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January 1992

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# NASA PATENT ABSTRACTS *P-564* BIBLIOGRAPHY

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ABSTRACTS BIBLIOGRAPHY: A CONTINUING  
BIBLIOGRAPHY. SECTION 2: INDEXES (SUPPLEMENT  
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A CONTINUING BIBLIOGRAPHY  
SECTION 2 INDEXES



## ACCESSION NUMBER RANGES

<i>Bibliography Number</i>	<i>STAR Accession Numbers</i>
NASA SP-7039(04) SEC 1	N69-20701 - N73-33931
NASA SP-7039(12) SEC 1	N74-10001 - N77-34042
NASA SP-7039(13) SEC 1	N78-10001 - N78-22018
NASA SP-7039(14) SEC 1	N78-22019 - N78-34034
NASA SP-7039(15) SEC 1	N79-10001 - N79-21993
NASA SP-7039(16) SEC 1	N79-21994 - N79-34158
NASA SP-7039(17) SEC 1	N80-10001 - N80-22254
NASA SP-7039(18) SEC 1	N80-22255 - N80-34339
NASA SP-7039(19) SEC 1	N81-10001 - N81-21997
NASA SP-7039(20) SEC 1	N81-21998 - N81-34139
NASA SP-7039(21) SEC 1	N82-10001 - N82-22140
NASA SP-7039(22) SEC 1	N82-22141 - N82-34341
NASA SP-7039(23) SEC 1	N83-10001 - N83-23266
NASA SP-7039(24) SEC 1	N83-23267 - N83-37053
NASA SP-7039(25) SEC 1	N84-10001 - N84-22526
NASA SP-7039(26) SEC 1	N84-22527 - N84-35284
NASA SP-7039(27) SEC 1	N85-10001 - N85-22341
NASA SP-7039(28) SEC 1	N85-22342 - N85-36162
NASA SP-7039(29) SEC 1	N86-10001 - N86-22536
NASA SP-7039(30) SEC 1	N86-22537 - N86-33262
NASA SP-7039(31) SEC 1	N87-10001 - N87-20170
NASA SP-7039(32) SEC 1	N87-20171 - N87-30248
NASA SP-7039(33) SEC 1	N88-10001 - N88-20253
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NASA SP-7039(35) SEC 1	N89-10001 - N89-20085
NASA SP-7039(36) SEC 1	N89-20086 - N89-30155
NASA SP-7039(37) SEC 1	N90-10001 - N90-20043
NASA SP-7039(38) SEC 1	N90-20044 - N90-30170
NASA SP-7039(39) SEC 1	N91-10001 - N91-21058
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NASA SP-7039 (40)  
January 1992

# **NASA PATENT ABSTRACTS BIBLIOGRAPHY**

A CONTINUING BIBLIOGRAPHY  
SECTION 2 INDEXES



National Aeronautics and Space Administration  
Scientific and Technical Information Program  
Washington, DC 1992

This supplement is available from the National Technical Information Service (NTIS), Springfield, Virginia 22161, price code A24.

# INTRODUCTION

Several thousand inventions result each year from the aeronautical and space research supported by the National Aeronautics and Space Administration. The inventions having important use in government programs or significant commercial potential are usually patented by NASA. These inventions cover practically all fields of technology and include many that have useful and valuable commercial application.

NASA inventions best serve the interests of the United States when their benefits are available to the public. In many instances, the granting of nonexclusive or exclusive licenses for the practice of these inventions may assist in the accomplishment of this objective. This bibliography is published as a service to companies, firms, and individuals seeking new, licensable products for the commercial market.

The *NASA Patent Abstracts Bibliography (NASA PAB)* is a semiannual NASA publication containing comprehensive abstracts and indexes of NASA-owned inventions covered by U.S. patents and applications for patent. The citations included in *NASA PAB* were originally published in NASA's *Scientific and Technical Aerospace Reports (STAR)* and cover *STAR* announcements made since May 1969.

For the convenience of the user, each issue of *NASA PAB* has a separately bound Abstract Section (Section 1) and Index Section (Section 2). Although each Abstract Section covers only the indicated six-month period, the Index Section is cumulative covering all NASA-owned inventions announced in *STAR* since 1969. Thus a complete set of *NASA PAB* would consist of the Abstract Sections of Issue 04 (January 1974) and Issue 12 (January 1978) and the Abstract Section for all subsequent issues and the Index Section for the most recent issue.

The 181 citations published in this issue of the Abstract Section cover the period July 1991 through December 1991. The Index Section references over 5100 citations covering the period May 1969 through December 1991.

## ABSTRACT SECTION (SECTION 1)

This *PAB* issue includes 10 major subject divisions separated into 76 specific categories and one general category/division. (See Table of Contents for the scope note of each category, under which are grouped appropriate NASA inventions.) This scheme was devised in 1975 and revised in 1987 in lieu of the 34 category divisions which were utilized in *PAB* supplements (01) through (06) covering *STAR* abstracts from May 1969 through January 1974. Each entry in the Abstract Section consists of a *STAR* citation accompanied by an abstract and, when appropriate, a key illustration taken from the patent or application for patent. Entries are arranged by subject category in order of the ascending NASA Accession Number originally assigned for *STAR* to the invention. The range of NASA Accession Numbers within each issue is printed on the inside front cover.

*Abstract Citation Data Elements:* Each of the abstract citations has several data elements useful for identification and indexing purposes, as follows:

- NASA Accession Number
- NASA Case Number
- Inventor's Name
- Title of Invention
- U.S. Patent Application Serial Number
- U.S. Patent Number (for issued patents only)
- U.S. Patent Office Classification Number(s)  
(for issued patents only)

These data elements are identified in the Typical Citation and Abstract and in the indexes.

## INDEX SECTION (SECTION 2)

The Index Section is divided into five indexes. These indexes are cross-indexed and are used to locate a single invention or groups of inventions.

**Subject Index:** Lists all inventions according to appropriate alphabetized technical term and indicates the related NASA Case Number, the Subject Category Number, and the Accession Number.

**Inventor Index:** Lists all inventions according to alphabetized names of inventors and indicates the related NASA Case Number, the Subject Category Number, and the Accession Number.

**Source Index:** Lists all inventions according to alphabetized source of invention (i.e., name of contractor or government installation where invention was made) and indicates the related NASA Case Number, the Subject Category Number, and the Accession Number.

**Number Index:** Lists inventions in order of ascending (1) NASA Case Number, (2) U.S. Patent Application Serial Number, (3) U.S. Patent Classification Number, and (4) U.S. Patent Number and indicates the related Subject Category Number and the Accession Number.

**Accession Number Index:** Lists all inventions in order of ascending Accession Number and indicates the related Subject Category Number, the NASA Case Number, the U.S. Patent Application Serial Number, the U.S. Patent Classification Number, and the U.S. Patent Number.

## HOW TO USE THIS PUBLICATION TO IDENTIFY NASA INVENTIONS

To identify one or more NASA inventions within a specific technical field or subject, several techniques are possible with the flexibility incorporated into the *NASA PAB*.

(1) *Using Subject Category:* To identify all NASA inventions in any one of the subject categories in this issue of *NASA PAB*, select the desired Subject Category in the Abstract Section (Section 1) and find the inventions abstracted thereunder.

(2) *Using Subject Index:* To identify all NASA inventions listed under a desired technical subject index term, (A) turn to the cumulative Subject Index in the Index Section and find the invention(s) listed under the desired technical subject term. (B) Note the indicated Accession Number and the Subject Category Number. (C) Using the indicated Accession Number, turn to the inside front cover of the Index Section to determine which issue of the Abstract Section includes the Accession Number desired. (D) To find the abstract of the particular invention in the issue of the Abstract Section selected, (1) use the Subject Category Number to locate the Subject Category and (2) use the Accession Number to locate the desired invention within the Subject Category listing.

(3) *Using Patent Classification Index:* To identify all inventions covered by issued NASA patents (not including applications for patent) within a desired Patent Classification, (A) turn to the Patent Classification Number in the Number Index of Section 2 and find the associated invention(s), and (B) follow the instructions outlined in (2)(B), and (D) above.

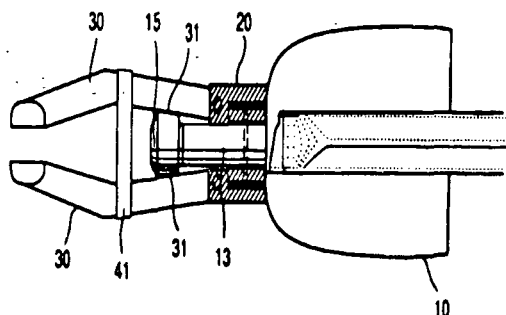
# TYPICAL CITATION AND ABSTRACT

NASA SPONSORED

ACCESSION NUMBER → **N91-32795\*** National Aeronautics and Space Administration. ← CORPORATE SOURCE  
 Marshall Space Flight Center, Huntsville, AL.  
 TITLE → **ROTATIONALLY ACTUATED PROSTHETIC HELPING  
 HAND Patent**  
 INVENTORS → **WILLIAM E. NORTON**, inventor (to NASA), **JEWELL G.  
 BELCHER, JR.**, inventor (to NASA), **JAMES R. CARDEN**, inventor  
 (to NASA), and **THOMAS W. WEST**, inventor (to NASA) 4 Jun.  
 1991 10 p Filed 12 Apr. 1990 Supersedes N90-27261 (28 -  
 21, p 3036)  
 NASA CASE NUMBER → (NASA-CASE-MFS-28426-1; US-PATENT-5,021,065;  
 US PATENT APPLICATIONS → US-PATENT-APPL-SN-508154; US-PATENT-CLASS-623-63;  
 SERIAL NUMBERS → US-PATENT-CLASS-623-62; INT-PATENT-CLASS-A61F-2/58;  
 INT-PATENT-CLASS-A61F-2/68) Avail: US Patent and ← AVAILABILITY SOURCE  
 Trademark Office CSCL 06K ← COSATI CODE

A prosthetic device has been developed for below-the-elbow amputees. The device consists of a cuff, a stem, a housing, two hook-like fingers, an elastic band for holding the fingers together, and a brace. The fingers are pivotally mounted on a housing that is secured to the amputee's upper arm with the brace. The stem, which also contains a cam, is rotationally mounted within the housing and is secured to the cuff, which fits over the amputee's stump. By rotating the cammed stem between the fingers with the lower arm, the amputee can open and close the fingers.

Official Gazette of the U.S. Patent and Trademark Office



KEY ILLUSTRATION

# Subject Categories

(1969 - 1973)

## 01 Aerodynamics

Includes aerodynamics of bodies, combinations, internal flow in ducts and turbomachinery; wings, rotors, and control surfaces. For applications see: 02 Aircraft; and 32 Space Vehicles. For related information see also: 12 Fluid Mechanics; and 33 Thermodynamics and Combustion.

## 02 Aircraft

Includes fixed-wing airplanes, helicopters, gliders, balloons, ornithopters, etc.; and specific types of complete aircraft; e.g., ground effect machines, STOL, and VTOL; flight tests; operating problems; e.g., sonic boom; safety and safety devices; economics; and stability and control. For basic research see: 01 Aerodynamics. For related information see also: 31 Space Vehicles; and 32 Structural Mechanics.

## 03 Auxiliary Systems

Includes fuel cells, energy conversion cells, and solar cells; auxiliary gas turbines; hydraulic, pneumatic and electrical systems; actuators; and inverters. For related information see also: 09 Electronic Equipment; 22 Nuclear Engineering; and 28 Propulsion Systems.

## 04 Biosciences

Includes aerospace medicine, exobiology, radiation effects on biological systems; physiological and psychological factors. For related information see also: 05 Biotechnology.

## 05 Biotechnology

Includes life support systems, human engineering; protective clothing and equipment; crew training and evaluation, and piloting. For related information see also: 04 Biosciences.

## 06 Chemistry

Includes chemical analysis and identification; e.g., spectroscopy. For applications see: 17 Materials, Metallic; 18 Materials, Nonmetallic; and 27 Propellants.

## 07 Communications

Includes communications equipment and techniques; noise; radio and communications blackout; modulation telemetry; tracking radar and optical observation; and wave propagation. For basic research see: 23 Physics, General; and 21 Navigation.

## 08 Computers

Includes computer operation and programming; and data processing. For applications, see specific categories. For related information see also: 19 Mathematics.

## 09 Electronic Equipment

Includes electronic test equipment and maintainability; component parts; e.g., electron tubes, tunnel diodes, transistors, integrated circuitry; microminiaturization. For basic research see: 10 Electronics. For related information see also: 07 Communications; and 21 Navigation.

## 10 Electronics

Includes circuit theory; and feedback and control theory. For applications see: 09 Electronic Equipment. For related information see specific Physics categories.

## 11 Facilities, Research and Support

Includes airports; lunar and planetary bases including associated vehicles; ground support systems; related logistics; simulators; test facilities; e.g., rocket engine test stands, shock tubes, and wind tunnels; test ranges; and tracking stations.

## 12 Fluid Mechanics

Includes boundary-layer flow; compressible flow; gas dynamics; hydrodynamics; and turbulence. For related information see also: 01 Aerodynamics; and 33 Thermodynamics and Combustion.

## 13 Geophysics

Includes aeronomy; upper and lower atmosphere studies; oceanography; cartography; and geodesy. For related information see also: 20 Meteorology; 29 Space Radiation; and 30 Space Sciences.

## 14 Instrumentation and Photography

Includes design, installation, and testing of instrumentation systems; gyroscopes; measuring instruments and gauges; recorders, transducers; aerial photography; and telescopes and cameras.

## 15 Machine Elements and Processes

Includes bearings, seals, pumps, and other mechanical equipment; lubrication, friction, and wear; manufacturing processes and quality control; reliability; drafting; and materials fabrication, handling, and inspection.

## 16 Masers

Includes applications of masers and lasers. For basic research see: 26 Physics, Solid-State.

## 17 Materials, Metallic

Includes cermets; corrosion; physical and mechanical properties of materials; metallurgy; and applications as structural materials. For basic research see: 06 Chemistry. For related information see also: 18 Materials, Nonmetallic; and 32 Structural Mechanics.

## 18 Materials, Nonmetallic

Includes corrosion; physical and mechanical properties of materials; e.g., plastics; and elastomers, hydraulic fluids, etc. For basic research see: 06 Chemistry. For related information see also: 17 Materials, Metallic; 27 Propellants; and 32 Structural Mechanics.



## **19 Mathematics**

Includes calculation methods and theory; and numerical analysis. For applications see specific categories. For related information see also: 08 Computers.

## **20 Meteorology**

Includes climatology; weather forecasting; and visibility studies. For related information see also: 13 Geophysics; and 30 Space Sciences.

## **21 Navigation**

Includes guidance; autopilots; star and planet tracking; inertial platforms; and air traffic control. For related information see also: 07 Communications.

## **22 Nuclear Engineering**

Includes nuclear reactors and nuclear heat sources used for propulsion and auxiliary power. For basic research see: 24 Physics, Atomic, Molecular, and Nuclear. For related information see also: 03 Auxiliary Systems; and 28 Propulsion Systems.

## **23 Physics, General**

Includes acoustics, cryogenics, mechanics, and optics. For astrophysics see: 30 Space Sciences. For geophysics and related information see also: 13 Geophysics; 20 Meteorology; and 29 Space Radiation.

## **24 Physics, Atomic, Molecular, and Nuclear**

Includes atomic, molecular and nuclear physics. For applications see: 22 Nuclear Engineering. For related information see also: 29 Space Radiation.

## **25 Physics, Plasma**

Includes magnetohydrodynamics. For applications see: 28 Propulsion Systems.

## **26 Physics, Solid-State**

Includes semiconductor theory; and superconductivity. For applications see: 16 Masers. For related information see also: 10 Electronics.

## **27 Propellants**

Includes fuels; igniters; and oxidizers. For basic research see: 06 Chemistry; and 33 Thermodynamics and Combustion. For related information see also: 28 Propulsion Systems.

## **28 Propulsion Systems**

Includes air breathing, electric, liquid, solid, and magnetohydrodynamic propulsion. For nuclear propulsion see: 22 Nuclear Engineering. For basic research see: 23 Physics, General; and 33 Thermodynamics and Combustion. For applications see: 31 Space Vehicles. For related information see also: 27 Propellants.

## **29 Space Radiation**

Includes cosmic radiation; solar flares; solar radiation; and Van Allen radiation belts. For related information see also: 13 Geophysics; and 24 Physics, Atomic, Molecular, and Nuclear.

## **30 Space Sciences**

Includes astronomy and astrophysics; cosmology; lunar and planetary flight and exploration; and theoretical analysis of orbits and trajectories. For related information see also: 11 Facilities, Research and Support; and 31 Space Vehicles.

## **31 Space Vehicles**

Includes launch vehicles; manned space capsules; clustered and multistage rockets; satellites; sounding rockets and probes; and operating problems. For basic research see: 30 Space Sciences. For related information see also: 28 Propulsion Systems; and 32 Structural Mechanics.

## **32 Structural Mechanics**

Includes structural element design and weight analysis; fatigue; thermal stress; impact phenomena; vibration; flutter; inflatable structures; and structural tests. For related information see also: 17 Materials, Metallic; and 18 Materials, Nonmetallic.

## **33 Thermodynamics and Combustion**

Includes ablation, cooling, heating, heat transfer, thermal balance, and other thermal effects; and combustion theory. For related information see also: 12 Fluid Mechanics; and 27 Propellants.

## **34 General**

Includes information of a broad nature related to industrial applications and technology, and to basic research; defense aspects; information retrieval; management; law and related legal matters; and legislative hearings and documents.

# TABLE OF CONTENTS

Revised Subject Categories  
(Includes 1974 and 1987 revisions)

**AERONAUTICS** For related information see also *Astronautics*.

## 01 AERONAUTICS (GENERAL)

### 02 AERODYNAMICS

Includes aerodynamics of bodies, combinations, wings, rotors, and control surfaces; and internal flow in ducts and turbomachinery. For related information see also *34 Fluid Mechanics and Heat Transfer*.

### 03 AIR TRANSPORTATION AND SAFETY

Includes passenger and cargo air transport operations; and aircraft accidents. For related information see also *16 Space Transportation* and *85 Urban Technology and Transportation*.

### 04 AIRCRAFT COMMUNICATIONS AND NAVIGATION

Includes digital and voice communication with aircraft; air navigation systems (satellite and ground based); and air traffic control. For related information see also *17 Space Communications, Spacecraft Communications, Command and Tracking* and *32 Communications and Radar*.

### 05 AIRCRAFT DESIGN, TESTING AND PERFORMANCE

Includes aircraft simulation technology. For related information see also *18 Spacecraft Design, Testing and Performance* and *39 Structural Mechanics*. For land transportation vehicles see *85 Urban Technology and Transportation*.

### 06 AIRCRAFT INSTRUMENTATION

Includes cockpit and cabin display devices; and flight instruments. For related information see also *19 Spacecraft Instrumentation* and *35 Instrumentation and Photography*.

### 07 AIRCRAFT PROPULSION AND POWER

Includes prime propulsion systems and systems components, e.g., gas turbine engines and compressors; and onboard auxiliary power plants for aircraft. For related information see also *20 Spacecraft Propulsion and Power, 28 Propellants and Fuels, and 44 Energy Production and Conversion*.

### 08 AIRCRAFT STABILITY AND CONTROL

Includes aircraft handling qualities; piloting; flight controls; and autopilots. For related information see also *05 Aircraft Design, Testing and Performance*.

### 09 RESEARCH AND SUPPORT FACILITIES (AIR)

Includes airports, hangars and runways; aircraft repair and overhaul facilities; wind tunnels; shock tubes; and aircraft engine test stands. For related information see also *14 Ground Support Systems and Facilities (Space)*.

**ASTRONAUTICS** For related information see also *Aeronautics*.

## 12 ASTRONAUTICS (GENERAL)

For extraterrestrial exploration see *91 Lunar and Planetary Exploration*.

### 13 ASTRODYNAMICS

Includes powered and free-flight trajectories; and orbital and launching dynamics.

### 14 GROUND SUPPORT SYSTEMS AND FACILITIES (SPACE)

Includes launch complexes, research and production facilities; ground support equipment, e.g., mobile transporters; and simulators. For related information see also *09 Research and Support Facilities (Air)*.

### 15 LAUNCH VEHICLES AND SPACE VEHICLES

Includes boosters; operating problems of launch/space vehicle systems; and reusable vehicles. For related information see also *20 Spacecraft Propulsion and Power*.

### 16 SPACE TRANSPORTATION

Includes passenger and cargo space transportation, e.g., shuttle operations; and space rescue techniques. For related information see also *03 Air Transportation and Safety* and *18 Spacecraft Design, Testing and Performance*. For space suits see *54 Man/System Technology and Life Support*.

### 17 SPACE COMMUNICATIONS, SPACECRAFT COMMUNICATIONS, COMMAND AND TRACKING

Includes telemetry; space communications networks; astronavigation and guidance; and radio blackout. For related information see also *04 Aircraft Communications and Navigation* and *32 Communications and Radar*.

**N.A.**—no abstracts were assigned to this category for this issue.

## **18 SPACECRAFT DESIGN, TESTING AND PERFORMANCE**

Includes satellites; space platforms; space stations; spacecraft systems and components such as thermal and environmental controls; and attitude controls. For life support systems see *54 Man/System Technology and Life Support*. For related information see also *05 Aircraft Design, Testing and Performance*, *39 Structural Mechanics*, and *16 Space Transportation*.

## **19 SPACECRAFT INSTRUMENTATION**

For related information see also *06 Aircraft Instrumentation* and *35 Instrumentation and Photography*.

## **20 SPACECRAFT PROPULSION AND POWER**

Includes main propulsion systems and components, e.g., rocket engines; and spacecraft auxiliary power sources. For related information see also *07 Aircraft Propulsion and Power*, *28 Propellants and Fuels*, *44 Energy Production and Conversion*, and *15 Launch Vehicles and Space Vehicles*.

# **CHEMISTRY AND MATERIALS**

## **23 CHEMISTRY AND MATERIALS (GENERAL)**

### **24 COMPOSITE MATERIALS**

Includes physical, chemical, and mechanical properties of laminates and other composite materials. For ceramic materials see *27 Nonmetallic Materials*.

### **25 INORGANIC AND PHYSICAL CHEMISTRY**

Includes chemical analysis, e.g., chromatography; combustion theory; electrochemistry; and photochemistry. For related information see also *77 Thermodynamics and Statistical Physics*.

### **26 METALLIC MATERIALS**

Includes physical, chemical, and mechanical properties of metals, e.g., corrosion; and metallurgy.

### **27 NONMETALLIC MATERIALS**

Includes physical, chemical, and mechanical properties of plastics, elastomers, lubricants, polymers, textiles, adhesives, and ceramic materials. For composite materials see *24 Composite Materials*.

### **28 PROPELLANTS AND FUELS**

Includes rocket propellants, igniters and oxidizers; their storage and handling procedures; and aircraft fuels. For related information see also *07 Aircraft Propulsion and Power*, *20 Spacecraft Propulsion and Power*, and *44 Energy Production and Conversion*.

### **29 MATERIALS PROCESSING**

Includes space-based development of products and processes for commercial application. For biological materials see *55 Space Biology*.

## **ENGINEERING** For related information see also *Physics*.

### **31 ENGINEERING (GENERAL)**

Includes vacuum technology; control engineering; display engineering; cryogenics; and fire prevention.

### **32 COMMUNICATIONS AND RADAR**

Includes radar; land and global communications; communications theory; and optical communications. For related information see also *04 Aircraft Communications and Navigation* and *17 Space Communications, Spacecraft Communications, Command and Tracking*. For search and rescue see *03 Air Transportation and Safety*, and *16 Space Transportation*.

### **33 ELECTRONICS AND ELECTRICAL ENGINEERING**

Includes test equipment and maintainability; components, e.g., tunnel diodes and transistors; microminiaturization; and integrated circuitry. For related information see also *60 Computer Operations and Hardware* and *76 Solid-State Physics*.

### **34 FLUID MECHANICS AND HEAT TRANSFER**

Includes boundary layers; hydrodynamics; fluidics; mass transfer and ablation cooling. For related information see also *02 Aerodynamics* and *77 Thermodynamics and Statistical Physics*.

### **35 INSTRUMENTATION AND PHOTOGRAPHY**

Includes remote sensors; measuring instruments and gauges; detectors; cameras and photographic supplies; and holography. For aerial photography see *43 Earth Resources and Remote Sensing*. For related information see also *06 Aircraft Instrumentation* and *19 Spacecraft Instrumentation*.

### **36 LASERS AND MASERS**

Includes parametric amplifiers. For related information see also *76 Solid-State Physics*.

### **37 MECHANICAL ENGINEERING**

Includes auxiliary systems (nonpower); machine elements and processes; and mechanical equipment.

### **38 QUALITY ASSURANCE AND RELIABILITY**

Includes product sampling procedures and techniques; and quality control.

### **39 STRUCTURAL MECHANICS**

Includes structural element design and weight analysis; fatigue; and thermal stress. For applications see *05 Aircraft Design, Testing and Performance* and *18 Spacecraft Design, Testing and Performance*.

## **GEOSCIENCES** For related information see also *Space Sciences*.

### **42 GEOSCIENCES (GENERAL)**

#### **43 EARTH RESOURCES AND REMOTE SENSING**

Includes remote sensing of earth resources by aircraft and spacecraft; photogrammetry; and aerial photography. For instrumentation see *35 Instrumentation and Photography*.

#### **44 ENERGY PRODUCTION AND CONVERSION**

Includes specific energy conversion systems, e.g., fuel cells; global sources of energy; geophysical conversion; and windpower. For related information see also *07 Aircraft Propulsion and Power*, *20 Spacecraft Propulsion and Power*, and *28 Propellants and Fuels*.

#### **45 ENVIRONMENT POLLUTION**

Includes atmospheric, noise, thermal, and water pollution.

#### **46 GEOPHYSICS**

Includes aeronomy; upper and lower atmosphere studies; ionospheric and magnetospheric physics; and geomagnetism. For space radiation see *93 Space Radiation*.

#### **47 METEOROLOGY AND CLIMATOLOGY**

Includes weather forecasting and modification.

#### **48 OCEANOGRAPHY**

Includes biological, dynamic, and physical oceanography; and marine resources. For related information see also *43 Earth Resources and Remote Sensing*.

## **LIFE SCIENCES**

### **51 LIFE SCIENCES (GENERAL)**

#### **52 AEROSPACE MEDICINE**

Includes physiological factors; biological effects of radiation; and effects of weightlessness on man and animals.

#### **53 BEHAVIORAL SCIENCES**

Includes psychological factors; individual and group behavior; crew training and evaluation; and psychiatric research.

#### **54 MAN/SYSTEM TECHNOLOGY AND LIFE SUPPORT**

Includes human engineering; biotechnology; and space suits and protective clothing. For related information see also *16 Space Transportation*.

#### **55 SPACE BIOLOGY**

Includes exobiology; planetary biology; and extraterrestrial life.

## **MATHEMATICAL AND COMPUTER SCIENCES**

### **59 MATHEMATICAL AND COMPUTER SCIENCES (GENERAL)**

#### **60 COMPUTER OPERATIONS AND HARDWARE**

Includes hardware for computer graphics, firmware, and data processing. For components see *33 Electronics and Electrical Engineering*.

#### **61 COMPUTER PROGRAMMING AND SOFTWARE**

Includes computer programs, routines, algorithms, and specific applications, e.g., CAD/CAM.

#### **62 COMPUTER SYSTEMS**

Includes computer networks and special application computer systems.

### **63 CYBERNETICS**

Includes feedback and control theory, artificial intelligence, robotics and expert systems. For related information see also *54 Man/System Technology and Life Support*.

### **64 NUMERICAL ANALYSIS**

Includes iteration, difference equations, and numerical approximation.

### **65 STATISTICS AND PROBABILITY**

Includes data sampling and smoothing; Monte Carlo method; and stochastic processes.

### **66 SYSTEMS ANALYSIS**

Includes mathematical modeling; network analysis; and operations research.

### **67 THEORETICAL MATHEMATICS**

Includes topology and number theory.

## **PHYSICS** For related information see also *Engineering*.

### **70 PHYSICS (GENERAL)**

For precision time and time interval (PTTI) see *35 Instrumentation and Photography*; for geophysics, astrophysics or solar physics see *46 Geophysics*, *90 Astrophysics*, or *92 Solar Physics*.

### **71 ACOUSTICS**

Includes sound generation, transmission, and attenuation. For noise pollution see *45 Environment Pollution*.

### **72 ATOMIC AND MOLECULAR PHYSICS**

Includes atomic structure, electron properties, and molecular spectra.

### **73 NUCLEAR AND HIGH-ENERGY PHYSICS**

Includes elementary and nuclear particles; and reactor theory. For space radiation see *93 Space Radiation*.

### **74 OPTICS**

Includes light phenomena and optical devices. For lasers see *36 Lasers and Masers*.

### **75 PLASMA PHYSICS**

Includes magnetohydrodynamics and plasma fusion. For ionospheric plasmas see *46 Geophysics*. For space plasmas see *90 Astrophysics*.

### **76 SOLID-STATE PHYSICS**

Includes superconductivity. For related information see also *33 Electronics and Electrical Engineering* and *36 Lasers and Masers*.

### **77 THERMODYNAMICS AND STATISTICAL PHYSICS**

Includes quantum mechanics; theoretical physics; and Bose and Fermi statistics. For related information see also *25 Inorganic and Physical Chemistry* and *34 Fluid Mechanics and Heat Transfer*.

## **SOCIAL SCIENCES**

### **80 SOCIAL SCIENCES (GENERAL)**

Includes educational matters.

### **81 ADMINISTRATION AND MANAGEMENT**

Includes management planning and research.

### **82 DOCUMENTATION AND INFORMATION SCIENCE**

Includes information management; information storage and retrieval technology; technical writing; graphic arts; and micrography. For computer documentation see *61 Computer Programming and Software*.

### **83 ECONOMICS AND COST ANALYSIS**

Includes cost effectiveness studies.

### **84 LAW, POLITICAL SCIENCE AND SPACE POLICY**

Includes NASA appropriation hearings; aviation law; space law and policy; international law; international cooperation; and patent policy.

### **85 URBAN TECHNOLOGY AND TRANSPORTATION**

Includes applications of space technology to urban problems; technology transfer; technology assessment; and surface and mass transportation. For related information see *03 Air Transportation and Safety*, *16 Space Transportation*, and *44 Energy Production and Conversion*.

**SPACE SCIENCES** For related information see also *Geosciences*.

**88 SPACE SCIENCES (GENERAL)**

**89 ASTRONOMY**

Includes radio, gamma-ray, and infrared astronomy; and astrometry.

**90 ASTROPHYSICS**

Includes cosmology; celestial mechanics; space plasmas; and interstellar and interplanetary gases and dust. For related information see also *75 Plasma Physics*.

**91 LUNAR AND PLANETARY EXPLORATION**

Includes planetology; and manned and unmanned flights. For spacecraft design or space stations see *18 Spacecraft Design, Testing and Performance*.

**92 SOLAR PHYSICS**

Includes solar activity, solar flares, solar radiation and sunspots. For related information see *93 Space Radiation*.

**93 SPACE RADIATION**

Includes cosmic radiation; and inner and outer earth's radiation belts. For biological effects of radiation see *52 Aerospace Medicine*. For theory see *73 Nuclear and High-Energy Physics*.

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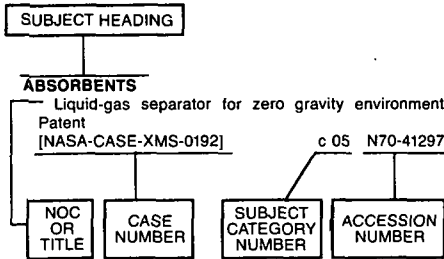
Includes aeronautical, astronautical, and space science related histories, biographies, and pertinent reports too broad for categorization; histories or broad overviews of NASA programs.

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The subject heading is a key to the subject content of the document. A brief description of the document, e.g., title, title plus a title extension, or notation of content (NOC), is included for each subject entry to indicate the subject heading context; these descriptions are arranged under each subject heading in ascending accession number order. The case number serves as the prime access number to the patent documents. The subject category number indicates the category in Section 1 (Abstracts) in which the patent citation and abstract are located. The accession number denotes the number by which the citation is identified within the subject category.

## A

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Protein sterilization method of firefly luciferase using reduced pressure and molecular sieves  
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Oil and fat absorbing polymers  
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[NASA-CASE-LAR-10180-1] c 06 N71-13461  
Filter system for control of outgas contamination in vacuum Patent  
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Aldehyde-containing urea-absorbing polysaccharides  
[NASA-CASE-NPO-13620-1] c 27 N77-30236

Electromagnetic power absorber  
[NASA-CASE-NPO-13830-1] c 32 N80-14281  
Water-absorbing capacitor system for measuring relative humidity  
[NASA-CASE-NPO-16544-1-CU] c 35 N87-22953

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[NASA-CASE-LAR-13254-1CU] c 35 N86-29174

### ABSORPTION COOLING

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### ABSORPTION CROSS SECTIONS

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### ABSORPTION SPECTRA

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[NASA-CASE-NPO-15102-1] c 25 N81-25159

Method and apparatus for enhancing laser absorption sensitivity  
[NASA-CASE-NPO-16567-1-CU] c 36 N87-28006

### ABSORPTION SPECTROSCOPY

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Centrifuge mounted motion simulator Patent  
[NASA-CASE-XAC-00399] c 11 N70-34815  
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[NASA-CASE-XMF-00424] c 11 N70-38196  
Artificial gravity spin deployment system Patent  
[NASA-CASE-XNP-02595] c 31 N71-21881  
Active vibration isolator for flexible bodies Patent  
[NASA-CASE-LAR-10106-1] c 15 N71-27169  
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[NASA-CASE-LAR-10550-1] c 09 N74-30597  
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[NASA-CASE-XAC-00405] c 05 N70-41819

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[NASA-CASE-XLA-02898] c 05 N71-20268

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[NASA-CASE-XNP-02595] c 31 N71-21881

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Peak acceleration limiter for vibrational tester Patent  
[NASA-CASE-NPO-10556] c 14 N71-27185

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Annular arc accelerator shock tube  
[NASA-CASE-NPO-13528-1] c 09 N77-10071

Spring operated accelerator and constant force spring mechanism therefor  
[NASA-CASE-ARC-10898-1] c 35 N77-18417

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Superconductive accelerometer Patent  
[NASA-CASE-XMF-01099] c 14 N71-15969

Apparatus for controlling the velocity of an electromechanical drive for interferometers and the like Patent  
[NASA-CASE-XGS-03532] c 14 N71-17627

Omnidirectional acceleration device Patent  
[NASA-CASE-HQN-10780] c 14 N71-30265

Angular velocity and acceleration measuring apparatus  
[NASA-CASE-ERC-10292] c 14 N72-25410

Temperature compensated digital inertial sensor --- circuit for maintaining inertial element of gyroscope or accelerometer at constant position  
[NASA-CASE-NPO-13044-1] c 35 N74-15094

Accelerometer telemetry system  
[NASA-CASE-ARC-10849-1] c 17 N76-29347

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Cross correlation anomaly detection system  
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III-V photocathode with nitrogen doping for increased quantum efficiency  
[NASA-CASE-NPO-12134-1] c 33 N76-31409

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Computer access security code system  
[NASA-CASE-NPO-17525-1-CU] c 60 N90-25583

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CAT altitude avoidance system  
[NASA-CASE-NPO-15351-1] c 06 N83-10040

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Visual accommodation trainer-tester  
[NASA-CASE-ARC-11426-1] c 09 N84-12193

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Direct radiation cooling of the collector of linear beam tubes  
[NASA-CASE-XNP-09227] c 15 N69-24319

Small rocket engine Patent  
[NASA-CASE-XLE-00685] c 28 N70-41992

Small plasma probe Patent  
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Electrostatic collector for charged particles  
[NASA-CASE-LEW-11192-1] c 09 N73-13208

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[NASA-CASE-MFS-19287-1] c 34 N77-30399

Method for fabricating solar cells having integrated collector grids  
[NASA-CASE-LEW-12819-2] c 44 N79-18444

Urine collection device  
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Urine collection apparatus --- feminine hygiene  
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Multistage depressed collector for dual mode operation --- for microwave transmitting tubes  
[NASA-CASE-LEW-13282-1] c 33 N82-24415

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Nozzle diffuser for use with an open test section of a wind tunnel  
[NASA-CASE-LAR-14424-1-SB] c 09 N91-32149

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Synthesis of polymeric schiff bases by reaction of acetals and amine compounds Patent  
[NASA-CASE-XMF-08652] c 06 N71-11243

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Thermoplastic rubber comprising ethylene-vinyl acetate copolymer, asphalt and fluxing oil  
[NASA-CASE-NPO-08835-1] c 27 N78-33228

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N-(3-ethynylphenyl)maleimide  
[NASA-CASE-LAR-14188-2] c 23 N91-14419

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Phenoxy resins containing pendent ethynyl groups and cured resins obtained therefrom  
[NASA-CASE-LAR-13262-1] c 23 N85-28973

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[NASA-CASE-XNP-03250] c 06 N71-23500

Polyphenylquinoxalines containing pendant phenylethynyl and ethynyl groups --- for thermoplastic resins  
[NASA-CASE-LAR-12838-1] c 27 N83-34040

Acetylene (ethynyl) terminated polyimide siloxane and process for preparation thereof  
[NASA-CASE-LAR-13318-1] c 27 N87-14516

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[NASA-CASE-LAR-13118-2] c 27 N87-16907

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[NASA-CASE-LAR-14188-2] c 23 N91-14419

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Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14489-1] c 37 N91-27562

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Ultrasonic calibration device --- for producing changes in acoustic attenuation and phase velocity  
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Acoustic guide for noise-transmission testing of aircraft  
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Acoustic transducer apparatus with reduced thermal conduction  
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[NASA-CASE-GSC-12788-1] c 33 N85-29145

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Lamina transducer coupler and method of making  
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Acoustic system for material transport  
[NASA-CASE-NPO-15453-1] c 71 N83-32515

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[NASA-CASE-NPO-15435-1] c 71 N83-36846

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[NASA-CASE-NPO-16896-1-CU] c 71 N89-13236

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[NASA-CASE-NPO-16995-1-CU] c 71 N90-12289

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[NASA-CASE-NPO-17511-1-CU] c 71 N91-14807

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[NASA-CASE-LAR-11476-1] c 07 N76-27232

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System for monitoring physical characteristics of fluids  
[NASA-CASE-NPO-15400-1] c 34 N83-31993

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Material suspension within an acoustically excited resonant chamber --- at near weightless conditions  
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Resolution enhanced sound detecting apparatus  
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Wind tunnel microphone structure Patent  
[NASA-CASE-XNP-00250] c 11 N71-28779

Acoustical transducer calibrating system and apparatus  
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Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c 25 N81-14015

Stark effect spectrophone for continuous absorption spectra monitoring --- a technique for gas analysis  
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[NASA-CASE-LEW-11359] c 03 N71-28579

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Gas actuated bolt disconnect Patent  
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Hermetically sealed explosive release mechanism Patent  
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[NASA-CASE-LEW-12419-1] c 07 N77-14025

Actuator device for artificial leg  
[NASA-CASE-MFS-23225-1] c 52 N77-14735

Cyclical bi-directional rotary actuator  
[NASA-CASE-GSC-11883-1] c 37 N77-19458

Actuator mechanism  
[NASA-CASE-GSC-11883-2] c 37 N78-31426

Pressure limiting propellant actuating system  
[NASA-CASE-MSC-18179-1] c 20 N80-18097

Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c 37 N81-17432

Electrical servo actuator bracket --- fuel control valves on jet engines  
[NASA-CASE-FRC-11044-1] c 37 N81-33483

Hydraulic actuator mechanism to control aircraft spoiler movements through dual input commands  
[NASA-CASE-LAR-12412-1] c 08 N82-24205

Tubing and cable cutting tool  
[NASA-CASE-LAR-12786-1] c 37 N84-28085

Slow opening valve --- valve design for shuttle portable oxygen system  
[NASA-CASE-MSC-20112-1] c 37 N85-20338

Solar powered actuator with continuously variable auxiliary power control  
[NASA-CASE-MFS-25637-1] c 44 N85-21769

Memory metal actuator  
[NASA-CASE-NPO-15960-1] c 37 N86-19604

Thumb-actuated two-axis controller  
[NASA-CASE-ARC-11372-1] c 08 N86-27268

Rotary stepping device with memory metal actuator  
[NASA-CASE-NPO-15482-1] c 37 N87-23970

Fully redundant mechanical release actuator  
[NASA-CASE-LAR-13198-1] c 37 N87-23983

Linear force device  
[NASA-CASE-MSC-20549-2] c 35 N88-24927

Toggle release  
[NASA-CASE-MSC-21354-1] c 37 N88-24969

Thermocouple for heating and cooling of memory metal actuators  
[NASA-CASE-NPO-17068-1-CU] c 35 N88-29151

Control surface actuator  
[NASA-CASE-LAR-12852-1] c 05 N89-11738

Antenna surface contour control system  
[NASA-CASE-LAR-13798-1] c 32 N89-25363

Multi-fingered robotic hand  
[NASA-CASE-NPO-15959-2] c 37 N91-14616

Single element magnetic suspension actuator  
[NASA-CASE-LAR-13981-1] c 37 N91-21539

Permanent magnet flux-biased magnetic actuator with flux feedback  
[NASA-CASE-LAR-13785-1] c 70 N91-21824

Preloaded latching device  
[NASA-CASE-MSC-21730-1] c 37 N91-23493

Fluid-loop reaction system  
[NASA-CASE-NPO-17204-1-CU] c 34 N91-25380

Robotic tool change mechanism  
[NASA-CASE-GSC-13239-1] c 37 N91-31656

Telerobot control system  
[NASA-CASE-NPO-18116-1-CU] c 37 N91-32509

Linear mass actuator  
[NASA-CASE-LAR-14352-1] c 37 N91-32511

Feedback controlled optics with wavefront compensation  
[NASA-CASE-NPO-18194-1-CU] c 74 N91-32924

## ADAPTATION

Method and apparatus for telemetry adaptive bandwidth compression  
[NASA-CASE-MSC-20821-1] c 17 N87-25348

## ADAPTERS

Image magnification adapter for cameras Patent  
[NASA-CASE-XMF-03844-1] c 14 N71-26474

Self indexing latch system  
[NASA-CASE-MFS-25956-1] c 37 N87-21333

Pressure vessel flex joint  
[NASA-CASE-MSC-21748-1] c 37 N91-25415

## ADAPTIVE CONTROL

Self-testing and repairing computer Patent  
[NASA-CASE-NPO-10567] c 08 N71-24633

Synchronous dc direct drive system Patent  
[NASA-CASE-GSC-10065-1] c 10 N71-27136

Ergometer  
[NASA-CASE-MFS-21109-1] c 05 N73-27941

Adaptive voting computer system  
[NASA-CASE-MSC-13932-1] c 62 N74-14920

Adaptive polarization separation  
[NASA-CASE-LAR-12196-1] c 33 N81-26358

Apparatus for damping operator induced oscillations of a controlled system --- flight control  
[NASA-CASE-FRC-11041-1] c 33 N82-18493

Adaptive reference voltage generator for firing angle control of line-commutated inverters  
[NASA-CASE-MFS-25215-1] c 33 N83-31953

Adaptive control system for line-commutated inverters  
[NASA-CASE-MFS-25209-1] c 33 N83-35227

Adaptive data acquisition multiplexing system and method  
[NASA-CASE-MSC-21170-1] c 17 N91-14371

## ADAPTIVE FILTERS

Adaptive tracking notch filter system Patent  
[NASA-CASE-XMF-01892] c 10 N71-22986

Apparatus for damping operator induced oscillations of a controlled system --- flight control  
[NASA-CASE-FRC-11041-1] c 33 N82-18493

## ADAPTIVE OPTICS

Fluorescent radiation converter  
[NASA-CASE-GSC-12528-1] c 74 N81-24900

## ADDING CIRCUITS

Full binary adder Patent  
[NASA-CASE-XGS-00689] c 08 N70-34787

Automatic fault correction system for parallel signal channels Patent  
[NASA-CASE-XNP-03263] c 09 N71-18843

## ADDITION RESINS

Tackifier for addition polyimides containing monoethylphthalate  
[NASA-CASE-LAR-12642-1] c 27 N81-29229

Vinyl capped addition polyimides  
[NASA-CASE-LEW-15027-1] c 27 N91-13566

## ADDITIVES

Ammonium perchlorate composite propellant containing an organic transitional metal chelate catalytic additive Patent  
[NASA-CASE-LAR-10173-1] c 27 N71-14090

Sewage sludge additive  
[NASA-CASE-NPO-13877-1] c 45 N82-11634

Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-2] c 27 N86-27451

Annealing group III-V compound doped silicon-germanium alloy for improved thermo-electric conversion efficiency  
[NASA-CASE-NPO-17259-1-CU] c 76 N90-19884

Process for lowering the dielectric constant of polyimides using diamic acid additives  
[NASA-CASE-LAR-13902-1] c 27 N90-23546

## ADDRESSING

Automatic multi-banking of memory for microprocessors  
[NASA-CASE-NPO-15295-1] c 60 N85-21992

## ADENOSINE TRIPHOSPHATE

Use of the enzyme hexokinase for the reduction of inherent light levels  
[NASA-CASE-XGS-05533] c 04 N69-27487

Light detection instrument Patent  
[NASA-CASE-XGS-05534] c 23 N71-16355

Lyophilized reaction mixtures Patent  
[NASA-CASE-XGS-05532] c 06 N71-17705

Automatic instrument for chemical processing to detect microorganism in biological samples by measuring light reactions  
[NASA-CASE-GSC-11169-2] c 05 N73-32011

Application of luciferase assay for ATP to antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c 51 N77-22794

Rapid, quantitative determination of bacteria in water --- adenosine triphosphate  
[NASA-CASE-GSC-12158-1] c 51 N83-27569

## ADHESION

Stud-bonding gun  
[NASA-CASE-MFS-20299] c 15 N72-11392

Improved refractory coatings --- sputtered coatings on substrates that form stable nitrides  
[NASA-CASE-LEW-23169-2] c 26 N81-16209

Refractory coatings  
[NASA-CASE-LEW-13169-2] c 26 N82-30371

Method of inseting predesigned disbond areas into composite laminates  
[NASA-CASE-LAR-13225-1] c 24 N90-25197

## ADHESION TESTS

Apparatus for the determination of the existence or non-existence of a bonding between two members Patent  
[NASA-CASE-MFS-13686] c 15 N71-18132

## ADHESIVE BONDING

Solar cell mounting Patent  
[NASA-CASE-XNP-00826] c 03 N71-20895

Honeycomb panel and method of making same Patent  
[NASA-CASE-XMF-01402] c 18 N71-21651

Etching of aluminum for bonding Patent  
[NASA-CASE-XMF-02303] c 17 N71-23828

Method and apparatus for attaching physiological monitoring electrodes Patent  
[NASA-CASE-XFR-07658-1] c 05 N71-26293

Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide.  
[NASA-CASE-GSC-11577-1] c 37 N75-15992

Weld-bonded titanium structures  
[NASA-CASE-LAR-11549-1] c 37 N77-11397

Method of adhering bone to a rigid substrate using a graphite fiber reinforced bone cement  
[NASA-CASE-NPO-13764-1] c 27 N78-17215

Thermal barrier coating system  
[NASA-CASE-LEW-12554-1] c 34 N78-18355

Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles  
[NASA-CASE-MSC-12619-2] c 27 N79-12221

Surface finishing  
[NASA-CASE-MSC-12631-3] c 27 N81-14077

Method of bonding plasticized elastomer to metal and articles produced thereby  
[NASA-CASE-MFS-25181-1] c 27 N82-24340

Thermal barrier coating system having improved adhesion  
[NASA-CASE-LEW-1335901] c 27 N83-31855

Impacting device for testing insulation  
[NASA-CASE-MFS-25862-2] c 37 N84-33807

Hot melt adhesive attachment pad  
[NASA-CASE-LAR-12894-1] c 27 N85-20125

High temperature polyimide film laminates and process for preparation thereof  
[NASA-CASE-LAR-13384-1] c 27 N86-20561

Method of attaching strain gauges to various materials  
[NASA-CASE-LAR-13797-1] c 35 N88-30108

Novel polyimide molding powder, coating, adhesive, and matrix resin  
[NASA-CASE-LAR-14163-1] c 27 N91-13559

Flush mounting of thin film sensors  
[NASA-CASE-LAR-14446-1] c 31 N91-28454

## ADHESIVES

Polyimide adhesives  
[NASA-CASE-LAR-11397-1] c 27 N75-29263

Polyimide adhesives  
[NASA-CASE-LAR-12181-1] c 27 N78-17205

Crystalline polyimides --- reinforcing fibers for high temperature composites and adhesives as well as flame retardation  
[NASA-CASE-LAR-12099-1] c 27 N80-16158

Aluminum ion-containing polyimide adhesives  
[NASA-CASE-LAR-12640-1] c 27 N82-11206

Elastomer toughened polyimide adhesives  
[NASA-CASE-LAR-12775-1] c 27 N83-28240

Hot melt recharge system --- repairing damaged or missing tiles on space shuttle orbiter  
[NASA-CASE-LAR-12881-1] c 27 N84-14323

Elastomer toughened polyimide adhesives --- bonding metal and composite material structures for aircraft and spacecraft  
 [NASA-CASE-LAR-12775-2] c 27 N85-21349  
 Thermal compensating mount  
 [NASA-CASE-LAR-14207-1] c 35 N91-14590  
 Processable polyimide adhesive and matrix composite resin  
 [NASA-CASE-LAR-14101-1] c 27 N91-15403  
 Process for bonding elastomers to metal  
 [NASA-CASE-LAR-13645-1] c 27 N91-28424

**ADIABATIC CONDITIONS**  
 Volumetric measurement of tank volume  
 [NASA-CASE-MSC-21500-1] c 35 N91-21493

**ADJUSTING**  
 Instrument support with precise lateral adjustment Patent  
 [NASA-CASE-XMF-00480] c 14 N70-39898  
 Fine adjustment mount  
 [NASA-CASE-MFS-20249] c 15 N72-11386  
 Adjustable support  
 [NASA-CASE-NPO-10721] c 15 N72-27484  
 Clock setter  
 [NASA-CASE-LAR-11458-1] c 35 N76-16392  
 Adjustable mount for electro-optic transducers in an evacuated cryogenic system  
 [NASA-CASE-LAR-13100-1] c 37 N87-23982  
 Adjustable choke for fluids nozzle  
 [NASA-CASE-NPO-17625-1-CU] c 34 N90-27070  
 Apparatus for precision focusing and positioning of a beam waist on a target  
 [NASA-CASE-ARC-11916-1-SB] c 74 N91-14002

**ADSORPTION**  
 Purification system  
 [NASA-CASE-MSC-21584-1] c 25 N91-24362

**AERIAL RUDDERS**  
 Thrust augmented spin recovery device  
 [NASA-CASE-LAR-11970-2] c 08 N81-19130

**AERACOUSTICS**  
 Acoustically swept rotor --- helicopter noise reduction  
 [NASA-CASE-ARC-11106-1] c 05 N80-14107

**AERODYNAMIC BALANCE**  
 Airplane automatic control force trimming device for asymmetric engine failures  
 [NASA-CASE-LAR-13280-1] c 08 N87-20999

**AERODYNAMIC BRAKES**  
 Annular supersonic decelerator or drogue Patent  
 [NASA-CASE-XLE-00222] c 02 N70-37939  
 Lightweight, variable solidity knitted parachute fabric --- for aerodynamic decelerators  
 [NASA-CASE-LAR-10776-1] c 02 N74-10034

**AERODYNAMIC CHARACTERISTICS**  
 Variable sweep wing aircraft Patent  
 [NASA-CASE-XLA-00221] c 02 N70-33266  
 Flight craft Patent  
 [NASA-CASE-XAC-02058] c 02 N71-16087  
 Space shuttle vehicle and system  
 [NASA-CASE-MSC-12433] c 31 N73-14854  
 Airfoil shape for flight at subsonic speeds --- design analysis and aerodynamic characteristics of the GAW-1 airfoil  
 [NASA-CASE-LAR-10585-1] c 02 N76-22154  
 Curved centerline air intake for a gas turbine engine  
 [NASA-CASE-LEW-13201-1] c 07 N81-14999  
 Serrated trailing edges for improving lift and drag characteristics of lifting surfaces  
 [NASA-CASE-LAR-13870-1] c 05 N90-15094  
 Multi-colored layers for visualizing aerodynamic flow effects  
 [NASA-CASE-LAR-13742-1] c 02 N91-16999

**AERODYNAMIC CONFIGURATIONS**  
 Variable-span aircraft Patent  
 [NASA-CASE-XLA-00166] c 02 N70-34178  
 Landing arrangement for aerial vehicle Patent  
 [NASA-CASE-XLA-00806] c 02 N70-34858  
 Space capsule Patent  
 [NASA-CASE-XLA-00149] c 31 N70-37938  
 Hypersonic reentry vehicle Patent  
 [NASA-CASE-XMS-04142] c 31 N70-41631  
 Translating horizontal tail Patent  
 [NASA-CASE-XLA-08801-1] c 02 N71-11043  
 Variable geometry manned orbital vehicle Patent  
 [NASA-CASE-XLA-03691] c 31 N71-15674  
 Nacelle afterbody for jet engines Patent  
 [NASA-CASE-XLA-10450] c 28 N71-21493  
 Variable geometry rotor system  
 [NASA-CASE-LAR-10557] c 02 N72-11018  
 Ferry system  
 [NASA-CASE-LAR-10574-1] c 11 N73-13257  
 Multistage aerospace craft --- perspective drawings of conceptual design  
 [NASA-CASE-XMF-02263] c 05 N74-10907  
 Supersonic fan blading --- noise reduction in turbofan engines  
 [NASA-CASE-LEW-11402-1] c 07 N74-28226

Free wing assembly for an aircraft  
 [NASA-CASE-FRC-10092-1] c 05 N79-12061  
 Multi-body aircraft with an all-movable center fuselage actively controlling fuselage pressure drag  
 [NASA-CASE-LAR-13511-1] c 05 N88-23765  
 Actuated forebody strakes  
 [NASA-CASE-LAR-13983-1] c 05 N90-23390

**AERODYNAMIC DRAG**  
 Skin friction measuring device for aircraft  
 [NASA-CASE-FRC-11029-1] c 06 N81-17057  
 Serrated trailing edges for improving lift and drag characteristics of lifting surfaces  
 [NASA-CASE-LAR-13970-1] c 05 N90-15094

**AERODYNAMIC HEATING**  
 Heat protection apparatus Patent  
 [NASA-CASE-XLA-00892] c 33 N71-17897  
 Heat flux measuring system Patent  
 [NASA-CASE-XFR-03802] c 33 N71-23085  
 Stand-off type ablative heat shield  
 [NASA-CASE-MSC-12143-1] c 33 N72-17947

**AERODYNAMIC INTERFERENCE**  
 Over-the-wing propeller  
 [NASA-CASE-LAR-13134-2] c 07 N87-16828  
 Multi-body aircraft with an all-movable center fuselage actively controlling fuselage pressure drag  
 [NASA-CASE-LAR-13511-1] c 05 N88-23765

**AERODYNAMIC LOADS**  
 Propeller blade loading control Patent  
 [NASA-CASE-XAC-00139] c 02 N70-34856  
 Means for controlling aerodynamically induced twist  
 [NASA-CASE-LAR-12175-1] c 05 N82-28279  
 Over-the-wing propeller  
 [NASA-CASE-LAR-13134-2] c 07 N87-16828

**AERODYNAMIC NOISE**  
 Apparatus for reducing aerodynamic noise in a wind tunnel  
 [NASA-CASE-MFS-23099-1] c 09 N76-23273  
 Acoustically swept rotor --- helicopter noise reduction  
 [NASA-CASE-ARC-11106-1] c 05 N80-14107  
 Curved centerline air intake for a gas turbine engine  
 [NASA-CASE-LEW-13201-1] c 07 N81-14999

**AERODYNAMIC STABILITY**  
 Meteorological balloon Patent  
 [NASA-CASE-XMF-04163] c 02 N71-23007  
 Instrument for measuring the dynamic behavior of liquids Patent  
 [NASA-CASE-XLA-05541] c 12 N71-26387  
 Emergency earth orbital escape device  
 [NASA-CASE-MSC-13281] c 31 N72-18859  
 High lift aircraft --- with improved stability, control, performance, and noise characteristics  
 [NASA-CASE-LAR-11252-1] c 05 N75-25914  
 Hingeless helicopter rotor with improved stability  
 [NASA-CASE-ARC-10807-1] c 05 N77-17029  
 Annular wing  
 [NASA-CASE-FRC-11007-2] c 05 N82-26277  
 Aeroelastic instability stoppers for wind tunnel models  
 [NASA-CASE-LAR-12720-1] c 44 N83-21504  
 Over-the-wing propeller  
 [NASA-CASE-LAR-13134-2] c 07 N87-16828  
 Actuated forebody strakes  
 [NASA-CASE-LAR-13983-1] c 05 N90-23390

**AERODYNAMIC STALLING**  
 Aerodynamic side-force alleviator means  
 [NASA-CASE-LAR-12326-1] c 02 N81-14968

**AERODYNAMICS**  
 Passive laminar flow control of crossflow vorticity  
 [NASA-CASE-LAR-13563-1] c 34 N91-23410

**AEROELASTICITY**  
 Aeroelastic instability stoppers for wind tunnel models  
 [NASA-CASE-LAR-12458-1] c 44 N83-21503  
 Aeroelastic instability stoppers for wind tunnel models  
 [NASA-CASE-LAR-12720-1] c 44 N83-21504

**AERONAUTICAL ENGINEERING**  
 Differential pressure cell Patent  
 [NASA-CASE-XAC-00042] c 14 N70-34816

**AEROSOLS**  
 Liquid aerosol dispenser  
 [NASA-CASE-MFS-20829] c 12 N72-21310  
 Particulate and aerosol detector  
 [NASA-CASE-LAR-11434-1] c 35 N76-22509  
 Thermoluminescent aerosol analysis  
 [NASA-CASE-LAR-12046-1] c 25 N78-15210  
 Particle analyzing method and apparatus  
 [NASA-CASE-NPO-15292-1] c 35 N83-27184  
 Liquid seeding atomizer  
 [NASA-CASE-ARC-11631-1] c 34 N87-21255

**AEROSPACE ENGINEERING**  
 Solar cell including second surface mirrors Patent  
 [NASA-CASE-NPO-10109] c 03 N71-11049  
 Metallic film diffusion for boundary lubrication Patent  
 [NASA-CASE-XLE-10337] c 15 N71-24046  
 Soldering device Patent  
 [NASA-CASE-XLA-08911] c 15 N71-27214  
 Installing fiber insulation  
 [NASA-CASE-MSC-16973-1] c 37 N81-14317

**AEROSPACE ENVIRONMENTS**

Electrostatic thruster with improved insulators Patent  
 [NASA-CASE-XLE-01902] c 28 N71-10574  
 Metallic film diffusion for boundary lubrication Patent  
 [NASA-CASE-XLE-01765] c 18 N71-10772  
 Inorganic solid film lubricants Patent  
 [NASA-CASE-XMF-03988] c 15 N71-21403  
 Particle detection apparatus including a ballistic pendulum Patent  
 [NASA-CASE-XMS-04201] c 14 N71-22990  
 Alloys for bearings Patent  
 [NASA-CASE-XMF-05033] c 15 N71-23810  
 Method and apparatus for varying thermal conductivity Patent  
 [NASA-CASE-XNP-05524] c 33 N71-24876  
 Space simulator Patent  
 [NASA-CASE-NPO-10141] c 11 N71-24964  
 Cyclic switch Patent  
 [NASA-CASE-LEW-10155-1] c 09 N71-29035  
 Automatic biowaste sampling  
 [NASA-CASE-MSC-14640-1] c 54 N76-14804  
 Wobble gear drive mechanism --- for aerospace environments  
 [NASA-CASE-WOO-00625] c 37 N78-17385  
 Plasma cleaning device --- designed for high vacuum environments  
 [NASA-CASE-MFS-22906-1] c 75 N78-27913  
 Process for spinning flame retardant elastomeric compositions --- fabricating synthetic fibers for high oxygen environments  
 [NASA-CASE-MSC-14331-3] c 27 N78-32262  
 General purpose rocket furnace  
 [NASA-CASE-MFS-23460-1] c 12 N79-26075  
 Spray applicator for spraying coatings and other fluids in space  
 [NASA-CASE-MSC-18852-1] c 37 N85-29283  
 Space ultra-vacuum facility and method of operation  
 [NASA-CASE-MFS-28139-1] c 29 N87-18679  
 Method of making a flexible diaphragm  
 [NASA-CASE-MSC-20797-1] c 37 N87-23981  
 Space spider crane  
 [NASA-CASE-LAR-13411-1-SB] c 18 N88-23828  
 Gas particle radiator  
 [NASA-CASE-LEW-14297-1] c 35 N89-12048  
 Tank gauging apparatus and method  
 [NASA-CASE-MSC-21059-2] c 35 N91-15511

**AEROSPACE MEDICINE**  
 Instrument for use in performing a controlled Valsalva maneuver Patent  
 [NASA-CASE-XMS-01615] c 05 N70-41329  
 Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
 [NASA-CASE-ARC-11059-1] c 54 N78-32721

**AEROSPACE PLANES**  
 Multistage aerospace craft --- perspective drawings of conceptual design  
 [NASA-CASE-XMF-02263] c 05 N74-10907

**AEROSPACE SYSTEMS**  
 Bidirectional drive and brake mechanism  
 [NASA-CASE-MSC-21540-1] c 37 N91-32514

**AEROSPACE VEHICLES**  
 Landing arrangement for aerial vehicles Patent  
 [NASA-CASE-XLA-00142] c 02 N70-33286  
 Landing pad assembly for aerospace vehicles Patent  
 [NASA-CASE-XMF-02853] c 31 N70-36654  
 Landing arrangement for aerospace vehicle Patent  
 [NASA-CASE-XLA-00805] c 31 N70-38010  
 Flexibly connected support and skin Patent  
 [NASA-CASE-XLA-01027] c 31 N71-24035  
 Nondestructive spot test method for titanium and titanium alloys  
 [NASA-CASE-LAR-10539-1] c 17 N73-12547  
 Aerospace vehicle  
 [NASA-CASE-LAR-13155-1] c 05 N86-19310  
 Composite flexible blanket insulation  
 [NASA-CASE-NPO-11907-1-NP] c 24 N91-31236

**AFTERBODIES**  
 Nacelle afterbody for jet engines Patent  
 [NASA-CASE-XLA-10450] c 28 N71-21493  
 Missile rolling tail brake torque system --- simulating bearing friction on canard controlled missiles  
 [NASA-CASE-LAR-12751-1] c 15 N84-16231

**AFTERBURNING**  
 Nozzle Patent  
 [NASA-CASE-XLA-00154] c 28 N70-33374

**AGGLOMERATION**  
 Acoustic agglomeration methods and apparatus  
 [NASA-CASE-NPO-15466-1] c 71 N85-22104

**AGING (MATERIALS)**  
 Method of heat treating age-hardenable alloys  
 [NASA-CASE-XNP-01311] c 26 N75-29236  
 Predictive aging of polymers  
 [NASA-CASE-NPO-17524-1-CU] c 27 N90-10261

**AGRICULTURE**  
 Solar-powered pump  
 [NASA-CASE-NPO-13567-1] c 44 N76-29701

- AILERONS**  
Control device Patent  
[NASA-CASE-XAC-10019] c 15 N71-23809
- AIR**  
Gas purged dry box glove Patent  
[NASA-CASE-XLE-02531] c 05 N71-23080  
Superconductive magnetic-field-trapping device  
[NASA-CASE-XNP-01185] c 26 N73-28710  
Solid sorbent air sampler  
[NASA-CASE-MS-C-20653-1] c 35 N86-26595
- AIR BREATHING ENGINES**  
Multiple pure tone elimination strut assembly --- air breathing engines  
[NASA-CASE-FRC-11062-1] c 71 N82-16800
- AIR CONDITIONING**  
Apparatus for supplying conditioned air at a substantially constant temperature and humidity  
[NASA-CASE-GSC-12191-1] c 31 N80-32583  
Automotive absorption air conditioner utilizing solar and motor waste heat  
[NASA-CASE-NPO-15183-1] c 44 N82-26776  
Air modulation apparatus  
[NASA-CASE-LEW-13524-1] c 07 N84-33410
- AIR CONDITIONING EQUIPMENT**  
Portable superclean air column device Patent  
[NASA-CASE-XMF-03212] c 15 N71-22721  
Air conditioning system and component therefore distributing air flow from opposite directions  
[NASA-CASE-GSC-11445-1] c 31 N74-27902  
Heat tube device  
[NASA-CASE-KSC-11395-1-CU] c 34 N91-21473
- AIR COOLING**  
Modification and improvements to cooled blades Patent  
[NASA-CASE-XLE-00092] c 15 N70-33264  
Acoustic convective system  
[NASA-CASE-NPO-17278-1-CU] c 31 N90-21215
- AIR FILTERS**  
Gas filter mounting structure  
[NASA-CASE-MS-C-12297] c 14 N72-23457
- AIR FLOW**  
Wind tunnel airstream oscillating apparatus Patent  
[NASA-CASE-XLA-00112] c 11 N70-33287  
Method of obtaining permanent record of surface flow phenomena Patent  
[NASA-CASE-XLA-01353] c 14 N70-41366  
Gas turbine combustor Patent  
[NASA-CASE-LEW-10286-1] c 28 N71-28915  
Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds  
[NASA-CASE-LAR-10612-1] c 12 N73-28144  
Air conditioning system and component therefore distributing air flow from opposite directions  
[NASA-CASE-GSC-11445-1] c 31 N74-27902  
Controlled separation combustor --- airflow distribution in gas turbine engines  
[NASA-CASE-LEW-11593-1] c 20 N76-14190  
Method and apparatus for fluffing, separating, and cleaning fibers  
[NASA-CASE-LAR-11224-1] c 37 N76-18456  
Smoke generator  
[NASA-CASE-ARC-10905-1] c 37 N77-13418  
Variable cycle gas turbine engines  
[NASA-CASE-LEW-12916-1] c 37 N78-17384  
Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c 07 N78-25089  
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[NASA-CASE-LEW-12938-1] c 07 N82-32366  
Vapor fragrancier  
[NASA-CASE-LAR-13680-1] c 35 N87-25561  
Passive venting technique for shallow cavities  
[NASA-CASE-LAR-14031-1] c 05 N90-20079  
Acoustic convective system  
[NASA-CASE-NPO-17278-1-CU] c 31 N90-21215
- AIR INTAKES**  
Aeroflexible structures  
[NASA-CASE-XLA-06095] c 01 N69-39981  
Reversed cowl flap inlet thrust augmentor --- with adjustable airfoil  
[NASA-CASE-ARC-10754-1] c 07 N75-24736  
Self stabilizing sonic inlet  
[NASA-CASE-LEW-11890-1] c 05 N79-24976  
Curved centerline air intake for a gas turbine engine  
[NASA-CASE-LEW-13201-1] c 07 N81-14999  
Control means for a gas turbine engine  
[NASA-CASE-LEW-14586-1] c 07 N83-31603
- AIR LOCKS**  
Spacecraft airlock Patent  
[NASA-CASE-XLA-02050] c 31 N71-22968  
Thruster maintenance system Patent  
[NASA-CASE-MFS-20325] c 28 N71-27095  
An airlock  
[NASA-CASE-MFS-20922] c 31 N72-20840  
Airlock  
[NASA-CASE-MFS-20922-1] c 18 N74-22136
- Apparatus for inserting and removing specimens from high temperature vacuum furnaces  
[NASA-CASE-LAR-10841-1] c 31 N74-27900
- AIR NAVIGATION**  
Autonomous navigation system --- gyroscopic pendulum for air navigation  
[NASA-CASE-ARC-11257-1] c 04 N81-21047  
Magnetic heading reference  
[NASA-CASE-LAR-12638-1] c 04 N84-14132
- AIR POLLUTION**  
Analytical photoionization mass spectrometer with an argon gas filter between the light source and monochromator Patent  
[NASA-CASE-LAR-10180-1] c 06 N71-13461  
Separation nut Patent  
[NASA-CASE-XGS-01971] c 15 N71-15922  
Monitoring atmospheric pollutants with a heterodyne radiometer transmitter-receiver  
[NASA-CASE-NPO-11919-1] c 35 N74-11284  
Fluorescence detector for monitoring atmospheric pollutants  
[NASA-CASE-NPO-13231-1] c 45 N75-27585  
Stack plume visualization system  
[NASA-CASE-LAR-11675-1] c 45 N76-17656  
Indicator providing continuous indication of the presence of a specific pollutant in air  
[NASA-CASE-NPO-13474-1] c 45 N76-21742  
Method for detecting pollutants --- through chemical reactions and heat treatment  
[NASA-CASE-LAR-11405-1] c 45 N76-31714  
Combustion engine --- for air pollution control  
[NASA-CASE-NPO-13671-1] c 37 N77-31497  
Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c 44 N78-31527  
Combined air and water pollution control system  
[NASA-CASE-NST-00007-1] c 45 N91-14662
- AIR PURIFICATION**  
High pressure gas filter system Patent  
[NASA-CASE-MFS-12806] c 14 N71-17588  
Portable superclean air column device Patent  
[NASA-CASE-XMF-03212] c 15 N71-22721  
Cell and method for electrolysis of water and anode  
[NASA-CASE-MS-C-16394-1] c 28 N81-24280
- AIR QUALITY**  
Vapor fragrancier  
[NASA-CASE-LAR-13680-1] c 35 N87-25561
- AIR SAMPLING**  
Aerodynamic measuring device Patent  
[NASA-CASE-XLA-00481] c 14 N70-36824  
Sampler of gas borne particles  
[NASA-CASE-NPO-13396-1] c 35 N76-18401  
Automated syringe sampler --- remote sampling of air and water  
[NASA-CASE-LAR-12308-1] c 35 N81-29407  
Mobile sampler for use in acquiring samples of terrestrial atmospheric gases  
[NASA-CASE-NPO-15220-1] c 45 N83-25217
- AIR START**  
Portable device for use in starting air-start-units for aircraft and having cable lead testing capability  
[NASA-CASE-FRC-10113-1] c 33 N80-26599
- AIR TRAFFIC CONTROL**  
Traffic control system and method Patent  
[NASA-CASE-GSC-10087-1] c 02 N71-19287  
Satellite aided vehicle avoidance system Patent  
[NASA-CASE-ERC-10090] c 21 N71-24948  
Position location system and method  
[NASA-CASE-GSC-10087-3] c 07 N72-12080  
Video processor for air traffic control beacon system  
[NASA-CASE-KSC-11155-1] c 04 N86-19304
- AIR TRANSPORTATION**  
Segmented tubular cushion springs and spring assembly  
[NASA-CASE-ARC-11349-1] c 37 N86-20797
- AIRBORNE EQUIPMENT**  
Inflatable radar reflector unit Patent  
[NASA-CASE-XMS-00893] c 07 N70-40063  
Airborne tracking sunphotometer apparatus and system  
[NASA-CASE-ARC-11622-1] c 44 N88-14492  
Airborne rescue system  
[NASA-CASE-ARC-11909-1] c 03 N91-31113
- AIRBORNE/SPACEBORNE COMPUTERS**  
Ripple add and ripple subtract binary counters Patent  
[NASA-CASE-XGS-04766] c 08 N71-18602  
Shared memory for a fault-tolerant computer  
[NASA-CASE-NPO-13139-1] c 60 N76-21914
- AIRCRAFT**  
System for indicating direction of intruder aircraft  
[NASA-CASE-ERC-10226-1] c 14 N73-16483  
Thin conformal antenna array for microwave power conversions  
[NASA-CASE-NPO-13886-1] c 32 N78-24391  
System for indicating fuel-efficient aircraft altitude  
[NASA-CASE-NPO-15351-2] c 06 N84-34443
- AIRCRAFT ACCIDENTS**  
Satellite aided vehicle avoidance system Patent  
[NASA-CASE-ERC-10090] c 21 N71-24948
- AIRCRAFT ANTENNAS**  
Spiral slotted phased antenna array  
[NASA-CASE-MS-C-18532-1] c 32 N82-27558
- AIRCRAFT COMPARTMENTS**  
Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety  
[NASA-CASE-ARC-11040-2] c 24 N78-27184
- AIRCRAFT CONFIGURATIONS**  
Variable sweep wing configuration Patent  
[NASA-CASE-XLA-00230] c 02 N70-33255  
Television simulation for aircraft and space flight Patent  
[NASA-CASE-XFR-03107] c 09 N71-19449  
Dual-fuselage aircraft having yawable wing and horizontal stabilizer  
[NASA-CASE-ARC-10470-1] c 02 N73-26005  
Family of airfoil shapes for rotating blades --- for increased power efficiency and blade stability  
[NASA-CASE-LAR-12843-1] c 02 N84-11136  
Actuated forebody strakes  
[NASA-CASE-LAR-13983-1] c 05 N90-23390
- AIRCRAFT CONSTRUCTION MATERIALS**  
Fuselage structure using advanced technology fiber reinforced composites  
[NASA-CASE-LAR-11688-1] c 24 N82-26384  
Curved cap corrugated sheet  
[NASA-CASE-LAR-12884-1] c 18 N84-33450  
Aluminum alloy  
[NASA-CASE-LAR-13924-1-CU] c 26 N89-28621
- AIRCRAFT CONTROL**  
Control for flexible parawing Patent  
[NASA-CASE-XLA-06958] c 02 N71-11038  
Attitude controls for VTOL aircraft Patent  
[NASA-CASE-XAC-08972] c 02 N71-20570  
Control device Patent  
[NASA-CASE-XAC-10019] c 15 N71-23809  
Direct lift control system Patent  
[NASA-CASE-LAR-10249-1] c 02 N71-26110  
High speed flight vehicle control Patent  
[NASA-CASE-XLA-08967] c 02 N71-27088  
Mechanically limited, electrically operated hydraulic valve system for aircraft controls Patent  
[NASA-CASE-XAC-00048] c 02 N71-29128  
Flight control system  
[NASA-CASE-MS-C-13397-1] c 21 N72-25595  
Aircraft control system  
[NASA-CASE-ERC-10439] c 02 N73-19004  
Display system  
[NASA-CASE-ERC-10350] c 14 N73-20474  
Suppression of flutter  
[NASA-CASE-LAR-10682-1] c 02 N73-26004  
Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c 05 N75-12930  
High lift aircraft --- with improved stability, control, performance, and noise characteristics  
[NASA-CASE-LAR-11252-1] c 05 N75-25914  
Filtering technique based on high-frequency plant modeling for high-gain control  
[NASA-CASE-LAR-12215-1] c 08 N79-23097  
Velocity vector control system augmented with direct lift control  
[NASA-CASE-LAR-12268-1] c 08 N81-24106  
Pitch attitude stabilization system utilizing engine pressure ratio feedback signals  
[NASA-CASE-LAR-12562-1] c 08 N81-26152  
Leading edge flap system for aircraft control augmentation  
[NASA-CASE-LAR-12787-2] c 08 N85-19985  
Airplane automatic control force trimming device-for asymmetric engine failures  
[NASA-CASE-LAR-13280-1] c 08 N87-20999  
Aircraft control position indicator  
[NASA-CASE-LAR-12984-1] c 06 N87-22678  
High performance forward swept wing aircraft  
[NASA-CASE-ARC-11636-1] c 05 N88-28914  
Actuated forebody strakes  
[NASA-CASE-LAR-13983-1] c 05 N90-23390  
Selectable towline spin chute system  
[NASA-CASE-LAR-14322-1] c 02 N91-27139  
Rotatable non-circular forebody flow controller  
[NASA-CASE-LAR-14212-1-CU] c 05 N91-31140
- AIRCRAFT DESIGN**  
Supersonic aircraft Patent  
[NASA-CASE-XLA-04451] c 02 N71-12243  
Dual-fuselage aircraft having yawable wing and horizontal stabilizer  
[NASA-CASE-ARC-10470-1] c 02 N73-26005  
Multistage aerospace craft --- perspective drawings of conceptual design  
[NASA-CASE-XMF-02263] c 05 N74-10907

- High lift aircraft --- with improved stability, control, performance, and noise characteristics  
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- Oblique-wing supersonic aircraft  
[NASA-CASE-ARC-10470-3] c 05 N76-29217
- Supersonic transport --- using canard surfaces  
[NASA-CASE-LAR-11932-1] c 05 N78-32086
- Shapes for rotating airfoils  
[NASA-CASE-LAR-12396-1] c 02 N84-28732
- Geometries for roughness shapes in laminar flow  
[NASA-CASE-LAR-13255-1] c 02 N87-16793
- Multi-body aircraft with an all-movable center fuselage actively controlling fuselage pressure drag  
[NASA-CASE-LAR-13511-1] c 05 N88-23765
- Compression pylon  
[NASA-CASE-LAR-13777-1] c 05 N90-20078
- AIRCRAFT DETECTION**
- Altitude measuring system  
[NASA-CASE-ERC-10412-1] c 09 N73-12211
- Apparatus for measuring an aircraft's speed and height  
[NASA-CASE-LAR-12275-1] c 35 N79-18296
- AIRCRAFT ENGINES**
- Noise suppressor --- for turbofan engine by incorporating annular acoustically porous elements in exhaust and inlet ducts  
[NASA-CASE-LAR-11141-1] c 07 N74-32418
- Dual cycle aircraft turbine engine  
[NASA-CASE-LAR-11310-1] c 07 N77-28118
- Portable device for use in starting air-start-units for aircraft and having cable lead testing capability  
[NASA-CASE-FRC-10113-1] c 33 N80-26599
- Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c 07 N80-32392
- Diesel engine catalytic combustor system --- aircraft engines  
[NASA-CASE-LEW-12995-1] c 37 N84-33808
- Elevated temperature aluminum alloys  
[NASA-CASE-LAR-13632-1] c 26 N87-29650
- AIRCRAFT EQUIPMENT**
- Clear air turbulence detector  
[NASA-CASE-ERC-10081] c 14 N72-28437
- Air speed and altitude probe  
[NASA-CASE-FRC-11009-1] c 06 N80-18036
- Cooling system for high speed aircraft  
[NASA-CASE-LAR-12406-1] c 05 N81-26114
- System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-FRC-11005-1] c 06 N82-16075
- Piezoelectric deicing device  
[NASA-CASE-LEW-13773-2] c 33 N86-20671
- Fire resistant polyamide based on 1-(diorganoxyphosphonyl)methyl-2,4- and -2,6-diamino benzene  
[NASA-CASE-ARC-11512-2] c 27 N86-32568
- Lightning discharge protection rod  
[NASA-CASE-LAR-13470-1] c 03 N88-14083
- Control surface actuator  
[NASA-CASE-LAR-12852-1] c 05 N89-11738
- Wingtip vortex turbine  
[NASA-CASE-LAR-14116-1] c 05 N91-14345
- AIRCRAFT FUEL SYSTEMS**
- Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12321-1] c 37 N78-10467
- AIRCRAFT GUIDANCE**
- Terminal guidance system --- for guiding aircraft into preselected altitude and/or heading at terminal point  
[NASA-CASE-FRC-10049-1] c 04 N74-13420
- Sun sensing guidance system for high altitude aircraft  
[NASA-CASE-FRC-11052-1] c 04 N82-23231
- AIRCRAFT HAZARDS**
- Inlet deflector for jet engines Patent  
[NASA-CASE-XLE-00388] c 28 N70-34788
- AIRCRAFT HYDRAULIC SYSTEMS**
- Gas turbine engine fuel control  
[NASA-CASE-LEW-11187-1] c 28 N73-19793
- Hydraulic actuator mechanism to control aircraft spoiler movements through dual input commands  
[NASA-CASE-LAR-12412-1] c 08 N82-24205
- Control surface actuator  
[NASA-CASE-LAR-12852-1] c 05 N89-11738
- AIRCRAFT INSTRUMENTS**
- Airplane take-off performance indicator Patent  
[NASA-CASE-XLA-00100] c 14 N70-36807
- Aerodynamic measuring device Patent  
[NASA-CASE-XLA-00481] c 14 N70-36824
- Aircraft instrument Patent  
[NASA-CASE-XLA-00487] c 14 N70-40157
- Optical projector system Patent  
[NASA-CASE-XNP-03853] c 23 N71-21882
- Combined optical attitude and altitude indicating instrument Patent  
[NASA-CASE-XLA-01907] c 14 N71-23268
- Head-up attitude display  
[NASA-CASE-ERC-10392] c 21 N73-14692
- G-load measuring and indicator apparatus  
[NASA-CASE-ARC-10806-1] c 35 N75-29381
- Magnetic heading reference  
[NASA-CASE-LAR-11387-1] c 04 N76-20114
- Aircraft-mounted crash-activated transmitter device  
[NASA-CASE-MFS-16609-3] c 03 N76-32140
- Heads up display  
[NASA-CASE-LAR-12630-1] c 06 N84-27733
- System for indicating fuel-efficient aircraft altitude  
[NASA-CASE-NPO-15351-2] c 06 N84-34443
- Microwave temperature profiler for clear air turbulence prediction  
[NASA-CASE-NPO-18115-1-CU] c 47 N91-23662
- AIRCRAFT LANDING**
- Landing arrangement for aerial vehicle Patent  
[NASA-CASE-XLA-00806] c 02 N70-34858
- Magnetic position detection method and apparatus  
[NASA-CASE-ARC-10179-1] c 21 N72-22619
- Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c 05 N75-12930
- Vehicle simulator binocular multiplanar visual display system  
[NASA-CASE-ARC-10808-1] c 09 N76-24280
- Full color hybrid display for aircraft simulators --- landing aids  
[NASA-CASE-ARC-10903-1] c 09 N78-18083
- Environmental fog/rain visual display system for aircraft simulators  
[NASA-CASE-ARC-11158-1] c 09 N82-24212
- Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13734-1-CU] c 09 N90-20096
- AIRCRAFT LAUNCH DEVICES**
- Rotating launch device for a remotely piloted aircraft  
[NASA-CASE-ARC-10979-1] c 09 N77-19076
- AIRCRAFT MANEUVERS**
- G-load measuring and indicator apparatus  
[NASA-CASE-ARC-10806-1] c 35 N75-29381
- AIRCRAFT MODELS**
- Test unit free-flight suspension system Patent  
[NASA-CASE-XLA-00939] c 11 N71-15926
- Variable geometry wind tunnels  
[NASA-CASE-XLA-07430] c 11 N72-22246
- Deploy/release system --- model aircraft flight control  
[NASA-CASE-LAR-11575-1] c 02 N76-16014
- AIRCRAFT NOISE**
- Instrumentation for measuring aircraft noise and sonic boom  
[NASA-CASE-LAR-11476-1] c 07 N76-27232
- Acoustic guide for noise-transmission testing of aircraft  
[NASA-CASE-LAR-13111-1-CU] c 71 N87-21652
- AIRCRAFT PERFORMANCE**
- Ferry system  
[NASA-CASE-LAR-10574-1] c 11 N73-13257
- High performance forward swept wing aircraft  
[NASA-CASE-ARC-11636-1] c 05 N88-28914
- Method and system for monitoring and displaying engine performance parameters  
[NASA-CASE-LAR-14049-1] c 07 N89-23466
- Airplane takeoff and landing performance monitoring system  
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- Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13854-1-CU] c 04 N91-31120
- AIRCRAFT PILOTS**
- Apparatus for applying simulator g-forces to an arm of an aircraft simulator pilot  
[NASA-CASE-LAR-10550-1] c 09 N74-30597
- AIRCRAFT POWER SUPPLIES**
- Wingtip vortex turbine  
[NASA-CASE-LAR-14116-1] c 05 N91-14345
- AIRCRAFT SAFETY**
- Airplane take-off performance indicator Patent  
[NASA-CASE-XLA-00100] c 14 N70-36807
- Display research collision warning system  
[NASA-CASE-HQN-10703] c 21 N73-13643
- Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft  
[NASA-CASE-LAR-10753-1] c 08 N74-30421
- Fire blocking systems for aircraft seat cushions  
[NASA-CASE-ARC-11423-1] c 03 N84-33394
- Variable response load limiting device  
[NASA-CASE-LAR-12801-1] c 37 N88-23982
- AIRCRAFT SPIN**
- Extended moment arm anti-spin device  
[NASA-CASE-LAR-12979-1] c 05 N85-21147
- Dual towline spin-recovery device  
[NASA-CASE-LAR-13076-1] c 08 N85-35200
- Electro-optical spin measurement system  
[NASA-CASE-LAR-13629-1] c 09 N91-14356
- Selectable towline spin chute system  
[NASA-CASE-LAR-14322-1] c 02 N91-27139
- AIRCRAFT STABILITY**
- Mechanical stability augmentation system Patent  
[NASA-CASE-XLA-06339] c 02 N71-13422
- Suppression of flutter  
[NASA-CASE-LAR-10682-1] c 02 N73-26004
- High performance forward swept wing aircraft  
[NASA-CASE-ARC-11636-1] c 05 N88-28914
- AIRCRAFT STRUCTURES**
- Fatigue testing device Patent  
[NASA-CASE-XLA-02131] c 32 N70-42003
- Heat flux measuring system Patent  
[NASA-CASE-XFR-03802] c 33 N71-23085
- Three-axis adjustable loading structure  
[NASA-CASE-FRC-10051-1] c 35 N74-13129
- Transparent fire resistant polymeric structures  
[NASA-CASE-ARC-10813-1] c 27 N76-16230
- Wingtip vortex dissipator for aircraft  
[NASA-CASE-LAR-11645-1] c 02 N77-10001
- Aircraft canopy lock  
[NASA-CASE-FRC-11065-1] c 05 N83-19737
- Metal matrix composite structural panel construction  
[NASA-CASE-LAR-12807-1] c 24 N84-11214
- Elastomer toughened polyimide adhesives --- bonding metal and composite material structures for aircraft and spacecraft  
[NASA-CASE-LAR-12775-2] c 27 N85-21349
- Optimized bolted joint  
[NASA-CASE-LAR-13250-1] c 37 N86-27630
- Fire resistant polyamide based on 1-(diorganoxyphosphonyl)methyl-2,4- and -2,6-diamino benzene  
[NASA-CASE-ARC-11512-2] c 27 N86-32568
- The 1-(diorganoxy phosphonyl) methyl-2,4- and -2,6-diamino benzenes and their derivatives  
[NASA-CASE-ARC-11425-2] c 23 N87-28605
- Elevated temperature aluminum alloys  
[NASA-CASE-LAR-13632-1] c 26 N87-29650
- Some 1-(diorganoxyphosphonyl)methyl-2,4- and -2,6-dinitro-benzenes  
[NASA-CASE-ARC-11425-3] c 23 N90-23475
- AIRCRAFT TIRES**
- Tire/wheel concept  
[NASA-CASE-LAR-11695-2] c 37 N81-24443
- AIRCRAFT WAKES**
- System for use in conducting wake investigation for a wing in flight --- differential pressure measurements for drag investigations  
[NASA-CASE-FRC-11024-1] c 02 N80-28300
- AIRFOIL PROFILES**
- Family of airfoil shapes for rotating blades --- for increased power efficiency and blade stability  
[NASA-CASE-LAR-12843-1] c 02 N84-11136
- AIRFOILS**
- Minimum induced drag airfoil body Patent  
[NASA-CASE-XLA-00755] c 01 N71-13410
- Minimum induced drag airfoil body Patent  
[NASA-CASE-XLA-05828] c 01 N71-13411
- Wind tunnel  
[NASA-CASE-LAR-10135-1] c 09 N79-21083
- Surface finishing  
[NASA-CASE-MSC-12631-3] c 27 N81-14077
- Aircraft rotor blade with passive tuned tab  
[NASA-CASE-ARC-11444-1] c 05 N85-29947
- Airfoil flutter model suspension system  
[NASA-CASE-LAR-13522-1-SB] c 09 N87-25334
- Porous plug for reducing orifice induced pressure error in airfoils  
[NASA-CASE-LAR-13569-1] c 35 N89-12841
- High lift, low pitching moment airfoils  
[NASA-CASE-LAR-13215-1] c 02 N89-14224
- AIRFRAMES**
- Dual-fuselage aircraft having yawable wing and horizontal stabilizer  
[NASA-CASE-ARC-10470-1] c 02 N73-26005
- Cooling system for high speed aircraft  
[NASA-CASE-LAR-12406-1] c 05 N81-26114
- Explosively activated egress area  
[NASA-CASE-LAR-12624-1] c 01 N83-35992
- AIR SPEED**
- Landing arrangement for aerial vehicle Patent  
[NASA-CASE-XLA-00806] c 02 N70-34858
- Apparatus for measuring an aircraft's speed and height  
[NASA-CASE-LAR-12275-1] c 35 N79-18296
- Air speed and altitude probe  
[NASA-CASE-FRC-11009-1] c 06 N80-18036
- Miniature electrooptical air flow sensor  
[NASA-CASE-LAR-13065-1] c 35 N85-20295
- ALBUMINS**
- Human serum albumin crystals and method of preparation  
[NASA-CASE-MFS-28234-1] c 52 N90-20616
- ALCOHOLS**
- Trifunctional alcohol  
[NASA-CASE-NPO-10714] c 06 N69-31244

- Laser coolant and ultraviolet filter  
[NASA-CASE-MFS-20180] c 16 N72-12440
- Alkaline battery containing a separator of a cross-linked copolymer of vinyl alcohol and unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c 33 N85-29144
- ALDEHYDES**
- Direct synthesis of polymeric schiff bases from two amines and two aldehydes Patent  
[NASA-CASE-XMF-08655] c 06 N71-11239
- Azine polymers and process for preparing the same Patent  
[NASA-CASE-XMF-08656] c 06 N71-11242
- Aromatic diamine-aromatic dialdehyde high molecular weight Schiff base polymers prepared in a monofunctional Schiff base Patent  
[NASA-CASE-XMF-03074] c 06 N71-24740
- Nuclear alkylated pyridine aldehyde polymers and conductive compositions thereof  
[NASA-CASE-NPO-10557] c 27 N78-17214
- Polyvinyl alcohol cross-linked with two aldehydes  
[NASA-CASE-LEW-13504-1] c 25 N83-13188
- ALGORITHMS**
- Systemic VLSI array for implementing the Kalman filter algorithm  
[NASA-CASE-NPO-17108-1-CU] c 33 N89-28713
- Multistage estimation of received carrier signal parameters under very high dynamic conditions of the receiver  
[NASA-CASE-NPO-17911-1-CU] c 32 N90-27016
- Modified fast frequency acquisition via adaptive least squares algorithm  
[NASA-CASE-NPO-17845-1-CU] c 61 N90-27341
- Predictive sensor method and apparatus  
[NASA-CASE-SSC-00006-1] c 35 N91-13691
- Obstacle avoidance for redundant robots using configuration control  
[NASA-CASE-NPO-17852-1-CU] c 63 N91-23783
- ALIGNMENT**
- Instrument support with precise lateral adjustment Patent  
[NASA-CASE-XMF-00480] c 14 N70-39898
- Portable alignment tool Patent  
[NASA-CASE-XMF-01452] c 15 N70-41371
- Optical alignment system Patent  
[NASA-CASE-XNP-02029] c 14 N70-41955
- Trigonometric vehicle guidance assembly which aligns the three perpendicular axes of two three-axes systems Patent  
[NASA-CASE-XMF-00684] c 21 N71-21688
- Aligning and positioning device Patent  
[NASA-CASE-XMS-04178] c 15 N71-22798
- Method and apparatus for aligning a laser beam projector Patent  
[NASA-CASE-NPO-11087] c 23 N71-29125
- Roll alignment detector  
[NASA-CASE-GSC-10514-1] c 14 N72-20379
- Zero gravity shadow shield aligner  
[NASA-CASE-KSC-10622-1] c 31 N72-21893
- Alignment apparatus using a laser having a gravitationally sensitive cavity reflector  
[NASA-CASE-ARC-10444-1] c 16 N73-33397
- Spacecraft docking and alignment system --- using television camera system  
[NASA-CASE-MS-C-12559-1] c 18 N76-14186
- Method of constructing dished ion thruster grids to provide hole array spacing compensation  
[NASA-CASE-LEW-11876-1] c 20 N76-21276
- Optical alignment device  
[NASA-CASE-ARC-10932-1] c 74 N76-22993
- Precision alignment apparatus for cutting a workpiece  
[NASA-CASE-LAR-11658-1] c 37 N77-14478
- Guide for a typewriter  
[NASA-CASE-MFS-15218-1] c 37 N77-19457
- Rotary target V-block  
[NASA-CASE-LAR-12007-3] c 35 N84-16523
- Ingot slicing machine and method  
[NASA-CASE-NPO-15483-1] c 37 N85-21650
- X-ray determination of parts alignment  
[NASA-CASE-MS-C-20418-1] c 74 N86-20126
- Simulator scene display evaluation device  
[NASA-CASE-ARC-11504-1] c 09 N86-32447
- Adjustable mount for electro-optic transducers in an evacuated cryogenic system  
[NASA-CASE-LAR-13100-1] c 37 N87-23982
- Alignment and assembly tool for very large diameter cylinders  
[NASA-CASE-MFS-28001-2] c 37 N88-14360
- Improved docking alignment system  
[NASA-CASE-MS-C-21372-1] c 35 N89-12842
- Space module assembly apparatus with docking alignment flexibility and restraint  
[NASA-CASE-MS-C-21211-1] c 18 N89-28553
- Tensile film clamps and mounting block for the rheovibron and autovibron viscoelastometer  
[NASA-CASE-LAR-13696-1] c 37 N90-20409
- Induction-type metal detector with increased scanning area capability  
[NASA-CASE-KSC-11386-1] c 35 N90-22023
- Thermal compensating mount  
[NASA-CASE-LAR-14207-1] c 35 N91-14590
- Multiple axis reticle  
[NASA-CASE-ARC-11886-1-SB] c 35 N91-14591
- Mechanical strain isolator mount  
[NASA-CASE-LAR-13580-1] c 37 N91-21541
- Alignment positioning mechanism  
[NASA-CASE-MS-C-21502-1] c 37 N91-21543
- Three dimensional moire pattern alignment  
[NASA-CASE-MS-C-21416-1] c 74 N91-32922
- ALKALI HALIDES**
- Fire extinguishant materials  
[NASA-CASE-ARC-11252-1] c 25 N83-36118
- ALKALI METALS**
- Alkali-metal silicate protective coating  
[NASA-CASE-XGS-04119] c 18 N69-39979
- Analytical test apparatus and method for determining oxide content of alkali metal Patent  
[NASA-CASE-XLE-01997] c 06 N71-23527
- Alkali metal silicate protective coating Patent  
[NASA-CASE-XGS-04799] c 18 N71-24183
- Heat activated cell with alkali anode and alkali salt electrolyte Patent  
[NASA-CASE-LEW-11358] c 03 N71-26084
- Preparation of alkali metal dispersions  
[NASA-CASE-XNP-08876] c 17 N73-28573
- Process for preparing higher oxides of the alkali and alkaline earth metals  
[NASA-CASE-ARC-10992-1] c 26 N78-32229
- Alkali-metal silicate binders and methods of manufacture  
[NASA-CASE-GSC-12303-1] c 24 N79-31347
- Heat pipes containing alkali metal working fluid  
[NASA-CASE-LEW-12253-1] c 74 N83-19596
- Fire extinguishant materials  
[NASA-CASE-ARC-11252-1] c 25 N83-36118
- ALKALINE BATTERIES**
- Method for determining the state of charge of batteries by the use of tracers Patent  
[NASA-CASE-XNP-01464] c 03 N71-10728
- Electrochemical coulometer and method of forming same Patent  
[NASA-CASE-XGS-05434] c 03 N71-20491
- Electrocatalyst for oxygen reduction  
[NASA-CASE-HQN-10537-1] c 06 N72-10138
- Inorganic-organic separators for alkaline batteries  
[NASA-CASE-LEW-12649-1] c 44 N78-25530
- Polyvinyl alcohol battery separator containing inert filler --- alkaline batteries  
[NASA-CASE-LEW-13556-1] c 44 N81-27615
- Process of treating cellulosic membrane and alkaline with membrane separator  
[NASA-CASE-GSC-10019-1] c 44 N82-24641
- Separator for alkaline batteries and method of making same  
[NASA-CASE-GSC-10350-1] c 44 N82-24642
- Separator for alkaline electric cells and method of making  
[NASA-CASE-GSC-10017-1] c 44 N82-24643
- Separator for alkaline electric batteries and method of making  
[NASA-CASE-GSC-10018-1] c 44 N82-24644
- Aqueous alkali metal hydroxide insoluble cellulose ether membrane  
[NASA-CASE-XGS-05584-1] c 25 N82-29370
- Advanced inorganic separators for alkaline batteries  
[NASA-CASE-LEW-13171-1] c 44 N82-29708
- Advanced inorganic separators for alkaline batteries and method of making the same  
[NASA-CASE-LEW-13171-2] c 44 N83-32176
- Additive for zinc electrodes --- electric automobiles  
[NASA-CASE-LEW-13286-1] c 33 N84-14422
- Alkaline battery containing a separator of a cross-linked copolymer of vinyl alcohol and unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c 33 N85-29144
- ALKALINE EARTH OXIDES**
- Process for preparing higher oxides of the alkali and alkaline earth metals  
[NASA-CASE-ARC-10992-1] c 26 N78-32229
- ALKYL COMPOUNDS**
- Fluorohydroxy ethers  
[NASA-CASE-MFS-10507] c 06 N73-30101
- Process for preparing perfluorotriazine elastomers and precursors thereof  
[NASA-CASE-ARC-11402-1] c 27 N84-22744
- Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-2-SB] c 27 N90-21177
- Some 1-(diorganoxyphosphonyl)methyl-2,4- and -2,6-dinitro-benzenes  
[NASA-CASE-ARC-11425-3] c 23 N90-23475
- Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-4] c 23 N91-25185
- ALKYNES**
- High performance channel injection sealant invention abstract  
[NASA-CASE-ARC-14408-1] c 27 N82-33523
- ALLOYS**
- Brazing alloy Patent  
[NASA-CASE-XNP-03063] c 17 N71-23365
- Alloys for bearings Patent  
[NASA-CASE-XLE-05033] c 15 N71-23810
- Process for applying black coating to metals Patent  
[NASA-CASE-XLA-06199] c 15 N71-24875
- Adjustable mount for a trihedral mirror Patent  
[NASA-CASE-XNP-08907] c 23 N71-29123
- Enhanced diffusion welding  
[NASA-CASE-LEW-11388-1] c 15 N73-32358
- Brazing alloy binder  
[NASA-CASE-XMF-05868] c 26 N75-27125
- Brazing alloy  
[NASA-CASE-XNP-03878] c 26 N75-27127
- Castable hot corrosion resistant alloy  
[NASA-CASE-LEW-14134-2] c 26 N89-14303
- Solidification processing of alloys using an applied electric field  
[NASA-CASE-MFS-26083-1-CU] c 26 N90-26940
- ALPHA PARTICLES**
- Method and means for helium/hydrogen ratio measurement by alpha scattering  
[NASA-CASE-NPO-14079-1] c 25 N80-20334
- ALPHANUMERIC CHARACTERS**
- X-Y alphanumeric character generator for oscilloscopes  
[NASA-CASE-GSC-11582-1] c 33 N75-19517
- ALTERNATING CURRENT**
- Ac power amplifier Patent Application  
[NASA-CASE-LAR-10218-1] c 09 N70-34559
- Frequency control network for a current feedback oscillator Patent  
[NASA-CASE-GSC-10041-1] c 10 N71-19418
- Blood pressure measuring system for separating and separately recording dc signal and an ac signal Patent  
[NASA-CASE-XMS-06061] c 05 N71-23317
- Switching circuit Patent  
[NASA-CASE-XNP-06505] c 10 N71-24799
- Pulse width inverter Patent  
[NASA-CASE-MFS-10068] c 10 N71-25139
- Inverter with means for base current shaping for sweeping charge carriers from base region Patent  
[NASA-CASE-XGS-06226] c 10 N71-25950
- A dc to ac to dc converter having transistor synchronous rectifiers  
[NASA-CASE-GSC-11126-1] c 09 N72-25253
- Phase protection system for ac power lines  
[NASA-CASE-MS-C-17832-1] c 33 N74-14956
- Solar cell system having alternating current output  
[NASA-CASE-LEW-12806-2] c 44 N81-12542
- Power factor control system for ac induction motors  
[NASA-CASE-MFS-23988-1] c 33 N81-27395
- Non-contacting power transfer device  
[NASA-CASE-GSC-12595-1] c 33 N82-24422
- Motor power control circuit for ac induction motors  
[NASA-CASE-MFS-25323-1] c 33 N84-22886
- Coupling an induction motor type generator to ac power lines --- making windmill generators compatible with public power lines  
[NASA-CASE-MFS-25302-2] c 33 N84-33660
- Three-phase power factor controller with induced EMF sensing  
[NASA-CASE-MFS-25852-1] c 33 N84-33661
- Power control for ac motor  
[NASA-CASE-MFS-25861-1] c 33 N85-22877
- Induction heating gun  
[NASA-CASE-LAR-13181-1] c 31 N85-29083
- ALTIMETERS**
- Echo tracker/range finder for radars and sonars  
[NASA-CASE-NPO-14361-1] c 32 N82-23376
- ALTITUDE**
- Combined optical attitude and altitude indicating instrument Patent  
[NASA-CASE-XLA-01907] c 14 N71-23268
- ALTITUDE CONTROL**
- Check valve assembly for a probe Patent  
[NASA-CASE-XLA-00128] c 15 N70-37925
- ALUMINUM**
- Method of joining aluminum to stainless steel Patent  
[NASA-CASE-MFS-07369] c 15 N71-20443
- Thermal control coating Patent  
[NASA-CASE-XLA-01995] c 18 N71-23047
- Etching of aluminum for bonding Patent  
[NASA-CASE-XMF-02303] c 17 N71-23828
- Process for producing dispersion strengthened nickel with aluminum Patent  
[NASA-CASE-XLE-06969] c 17 N71-24142

- Plating nickel on aluminum castings Patent  
[NASA-CASE-XNP-04148] c 17 N71-24830
- Method of plating copper on aluminum Patent  
[NASA-CASE-XLA-08966-1] c 17 N71-25903
- Heat activated cell Patent  
[NASA-CASE-LEW-11359] c 03 N71-28579
- Method of making emf cell  
[NASA-CASE-LEW-11359-2] c 03 N72-20034
- Method of preparing graphite reinforced aluminum composite  
[NASA-CASE-MFS-21077-1] c 24 N75-28135
- Method of fluxless brazing and diffusion bonding of aluminum containing components  
[NASA-CASE-MSC-14435-1] c 37 N76-18455
- Method for making an aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-1] c 44 N79-11469
- Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c 28 N81-15119
- Variable anodic thermal control coating  
[NASA-CASE-LAR-12719-1] c 44 N83-34449
- Oxygen diffusion barrier coating  
[NASA-CASE-LAR-13474-1-SB] c 26 N87-25455
- Composite passive damping struts for large precision structures  
[NASA-CASE-NPO-17914-1-CU] c 39 N91-13767
- Thermal treatment of silicon integrated circuit chips to prevent and heal voids in aluminum metallization  
[NASA-CASE-NPO-17678-1-CU] c 76 N91-28014
- ALUMINUM ALLOYS**
- Low temperature aluminum alloy Patent  
[NASA-CASE-XMF-02786] c 17 N71-20743
- Etching of aluminum for bonding Patent  
[NASA-CASE-XMF-02303] c 17 N71-23828
- Method of producing complex aluminum alloy parts of high temper, and products thereof  
[NASA-CASE-MSC-19693-1] c 26 N78-24333
- Nicral ternary alloy having improved cyclic oxidation resistance  
[NASA-CASE-LEW-13339-1] c 26 N82-31505
- Metal matrix composite structural panel construction  
[NASA-CASE-LAR-12807-1] c 24 N84-11214
- Elevated temperature aluminum alloys  
[NASA-CASE-LAR-13632-1] c 26 N87-29650
- Aluminum alloy  
[NASA-CASE-LAR-13924-1-CU] c 26 N89-28621
- ALUMINUM COATINGS**
- Nickel aluminide coated low alloy stainless steel  
[NASA-CASE-LEW-11267-1] c 17 N73-32414
- Preparing oxidizer coated metal fuel particles  
[NASA-CASE-NPO-11975-1] c 28 N74-33209
- Method of protecting the surface of a substrate --- by applying aluminide coating  
[NASA-CASE-LEW-11696-1] c 37 N75-13261
- Duplex aluminized coatings  
[NASA-CASE-LEW-11696-2] c 26 N75-19408
- Meteoroid impact position locator aid for manned space station  
[NASA-CASE-LAR-10629-1] c 35 N75-33367
- Method of protecting a surface with a silicon-slurry/aluminide coating --- coatings for gas turbine, engine blades and vanes  
[NASA-CASE-LEW-13343-1] c 27 N82-28441
- Silicon-slurry/aluminide coating --- protecting gas turbine engine vanes and blades  
[NASA-CASE-LEW-13343] c 26 N83-31795
- ALUMINUM COMPOUNDS**
- Synthesis of dawsonites --- for use in fire extinguishing operations  
[NASA-CASE-ARC-11326-1] c 25 N83-33977
- Fire extinguishant materials  
[NASA-CASE-ARC-11252-1] c 25 N83-36118
- ALUMINUM OXIDES**
- Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-1] c 37 N75-15992
- Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-3] c 24 N79-25143
- Method and technique for installing light-weight, fragile, high-temperature fiber insulation  
[NASA-CASE-MSC-16934-3] c 24 N84-16262
- ALUMINUM SILICATES**
- Inorganic thermal control pigment Patent  
[NASA-CASE-XNP-02139] c 18 N71-24184
- AMBIENT TEMPERATURE**
- High stability amplifier  
[NASA-CASE-GSC-12646-1] c 33 N83-34191
- AMBIGUITY**
- Phase ambiguity resolution for offset QPSK modulation systems  
[NASA-CASE-NPO-17853-1-CU] c 32 N91-25318
- AMIDES**
- Preparation of heterocyclic block copolymer omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c 27 N79-22300
- Method for preparing addition type polyimide prepreps  
[NASA-CASE-LAR-12054-2] c 27 N81-14078
- Polyimides prepared from 3,5-diamino benzo trifluoride  
[NASA-CASE-LAR-14206-1] c 27 N91-28425
- AMINES**
- Direct synthesis of polymeric schiff bases from two amines and two aldehydes Patent  
[NASA-CASE-XMF-08655] c 06 N71-11239
- Synthesis of polymeric schiff bases by reaction of acetals and amine compounds Patent  
[NASA-CASE-XMF-08652] c 06 N71-11243
- Polyimide foam for the thermal insulation and fire protection  
[NASA-CASE-ARC-10464-1] c 27 N74-12812
- Automated analysis of oxidative metabolites  
[NASA-CASE-ARC-10469-1] c 25 N75-12086
- Preparation of perfluorinated 1,2,4-oxadiazoles  
[NASA-CASE-ARC-11267-2] c 23 N82-28353
- Method of neutralizing the corrosive surface of amine-cured epoxy resins  
[NASA-CASE-GSC-12686-1] c 27 N83-34039
- Metal (2) 4,4',4'' phthalocyanine tetraamines as curing agents for epoxy resins  
[NASA-CASE-ARC-11424-1] c 27 N85-34281
- Laminate comprising fibers embedded in cured amine terminated bis-imide  
[NASA-CASE-ARC-11421-3] c 24 N86-25416
- Amine terminated bispartimide polymer  
[NASA-CASE-ARC-11421-2] c 27 N86-31726
- Aminophenoxycyclotriphosphazene cured epoxy resins and the composites, laminates, adhesives and structures thereof  
[NASA-CASE-ARC-11548-1] c 27 N87-25469
- Aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-3] c 23 N88-24692
- AMINO ACIDS**
- Amino acid analysis  
[NASA-CASE-NPO-12130-1] c 25 N75-14844
- AMMONIA**
- Solid state chemical source for ammonia beam maser Patent  
[NASA-CASE-XGS-01504] c 16 N70-41578
- AMMONIUM NITRATES**
- High performance ammonium nitrate propellant  
[NASA-CASE-NPO-14260-1] c 28 N79-28342
- AMMONIUM PERCHLORATES**
- Ammonium perchlorate composite propellant containing an organic transitional metal chelate catalytic additive Patent  
[NASA-CASE-LAR-10173-1] c 27 N71-14090
- Process for the leaching of AP from propellant  
[NASA-CASE-NPO-14109-1] c 28 N80-23471
- AMORPHOUS MATERIALS**
- Corrosion resistant coating  
[NASA-CASE-NPO-15928-1] c 26 N85-29005
- Apparatus for production of ultrapure amorphous metals utilizing acoustic cooling  
[NASA-CASE-NPO-15658-1] c 26 N86-32551
- Oxygen diffusion barrier coating  
[NASA-CASE-LAR-13474-1-SB] c 26 N87-25455
- AMPLIFICATION**
- Amplifier drift tester  
[NASA-CASE-XMS-05562-1] c 09 N69-39986
- Amplifier clamping circuit for horizon scanner Patent  
[NASA-CASE-XGS-01784] c 10 N71-20782
- Diversity receiving system with diversity phase lock Patent  
[NASA-CASE-XGS-01222] c 10 N71-20841
- Active RC networks  
[NASA-CASE-ARC-10042-2] c 10 N72-11256
- High voltage transistor amplifier with constant current load  
[NASA-CASE-NPO-11023] c 09 N72-17155
- Independent gain and bandwidth control of a traveling wave maser  
[NASA-CASE-NPO-13801-1] c 36 N78-18410
- Pseudonoise code tracking loop  
[NASA-CASE-MSC-18035-1] c 32 N81-15179
- Automatic level control circuit  
[NASA-CASE-KSC-11170-1] c 33 N83-36356
- AMPLIFIER DESIGN**
- Automatic gain control system  
[NASA-CASE-XMS-05307] c 09 N69-24330
- Bio-isolated dc operational amplifier --- for bioelectric measurements  
[NASA-CASE-ARC-10596-1] c 33 N74-21851
- High power metallic halide laser --- amplifying a copper chloride laser  
[NASA-CASE-NPO-14782-1] c 36 N82-28616
- Reactanceless synthesized impedance bandpass amplifier  
[NASA-CASE-GSC-12788-1] c 33 N85-29145
- Amplifier for measuring low-level signals in the presence of high common mode voltage  
[NASA-CASE-MFS-25868-1] c 33 N86-20670
- Low phase noise oscillator using two parallel connected amplifiers  
[NASA-CASE-GSC-13018-1] c 33 N87-21232
- AMPLIFIERS**
- Stable amplifier having a stable quiescent point Patent  
[NASA-CASE-XGS-02812] c 09 N71-19466
- Method and apparatus for continuously monitoring blood oxygenation, blood pressure, pulse rate and the pressure pulse curve utilizing an ear oximeter as transducer Patent  
[NASA-CASE-XAC-05422] c 04 N71-23185
- High-gain, broadband traveling wave maser Patent  
[NASA-CASE-NPO-10548] c 16 N71-24831
- Vibrophonocardiograph Patent  
[NASA-CASE-XFR-07172] c 05 N71-27234
- Transient augmentation circuit for pulse amplifiers Patent  
[NASA-CASE-XNP-01068] c 10 N71-28739
- RC networks and amplifiers employing the same  
[NASA-CASE-XAC-05462-2] c 10 N72-17171
- Full wave modulator-demodulator amplifier apparatus --- for generating rectified output signal  
[NASA-CASE-FRC-10072-1] c 33 N74-14939
- Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c 35 N75-15014
- Reflected-wave maser --- low noise amplifier  
[NASA-CASE-NPO-13490-1] c 36 N76-31512
- High stability amplifier  
[NASA-CASE-GSC-12646-1] c 33 N83-34191
- Low noise tuned amplifier  
[NASA-CASE-GSC-12567-1] c 33 N84-22887
- Low phase noise oscillator using two parallel connected amplifiers  
[NASA-CASE-GSC-13018-1] c 33 N87-21232
- Programmable electronic synthesized capacitance  
[NASA-CASE-GSC-12961-1] c 33 N87-22895
- Integrated photo-responsive metal oxide semiconductor circuit  
[NASA-CASE-GSC-12782-1] c 33 N88-14271
- AMPLITUDE DISTRIBUTION ANALYSIS**
- System for monitoring signal amplitude ranges  
[NASA-CASE-XMS-04061-1] c 09 N69-39885
- Single or joint amplitude distribution analyzer Patent  
[NASA-CASE-XNP-01383] c 09 N71-10659
- Analog-to-digital converter  
[NASA-CASE-XNP-00477] c 08 N73-28045
- AMPLITUDE MODULATION**
- Signal generator  
[NASA-CASE-XNP-05612] c 09 N69-21468
- Demodulation system Patent  
[NASA-CASE-XAC-04030] c 10 N71-19472
- Amplitude modulated laser transmitter Patent  
[NASA-CASE-XMS-04269] c 16 N71-22895
- Vibrating element electrometer with output signal magnified over input signal by a function of the mechanical Q of the vibrating element Patent  
[NASA-CASE-XAC-02807] c 09 N71-23021
- Phase multiplying electronic scanning system Patent  
[NASA-CASE-NPO-10302] c 10 N71-26142
- Signal path series step biased multidevice high efficiency amplifier Patent  
[NASA-CASE-GSC-10668-1] c 07 N71-28430
- Gated compressor, distortionless signal limiter  
[NASA-CASE-NPO-11820-1] c 32 N74-19788
- Amplitude steered array  
[NASA-CASE-GSC-11446-1] c 33 N74-20860
- Stark-effect modulation of CO2 laser with NH2D  
[NASA-CASE-NPO-11945-1] c 36 N76-18427
- Adaptive reference voltage generator for firing angle control of line-commutated inverters  
[NASA-CASE-MFS-25215-1] c 33 N83-31953
- Control circuitry using electronic emulation of a synchro signal for accurate control of position and rate of rotation for shafts  
[NASA-CASE-MFS-28458-1] c 33 N91-26459
- Method and apparatus for second-rank tensor generation  
[NASA-CASE-NPO-17512-1-CU] c 74 N91-26918
- AMPLITUDES**
- Noise limiter Patent  
[NASA-CASE-NPO-10169] c 10 N71-24844
- Acoustic rotation control  
[NASA-CASE-NPO-15689-1] c 71 N84-23233
- High voltage power supply  
[NASA-CASE-GSC-12818-1] c 33 N85-29147
- AMPOULES**
- Ampoule sealing apparatus and process --- for housing a semiconductor growth charge under vacuum  
[NASA-CASE-LAR-12847-1] c 33 N83-16633
- Apparatus and method for heating a material in a transparent ampoule --- crystal growth  
[NASA-CASE-MFS-25436-1] c 27 N83-36220
- Reusable thermal cycling clamp  
[NASA-CASE-LAR-12868-1] c 37 N85-21651

- Method of preparing radially homogeneous mercury cadmium telluride crystals  
[NASA-CASE-MFS-25786-2] c 76 N90-20896
- ANALGESIA**  
Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-2] c 52 N81-14613  
Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-1] c 52 N81-29764
- ANALOG CIRCUITS**  
Condition and condition duration indicator Patent  
[NASA-CASE-XMF-01097] c 10 N71-16058  
Automatic closed circuit television arc guidance control Patent  
[NASA-CASE-MFS-13046] c 07 N71-19433  
Electronic divider and multiplier using photocells Patent  
[NASA-CASE-XFR-05637] c 09 N71-19480  
Continuous Fourier transform method and apparatus --- for the analysis of simultaneous analog signal components  
[NASA-CASE-ARC-10466-1] c 60 N75-13539  
Electronic analog divider  
[NASA-CASE-LEW-11881-1] c 33 N77-17354  
Tuned analog network  
[NASA-CASE-GSC-12650-1] c 33 N84-14421  
Control circuitry using electronic emulation of a synchro signal for accurate control of position and rate of rotation for shafts  
[NASA-CASE-MFS-28458-1] c 33 N91-26459  
Analog hardware for learning neural networks  
[NASA-CASE-NPO-17664-1-CU] c 62 N91-32852
- ANALOG COMPUTERS**  
Analog spatial maneuver computer  
[NASA-CASE-GSC-10880-1] c 08 N72-11172
- ANALOG DATA**  
Data compression processor Patent  
[NASA-CASE-NPO-10068] c 08 N71-19288  
Wide range data compression system Patent  
[NASA-CASE-XGS-02612] c 08 N71-19435  
Analog Signal to Discrete Time Interval Converter (ASDTIC)  
[NASA-CASE-ERC-10048] c 09 N72-25251  
Digital plus analog output encoder  
[NASA-CASE-GSC-12115-1] c 62 N76-31946  
Velocity measurement system  
[NASA-CASE-MFS-23363-1] c 35 N78-32396
- ANALOG SIMULATION**  
Apparatus for simulating optical transmission links  
[NASA-CASE-GSC-11877-1] c 74 N76-18913
- ANALOG TO DIGITAL CONVERTERS**  
Analog-to-digital conversion system Patent  
[NASA-CASE-XAC-00404] c 08 N70-40125  
Analog to digital converter Patent  
[NASA-CASE-XLA-00670] c 08 N71-12501  
Nonlinear analog-to-digital converter Patent  
[NASA-CASE-XAC-04031] c 08 N71-18594  
Drift compensation circuit for analog to digital converter Patent  
[NASA-CASE-XNP-04780] c 08 N71-19687  
Pneumatic oscillator Patent  
[NASA-CASE-LEW-10345-1] c 10 N71-25899  
Analog signal integration and reconstruction system Patent  
[NASA-CASE-NPO-10344] c 10 N71-26544  
Analog to digital converter tester Patent  
[NASA-CASE-XLA-06713] c 14 N71-28991  
Wide range analog-to-digital converter with a variable gain amplifier  
[NASA-CASE-NPO-11018] c 08 N72-21200  
Analog-to-digital converter  
[NASA-CASE-MSC-13110-1] c 08 N72-22163  
Analog-to-digital converter analyzing system  
[NASA-CASE-NPO-10560] c 08 N72-22166  
Digital control and information system  
[NASA-CASE-NPO-11016] c 08 N72-31226  
Counting digital filters  
[NASA-CASE-NPO-11821-1] c 08 N73-26175  
Analog-to-digital converter  
[NASA-CASE-XNP-00477] c 08 N73-28045  
Analog to digital converter  
[NASA-CASE-NPO-13385-1] c 33 N76-18345  
Analog to digital converter for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-3] c 60 N77-32731  
Electrochemical detection device --- for use in microbiology  
[NASA-CASE-LAR-11922-1] c 25 N79-24073  
Heads up display  
[NASA-CASE-LAR-12630-1] c 06 N84-27733  
Method of and apparatus for generating an interstitial point in a data stream having an even number of data points  
[NASA-CASE-MFS-25319-1] c 60 N85-33701
- Frequency domain laser velocimeter signal processor  
[NASA-CASE-LAR-13552-1-CU] c 33 N89-14385  
A digitally controlled system for effecting and presenting a selected electrical resistance  
[NASA-CASE-MFS-29149-1] c 33 N90-19492  
X ray sensitive area detection device  
[NASA-CASE-MFS-28232-1] c 74 N91-14835
- ANALOGIES**  
Auto and hetero-associative memory using a 2-D optical logic gate  
[NASA-CASE-NPO-17997-1-CU] c 60 N91-13888
- ANALYZERS**  
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[NASA-CASE-NPO-10691] c 14 N71-26199  
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[NASA-CASE-XNP-09451] c 06 N71-26754  
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[NASA-CASE-ARC-10443-1] c 14 N73-20477  
NDIR gas analyzer based on absorption modulation ratios for known and unknown samples  
[NASA-CASE-ARC-10802-1] c 35 N75-30502  
Cosmic dust analyzer  
[NASA-CASE-MSC-13802-2] c 35 N76-15431  
Optically selective, acoustically resonant gas detecting transducer  
[NASA-CASE-ARC-10639-1] c 35 N78-13400
- ANCHORS (FASTENERS)**  
Daze fasteners  
[NASA-CASE-LAR-13009-2] c 37 N87-22976
- ANECHOIC CHAMBERS**  
Almond test body --- for microwave anechoic chambers  
[NASA-CASE-LAR-13747-1-CU] c 32 N89-28672
- ANEMOMETERS**  
Anemometer with braking mechanism Patent  
[NASA-CASE-XMF-05224] c 14 N71-23726  
Maxometers (peak wind speed anemometers)  
[NASA-CASE-MFS-20916] c 14 N73-25460  
Radionuclide counting technique for measuring wind velocity and direction  
[NASA-CASE-LAR-12971-1] c 47 N84-28292  
Thermal remote anemometer system  
[NASA-CASE-LAR-13508-1] c 35 N88-23962
- ANGIOGRAPHY**  
Contour detector and data acquisition system for the left ventricular outline  
[NASA-CASE-ARC-10985-1] c 52 N79-10724
- ANGLE OF ATTACK**  
Angle detector  
[NASA-CASE-ARC-11036-1] c 35 N78-32395  
Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c 02 N81-14968
- ANGLES (GEOMETRY)**  
Internal flare angle gauge Patent  
[NASA-CASE-XMF-04415] c 14 N71-24693  
Method for generating ultra-precise angles Patent  
[NASA-CASE-XGS-04173] c 19 N71-26674  
Rotating raster generator  
[NASA-CASE-FRC-10071-1] c 32 N74-20813  
Angular measurement system  
[NASA-CASE-MFS-25825-1] c 31 N86-29055  
Universal precision sine bar attachment  
[NASA-CASE-MFS-28253-1] c 37 N89-28831
- ANGULAR ACCELERATION**  
Angular accelerometer Patent  
[NASA-CASE-XMS-05936] c 14 N70-41682
- ANGULAR CORRELATION**  
Device for determining relative angular position between a spacecraft and a radiation emitting celestial body  
[NASA-CASE-GSC-11444-1] c 14 N73-28490
- ANGULAR DISTRIBUTION**  
Noncontacting method for measuring angular deflection  
[NASA-CASE-LAR-12178-1] c 74 N80-21138
- ANGULAR MOMENTUM**  
Stretch de-spin mechanism Patent  
[NASA-CASE-XGS-00619] c 30 N70-40016  
Rim inertial measuring system  
[NASA-CASE-LAR-12052-1] c 18 N81-29152  
Fluidic momentum controller  
[NASA-CASE-MSC-20906-2] c 35 N89-15379
- ANGULAR RESOLUTION**  
Angular measurement system Patent  
[NASA-CASE-XMF-00447] c 14 N70-33179  
Compliant joint  
[NASA-CASE-GSC-13153-1] c 37 N91-17387
- ANGULAR VELOCITY**  
Angular position and velocity sensing apparatus Patent  
[NASA-CASE-XGS-05680] c 14 N71-17585  
Speed control device for a heavy duty shaft --- solar sails for spacecraft propulsion  
[NASA-CASE-NPO-14170-1] c 37 N81-15364  
Interferometric angle monitor  
[NASA-CASE-GSC-12614-1] c 74 N83-32577
- Fluidic angular velocity sensor  
[NASA-CASE-NPO-16479-1CU] c 35 N86-32695
- ANHYDRIDES**  
Perfluoro alkylene dioxy-bis-(4-phthalic anhydrides and oxy-bis-(perfluoroalkyleneoxyphthalic anhydrides  
[NASA-CASE-MFS-22356-1] c 23 N75-30256  
Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams  
[NASA-CASE-ARC-11107-1] c 25 N80-16116  
Prepolymer dianhydrides  
[NASA-CASE-NPO-13899-1] c 27 N80-32515  
Maleimido substituted aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-1] c 23 N86-19376  
Novel polyimide compositions based on 4,4'-isophthaloyldiphthalic anhydride (IDPA)  
[NASA-CASE-LAR-14194-1] c 24 N90-15148  
Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14162-1] c 27 N90-15259  
Copolyimide with a combination of flexibilizing groups  
[NASA-CASE-LAR-13821-1] c 27 N90-16950  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-2] c 25 N90-23497  
Aromatic polyimides containing a dimethylsilane-linked dianhydride  
[NASA-CASE-LAR-14198-1] c 27 N90-26956  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-3] c 23 N91-17141  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-4] c 23 N91-25185  
Addition polyimides with enhanced processability  
[NASA-CASE-LEW-15043-1] c 27 N91-32230
- ANILINE**  
Process for preparation of dianilinosilanes Patent  
[NASA-CASE-XMF-06409] c 06 N71-23230  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-4] c 23 N91-25185
- ANIMALS**  
Automatic real-time pair-feeding system for animals  
[NASA-CASE-ARC-10302-1] c 51 N74-15778  
Tread drum for animals --- having an electrical shock station  
[NASA-CASE-ARC-10917-1] c 51 N78-27733
- ANIONS**  
Regenerable biocide delivery unit  
[NASA-CASE-MSC-21763-1] c 51 N91-25570
- ANISOTROPIC MEDIA**  
Hybrid composite laminate structures  
[NASA-CASE-LEW-12118-1] c 24 N77-27188
- ANISOTROPY**  
High speed magneto-resistive random access memory  
[NASA-CASE-NPO-17954-1-CU] c 60 N90-26519  
Method for anisotropic etching in the manufacture of semiconductor devices  
[NASA-CASE-MSC-21631-1] c 75 N91-32947
- ANNEALING**  
Recovery of radiation damaged solar cells through thermal annealing  
[NASA-CASE-XGS-04047-2] c 03 N72-11062  
CDS solid state phase insensitive ultrasonic transducer --- annealing cadmium sulfide crystals  
[NASA-CASE-LAR-12304-1] c 35 N80-20559
- ANNULAR NOZZLES**  
Rocket thrust chamber Patent  
[NASA-CASE-XLE-00145] c 28 N70-36806  
Annular slit colloid thruster Patent  
[NASA-CASE-GSC-10709-1] c 28 N71-25213
- ANNULAR PLATES**  
Annular supersonic decelerator or drogue Patent  
[NASA-CASE-XLE-00222] c 02 N70-37939  
Multiple plate hydrostatic viscous damper  
[NASA-CASE-LEW-12445-1] c 37 N81-22360
- ANNULI**  
Shaft transducer having dc output proportional to angular velocity  
[NASA-CASE-NPO-15706-1] c 35 N84-28017
- ANODES**  
Heat activated cell with alkali anode and alkali salt electrolyte Patent  
[NASA-CASE-LEW-11358] c 03 N71-26084  
Storage battery comprising negative plates of a wedge shaped configuration --- for preventing shape change induced malfunctions  
[NASA-CASE-NPO-11806-1] c 44 N74-19693  
Resistive anode image converter  
[NASA-CASE-HQN-10876-1] c 33 N76-27473  
Rechargeable battery which combats shape change of the zinc anode  
[NASA-CASE-HQN-10862-1] c 44 N76-29699  
Arc control in compact arc lamps  
[NASA-CASE-NPO-10870-1] c 33 N77-22386  
Multiple anode arc lamp system  
[NASA-CASE-NPO-10857-1] c 33 N80-14330

Ion sputter textured graphite --- anode collector plates in electron tube devices  
 [NASA-CASE-LEW-12919-1] c 24 N83-10117  
 Method and apparatus for rebalancing a REDOX flow cell system  
 [NASA-CASE-LEW-14127-1] c 33 N86-20680  
 Organic cathode for a secondary battery  
 [NASA-CASE-NPO-17604-1-CU] c 33 N91-14536

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Temperature reducing coating for metals subject to flame exposure Patent  
 [NASA-CASE-XLE-00035] c 33 N71-29151  
 Anode for ion thruster  
 [NASA-CASE-LEW-12048-1] c 20 N77-20162  
 Variable anodic thermal control coating  
 [NASA-CASE-LAR-12719-1] c 44 N83-34449

**ANOMALIES**

Aircraft liftmeter  
 [NASA-CASE-LAR-12518-1] c 06 N86-27280

**ANTENNA ARRAYS**

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 [NASA-CASE-XLA-00414] c 07 N70-38200  
 Multiple input radio receiver Patent  
 [NASA-CASE-XLA-00901] c 07 N71-10775  
 Horn feed having overlapping apertures Patent  
 [NASA-CASE-GSC-10452] c 07 N71-12396  
 Tracking antenna system Patent  
 [NASA-CASE-GSC-10553-1] c 07 N71-19854  
 Radar antenna system for acquisition and tracking Patent  
 [NASA-CASE-XMS-09610] c 07 N71-24625  
 Antenna array phase quadrature tracking system Patent  
 [NASA-CASE-MS-C-12205-1] c 07 N71-27056  
 Antenna array at focal plane of reflector with coupling network for beam switching Patent  
 [NASA-CASE-GSC-10220-1] c 07 N71-27233  
 Triaxial antenna Patent  
 [NASA-CASE-XGS-02290] c 07 N71-28809  
 Virtual wall slot circularly polarized planar array antenna  
 [NASA-CASE-NPO-10301] c 07 N72-11148  
 Stacked array of omnidirectional antennas  
 [NASA-CASE-LAR-10545-1] c 09 N72-21244  
 Circularly polarized antenna  
 [NASA-CASE-ERC-10214] c 09 N72-31235  
 Phase control circuits using frequency multiplications for phased array antennas  
 [NASA-CASE-ERC-10285] c 10 N73-16206  
 Plural beam antenna  
 [NASA-CASE-GSC-11013-1] c 09 N73-19234  
 Amplitude steered array  
 [NASA-CASE-GSC-11446-1] c 33 N74-20860  
 Position determination systems --- using orbital antenna scan of celestial bodies  
 [NASA-CASE-MS-C-12593-1] c 17 N76-21250  
 Thin conformal antenna array for microwave power conversions  
 [NASA-CASE-NPO-13886-1] c 32 N78-24391  
 RF beam center location method and apparatus for power transmission system  
 [NASA-CASE-NPO-13821-1] c 44 N78-28594  
 Phased array antenna control  
 [NASA-CASE-MS-C-14939-1] c 32 N79-11264  
 Phase conjugation method and apparatus for an active retrodirective antenna array  
 [NASA-CASE-NPO-13641-1] c 32 N79-24210  
 Scannable beam forming interferometer antenna array system  
 [NASA-CASE-GSC-12365-1] c 32 N80-28578  
 Frequency translating phase conjugation circuit for active retrodirective antenna array --- microwave transmission  
 [NASA-CASE-NPO-14536-1] c 32 N81-14185  
 Coaxial phased array antenna  
 [NASA-CASE-MS-C-16800-1] c 32 N81-14187  
 Baseband signal combiner for large aperture antenna array  
 [NASA-CASE-NPO-14641-1] c 32 N81-29308  
 Cavity-backed, micro-strip dipole antenna array  
 [NASA-CASE-MS-C-18606-1] c 32 N82-11336  
 Spiral slotted phased antenna array  
 [NASA-CASE-MS-C-18532-1] c 32 N82-27558  
 Method and apparatus for self-calibration and phasing of array antenna  
 [NASA-CASE-NPO-15920-1] c 33 N85-21493  
 Ground plane interference elimination by passive element  
 [NASA-CASE-NPO-16632-1-CU] c 32 N87-15390  
 Stripline feed for a microstrip array of patch elements with teardrop shaped probes  
 [NASA-CASE-NPO-17548-1-CU] c 32 N90-16104

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Digital servo controller --- for rotating antenna shaft  
 [NASA-CASE-KSC-10769-1] c 33 N74-29556  
 Faraday rotation measurement method and apparatus  
 [NASA-CASE-NPO-14839-1] c 35 N82-15381  
 Ground plane interference elimination by passive element  
 [NASA-CASE-NPO-16632-1-CU] c 32 N87-15390

**ANTENNA COUPLERS**

Dual band combiner for horn antenna  
 [NASA-CASE-NPO-14519-1] c 32 N80-23524

**ANTENNA DESIGN**

Low noise single aperture multimode monopulse antenna feed system Patent  
 [NASA-CASE-XNP-01735] c 07 N71-22750  
 Nose cone mounted heat resistant antenna Patent  
 [NASA-CASE-XMS-04312] c 07 N71-22984  
 Antenna array phase quadrature tracking system Patent  
 [NASA-CASE-MS-C-12205-1] c 07 N71-27056  
 Unfurlable structure including coiled strips thrust launched upon tension release Patent  
 [NASA-CASE-HQN-00937] c 07 N71-28979  
 Antenna design for surface wave suppression Patent  
 [NASA-CASE-XLA-10772] c 07 N71-28980  
 Target acquisition antenna  
 [NASA-CASE-GSC-10064-1] c 10 N72-22235  
 Collapsible high gain antenna  
 [NASA-CASE-KSC-10392] c 07 N73-26117  
 Dish antenna having switchable beamwidth --- with truncated concave ellipsoid subreflector  
 [NASA-CASE-GSC-11760-1] c 33 N75-19516  
 Horn antenna having V-shaped corrugated slots  
 [NASA-CASE-LAR-11112-1] c 32 N78-15330  
 Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector  
 [NASA-CASE-NPO-13568-1] c 32 N76-21365  
 Furlable antenna --- antenna design  
 [NASA-CASE-NPO-13553-1] c 33 N76-32457  
 Collapsible corrugated horn antenna  
 [NASA-CASE-LAR-11745-1] c 32 N80-29539  
 Multiple band circularly polarized microstrip antenna  
 [NASA-CASE-MS-C-18334-1] c 32 N80-32604  
 Spiral slotted phased antenna array  
 [NASA-CASE-MS-C-18532-1] c 32 N82-27558  
 Ground plane interference elimination by passive element  
 [NASA-CASE-NPO-16632-1-CU] c 32 N87-15390  
 Switched steerable multiple beam antenna system  
 [NASA-CASE-MS-C-20873-1-SB] c 32 N89-11961  
 System and method for measuring ocean surface currents at locations remote from land masses using synthetic aperture radar  
 [NASA-CASE-NPO-17937-1-CU] c 43 N91-21621

**ANTENNA FEEDS**

Multi-feed cone Cassegrain antenna Patent  
 [NASA-CASE-NPO-10539] c 07 N71-11285  
 Horn feed having overlapping apertures Patent  
 [NASA-CASE-GSC-10452] c 07 N71-12396  
 Target acquisition antenna  
 [NASA-CASE-GSC-10064-1] c 10 N72-22235  
 Composite antenna feed  
 [NASA-CASE-GSC-11046-1] c 07 N73-28013  
 Low loss dichroic plate  
 [NASA-CASE-NPO-13171-1] c 32 N74-11000  
 High efficiency multifrequency feed  
 [NASA-CASE-GSC-11909] c 32 N74-20863  
 Single frequency, two feed dish antenna having switchable beamwidth  
 [NASA-CASE-GSC-11968-1] c 32 N76-15329  
 Reflex feed system for dual frequency antenna with frequency cutoff means  
 [NASA-CASE-NPO-14022-1] c 32 N78-31321  
 Antenna feed system for receiving circular polarization and transmitting linear polarization  
 [NASA-CASE-NPO-14362-1] c 32 N80-16261  
 Multifrequency broadband polarized horn antenna  
 [NASA-CASE-NPO-14588-1] c 32 N81-25278  
 Microwave switching power divider --- antenna feeds  
 [NASA-CASE-GSC-12420-1] c 33 N82-16340  
 Focal axis resolver for offset reflector antennas  
 [NASA-CASE-GSC-12630-1] c 33 N83-36355  
 Beam forming network  
 [NASA-CASE-NPO-15743-1] c 32 N85-29118  
 Stripline feed for a microstrip array of patch elements with teardrop shaped probes  
 [NASA-CASE-NPO-17548-1-CU] c 32 N90-16104

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 [NASA-CASE-XMS-05303] c 07 N69-27462  
 Dual mode horn antenna Patent  
 [NASA-CASE-XNP-01057] c 07 N71-15907  
 Electronic scanning of 2-channel monopulse patterns Patent  
 [NASA-CASE-GSC-10299-1] c 09 N71-24804

High impact antenna Patent  
 [NASA-CASE-NPO-10231] c 07 N71-26101  
 Triaxial antenna Patent  
 [NASA-CASE-XGS-02290] c 07 N71-28809  
 Lightning tracking system  
 [NASA-CASE-KSC-10729-1] c 09 N73-32110  
 Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector  
 [NASA-CASE-NPO-13568-1] c 32 N76-21365  
 Coaxial phased array antenna  
 [NASA-CASE-MS-C-16800-1] c 32 N81-14187  
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 [NASA-CASE-NPO-16632-1-CU] c 32 N87-15390

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 [NASA-CASE-XGS-09190] c 31 N71-16102  
 High impact antenna Patent  
 [NASA-CASE-NPO-10231] c 07 N71-26101  
 Collapsible antenna boom and transmission line Patent  
 [NASA-CASE-MFS-20068] c 07 N71-27191  
 Conical reflector antenna  
 [NASA-CASE-NPO-10303] c 07 N72-22127  
 Coupled cavity traveling wave tube with velocity tapering  
 [NASA-CASE-LEW-12296-1] c 33 N82-26568  
 Antenna grout replacement system  
 [NASA-CASE-NPO-15202-1] c 27 N83-34043  
 Measurement apparatus and procedure for the determination of surface emissivities  
 [NASA-CASE-LAR-13455-1] c 32 N87-21206

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 [NASA-CASE-GSC-12046-1] c 52 N79-14750

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 [NASA-CASE-NPO-17653-1-CU] c 51 N90-27239

**ANTIFRICTION BEARINGS**

Hybrid lubrication system and bearing Patent  
 [NASA-CASE-XNP-01641] c 15 N71-22997  
 Rolling element bearings Patent  
 [NASA-CASE-XLE-09527-2] c 15 N71-26189  
 High speed hybrid bearing comprising a fluid bearing and a rolling bearing connected in series  
 [NASA-CASE-LEW-11152-1] c 15 N73-32359  
 Production of hollow components for rolling element bearings by diffusion welding  
 [NASA-CASE-LEW-11026-1] c 15 N73-33383  
 Method of making bearing materials --- self-lubricating, oxidation resistant composites for high temperature applications  
 [NASA-CASE-LEW-11930-4] c 24 N79-17916  
 Method of making bearing material  
 [NASA-CASE-LEW-11930-3] c 24 N80-33482  
 Cryogenic anti-friction bearing with inner race  
 [NASA-CASE-MFC-28384-1] c 37 N90-27112

**ANTIGRAVITY**

Anti-gravity device  
 [NASA-CASE-MFS-22758-1] c 70 N75-26789

**ANTIHISTAMINICS**

Indomethacin-antihistamine combination for gastric ulceration control  
 [NASA-CASE-ARC-11118-2] c 52 N81-14613  
 Indomethacin-antihistamine combination for gastric ulceration control  
 [NASA-CASE-ARC-11118-1] c 52 N81-29764

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Silicon nitride coated, plastic covered solar cell  
 [NASA-CASE-LEW-11496-1] c 44 N77-14580  
 Broadband optical radiation detector  
 [US-PATENT-4,262,198] c 74 N83-19597

**ANVILS**

Apparatus for making diamonds  
 [NASA-CASE-MFS-20698] c 15 N72-20446  
 High temperature solder device for flat cables  
 [NASA-CASE-GSC-13344-1] c 26 N91-28363

**APERTURES**

Focussing system for an ion source having apertured electrodes Patent  
 [NASA-CASE-XNP-03332] c 09 N71-10618  
 Threadless fastener apparatus Patent  
 [NASA-CASE-XFR-05302] c 15 N71-23254  
 On-film optical recording of camera lens settings  
 [NASA-CASE-MS-C-12363-1] c 14 N73-26431  
 Method of forming aperture plate for electron microscope  
 [NASA-CASE-ARC-10448-2] c 74 N75-12732  
 Method of making an apertured casting --- using duplicate mold  
 [NASA-CASE-LEW-11169-1] c 37 N76-23570  
 Electron microscope aperture system  
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## APOLLO PROJECT

Space suit  
[NASA-CASE-MSC-12609-1] c 05 N73-32012

## APOLLO SPACECRAFT

Energy absorbing structure Patent Application  
[NASA-CASE-MSC-12279-1] c 15 N70-35679  
Low onset rate energy absorber  
[NASA-CASE-MSC-12279] c 15 N72-17450

## APPLICATIONS OF MATHEMATICS

Apparatus for computing square roots Patent  
[NASA-CASE-XGS-04768] c 08 N71-19437

## APPROACH

Spectrally balanced chromatic landing approach lighting system  
[NASA-CASE-ARC-10990-1] c 04 N82-16059

## AQUATIC PLANTS

Method for treating wastewater using microorganisms and vascular aquatic plants  
[NASA-CASE-NSTL-10] c 45 N84-12654

## AQUEOUS SOLUTIONS

Anti-fog composition --- for prevention of fogging on surfaces such as space helmet visors and windshields  
[NASA-CASE-MSC-13530-2] c 23 N75-14834  
Automated system for identifying traces of organic chemical compounds in aqueous solutions  
[NASA-CASE-NPO-13063-1] c 25 N76-18245  
Method for separating biological cells --- suspended in aqueous polymer systems  
[NASA-CASE-MFS-23883-1] c 51 N80-16715  
Method of cross-linking polyvinyl alcohol and other water soluble resins  
[NASA-CASE-LEW-13103-1] c 27 N80-32516  
Electrophotolysis oxidation system for measurement of organic concentration in water  
[NASA-CASE-MSC-16497-1] c 25 N82-12166  
Liquid immersion apparatus for minute articles  
[NASA-CASE-MFS-25363-1] c 37 N82-12441  
Coal desulfurization by aqueous chlorination  
[NASA-CASE-NPO-14902-1] c 25 N82-29371  
Hydrodesulfurization of chlorinated coal  
[NASA-CASE-NPO-15304-1] c 25 N83-31743

## ARC DISCHARGES

Device for preventing high voltage arcing in electron beam welding Patent  
[NASA-CASE-XMF-08522] c 15 N71-19486  
Self-repeating plasma generator having communicating annular and linear arc discharge passages Patent  
[NASA-CASE-XLA-03103] c 25 N71-21693  
Method and apparatus for nondestructive testing --- using high frequency arc discharges  
[NASA-CASE-MFS-21233-1] c 38 N74-15395  
Sustained arc ignition system  
[NASA-CASE-LEW-12444-1] c 33 N77-28385

## ARC HEATING

Electric-arc heater Patent  
[NASA-CASE-XLA-00330] c 33 N70-34540  
Electric arc device for heating gases Patent  
[NASA-CASE-XAC-00319] c 25 N70-41628  
Annular arc accelerator shock tube  
[NASA-CASE-NPO-13528-1] c 09 N77-10071

## ARC JET ENGINES

Magneto-plasma-dynamic arc thruster  
[NASA-CASE-LEW-11180-1] c 25 N73-25760  
Arcjet power supply and start circuit  
[NASA-CASE-LEW-14374-1] c 09 N88-28939

## ARC LAMPS

Starting circuit for vapor lamps and the like Patent  
[NASA-CASE-XNP-01058] c 09 N71-12540  
Compact, high intensity arc lamp with internal magnetic field producing means  
[NASA-CASE-NPO-11510-1] c 33 N77-21315  
Depressurization of arc lamps  
[NASA-CASE-NPO-10790-1] c 33 N77-21316  
Arc control in compact arc lamps  
[NASA-CASE-NPO-10870-1] c 33 N77-22386  
Purging means and method for Xenon arc lamps  
[NASA-CASE-NPO-11978] c 31 N78-17238  
Multiple anode arc lamp system  
[NASA-CASE-NPO-10857-1] c 33 N80-14330  
Self-clamping arc light reflector for welding torch  
[NASA-CASE-MFS-29207-1] c 74 N87-25843  
Arc lamp power supply using a voltage multiplier  
[NASA-CASE-LAR-13202-1] c 33 N88-23942

## ARC SPRAYING

Arc spray fabrication of metal matrix composite monolayer  
[NASA-CASE-LEW-13828-1] c 24 N85-30027  
Process for HIP canning of composites  
[NASA-CASE-LEW-14990-1-CU] c 24 N91-17145

## ARC WELDING

Spectral method for monitoring atmospheric contamination of inert-gas welding shields Patent  
[NASA-CASE-XMF-02039] c 15 N71-15871  
Automatic closed circuit television arc guidance control Patent  
[NASA-CASE-MFS-13046] c 07 N71-19433

Device for preventing high voltage arcing in electron beam welding Patent  
[NASA-CASE-XMF-08522] c 15 N71-19486  
Welding skate with computerized control Patent  
[NASA-CASE-XMF-07069] c 15 N71-23815  
Grain refinement control in TIG arc welding  
[NASA-CASE-MSC-19095-1] c 37 N75-19683  
Self-clamping arc light reflector for welding torch  
[NASA-CASE-MFS-29207-1] c 74 N87-25843  
Welding torch gas cup extension  
[NASA-CASE-MFS-29252-1] c 37 N88-23980  
ARC length control for plasma welding  
[NASA-CASE-MSC-20900-1] c 37 N88-30131  
Trailer shield assembly for a welding torch  
[NASA-CASE-MFS-29260-1] c 37 N90-19602

## ARCHITECTURE

Foldable construction block  
[NASA-CASE-MSC-12233-2] c 32 N73-13921  
Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-2] c 18 N89-25266

## ARCHITECTURE (COMPUTERS)

Massively parallel processor computer  
[NASA-CASE-GSC-12223-1] c 60 N83-25378  
Distributed multipoint memory architecture  
[NASA-CASE-NPO-15342-1] c 60 N83-32342  
High dynamic global positioning system receiver  
[NASA-CASE-NPO-16171-1-CU] c 04 N86-27270  
Method for Veterbi decoding of large constraint length convolutional codes  
[NASA-CASE-NPO-17310-1-CU] c 17 N88-28946  
Nanosequencer digital logic controller  
[NASA-CASE-NPO-16116-2] c 60 N88-29310  
Fault tolerant hypercube computer system architecture  
[NASA-CASE-NPO-16859-1-CU] c 60 N90-21527  
Special purpose parallel computer architecture for real-time control and simulation in robotic applications  
[NASA-CASE-NPO-17629-1-CU] c 60 N90-27268  
Programmable remapper with single flow architecture  
[NASA-CASE-MSC-21481-1] c 60 N91-13890  
System and method for a general purpose architecture for intelligent computer-aided training  
[NASA-CASE-MSC-21381-1] c 63 N91-13944  
Adaptive data acquisition multiplexing system and method  
[NASA-CASE-MSC-21170-1] c 17 N91-14371  
Distributed computing system with dual independent communications paths between computers and employing split tokens  
[NASA-CASE-NPO-17185-1-CU] c 62 N91-14772  
Synchronized computational architecture for generalized bilateral control of robot arms  
[NASA-CASE-NPO-17401-1-CU] c 63 N91-31885  
Highly parallel computer architecture for robotic computation  
[NASA-CASE-NPO-17632-1-CU] c 60 N91-32805  
Analog hardware for learning neural networks  
[NASA-CASE-NPO-17664-1-CU] c 62 N91-32852

## ARGON

Liquid crystal light valve structures  
[NASA-CASE-MSC-20036-1] c 76 N85-33826

## ARITHMETIC

VLSI binary updown counter  
[NASA-CASE-NPO-17205-1-CU] c 60 N90-21525

## ARM (ANATOMY)

Apparatus for applying simulator g-forces to an arm of an aircraft simulator pilot  
[NASA-CASE-LAR-10550-1] c 09 N74-30597  
Orthotic arm joint --- for use in mechanical arms  
[NASA-CASE-MFS-21611-1] c 54 N75-12616  
Controller arm for a remotely related slave arm  
[NASA-CASE-ARC-11052-1] c 37 N79-28551  
Rotationally actuated prosthetic helping hand  
[NASA-CASE-MFS-26426-1] c 54 N91-32795

## ARMATURES

Direct current motor with stationary armature and field Patent  
[NASA-CASE-XGS-05290] c 09 N71-25999  
Solenoid valve including guide for armature and valve member  
[NASA-CASE-GSC-10607-1] c 15 N72-20442  
Electric motive machine including magnetic bearing  
[NASA-CASE-XGS-07805] c 15 N72-33476  
Natural turbulence electrical power generator --- using wave action or random motion  
[NASA-CASE-LAR-11551-1] c 44 N80-29834

## AROMATIC COMPOUNDS

Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-1] c 27 N74-21156  
Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c 27 N76-32315  
Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c 27 N78-31232

Process for preparing thermoplastic aromatic polyimides  
[NASA-CASE-LAR-11828-1] c 27 N78-32261  
Curing agent for polyepoxides and epoxy resins and composites cured therewith --- preventing carbon fiber release  
[NASA-CASE-LEW-13226-1] c 27 N81-17260  
The 1,1,1-triaryl-2,2,2-trifluoroethanes and process for their synthesis  
[NASA-CASE-ARC-11097-1] c 25 N82-24312  
Bis (4-(3,4-dimethylene-pyrrolyl)-phenyl) methane  
[NASA-CASE-LAR-13965-2-CU] c 23 N91-14418

## ARRAYS

Radio frequency arraying method for receivers  
[NASA-CASE-NPO-14328-1] c 32 N80-18253  
Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c 35 N82-31659  
Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-2] c 33 N83-24763  
Tm,Ho:YLF laser end-pumped by a semiconductor diode laser array  
[NASA-CASE-NPO-17282-1-CU] c 36 N91-15528

## ARTERIES

Arterial pulse wave pressure transducer  
[NASA-CASE-GSC-11531-1] c 52 N74-27566

## ARTIFICIAL CLOUDS

Barium release system  
[NASA-CASE-LAR-10670-1] c 06 N73-30097

## ARTIFICIAL GRAVITY

Rotating space station simulator Patent  
[NASA-CASE-XLA-03127] c 11 N71-10776  
Artificial gravity spin deployment system Patent  
[NASA-CASE-XNP-02595] c 31 N71-21881  
Space vehicle with artificial gravity and earth-like environment  
[NASA-CASE-LEW-11101-1] c 31 N73-32750

## ARTIFICIAL INTELLIGENCE

Discrete event simulation tool for analysis of qualitative models of continuous processing systems  
[NASA-CASE-MSC-21465-1] c 61 N91-14741

## ARTIFICIAL SATELLITES

Satellite communication system and method Patent  
[NASA-CASE-GSC-10118-1] c 07 N71-24621  
Gravity gradient attitude control system Patent  
[NASA-CASE-GSC-10555-1] c 21 N71-27324

## ASBESTOS

Reconstituted asbestos matrix --- for use in fuel or electrolysis cells  
[NASA-CASE-MSC-12568-1] c 24 N76-14204

## ASHES

Energy efficient continuous flow ash lockhopper  
[NASA-CASE-NPO-16985-1-CU] c 31 N91-15423

## ASPECT RATIO

Variable sweep wing aircraft Patent  
[NASA-CASE-XLA-00221] c 02 N70-33266  
Variable-span aircraft Patent  
[NASA-CASE-XLA-00166] c 02 N70-34178  
Variable sweep aircraft wing Patent  
[NASA-CASE-XLA-00350] c 02 N70-38011

## ASPHALT

Thermoplastic rubber comprising ethylene-vinyl acetate copolymer, asphalt and fluxing oil  
[NASA-CASE-NPO-08835-1] c 27 N78-33228

## ASSAYING

Rapid, quantitative determination of bacteria in water --- adenosine triphosphate  
[NASA-CASE-GSC-12158-1] c 51 N83-27569  
Pseudomonas diagnostic assay  
[NASA-CASE-NPO-17653-1-CU] c 51 N90-27239

## ASSEMBLIES

Multiple Belleville spring assembly Patent  
[NASA-CASE-XNP-00840] c 15 N70-38225  
Bearing seat usable in a gas turbine engine  
[NASA-CASE-LEW-12477-1] c 37 N77-32501  
Foldable beam  
[NASA-CASE-LAR-12077-1] c 31 N81-25259  
Resilient seal ring assembly with spring means applying force to wedge member --- cryogenic applications  
[NASA-CASE-MFS-25678-1] c 37 N84-11497  
Self-locking mechanical center joint  
[NASA-CASE-LAR-12864-1] c 37 N85-30336  
X-ray determination of parts alignment  
[NASA-CASE-MSC-20418-1] c 74 N86-20126  
Emitted vibration measurement device and method  
[NASA-CASE-MFS-25981-1] c 35 N87-14670  
Fully redundant mechanical release actuator  
[NASA-CASE-LAR-13198-1] c 37 N87-23983

## ASSEMBLING

Magnetic attachment mechanism  
[NASA-CASE-MSC-21095-1] c 37 N89-12866  
Method of preforming and assembling superconducting circuit elements  
[NASA-CASE-LAR-14395-1-CU] c 33 N91-28490

## ASSEMBLY

Alignment and assembly tool for very large diameter cylinders  
[NASA-CASE-MFS-28001-2] c 37 N88-14360

**ASSOCIATIVE PROCESSING (COMPUTERS)**  
Hybrid analog-digital associative neural network  
[NASA-CASE-NPO-17058-1-CU] c 62 N87-25803

**ASTRONAUT LOCOMOTION**  
Rotating space station simulator Patent  
[NASA-CASE-XLA-03127] c 11 N71-10776  
Space suit pressure stabilizer Patent  
[NASA-CASE-XLA-05332] c 05 N71-11194  
Equipotential space suit Patent  
[NASA-CASE-LAR-10007-1] c 05 N71-11195  
Hard space suit Patent  
[NASA-CASE-XAC-07043] c 05 N71-23161  
Foreshortened convolute section for a pressurized suit Patent  
[NASA-CASE-XMS-09637-1] c 05 N71-24730  
Locomotion and restraint aid Patent  
[NASA-CASE-ARC-10153] c 05 N71-28619  
Walking boot assembly  
[NASA-CASE-ARC-11101-1] c 54 N78-17675  
Spacesuit mobility knee joints  
[NASA-CASE-ARC-11058-2] c 54 N79-24651

**ASTRONAUT MANEUVERING EQUIPMENT**  
Hand-held self-manuevering unit Patent  
[NASA-CASE-XMS-05304] c 05 N71-12336  
Space environmental work simulator Patent  
[NASA-CASE-XMF-07488] c 11 N71-18773  
Personal propulsion unit Patent  
[NASA-CASE-MFS-20130] c 28 N71-27585

**ASTRONAUT PERFORMANCE**  
Locomotion and restraint aid Patent  
[NASA-CASE-ARC-10153] c 05 N71-28619  
Spacesuit mobility joints  
[NASA-CASE-ARC-11058-1] c 54 N78-31735

**ASTRONAUT TRAINING**  
Training vehicle for controlling attitude Patent  
[NASA-CASE-XMS-02977] c 11 N71-10746  
Mechanical simulator of low gravity conditions Patent  
[NASA-CASE-MFS-10555] c 11 N71-19494  
Subgravity simulator Patent  
[NASA-CASE-XMS-04798] c 11 N71-21474

**ASTRONAUTS**  
Emergency lunar communications system  
[NASA-CASE-MFS-21042] c 07 N72-25171  
Manual actuator --- for spacecraft exercising machines  
[NASA-CASE-MFS-21481-1] c 37 N74-18127  
Bi-stem gripping apparatus  
[NASA-CASE-MFS-28185-1] c 37 N88-23979

**ASTRONAVIGATION**  
Guidance and maneuver analyzer Patent  
[NASA-CASE-XNP-09572] c 14 N71-15621

**ASTRONOMICAL PHOTOGRAPHY**  
Apparatus for photographing meteors  
[NASA-CASE-LAR-10226-1] c 14 N73-19419

**ASYMMETRY**  
Method for the preparation of thin-skinned asymmetric reverse osmosis membranes and products thereof  
[NASA-CASE-ARC-11359-1] c 51 N84-28361  
Trellis coded modulation for transmission over fading mobile satellite channel  
[NASA-CASE-NPO-16904-2-CU] c 32 N91-14523  
Asymmetric soft-error resistant memory  
[NASA-CASE-NPO-17394-1-CU] c 60 N91-31810

**ATMOSPHERIC CHEMISTRY**  
All-optical photochromic spatial light modulators based on photoinduced electron transfer in rigid matrices  
[NASA-CASE-NPO-17612-1-CU] c 74 N90-27487

**ATMOSPHERIC COMPOSITION**  
Atmospheric sampling devices  
[NASA-CASE-NPO-11373] c 13 N72-25323  
Apparatus for sampling particulates in gases  
[NASA-CASE-HQN-10037-1] c 14 N73-27376  
Monitoring atmospheric pollutants with a heterodyne radiometer transmitter-receiver  
[NASA-CASE-NPO-11919-1] c 35 N74-11284  
Chelate-modified polymers for atmospheric gas chromatography  
[NASA-CASE-ARC-11154-1] c 25 N80-23383  
Mobile sampler for use in acquiring samples of terrestrial atmospheric gases  
[NASA-CASE-NPO-15220-1] c 45 N83-25217

**ATMOSPHERIC DENSITY**  
System for indicating fuel-efficient aircraft altitude  
[NASA-CASE-NPO-15351-2] c 06 N84-34443

**ATMOSPHERIC ENTRY**  
Flight craft Patent  
[NASA-CASE-XAC-02058] c 02 N71-16087  
Means for measuring the electron density gradients of the plasma sheath formed around a space vehicle Patent  
[NASA-CASE-XLA-06232] c 25 N71-20563

Orbital and entry tracking accessory for globes --- to provide range requirements for reentry vehicles to any landing site  
[NASA-CASE-LAR-10626-1] c 19 N74-21015

**ATMOSPHERIC ENTRY SIMULATION**  
Plasma accelerator Patent  
[NASA-CASE-XLA-00675] c 25 N70-33267  
Flow field simulation Patent  
[NASA-CASE-LAR-11138] c 12 N71-20436

**ATMOSPHERIC MOISTURE**  
Geodetic distance measuring apparatus  
[NASA-CASE-GSC-12609-2] c 36 N83-29681  
Wet atmospheric generation apparatus  
[NASA-CASE-MFS-28177-1] c 35 N91-21496

**ATMOSPHERIC PHYSICS**  
Rocket borne instrument to measure electric fields inside electrified clouds  
[NASA-CASE-KSC-10730-1] c 14 N73-32318

**ATMOSPHERIC PRESSURE**  
Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c 26 N80-14229  
Method of and apparatus for measuring temperature and pressure --- atmospheric sounding  
[NASA-CASE-GSC-12558-1] c 36 N85-21639

**ATMOSPHERIC RADIATION**  
Method and apparatus for measuring solar activity and atmospheric radiation effects  
[NASA-CASE-ERC-10276] c 14 N73-26432

**ATMOSPHERIC REFRACTION**  
Geodetic distance measuring apparatus  
[NASA-CASE-GSC-12609-1] c 36 N81-22344

**ATMOSPHERIC SCATTERING**  
Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c 36 N75-15028

**ATMOSPHERIC SOUNDING**  
Microwave limb sounder --- measuring trace gases in the upper atmosphere  
[NASA-CASE-NPO-14544-1] c 46 N82-12685

**ATMOSPHERIC TEMPERATURE**  
System for indicating fuel-efficient aircraft altitude  
[NASA-CASE-NPO-15351-2] c 06 N84-34443  
Method of and apparatus for measuring temperature and pressure --- atmospheric sounding  
[NASA-CASE-GSC-12558-1] c 36 N85-21639

**ATMOSPHERIC TURBULENCE**  
Passive optical wind and turbulence detection system Patent  
[NASA-CASE-XMF-14032] c 20 N71-16340  
Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c 35 N77-10493

**ATOMIC BEAMS**  
Variable energy, high flux, ground-state atomic oxygen source  
[NASA-CASE-NPO-16640-1-CU] c 72 N87-21661

**ATOMIC EXCITATIONS**  
Double photon excitation of high-Rydberg atoms as a long-lived submillimeter detector  
[NASA-CASE-NPO-16372-1] c 72 N86-33127

**ATOMIC STRUCTURE**  
Tailorable infrared sensing device with strain layer superlattice structure  
[NASA-CASE-NPO-16617-2-CU] c 35 N90-17118

**ATOMIZERS**  
Cryogenic cooling system Patent  
[NASA-CASE-NPO-10467] c 23 N71-26654  
Constant-output atomizer --- inhalation therapy and aerosol research  
[NASA-CASE-MFS-25631-1] c 34 N84-12406  
Liquid seeding atomizer  
[NASA-CASE-ARC-11631-1] c 34 N87-21255

**ATS**  
Doppler frequency spread correction device for multiplex transmissions  
[NASA-CASE-XGS-02749] c 07 N69-39978

**ATTACHMENT**  
Wide temperature range electronic device with lead attachment  
[NASA-CASE-ERC-10224-2] c 09 N73-27150

**ATTENUATORS**  
Rotary vane attenuator wherein rotor has orthogonally disposed resistive and dielectric cards  
[NASA-CASE-NPO-11418-1] c 14 N73-13420  
Pulse transducer with artifact signal attenuator --- heart rate sensors  
[NASA-CASE-FRC-11012-1] c 52 N80-23969

**ATTITUDE (INCLINATION)**  
Analog spatial maneuver computer  
[NASA-CASE-GSC-10880-1] c 08 N72-11172  
Spacecraft attitude sensor  
[NASA-CASE-GSC-10890-1] c 21 N73-30640  
Interferometer mirror tilt correcting system  
[NASA-CASE-NPO-13687-1] c 35 N78-18391

**ATTITUDE CONTROL**  
Visual target for retrofire attitude control  
[NASA-CASE-XMS-12158-1] c 31 N69-27499

Three axis controller Patent  
[NASA-CASE-XFR-00181] c 21 N70-33279  
Method and apparatus for determining satellite orientation utilizing spatial energy sources Patent  
[NASA-CASE-XGS-00466] c 21 N70-34297  
Attitude and propellant flow control system and method Patent  
[NASA-CASE-XMF-00185] c 21 N70-34539  
Space vehicle attitude control Patent  
[NASA-CASE-XNP-00465] c 21 N70-35395  
Attitude control for spacecraft Patent  
[NASA-CASE-XNP-00294] c 21 N70-36938  
Attitude orientation of spin-stabilized space vehicles Patent  
[NASA-CASE-XLA-00281] c 21 N70-36943  
Ejection unit Patent  
[NASA-CASE-XNP-00676] c 15 N70-38996  
Three-axis controller Patent  
[NASA-CASE-XAC-01404] c 05 N70-41581  
Training vehicle for controlling attitude Patent  
[NASA-CASE-XMS-02977] c 11 N71-10746  
Canopus detector including automotive gain control of photomultiplier tube Patent  
[NASA-CASE-XNP-03914] c 21 N71-10771  
Automatic balancing device Patent  
[NASA-CASE-LAR-10774] c 10 N71-13545  
Spacecraft experiment pointing and attitude control system Patent  
[NASA-CASE-XLA-05464] c 21 N71-14132  
Attitude control system Patent  
[NASA-CASE-XGS-04393] c 21 N71-14159  
Control system for rocket vehicles Patent  
[NASA-CASE-XLA-01163] c 21 N71-15582  
Reactance control system Patent  
[NASA-CASE-XMF-01598] c 21 N71-15583  
Spacecraft attitude detection system by stellar reference Patent  
[NASA-CASE-XGS-03431] c 21 N71-15642  
Three-axis finger tip controller for switches Patent  
[NASA-CASE-XAC-02405] c 09 N71-16089  
Thrust and direction control apparatus Patent  
[NASA-CASE-XLE-03583] c 31 N71-17629  
Attitude sensor for space vehicles Patent  
[NASA-CASE-XLA-00793] c 21 N71-22880  
Attitude control system for sounding rockets Patent  
[NASA-CASE-XGS-01654] c 31 N71-24750  
Voice operated controller Patent  
[NASA-CASE-XLA-04063] c 31 N71-33160  
Attitude sensor  
[NASA-CASE-LAR-10586-1] c 19 N74-15089  
Temperature compensated digital inertial sensor --- circuit for maintaining inertial element of gyroscope or accelerometer at constant position  
[NASA-CASE-NPO-13044-1] c 35 N74-15094  
Sun direction detection system  
[NASA-CASE-NPO-13722-1] c 74 N77-22951  
Thrust augmented spin recovery device  
[NASA-CASE-LAR-11970-2] c 08 N81-19130  
Programmable scan/read circuitry for charge coupled device imaging detectors --- spacecraft attitude control and star trackers  
[NASA-CASE-NPO-15345-1] c 74 N84-23247  
Propulsion apparatus and method using boil-off gas from a cryogenic liquid  
[NASA-CASE-MFS-25946-1] c 20 N86-26368  
Emitted vibration measurement device and method  
[NASA-CASE-MFS-25981-1] c 35 N87-14670  
Aircraft control position indicator  
[NASA-CASE-LAR-12984-1] c 06 N87-22678  
Three axis attitude control system  
[NASA-CASE-GSC-12970-1] c 08 N88-23808  
Fluid-loop reaction system  
[NASA-CASE-NPO-17204-1-CU] c 34 N91-25380

**ATTITUDE GYROS**  
Space vehicle attitude control Patent  
[NASA-CASE-XNP-00465] c 21 N70-35395  
Attitude control system  
[NASA-CASE-MFS-22787-1] c 15 N77-10113

**ATTITUDE INDICATORS**  
Photosensitive device to detect bearing deviation Patent  
[NASA-CASE-XNP-00438] c 21 N70-35089  
Controllers Patent  
[NASA-CASE-XMS-07487] c 15 N71-23255  
Combined optical attitude and altitude indicating instrument Patent  
[NASA-CASE-XLA-01907] c 14 N71-23268  
Head-up attitude display  
[NASA-CASE-ERC-10392] c 21 N73-14692  
Attitude sensor  
[NASA-CASE-LAR-10586-1] c 19 N74-15089  
Translatory shock absorber for attitude sensors  
[NASA-CASE-MFS-22905-1] c 19 N76-22284  
Air speed and attitude probe  
[NASA-CASE-FRC-11009-1] c 06 N80-18036

- Aircraft body-axis rotation measurement system  
[NASA-CASE-FRC-11043-1] c 06 N83-33882
- ATTITUDE STABILITY**  
Dynamic precession damper for spin stabilized vehicles Patent  
[NASA-CASE-XLA-01989] c 21 N70-34295  
Apparatus for automatically stabilizing the attitude of a nonrigid vehicle  
[NASA-CASE-ARC-10134] c 30 N72-17873  
Method of damping nutation motion with minimum spin axis attitude disturbance  
[NASA-CASE-GSC-12551-1] c 18 N83-28064
- AUDIO EQUIPMENT**  
Audio system with means for reducing noise effects  
[NASA-CASE-NPO-11631] c 10 N73-12244
- AUDIO FREQUENCIES**  
Signal path series step biased multidevice high efficiency amplifier Patent  
[NASA-CASE-GSC-10668-1] c 07 N71-28430  
Audio frequency marker system  
[NASA-CASE-NPO-11147] c 14 N72-27408  
Emergency locating transmitter  
[NASA-CASE-GSC-12821-2] c 33 N91-31530
- AUDIO SIGNALS**  
Method and apparatus for operating on companded PCM voice data  
[NASA-CASE-KSC-11285-1] c 32 N86-27513
- AUDITORY DEFECTS**  
Hearing aid malfunction detection system  
[NASA-CASE-MSC-14916-1] c 33 N78-10375  
Visual aid for the hearing impaired  
[NASA-CASE-GSC-13027-1-CU] c 35 N91-27522
- AUDITORY PERCEPTION**  
Auditory display for the blind  
[NASA-CASE-HQN-10832-1] c 71 N74-21014
- AUDITORY SIGNALS**  
Audio signal processor Patent  
[NASA-CASE-MSC-12223-1] c 07 N71-26181  
Audio system with means for reducing noise effects  
[NASA-CASE-NPO-11631] c 10 N73-12244
- AUDITORY STIMULI**  
Auditory display for the blind  
[NASA-CASE-HQN-10832-1] c 71 N74-21014
- AUGER EFFECT**  
Apparatus for accurately preloading auger attachment means for frangible protective material  
[NASA-CASE-MSC-18791-1] c 37 N83-36482
- AUSTENITIC STAINLESS STEELS**  
Nickel aluminate coated low alloy stainless steel  
[NASA-CASE-LEW-11267-1] c 17 N73-32414  
Device for measuring the ferrite content in an austenitic stainless-steel weld  
[NASA-CASE-MFS-22907-1] c 26 N76-18257
- AUTOCLAVES**  
System for sterilizing objects --- cleaning space vehicle systems  
[NASA-CASE-KSC-11085-1] c 54 N81-24724
- AUTOCORRELATION**  
Linear three-tap feedback shift register Patent  
[NASA-CASE-NPO-10351] c 08 N71-12503  
Correlation function apparatus Patent  
[NASA-CASE-XNP-00746] c 07 N71-21476
- AUTOMATIC CONTROL**  
Bus voltage compensation circuit for controlling direct current motor  
[NASA-CASE-XMS-04215-1] c 09 N69-39987  
Optical alignment system Patent  
[NASA-CASE-XNP-02029] c 14 N70-41955  
Pulsed energy power system Patent  
[NASA-CASE-MSC-13112] c 03 N71-11057  
Automatic balancing device Patent  
[NASA-CASE-LAR-10774] c 10 N71-13545  
Apparatus for welding torch angle and seam tracking control Patent  
[NASA-CASE-XMF-03287] c 15 N71-15607  
Leak detector Patent  
[NASA-CASE-LAR-10323-1] c 12 N71-17573  
Solar optical telescope dome control system Patent  
[NASA-CASE-MSC-10966] c 14 N71-19568  
Automatic welding speed controller Patent  
[NASA-CASE-XMF-01730] c 15 N71-23050  
Indexing microwave switch Patent  
[NASA-CASE-XNP-06507] c 09 N71-23548  
Automatic pump Patent  
[NASA-CASE-XNP-04731] c 15 N71-24042  
Automatic fatigue test temperature programmer Patent  
[NASA-CASE-XLA-02059] c 33 N71-24276  
Automatic battery charger Patent  
[NASA-CASE-XNP-04758] c 03 N71-24605  
Transistor servo system including a unique differential amplifier circuit Patent  
[NASA-CASE-XMF-05195] c 10 N71-24861  
Electron beam tube containing a multiple cathode array employing indexing means for cathode substitution Patent  
[NASA-CASE-NPO-10625] c 09 N71-26182
- Automatic signal range selector for metering devices Patent  
[NASA-CASE-XMS-06497] c 14 N71-26244  
Automated fluid chemical analyzer Patent  
[NASA-CASE-XNP-09451] c 06 N71-26754  
Automatic control of liquid cooling garment by cutaneous and external auditory meatus temperatures  
[NASA-CASE-MSC-13917-1] c 05 N72-15098  
Optimal control system for an electric motor driven vehicle  
[NASA-CASE-NPO-11210] c 11 N72-20244  
Automated equipotential plotter  
[NASA-CASE-NPO-11134] c 09 N72-21246  
Ion thruster magnetic field control  
[NASA-CASE-LEW-10835-1] c 28 N72-22771  
Temperature controller for a fluid cooled garment  
[NASA-CASE-ARC-10599-1] c 05 N73-26071  
Redundant speed control for brushless Hall effect motor  
[NASA-CASE-MFS-20207-1] c 09 N73-32107  
Programmable physiological infusion  
[NASA-CASE-ARC-10447-1] c 52 N74-22771  
Automatically operable self-leveling load table  
[NASA-CASE-MFS-22039-1] c 09 N75-12968  
Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c 35 N75-15014  
Traffic survey system --- using optical scanners  
[NASA-CASE-MFS-22631-1] c 66 N76-19888  
Automatic visual inspection system for microelectronics  
[NASA-CASE-NPO-13282] c 38 N78-17396  
Automatic fluid dispenser  
[NASA-CASE-ARC-10820-1] c 35 N78-19466  
Method for producing solar energy panels by automation  
[NASA-CASE-LEW-12541-1] c 44 N78-25529  
Circuit for automatic load sharing in parallel converter modules  
[NASA-CASE-NPO-14056-1] c 33 N79-24257  
Method for forming a solar array strip  
[NASA-CASE-NPO-13652-3] c 44 N80-14474  
Method of growing a ribbon crystal particularly suited for facilitating automated control of ribbon width  
[NASA-CASE-NPO-14295-1] c 76 N80-32245  
Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c 07 N81-19116  
Solar energy control system --- temperature measurement  
[NASA-CASE-MFS-25287-1] c 44 N82-18686  
Hydraulic actuator mechanism to control aircraft spoiler movements through dual input commands  
[NASA-CASE-LAR-12412-1] c 08 N82-24205  
Automatic weld torch guidance control system  
[NASA-CASE-MFS-25807] c 37 N83-20154  
Automatic thermal switch --- spacecraft applications  
[NASA-CASE-GSC-12553-1] c 34 N83-28356  
Linear magnetic bearings  
[NASA-CASE-GSC-12582-2] c 37 N85-20337  
Jet pump-drive system for heat removal  
[NASA-CASE-NPO-16494-1-CU] c 34 N85-29182  
Automatic oscillator frequency control system  
[NASA-CASE-GSC-12804-1] c 33 N86-20668  
Automated weld torch guidance control system  
[NASA-CASE-MFS-25807-2] c 37 N86-21850  
Airplane automatic control force trimming device for asymmetric engine failures  
[NASA-CASE-LAR-13280-1] c 08 N87-20999  
Self indexing latch system  
[NASA-CASE-MFS-25956-1] c 37 N87-21333  
Solder dross removal apparatus  
[NASA-CASE-MFS-28406-1] c 37 N91-13729  
Standard remote manipulator system docking target augmentation for automated docking  
[NASA-CASE-MFS-28419-1] c 18 N91-27200
- AUTOMATIC CONTROL VALVES**  
Check valve assembly for a probe Patent  
[NASA-CASE-XLA-00128] c 15 N70-37925  
Metal valve pintle with encapsulated elastomeric body Patent  
[NASA-CASE-MSC-12116-1] c 15 N71-17648  
Semitoroidal diaphragm cavitating valve Patent  
[NASA-CASE-XNP-09704] c 12 N71-18615  
Valving device for automatic refilling in cryogenic liquid systems  
[NASA-CASE-NPO-11177] c 15 N72-17453  
Combined pressure regulator and shutoff valve  
[NASA-CASE-NPO-13201-1] c 37 N75-15050  
Iodine generator for reclaimed water purification  
[NASA-CASE-MSC-14632-1] c 54 N78-14784  
Automatic compression adjusting mechanism for internal combustion engines  
[NASA-CASE-MSC-18807-1] c 37 N83-36483
- AUTOMATIC FREQUENCY CONTROL**  
Automatic acquisition system for phase-lock loop  
[NASA-CASE-XGS-04994] c 09 N69-21543
- Audio signal processor Patent  
[NASA-CASE-MSC-12223-1] c 07 N71-26181  
Automatic frequency control loop including synchronous switching circuits  
[NASA-CASE-KSC-10393] c 09 N72-21247  
Self-tuning bandpass filter  
[NASA-CASE-ARC-10264-1] c 09 N73-20231  
Programmable electronic synthesized capacitance  
[NASA-CASE-GSC-12961-1] c 33 N87-22895  
Frequency domain laser velocimeter signal processor  
[NASA-CASE-LAR-13552-1-CU] c 33 N89-14385
- AUTOMATIC GAIN CONTROL**  
Automatic gain control system  
[NASA-CASE-XMS-05307] c 09 N69-24330  
Amplifier drift tester  
[NASA-CASE-XMS-05562-1] c 09 N69-39986  
Self-tuning bandpass filter  
[NASA-CASE-ARC-10264-1] c 09 N73-20231  
Digital automatic gain amplifier  
[NASA-CASE-KSC-11008-1] c 33 N79-22373  
Automatic level control circuit  
[NASA-CASE-LAR-11170-1] c 33 N83-36356  
Frequency domain laser velocimeter signal processor  
[NASA-CASE-LAR-13552-1-CU] c 33 N89-14385
- AUTOMATIC TEST EQUIPMENT**  
Visual examination apparatus  
[NASA-CASE-ARC-10329-1] c 05 N73-26072  
Automatic microbial transfer device  
[NASA-CASE-LAR-11354-1] c 35 N75-27330  
Visual examination apparatus  
[US-PATENT-RE-28,921] c 52 N76-30793  
Automated clinical system for chromosome analysis  
[NASA-CASE-NPO-13913-1] c 52 N79-12694  
Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c 34 N81-26402  
Pressure suit joint analyzer  
[NASA-CASE-ARC-11314-1] c 54 N82-26987
- AUTOMATION**  
Automated multi-level vehicle parking system  
[NASA-CASE-NPO-13058-1] c 37 N77-22480
- AUTOMOBILE ENGINES**  
Automotive gas turbine fuel control  
[NASA-CASE-LEW-12785-1] c 37 N78-24545  
Controller for computer control of brushless dc motors --- automobile engines  
[NASA-CASE-NPO-13970-1] c 33 N81-20352
- AUTOMOBILE FUELS**  
Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-2] c 44 N76-29700
- AUTONOMOUS NAVIGATION**  
Autonomous navigation system --- gyroscopic pendulum for air navigation  
[NASA-CASE-ARC-11257-1] c 04 N81-21047
- AUTONOMY**  
Closed-loop autonomous docking system  
[NASA-CASE-MFS-28421-1] c 18 N90-26861  
Bilevel shared control for teleoperators  
[NASA-CASE-NPO-17800-1-CU] c 37 N91-13724
- AUXILIARY POWER SOURCES**  
Independent power generator  
[NASA-CASE-LAR-11208-1] c 44 N78-32539  
Electrical power generating system  
[NASA-CASE-MFS-25302-1] c 33 N83-28319
- AVERAGE**  
Method of and apparatus for generating an interstitial point in a data stream having an even number of data points  
[NASA-CASE-MFS-25319-1] c 60 N85-33701
- AVIONICS**  
Aircraft control position indicator  
[NASA-CASE-LAR-12984-1] c 06 N87-22678
- AXES (REFERENCE LINES)**  
Moment of inertia test fixture Patent  
[NASA-CASE-XGS-01023] c 14 N71-22992  
Universal restrainer and joint Patent  
[NASA-CASE-XNP-02278] c 15 N71-28951  
Focal axis resolver for offset reflector antennas  
[NASA-CASE-GSC-12630-1] c 33 N83-36355
- AXES OF ROTATION**  
Three axis controller Patent  
[NASA-CASE-XFR-00181] c 21 N70-33279  
Proportional controller Patent  
[NASA-CASE-XAC-03392] c 03 N70-41954  
Trigonometric vehicle guidance assembly which aligns the three perpendicular axes of two three-axes systems Patent  
[NASA-CASE-XMF-00684] c 21 N71-21688  
Controllers Patent  
[NASA-CASE-XMS-07487] c 15 N71-23255  
Aircraft body-axis rotation measurement system  
[NASA-CASE-FRC-11043-1] c 06 N83-33882  
Centrifugal-reciprocating compressor  
[NASA-CASE-NPO-14597-2] c 37 N84-28081  
Shoulder and hip joint for hard space suits  
[NASA-CASE-ARC-11543-1] c 54 N86-28620

**AXIAL COMPRESSION LOADS**

- Impact monitoring apparatus  
[NASA-CASE-MSC-15626-1] c 14 N72-25411
- Compression test apparatus  
[NASA-CASE-MSC-18723-1] c 35 N83-21312

**AXIAL FLOW**

- Monogroove heat pipe design: Insulated liquid channel with bridging wick  
[NASA-CASE-MSC-20497-1] c 34 N85-29180
- Wingtip vortex propeller  
[NASA-CASE-LAR-13019-1] c 07 N85-35194

**AXIAL FLOW PUMPS**

- Dual motion valve with single motion input  
[NASA-CASE-MFS-28058-1] c 37 N87-21332
- Rotor self-lubricating axial stop  
[NASA-CASE-MFS-28273-1] c 37 N88-23974

**AXIAL FLOW TURBINES**

- Multistage multiple-reentry turbine Patent  
[NASA-CASE-XLE-00170] c 15 N70-36412
- Multistage multiple-reentry turbine Patent  
[NASA-CASE-XLE-00085] c 28 N70-39895
- Method and turbine for extracting kinetic energy from a stream of two-phase fluid  
[NASA-CASE-NPO-14130-1] c 34 N79-20335

**AXIAL LOADS**

- Locking device with rolling detents Patent  
[NASA-CASE-XMF-01371] c 15 N70-41829
- Method for measuring biaxial stress in a body subjected to stress inducing loads  
[NASA-CASE-MFS-23299-1] c 39 N77-28511
- Metallic threaded composite fastener  
[NASA-CASE-MSC-21580-1] c 37 N91-23491
- Pressure vessel flex joint  
[NASA-CASE-MSC-21748-1] c 37 N91-25415

**AXIAL STRESS**

- Axially and radially controllable magnetic bearing  
[NASA-CASE-GSC-11551-1] c 37 N76-18459
- Method for measuring biaxial stress in a body subjected to stress inducing loads  
[NASA-CASE-MFS-23299-1] c 39 N77-28511

**AZIMUTH**

- Optical tracking mount Patent  
[NASA-CASE-MFS-14017] c 14 N71-26627
- Long range laser traversing system  
[NASA-CASE-GSC-11262-1] c 36 N74-21091
- Magnetic heading reference  
[NASA-CASE-LAR-11387-2] c 04 N77-19056
- Aircraft body-axis rotation measurement system  
[NASA-CASE-FRC-11043-1] c 06 N83-33882

**AZINES**

- Azine polymers and process for preparing the same Patent  
[NASA-CASE-XMF-08656] c 06 N71-11242
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-1] c 27 N74-21156
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c 27 N76-32315
- Catalytic trimerization of aromatic nitriles and triaryl-s-triazine ring cross-linked high temperature resistant polymers and copolymers made thereby  
[NASA-CASE-LEW-12053-2] c 27 N79-28307
- Perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups  
[NASA-CASE-ARC-11241-1] c 25 N81-14016
- Process for the preparation of fluorine containing crosslinked elastomeric polytriazine and product so produced  
[NASA-CASE-ARC-11248-1] c 27 N81-17259

**AZO COMPOUNDS**

- Molding process for imidazopyrrolone polymers  
[NASA-CASE-LAR-10547-1] c 31 N74-13177

**AZOLES**

- Vinyl stilbazoles  
[NASA-CASE-ARC-11429-3CU] c 27 N87-16908
- Polymidazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14145-1] c 27 N90-26954
- Poly(1,3,4-oxadiazoles) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14427-1] c 23 N91-23237

**B**

**BACK INJURIES**

- Spine immobilization apparatus  
[NASA-CASE-ARC-11167-1] c 52 N81-25662

**BACKGROUND NOISE**

- Electronic background suppression method and apparatus for a field scanning sensor  
[NASA-CASE-XGS-05211] c 07 N69-39980

**BACKGROUND RADIATION**

- Method and apparatus for background signal reduction in opto-acoustic absorption measurement  
[NASA-CASE-NPO-13683-1] c 35 N77-14411

**BACKSCATTERING**

- Method and apparatus for determining electromagnetic characteristics of large surface area passive reflectors Patent  
[NASA-CASE-XGS-02608] c 07 N70-41678
- Mossbauer spectrometer radiation detector  
[NASA-CASE-LAR-11155-1] c 35 N74-15091

**BACKUPS**

- Flexible back-up bar Patent  
[NASA-CASE-XMF-00722] c 15 N70-40204
- Inherent redundancy electric heater  
[NASA-CASE-MFS-21462-1] c 33 N74-14935
- Impact tolerant material  
[NASA-CASE-LAR-12887-3] c 24 N90-21822
- Electromagnetic attachment mechanism  
[NASA-CASE-MSC-21463-1] c 37 N91-23490

**BACKWARD WAVES**

- Ladder supported ring bar circuit  
[NASA-CASE-LEW-13570-1] c 33 N84-16452
- Dielectric based submillimeter backward wave oscillator circuit  
[NASA-CASE-LEW-13736-1] c 33 N84-27974

**BACTERIA**

- Decontamination of petroleum products Patent  
[NASA-CASE-XNP-03835] c 06 N71-23499
- Bacterial contamination monitor  
[NASA-CASE-GSC-10879-1] c 14 N72-25413
- Method of detecting and counting bacteria in body fluids  
[NASA-CASE-GSC-11092-2] c 04 N73-27052
- Lyophilized spore dispenser  
[NASA-CASE-LAR-10544-1] c 37 N74-13178
- Method of detecting and counting bacteria  
[NASA-CASE-GSC-11917-2] c 51 N76-29891
- Determination of antimicrobial susceptibilities on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c 52 N79-14750
- Method and apparatus for eliminating luminol interference material  
[NASA-CASE-MSC-16260-1] c 51 N80-16714
- Rapid, quantitative determination of bacteria in water --- adenosine triphosphate  
[NASA-CASE-GSC-12158-1] c 51 N83-27569

**BACTERIOLOGY**

- Bacteria detection instrument and method  
[NASA-CASE-GSC-11533-1] c 14 N73-13435
- Application of luciferase assay for ATP to antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c 51 N77-22794
- Automated single-slide staining device  
[NASA-CASE-LAR-11649-1] c 51 N77-27677

**BAFFLES**

- Light radiation direction indicator with a baffle of two parallel grids  
[NASA-CASE-XNP-03930] c 14 N69-24331
- Anti-glare improvement for optical imaging systems Patent  
[NASA-CASE-NPO-10337] c 14 N71-15604
- Flexible ring slosh damping baffle Patent  
[NASA-CASE-LAR-10317-1] c 32 N71-16103
- Buoyant anti-slosh system Patent  
[NASA-CASE-XLA-04605] c 32 N71-16106
- Floating baffle to improve efficiency of liquid transfer from tanks  
[NASA-CASE-KSC-10639] c 15 N73-26472
- System for the measurement of ultra-low stray light levels --- determining the adequacy of large space telescope systems  
[NASA-CASE-MFS-23513-1] c 74 N79-11865
- Pressure letdown method and device for coal conversion systems  
[NASA-CASE-NPO-15100-1] c 44 N84-14583
- Optical system with reflective baffles  
[NASA-CASE-ARC-11502-1] c 74 N86-20125

**BAGS**

- Relief container  
[NASA-CASE-XMS-06761] c 05 N69-23192
- Gas diffusion liquid storage bag and method of use for storing blood  
[NASA-CASE-NPO-13930-1] c 52 N79-14749

**BAKING**

- Bakeable McLeod gauge  
[NASA-CASE-XGS-01293-1] c 35 N79-33450
- A method and technique for installing light-weight fragile, high-temperature fiber insulation  
[NASA-CASE-MSC-18934-3] c 24 N82-26387

**BALANCE**

- Thermo-protective device for balances Patent  
[NASA-CASE-XAC-00648] c 14 N70-40400
- Device for monitoring a change in mass in varying gravimetric environments  
[NASA-CASE-MFS-21556-1] c 35 N74-26945
- Wind tunnel balance  
[NASA-CASE-ARC-11877-1-SB] c 09 N91-14357
- Multiple axis reticle  
[NASA-CASE-ARC-11886-1-SB] c 35 N91-14591

**BALANCING**

- Automatic balancing device Patent  
[NASA-CASE-LAR-10774] c 10 N71-13545
- Force-balanced, throttle valve Patent  
[NASA-CASE-NPO-10808] c 15 N71-27432
- Lift balancing device  
[NASA-CASE-LAR-10348-1] c 11 N73-12264
- Method and apparatus for rebalancing a REDOX flow cell system  
[NASA-CASE-LEW-14127-1] c 33 N86-20680

**BALL BEARINGS**

- Two component bearing Patent  
[NASA-CASE-XLA-00013] c 15 N71-29136
- High speed rolling element bearing  
[NASA-CASE-LEW-10856-1] c 15 N72-22490
- Low mass rolling element for bearings  
[NASA-CASE-LEW-11087-1] c 15 N73-30458
- Hollow rolling element bearings  
[NASA-CASE-LEW-11087-3] c 37 N74-21064
- Drilled ball bearing with a one piece anti-tipping cage assembly  
[NASA-CASE-LEW-11925-1] c 37 N75-31446
- Spherical bearing --- to reduce vibration effects  
[NASA-CASE-MFS-23447-1] c 37 N79-11404
- Apparatus and method for inspecting a bearing ball  
[NASA-CASE-LEW-10853-1] c 35 N86-32698
- Turbomachinery rotor support with damping  
[NASA-CASE-MFS-28345-1] c 37 N91-14608
- Fully articulated four-point-bend loading fixture  
[NASA-CASE-LEW-14776-1] c 37 N91-21540

**BALLAST**

- Ballast system for maintaining constant pressure in a glove box  
[NASA-CASE-NPO-17786-1-CU] c 35 N90-17104

**BALLAST (MASS)**

- Life raft stabilizer  
[NASA-CASE-MSC-12393-1] c 02 N73-26006

**BALLASTS (IMPEDANCES)**

- Apparatus for ballasting high frequency transistors  
[NASA-CASE-XGS-05003] c 09 N69-24318
- Direct current ballast circuit for metal halide lamp  
[NASA-CASE-MSC-18407-1] c 33 N82-24427

**BALLISTICS**

- Fiber modified polyurethane foam for ballistic protection  
[NASA-CASE-ARC-10714-1] c 27 N76-15310

**BALLOON SOUNDING**

- Apparatus for controlling the temperature of balloon-borne equipment  
[NASA-CASE-GSC-11620-1] c 34 N74-23039

**BALLOON-BORNE INSTRUMENTS**

- Rotating-unbalanced-mass devices and methods for scanning balloon-borne-experiments, free-flying spacecraft, and space shuttle/space station attached experiments  
[NASA-CASE-MFS-28425-1] c 35 N90-26304

**BALLOONS**

- Hot air balloon deceleration and recovery system Patent  
[NASA-CASE-XLA-06824-2] c 02 N71-11037
- Inflation system for balloon type satellites Patent  
[NASA-CASE-XGS-03351] c 31 N71-16081
- System for stabilizing torque between a balloon and gondola  
[NASA-CASE-GSC-11077-1] c 02 N73-13008

**BALLS**

- Two-axis controller Patent  
[NASA-CASE-XFR-04104] c 03 N70-42073
- Quartz ball valve  
[NASA-CASE-NPO-14473-1] c 37 N80-23654

**BANDPASS FILTERS**

- Helical coaxial resonator RF filter  
[NASA-CASE-XGS-02816] c 07 N69-24323
- Compensating bandwidth switching transients in an amplifier circuit Patent  
[NASA-CASE-XNP-01107] c 10 N71-28859
- Signal-to-noise ratio determination circuit  
[NASA-CASE-GSC-11239-1] c 10 N73-25241
- High-Q bandpass resonators utilizing bandstop resonator pairs  
[NASA-CASE-GSC-10990-1] c 09 N73-26195
- Dichroic plate --- as bandpass filters  
[NASA-CASE-NPO-13506-1] c 35 N76-15435
- Notch filter  
[NASA-CASE-MFS-23303-1] c 32 N77-18307
- Adaptive polarization separation  
[NASA-CASE-LAR-12196-1] c 33 N81-26358
- Smoothing filter for digital to analog conversion  
[NASA-CASE-FRC-11025-1] c 33 N82-24417
- Tuned analog network  
[NASA-CASE-GSC-12650-1] c 33 N84-14421
- Low noise tuned amplifier  
[NASA-CASE-GSC-12567-1] c 33 N84-22887
- Reactanceless synthesized impedance bandpass amplifier  
[NASA-CASE-GSC-12788-1] c 33 N85-29145

- Multispectral linear array multiband selection device  
[NASA-CASE-GSC-12911-1] c 74 N86-29650
- BANDWIDTH**  
Narrow bandwidth video Patent  
[NASA-CASE-XMS-06740-1] c 07 N71-26579  
Self-tuning bandpass filter  
[NASA-CASE-ARC-10264-1] c 09 N73-20231  
Turnstile and flared cone UHF antenna  
[NASA-CASE-LAR-10970-1] c 33 N76-14372  
Independent gain and bandwidth control of a traveling wave maser  
[NASA-CASE-NPO-13801-1] c 36 N78-18410  
Dual band combiner for horn antenna  
[NASA-CASE-NPO-14519-1] c 32 N80-23524  
Method and apparatus for telemetry adaptive bandwidth compression  
[NASA-CASE-MS-C-20821-1] c 17 N87-25348
- BARIUM**  
Barium release system  
[NASA-CASE-LAR-10670-1] c 06 N73-30097
- BARIUM COMPOUNDS**  
Ion thruster cathode  
[NASA-CASE-XLE-07087] c 06 N69-39889
- BARIUM FLUORIDES**  
Method of making self lubricating fluoride- metal composite materials Patent  
[NASA-CASE-XLE-08511-2] c 18 N71-16105
- BARIUM ION CLOUDS**  
Rocket having barium release system to create ion clouds in the upper atmosphere  
[NASA-CASE-LAR-10670-2] c 15 N74-27360
- BARIUM TITANATES**  
Semiconductor-ferroelectric memory device  
[NASA-CASE-ERC-10307] c 08 N72-21198
- BARRIER LAYERS**  
Schottky barrier solar cell  
[NASA-CASE-NPO-13689-2] c 44 N81-29525  
Method of measuring field funneling and range straggling in semiconductor charge-collecting junctions  
[NASA-CASE-NPO-16584-1-CU] c 76 N86-25269  
System for venting gas from a liquid storage tank  
[NASA-CASE-MS-C-21253-1] c 31 N90-20254  
Microwave field effect transistor  
[NASA-CASE-GSC-12442-2] c 33 N90-20282
- BARRIERS**  
Short range laser obstacle detector --- for surface vehicles using laser diode array  
[NASA-CASE-NPO-11856-1] c 36 N74-15145  
High-temperature, flexible, thermal barrier seal  
[NASA-CASE-LEW-14672-1] c 37 N91-27560
- BARS**  
Satellite retrieval system  
[NASA-CASE-MFS-25403-1] c 18 N83-29303
- BASES (CHEMICAL)**  
Thermal control coating Patent  
[NASA-CASE-XLA-01995] c 18 N71-23047
- BATHING**  
Whole body cleansing agent  
[NASA-CASE-MS-C-21589-1] c 54 N91-16566
- BATHS**  
Solder dross removal apparatus  
[NASA-CASE-MFS-28406-1] c 37 N91-13729
- BATTERY CHARGERS**  
Method and apparatus for battery charge control Patent  
[NASA-CASE-XGS-05432] c 03 N71-19438  
Electrochemical coulometer and method of forming same Patent  
[NASA-CASE-XGS-05434] c 03 N71-20491  
Coulometer and third electrode battery charging circuit Patent  
[NASA-CASE-GSC-10487-1] c 03 N71-24719  
Method and apparatus for conditioning of nickel-cadmium batteries  
[NASA-CASE-MFS-23270-1] c 44 N78-25531
- BAYARD-ALPERT IONIZATION GAGES**  
Ionization vacuum gauge with all but the end of the ion collector shielded Patent  
[NASA-CASE-XLA-07424] c 14 N71-18482
- BAYS (STRUCTURAL UNITS)**  
Deployable geodesic truss structure  
[NASA-CASE-LAR-13113-1] c 31 N87-25492
- BEADS**  
Rotary bead dropper and selector for testing micrometeorite detectors Patent  
[NASA-CASE-XGS-03304] c 09 N71-22988  
Method for thermal monitoring subcutaneous tissue  
[NASA-CASE-LAR-13028-1] c 52 N85-30618
- BEAM LEADS**  
Integrated circuit package with lead structure and method of preparing the same  
[NASA-CASE-MFS-21374-1] c 33 N74-12951
- BEAM SPLITTERS**  
Optical range finder having nonoverlapping complete images  
[NASA-CASE-MS-C-12105-1] c 14 N72-21409
- Laser extensometer  
[NASA-CASE-MFS-19259-1] c 36 N78-14380  
Over-under double-pass interferometer  
[NASA-CASE-NPO-13999-1] c 35 N78-18395  
Method and apparatus for splitting a beam of energy --- optical communication  
[NASA-CASE-GSC-12083-1] c 73 N78-32848  
Interferometer  
[NASA-CASE-NPO-14502-1] c 74 N81-17888  
Collimated beam manifold with the number of output beams variable at a given output angle  
[NASA-CASE-MFS-25312-1] c 74 N83-17305  
Dual-beam skin friction interferometer  
[NASA-CASE-ARC-11354-1] c 74 N83-21949  
High speed multi focal plane optical system  
[NASA-CASE-GSC-12683-1] c 74 N83-36898  
Projection lens scanning laser velocimeter system  
[NASA-CASE-ARC-11547-1] c 36 N87-17026  
Method and apparatus for second-rank tensor generation  
[NASA-CASE-NPO-17512-1-CU] c 74 N91-26918
- BEAM SWITCHING**  
Electronic beam switching commutator Patent  
[NASA-CASE-XGS-01451] c 09 N71-10677  
Antenna array at focal plane of reflector with coupling network for beam switching Patent  
[NASA-CASE-GSC-10220-1] c 07 N71-27233  
Dish antenna having switchable beamwidth --- with truncated concave ellipsoid subreflector  
[NASA-CASE-GSC-11760-1] c 33 N75-19516  
Single frequency, two feed dish antenna having switchable beamwidth  
[NASA-CASE-GSC-11968-1] c 32 N76-15329  
Switchable beamwidth monopulse method and system  
[NASA-CASE-GSC-11924-1] c 33 N76-27472
- BEAM WAVEGUIDES**  
Laser machining apparatus Patent  
[NASA-CASE-HQN-10541-2] c 15 N71-27135  
Optical frequency waveguide and transmission system Patent  
[NASA-CASE-HQN-10541-4] c 16 N71-27183  
Method and apparatus for aligning a laser beam projector Patent  
[NASA-CASE-NPO-11087] c 23 N71-29125  
Microwave power transmission beam safety system  
[NASA-CASE-NPO-14224-1] c 33 N80-18287  
Multiprism collimator  
[NASA-CASE-GSC-12608-1] c 74 N83-10900
- BEAMS (RADIATION)**  
Method and means for recording and reconstructing holograms without use of a reference beam Patent  
[NASA-CASE-ERC-10020] c 16 N71-26154  
Optical frequency waveguide and transmission system  
[NASA-CASE-HQN-10541-3] c 23 N72-23695  
Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14524-1] c 32 N80-24510  
Scannable beam forming interferometer antenna array system  
[NASA-CASE-GSC-12365-1] c 32 N80-28578  
Method for shaping and aiming narrow beams --- sonar mapping and target identification  
[NASA-CASE-NPO-14632-1] c 32 N82-18443  
Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c 74 N82-24072  
Sideloading laser altimeter for a flight simulator  
[NASA-CASE-ARC-11312-1] c 36 N83-34304  
Off-axis coherently pumped laser  
[NASA-CASE-GSC-12592-1] c 36 N84-28065  
Beam forming network  
[NASA-CASE-NPO-15743-1] c 32 N85-29118  
Means for phase locking the outputs of a surface emitting laser diode array  
[NASA-CASE-NPO-16542-1-CU] c 36 N87-23960
- BEAMS (SUPPORTS)**  
Foldable beam  
[NASA-CASE-LAR-12077-1] c 31 N81-25259  
Beam connector apparatus and assembly  
[NASA-CASE-MFS-25134-1] c 31 N83-31895  
Sequentially deployable maneuverable tetrahedral beam  
[NASA-CASE-LAR-13098-1] c 31 N86-19479  
Joint for deployable structures  
[NASA-CASE-NPO-16038-1] c 37 N86-19605  
Bi-stem gripping apparatus  
[NASA-CASE-MFS-28185-1] c 37 N88-23979  
Mobile remote manipulator system for a tetrahedral truss  
[NASA-CASE-MS-C-20985-1] c 18 N88-26398  
Wind tunnel balance  
[NASA-CASE-ARC-11877-1-SB] c 09 N91-14357  
Synchronously deployable double fold beam and planar truss structure  
[NASA-CASE-LAR-13490-1] c 18 N91-27199
- BEARING**  
Emitted vibration measurement device and method  
[NASA-CASE-MFS-25981-1] c 35 N87-14670
- BEARING (DIRECTION)**  
Light radiation direction indicator with a baffle of two parallel grids  
[NASA-CASE-XNP-03930] c 14 N69-24331  
Radiation direction detector including means for compensating for photocell aging Patent  
[NASA-CASE-XLA-00183] c 14 N70-40239  
Interferometer direction sensor Patent  
[NASA-CASE-NPO-10320] c 14 N71-17655  
Omnidirectional acceleration device Patent  
[NASA-CASE-HQN-10780] c 14 N71-30265  
Magnetic heading reference  
[NASA-CASE-LAR-11387-2] c 04 N77-19056  
Direction sensitive laser velocimeter --- determining the direction of particles using a helium-neon laser  
[NASA-CASE-LAR-12177-1] c 36 N81-24422  
System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-FRC-11005-1] c 06 N82-16075
- BEARINGS**  
Alloys for bearings Patent  
[NASA-CASE-XLE-05033] c 15 N71-23810  
Bearing and gimbal lock mechanism and spiral flex lead module Patent  
[NASA-CASE-GSC-10556-1] c 31 N71-26537  
Device for measuring bearing preload  
[NASA-CASE-MFS-20434] c 11 N72-25288  
Magnetic bearing --- for supplying magnetic fluxes  
[NASA-CASE-GSC-11079-1] c 37 N75-18574  
Magnetic bearing system  
[NASA-CASE-GSC-11978-1] c 37 N77-17464  
Hydrostatic bearing support  
[NASA-CASE-LEW-11158-1] c 37 N77-28486  
Deformable bearing seat  
[NASA-CASE-LEW-12527-1] c 37 N77-32500  
Bearing seat usable in a gas turbine engine  
[NASA-CASE-LEW-12477-1] c 37 N77-32501  
Method of making bearing material-  
[NASA-CASE-LEW-11930-3] c 24 N80-33482  
Suspension system for a wheel rolling on a flat track --- bearings for directional antennas  
[NASA-CASE-NPO-14395-1] c 37 N82-21587  
Antenna groud replacement system  
[NASA-CASE-NPO-15202-1] c 27 N83-34043  
Magnetic bearing and motor  
[NASA-CASE-GSC-12726-1] c 37 N83-34323  
Unidirectional flexural pivot  
[NASA-CASE-GSC-12622-1] c 37 N84-12492  
Portable 90 degree proof loading device  
[NASA-CASE-MS-C-20250-1] c 35 N86-19581
- BEDS (PROCESS ENGINEERING)**  
Catalyst bed removing tool Patent  
[NASA-CASE-XFR-00811] c 15 N70-36901  
Solar heated oil shale pyrolysis process  
[NASA-CASE-NPO-16392-1] c 25 N86-25428
- BEER LAW**  
A multichannel photoionization chamber for absorption analysis Patent  
[NASA-CASE-ERC-10044-1] c 14 N71-27090
- BEES**  
Decontamination of petroleum products Patent  
[NASA-CASE-XNP-03835] c 06 N71-23499
- BELLOWS**  
Balanced bellows spirometer  
[NASA-CASE-XAR-01547] c 05 N69-21473  
Printed circuit board with bellows rivet connection Patent  
[NASA-CASE-XNP-05082] c 15 N70-41960  
Spherical shield Patent  
[NASA-CASE-XNP-01855] c 15 N71-28937  
Internally supported flexible duct joint --- device for conducting fluids in high pressure systems  
[NASA-CASE-MFS-19193-1] c 37 N75-19686  
Protective telescoping shield for solar concentrator  
[NASA-CASE-NPO-16236-1] c 44 N86-27706  
Pressurized bellows flat contact heat exchanger interface  
[NASA-CASE-MS-C-21271-1] c 34 N90-21999
- BELTS**  
Apparatus for forming drive belts  
[NASA-CASE-NPO-13205-1] c 31 N74-32917
- BEND TESTS**  
Delamination test apparatus and method  
[NASA-CASE-LAR-13985-1] c 24 N91-14430  
Fully articulated four-point-bend loading fixture  
[NASA-CASE-LEW-14776-1] c 37 N91-21540
- BENDING**  
Radio frequency shielded enclosure Patent  
[NASA-CASE-XMF-09422] c 07 N71-19436  
Means for suppressing or attenuating bending motion of elastic bodies Patent  
[NASA-CASE-XAC-05632] c 32 N71-23971

- Technique of elbow bending small jacketed transfer lines Patent  
[NASA-CASE-XNP-10475] c 15 N71-24679  
Forming tool for ribbon or wire  
[NASA-CASE-XLA-05966] c 15 N72-12408
- BENDING DIAGRAMS**  
Electrostatic charged particle analyzer having deflection members shaped according to the periodic voltage applied thereto Patent  
[NASA-CASE-XAC-05506-1] c 24 N71-16095
- BENDING FATIGUE**  
Apparatus for positioning and loading a test specimen Patent  
[NASA-CASE-XLE-01300] c 15 N70-41993  
Low temperature flexure fatigue cryostat Patent  
[NASA-CASE-XMF-02964] c 14 N71-17659
- BENDING MOMENTS**  
Missile launch release system Patent  
[NASA-CASE-XMF-03198] c 30 N70-40353  
Compliant hydrodynamic fluid journal bearing  
[NASA-CASE-LEW-13670-1] c 37 N86-19606
- BENDING VIBRATION**  
Viscous pendulum damper Patent  
[NASA-CASE-LAR-10274-1] c 14 N71-17626
- BENZENE**  
Intumescent composition, foamed product prepared therewith, and process for making same  
[NASA-CASE-ARC-10304-1] c 18 N73-26572  
Polymer of phosphonylmethyl-2,4- and -2,6-diamino benzene and polyfunctional monomer  
[NASA-CASE-ARC-11506-2] c 23 N86-32525  
Fire and heat resistant laminating resins based on maleimido and citraconimido substituted 1-(diorgano oxyphosphonyl) methyl-2,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11533-3] c 27 N87-24564  
The 1-(diorganooxyphosphonyl)-methyl-2,4- and -2,6-diamido benzenes  
[NASA-CASE-ARC-11425-4] c 23 N90-20133  
Some 1-(diorganooxyphosphonyl)methyl-2,4- and -2,6-dinitro-benzenes  
[NASA-CASE-ARC-11425-3] c 23 N90-23475
- BERYLLIUM ALLOYS**  
Corrosion resistant beryllium Patent  
[NASA-CASE-LEW-10327] c 17 N71-33408  
Thin film strain transducer  
[NASA-CASE-WLP-10055-1] c 35 N84-28015
- BERYLLIUM HYDRIDES**  
Inhibited solid propellant composition containing beryllium hydride  
[NASA-CASE-NPO-10866-1] c 28 N79-14228
- BERYLLIUM OXIDES**  
High temperature beryllium oxide capacitor  
[NASA-CASE-LEW-11938-1] c 33 N76-15373  
High modulus invert analog glass compositions containing beryllia  
[NASA-CASE-HQN-10931-2] c 27 N82-29452  
High modulus rare earth and beryllium containing silicate glass compositions --- for glass reinforcing fibers  
[NASA-CASE-HQN-10595-1] c 27 N82-29455
- BIDIRECTIONAL REFLECTANCE**  
A reference standard for bidirectional reflection distribution function and bidirectional transmission distribution function measurement  
[NASA-CASE-MFS-28183-1] c 74 N89-13253
- BIMETALS**  
Nonmagnetic thermal motor for a magnetometer  
[NASA-CASE-XAR-03786] c 09 N69-21313  
Thermostatic actuator  
[NASA-CASE-NPO-10637] c 15 N72-12409  
Thermal motor  
[NASA-CASE-NPO-11283] c 09 N72-25260  
Thermal compensating structural member  
[NASA-CASE-MFS-20433] c 15 N72-28496  
Bimetallic fluid displacement apparatus --- for stirring and heating stored gases and liquids  
[NASA-CASE-ARC-10441-1] c 35 N74-15126  
Thermocouples of tantalum and rhenium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12050-1] c 35 N77-32454
- BINARY CODES**  
Time division radio relay synchronizing system using different sync code words for in sync and out of sync conditions Patent  
[NASA-CASE-GSC-10373-1] c 07 N71-19773  
Parallel generation of the check bits of a PN sequence Patent  
[NASA-CASE-XNP-04623] c 10 N71-26103  
Encoder/decoder system for a rapidly synchronizable binary code Patent  
[NASA-CASE-NPO-10342] c 10 N71-33407  
Binary coded sequential acquisition ranging system  
[NASA-CASE-NPO-11194] c 08 N72-25209  
Binary concatenated coding system  
[NASA-CASE-MS-C-14082-1] c 60 N76-23850
- Multiple rate digital command detection system with range clean-up capability  
[NASA-CASE-NPO-13753-1] c 32 N77-20289  
Pseudo noise code and data transmission method and apparatus  
[NASA-CASE-GSC-12017-1] c 32 N77-30308  
Binary to binary coded decimal converter  
[NASA-CASE-GSC-12044-1] c 60 N78-17691  
Apparatus and method for stabilized phase detection for binary signal tracking loops  
[NASA-CASE-MS-C-14661-1] c 33 N79-11313
- BINARY DATA**  
Binary magnetic memory device Patent  
[NASA-CASE-XGS-00174] c 08 N70-34743  
Ripple add and ripple subtract binary counters Patent  
[NASA-CASE-XGS-04766] c 08 N71-18602  
Computing apparatus Patent  
[NASA-CASE-XGS-04765] c 08 N71-18693  
Digital synchronizer Patent  
[NASA-CASE-NPO-10851] c 07 N71-24613  
Differential phase shift keyed communication system  
[NASA-CASE-MS-C-14065-1] c 32 N74-26654  
Modulator for tone and binary signals --- phase of modulation of tone and binary signals on carrier waves in communication systems  
[NASA-CASE-GSC-11743-1] c 32 N75-24981  
Binary to binary coded decimal converter  
[NASA-CASE-GSC-12044-1] c 60 N78-17691  
VLSI binary updown counter  
[NASA-CASE-NPO-17205-1-CU] c 60 N90-21525
- BINARY DIGITS**  
Logarithmic converter Patent  
[NASA-CASE-XLA-00471] c 08 N70-34778  
Full binary adder Patent  
[NASA-CASE-XGS-00689] c 08 N70-34787  
Binary number sorter Patent  
[NASA-CASE-NPO-10112] c 08 N71-12502  
Binary sequence detector Patent  
[NASA-CASE-XNP-05415] c 08 N71-12505  
Display for binary characters Patent  
[NASA-CASE-XGS-04987] c 08 N71-20571  
Comparator for the comparison of two binary numbers Patent  
[NASA-CASE-XNP-04819] c 08 N71-23295  
High speed direct binary to binary coded decimal converter and scaler  
[NASA-CASE-KSC-10595] c 08 N73-12176  
A m-ary linear feedback shift register with binary logic  
[NASA-CASE-NPO-11868] c 10 N73-20254  
Binary concatenated coding system  
[NASA-CASE-MS-C-14082-1] c 60 N76-23850  
Long period pseudo random number sequence generator  
[NASA-CASE-NPO-17241-1-CU] c 33 N90-23636
- BINARY FLUIDS**  
Flow measuring apparatus  
[NASA-CASE-LEW-12078-1] c 35 N75-30503
- BINARY TO DECIMAL CONVERTERS**  
Binary to binary-coded-decimal converter Patent  
[NASA-CASE-XNP-00432] c 08 N70-35423  
High speed binary to decimal conversion system Patent  
[NASA-CASE-XGS-01230] c 08 N71-19544  
BCD to decimal decoder Patent  
[NASA-CASE-XKS-06167] c 08 N71-24890  
High speed direct binary-to-binary coded decimal converter  
[NASA-CASE-KSC-10326] c 08 N72-21197  
Binary to binary coded decimal converter  
[NASA-CASE-GSC-12044-1] c 60 N78-17691
- BINDERS (MATERIALS)**  
Bonded solid lubricant coating Patent  
[NASA-CASE-XMS-00259] c 18 N70-36400  
Brazing alloy binder  
[NASA-CASE-XMF-05868] c 26 N75-27125  
Alkali-metal silicate binders and methods of manufacture  
[NASA-CASE-GSC-12303-1] c 24 N79-31347  
Method of making single crystal fibers  
[NASA-CASE-LEW-14921-1] c 24 N91-13502  
Heat transfer device and method of making the same  
[NASA-CASE-LEW-14162-1] c 34 N91-13668  
Method of making contamination-free ceramic bodies  
[NASA-CASE-LEW-14984-1] c 27 N91-16152  
Method of making carbide/fluoride/silver composites  
[NASA-CASE-LEW-14902-1] c 24 N91-27244
- BINOCULARS**  
Binocular device for displaying numerical information in field of view  
[NASA-CASE-LAR-11782-1] c 74 N77-20882
- BIOASSAY**  
Apparatus for producing three-dimensional recordings of fluorescence spectra Patent  
[NASA-CASE-XGS-01231] c 14 N70-41676  
Flavin coenzyme assay  
[NASA-CASE-GSC-10565-1] c 06 N72-25149
- Method of detecting and counting bacteria in body fluids  
[NASA-CASE-GSC-11092-2] c 04 N73-27052  
Amino acid analysis  
[NASA-CASE-NPO-12130-1] c 25 N75-14844  
Servo-controlled intravital microscope system  
[NASA-CASE-NPO-13214-1] c 35 N75-25123  
Method of detecting and counting bacteria  
[NASA-CASE-GSC-11917-2] c 51 N76-29891  
Automated clinical system for chromosome analysis  
[NASA-CASE-NPO-13913-1] c 52 N79-12694  
Determination of antimicrobial susceptibilities on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c 52 N79-14750  
Method and apparatus for eliminating luminol interference material  
[NASA-CASE-MS-C-16260-1] c 51 N80-16714
- BIOCHEMISTRY**  
A culture vessel with large perfusion area to volume ratio  
[NASA-CASE-MS-C-21662-1] c 51 N91-17531
- BIODEGRADATION**  
Method for treating wastewater using microorganisms and vascular aquatic plants  
[NASA-CASE-NSTL-10] c 45 N84-12654
- BIODYNAMICS**  
Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c 52 N79-26772  
Kinesimetric method and apparatus  
[NASA-CASE-MS-C-18929-1] c 39 N83-20280  
Rotationally actuated prosthetic helping hand  
[NASA-CASE-MFS-28426-1] c 54 N91-32795
- BIOELECTRIC POTENTIAL**  
Electrode for biological recording  
[NASA-CASE-XMS-02872] c 05 N69-21925  
Method of making a perspiration resistant biopotential electrode  
[NASA-CASE-MS-C-90153-2] c 05 N72-25120  
Process for control of cell division  
[NASA-CASE-LAR-10773-3] c 51 N77-25769
- BIOELECTRICITY**  
Plated electrodes Patent  
[NASA-CASE-XMS-04213-1] c 09 N71-26002  
Indirect microbial detection  
[NASA-CASE-LAR-12520-1] c 51 N81-28698
- BIOENGINEERING**  
Bio-isolated dc operational amplifier --- for bioelectric measurements  
[NASA-CASE-ARC-10596-1] c 33 N74-21851  
Actuator device for artificial leg  
[NASA-CASE-MFS-23225-1] c 52 N77-14735  
Percutaneous connector device  
[NASA-CASE-KSC-10849-1] c 52 N77-14738  
Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c 52 N79-26772  
Subcutaneous electrode structure  
[NASA-CASE-ARC-11117-1] c 52 N81-14612  
Urine collection device  
[NASA-CASE-MS-C-16433-1] c 52 N81-24711  
Bio-medical flow sensor --- intravenous procedures  
[NASA-CASE-MS-C-18761-1] c 52 N83-27577  
Prosthetic occlusive device for an internal passageway  
[NASA-CASE-MFS-25740-1] c 52 N84-11744  
Medical clip  
[NASA-CASE-LAR-12650-1] c 52 N84-28388
- BIOINSTRUMENTATION**  
Temperature compensated solid state differential amplifier Patent  
[NASA-CASE-XAC-00435] c 09 N70-35440  
Electrode construction Patent  
[NASA-CASE-ARC-10043-1] c 05 N71-11193  
Pressed disc type sensing electrodes with ion- screening means Patent  
[NASA-CASE-XMS-04212-1] c 05 N71-12346  
EEG sleep analyzer and method of operation Patent  
[NASA-CASE-MS-C-13282-1] c 05 N71-24729  
Plated electrodes Patent  
[NASA-CASE-XMS-04213-1] c 09 N71-26002  
Ultrasonic biomedical measuring and recording apparatus --- for recording motion of internal organs such as heart valves  
[NASA-CASE-ARC-10597-1] c 52 N74-20726  
Subminiature insertable force transducer --- including a strain gage to measure forces in muscles  
[NASA-CASE-NPO-13423-1] c 33 N75-31329  
Catheter tip force transducer for cardiovascular research  
[NASA-CASE-NPO-13643-1] c 52 N76-29896  
Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-1] c 52 N76-33835  
Thermistor holder for skin temperature measurements  
[NASA-CASE-ARC-10855-1] c 52 N77-10780  
Magnetic electrical connectors for biomedical percutaneous implants  
[NASA-CASE-KSC-11030-1] c 52 N77-25772

- Corneal seal device  
[NASA-CASE-LEW-12258-1] c 52 N77-28716  
Snap-in compressible biomedical electrode  
[NASA-CASE-MS-C-14623-1] c 52 N77-28717  
Miniature implantable ultrasonic echosonometer  
[NASA-CASE-ARC-11035-1] c 52 N79-18580  
Induction powered biological radiosome  
[NASA-CASE-ARC-11120-1] c 52 N80-18691  
Pulse transducer with artifact signal attenuator --- heart rate sensors  
[NASA-CASE-FRC-11012-1] c 52 N80-23969  
Method and automated apparatus for detecting coliform organisms  
[NASA-CASE-MS-C-16777-1] c 51 N80-27067  
Simultaneous muscle force and displacement transducer  
[NASA-CASE-NPO-14212-1] c 52 N80-27072  
Logic-controlled occlusive cuff system  
[NASA-CASE-MS-C-14836-1] c 52 N82-11770  
Implantable electrical device  
[NASA-CASE-GSC-12560-1] c 52 N82-29863
- BIOLOGICAL EFFECTS**  
Rotating bio-reactor cell culture apparatus  
[NASA-CASE-MS-C-21293-1] c 51 N91-21700
- BIO-LUMINESCENCE**  
Light detection instrument Patent  
[NASA-CASE-XGS-05534] c 23 N71-16355  
Lyophilized reaction mixtures Patent  
[NASA-CASE-XGS-05532] c 06 N71-17705  
Application of luciferase assay for ATP to antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c 51 N77-22794  
Rapid, quantitative determination of bacteria in water --- adenosine triphosphate  
[NASA-CASE-GSC-12158-1] c 51 N83-27569
- BIO-MEDICAL DATA**  
Biomedical radiation detecting probe Patent  
[NASA-CASE-XMS-01177] c 05 N71-19440  
Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-2] c 52 N79-26771
- BIO-METRICS**  
Pressed disc type sensing electrodes with ion-screening means Patent  
[NASA-CASE-XMS-04212-1] c 05 N71-12346  
Compressible biomedical electrode  
[NASA-CASE-MS-C-13648] c 05 N72-27103  
Ultrasonic biomedical measuring and recording apparatus --- for recording motion of internal organs such as heart valves  
[NASA-CASE-ARC-10597-1] c 52 N74-20726  
Arterial pulse wave pressure transducer  
[NASA-CASE-GSC-11531-1] c 52 N74-27566  
Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-1] c 52 N76-33835  
Miniature implantable ultrasonic echosonometer  
[NASA-CASE-ARC-11035-1] c 52 N79-18580  
Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-2] c 52 N79-26771  
Simultaneous muscle force and displacement transducer  
[NASA-CASE-NPO-14212-1] c 52 N80-27072  
Multifunctional transducer  
[NASA-CASE-NPO-14329-1] c 52 N81-20703  
Sweat collection capsule  
[NASA-CASE-ARC-11031-1] c 52 N81-29763  
Rapid quantification of an internal property --- ultrasonic determination of bladder urine quantity  
[NASA-CASE-LAR-13689-1-NP] c 35 N87-23941
- BIO-PROCESSING**  
Spiral vane bioreactor  
[NASA-CASE-MS-C-21361-1] c 51 N91-21701
- BIO-REACTORS**  
Three-dimensional coculture process  
[NASA-CASE-MS-C-21560-1] c 51 N90-18852  
Bio-reactor chamber  
[NASA-CASE-MS-C-20929-1] c 51 N91-14703  
Rotating bio-reactor cell culture apparatus  
[NASA-CASE-MS-C-21293-1] c 51 N91-21700  
Spiral vane bioreactor  
[NASA-CASE-MS-C-21361-1] c 51 N91-21701  
Horizontally rotated cell culture system with a coaxial tubular oxygenator  
[NASA-CASE-MS-C-21294-1] c 51 N91-30667
- BIO-TECHNOLOGY**  
Bio-reactor chamber  
[NASA-CASE-MS-C-20929-1] c 51 N91-14703  
Rotating bio-reactor cell culture apparatus  
[NASA-CASE-MS-C-21293-1] c 51 N91-21700
- BIO-TELEMETRY**  
Telemeter adaptable for implanting in an animal Patent  
[NASA-CASE-XAC-05706] c 05 N71-12342  
Miniature multichannel biotelemeter system  
[NASA-CASE-NPO-13065-1] c 52 N74-26625
- Medical subject monitoring systems --- multichannel monitoring systems  
[NASA-CASE-MS-C-14180-1] c 52 N76-14757  
Accelerometer telemetry system  
[NASA-CASE-ARC-10849-1] c 17 N76-29347  
Miniature ingestible telemeter devices to measure deep-body temperature  
[NASA-CASE-ARC-10583-1] c 52 N76-29894
- BIPOLAR TRANSISTORS**  
Voltage regulator for battery power source --- using a bipolar transistor  
[NASA-CASE-FRC-10116-1] c 33 N79-23345  
Power converter  
[NASA-CASE-FRC-11014-1] c 33 N82-18494  
High-gain AlGaAs/GaAs double heterojunction Darlington phototransistors for optical neural networks  
[NASA-CASE-NPO-18101-1-CU] c 74 N91-25841
- BIREFRINGENCE**  
Polarimeter for transient measurement Patent  
[NASA-CASE-XNP-08883] c 23 N71-16101  
Birefringent filter design  
[NASA-CASE-LAR-13887-1] c 36 N91-23472
- BIREFRINGENT FILTERS**  
Birefringent filter design  
[NASA-CASE-LAR-13887-1] c 36 N91-23472
- BISMALEIMIDE**  
Amine terminated bisaspartimide polymer  
[NASA-CASE-ARC-11421-2] c 27 N86-31726  
Process for curing bismaleimide resins  
[NASA-CASE-ARC-11429-4CU] c 27 N87-15304  
Vinyl stilbazoles  
[NASA-CASE-ARC-11429-3CU] c 27 N87-16908  
Preparation of polyimides from bis(N-isoprenyl)s of aryl diamides  
[NASA-CASE-LAR-14330-1-CU] c 27 N91-13560  
Bis (4-(3,4-dimethylene-pyrrolydyl)-phenyl) methane  
[NASA-CASE-LAR-13965-2-CU] c 23 N91-14418  
N-(3-ethynylphenyl)maleimide  
[NASA-CASE-LAR-14188-2] c 23 N91-14419
- BISMUTH**  
Manganese bismuth films with narrow transfer characteristics for Curie-point switching  
[NASA-CASE-NPO-11336-1] c 76 N79-16678
- BISMUTH COMPOUNDS**  
Hall effect magnetometer  
[NASA-CASE-LEW-11632-2] c 35 N75-13213
- BISTABLE CIRCUITS**  
AC logic flip-flop circuits Patent  
[NASA-CASE-XGS-00823] c 10 N71-15910
- BIT ERROR RATE**  
Detection of multiple-bit errors from single-ion tracks in integrated circuits  
[NASA-CASE-NPO-18075-1-CU] c 33 N91-13622
- BIT SYNCHRONIZATION**  
Telemetry word forming unit  
[NASA-CASE-XNP-09225] c 09 N69-24333  
Transition tracking bit synchronization system  
[NASA-CASE-NPO-10844] c 07 N72-20140  
Apparatus for deriving synchronizing pulses from pulses in a single channel PCM communications system  
[NASA-CASE-NPO-11302-1] c 07 N73-13149  
Method and apparatus for a single channel digital communications system --- synchronization of received PCM signal by digital correlation with reference signal  
[NASA-CASE-NPO-11302-2] c 32 N74-10132
- BITERNARY CODE**  
Minimal logic block encoder Patent  
[NASA-CASE-NPO-10595] c 10 N71-25917
- BITS**  
Parallel generation of the check bits of a PN sequence Patent  
[NASA-CASE-XNP-04623] c 10 N71-26103  
MOD 2 sequential function generator for multibit binary sequence  
[NASA-CASE-NPO-10636] c 08 N72-25210  
Bit error rate measurement above and below bit rate tracking threshold  
[NASA-CASE-MS-C-12743-1] c 32 N79-10263
- BITUMENS**  
Oil shale extraction using super-critical extraction  
[NASA-CASE-NPO-15656-1] c 43 N84-23012
- BLACK BODY RADIATION**  
Black-body furnace Patent  
[NASA-CASE-XLE-01399] c 33 N71-15625  
Cavity radiometer Patent  
[NASA-CASE-XNP-08961] c 14 N71-24809  
Conically shaped cavity radiometer with a dual purpose cone winding Patent  
[NASA-CASE-XNP-09701] c 14 N71-26475  
Black body cavity radiometer Patent  
[NASA-CASE-NPO-10810] c 14 N71-27323  
Stable density stratification solar pond  
[NASA-CASE-NPO-15419-2] c 44 N85-30474
- BLADDER**  
Prosthetic urinary sphincter  
[NASA-CASE-MFS-23717-1] c 52 N81-25660
- Rapid quantification of an internal property --- ultrasonic determination of bladder urine quantity  
[NASA-CASE-LAR-13689-1-NP] c 35 N87-23941  
Rapidly quantifying the relative distention of a human bladder  
[NASA-CASE-LAR-13901-1-NP] c 52 N90-21519
- BLADE TIPS**  
Modification and improvements to cooled blades Patent  
[NASA-CASE-XLE-00092] c 15 N70-33264  
Tip cap for a rotor blade  
[NASA-CASE-LEW-13654-1] c 07 N84-22560
- BLADES**  
Impact absorbing blade mounts for variable pitch blades  
[NASA-CASE-LEW-12313-1] c 37 N78-10468
- BLADES (CUTTERS)**  
Line cutter Patent  
[NASA-CASE-XMS-04072] c 15 N70-42017  
Tissue macerating instrument  
[NASA-CASE-LEW-12668-1] c 52 N78-14773  
Crystal cleaving machine  
[NASA-CASE-GSC-12584-1] c 37 N82-32730
- BLAST LOADS**  
Linear explosive comparison  
[NASA-CASE-LAR-10800-1] c 33 N72-27959
- BLOCK COPOLYMERS**  
Imide/arylene ether copolymers  
[NASA-CASE-LAR-14159-1-CU] c 27 N90-26953
- BLOOD**  
Reduction of blood serum cholesterol  
[NASA-CASE-NPO-12119-1] c 52 N75-15270  
Gas diffusion liquid storage bag and method of use for storing blood  
[NASA-CASE-NPO-13930-1] c 52 N79-14749  
Dialysis system --- using ion exchange resin membranes permeable to urea molecules  
[NASA-CASE-NPO-14101-1] c 52 N80-14687
- BLOOD FLOW**  
Logic-controlled occlusive cuff system  
[NASA-CASE-MS-C-14836-1] c 52 N82-11770
- BLOOD PRESSURE**  
Blood pressure measuring system for separating and separately recording dc signal and an ac signal Patent  
[NASA-CASE-XMS-06061] c 05 N71-23317  
Apparatus and method for processing Korotkov sounds --- for blood pressure measurement  
[NASA-CASE-MS-C-13999-1] c 52 N74-26626  
Arterial pulse wave pressure transducer  
[NASA-CASE-GSC-11531-1] c 52 N74-27566  
Circuit for detecting initial systole and diastolic notch --- for monitoring arterial pressure  
[NASA-CASE-LEW-11581-1] c 54 N75-13531
- BLOOD VESSELS**  
Non-invasive method and apparatus for measuring pressure within a phlebotomy vessel  
[NASA-CASE-ARC-11264-2] c 52 N83-29991
- BLUFF BODIES**  
Annular supersonic decelerator or drogue Patent  
[NASA-CASE-XLE-00222] c 02 N70-37939
- BLUNT BODIES**  
Flow field simulation Patent  
[NASA-CASE-LAR-11138] c 12 N71-20436
- BODIES OF REVOLUTION**  
Conforming polisher for aspheric surface of revolution Patent  
[NASA-CASE-XGS-02884] c 15 N71-22705  
Moment of inertia test fixture Patent  
[NASA-CASE-XGS-01023] c 14 N71-22992
- BODY FLUIDS**  
Programmable physiological infusion  
[NASA-CASE-ARC-10447-1] c 52 N74-22771  
Method of detecting and counting bacteria  
[NASA-CASE-GSC-11917-2] c 51 N76-29891  
Micro-fluid exchange coupling apparatus  
[NASA-CASE-ARC-11114-1] c 51 N81-14605
- BODY KINEMATICS**  
Space suit having improved waist and torso movement  
[NASA-CASE-ARC-10275-1] c 05 N72-22092  
Controller arm for a remotely related slave arm  
[NASA-CASE-ARC-11052-1] c 37 N79-28551  
Kinesimetric method and apparatus  
[NASA-CASE-MS-C-18929-1] c 39 N83-20280
- BODY MEASUREMENT (BIOLOGY)**  
Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-1] c 52 N76-33835  
Miniature implantable ultrasonic echosonometer  
[NASA-CASE-ARC-11035-1] c 52 N79-18580  
Kinesimetric method and apparatus  
[NASA-CASE-MS-C-18929-1] c 39 N83-20280  
Apparatus for determining changes in limb volume  
[NASA-CASE-MS-C-18759-1] c 52 N83-27578

**BODY TEMPERATURE**

Garments for controlling the temperature of the body Patent  
 [NASA-CASE-XMS-10269] c 05 N71-24147  
 Miniature ingestible telemeter devices to measure deep-body temperature  
 [NASA-CASE-ARC-10583-1] c 52 N76-29894  
 Method for thermal monitoring subcutaneous tissue  
 [NASA-CASE-LAR-13028-1] c 52 N85-30618

**BODY VOLUME (BIOLOGY)**  
 Whole body measurement systems --- for weightlessness simulation  
 [NASA-CASE-MSC-13972-1] c 52 N74-10975  
 Apparatus for determining changes in limb volume  
 [NASA-CASE-MSC-18759-1] c 52 N83-27578

**BODY-WING CONFIGURATIONS**  
 Free wing assembly for an aircraft  
 [NASA-CASE-FRC-10092-1] c 05 N79-12061  
 Means for controlling aerodynamically induced twist  
 [NASA-CASE-LAR-12175-1] c 05 N82-28279

**BOILERS**  
 Boiler for generating high quality vapor Patent  
 [NASA-CASE-XLE-00785] c 33 N71-16104  
 Shell side liquid metal boiler  
 [NASA-CASE-NPO-10831] c 33 N72-20915  
 Carbon granule probe microphone for leak detection --- recovery boilers  
 [NASA-CASE-NPO-16027-1] c 35 N85-21597

**BOILING**  
 Process for making a noble metal on tin oxide catalyst  
 [NASA-CASE-LAR-13741-1-SB] c 25 N90-20180  
 Boron-containing organosilane polymers and ceramic materials thereof  
 [NASA-CASE-ARC-11649-2-SB] c 27 N90-21177

**BOLOMETERS**  
 Insertion loss measuring apparatus having transformer means connected across a pair of bolometers Patent  
 [NASA-CASE-XNP-01193] c 10 N71-16057  
 Thin film capacitive bolometer and temperature sensor Patent  
 [NASA-CASE-NPO-10607] c 09 N71-27232  
 Wedge immersed thermistor bolometers  
 [NASA-CASE-XGS-01245-1] c 35 N79-33449

**BOLTED JOINTS**  
 Optimized bolted joint  
 [NASA-CASE-LAR-13250-1] c 37 N86-27630  
 Device for measuring hole elongation in a bolted joint  
 [NASA-CASE-LAR-13453-1] c 37 N88-14361  
 Clevis joint for deployable space structures  
 [NASA-CASE-LAR-13898-1] c 37 N91-15544

**BOLTS**  
 Gas actuated bolt disconnect Patent  
 [NASA-CASE-XLA-00326] c 03 N70-34667  
 Despin weight release Patent  
 [NASA-CASE-XLA-00679] c 15 N70-38601  
 Inspection gage for boss Patent  
 [NASA-CASE-XMF-04966] c 14 N71-17658  
 Split nut separation system Patent  
 [NASA-CASE-XNP-06914] c 15 N71-21489  
 Fastener stretcher  
 [NASA-CASE-GSC-11149-1] c 15 N73-30457  
 Optimized bolted joint  
 [NASA-CASE-LAR-13250-1] c 37 N86-27630  
 Bearing-bypass material system test  
 [NASA-CASE-LAR-13458-1] c 35 N88-23967

**BONDING**  
 Bonding graphite with fused silver chloride  
 [NASA-CASE-XGS-00963] c 15 N69-39735  
 Bonded joint and method --- for reducing peak shear stress in adhesive bonds  
 [NASA-CASE-LAR-10900-1] c 37 N74-23064  
 Bonding method in the manufacture of continuous regression rate sensor devices  
 [NASA-CASE-LAR-10337-1] c 24 N75-30260  
 Strain arrestor plate for fused silica tile --- bonding of thermal insulation to metallic plates or structural parts  
 [NASA-CASE-MSC-14182-1] c 27 N76-14264  
 Bonding machine for forming a solar array strip  
 [NASA-CASE-NPO-13652-2] c 44 N79-24431  
 Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
 [NASA-CASE-GSC-11577-3] c 24 N79-25143  
 Method of making a partial interlaminar separation composite system  
 [NASA-CASE-LAR-12065-2] c 24 N81-33235  
 Attachment system for silica tiles --- thermal protection for space shuttle orbiter  
 [NASA-CASE-MSC-18741-1] c 27 N82-29456  
 Surface texturing of fluoropolymers  
 [NASA-CASE-LEW-13028-1] c 27 N82-33521  
 Heat sealable, flame and abrasion resistant coated fabric  
 [NASA-CASE-MSC-18382-2] c 27 N84-14324  
 Insulation bonding test system  
 [NASA-CASE-MFS-25862-1] c 27 N85-20126

Cryogenic insulation strength and bond tester  
 [NASA-CASE-MFS-25910-1] c 39 N86-20841  
 Method for forming hermetic seals  
 [NASA-CASE-NPO-16423-1-CU] c 37 N87-21334  
 Tool and process for miniature explosive joining of tubes  
 [NASA-CASE-LAR-13662-1] c 37 N88-14359  
 Method for maintaining precise suction strip porosities  
 [NASA-CASE-LAR-13638-1] c 31 N90-19427  
 New core design for use with precision composite reflectors  
 [NASA-CASE-NPO-17858-1-CU] c 24 N90-26880  
 Ceramic coatings on smooth surfaces  
 [NASA-CASE-LEW-15164-1] c 27 N91-25298

**BONES**  
 Ultrasonic bone densitometer  
 [NASA-CASE-MFS-20994-1] c 35 N75-12271  
 Method and system for in vivo measurement of bone tissue using a two level energy source  
 [NASA-CASE-MSC-14276-1] c 52 N77-14737  
 Method of adhering bone to a rigid substrate using a graphite fiber reinforced bone cement  
 [NASA-CASE-NPO-13764-1] c 27 N78-17215

**BOOLEAN ALGEBRA**  
 VLSI binary updown counter  
 [NASA-CASE-NPO-17205-1-CU] c 60 N90-21525

**BOOMS (EQUIPMENT)**  
 Folding boom assembly Patent  
 [NASA-CASE-XGS-00938] c 32 N70-41367  
 Collapsible antenna boom and transmission line Patent  
 [NASA-CASE-MFS-20068] c 07 N71-27191  
 Minimech self-deploying boom mechanism  
 [NASA-CASE-GSC-10566-1] c 15 N72-18477  
 Mechanically extendible telescoping boom  
 [NASA-CASE-NPO-11118] c 03 N72-25021  
 Extended moment arm anti-spin device  
 [NASA-CASE-LAR-12979-1] c 05 N85-21147  
 Space station erectable manipulator placement system  
 [NASA-CASE-MSC-21096-1] c 18 N89-12621

**BOOSTER RECOVERY**  
 Recoverable rocket vehicle Patent  
 [NASA-CASE-XMF-00389] c 31 N70-34176  
 Recoverable single stage spacecraft booster Patent  
 [NASA-CASE-XMF-01973] c 31 N70-41588  
 Orbiter/launch system  
 [NASA-CASE-LAR-12250-1] c 14 N81-26161  
 A two-stage earth-to-orbit transport with translating oblique wings for booster recovery  
 [NASA-CASE-LAR-14156-1] c 16 N90-16781

**BOOSTER ROCKET ENGINES**  
 Segmented back-up bar Patent  
 [NASA-CASE-XMF-00640] c 15 N70-39924  
 Recoverable single stage spacecraft booster Patent  
 [NASA-CASE-XMF-01973] c 31 N70-41588  
 Space Shuttle with rail system and aft thrust structure securing solid rocket boosters to external tank  
 [NASA-CASE-MFS-25853-1] c 16 N84-27784  
 Earth-to-orbit vehicle providing a reusable orbital stage  
 [NASA-CASE-LAR-13486-1] c 16 N90-22584

**BOOTS (FOOTWEAR)**  
 Walking boot assembly  
 [NASA-CASE-ARC-11101-1] c 54 N78-17675

**BOREHOLES**  
 Method for machining holes in composite materials  
 [NASA-CASE-MFS-28044-1] c 31 N87-25491

**BORIDES**  
 Method of making a light weight battery plaque  
 [NASA-CASE-LEW-13349-1] c 26 N84-22734  
 Boron-containing organosilane polymers and ceramic materials thereof  
 [NASA-CASE-ARC-11649-1-SB] c 27 N88-29040  
 High temperature refractory member with radiation emissive overcoat  
 [NASA-CASE-NPO-17122-1-CU] c 27 N91-14489

**BORING MACHINES**  
 Boring bar drive mechanism Patent  
 [NASA-CASE-XLA-03661] c 15 N71-33518  
 Borehole geological assessment  
 [NASA-CASE-NPO-14231-1] c 46 N80-10709

**BORON**  
 Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential of field effect device  
 [NASA-CASE-GSC-11425-1] c 76 N74-20329  
 Boron-containing organosilane polymers and ceramic materials thereof  
 [NASA-CASE-ARC-11649-2-SB] c 27 N90-21177

**BORON CARBIDES**  
 Catalyst for growth of boron carbide single crystal whiskers  
 [NASA-CASE-XHQ-03903] c 15 N69-21922

**BORON CHLORIDES**  
 Preparation of B-trichloroborazine  
 [NASA-CASE-ARC-11643-1-SB] c 23 N87-23698

**BORON COMPOUNDS**

Boron-containing organosilane polymers and ceramic materials thereof  
 [NASA-CASE-ARC-11649-1-SB] c 27 N88-29040

**BORON FLUORIDES**  
 Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
 [NASA-CASE-ARC-11057-1] c 27 N78-31233

**BOROSILICATE GLASS**  
 Method for repair of thin glass coatings --- on space shuttle orbiter tiles  
 [NASA-CASE-KSC-11097-1] c 27 N82-33520  
 Pressure transducer and system for cryogenic environments  
 [NASA-CASE-LAR-14579-1] c 35 N91-28546

**BOULES**  
 Ingot slicing machine and method  
 [NASA-CASE-NPO-15483-1] c 37 N85-21650

**BOUNDARY CONDITIONS**  
 Suspension device for low-frequency structures  
 [NASA-CASE-LAR-14272-1-CU] c 14 N91-28184

**BOUNDARY LAYER CONTROL**  
 Double hinged flap Patent  
 [NASA-CASE-XLA-01290] c 02 N70-42016  
 Aerodynamic side-force alleviator means  
 [NASA-CASE-LAR-12326-1] c 02 N81-14968  
 Active control of boundary layer transition and turbulence  
 [NASA-CASE-LAR-13532-1] c 34 N91-14562  
 Passive laminar flow control of crossflow vorticity  
 [NASA-CASE-LAR-13563-1] c 34 N91-23410

**BOUNDARY LAYER FLOW**  
 Combined riblet and lebu drag reduction system  
 [NASA-CASE-LAR-13286-1] c 02 N88-14071

**BOUNDARY LAYER SEPARATION**  
 Tertiary flow injection thrust vectoring system Patent  
 [NASA-CASE-MFS-20831] c 28 N71-29153  
 Controlled separation combustor --- airflow distribution in gas turbine engines  
 [NASA-CASE-LEW-11593-1] c 20 N76-14190  
 Self stabilizing sonic inlet  
 [NASA-CASE-LEW-11890-1] c 05 N79-24976

**BOUNDARY LAYER TRANSITION**  
 Detection of the transitional layer between laminar and turbulent flow areas on a wing surface --- using an accelerometer to measure pressure levels during wind tunnel tests  
 [NASA-CASE-LAR-12261-1] c 02 N80-20224  
 Crossflow vorticity sensor  
 [NASA-CASE-LAR-13436-1-CU] c 02 N88-23759  
 Method for laminar boundary layer transition visualization in flight  
 [NASA-CASE-LAR-13554-1] c 02 N89-12551  
 Active control of boundary layer transition and turbulence  
 [NASA-CASE-LAR-13532-1] c 34 N91-14562

**BOUNDARY LAYERS**  
 Traversing probe Patent  
 [NASA-CASE-XFR-02007] c 12 N71-24692  
 Apparatus for sensing temperature  
 [NASA-CASE-XLE-05230] c 14 N72-27410

**BOXES (CONTAINERS)**  
 Storage container for electronic devices Patent  
 [NASA-CASE-MFS-20075] c 09 N71-26133  
 Double window viewing chamber assembly  
 [NASA-CASE-MFS-28057-1] c 09 N87-14355

**BRACKETS**  
 Electrical servo actuator bracket --- fuel control valves on jet engines  
 [NASA-CASE-FRC-11044-1] c 37 N81-33483  
 Airfoil flutter model suspension system  
 [NASA-CASE-LAR-13522-1-SB] c 09 N87-25334  
 Locking hinge  
 [NASA-CASE-MSC-21056-1] c 18 N88-23827  
 Robot cable-compliant devices  
 [NASA-CASE-GSC-13127-1] c 37 N91-17388  
 Removable hand hold  
 [NASA-CASE-LEW-15196-1] c 37 N91-26543

**BRAGG CELLS**  
 Synchronous strobe apparatus for flow visualization  
 [NASA-CASE-LAR-14556-1] c 36 N91-25392

**BRILLE**  
 Braille reading system  
 [NASA-CASE-LAR-13306-1] c 82 N87-29372

**BRAKES**  
 Preloaded brake disc  
 [NASA-CASE-MSC-21132-1] c 37 N88-29181

**BRAKES (FOR ARRESTING MOTION)**  
 Frangible tube energy dissipation Patent  
 [NASA-CASE-XLA-00754] c 15 N70-34850  
 Emergency escape system Patent  
 [NASA-CASE-XKS-07814] c 15 N71-27067  
 Sprag solenoid brake --- development and operations of electrically controlled brake  
 [NASA-CASE-MFS-21846-1] c 37 N74-26976



- Reel safety brake  
[NASA-CASE-GSC-11960-1] c 37 N77-14479
- Motion restraining device  
[NASA-CASE-NPO-13619-1] c 37 N78-16369
- Moving body velocity arresting line --- stainless steel cables with energy absorbing sleeves  
[NASA-CASE-LAR-12372-1] c 37 N82-18601
- Bidirectional drive and brake mechanism  
[NASA-CASE-MS-C-21540-1] c 37 N91-32514
- BRAKING**
- Regenerative braking system Patent  
[NASA-CASE-XMF-01096] c 10 N71-16030
- Linear magnetic brake with two windings Patent  
[NASA-CASE-XLE-05079] c 15 N71-17652
- Anemometer with braking mechanism Patent  
[NASA-CASE-XMF-05224] c 14 N71-23726
- Roller locking brake  
[NASA-CASE-GSC-13376-1] c 37 N91-28579
- BRAZING**
- Pretreatment method for anti-wettable materials  
[NASA-CASE-XMS-03537] c 15 N69-21471
- Process for applying a protective coating for salt bath brazing Patent  
[NASA-CASE-XLE-00046] c 15 N70-33311
- Method of joining aluminum to stainless steel Patent  
[NASA-CASE-MFS-07369] c 15 N71-20443
- Brazing alloy Patent  
[NASA-CASE-XNP-03063] c 17 N71-23365
- Brazing alloy binder  
[NASA-CASE-XMF-05868] c 26 N75-27125
- Brazing alloy composition  
[NASA-CASE-XMF-06053] c 26 N75-27126
- Brazing alloy  
[NASA-CASE-XNP-03878] c 26 N75-27127
- Method of fluxless brazing and diffusion bonding of aluminum containing components  
[NASA-CASE-MS-C-14435-1] c 37 N76-18455
- BREATHING APPARATUS**
- Transfer valve Patent  
[NASA-CASE-XAC-01158] c 15 N71-23051
- Self-contained breathing apparatus  
[NASA-CASE-MS-C-14733-1] c 54 N76-24900
- Portable breathing system --- a breathing apparatus using a rebreathing system of heat exchangers for carbon dioxide removal  
[NASA-CASE-MS-C-16182-1] c 54 N80-10799
- BRICKS**
- Foldable construction block  
[NASA-CASE-MS-C-12233-2] c 32 N73-13921
- BRIDGMAN METHOD**
- Apparatus and procedure to detect a liquid-solid interface during crystal growth in a bridgman furnace  
[NASA-CASE-LAR-13597-1-CU] c 25 N87-23713
- BRIGHTNESS**
- Light intensity modulator controller Patent  
[NASA-CASE-XMS-04300] c 09 N71-19479
- BRIGHTNESS DISCRIMINATION**
- Television signal processing system Patent  
[NASA-CASE-NPO-10140] c 07 N71-24742
- Visual examination apparatus  
[NASA-CASE-ARC-10329-1] c 05 N73-26072
- Illumination control apparatus for compensating solar light  
[NASA-CASE-KSC-11010-1] c 74 N79-12890
- BRITTLENESS**
- Rock sampling --- apparatus for controlling particle size  
[NASA-CASE-XNP-10007-1] c 46 N74-23068
- Rock sampling --- method for controlling particle size distribution  
[NASA-CASE-XNP-09755] c 46 N74-23069
- Elastomer coated filler and composites thereof comprising at least 60% by weight of a hydrated filler and an elastomer containing an acid substituent  
[NASA-CASE-NPO-14857-1] c 27 N83-19900
- Directional solidification of superalloys  
[NASA-CASE-MFS-28314-1] c 26 N91-14462
- BROADBAND**
- Broadband choke for antenna structure  
[NASA-CASE-XMS-05303] c 07 N69-27462
- Flexible blade antenna Patent  
[NASA-CASE-MS-C-12101] c 09 N71-18720
- Broadband frequency discriminator Patent  
[NASA-CASE-NPO-10096] c 07 N71-24583
- Broadband microwave waveguide window Patent  
[NASA-CASE-XNP-08880] c 09 N71-24808
- High-gain, broadband traveling wave maser Patent  
[NASA-CASE-NPO-10548] c 16 N71-24831
- Wideband VCO with high phase stability Patent  
[NASA-CASE-XLA-03893] c 10 N71-27271
- Composite antenna feed  
[NASA-CASE-GSC-11046-1] c 07 N73-28013
- Multifrequency broadband polarized horn antenna  
[NASA-CASE-NPO-14588-1] c 32 N81-25278
- Broadband optical radiation detector  
[US-PATENT-4,262,198] c 74 N83-19597
- Method of measuring sea surface water temperature with a satellite including wideband passive synthetic-aperture multichannel receiver  
[NASA-CASE-NPO-15651-1] c 43 N85-21723
- Multispectral variable magnification glancing incidence x ray telescope  
[NASA-CASE-MFS-28013-4] c 89 N90-27595
- BROADBAND AMPLIFIERS**
- Broadband stable power multiplier Patent  
[NASA-CASE-XNP-10854] c 10 N71-26331
- Cascaded complementary pair broadband transistor amplifiers Patent  
[NASA-CASE-NPO-10003] c 10 N71-26415
- BROADCASTING**
- Vehicle locating system utilizing AM broadcasting station carriers  
[NASA-CASE-NPO-13217-1] c 32 N75-26194
- Real-time data compression of broadcast video signals  
[NASA-CASE-LEW-14945-1] c 32 N91-13598
- BROMINATION**
- Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-1] c 24 N86-19380
- BROMINE**
- Hydrogen-bromine secondary battery  
[NASA-CASE-NPO-13237-1] c 44 N76-18641
- BROMINE COMPOUNDS**
- Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-2] c 27 N86-27451
- BRONZES**
- Thin wire pointing method  
[NASA-CASE-NPO-15789-1] c 31 N83-19947
- BRUSHES**
- Method of making impurity-type semiconductor electrical contacts Patent  
[NASA-CASE-XMF-01016] c 26 N71-17818
- BRUSHES (ELECTRICAL CONTACTS)**
- Shaft transducer having dc output proportional to angular velocity  
[NASA-CASE-NPO-15706-1] c 35 N84-28017
- BUBBLES**
- Method of forming frozen spheres in a force-free drop tower  
[NASA-CASE-NPO-14845-1] c 27 N82-28442
- Acoustic bubble removal method  
[NASA-CASE-NPO-15334-1] c 71 N83-35781
- BUCKLING**
- Miniature vibration isolator Patent  
[NASA-CASE-XLA-01019] c 15 N70-40156
- Compression test assembly  
[NASA-CASE-LAR-10440-1] c 14 N73-32323
- BUFFER STORAGE**
- Data handling system based on source significance, storage availability and data received from the source Patent Application  
[NASA-CASE-XNP-04162-1] c 08 N70-34675
- Data transfer system Patent  
[NASA-CASE-NPO-12107] c 08 N71-27255
- Buffered analog converter  
[NASA-CASE-KSC-10397] c 08 N72-25206
- Common data buffer system --- communication with computational equipment utilized in spacecraft operations  
[NASA-CASE-KSC-11048-1] c 62 N81-24779
- Braille reading system  
[NASA-CASE-LAR-13306-1] c 82 N87-29372
- BUFFERS (CHEMISTRY)**
- Static continuous electrophoresis device  
[NASA-CASE-MFS-25306-1] c 25 N83-13187
- BUILDINGS**
- Foldable construction block  
[NASA-CASE-MS-C-12233-1] c 15 N72-25454
- BULBS**
- External bulb variable volume maser  
[NASA-CASE-GSC-12334-1] c 36 N79-14362
- BULKHEADS**
- Tank construction for space vehicles Patent  
[NASA-CASE-XMF-01899] c 31 N70-41948
- Tube coupling device  
[NASA-CASE-MFS-25964-2] c 37 N87-22977
- Pressure vessel flex joint  
[NASA-CASE-MS-C-21748-1] c 37 N91-25415
- BUOYANCY**
- Inflatable radar reflector unit Patent  
[NASA-CASE-XMS-00893] c 07 N70-40063
- BURNERS**
- Micronized coal burner facility  
[NASA-CASE-LEW-13426-1] c 25 N84-16276
- BURNING RATE**
- Burning rate control of solid propellants Patent  
[NASA-CASE-XLE-03494] c 27 N71-21819
- Burn rate testing apparatus  
[NASA-CASE-XMS-09690] c 33 N72-25913
- Nitramine propellants --- gun propellant burning rate  
[NASA-CASE-NPO-14103-1] c 28 N78-31255
- BURNOUT**
- Spherically-shaped rocket motor Patent  
[NASA-CASE-XHQ-01897] c 28 N70-35381
- BURNS (INJURIES)**
- Medical diagnosis system and method with multispectral imaging --- depth of burns and optical density of the skin  
[NASA-CASE-NPO-14402-1] c 52 N81-27783
- Method and apparatus for characterizing reflected ultrasonic pulses  
[NASA-CASE-LAR-13966-1] c 71 N91-27914
- BUS CONDUCTORS**
- Test apparatus for locating shorts during assembly of electrical buses  
[NASA-CASE-ARC-11116-1] c 33 N82-24420
- BUSHINGS**
- Overcenter collet space station truss fastener  
[NASA-CASE-MS-C-21504-1] c 18 N91-21221
- BUTANES**
- Production of butanol by fermentation in the presence of cocultures of clostridium  
[NASA-CASE-NPO-16203-1] c 23 N85-35227
- BUTT JOINTS**
- Channel-type shell construction for rocket engines and the like Patent  
[NASA-CASE-XLE-00144] c 28 N70-34860
- Segmented back-up bar Patent  
[NASA-CASE-XMF-00640] c 15 N70-39924
- Apparatus for welding sheet material --- butt joints  
[NASA-CASE-XMS-01330] c 37 N75-27376
- BUTTERFLY VALVES**
- Flexible seal for valves Patent  
[NASA-CASE-XLE-00101] c 15 N70-33376
- Hybrid butterfly valve  
[NASA-CASE-SSC-00004-1] c 37 N91-14609
- BUTYRIC ACID**
- Production of butanol by fermentation in the presence of cocultures of clostridium  
[NASA-CASE-NPO-16203-1] c 23 N85-35227
- BYPASSES**
- Low power drain semi-conductor circuit  
[NASA-CASE-XGS-04999] c 09 N69-24317
- Helical coaxial resonator RF filter  
[NASA-CASE-XGS-02816] c 07 N69-24323
- Current regulating voltage divider  
[NASA-CASE-MFS-20935] c 09 N71-34212
- Use of unilluminated solar cells as shunt diodes for a solar array  
[NASA-CASE-GSC-10344-1] c 03 N72-27053
- Shunt regulation electric power system  
[NASA-CASE-GSC-10135] c 33 N78-17296
- Thrust reverser for a long duct fan engine --- for turbofan engines  
[NASA-CASE-LEW-13199-1] c 07 N82-26293
- Method of making an ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-2] c 52 N84-23095
- C**
- CABLE FORCE RECORDERS**
- Winch having cable position and load indicators Patent  
[NASA-CASE-MS-C-12052-1] c 15 N71-24599
- CABLES**
- Cable restraint  
[NASA-CASE-LAR-10129-1] c 15 N73-25512
- Deployable flexible tunnel  
[NASA-CASE-MFS-22636-1] c 37 N76-22540
- Cable suspended windmill  
[NASA-CASE-LAR-13434-1] c 37 N90-23742
- CABLES (ROPES)**
- High-voltage cable Patent  
[NASA-CASE-XNP-00738] c 09 N70-38201
- Cable arrangement for rigid tethering Patent  
[NASA-CASE-XLA-02332] c 32 N71-17609
- Extensible cable support Patent  
[NASA-CASE-XMF-07587] c 15 N71-18701
- Satellite appendage tie down cord Patent  
[NASA-CASE-XGS-02554] c 31 N71-21064
- Quick attach mechanism Patent  
[NASA-CASE-XFR-05421] c 15 N71-22994
- Flexible/rigidifiable cable assembly  
[NASA-CASE-MS-C-13512-1] c 15 N72-22485
- Cable stabilizer for open shaft cable operated elevators  
[NASA-CASE-KSC-10513] c 15 N72-25453
- Reefing system  
[NASA-CASE-LAR-10129-2] c 37 N74-20063
- Emergency descent device  
[NASA-CASE-MFS-23074-1] c 54 N77-21844
- Belt for transmitting power from a cogged driving member to a cogged driven member  
[NASA-CASE-GSC-12289-1] c 37 N80-32717

Moving body velocity arresting line --- stainless steel cables with energy absorbing sleeves  
 [NASA-CASE-LAR-12372-1] c 37 N82-18601  
 Selectable towline spin chute system  
 [NASA-CASE-LAR-14322-1] c 02 N91-27139

**CADMIUM COMPOUNDS**

Pretreatment of lubricated surfaces with sputtered cadmium oxide  
 [NASA-CASE-LEW-14474-1] c 27 N91-28423

**CADMIUM SULFIDES**

High field CdS detector for infrared radiation  
 [NASA-CASE-LAR-11027-1] c 35 N74-18088  
 CDS solid state phase insensitive ultrasonic transducer --- annealing cadmium sulfide crystals  
 [NASA-CASE-LAR-12304-1] c 35 N80-20559  
 Liquid crystal light valve structures  
 [NASA-CASE-MSC-20036-1] c 76 N85-33826

**CALCIUM**

Ultrasonic bone densitometer  
 [NASA-CASE-MFS-20994-1] c 35 N75-12271

**CALCIUM FLUORIDES**

Bonded solid lubricant coating Patent  
 [NASA-CASE-XMS-00259] c 18 N70-36400  
 Method of making self lubricating fluoride- metal composite materials Patent  
 [NASA-CASE-XLE-08511-2] c 18 N71-16105

**CALCIUM OXIDES**

Process for the preparation of calcium superoxide  
 [NASA-CASE-ARC-11053-1] c 25 N79-10162

**CALCIUM PHOSPHATES**

Process for the preparation of brushite crystals  
 [NASA-CASE-ERC-10338] c 04 N72-33072

**CALCULATORS**

Sun angle calculator  
 [NASA-CASE-MSC-12617-1] c 35 N76-29552

**CALCULI**

Apparatus for disintegrating kidney stones  
 [NASA-CASE-GSC-12652-1] c 52 N84-34913

**CALIBRATING**

Self-calibrating displacement transducer Patent  
 [NASA-CASE-XLA-00781] c 09 N71-22999  
 Pressure transducer calibrator Patent  
 [NASA-CASE-XNP-01660] c 14 N71-23036  
 Apparatus for testing a pressure responsive instrument Patent  
 [NASA-CASE-XMF-04134] c 14 N71-23755  
 Phonocardiogram simulator Patent  
 [NASA-CASE-XKS-10804] c 05 N71-24606  
 Laser calibrator Patent  
 [NASA-CASE-XLA-03410] c 16 N71-25914  
 Radar calibration sphere  
 [NASA-CASE-XLA-11154] c 07 N72-21117  
 Gauge calibration by diffusion  
 [NASA-CASE-XGS-07752] c 14 N73-30390  
 System for calibrating pressure transducer  
 [NASA-CASE-LAR-10910-1] c 35 N74-13132  
*In situ transfer standard for ultrahigh vacuum gage calibration*  
 [NASA-CASE-LAR-10862-1] c 35 N74-15092  
 Ergometer calibrator --- for any ergometer utilizing rotating shaft  
 [NASA-CASE-MFS-21045-1] c 35 N75-15932  
 Ultrasonic calibration device --- for producing changes in acoustic attenuation and phase velocity  
 [NASA-CASE-LAR-11435-1] c 35 N76-15432  
 High temperature strain gage calibration fixture  
 [NASA-CASE-LAR-11500-1] c 35 N76-24523  
 Electronically scanned pressure sensor module with in situ calibration capability  
 [NASA-CASE-LAR-12230-1] c 35 N79-14347  
 Calibrating pressure switch  
 [NASA-CASE-XMF-04494-1] c 33 N79-33392  
 Electromagnetic power absorber  
 [NASA-CASE-NPO-13830-1] c 32 N80-14281  
 Automatic flowmeter calibration system  
 [NASA-CASE-KSC-11076-1] c 34 N81-26402  
 Method and apparatus for precision control of radiometer  
 [NASA-CASE-NPO-15398-1] c 35 N84-22931  
 Strain gage calibration  
 [NASA-CASE-LAR-12743-1] c 35 N84-28019  
 Means and method for calibrating a photon detector utilizing electron-photon coincidence  
 [NASA-CASE-NPO-15644-1] c 35 N84-33767  
 Method and apparatus for self-calibration and phasing of array antenna  
 [NASA-CASE-NPO-15920-1] c 33 N85-21493  
 Ultrasonic angle beam standard reflector --- ultrasonic nondestructive inspection  
 [NASA-CASE-LAR-13153-1] c 71 N86-21276  
 Simulator scene display evaluation device  
 [NASA-CASE-ARC-11504-1] c 09 N86-32447  
 Spinning disk calibration method and apparatus for laser Doppler velocimeter  
 [NASA-CASE-ARC-11510-1] c 35 N86-32697

Antimultipath communication by injecting tone into null in signal spectrum  
 [NASA-CASE-NPO-16414-1-CU] c 32 N87-25511  
 Miniature remote dead weight calibrator  
 [NASA-CASE-LAR-13564-1] c 35 N87-25558  
 Multiple axis reticle  
 [NASA-CASE-ARC-11886-1-SB] c 35 N91-14591

**CALORIMETERS**

Constant temperature heat sink for calorimeters Patent  
 [NASA-CASE-XMF-04208] c 33 N71-29051  
 Heat flow calorimeter --- measures output of Ni-Cd batteries  
 [NASA-CASE-GSC-11434-1] c 34 N74-27859  
 Containerless high temperature calorimeter apparatus  
 [NASA-CASE-MFS-23923-1] c 35 N81-19426

**CAMERA SHUTTERS**

Electrically-operated rotary shutter Patent  
 [NASA-CASE-XNP-00637] c 14 N70-40273  
 Fast opening diaphragm Patent  
 [NASA-CASE-XLA-03660] c 15 N71-21060  
 Cyclically operable optical shutter  
 [NASA-CASE-NPO-10758] c 14 N73-14427  
 Rotary solenoid shutter drive assembly and rotary inertia damper and stop plate assembly --- for use with cameras mounted in satellites  
 [NASA-CASE-GSC-11560-1] c 33 N74-20861

**CAMERAS**

Measurement of time differences between luminous events Patent  
 [NASA-CASE-XLA-01987] c 23 N71-23976  
 Image magnification adapter for cameras Patent  
 [NASA-CASE-XMF-03844-1] c 14 N71-26474  
 Film feed camera having a detent means Patent  
 [NASA-CASE-LAR-10686] c 14 N71-28935  
 Laser camera and diffusion filter therefor Patent  
 [NASA-CASE-NPO-10417] c 16 N71-33410  
 Optical binocular scanning apparatus  
 [NASA-CASE-NPO-11002] c 14 N72-22441  
 On-film optical recording of camera lens settings  
 [NASA-CASE-MSC-12363-1] c 14 N73-26431  
 Exposure interlock for oscilloscope cameras  
 [NASA-CASE-LAR-10319-1] c 14 N73-32322  
 Real time moving scene holographic camera system  
 [NASA-CASE-MFS-21087-1] c 35 N74-17153  
 Automatic focus control for facsimile cameras  
 [NASA-CASE-LAR-11213-1] c 35 N75-15014  
 Spectrometer integrated with a facsimile camera  
 [NASA-CASE-LAR-11207-1] c 35 N75-19613  
 Real time, large volume, moving scene holographic camera system  
 [NASA-CASE-MFS-22537-1] c 35 N75-27328  
 Holographic motion picture camera with Doppler shift compensation  
 [NASA-CASE-MFS-22517-1] c 35 N76-18402  
 Stereoscopic camera and viewing systems with undistorted depth presentation and reduced or eliminated erroneous acceleration and deceleration perceptions, or with perceptions produced or enhanced for special effects  
 [NASA-CASE-NPO-18028-1-CU] c 74 N91-24878

**CAMS**

Controlled caging and uncaging mechanism  
 [NASA-CASE-GSC-11063-1] c 37 N77-27400  
 Cam-operated pitch-change apparatus  
 [NASA-CASE-LEW-13050-1] c 07 N79-14095  
 CAM controlled retractable door latch  
 [NASA-CASE-MSC-20304-1] c 37 N82-31690

**CANARD CONFIGURATIONS**

Thrust and direction control apparatus Patent  
 [NASA-CASE-XLE-03583] c 31 N71-17629  
 Supersonic transport --- using canard surfaces  
 [NASA-CASE-LAR-11932-1] c 05 N78-32086  
 Missile rolling tail brake torque system --- simulating bearing friction on canard controlled missiles  
 [NASA-CASE-LAR-12751-1] c 15 N84-16231

**CANCER**

Coupling apparatus for ultrasonic medical diagnostic system  
 [NASA-CASE-NPO-13935-1] c 52 N79-14751  
 Hyperthermia heating apparatus --- cancer therapy  
 [NASA-CASE-NPO-14549-2] c 52 N82-33996

**CANNING**

One step HIP canning of powder metallurgy composites  
 [NASA-CASE-LEW-14719-1] c 24 N90-23493

**CANOPIES**

Transparent fire resistant polymeric structures  
 [NASA-CASE-ARC-10813-1] c 27 N76-16230  
 Method for refurbishing and processing parachutes  
 [NASA-CASE-KSC-11042-1] c 09 N82-29330  
 Aircraft canopy lock  
 [NASA-CASE-FRC-11065-1] c 05 N83-19737

**CANS**

Canister closing device Patent  
 [NASA-CASE-XLA-01446] c 15 N71-21528

Extrusion can  
 [NASA-CASE-NPO-10812] c 15 N73-13464  
 Process for HIP canning of composites  
 [NASA-CASE-LEW-14990-1-CU] c 24 N91-17145

**CANTILEVER BEAMS**

Inflatable support structure Patent  
 [NASA-CASE-XLA-01731] c 32 N71-21045  
 Cantilever mounted resilient pad gas bearing  
 [NASA-CASE-LEW-12569-1] c 37 N79-10418

**CANTILEVER MEMBERS**

Deployable solar cell array  
 [NASA-CASE-NPO-10883] c 31 N72-22874  
 Miniature biaxial strain transducer  
 [NASA-CASE-LAR-11648-1] c 35 N77-14407  
 Cantilever clamp fitting  
 [NASA-CASE-MFS-28328-1] c 37 N91-13731

**CAPACITANCE**

Device for determining the accuracy of the flare on a flared tube  
 [NASA-CASE-XKS-03495] c 14 N69-39785  
 Floating two force component measuring device Patent  
 [NASA-CASE-XAC-04885] c 14 N71-23790  
 Thin film capacitive bolometer and temperature sensor Patent  
 [NASA-CASE-NPO-10607] c 09 N71-27232  
 Capacitive tank gaging apparatus being independent of liquid distribution  
 [NASA-CASE-MFS-21629] c 14 N72-22442  
 Capacitance multiplier and filter synthesizing network  
 [NASA-CASE-NPO-11948-1] c 33 N74-32712  
 Direct reading inductance meter  
 [NASA-CASE-NPO-13792-1] c 35 N77-32455  
 Dynamic capacitor having a peripherally driven element and system incorporating the same  
 [NASA-CASE-XNP-02899-1] c 33 N79-21265  
 Programmable electronic synthesized capacitance  
 [NASA-CASE-GSC-12961-1] c 33 N87-22895  
 Ice detector  
 [NASA-CASE-LAR-13776-1] c 35 N88-29149  
 Driven shielding capacitive proximity sensor  
 [NASA-CASE-GSC-13377-1] c 63 N91-28785

**CAPACITANCE SWITCHES**

Electrical discharge apparatus for forming Patent  
 [NASA-CASE-XMF-00375] c 15 N70-34249  
 Ultra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit Patent  
 [NASA-CASE-XGS-00381] c 09 N70-34819  
 Feedback integrator with grounded capacitor Patent  
 [NASA-CASE-XAC-10607] c 10 N71-23669

**CAPACITORS**

Temperature sensitive capacitor device  
 [NASA-CASE-XNP-09750] c 14 N69-39937  
 Space vehicle electrical system Patent  
 [NASA-CASE-XMF-00517] c 03 N70-34157  
 Apparatus having coaxial capacitor structure for measuring fluid density Patent  
 [NASA-CASE-XLE-00143] c 14 N70-36618  
 Meteoroid sensing apparatus having a coincidence network connected to a pair of capacitors Patent  
 [NASA-CASE-XLE-01246] c 14 N71-10797  
 Capacitor and method of making same Patent  
 [NASA-CASE-LEW-10364-1] c 09 N71-13522  
 Measurement of time differences between luminous events Patent  
 [NASA-CASE-XLA-01987] c 23 N71-23976  
 Ripple indicator  
 [NASA-CASE-KSC-10162] c 09 N72-11225  
 Thermoelectric radiometer utilizing polymer film  
 [NASA-CASE-ARC-10138-1] c 14 N72-24477  
 Screened circuit capacitors  
 [NASA-CASE-LAR-10294-1] c 26 N72-28762  
 Micrometeoroid analyzer  
 [NASA-CASE-ARC-10443-1] c 14 N73-20477  
 Insulated electrocardiographic electrodes --- without paste electrolyte  
 [NASA-CASE-MSC-14339-1] c 05 N75-24716  
 High temperature beryllium oxide capacitor  
 [NASA-CASE-LEW-11938-1] c 33 N76-15373  
 Energy storage apparatus  
 [NASA-CASE-GSC-12030-1] c 44 N78-24608  
 Regulated high efficiency, lightweight capacitor-diode multiplier dc to dc converter  
 [NASA-CASE-LEW-12791-1] c 33 N78-32341  
 Dynamic capacitor having a peripherally driven element and system incorporating the same  
 [NASA-CASE-XNP-02899-1] c 33 N79-21265  
 Laser activated MTOS microwave device  
 [NASA-CASE-NPO-16112-1] c 33 N86-19516  
 Water-absorbing capacitor system for measuring relative humidity  
 [NASA-CASE-NPO-16544-1-CU] c 35 N87-22953  
 Method and apparatus for determining time, direction, and composition of impacting space particles  
 [NASA-CASE-LAR-13392-1-CU] c 19 N91-14412

**CAPILLARY FLOW**

- Capillary radiator Patent  
[NASA-CASE-XLE-03307] c 33 N71-14035
- Fluid lubricant system Patent  
[NASA-CASE-XNP-03972] c 15 N71-23048
- Soldering device Patent  
[NASA-CASE-XLA-08911] c 15 N71-27214
- Capillary flow weld-bonding  
[NASA-CASE-LAR-11726-1] c 37 N76-27568
- Polymeric heat pipe wick  
[NASA-CASE-GSC-13019-1] c 34 N88-29133
- Capillary heat transport and fluid management device  
[NASA-CASE-MFS-28217-1] c 34 N89-14392

**CAPILLARY TUBES**

- Fluid flow restrictor Patent  
[NASA-CASE-NPO-10117] c 15 N71-15608
- Water separating system Patent  
[NASA-CASE-XMS-13052] c 14 N71-20427
- Mercury capillary interrupter Patent  
[NASA-CASE-XNP-02251] c 12 N71-20896
- Diffused waveguiding capillary tube with distributed feedback for a gas laser  
[NASA-CASE-NPO-13544-1] c 36 N76-18428
- Ceramic heat pipe wick  
[NASA-CASE-GSC-13199-1] c 27 N90-23541

**CARBAZOLES**

- Method of using photovoltaic cell using poly-N-vinylcarbazole complex Patent  
[NASA-CASE-NPO-10373] c 03 N71-18698

**CARBIDES**

- Absorbable-susceptor joining of ceramic surfaces  
[NASA-CASE-NPO-15640-1] c 27 N84-22748
- Carbide-fluoride-silver self-lubricating composite  
[NASA-CASE-LEW-14196-2] c 37 N87-25585

**CARBOHYDRATES**

- Decontamination of petroleum products Patent  
[NASA-CASE-XNP-03835] c 06 N71-23499

**CARBON**

- Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety  
[NASA-CASE-ARC-11040-2] c 24 N78-27184
- Electrophotolysis oxidation system for measurement of organic concentration in water  
[NASA-CASE-MS-C-16497-1] c 25 N82-12166
- Apparatus and method for destructive removal of particles contained in flowing fluid  
[NASA-CASE-NPO-15426-1] c 35 N84-17555
- Chromium electrodes for REDOX cells  
[NASA-CASE-LEW-13653-1] c 44 N84-28205
- Deposition of diamondlike carbon films  
[NASA-CASE-LEW-14080-1] c 31 N85-20153
- Carbon granule probe microphone for leak detection --- recovery boilers  
[NASA-CASE-NPO-16027-1] c 35 N85-21597
- Textured carbon surfaces on copper by sputtering  
[NASA-CASE-LEW-14130-1] c 31 N86-32587
- Krypton based adsorption type cryogenic refrigerator  
[NASA-CASE-NPO-17334-1-CU] c 31 N88-23917
- Cryogenic regenerator including saran-carbon heat conduction matrix  
[NASA-CASE-NPO-17291-1-CU] c 34 N88-23946

**CARBON ARCS**

- Water cooled contactor for anode in carbon arc mechanism  
[NASA-CASE-XMS-03700] c 15 N69-24266
- Diamondlike flakes  
[NASA-CASE-LEW-13837-2] c 24 N85-21267

**CARBON COMPOUNDS**

- Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent  
[NASA-CASE-XLA-00284] c 15 N71-16075
- Surfactant-assisted liquefaction of particulate carbonaceous substances  
[NASA-CASE-NPO-13904-1] c 25 N79-11152
- Diamondlike flake composites  
[NASA-CASE-LEW-13837-1] c 24 N84-22695

**CARBON DIOXIDE**

- Techniques for insulating cryogenic fuel containers Patent  
[NASA-CASE-XLA-01967] c 31 N70-42015
- Miniature carbon dioxide sensor and methods  
[NASA-CASE-MS-C-13332-1] c 14 N72-21408
- Metabolic rate meter and method  
[NASA-CASE-MS-C-12239-1] c 52 N79-21750

**CARBON DIOXIDE LASERS**

- Repetitively pulsed, wavelength selective laser Patent  
[NASA-CASE-ERC-10178] c 16 N71-24832
- Power supply for carbon dioxide lasers  
[NASA-CASE-GSC-11222-1] c 16 N73-32391
- Stark-effect modulation of CO<sub>2</sub> laser with NH<sub>2</sub>D  
[NASA-CASE-NPO-11945-1] c 36 N76-18427

**CARBON DIOXIDE REMOVAL**

- Catalyst cartridge for carbon dioxide reduction unit  
[NASA-CASE-LAR-10551-1] c 25 N74-12813

- Regenerable device for scrubbing breathable air of CO<sub>2</sub> and moisture without special heat exchanger equipment  
[NASA-CASE-MS-C-14771-1] c 54 N77-32722
- Portable breathing system --- a breathing apparatus using a rebreathing system of heat exchangers for carbon dioxide removal  
[NASA-CASE-MS-C-16182-1] c 54 N80-10799
- Method and apparatus for bio-regenerative life support system  
[NASA-CASE-MS-C-21629-1] c 54 N91-31803

**CARBON FIBER REINFORCED PLASTICS**

- Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-1] c 24 N79-16915
- Circumferential shaft seal  
[NASA-CASE-LEW-12119-1] c 37 N80-28711
- Curing agent for polyepoxides and epoxy resins and composites cured therewith --- preventing carbon fiber release  
[NASA-CASE-LEW-13226-1] c 27 N81-17260

**CARBON FIBERS**

- Method and device for detection of a substance --- determining carbon fiber release in fire situations  
[NASA-CASE-NPO-14940-1] c 33 N83-31954
- Mixed polyvalent-monovalent metal coating for carbon-graphite fibers  
[NASA-CASE-NPO-14987-1] c 24 N83-33950
- High resistance and raised modulus carbon fibers  
[NASA-TM-76884] c 24 N85-25436
- Apparatus for intercalating large quantities of fibrous structures  
[NASA-CASE-LEW-15077-2] c 24 N91-28289

**CARBON MONOXIDE**

- Carbon monoxide monitor --- using real time operation  
[NASA-CASE-MFS-22060-1] c 35 N75-29380
- Catalyst for carbon monoxide oxidation  
[NASA-CASE-LAR-14155-1-SB] c 25 N90-23517
- Catalyst for carbon monoxide oxidation  
[NASA-CASE-LAR-14155-2-SB] c 25 N91-21270

**CARBON-CARBON COMPOSITES**

- Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267
- Lightweight piston  
[NASA-CASE-LAR-13150-1] c 24 N87-27742
- Composite piston  
[NASA-CASE-LAR-13435-1] c 37 N88-23981
- Reusable high-temperature heat pipes and heat pipe panels  
[NASA-CASE-LAR-13761-1] c 34 N90-20323
- Lightweight piston architecture  
[NASA-CASE-LAR-13926-1] c 37 N90-22042
- Braided composite fasteners and method for producing same  
[NASA-CASE-LAR-14062-1] c 37 N90-27114

**CARBONACEOUS MATERIALS**

- Fluidized bed desulfurization  
[NASA-CASE-NPO-15924-1] c 25 N85-35253

**CARBONATES**

- Polyurethanes of fluorine containing polycarbonates  
[NASA-CASE-MFS-10512] c 06 N73-30099
- Synthesis of dawsonites --- for use in fire extinguishing operations  
[NASA-CASE-ARC-11326-1] c 25 N83-33977

**CARBONIZATION**

- Method of carbonizing polyacrylonitrile fibers  
[NASA-CASE-ARC-11261-1] c 24 N83-25789

**CARBONYL COMPOUNDS**

- Coal desulfurization --- using iron pentacarbonyl  
[NASA-CASE-NPO-14272-1] c 25 N81-33246
- Polyimides containing carbonyl and ether connecting groups  
[NASA-CASE-LAR-13633-1] c 27 N87-24575
- Polyimides with carbonyl and ether connecting groups between the aromatic rings  
[NASA-CASE-LAR-14001-1] c 27 N90-15260
- Methyl substituted polyimides containing carbonyl and ether connecting groups  
[NASA-CASE-LAR-14351-1] c 27 N91-13561

**CARBORANE**

- Process for the preparation of polycarboranylphosphazenes --- thermal insulation  
[NASA-CASE-ARC-11176-2] c 27 N81-27271
- Carboranylchlorotriphosphazenes and their polymers --- thermal insulation  
[NASA-CASE-ARC-11176-1] c 27 N82-18389
- Carboranyl(methylene-substituted phosphazenes and polymers thereof  
[NASA-CASE-ARC-11370-1] c 27 N84-22750

**CARBOXYL GROUP**

- Novel polycarboxylic prepolymeric materials and polymers thereof Patent  
[NASA-CASE-NPO-10596] c 06 N71-25929

**CARBOXYLIC ACIDS**

- Preparation of polyimides from mixtures of monomeric diamines and esters of polycarboxylic acids  
[NASA-CASE-LEW-11325-1] c 06 N73-27980
- Fluorinated esters of polycarboxylic acids  
[NASA-CASE-MFS-21040-1] c 06 N73-30096
- Metal phthalocyanine polymers  
[NASA-CASE-ARC-11405-1] c 27 N84-27884
- Alkaline battery containing a separator of a cross-linked copolymer of vinyl alcohol and unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c 33 N85-29144
- Metal phthalocyanine intermediates for the preparation of polymers  
[NASA-CASE-ARC-11405-2] c 27 N86-19455

**CARCINOGENS**

- Apparatus for producing three-dimensional recordings of fluorescence spectra Patent  
[NASA-CASE-XGS-01231] c 14 N70-41676

**CARDIAC VENTRICLES**

- Contour detector and data acquisition system for the left ventricular outline  
[NASA-CASE-ARC-10985-1] c 52 N79-10724

**CARDIOGRAPHY**

- Digital cardiometer system Patent  
[NASA-CASE-XMS-02399] c 05 N71-22896
- Reference apparatus for medical ultrasonic transducer  
[NASA-CASE-ARC-10753-1] c 54 N75-27760

**CARDIOLOGY**

- Ratemeter  
[NASA-CASE-MFS-20418] c 14 N73-24473
- Myocardium wall thickness transducer and measuring method  
[NASA-CASE-NPO-13644-1] c 52 N76-29895

**CARDIOTACHOMETERS**

- Digital computing cardiometer  
[NASA-CASE-MFS-20284-1] c 52 N74-12778

**CARDIOVASCULAR SYSTEM**

- G conditioning suit Patent  
[NASA-CASE-XLA-02898] c 05 N71-20268
- Method and apparatus for continuously monitoring blood oxygenation, blood pressure, pulse rate and the pressure pulse curve utilizing an ear oximeter as transducer Patent  
[NASA-CASE-XAC-05422] c 04 N71-23185
- Catheter tip force transducer for cardiovascular research  
[NASA-CASE-NPO-13643-1] c 52 N76-29896
- Medical clip  
[NASA-CASE-LAR-12650-1] c 52 N84-28388

**CARGO**

- Portable pallet weighing apparatus  
[NASA-CASE-GSC-12789-1] c 35 N85-20294

**CARRIER FREQUENCIES**

- Bi-carrier demodulator with modulation Patent  
[NASA-CASE-XMF-01160] c 07 N71-11298
- Automatic carrier acquisition system  
[NASA-CASE-NPO-11628-1] c 07 N73-30113
- Demodulator for carrier transducers  
[NASA-CASE-NUC-10107-1] c 33 N74-17930
- Decision feedback loop for tracking a polyphase modulated carrier  
[NASA-CASE-NPO-13103-1] c 32 N74-20811
- Discriminator aided phase lock acquisition for suppressed carrier signals  
[NASA-CASE-NPO-14311-1] c 33 N82-29539

**CARRIER LIFETIME**

- Method of increasing minority carrier lifetime in silicon web or the like  
[NASA-CASE-NPO-15530-1] c 76 N83-35888
- Method and apparatus for measuring minority carrier lifetime in a direct band-gap semiconductor  
[NASA-CASE-NPO-16337-1-CU] c 33 N87-22894

**CARRIER WAVES**

- Variable frequency oscillator with temperature compensation Patent  
[NASA-CASE-XNP-03916] c 09 N71-28810
- Modulator for tone and binary signals --- phase of modulation of tone and binary signals on carrier waves in communication systems  
[NASA-CASE-GSC-11743-1] c 32 N75-24981

**CARRIERS**

- Storage container for electronic devices Patent  
[NASA-CASE-MFS-20075] c 09 N71-26133
- Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-MFS-21394-1] c 34 N74-27744

**CARTESIAN COORDINATES**

- Random function tracer Patent  
[NASA-CASE-XLA-01401] c 15 N71-21179
- Two dimensional vernier  
[NASA-CASE-MS-C-21700-1] c 35 N91-23462

**CARTRIDGES**

- Endless tape cartridge Patent  
[NASA-CASE-XGS-00769] c 14 N70-41647

Endless tape transport mechanism Patent  
 [NASA-CASE-XGS-01223] c 07 N71-10609  
 Catalyst cartridge for carbon dioxide reduction unit  
 [NASA-CASE-LAR-10551-1] c 25 N74-12813

**CASCADE CONTROL**  
 Reversible ring counter employing cascaded single SCR stages Patent  
 [NASA-CASE-XGS-01473] c 09 N71-10673  
 Synchronous dc direct drive system Patent  
 [NASA-CASE-GSC-10065-1] c 10 N71-27136  
 Multiloop RC active filter apparatus having low parameter sensitivity with low amplifier gain  
 [NASA-CASE-ARC-10192] c 09 N72-21245

**CASCADE FLOW**  
 Cascade plug nozzle --- for jet noise reduction  
 [NASA-CASE-LAR-11674-1] c 07 N76-18117  
 Thrust reverser for a long duct fan engine --- for turbofan engines  
 [NASA-CASE-LEW-13199-1] c 07 N82-26293  
 Degassing and mixing apparatus for liquids --- potable water for spacecraft  
 [NASA-CASE-MS-C-18936-1] c 35 N83-29652

**CASE BONDED PROPELLANTS**  
 Solid propellant motor  
 [NASA-CASE-NPO-11458A] c 20 N78-32179

**CASES (CONTAINERS)**  
 Non-magnetic battery case Patent  
 [NASA-CASE-XGS-00886] c 03 N71-11053  
 Protected isotope heat source --- for atmospheric reentry protection and heat transmission to spacecraft  
 [NASA-CASE-LEW-11227-1] c 73 N75-30876  
 Portable heatable container  
 [NASA-CASE-NPO-14237-1] c 44 N80-20808  
 Low temperature storage container for transporting perishables to space station  
 [NASA-CASE-MFS-28248-1] c 31 N88-24817

**CASSEGRAIN ANTENNAS**  
 Cassegrain antenna subreflector flange for suppressing ground noise Patent  
 [NASA-CASE-XNP-00683] c 09 N70-35425  
 Multi-feed cone Cassegrain antenna Patent  
 [NASA-CASE-NPO-10539] c 07 N71-11285  
 Millimeter wave radiometer for radio astronomy Patent  
 [NASA-CASE-XNP-09832] c 30 N71-23723  
 Dual frequency microwave reflex feed  
 [NASA-CASE-NPO-13091-1] c 09 N73-12214  
 Low loss dichroic plate  
 [NASA-CASE-NPO-13171-1] c 32 N74-11000

**CASSEGRAIN OPTICS**  
 Wide acceptance angle, high concentration ratio, optical collector  
 [NASA-CASE-MFS-28295-1] c 74 N91-13999

**CASTING**  
 Hydraulic casting of liquid polymers Patent  
 [NASA-CASE-XNP-07659] c 06 N71-22975  
 Texturing polymer surfaces by transfer casting --- cardiovascular prosthesis  
 [NASA-CASE-LEW-13120-1] c 27 N82-28440  
 Castable hot corrosion resistant alloy  
 [NASA-CASE-LEW-14134-2] c 26 N89-14303  
 High density tape casting system  
 [NASA-CASE-NPO-16901-1-CU] c 31 N90-19425  
 Pressure rig for repetitive casting  
 [NASA-CASE-LAR-14050-1] c 31 N90-21216  
 A tough performance simultaneous semi-interpenetrating polymer network  
 [NASA-CASE-LAR-14339-1] c 27 N90-26955  
 Novel polyimide molding powder, coating, adhesive, and matrix resin  
 [NASA-CASE-LAR-14163-1] c 27 N91-13559

**CASTINGS**  
 Method of making an apertured casting --- using duplicate mold  
 [NASA-CASE-LEW-11169-1] c 37 N76-23570

**CATALYSIS**  
 Decomposition unit Patent  
 [NASA-CASE-XMS-00583] c 28 N70-38504  
 Apparatus for photon excited catalysis  
 [NASA-CASE-NPO-13566-1] c 25 N77-32255  
 Start up system for hydrogen generator used with an internal combustion engine  
 [NASA-CASE-NPO-13849-1] c 28 N80-10374

**CATALYSTS**  
 Catalyst for growth of boron carbide single crystal whiskers  
 [NASA-CASE-XHQ-03903] c 15 N69-21922  
 Catalyst bed removing tool Patent  
 [NASA-CASE-XFR-00811] c 15 N70-36901  
 Ignition means for monopropellant Patent  
 [NASA-CASE-XNP-00876] c 28 N70-41311  
 Hydrogen leak detection device Patent  
 [NASA-CASE-MFS-11537] c 14 N71-20442  
 Catalyst cartridge for carbon dioxide reduction unit  
 [NASA-CASE-LAR-10551-1] c 25 N74-12813

Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams  
 [NASA-CASE-ARC-11107-1] c 25 N80-16116  
 Mixed polyvalent-monovalent metal coating for carbon-graphite fibers  
 [NASA-CASE-NPO-14987-1] c 24 N83-33950  
 Photoelectrochemical electrodes  
 [NASA-CASE-NPO-15458-1] c 25 N84-12262  
 Negative electrode catalyst for the iron chromium redox energy storage system  
 [NASA-CASE-LEW-14028-1] c 44 N86-19721  
 Isotope exchange in oxide-containing catalyst  
 [NASA-CASE-LAR-13542-2-SB] c 25 N90-20154  
 Process for making a noble metal on tin oxide catalyst  
 [NASA-CASE-LAR-13741-1-SB] c 25 N90-20180  
 Catalyst for carbon monoxide oxidation  
 [NASA-CASE-LAR-14155-1-SB] c 25 N90-23517  
 Catalyst for carbon monoxide oxidation  
 [NASA-CASE-LAR-14155-2-SB] c 25 N91-21270

**CATALYTIC ACTIVITY**  
 Diesel engine catalytic combustor system --- aircraft engines  
 [NASA-CASE-LEW-12995-1] c 37 N84-33808

**CATCHERS**  
 Load limiting, energy absorbing, lightweight debris catcher  
 [NASA-CASE-MS-C-21562-1] c 16 N91-24216

**CATHETERIZATION**  
 Transducer circuit and catheter transducer Patent  
 [NASA-CASE-ARC-10132-1] c 09 N71-24597  
 Catheter tip force transducer for cardiovascular research  
 [NASA-CASE-NPO-13643-1] c 52 N76-29896  
 Ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
 [NASA-CASE-LEW-13107-1] c 52 N83-21785  
 Method of making an ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
 [NASA-CASE-LEW-13107-2] c 52 N84-23095

**CATHODE RAY TUBES**  
 Single or joint amplitude distribution analyzer Patent  
 [NASA-CASE-XNP-01383] c 09 N71-10659  
 Display for binary characters Patent  
 [NASA-CASE-XGS-04987] c 08 N71-20571  
 Electron beam tube containing a multiple cathode array employing indexing means for cathode substitution Patent  
 [NASA-CASE-NPO-10625] c 09 N71-26182  
 Color television systems using a single gun color cathode ray tube Patent  
 [NASA-CASE-ERC-10098] c 09 N71-28618  
 High contrast cathode ray tube  
 [NASA-CASE-ERC-10468] c 09 N72-20206  
 Digital video display system using cathode ray tube  
 [NASA-CASE-NPO-11342] c 09 N72-25248  
 CRT blanking and brightness control circuit  
 [NASA-CASE-KSC-10647-1] c 10 N72-31273  
 Display system  
 [NASA-CASE-ERC-10350] c 14 N73-20474  
 Very high intensity light source using a cathode ray tube --- electron beams  
 [NASA-CASE-XNP-01296] c 33 N75-27250

**CATHODES**  
 Ion thruster cathode Patent Application  
 [NASA-CASE-LEW-10814-1] c 28 N70-35422  
 Electronic cathode having a brush-like structure and a relatively thick oxide emissive coating Patent  
 [NASA-CASE-XLE-04501] c 09 N71-23190  
 Heat activated cell with alkali anode and alkali salt electrolyte Patent  
 [NASA-CASE-LEW-11358] c 03 N71-26084  
 Ion thruster with a combination keeper electrode and electron baffle  
 [NASA-CASE-NPO-11880] c 28 N73-24783  
 Storage battery comprising negative plates of a wedge shaped configuration --- for preventing shape change induced malfunctions  
 [NASA-CASE-NPO-11806-1] c 44 N74-19693  
 Method and apparatus for rebalancing a REDOX flow cell system  
 [NASA-CASE-LEW-14127-1] c 33 N86-20680  
 Apparatus for mounting a field emission cathode  
 [NASA-CASE-LEW-14108-1] c 33 N87-28832  
 Dual cathode system for electron beam instruments  
 [NASA-CASE-NPO-16878-1-CU] c 35 N90-20351  
 Organic cathode for a secondary battery  
 [NASA-CASE-NPO-17604-1-CU] c 33 N91-14536  
 Copper chloride cathode for a secondary battery  
 [NASA-CASE-NPO-17640-1-CU] c 33 N91-14538  
 Plasma gun with coaxial powder feed and adjustable cathode  
 [NASA-CASE-LEW-14901-1] c 75 N91-25875  
 Metal chloride cathode for a battery  
 [NASA-CASE-NPO-17809-1-CU] c 33 N91-27478

**CATHOLYTES**  
 Organic cathode for a secondary battery  
 [NASA-CASE-NPO-17604-1-CU] c 33 N91-14536

**CATIONS**  
 Ionene membrane separator  
 [NASA-CASE-NPO-11091] c 18 N72-22567  
 Viscoelastic cationic polymers containing the urethane linkage  
 [NASA-CASE-NPO-10830-1] c 27 N81-15104  
 Procedure to prepare transparent silica gels  
 [NASA-CASE-LAR-13476-1-CU] c 76 N87-29360

**CAVITATION FLOW**  
 Semitoroidal diaphragm cavitating valve Patent  
 [NASA-CASE-XNP-09704] c 12 N71-18615

**CAVITIES**  
 Black body cavity radiometer Patent  
 [NASA-CASE-NPO-10810] c 14 N71-27323  
 Method of coating through-holes Patent  
 [NASA-CASE-XMF-05999] c 15 N71-29032  
 Burrowing apparatus  
 [NASA-CASE-XNP-07169] c 15 N73-32362  
 Method of constructing dished ion thruster grids to provide hole array spacing compensation  
 [NASA-CASE-LEW-11876-1] c 20 N76-21276  
 Method of making hollow elastomeric bodies  
 [NASA-CASE-MSC-13535-1] c 37 N76-31524  
 Method and apparatus for producing concentric hollow spheres --- inertial confinement fusion targets  
 [NASA-CASE-NPO-14596-1] c 31 N81-33319  
 Cavity-backed, micro-strip dipole antenna array  
 [NASA-CASE-MSC-18606-1] c 32 N82-11336  
 High performance channel injection sealant invention abstract  
 [NASA-CASE-ARC-14408-1] c 27 N82-33523  
 Maser cavity servo-tuning system  
 [NASA-CASE-NPO-15890-1-CU] c 33 N85-29143  
 Passive venting technique for shallow cavities  
 [NASA-CASE-LAR-14031-1] c 05 N90-20079  
 Pressure rig for repetitive casting  
 [NASA-CASE-LAR-14050-1] c 31 N90-21216  
 Circumferential pressure probe  
 [NASA-CASE-LAR-13775-1] c 35 N90-23706  
 Measurement of waves in flows across a surface  
 [NASA-CASE-NPO-17479-1-CU] c 34 N91-13658  
 Passive venting technique for shallow cavities  
 [NASA-CASE-LAR-13875-1] c 05 N91-27156

**CAVITY RESONATORS**  
 Helical coaxial resonator RF filter  
 [NASA-CASE-XGS-02816] c 07 N69-24323  
 System for improving signal-to-noise ratio of a communication signal Patent Application  
 [NASA-CASE-MS-C-12259-1] c 07 N70-12616  
 Temperature-compensating means for cavity resonator of amplifier Patent  
 [NASA-CASE-XNP-00449] c 14 N70-35220  
 Holder for crystal resonators Patent  
 [NASA-CASE-XNP-03637] c 15 N71-21311  
 System for improving signal-to-noise ratio of a communication signal  
 [NASA-CASE-MS-C-12259-2] c 07 N72-33146  
 Infrared tunable laser  
 [NASA-CASE-ARC-10463-1] c 09 N73-32111  
 Tunable cavity resonator with ramp shaped supports  
 [NASA-CASE-HQN-10790-1] c 36 N74-11313  
 Laser apparatus  
 [NASA-CASE-GSC-12237-1] c 36 N80-14384  
 Laser Resonator  
 [NASA-CASE-GSC-12565-1] c 36 N84-14509  
 Off-axis coherently pumped laser  
 [NASA-CASE-GSC-12592-1] c 36 N84-28065  
 Maser cavity servo-tuning system  
 [NASA-CASE-NPO-15890-1-CU] c 33 N85-29143

**CELESTIAL BODIES**  
 Device for determining relative angular position between a spacecraft and a radiation emitting celestial body  
 [NASA-CASE-GSC-11444-1] c 14 N73-28490  
 Position determination systems --- using orbital antenna scan of celestial bodies  
 [NASA-CASE-MS-C-12593-1] c 17 N76-21250

**CELESTIAL NAVIGATION**  
 Radiant energy intensity measurement system Patent  
 [NASA-CASE-XNP-06510] c 14 N71-23797

**CELL ANODES**  
 Heat activated cell Patent  
 [NASA-CASE-LEW-11359] c 03 N71-28579  
 Method of making emf cell  
 [NASA-CASE-LEW-11359-2] c 03 N72-20034  
 Electrically rechargeable REDOX flow cell  
 [NASA-CASE-LEW-12220-1] c 44 N77-14581

**CELL DIVISION**  
 Process for control of cell division  
 [NASA-CASE-LAR-10773-3] c 51 N77-25769  
 A culture vessel with large perfusion area to volume ratio  
 [NASA-CASE-MS-C-21662-1] c 51 N91-17531

## CELLS

Mixture separation cell Patent  
[NASA-CASE-XMS-02952] c 18 N71-20742

## CELLS (BIOLOGY)

System for and method of freezing biological tissue  
[NASA-CASE-GSC-12173-1] c 51 N79-10694  
Method for separating biological cells --- suspended in aqueous polymer systems  
[NASA-CASE-MFS-23883-1] c 51 N80-16715  
Electrophoresis device  
[NASA-CASE-MFS-25426-1] c 25 N83-10126  
Controlled method of reducing electrophoretic mobility of various substances  
[NASA-CASE-MFS-26049-1-NP] c 25 N89-28603  
Three-dimensional coculture process  
[NASA-CASE-MS-C-21560-1] c 51 N90-18852  
Three-dimensional cell to tissue assembly process  
[NASA-CASE-MS-C-21559-1] c 51 N91-13860  
A culture vessel with large perfusion area to volume ratio  
[NASA-CASE-MS-C-21662-1] c 51 N91-17531  
Rotating bio-reactor cell culture apparatus  
[NASA-CASE-MS-C-21293-1] c 51 N91-21700  
Spiral vane bioreactor  
[NASA-CASE-MS-C-21361-1] c 51 N91-21701  
Horizontally rotated cell culture system with a coaxial tubular oxygenator  
[NASA-CASE-MS-C-21294-1] c 51 N91-30667

## CELLULOSE

Process of treating cellulosic membrane and alkaline with membrane separator  
[NASA-CASE-GSC-10019-1] c 44 N82-24641  
Separator for alkaline electric cells and method of making  
[NASA-CASE-GSC-10017-1] c 44 N82-24643  
Alkaline electrochemical cells and method of making  
[NASA-CASE-GSC-10349-1] c 44 N82-24645  
Aqueous alkali metal hydroxide insoluble cellulose ether membrane  
[NASA-CASE-XGS-05584-1] c 25 N82-29370

## CELLULOSE NITRATE

Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267

## CENTERBODIES

Multi-body aircraft with an all-movable center fuselage actively controlling fuselage pressure drag  
[NASA-CASE-LAR-13511-1] c 05 N88-23765

## CENTRAL PROCESSING UNITS

Pipelined digital SAR azimuth correlator using hybrid FFT-transversal filter  
[NASA-CASE-NPO-15519-1] c 32 N84-34651

## CENTRIFUGAL COMPRESSORS

Centrifugal-reciprocating compressor  
[NASA-CASE-NPO-14597-2] c 37 N84-28081

## CENTRIFUGAL FORCE

Counter pumping debris excluder and separator --- gas turbine shaft seals  
[NASA-CASE-LEW-11855-1] c 07 N78-25090  
Vortex motion phase separator for zero gravity liquid transfer  
[NASA-CASE-KSC-11387-1] c 29 N90-20236  
Rotating-unbalanced-mass devices and methods for scanning balloon-borne-experiments, free-flying spacecraft, and space shuttle/space station attached experiments  
[NASA-CASE-MFS-28425-1] c 35 N90-26304

## CENTRIFUGES

Centrifuge mounted motion simulator Patent  
[NASA-CASE-XAC-00399] c 11 N70-34815  
Separator Patent  
[NASA-CASE-XLA-00415] c 15 N71-16079  
Centrifugal lyophobic separator  
[NASA-CASE-LAR-10194-1] c 34 N74-30608  
Fluid control apparatus and method  
[NASA-CASE-LAR-11110-1] c 34 N75-26282  
Biocentrifuge system capable of exchanging specimen cages while in operational mode  
[NASA-CASE-MFS-23825-1] c 51 N81-32829

## CERAMIC BONDING

Method of making a diffusion bonded refractory coating Patent  
[NASA-CASE-XLE-01604-2] c 15 N71-15610  
Method of forming ceramic to metal seal Patent  
[NASA-CASE-XNP-01263-2] c 15 N71-26312  
Composite piston  
[NASA-CASE-LAR-13435-1] c 37 N88-23981

## CERAMIC COATINGS

Evaporant holder  
[NASA-CASE-XLA-03105] c 15 N69-27483  
Unfired-ceramic flame-resistant insulation and method of making the same Patent  
[NASA-CASE-XMF-01030] c 18 N70-41583  
Ceramic insulation for radiant heating environments and method of preparing the same Patent  
[NASA-CASE-MFS-14253] c 33 N71-24858

Method of making a cermet Patent  
[NASA-CASE-LEW-10219-1] c 18 N71-28729  
Two-component ceramic coating for silica insulation  
[NASA-CASE-MS-C-14270-1] c 27 N76-22377  
Three-component ceramic coating for silica insulation  
[NASA-CASE-MS-C-14270-2] c 27 N76-23426  
Spray coating apparatus having a rotatable workpiece holder  
[NASA-CASE-ARC-11110-1] c 37 N82-24492  
Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c 18 N83-20996  
Thermal barrier coating system having improved adhesion  
[NASA-CASE-LEW-1335901] c 27 N83-31855  
Thermal barrier coating system  
[NASA-CASE-LEW-13324-2] c 24 N85-21266  
Ceramic-ceramic shell tile thermal protection system and method thereof  
[NASA-CASE-ARC-11641-1] c 24 N88-18628  
Metallic threaded composite fastener  
[NASA-CASE-MS-C-21580-1] c 37 N91-23491  
Ceramic coatings on smooth surfaces  
[NASA-CASE-LEW-15164-1] c 27 N91-25298  
Ceramic coatings on smooth surfaces  
[NASA-CASE-LEW-15164-2] c 27 N91-32229

## CERAMIC HONEYCOMBS

Ceramic honeycomb structures and the method thereof  
[NASA-CASE-ARC-11652-1] c 27 N87-23737

## CERAMIC MATRIX COMPOSITES

Method of preparing fiber reinforced ceramic material  
[NASA-CASE-LEW-14392-1] c 27 N87-28656  
Fiber reinforced ceramic material  
[NASA-CASE-LEW-14392-2] c 27 N89-29538

## CERAMIC NUCLEAR FUELS

Method of making a cermet Patent  
[NASA-CASE-LEW-10219-1] c 18 N71-28729

## CERAMICS

Transpiration cooled turbine blade manufactured from wires Patent  
[NASA-CASE-XLE-00020] c 15 N70-33226  
Foamed in place ceramic refractory insulating material Patent  
[NASA-CASE-XGS-02435] c 18 N71-22998  
Method for fiberizing ceramic materials Patent  
[NASA-CASE-XNP-00597] c 18 N71-23088  
Method of coating through-holes Patent  
[NASA-CASE-XMF-05999] c 15 N71-29032  
Extrusion can  
[NASA-CASE-NPO-10812] c 15 N73-13464  
Thermal shock resistant hafnia ceramic material  
[NASA-CASE-LAR-10894-1] c 18 N73-14584  
Thermal shock and erosion resistant tantalum carbide ceramic material  
[NASA-CASE-LAR-11902-1] c 27 N78-17206  
High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
[NASA-CASE-NPO-13690-1] c 27 N78-19302  
Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles  
[NASA-CASE-MS-C-12619-2] c 27 N79-12221  
High temperature resistant cermet and ceramic compositions  
[NASA-CASE-NPO-13690-2] c 27 N79-14213  
Sandblasting nozzle  
[NASA-CASE-NPO-13823-1] c 37 N81-25371  
Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-2] c 37 N82-26674  
Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-1] c 27 N82-29453  
Absorbable-susceptor joining of ceramic surfaces  
[NASA-CASE-NPO-15640-1] c 27 N84-22748  
Method of fabricating an abradable gas path seal  
[NASA-CASE-LEW-13269-2] c 37 N84-22957  
Shell tile thermal protection system  
[NASA-CASE-LAR-12862-1] c 27 N84-27886  
Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-1-SB] c 27 N88-29040  
Fiber reinforced ceramic material  
[NASA-CASE-LEW-14392-2] c 27 N89-29538  
Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-2-SB] c 27 N90-21177  
Pressure rig for repetitive casting  
[NASA-CASE-LAR-14050-1] c 31 N90-21216  
Ceramic heat pipe wick  
[NASA-CASE-GSC-13199-1] c 27 N90-23541  
Lightweight ceramic insulation and method  
[NASA-CASE-MS-C-20782-1] c 27 N90-23566  
Composite thermal barrier coating  
[NASA-CASE-LEW-14999-1] c 24 N91-13500

Method of making single crystal fibers  
[NASA-CASE-LEW-14921-1] c 24 N91-13502  
Metallic seal for thermal barrier coating systems  
[NASA-CASE-LEW-15020-1] c 27 N91-15412  
Method of making contamination-free ceramic bodies  
[NASA-CASE-LEW-14984-1] c 27 N91-16152  
Method of applying a thermal barrier coating system to a substrate  
[NASA-CASE-LEW-15020-2] c 24 N91-25202  
Ceramic coatings on smooth surfaces  
[NASA-CASE-LEW-15164-1] c 27 N91-25298  
Plasma gun with coaxial powder feed and adjustable cathode  
[NASA-CASE-LEW-14901-1] c 75 N91-25875  
Method of preparing a thermal barrier coating  
[NASA-CASE-LEW-14999-2] c 27 N91-26376  
Method of preforming and assembling superconducting circuit elements  
[NASA-CASE-LAR-14395-1-CU] c 33 N91-28490  
Composite flexible blanket insulation  
[NASA-CASE-NPO-11907-1-NP] c 24 N91-31236  
Low cost, formable, high T(sub c) superconducting wire  
[NASA-CASE-LEW-14676-1] c 33 N91-31529

## CEREBROSPINAL FLUID

Ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-1] c 52 N83-21785  
Method of making an ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-2] c 52 N84-23095

## CERMETS

Process of casting heavy slips Patent  
[NASA-CASE-XLE-00106] c 15 N71-16076  
Method of making a cermet Patent  
[NASA-CASE-LEW-10219-1] c 18 N71-28729  
Cermet composition and method of fabrication --- heat resistant alloys and powders  
[NASA-CASE-NPO-13120-1] c 27 N76-15311  
High temperature oxidation resistant cermet compositions  
[NASA-CASE-NPO-13666-1] c 27 N77-13217  
High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
[NASA-CASE-NPO-13690-1] c 27 N78-19302  
High temperature resistant cermet and ceramic compositions  
[NASA-CASE-NPO-13690-2] c 27 N79-14213  
Coating with overlay metallic-cermet alloy systems  
[NASA-CASE-LEW-13839-2] c 26 N84-27855  
Overlay metallic-cermet alloy coating systems  
[NASA-CASE-LEW-13639-1] c 26 N84-33555

## CESIUM

Method for removing oxygen impurities from cesium Patent  
[NASA-CASE-XNP-04262-2] c 17 N71-26773  
Method of producing I-123 --- by bombardment of cesium causing spallation  
[NASA-CASE-LEW-11390-2] c 25 N76-27383

## CESIUM DIODES

Thermionic tantalum emitter doped with oxygen Patent Application  
[NASA-CASE-NPO-11138] c 03 N70-34646  
Cavity emitter for thermionic converter Patent  
[NASA-CASE-NPO-10412] c 09 N71-28421  
Thermionic energy converters  
[NASA-CASE-LEW-12443-1] c 44 N83-32175

## CESIUM ENGINES

Variable thrust ion engine utilizing thermally decomposable solid fuel Patent  
[NASA-CASE-XMF-00923] c 28 N70-36802  
Method of producing porous tungsten ionizers for ion rocket engines Patent  
[NASA-CASE-XLE-00455] c 28 N70-38197

## CESIUM VAPOR

Electric power generation system directory from laser power  
[NASA-CASE-NPO-13308-1] c 36 N75-30524

## CHALCOGENIDES

Photoelectrochemical cells including chalcogenophosphate photoelectrodes  
[NASA-CASE-LAR-12958-1] c 44 N84-23019

## CHAMBERS

Diffuser/ejector system for a very high vacuum environment  
[NASA-CASE-MFS-25791-1] c 09 N84-27749

## CHANGE DETECTION

Real-time image difference detection using a polarization rotation spacial light modulator  
[NASA-CASE-NPO-17144-1-CU] c 74 N88-25305

## CHANNEL FLOW

Method of making a regeneratively cooled combustion chamber Patent  
[NASA-CASE-XLE-00150] c 28 N70-41818

- Heated element fluid flow sensor Patent  
[NASA-CASE-MS-C-12084-1] c 12 N71-17569
- Multicolor printing plate joining  
[NASA-CASE-LEW-13598-1] c 35 N84-22930
- CHANNELS (DATA TRANSMISSION)**
- Automatic fault correction system for parallel signal channels Patent  
[NASA-CASE-XNP-03263] c 09 N71-18843
- Helical recorder arrangement for multiple channel recording on both sides of the tape  
[NASA-CASE-GSC-10614-1] c 09 N72-11224
- Asynchronous, multiplexing, single line transmission and recovery data system --- for satellite use  
[NASA-CASE-NPO-13321-1] c 32 N75-26195
- High-speed data link for moderate distances and noisy environments  
[NASA-CASE-NPO-14152-1] c 32 N80-18252
- CHARACTER RECOGNITION**
- Automatic character skew and spacing checking network --- of digital tape drive systems  
[NASA-CASE-GSC-11925-1] c 33 N76-18353
- System and method for character recognition  
[NASA-CASE-NPO-11337-1] c 74 N81-19896
- CHARACTERIZATION**
- Method and apparatus for characterizing residual stress in ferromagnetic materials  
[NASA-CASE-LAR-14239-1] c 26 N91-13527
- CHARGE COUPLED DEVICES**
- Multispectral imaging and analysis system --- using charge coupled devices and linear arrays  
[NASA-CASE-NPO-13691-1] c 43 N79-17288
- CCD correlated quadruple sampling processor  
[NASA-CASE-NPO-14426-1] c 33 N81-27396
- Programmable scan/read circuitry for charge coupled device imaging detectors --- spacecraft attitude control and star trackers  
[NASA-CASE-NPO-15345-1] c 74 N84-23247
- Laser pulse detection method and apparatus  
[NASA-CASE-NPO-16030-1] c 36 N84-25037
- Portable dynamic fundus instrument  
[NASA-CASE-MS-C-21675-1] c 52 N91-13865
- X ray sensitive area detection device  
[NASA-CASE-MFS-28232-1] c 74 N91-14835
- CHARGE DISTRIBUTION**
- Method of erasing target material of a vidicon tube or the like Patent  
[NASA-CASE-XNP-06028] c 09 N71-23189
- Charge storage diode modulators and demodulators  
[NASA-CASE-NPO-10189-1] c 33 N77-21314
- CHARGE EFFICIENCY**
- State-of-charge coulometer  
[NASA-CASE-NPO-15759-1] c 35 N85-21596
- Method for determining the point of zero zeta potential of semiconductor  
[NASA-CASE-LAR-12893-1] c 76 N85-30923
- CHARGE EXCHANGE**
- Ion beam thruster shield  
[NASA-CASE-LEW-12082-1] c 20 N77-10148
- CHARGE TRANSFER**
- Magnetic counter Patent  
[NASA-CASE-XNP-08836] c 09 N71-12515
- Pressure transducer --- using a monomeric charge transfer complex sensor  
[NASA-CASE-NPO-11150] c 35 N78-17359
- Process for preparing highly optically transparent/colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N86-31727
- Secondary Li battery incorporating 12-crown-4 ether  
[NASA-CASE-NPO-17922-1-CU] c 33 N91-13621
- CHARGE TRANSFER DEVICES**
- Charge transfer reaction laser with preionization means  
[NASA-CASE-NPO-13945-1] c 36 N78-27402
- Time delay and integration detectors using charge transfer devices  
[NASA-CASE-GSC-12324-1] c 33 N81-33403
- Image readout device with electronically variable spatial resolution  
[NASA-CASE-LAR-12633-1] c 33 N82-24416
- CHARGED PARTICLES**
- Method of forming thin window drifted silicon charged particle detector Patent  
[NASA-CASE-XLE-00808] c 24 N71-10560
- Electrostatic charged particle analyzer having deflection members shaped according to the periodic voltage applied thereto Patent  
[NASA-CASE-XAC-05506-1] c 24 N71-16095
- Electrostatic collector for charged particles  
[NASA-CASE-LEW-11192-1] c 09 N73-13208
- Method and apparatus for neutralizing potentials induced on spacecraft surfaces  
[NASA-CASE-GSC-11963-1] c 33 N77-10429
- Apparatus for measuring charged particle beam  
[NASA-CASE-MFS-25641-1] c 72 N84-26575
- Multistage spent particle collector and a method for making same  
[NASA-CASE-LEW-13914-1] c 37 N85-33489
- CHARGING**
- Synchronous orbit battery cyclor  
[NASA-CASE-GSC-11211-1] c 03 N72-25020
- CHARRING**
- Ablation sensor  
[NASA-CASE-XLA-01781] c 14 N69-39975
- Ablation sensor Patent  
[NASA-CASE-XLA-01794] c 33 N71-21586
- CHASSIS**
- Chassis unit insert tightening-extract device  
[NASA-CASE-XMS-01077-1] c 37 N79-33467
- Articulated suspension system  
[NASA-CASE-NPO-17354-1-CU] c 37 N90-17153
- CHECKOUT**
- Electronic checkout system for space vehicles Patent  
[NASA-CASE-XKS-08012-2] c 31 N71-15566
- Rapid activation and checkout device for batteries  
[NASA-CASE-MFS-22749-1] c 44 N76-14601
- Decommutator patchboard verifier  
[NASA-CASE-KSC-11065-1] c 33 N81-26359
- CHELATES**
- Ammonium perchlorate composite propellant containing an organic transitional metal chelate catalytic additive Patent  
[NASA-CASE-LAR-10173-1] c 27 N71-14090
- Chelate-modified polymers for atmospheric gas chromatography  
[NASA-CASE-ARC-11154-1] c 25 N80-23383
- CHEMICAL ANALYSIS**
- Analytical test apparatus and method for determining oxide content of alkali metal Patent  
[NASA-CASE-XLE-01997] c 06 N71-23527
- Automated fluid chemical analyzer Patent  
[NASA-CASE-XNP-09451] c 06 N71-26754
- Method for determining presence of OH in magnesium oxide  
[NASA-CASE-NPO-10774] c 06 N72-17095
- Micrometeoroid analyzer  
[NASA-CASE-ARC-10443-1] c 14 N73-20477
- Chromato-fluorographic drug detector --- device for detecting and recording fluorescent properties of materials  
[NASA-CASE-ARC-10633-1] c 25 N74-26947
- Amino acid analysis  
[NASA-CASE-NPO-12130-1] c 25 N75-14844
- Gas chromatograph injection system  
[NASA-CASE-ARC-10344-2] c 35 N75-26334
- Alkaline electrochemical cells and method of making  
[NASA-CASE-GSC-10349-1] c 44 N82-24645
- Particle analyzing method and apparatus  
[NASA-CASE-NPO-15292-1] c 35 N83-27184
- System for monitoring physical characteristics of fluids  
[NASA-CASE-NPO-15400-1] c 34 N83-31993
- Method and apparatus for mapping the distribution of chemical elements in an extended medium  
[NASA-CASE-GSC-12808-1] c 25 N85-21279
- CHEMICAL AUXILIARY POWER UNITS**
- Ion-exchange membrane with platinum electrode assembly Patent  
[NASA-CASE-XMS-02063] c 03 N71-29044
- CHEMICAL BONDS**
- Fluorine-containing polyformals  
[NASA-CASE-XMF-06900-1] c 27 N79-21191
- Perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups  
[NASA-CASE-ARC-11241-1] c 25 N81-14016
- Preparation of perfluorinated 1,2,4-oxadiazoles  
[NASA-CASE-ARC-11267-2] c 23 N82-28353
- The 1-((diorganooxyphosphonyl)-methyl)-2,4- and -2,6-diamido benzenes  
[NASA-CASE-ARC-11425-4] c 23 N90-20133
- Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-2-SB] c 27 N90-21177
- CHEMICAL COMPOSITION**
- Phototropic composition of matter  
[NASA-CASE-XGS-03736] c 14 N72-22443
- Nitramine propellants --- gun propellant burning rate  
[NASA-CASE-NPO-14103-1] c 28 N78-31255
- Composition and method for making polyimide resin-reinforced fabric  
[NASA-CASE-LEW-12933-1] c 27 N81-19296
- Non-toxic invert analog glass compositions of high modulus  
[NASA-CASE-HQN-10328-2] c 27 N82-29454
- High modulus rare earth and beryllium containing silicate glass compositions --- for glass reinforcing fibers  
[NASA-CASE-HQN-10595-1] c 27 N82-29455
- Low temperature cross linking polyimides  
[NASA-CASE-LEW-12876-2] c 27 N83-29392
- Acetylene (ethynyl) terminated polyimide siloxane and process for preparation thereof  
[NASA-CASE-LAR-13318-1] c 27 N87-14516
- Novel polyimide compositions based on 4,4': isophthaloyldiphthalic anhydride (IDPA)  
[NASA-CASE-LAR-14194-1] c 24 N90-15148
- Polyimidazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14145-1] c 27 N90-26954
- Poly(1,3,4-oxadiazoles) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14427-1] c 23 N91-23237
- Spectroscopic wear detector  
[NASA-CASE-LEW-15200-1] c 20 N91-32167
- CHEMICAL COMPOUNDS**
- Ultraviolet atomic emission detector  
[NASA-CASE-HQN-10756-1] c 14 N72-25428
- CHEMICAL ELEMENTS**
- Apparatus for remote handling of materials --- mixing or analyzing dangerous chemicals  
[NASA-CASE-LAR-10634-1] c 37 N74-18123
- CHEMICAL ENGINEERING**
- Process for the preparation of calcium superoxide  
[NASA-CASE-ARC-11053-1] c 25 N79-10162
- CHEMICAL EXPLOSIONS**
- Hypervelocity gun --- using both electric and chemical energy for projectile propulsion  
[NASA-CASE-LEW-03186-1] c 09 N79-21084
- CHEMICAL INDICATORS**
- Self-contained, single-use hose and tubing cleaning module  
[NASA-CASE-MS-C-20857-1] c 37 N87-17035
- CHEMICAL MACHINING**
- Masking device Patent  
[NASA-CASE-XNP-02092] c 15 N70-42033
- CHEMICAL PROPERTIES**
- Method of producing alternating ether siloxane copolymers Patent  
[NASA-CASE-XMF-02584] c 06 N71-20905
- Polyurethanes of fluorine containing polycarbonates  
[NASA-CASE-MFS-10512] c 06 N73-30099
- Highly fluorinated polyurethanes  
[NASA-CASE-NPO-10767-1] c 06 N73-33076
- Thiophenyl ether disiloxanes and trisiloxanes useful as lubricant fluids  
[NASA-CASE-MFS-22411-1] c 37 N74-21058
- CHEMICAL REACTIONS**
- Process for interfacial polymerization of pyromellitic dianhydride and 1,2,4,5-tetraamino-benzene Patent  
[NASA-CASE-XLA-03104] c 06 N71-11235
- Synthesis of polymeric schiff bases by schiff-base exchange reactions Patent  
[NASA-CASE-XMF-08651] c 06 N71-11236
- Preparation of ordered poly /arylenesiloxane/ polymers  
[NASA-CASE-XMF-10753] c 06 N71-11237
- Imidazopyrrolone/imide copolymers Patent  
[NASA-CASE-XLA-08802] c 06 N71-11238
- High resolution developing of photosensitive resists Patent  
[NASA-CASE-XGS-04993] c 14 N71-17574
- Inorganic solid film lubricants Patent  
[NASA-CASE-XMF-03988] c 15 N71-21403
- Process for preparation of dianilinosilanes Patent  
[NASA-CASE-XMF-06409] c 06 N71-23230
- Aromatic diamine-aromatic dialdehyde high molecular weight schiff base polymers prepared in a monofunctional schiff base Patent  
[NASA-CASE-XMF-03074] c 06 N71-24740
- Hydroxy terminated perfluoro ethers Patent  
[NASA-CASE-NPO-10768] c 06 N71-27254
- Metal containing polymers from cyclic tetrameric phenylphosphonitriamides Patent  
[NASA-CASE-HQN-10364] c 06 N71-27363
- Gas liquefaction and dispensing apparatus Patent  
[NASA-CASE-NPO-10070] c 15 N71-27372
- Epoxy-aziridine polymer product Patent  
[NASA-CASE-NPO-10701] c 06 N71-28620
- Process for preparation of high-molecular-weight polyaryloxysilanes Patent  
[NASA-CASE-XMF-08674] c 06 N71-28807
- Trialkyl-dihalotantalum and niobium compounds Patent  
[NASA-CASE-XNP-04023] c 06 N71-28808
- Method of making foamed materials in zero gravity  
[NASA-CASE-XMF-09902] c 15 N72-11387
- Preparation of high purity copper fluoride  
[NASA-CASE-LEW-10794-1] c 06 N72-17093
- Firefly pump-metering system  
[NASA-CASE-GSC-10218-1] c 15 N72-21465
- Apparatus for producing metal powders  
[NASA-CASE-XLE-06461-2] c 17 N72-28535
- Nondestructive spot test method for titanium and titanium alloys  
[NASA-CASE-LAR-10539-1] c 17 N73-12547
- Self-cycling fluid heater  
[NASA-CASE-MS-C-15567-1] c 33 N73-16918
- Method of forming difunctional polyisobutylene  
[NASA-CASE-NPO-10893] c 27 N73-22710

- Polyurethanes from fluoroalkyl propyleneglycol polyethers  
[NASA-CASE-MFS-10506] c 06 N73-30100
- Fluorine containing polyurethane  
[NASA-CASE-MFS-10509] c 06 N73-30103
- Novel polymers and method of preparing same  
[NASA-CASE-NPO-10998-1] c 06 N73-32029
- Polyimide foam for the thermal insulation and fire protection  
[NASA-CASE-ARC-10464-1] c 27 N74-12812
- Intumescent composition, foamed product prepared therewith and process for making same  
[NASA-CASE-ARC-10304-2] c 27 N74-27037
- Vapor phase growth of groups 3-5 compounds by hydrogen chloride transport of the elements  
[NASA-CASE-LAR-11144-1] c 25 N75-26043
- Utilization of oxygen difluoride for syntheses of fluoropolymers  
[NASA-CASE-NPO-12061-1] c 27 N76-16228
- Method for detecting pollutants --- through chemical reactions and heat treatment  
[NASA-CASE-LAR-11405-1] c 45 N76-31714
- Process for preparing higher oxides of the alkali and alkaline earth metals  
[NASA-CASE-ARC-10992-1] c 26 N78-32229
- Method for preparing addition type polyimide prepreps  
[NASA-CASE-LAR-12054-2] c 27 N81-14078
- The 1,1,1-triaryl-2,2,2-trifluoroethanes and process for their synthesis  
[NASA-CASE-ARC-11097-1] c 25 N82-24312
- Preparation of perfluorinated 1,2,4-oxadiazoles  
[NASA-CASE-ARC-11267-2] c 23 N82-28353
- Process for producing tris (n-methylamino) methylsilane  
[NASA-CASE-MFS-25721-1] c 25 N85-21280
- Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-5] c 27 N85-21352
- Fire-resistant phosphorus containing polyimides and copolyimides  
[NASA-CASE-ARC-11522-2] c 27 N85-34280
- Sulfone-ester polymers containing pendent ethynyl groups  
[NASA-CASE-LAR-13316-1] c 27 N86-27450
- Preparation of B-trichloroborazine  
[NASA-CASE-ARC-11643-1-SB] c 23 N87-23698
- The 1-(diorganoxy phosphonyl) methyl)-2,4- and -2,6-diamino benzenes and their derivatives  
[NASA-CASE-ARC-11425-2] c 23 N87-28605
- Polyimidazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14145-1] c 27 N90-26954
- Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-4] c 23 N91-25185
- CHEMICAL REACTORS**
- Chemical vapor deposition reactor --- providing uniform film thickness  
[NASA-CASE-NPO-13650-1] c 25 N79-28253
- Sodium storage and injection system  
[NASA-CASE-NPO-14384-1] c 37 N80-10494
- Method of producing silicon --- gas phase reactor multiple injector liquid feed system  
[NASA-CASE-NPO-14382-1] c 31 N80-18231
- Fluidized bed coal combustion reactor  
[NASA-CASE-NPO-14273-1] c 25 N82-11144
- Solar heated fluidized bed gasification system  
[NASA-CASE-NPO-15071-1] c 44 N82-16475
- Thermal reactor --- liquid silicon production from silane gas  
[NASA-CASE-NPO-14369-1] c 44 N83-10501
- Pressure letdown method and device for coal conversion systems  
[NASA-CASE-NPO-15100-1] c 44 N84-14583
- Apparatus and method to keep the walls of a free-space reactor free from deposits of solid materials  
[NASA-CASE-NPO-15851-1] c 37 N85-21652
- Remotely controllable mixing system  
[NASA-CASE-MFS-28153-1] c 31 N86-32589
- CHEMICAL TESTS**
- Nondestructive spot test method for titanium and titanium alloys  
[NASA-CASE-LAR-10539-1] c 17 N73-12547
- Nondestructive spot test method for magnesium and magnesium alloys  
[NASA-CASE-LAR-10953-1] c 17 N73-27446
- Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-6] c 25 N85-30039
- CHEMILUMINESCENCE**
- Method and apparatus for eliminating luminol interference material  
[NASA-CASE-MS-C-16260-1] c 51 N80-16714
- CHEMISORPTION**
- Oxygen chemisorption cryogenic refrigerator  
[NASA-CASE-NPO-16734-1-CU] c 31 N88-14223
- CHEMOTHERAPY**
- Indomethacin-acin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-2] c 52 N81-14613
- CHIPS (ELECTRONICS)**
- Head for high speed spinner having a vacuum chuck --- holding silicon dioxide chips for etching  
[NASA-CASE-NPO-15227-1] c 37 N81-33482
- Liquid immersion apparatus for minute articles  
[NASA-CASE-MFS-25363-1] c 37 N82-12441
- Miniaturization of flight deflection measurement system  
[NASA-CASE-LAR-13628-1] c 35 N90-23707
- VLSI architecture for a Reed-Solomon decoder  
[NASA-CASE-NPO-17897-1-CU] c 33 N90-27040
- Laterally stacked Schottky diodes for infrared sensor applications  
[NASA-CASE-NPO-17426-1-CU] c 33 N91-21434
- Thermal treatment of silicon integrated circuit chips to prevent and heal voids in aluminum metallization  
[NASA-CASE-NPO-17678-1-CU] c 76 N91-28014
- CHIPS (MEMORY DEVICES)**
- VLSI single-chip (255,223) Reed-Solomon encoder with interleaver  
[NASA-CASE-NPO-17280-1-CU] c 17 N90-21061
- CHIRP SIGNALS**
- Method for shaping and aiming narrow beams --- sonar mapping and target identification  
[NASA-CASE-NPO-14632-1] c 32 N82-18443
- CHLORIDES**
- The 5-(4-Ethynylphenoxy) isophthalic chloride  
[NASA-CASE-LAR-13316-2] c 27 N87-14515
- Metal chloride cathode for a battery  
[NASA-CASE-NPO-17809-1-CU] c 33 N91-27478
- CHLORINATION**
- Specialized halogen generator for purification of water  
[NASA-CASE-XLA-08913] c 14 N71-28933
- Coal desulfurization by aqueous chlorination  
[NASA-CASE-NPO-14902-1] c 25 N82-29371
- Hydrodesulfurization of chlorinized coal  
[NASA-CASE-NPO-15304-1] c 25 N83-31743
- CHLORINE**
- Fluidized bed desulfurization  
[NASA-CASE-NPO-15924-1] c 25 N85-35253
- CHLOROPRENE RESINS**
- Flexible fire retardant polyisocyanate modified neoprene foam --- for thermal protective devices  
[NASA-CASE-ARC-10180-1] c 27 N74-12814
- CHOKES**
- Current dependent filter inductance  
[NASA-CASE-ERC-10139] c 09 N72-17154
- CHOKES (RESTRICTIONS)**
- Variably positioned guide vanes for aerodynamic choking  
[NASA-CASE-LAR-10642-1] c 07 N74-31270
- Adjustable choke for fluids nozzle  
[NASA-CASE-NPO-17625-1-CU] c 34 N90-27070
- CHOLESTEROL**
- Reduction of blood serum cholesterol  
[NASA-CASE-NPO-12119-1] c 52 N75-15270
- CHROMATOGRAPHY**
- Chromatofluorographic drug detector --- device for detecting and recording fluorescent properties of materials  
[NASA-CASE-ARC-10633-1] c 25 N74-26947
- Modulated voltage metastable ionization detector  
[NASA-CASE-ARC-11503-1] c 35 N85-34374
- CHROMIUM**
- Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c 44 N78-19599
- Efficiency of silicon solar cells containing chromium  
[NASA-CASE-NPO-15179-1] c 44 N82-26777
- Process for improving moisture resistance of epoxy resins by addition of chromium ions  
[NASA-CASE-LAR-13226-1] c 27 N85-34282
- Negative electrode catalyst for the iron chromium redox energy storage system  
[NASA-CASE-LEW-14028-1] c 44 N86-19721
- CHROMIUM ALLOYS**
- Method of heat treating age-hardenable alloys  
[NASA-CASE-XNP-01311] c 26 N75-29236
- Nicral ternary alloy having improved cyclic oxidation resistance  
[NASA-CASE-LEW-13339-1] c 26 N82-31505
- CHROMIUM CARBIDES**
- Method of making carbide/fluoride/silver composites  
[NASA-CASE-LEW-14902-1] c 24 N91-27244
- CHROMIUM COMPOUNDS**
- Chromium electrodes for REDOX cells  
[NASA-CASE-LEW-13653-1] c 44 N84-28205
- CHROMOSOMES**
- Automated clinical system for chromosome analysis  
[NASA-CASE-NPO-13913-1] c 52 N79-12694
- CINEMATOGRAPHY**
- High speed photo-optical time recording  
[NASA-CASE-KSC-10294] c 14 N72-18411
- Holographic motion picture camera with Doppler shift compensation  
[NASA-CASE-MFS-22517-1] c 35 N76-18402
- CIRCLES (GEOMETRY)**
- Two dimensional vernier  
[NASA-CASE-MS-C-21700-1] c 35 N91-23462
- CIRCUIT BOARDS**
- Electrical feed-through connection for printed circuit boards and printed cable  
[NASA-CASE-XMF-01483] c 14 N69-27431
- Printed cable connector Patent  
[NASA-CASE-XMF-00369] c 09 N70-36494
- Printed circuit board with bellows rivet connection Patent  
[NASA-CASE-XNP-05082] c 15 N70-41960
- Electrical spot terminal assembly Patent  
[NASA-CASE-NPO-10034] c 15 N71-17685
- Polyimide resin-fiberglass cloth laminates for printed circuit boards  
[NASA-CASE-MFS-20408] c 18 N73-12604
- Circuit board package with wedge shaped covers  
[NASA-CASE-MFS-21919-1] c 10 N73-25243
- Tool for use in lifting pin supported objects  
[NASA-CASE-NPO-13157-1] c 37 N74-32918
- Shock absorbing mount for electrical components  
[NASA-CASE-NPO-13253-1] c 37 N75-18573
- Connector --- for connecting circuits on different layers of multilayer printed circuit boards  
[NASA-CASE-LAR-11709-1] c 37 N76-27567
- Traveling wave tube circuit  
[NASA-CASE-LEW-12013-1] c 33 N79-10339
- High stability amplifier  
[NASA-CASE-GSC-12646-1] c 33 N83-34191
- Beam forming network  
[NASA-CASE-NPO-15743-1] c 32 N85-29118
- CIRCUIT BREAKERS**
- Mercury capillary interrupter Patent  
[NASA-CASE-XNP-02251] c 12 N71-20896
- Diode and protection fuse unit Patent  
[NASA-CASE-XKS-03381] c 09 N71-22796
- Separation simulator Patent  
[NASA-CASE-XKS-04631] c 10 N71-23663
- Detenting servomotor Patent  
[NASA-CASE-XNP-06936] c 15 N71-24695
- Circuit breaker utilizing magnetic latching relays Patent  
[NASA-CASE-MS-C-11277] c 09 N71-29008
- Multiple circuit protector device  
[NASA-CASE-XMS-02744] c 33 N75-27249
- Solar concentrator protective system  
[NASA-CASE-NPO-15662-1] c 44 N84-28204
- CIRCUIT DIAGRAMS**
- Excitation and detection circuitry for a flux responsive magnetic head  
[NASA-CASE-XNP-04183] c 09 N69-24329
- Signal multiplexer  
[NASA-CASE-XGS-01110] c 07 N69-24334
- Ring counter  
[NASA-CASE-XGS-03095] c 09 N69-27463
- Solid state switch  
[NASA-CASE-XNP-09228] c 09 N69-27500
- Ultra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit Patent  
[NASA-CASE-XGS-00381] c 09 N70-34819
- Frequency shift keyed demodulator Patent  
[NASA-CASE-XGS-02889] c 07 N71-11282
- Difference circuit Patent  
[NASA-CASE-XNP-08274] c 10 N71-13537
- High voltage transistor circuit Patent  
[NASA-CASE-XNP-06937] c 09 N71-19516
- Weld control system using thermocouple wire Patent  
[NASA-CASE-MFS-06074] c 15 N71-20393
- Correlation function apparatus Patent  
[NASA-CASE-XNP-00746] c 07 N71-21476
- Diode and protection fuse unit Patent  
[NASA-CASE-XKS-03381] c 09 N71-22796
- Buck boost voltage regulation circuit Patent  
[NASA-CASE-GSC-10735-1] c 10 N71-26085
- Active RC networks  
[NASA-CASE-ARC-10042-2] c 10 N72-11256
- Microcircuit negative cutter  
[NASA-CASE-XLA-09843] c 15 N72-27485
- Self-regulating proportionally controlled heating apparatus and technique  
[NASA-CASE-GSC-11752-1] c 77 N75-20140
- Symmetrical odd-modulus frequency divider  
[NASA-CASE-NPO-13426-1] c 33 N75-31330
- Trielectrode capacitive pressure transducer  
[NASA-CASE-ARC-10711-2] c 33 N76-21390
- Frequency discriminator and phase detector circuit  
[NASA-CASE-NPO-11515-1] c 33 N77-13315

## CIRCUIT PROTECTION

- Protection for energy conversion systems  
[NASA-CASE-XGS-04808] c 03 N69-25146
- Protective circuit of the spark gap type  
[NASA-CASE-XAC-08981] c 09 N69-39897
- Electrical load protection device Patent  
[NASA-CASE-MS-C-12135-1] c 09 N71-12526
- Apparatus for overcurrent protection of a push-pull amplifier Patent  
[NASA-CASE-MS-C-12033-1] c 09 N71-13531
- Method of coating circuit paths on printed circuit boards with solder Patent  
[NASA-CASE-XMF-01599] c 09 N71-20705
- Power supply circuit Patent  
[NASA-CASE-XMS-00913] c 10 N71-23543
- Selective plating of etched circuits without removing previous plating Patent  
[NASA-CASE-XGS-03120] c 15 N71-24047
- Failure sensing and protection circuit for converter networks Patent  
[NASA-CASE-GSC-10114-1] c 10 N71-27366
- Power responsive overload sensing circuit Patent  
[NASA-CASE-GSC-10667-1] c 10 N71-33129
- Saturation current protection apparatus for saturable core transformers  
[NASA-CASE-ERC-10075-2] c 09 N72-22196
- Electrical insulating layer process  
[NASA-CASE-LEW-10489-1] c 15 N72-25447
- Phase protection system for ac power lines  
[NASA-CASE-MS-C-17832-1] c 33 N74-14956
- Overvoltage protection network  
[NASA-CASE-ARC-10197-1] c 33 N74-17929
- Shock absorbing mount for electrical components  
[NASA-CASE-NPO-13253-1] c 37 N75-18573
- Multiple circuit protector device  
[NASA-CASE-XMS-02744] c 33 N75-27249
- Multi-cell battery protection system  
[NASA-CASE-LEW-12039-1] c 44 N78-14625
- Fused switch  
[NASA-CASE-XMS-01244-1] c 33 N79-33393
- Base drive for paralleled inverter systems  
[NASA-CASE-NPO-14163-1] c 33 N81-14220
- Shielded conductor cable system  
[NASA-CASE-MS-C-12745-1] c 33 N81-27397
- Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NPO-14316-1] c 33 N81-33404
- Thermal switch disc for short circuit protection of batteries  
[NASA-CASE-MS-C-21428-1] c 33 N91-14537
- CIRCUIT RELIABILITY**
- Split-cross-bridge resistor for testing for proper fabrication of integrated circuits  
[NASA-CASE-NPO-16021-1] c 33 N85-30187
- Cross-contact chain  
[NASA-CASE-NPO-16784-1] c 33 N87-10231
- CIRCUITS**
- Connector - Electrical  
[NASA-CASE-XLA-01288] c 09 N69-21470
- Binary magnetic memory device Patent  
[NASA-CASE-XGS-00174] c 08 N70-34743
- Electronic motor control system Patent  
[NASA-CASE-XMF-01129] c 09 N70-38712
- Starting circuit for vapor lamps and the like Patent  
[NASA-CASE-XNP-01058] c 09 N71-12540
- Drift compensation circuit for analog to digital converter Patent  
[NASA-CASE-XNP-04780] c 08 N71-19687
- High voltage divider system Patent  
[NASA-CASE-XLE-02008] c 09 N71-21583
- Solar cell and circuit array and process for nullifying magnetic fields Patent  
[NASA-CASE-XGS-03390] c 03 N71-23187
- Dual polarity full wave dc motor drive Patent  
[NASA-CASE-XNP-07477] c 09 N71-26092
- Temperature regulation circuit Patent  
[NASA-CASE-XNP-02792] c 14 N71-28958
- Pulse generating circuit employing switch means on ends of delay line for alternately charging and discharging same Patent  
[NASA-CASE-XNP-00745] c 10 N71-28960
- Digital pulse width selection circuit Patent  
[NASA-CASE-XLA-07788] c 09 N71-29139
- Power responsive overload sensing circuit Patent  
[NASA-CASE-GSC-10667-1] c 10 N71-33129
- Pulsed excitation voltage circuit for transducers  
[NASA-CASE-FRC-10036] c 09 N72-22200
- Thermal to electrical power conversion system with solid-state switches with Seebeck effect compensation  
[NASA-CASE-NPO-11388] c 03 N72-23048
- Controllable load insensitive power converters  
[NASA-CASE-ERC-10268] c 09 N72-25252
- Failsafe multiple transformer circuit configuration  
[NASA-CASE-NPO-11078] c 09 N72-25262
- Microcircuit negative cutter  
[NASA-CASE-XLA-09843] c 15 N72-27485
- Infinite range electronics gain control circuit  
[NASA-CASE-GSC-10786-1] c 10 N72-28241
- Active tuned circuit  
[NASA-CASE-GSC-11340-1] c 10 N72-33230
- Heat detection and compositions and devices therefor  
[NASA-CASE-NPO-10764-1] c 14 N73-14428
- Driving lamps by induction  
[NASA-CASE-MFS-21214-1] c 09 N73-30181
- Circuit for detecting initial systole and diastolic notch --- for monitoring arterial pressure  
[NASA-CASE-LEW-11581-1] c 54 N75-13531
- Peak holding circuit for extremely narrow pulses  
[NASA-CASE-MS-C-14129-1] c 33 N75-18479
- High voltage distributor  
[NASA-CASE-GSC-11849-1] c 33 N76-16332
- Circuit for automatic load sharing in parallel converter modules  
[NASA-CASE-NPO-14056-1] c 33 N79-24257
- Method and apparatus for fabricating improved solar cell modules  
[NASA-CASE-NPO-14416-1] c 44 N81-14389
- Control system for an induction motor with energy recovery  
[NASA-CASE-MFS-25477-1] c 33 N84-14424
- Ladder supported ring bar circuit  
[NASA-CASE-LEW-13570-1] c 33 N84-16452
- Programmable scan/read circuitry for charge coupled device imaging detectors --- spacecraft attitude control and star trackers  
[NASA-CASE-NPO-15345-1] c 74 N84-23247
- Dielectric based submillimeter backward wave oscillator circuit  
[NASA-CASE-LEW-13736-1] c 33 N84-27974
- High voltage power supply  
[NASA-CASE-GSC-12818-1] c 33 N85-29147
- Method and apparatus for transfer function simulator for testing complex systems  
[NASA-CASE-NPO-15696-1] c 33 N85-34333
- Amplifier for measuring low-level signals in the presence of high common mode voltage  
[NASA-CASE-MFS-25868-1] c 33 N86-20670
- Processing circuit with asymmetry corrector and convolutional encoder for digital data  
[NASA-CASE-MS-C-20187-1] c 33 N87-25531
- Arctjet power supply and start circuit  
[NASA-CASE-LEW-14374-1] c 09 N88-28939
- Power supply conditioning circuit  
[NASA-CASE-NPO-17233-1-CU] c 33 N88-29095
- Method and circuit for controlling the evolution time interval of a laser output pulse  
[NASA-CASE-LAR-13772-1] c 36 N89-28816
- Method and circuit for shaping laser output pulses  
[NASA-CASE-LAR-14203-1] c 36 N89-28817
- Electromagnetic attachment mechanism  
[NASA-CASE-MS-C-21463-1] c 37 N91-23490
- Control circuitry using electronic emulation of a synchro signal for accurate control of position and rate of rotation for shafts  
[NASA-CASE-MFS-28458-1] c 33 N91-26459
- Method of preforming and assembling superconducting circuit elements  
[NASA-CASE-LAR-14395-1-CU] c 33 N91-28490
- Asymmetric soft-error resistant memory  
[NASA-CASE-NPO-17394-1-CU] c 60 N91-31810
- CIRCULAR CONES**
- Optical inspection apparatus Patent  
[NASA-CASE-XMF-00462] c 14 N70-34298
- CIRCULAR CYLINDERS**
- Light intensity modulator controller Patent  
[NASA-CASE-XMS-04300] c 09 N71-19479
- CIRCULAR POLARIZATION**
- Electromagnetic polarization systems and methods Patent  
[NASA-CASE-GSC-10021-1] c 09 N71-24595
- Virtual wall slot circularly polarized planar array antenna  
[NASA-CASE-NPO-10301] c 07 N72-11148
- Circularly polarized antenna  
[NASA-CASE-ERC-10214] c 09 N72-31235
- Stripline feed for a microstrip array of patch elements with teardrop shaped probes  
[NASA-CASE-NPO-17548-1-CU] c 32 N90-16104
- CIRCULAR TUBES**
- Evacuated displacement compression molding  
[NASA-CASE-LAR-10782-1] c 31 N74-14133
- Segmented tubular cushion springs and spring assembly  
[NASA-CASE-ARC-11349-1] c 37 N86-20797
- CIRCULATION CONTROL AIRFOILS**
- Helicopter anti-torque system using strakes  
[NASA-CASE-LAR-13233-1] c 05 N84-33400
- CIRCULATORS (PHASE SHIFT CIRCUITS)**
- Circulator having quarter wavelength resonant post and parametric amplifier circuits utilizing the same Patent  
[NASA-CASE-XNP-02140] c 09 N71-23097
- Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures  
[NASA-CASE-NPO-14254-1] c 36 N80-18372
- CIRCUMFERENCES**
- Circumferential pressure probe  
[NASA-CASE-LAR-13775-1] c 35 N90-23706
- CLADDING**
- Cladding for transverse-pumped solid-state laser  
[NASA-CASE-NPO-17355-1-CU] c 36 N91-17360
- Process for the manufacture of seamless metal-clad fiber-reinforced organic matrix composite structures  
[NASA-CASE-LAR-13562-2] c 24 N91-25199
- CLAMPING CIRCUITS**
- Amplifier clamping circuit for horizon scanner Patent  
[NASA-CASE-XGS-01784] c 10 N71-20782
- CLAMPS**
- Portable alignment tool Patent  
[NASA-CASE-XMF-01452] c 15 N70-41371
- Hydraulic grip Patent  
[NASA-CASE-XLA-05100] c 15 N71-17696
- Clamping assembly for inertial components Patent  
[NASA-CASE-XMS-02184] c 15 N71-20813
- Central spar and module joint Patent  
[NASA-CASE-XNP-02341] c 15 N71-21531
- Quick attach mechanism Patent  
[NASA-CASE-XFR-05421] c 15 N71-22994
- Prosthetic occlusive device for an internal passageway  
[NASA-CASE-MFS-25740-1] c 52 N84-11744
- Clamp-mount device  
[NASA-CASE-MFS-25510-1] c 37 N84-16560
- Reusable thermal cycling clamp  
[NASA-CASE-LAR-12868-1] c 37 N85-21651
- Self-clamping arc light reflector for welding torch  
[NASA-CASE-MFS-29207-1] c 74 N87-25843
- Releasable clamping apparatus  
[NASA-CASE-MFS-28192-1] c 37 N90-17154
- Tensile film clamps and mounting block for the rheovibron and autovibron viscoelastometer  
[NASA-CASE-LAR-13696-1] c 37 N90-20409
- Cantilever clamp fitting  
[NASA-CASE-MFS-28328-1] c 37 N91-13731
- Post clamp  
[NASA-CASE-LEW-14862-1] c 37 N91-14617
- Overcenter collet space station truss fastener  
[NASA-CASE-MS-C-21504-1] c 18 N91-21221
- Apparatus for joining trusses  
[NASA-CASE-MFS-28545-1] c 31 N91-25306
- Quick action clamp  
[NASA-CASE-LEW-14887-1] c 37 N91-27561
- Power saw  
[NASA-CASE-MS-C-21469-1] c 37 N91-31655
- CLASSIFICATIONS**
- General method of pattern classification using the two-domain theory  
[NASA-CASE-MS-C-21737-1] c 61 N91-13911
- CLAYS**
- Inorganic thermal control pigment Patent  
[NASA-CASE-XNP-02139] c 18 N71-24184
- CLEAN ROOMS**
- Air conditioned suit  
[NASA-CASE-LAR-10076-1] c 05 N73-20137
- CLEANERS**
- Purge device for thrust engines Patent  
[NASA-CASE-XMS-04826] c 28 N71-28849
- Noncontaminating swabs  
[NASA-CASE-MFS-18100] c 15 N72-11390
- Apparatus and method to keep the walls of a free-space reactor free from deposits of solid materials  
[NASA-CASE-NPO-15851-1] c 37 N85-21652
- Whole body cleansing agent  
[NASA-CASE-MS-C-21589-1] c 54 N91-16566
- Orbital debris sweeper and method  
[NASA-CASE-MS-C-21534-1] c 18 N91-21222
- CLEANING**
- Disk pack cleaning table Patent Application  
[NASA-CASE-LAR-10590-1] c 15 N70-26819
- System for sterilizing objects --- cleaning space vehicle systems  
[NASA-CASE-KSC-11085-1] c 54 N81-24724
- Apparatus and method to keep the walls of a free-space reactor free from deposits of solid materials  
[NASA-CASE-NPO-15851-1] c 37 N85-21652
- Self-contained, single-use hose and tubing cleaning module  
[NASA-CASE-MS-C-20857-1] c 37 N87-17035
- Orbital debris sweeper and method  
[NASA-CASE-MS-C-21534-1] c 18 N91-21222
- CLEAR AIR TURBULENCE**
- Clear air turbulence detector  
[NASA-CASE-ERC-10081] c 14 N72-28437
- Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c 36 N75-15028
- CAT altitude avoidance system  
[NASA-CASE-NPO-15351-1] c 06 N83-10040



- Microwave temperature profiler for clear air turbulence prediction  
[NASA-CASE-NPO-18115-1-CU] c 47 N91-23662
- CLEARANCES**  
Active clearance control system for a turbomachine  
[NASA-CASE-LEW-12938-1] c 07 N82-32366  
Control means for a gas turbine engine  
[NASA-CASE-LEW-14586-1] c 07 N83-31603
- CLEAVAGE**  
Crystal cleaving machine  
[NASA-CASE-GSC-12584-1] c 37 N82-32730  
Workpiece positioning vise  
[NASA-CASE-GSC-12762-1] c 37 N84-28083
- CLIMBING FLIGHT**  
Aircraft instrument Patent  
[NASA-CASE-XLA-00487] c 14 N70-40157  
Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13734-1-CU] c 09 N90-20096
- CLINICAL MEDICINE**  
Process for the preparation of brushite crystals  
[NASA-CASE-ERC-10338] c 04 N72-33072  
Measurement of gas production of microorganisms --- using pressure sensors  
[NASA-CASE-LAR-11326-1] c 35 N75-33368  
Production of I-123  
[NASA-CASE-LEW-11390-3] c 25 N76-29379  
Automated clinical system for chromosome analysis  
[NASA-CASE-NPO-13913-1] c 52 N79-12694  
Medical diagnosis system and method with multispectral imaging --- depth of burns and optical density of the skin  
[NASA-CASE-NPO-14402-1] c 52 N81-27783  
Process of making medical clip  
[NASA-CASE-LAR-12650-2] c 52 N84-28389
- CLIPS**  
Medical clip  
[NASA-CASE-LAR-12650-1] c 52 N84-28388  
Process of making medical clip  
[NASA-CASE-LAR-12650-2] c 52 N84-28389  
Airborne rescue system  
[NASA-CASE-ARC-11909-1] c 03 N91-31113
- CLOCKS**  
Time synchronization system utilizing moon reflected coded signals Patent  
[NASA-CASE-NPO-10143] c 10 N71-26326  
Counter Patent  
[NASA-CASE-XNP-06234] c 10 N71-27137  
Fault tolerant clock apparatus utilizing a controlled minority of clock elements  
[NASA-CASE-MSC-12531-1] c 35 N75-30504  
Clock setter  
[NASA-CASE-LAR-11458-1] c 35 N76-16392  
Real-time simulation clock  
[NASA-CASE-LAR-14056-1] c 35 N90-23713
- CLOSED CIRCUIT TELEVISION**  
Spacecraft docking and alignment system --- using television camera system  
[NASA-CASE-MSC-12559-1] c 18 N76-14186
- CLOSED CYCLES**  
Closed loop ranging system Patent  
[NASA-CASE-XNP-01501] c 21 N70-41930  
Digital phase-locked loop  
[NASA-CASE-GSC-11623-1] c 33 N75-25040  
Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c 44 N76-27664
- CLOSED ECOLOGICAL SYSTEMS**  
Recovery of potable water from human wastes in below-G conditions Patent  
[NASA-CASE-XLA-03213] c 05 N71-11207  
Space vehicle with artificial gravity and earth-like environment  
[NASA-CASE-LEW-11101-1] c 31 N73-32750  
Regenerable device for scrubbing breathable air of CO<sub>2</sub> and moisture without special heat exchanger equipment  
[NASA-CASE-MSC-14771-1] c 54 N77-32722  
Cell and method for electrolysis of water and anode  
[NASA-CASE-MSC-16394-1] c 28 N81-24280  
Method and apparatus for bio-regenerative life support system  
[NASA-CASE-MSC-21629-1] c 54 N91-31803
- CLOSTRIDIUM**  
Production of butanol by fermentation in the presence of cocultures of clostridium  
[NASA-CASE-NPO-16203-1] c 23 N85-35227
- CLOSURES**  
Canister closing device Patent  
[NASA-CASE-XLA-01446] c 15 N71-21528  
Spacesuit torso closure  
[NASA-CASE-ARC-11100-1] c 54 N78-31736
- CLOUD CHAMBERS**  
Heat transfer device  
[NASA-CASE-MFS-22938-1] c 34 N76-18374
- CLOUD COVER**  
Cloud cover sensor  
[NASA-CASE-NPO-14936-1] c 47 N83-32232
- CLOUDS (METEOROLOGY)**  
Rocket borne instrument to measure electric fields inside electrified clouds  
[NASA-CASE-KSC-10730-1] c 14 N73-32318  
Electric field measuring and display system --- for cloud formations  
[NASA-CASE-KSC-10731-1] c 33 N74-27862
- CLUTCHES**  
Directional gear ratio transmissions  
[NASA-CASE-LAR-12644-1] c 37 N84-28084  
Non-backdrivable free wheeling coupling  
[NASA-CASE-MSC-20475-1] c 37 N87-17037  
Rotary stepping device with memory metal actuator  
[NASA-CASE-NPO-15482-1] c 37 N87-23970
- CLUTTER**  
Clutter free synthetic aperture radar correlator  
[NASA-CASE-NPO-14035-1] c 32 N83-19968  
Method and apparatus for measuring distance  
[NASA-CASE-MSC-20912-1] c 32 N88-26568  
Motion detection, novelty filtering, and target tracking using an interferometric technique with a GaAs phase conjugate mirror  
[NASA-CASE-NPO-17784-1-CU] c 74 N91-13998
- CMOS**  
Complementary DMOS-VMOS integrated circuit structure  
[NASA-CASE-GSC-12190-1] c 33 N79-12321
- COAGULATION**  
Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14489-1] c 37 N91-27562
- COAL**  
Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c 43 N79-25443  
Thickness measurement system  
[NASA-CASE-MFS-23721-1] c 31 N79-28370  
Coal-rock interface detector  
[NASA-CASE-MFS-23725-1] c 43 N79-31706  
Coal-shale interface detection system  
[NASA-CASE-MFS-23720-2] c 43 N80-14423  
Coal-shale interface detector  
[NASA-CASE-MFS-23720-1] c 43 N80-23711  
Coal desulfurization --- using iron pentacarbonyl  
[NASA-CASE-NPO-14272-1] c 25 N81-33246  
Coal desulfurization by aqueous chlorination  
[NASA-CASE-NPO-14902-1] c 25 N82-29371  
Hydrodesulfurization of chlorinated coal  
[NASA-CASE-NPO-15304-1] c 25 N83-31743  
Supercritical multicomponent solvent coal extraction  
[NASA-CASE-NPO-15767-1] c 23 N84-16255  
Supercritical solvent coal extraction  
[NASA-CASE-NPO-15210-1] c 25 N84-22709  
Longwall shearer tracking system  
[NASA-CASE-MFS-25717-1] c 35 N84-33768  
Shuttle car loading system  
[NASA-CASE-NPO-15949-1] c 85 N85-34722  
Fluidized bed desulfurization  
[NASA-CASE-NPO-15924-1] c 25 N85-35253
- COAL GASIFICATION**  
Solar heated fluidized bed gasification system  
[NASA-CASE-NPO-15071-1] c 44 N82-16475  
Pressure letdown method and device for coal conversion systems  
[NASA-CASE-NPO-15100-1] c 44 N84-14583  
Micronized coal burner facility  
[NASA-CASE-LEW-13426-1] c 25 N84-16276  
Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-2] c 28 N91-14495
- COAL LIQUEFACTION**  
Surfactant-assisted liquefaction of particulate carbonaceous substances  
[NASA-CASE-NPO-13904-1] c 25 N79-11152
- COAL UTILIZATION**  
Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c 44 N78-31527  
Continuous coal processing method  
[NASA-CASE-NPO-13758-2] c 31 N81-15154  
Fluidized bed coal combustion reactor  
[NASA-CASE-NPO-14273-1] c 25 N82-11144
- COATING**  
Method of coating circuit paths on printed circuit boards with solder Patent  
[NASA-CASE-XMF-01599] c 09 N71-20705  
Process for applying black coating to metals Patent  
[NASA-CASE-XLA-06199] c 15 N71-24875  
Method of forming metal hydride films  
[NASA-CASE-LEW-12083-1] c 37 N78-13436  
Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c 44 N78-19599  
Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
[NASA-CASE-ARC-11057-1] c 27 N78-31233  
Process for producing a well-adhered durable optical coating on an optical plastic substrate --- abrasion resistant polymethyl methacrylate lenses  
[NASA-CASE-ARC-11039-1] c 74 N78-32854
- Contactless pellet fabrication  
[NASA-CASE-NPO-15592-1] c 71 N84-16940  
Corrosion resistant coating  
[NASA-CASE-NPO-15928-1] c 26 N85-29005  
Textured carbon surfaces on copper by sputtering  
[NASA-CASE-LEW-14130-1] c 31 N86-32587  
Novel polyimide molding powder, coating, adhesive, and matrix resin  
[NASA-CASE-LAR-14163-1] c 27 N91-13559  
Improved sprayable lightweight ablative coating  
[NASA-CASE-MFS-28372-1] c 27 N91-24426  
Ceramic coatings on smooth surfaces  
[NASA-CASE-LEW-15164-1] c 27 N91-25298
- COATINGS**  
Bonded solid lubricant coating Patent  
[NASA-CASE-XMS-00259] c 18 N70-36400  
High contrast cathode ray tube  
[NASA-CASE-ERC-10468] c 09 N72-20206  
Durable antistatic coating for polymethylmethacrylate  
[NASA-CASE-NPO-13867-1] c 27 N78-14164  
Edge coating of flat wires  
[NASA-CASE-XMF-05757-1] c 31 N79-21227  
Advanced inorganic separators for alkaline batteries and method of making the same  
[NASA-CASE-LEW-13171-2] c 44 N83-32176  
Diamondlike flake composites  
[NASA-CASE-LEW-13837-2] c 24 N84-22695  
Diamondlike flakes  
[NASA-CASE-LEW-13837-2] c 24 N85-21267  
Method for laminar boundary layer transition visualization in flight  
[NASA-CASE-LAR-13554-1] c 02 N89-12551  
Process for making a noble metal on tin oxide catalyst  
[NASA-CASE-LAR-13741-1-SB] c 25 N90-20180  
Method of inseting predesigned disbond areas into composite laminates  
[NASA-CASE-LAR-13225-1] c 24 N90-25197  
Process for bonding elastomers to metal  
[NASA-CASE-LAR-13645-1] c 27 N91-28424
- COAXIAL CABLES**  
Transmission line thermal short Patent  
[NASA-CASE-XNP-09775] c 09 N71-20445  
Coaxial cable connector Patent  
[NASA-CASE-NPO-04732] c 09 N71-20851  
Transducer circuit and catheter transducer Patent  
[NASA-CASE-ARC-10132-1] c 09 N71-24597  
Collapsible antenna boom and transmission line Patent  
[NASA-CASE-MFS-20068] c 07 N71-27191  
Vibration isolation system using compression springs  
[NASA-CASE-NPO-11012] c 15 N72-11391  
Hermetically sealed semiconductor  
[NASA-CASE-GSC-10791-1] c 15 N73-14469  
System for stabilizing cable phase delay utilizing a coaxial cable under pressure  
[NASA-CASE-NPO-13138-1] c 33 N74-17927  
Refrigerated coaxial coupling --- for microwave equipment  
[NASA-CASE-NPO-13504-1] c 33 N75-30430  
High power RF coaxial switch  
[NASA-CASE-NPO-14229-1] c 33 N80-18285  
Coaxial cable connector  
[NASA-CASE-NPO-16764-1-CU] c 33 N88-14270
- COAXIAL PLASMA ACCELERATORS**  
Self-energized plasma compressor  
[NASA-CASE-MFS-22145-2] c 75 N76-17951
- COBALT**  
Process for improving mechanical properties of epoxy resins by addition of cobalt ions  
[NASA-CASE-LAR-13230-1] c 24 N84-34571  
Metal (2,4,4',4' phthalocyanine tetraamines as curing agents for epoxy resins  
[NASA-CASE-ARC-11424-1] c 27 N85-34281
- COBALT ALLOYS**  
High temperature cobalt-base alloy Patent  
[NASA-CASE-XLE-00726] c 17 N71-15644  
High temperature cobalt-base alloy Patent  
[NASA-CASE-XLE-02991] c 17 N71-16025  
High temperature ferromagnetic cobalt-base alloy Patent  
[NASA-CASE-XLE-03629] c 17 N71-23248  
Cobalt-base alloy  
[NASA-CASE-LEW-10436-1] c 17 N73-32415
- COBALT COMPOUNDS**  
Fabrication of nanometer single crystal metallic CoSi<sub>2</sub> structures on Si  
[NASA-CASE-NPO-17736-1-CU] c 76 N90-17455
- COBALT OXIDES**  
High contrast cathode ray tube  
[NASA-CASE-ERC-10468] c 09 N72-20206
- COCKPIT SIMULATORS**  
Controlled visibility device for an aircraft Patent  
[NASA-CASE-XFR-04147] c 11 N71-10748
- COCKPITS**  
Aircraft canopy lock  
[NASA-CASE-FRC-11065-1] c 05 N83-19737

## CODERS

Encoder/decoder system for a rapidly synchronizable binary code Patent  
[NASA-CASE-NPO-10342] c 10 N71-33407

Modular encoder  
[NASA-CASE-NPO-10629] c 08 N72-18184

Method and apparatus for decoding compatible convolutional codes  
[NASA-CASE-MSC-14070-1] c 32 N74-32598

Digital plus analog output encoder  
[NASA-CASE-GSC-12115-1] c 62 N76-31946

Twin-capacitive shaft angle encoder with analog output signal  
[NASA-CASE-ARC-10897-1] c 33 N77-31404

VLSI single-chip (255,223) Reed-Solomon encoder with interleaver  
[NASA-CASE-NPO-17280-1-CU] c 17 N90-21061

Electrostatically suspended rotor for angular encoder  
[NASA-CASE-MFS-28294-1] c 31 N91-14508

**CODING**

Error correcting method and apparatus Patent  
[NASA-CASE-XNP-02748] c 08 N71-22749

Rate data encoder  
[NASA-CASE-LAR-10128-1] c 08 N73-20217

Binary concatenated coding system  
[NASA-CASE-MSC-14082-1] c 60 N76-23850

Differential pulse code modulation  
[NASA-CASE-MSC-12506-1] c 32 N77-12239

Automatic multi-banking of memory for microprocessors  
[NASA-CASE-NPO-15295-1] c 60 N85-21992

Method for Viterbi decoding of large constraint length convolutional codes  
[NASA-CASE-NPO-17310-1-CU] c 17 N88-28946

Laser optical disk position encoder with active heads  
[NASA-CASE-GSC-13175-1] c 74 N91-14001

**COEFFICIENT OF FRICTION**

Static coefficient test method and apparatus  
[NASA-CASE-GSC-11893-1] c 35 N76-31489

Locking redundant link  
[NASA-CASE-LAR-11900-1] c 37 N79-14382

**COENZYMES**

Flavin coenzyme assay  
[NASA-CASE-GSC-10565-1] c 06 N72-25149

**COHERENT ELECTROMAGNETIC RADIATION**

Folded traveling wave maser structure Patent  
[NASA-CASE-XNP-05219] c 16 N71-15550

Focused image holography with extended sources Patent  
[NASA-CASE-ERC-10019] c 16 N71-15551

Off-axis coherently pumped laser  
[NASA-CASE-GSC-12592-1] c 36 N84-28065

**COHERENT LIGHT**

Hybrid holographic system using reflected and transmitted object beams simultaneously Patent  
[NASA-CASE-MFS-20074] c 16 N71-15565

Amplitude modulated laser transmitter Patent  
[NASA-CASE-XMS-04269] c 16 N71-22895

Device for measuring light scattering wherein the measuring beam is successively reflected between a pair of parallel reflectors Patent  
[NASA-CASE-XER-11203] c 14 N71-28994

**COHERENT RADIATION**

Laser communication system for controlling several functions at a location remote to the laser  
[NASA-CASE-LAR-10311-1] c 16 N73-16536

Monitoring atmospheric pollutants with a heterodyne radiometer transmitter-receiver  
[NASA-CASE-NPO-11919-1] c 35 N74-11284

Apparatus for scanning the surface of a cylindrical body  
[NASA-CASE-NPO-11861-1] c 36 N74-20009

Optically detonated explosive device  
[NASA-CASE-NPO-11743-1] c 28 N74-27425

Method and apparatus for generating coherent radiation in the ultra-violet region and above by use of distributed feedback  
[NASA-CASE-NPO-13346-1] c 36 N76-29575

Coherently pulsed laser source  
[NASA-CASE-NPO-15111-1] c 36 N82-29589

**COINCIDENCE CIRCUITS**

Frequency measurement by coincidence detection with standard frequency  
[NASA-CASE-MSC-14649-1] c 33 N76-16331

**COLD CATHODES**

Meteoroid detector  
[NASA-CASE-LAR-10483-1] c 14 N73-32327

**COLD GAS**

Annular arc accelerator shock tube  
[NASA-CASE-NPO-13528-1] c 09 N77-10071

**COLD WELDING**

Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c 37 N81-19455

**COLD WORKING**

Hydroforming techniques using epoxy molds Patent  
[NASA-CASE-XLE-05641-1] c 15 N71-26346

## COLLAPSE

Collapsible pistons  
[NASA-CASE-MSC-13789-1] c 11 N73-32152

## COLLECTION

Automatic liquid inventory collecting and dispensing unit  
[NASA-CASE-LAR-11071-1] c 35 N75-19611

Absorbent product to absorb fluids --- for collection of human wastes  
[NASA-CASE-MSC-18223-1] c 24 N82-29362

Improved method and apparatus for waste collection and storage  
[NASA-CASE-MSC-21025-1] c 31 N87-25495

## COLLIMATION

Long range laser traversing system  
[NASA-CASE-GSC-11262-1] c 36 N74-21091

Optical alignment device  
[NASA-CASE-ARC-10932-1] c 74 N76-22993

Spatial filter for Q-switched lasers  
[NASA-CASE-LEW-12164-1] c 36 N77-32478

Dual acting slit control mechanism  
[NASA-CASE-LAR-11370-1] c 35 N80-28686

Method for shaping and aiming narrow beams --- sonar mapping and target identification  
[NASA-CASE-NPO-14632-1] c 32 N82-18443

Dual laser optical system and method for studying fluid flow  
[NASA-CASE-MFS-25315-1] c 36 N83-29680

Ion beam accelerator system  
[NASA-CASE-NPO-15547-1] c 72 N84-16959

Sonic levitation apparatus  
[NASA-CASE-MFS-25828-1] c 71 N84-28568

Laser schlieren crystal monitor  
[NASA-CASE-MFS-28060-1] c 76 N87-25862

Ion generator and ion application system  
[NASA-CASE-MSC-28122-1] c 72 N88-24253

## COLLIMATORS

X-ray reflection collimator adapted to focus X-radiation directly on a detector Patent  
[NASA-CASE-XHQ-04106] c 14 N70-40240

Collimator of multiple plates with axially aligned identical random arrays of apertures  
[NASA-CASE-MFS-20546-2] c 14 N73-30389

Multiplate focusing collimator --- for scanning small near radiation sources  
[NASA-CASE-MFS-20932-1] c 35 N75-19616

Method for shaping and aiming narrow beams --- sonar mapping and target identification  
[NASA-CASE-NPO-14632-1] c 32 N82-18443

Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c 74 N82-24072

Multiprism collimator  
[NASA-CASE-GSC-12608-1] c 74 N83-10900

Gamma ray collimator  
[NASA-CASE-SSC-00013-1] c 38 N91-32515

## COLLISION AVOIDANCE

Cooperative Doppler radar system Patent  
[NASA-CASE-LAR-10403] c 21 N71-11766

Satellite aided vehicle avoidance system Patent  
[NASA-CASE-ERC-10090] c 21 N71-24948

Stacked array of omnidirectional antennas  
[NASA-CASE-LAR-10545-1] c 09 N72-21244

Display research collision warning system  
[NASA-CASE-HQN-10703] c 21 N73-13643

Apparatus for aiding a pilot in avoiding a midair collision between aircraft  
[NASA-CASE-LAR-10717-1] c 21 N73-30641

Satellite aided vehicle avoidance system  
[NASA-CASE-ERC-10419-1] c 03 N75-30132

## COLLISIONS

Tool and process for miniature explosive joining of tubes  
[NASA-CASE-LAR-13662-1] c 37 N88-14359

## COLLOIDAL GENERATORS

Colloid propulsion method and apparatus Patent  
[NASA-CASE-XLE-00817] c 28 N70-33265

## COLLOIDAL PROPELLANTS

Colloid propulsion method and apparatus Patent  
[NASA-CASE-XLE-00817] c 28 N70-33265

Low viscosity magnetic fluid obtained by the colloidal suspension of magnetic particles Patent  
[NASA-CASE-XLE-01512] c 12 N70-40124

Annular slit colloid thruster Patent  
[NASA-CASE-GSC-10709-1] c 28 N71-25213

## COLLOIDS

The 2 deg/90 deg laboratory scattering photometer --- particulate refractivity in hydrosols  
[NASA-CASE-GSC-12088-1] c 74 N78-13874

## COLOR

Nondestructive spot test method for magnesium and magnesium alloys  
[NASA-CASE-LAR-10953-1] c 17 N73-27446

Spectrally balanced chromatic landing approach lighting system  
[NASA-CASE-ARC-10990-1] c 04 N82-16059

Method for laminar boundary layer transition visualization in flight  
[NASA-CASE-LAR-13554-1] c 02 N89-12551

Enhanced single layer multi-color or luminescent display with coactivators  
[NASA-CASE-LAR-14181-1] c 76 N91-21911

Single layer multi-color luminescent display  
[NASA-CASE-LAR-13616-1] c 74 N91-31950

## COLOR PHOTOGRAPHY

Method of recording a gas flow pattern Patent  
[NASA-CASE-XMF-01779] c 12 N71-20815

Method for retarding dye fading during archival storage of developed color photographic film --- inert atmosphere  
[NASA-CASE-MFS-23250-1] c 35 N82-11432

## COLOR TELEVISION

Color television systems using a single gun color cathode ray tube Patent  
[NASA-CASE-ERC-10098] c 09 N71-28618

Color television system  
[NASA-CASE-MSC-12146-1] c 07 N72-17109

Scan converting video tape recorder  
[NASA-CASE-NPO-10166-1] c 07 N73-22076

Scan converting video tape recorder  
[NASA-CASE-NPO-10166-2] c 35 N76-16391

System for producing chroma signals  
[NASA-CASE-MSC-14683-1] c 74 N77-18893

Full color hybrid display for aircraft simulators --- landing aids  
[NASA-CASE-ARC-10903-1] c 09 N78-18083

## COLOR VISION

Color perception tester  
[NASA-CASE-KSC-10278] c 05 N72-16015

## COLUMNS

Lightweight structural columns --- space erectable trusses  
[NASA-CASE-LAR-12095-1] c 31 N81-25258

## COLUMNS (PROCESS ENGINEERING)

Micropacked column for a chromatographic system  
[NASA-CASE-XNP-04816] c 06 N69-39936

## COLUMNS (SUPPORTS)

Telescoping columns --- parabolic antenna support  
[NASA-CASE-LAR-12195-1] c 31 N81-27324

## COMBINATORIAL ANALYSIS

Apparatus for computing square roots Patent  
[NASA-CASE-XGS-04768] c 08 N71-19437

## COMBINED CYCLE POWER GENERATION

Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-2] c 28 N91-14495

## COMBUSTION

Combustion detector  
[NASA-CASE-LAR-10739-1] c 14 N73-16484

A system for controlling the oxygen content of a gas produced by combustion  
[NASA-CASE-LAR-13257-1] c 25 N84-32447

## COMBUSTION CHAMBERS

Rocket chamber leak test fixture  
[NASA-CASE-XFR-09479] c 14 N69-27503

Rocket propellant injector Patent  
[NASA-CASE-XLE-00103] c 28 N70-33241

Formed metal ribbon wrap Patent  
[NASA-CASE-XLE-00164] c 15 N70-36411

Injector-valve device Patent  
[NASA-CASE-XLE-00303] c 15 N70-36535

Ignition system for monopropellant combustion devices Patent  
[NASA-CASE-XNP-00249] c 28 N70-38249

Method of making a regeneratively cooled combustion chamber Patent  
[NASA-CASE-XLE-00150] c 28 N70-41818

Control of transverse instability in rocket combustors Patent  
[NASA-CASE-XLE-04603] c 33 N71-21507

Combustion chamber Patent  
[NASA-CASE-XLE-04857] c 28 N71-23968

Rocket engine injector Patent  
[NASA-CASE-XLE-03157] c 28 N71-24736

Coaxial injector for reaction motors  
[NASA-CASE-NPO-11095] c 15 N72-25455

Swirl can primary combustor  
[NASA-CASE-LEW-11326-1] c 23 N73-30665

Method of electroforming a rocket chamber  
[NASA-CASE-LEW-11118-1] c 20 N74-32919

Controlled separation combustor --- airflow distribution in gas turbine engines  
[NASA-CASE-LEW-11593-1] c 20 N76-14190

Fuel combustor  
[NASA-CASE-LEW-12137-1] c 25 N78-10224

Direct heating surface combustor  
[NASA-CASE-LEW-11877-1] c 34 N78-27357

Combustor --- low nitrogen oxide formation  
[NASA-CASE-NPO-13958-1] c 25 N79-11151

Heat exchanger --- rocket combustion chambers and cooling systems  
[NASA-CASE-LEW-12252-1] c 34 N79-13288

- General purpose rocket furnace  
[NASA-CASE-MFS-23460-1] c 12 N79-26075
- Reduction of nitric oxide emissions from a combustor  
[NASA-CASE-ARC-10814-2] c 07 N80-26298
- Fluidized bed coal combustion reactor  
[NASA-CASE-NPO-14273-1] c 25 N82-11144
- Micronized coal burner facility  
[NASA-CASE-LEW-13426-1] c 25 N84-16276
- Heat pipes to reduce engine exhaust emissions  
[NASA-CASE-LEW-12590-1] c 37 N84-22958
- Combustor liner construction  
[NASA-CASE-LEW-14035-1] c 07 N84-24577
- A system for controlling the oxygen content of a gas produced by combustion  
[NASA-CASE-LAR-13257-1] c 25 N84-32447
- Diesel engine catalytic combustor system --- aircraft engines  
[NASA-CASE-LEW-12995-1] c 37 N84-33808
- Flow modifying device  
[NASA-CASE-LEW-13562-2] c 07 N85-35195
- Low loss injector for liquid propellant rocket engines  
[NASA-CASE-MFS-25989-1] c 20 N87-14420
- Steam cooled rich-burn combustor liner  
[NASA-CASE-LEW-13609-1] c 25 N90-11824
- High-pressure promoted combustion chamber  
[NASA-CASE-MSC-21470-1] c 09 N91-21157
- Method of injecting fluid propellants into a rocket combustion chamber  
[NASA-CASE-LEW-14846-2] c 20 N91-26200
- COMBUSTION CONTROL**  
Burning rate control of solid propellants Patent  
[NASA-CASE-XLE-03494] c 27 N71-21819
- COMBUSTION EFFICIENCY**  
Rocket engine injector Patent  
[NASA-CASE-XLE-00111] c 28 N70-38199
- Heat pipes to reduce engine exhaust emissions  
[NASA-CASE-LEW-12590-1] c 37 N84-22958
- COMBUSTION PHYSICS**  
Solid propellant rocket motor  
[NASA-CASE-NPO-11559] c 28 N73-24784
- Plasma igniter for internal combustion engine  
[NASA-CASE-NPO-13828-1] c 37 N79-11405
- COMBUSTION PRODUCTS**  
Separation nut Patent  
[NASA-CASE-XGS-01971] c 15 N71-15922
- Combustion products generating and metering device  
[NASA-CASE-GSC-11095-1] c 14 N72-10375
- System for minimizing internal combustion engine pollution emission  
[NASA-CASE-NPO-13402-1] c 37 N76-18457
- Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c 44 N78-31527
- Combustor --- low nitrogen oxide formation  
[NASA-CASE-NPO-13958-1] c 25 N79-11151
- A system for controlling the oxygen content of a gas produced by combustion  
[NASA-CASE-LAR-13257-1] c 25 N84-32447
- Device for quickly sensing the amount of O<sub>2</sub> in a combustion product gas  
[NASA-CASE-LAR-13816-1] c 35 N90-22025
- COMBUSTION STABILITY**  
Control of transverse instability in rocket combustors Patent  
[NASA-CASE-XLE-04603] c 33 N71-21507
- Low loss injector for liquid propellant rocket engines  
[NASA-CASE-MFS-25989-1] c 20 N87-14420
- COMET TAILS**  
Ion mass spectrometer  
[NASA-CASE-NPO-15423-1] c 35 N84-28016
- COMFORT**  
Ride quality meter  
[NASA-CASE-LAR-12882-1] c 35 N84-12445
- COMMAND AND CONTROL**  
Multiple rate digital command detection system with range clean-up capability  
[NASA-CASE-NPO-13753-1] c 32 N77-20289
- Common data buffer system --- communication with computational equipment utilized in spacecraft operations  
[NASA-CASE-KSC-11048-1] c 62 N81-24779
- COMMAND MODULES**  
Low onset rate energy absorber  
[NASA-CASE-MSC-12279] c 15 N72-17450
- COMMUNICATING**  
Communications link for computers  
[NASA-CASE-NPO-11161] c 08 N72-25207
- COMMUNICATION**  
Correlation function apparatus Patent  
[NASA-CASE-XNP-00746] c 07 N71-21476
- System for improving signal-to-noise ratio of a communication signal  
[NASA-CASE-MSC-12259-2] c 07 N72-33146
- COMMUNICATION CABLES**  
Method of making a molded connector Patent  
[NASA-CASE-XMF-03499] c 15 N71-15986
- Process for making RF shielded cable connector assemblies and the products formed thereby  
[NASA-CASE-GSC-11215-1] c 09 N73-28083
- Fiber distributed feedback laser  
[NASA-CASE-NPO-13531-1] c 36 N76-24553
- High-speed data link for moderate distances and noisy environments  
[NASA-CASE-NPO-14152-1] c 32 N80-18252
- High acceleration cable deployment system  
[NASA-CASE-ARC-11256-1] c 15 N82-24272
- Rotatable electric cable connecting system  
[NASA-CASE-GSC-12899-1] c 33 N86-20669
- COMMUNICATION EQUIPMENT**  
Elimination of frequency shift in a multiplex communication system Patent  
[NASA-CASE-XNP-01306] c 07 N71-20814
- Decoder system Patent  
[NASA-CASE-NPO-10118] c 07 N71-24741
- Data-aided carrier tracking loops  
[NASA-CASE-NPO-11282] c 10 N73-16205
- Doppler compensation by shifting transmitted object frequency within limits  
[NASA-CASE-GSC-10087-4] c 07 N73-20174
- Differential phase shift keyed communication system  
[NASA-CASE-MSC-14065-1] c 32 N74-26654
- Doppler-corrected differential detection system  
[NASA-CASE-NPO-18987-1-CU] c 32 N91-25316
- COMMUNICATION NETWORKS**  
Fault tolerant hypercube computer system architecture  
[NASA-CASE-NPO-16859-1-CU] c 60 N90-21527
- Distributed computing system with dual independent communications paths between computers and employing split tokens  
[NASA-CASE-NPO-17185-1-CU] c 62 N91-14772
- COMMUNICATION SATELLITES**  
Passive communication satellite Patent  
[NASA-CASE-XLA-00210] c 30 N70-40309
- Apparatus providing a directive field pattern and attitude sensing of a spin stabilized satellite Patent  
[NASA-CASE-XGS-02607] c 31 N71-23009
- Deep space monitor communication satellite system Patent  
[NASA-CASE-XAC-06029-1] c 31 N71-24813
- Satellite communication system Patent  
[NASA-CASE-XNP-02389] c 07 N71-28900
- Satellite aided vehicle avoidance system  
[NASA-CASE-ERC-10419-1] c 03 N75-30132
- Ultra stable frequency distribution system  
[NASA-CASE-NPO-13836-1] c 32 N78-15323
- COMMUTATION**  
High speed low level electrical stepping switch Patent  
[NASA-CASE-XAC-00060] c 09 N70-39915
- Elimination of current spikes in buck power converters  
[NASA-CASE-NPO-14505-1] c 33 N81-19393
- COMMUTATORS**  
Scanning aspect sensor employing an apertured disc and a commutator  
[NASA-CASE-XGS-08266] c 14 N69-27432
- Current steering commutator  
[NASA-CASE-NPO-10743] c 08 N72-21199
- COMPARATOR CIRCUITS**  
Digital frequency discriminator Patent  
[NASA-CASE-MFS-14322] c 08 N71-18692
- Pulsed differential comparator circuit Patent  
[NASA-CASE-XLE-03804] c 10 N71-19471
- Multi-cell battery protection system  
[NASA-CASE-LEW-12039-1] c 44 N78-14625
- Window comparator  
[NASA-CASE-FRC-10090-1] c 33 N78-18308
- COMPARATORS**  
Fluid flow meter with comparator reference means Patent  
[NASA-CASE-XGS-01331] c 14 N71-22996
- Comparator for the comparison of two binary numbers Patent  
[NASA-CASE-XNP-04819] c 08 N71-23295
- High stability buffered phase comparator  
[NASA-CASE-GSC-12645-1] c 33 N84-16454
- Neighborhood comparison operator  
[NASA-CASE-NPO-16464-1CU] c 60 N86-24224
- Comparator with noise suppression  
[NASA-CASE-LAR-13151-1] c 33 N87-21235
- Dual physiological rate measurement instrument  
[NASA-CASE-MSC-20078-3] c 52 N91-14709
- COMPARTMENTS**  
Protein crystal growth tray assembly  
[NASA-CASE-MFS-28507-1] c 76 N91-23933
- Double face sealing device  
[NASA-CASE-MFS-28521-1] c 37 N91-26542
- COMPATIBILITY**  
Imide/arylene ether copolymers  
[NASA-CASE-LAR-14159-1-CU] c 27 N90-26953
- COMPENSATORS**  
Star image motion compensator  
[NASA-CASE-LAR-10523-1] c 14 N72-22444
- Thermal compensator for closed-cycle helium refrigerator --- assuring constant temperature for an infrared laser diode  
[NASA-CASE-GSC-12168-1] c 31 N79-17029
- Apparatus for and method of compensating dynamic unbalance  
[NASA-CASE-GSC-12550-1] c 37 N84-28082
- Compensation for primary reflector wavefront error  
[NASA-CASE-NPO-16869-1CU] c 74 N86-33138
- COMPLEX COMPOUNDS**  
Synthesis of polyformals  
[NASA-CASE-ARC-11244-1] c 23 N82-16174
- COMPLEX SYSTEMS**  
Feedback controlled optics with wavefront compensation  
[NASA-CASE-NPO-18194-1-CU] c 74 N91-32924
- COMPONENT RELIABILITY**  
Acoustic guide for noise-transmission testing of aircraft  
[NASA-CASE-LAR-13111-1-CU] c 71 N87-21652
- Dual cathode system for electron beam instruments  
[NASA-CASE-NPO-16878-1-CU] c 35 N90-20351
- COMPOSITE MATERIALS**  
Reinforced metallic composites Patent  
[NASA-CASE-XLE-02428] c 17 N70-33288
- Method of making fiber reinforced metallic composites Patent  
[NASA-CASE-XLE-00231] c 17 N70-38198
- Reinforced metallic composites Patent  
[NASA-CASE-XLE-00228] c 17 N70-38490
- Unfired-ceramic flame-resistant insulation and method of making the same Patent  
[NASA-CASE-XMF-01030] c 18 N70-41583
- Process of casting heavy slips Patent  
[NASA-CASE-XLE-00106] c 15 N71-16076
- Lightweight refractory insulation and method of preparing the same Patent  
[NASA-CASE-XMF-05279] c 18 N71-16124
- Flexible composite membrane Patent  
[NASA-CASE-XNP-08837] c 18 N71-16210
- Low temperature flexure fatigue cryostat Patent  
[NASA-CASE-XMF-02964] c 14 N71-17659
- Method for producing fiber reinforced metallic composites Patent  
[NASA-CASE-XLE-03925] c 18 N71-22894
- Solar cell matrix  
[NASA-CASE-NPO-11190] c 03 N71-34044
- Method of forming shapes from planar sheets of thermosetting materials  
[NASA-CASE-NPO-11036] c 15 N72-24522
- Method of making fiber composites  
[NASA-CASE-LEW-10424-2-2] c 18 N72-25539
- Thermal compensating structural member  
[NASA-CASE-MFS-20433] c 15 N72-28496
- Bearing material --- composite material with low friction surface for rolling or sliding contact  
[NASA-CASE-LEW-11930-1] c 24 N76-22309
- Fluid seal for rotating shafts  
[NASA-CASE-LEW-11676-1] c 37 N76-22541
- Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[NASA-CASE-MSC-14331-1] c 27 N76-24405
- Method of growing composites of the type exhibiting the Soret effect --- improved structure of eutectic alloy crystals  
[NASA-CASE-MFS-22926-1] c 24 N77-27187
- Hybrid composite laminate structures  
[NASA-CASE-LEW-12118-1] c 24 N77-27188
- Honeycomb-laminate composite structure  
[NASA-CASE-ARC-10913-1] c 24 N78-15180
- High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
[NASA-CASE-NPO-13690-1] c 27 N78-19302
- Molded composite pyrogen igniter for rocket motors --- solid propellant ignition  
[NASA-CASE-LAR-12018-1] c 20 N78-24275
- Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-1] c 28 N78-24365
- Method of making bearing materials --- self-lubricating, oxidation resistant composites for high temperature applications  
[NASA-CASE-LEW-11930-4] c 24 N79-17916
- Composite seal for turbomachinery --- backings for turbine engine shrouds  
[NASA-CASE-LEW-12131-1] c 37 N79-18318
- Crystalline polyimides --- reinforcing fibers for high temperature composites and adhesives as well as flame retardation  
[NASA-CASE-LAR-12099-1] c 27 N80-16158
- Cork-resin ablative insulation for complex surfaces and method for applying the same  
[NASA-CASE-MFS-23626-1] c 24 N80-26388
- Method of making bearing material  
[NASA-CASE-LEW-11930-3] c 24 N80-33482

- Tackifier for addition polyimides containing monoethylphthalate  
[NASA-CASE-LAR-12642-1] c 27 N81-29229
- Elastomer coated filler and composites thereof comprising at least 60% by weight of a hydrated filler and an elastomer containing an acid substituent  
[NASA-CASE-NPO-14857-1] c 27 N83-19900
- Piezoelectric composite materials  
[NASA-CASE-LEW-12582-1] c 76 N83-34796
- Pre-stressed thermal protection systems  
[NASA-CASE-MSC-20254-1] c 16 N84-22601
- Diamondlike flake composites  
[NASA-CASE-LEW-13837-1] c 24 N84-22695
- Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-3] c 27 N85-21350
- Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-4] c 27 N85-21351
- Process for improving moisture resistance of epoxy resins by addition of chromium ions  
[NASA-CASE-LAR-13226-1] c 27 N85-34282
- Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-1] c 24 N86-19380
- Carbide-fluoride-silver self-lubricating composite  
[NASA-CASE-LEW-14196-2] c 37 N87-25585
- Cryogenic regenerator including saran-carbon heat conduction matrix  
[NASA-CASE-NPO-17291-1-CU] c 34 N88-23946
- High temperature insulation barrier composite  
[NASA-CASE-MFS-29241-1] c 24 N90-23480
- New core design for use with precision composite reflectors  
[NASA-CASE-NPO-17858-1-CU] c 24 N90-26880
- Heat transfer device and method of making the same  
[NASA-CASE-LEW-14162-1] c 34 N91-13668
- Graphite fluoride fiber polymer composite material  
[NASA-CASE-LEW-14472-1] c 24 N91-15320
- Metallic threaded composite fastener  
[NASA-CASE-MSC-21580-1] c 37 N91-23491
- Preparing composite materials from matrices of processable aromatic polyimide thermoplastic blends  
[NASA-CASE-LAR-14107-1] c 24 N91-25200
- Heat transfer device  
[NASA-CASE-LEW-14162-2] c 24 N91-25201
- COMPOSITE PROPELLANTS**
- Ammonium perchlorate composite propellant containing an organic transitional metal chelate catalytic additive Patent  
[NASA-CASE-LAR-10173-1] c 27 N71-14090
- Silicone containing solid propellant  
[NASA-CASE-NPO-14477-1] c 28 N80-28536
- Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c 28 N81-15119
- COMPOSITE STRUCTURES**
- Inflatable honeycomb Patent  
[NASA-CASE-XLA-00204] c 32 N70-36536
- Composite powerplant and shroud therefor Patent  
[NASA-CASE-XLA-01043] c 28 N71-10780
- Bonding method in the manufacture of continuous regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c 24 N75-30260
- Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c 24 N77-19170
- Composite sandwich lattice structure  
[NASA-CASE-LAR-11898-1] c 24 N78-10214
- Method of making a composite sandwich lattice structure  
[NASA-CASE-LAR-11898-2] c 24 N78-17149
- Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety  
[NASA-CASE-ARC-11040-2] c 24 N78-27184
- Aluminium or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-3] c 44 N80-16452
- Lightweight structural columns --- space erectable trusses  
[NASA-CASE-LAR-12095-1] c 31 N81-25258
- Optimized bolted joint  
[NASA-CASE-LAR-13250-1] c 37 N86-27630
- Light weight fire resistant graphite composites  
[US-PATENT-4,598,007] c 24 N86-28131
- Ceramic honeycomb structures and the method thereof  
[NASA-CASE-ARC-11652-1] c 27 N87-23737
- Composite piston  
[NASA-CASE-LAR-13435-1] c 37 N88-23981
- Seamless metal-clad fiber-reinforced organic matrix composite structures and process for their manufacture  
[NASA-CASE-LAR-13562-1] c 24 N90-25196
- Method of inseting predesigned disbond areas into composite laminates  
[NASA-CASE-LAR-13225-1] c 24 N90-25197
- Process for HIP canning of composites  
[NASA-CASE-LEW-14990-1-CU] c 24 N91-17145
- Process for the manufacture of seamless metal-clad fiber-reinforced organic matrix composite structures  
[NASA-CASE-LAR-13562-2] c 24 N91-25199
- COMPOSITION (PROPERTY)**
- Moving particle composition analyzer  
[NASA-CASE-GSC-11889-1] c 35 N76-16393
- COMPRESSED AIR**
- Valve actuator Patent  
[NASA-CASE-XHO-01208] c 15 N70-35409
- COMPRESSIBILITY**
- Nozzle extraction process and handlemeter for measuring handle  
[NASA-CASE-LAR-12147-1] c 31 N79-11246
- Compression pylon  
[NASA-CASE-LAR-13777-1] c 05 N90-20078
- Preloaded latching device  
[NASA-CASE-MSC-21730-1] c 37 N91-23493
- COMPRESSIBLE FLUIDS**
- Apparatus having coaxial capacitor structure for measuring fluid density Patent  
[NASA-CASE-XLE-00143] c 14 N70-36618
- Apparatus for tensile testing Patent  
[NASA-CASE-XKS-06250] c 14 N71-15600
- COMPRESSING**
- Refrigeration apparatus Patent  
[NASA-CASE-XNP-08877] c 15 N71-23025
- Method for compression molding of thermosetting plastics utilizing a temperature gradient across the plastic to cure the article  
[NASA-CASE-LAR-10489-1] c 31 N74-18124
- Dynamic range compression/expansion of light beams by photorefractive crystals  
[NASA-CASE-NPO-17140-1-CU] c 74 N89-14077
- Mechanical end joint system for connecting structural column elements  
[NASA-CASE-LAR-14465-1] c 37 N91-14614
- Method of fabricating composite structures  
[NASA-CASE-MFS-28390-1] c 24 N91-15333
- Preloaded latching device  
[NASA-CASE-MSC-21730-1] c 37 N91-23493
- COMPRESSION LOADS**
- Pressure transducer  
[NASA-CASE-NPO-10832] c 14 N72-21405
- Solid medium thermal engine  
[NASA-CASE-ARC-10461-1] c 44 N74-33379
- Locking redundant link  
[NASA-CASE-LAR-11900-1] c 37 N79-14382
- Fixture for environmental exposure of structural materials under compression load  
[NASA-CASE-LAR-12602-1] c 39 N83-32081
- Deployable M-braced truss structure  
[NASA-CASE-LAR-13081-1] c 37 N86-32737
- Metallic threaded composite fastener  
[NASA-CASE-MSC-21580-1] c 37 N91-23491
- COMPRESSION RATIO**
- Automatic compression adjusting mechanism for internal combustion engines  
[NASA-CASE-MSC-18807-1] c 37 N83-36483
- COMPRESSION TESTS**
- Compression test assembly  
[NASA-CASE-LAR-10440-1] c 14 N73-32323
- Anti-buckling fatigue test assembly --- for subjecting metal specimen to tensile and compressive loads at constant temperature  
[NASA-CASE-LAR-10426-1] c 09 N74-19528
- Compression test apparatus  
[NASA-CASE-MSC-18723-1] c 35 N83-21312
- Bearing-bypass material system test  
[NASA-CASE-LAR-13458-1] c 35 N88-23967
- COMPRESSIVE STRENGTH**
- Truss-core corrugation for compressive loads  
[NASA-CASE-LAR-13438-1] c 31 N89-12786
- COMPRESSOR BLADES**
- Welding blades to rotors  
[NASA-CASE-LEW-10533-1] c 15 N73-28515
- Control means for a gas turbine engine  
[NASA-CASE-LEW-14586-1] c 07 N83-31603
- COMPRESSOR ROTORS**
- Active clearance control system for a turbomachine  
[NASA-CASE-LEW-12938-1] c 07 N82-32366
- COMPRESSORS**
- Thermal pump-compressor for space use Patent  
[NASA-CASE-XLA-00377] c 33 N71-17610
- Self-energized plasma compressor  
[NASA-CASE-MFS-22145-2] c 75 N76-17951
- Gas compression apparatus  
[NASA-CASE-MSC-14757-1] c 35 N78-10428
- Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-2] c 37 N80-26658
- Cycling Joule Thomson refrigerator  
[NASA-CASE-NPO-15251-1] c 31 N83-31897
- Magnetically actuated compressor  
[NASA-CASE-GSC-12799-1] c 31 N85-21404
- Oxygen chemisorption cryogenic refrigerator  
[NASA-CASE-NPO-16734-1-CU] c 31 N88-14223
- COMPUTATION**
- Apparatus for computing square roots Patent  
[NASA-CASE-XGS-04768] c 08 N71-19437
- Ruler for making navigational computations  
[NASA-CASE-XNP-01458] c 04 N78-17031
- COMPUTATIONAL GRIDS**
- Two dimensional vernier  
[NASA-CASE-MSC-21700-1] c 35 N91-23462
- COMPUTER ANIMATION**
- Generation of animation sequences of three dimensional models  
[NASA-CASE-MSC-21379-1-SB] c 61 N90-27340
- COMPUTER ASSISTED INSTRUCTION**
- System and method for a general purpose architecture for intelligent computer-aided training  
[NASA-CASE-MSC-21381-1] c 63 N91-13944
- COMPUTER COMPONENTS**
- Counter and shift register Patent  
[NASA-CASE-XNP-01753] c 08 N71-22897
- Binary to binary coded decimal converter  
[NASA-CASE-GSC-12044-1] c 60 N78-17691
- Computer circuit card puller  
[NASA-CASE-FRC-11042-1] c 60 N82-24839
- Control means for a solid state crossbar switch  
[NASA-CASE-NPO-15066-1] c 33 N82-29538
- Neighborhood comparison operator  
[NASA-CASE-NPO-16464-1CU] c 60 N86-24224
- Real time pipelined system for forming the sum of products in the processing of video data  
[NASA-CASE-NPO-16462-1-CU] c 60 N88-24169
- COMPUTER DESIGN**
- Two-dimensional radiant energy array computers and computing devices  
[NASA-CASE-GSC-11839-1] c 60 N77-14751
- Massively parallel processor computer  
[NASA-CASE-GSC-12223-1] c 60 N83-25378
- Distributed multipoint memory architecture  
[NASA-CASE-NPO-15342-1] c 60 N83-32342
- Automatic multi-banking of memory for microprocessors  
[NASA-CASE-NPO-15295-1] c 60 N85-21992
- COMPUTER GRAPHICS**
- System for quantizing graphic displays  
[NASA-CASE-NPO-10745] c 08 N72-22164
- Generation of animation sequences of three dimensional models  
[NASA-CASE-MSC-21379-1-SB] c 61 N90-27340
- Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13854-1-CU] c 04 N91-31120
- COMPUTER INFORMATION SECURITY**
- Computer access security code system  
[NASA-CASE-NPO-17525-1-CU] c 60 N90-25583
- COMPUTER NETWORKS**
- High-speed data link for moderate distances and noisy environments  
[NASA-CASE-NPO-14152-1] c 32 N80-18252
- Common data buffer system --- communication with computational equipment utilized in spacecraft operations  
[NASA-CASE-KSC-11048-1] c 62 N81-24779
- Multicomputer communication system  
[NASA-CASE-NPO-15433-1] c 32 N85-21428
- Network of dedicated processors for finding lowest-cost map path  
[NASA-CASE-NPO-17716-1-CU] c 62 N90-10608
- Distributed computing system with dual independent communications paths between computers and employing split tokens  
[NASA-CASE-NPO-17185-1-CU] c 62 N91-14772
- Dynamic resource allocation scheme for distributed heterogeneous computer systems  
[NASA-CASE-NPO-17197-1-CU] c 62 N91-25693
- COMPUTER PROGRAMMING**
- Minimal logic block encoder Patent  
[NASA-CASE-NPO-10595] c 10 N71-25917
- Priority interrupt system --- comprised of four registers  
[NASA-CASE-NPO-13067-1] c 60 N76-18800
- Bus programmable slave module  
[NASA-CASE-MSC-21387-1] c 61 N90-16411
- Analog hardware for delta-backpropagation neural networks  
[NASA-CASE-NPO-17564-1-CU] c 32 N90-16974
- COMPUTER PROGRAMS**
- Self-testing and repairing computer Patent  
[NASA-CASE-NPO-10567] c 08 N71-24633
- Program for computer aided reliability estimation  
[NASA-CASE-NPO-13086-1] c 15 N73-12495
- Numerical computer peripheral interactive device with manual controls  
[NASA-CASE-NPO-11497] c 08 N73-25206
- Local area network with fault-checking, priorities, and redundant backup  
[NASA-CASE-NPO-16949-1-CU] c 62 N90-19776

- Programmable remapper for image processing  
[NASA-CASE-MSC-21350-1] c 60 N91-23724
- COMPUTER STORAGE DEVICES**
- Magnetic matrix memory system Patent  
[NASA-CASE-XMF-05835] c 08 N71-12504
- Binary sequence detector Patent  
[NASA-CASE-XNP-05415] c 08 N71-12505
- Pulse-type magnetic core memory element circuit with blocking oscillator feedback Patent  
[NASA-CASE-XGS-03303] c 08 N71-18595
- Drive circuit utilizing two cores Patent  
[NASA-CASE-XNP-01318] c 10 N71-23033
- Programmable telemetry system Patent  
[NASA-CASE-GSC-10131-1] c 07 N71-24624
- Serial digital decoder Patent  
[NASA-CASE-NPO-10150] c 08 N71-24650
- Digital memory in which the driving of each word location is controlled by a switch core Patent  
[NASA-CASE-XNP-01466] c 10 N71-26434
- Redundant memory organization Patent  
[NASA-CASE-GSC-10564] c 10 N71-29135
- Semiconductor-ferroelectric memory device  
[NASA-CASE-ERC-10307] c 08 N72-21198
- Shared memory for a fault-tolerant computer  
[NASA-CASE-NPO-13139-1] c 60 N76-21914
- Distributed multiport memory architecture  
[NASA-CASE-NPO-15342-1] c 60 N83-32342
- Method of and apparatus for generating an interspersal point in a data stream having an even number of data points  
[NASA-CASE-MFS-25319-1] c 60 N85-33701
- High speed magneto-resistive random access memory  
[NASA-CASE-NPO-17954-1-CU] c 60 N90-26519
- Asymmetric soft-error resistant memory  
[NASA-CASE-NPO-17394-1-CU] c 60 N91-31810
- COMPUTER SYSTEMS DESIGN**
- Adaptive voting computer system  
[NASA-CASE-MSC-13932-1] c 62 N74-14920
- Computer interface system  
[NASA-CASE-NPO-13428-1] c 60 N77-12721
- Local area network with fault-checking, priorities, and redundant backup  
[NASA-CASE-NPO-16949-1-CU] c 62 N90-19776
- Adaptive data acquisition multiplexing system and method  
[NASA-CASE-MSC-21170-1] c 17 N91-14371
- Distributed computing system with dual independent communications paths between computers and employing split tokens  
[NASA-CASE-NPO-17185-1-CU] c 62 N91-14772
- Method and apparatus for positioning a robotic end effector  
[NASA-CASE-MSC-21476-1] c 37 N91-21542
- Highly parallel computer architecture for robotic computation  
[NASA-CASE-NPO-17632-1-CU] c 60 N91-32805
- COMPUTER TECHNIQUES**
- Automated system for identifying traces of organic chemical compounds in aqueous solutions  
[NASA-CASE-NPO-13063-1] c 25 N76-18245
- Apparatus for determining thermophysical properties of test specimens  
[NASA-CASE-LAR-11883-1] c 09 N77-27131
- Computerized system for translating a torch head  
[NASA-CASE-MFS-23620-1] c 37 N79-10421
- Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c 34 N81-26402
- Method and apparatus for transfer function simulator for testing complex systems  
[NASA-CASE-NPO-15696-1] c 33 N85-34333
- Auto covariance computer  
[NASA-CASE-LAR-12968-1] c 60 N86-21154
- System and method for a general purpose architecture for intelligent computer-aided training  
[NASA-CASE-MSC-21381-1] c 63 N91-13944
- Remote object configuration/orientation determination  
[NASA-CASE-NPO-17436-1-CU] c 35 N91-15512
- COMPUTER VISION**
- Optically controlled welding system  
[NASA-CASE-MFS-29291-1] c 37 N89-12868
- COMPUTERIZED SIMULATION**
- Integrated time shared instrumentation display Patent  
[NASA-CASE-XLA-01952] c 08 N71-12507
- Microcomputerized electric field meter diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c 35 N78-28411
- Simulator method and apparatus for practicing the mating of an observer-controlled object with a target  
[NASA-CASE-MFS-23052-2] c 74 N79-13855
- Method and apparatus for transfer function simulator for testing complex systems  
[NASA-CASE-NPO-15696-1] c 33 N85-34333
- Real-time simulation clock  
[NASA-CASE-LAR-14056-1] c 35 N90-23713
- Special purpose parallel computer architecture for real-time control and simulation in robotic applications  
[NASA-CASE-NPO-17629-1-CU] c 60 N90-27268
- Discrete event simulation tool for analysis of qualitative models of continuous processing systems  
[NASA-CASE-MSC-21465-1] c 61 N91-14741
- COMPUTERS**
- Telemetry word forming unit  
[NASA-CASE-XNP-09225] c 09 N69-24333
- Data compression processor Patent  
[NASA-CASE-NPO-10068] c 08 N71-19288
- Communications link for computers  
[NASA-CASE-NPO-11161] c 08 N72-25207
- Digital interface for bi-directional communication between a computer and a peripheral device  
[NASA-CASE-MSC-20258-1] c 60 N84-28492
- Ranging system which compares an object reflected component of a light beam to a reference component of the light beam  
[NASA-CASE-NPO-15865-1] c 74 N85-34629
- Auto covariance computer  
[NASA-CASE-LAR-12968-1] c 60 N86-21154
- Bus programmable slave module  
[NASA-CASE-MSC-21387-1] c 61 N90-16411
- Self-checking on-line testable static RAM  
[NASA-CASE-NPO-17939-1-CU] c 60 N90-26518
- CONCAVITY**
- Concave grating spectrometer Patent  
[NASA-CASE-XGS-01036] c 14 N70-40003
- CONCENTRATORS**
- Device for directionally controlling electromagnetic radiation Patent  
[NASA-CASE-XLE-01716] c 09 N70-40234
- Thermostatically controlled non-tracking type solar energy concentrator  
[NASA-CASE-NPO-13497-1] c 44 N76-14602
- Three-dimensional tracking solar energy concentrator and method for making same  
[NASA-CASE-NPO-13736-1] c 44 N77-32583
- Non-tracking solar energy collector system  
[NASA-CASE-NPO-13817-1] c 44 N79-11471
- Solar cell module  
[NASA-CASE-NPO-14467-1] c 44 N79-31753
- Solar concentrator  
[NASA-CASE-MFS-23727-1] c 44 N80-14473
- Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c 44 N81-17518
- Nebulization reflux concentrator  
[NASA-CASE-LAR-13254-1CU] c 35 N86-29174
- CONCENTRIC CYLINDERS**
- Flow resistivity instrument  
[NASA-CASE-LAR-13053-1] c 43 N83-29783
- CONCENTRIC SPHERES**
- Method and apparatus for producing concentric hollow spheres --- inertial confinement fusion targets  
[NASA-CASE-NPO-14596-1] c 31 N81-33319
- Method and apparatus for producing gas-filled hollow spheres --- target pellets for inertial confinement fusion  
[NASA-CASE-NPO-14596-3] c 31 N83-31896
- CONCURRENT PROCESSING**
- Distributed computing system with dual independent communications paths between computers and employing split tokens  
[NASA-CASE-NPO-17185-1-CU] c 62 N91-14772
- CONDENSATES**
- Apparatus for testing polymeric materials Patent  
[NASA-CASE-XNP-09699] c 06 N71-24607
- Condensate removal device for heat exchanger  
[NASA-CASE-MSC-14143-1] c 77 N75-20139
- Method of evaporation  
[NASA-CASE-NPO-15609-2] c 25 N88-23846
- CONDENSERS (LIQUEFIERS)**
- Condenser - Separator  
[NASA-CASE-XLA-08645] c 15 N69-21465
- Condensate removal device for heat exchanger  
[NASA-CASE-MSC-14143-1] c 77 N75-20139
- CONDENSING**
- Preparation of heterocyclic block copolymer omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c 27 N79-22300
- CONDUCTING FLUIDS**
- Multiducted electromagnetic pump Patent  
[NASA-CASE-NPO-10755] c 15 N71-27084
- Internally supported flexible duct joint --- device for conducting fluids in high pressure systems  
[NASA-CASE-MFS-19193-1] c 37 N75-19686
- CONDUCTION ELECTRONS**
- Alternating gradient photodetector  
[NASA-CASE-NPO-17235-1-CU] c 35 N90-21358
- CONDUCTIVE HEAT TRANSFER**
- Enthalpy and stagnation temperature determination of a high temperature laminar flow gas stream Patent  
[NASA-CASE-XLE-00266] c 14 N70-34156
- Space suit heat exchanger Patent  
[NASA-CASE-XMS-09571] c 05 N71-19439
- Compact pulsed laser having improved heat conduction  
[NASA-CASE-NPO-13147-1] c 36 N77-25502
- Automatic thermal switch  
[NASA-CASE-GSC-12415-1] c 33 N82-24419
- Acoustic transducer apparatus with reduced thermal conduction  
[NASA-CASE-NPO-17620-1-CU] c 71 N91-14808
- Coupling device with improved thermal interface  
[NASA-CASE-GSC-13251-1] c 37 N91-28582
- CONDUCTIVITY**
- Integrated circuit reliability testing  
[NASA-CASE-NPO-17393-1-CU] c 33 N89-29679
- CONDUCTORS**
- Extensible cable support Patent  
[NASA-CASE-XMF-07587] c 15 N71-18701
- Method for making conductors for ferrite memory arrays --- from pre-formed metal conductors  
[NASA-CASE-LAR-10994-1] c 24 N75-13032
- CONES**
- Conically shaped cavity radiometer with a dual purpose cone winding Patent  
[NASA-CASE-XNP-09701] c 14 N71-26475
- CONFIGURATION MANAGEMENT**
- Reconfigurable work station for a video display unit and keyboard  
[NASA-CASE-MFS-26009-1-SB] c 54 N88-24163
- Method and apparatus for configuration control of redundant robots  
[NASA-CASE-NPO-17801-1-CU] c 37 N91-21544
- Obstacle avoidance for redundant robots using configuration control  
[NASA-CASE-NPO-17852-1-CU] c 63 N91-23783
- CONFINEMENT**
- Observation window for a gas confining chamber  
[NASA-CASE-NPO-10890] c 11 N73-12265
- CONICAL BODIES**
- Conical valve plug Patent  
[NASA-CASE-XLE-00715] c 15 N70-34859
- Conical reflector antenna  
[NASA-CASE-NPO-10303] c 07 N72-22127
- Multiple reflection conical microwave antenna  
[NASA-CASE-NPO-11661] c 07 N73-14130
- Almond test body --- for microwave anechoic chambers  
[NASA-CASE-LAR-13747-1-CU] c 32 N89-28672
- CONICAL SCANNING**
- Conical scan tracking system employing a large antenna  
[NASA-CASE-NPO-14009-1] c 32 N79-13214
- CONICAL SHELLS**
- Device for determining the accuracy of the flare on a flared tube  
[NASA-CASE-XKS-03495] c 14 N69-39785
- Foldable solar concentrator Patent  
[NASA-CASE-XLA-04622] c 03 N70-41580
- Apparatus for machining geometric cones Patent  
[NASA-CASE-XMS-04292] c 15 N71-22722
- CONJUGATES**
- Phase conjugation method and apparatus for an active retrodirective antenna array  
[NASA-CASE-NPO-13641-1] c 32 N79-24210
- CONNECTORS**
- Connector strips-positive, negative and T tabs  
[NASA-CASE-XGS-01395] c 03 N69-21539
- Quick release connector Patent  
[NASA-CASE-XLA-01141] c 15 N71-13789
- Flared tube strainer  
[NASA-CASE-XLA-05056] c 15 N72-11389
- Process for making RF shielded cable connector assemblies and the products formed thereby  
[NASA-CASE-GSC-11215-1] c 09 N73-28083
- Low heat leak connector for cryogenic system  
[NASA-CASE-XLE-02367-1] c 31 N79-21225
- Clamp-mount device  
[NASA-CASE-MFS-25510-1] c 37 N84-16560
- Apparatus for releasably connecting first and second objects in predetermined space relationship  
[NASA-CASE-MSC-18969-1] c 18 N84-22605
- Connection system --- insuring against loss of a tool component without using multiple tethers  
[NASA-CASE-MSC-20319-1] c 37 N85-21649
- Toggle release  
[NASA-CASE-MSC-21354-1] c 37 N88-24969
- Collet lock joint for space station truss  
[NASA-CASE-MSC-21207-1] c 37 N88-29180
- Vortex motion phase separator for zero gravity liquid transfer  
[NASA-CASE-KSC-11387-1] c 29 N90-20236
- Quick connect coupling  
[NASA-CASE-MSC-21539-1] c 37 N91-14610
- System for connecting fluid couplings  
[NASA-CASE-MFS-26042-1-SB] c 37 N91-14613
- Connection space reduction mechanism  
[NASA-CASE-GSC-13220-1] c 37 N91-21525

Method and apparatus for releasably connecting first and second objects  
[NASA-CASE-MSC-21517-1] c 37 N91-24577

**CONSCIOUSNESS**  
EEG sleep analyzer and method of operation Patent  
[NASA-CASE-MSC-13282-1] c 05 N71-24729

**CONSISTENCY**  
Constant-output atomizer --- Inhalation therapy and aerosol research  
[NASA-CASE-MFS-25631-1] c 34 N84-12406

**CONSOLES**  
Telephone multiline signaling using common signal pair  
[NASA-CASE-KSC-11023-1] c 32 N79-23310

**CONSOLIDATION**  
Preparing composite materials from matrices of processable aromatic polyimide thermoplastic blends  
[NASA-CASE-LAR-14107-1] c 24 N91-25200

**CONSTANTS**  
Spring operated accelerator and constant force spring mechanism therefor  
[NASA-CASE-ARC-10898-1] c 35 N77-18417

**CONSTRAINTS**  
Passive caging mechanism Patent  
[NASA-CASE-GSC-10306-1] c 15 N71-24694  
Cable restraint  
[NASA-CASE-LAR-10129-1] c 15 N73-25512  
Restraint system for ergometer  
[NASA-CASE-MFS-21046-1] c 14 N73-27377  
Reefing system  
[NASA-CASE-LAR-10129-2] c 37 N74-20063  
Restraining mechanism  
[NASA-CASE-MSC-13054] c 54 N78-17677  
Spine immobilization apparatus  
[NASA-CASE-ARC-11167-1] c 52 N81-25662

**CONSTRUCTION MATERIALS**  
Foldable construction block  
[NASA-CASE-MSC-12233-1] c 15 N72-25454  
Foldable construction block  
[NASA-CASE-MSC-12233-2] c 32 N73-13921  
Structural panels  
[NASA-CASE-ARC-11429-2-CU] c 27 N87-22845

**CONTACT POTENTIALS**  
Ionospheric battery Patent  
[NASA-CASE-XGS-01593] c 03 N70-35408

**CONTAINERLESS MELTS**  
Method of crystallization --- in gravity-free environments  
[NASA-CASE-MFS-23001-1] c 76 N77-32919  
Gas levitator having fixed levitation node for containerless processing  
[NASA-CASE-MFS-25509-1] c 35 N83-24628  
Method and apparatus for supercooling and solidifying substances  
[NASA-CASE-MFS-25242-1] c 35 N83-29650  
Apparatus for production of ultrapure amorphous metals utilizing acoustic cooling  
[NASA-CASE-NPO-15658-1] c 26 N86-32551  
Quasi-containerless glass formation method and apparatus  
[NASA-CASE-MFS-28090-1] c 27 N87-21111  
Apparatus ad method for quiescent containerless processing of high temperature metals and alloys in low gravity  
[NASA-CASE-MFS-28087-1] c 35 N87-23944  
Sample levitation and melt in microgravity  
[NASA-CASE-NPO-17022-1-CU] c 29 N87-25489

**CONTAINERS**  
Fluid containers and resealable septum therefor Patent  
[NASA-CASE-NPO-10123] c 15 N71-24635  
Method for detecting leaks in hermetically sealed containers Patent  
[NASA-CASE-ERC-10045] c 15 N71-24910  
Apparatus for detecting the amount of material in a resonant cavity container Patent  
[NASA-CASE-XNP-02500] c 18 N71-27397

**CONTAINMENT**  
Hemispherical latching apparatus  
[NASA-CASE-MFS-25837-1] c 18 N85-29991

**CONTAMINANTS**  
Apparatus for purging systems handling toxic, corrosive, noxious and other fluids Patent  
[NASA-CASE-XMS-01905] c 12 N71-21089  
Method and apparatus for mapping the distribution of chemical elements in an extended medium  
[NASA-CASE-GSC-12808-1] c 25 N85-21279  
Ballast system for maintaining constant pressure in a glove box  
[NASA-CASE-NPO-17786-1-CU] c 35 N90-17104  
Method of making contamination-free ceramic bodies  
[NASA-CASE-LEW-14984-1] c 27 N91-16152

**CONTAMINATION**  
Spectral method for monitoring atmospheric contamination of inert-gas welding shields Patent  
[NASA-CASE-XMF-02039] c 15 N71-15871

Separation nut Patent  
[NASA-CASE-XGS-01971] c 15 N71-15922  
Gas liquefaction and dispensing apparatus Patent  
[NASA-CASE-NPO-10070] c 15 N71-27372

Bacterial contamination monitor  
[NASA-CASE-GSC-10879-1] c 14 N72-25413  
Biocontamination and particulate detection system  
[NASA-CASE-NPO-13953-1] c 35 N79-28527  
High velocity gas particulate sampling system  
[NASA-CASE-MSC-21729-1] c 34 N91-17340  
Biofilm monitoring coupon system and method of use  
[NASA-CASE-MSC-21585-1] c 51 N91-31755

**CONTINUOUS RADIATION**  
CW ultrasonic bolt tensioning monitor  
[NASA-CASE-LAR-12016-1] c 39 N78-15512  
Pseudo continuous wave instrument --- ultrasonics  
[NASA-CASE-LAR-12260-1] c 35 N79-10390  
Low-frequency radio navigation system  
[NASA-CASE-NPO-15264-1] c 04 N84-27713

**CONTINUOUS WAVE LASERS**  
High power laser apparatus and system  
[NASA-CASE-XLE-2529-2] c 36 N75-27364  
Continuous plasma laser --- method and apparatus for producing intense, coherent, monochromatic light from low temperature plasma  
[NASA-CASE-XNP-04167-3] c 36 N77-19416  
Stark effect spectrophone for continuous absorption spectra monitoring --- a technique for gas analysis  
[NASA-CASE-NPO-15102-1] c 25 N81-25159  
Coherently pulsed laser source  
[NASA-CASE-NPO-15111-1] c 36 N82-29589  
Spectrophone stabilized laser with line center offset frequency control  
[NASA-CASE-NPO-15516-1] c 36 N84-22943

**CONTINUOUS WAVE RADAR**  
Phase-locked loop with sideband rejecting properties Patent  
[NASA-CASE-XNP-02723] c 07 N70-41680  
FM/CW radar system  
[NASA-CASE-MFS-22234-1] c 32 N79-10264  
Method and apparatus for measuring distance  
[NASA-CASE-MSC-20912-1] c 32 N88-26568

**CONTINUUM FLOW**  
Energy efficient continuous flow ash lockhopper  
[NASA-CASE-NPO-16985-1-CU] c 31 N91-15423

**CONTOUR SENSORS**  
Antenna surface contour control system  
[NASA-CASE-LAR-13798-1] c 32 N89-25363

**CONTOURS**  
Contour surveying system Patent  
[NASA-CASE-XLA-08646] c 14 N71-17586  
Contourograph system for monitoring electrocardiograms  
[NASA-CASE-MSC-13407-1] c 10 N72-20225  
Variable contour securing system  
[NASA-CASE-MSC-16270-1] c 37 N78-27423  
Device for measuring the contour of a surface  
[NASA-CASE-LAR-11989-1] c 74 N78-27904  
Contour detector and data acquisition system for the left ventricular outline  
[NASA-CASE-ARC-10985-1] c 52 N79-10724  
Contour measurement system  
[NASA-CASE-MFS-23726-1] c 43 N79-26439  
Cork-resin ablative insulation for complex surfaces and method for applying the same  
[NASA-CASE-MFS-23626-1] c 24 N80-26388  
Surface conforming thermal/pressure seal --- tail assemblies of space shuttle orbiters  
[NASA-CASE-MSC-18422-1] c 37 N82-16408  
Method and apparatus for contour mapping using synthetic aperture radar  
[NASA-CASE-NPO-15939-1] c 43 N86-19711

**CONTROL**  
Dual latching solenoid valve Patent  
[NASA-CASE-XMS-05890] c 09 N71-23191  
Apparatus for testing a pressure responsive instrument Patent  
[NASA-CASE-XMF-04134] c 14 N71-23755  
Failure detection and control means for improved drift performance of a gimballed platform system  
[NASA-CASE-MFS-23551-1] c 04 N76-26175  
Power factor control system for ac induction motors  
[NASA-CASE-MFS-23988-1] c 33 N81-27395  
Control means for a solid state crossbar switch  
[NASA-CASE-NPO-15066-1] c 33 N82-29538  
Television camera video level control system  
[NASA-CASE-MSC-18578-1] c 32 N85-21427

**CONTROL BOARDS**  
Pressure monitoring with a plurality of ionization gauges controlled at a central location Patent  
[NASA-CASE-XLE-00787] c 14 N71-21090

**CONTROL DATA (COMPUTERS)**  
Computer interface system  
[NASA-CASE-NPO-13428-1] c 60 N77-12721

**CONTROL EQUIPMENT**

Stepping motor control circuit Patent  
[NASA-CASE-GSC-10366-1] c 10 N71-18772  
Drift compensation circuit for analog to digital converter Patent  
[NASA-CASE-XNP-04780] c 08 N71-19687  
Attitude controls for VTOL aircraft Patent  
[NASA-CASE-XAC-08972] c 02 N71-20570  
Control device Patent  
[NASA-CASE-XAC-10019] c 15 N71-23809  
Controlled release device Patent  
[NASA-CASE-XKS-03338] c 15 N71-24043  
Dual polarity full wave dc motor drive Patent  
[NASA-CASE-XNP-07477] c 09 N71-26092  
Digital memory in which the driving of each word location is controlled by a switch core Patent  
[NASA-CASE-XNP-01466] c 10 N71-26434  
Fluid jet amplifier Patent  
[NASA-CASE-XLE-09341] c 12 N71-28741  
System for controlling the operation of a variable signal device  
[NASA-CASE-NPO-11064] c 07 N72-11150  
Solid state remote circuit selector switch  
[NASA-CASE-LEW-10387] c 09 N72-22201  
Synchronous orbit battery cyclor  
[NASA-CASE-GSC-11211-1] c 03 N72-25020  
Infinite range electronics gain control circuit  
[NASA-CASE-GSC-10786-1] c 10 N72-28241  
Interferometric rotation sensor  
[NASA-CASE-ARC-10278-1] c 14 N73-25463  
Digital controller for a Baum folding machine --- providing automatic counting and machine shutoff  
[NASA-CASE-LAR-10688-1] c 37 N74-21056  
Flow control valve --- for high temperature fluids  
[NASA-CASE-NPO-11951-1] c 37 N74-21065  
Variable ratio mixed-mode bilateral master-slave control system for shuttle remote manipulator system  
[NASA-CASE-MSC-14245-1] c 18 N75-27041  
Anthropomorphic master/slave manipulator system  
[NASA-CASE-ARC-10756-1] c 54 N77-32721  
Power factor control system for AC induction motors  
[NASA-CASE-MFS-23280-1] c 33 N78-10376  
Variable cycle gas turbine engines  
[NASA-CASE-LEW-12916-1] c 37 N78-17384  
Control for nuclear thermionic power source  
[NASA-CASE-NPO-13114-2] c 73 N78-28913  
Illumination control apparatus for compensating solar light  
[NASA-CASE-KSC-11010-1] c 74 N79-12890  
Dual acting slit control mechanism  
[NASA-CASE-LAR-11370-1] c 35 N80-28686  
Pneumatic inflatable end effector  
[NASA-CASE-MFS-23696-1] c 54 N81-26718  
Means for controlling aerodynamically induced twist  
[NASA-CASE-LAR-12175-1] c 05 N82-28279  
Electronic system for high power load control --- solar arrays  
[NASA-CASE-NPO-15358-1] c 33 N83-27126  
Pulsed thyristor trigger control circuit  
[NASA-CASE-MFS-25616-1] c 33 N84-16455  
Magnetic spin reduction system for free spinning objects  
[NASA-CASE-MFS-25966-1] c 16 N86-26352  
Apparatus and method of capturing an orbiting spacecraft  
[NASA-CASE-MSC-20979-1] c 37 N87-22985  
Controlled sample orientation and rotation in an acoustic levitator  
[NASA-CASE-NPO-17086-1-CU] c 35 N89-14422  
Active control of boundary layer transition and turbulence  
[NASA-CASE-LAR-13532-1] c 34 N91-14562  
Rotatable non-circular forebody flow controller  
[NASA-CASE-LAR-14212-1-CU] c 05 N91-31140

**CONTROL ROCKETS**  
Decomposition unit Patent  
[NASA-CASE-XMS-00583] c 28 N70-38504

**CONTROL RODS**  
Null device for hand controller Patent  
[NASA-CASE-XLA-01808] c 15 N71-20740

**CONTROL SIMULATION**  
Helmet weight simulator  
[NASA-CASE-LAR-12320-1] c 54 N81-27806

**CONTROL STABILITY**  
Apparatus for sensor failure detection and correction in a gas turbine engine control system  
[NASA-CASE-LEW-12907-2] c 07 N81-19115  
Apparatus for damping operator induced oscillations of a controlled system --- flight control  
[NASA-CASE-FRC-11041-1] c 33 N82-18493  
Controlled sample orientation and rotation in an acoustic levitator  
[NASA-CASE-NPO-17086-1-CU] c 35 N89-14422

**CONTROL SURFACES**  
Conical valve plug Patent  
[NASA-CASE-XLE-00715] c 15 N70-34859

- Attitude control for spacecraft Patent  
[NASA-CASE-XNP-02982] c 31 N70-41855
- Vortex-lift roll-control device  
[NASA-CASE-LAR-11868-2] c 08 N79-14108
- Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12325-1] c 02 N81-14968
- Thermal barrier pressure seal --- shielding junctions between spacecraft control surfaces and structures  
[NASA-CASE-MSC-18134-1] c 37 N81-15363
- Control surface actuator  
[NASA-CASE-LAR-12852-1] c 05 N89-11738
- Rotatable non-circular forebody flow controller  
[NASA-CASE-LAR-14212-1-CU] c 05 N91-31140
- CONTROL SYSTEMS DESIGN**
- Reactant pressure differential control for fuel cell gases  
[NASA-CASE-MSC-20127-2] c 37 N85-34403
- Brushless DC motor control system responsive to control signals generated by a computer or the like  
[NASA-CASE-NPO-16420-1] c 33 N86-20681
- ARC length control for plasma welding  
[NASA-CASE-MSC-20900-1] c 37 N88-30131
- Spacecraft component heater control system  
[NASA-CASE-MFS-28327-1] c 18 N89-28556
- Method and circuit for controlling the evolution time interval of a laser output pulse  
[NASA-CASE-LAR-13772-1] c 36 N89-28816
- Robust high-performance control for robotic manipulators  
[NASA-CASE-NPO-17785-1-CU] c 37 N89-28846
- Docking mechanism for spacecraft  
[NASA-CASE-MSC-21386-1] c 18 N90-20126
- Balanced bridge feedback control system  
[NASA-CASE-NPO-17430-1-CU] c 33 N90-21951
- Long period pseudo random number sequence generator  
[NASA-CASE-NPO-17241-1-CU] c 33 N90-23636
- System and method for a general purpose architecture for intelligent computer-aided training  
[NASA-CASE-MSC-21381-1] c 63 N91-13944
- Electro-optical spin measurement system  
[NASA-CASE-LAR-13629-1] c 09 N91-14356
- Combined air and water pollution control system  
[NASA-CASE-NST-00007-1] c 45 N91-14662
- Permanent magnet flux-biased magnetic actuator with flux feedback  
[NASA-CASE-LAR-13785-1] c 70 N91-21824
- Control circuitry using electronic emulation of a synchro signal for accurate control of position and rate of rotation for shafts  
[NASA-CASE-MFS-28458-1] c 33 N91-26459
- Apparatus for intercalating large quantities of fibrous structures  
[NASA-CASE-LEW-15077-2] c 24 N91-28289
- Rotatable non-circular forebody flow controller  
[NASA-CASE-LAR-14212-1-CU] c 05 N91-31140
- A universal computer control system for motors  
[NASA-CASE-NPO-17134-1-CU] c 33 N91-31528
- CONTROL THEORY**
- Robust high-performance control for robotic manipulators  
[NASA-CASE-NPO-17785-1-CU] c 37 N89-28846
- Method and apparatus for configuration control of redundant robots  
[NASA-CASE-NPO-17801-1-CU] c 37 N91-21544
- CONTROL UNITS (COMPUTERS)**
- Self-testing and repairing computer Patent  
[NASA-CASE-NPO-10567] c 08 N71-24633
- CONTROL VALVES**
- Electromechanical actuator  
[NASA-CASE-XNP-05975] c 15 N69-23185
- Full flow with shut off and selective drainage control valve Patent application  
[NASA-CASE-ERC-10208] c 15 N70-10867
- Conical valve plug Patent  
[NASA-CASE-XLE-00715] c 15 N70-34859
- Control valve and co-axial variable injector Patent  
[NASA-CASE-XNP-09702] c 15 N71-17654
- Electrohydrodynamic control valve Patent  
[NASA-CASE-NPO-10416] c 12 N71-27332
- Force-balanced, throttle valve Patent  
[NASA-CASE-NPO-10808] c 15 N71-27432
- Dual stage check valve  
[NASA-CASE-MSC-13587-1] c 15 N73-30459
- Airflow control system for supersonic inlets  
[NASA-CASE-LEW-11188-1] c 02 N74-20646
- Ultrasonically bonded valve assembly  
[NASA-CASE-NPO-13360-1] c 37 N75-25185
- Pressure modulating valve  
[NASA-CASE-MSC-14905-1] c 37 N77-28487
- Fluid valve assembly  
[NASA-CASE-MSC-12731-1] c 37 N78-25426
- Flow diverter valve and flow diversion method  
[NASA-CASE-HQN-00573-1] c 37 N79-33468
- Quartz ball valve  
[NASA-CASE-NPO-14473-1] c 37 N80-23654
- Pressure control valve --- inflating flexible bladders  
[NASA-CASE-AFC-11251-1] c 37 N81-17433
- Electrical servo actuator bracket --- fuel control valves on jet engines  
[NASA-CASE-FRC-11044-1] c 37 N81-33483
- Control means for a gas turbine engine  
[NASA-CASE-LEW-14586-1] c 07 N83-31603
- Slow opening valve --- valve design for shuttle portable oxygen system  
[NASA-CASE-MSC-20112-1] c 37 N85-20338
- Remotely controllable mixing system  
[NASA-CASE-MFS-28153-1] c 31 N86-32589
- Dual motion valve with single motion input  
[NASA-CASE-MFS-28058-1] c 37 N87-21332
- Monogroove cold plate  
[NASA-CASE-MSC-20946-1] c 34 N87-28867
- Low-noise nozzle valve  
[NASA-CASE-MFS-28383-1] c 34 N91-14563
- CONTROLLED ATMOSPHERES**
- Electrical connector Patent Application  
[NASA-CASE-MFS-14741] c 09 N70-20737
- High voltage pulse generator Patent  
[NASA-CASE-MSC-12178-1] c 09 N71-13518
- Exposure system for animals Patent  
[NASA-CASE-XAC-05333] c 11 N71-22875
- Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-1] c 18 N84-22612
- CONTROLLERS**
- Three axis controller Patent  
[NASA-CASE-XFR-00181] c 21 N70-33279
- Two-axis controller Patent  
[NASA-CASE-XFR-04104] c 03 N70-42073
- Controllers Patent  
[NASA-CASE-XMS-07487] c 15 N71-23255
- Solid state controller three axes controller  
[NASA-CASE-MSC-12394-1] c 08 N74-10942
- Wide power range microwave feedback controller  
[NASA-CASE-GSC-12146-1] c 33 N78-32340
- Active nutation controller  
[NASA-CASE-GSC-12273-1] c 35 N80-21719
- Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c 37 N81-17432
- Controller for computer control of brushless dc motors --- automobile engines  
[NASA-CASE-NPO-13970-1] c 33 N81-20352
- Motor power factor controller with a reduced voltage starter  
[NASA-CASE-MFS-25586-1] c 33 N82-11360
- Phase detector for three-phase power factor controller  
[NASA-CASE-MFS-25854-1] c 33 N84-27975
- Three-phase power factor controller with induced EMF sensing  
[NASA-CASE-MFS-25852-1] c 33 N84-33661
- Thumb-actuated two-axis controller  
[NASA-CASE-ARC-11372-1] c 08 N86-27288
- Reconfigurable work station for a video display unit and keyboard  
[NASA-CASE-MFS-26009-1-SB] c 54 N88-24163
- Nanosequencer digital logic controller  
[NASA-CASE-NPO-16116-2] c 60 N88-29310
- Fluidic momentum controller  
[NASA-CASE-MSC-20906-2] c 35 N89-15379
- Robust high-performance control for robotic manipulators  
[NASA-CASE-NPO-17785-1-CU] c 37 N89-28846
- Closed-loop autonomous docking system  
[NASA-CASE-MFS-28421-1] c 18 N90-26861
- Generation of animation sequences of three dimensional models  
[NASA-CASE-MSC-21379-1-SB] c 61 N90-27340
- Solder dross removal apparatus  
[NASA-CASE-MFS-28406-1] c 37 N91-13729
- Apparatus for precision focusing and positioning of a beam waist on a target  
[NASA-CASE-ARC-11916-1-SB] c 74 N91-14002
- Method of injecting fluid propellants into a rocket combustion chamber  
[NASA-CASE-LEW-14846-2] c 20 N91-26200
- A universal computer control system for motors  
[NASA-CASE-NPO-17134-1-CU] c 33 N91-31528
- Synchronized computational architecture for generalized bilateral control of robot arms  
[NASA-CASE-NPO-17401-1-CU] c 63 N91-31885
- Telerobot control system  
[NASA-CASE-NPO-18116-1-CU] c 37 N91-32509
- A generalized compliant motion primitive  
[NASA-CASE-NPO-18134-1-CU] c 37 N91-32510
- CONVECTION**
- Method and apparatus for minimizing convection during crystal growth from solution  
[NASA-CASE-NPO-15811-1] c 76 N84-12968
- High temperature insulation barrier composite  
[NASA-CASE-MFS-29241-1] c 24 N90-23480
- Crystal growth in a microgravity environment  
[NASA-CASE-MFS-28473-1] c 76 N91-26968
- CONVECTIVE FLOW**
- Geysering inhibitor for vertical cryogenic transfer pipe  
[NASA-CASE-KSC-10615] c 15 N73-12486
- Method and apparatus for convection control of metallic halide vapor density in a metallic halide laser  
[NASA-CASE-NPO-15021-1] c 36 N83-10417
- Acoustic convective system  
[NASA-CASE-NPO-17278-1-CU] c 31 N90-21215
- CONVECTIVE HEAT TRANSFER**
- Thin film gauge --- for measuring convective heat transfer rates along test surfaces in wind tunnels  
[NASA-CASE-NPO-10617-1] c 35 N74-22095
- Acoustic convective system  
[NASA-CASE-NPO-17278-1-CU] c 31 N90-21215
- CONVERGENCE**
- Shock wave convergence apparatus  
[NASA-CASE-MFS-20890] c 14 N72-22439
- Dual cathode system for electron beam instruments  
[NASA-CASE-NPO-16878-1-CU] c 35 N90-20351
- Convergent strand array liquid pumping system  
[NASA-CASE-NPO-17301-1-CU] c 31 N90-23587
- Stereoscopic camera and viewing systems with undistorted depth presentation and reduced or eliminated erroneous acceleration and deceleration perceptions, or with perceptions produced or enhanced for special effects  
[NASA-CASE-NPO-18028-1-CU] c 74 N91-24878
- CONVERGENT NOZZLES**
- Nozzle extraction process and handmeter for measuring handle  
[NASA-CASE-LAR-12147-1] c 31 N79-11246
- CONVERGENT-DIVERGENT NOZZLES**
- Gimballed, partially submerged rocket nozzle Patent  
[NASA-CASE-XMF-01544] c 28 N70-34162
- Combustion chamber Patent  
[NASA-CASE-XLE-04857] c 28 N71-23968
- Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c 07 N80-32392
- Wind tunnel supplementary Mach number minimum section insert  
[NASA-CASE-LAR-12532-1] c 09 N82-11088
- Nozzle fabrication technique  
[NASA-CASE-MSC-21299-1] c 20 N88-24684
- CONVERSION**
- Technique for measuring gas conversion factors  
[NASA-CASE-LAR-13220-1] c 34 N86-12547
- CONVERTERS**
- Scan converting video tape recorder  
[NASA-CASE-NPO-10166-2] c 35 N76-16391
- CONVEXITY**
- Wide acceptance angle, high concentration ratio, optical collector  
[NASA-CASE-MFS-28295-1] c 74 N91-13999
- CONVEYORS**
- System and method for refurbishing and processing parachutes --- monorial conveyor system  
[NASA-CASE-KSC-11042-2] c 02 N81-26073
- Method for refurbishing and processing parachutes  
[NASA-CASE-KSC-11042-1] c 09 N82-29330
- Static continuous electrophoresis device  
[NASA-CASE-MFS-25306-1] c 25 N83-13187
- Acoustic system for material transport  
[NASA-CASE-NPO-15453-1] c 71 N83-32515
- Shuttle car loading system  
[NASA-CASE-NPO-15949-1] c 85 N85-34722
- CONVOLUTION INTEGRALS**
- Real time pipelined system for forming the sum of products in the processing of video data  
[NASA-CASE-NPO-16462-1-CU] c 60 N88-24169
- COOLANTS**
- Jet pump-drive system for heat removal  
[NASA-CASE-NPO-16494-1-CU] c 34 N85-29182
- Liquid cooled supersonic total temperature probe  
[NASA-CASE-LAR-14435-1-CU] c 09 N91-26159
- COOLERS**
- Flexible thermal apparatus for mounting of thermoelectric cooler  
[NASA-CASE-NPO-17806-1-CU] c 31 N91-27385
- COOLING**
- Microwave power receiving antenna Patent  
[NASA-CASE-MFS-20333] c 09 N71-13486
- Voltage regulator with plural parallel power source sections Patent  
[NASA-CASE-GSC-10891-1] c 10 N71-26626
- Laser coolant and ultraviolet filter  
[NASA-CASE-MFS-20180] c 16 N72-12440
- Compact pulsed laser having improved heat conduction  
[NASA-CASE-NPO-13147-1] c 36 N77-25502
- Heating and cooling system --- for fatigue test specimens  
[NASA-CASE-LAR-12393-1] c 34 N83-34221
- Tip cap for a rotor blade  
[NASA-CASE-LEW-13654-1] c 07 N84-22560

Combustor liner construction  
[NASA-CASE-LEW-14035-1] c 07 N84-24577

Air modulation apparatus  
[NASA-CASE-LEW-13524-1] c 07 N84-33410

Heat pipe cooled probe  
[NASA-CASE-LAR-12588-1] c 34 N85-21568

Thermocouple for heating and cooling of memory metal actuators  
[NASA-CASE-NPO-17068-1-CU] c 35 N88-29151

Surface tension confined liquid cryogen cooler  
[NASA-CASE-GSC-13112-1] c 31 N89-29578

Steam cooled rich-burn combustor liner  
[NASA-CASE-LEW-13609-1] c 25 N90-11824

High temperature electric arc furnace and method  
[NASA-CASE-MFS-28281-1] c 09 N90-23415

Crystal growth in a microgravity environment  
[NASA-CASE-MFS-28473-1] c 76 N91-26968

**COOLING SYSTEMS**

Automatic thermal switch Patent  
[NASA-CASE-XNP-03796] c 23 N71-15467

Differential temperature transducer Patent  
[NASA-CASE-XAC-00812] c 14 N71-15598

Power system with heat pipe liquid coolant lines Patent  
[NASA-CASE-MFS-14114-2] c 09 N71-24807

Cryogenic cooling system Patent  
[NASA-CASE-NPO-10467] c 23 N71-26654

Self-adjusting multisegment, deployable, natural circulation radiator Patent  
[NASA-CASE-XHO-03673] c 33 N71-29046

Heat conductive resiliently compressible structure for space electronics package modules Patent  
[NASA-CASE-MS-C-12389] c 33 N71-29052

Method and device for cooling Patent  
[NASA-CASE-HQN-00938] c 33 N71-29053

Liquid spray cooling method Patent  
[NASA-CASE-XLE-00027] c 33 N71-29152

Radial heat flux transformer  
[NASA-CASE-NPO-10828] c 33 N72-17948

Light shield and cooling apparatus --- high intensity ultraviolet lamp  
[NASA-CASE-LAR-10089-1] c 34 N74-23066

Refrigerated coaxial coupling --- for microwave equipment  
[NASA-CASE-NPO-13504-1] c 33 N75-30430

Rocket chamber and method of making  
[NASA-CASE-LEW-11118-2] c 20 N76-14191

Tubular sublimatory evaporator heat sink  
[NASA-CASE-ARC-10912-1] c 34 N77-19353

Arc control in compact arc lamps  
[NASA-CASE-NPO-10870-1] c 33 N77-22386

Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12830-1] c 07 N77-23106

Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12321-1] c 37 N78-10467

Closed loop spray cooling apparatus --- for particle accelerator targets  
[NASA-CASE-LEW-11981-1] c 31 N78-17237

Multistation refrigeration system  
[NASA-CASE-NPO-13839-1] c 31 N78-25256

Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c 54 N78-32721

Heat exchanger --- rocket combustion chambers and cooling systems  
[NASA-CASE-LEW-12252-1] c 34 N79-13288

Closed loop spray cooling apparatus  
[NASA-CASE-LEW-11981-2] c 34 N79-20336

Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c 45 N80-14579

Heat exchanger and method of making  
[NASA-CASE-LEW-12441-3] c 44 N81-24519

Cooling system for high speed aircraft  
[NASA-CASE-LAR-12406-1] c 05 N81-26114

Waveguide cooling system  
[NASA-CASE-NPO-15401-1] c 32 N83-27085

Cooling by conversion of para to ortho-hydrogen  
[NASA-CASE-GSC-12770-1] c 25 N83-29324

Radiative cooler --- spacecraft radiators  
[NASA-CASE-NPO-15465-1] c 34 N84-22903

Combustor liner construction  
[NASA-CASE-LEW-14035-1] c 07 N84-24577

High thermal power density heat transfer apparatus providing electrical isolation at high temperature using heat pipes  
[NASA-CASE-LEW-12950-2] c 34 N85-29179

Jet pump-drive system for heat removal  
[NASA-CASE-NPO-16494-1-CU] c 34 N85-29182

Precision manipulator heating and cooling apparatus for use in UHV systems with sample transfer capability  
[NASA-CASE-LAR-13040-1] c 37 N85-29286

Vortex generating flow passage design for increased film cooling effectiveness  
[NASA-CASE-LEW-14039-1] c 34 N85-33433

Monogroove cold plate  
[NASA-CASE-MS-C-20946-1] c 34 N87-28867

Capillary heat transport and fluid management device  
[NASA-CASE-MFS-28217-1] c 34 N89-14392

**COORDINATES**

Mechanical coordinate converter Patent  
[NASA-CASE-XNP-00614] c 14 N70-36907

Lightning tracking system  
[NASA-CASE-KSC-10729-1] c 09 N73-32110

Magnetic heading reference  
[NASA-CASE-LAR-11387-2] c 04 N77-19056

Remote object configuration/orientation determination  
[NASA-CASE-NPO-17436-1-CU] c 35 N91-15512

Method and apparatus for configuration control of redundant robots  
[NASA-CASE-NPO-17801-1-CU] c 37 N91-21544

**COPOLYMERIZATION**

Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-1] c 27 N84-27885

Chemical control of nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-2] c 25 N85-28982

Copolymers of vinyl styrylpyridines or vinyl stilbazoles with bismaleimide  
[NASA-CASE-ARC-11429-1-CU] c 27 N86-20560

Process for curing bismaleimide resins  
[NASA-CASE-ARC-11429-4CU] c 27 N87-15304

Polyether-polyester graft copolymer  
[NASA-CASE-LAR-13447-1] c 27 N88-18725

Bis (4-[3,4-dimethylene-pyrrolidyl]-phenyl) methane  
[NASA-CASE-LAR-13965-2-CU] c 23 N91-14418

**COPOLYMERS**

Method of producing alternating ether siloxane copolymers Patent  
[NASA-CASE-XMF-02584] c 06 N71-20905

Dicyanoacetylene polymers Patent  
[NASA-CASE-XNP-03250] c 06 N71-23500

Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MS-C-14903-3] c 27 N80-24438

Insoluble polyelectrolyte and ion-exchange hollow fiber impregnated therewith  
[NASA-CASE-NPO-13530-1] c 25 N81-17187

Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-3] c 27 N85-21350

Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-4] c 27 N85-21351

Alkaline battery containing a separator of a cross-linked copolymer of vinyl alcohol and unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c 33 N85-29144

Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-1] c 24 N86-19380

Poly(carbonate-mide) polymer  
[NASA-CASE-LAR-13292-1] c 27 N86-24841

Polyarylene ethers with improved properties  
[NASA-CASE-LAR-13555-1] c 23 N86-32526

Polyether-polyester graft copolymer  
[NASA-CASE-LAR-13447-1] c 27 N88-18725

Copolyimide with a combination of flexibilizing groups  
[NASA-CASE-LAR-13821-1] c 27 N90-16950

Silicon containing electroconductive polymers and structures made therefrom  
[NASA-CASE-NPO-17826-1-CU] c 27 N90-26952

Imide/arylene ether copolymers  
[NASA-CASE-LAR-14159-1-CU] c 27 N90-26953

**COPPER**

Method for etching copper Patent  
[NASA-CASE-XGS-06306] c 17 N71-16044

Method of plating copper on aluminum Patent  
[NASA-CASE-XLA-08966-1] c 17 N71-25903

Brazing alloy composition  
[NASA-CASE-XMF-06053] c 26 N75-27126

Method for making an aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-1] c 44 N79-11469

Metal (2) 4',4',4" phthalocyanine tetraamines as curing agents for epoxy resins  
[NASA-CASE-ARC-11424-1] c 27 N85-34281

**COPPER ALLOYS**

Zirconium modified nickel-copper alloy  
[NASA-CASE-LEW-12245-1] c 26 N77-20201

Thin film strain transducer  
[NASA-CASE-WLP-10055-1] c 35 N84-28015

Aluminum alloy  
[NASA-CASE-LAR-13924-1-CU] c 26 N89-28621

Method of forming low cost, formable High T(subc) superconducting wire  
[NASA-CASE-LEW-14676-2] c 76 N90-17454

Low cost, formable, high T(subc) superconducting wire  
[NASA-CASE-LEW-14676-1] c 33 N91-31529

**COPPER CHLORIDES**

Copper chloride cathode for a secondary battery  
[NASA-CASE-NPO-17640-1-CU] c 33 N91-14538

**COPPER COMPOUNDS**

Simple method of making photovoltaic junctions Patent  
[NASA-CASE-XNP-01960] c 09 N71-23027

Laser coolant and ultraviolet filter  
[NASA-CASE-MFS-20180] c 16 N72-12440

Brazing alloy  
[NASA-CASE-XNP-03878] c 26 N75-27127

**COPPER FLUORIDES**

Preparation of high purity copper fluoride  
[NASA-CASE-LEW-10794-1] c 06 N72-17093

**COPPER OXIDES**

Textured carbon surfaces on copper by sputtering  
[NASA-CASE-LEW-14130-1] c 31 N86-32587

**CORDAGE**

Method of forming a root cord restrained convolute section  
[NASA-CASE-MS-C-12398] c 05 N72-20098

**CORE STORAGE**

Semiconductor-ferroelectric memory device  
[NASA-CASE-ERC-10307] c 08 N72-21198

**CORES**

Method of making rolling element bearings  
[NASA-CASE-LEW-11087-2] c 37 N74-15128

Electromagnetic transducer recording head having a laminated core section and tapered gap  
[NASA-CASE-NPO-10711-1] c 35 N77-21392

Superplastically formed diffusion bonded metallic structure  
[NASA-CASE-FRC-11026-1] c 24 N82-24296

Low power consumption current transducer  
[NASA-CASE-NPO-16888-1-CU] c 33 N89-29681

New core design for use with precision composite reflectors  
[NASA-CASE-NPO-17858-1-CU] c 24 N90-26880

**CORK (MATERIALS)**

Cork-resin ablative insulation for complex surfaces and method for applying the same  
[NASA-CASE-MFS-23626-1] c 24 N80-26388

**CORRECTION**

Doppler frequency spread correction device for multiplex transmissions  
[NASA-CASE-XGS-02749] c 07 N69-39978

Alignment positioning mechanism  
[NASA-CASE-MS-C-21502-1] c 37 N91-21543

**CORRELATION**

Clutter free synthetic aperture radar correlator  
[NASA-CASE-NPO-14035-1] c 32 N83-19968

**CORRELATION DETECTION**

Correlation type phase detector --- with time correlation integrator for frequency multiplexed signals  
[NASA-CASE-GSC-11744-1] c 33 N75-26243

Interferometric locating system  
[NASA-CASE-NPO-14173-1] c 04 N80-32359

**CORRELATORS**

Millimeter wave radiometer for radio astronomy Patent  
[NASA-CASE-XNP-09832] c 30 N71-23723

Digital demodulator-correlator  
[NASA-CASE-NPO-13982-1] c 32 N79-14267

Baseband signal combiner for large aperture antenna array  
[NASA-CASE-NPO-14641-1] c 32 N81-29308

Serial data correlator/code translator  
[NASA-CASE-KSC-11025-1] c 32 N83-13323

Synchronous demodulator  
[NASA-CASE-GSC-13179-1] c 33 N91-26438

**CORROSION**

Method of neutralizing the corrosive surface of amine-cured epoxy resins  
[NASA-CASE-GSC-12686-1] c 27 N83-34039

**CORROSION PREVENTION**

Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent  
[NASA-CASE-XLA-00284] c 15 N71-16075

Method of inhibiting stress corrosion cracks in titanium alloys Patent  
[NASA-CASE-NPO-10271] c 17 N71-16393

Controlled glass bead peening Patent  
[NASA-CASE-XLA-07390] c 15 N71-18616

Corrosion resistant beryllium Patent  
[NASA-CASE-LEW-10327] c 17 N71-33408

Prevention of hydrogen embrittlement of high strength steel by hydrazine compositions --- by adding potassium hydroxide to hydrazine  
[NASA-CASE-NPO-12122-1] c 24 N76-14203

Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c 45 N80-14579

Method of protecting a surface with a silicon-slurry/aluminide coating --- coatings for gas turbine engine blades and vanes  
[NASA-CASE-LEW-13343-1] c 27 N82-28441

Heat pipes containing alkali metal working fluid  
[NASA-CASE-LEW-12253-1] c 74 N83-19596

Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N86-32550



- Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-3] c 27 N87-23736
- CORROSION RESISTANCE**  
High temperature cobalt-base alloy Patent  
[NASA-CASE-XLE-00726] c 17 N71-15644  
Solder flux which leaves corrosion-resistant coating Patent  
[NASA-CASE-XNP-03459-2] c 18 N71-15688  
High temperature cobalt-base alloy Patent  
[NASA-CASE-XLE-02991] c 17 N71-16025  
Soldering with solder flux which leaves corrosion resistant coating Patent  
[NASA-CASE-XNP-03459] c 15 N71-21078  
Method of making bearing material  
[NASA-CASE-LEW-11930-3] c 24 N80-33482  
Corrosion resistant thermal barrier coating --- protecting gas turbines and other engine parts  
[NASA-CASE-LEW-13088-1] c 26 N81-25188  
Sandblasting nozzle  
[NASA-CASE-NPO-13823-1] c 37 N81-25371  
Covering solid, film cooled surfaces with a duplex thermal barrier coating  
[NASA-CASE-LEW-13450-1] c 31 N83-35177  
Carbon granule probe microphone for leak detection --- recovery boilers  
[NASA-CASE-NPO-16027-1] c 35 N85-21597  
Corrosion resistant coating  
[NASA-CASE-NPO-15928-1] c 26 N85-29005  
Castable hot corrosion resistant alloy  
[NASA-CASE-LEW-14134-2] c 26 N89-14303
- CORRUGATED PLATES**  
Superplastically formed diffusion bonded metallic structure  
[NASA-CASE-FRC-11026-1] c 24 N82-24296  
Truss-core corrugation for compressive loads  
[NASA-CASE-LAR-13438-1] c 31 N89-12786
- CORRUGATING**  
Collapsible corrugated horn antenna  
[NASA-CASE-LAR-11745-1] c 32 N80-29539  
Superplastically formed diffusion bonded metallic structure  
[NASA-CASE-FRC-11026-1] c 24 N82-24296  
Curved cap corrugated sheet  
[NASA-CASE-LAR-12884-1] c 18 N84-33450
- COSINE SERIES**  
Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-10503-1] c 09 N72-21248  
Function generator for synthesizing complex vibration mode patterns  
[NASA-CASE-LAR-10310-1] c 10 N73-20253
- COSMIC DUST**  
Cosmic dust sensor  
[NASA-CASE-GSC-10503-1] c 14 N72-20381  
Cosmic dust or other similar outer space particles impact location detector  
[NASA-CASE-GSC-11291-1] c 25 N72-33696  
Impact position detector for outer space particles  
[NASA-CASE-GSC-11829-1] c 35 N75-27331  
Cosmic dust analyzer  
[NASA-CASE-MSC-13802-2] c 35 N76-15431  
Method and apparatus for determining time, direction, and composition of impacting space particles  
[NASA-CASE-LAR-13392-1-CU] c 19 N91-14412
- COST ANALYSIS**  
Low cost solar energy collection system  
[NASA-CASE-NPO-13579-1] c 44 N78-17460
- COST EFFECTIVENESS**  
Glass heating panels and method for preparing the same from architectural reflective glass  
[NASA-CASE-NPO-15753-1] c 27 N84-33589  
Assured crew return vehicle  
[NASA-CASE-MSC-21536-1] c 18 N91-13483
- COST REDUCTION**  
Mechanical end joint system for connecting structural column elements  
[NASA-CASE-LAR-14465-1] c 37 N91-14614
- COUCHES**  
Shock absorbing support and restraint means Patent  
[NASA-CASE-XMS-01240] c 05 N70-35152  
Energy absorbing structure Patent Application  
[NASA-CASE-MSC-12279-1] c 15 N70-35679  
Articulated multiple couch assembly Patent  
[NASA-CASE-MSC-11253] c 05 N71-12343  
Collapsible Apollo couch  
[NASA-CASE-MSC-13140] c 05 N72-11085
- COULOMETERS**  
Electrochemical coulometer and method of forming same Patent  
[NASA-CASE-XGS-05434] c 03 N71-20491  
Coulometer and third electrode battery charging circuit Patent  
[NASA-CASE-GSC-10487-1] c 03 N71-24719  
State-of-charge coulometer  
[NASA-CASE-NPO-15759-1] c 35 N85-21596
- COUNTERBALANCES**  
Load positioning system with gravity compensation  
[NASA-CASE-ARC-11525-1] c 37 N86-27629
- COUNTERS**  
Counter Patent  
[NASA-CASE-XNP-06234] c 10 N71-27137  
Electronic strain-level counter  
[NASA-CASE-LAR-10756-1] c 32 N73-26910  
Electrochemical detection device --- for use in microbiology  
[NASA-CASE-LAR-11922-1] c 25 N79-24073  
Redundant operation of counter modules  
[NASA-CASE-NPO-14162-1] c 60 N81-15706  
Film advance indicator  
[NASA-CASE-LAR-12474-1] c 35 N82-26628  
Apparatus and process for microbial detection and enumeration  
[NASA-CASE-LAR-12709-1] c 35 N82-28604  
Apparatus for using a time interval counter to measure frequency stability  
[NASA-CASE-NPO-17325-1-CU] c 32 N90-17005  
VLSI binary updown counter  
[NASA-CASE-NPO-17205-1-CU] c 60 N90-21525
- COUNTING CIRCUITS**  
Scanning aspect sensor employing an apertured disc and a commutator  
[NASA-CASE-XGS-08266] c 14 N69-27432  
Ring counter  
[NASA-CASE-XGS-03095] c 09 N69-27463  
Relay binary circuit Patent  
[NASA-CASE-XMF-00421] c 09 N70-34502  
Reversible ring counter employing cascaded single SCR stages Patent  
[NASA-CASE-XGS-01473] c 09 N71-10673  
Meteoroid sensing apparatus having a coincidence network connected to a pair of capacitors Patent  
[NASA-CASE-XLE-01246] c 14 N71-10797  
Magnetic counter Patent  
[NASA-CASE-XNP-08836] c 09 N71-12515  
Synchronous counter Patent  
[NASA-CASE-XGS-02440] c 08 N71-19432  
Digital cardiostachometer system Patent  
[NASA-CASE-XMS-02399] c 05 N71-22896  
Counter and shift register Patent  
[NASA-CASE-XNP-01753] c 08 N71-22897  
Noninterruptable digital counting system Patent  
[NASA-CASE-XNP-09759] c 08 N71-24891  
Frequency measurement by coincidence detection with standard frequency  
[NASA-CASE-MSC-14649-1] c 33 N76-16331  
Redundant operation of counter modules  
[NASA-CASE-NPO-14162-1] c 60 N81-15706
- COUPLERS**  
Lamina transducer coupler and method of making  
[NASA-CASE-LAR-14361-1] c 71 N91-16707
- COUPLES**  
Two fault tolerant toggle-hook release  
[NASA-CASE-MSC-21671-1] c 37 N91-32498
- COUPLING**  
Coupling for linear shaped charge Patent  
[NASA-CASE-XLA-00189] c 33 N70-36846  
Expandible support means  
[NASA-CASE-NPO-11059] c 15 N72-17454  
Coupled cavity traveling wave tube with velocity tapering  
[NASA-CASE-LEW-12296-1] c 33 N82-26568  
Electrical power generating system  
[NASA-CASE-MFS-25302-1] c 33 N83-28319  
Coupling an induction motor type generator to ac power lines --- making windmill generators compatible with public power lines  
[NASA-CASE-MFS-25302-2] c 33 N84-33660  
Magnetic drive coupling  
[NASA-CASE-MSC-21171-1] c 37 N88-23973  
Optical pressure sealing coupling apparatus  
[NASA-CASE-MFS-29348-1] c 74 N89-25689
- COUPLING CIRCUITS**  
Flipflop interrogator and bi-polar current driver Patent  
[NASA-CASE-XGS-03058] c 10 N71-19547  
Antenna array at focal plane of reflector with coupling network for beam switching Patent  
[NASA-CASE-GSC-10220-1] c 07 N71-27233  
Phase modulator Patent  
[NASA-CASE-MSC-13201-1] c 07 N71-28429  
Signal path series step biased multidevice high efficiency amplifier Patent  
[NASA-CASE-GSC-10668-1] c 07 N71-28430  
Automatic quadrature control and measuring system --- using optical coupling circuitry  
[NASA-CASE-MFS-21660-1] c 35 N74-21017  
Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-3] c 33 N75-19520  
Non-contacting power transfer device  
[NASA-CASE-GSC-12595-1] c 33 N82-24422
- COUPLINGS**  
Coupling device  
[NASA-CASE-XMS-07846-1] c 09 N69-21927  
Tubular coupling having frangible connecting means  
[NASA-CASE-XLA-02854] c 15 N69-27490  
Quick release separation mechanism Patent  
[NASA-CASE-XLA-01441] c 15 N70-41679  
Indexed keyed connection Patent  
[NASA-CASE-XMS-02532] c 15 N70-41808  
Quick attach and release fluid coupling assembly Patent  
[NASA-CASE-XKS-01985] c 15 N71-10782  
Ratchet mechanism Patent  
[NASA-CASE-MFS-12805] c 15 N71-17805  
Split nut separation system Patent  
[NASA-CASE-XNP-06914] c 15 N71-21489  
Duct coupling for single-handed operation Patent  
[NASA-CASE-MFS-20395] c 15 N71-24903  
Isolation coupling arrangement for a torque measuring system  
[NASA-CASE-XLA-04897] c 15 N72-22482  
Refrigerated coaxial coupling --- for microwave equipment  
[NASA-CASE-NPO-13504-1] c 33 N75-30430  
Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c 35 N77-27366  
Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c 52 N79-26772  
Coupling device for moving vehicles  
[NASA-CASE-GSC-12322-1] c 37 N80-14398  
Device for coupling a first vehicle to a second vehicle  
[NASA-CASE-GSC-12429-1] c 37 N81-14320  
Micro-fluid exchange coupling apparatus  
[NASA-CASE-ARC-11114-1] c 51 N81-14605  
Reusable captive blind fastener  
[NASA-CASE-MSC-18742-1] c 37 N82-26673  
Apparatus for releasably connecting first and second objects in predetermined space relationship  
[NASA-CASE-MSC-18969-1] c 18 N84-22605  
Connection system --- insuring against loss of a tool component without using multiple tethers  
[NASA-CASE-MSC-20319-1] c 37 N85-21649  
Non-backdrivable free wheeling coupling  
[NASA-CASE-MSC-20475-1] c 37 N87-17037  
Tube coupling device  
[NASA-CASE-MFS-25964-2] c 37 N87-22977  
Preloaded space structural coupling joints  
[NASA-CASE-LAR-13489-1] c 18 N87-27713  
Docking system for spacecraft  
[NASA-CASE-MSC-21327-1] c 18 N90-11798  
Docking mechanism for spacecraft  
[NASA-CASE-MSC-21386-1] c 18 N90-20126  
Quick connect coupling  
[NASA-CASE-MSC-21539-1] c 37 N91-14610  
System for connecting fluid couplings  
[NASA-CASE-MFS-26042-1-SB] c 37 N91-14613  
Connection space reduction mechanism  
[NASA-CASE-GSC-13220-1] c 37 N91-21525  
Two fault tolerant toggle-hook release  
[NASA-CASE-MSC-21671-1] c 37 N91-32498
- COVARIANCE**  
Auto covariance computer  
[NASA-CASE-LAR-12968-1] c 60 N86-21154
- COVERINGS**  
Apparatus for ejection of an instrument cover  
[NASA-CASE-XMF-04132] c 15 N69-27502  
Fire blocking systems for aircraft seat cushions  
[NASA-CASE-ARC-11423-1] c 03 N84-33394  
Hatch cover  
[NASA-CASE-MSC-21356-1] c 18 N90-19278
- COWLINGS**  
Thrust reverser for a long duct fan engine --- for turbofan engines  
[NASA-CASE-LEW-13199-1] c 07 N82-26293
- CRACK OPENING DISPLACEMENT**  
Ultrasonic method and apparatus for determining crack opening load  
[NASA-CASE-LAR-13889-1] c 39 N88-30160
- CRACK PROPAGATION**  
Fatigue testing apparatus  
[NASA-CASE-LEW-14124-1] c 35 N90-23712
- CRACKING (FRACTURING)**  
Method of inhibiting stress corrosion cracks in titanium alloys Patent  
[NASA-CASE-NPO-10271] c 17 N71-16393  
TV fatigue crack monitoring system  
[NASA-CASE-LAR-11490-1] c 39 N78-16387
- CRACKS**  
Method of repairing hidden leaks in tubes  
[NASA-CASE-MFS-19796-1] c 37 N86-32736
- CRANES**  
Space spider crane  
[NASA-CASE-LAR-13411-1-SB] c 18 N88-23828

## CRASH LANDING

Aircraft-mounted crash-activated transmitter device  
[NASA-CASE-MFS-16609-3] c 03 N76-32140

**CREEP RUPTURE STRENGTH**  
Nickel-base alloy containing Mo-W-Al-Cr-Ta-Zr-C-Nb-B  
Patent  
[NASA-CASE-XLE-02082] c 17 N71-16026  
Heat treatment for superalloy  
[NASA-CASE-LEW-14262-1] c 26 N87-28647

**CREEP TESTS**  
Tensile testing apparatus  
[NASA-CASE-LAR-13243-1] c 35 N85-34375

**CRITICAL EXPERIMENTS**  
Gas liquefaction and dispensing apparatus Patent  
[NASA-CASE-NPO-10070] c 15 N71-27372

**CRITICAL TEMPERATURE**  
Stable superconducting magnet --- high current levels  
below critical temperature  
[NASA-CASE-XMF-05373-1] c 33 N79-21264

**CROSS CORRELATION**  
Cross correlation anomaly detection system  
[NASA-CASE-NPO-13283] c 38 N78-17395  
Method and apparatus for calibrating the ionosphere  
and application to surveillance of geophysical events  
[NASA-CASE-NPO-15430-1] c 46 N85-21846  
Optoelectronic associative memory  
[NASA-CASE-NPO-18278-1-CU] c 74 N91-32925

**CROSS FLOW**  
Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c 02 N81-14968  
Wingtip vortex propeller  
[NASA-CASE-LAR-13019-1] c 07 N85-35194  
Crossflow vorticity sensor  
[NASA-CASE-LAR-13436-1-CU] c 02 N88-23759  
Passive laminar flow control of crossflow vorticity  
[NASA-CASE-LAR-13563-1] c 34 N91-23410

**CROSS POLARIZATION**  
Adaptive polarization separation  
[NASA-CASE-LAR-12196-1] c 33 N81-26358

**CROSSED FIELDS**  
Plasma accelerator Patent  
[NASA-CASE-XLA-00675] c 25 N70-33267  
Energy conversion apparatus Patent  
[NASA-CASE-XLE-00212] c 03 N70-34134  
Crossed-field MHD plasma generator/accelerator  
Patent  
[NASA-CASE-XLA-03374] c 25 N71-15562

**CROSSLINKING**  
Trifunctional alcohol  
[NASA-CASE-NPO-10714] c 06 N69-31244  
Trimerization of aromatic nitriles  
[NASA-CASE-LEW-12053-1] c 27 N78-15276  
Polymeric foams from cross-linkable  
poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c 27 N78-31232  
In situ self cross-linking of polyvinyl alcohol battery  
separators  
[NASA-CASE-LEW-12972-1] c 44 N79-25481  
Catalytic trimerization of aromatic nitriles and  
triaryl-s-triazine ring cross-linked high temperature  
resistant polymers and copolymers made thereby  
[NASA-CASE-LEW-12053-2] c 27 N79-28307  
Method of cross-linking polyvinyl alcohol and other water  
soluble resins  
[NASA-CASE-LEW-13103-1] c 27 N80-32516  
Process for the preparation of fluorine containing  
crosslinked elastomeric polytriazine and product so  
produced  
[NASA-CASE-ARC-11248-1] c 27 N81-17259  
The 1,2,4-oxadiazole elastomers --- heat resistant  
polymers  
[NASA-CASE-ARC-11253-1] c 27 N81-17262  
In-situ cross linking of polyvinyl alcohol --- application  
to battery separator films  
[NASA-CASE-LEW-13135-2] c 27 N81-24257  
Cross-linked polyvinyl alcohol and method of making  
same  
[NASA-CASE-LEW-13101-2] c 23 N81-29160  
Polyvinyl alcohol cross-linked with two aldehydes  
[NASA-CASE-LEW-13504-1] c 25 N83-13188  
Elastomer coated filler and composites thereof  
comprising at least 60% by weight of a hydrated filler and  
an elastomer containing an acid substituent  
[NASA-CASE-NPO-14857-1] c 27 N83-19900  
Low temperature cross linking polyimides  
[NASA-CASE-LEW-12876-2] c 27 N83-29392  
Mixed polyvalent-monovalent metal coating for  
carbon-graphite fibers  
[NASA-CASE-NPO-14987-1] c 24 N83-33950  
Polyphenylquinoxalines containing pendant  
phenylethynyl and ethynyl groups --- for thermoplastic  
resins  
[NASA-CASE-LAR-12838-1] c 27 N83-34040  
Process for preparing perfluorotriazine elastomers and  
precursors thereof  
[NASA-CASE-ARC-11402-1] c 27 N84-22744

Ethynyl and substituted ethynyl-terminated  
polyisulones  
[NASA-CASE-LAR-12931-1] c 27 N84-22747  
Thermoset-thermoplastic aromatic polyamide containing  
N-propargyl groups  
[NASA-CASE-LAR-12723-1] c 27 N85-20123  
Chemical approach for controlling nadimide cure  
temperature and rate  
[NASA-CASE-LEW-13770-5] c 27 N85-21352  
Chemical control of nadimide cure temperature and  
rate  
[NASA-CASE-LEW-13770-2] c 25 N85-28982  
Laminate comprising fibers embedded in cured amine  
terminated bis-imide  
[NASA-CASE-ARC-11421-3] c 24 N86-25416  
Process for crosslinking and extending conjugated  
diene-containing polymers  
[NASA-CASE-LAR-13452-1] c 27 N87-22848  
Semi-2-interpenetrating networks of high temperature  
systems  
[NASA-CASE-LAR-13450-1] c 27 N87-28657  
Polyether-polyester graft copolymer  
[NASA-CASE-LAR-13447-1] c 27 N88-18725  
Process for crosslinking methylene-containing aromatic  
polymers with ionizing radiation  
[NASA-CASE-LAR-13448-1] c 27 N90-21198  
A tough high performance composite matrix  
[NASA-CASE-LAR-14338-1] c 24 N90-26881  
A tough performance simultaneous  
semi-interpenetrating polymer network  
[NASA-CASE-LAR-14339-1] c 27 N90-26955  
Methyl substituted polyimides containing carbonyl and  
ether connecting groups  
[NASA-CASE-LAR-14351-1] c 27 N91-13561  
Tissue simulating gel for medical research  
[NASA-CASE-LAR-14036-1] c 27 N91-13562

**CROSSTALK**  
Integrated filter and detector array for spectral imaging  
[NASA-CASE-NPO-18317-1-CU] c 74 N91-32926

**CRUCIBLES**  
Evaporant holder  
[NASA-CASE-XLA-03105] c 15 N69-27483

**CRUCIFORM WINGS**  
Solar powered aircraft  
[NASA-CASE-LAR-12615-1] c 05 N84-12154

**CRUDE OIL**  
Decontamination of petroleum products Patent  
[NASA-CASE-XNP-03835] c 06 N71-23499  
Crude oil desulfurization  
[NASA-CASE-NPO-14542-1] c 25 N82-23282

**CRUSTAL FRACTURES**  
System for real-time crustal deformation monitoring  
[NASA-CASE-NPO-14124-1] c 46 N80-14603

**CRYOGENIC COOLING**  
Support assembly for cryogenically coolable low-noise  
choke waveguide  
[NASA-CASE-NPO-14253-1] c 32 N80-32605  
Low cost cryostat  
[NASA-CASE-NPO-14513-1] c 35 N81-14287  
Stirling cycle cryogenic cooler  
[US-PATENT-4,389,849] c 44 N83-28574  
Oxygen chemisorption cryogenic refrigerator  
[NASA-CASE-NPO-16734-1-CU] c 31 N88-14223  
Krypton based adsorption type cryogenic refrigerator  
[NASA-CASE-NPO-17334-1-CU] c 31 N88-23917  
Cryogenic regenerator including saran-carbon heat  
conduction matrix  
[NASA-CASE-NPO-17291-1-CU] c 34 N88-23946  
Multicomponent gas sorption Joule-Thomson  
refrigerator  
[NASA-CASE-NPO-17569-1-CU] c 31 N90-26176

**CRYOGENIC EQUIPMENT**  
Refrigeration apparatus  
[NASA-CASE-NPO-10309] c 15 N69-23190  
Piping arrangement through a double chamber  
structure  
[NASA-CASE-XNP-08882] c 15 N69-39935  
Method and apparatus for cryogenic wire stripping  
Patent  
[NASA-CASE-MFS-10340] c 15 N71-17628  
Dual solid cryogenics for spacecraft refrigeration Patent  
[NASA-CASE-GSC-10188-1] c 23 N71-24725  
Valving device for automatic refilling in cryogenic liquid  
systems  
[NASA-CASE-NPO-11177] c 15 N72-17453  
Dual stage check valve  
[NASA-CASE-MS-C-13587-1] c 15 N73-30459  
Heat operated cryogenic electrical generator  
[NASA-CASE-NPO-13303-1] c 20 N75-24837  
Cryostat system for temperatures on the order of 2 deg  
K or less  
[NASA-CASE-NPO-13459-1] c 31 N77-10229  
Device for tensioning test specimens within an  
hermetically sealed chamber  
[NASA-CASE-MFS-23281-1] c 35 N77-22450

Multistation refrigeration system  
[NASA-CASE-NPO-13839-1] c 31 N78-25256  
System for and method of freezing biological tissue  
[NASA-CASE-GSC-12173-1] c 51 N79-10694  
Shock isolator for operating a diode laser on a  
closed-cycle refrigerator  
[NASA-CASE-GSC-12297-1] c 37 N79-28549  
Low temperature latching solenoid  
[NASA-CASE-MS-C-18106-1] c 33 N82-11357  
Resilient seal ring assembly with spring means applying  
force to wedge member --- cryogenic applications  
[NASA-CASE-MFS-25678-1] c 37 N84-11497  
Magnetically actuated compressor  
[NASA-CASE-GSC-12799-1] c 31 N85-21404  
Propulsion apparatus and method using boil-off gas from  
a cryogenic liquid  
[NASA-CASE-MFS-25946-1] c 20 N86-26368  
Low temperature storage container for transporting  
perishables to space station  
[NASA-CASE-MFS-28248-1] c 31 N88-24817  
Two stage sorption type cryogenic refrigerator including  
heat regeneration system  
[NASA-CASE-NPO-17630-1-CU] c 31 N89-29577  
Surface tension confined liquid cryogen cooler  
[NASA-CASE-GSC-13112-1] c 31 N89-29578

**CRYOGENIC FLUID STORAGE**  
Apparatus for transferring cryogenic liquids Patent  
[NASA-CASE-XLE-00345] c 15 N70-38020  
Cryogenic storage system Patent  
[NASA-CASE-XMS-04390] c 31 N70-41871  
Techniques for insulating cryogenic fuel containers  
Patent  
[NASA-CASE-XLA-01967] c 31 N70-42015  
Method of making a filament-wound container Patent  
[NASA-CASE-XLE-03803-2] c 15 N71-17651  
Cryogenic insulation system Patent  
[NASA-CASE-XLE-04222] c 23 N71-22881  
Panelized high performance multilayer insulation  
Patent  
[NASA-CASE-MFS-14023] c 33 N71-25351  
Cryogenic thermal insulation Patent  
[NASA-CASE-XMF-05046] c 33 N71-28892  
Zero gravity shadow shield afigner  
[NASA-CASE-KSC-10622-1] c 31 N72-21893  
Heater-mixer for stored fluids  
[NASA-CASE-ARC-10442-1] c 35 N74-15093  
Low heat leak connector for cryogenic system  
[NASA-CASE-XLE-02367-1] c 31 N79-21225  
Cryogenic container compound suspension strap  
[NASA-CASE-ARC-11157-1] c 37 N80-18393  
Cryogenic insulation strength and bond tester  
[NASA-CASE-MFS-25910-1] c 39 N86-20841  
Cryogenic insulation system  
[NASA-CASE-LAR-13506-1] c 27 N89-12741

**CRYOGENIC FLUIDS**  
Cryogenic apparatus for measuring the intensity of  
magnetic fields  
[NASA-CASE-XAC-02407] c 14 N69-27423  
Venting vapor apparatus Patent  
[NASA-CASE-XLE-00288] c 15 N70-34247  
Conical valve plug Patent  
[NASA-CASE-XLE-00715] c 15 N70-34859  
Fluid coupling Patent  
[NASA-CASE-XLE-00397] c 15 N70-36492  
Densitometer Patent  
[NASA-CASE-XLE-00688] c 14 N70-41330  
Cryogenic connector for vacuum use Patent  
[NASA-CASE-XGS-02441] c 15 N70-41629  
Liquid flow sight assembly Patent  
[NASA-CASE-XLE-02998] c 14 N70-42074  
Automatic thermal switch Patent  
[NASA-CASE-XNP-03796] c 23 N71-15467  
Zero gravity separator Patent  
[NASA-CASE-XLE-00586] c 15 N71-15968  
Apparatus for measuring thermal conductivity Patent  
[NASA-CASE-XGS-01052] c 14 N71-15992  
Process of forming particles in a cryogenic path  
Patent  
[NASA-CASE-NPO-10250] c 23 N71-16212  
Superconducting alternator Patent  
[NASA-CASE-XLE-02823] c 09 N71-23443  
Flow angle sensor and read out system Patent  
[NASA-CASE-XLE-04503] c 14 N71-24864  
Geysing inhibitor for vertical cryogenic transfer pipe  
[NASA-CASE-KSC-10615] c 15 N73-12486  
Magnetocaloric pump --- for cryogenic fluids  
[NASA-CASE-LEW-11672-1] c 37 N74-27904  
Cryogenic liquid sensor  
[NASA-CASE-NPO-10619-1] c 35 N77-21393  
Quick-disconnect inflatable seal assembly  
[NASA-CASE-KSC-11368-1] c 37 N89-13786

**CRYOGENIC GYROSCOPES**  
Cryogenic gyroscope housing --- with annular disks for  
gas spin-up  
[NASA-CASE-MFS-21136-1] c 35 N74-18323

**CRYOGENIC MAGNETS**

- Superconducting alternator  
[NASA-CASE-XLE-02824] c 03 N69-39890
- CRYOGENIC ROCKET PROPELLANTS**  
Quick attach and release fluid coupling assembly  
Patent  
[NASA-CASE-XKS-01985] c 15 N71-10782  
Hot wire liquid level detector for cryogenic fluids  
Patent  
[NASA-CASE-XLE-00454] c 23 N71-17802  
Automatic pump Patent  
[NASA-CASE-XNP-04731] c 15 N71-24042
- CRYOGENIC STORAGE**  
Insulation system Patent  
[NASA-CASE-XLE-02647] c 18 N71-23658  
Filament wound container Patent  
[NASA-CASE-XLE-03803] c 15 N71-23816
- CRYOGENIC TEMPERATURE**  
Low noise cryogenic dielectric resonator oscillator  
[NASA-CASE-NPO-17157-1-CU] c 33 N88-26596
- CRYOGENIC WIND TUNNELS**  
Continuous self-locking spiral wound seal --- for maintaining pressure between chambers in cryogenic wind tunnels  
[NASA-CASE-LAR-12315-1] c 37 N82-24490  
Miniature remote dead weight calibrator  
[NASA-CASE-LAR-13564-1] c 35 N87-25558  
Method of forming a multiple layer dielectric and a hot film sensor therewith  
[NASA-CASE-LAR-13678-1] c 76 N90-24168
- CRYOGENICS**  
Low temperature aluminum alloy Patent  
[NASA-CASE-XMF-02786] c 17 N71-20743  
Cryogenic cooling system Patent  
[NASA-CASE-NPO-10467] c 23 N71-26654  
Germanium coated microbridge and method  
[NASA-CASE-MFS-23274-1] c 33 N78-13320  
Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures  
[NASA-CASE-NPO-14254-1] c 36 N80-18372  
High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-3] c 26 N80-32484  
Multispectral scanner optical system  
[NASA-CASE-MSC-18255-1] c 74 N80-33210  
Polymeric compositions and their method of manufacture --- forming filled polymer systems using cryogenics  
[NASA-CASE-NPO-10424-1] c 27 N81-24258  
Cryogenic anti-friction bearing with inner race  
[NASA-CASE-MFS-28384-1] c 37 N90-27112  
Pressure transducer and system for cryogenic environments  
[NASA-CASE-LAR-14579-1] c 35 N91-28546
- CRYOLITE**  
Ultraviolet filter  
[NASA-CASE-XNP-02340] c 23 N69-24332
- CRYOSTATS**  
Low temperature flexure fatigue cryostat Patent  
[NASA-CASE-XMF-02964] c 14 N71-17659  
Horizontal cryostat for fatigue testing Patent  
[NASA-CASE-XMF-10968] c 14 N71-24234  
Heater-mixer for stored fluids  
[NASA-CASE-ARC-10442-1] c 35 N74-15093  
Cryostat system for temperatures on the order of 2 deg K or less  
[NASA-CASE-NPO-13459-1] c 31 N77-10229  
Low cost cryostat  
[NASA-CASE-NPO-14513-1] c 35 N81-14287
- CRYOTRAPPING**  
Atomic hydrogen storage --- cryotrapping and magnetic field strength  
[NASA-CASE-LEW-12081-2] c 28 N80-20402
- CRYSTAL DEFECTS**  
Method of controlling defect orientation in silicon crystal ribbon growth  
[NASA-CASE-NPO-13918-1] c 76 N79-11920  
Method of growing low defect, high purity crystalline layers utilizing lateral overgrowth of a patterned mask  
[NASA-CASE-NPO-15813-2] c 76 N87-15882
- CRYSTAL FILTERS**  
Infrared tunable laser  
[NASA-CASE-ARC-10463-1] c 09 N73-32111  
Partial polarizer filter  
[NASA-CASE-GSC-12225-1] c 74 N79-14891
- CRYSTAL GROWTH**  
Apparatus for producing high purity silicon carbide crystals Patent  
[NASA-CASE-XLA-02057] c 26 N70-40015  
Method of producing crystalline materials  
[NASA-CASE-NPO-10440] c 15 N72-21466  
Vapor phase growth of groups 3-5 compounds by hydrogen chloride transport of the elements  
[NASA-CASE-LAR-11144-1] c 25 N75-26043  
Process for fabricating SiC semiconductor devices  
[NASA-CASE-LEW-12094-1] c 76 N76-25049

- Method of crystallization --- in gravity-free environments  
[NASA-CASE-MFS-23001-1] c 76 N77-32919  
Pressure transducer --- using a monomeric charge transfer complex sensor  
[NASA-CASE-NPO-11150] c 35 N78-17359  
Method of controlling defect orientation in silicon crystal ribbon growth  
[NASA-CASE-NPO-13918-1] c 76 N79-11920  
Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt  
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Method of mitigating titanium impurities effects in p-type silicon material for solar cells  
[NASA-CASE-NPO-14635-1] c 44 N80-24741  
Means for growing ribbon crystals without subjecting the crystals to thermal shock-induced strains  
[NASA-CASE-NPO-14298-1] c 76 N80-32244  
Method of growing a ribbon crystal particularly suited for facilitating automated control of ribbon width  
[NASA-CASE-NPO-14295-1] c 76 N80-32245  
Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c 33 N81-19389  
Ampoule sealing apparatus and process --- for housing a semiconductor growth charge under vacuum  
[NASA-CASE-LAR-12847-1] c 33 N83-16633  
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Method and apparatus for minimizing convection during crystal growth from solution  
[NASA-CASE-NPO-15811-1] c 76 N84-12968  
Process and apparatus for growing a crystal ribbon  
[NASA-CASE-NPO-15629-1] c 76 N84-35113  
Method for growth of crystals by pressure reduction of supercritical or subcritical solution  
[NASA-CASE-NPO-15772-1] c 76 N85-29800  
Low defect, high purity crystalline layers grown by selective deposition  
[NASA-CASE-NPO-15813-1] c 76 N85-30922  
Planar oscillatory stirring apparatus  
[NASA-CASE-MFS-26002-1-CU] c 35 N86-26598  
Method for growing low defect, high purity crystalline layers utilizing lateral overgrowth of a patterned mask  
[NASA-CASE-NPO-15813-2] c 76 N87-15882  
Total immersion crystal growth  
[NASA-CASE-NPO-15800-2] c 76 N87-23286  
Apparatus and procedure to detect a liquid-solid interface during crystal growth in a bridgman furnace  
[NASA-CASE-LAR-13597-1-CU] c 25 N87-23713  
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[NASA-CASE-NPO-16808-1-CU] c 76 N87-25868  
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[NASA-CASE-LAR-13476-1-CU] c 76 N87-29360  
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[NASA-CASE-MFS-28144-1] c 76 N88-24545  
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[NASA-CASE-MFS-28234-1] c 52 N90-20616  
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[NASA-CASE-NPO-17723-1-CU] c 76 N90-26685  
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[NASA-CASE-NPO-17724-1-CU] c 76 N90-27517  
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[NASA-CASE-MFS-26061-1] c 76 N91-16815  
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[NASA-CASE-MFS-28507-1] c 76 N91-23933  
Process for the controlled growth of single-crystal films of silicon carbide polytypes on silicon carbide wafers  
[NASA-CASE-LEW-15222-1] c 76 N91-26966  
Crystal growth in a microgravity environment  
[NASA-CASE-MFS-28473-1] c 76 N91-26968
- CRYSTAL LATTICES**  
Apparatus for use in examining the lattice of a semiconductor wafer by X-ray diffraction  
[NASA-CASE-MFS-23315-1] c 76 N78-24950

- Crystal cleaving machine  
[NASA-CASE-GSC-12584-1] c 37 N82-32730  
MBE growth technology for high quality strained III-V layers  
[NASA-CASE-NPO-17723-1-CU] c 76 N90-26685  
Growth of III-V films by control of MBE growth front stoichiometry  
[NASA-CASE-NPO-17724-1-CU] c 76 N90-27517
- CRYSTAL OPTICS**  
Optical crystal temperature gauge with fiber optic connections  
[NASA-CASE-MSC-18627-1] c 74 N82-30071
- CRYSTAL OSCILLATORS**  
Microbalance including crystal oscillators for measuring contaminants in a gas system Patent  
[NASA-CASE-NPO-10144] c 14 N71-17701  
Passive intrusion detection system  
[NASA-CASE-NPO-13804-1] c 33 N80-23559  
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[NASA-CASE-GSC-12804-1] c 33 N86-20668  
Real-time dynamic holographic image storage device  
[NASA-CASE-LAR-13989-1] c 35 N91-13694
- CRYSTAL RECTIFIERS**  
Turn on transient limiter Patent  
[NASA-CASE-GSC-10413] c 10 N71-26531
- CRYSTAL STRUCTURE**  
Method of growing composites of the type exhibiting the Soret effect --- improved structure of eutectic alloy crystals  
[NASA-CASE-MFS-22926-1] c 24 N77-27187
- CRYSTALLINITY**  
Crystalline polyimides --- reinforcing fibers for high temperature composites and adhesives as well as flame retardation  
[NASA-CASE-LAR-12099-1] c 27 N80-16158  
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[NASA-CASE-NPO-15813-2] c 76 N87-15882  
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[NASA-CASE-LAR-13732-1] c 27 N87-25474
- CRYSTALLIZATION**  
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[NASA-CASE-MFS-23001-1] c 76 N77-32919  
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[NASA-CASE-NPO-15800-2] c 76 N87-23286  
Novel polyimide compositions based on 4,4': isophthaloyldiphthalic anhydride (IDPA)  
[NASA-CASE-LAR-14194-1] c 24 N90-15148  
Apparatus for mixing solutions in low gravity environments  
[NASA-CASE-MFS-26047-1] c 29 N90-21209
- CRYSTALS**  
Brushless direct current tachometer Patent  
[NASA-CASE-MFS-20385] c 09 N71-24904  
Method and apparatus for slicing crystals  
[NASA-CASE-GSC-12291-1] c 76 N80-18951  
Crystal cleaving machine  
[NASA-CASE-GSC-12584-1] c 37 N82-32730  
Workpiece positioning vise  
[NASA-CASE-GSC-12762-1] c 37 N84-28083  
Dynamic range compression/expansion of light beams by photorefractive crystals  
[NASA-CASE-NPO-17140-1-CU] c 74 N89-14077  
Method of preparing radially homogeneous mercury cadmium telluride crystals  
[NASA-CASE-MFS-25786-2] c 76 N90-20896  
Reflection oscillators employing series resonant crystals  
[NASA-CASE-GSC-13173-1] c 33 N90-23635  
Hanging drop crystal growth apparatus  
[NASA-CASE-MFS-26061-1] c 76 N91-16815  
Method and apparatus for second-rank tensor generation  
[NASA-CASE-NPO-17512-1-CU] c 74 N91-26918  
Crystal growth in a microgravity environment  
[NASA-CASE-MFS-28473-1] c 76 N91-26968
- CUBIC LATTICES**  
Stabilized lanthanum sulphur compounds --- thermoelectric materials  
[NASA-CASE-NPO-16135-1] c 25 N83-24572
- CUES**  
Helmet weight simulator  
[NASA-CASE-LAR-12320-1] c 54 N81-27806
- CUFFS**  
Logic-controlled occlusive cuff system  
[NASA-CASE-MSC-14836-1] c 52 N82-11770  
Prosthetic occlusive device for an internal passageway  
[NASA-CASE-MFS-25740-1] c 52 N84-11744
- CULTURE TECHNIQUES**  
Variable angle tube holder  
[NASA-CASE-LAR-10507-1] c 11 N72-25284

Automatic inoculating apparatus --- includes movable carriage, drive motor, and swabbing motor  
 [NASA-CASE-LAR-11074-1] c 51 N75-13502

Automatic microbial transfer device  
 [NASA-CASE-LAR-11354-1] c 35 N75-27330

Electrochemical detection device --- for use in microbiology  
 [NASA-CASE-LAR-11922-1] c 25 N79-24073

Indirect microbial detection  
 [NASA-CASE-LAR-12520-1] c 51 N81-28698

Enhancement of in vitro guayule propagation  
 [NASA-CASE-NPO-15213-1] c 51 N83-17045

Method for detecting coliform organisms  
 [NASA-CASE-ARC-11322-1] c 51 N83-28849

Production of butanol by fermentation in the presence of cocultures of clostridium  
 [NASA-CASE-NPO-16203-1] c 23 N85-35227

Hollow fiber clinostat: Technical abstract  
 [NASA-CASE-MFS-28370-1] c 35 N89-28793

Three-dimensional coculture process  
 [NASA-CASE-MSC-21560-1] c 51 N90-18852

Three-dimensional cell to tissue assembly process  
 [NASA-CASE-MSC-21559-1] c 51 N91-13860

Bio-reactor chamber  
 [NASA-CASE-MSC-20929-1] c 51 N91-14703

A culture vessel with large perfusion area to volume ratio  
 [NASA-CASE-MSC-21662-1] c 51 N91-17531

Rotating bio-reactor cell culture apparatus  
 [NASA-CASE-MSC-21293-1] c 51 N91-21700

Spiral vane bioreactor  
 [NASA-CASE-MSC-21361-1] c 51 N91-21701

Horizontally rotated cell culture system with a coaxial tubular oxygenator  
 [NASA-CASE-MSC-21294-1] c 51 N91-30667

**CURIE TEMPERATURE**  
 Manganese bismuth films with narrow transfer characteristics for Curie-point switching  
 [NASA-CASE-NPO-11336-1] c 76 N79-16678

**CURING**  
 Reaction cured glass and glass coatings  
 [NASA-CASE-ARC-11051-1] c 27 N78-32260

Ambient cure polyimide foams --- thermal resistant foams  
 [NASA-CASE-ARC-11170-1] c 27 N79-11215

Curing agent for polyepoxides and epoxy resins and composites cured therewith --- preventing carbon fiber release  
 [NASA-CASE-LEW-13226-1] c 27 N81-17260

Method of neutralizing the corrosive surface of amine-cured epoxy resins  
 [NASA-CASE-GSC-12686-1] c 27 N83-34039

Fluoroether modified epoxy composites  
 [NASA-CASE-ARC-11418-1] c 24 N84-11213

Method and technique for installing light-weight, fragile, high-temperature fiber insulation  
 [NASA-CASE-MSC-16934-3] c 24 N84-16262

Chemical approach for controlling nadimide cure temperature and rate  
 [NASA-CASE-LEW-13770-1] c 27 N84-27885

Chemical approach for controlling nadimide cure temperature and rate with maleimide  
 [NASA-CASE-LEW-13770-3] c 27 N85-21350

Chemical approach for controlling nadimide cure temperature and rate with maleimide  
 [NASA-CASE-LEW-13770-4] c 27 N85-21351

Chemical control of nadimide cure temperature and rate  
 [NASA-CASE-LEW-13770-2] c 25 N85-28982

Metal (2,4,4',4''-phthalocyanine tetraamines as curing agents for epoxy resins  
 [NASA-CASE-ARC-11424-1] c 27 N85-34281

Toughening reinforced epoxy composites with brominated polymeric additives  
 [NASA-CASE-ARC-11427-1] c 24 N86-19380

High performance mixed bisimide resins and composites based thereon  
 [NASA-CASE-ARC-11538-1SB] c 24 N86-21590

Ethynyl and substituted ethynyl-terminated polysulfones  
 [NASA-CASE-LAR-12931-2] c 27 N86-21675

Process for curing bismaleimide resins  
 [NASA-CASE-ARC-11429-4CU] c 27 N87-15304

Cellular thermosetting fluoropolymers and process for making them  
 [NASA-CASE-GSC-13008-1] c 27 N88-23894

Method of controlling a resin curing process --- for fiber reinforced composites  
 [NASA-CASE-MSC-21169-1] c 27 N89-29539

Nonintrusive method and apparatus for monitoring the cure of polymeric materials  
 [NASA-CASE-LAR-13465-1] c 27 N90-23544

New core design, for use with precision composite reflectors  
 [NASA-CASE-NPO-17858-1-CU] c 24 N90-26880

Process for bonding elastomers to metal  
 [NASA-CASE-LAR-13645-1] c 27 N91-28424

Flush mounting of thin film sensors  
 [NASA-CASE-LAR-14446-1] c 31 N91-28454

**CURRENT AMPLIFIERS**  
 Multi-channel temperature measurement amplification system --- solar heating systems  
 [NASA-CASE-MFS-23775-1] c 44 N82-16474

Tuned analog network  
 [NASA-CASE-GSC-12650-1] c 33 N84-14421

A dc to dc converter  
 [NASA-CASE-MFS-25430-1] c 33 N84-16453

Differential current source  
 [NASA-CASE-GSC-13280-1] c 33 N91-27479

**CURRENT DENSITY**  
 Solid state switch  
 [NASA-CASE-XNP-09228] c 09 N69-27500

Method and apparatus for sputtering utilizing an apertured electrode and a pulsed substrate bias  
 [NASA-CASE-LEW-10920-1] c 17 N73-24569

Stable superconducting magnet --- high current levels below critical temperature  
 [NASA-CASE-XMF-05373-1] c 33 N79-21264

Catalyst surfaces for the chromous/chromic redox couple  
 [NASA-CASE-LEW-13148-2] c 44 N81-29524

**CURRENT DISTRIBUTION**  
 Connector - Electrical  
 [NASA-CASE-XLA-01288] c 09 N69-21470

Electrostatic ion rocket engine Patent  
 [NASA-CASE-XLE-02066] c 28 N71-15661

Reversible current control apparatus Patent  
 [NASA-CASE-XLA-09371] c 10 N71-18724

Polarity sensitive circuit Patent  
 [NASA-CASE-XNP-00952] c 10 N71-23271

Load insensitive electrical device --- power converters for supplying direct current at one voltage from a source at another voltage  
 [NASA-CASE-XER-11046-2] c 33 N74-22864

**CURRENT REGULATORS**  
 Apparatus for ballasting high frequency transistors  
 [NASA-CASE-XGS-05003] c 09 N69-24318

Baseline stabilization system for ionization detector Patent  
 [NASA-CASE-XNP-03128] c 10 N70-41991

Magnetic core current steering commutator Patent  
 [NASA-CASE-NPO-10201] c 08 N71-18694

Increasing efficiency of switching type regulator circuits Patent  
 [NASA-CASE-XMS-09352] c 09 N71-23316

Saturation current protection apparatus for saturable core transformers Patent  
 [NASA-CASE-ERC-10075] c 09 N71-24800

Drive circuit for minimizing power consumption in inductive load Patent  
 [NASA-CASE-NPO-10716] c 09 N71-24892

Turn on transient limiter Patent  
 [NASA-CASE-GSC-10413] c 10 N71-26531

Current regulating voltage divider  
 [NASA-CASE-MFS-20935] c 09 N71-34212

Ripple indicator  
 [NASA-CASE-KSC-10162] c 09 N72-11225

Inrush current limiter  
 [NASA-CASE-GSC-11789-1] c 33 N77-14333

Circuit for automatic load sharing in parallel converter modules  
 [NASA-CASE-NPO-14056-1] c 33 N79-24257

Three phase power factor controller  
 [NASA-CASE-MFS-25535-1] c 33 N81-12330

Motor power factor controller with a reduced voltage starter  
 [NASA-CASE-MFS-25586-1] c 33 N82-11360

Electronic system for high power load control --- solar arrays  
 [NASA-CASE-NPO-15358-1] c 33 N83-27126

Differential current source  
 [NASA-CASE-GSC-13280-1] c 33 N91-27479

**CURVATURE**  
 Spin forming tubular elbows Patent  
 [NASA-CASE-XMF-01083] c 15 N71-22723

Two degree inverted flexure  
 [NASA-CASE-ARC-10345-1] c 15 N73-12488

Cylindrical surface profile and diameter measuring tool and method  
 [NASA-CASE-MFS-28287-1] c 35 N88-23959

**CURVE FITTING**  
 Voltage-current characteristic simulator Patent  
 [NASA-CASE-XMS-01554] c 10 N71-10578

**CURVED PANELS**  
 Method and apparatus for making curved reflectors Patent  
 [NASA-CASE-XLE-08917] c 15 N71-15597

Radio frequency shielded enclosure Patent  
 [NASA-CASE-XMF-09422] c 07 N71-19436

Roll-up solar array Patent  
 [NASA-CASE-NPO-10188] c 03 N71-20273

Apparatus for making curved reflectors Patent  
 [NASA-CASE-XLE-08917-2] c 15 N71-24836

Variable contour securing system  
 [NASA-CASE-MSC-16270-1] c 37 N78-27423

**CUSHIONS**  
 Seat cushion to provide realistic acceleration cues to aircraft simulator pilot  
 [NASA-CASE-LAR-12149-2] c 09 N79-31228

Fire blocking systems for aircraft seat cushions  
 [NASA-CASE-ARC-11423-1] c 03 N84-33394

**CUTTERS**  
 Aligning and positioning device Patent  
 [NASA-CASE-XMS-04178] c 15 N71-22798

Weld preparation machine Patent  
 [NASA-CASE-XKS-07953] c 15 N71-26134

Microcircuit negative cutter  
 [NASA-CASE-XLA-09843] c 15 N72-27485

Insert facing tool --- manually operated cutting tool for forming studs in honeycomb material  
 [NASA-CASE-MFS-21485-1] c 37 N74-25968

Grinding arrangement for ball nose milling cutters  
 [NASA-CASE-LAR-10450-1] c 37 N74-27905

Ophthalmic liquifaction pump  
 [NASA-CASE-LEW-12051-1] c 52 N75-33640

Coal-shale interface detection  
 [NASA-CASE-MFS-23720-3] c 43 N79-25443

System for slicing silicon wafers  
 [NASA-CASE-NPO-14406-1] c 37 N80-29703

Open ended tubing cutters  
 [NASA-CASE-MSC-18538-1] c 37 N82-26672

Tubing and cable cutting tool  
 [NASA-CASE-LAR-12786-1] c 37 N84-28085

Cutting head for ultrasonic lithotripsy  
 [NASA-CASE-GSC-12944-1] c 52 N86-19885

**CUTTING**  
 Ellipsograph for pantograph Patent  
 [NASA-CASE-XLA-03102] c 14 N71-21079

Precision alignment apparatus for cutting a workpiece  
 [NASA-CASE-LAR-11658-1] c 37 N77-14478

Explosively activated egress area  
 [NASA-CASE-LAR-12624-1] c 01 N83-35992

Tubing and cable cutting tool  
 [NASA-CASE-LAR-12786-1] c 37 N84-28085

New core design for use with precision composite reflectors  
 [NASA-CASE-NPO-17858-1-CU] c 24 N90-26880

Power saw  
 [NASA-CASE-MSC-21469-1] c 37 N91-31655

Nozzle fabrication technique  
 [NASA-CASE-MSC-21299-2] c 37 N91-32508

**CYANATES**  
 Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams  
 [NASA-CASE-ARC-11107-1] c 25 N80-16116

**CYCLES**  
 Pneumatic system for controlling and actuating pneumatic cyclic devices  
 [NASA-CASE-XMS-04843] c 03 N69-21469

Feedback shift register with states decomposed into cycles of equal length  
 [NASA-CASE-NPO-11082] c 08 N72-22167

**CYCLIC ACCELERATORS**  
 Cyclical bi-directional rotary actuator  
 [NASA-CASE-GSC-11883-1] c 37 N77-19458

**CYCLIC COMPOUNDS**  
 Carboranylchlorophosphazenes and their polymers --- thermal insulation  
 [NASA-CASE-ARC-11176-1] c 27 N82-18389

Maleimido substituted aromatic cyclotriphosphazenes  
 [NASA-CASE-ARC-11428-1] c 23 N86-19376

Aminophenoxy cyclotriphosphazene cured epoxy resins and the composites, laminates, adhesives and structures thereof  
 [NASA-CASE-ARC-11548-1] c 27 N87-25469

Aromatic cyclotriphosphazenes  
 [NASA-CASE-NPO-11428-3] c 23 N88-24692

**CYCLIC HYDROCARBONS**  
 Intumescent composition, foamed product prepared therewith, and process for making same  
 [NASA-CASE-ARC-10304-1] c 18 N73-26572

Synthesis of 2,4,8,10-tetroxaspiro[5.5]undecane  
 [NASA-CASE-ARC-11243-2] c 23 N85-33187

**CYCLIC LOADS**  
 Automatic fatigue test temperature programmer Patent  
 [NASA-CASE-XLA-02059] c 33 N71-24276

Low cycle fatigue testing machine  
 [NASA-CASE-LAR-10270-1] c 32 N72-25877

Material fatigue testing system  
 [NASA-CASE-MFS-20673] c 14 N73-20476

Fatigue testing a plurality of test specimens and method  
 [NASA-CASE-MFS-28118-1] c 39 N87-25601

**CYCLOTRON RADIATION**  
 Targets for producing high purity I-123  
 [NASA-CASE-LEW-10518-3] c 25 N78-27226

**CYCLOTRON RESONANCE**

Miniature cyclotron resonance ion source using small permanent magnet  
[NASA-CASE-NPO-14324-1] c 72 N80-27163

**CYCLOTRON RESONANCE DEVICES**

Miniature cyclotron resonance ion source using small permanent magnet  
[NASA-CASE-NPO-14324-1] c 72 N80-27163  
Gyrotron transmitting tube  
[NASA-CASE-LEW-12329-1] c 33 N83-31952

**CYLINDRICAL ANTENNAS**

Variable beamwidth antenna --- with multiple beam, variable feed system  
[NASA-CASE-GSC-11862-1] c 32 N76-18295

**CYLINDRICAL BODIES**

Apparatus for scanning the surface of a cylindrical body  
[NASA-CASE-NPO-11861-1] c 36 N74-20009  
Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c 02 N81-14968  
Alignment and assembly tool for very large diameter cylinders  
[NASA-CASE-MFS-28001-2] c 37 N88-14360  
Cylindrical surface profile and diameter measuring tool and method  
[NASA-CASE-MFS-28287-1] c 35 N88-23959  
Thermal compensating mount  
[NASA-CASE-LAR-14207-1] c 35 N91-14590

**CYLINDRICAL CHAMBERS**

Modified spiral wound retaining ring  
[NASA-CASE-LAR-12361-1] c 37 N83-19091

**CYLINDRICAL SHELLS**

Segmented tubular cushion springs and spring assembly  
[NASA-CASE-ARC-11349-1] c 37 N86-20797

**CYSTS**

Coupling apparatus for ultrasonic medical diagnostic system  
[NASA-CASE-NPO-13935-1] c 52 N79-14751

**CYTOLOGY**

Spiral vane bioreactor  
[NASA-CASE-MSC-21361-1] c 51 N91-21701

**CZOCHEWALSKI METHOD**

Electromigration process for the purification of molten silicon during crystal growth  
[NASA-CASE-NPO-14831-1] c 76 N82-30105

**D****DAMAGE**

Method of repairing surface damage to porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MSC-18736-1] c 24 N83-13172

**DAMPERS (VALVES)**

Dual clearance squeeze film damper  
[NASA-CASE-LEW-13506-1] c 37 N85-33490

**DAMPING**

Dynamic precession damper for spin stabilized vehicles Patent  
[NASA-CASE-XLA-01989] c 21 N70-34295  
Slosh suppressing device and method Patent  
[NASA-CASE-XMF-00658] c 12 N70-38997  
Attitude control and damping system for spacecraft Patent  
[NASA-CASE-XLA-02551] c 21 N71-21708  
Passive caging mechanism Patent  
[NASA-CASE-GSC-10306-1] c 15 N71-24694  
Nutation damper  
[NASA-CASE-GSC-11205-1] c 15 N73-25513  
Parasitic suppressing circuit  
[NASA-CASE-ERC-10403-1] c 10 N73-26228  
Apparatus for disintegrating kidney stones  
[NASA-CASE-GSC-12652-1] c 52 N84-34913  
Arrangement for damping the resonance in a laser diode  
[NASA-CASE-NPO-15980-1] c 36 N85-30305  
Damping seal for turbomachinery  
[NASA-CASE-MFS-25842-2] c 37 N86-20788  
Composite passive damping struts for large precision structures  
[NASA-CASE-NPO-17914-1-CU] c 39 N91-13767  
Turbomachinery rotor support with damping  
[NASA-CASE-MFS-28345-1] c 37 N91-14608

**DATA ACQUISITION**

Analog-to-digital conversion system Patent  
[NASA-CASE-XAC-00404] c 08 N70-40125  
Position location and data collection system and method Patent  
[NASA-CASE-GSC-10083-1] c 30 N71-16090  
Analog signal integration and reconstruction system Patent  
[NASA-CASE-NPO-10344] c 10 N71-26544  
Data transfer system Patent  
[NASA-CASE-NPO-12107] c 08 N71-27255

Simultaneous acquisition of tracking data from two stations  
[NASA-CASE-NPO-13292-1] c 32 N75-15854  
Contour detector and data acquisition system for the left ventricular outline  
[NASA-CASE-ARC-10985-1] c 52 N79-10724  
Adaptive data acquisition multiplexing system and method  
[NASA-CASE-MSC-21170-1] c 17 N91-14371

**DATA COLLECTION PLATFORMS**

Remote platform power conserving system  
[NASA-CASE-GSC-11182-1] c 15 N75-13007

**DATA COMPRESSION**

Data compression system with a minimum time delay unit Patent  
[NASA-CASE-XNP-08832] c 08 N71-12506  
Data compression processor Patent  
[NASA-CASE-NPO-10068] c 08 N71-19288  
Wide range data compression system Patent  
[NASA-CASE-XGS-02612] c 08 N71-19435  
Method and apparatus for data compression by a decreasing slope threshold test  
[NASA-CASE-NPO-10769] c 08 N72-11171  
Data compression system  
[NASA-CASE-NPO-11243] c 07 N72-20154  
Gated compressor, distortionless signal limiter  
[NASA-CASE-NPO-11820-1] c 32 N74-19788  
Space communication system for compressed data with a concatenated Reed-Solomon-Viterbi coding channel  
[NASA-CASE-NPO-13545-1] c 32 N77-12240  
Sampling video compression system  
[NASA-CASE-ARC-10984-1] c 32 N77-24328  
Pipeline synthetic aperture radar data compression utilizing systolic binary tree-searched architecture for vector quantization  
[NASA-CASE-NPO-17941-1-CU] c 32 N91-13595  
Real-time data compression of broadcast video signals  
[NASA-CASE-LEW-14945-1] c 32 N91-13598  
Digital data registration and differencing compression system  
[NASA-CASE-SSC-00010-1] c 82 N91-23976

**DATA CONVERTERS**

Logarithmic converter Patent  
[NASA-CASE-XLA-00471] c 08 N70-34778  
Mechanical coordinate converter Patent  
[NASA-CASE-XNP-00614] c 14 N70-36907  
Analog Signal to Discrete Time Interval Converter (ASDTIC)  
[NASA-CASE-ERC-10048] c 09 N72-25251  
High speed direct binary to binary coded decimal converter and scaler  
[NASA-CASE-KSC-10595] c 08 N73-12176  
Image data rate converter having a drum with a fixed head and a rotatable head  
[NASA-CASE-NPO-11659-1] c 35 N74-11283  
Electronic analog divider  
[NASA-CASE-LEW-11881-1] c 33 N77-17354  
Digital demodulator  
[NASA-CASE-LAR-12659-1] c 33 N82-26570

**DATA CORRELATION**

Instrument for determining coincidence and elapse time between independent sources of random sequential events  
[NASA-CASE-LAR-12531-1] c 35 N83-29651  
Auto covariance computer  
[NASA-CASE-LAR-12968-1] c 60 N86-21154

**DATA LINKS**

Multichannel telemetry system  
[NASA-CASE-NPO-11572] c 07 N73-16121  
Automated attendance accounting system  
[NASA-CASE-NPO-11456] c 08 N73-26176  
Multi-computer multiple data path hardware exchange system  
[NASA-CASE-NPO-13422-1] c 60 N76-14818  
Apparatus for simulating optical transmission links  
[NASA-CASE-GSC-11877-1] c 74 N76-18913  
Distributed computing system with dual independent communications paths between computers and employing split tokens  
[NASA-CASE-NPO-17185-1-CU] c 62 N91-14772  
A universal computer control system for motors  
[NASA-CASE-NPO-17134-1-CU] c 33 N91-31528

**DATA MANAGEMENT**

Selective data segment monitoring system --- using shift registers  
[NASA-CASE-ARC-10899-1] c 60 N77-19760

**DATA PROCESSING**

Energy management system for glider type vehicle Patent  
[NASA-CASE-XFR-00756] c 02 N71-13421  
Minimal logic block encoder Patent  
[NASA-CASE-NPO-10595] c 10 N71-25917  
Data transfer system Patent  
[NASA-CASE-NPO-12107] c 08 N71-27255

Transient augmentation circuit for pulse amplifiers Patent  
[NASA-CASE-XNP-01068] c 10 N71-28739  
Pseudonoise (PN) synchronization of data system with derivation of clock frequency from received signal for clocking receiver PN generator  
[NASA-CASE-XNP-03623] c 09 N73-28084  
Image data rate converter having a drum with a fixed head and a rotatable head  
[NASA-CASE-NPO-11659-1] c 35 N74-11283  
Charge-coupled device data processor for an airborne imaging radar system  
[NASA-CASE-NPO-13587-1] c 32 N77-32342  
Interactive color display for multispectral imagery using correlation clustering  
[NASA-CASE-MSC-16253-1] c 32 N79-20297  
High-speed multiplexing of keyboard data inputs  
[NASA-CASE-NPO-14554-1] c 60 N81-27814  
Real-time garbage collection for list processing  
[NASA-CASE-MSC-20964-1] c 60 N87-14863  
Processing circuit with asymmetry corrector and convolutional encoder for digital data  
[NASA-CASE-MSC-20187-1] c 33 N87-25531  
Laser Doppler velocimeter multiplexer interface for simultaneous measured events  
[NASA-CASE-ARC-11536-1] c 33 N89-14384  
Real-time simulation clock  
[NASA-CASE-LAR-14056-1] c 35 N90-23713

**DATA PROCESSING EQUIPMENT**

Data processor having multiple sections activated at different times by selective power coupling to the sections Patent  
[NASA-CASE-XGS-04767] c 08 N71-12494  
Demodulation system Patent  
[NASA-CASE-XAC-04030] c 10 N71-19472  
Rate augmented digital to analog converter Patent  
[NASA-CASE-XLA-07828] c 08 N71-27057  
Variable digital processor including a register for shifting and rotating bits in either direction Patent  
[NASA-CASE-GSC-10186] c 08 N71-33110  
Flexible computer accessed telemetry  
[NASA-CASE-NPO-11358] c 07 N72-25172  
Versatile arithmetic unit for high speed sequential decoder  
[NASA-CASE-NPO-11371] c 08 N73-12177  
Data processor with conditionally supplied clock signals  
[NASA-CASE-GSC-10975-1] c 08 N73-13187  
Automated attendance accounting system  
[NASA-CASE-NPO-11456] c 08 N73-26176  
Space communication system for compressed data with a concatenated Reed-Solomon-Viterbi coding channel  
[NASA-CASE-NPO-13545-1] c 32 N77-12240  
High-speed multiplexing of keyboard data inputs  
[NASA-CASE-NPO-14554-1] c 60 N81-27814  
Digital interface for bi-directional communication between a computer and a peripheral device  
[NASA-CASE-MSC-20258-1] c 60 N84-28492  
Neighborhood comparison operator  
[NASA-CASE-NPO-16464-1-CU] c 60 N86-24224  
Real time pipelined system for forming the sum of products in the processing of video data  
[NASA-CASE-NPO-16462-1-CU] c 60 N88-24169

**DATA RECORDERS**

Data compressor Patent  
[NASA-CASE-XNP-04067] c 08 N71-22707  
Recorder using selective noise filter  
[NASA-CASE-ERC-10112] c 07 N72-21119  
Recorder/processor apparatus --- for optical data processing  
[NASA-CASE-GSC-11553-1] c 35 N74-15831

**DATA RECORDING**

System for recording and reproducing pulse code modulated data Patent  
[NASA-CASE-XGS-01021] c 08 N71-21042  
Data compressor Patent  
[NASA-CASE-XNP-04067] c 08 N71-22707  
Incremental tape recorder and data rate converter Patent  
[NASA-CASE-XNP-02778] c 08 N71-22710  
Transient video signal recording with expanded playback Patent  
[NASA-CASE-ARC-10003-1] c 09 N71-25866  
On-film optical recording of camera lens settings  
[NASA-CASE-MSC-12363-1] c 14 N73-26431  
Image data rate converter having a drum with a fixed head and a rotatable head  
[NASA-CASE-NPO-11659-1] c 35 N74-11283  
Holography utilizing surface plasmon resonances  
[NASA-CASE-MFS-22040-1] c 35 N74-26946

**DATA REDUCTION**

Data compression system  
[NASA-CASE-XNP-09785] c 08 N69-21928  
Method and system for respiration analysis Patent  
[NASA-CASE-XFR-08403] c 05 N71-11202

Data compression system with a minimum time delay unit Patent  
 [NASA-CASE-XNP-08832] c 08 N71-12506

Data compression processor Patent  
 [NASA-CASE-NPO-10068] c 08 N71-19288

Wide range data compression system Patent  
 [NASA-CASE-XGS-02612] c 08 N71-19435

Data compressor Patent  
 [NASA-CASE-XNP-04067] c 08 N71-22707

Method and apparatus for data compression by a decreasing slope threshold test  
 [NASA-CASE-NPO-10769] c 08 N72-11171

Data compression system  
 [NASA-CASE-NPO-11243] c 07 N72-20154

Digital slope threshold data compressor  
 [NASA-CASE-NPO-11630] c 08 N72-33172

Data volume reduction for imaging radar polarimetry  
 [NASA-CASE-NPO-17184-1-CU] c 32 N88-26541

**DATA RETRIEVAL**

Magnetic matrix memory system Patent  
 [NASA-CASE-XMF-05835] c 08 N71-12504

Asynchronous, multiplexing, single line transmission and recovery data system --- for satellite use  
 [NASA-CASE-NPO-13321-1] c 32 N75-26195

**DATA SAMPLING**

Reduced bandwidth video communication system utilizing sampling techniques Patent  
 [NASA-CASE-XNP-02791] c 07 N71-23026

Signal processing apparatus for multiplex transmission Patent  
 [NASA-CASE-NPO-10388] c 07 N71-24622

Television signal processing system Patent  
 [NASA-CASE-NPO-10140] c 07 N71-24742

Method and apparatus for data compression by a decreasing slope threshold test  
 [NASA-CASE-NPO-10769] c 08 N72-11171

Sampling video compression system  
 [NASA-CASE-ARC-10984-1] c 32 N77-24328

CCD correlated quadruple sampling processor  
 [NASA-CASE-NPO-14426-1] c 33 N81-27396

**DATA SMOOTHING**

Variable time constant smoothing circuit Patent  
 [NASA-CASE-XGS-01983] c 10 N70-41964

Smoothing filter for digital to analog conversion  
 [NASA-CASE-FRC-11025-1] c 33 N82-24417

**DATA STORAGE**

Data handling system based on source significance, storage availability and data received from the source Patent Application  
 [NASA-CASE-XNP-04162-1] c 08 N70-34675

Magnetic matrix memory system Patent  
 [NASA-CASE-XMF-05835] c 08 N71-12504

Tape guidance system and apparatus for the provision thereof Patent  
 [NASA-CASE-XNP-09453] c 08 N71-19420

Event recorder Patent  
 [NASA-CASE-XLA-01832] c 14 N71-21006

System for recording and reproducing pulse code modulated data Patent  
 [NASA-CASE-XGS-01021] c 08 N71-21042

Incremental tape recorder and data rate converter Patent  
 [NASA-CASE-XNP-02778] c 08 N71-22710

Multiple hologram recording and readout system Patent  
 [NASA-CASE-ERC-10151] c 16 N71-29131

Dual purpose momentum wheels for spacecraft with magnetic recording  
 [NASA-CASE-NPO-11481] c 21 N73-13644

Data storage, image tube type  
 [NASA-CASE-MS-C-14053-1] c 60 N74-12888

Lightning current waveform measuring system  
 [NASA-CASE-KSC-11018-1] c 33 N79-10337

Rapidly quantifying the relative distention of a human bladder  
 [NASA-CASE-LAR-13901-1-NP] c 52 N90-21519

Analog hardware for learning neural networks  
 [NASA-CASE-NPO-17664-1-CU] c 62 N91-32852

**DATA STRUCTURES**

Real-time garbage collection for list processing  
 [NASA-CASE-MS-C-20964-1] c 60 N87-14863

**DATA SYSTEMS**

Data handling system based on source significance, storage availability and data received from the source Patent Application  
 [NASA-CASE-XNP-04162-1] c 08 N70-34675

Rate augmented digital to analog converter Patent  
 [NASA-CASE-XLA-07828] c 08 N71-27057

Method and apparatus for decoding compatible convolutional codes  
 [NASA-CASE-MS-C-14070-1] c 32 N74-32598

**DATA TRANSFER (COMPUTERS)**

Data transfer system Patent  
 [NASA-CASE-NPO-12107] c 08 N71-27255

**DATA TRANSMISSION**

Telemetry word forming unit  
 [NASA-CASE-XNP-09225] c 09 N69-24333

Phase-shift data transmission system having a pseudo-noise SYNC code modulated with the data in a single channel Patent  
 [NASA-CASE-XNP-00911] c 08 N70-41961

Data compression system with a minimum time delay unit Patent  
 [NASA-CASE-XNP-08832] c 08 N71-12506

Data compression processor Patent  
 [NASA-CASE-NPO-10068] c 08 N71-19288

Wide range data compression system Patent  
 [NASA-CASE-XGS-02612] c 08 N71-19435

Phase quadrature-plural channel data transmission system Patent  
 [NASA-CASE-XAC-06302] c 08 N71-19763

Reduced bandwidth video communication system utilizing sampling techniques Patent  
 [NASA-CASE-XNP-02791] c 07 N71-23026

Frequency shift keying apparatus Patent  
 [NASA-CASE-XGS-01537] c 07 N71-23405

Decoder system Patent  
 [NASA-CASE-NPO-10118] c 07 N71-24741

Data compression system  
 [NASA-CASE-NPO-11243] c 07 N72-20154

Multichannel telemetry system  
 [NASA-CASE-NPO-11572] c 07 N73-16121

Automated attendance accounting system  
 [NASA-CASE-NPO-11456] c 08 N73-26176

System for generating timing and control signals  
 [NASA-CASE-NPO-13125-1] c 33 N75-19519

Sampling video compression system  
 [NASA-CASE-ARC-10984-1] c 32 N77-24328

Pseudo noise code and data transmission method and apparatus  
 [NASA-CASE-GSC-12017-1] c 32 N77-30308

Multi-channel rotating optical interface for data transmission  
 [NASA-CASE-NPO-14066-1] c 74 N79-34011

System for a displaying at a remote station data generated at a central station and for powering the remote station from the central station  
 [NASA-CASE-GSC-12411-1] c 33 N81-14221

Digital interface for bi-directional communication between a computer and a peripheral device  
 [NASA-CASE-MS-C-20258-1] c 60 N84-28492

Single frequency multitransmitter telemetry  
 [NASA-CASE-LAR-13006-1] c 17 N87-16863

VLSI single-chip (255,223) Reed-Solomon encoder with interleaver  
 [NASA-CASE-NPO-17280-1-CU] c 17 N90-21061

**DAWSONITE**

Synthesis of dawsonites --- for use in fire extinguishing operations  
 [NASA-CASE-ARC-11326-1] c 25 N83-33977

**DEACTIVATION**

Magnetostrictive roller drive motor  
 [NASA-CASE-GSC-13369-1] c 33 N91-23380

**DEBRIS**

Counter pumping debris excluder and separator --- gas turbine shaft seals  
 [NASA-CASE-LEW-11855-1] c 07 N78-25090

Hypervelocity impact shield  
 [NASA-CASE-MS-C-21420-1] c 18 N90-26858

Load limiting, energy absorbing, lightweight debris catcher  
 [NASA-CASE-MS-C-21562-1] c 16 N91-24216

**DECAY RATES**

Solar sensor having coarse and fine sensing with matched preirradiated cells and method of selecting cells Patent  
 [NASA-CASE-XLA-01584] c 14 N71-23269

**DECELERATION**

Assembly for recovering a capsule Patent  
 [NASA-CASE-XMF-00641] c 31 N70-36410

Discrete local altitude sensing device Patent  
 [NASA-CASE-XMS-03792] c 14 N70-41812

Hot air balloon deceleration and recovery system Patent  
 [NASA-CASE-XLA-06824-2] c 02 N71-11037

Zero gravity apparatus Patent  
 [NASA-CASE-XMF-06515] c 14 N71-23227

**DECIMALS**

High speed direct binary to binary coded decimal converter and scaler  
 [NASA-CASE-KSC-10595] c 08 N73-12176

**DECISION MAKING**

Method and apparatus for decoding compatible convolutional codes  
 [NASA-CASE-MS-C-14070-1] c 32 N74-32598

Method for Viterbi decoding of large constraint length convolutional codes  
 [NASA-CASE-NPO-17310-1-CU] c 17 N88-28946

Multiple symbol differential detection  
 [NASA-CASE-NPO-17896-1-CU] c 32 N91-27439

**DECODERS**

Serial digital decoder Patent  
 [NASA-CASE-NPO-10150] c 08 N71-24650

BCD to decimal decoder Patent  
 [NASA-CASE-XKS-06167] c 08 N71-24890

Encoder/decoder system for a rapidly synchronizable binary code Patent  
 [NASA-CASE-NPO-10342] c 10 N71-33407

Compact-bi-phase pulse coded modulation decoder  
 [NASA-CASE-KSC-10834-1] c 33 N76-14371

Low distortion receiver for bi-level baseband PCM waveforms  
 [NASA-CASE-MS-C-14557-1] c 32 N76-16249

Three phase full wave dc motor decoder  
 [NASA-CASE-GSC-11824-1] c 33 N77-26386

Decommutator patchboard verifier  
 [NASA-CASE-KSC-11065-1] c 33 N81-26359

Reed-Solomon decoder  
 [NASA-CASE-NPO-15982-1] c 60 N87-21591

Miniaturization of flight deflection measurement system  
 [NASA-CASE-LAR-13628-1] c 35 N90-23707

VLSI architecture for a Reed-Solomon decoder  
 [NASA-CASE-NPO-17897-1-CU] c 33 N90-27040

**DECODING**

Decoder system Patent  
 [NASA-CASE-NPO-10118] c 07 N71-24741

Versatile arithmetic unit for high speed sequential decoder  
 [NASA-CASE-NPO-11371] c 08 N73-12177

Method and apparatus for decoding compatible convolutional codes  
 [NASA-CASE-MS-C-14070-1] c 32 N74-32598

Differential pulse code modulation  
 [NASA-CASE-MS-C-12506-1] c 32 N77-12239

Method for Viterbi decoding of large constraint length convolutional codes  
 [NASA-CASE-NPO-17310-1-CU] c 17 N88-28946

**DECOMMUTATORS**

Decommutator patchboard verifier  
 [NASA-CASE-KSC-11065-1] c 33 N81-26359

Memory-based parallel data output controller  
 [NASA-CASE-GSC-12447-2] c 60 N84-28491

**DECONTAMINATION**

Decontamination of petroleum products Patent  
 [NASA-CASE-XNP-03835] c 06 N71-23499

Helium refrigerator and method for decontaminating the refrigerator  
 [NASA-CASE-NPO-10634] c 23 N72-25619

Plasma cleaning device --- designed for high vacuum environments  
 [NASA-CASE-MFS-22906-1] c 75 N78-27913

**DECOUPLING**

Two fault tolerant toggle-hook release  
 [NASA-CASE-MS-C-21671-1] c 37 N91-32498

**DEEP SPACE NETWORK**

Low phase noise digital frequency divider  
 [NASA-CASE-NPO-11569] c 10 N73-26229

**DEFECTS**

Hybrid holographic non-destructive test system  
 [NASA-CASE-MFS-23114-1] c 38 N78-32447

Programmable remapper for image processing  
 [NASA-CASE-MS-C-21350-1] c 60 N91-23724

**DEFLECTION**

Bipropellant injector  
 [NASA-CASE-XNP-09461] c 28 N72-23809

Noncontacting method for measuring angular deflection  
 [NASA-CASE-LAR-12178-1] c 74 N80-21138

Miniaturization of flight deflection measurement system  
 [NASA-CASE-LAR-13628-1] c 35 N90-23707

**DEFLECTORS**

Inlet deflector for jet engines Patent  
 [NASA-CASE-XLE-00388] c 28 N70-34788

Aircraft wheel spray drag alleviator Patent  
 [NASA-CASE-XLA-01583] c 02 N70-36825

Ion beam deflector Patent  
 [NASA-CASE-LEW-10689-1] c 28 N71-26173

Exhaust flow deflector --- for ducted gas flow  
 [NASA-CASE-LAR-11570-1] c 34 N76-18364

Safety shield for vacuum/pressure chamber viewing port  
 [NASA-CASE-GSC-12513-1] c 31 N81-19343

Quantum well, beam deflecting surface emitting lasers  
 [NASA-CASE-NPO-18243-1-CU] c 36 N91-32489

**DEFOCUSING**

Retrodirective modulator Patent  
 [NASA-CASE-GSC-10062] c 14 N71-15605

**DEFORMATION**

Arbitrarily shaped model survey system Patent  
 [NASA-CASE-LAR-10098] c 32 N71-26681

Low cycle fatigue testing machine  
 [NASA-CASE-LAR-10270-1] c 32 N72-25877

Deformable bearing seat  
 [NASA-CASE-LEW-12527-1] c 37 N77-32500

- Cantilever clamp fitting  
 [NASA-CASE-MFS-28328-1] c 37 N91-13731  
 Probe insertion apparatus with inflatable seal  
 [NASA-CASE-LEW-14965-1] c 37 N91-13732
- DEGASSING**
- Degassifying and mixing apparatus for liquids --- potable water for spacecraft  
 [NASA-CASE-MSC-18936-1] c 35 N83-29652
- DEGREES OF FREEDOM**
- Training vehicle for controlling attitude Patent  
 [NASA-CASE-XMS-02977] c 11 N71-10746  
 Dynamic vibration absorber Patent  
 [NASA-CASE-LAR-10083-1] c 15 N71-27006  
 Kinesthetic control simulator --- for pilot training  
 [NASA-CASE-LAR-10276-1] c 09 N75-15662  
 Synchronized computational architecture for generalized bilateral control of robot arms  
 [NASA-CASE-NPO-17401-1-CU] c 63 N91-31885
- DEHUMIDIFICATION**
- Condenser - Separator  
 [NASA-CASE-XLA-08645] c 15 N69-21465
- DEHYDRATED FOOD**
- Modification of the physical properties of freeze-dried rice  
 [NASA-CASE-MSC-13540-1] c 05 N72-33096
- DEHYDRATION**
- Process for developing crystallinity in linear aromatic polyimides  
 [NASA-CASE-LAR-13732-1] c 27 N87-25474
- DEICERS**
- Piezoelectric deicing device  
 [NASA-CASE-LEW-13773-2] c 33 N86-20671  
 Electro-expulsive separation system  
 [NASA-CASE-ARC-11613-1] c 33 N87-28833
- DEIONIZATION**
- Process for making a noble metal on tin oxide catalyst  
 [NASA-CASE-LAR-13741-1-SB] c 25 N90-20180
- DELAMINATING**
- Delamination test apparatus and method  
 [NASA-CASE-LAR-13985-1] c 24 N91-14430
- DELAY CIRCUITS**
- Pulsed differential comparator circuit Patent  
 [NASA-CASE-XLE-03804] c 10 N71-19471  
 Control apparatus for applying pulses of selectively predetermined duration to a sequence of loads Patent  
 [NASA-CASE-XGS-04224] c 10 N71-26418  
 Telemetry synchronizer  
 [NASA-CASE-GSC-11868-1] c 17 N76-22245  
 Swept group delay measurement  
 [NASA-CASE-NPO-13909-1] c 33 N78-25319  
 Pseudonoise code tracking loop  
 [NASA-CASE-MSC-18035-1] c 32 N81-15179  
 Long period pseudo random number sequence generator  
 [NASA-CASE-NPO-17241-1-CU] c 33 N90-23636  
 Vibration analyzer  
 [NASA-CASE-MSC-21408-1] c 37 N91-14607
- DELAY LINES**
- A solid state acoustic variable time delay line Patent  
 [NASA-CASE-ERC-10032] c 10 N71-25900
- DELTA MODULATION**
- Multifunction audio digitizer --- producing direct delta and pulse code modulation  
 [NASA-CASE-MSC-13855-1] c 35 N74-17885
- DELTA WINGS**
- Variable-geometry winged reentry vehicle Patent  
 [NASA-CASE-XLA-00241] c 31 N70-37986  
 A two-stage earth-to-orbit transport with translating oblique wings for booster recovery  
 [NASA-CASE-LAR-14156-1] c 16 N90-16781
- DEMAGNETIZATION**
- Tumbler system to provide random motion  
 [NASA-CASE-XGS-02437] c 15 N69-21472
- DEMODULATION**
- Phase quadrature-plural channel data transmission system Patent  
 [NASA-CASE-XAC-06302] c 08 N71-19763  
 Facsimile video remodulation network  
 [NASA-CASE-GSC-10185-1] c 07 N72-12081  
 Quadrature demodulation  
 [NASA-CASE-GSC-12137-1] c 33 N78-32338  
 Navigation system and method  
 [NASA-CASE-GSC-12508-1] c 04 N84-22546  
 Digital carrier demodulator employing components working beyond normal limits  
 [NASA-CASE-NPO-17628-1-CU] c 32 N89-28684  
 Phase ambiguity resolution for offset QPSK modulation systems  
 [NASA-CASE-NPO-17853-1-CU] c 32 N91-25318
- DEMODULATORS**
- Telemetry word forming unit  
 [NASA-CASE-XNP-09225] c 09 N69-24333  
 Frequency shift keyed demodulator Patent  
 [NASA-CASE-XGS-02889] c 07 N71-11282  
 Bi-carrier demodulator with modulation Patent  
 [NASA-CASE-XMF-01160] c 07 N71-11298
- Demodulation system Patent  
 [NASA-CASE-XAC-04030] c 10 N71-19472  
 Laser calibrator Patent  
 [NASA-CASE-XLA-03410] c 16 N71-25914  
 Frequency modulation demodulator threshold extension device Patent  
 [NASA-CASE-MSC-12165-1] c 07 N71-33696  
 Full wave modulator-demodulator amplifier apparatus --- for generating rectified output signal  
 [NASA-CASE-FRC-10072-1] c 33 N74-14939  
 Unbalanced quadrature demodulator  
 [NASA-CASE-MSC-14840-1] c 32 N77-24331  
 Digital demodulator-correlator  
 [NASA-CASE-NPO-13982-1] c 32 N79-14267  
 Self-calibrating threshold detector  
 [NASA-CASE-MSC-16370-1] c 35 N81-19427  
 Digital demodulator  
 [NASA-CASE-LAR-12659-1] c 33 N82-26570  
 Digitized synchronous demodulator  
 [NASA-CASE-GSC-13237-1] c 33 N91-14550  
 Synchronous demodulator  
 [NASA-CASE-GSC-13179-1] c 33 N91-26438
- DENDRITIC CRYSTALS**
- Method of increasing minority carrier lifetime in silicon web or the like  
 [NASA-CASE-NPO-15530-1] c 76 N83-35888
- DENSIFICATION**
- Densification of porous refractory substrates --- space shuttle orbiter tiles  
 [NASA-CASE-MSC-18737-1] c 24 N83-13171
- DENSITOMETERS**
- Apparatus having coaxial capacitor structure for measuring fluid density Patent  
 [NASA-CASE-XLE-00143] c 14 N70-36618  
 Densitometer Patent  
 [NASA-CASE-XLE-00688] c 14 N70-41330  
 Ultrasonic bone densitometer  
 [NASA-CASE-MFS-20994-1] c 35 N75-12271
- DENSITY (MASS/VOLUME)**
- Non-toxic inert analog glass compositions of high modulus  
 [NASA-CASE-HQN-10328-2] c 27 N82-29454  
 Method and apparatus for minimizing convection during crystal growth from solution  
 [NASA-CASE-NPO-15811-1] c 76 N84-12968
- DENSITY DISTRIBUTION**
- Apparatus for increasing ion engine beam density Patent  
 [NASA-CASE-XLE-00519] c 28 N70-41576  
 Method and apparatus for compensating reflection losses in a path length modulated absorption-absorption trace gas detector --- for determining density of gas  
 [NASA-CASE-ARC-10631-1] c 74 N76-20958
- DENSITY MEASUREMENT**
- Apparatus having coaxial capacitor structure for measuring fluid density Patent  
 [NASA-CASE-XLE-00143] c 14 N70-36618  
 Densitometer Patent  
 [NASA-CASE-XLE-00688] c 14 N70-41330  
 Determining particle density using known material Hugoniot curves  
 [NASA-CASE-LAR-11059-1] c 76 N75-12810  
 Selective image area control of X-ray film exposure density  
 [NASA-CASE-NPO-13808-1] c 35 N78-15461  
 Geodetic distance measuring apparatus  
 [NASA-CASE-GSC-12609-2] c 36 N83-29681  
 Device for determining frost depth and density  
 [NASA-CASE-MFS-25754-1] c 35 N84-28018
- DENTISTRY**
- Process for the preparation of brushite crystals  
 [NASA-CASE-ERC-10338] c 04 N72-33072  
 Acoustic tooth cleaner  
 [NASA-CASE-LAR-12471-1] c 52 N82-29862
- DEOXIDIZING**
- Isotope exchange in oxide-containing catalyst  
 [NASA-CASE-LAR-13542-2-SB] c 25 N90-20154
- DEOXYGENATION**
- Electrocatalyst for oxygen reduction  
 [NASA-CASE-HQN-10537-1] c 06 N72-10138
- DEPLOYMENT**
- Minimech self-deploying boom mechanism  
 [NASA-CASE-GSC-10566-1] c 15 N72-18477  
 Deployable solar cell array  
 [NASA-CASE-NPO-10883] c 31 N72-22874  
 Antenna deployment mechanism for use with a spacecraft --- extensible and retractable telescopic antenna mast  
 [NASA-CASE-GSC-12331-1] c 18 N80-14183  
 High acceleration cable deployment system  
 [NASA-CASE-ARC-11256-1] c 15 N82-24272  
 Sequentially deployable maneuverable tetrahedral beam  
 [NASA-CASE-LAR-13098-1] c 31 N86-19479  
 Joint for deployable structures  
 [NASA-CASE-NPO-16038-1] c 37 N86-19605
- Latching mechanism for deployable/re-stowable columns useful in satellite construction  
 [NASA-CASE-LAR-13169-1] c 37 N86-25791  
 Payload deployment method and system  
 [NASA-CASE-MSC-21330-1] c 16 N88-24660  
 Load limiting, energy absorbing, lightweight debris catcher  
 [NASA-CASE-MSC-21562-1] c 16 N91-24216  
 Selectable towline spin chute system  
 [NASA-CASE-LAR-14322-1] c 02 N91-27139
- DEPOSITION**
- Means and methods of depositing thin films on substrates Patent  
 [NASA-CASE-XNP-00595] c 15 N70-34967  
 Monitoring deposition of films  
 [NASA-CASE-MFS-20675] c 26 N73-26751  
 Production of pure metals  
 [NASA-CASE-LEW-10906-1] c 25 N74-30502  
 Diamondlike flake composites  
 [NASA-CASE-LEW-13837-1] c 24 N84-22695  
 Deposition of diamondlike carbon films  
 [NASA-CASE-LEW-14080-1] c 31 N85-20153  
 Liquid crystal light valve structures  
 [NASA-CASE-MSC-20036-1] c 76 N85-33826  
 Method of coating a substrate with a rapidly solidified metal  
 [NASA-CASE-GSC-12880-1] c 26 N86-32550  
 Integrated filter and detector array for spectral imaging  
 [NASA-CASE-NPO-18317-1-CU] c 74 N91-32926
- DEPOSITS**
- Apparatus and method to keep the walls of a free-space reactor free from deposits of solid materials  
 [NASA-CASE-NPO-15851-1] c 37 N85-21652
- DEPTH**
- Television monitor field shifter and an opto-electronic method for obtaining a stereo image of optimal depth resolution and reduced depth distortion on a single screen  
 [NASA-CASE-NPO-17249-1-CU] c 32 N89-28676
- DEPTH MEASUREMENT**
- Device for determining frost depth and density  
 [NASA-CASE-MFS-25754-1] c 35 N84-28018  
 Mining volume measurement system  
 [NASA-CASE-LAR-13519-1] c 35 N88-23963  
 Ultrasonic depth gauge for liquids under high pressure  
 [NASA-CASE-LAR-13300-1-CU] c 35 N89-14407  
 Adjustable depth gage  
 [NASA-CASE-LEW-14880-1] c 35 N90-10415
- DESCENT**
- Emergency descent device  
 [NASA-CASE-MFS-23074-1] c 54 N77-21844
- DESIGN ANALYSIS**
- Airfoil shape for flight at subsonic speeds --- design analysis and aerodynamic characteristics of the GAW-1 airfoil  
 [NASA-CASE-LAR-10585-1] c 02 N76-22154  
 Snap-in compressible biomedical electrode  
 [NASA-CASE-MSC-14623-1] c 52 N77-28717
- DESORPTION**
- Multicomponent gas sorption Joule-Thomson refrigerator  
 [NASA-CASE-NPO-17569-1-CU] c 31 N90-26176
- DESTRUCTIVE TESTS**
- Aeroelastic instability stoppers for wind tunnel models  
 [NASA-CASE-LAR-12458-1] c 44 N83-21503  
 Delamination test apparatus and method  
 [NASA-CASE-LAR-13985-1] c 24 N91-14430
- DESULFURIZING**
- Coal desulfurization process  
 [NASA-CASE-NPO-13937-1] c 44 N78-31527  
 Continuous coal processing method  
 [NASA-CASE-NPO-13758-2] c 31 N81-15154  
 Coal desulfurization --- using iron pentacarbonyl  
 [NASA-CASE-NPO-14272-1] c 25 N81-33246  
 Crude oil desulfurization  
 [NASA-CASE-NPO-14542-1] c 25 N82-23282  
 Coal desulfurization by aqueous chlorination  
 [NASA-CASE-NPO-14902-1] c 25 N82-29371  
 Hydrodesulfurization of chlorinated coal  
 [NASA-CASE-NPO-15304-1] c 25 N83-31743  
 Fluidized bed desulfurization  
 [NASA-CASE-NPO-15924-1] c 25 N85-35253
- DETECTION**
- Heated element fluid flow sensor Patent  
 [NASA-CASE-MSC-12084-1] c 12 N71-17569  
 Leak detector Patent  
 [NASA-CASE-LAR-10323-1] c 12 N71-17573  
 Metallic intrusion detector system  
 [NASA-CASE-ARC-10265-1] c 10 N72-28240  
 Cosmic dust or other similar outer space particles impact location detector  
 [NASA-CASE-GSC-11291-1] c 25 N72-33696  
 Bacteria detection instrument and method  
 [NASA-CASE-GSC-11533-1] c 14 N73-13435

- Short range laser obstacle detector --- for surface vehicles using laser diode array  
[NASA-CASE-NPO-11856-1] c 36 N74-15145
- Vacuum leak detector  
[NASA-CASE-LAR-11237-1] c 35 N75-19612
- Photoelectric detection system --- manufacturing automation  
[NASA-CASE-MFS-23776-1] c 33 N82-28545
- Apparatus and process for microbial detection and enumeration  
[NASA-CASE-LAR-12709-1] c 35 N82-28604
- Focal plane array optical proximity sensor  
[NASA-CASE-NPO-15155-1] c 74 N85-22139
- Dual differential interferometer  
[NASA-CASE-LAR-12966-1] c 35 N85-30282
- Instrumentation for sensing moisture content of material using a transient thermal pulse.  
[NAS 1.71-NPO-15494-2] c 35 N85-34373
- Modulated voltage metastable ionization detector  
[NASA-CASE-ARC-11503-1] c 35 N85-34374
- Spillage detector for liquid chromatography systems  
[NASA-CASE-MSC-20206-1] c 25 N86-27431
- Dynamic range compression/expansion of light beams by photorefractive crystals  
[NASA-CASE-NPO-17140-1-CU] c 74 N89-14077
- Tailorable infrared sensing device with strain layer superlattice structure  
[NASA-CASE-NPO-16617-2-CU] c 35 N90-17118
- Device for quickly sensing the amount of O<sub>2</sub> in a combustion product gas  
[NASA-CASE-LAR-13816-1] c 35 N90-22025
- Pseudomonas diagnostic assay  
[NASA-CASE-NPO-17653-1-CU] c 51 N90-27239
- Method and apparatus for determining return stroke polarity of distant lightning  
[NASA-CASE-MFS-26102-1-CU] c 47 N91-15661
- Dynamic tester for rotor seals and bearings  
[NASA-CASE-MFS-28493-1] c 09 N91-25155
- Dual diaphragm tank with telltale drain  
[NASA-CASE-MSC-21703-1] c 31 N91-25305
- DETECTORS**
- Pressurized cell micrometeoroid detector Patent  
[NASA-CASE-XLA-00936] c 14 N71-14996
- Detector panels-micrometeoroid impact Patent  
[NASA-CASE-XLA-05906] c 31 N71-16221
- Pulse activated polarographic hydrogen detector Patent  
[NASA-CASE-XMF-06531] c 14 N71-17575
- Light position locating system Patent  
[NASA-CASE-XNP-01059] c 23 N71-21821
- Method for detecting leaks in hermetically sealed containers Patent  
[NASA-CASE-ERC-10045] c 15 N71-24910
- Precipitation detector Patent  
[NASA-CASE-XLA-02619] c 10 N71-26334
- Hydrogen fire blink detector  
[NASA-CASE-MFS-15063] c 14 N72-25412
- Combustion detector  
[NASA-CASE-LAR-10739-1] c 14 N73-16484
- Multiple pass reimaging optical system  
[NASA-CASE-ARC-10194-1] c 23 N73-20741
- Meteoroid detector  
[NASA-CASE-LAR-10483-1] c 14 N73-32327
- Deployable pressurized cell structure for a micrometeoroid detector  
[NASA-CASE-LAR-10295-1] c 35 N74-21062
- Modulated hydrogen ion flame detector  
[NASA-CASE-ARC-10322-1] c 35 N76-18403
- Coal-rock interface detector  
[NASA-CASE-MFS-23725-1] c 43 N79-31706
- Means and method for calibrating a photon detector utilizing electron-photon coincidence  
[NASA-CASE-NPO-15644-1] c 35 N84-33767
- DETERGENTS**
- Anti-fog composition --- for prevention of fogging on surfaces such as space helmet visors and windshields  
[NASA-CASE-MSC-13530-2] c 23 N75-14834
- Self-contained, single-use hose and tubing cleaning module  
[NASA-CASE-MSC-20857-1] c 37 N87-17035
- DETONATION**
- Optically detonated explosive device  
[NASA-CASE-NPO-11743-1] c 28 N74-27425
- Timing control system  
[NASA-CASE-NPO-16882-1-CU] c 33 N88-24863
- Improving the performance of blasting caps  
[NASA-CASE-LAR-13832-1] c 28 N91-28444
- DETONATION WAVES**
- Continuous detonation reaction engine Patent  
[NASA-CASE-XMF-06926] c 28 N71-22983
- DETONATORS**
- Improving the performance of blasting caps  
[NASA-CASE-LAR-13832-1] c 28 N91-28444
- DEUTERIUM**
- Analysis of hydrogen-deuterium mixtures  
[NASA-CASE-NPO-11322] c 06 N72-25146
- Deuterium pass through target --- neutron emitting target  
[NASA-CASE-LEW-11866-1] c 72 N76-15860
- DEW POINT**
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71-NPO-15494-2] c 35 N85-34373
- Wet atmospheric generation apparatus  
[NASA-CASE-MFS-28177-1] c 35 N91-21496
- DIAGNOSIS**
- Coupling apparatus for ultrasonic medical diagnostic system  
[NASA-CASE-NPO-13935-1] c 52 N79-14751
- Medical diagnosis system and method with multispectral imaging --- depth of burns and optical density of the skin  
[NASA-CASE-NPO-14402-1] c 52 N81-27783
- Portable dynamic fundus instrument  
[NASA-CASE-MSC-21675-1] c 52 N91-13865
- Lamina transducer coupler and method of making  
[NASA-CASE-LAR-14361-1] c 71 N91-16707
- Method and apparatus for characterizing reflected ultrasonic pulses  
[NASA-CASE-LAR-13966-1] c 71 N91-27914
- DIAGRAMS**
- Phototransistor  
[NASA-CASE-MFS-20407] c 09 N73-19235
- DIALYSIS**
- Dialysis system --- using ion exchange resin membranes permeable to urea molecules  
[NASA-CASE-NPO-14101-1] c 52 N80-14687
- DIAMETERS**
- Cylindrical surface profile and diameter measuring tool and method  
[NASA-CASE-MFS-28287-1] c 35 N88-23959
- DIAMINES**
- Elastomeric silazane polymers and process for preparing the same Patent  
[NASA-CASE-XMF-04133] c 06 N71-20717
- Aromatic diamine-aromatic dialdehyde high molecular weight Schiff base polymers prepared in a monofunctional Schiff base Patent  
[NASA-CASE-XMF-03074] c 06 N71-24740
- Siloxane containing epoxide compounds  
[NASA-CASE-MFS-13994-2] c 06 N72-25148
- Preparation of polyimides from mixtures of monomeric diamines and esters of polycarboxylic acids  
[NASA-CASE-LEW-11325-1] c 06 N73-27980
- Mixed diamines for lower melting addition polyimide preparation and utilization  
[NASA-CASE-LAR-12054-1] c 27 N79-33316
- Method for preparing addition type polyimide prepreps  
[NASA-CASE-LAR-12054-2] c 27 N81-14078
- Amine terminated bisaspartamide polymer  
[NASA-CASE-ARC-11421-2] c 27 N86-31726
- Process for preparing highly optically transparent/colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N86-31727
- Polynamines from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-1-CU] c 27 N87-22847
- Fire and heat resistant laminating resins based on maleimide and citraconimide substituted 1-(diorgano oxyphosphonyl) methyl -2,4- and -2,6- diaminobenzenes  
[NASA-CASE-ARC-11533-3] c 27 N87-24564
- Polynamines from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-2-CU] c 23 N89-12667
- Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14162-1] c 27 N90-15259
- Polyimides with carbonyl and ether connecting groups between the aromatic rings  
[NASA-CASE-LAR-14001-1] c 27 N90-15260
- Copolyimide with a combination of flexibilizing groups  
[NASA-CASE-LAR-13821-1] c 27 N90-16950
- Acetylene terminated aspartamides and resins therefrom  
[NASA-CASE-LAR-14188-1] c 27 N90-23545
- Vinyl capped addition polyimides  
[NASA-CASE-LEW-15027-1] c 27 N91-13566
- N-(3-ethynylphenyl)maleimide  
[NASA-CASE-LAR-14188-2] c 23 N91-14419
- Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-4] c 23 N91-25185
- Polyimides prepared from 3,5-diamino benzo trifluoride  
[NASA-CASE-LAR-14206-1] c 27 N91-28425
- Addition polyimides with enhanced processability  
[NASA-CASE-LEW-15043-1] c 27 N91-32230
- DIAMONDS**
- Apparatus for making diamonds  
[NASA-CASE-MFS-20698] c 15 N72-20446
- Process for making diamonds  
[NASA-CASE-MFS-20698-2] c 15 N73-19457
- Diamondlike flakes  
[NASA-CASE-LEW-13837-2] c 24 N85-21267
- DIAPHRAGMS (MECHANICS)**
- Measuring device Patent  
[NASA-CASE-XMS-01546] c 14 N70-40233
- Reinforcing means for diaphragms Patent  
[NASA-CASE-XNP-01962] c 32 N70-41370
- Self-sealing, unbonded, rocket motor nozzle closure Patent  
[NASA-CASE-XLA-02651] c 28 N70-41967
- Means for controlling rupture of shock tube diaphragms Patent  
[NASA-CASE-XAC-00731] c 11 N71-15960
- Fast opening diaphragm Patent.  
[NASA-CASE-XLA-03660] c 15 N71-21060
- Inertia diaphragm pressure transducer Patent  
[NASA-CASE-XAC-02981] c 14 N71-21072
- Convoluting device for forming convolutions and the like Patent  
[NASA-CASE-XNP-05297] c 15 N71-23811
- Differential pressure control  
[NASA-CASE-MSC-14216] c 14 N73-13418
- Fluid flow meter for measuring the rate of fluid flow in a conduit  
[NASA-CASE-MFS-28030-1] c 35 N86-25752
- Method of making a flexible diaphragm  
[NASA-CASE-MSC-20797-1] c 37 N87-23981
- Flexible diaphragm-extreme temperature usage  
[NASA-CASE-MSC-20797-2] c 35 N91-21494
- Dual diaphragm tank with telltale drain  
[NASA-CASE-MSC-21703-1] c 31 N91-25305
- DIATOMIC GASES**
- Diatomic infrared gasdynamic laser --- for producing different wavelengths  
[NASA-CASE-ARC-10370-1] c 36 N75-31426
- DICHROISM**
- Dichroic plate --- as bandpass filters  
[NASA-CASE-NPO-13506-1] c 35 N76-15435
- Microwave dichroic plate  
[NASA-CASE-GSC-12171-1] c 33 N79-28416
- DICKE RADIOMETERS**
- Distributed-switch Dicke radiometers  
[NASA-CASE-GSC-12219-1] c 35 N80-18359
- IDYMIUM**
- Didymium hydrate additive to nickel hydroxide electrodes Patent  
[NASA-CASE-XGS-03505] c 03 N71-10608
- DIELECTRIC PROPERTIES**
- Capacitive tank gaging apparatus being independent of liquid distribution  
[NASA-CASE-MFS-21629] c 14 N72-22442
- Fine particulate capture device  
[NASA-CASE-LEW-11583-1] c 35 N79-17192
- Low noise cryogenic dielectric resonator oscillator  
[NASA-CASE-NPO-17157-1-CU] c 33 N88-26596
- DIELECTRICS**
- Method for producing a solar cell having an integral protective covering  
[NASA-CASE-XGS-04531] c 03 N69-24267
- Temperature sensitive capacitor device  
[NASA-CASE-XNP-09750] c 14 N69-39937
- Space vehicle electrical system Patent  
[NASA-CASE-XMF-00517] c 03 N70-34157
- Nose cone mounted heat resistant antenna Patent  
[NASA-CASE-XMS-04312] c 07 N71-22984
- Broadband microwave waveguide window Patent  
[NASA-CASE-XNP-08880] c 09 N71-24808
- Laser machining apparatus Patent  
[NASA-CASE-HQN-10541-2] c 15 N71-27135
- Quasi-optical microwave component Patent  
[NASA-CASE-ERC-10011] c 07 N71-29065
- Method of manufacturing semiconductor devices using refractory dielectrics  
[NASA-CASE-XER-08476-1] c 26 N72-17820
- Screened circuit capacitors  
[NASA-CASE-LAR-10294-1] c 26 N72-28762
- Low loss dichroic plate  
[NASA-CASE-NPO-13171-1] c 32 N74-11000
- Electrostatic measurement system --- for contact-electrifying a dielectric  
[NASA-CASE-MFS-22129-1] c 33 N75-18477
- Method and apparatus for measurement of trap density and energy distribution in dielectric films  
[NASA-CASE-NPO-13443-1] c 76 N76-20994
- Preparation of dielectric coating of variable dielectric constant by plasma polymerization  
[NASA-CASE-ARC-10892-2] c 27 N79-14214
- Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures  
[NASA-CASE-NPO-14254-1] c 36 N80-18372
- Method and apparatus for making an optical element having a dielectric film  
[NASA-CASE-ARC-11611-1] c 74 N87-28416
- Microwave field effect transistor  
[NASA-CASE-GSC-12442-2] c 33 N90-20282
- Method of forming a multiple layer dielectric and a hot film sensor therewith  
[NASA-CASE-LAR-13678-1] c 76 N90-24168



- Aromatic polyimides containing a dimethylsilane-linked dianhydride  
[NASA-CASE-LAR-14198-1] c 27 N90-26956
- DIELS-ALDER REACTIONS**  
Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-6] c 25 N85-30039  
Process for crosslinking and extending conjugated diene-containing polymers  
[NASA-CASE-LAR-13452-1] c 27 N87-22848  
Bis(4-(3,4-dimethylenepyrrolidyl)-phenyl) methane  
[NASA-CASE-LAR-13965-1-CU] c 23 N90-21118  
Bis (4-(3,4-dimethylene-pyrrolidyl)-phenyl) methane  
[NASA-CASE-LAR-13965-2-CU] c 23 N91-14418
- DIENES**  
Process for crosslinking and extending conjugated diene-containing polymers  
[NASA-CASE-LAR-13452-1] c 27 N87-22848
- DIES**  
Convoluting device for forming convolutions and the like Patent  
[NASA-CASE-XNP-05297] c 15 N71-23811  
Extrusion die for refractory metals Patent  
[NASA-CASE-XLE-06773] c 15 N71-23817  
Holding fixture for a hot stamping press  
[NASA-CASE-GSC-12619-1] c 37 N84-12491  
Ultrasonic angle beam standard reflector --- ultrasonic nondestructive inspection  
[NASA-CASE-LAR-13153-1] c 71 N86-21276  
Pultrusion die assembly  
[NASA-CASE-LAR-13719-1] c 37 N89-12867  
Continuous fiber thermoplastic prepreg  
[NASA-CASE-LAR-14459-1] c 24 N91-15334
- DIESEL ENGINES**  
Apparatus and method for destructive removal of particles contained in flowing fluid  
[NASA-CASE-NPO-15426-1] c 35 N84-17555  
Diesel engine catalytic combustor system --- aircraft engines  
[NASA-CASE-LEW-12995-1] c 37 N84-33808
- DIETS**  
Reduction of blood serum cholesterol  
[NASA-CASE-NPO-12119-1] c 52 N75-15270
- DIFFERENCE EQUATIONS**  
Digital data registration and differencing compression system  
[NASA-CASE-SSC-00010-1] c 82 N91-23976
- DIFFERENCES**  
Retinally stabilized differential resolution television display  
[NASA-CASE-NPO-15432-1] c 32 N85-29117
- DIFFERENTIAL AMPLIFIERS**  
Temperature compensated solid state differential amplifier Patent  
[NASA-CASE-XAC-00435] c 09 N70-35440  
Stepping motor control circuit Patent  
[NASA-CASE-GSC-10366-1] c 10 N71-18772  
Multi-channel temperature measurement amplification system --- solar heating systems  
[NASA-CASE-MFS-23775-1] c 44 N82-16474  
Amplifier for measuring low-level signals in the presence of high common mode voltage  
[NASA-CASE-MFS-25868-1] c 33 N86-20670  
Synchronous demodulator  
[NASA-CASE-GSC-13179-1] c 33 N91-26438
- DIFFERENTIAL INTERFEROMETRY**  
Gravimeter Patent  
[NASA-CASE-XMF-05844] c 14 N71-17587
- DIFFERENTIAL PRESSURE**  
Relief valve  
[NASA-CASE-XMS-05894-1] c 15 N69-21924  
Apparatus for ejection of an instrument cover  
[NASA-CASE-XMF-04132] c 15 N69-27502  
Differential sound level meter  
[NASA-CASE-LAR-12106-1] c 71 N78-14867  
Differential optoacoustic absorption detector  
[NASA-CASE-NPO-13759-1] c 74 N78-17867  
System for use in conducting wake investigation for a wing in flight --- differential pressure measurements for drag investigations  
[NASA-CASE-FRC-11024-1] c 02 N80-28300
- DIFFERENTIAL PULSE CODE MODULATION**  
Real-time data compression of broadcast video signals  
[NASA-CASE-LEW-14945-1] c 32 N91-13598
- DIFFERENTIATION (BIOLOGY)**  
Three-dimensional coculture process  
[NASA-CASE-MSC-21560-1] c 51 N90-18852
- DIFFERENTIATORS**  
Window comparator  
[NASA-CASE-FRC-10090-1] c 33 N78-18308
- DIFFRACTION**  
Optical mirror apparatus Patent  
[NASA-CASE-ERC-10001] c 23 N71-24868
- DIFFRACTION PATTERNS**  
Fringe counter for interferometers Patent  
[NASA-CASE-LAR-10204] c 14 N71-27215  
Radiation sensitive area detection device and method  
[NASA-CASE-MFS-28563-1] c 35 N91-25388  
Three dimensional moire pattern alignment  
[NASA-CASE-MSC-21416-1] c 74 N91-32922
- DIFFRACTOMETERS**  
Dual purpose optical instrument capable of simultaneously acting as spectrometer and diffractometer  
[NASA-CASE-XNP-05231] c 14 N73-28491
- DIFFUSE RADIATION**  
Transmitting and reflecting diffuser --- using ultraviolet grade fused silica coatings  
[NASA-CASE-LAR-10385-3] c 74 N78-15879
- DIFFUSERS**  
Application of semiconductor diffusants to solar cells by screen printing  
[NASA-CASE-LEW-12775-1] c 44 N79-11468  
Diffuser/ejector system for a very high vacuum environment  
[NASA-CASE-MFS-25791-1] c 09 N84-27749
- DIFFUSION**  
A method for selective gold diffusion of monolithic silicon devices and/or circuits Patent application  
[NASA-CASE-ERC-10072] c 09 N70-11148  
Metallic film diffusion for boundary lubrication Patent  
[NASA-CASE-XLE-10337] c 15 N71-24046  
Transmitting and reflecting diffuser --- for ultraviolet light  
[NASA-CASE-LAR-10385-2] c 70 N74-13436  
Polymer/riblet combination for hydrodynamic skin friction reduction  
[NASA-CASE-LAR-14271-1-CU] c 27 N91-13558
- DIFFUSION LENGTH**  
Alternating gradient photodetector  
[NASA-CASE-NPO-17235-1-CU] c 35 N90-21358
- DIFFUSION PUMPS**  
Trap for preventing diffusion pump backstreaming  
[NASA-CASE-GSC-10518-1] c 15 N72-22489  
Programmable physiological infusion  
[NASA-CASE-ARC-10447-1] c 52 N74-22771
- DIFFUSION WELDING**  
Thermal compression bonding of interconnectors  
[NASA-CASE-GSC-10303] c 15 N72-22487  
Bonding of reinforced Teflon to metals  
[NASA-CASE-MFS-20482] c 15 N72-22492  
Enhanced diffusion welding  
[NASA-CASE-LEW-11388-1] c 15 N73-32358  
Method of fluxless brazing and diffusion bonding of aluminum containing components  
[NASA-CASE-MSC-14435-1] c 37 N76-18455  
Superplastically formed diffusion bonded metallic structure  
[NASA-CASE-FRC-11026-1] c 24 N82-24296
- DIFFUSIVITY**  
Diffusely reflecting paints including polytetrafluoroethylene and method of manufacture  
[NASA-CASE-GSC-12883-1] c 27 N85-29044
- DIGITAL COMMAND SYSTEMS**  
Digitally controlled frequency synthesizer Patent  
[NASA-CASE-XGS-02317] c 09 N71-23525  
System for maintaining a motor at a predetermined speed utilizing digital feedback means Patent  
[NASA-CASE-XMF-06892] c 09 N71-24805  
Digital filter for reducing sampling jitter in digital control systems Patent  
[NASA-CASE-NPO-11088] c 08 N71-29034
- DIGITAL COMPUTERS**  
Disk pack cleaning table Patent Application  
[NASA-CASE-LAR-10590-1] c 15 N70-26819  
Binary number sorter Patent  
[NASA-CASE-NPO-10112] c 08 N71-12502  
Binary sequence detector Patent  
[NASA-CASE-XNP-05415] c 08 N71-12505  
Electronic checkout system for space vehicles Patent  
[NASA-CASE-XKS-08012-2] c 31 N71-15566  
Error correcting method and apparatus Patent  
[NASA-CASE-XNP-02748] c 08 N71-22749  
Serial digital decoder Patent  
[NASA-CASE-NPO-10150] c 08 N71-24650  
Digital memory sense amplifying means Patent  
[NASA-CASE-XNP-01012] c 08 N71-28925  
Redundant memory organization Patent  
[NASA-CASE-GSC-10564] c 10 N71-29135  
High speed direct binary to binary coded decimal converter and scaler  
[NASA-CASE-KSC-10595] c 08 N73-12176  
Fault tolerant clock apparatus utilizing a controlled minority of clock elements  
[NASA-CASE-MSC-12531-1] c 35 N75-30504  
Two-dimensional radiant energy array computers and computing devices  
[NASA-CASE-GSC-11839-1] c 60 N77-14751
- Memory device for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-2] c 60 N78-10709  
Environmental fog/rain visual display system for aircraft simulators  
[NASA-CASE-ARC-11158-1] c 09 N82-24212  
Multicomputer communication system  
[NASA-CASE-NPO-15433-1] c 32 N85-21428  
Method and apparatus for transfer function simulator for testing complex systems  
[NASA-CASE-NPO-15696-1] c 33 N85-34333
- DIGITAL DATA**  
Phase-shift data transmission system having a pseudo-noise SYNC code modulated with the data in a single channel Patent  
[NASA-CASE-XNP-00911] c 08 N70-41961  
Tape guidance system and apparatus for the provision thereof Patent  
[NASA-CASE-XNP-09453] c 08 N71-19420  
Digital telemetry system Patent  
[NASA-CASE-XGS-01812] c 07 N71-23001  
Transient augmentation circuit for pulse amplifiers Patent  
[NASA-CASE-XNP-01068] c 10 N71-28739  
Transition tracking bit synchronization system  
[NASA-CASE-NPO-10844] c 07 N72-20140  
Digital control and information system  
[NASA-CASE-NPO-11016] c 08 N72-31226  
Digital plus analog output encoder  
[NASA-CASE-GSC-12115-1] c 62 N76-31946  
Digital data reformatter/deserializer  
[NASA-CASE-NPO-13676-1] c 60 N79-20751  
Heads up display  
[NASA-CASE-LAR-12630-1] c 06 N84-27733  
Memory-based parallel data output controller  
[NASA-CASE-GSC-12447-2] c 60 N84-28491  
Trellis coded modulation for transmission over fading mobile satellite channel  
[NASA-CASE-NPO-16904-2-CU] c 32 N91-14523  
Digital data registration and differencing compression system  
[NASA-CASE-SSC-00010-1] c 82 N91-23976
- DIGITAL ELECTRONICS**  
Control circuitry using electronic emulation of a synchro signal for accurate control of position and rate of rotation for shafts  
[NASA-CASE-MFS-28458-1] c 33 N91-26459
- DIGITAL FILTERS**  
Signal detection and tracking apparatus Patent  
[NASA-CASE-XGS-03502] c 10 N71-20852  
Digital filter for reducing sampling jitter in digital control systems Patent  
[NASA-CASE-NPO-11088] c 08 N71-29034  
Counting digital filters  
[NASA-CASE-NPO-11821-1] c 08 N73-26175  
Filtering device --- removing electromagnetic noise from voice communication signals  
[NASA-CASE-MFS-22729-1] c 32 N76-21366  
Frequency domain laser velocimeter signal processor  
[NASA-CASE-LAR-13552-1-CU] c 33 N89-14385  
Digital carrier demodulator employing components working beyond normal limits  
[NASA-CASE-NPO-17628-1-CU] c 32 N89-28684
- DIGITAL INTEGRATORS**  
Digital automatic gain amplifier  
[NASA-CASE-KSC-11008-1] c 33 N79-22373
- DIGITAL RADAR SYSTEMS**  
Real-time multiple-look synthetic aperture radar processor for spacecraft applications  
[NASA-CASE-NPO-14054-1] c 32 N82-12297
- DIGITAL SPACECRAFT TELEVISION**  
Digital television camera control system Patent  
[NASA-CASE-XNP-01472] c 14 N70-41807
- DIGITAL SYSTEMS**  
Light sensitive digital aspect sensor Patent  
[NASA-CASE-XGS-00359] c 14 N70-34158  
Full binary adder Patent  
[NASA-CASE-XGS-00689] c 08 N70-34787  
Digital telemetry system Patent  
[NASA-CASE-XGS-01812] c 07 N71-23001  
Drive circuit utilizing two cores Patent  
[NASA-CASE-XNP-01318] c 10 N71-23033  
Noninterruptible digital counting system Patent  
[NASA-CASE-XNP-09759] c 08 N71-24891  
Digital memory in which the driving of each word location is controlled by a switch core Patent  
[NASA-CASE-XNP-01466] c 10 N71-26434  
Digital quasi-exponential function generator  
[NASA-CASE-NPO-11130] c 08 N72-20176  
Digital function generator  
[NASA-CASE-NPO-11104] c 08 N72-22165  
Digital video display system using cathode ray tube  
[NASA-CASE-NPO-11342] c 09 N72-25248  
Digital slope threshold data compressor  
[NASA-CASE-NPO-11630] c 08 N72-33172

- Data processor with conditionally supplied clock signals  
[NASA-CASE-GSC-10975-1] c 08 N73-13187
- Low phase noise digital frequency divider  
[NASA-CASE-NPO-11569] c 10 N73-26229
- Pseudonoise (PN) synchronization of data system with derivation of clock frequency from received signal for clocking receiver PN generator  
[NASA-CASE-XNP-03623] c 09 N73-28084
- Digital second-order phase-locked loop  
[NASA-CASE-NPO-11905-1] c 33 N74-12887
- Digital controller for a Baum folding machine --- providing automatic counting and machine shutoff  
[NASA-CASE-LAR-10688-1] c 37 N74-21056
- Digital transmitter for data bus communications system  
[NASA-CASE-MSC-14558-1] c 32 N75-21486
- Automatic character skew and spacing checking network --- of digital tape drive systems  
[NASA-CASE-GSC-11925-1] c 33 N76-18353
- Anti-multipath digital signal detector  
[NASA-CASE-LAR-11827-1] c 32 N77-10392
- Multiple rate digital command detection system with range clean-up capability  
[NASA-CASE-NPO-13753-1] c 32 N77-20289
- Open loop digital frequency multiplier  
[NASA-CASE-MSC-12709-1] c 33 N77-24375
- Bit error rate measurement above and below bit rate tracking threshold  
[NASA-CASE-MSC-12743-1] c 32 N79-10263
- Apparatus and method for stabilized phase detection for binary signal tracking loops  
[NASA-CASE-MSC-16461-1] c 33 N79-11313
- Digital demodulator-correlator  
[NASA-CASE-NPO-13982-1] c 32 N79-14267
- Memory-based frame synchronizer --- for digital communication systems  
[NASA-CASE-GSC-12430-1] c 60 N82-16747
- Digital demodulator  
[NASA-CASE-LAR-12659-1] c 33 N82-26570
- Random digital encryption secure communication system  
[NASA-CASE-MSC-16462-1] c 32 N82-31583
- Error correction method and apparatus for electronic timepieces  
[NASA-CASE-LAR-12654-1] c 33 N83-36357
- Digital control of diode laser for atmospheric spectroscopy  
[NASA-CASE-NPO-16000-1] c 36 N85-29264
- Antimultipath communication by injecting tone into null in signal spectrum  
[NASA-CASE-NPO-16414-1-CU] c 32 N87-25511
- Digital phase-lock loop having an estimator and predictor of error  
[NASA-CASE-NPO-17196-1-CU] c 32 N88-29076
- Neural network with dynamically adaptable neurons  
[NASA-CASE-NPO-17803-1-CU] c 62 N90-27385
- Digitized synchronous demodulator  
[NASA-CASE-GSC-13237-1] c 33 N91-14550
- DIGITAL TECHNIQUES**
- Digital frequency discriminator Patent  
[NASA-CASE-MFS-14322] c 08 N71-18692
- Exclusive-Or digital logic module Patent  
[NASA-CASE-XLA-07732] c 08 N71-18751
- Horizon sensor with a plurality of fixedly positioned radiation compensated radiation sensitive detectors Patent  
[NASA-CASE-XNP-06957] c 14 N71-21088
- Digital cardiachometer system Patent  
[NASA-CASE-XMS-02399] c 05 N71-22896
- Digital synchronizer Patent  
[NASA-CASE-NPO-10851] c 07 N71-24613
- Fringe counter for interferometers Patent  
[NASA-CASE-LAR-10204] c 14 N71-27215
- Rate data encoder  
[NASA-CASE-LAR-10128-1] c 08 N73-20217
- Digital communication system  
[NASA-CASE-MSC-13912-1] c 32 N74-30524
- Digital phase-locked loop  
[NASA-CASE-GSC-11623-1] c 33 N75-25040
- Digital numerically controlled oscillator  
[NASA-CASE-MSC-16747-1] c 33 N81-17349
- Random digital encryption secure communication system  
[NASA-CASE-MSC-16462-1] c 32 N82-31583
- Pipelined digital SAR azimuth correlator using hybrid FFT-transversal filter  
[NASA-CASE-NPO-15519-1] c 32 N84-34651
- Brushless DC motor control system responsive to control signals generated by a computer or the like  
[NASA-CASE-NPO-16420-1] c 33 N86-20681
- Nanosequencer digital logic controller  
[NASA-CASE-NPO-16116-2] c 60 N88-29310
- Digital carrier demodulator employing components working beyond normal limits  
[NASA-CASE-NPO-17628-1-CU] c 32 N89-28684
- Phase ambiguity resolution for offset QPSK modulation systems  
[NASA-CASE-NPO-17853-1-CU] c 32 N91-25318
- DIGITAL TO ANALOG CONVERTERS**
- Rate augmented digital to analog converter Patent  
[NASA-CASE-XLA-07828] c 08 N71-27057
- Buffered analog converter  
[NASA-CASE-KSC-10397] c 08 N72-25206
- Digital to analog conversion apparatus  
[NASA-CASE-MSC-12458-1] c 08 N73-32081
- Smoothing filter for digital to analog conversion  
[NASA-CASE-FRC-11025-1] c 33 N82-24417
- Memory-based parallel data output controller  
[NASA-CASE-GSC-12447-2] c 60 N84-28491
- Method and apparatus for operating on companded PCM voice data  
[NASA-CASE-KSC-11285-1] c 32 N86-27513
- DIGITAL TRANSDUCERS**
- Digital to analog conversion apparatus  
[NASA-CASE-MSC-12458-1] c 08 N73-32081
- Angle detector  
[NASA-CASE-ARC-11036-1] c 35 N78-32395
- DIISOCYANATES**
- Polyurethanes of fluorine containing polycarbonates  
[NASA-CASE-MFS-10512] c 06 N73-30099
- Polyurethanes from fluoroalkyl propylene glycol polyethers  
[NASA-CASE-MFS-10506] c 06 N73-30100
- Fluorine containing polyurethane  
[NASA-CASE-MFS-10509] c 06 N73-30103
- DILUTION**
- Preparation of dilute magnetic semiconductor films by metalorganic chemical vapor deposition  
[NASA-CASE-NPO-17399-1-CU] c 76 N89-14120
- DIMENSIONAL MEASUREMENT**
- Cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c 52 N82-22875
- DIMENSIONS**
- Projection system for display of parallax and perspective  
[NASA-CASE-MFS-23194-1] c 35 N78-17357
- DIODES**
- Diode and protection fuse unit Patent  
[NASA-CASE-XKS-03381] c 09 N71-22796
- Protection of serially connected solar cells against open circuits by the use of shunting diode Patent  
[NASA-CASE-XLE-04535] c 03 N71-23354
- Shielded cathode mode bulk effect devices  
[NASA-CASE-ERC-10119] c 26 N72-21701
- Fast response low power drain logic circuits  
[NASA-CASE-GSC-10878-1] c 10 N72-22236
- Method and apparatus for detecting surface ions on silicon diodes and transistors  
[NASA-CASE-ERC-10325] c 15 N72-25457
- Temperature compensated light source using a light emitting diode  
[NASA-CASE-ARC-10467-1] c 09 N73-14214
- Wide temperature range electronic device with lead attachment  
[NASA-CASE-ERC-10224-2] c 09 N73-27150
- High isolation RF signal selection switches  
[NASA-CASE-NPO-13081-1] c 33 N74-22814
- Logarithmic circuit with wide dynamic range  
[NASA-CASE-GSC-12145-1] c 33 N78-32339
- Regulated high efficiency, lightweight capacitor-diode multiplier dc to dc converter  
[NASA-CASE-LEW-12791-1] c 33 N78-32341
- Thermal compensator for closed-cycle helium refrigerator --- assuring constant temperature for an infrared laser diode  
[NASA-CASE-GSC-12168-1] c 31 N79-17029
- Digital control of diode laser for atmospheric spectroscopy  
[NASA-CASE-NPO-16000-1] c 36 N85-29264
- Arrangement for damping the resonance in a laser diode  
[NASA-CASE-NPO-15980-1] c 36 N85-30305
- DIPHENYL COMPOUNDS**
- Poly(carbonate-mide) polymer  
[NASA-CASE-LAR-13292-1] c 27 N86-24841
- Amine terminated bisaspartamide polymer  
[NASA-CASE-ARC-11421-2] c 27 N86-31726
- Aminophenoxy cyclotriphosphazene cured epoxy resins and the composites, laminates, adhesives and structures thereof  
[NASA-CASE-ARC-11548-1] c 27 N87-25469
- DIPOLE ANTENNAS**
- Circularly polarized antenna  
[NASA-CASE-ERC-10214] c 09 N72-31235
- Cavity-backed, micro-strip dipole antenna array  
[NASA-CASE-MSC-18606-1] c 32 N82-11336
- DIPPING**
- Solder dross removal apparatus  
[NASA-CASE-MFS-28406-1] c 37 N91-13729
- DIRECT CURRENT**
- Regulated dc to dc converter  
[NASA-CASE-XGS-03429] c 03 N69-21330
- Bus voltage compensation circuit for controlling direct current motor  
[NASA-CASE-XMS-04215-1] c 09 N69-39987
- Thermionic diode switch Patent  
[NASA-CASE-NPO-10404] c 03 N71-12255
- A dc-coupled noninverting one-shot Patent  
[NASA-CASE-XNP-09450] c 10 N71-18723
- Stepping motor control circuit Patent  
[NASA-CASE-GSC-10366-1] c 10 N71-18772
- Frequency control network for a current feedback oscillator Patent  
[NASA-CASE-GSC-10041-1] c 10 N71-19418
- Self-repeating plasma generator having communicating annular and linear arc discharge passages Patent  
[NASA-CASE-XLA-03103] c 25 N71-21693
- Positive dc to positive dc converter Patent  
[NASA-CASE-XMF-14301] c 09 N71-23188
- Positive dc to negative dc converter Patent  
[NASA-CASE-XMF-08217] c 03 N71-23239
- Blood pressure measuring system for separating and separately recording dc signal and an ac signal Patent  
[NASA-CASE-XMS-06061] c 05 N71-23317
- Radio frequency coaxial high pass filter Patent  
[NASA-CASE-XGS-01418] c 09 N71-23573
- Brushless direct current tachometer Patent  
[NASA-CASE-MFS-20385] c 09 N71-24904
- Inverter with means for base current shaping for sweeping charge carriers from base region Patent  
[NASA-CASE-XGS-06226] c 10 N71-25950
- Dual polarity full wave dc motor drive Patent  
[NASA-CASE-XNP-07477] c 09 N71-26092
- A dc motor speed control system Patent  
[NASA-CASE-MFS-14610] c 09 N71-28886
- Cyclic switch Patent  
[NASA-CASE-LEW-10155-1] c 09 N71-29035
- Load-insensitive electrical device  
[NASA-CASE-XER-11046] c 09 N72-22203
- A dc to ac to dc converter having transistor synchronous rectifiers  
[NASA-CASE-GSC-11126-1] c 09 N72-25253
- Electric motive machine including magnetic bearing  
[NASA-CASE-XGS-07805] c 15 N72-33476
- Powerplexer  
[NASA-CASE-MSC-12396-1] c 03 N73-31988
- Bio-isolated dc operational amplifier --- for bioelectric measurements  
[NASA-CASE-ARC-10596-1] c 33 N74-21851
- Load insensitive electrical device --- power converters for supplying direct current at one voltage from a source at another voltage  
[NASA-CASE-XER-11046-2] c 33 N74-22864
- Differential pulse code modulation  
[NASA-CASE-MSC-12506-1] c 32 N77-12239
- Three phase full wave dc motor decoder  
[NASA-CASE-GSC-11824-1] c 33 N77-26386
- Time domain phase measuring apparatus  
[NASA-CASE-GSC-12228-1] c 33 N79-10338
- Direct current transformer  
[NASA-CASE-MFS-23659-1] c 33 N79-17133
- Elimination of current spikes in buck power converters  
[NASA-CASE-NPO-14505-1] c 33 N81-19393
- Controller for computer control of brushless dc motors --- automobile engines  
[NASA-CASE-NPO-13970-1] c 33 N81-20352
- Direct current ballast circuit for metal halide lamp  
[NASA-CASE-MSC-18407-1] c 33 N82-24427
- Brushless DC motor control system responsive to control signals generated by a computer or the like  
[NASA-CASE-NPO-16420-1] c 33 N86-20681
- Four quadrant control circuit for a brushless three-phase dc motor  
[NASA-CASE-MFS-28080-1] c 33 N87-21233
- Arcjet power supply and start circuit  
[NASA-CASE-LEW-14374-1] c 09 N88-28939
- DIRECT LIFT CONTROLS**
- Velocity vector control system augmented with direct lift control  
[NASA-CASE-LAR-12268-1] c 08 N81-24106
- DIRECT POWER GENERATORS**
- Energy conversion apparatus Patent  
[NASA-CASE-XLE-00212] c 03 N70-34134
- Thermal pump-compressor for space use Patent  
[NASA-CASE-XLA-00377] c 33 N71-17610
- Positive dc to negative dc converter Patent  
[NASA-CASE-XMF-08217] c 03 N71-23239
- Unsaturation saturable core transformer Patent  
[NASA-CASE-ERC-10125] c 09 N71-24893
- Load insensitive electrical device --- power converters for supplying direct current at one voltage from a source at another voltage  
[NASA-CASE-XER-11046-2] c 33 N74-22864

- Bidirectional control system for energy flow in solar powered flywheel  
[NASA-CASE-MFS-25978-1] c 44 N87-21410
- DIRECTIONAL ANTENNAS**
- Mechanical coordinate converter Patent  
[NASA-CASE-XNP-00614] c 14 N70-36907
- Weatherproof helix antenna Patent  
[NASA-CASE-XKS-08485] c 07 N71-19493
- Tracking antenna system Patent  
[NASA-CASE-GSC-10553-1] c 07 N71-19854
- Reversible motion drive system Patent  
[NASA-CASE-NPO-10173] c 15 N71-24696
- Variable beamwidth antenna --- with multiple beam, variable feed system  
[NASA-CASE-GSC-11862-1] c 32 N76-18295
- Suspension system for a wheel rolling on a flat track --- bearings for directional antennas  
[NASA-CASE-NPO-14395-1] c 37 N82-21587
- DIRECTIONAL CONTROL**
- Gimbaled, partially submerged rocket nozzle Patent  
[NASA-CASE-XMF-01544] c 28 N70-34162
- Omnidirectional wheel  
[NASA-CASE-MFS-21309-1] c 37 N74-18125
- Velocity vector control system augmented with direct lift control  
[NASA-CASE-LAR-12268-1] c 08 N81-24106
- Magnetic heading reference  
[NASA-CASE-LAR-12638-1] c 04 N84-14132
- DIRECTIONAL SOLIDIFICATION (CRYSTALS)**
- Preparation of monotectic alloys having a controlled microstructure by directional solidification under dopant-induced interface breakdown  
[NASA-CASE-MFS-23816-1] c 26 N80-23419
- High gradient directional solidification furnace  
[NASA-CASE-MFS-25963-1] c 35 N86-20750
- Directional solidification of superalloys  
[NASA-CASE-MFS-28314-1] c 26 N91-14462
- DIRECTIONAL STABILITY**
- Nose gear steering system for vehicle with main skids Patent  
[NASA-CASE-XLA-01804] c 02 N70-34160
- System for imposing directional stability on a rocket-propelled vehicle  
[NASA-CASE-MFS-21311-1] c 20 N76-21275
- DIRECTIVITY**
- Multiprism collimator  
[NASA-CASE-GSC-12608-1] c 74 N83-10900
- DISABILITIES**
- Compliant walker  
[NASA-CASE-GSC-13348-2] c 52 N91-29714
- DISCONNECT DEVICES**
- Gas actuated bolt disconnect Patent  
[NASA-CASE-XLA-00326] c 03 N70-34667
- Umbilical disconnect Patent  
[NASA-CASE-XLA-00711] c 03 N71-12258
- Remote controlled tubular disconnect Patent  
[NASA-CASE-XLA-01396] c 03 N71-12259
- Quick release connector Patent  
[NASA-CASE-XLA-01141] c 15 N71-13789
- Split nut separation system Patent  
[NASA-CASE-XNP-06914] c 15 N71-21489
- Separation simulator Patent  
[NASA-CASE-XKS-04631] c 10 N71-23663
- Duct coupling for single-handed operation Patent  
[NASA-CASE-MFS-20395] c 15 N71-24903
- Breakaway connector  
[NASA-CASE-NPO-11140] c 15 N72-17455
- Torsional disconnect unit  
[NASA-CASE-NPO-10704] c 15 N72-20445
- Frangible link  
[NASA-CASE-MSC-11849-1] c 15 N72-22488
- Quick disconnect coupling  
[NASA-CASE-NPO-11202] c 15 N72-25450
- Quick disconnect filter coupling  
[NASA-CASE-MFS-22323-1] c 37 N76-14463
- Positive isolation disconnect  
[NASA-CASE-MSC-16043-1] c 37 N79-11402
- Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-15429-1] c 18 N84-22609
- Slide release mechanism --- for space shuttle orbiter/external tank connection device  
[NASA-CASE-MSC-20080-1] c 37 N85-30334
- Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-25429-1] c 18 N86-20469
- Self-locking double retention redundant full pin release  
[NASA-CASE-NPO-16233-1] c 37 N86-20801
- Preloadable vector sensitive latch  
[NASA-CASE-MSC-20910-1] c 37 N87-25582
- Toggle release  
[NASA-CASE-MSC-21354-1] c 37 N88-24969
- Quick action clamp  
[NASA-CASE-LEW-14887-1] c 37 N91-27561
- Two fault tolerant toggle-hook release  
[NASA-CASE-MSC-21671-1] c 37 N91-32498
- DISCONTINUITY**
- Strain coupled servo control system Patent  
[NASA-CASE-XLA-08530] c 32 N71-25360
- DISCRIMINATORS**
- Phase detector assembly Patent  
[NASA-CASE-XMF-00701] c 09 N70-40272
- Difference circuit Patent  
[NASA-CASE-XNP-08274] c 10 N71-13537
- Digital frequency discriminator Patent  
[NASA-CASE-MFS-14322] c 08 N71-18692
- Comparator for the comparison of two binary numbers Patent  
[NASA-CASE-XNP-04819] c 08 N71-23295
- Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-3] c 33 N75-19520
- Niada-quad bridge circuit means  
[NASA-CASE-ARC-10364-2] c 33 N75-25041
- Discriminator aided phase lock acquisition for suppressed carrier signals  
[NASA-CASE-NPO-14311-1] c 33 N82-29539
- DISKS**
- Hybrid butterfly valve  
[NASA-CASE-SSC-00004-1] c 37 N91-14609
- DISPENSERS**
- Liquid aerosol dispenser  
[NASA-CASE-MFS-20829] c 12 N72-21310
- Potable water dispenser  
[NASA-CASE-MFS-21115-1] c 54 N74-12779
- Lyophilized spore dispenser  
[NASA-CASE-LAR-10544-1] c 37 N74-13178
- Metering gun for dispensing precisely measured charges of fluid  
[NASA-CASE-MFS-21163-1] c 54 N74-17853
- Automatic fluid dispenser  
[NASA-CASE-ARC-10820-1] c 35 N78-19466
- DISPENSING**
- Shock tube powder dispersing apparatus Patent  
[NASA-CASE-XLE-04946] c 17 N71-24911
- Powder fed sheared dispersal particle generator  
[NASA-CASE-LAR-12785-1] c 37 N84-16561
- DISPERSIONS**
- Preparation of alkali metal dispersions  
[NASA-CASE-XNP-08876] c 17 N73-28573
- DISPLACEMENT**
- Bimetallic fluid displacement apparatus --- for stirring and heating stored gases and liquids  
[NASA-CASE-ARC-10441-1] c 35 N74-15126
- Polyimidazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14145-1] c 27 N90-26954
- Poly(1,3,4-oxadiazoles) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14427-1] c 23 N91-23237
- Pressure vessel flex joint  
[NASA-CASE-MSC-21748-1] c 37 N91-25415
- DISPLACEMENT MEASUREMENT**
- Null-type vacuum microbalance Patent  
[NASA-CASE-XAC-00472] c 15 N70-40180
- Self-calibrating displacement transducer Patent  
[NASA-CASE-XLA-00781] c 09 N71-22999
- Angular displacement indicating gas bearing support system Patent  
[NASA-CASE-XLA-09346] c 15 N71-28740
- Apparatus for remote measurement of displacement of marks on a specimen undergoing a tensile test  
[NASA-CASE-NPO-10778] c 14 N72-11364
- Miniature muscle displacement transducer  
[NASA-CASE-NPO-13519-1] c 33 N76-19338
- Simultaneous muscle force and displacement transducer  
[NASA-CASE-NPO-14212-1] c 52 N80-27072
- Device for measuring hole elongation in a bolted joint  
[NASA-CASE-LAR-13453-1] c 37 N88-14361
- DISPLAY DEVICES**
- Integrated time shared instrumentation display Patent  
[NASA-CASE-XLA-01952] c 08 N71-12507
- Energy management system for glider type vehicle Patent  
[NASA-CASE-XFR-00756] c 02 N71-13421
- Fluidic-thermochromic display device Patent  
[NASA-CASE-ERC-10031] c 12 N71-18603
- Display for binary characters Patent  
[NASA-CASE-XGS-04987] c 08 N71-20571
- Optical projector system Patent  
[NASA-CASE-XNP-03853] c 23 N71-21882
- Optical monitor panel Patent  
[NASA-CASE-XKS-03509] c 14 N71-23175
- BCD to decimal decoder Patent  
[NASA-CASE-XKS-06167] c 08 N71-24890
- Noninterruptible digital counting system Patent  
[NASA-CASE-XNP-09759] c 08 N71-24891
- Analog signal integration and reconstruction system Patent  
[NASA-CASE-NPO-10344] c 10 N71-26544
- Plasma fluidic hybrid display Patent  
[NASA-CASE-ERC-10100] c 09 N71-33519
- System for quantizing graphic displays  
[NASA-CASE-NPO-10745] c 08 N72-22164
- Digital video display system using cathode ray tube  
[NASA-CASE-NPO-11342] c 09 N72-25248
- Scientific experiment flexible mount  
[NASA-CASE-MSC-12372-1] c 31 N72-25842
- Display system  
[NASA-CASE-ERC-10350] c 14 N73-20474
- Transparent switchboard  
[NASA-CASE-MSC-13746-1] c 10 N73-32143
- Recorder/processor apparatus --- for optical data processing  
[NASA-CASE-GSC-11553-1] c 35 N74-15831
- Rotating raster generator  
[NASA-CASE-FRC-10071-1] c 32 N74-20813
- X-Y alphanumeric character generator for oscilloscopes  
[NASA-CASE-GSC-11582-1] c 33 N75-19517
- Binocular device for displaying numerical information in field of view  
[NASA-CASE-LAR-11782-1] c 74 N77-20882
- Particle parameter analyzing system --- x-y plotter circuits and display  
[NASA-CASE-XLE-06094] c 33 N78-17293
- Projection system for display of parallax and perspective  
[NASA-CASE-MFS-23194-1] c 35 N78-17357
- Full color hybrid display for aircraft simulators --- landing aids  
[NASA-CASE-ARC-10903-1] c 09 N78-18083
- Miniature implantable ultrasonic echosonometer  
[NASA-CASE-ARC-11035-1] c 52 N79-18580
- System and method for obtaining wide screen Schlieren photographs  
[NASA-CASE-NPO-14174-1] c 74 N79-20856
- Chromatically corrected virtual image visual display --- reducing eye strain in flight simulators  
[NASA-CASE-LAR-12251-1] c 74 N80-27185
- System for a displaying at a remote station data generated at a central station and for powering the remote station from the central station  
[NASA-CASE-GSC-12411-1] c 33 N81-14221
- System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-FRC-11005-1] c 06 N82-16075
- Environmental fog/rain visual display system for aircraft simulators  
[NASA-CASE-ARC-11158-1] c 09 N82-24212
- Synchronized voltage contrast display analysis system  
[NASA-CASE-NPO-14567-1] c 33 N83-18996
- Real-time 3-D X-ray and gamma-ray viewer  
[NASA-CASE-GSC-12640-1] c 74 N84-11920
- Retinally stabilized differential resolution television display  
[NASA-CASE-NPO-15432-1] c 32 N85-29117
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71:NPO-15494-2] c 35 N85-34373
- Aircraft liftemer  
[NASA-CASE-LAR-12518-1] c 06 N86-27280
- Simulator scene display evaluation device  
[NASA-CASE-ARC-11504-1] c 09 N86-32447
- Large TV display system  
[NASA-CASE-NPO-16932-1CU] c 33 N87-15413
- Aircraft control position indicator  
[NASA-CASE-LAR-12984-1] c 06 N87-22678
- Flat-panel, full-color, electroluminescent display  
[NASA-CASE-LAR-13407-1] c 33 N87-28831
- Braille reading system  
[NASA-CASE-LAR-13306-1] c 82 N87-29372
- Method and system for monitoring and displaying engine performance parameters  
[NASA-CASE-LAR-14049-1] c 07 N89-23466
- Enhanced single layer multi-color or luminescent display with coactivators  
[NASA-CASE-LAR-14181-1] c 76 N91-21911
- Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13854-1-CU] c 04 N91-31120
- Synchronized computational architecture for generalized bilateral control of robot arms  
[NASA-CASE-NPO-17401-1-CU] c 63 N91-31885
- Single layer multi-color luminescent display  
[NASA-CASE-LAR-13616-1] c 74 N91-31950
- DISSIPATION**
- Voltage regulator with plural parallel power source sections Patent  
[NASA-CASE-GSC-10891-1] c 10 N71-26626
- Warm fog dissipation using large volume water sprays  
[NASA-CASE-MFS-25962-1] c 09 N89-25242
- DISSOCIATION**
- Solar hydrogen generator  
[NASA-CASE-LAR-11361-1] c 44 N77-22607

## DISSOLVING

Zero gravity liquid mixer  
[NASA-CASE-LAR-10195-1] c 15 N73-19458

**DISTANCE**  
Auto and hetero-associative memory using a 2-D optical logic gate  
[NASA-CASE-NPO-17997-1-CU] c 60 N91-13888  
Stereoscopic camera and viewing systems with undistorted depth presentation and reduced or eliminated erroneous acceleration and deceleration perceptions, or with perceptions produced or enhanced for special effects  
[NASA-CASE-NPO-18028-1-CU] c 74 N91-24878

**DISTANCE MEASURING EQUIPMENT**  
Binary coded sequential acquisition ranging system  
[NASA-CASE-NPO-11194] c 08 N72-25209  
Determining distance to lightning strokes from a single station  
[NASA-CASE-KSC-10698] c 07 N73-20175  
Terminal guidance sensor system --- space shuttle coupling to orbiting satellites  
[NASA-CASE-NPO-14521-1] c 37 N81-27519  
Geodetic distance measuring apparatus  
[NASA-CASE-GSC-12609-2] c 36 N83-29681  
Rotary target V-block  
[NASA-CASE-LAR-12007-3] c 35 N84-16523  
Method and apparatus for measuring distance  
[NASA-CASE-MS-C-20912-1] c 32 N88-26568  
Adjustable depth gage  
[NASA-CASE-LEW-14880-1] c 35 N90-10415

**DISTILLATION EQUIPMENT**  
Compact solar still Patent  
[NASA-CASE-XMS-04533] c 15 N71-23086  
Method and apparatus for distillation of liquids Patent  
[NASA-CASE-XNP-08124] c 15 N71-27184  
Method for distillation of liquids  
[NASA-CASE-XNP-08124-2] c 06 N73-13129

**DISTRIBUTED AMPLIFIERS**  
Cascaded complementary pair broadband transistor amplifiers Patent  
[NASA-CASE-NPO-10003] c 10 N71-26415

**DISTRIBUTED PROCESSING**  
Distributed multipoint memory architecture  
[NASA-CASE-NPO-15342-1] c 60 N83-32342  
Real-time simulation clock  
[NASA-CASE-LAR-14056-1] c 35 N90-23713  
Method of up-front load balancing for local memory parallel processors  
[NASA-CASE-MS-C-21348-1] c 62 N91-14769  
Distributed computing system with dual independent communications paths between computers and employing split tokens  
[NASA-CASE-NPO-17185-1-CU] c 62 N91-14772  
Dynamic resource allocation scheme for distributed heterogeneous computer systems  
[NASA-CASE-NPO-17197-1-CU] c 62 N91-25693

**DISTRIBUTION (PROPERTY)**  
Thermionic energy converters  
[NASA-CASE-LEW-12443-1] c 44 N83-32175

**DISTRIBUTORS**  
High voltage distributor  
[NASA-CASE-GSC-11849-1] c 33 N76-16332

**DIVERGENT NOZZLES**  
Jet exhaust noise suppressor  
[NASA-CASE-LEW-11286-1] c 07 N74-27490

**DIVERTERS**  
Flow diverter valve and flow diversion method  
[NASA-CASE-HQN-00573-1] c 37 N79-33468

**DIVIDERS**  
A synchronous binary array divider  
[NASA-CASE-ERC-10180-1] c 60 N74-20836

**DOCUMENT STORAGE**  
File card marker Patent  
[NASA-CASE-XLA-02705] c 08 N71-15908

**DOMES (STRUCTURAL FORMS)**  
Airborne tracking sunphotometer apparatus and system  
[NASA-CASE-ARC-11622-1] c 44 N88-14492

**DOORS**  
Emergency escape system Patent  
[NASA-CASE-MS-C-12086-1] c 05 N71-12345  
CAM controlled retractable door latch  
[NASA-CASE-MS-C-20304-1] c 37 N82-31690

**DOPE**  
Lithium counterdoped silicon solar cell  
[NASA-CASE-LEW-14177-1] c 44 N86-32875

**DOPPLER EFFECT**  
Doppler frequency spread correction device for multiplex transmissions  
[NASA-CASE-XGS-02749] c 07 N69-39978  
Laser Doppler system for measuring three dimensional vector velocity Patent  
[NASA-CASE-MFS-20386] c 21 N71-19212  
Doppler compensation by shifting transmitted object frequency within limits  
[NASA-CASE-GSC-10087-4] c 07 N73-20174

Doppler shift system --- system for measuring velocities of radiating particles  
[NASA-CASE-HQN-10740-1] c 72 N74-19310  
Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14524-1] c 32 N80-24510  
Servomechanism for Doppler shift compensation in optical correlator for synthetic aperture radar  
[NASA-CASE-NPO-14998-1] c 32 N83-18975  
Vibration-free Raman Doppler velocimeter  
[NASA-CASE-LAR-13268-1] c 35 N87-14669  
Efficient detection and signal parameter estimation with application to high dynamic GPS receiver  
[NASA-CASE-NPO-17820-1-CU] c 04 N91-14321  
Doppler-corrected differential detection system  
[NASA-CASE-NPO-16987-1-CU] c 32 N91-25316  
Edge technique for measurement of laser frequency shifts including the Doppler shift  
[NASA-CASE-GSC-13343-1] c 36 N91-28557

**DOPPLER RADAR**  
Cooperative Doppler radar system Patent  
[NASA-CASE-LAR-10403] c 21 N71-11766  
Doppler radar having phase modulation of both transmitted and reflected return signals  
[NASA-CASE-MS-C-18675-1] c 32 N84-22820  
Doppler radar with multiphase modulation of transmitted and reflected signal  
[NASA-CASE-MS-C-18808-1] c 32 N90-20280

**DOSIMETERS**  
Dosimeter for high levels of absorbed radiation Patent  
[NASA-CASE-XLA-03645] c 14 N71-20430  
Miniature spectrally selective dosimeter  
[NASA-CASE-LAR-12469-1] c 35 N83-21311

**DOWNLINKING**  
VLSI single-chip (255,223) Reed-Solomon encoder with interleaver  
[NASA-CASE-NPO-17280-1-CU] c 17 N90-21061

**DRAG CHUTES**  
Flexible wing deployment device Patent  
[NASA-CASE-XLA-01220] c 02 N70-41863  
Lightweight, variable solidity knitted parachute fabric --- for aerodynamic decelerators  
[NASA-CASE-LAR-10776-1] c 02 N74-10034  
Extended moment arm anti-spin device  
[NASA-CASE-LAR-12979-1] c 05 N85-21147  
Selectable towline spin chute system  
[NASA-CASE-LAR-14322-1] c 02 N91-27139

**DRAG MEASUREMENT**  
Air frame drag balance Patent  
[NASA-CASE-XLA-00113] c 14 N70-33386  
Minimum induced drag airfoil body Patent  
[NASA-CASE-XLA-00755] c 01 N71-13410  
Minimum induced drag airfoil body Patent  
[NASA-CASE-XLA-05828] c 01 N71-13411  
Impact energy absorber Patent  
[NASA-CASE-XLA-01530] c 14 N71-23092  
System for use in conducting wake investigation for a wing in flight --- differential pressure measurements for drag investigations  
[NASA-CASE-FRC-11024-1] c 02 N80-28300  
Skin friction measuring device for aircraft  
[NASA-CASE-FRC-11029-1] c 06 N81-17057

**DRAG REDUCTION**  
Propeller blade loading control Patent  
[NASA-CASE-XAC-00139] c 02 N70-34856  
Aircraft wheel spray drag alleviator Patent  
[NASA-CASE-XLA-01583] c 02 N70-36825  
Low-drag ground vehicle particularly suited for use in safely transporting livestock  
[NASA-CASE-FRC-11058-1] c 85 N82-33288  
Wingtip vortex propeller  
[NASA-CASE-LAR-13019-1] c 07 N85-35194  
Combined riblet and lebu drag reduction system  
[NASA-CASE-LAR-13286-1] c 02 N88-14071  
A two-stage earth-to-orbit transport with translating oblique wings for booster recovery  
[NASA-CASE-LAR-14156-1] c 16 N90-16781  
Compression pylon  
[NASA-CASE-LAR-13777-1] c 05 N90-20078  
Passive venting technique for shallow cavities  
[NASA-CASE-LAR-14031-1] c 05 N90-20079  
Polymer/riblet combination for hydrodynamic skin friction reduction  
[NASA-CASE-LAR-14271-1-CU] c 27 N91-13558  
Active control of boundary layer transition and turbulence  
[NASA-CASE-LAR-13532-1] c 34 N91-14562  
Passive laminar flow control of crossflow vorticity  
[NASA-CASE-LAR-13563-1] c 34 N91-23410  
Passive venting technique for shallow cavities  
[NASA-CASE-LAR-13875-1] c 05 N91-27156

**DRAINAGE**  
Dual diaphragm tank with telltale drain  
[NASA-CASE-MS-C-21703-1] c 31 N91-25305

## DRIFT (INSTRUMENTATION)

Amplifier drift tester  
[NASA-CASE-XMS-05562-1] c 09 N69-39986  
Radiation direction detector including means for compensating for photocell aging Patent  
[NASA-CASE-XLA-00183] c 14 N70-40239  
Failure detection and control means for improved drift performance of a gimbaled platform system  
[NASA-CASE-MFS-23551-1] c 04 N76-26175

**DRILL BITS**  
Sample collecting impact bit Patent  
[NASA-CASE-XNP-01412] c 15 N70-42034  
Hole cutter --- drill bits and rotating shaft  
[NASA-CASE-MFS-22649-1] c 37 N75-25186

**DRILLING**  
Method for milling and drilling glass  
[NASA-CASE-GSC-12636-1] c 31 N83-27058  
Method for machining holes in composite materials  
[NASA-CASE-MFS-28044-1] c 31 N87-25491  
Adjustable depth gage  
[NASA-CASE-LEW-14880-1] c 35 N90-10415

**DRILLS**  
Rock drill for recovering samples  
[NASA-CASE-XNP-07478] c 14 N69-21923  
Soil penetrometer  
[NASA-CASE-XNP-05530] c 14 N73-32321

**DRIVES**  
Transistor drive regulator Patent  
[NASA-CASE-LEW-10233] c 10 N71-27126

**DROP TOWERS**  
Method of forming frozen spheres in a force-free drop tower  
[NASA-CASE-NPO-14845-1] c 27 N82-28442  
Sphere forming method and apparatus  
[NASA-CASE-NPO-15070-1] c 31 N83-35176

**DROPS (LIQUIDS)**  
Droplet monitoring probe  
[NASA-CASE-NPO-10985] c 14 N73-20478  
Method of evaporation  
[NASA-CASE-NPO-15609-2] c 25 N88-23846  
Hanging drop crystal growth apparatus and method  
[NASA-CASE-MFS-28206-1-SB] c 76 N90-23242  
Crystal growth apparatus  
[NASA-CASE-MFS-28182-1] c 76 N90-24169  
Drop deployment system for crystal growth apparatus  
[NASA-CASE-MFS-28422-1] c 29 N91-17250

**DRUGS**  
Automated analysis of oxidative metabolites  
[NASA-CASE-NPO-10469-1] c 25 N75-12086  
Human serum albumin crystals and method of preparation  
[NASA-CASE-MFS-28234-1] c 52 N90-20616

**DRY HEAT**  
Pressurized bellows flat contact heat exchanger interface  
[NASA-CASE-MS-C-21271-1] c 34 N90-21999

**DRYING**  
Drying apparatus for photographic sheet material  
[NASA-CASE-GSC-11074-1] c 14 N73-28489  
Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA-CASE-NPO-15494-1] c 35 N82-25484  
Process for making a noble metal on tin oxide catalyst  
[NASA-CASE-LAR-13741-1-SB] c 25 N90-20180

**DRYING APPARATUS**  
Gas purged dry box glove Patent  
[NASA-CASE-XLE-02531] c 05 N71-23080

**DUCTED FANS**  
Cam-operated pitch-change apparatus  
[NASA-CASE-LEW-13050-1] c 07 N79-14095

**DUCTILITY**  
Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-3] c 37 N82-19540

**DUCTS**  
Duct coupling for single-handed operation Patent  
[NASA-CASE-MFS-20395] c 15 N71-24903  
Externally supported internally stabilized flexible duct joint  
[NASA-CASE-MFS-19194-1] c 37 N76-14460  
Apparatus for supplying conditioned air at a substantially constant temperature and humidity  
[NASA-CASE-GSC-12191-1] c 31 N80-32583  
Multi-path peristaltic pump  
[NASA-CASE-MS-C-20907-1] c 37 N87-18818  
Vortex motion phase separator for zero gravity liquid transfer  
[NASA-CASE-KSC-11387-1] c 29 N90-20236

**DURABILITY**  
Belt for transmitting power from a cogged driving member to a cogged driven member  
[NASA-CASE-GSC-12289-1] c 37 N80-32717  
Composite thermal barrier coating  
[NASA-CASE-LEW-14999-1] c 24 N91-13500

**DUST COLLECTORS**  
Disk pack cleaning table Patent Application  
[NASA-CASE-LAR-10590-1] c 15 N70-26819

Acoustic agglomeration methods and apparatus  
[NASA-CASE-NPO-15466-1] c 71 N85-22104

**DYE LASERS**  
Infrared tunable laser  
[NASA-CASE-ARC-10463-1] c 09 N73-32111  
Laser head for simultaneous optical pumping of several dye lasers --- with single flash lamp  
[NASA-CASE-LAR-11341-1] c 36 N75-19655

**DYES**  
Dye penetrant for surfaces subsequently contacted by liquid oxygen Patent  
[NASA-CASE-XMF-02221] c 18 N71-27170  
Method for retarding dye fading during archival storage of developed color photographic film --- inert atmosphere  
[NASA-CASE-MFS-23250-1] c 35 N82-11432  
Multi-colored layers for visualizing aerodynamic flow effects  
[NASA-CASE-LAR-13742-1] c 02 N91-16999

**DYNAMIC CHARACTERISTICS**  
Dynamic sensor Patent  
[NASA-CASE-XAC-02877] c 14 N70-41681  
Alignment apparatus using a laser having a gravitationally sensitive cavity reflector  
[NASA-CASE-ARC-10444-1] c 16 N73-33397  
Apparatus for and method of compensating dynamic unbalance  
[NASA-CASE-GSC-12550-1] c 37 N84-28082

**DYNAMIC CONTROL**  
Motion restraining device  
[NASA-CASE-NPO-13619-1] c 37 N78-16369  
System for controlled acoustic rotation of objects  
[NASA-CASE-NPO-15522-1] c 71 N83-32516

**DYNAMIC LOADS**  
Multilegged support system Patent  
[NASA-CASE-XLA-01326] c 11 N71-21481  
Tension measurement device Patent  
[NASA-CASE-XMS-04545] c 15 N71-22878  
Impact monitoring apparatus  
[NASA-CASE-MS-C-15626-1] c 14 N72-25411  
Ultrasonic method and apparatus for determining crack opening load  
[NASA-CASE-LAR-13889-1] c 39 N88-30160  
Method and apparatus for detecting laminar flow separation and reattachment  
[NASA-CASE-LAR-13952-2-SB] c 34 N91-31596

**DYNAMIC MODELS**  
Robust high-performance control for robotic manipulators  
[NASA-CASE-NPO-17785-1-CU] c 37 N89-28846

**DYNAMIC MODULUS OF ELASTICITY**  
Apparatus for positioning and loading a test specimen Patent  
[NASA-CASE-XLE-01300] c 15 N70-41993

**DYNAMIC PRESSURE**  
Dynamic tester for rotor seals and bearings  
[NASA-CASE-MFS-28493-1] c 09 N91-25155

**DYNAMIC RESPONSE**  
Impact simulator Patent  
[NASA-CASE-XLA-00493] c 11 N70-34786  
Instrument for measuring the dynamic behavior of liquids Patent  
[NASA-CASE-XLA-05541] c 12 N71-26387  
Response analyzers for sensors Patent  
[NASA-CASE-MFS-11204] c 14 N71-29134  
Cam-operated pitch-change apparatus  
[NASA-CASE-LEW-13050-1] c 07 N79-14095

**DYNAMIC STRUCTURAL ANALYSIS**  
Method and apparatus for measuring the damping characteristics of a structure  
[NASA-CASE-ARC-10154-1] c 14 N72-22440

**DYNAMIC TESTS**  
Support apparatus for dynamic testing Patent  
[NASA-CASE-XMF-01772] c 11 N70-41677  
Hydraulic support for dynamic testing Patent  
[NASA-CASE-XMF-03248] c 11 N71-10604  
Dynamic tester for rotor seals and bearings  
[NASA-CASE-MFS-28493-1] c 09 N91-25155  
Suspension device for low-frequency structures  
[NASA-CASE-LAR-14272-1-CU] c 14 N91-28184

**DYNAMICAL SYSTEMS**  
Method of forming dynamic membrane on stainless steel support  
[NASA-CASE-MS-C-18172-3] c 31 N88-29052  
Dynamic range compression/expansion of light beams by photorefractive crystals  
[NASA-CASE-NPO-17140-1-CU] c 74 N89-14077

**DYNAMOMETERS**  
Thrust dynamometer Patent  
[NASA-CASE-XLE-00702] c 14 N70-40203  
Thrust dynamometer Patent  
[NASA-CASE-XLE-05260] c 14 N71-20429

## E

**EAR**  
Method and apparatus for continuously monitoring blood oxygenation, blood pressure, pulse rate and the pressure pulse curve utilizing an ear oximeter as transducer Patent  
[NASA-CASE-XAC-05422] c 04 N71-23185

**EARPHONES**  
Multi-adjustable headband --- for headsets  
[NASA-CASE-KSC-11322-1] c 54 N89-29953

**EARTH ATMOSPHERE**  
Ablation sensor Patent  
[NASA-CASE-XLA-01791] c 14 N71-22991

**EARTH CRUST**  
Seismic vibration source  
[NASA-CASE-NPO-14112-1] c 46 N79-22679

**EARTH IONOSPHERE**  
Ionospheric battery Patent  
[NASA-CASE-XGS-01593] c 03 N70-35408

**EARTH ORBITS**  
High temperature furnace for melting materials in space  
[NASA-CASE-MFS-20710] c 11 N72-23215  
A method of delivering a vehicle to earth orbit and returning the reusable portion thereof to earth  
[NASA-CASE-MS-C-12391] c 30 N73-12884  
A two-stage earth-to-orbit transport with translating oblique wings for booster recovery  
[NASA-CASE-LAR-14156-1] c 16 N90-16781  
Assured crew return vehicle  
[NASA-CASE-MS-C-21536-1] c 18 N91-13483  
Orbital debris sweeper and method  
[NASA-CASE-MS-C-21534-1] c 18 N91-21222

**ECCENTRICITY**  
Laser optical disk position encoder with active heads  
[NASA-CASE-GSC-13175-1] c 74 N91-14001

**ECCENTRICS**  
Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c 37 N81-25370

**ECHELLE GRATINGS**  
Cooled echelle grating spectrometer --- for space telescope applications  
[NASA-CASE-NPO-14372-1] c 35 N80-26635

**ECHO SOUNDING**  
Ultrasonic depth gauge for liquids under high pressure  
[NASA-CASE-LAR-13300-1-CU] c 35 N89-14407

**ECHOES**  
Miniature implantable ultrasonic echosonometer  
[NASA-CASE-ARC-11035-1] c 52 N79-18580  
Echo tracker/range finder for radars and sonars  
[NASA-CASE-NPO-14361-1] c 32 N82-23376

**EDDY CURRENTS**  
Apparatus and method for inspecting a bearing ball  
[NASA-CASE-MFS-25833-1] c 35 N86-32698

**EDGES**  
Method of forming a sharp edge on an optical device  
[NASA-CASE-GSC-12348-1] c 74 N80-24149

**EDITING**  
Generation of animation sequences of three dimensional models  
[NASA-CASE-MS-C-21379-1-SB] c 61 N90-27340

**EDUCATION**  
Visual accommodation trainer-tester  
[NASA-CASE-ARC-11426-2] c 52 N89-18256  
System and method for a general purpose architecture for intelligent computer-aided training  
[NASA-CASE-MS-C-21381-1] c 63 N91-13944

**EFFICIENCY**  
Recovery of radiation damaged solar cells through thermal annealing  
[NASA-CASE-XGS-04047-2] c 03 N72-11062  
High efficiency multifrequency feed  
[NASA-CASE-GSC-11909] c 32 N74-20863

**EFFLUENTS**  
Vortex generator for controlling the dispersion of effluents in a flowing liquid  
[NASA-CASE-LAR-12045-1] c 34 N77-24423  
Fluid sample collection and distribution system --- qualitative analysis of aqueous samples from several points  
[NASA-CASE-MS-C-16841-1] c 34 N79-24285

**EGRESS**  
Explosively activated egress area  
[NASA-CASE-LAR-12624-1] c 01 N83-35992  
Emergency egress fixed rocket package  
[NASA-CASE-MS-C-21332-1] c 03 N91-15142

**EJECTION**  
Apparatus for ejection of an instrument cover  
[NASA-CASE-XMF-04132] c 15 N69-27502

**EJECTION SEATS**  
Device for separating occupant from an ejection seat Patent  
[NASA-CASE-XMS-04625] c 05 N71-20718

## EJECTORS

Ejection unit Patent  
[NASA-CASE-XNP-00676] c 15 N70-38996  
Device for separating occupant from an ejection seat Patent  
[NASA-CASE-XMS-04625] c 05 N71-20718  
Latch/ejector unit Patent  
[NASA-CASE-XLA-03538] c 15 N71-24897  
Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-15429-1] c 18 N84-22609  
Diffuser/ejector system for a very high vacuum environment  
[NASA-CASE-MFS-25791-1] c 09 N84-27749  
Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-25429-1] c 18 N86-20469

**ELASTIC BODIES**  
Belleville spring assembly with elastic guides  
[NASA-CASE-XNP-09452] c 15 N69-27504  
Means for suppressing or attenuating bending motion of elastic bodies Patent  
[NASA-CASE-XAC-05632] c 32 N71-23971  
Device for measuring tensile forces  
[NASA-CASE-MFS-21728-1] c 35 N74-27865

**ELASTIC DEFORMATION**  
Instrument for measuring torsional creep and recovery Patent  
[NASA-CASE-XLE-01481] c 14 N71-10781  
Means for suppressing or attenuating bending motion of elastic bodies Patent  
[NASA-CASE-XAC-05632] c 32 N71-23971

**ELASTIC MEDIA**  
Miniature vibration isolator Patent  
[NASA-CASE-XLA-01019] c 15 N70-40156

**ELASTIC PROPERTIES**  
Elastic universal joint Patent  
[NASA-CASE-XNP-00416] c 15 N70-36947  
Deformable vehicle wheel Patent  
[NASA-CASE-MFS-20400] c 31 N71-18611  
Threadless fastener apparatus Patent  
[NASA-CASE-XFR-05302] c 15 N71-23254  
Highly fluorinated polyurethanes  
[NASA-CASE-NPO-10767-1] c 06 N73-33076  
Meter for use in detecting tension in straps having predetermined elastic characteristics  
[NASA-CASE-MFS-22189-1] c 35 N75-19615

**ELASTIC SHEETS**  
Method for forming plastic materials Patent  
[NASA-CASE-XMS-05516] c 15 N71-17803

**ELASTOMERS**  
Metal valve pintle with encapsulated elastomeric body Patent  
[NASA-CASE-MS-C-12116-1] c 15 N71-17648  
Extensometer Patent  
[NASA-CASE-XMF-04680] c 15 N71-19489  
Elastomeric silazane polymers and process for preparing the same Patent  
[NASA-CASE-XMF-04133] c 06 N71-20717  
Bonded elastomeric seal for electrochemical cells Patent  
[NASA-CASE-XGS-02631] c 03 N71-23006  
Conductive elastomeric extensometer  
[NASA-CASE-MFS-21049-1] c 52 N74-27864  
Vacuum pressure molding technique  
[NASA-CASE-LAR-10073-1] c 37 N76-24575  
Method of making hollow elastomeric bodies  
[NASA-CASE-NPO-13535-1] c 37 N76-31524  
Process for spinning flame retardant elastomeric compositions --- fabricating synthetic fibers for high oxygen environments  
[NASA-CASE-MS-C-14331-3] c 27 N78-32262  
Curable liquid hydrocarbon prepolymers containing hydroxyl groups and process for producing same  
[NASA-CASE-NPO-13137-1] c 27 N80-32514  
Prepolymer dianhydrides  
[NASA-CASE-NPO-13899-1] c 27 N80-32515  
Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c 27 N81-15104  
Process for the preparation of fluorine containing crosslinked elastomeric polytriazine and product so produced  
[NASA-CASE-ARC-11248-1] c 27 N81-17259  
The 1,2,4-oxadiazole elastomers --- heat resistant polymers  
[NASA-CASE-ARC-11253-1] c 27 N81-17262  
Bifunctional monomers having terminal oxime and cyano or amidine groups  
[NASA-CASE-ARC-11253-3] c 27 N81-24256  
Circumferential shaft seal  
[NASA-CASE-LEW-12119-2] c 37 N81-26447  
Heat sealable, flame and abrasion resistant coated fabric --- clothing and containers for space exploration  
[NASA-CASE-MS-C-18382-1] c 27 N82-16238

- Preparation of crosslinked 1,2,4-oxadiazole polymer  
[NASA-CASE-ARC-11253-2] c 27 N82-24338
- Method of bonding plasticized elastomer to metal and articles produced thereby  
[NASA-CASE-MFS-25181-1] c 27 N82-24340
- Elastomer toughened polyimide adhesives  
[NASA-CASE-LAR-12775-1] c 27 N83-28240
- Elastomer-modified phosphorus-containing imide resins  
[NASA-CASE-ARC-11400-1] c 27 N84-14322
- Process for preparing perfluorotriazine elastomers and precursors thereof  
[NASA-CASE-ARC-11402-1] c 27 N84-22744
- Elastomer toughened polyimide adhesives --- bonding metal and composite material structures for aircraft and spacecraft  
[NASA-CASE-LAR-12775-2] c 27 N85-21349
- Perfluoro (imidoylamidine) diamidines  
[NASA-CASE-ARC-11402-3] c 23 N86-21582
- Electro-expulsive separation system  
[NASA-CASE-ARC-11613-1] c 33 N87-28833
- Coaxial cable connector  
[NASA-CASE-NPO-16764-1-CU] c 33 N88-14270
- Device for applying constant pressure to a surface  
[NASA-CASE-GSC-13230-1] c 37 N91-13734
- Double face seating device  
[NASA-CASE-MFS-28521-1] c 37 N91-26542
- Process for bonding elastomers to metal  
[NASA-CASE-LAR-13645-1] c 27 N91-28424
- ELBOW (ANATOMY)**
- Elbow and knee joint for hard space suits  
[NASA-CASE-ARC-11610-1] c 54 N86-28619
- ELECTRIC ARCS**
- Electric-arc heater Patent  
[NASA-CASE-XLA-00330] c 33 N70-34540
- Electric arc welding Patent  
[NASA-CASE-XMF-00392] c 15 N70-34814
- Electric arc driven wind tunnel Patent  
[NASA-CASE-XMF-00411] c 11 N70-36913
- Electric arc device for heating gases Patent  
[NASA-CASE-XAC-00319] c 25 N70-41628
- Electric arc apparatus Patent  
[NASA-CASE-XAC-01677] c 09 N71-20816
- Arc electrode of graphite with ball tip Patent  
[NASA-CASE-XLE-04788] c 09 N71-22987
- High powered arc electrodes --- producing solar simulator radiation  
[NASA-CASE-LEW-11162-1] c 33 N74-12913
- Electric arc light source having undercut recessed anode  
[NASA-CASE-ARC-10266-1] c 33 N75-29318
- Welding torch with arc light reflector  
[NASA-CASE-MFS-29134-1] c 74 N87-17493
- Welding torch gas cup extension  
[NASA-CASE-MFS-29252-1] c 37 N88-23980
- ELECTRIC AUTOMOBILES**
- Additive for zinc electrodes --- electric automobiles  
[NASA-CASE-LEW-13286-1] c 33 N84-14422
- ELECTRIC BATTERIES**
- Spacecraft battery seals  
[NASA-CASE-XGS-03864] c 15 N69-24320
- Sealed battery gas manifold construction Patent  
[NASA-CASE-XNP-03378] c 03 N71-11051
- Method and apparatus for battery charge control Patent  
[NASA-CASE-XGS-05432] c 03 N71-19438
- Coulometer and third electrode battery charging circuit Patent  
[NASA-CASE-GSC-10487-1] c 03 N71-24719
- Heat activated cell Patent  
[NASA-CASE-LEW-11359] c 03 N71-28579
- Synchronous orbit battery cycler  
[NASA-CASE-GSC-11211-1] c 03 N72-25020
- Storage battery comprising negative plates of a wedge shaped configuration --- for preventing shape change induced malfunctions  
[NASA-CASE-NPO-11806-1] c 44 N74-19693
- Battery testing device --- for testing cells of multiple-cell battery  
[NASA-CASE-MFS-20761-1] c 44 N74-27519
- Rapid activation and checkout device for batteries  
[NASA-CASE-MFS-22749-1] c 44 N76-14601
- Zinc-halide battery with molten electrolyte  
[NASA-CASE-NPO-11961-1] c 44 N76-18643
- Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c 44 N76-27664
- Voltage regulator for battery power source --- using a bipolar transistor  
[NASA-CASE-FRC-10116-1] c 33 N79-23345
- In-situ cross linking of polyvinyl alcohol --- application to battery separator films  
[NASA-CASE-LEW-13135-2] c 27 N81-24257
- State-of-charge coulometer  
[NASA-CASE-NPO-15759-1] c 35 N85-21596
- Secondary Li battery incorporating 12-crown-4 ether  
[NASA-CASE-NPO-17922-1-CU] c 33 N91-13621
- Organic cathode for a secondary battery  
[NASA-CASE-NPO-17604-1-CU] c 33 N91-14536
- Thermal switch disc for short circuit protection of batteries  
[NASA-CASE-MSC-21428-1] c 33 N91-14537
- Copper chloride cathode for a secondary battery  
[NASA-CASE-NPO-17640-1-CU] c 33 N91-14538
- Metal chloride cathode for a battery  
[NASA-CASE-NPO-17809-1-CU] c 33 N91-27478
- ELECTRIC BRIDGES**
- Pulsed excitation voltage circuit for transducers  
[NASA-CASE-FRC-10036] c 09 N72-22200
- Infinite range electronics gain control circuit  
[NASA-CASE-GSC-10786-1] c 10 N72-28241
- Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-2] c 33 N75-25041
- Germanium coated microbridge and method  
[NASA-CASE-MFS-23274-1] c 33 N78-13320
- Power converter  
[NASA-CASE-FRC-11014-1] c 33 N82-18494
- ELECTRIC CELLS**
- Connector strips-positive, negative and T tabs  
[NASA-CASE-XGS-01395] c 03 N69-21539
- Heat activated cell with alkali anode and alkali salt electrolyte Patent  
[NASA-CASE-LEW-11358] c 03 N71-26084
- Ion-exchange membrane with platinum electrode assembly Patent  
[NASA-CASE-XMS-02063] c 03 N71-29044
- ELECTRIC CHARGE**
- Method and device for determining battery state of charge Patent  
[NASA-CASE-NPO-10194] c 03 N71-20407
- Automatic battery charger Patent  
[NASA-CASE-XNP-04758] c 03 N71-24605
- FET charge sensor and voltage probe  
[NASA-CASE-NPO-16045-1] c 76 N87-13313
- ELECTRIC CHOPPERS**
- Monostable multivibrator  
[NASA-CASE-GSC-10082-1] c 10 N72-20221
- Transformer regulated self-stabilizing chopper  
[NASA-CASE-XGS-09186] c 33 N78-17295
- ELECTRIC COILS**
- Broadband choke for antenna structure  
[NASA-CASE-XMS-05303] c 07 N69-27462
- Shaft transducer having dc output proportional to angular velocity  
[NASA-CASE-NPO-15706-1] c 35 N84-28017
- Phase sensitive guidance sensor for wire-following vehicles  
[NASA-CASE-NPO-15341-1] c 35 N84-33769
- ELECTRIC CONDUCTORS**
- Electrode and insulator with shielded dielectric junction  
[NASA-CASE-XLE-03778] c 09 N69-21542
- Solar cell matrix Patent  
[NASA-CASE-NPO-10821] c 03 N71-19545
- Electrical switching device Patent  
[NASA-CASE-NPO-10037] c 09 N71-19610
- Flexible conductive disc electrode Patent  
[NASA-CASE-FRC-10029] c 09 N71-24618
- Electrical insulating layer process  
[NASA-CASE-LEW-10489-1] c 15 N72-25447
- Injector for use in high voltage isolators for liquid feed lines  
[NASA-CASE-NPO-11377] c 15 N73-27406
- Solar cell grid patterns  
[NASA-CASE-NPO-13087-2] c 44 N76-31666
- Velocity measurement system  
[NASA-CASE-MFS-23363-1] c 35 N78-32396
- Shielded conductor cable system  
[NASA-CASE-MSC-12745-1] c 33 N81-27397
- ELECTRIC CONNECTORS**
- Connector - Electrical  
[NASA-CASE-XLA-01288] c 09 N69-21470
- Test fixture for pellet-like electrical elements  
[NASA-CASE-XNP-06032] c 09 N69-21926
- Coupling device  
[NASA-CASE-XMS-07846-1] c 09 N69-21927
- Electrical feed-through connection for printed circuit boards and printed cable  
[NASA-CASE-XMF-01483] c 14 N69-27431
- Electrical connector pin with wiping action  
[NASA-CASE-XMF-04238] c 09 N69-39734
- Electrical connector Patent Application  
[NASA-CASE-MFS-14741] c 09 N70-20737
- Electrical connector for flat cables Patent  
[NASA-CASE-XMF-00324] c 09 N70-34596
- Printed cable connector Patent  
[NASA-CASE-XMF-00369] c 09 N70-36494
- Printed circuit board with bellows rivet connection Patent  
[NASA-CASE-XNP-05082] c 15 N70-41960
- Method of making a molded connector Patent  
[NASA-CASE-XMF-03498] c 15 N71-15986
- Coaxial cable connector Patent  
[NASA-CASE-XNP-04732] c 09 N71-20851
- Connector internal force gauge Patent  
[NASA-CASE-XNP-03918] c 14 N71-23087
- Protection of serially connected solar cells against open circuits by the use of shunting diode Patent  
[NASA-CASE-XLE-04535] c 03 N71-23354
- Microelectronic module package Patent  
[NASA-CASE-XMS-02182] c 10 N71-28783
- Breakaway connector  
[NASA-CASE-NPO-11140] c 15 N72-17455
- Electrical connector  
[NASA-CASE-NPO-10694] c 09 N72-20200
- Radio frequency filter device  
[NASA-CASE-XLA-02609] c 09 N72-25256
- Use of unilluminated solar cells as shunt diodes for a solar array  
[NASA-CASE-GSC-10344-1] c 03 N72-27053
- Electrical connector  
[NASA-CASE-MFS-20757] c 09 N72-28225
- Device for configuring multiple leads --- method for connecting electric leads to printed circuit board  
[NASA-CASE-MFS-22133-1] c 33 N74-26977
- Connector --- for connecting circuits on different layers of multilayer printed circuit boards  
[NASA-CASE-LAR-11709-1] c 37 N76-27567
- Percutaneous connector device  
[NASA-CASE-KSC-10849-1] c 52 N77-14738
- Magnetic electrical connectors for biomedical percutaneous implants  
[NASA-CASE-KSC-11030-1] c 52 N77-25772
- Decommutator patchboard verifier  
[NASA-CASE-KSC-11065-1] c 33 N81-26359
- Electrical self-aligning connector --- orbital servicer vehicles  
[NASA-CASE-MFS-25211-2] c 33 N84-14423
- Four-terminal electrical testing device --- initiator bridgewire resistance  
[NASA-CASE-MSC-21166-1] c 35 N87-25555
- Coaxial cable connector  
[NASA-CASE-NPO-16764-1-CU] c 33 N88-14270
- Flush mounting of thin film sensors  
[NASA-CASE-LAR-14446-1] c 31 N91-28454
- ELECTRIC CONTACTS**
- Solid state switch  
[NASA-CASE-XNP-09228] c 09 N69-27500
- Deflective rod switch with elastic support and sealing means Patent  
[NASA-CASE-XNP-09808] c 09 N71-12518
- Method of making electrical contact on silicon solar cell and resultant product Patent  
[NASA-CASE-XLE-04787] c 03 N71-20492
- Continuous turning slip ring assembly Patent  
[NASA-CASE-XMF-01049] c 15 N71-23049
- Electrical connector  
[NASA-CASE-MFS-20757] c 09 N72-28225
- Electrostatic measurement system --- for contact-electrifying a dielectric  
[NASA-CASE-MFS-22129-1] c 33 N75-18477
- Process for preparing liquid metal electrical contact device  
[NASA-CASE-LEW-11978-1] c 33 N77-26385
- Non-contacting power transfer device  
[NASA-CASE-GSC-12595-1] c 33 N82-24422
- Solar cell having improved back surface reflector  
[NASA-CASE-LEW-13620-1] c 44 N83-13579
- Screen printed interdigitated back contact solar cell  
[NASA-CASE-LEW-13414-1] c 44 N85-20530
- Cross-contact chain  
[NASA-CASE-NPO-16784-1] c 33 N87-10231
- ELECTRIC CONTROL**
- Increasing efficiency of switching type regulator circuits Patent  
[NASA-CASE-XMS-09352] c 09 N71-23316
- Adjustable indicating device for load position  
[NASA-CASE-MFS-28008-1] c 35 N85-20300
- ELECTRIC CURRENT**
- Didymium hydrate additive to nickel hydroxide electrodes Patent  
[NASA-CASE-XGS-03505] c 03 N71-10608
- Electrical load protection device Patent  
[NASA-CASE-MSC-12135-1] c 09 N71-12526
- Micro current measuring device using plural logarithmic response heated filamentary type diodes Patent  
[NASA-CASE-XNP-00384] c 09 N71-13530
- Connector internal force gauge Patent  
[NASA-CASE-XNP-03918] c 14 N71-23087
- Pulse modulator providing fast rise and fall times Patent  
[NASA-CASE-XMS-04919] c 09 N71-23270
- Polarity sensitive circuit Patent  
[NASA-CASE-XNP-00952] c 10 N71-23271

- Protection of serially connected solar cells against open circuits by the use of shunting diode Patent  
[NASA-CASE-XLE-04535] c 03 N71-23354
- Color television systems using a single gun color cathode ray tube Patent  
[NASA-CASE-ERC-10098] c 09 N71-28618
- Current dependent filter inductance  
[NASA-CASE-ERC-10139] c 09 N72-17154
- High voltage transistor amplifier with constant current load  
[NASA-CASE-NPO-11023] c 09 N72-17155
- Current steering commutator  
[NASA-CASE-NPO-10743] c 08 N72-21199
- Saturation current protection apparatus for saturable core transformers  
[NASA-CASE-ERC-10075-2] c 09 N72-22196
- Thermal to electrical power conversion system with solid-state switches with Seebeck effect compensation  
[NASA-CASE-NPO-11388] c 03 N72-23048
- Load current sensor for a series pulse width modulated power supply  
[NASA-CASE-GSC-10656-1] c 09 N72-25249
- Method and apparatus for limiting field emission current  
[NASA-CASE-ERC-10015-2] c 10 N72-27246
- Deposition apparatus  
[NASA-CASE-LAR-10541-1] c 15 N72-32487
- Lightning current measuring systems  
[NASA-CASE-KSC-10807-1] c 33 N75-26246
- Overload protection system for power inverter  
[NASA-CASE-NPO-13872-1] c 33 N78-10377
- Shunt regulation electric power system  
[NASA-CASE-GSC-10135] c 33 N78-17296
- Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c 33 N79-10337
- Electroexplosive device  
[NASA-CASE-NPO-13858-1] c 28 N79-11231
- Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c 33 N79-11315
- Lightning current detector  
[NASA-CASE-KSC-11057-1] c 33 N79-14305
- Driver for solar cell I-V characteristic plots  
[NASA-CASE-NPO-14096-1] c 44 N80-18551
- Electrical power generating system --- for windpowered generation  
[NASA-CASE-MFS-24368-3] c 33 N81-22280
- Trace water sensor  
[NASA-CASE-NPO-15722-1] c 35 N85-29212
- Magnetic spin reduction system for free spinning objects  
[NASA-CASE-MFS-25966-1] c 16 N86-26352
- Four quadrant control circuit for a brushless three-phase dc motor  
[NASA-CASE-MFS-28080-1] c 33 N87-21233
- Electro-expulsive separation system  
[NASA-CASE-ARC-11613-1] c 33 N87-28833
- Differential current source  
[NASA-CASE-GSC-13280-1] c 33 N91-27479
- ELECTRIC DISCHARGES**
- Electrical discharge apparatus for forming Patent  
[NASA-CASE-XMF-00375] c 15 N70-34249
- High voltage pulse generator Patent  
[NASA-CASE-MS-C-12178-1] c 09 N71-13518
- Pulse generating circuit employing switch means on ends of delay line for alternately charging and discharging same Patent  
[NASA-CASE-XNP-00745] c 10 N71-28960
- Rapidly pulsed, high intensity, incoherent light source  
[NASA-CASE-XLE-2529-3] c 33 N74-20859
- Voltage feed through apparatus having reduced partial discharge  
[NASA-CASE-GSC-12347-1] c 33 N80-18286
- Electrostatic discharge test apparatus  
[NASA-CASE-MS-C-21094-1] c 35 N88-24941
- ELECTRIC ENERGY STORAGE**
- Apparatus for measuring current flow Patent  
[NASA-CASE-XGS-02439] c 14 N71-19431
- Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c 44 N76-27664
- Electrically rechargeable REDOX flow cell  
[NASA-CASE-LEW-12220-1] c 44 N77-14581
- Gels as battery separators for soluble electrode cells  
[NASA-CASE-LEW-12364-1] c 44 N77-22606
- Electrochemical cell for rebalancing REDOX flow system  
[NASA-CASE-LEW-13150-1] c 44 N79-26474
- Toroidal cell and battery --- storage battery for high amp-hour load applications  
[NASA-CASE-LEW-12918-1] c 44 N81-24521
- ELECTRIC EQUIPMENT**
- Ac power amplifier Patent Application  
[NASA-CASE-LAR-10218-1] c 09 N70-34559
- Generator for a space power system Patent  
[NASA-CASE-XLE-04250] c 09 N71-20446
- High impedance measuring apparatus Patent  
[NASA-CASE-XMS-08589-1] c 09 N71-20569
- Regulated power supply Patent  
[NASA-CASE-XMS-01991] c 09 N71-21449
- Method for improving the signal-to-noise ratio of the Wheatstone bridge type bolometer Patent  
[NASA-CASE-XLA-02810] c 14 N71-25901
- Buck boost voltage regulation circuit Patent  
[NASA-CASE-GSC-10735-1] c 10 N71-26085
- Electronically resettable fuse Patent  
[NASA-CASE-XGS-11177] c 09 N71-27001
- Voltage regulator Patent  
[NASA-CASE-ERC-10113] c 09 N71-27053
- Digital pulse width selection circuit Patent  
[NASA-CASE-XLA-07788] c 09 N71-29139
- Solar energy powered heliotope  
[NASA-CASE-GSC-10945-1] c 21 N72-31637
- Temperature compensated light source using a light emitting diode  
[NASA-CASE-ARC-10467-1] c 09 N73-14214
- Hermetically sealed semiconductor  
[NASA-CASE-GSC-10791-1] c 15 N73-14469
- Overvoltage protection network  
[NASA-CASE-ARC-10197-1] c 33 N74-17929
- Sprag solenoid brake --- development and operations of electrically controlled brake  
[NASA-CASE-MFS-21846-1] c 37 N74-26976
- Shock absorbing mount for electrical components  
[NASA-CASE-NPO-13253-1] c 37 N75-18573
- Self-regulating proportionally controlled heating apparatus and technique  
[NASA-CASE-GSC-11752-1] c 77 N75-20140
- ELECTRIC EQUIPMENT TESTS**
- Test fixture for pellet-like electrical elements  
[NASA-CASE-XNP-06032] c 09 N69-21926
- Pulse amplitude and width detector Patent  
[NASA-CASE-XMF-06519] c 09 N71-12519
- High power-high voltage waterload Patent  
[NASA-CASE-XNP-05381] c 09 N71-20842
- ELECTRIC FIELD STRENGTH**
- Apparatus for field strength measurement of a space vehicle Patent  
[NASA-CASE-XLE-00820] c 14 N71-16014
- Apparatus for measuring electric field strength on the surface of a model vehicle Patent  
[NASA-CASE-XLE-02038] c 09 N71-16086
- Floating two force component measuring device Patent  
[NASA-CASE-XAC-04885] c 14 N71-23790
- Apparatus for determining the deflection of an electron beam impinging on a target Patent  
[NASA-CASE-XMF-06617] c 09 N71-24843
- ELECTRIC FIELDS**
- Minimum induced drag airfoil body Patent  
[NASA-CASE-XLA-00755] c 01 N71-13410
- Minimum induced drag airfoil body Patent  
[NASA-CASE-XLA-05828] c 01 N71-13411
- Instrument for measuring potentials on two dimensional electric field plots Patent  
[NASA-CASE-XLA-08493] c 10 N71-19421
- Electron beam instrument for measuring electric fields Patent  
[NASA-CASE-XMF-10289] c 14 N71-23699
- Field ionization electrodes Patent  
[NASA-CASE-ERC-10013] c 09 N71-26678
- Determining distance to lightning strokes from a single station  
[NASA-CASE-KSC-10698] c 07 N73-20175
- Rocket borne instrument to measure electric fields inside electrified clouds  
[NASA-CASE-KSC-10730-1] c 14 N73-32318
- Electric field measuring and display system --- for cloud formations  
[NASA-CASE-KSC-10731-1] c 33 N74-27862
- Lightning discharge identification system  
[NASA-CASE-KSC-11099-1] c 47 N82-24779
- Maser cavity servo-tuning system  
[NASA-CASE-NPO-15890-1-CU] c 33 N85-29143
- Method of measuring field funneling and range straggling in semiconductor charge-collecting junctions  
[NASA-CASE-NPO-16584-1-CU] c 76 N86-25269
- Solidification processing of alloys using an applied electric field  
[NASA-CASE-MFS-26083-1-CU] c 26 N90-26940
- Method and apparatus for determining return stroke polarity of distant lightning  
[NASA-CASE-MFS-26102-1-CU] c 47 N91-15661
- Enhanced single layer multi-color or luminescent display with coactivators  
[NASA-CASE-LAR-14181-1] c 76 N91-21911
- ELECTRIC FILTERS**
- Static inverters which sum a plurality of waves Patent  
[NASA-CASE-XMF-00663] c 08 N71-18752
- Remodulator filter Patent  
[NASA-CASE-NPO-10198] c 09 N71-24806
- RC networks and amplifiers employing the same  
[NASA-CASE-XAC-05462-2] c 10 N72-17171
- Multiloop RC active filter apparatus having low parameter sensitivity with low amplifier gain  
[NASA-CASE-ARC-10192] c 09 N72-21245
- Radio frequency filter device  
[NASA-CASE-XLA-02609] c 09 N72-25256
- Filter for third order phase locked loops  
[NASA-CASE-NPO-11941-1] c 10 N73-27171
- ELECTRIC FURNACES**
- High gradient directional solidification furnace  
[NASA-CASE-MFS-25963-1] c 35 N86-20750
- ELECTRIC FUSES**
- Electrical load protection device Patent  
[NASA-CASE-MS-C-12135-1] c 09 N71-12526
- Diode and protection fuse unit Patent  
[NASA-CASE-XKS-03381] c 09 N71-22796
- Fused switch  
[NASA-CASE-XMS-01244-1] c 33 N79-33393
- ELECTRIC GENERATORS**
- Regulated dc to dc converter  
[NASA-CASE-XGS-03429] c 03 N69-21330
- Generator for a space power system Patent  
[NASA-CASE-XLE-04250] c 09 N71-20446
- Solid state pulse generator with constant output width, for variable input width, in nanosecond range Patent  
[NASA-CASE-XGS-03427] c 10 N71-23029
- Continuous turning slip ring assembly Patent  
[NASA-CASE-XMF-01049] c 15 N71-23049
- Positive dc to positive dc converter Patent  
[NASA-CASE-XMF-14301] c 09 N71-23188
- High temperature ferromagnetic cobalt-base alloy Patent  
[NASA-CASE-XLE-03629] c 17 N71-23248
- Variable width pulse integrator Patent  
[NASA-CASE-XLA-03356] c 10 N71-23315
- Power system with heat pipe liquid coolant lines Patent  
[NASA-CASE-MFS-14114-2] c 09 N71-24807
- RC rate generator for slow speed measurement Patent  
[NASA-CASE-XMF-02966] c 10 N71-24863
- Pulse width inverter Patent  
[NASA-CASE-MFS-10068] c 10 N71-25139
- Multiple varactor frequency doubler Patent  
[NASA-CASE-XMF-04958-1] c 10 N71-26414
- Failure sensing and protection circuit for converter networks Patent  
[NASA-CASE-GSC-10114-1] c 10 N71-27366
- Power system with heat pipe liquid coolant lines Patent  
[NASA-CASE-MFS-14114] c 33 N71-27862
- Load-insensitive electrical device  
[NASA-CASE-XER-11046] c 09 N72-22203
- Controllable load insensitive power converters  
[NASA-CASE-ERC-10268] c 09 N72-25252
- A dc to ac to dc converter having transistor synchronous rectifiers  
[NASA-CASE-GSC-11126-1] c 09 N72-25253
- Electromagnetic wave energy converter  
[NASA-CASE-GSC-11394-1] c 09 N73-32109
- Heat operated cryogenic electrical generator  
[NASA-CASE-NPO-13303-1] c 20 N75-24837
- Electric power generation system directory from laser power  
[NASA-CASE-NPO-13308-1] c 36 N75-30524
- Smoke generator  
[NASA-CASE-ARC-10905-1] c 37 N77-13418
- Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-11389-1] c 33 N77-26387
- Wind wheel electric power generator  
[NASA-CASE-MFS-23515-1] c 44 N80-21828
- Natural turbulence electrical power generator --- using wave action or random motion  
[NASA-CASE-LAR-11551-1] c 44 N80-29834
- Electrical power generating system --- for windpowered generation  
[NASA-CASE-MFS-24368-3] c 33 N81-22280
- Linear magnetic motor/generator --- to generate electric energy using magnetic flux for spacecraft power supply  
[NASA-CASE-GSC-12518-1] c 33 N82-24421
- Electrical power generating system  
[NASA-CASE-MFS-25302-1] c 33 N83-28319
- Control system for an induction motor with energy recovery  
[NASA-CASE-MFS-25477-1] c 33 N84-14424
- Solar powered actuator with continuously variable auxiliary power control  
[NASA-CASE-MFS-25637-1] c 44 N85-21769
- Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-2] c 28 N91-14495
- ELECTRIC IGNITION**
- Method of making a solid propellant rocket motor Patent  
[NASA-CASE-XLA-04126] c 28 N71-26779

## ELECTRIC MOTOR VEHICLES

Automotive absorption air conditioner utilizing solar and motor waste heat  
[NASA-CASE-NPO-15183-1] c 44 N82-26776

## ELECTRIC MOTORS

Bus voltage compensation circuit for controlling direct current motor  
[NASA-CASE-XMS-04215-1] c 09 N69-39987  
Electronic motor control system Patent  
[NASA-CASE-XMF-01129] c 09 N70-38712  
Electronic beam switching commutator Patent  
[NASA-CASE-XGS-01451] c 09 N71-10677  
Regenerative braking system Patent  
[NASA-CASE-XMF-01096] c 10 N71-16030  
Angular position and velocity sensing apparatus Patent  
[NASA-CASE-XGS-05680] c 14 N71-17585  
Reversible current control apparatus Patent  
[NASA-CASE-XLA-09371] c 10 N71-18724  
Stepping motor control circuit Patent  
[NASA-CASE-GSC-10366-1] c 10 N71-18772  
Detenting servomotor Patent  
[NASA-CASE-XNP-06936] c 15 N71-24695  
Transistor servo system including a unique differential amplifier circuit Patent  
[NASA-CASE-XMF-05195] c 10 N71-24861  
Velocity limiting safety system Patent  
[NASA-CASE-XLA-07473] c 15 N71-24895  
Direct current motor with stationary armature and field Patent  
[NASA-CASE-XGS-05290] c 09 N71-25999  
Dual polarity full wave dc motor drive Patent  
[NASA-CASE-XNP-07477] c 09 N71-26092  
Control apparatus for applying pulses of selectively predetermined duration to a sequence of loads Patent  
[NASA-CASE-XGS-04224] c 10 N71-26418  
A dc motor speed control system Patent  
[NASA-CASE-MFS-14610] c 09 N71-28886  
Optimal control system for an electric motor driven vehicle  
[NASA-CASE-NPO-11210] c 11 N72-20244  
Electric motive machine including magnetic bearing  
[NASA-CASE-XGS-07805] c 15 N72-33476  
Redundant speed control for brushless Hall effect motor  
[NASA-CASE-MFS-20207-1] c 09 N73-32107  
Three phase full wave dc motor decoder  
[NASA-CASE-GSC-11824-1] c 33 N77-26386  
Rotary electric device  
[NASA-CASE-GSC-12138-1] c 33 N79-20314  
Controller for computer control of brushless dc motors --- automobile engines  
[NASA-CASE-NPO-13970-1] c 33 N81-20352  
Linear magnetic motor/generator --- to generate electric energy using magnetic flux for spacecraft power supply  
[NASA-CASE-GSC-12518-1] c 33 N82-24421  
Four quadrant control circuit for a brushless three-phase dc motor  
[NASA-CASE-MFS-28080-1] c 33 N87-21233  
Reciprocating linear motor  
[NASA-CASE-GSC-12773-2] c 33 N87-23904

## ELECTRIC NETWORKS

Condition and condition duration indicator Patent  
[NASA-CASE-XMF-01097] c 10 N71-16058  
Solid state pulse generator with constant output width, for variable input width, in nanosecond range Patent  
[NASA-CASE-XGS-03427] c 10 N71-23029  
Increasing efficiency of switching type regulator circuits Patent  
[NASA-CASE-XMS-09352] c 09 N71-23316  
Broadband frequency discriminator Patent  
[NASA-CASE-NPO-10096] c 07 N71-24583  
Test apparatus for locating shorts during assembly of electrical buses  
[NASA-CASE-ARC-11116-1] c 33 N82-24420

## ELECTRIC POTENTIAL

Method and apparatus for battery charge control Patent  
[NASA-CASE-XGS-05432] c 03 N71-19438  
Positive dc to positive dc converter Patent  
[NASA-CASE-XMF-14301] c 09 N71-23188  
Variable width pulse integrator Patent  
[NASA-CASE-XLA-03356] c 10 N71-23315  
Voltage dropout sensor Patent  
[NASA-CASE-KSC-10020] c 10 N71-27338  
Automated equipotential plotter  
[NASA-CASE-NPO-11134] c 09 N72-21246  
Pulsed excitation voltage circuit for transducers  
[NASA-CASE-FRC-10036] c 09 N72-22200  
Load-insensitive electrical device  
[NASA-CASE-XER-11046] c 09 N72-22203  
Continuously variable voltage controlled phase shifter  
[NASA-CASE-NPO-11129] c 09 N72-33204  
Photoelectron spectrometer with means for stabilizing sample surface potential  
[NASA-CASE-NPO-13772-1] c 35 N78-10429

Microcomputerized electric field meter diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c 35 N78-28411  
Driver for solar cell I-V characteristic plots  
[NASA-CASE-NPO-14096-1] c 44 N80-18551  
Microwave integrated circuit for Josephson voltage standards  
[NASA-CASE-MFS-23845-1] c 33 N81-17348  
Synchronized voltage contrast display analysis system  
[NASA-CASE-NPO-14567-1] c 33 N83-18996  
Method for detecting coliform organisms  
[NASA-CASE-ARC-11322-1] c 51 N83-28849  
Phase detector for three-phase power factor controller  
[NASA-CASE-MFS-25854-1] c 33 N84-27975  
Simplified dc to dc converter  
[NASA-CASE-LEW-13495-1] c 33 N84-33663  
High voltage power supply  
[NASA-CASE-GSC-12818-1] c 33 N85-29147  
Modulated voltage metastable ionization detector  
[NASA-CASE-ARC-11503-1] c 35 N85-34374  
Angular measurement system  
[NASA-CASE-MFS-25825-1] c 31 N86-29055  
FET charge sensor and voltage probe  
[NASA-CASE-NPO-16045-1] c 76 N87-13313  
Electronic precipitator control  
[NASA-CASE-LAR-13273-2] c 33 N90-20320  
Alternating gradient photodetector  
[NASA-CASE-NPO-17235-1-CU] c 35 N90-21358  
Induction-type metal detector with increased scanning area capability  
[NASA-CASE-KSC-11386-1] c 35 N90-22023  
Device for quickly sensing the amount of O<sub>2</sub> in a combustion product gas  
[NASA-CASE-LAR-13816-1] c 35 N90-22025  
Noninvasive method and apparatus for monitoring the cure of polymeric materials  
[NASA-CASE-LAR-13465-1] c 27 N90-23544  
High speed magneto-resistive random access memory  
[NASA-CASE-NPO-17954-1-CU] c 60 N90-26519  
Dual physiological rate measurement instrument  
[NASA-CASE-MSC-20078-3] c 52 N91-14709  
Single element magnetic suspension actuator  
[NASA-CASE-LAR-13981-1] c 37 N91-21539  
Differential current source  
[NASA-CASE-GSC-13280-1] c 33 N91-27479  
Driven shielding capacitive proximity sensor  
[NASA-CASE-GSC-13377-1] c 63 N91-28785

## ELECTRIC POWER

Switching circuit employing regeneratively connected complementary transistors Patent  
[NASA-CASE-XNP-02654] c 10 N70-42032  
High power-high voltage waterload Patent  
[NASA-CASE-XNP-05381] c 09 N71-20842  
Power factor control system for AC induction motors  
[NASA-CASE-MFS-23280-1] c 33 N78-10376  
Shunt regulation electric power system  
[NASA-CASE-GSC-10135] c 33 N78-17296  
Electrical power generating system --- for windpowered generation  
[NASA-CASE-MFS-24368-3] c 33 N81-22280

## ELECTRIC POWER PLANTS

Ocean thermal plant  
[NASA-CASE-KSC-11034-1] c 44 N78-32542  
Wind and solar powered turbine  
[NASA-CASE-NPO-15496-1] c 44 N84-23018

## ELECTRIC POWER SUPPLIES

Current dependent filter inductance  
[NASA-CASE-ERC-10139] c 09 N72-17154  
Thermal to electrical power conversion system with solid-state switches with Seebeck effect compensation  
[NASA-CASE-NPO-11388] c 03 N72-23048  
Parasitic suppressing circuit  
[NASA-CASE-ERC-10403-1] c 10 N73-26228  
Powerplexer  
[NASA-CASE-MSC-12396-1] c 03 N73-31988  
Inherent redundancy electric heater  
[NASA-CASE-MFS-21462-1] c 33 N74-14935  
Temperature compensated current source  
[NASA-CASE-MSC-11235] c 33 N78-17294  
High voltage power supply  
[NASA-CASE-GSC-12818-1] c 33 N85-29147  
Arc lamp power supply using a voltage multiplier  
[NASA-CASE-LAR-13202-1] c 33 N88-23942  
Magnetically switched power supply system for lasers  
[NASA-CASE-NPO-16402-2] c 33 N88-24862

## ELECTRIC POWER TRANSMISSION

Magnetic power switch Patent  
[NASA-CASE-NPO-10242] c 09 N71-24803  
Failure sensing and protection circuit for converter networks Patent  
[NASA-CASE-GSC-10114-1] c 10 N71-27366  
Powerplexer  
[NASA-CASE-MSC-12396-1] c 03 N73-31988

Microwave power transmission system wherein level of transmitted power is controlled by reflections from receiver  
[NASA-CASE-MFS-21470-1] c 44 N74-19870  
Electrical rotary joint apparatus for large space structures  
[NASA-CASE-MFS-23981-1] c 07 N83-20944

## ELECTRIC PROPULSION

Electric propulsion engine test chamber Patent  
[NASA-CASE-XLE-00252] c 11 N70-34844

## ELECTRIC PULSES

Pulse counting circuit which simultaneously indicates the occurrence of the nth pulse Patent  
[NASA-CASE-ARC-00906] c 09 N70-41655  
Variable pulse width multiplier Patent  
[NASA-CASE-XLA-02850] c 09 N71-20447  
Phonocardiograph transducer Patent  
[NASA-CASE-XMS-05365] c 14 N71-22993  
Solid state pulse generator with constant output width, for variable input width, in nanosecond range Patent  
[NASA-CASE-XGS-03427] c 10 N71-23029  
Variable width pulse integrator Patent  
[NASA-CASE-XLA-03356] c 10 N71-23315  
Pulse rise time and amplitude detector Patent  
[NASA-CASE-XMF-08804] c 09 N71-24717  
Counter Patent  
[NASA-CASE-XNP-06234] c 10 N71-27137  
Precision rectifier with FET switching means Patent  
[NASA-CASE-ARC-10101-1] c 09 N71-33109  
Phase modulating with odd and even finite power series of a modulating signal  
[NASA-CASE-LAR-11607-1] c 32 N77-14292  
Telephone multiline signaling using common signal pair  
[NASA-CASE-KSC-11023-1] c 32 N79-23310  
Active lamp pulse driver circuit --- optical pumping of laser media  
[NASA-CASE-GSC-12566-1] c 33 N83-34189

## ELECTRIC RELAYS

Protective circuit of the spark gap type  
[NASA-CASE-XAC-08981] c 09 N69-39897  
Time-division multiplexer Patent  
[NASA-CASE-XNP-00431] c 09 N70-38998  
Out of tolerance warning alarm system for plurality of monitored circuits Patent  
[NASA-CASE-XMS-10984-1] c 10 N71-19417  
Time division ratio relay synchronizing system using different sync code words for in sync and out of sync conditions Patent  
[NASA-CASE-GSC-10373-1] c 07 N71-19773  
Circuit breaker utilizing magnetic latching relays Patent  
[NASA-CASE-MSC-11277] c 09 N71-29008  
Multi-cell battery protection system  
[NASA-CASE-LEW-12039-1] c 44 N78-14625

## ELECTRIC ROCKET ENGINES

Electron bombardment ion engine Patent  
[NASA-CASE-XNP-04124] c 28 N71-21822

## ELECTRIC SPARKS

Method and device for detection of a substance --- determining carbon fiber release in fire situations  
[NASA-CASE-NPO-14940-1] c 33 N83-31954

## ELECTRIC STIMULI

Tread drum for animals --- having an electrical shock station  
[NASA-CASE-ARC-10917-1] c 51 N78-27733

## ELECTRIC SWITCHES

Thermionic diode switch Patent  
[NASA-CASE-NPO-10404] c 03 N71-12255  
Deflective rod switch with elastic support and sealing means Patent  
[NASA-CASE-XNP-09808] c 09 N71-12518  
Electrical switching device Patent  
[NASA-CASE-NPO-10037] c 09 N71-19610  
Plural position switch status and operativeness checker Patent  
[NASA-CASE-XLA-08799] c 10 N71-27272  
Pulse generating circuit employing switch means on ends of delay line for alternately charging and discharging same Patent  
[NASA-CASE-XNP-00745] c 10 N71-28960  
Cyclic switch Patent  
[NASA-CASE-LEW-10155-1] c 09 N71-29035  
Telemetry actuated switch  
[NASA-CASE-ARC-10105] c 09 N72-17153  
Differential pressure control  
[NASA-CASE-MFS-14216] c 14 N73-13418  
Fused switch  
[NASA-CASE-XMS-01244-1] c 33 N79-33393  
Pulse switching for high energy lasers  
[NASA-CASE-NPO-14556-1] c 33 N82-24418  
Automatic thermal switch --- spacecraft applications  
[NASA-CASE-GSC-12553-1] c 34 N83-28356  
Four quadrant control circuit for a brushless three-phase dc motor  
[NASA-CASE-MFS-28080-1] c 33 N87-21233



**ELECTRIC TERMINALS**

- Electrical connector pin with wiping action  
[NASA-CASE-XMF-04238] c 09 N69-39734
- Electrical connector for flat cables Patent  
[NASA-CASE-XMF-00324] c 09 N70-34596
- Tool attachment for spreading loose elements away from work Patent  
[NASA-CASE-XMF-02107] c 15 N71-10809
- Electrical spot terminal assembly Patent  
[NASA-CASE-NPO-10034] c 15 N71-17685
- Resistance soldering apparatus  
[NASA-CASE-GSC-10913] c 15 N72-22491
- Radio frequency filter device  
[NASA-CASE-XLA-02609] c 09 N72-25256
- Device for configuring multiple leads --- method for connecting electric leads to printed circuit board  
[NASA-CASE-MFS-22133-1] c 33 N74-26977

**ELECTRIC WELDING**

- Electric welding torch Patent  
[NASA-CASE-XMF-02330] c 15 N71-23798
- Butt welder for fine gauge tungsten/rhenium thermocouple wire  
[NASA-CASE-LAR-10103-1] c 15 N73-14468
- Welding blades to rotors  
[NASA-CASE-LEW-10533-1] c 15 N73-28515

**ELECTRIC WIRE**

- Wire grid forming apparatus Patent  
[NASA-CASE-XLE-00023] c 15 N70-33330
- Weld control system using thermocouple wire Patent  
[NASA-CASE-MFS-06074] c 15 N71-20393
- Ablation sensor Patent  
[NASA-CASE-XLA-01794] c 33 N71-21586
- Resistance soldering apparatus  
[NASA-CASE-GSC-10913] c 15 N72-22491
- Lead attachment to high temperature devices  
[NASA-CASE-ERC-10224] c 09 N72-25261
- Means for accommodating large overstrain in lead wires --- by storing extra length of wire in stretchable loop  
[NASA-CASE-LAR-10168-1] c 33 N74-22865
- Device for configuring multiple leads --- method for connecting electric leads to printed circuit board  
[NASA-CASE-MFS-22133-1] c 33 N74-26977
- High current electrical lead --- for thermionic converters  
[NASA-CASE-LEW-10950-1] c 33 N74-27683
- Wire stripper  
[NASA-CASE-FRC-10111-1] c 37 N79-10419
- Method and apparatus for preparing multiconductor cable with flat conductors  
[NASA-CASE-MFS-10946-1] c 31 N79-21226
- Edge coating of flat wires  
[NASA-CASE-XMF-05757-1] c 31 N79-21227
- Thin wire pointing method  
[NASA-CASE-NPO-15789-1] c 31 N83-19947

**ELECTRICAL ENGINEERING**

- Relay binary circuit Patent  
[NASA-CASE-XMF-00421] c 09 N70-34502
- Vibrating element electrometer with output signal magnified over input signal by a function of the mechanical Q of the vibrating element Patent  
[NASA-CASE-XAC-02807] c 09 N71-23021

**ELECTRICAL FAULTS**

- Apparatus for overcurrent protection of a push-pull amplifier Patent  
[NASA-CASE-MSC-12033-1] c 09 N71-13531
- Failure sensing and protection circuit for converter networks Patent  
[NASA-CASE-GSC-10114-1] c 10 N71-27366
- Solar cell assembly test method  
[NASA-CASE-NPO-10401] c 03 N72-20033
- Shared memory for a fault-tolerant computer  
[NASA-CASE-NPO-13139-1] c 60 N76-21914
- Method and apparatus for transfer function simulator for testing complex systems  
[NASA-CASE-NPO-15696-1] c 33 N85-34333

**ELECTRICAL IMPEDANCE**

- High voltage transistor circuit Patent  
[NASA-CASE-XNP-06937] c 09 N71-19516
- High impedance measuring apparatus Patent  
[NASA-CASE-XMS-08589-1] c 09 N71-20569
- Multialarm summary alarm Patent  
[NASA-CASE-XLE-03061-1] c 10 N71-24798
- Signal conditioning circuit apparatus --- with constant input impedance  
[NASA-CASE-ARC-10348-1] c 33 N75-19518
- Readout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c 35 N76-24525
- Solid-state current transformer  
[NASA-CASE-MFS-22560-1] c 33 N77-14335

**ELECTRICAL INSULATION**

- Solenoid construction Patent  
[NASA-CASE-XNP-01951] c 09 N70-41929
- Method and apparatus for cryogenic wire stripping Patent  
[NASA-CASE-MFS-10340] c 15 N71-17628

- Plasma device feed system Patent  
[NASA-CASE-XLE-02902] c 25 N71-21694
- Propellant feed isolator Patent  
[NASA-CASE-LEW-10210-1] c 28 N71-26781
- Electrical insulating layer process  
[NASA-CASE-LEW-10489-1] c 15 N72-25447
- Bio-isolated dc operational amplifier --- for bioelectric measurements  
[NASA-CASE-ARC-10596-1] c 33 N74-21851
- Stored charge transistor  
[NASA-CASE-NPO-11156-2] c 33 N75-31331
- Method of making an insulation foil  
[NASA-CASE-LEW-11484-1] c 24 N75-33181
- Gas ion laser construction for electrically isolating the pressure gauge thereof  
[NASA-CASE-MFS-22597] c 36 N78-17366
- Wire stripper  
[NASA-CASE-FRC-10111-1] c 37 N79-10419
- Coaxial cable connector  
[NASA-CASE-NPO-16764-1-CU] c 33 N88-14270

**ELECTRICAL MEASUREMENT**

- Device for determining the accuracy of the flare on a flared tube  
[NASA-CASE-XKS-03495] c 14 N69-39785
- Bootstrap unloader Patent  
[NASA-CASE-XNP-09768] c 09 N71-12516
- Micro current measuring device using plural logarithmic response heated filamentary type diodes Patent  
[NASA-CASE-XNP-00384] c 09 N71-13530
- Apparatus for field strength measurement of a space vehicle Patent  
[NASA-CASE-XLE-00820] c 14 N71-16014
- Apparatus for measuring current flow Patent  
[NASA-CASE-XGS-02439] c 14 N71-19431
- High voltage divider system Patent  
[NASA-CASE-XLE-02008] c 09 N71-21583
- Ablation sensor Patent  
[NASA-CASE-XLA-01794] c 33 N71-21586
- Hall current measuring apparatus having a series resistor for temperature compensation Patent  
[NASA-CASE-XAC-01662] c 14 N71-23037
- Connector internal force gauge Patent  
[NASA-CASE-XNP-03918] c 14 N71-23087
- Automatic signal range selector for metering devices Patent  
[NASA-CASE-XMS-06497] c 14 N71-26244
- Lightning current measuring systems  
[NASA-CASE-KSC-10807-1] c 33 N75-26246
- Rapid activation and checkout device for batteries  
[NASA-CASE-MFS-22749-1] c 44 N76-14601
- Electrical conductivity cell and method for fabricating the same  
[NASA-CASE-ARC-10810-1] c 33 N76-19339
- Trielectrode capacitive pressure transducer  
[NASA-CASE-ARC-10711-2] c 33 N76-21390
- Readout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c 35 N76-24525
- Apparatus for measuring semiconductor device resistance  
[NASA-CASE-NPO-14424-1] c 33 N80-32650
- Lightning discharge identification system  
[NASA-CASE-KSC-11099-1] c 47 N82-24779
- Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c 35 N82-31659
- Four-terminal electrical testing device --- initiator bridgewire resistance  
[NASA-CASE-MSC-21166-1] c 35 N87-25555

**ELECTRICAL PROPERTIES**

- Drift compensation circuit for analog to digital converter Patent  
[NASA-CASE-XNP-04780] c 08 N71-19687
- Electronically resettable fuse Patent  
[NASA-CASE-XGS-11177] c 09 N71-27001
- Voltage regulator Patent  
[NASA-CASE-ERC-10113] c 09 N71-27053
- Radiometric temperature reference Patent  
[NASA-CASE-MSC-13276-1] c 14 N71-27058
- Solar cell matrix  
[NASA-CASE-NPO-11190] c 03 N71-34044
- Storage battery comprising negative plates of a wedge shaped configuration --- for preventing shape change induced malfunctions  
[NASA-CASE-NPO-11806-1] c 44 N74-19693
- Thermocouple tape --- developed from thermoelectrically different metals  
[NASA-CASE-LEW-11072-2] c 35 N76-15434
- Modification of the electrical and optical properties of polymers --- ion irradiation to create texture  
[NASA-CASE-LEW-13027-1] c 27 N80-24437
- Silicon containing electroconductive polymers and structures made therefrom  
[NASA-CASE-NPO-17826-1-CU] c 27 N90-26952
- ELECTRICAL RESISTANCE**  
Positive contact resistance soldering unit  
[NASA-CASE-KSC-10242] c 15 N72-23497

- RF-source resistance meters  
[NASA-CASE-NPO-11291-1] c 14 N73-30388
- Apparatus for measuring semiconductor device resistance  
[NASA-CASE-NPO-14424-1] c 33 N80-32650
- Tensile testing apparatus  
[NASA-CASE-LAR-13243-1] c 35 N85-34375
- Four-terminal electrical testing device --- initiator bridgewire resistance  
[NASA-CASE-MSC-21166-1] c 35 N87-25555
- A digitally controlled system for effecting and presenting a selected electrical resistance  
[NASA-CASE-MFS-29149-1] c 33 N90-19492

**ELECTRICAL RESISTIVITY**

- GaAs solar detector using manganese as a doping agent Patent  
[NASA-CASE-XNP-01328] c 26 N71-18064
- Thermopile vacuum gage tube simulator Patent  
[NASA-CASE-XLA-02758] c 14 N71-18481
- Electrically conductive fluorocarbon polymer  
[NASA-CASE-LEW-06774-2] c 06 N78-25150
- Electrical conductivity cell and method for fabricating the same  
[NASA-CASE-ARC-10810-1] c 33 N76-19339
- Durable antistatic coating for polymethylmethacrylate  
[NASA-CASE-NPO-13867-1] c 27 N78-14164
- Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c 33 N79-11315
- Lightweight electrically-powered flexible thermal laminate --- made of metal and nonconductive yarns  
[NASA-CASE-MSC-12662-1] c 33 N79-12331
- Electrically conductive thermal control coatings  
[NASA-CASE-GSC-12207-1] c 24 N79-14156
- Electrically conductive palladium containing polyimide films  
[NASA-CASE-LAR-12705-1] c 25 N82-26396
- Method of making a high voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c 44 N82-29709
- Method and device for detection of a substance --- determining carbon fiber release in fire situations  
[NASA-CASE-NPO-14940-1] c 33 N83-31954
- Piezoelectric composite materials  
[NASA-CASE-LEW-12582-1] c 76 N83-34796
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA-CASE-NPO-15494-2] c 35 N85-34373
- Light weight polymer matrix composite material  
[NASA-CASE-LEW-14734-1] c 24 N89-23623
- Solid state electrical switch employing materials with reversible phase transistors  
[NASA-CASE-NPO-17621-1-CU] c 33 N90-17010
- Alternating gradient photodetector  
[NASA-CASE-NPO-17235-1-CU] c 35 N90-21358
- High temperature electric arc furnace and method  
[NASA-CASE-MFS-28281-1] c 09 N90-23415
- High speed magneto-resistive random access memory  
[NASA-CASE-NPO-17954-1-CU] c 60 N90-26519
- Silicon containing electroconductive polymers and structures made therefrom  
[NASA-CASE-NPO-17826-1-CU] c 27 N90-26952
- Heat transfer device and method of making the same  
[NASA-CASE-LEW-14162-1] c 34 N91-13668

**ELECTRICITY**

- Thermionic converter with current augmented by self induced magnetic field Patent  
[NASA-CASE-XLE-01903] c 22 N71-23599
- Heat exchanger for electrothermal devices  
[NASA-CASE-LEW-14037-1] c 20 N87-16875
- Small particle selective emitter  
[NASA-CASE-LEW-14731-1] c 44 N91-13802

**ELECTRO-OPTICS**

- Electro-optical scanning apparatus Patent Application  
[NASA-CASE-NPO-11106] c 14 N70-34697
- Electro-optical alignment control system Patent  
[NASA-CASE-XMF-00908] c 14 N70-40238
- Polarimeter for transient measurement Patent  
[NASA-CASE-XNP-08883] c 23 N71-16101
- Light direction sensor  
[NASA-CASE-NPO-11201] c 14 N72-27409
- Ultrastable calibrated light source  
[NASA-CASE-MSC-12293-1] c 14 N72-27411
- Optical conversion method --- for spacecraft television  
[NASA-CASE-MSC-12618-1] c 74 N78-17865
- Noncontacting method for measuring angular deflection  
[NASA-CASE-LAR-12178-1] c 74 N80-21138
- Miniature electrooptical air flow sensor  
[NASA-CASE-LAR-13065-1] c 35 N85-20295
- Adjustable mount for electro-optic transducers in an evacuated cryogenic system  
[NASA-CASE-LAR-13100-1] c 37 N87-23982
- Photorefractor ocular screening system  
[NASA-CASE-MFS-26011-1-SB] c 52 N87-24874
- Electro-optical spin measurement system  
[NASA-CASE-LAR-13629-1] c 09 N91-14356

**ELECTROACOUSTIC TRANSDUCERS**

- Respiration monitor  
[NASA-CASE-FRC-10012] c 14 N72-17329  
Material suspension within an acoustically excited resonant chamber --- at near weightless conditions  
[NASA-CASE-NPO-13263-1] c 12 N75-24774  
CDS solid state phase insensitive ultrasonic transducer --- annealing cadmium sulfide crystals  
[NASA-CASE-LAR-12304-1] c 35 N80-20559  
Acoustic transducer apparatus with reduced thermal conduction  
[NASA-CASE-NPO-17620-1-CU] c 71 N91-14808
- ELECTROACOUSTIC WAVES**  
Phonocardiogram simulator Patent  
[NASA-CASE-XKS-10804] c 05 N71-24606
- ELECTROCARDIOGRAPHY**  
Phonocardiogram simulator Patent  
[NASA-CASE-XKS-10804] c 05 N71-24606  
Ratometer  
[NASA-CASE-MFS-20418] c 14 N73-24473  
Insulated electrocardiographic electrodes --- without paste electrolyte  
[NASA-CASE-MS-C-14339-1] c 05 N75-24716  
Pocket ECG electrode  
[NASA-CASE-ARC-11258-1] c 52 N80-33081  
Subcutaneous electrode structure  
[NASA-CASE-ARC-11117-1] c 52 N81-14612
- ELECTROCATALYSTS**  
Electrocatalyst for oxygen reduction  
[NASA-CASE-HQN-10537-1] c 06 N72-10138  
Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-1] c 33 N80-20487  
Zirconium carbide as an electrocatalyst for the chromous-chromic redox couple  
[NASA-CASE-LEW-13246-1] c 44 N83-27344
- ELECTROCHEMICAL CELLS**  
Apparatus for measuring swelling characteristics of membranes  
[NASA-CASE-XGS-03865] c 14 N69-21363  
Prevention of pressure build-up in electrochemical cells Patent  
[NASA-CASE-XGS-01419] c 03 N70-41864  
Non-magnetic battery case Patent  
[NASA-CASE-XGS-00886] c 03 N71-11053  
Sealing device for an electrochemical cell Patent  
[NASA-CASE-XGS-02630] c 03 N71-22974  
Sealed electrochemical cell provided with a flexible casing Patent  
[NASA-CASE-XGS-01513] c 03 N71-23336  
Electric battery and method for operating same Patent  
[NASA-CASE-XGS-01674] c 03 N71-29129  
Frangible electrochemical cell  
[NASA-CASE-XGS-10010] c 03 N72-15986  
Porus electrode comprising a bonded stack of pieces of corrugated metal foil  
[NASA-CASE-GSC-11368-1] c 09 N73-32108  
Battery testing device --- for testing cells of multiple-cell battery  
[NASA-CASE-MFS-20761-1] c 44 N74-27519  
Electrical conductivity cell and method for fabricating the same  
[NASA-CASE-ARC-10810-1] c 33 N76-19339  
Multi-cell battery protection system  
[NASA-CASE-LEW-12039-1] c 44 N78-14625  
Method and device for the detection of phenol and related compounds --- in an electrochemical cell  
[NASA-CASE-LEW-12513-1] c 25 N79-22235  
Electrochemical cell for rebalancing REDOX flow system  
[NASA-CASE-LEW-13150-1] c 44 N79-26474  
Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-1] c 33 N80-20487  
Alkaline electrochemical cells and method of making  
[NASA-CASE-GSC-10349-1] c 44 N82-24645  
Method for determining the point of zero zeta potential of semiconductor  
[NASA-CASE-LAR-12893-1] c 76 N85-30923  
Method and apparatus for rebalancing a REDOX flow cell system  
[NASA-CASE-LEW-14127-1] c 33 N86-20680
- ELECTROCHEMICAL MACHINING**  
Apparatus for electrolytically tapered or contoured cavities  
[NASA-CASE-XNP-08835-1] c 37 N80-14395
- ELECTROCHEMICAL OXIDATION**  
Method and device for the detection of phenol and related compounds --- in an electrochemical cell  
[NASA-CASE-LEW-12513-1] c 25 N79-22235  
Epitaxial thinning process  
[NASA-CASE-NPO-15786-1] c 76 N84-35112
- ELECTROCHEMISTRY**  
Electrode for biological recording  
[NASA-CASE-XMS-02872] c 05 N69-21925

- Electrochemical detection device --- for use in microbiology  
[NASA-CASE-LAR-11922-1] c 25 N79-24073  
Metal chloride cathode for a battery  
[NASA-CASE-NPO-17809-1-CU] c 33 N91-27478
- ELECTRODE FILM BARRIERS**  
Formulated plastic separators for soluble electrode cells --- rubber-ion transport membranes  
[NASA-CASE-LEW-12358-1] c 44 N79-17313
- ELECTRODEPOSITION**  
Method of electrolytically binding a layer of semiconductors together Patent  
[NASA-CASE-XNP-01959] c 26 N71-23043  
Method of producing crystalline materials  
[NASA-CASE-NPO-10440] c 15 N72-21466  
Electrophoretic sample insertion --- device for uniformly distributing samples in flow path  
[NASA-CASE-MFS-21395-1] c 25 N74-26948  
Multitarget sequential sputtering apparatus  
[NASA-CASE-NPO-13345-1] c 37 N75-19684  
Method and device for the detection of phenol and related compounds --- in an electrochemical cell  
[NASA-CASE-LEW-12513-1] c 25 N79-22235
- ELECTRODES**  
Electrode and insulator with shielded dielectric junction  
[NASA-CASE-XLE-03778] c 09 N69-21542  
Electrode for biological recording  
[NASA-CASE-XMS-02872] c 05 N69-21925  
Bonding thermoelectric elements to nonmagnetic refractory metal electrodes  
[NASA-CASE-XGS-04554] c 15 N69-39786  
Ionization vacuum gauge Patent  
[NASA-CASE-XNP-00646] c 14 N70-35666  
Double optic system for ion engine Patent  
[NASA-CASE-XNP-02839] c 28 N70-41922  
Didymium hydrate additive to nickel hydroxide electrodes Patent  
[NASA-CASE-XGS-03505] c 03 N71-10608  
Focusing system for an ion source having apertured electrodes Patent  
[NASA-CASE-XNP-03332] c 09 N71-10618  
Biomedical electrode arrangement Patent  
[NASA-CASE-XFR-10856] c 05 N71-11189  
Electrode construction Patent  
[NASA-CASE-ARC-10043-1] c 05 N71-11193  
Pressed disc type sensing electrodes with ion-screening means Patent  
[NASA-CASE-XMS-04212-1] c 05 N71-12346  
Method of making electrical contact on silicon solar cell and resultant product Patent  
[NASA-CASE-XLE-04787] c 03 N71-20492  
Arc electrode of graphite with ball tip Patent  
[NASA-CASE-XLE-04788] c 09 N71-22987  
Sealing member and combination thereof and method of producing said sealing member Patent  
[NASA-CASE-XMS-01625] c 15 N71-23022  
Automatic recording McLeod gauge Patent  
[NASA-CASE-XLE-03280] c 14 N71-23093  
Flexible conductive disc electrode Patent  
[NASA-CASE-FRC-10029] c 09 N71-24618  
Plated electrodes Patent  
[NASA-CASE-XMS-04213-1] c 09 N71-26002  
Method and apparatus for attaching physiological monitoring electrodes Patent  
[NASA-CASE-XFR-07658-1] c 05 N71-26293  
Field ionization electrodes Patent  
[NASA-CASE-ERC-10013] c 09 N71-26678  
Method of making a perspiration resistant biopotential electrode  
[NASA-CASE-MS-C-90153-2] c 05 N72-25120  
Method of making dry electrodes  
[NASA-CASE-FRC-10029-2] c 05 N72-25121  
Compressible biomedical electrode  
[NASA-CASE-MS-C-13648] c 05 N72-27103  
Method and apparatus for limiting field emission current  
[NASA-CASE-ERC-10015-2] c 10 N72-27246  
Coaxial high density, hypervelocity plasma generator and accelerator with ionizable metal disc  
[NASA-CASE-MFS-20589] c 25 N72-32688  
Ion thruster with a combination keeper electrode and electron baffle  
[NASA-CASE-NPO-11880] c 28 N73-24783  
Wide temperature range electronic device with lead attachment  
[NASA-CASE-ERC-10224-2] c 09 N73-27150  
Porus electrode comprising a bonded stack of pieces of corrugated metal foil  
[NASA-CASE-GSC-11368-1] c 09 N73-32108  
High powered arc electrodes --- producing solar simulator radiation  
[NASA-CASE-LEW-11162-1] c 33 N74-12913  
Method of making porous conductive supports for electrodes --- by electroforming and stacking nickel foils  
[NASA-CASE-GSC-11367-1] c 44 N74-19692

- Insulated electrocardiographic electrodes --- without paste electrolyte  
[NASA-CASE-MS-C-14339-1] c 05 N75-24716  
Readout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c 35 N76-24525  
Gels as battery separators for soluble electrode cells  
[NASA-CASE-LEW-12364-1] c 44 N77-22606  
Snap-in compressible biomedical electrode  
[NASA-CASE-MS-C-14623-1] c 52 N77-28717  
Apparatus for electrolytically tapered or contoured cavities  
[NASA-CASE-XNP-08835-1] c 37 N80-14395  
Toroidal cell and battery --- storage battery for high amp-hour load applications  
[NASA-CASE-LEW-12918-1] c 44 N81-24521  
Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-2] c 44 N81-29524  
Method of making formulated plastic separators for soluble electrode cells  
[NASA-CASE-LEW-12358-2] c 25 N82-21268  
Multistage depressed collector for dual mode operation --- for microwave transmitting tubes  
[NASA-CASE-LEW-13282-1] c 33 N82-24415  
Alkaline electrochemical cells and method of making  
[NASA-CASE-GSC-10349-1] c 44 N82-24645  
Thermionic energy converters  
[NASA-CASE-LEW-12443-1] c 44 N83-32175  
Photoelectrochemical electrodes  
[NASA-CASE-NPO-15458-1] c 25 N84-12262  
Electrodes for solid state devices  
[NASA-CASE-NPO-15161-1] c 33 N84-16456  
Method of making a light weight battery plaque  
[NASA-CASE-LEW-13349-1] c 26 N84-22734  
Chromium electrodes for REDOX cells  
[NASA-CASE-LEW-13653-1] c 44 N84-28205  
Ion sputter textured graphite electrode plates  
[NASA-CASE-LEW-12919-2] c 70 N84-28565  
Trace water sensor  
[NASA-CASE-NPO-15722-1] c 35 N85-29212  
Negative electrode catalyst for the iron chromium redox energy storage system  
[NASA-CASE-LEW-14028-1] c 44 N86-19721  
Discharge cell for optogalvanic spectroscopy having orthogonal relationship between the probe laser and discharge axis  
[NASA-CASE-NPO-16271-1] c 35 N86-25753  
Spillage detector for liquid chromatography systems  
[NASA-CASE-MS-C-20206-1] c 25 N86-27431  
Edge geometry superconducting tunnel junctions utilizing an NbN/MgO/NbN thin film structure  
[NASA-CASE-NPO-17812-1-CU] c 76 N90-17456  
Microwave field effect transistor  
[NASA-CASE-GSC-12442-2] c 33 N90-20282  
Electrode carrying wire for GTAW welding  
[NASA-CASE-MFS-29491-1] c 31 N90-26168  
Arc/gas electrode  
[NASA-CASE-MFS-29766-1] c 33 N91-25335  
High temperature solder device for flat cables  
[NASA-CASE-GSC-13344-1] c 26 N91-28363
- ELECTRODIALYSIS**  
Aqueous alkali metal hydroxide insoluble cellulose ether membrane  
[NASA-CASE-XGS-05584-1] c 25 N82-29370
- ELECTROFORMING**  
Method of electroforming a rocket chamber  
[NASA-CASE-LEW-11118-1] c 20 N74-32919
- ELECTROHYDRAULIC FORMING**  
Electrical discharge apparatus for forming Patent  
[NASA-CASE-XMF-00375] c 15 N70-34249
- ELECTROHYDRODYNAMICS**  
Electrohydrodynamic control valve Patent  
[NASA-CASE-NPO-10416] c 12 N71-27332
- ELECTROKINETICS**  
Zeta potential flowmeter Patent  
[NASA-CASE-XNP-06509] c 14 N71-23226
- ELECTROLUMINESCENCE**  
Flat-panel, full-color, electroluminescent display  
[NASA-CASE-LAR-13407-1] c 33 N87-28831  
Enhanced single layer multi-color or luminescent display with coactivators  
[NASA-CASE-LAR-14181-1] c 76 N91-21911  
Single layer multi-color luminescent display  
[NASA-CASE-LAR-13616-1] c 74 N91-31950
- ELECTROLYSIS**  
Passively regulated water electrolysis rocket engine Patent  
[NASA-CASE-XGS-08729] c 28 N71-14044  
Combined electrolysis device and fuel cell and method of operation Patent  
[NASA-CASE-XLE-01645] c 03 N71-20904  
Polymeric electrolytic hygrometer  
[NASA-CASE-NPO-13948-1] c 35 N78-25391  
Static feed water electrolysis subsystem development  
[NASA-CASE-MS-C-21577-1-SB] c 25 N91-23271

**ELECTROLYTES**

- Apparatus for measuring swelling characteristics of membranes  
[NASA-CASE-XGS-03865] c 14 N69-21363
- Electrolytically regenerative hydrogen-oxygen fuel cell Patent  
[NASA-CASE-XLE-04526] c 03 N71-11052
- Sealed electrochemical cell provided with a flexible casing Patent  
[NASA-CASE-XGS-01513] c 03 N71-23336
- Compressible biomedical electrode  
[NASA-CASE-MS-C-13648] c 05 N72-27103
- Solid electrolyte cell  
[NASA-CASE-NPO-15269-1] c 44 N82-29710
- Chromium electrodes for REDOX cells  
[NASA-CASE-LEW-13653-1] c 44 N84-28205
- Trace water sensor  
[NASA-CASE-NPO-15722-1] c 35 N85-29212
- Secondary Li battery incorporating 12-crown-4 ether  
[NASA-CASE-NPO-17922-1-CU] c 33 N91-13621
- Thermal power transfer system using applied potential difference to sustain operating pressure difference  
[NASA-CASE-NPO-18034-1-CU] c 44 N91-13796

**ELECTROLYTIC CELLS**

- Method of making emf cell  
[NASA-CASE-LEW-11359-2] c 03 N72-20034
- Electrolytic gas operated actuator  
[NASA-CASE-NPO-11369] c 15 N73-13467
- Electrolytic cell structure  
[NASA-CASE-LAR-11042-1] c 33 N75-27252
- Reconstituted asbestos matrix --- for use in fuel or electrolysis cells  
[NASA-CASE-MS-C-12568-1] c 24 N76-14204
- Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-1] c 33 N80-20487
- Cell and method for electrolysis of water and anode  
[NASA-CASE-MS-C-16394-1] c 28 N81-24280
- Toroidal cell and battery --- storage battery for high amp-hour load applications  
[NASA-CASE-LEW-12918-1] c 44 N81-24521
- Solid electrolyte cell  
[NASA-CASE-NPO-15269-1] c 44 N82-29710
- State-of-charge coulometer  
[NASA-CASE-NPO-15759-1] c 35 N85-21596

**ELECTROMAGNETIC ABSORPTION**

- Multiple pass reimaging optical system  
[NASA-CASE-ARC-10194-1] c 23 N73-20741
- Method and apparatus for background signal reduction in opto-acoustic absorption measurement  
[NASA-CASE-NPO-13683-1] c 35 N77-14411
- Electromagnetic radiation energy arrangement --- coatings for solar energy absorption and infrared reflection  
[NASA-CASE-WOO-00428-1] c 32 N79-19186
- Electromagnetic power absorber  
[NASA-CASE-NPO-13830-1] c 32 N80-14281
- Method and apparatus for determining optical absorption and emission characteristics of a crystal or non-crystalline fiber  
[NASA-CASE-LAR-13963-1] c 76 N90-24150

**ELECTROMAGNETIC FIELDS**

- Tumbler system to provide random motion  
[NASA-CASE-XGS-02437] c 15 N69-21472
- Vacuum evaporator with electromagnetic ion steering Patent  
[NASA-CASE-NPO-10331] c 09 N71-26701
- Metallic intrusion detector system  
[NASA-CASE-ARC-10265-1] c 10 N72-28240
- Low power electromagnetic flowmeter providing accurate zero set  
[NASA-CASE-ARC-10362-1] c 14 N73-32326
- Electromagnetic flow rate meter --- for liquid metals  
[NASA-CASE-LEW-10981-1] c 35 N74-21018
- Microcomputerized electric field meter diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c 35 N78-28411

**ELECTROMAGNETIC HAMMERS**

- Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114] c 15 N71-17650
- Magnetomotive metal working device Patent  
[NASA-CASE-XMF-03793] c 15 N71-24833

**ELECTROMAGNETIC INTERFERENCE**

- Sealed cabinetry Patent  
[NASA-CASE-MS-C-12168-1] c 09 N71-18600
- Method of treating the surface of a glass member  
[NASA-CASE-GSC-12110-1] c 27 N77-32308
- Method and apparatus for enhancing laser absorption sensitivity  
[NASA-CASE-NPO-16567-1-CU] c 36 N87-28006

**ELECTROMAGNETIC MEASUREMENT**

- Method and apparatus for determining electromagnetic characteristics of large surface area passive reflectors Patent  
[NASA-CASE-XGS-02608] c 07 N70-41678

- Microcomputerized electric field meter diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c 35 N78-28411
- Lightning discharge identification system  
[NASA-CASE-KSC-11099-1] c 47 N82-24779

**ELECTROMAGNETIC NOISE**

- Parametric amplifiers with idler circuit feedback  
[NASA-CASE-LAR-10253-1] c 09 N72-25258
- Audio system with means for reducing noise effects  
[NASA-CASE-NPO-11631] c 10 N73-12244
- Filtering device --- removing electromagnetic noise from voice communication signals  
[NASA-CASE-MFS-22729-1] c 32 N76-21366

**ELECTROMAGNETIC PROPERTIES**

- Measurement apparatus and procedure for the determination of surface emissivities  
[NASA-CASE-LAR-13455-1] c 32 N87-21206

**ELECTROMAGNETIC PROPULSION**

- Hypervelocity gun --- using both electric and chemical energy for projectile propulsion  
[NASA-CASE-XLE-03186-1] c 09 N79-21084

**ELECTROMAGNETIC PULSES**

- Laser pulse detection method and apparatus  
[NASA-CASE-NPO-16030-1] c 36 N84-25037

**ELECTROMAGNETIC PUMPS**

- Multiducted electromagnetic pump Patent  
[NASA-CASE-NPO-10755] c 15 N71-27084
- Heat exchanger with oscillating flow  
[NASA-CASE-LAR-14033-1] c 34 N90-27072

**ELECTROMAGNETIC RADIATION**

- Inflatable radar reflector unit Patent  
[NASA-CASE-XMS-00893] c 07 N70-40063
- Circulator having quarter wavelength resonant post and parametric amplifier circuits utilizing the same Patent  
[NASA-CASE-XNP-02140] c 09 N71-23097
- Electromagnetic polarization systems and methods Patent  
[NASA-CASE-GSC-10021-1] c 09 N71-24595
- Antenna design for surface wave suppression Patent  
[NASA-CASE-XLA-10772] c 07 N71-28980
- Multiple reflection conical microwave antenna  
[NASA-CASE-NPO-11661] c 07 N73-14130
- Method and apparatus for measuring electromagnetic radiation  
[NASA-CASE-LEW-11159-1] c 14 N73-28488
- Hyperthermia heating apparatus --- cancer therapy  
[NASA-CASE-NPO-14549-2] c 52 N82-33996
- Method and apparatus for measuring distance  
[NASA-CASE-MS-C-20912-1] c 32 N88-26568
- Induction-type metal detector with increased scanning area capability  
[NASA-CASE-KSC-11386-1] c 35 N90-22023

**ELECTROMAGNETIC SHIELDING**

- Method of making shielded flat cable Patent  
[NASA-CASE-MFS-13687] c 09 N71-28691
- Wire stripper  
[NASA-CASE-FRC-10111-1] c 37 N79-10419
- Shielded conductor cable system  
[NASA-CASE-MS-C-12745-1] c 33 N81-27397

**ELECTROMAGNETIC WAVE FILTERS**

- Laser camera and diffusion filter therefore Patent  
[NASA-CASE-NPO-10417] c 16 N71-33410

**ELECTROMAGNETIC WAVE TRANSMISSION**

- Method and apparatus for determining electromagnetic characteristics of large surface area passive reflectors Patent  
[NASA-CASE-XGS-02608] c 07 N70-41678
- Gyrottron transmitting tube  
[NASA-CASE-LEW-13429-1] c 33 N83-31952

**ELECTROMAGNETISM**

- Detenting servomotor Patent  
[NASA-CASE-XNP-06936] c 15 N71-24695
- Linear magnetic bearing  
[NASA-CASE-GSC-12517-1] c 37 N83-32067
- Linear magnetic bearings  
[NASA-CASE-GSC-12582-2] c 37 N85-20337

**ELECTROMAGNETS**

- Electromagnetic mirror drive system  
[NASA-CASE-XLA-03724] c 14 N69-27461
- Solenoid construction Patent  
[NASA-CASE-XNP-01951] c 09 N70-41929
- Position sensing device employing misaligned magnetic field generating and detecting apparatus Patent  
[NASA-CASE-XGS-07514] c 23 N71-16099
- Safe-arm initiator Patent  
[NASA-CASE-LAR-10372] c 09 N71-18599
- Magnetic bearing --- for supplying magnetic fluxes  
[NASA-CASE-GSC-11079-1] c 37 N75-18574
- Magnetic spin reduction system for free spinning objects  
[NASA-CASE-MFS-25966-1] c 16 N86-26352
- Electromagnetic attachment mechanism  
[NASA-CASE-MS-C-21463-1] c 37 N91-23490

**ELECTROMECHANICAL DEVICES**

- Electromechanical actuator  
[NASA-CASE-XNP-05975] c 15 N69-23185

- Bimetallic power controlled actuator  
[NASA-CASE-XNP-09776] c 09 N69-39929
- Apparatus for coupling a plurality of ungrounded circuits to a grounded circuit Patent  
[NASA-CASE-XAC-00086] c 09 N70-33182
- Apparatus for controlling the velocity of an electromechanical drive for interferometers and the like Patent  
[NASA-CASE-XGS-03532] c 14 N71-17627
- Mechanical actuator Patent  
[NASA-CASE-XGS-04548] c 15 N71-24045
- Transverse piezoresistance and pinch effect electromechanical transducers Patent  
[NASA-CASE-ERC-10088] c 26 N71-25490
- Electromechanical control actuator system Patent  
[NASA-CASE-ERC-10022] c 15 N71-26635
- Pressure sensitive transducers Patent  
[NASA-CASE-ERC-10087] c 14 N71-27334
- Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-10503-1] c 09 N72-21248
- Ferrofluidic solenoid  
[NASA-CASE-NPO-11738-1] c 09 N73-30185
- Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-11389-1] c 33 N77-26387
- Rotary electric device  
[NASA-CASE-GSC-12138-1] c 33 N79-20314
- Coal-shale interface detection system  
[NASA-CASE-MFS-23720-2] c 43 N80-14423
- Coal-shale interface detector  
[NASA-CASE-MFS-23720-1] c 43 N80-23711
- Magnetic field control --- electromechanical torquing device  
[NASA-CASE-MFS-23828-1] c 33 N82-26569
- Piezoelectric composite materials  
[NASA-CASE-LEW-12582-1] c 76 N83-34796
- Two-dimensional scanner apparatus --- flaw detector in small flat plates  
[NASA-CASE-MFS-25687-1] c 35 N84-22928
- Memory metal actuator  
[NASA-CASE-NPO-15960-1] c 37 N86-19604
- Electro-expulsive separation system  
[NASA-CASE-ARC-11613-1] c 33 N87-28833

**ELECTROMETERS**

- Vibrating element electrometer with output signal magnified over input signal by a function of the mechanical Q of the vibrating element Patent  
[NASA-CASE-XAC-02807] c 09 N71-23021
- Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c 35 N82-31659

**ELECTROMIGRATION**

- Electromigration process for the purification of molten silicon during crystal growth  
[NASA-CASE-NPO-14831-1] c 76 N82-30105

**ELECTROMOTIVE FORCES**

- Heat activated cell Patent  
[NASA-CASE-LEW-11359] c 03 N71-28579
- Three-phase power factor controller with induced EMF sensing  
[NASA-CASE-MFS-25852-1] c 33 N84-33661

**ELECTRON ATTACHMENT**

- High resolution threshold photoelectron spectroscopy by electron attachment  
[NASA-CASE-NPO-14078-1] c 72 N80-14877
- Reversal electron attachment ionizer for detection of trace species  
[NASA-CASE-NPO-17596-1-CU] c 35 N89-28795

**ELECTRON BEAM WELDING**

- Split welding chamber Patent  
[NASA-CASE-LEW-11531] c 15 N71-14932
- Device for preventing high voltage arcing in electron beam welding Patent  
[NASA-CASE-XMF-08522] c 15 N71-19486

**ELECTRON BEAMS**

- Electronic beam switching commutator Patent  
[NASA-CASE-XGS-01451] c 09 N71-10677
- Method and means for an improved electron beam scanning system Patent  
[NASA-CASE-ERC-10552] c 09 N71-12539
- Electron beam instrument for measuring electric fields Patent  
[NASA-CASE-XMF-10289] c 14 N71-23699
- Apparatus for determining the deflection of an electron beam impinging on a target Patent  
[NASA-CASE-XMF-06617] c 09 N71-24843
- Infrared detectors  
[NASA-CASE-LAR-10728-1] c 14 N73-12445
- Electron beam controller --- using magnetic field to refocus spent electron beam in microwave oscillator tube  
[NASA-CASE-LEW-11617-1] c 33 N74-10195
- Image tube --- deriving electron beam replica of image  
[NASA-CASE-GSC-11602-1] c 33 N74-21850
- Very high intensity light source using a cathode ray tube --- electron beams  
[NASA-CASE-XNP-01296] c 33 N75-27250

- Low energy electron magnetometer using a monoenergetic electron beam  
[NASA-CASE-LAR-12706-1] c 35 N84-12444
- Isotope separation using tuned laser and electron beam  
[NASA-CASE-NPO-16907-1-CU] c 25 N88-24732
- Trochoidal analysis of scattered electrons in a merged electron-ion beam geometry  
[NASA-CASE-NPO-16789-1-CU] c 72 N89-29169
- Dual cathode system for electron beam instruments  
[NASA-CASE-NPO-16878-1-CU] c 35 N90-20351
- ELECTRON BOMBARDMENT**
- Ion thruster cathode  
[NASA-CASE-XLE-07087] c 06 N69-39889
- Device for measuring electron-beam intensities and for subjecting materials to electron irradiation in an electron microscope  
[NASA-CASE-XGS-01725] c 14 N69-39982
- Electron bombardment ion engine Patent  
[NASA-CASE-XNP-04124] c 28 N71-21822
- Electronic cathode having a brush-like structure and a relatively thick oxide emissive coating Patent  
[NASA-CASE-XLE-04501] c 09 N71-23190
- Single grid accelerator for an ion thruster  
[NASA-CASE-XLE-10453-2] c 28 N73-27699
- Containerless high temperature calorimeter apparatus  
[NASA-CASE-MFS-23923-1] c 35 N81-19426
- Mechanical bonding of metal method  
[NASA-CASE-LEW-12941-1] c 26 N83-10170
- Diamondlike flake composites  
[NASA-CASE-LEW-13837-1] c 24 N84-22695
- Ion sputter textured graphite electrode plates  
[NASA-CASE-LEW-12919-2] c 70 N84-28565
- Apparatus and method for quiescent containerless processing of high temperature metals and alloys in low gravity  
[NASA-CASE-MFS-28087-1] c 35 N87-23944
- Surface modification using low energy ground state ion beams  
[NASA-CASE-NPO-17498-1-CU] c 72 N91-14813
- ELECTRON CAPTURE**
- Multistage depressed collector for dual mode operation --- for microwave transmitting tubes  
[NASA-CASE-LEW-13282-1] c 33 N82-24415
- ELECTRON DISTRIBUTION**
- Measurement of plasma temperature and density using radiation absorption  
[NASA-CASE-ARC-10598-1] c 75 N74-30156
- ELECTRON EMISSION**
- Triode thermionic energy converter  
[NASA-CASE-XLE-01015] c 03 N69-39898
- Textured carbon surfaces on copper by sputtering  
[NASA-CASE-LEW-14130-1] c 31 N86-32587
- ELECTRON ENERGY**
- Low energy electron magnetometer using a monoenergetic electron beam  
[NASA-CASE-LAR-12706-1] c 35 N84-12444
- ELECTRON FLUX DENSITY**
- Device for measuring electron-beam intensities and for subjecting materials to electron irradiation in an electron microscope  
[NASA-CASE-XGS-01725] c 14 N69-39982
- ELECTRON GUNS**
- Induction heating gun  
[NASA-CASE-LAR-13181-1] c 31 N85-29083
- Generation of intense negative ion beams  
[NASA-CASE-NPO-16061-1-CU] c 72 N87-21660
- ELECTRON IRRADIATION**
- Ion rocket Patent  
[NASA-CASE-XLE-00376] c 28 N70-37245
- ELECTRON MICROSCOPES**
- Device for measuring electron-beam intensities and for subjecting materials to electron irradiation in an electron microscope  
[NASA-CASE-XGS-01725] c 14 N69-39982
- Method of forming aperture plate for electron microscope  
[NASA-CASE-ARC-10448-2] c 74 N75-12732
- Electron microscope aperture system  
[NASA-CASE-ARC-10448-3] c 35 N77-14408
- ELECTRON MICROSCOPY**
- Synchronized voltage contrast display analysis system  
[NASA-CASE-NPO-14567-1] c 33 N83-18996
- ELECTRON OSCILLATIONS**
- Programmable electronic synthesized capacitance  
[NASA-CASE-GSC-12961-1] c 33 N87-22895
- ELECTRON PHOTON CASCADES**
- Resistive anode image converter  
[NASA-CASE-HQN-10876-1] c 33 N76-27473
- ELECTRON PLASMA**
- Method and apparatus for producing a plasma Patent  
[NASA-CASE-XLA-00147] c 25 N70-34661
- ELECTRON SCATTERING**
- Trochoidal analysis of scattered electrons in a merged electron-ion beam geometry  
[NASA-CASE-NPO-16789-1-CU] c 72 N89-29169
- ELECTRON SOURCES**
- Electron microscope aperture system  
[NASA-CASE-ARC-10448-3] c 35 N77-14408
- ELECTRON TRANSFER**
- Process for reducing secondary electron emission Patent  
[NASA-CASE-XNP-09469] c 24 N71-25555
- All-optical photochromic spatial light modulators based on photoinduced electron transfer in rigid matrices  
[NASA-CASE-NPO-17612-1-CU] c 74 N90-27487
- ELECTRON TRANSITIONS**
- Diatom infrared gasdynamic laser --- for producing different wavelengths  
[NASA-CASE-ARC-10370-1] c 36 N75-31426
- ELECTRON TUBES**
- Direct radiation cooling of the collector of linear beam tubes  
[NASA-CASE-XNP-09227] c 15 N69-24319
- Radiant heater having formed filaments Patent  
[NASA-CASE-XLE-00387] c 33 N70-34812
- Ion sputter textured graphite --- anode collector plates in electron tube devices  
[NASA-CASE-LEW-12919-1] c 24 N83-10117
- Gyrotrotron transmitting tube  
[NASA-CASE-LEW-13429-1] c 33 N83-31952
- ELECTRON TUNNELING**
- Doped Josephson tunneling junction for use in a sensitive IR detector  
[NASA-CASE-NPO-13348-1] c 33 N75-31332
- Inelastic tunnel diodes  
[NASA-CASE-LEW-13833-1] c 33 N85-21492
- ELECTRONIC CONTROL**
- Monopulse system with an electronic scanner  
[NASA-CASE-XGS-05582] c 07 N69-27460
- Electronic motor control system Patent  
[NASA-CASE-XMF-01129] c 09 N70-38712
- Phase multiplying electronic scanning system Patent  
[NASA-CASE-NPO-10302] c 10 N71-26142
- Ion beam deflector Patent  
[NASA-CASE-LEW-10689-1] c 28 N71-26173
- Peak acceleration limiter for vibrational tester Patent  
[NASA-CASE-NPO-10556] c 14 N71-27185
- Digital control and information system  
[NASA-CASE-NPO-11016] c 08 N72-31226
- Electronic system for high power load control --- solar arrays  
[NASA-CASE-NPO-15358-1] c 33 N83-27126
- Closed loop electrostatic levitation system  
[NASA-CASE-NPO-15553-1] c 33 N85-29142
- Electronic precipitator control  
[NASA-CASE-LAR-13273-2] c 33 N90-20320
- Solder dross removal apparatus  
[NASA-CASE-MFS-28406-1] c 37 N91-13729
- ELECTRONIC EQUIPMENT**
- Monopulse system with an electronic scanner  
[NASA-CASE-XGS-05582] c 07 N69-27460
- Pulse activated polarographic hydrogen detector Patent  
[NASA-CASE-XMF-06531] c 14 N71-17575
- Stable amplifier having a stable quiescent point Patent  
[NASA-CASE-XGS-02812] c 09 N71-19466
- Static inverter Patent  
[NASA-CASE-XGS-05289] c 09 N71-19470
- Circulator having quarter wavelength resonant post and parametric amplifier circuits utilizing the same Patent  
[NASA-CASE-XNP-02140] c 09 N71-23097
- Optimum predetection diversity receiving system Patent  
[NASA-CASE-XGS-00740] c 07 N71-23098
- Electronic cathode having a brush-like structure and a relatively thick oxide emissive coating Patent  
[NASA-CASE-XLE-04501] c 09 N71-23190
- Method and apparatus for varying thermal conductivity Patent  
[NASA-CASE-XNP-05524] c 33 N71-24876
- A solid state acoustic variable time delay line Patent  
[NASA-CASE-ERC-10032] c 10 N71-25900
- Automatic signal range selector for metering devices Patent  
[NASA-CASE-XMS-06497] c 14 N71-26244
- Fringe counter for interferometers Patent  
[NASA-CASE-LAR-10204] c 14 N71-27215
- Temperature regulation circuit Patent  
[NASA-CASE-XNP-02792] c 14 N71-28958
- Method and apparatus for data compression by a decreasing slope threshold test  
[NASA-CASE-NPO-10769] c 08 N72-11171
- Universal environment package with sectional component housing  
[NASA-CASE-KSC-10031] c 15 N72-22486
- Lead attachment to high temperature devices  
[NASA-CASE-ERC-10224] c 09 N72-25261
- Method and apparatus for detecting surface ions on silicon diodes and transistors  
[NASA-CASE-ERC-10325] c 15 N72-25457
- Versatile arithmetic unit for high speed sequential decoder  
[NASA-CASE-NPO-11371] c 08 N73-12177
- Data processor with conditionally supplied clock signals  
[NASA-CASE-GSC-10975-1] c 08 N73-13187
- Heat detection and compositions and devices therefor  
[NASA-CASE-NPO-10764-1] c 14 N73-14428
- Phase control circuits using frequency multiplications for phased array antennas  
[NASA-CASE-ERC-10285] c 10 N73-16206
- Junction range finder  
[NASA-CASE-KSC-10108] c 14 N73-25461
- Electronic strain-level counter  
[NASA-CASE-LAR-10756-1] c 32 N73-26910
- Automatic vehicle location system  
[NASA-CASE-NPO-11850-1] c 32 N74-12912
- Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c 35 N75-15014
- Electronic analog divider  
[NASA-CASE-LEW-11881-1] c 33 N77-17354
- Moisture content and gas sampling device  
[NASA-CASE-MSC-18866-1] c 35 N85-29213
- Visual aid for the hearing impaired  
[NASA-CASE-GSC-13027-1-CU] c 35 N91-27522
- ELECTRONIC EQUIPMENT TESTS**
- Analogue to digital converter tester Patent  
[NASA-CASE-XLA-06713] c 14 N71-28991
- Signal conditioner test set  
[NASA-CASE-KSC-10750-1] c 35 N75-12270
- Decommutator patchboard verifier  
[NASA-CASE-KSC-11065-1] c 33 N81-26359
- Synchronized voltage contrast display analysis system  
[NASA-CASE-NPO-14567-1] c 33 N83-18996
- Cross-contact chain  
[NASA-CASE-NPO-16784-1] c 33 N87-10231
- ELECTRONIC FILTERS**
- Self-tuning bandpass filter  
[NASA-CASE-ARC-10264-1] c 09 N73-20231
- Capacitance multiplier and filter synthesizing network  
[NASA-CASE-NPO-11948-1] c 33 N74-32712
- Notch filter  
[NASA-CASE-MFS-23303-1] c 32 N77-18307
- ELECTRONIC MODULES**
- Thermal conductive connection and method of making same Patent  
[NASA-CASE-XMS-02087] c 09 N70-41717
- Solar cell submodule Patent  
[NASA-CASE-XNP-05821] c 03 N71-11056
- Heat conductive resiliently compressible structure for space electronics package modules Patent  
[NASA-CASE-MSC-12389] c 33 N71-29052
- Tool for use in lifting pin supported objects  
[NASA-CASE-NPO-13157-1] c 37 N74-32918
- Phase substitution of spare converter for a failed one of parallel phase staggered converters  
[NASA-CASE-NPO-13812-1] c 33 N77-30365
- Method of making encapsulated solar cell modules  
[NASA-CASE-LEW-12185-1] c 44 N78-25528
- Electronically scanned pressure sensor module with in situ calibration capability  
[NASA-CASE-LAR-12230-1] c 35 N79-14347
- Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c 33 N79-24254
- Circuit for automatic load sharing in parallel converter modules  
[NASA-CASE-NPO-14056-1] c 33 N79-24257
- Method and apparatus for fabricating improved solar cell modules  
[NASA-CASE-NPO-14416-1] c 44 N81-14389
- Redundant operation of counter modules  
[NASA-CASE-NPO-14162-1] c 60 N81-15706
- ELECTRONIC PACKAGING**
- Electrical feed-through connection for printed circuit boards and printed cable  
[NASA-CASE-XMF-01483] c 14 N69-27431
- Capacitor and method of making same Patent  
[NASA-CASE-LEW-10364-1] c 09 N71-13522
- Method of evaluating moisture barrier properties of encapsulating materials Patent  
[NASA-CASE-NPO-10051] c 18 N71-24934
- Microelectronic module package Patent  
[NASA-CASE-XMS-02182] c 10 N71-28783
- Fragible electrochemical cell  
[NASA-CASE-XGS-10010] c 03 N72-15986
- Hermetically sealed semiconductor  
[NASA-CASE-GSC-10791-1] c 15 N73-14469
- Circuit board package with wedge shaped covers  
[NASA-CASE-MFS-21919-1] c 10 N73-25243
- Integrated circuit package with lead structure and method of preparing the same  
[NASA-CASE-MFS-21374-1] c 33 N74-12951
- Tool for use in lifting pin supported objects  
[NASA-CASE-NPO-13157-1] c 37 N74-32918

- Chassis unit insert tightening-extract device  
[NASA-CASE-XMS-01077-1] c 37 N79-33467
- Computer circuit card puller  
[NASA-CASE-FRC-11042-1] c 60 N82-24839
- Electronic scanning pressure measuring system and transducer package  
[NASA-CASE-ARC-11361-1] c 35 N84-22934
- Hermetically sealable package for hybrid solid-state electronic devices and the like  
[NASA-CASE-MS-C-20181-1] c 33 N88-23941
- ELECTRONIC RECORDING SYSTEMS**  
Propellant mass distribution metering apparatus Patent  
[NASA-CASE-NPO-10185] c 10 N71-26339
- ELECTRONIC TRANSDUCERS**  
Fiber optic vibration transducer and analyzer Patent  
[NASA-CASE-XMF-02433] c 14 N71-10616
- Transducer circuit and catheter transducer Patent  
[NASA-CASE-ARC-10132-1] c 09 N71-24597
- Failure sensing and protection circuit for converter networks Patent  
[NASA-CASE-GSC-10114-1] c 10 N71-27366
- Electromagnetic transducer recording head having a laminated core section and tapered gap  
[NASA-CASE-NPO-10711-1] c 35 N77-21392
- Distributed-switch Dicke radiometers  
[NASA-CASE-GSC-12219-1] c 35 N80-18359
- Electronic scanning pressure measuring system and transducer package  
[NASA-CASE-ARC-11361-1] c 35 N84-22934
- ELECTRONS**  
Means and method for calibrating a photon detector utilizing electron-photon coincidence  
[NASA-CASE-NPO-15644-1] c 35 N84-33767
- Ion generator and ion application system  
[NASA-CASE-MFS-28122-1] c 72 N88-24253
- Reversal electron attachment ionizer for detection of trace species  
[NASA-CASE-NPO-17596-1-CU] c 35 N89-28795
- ELECTROPHORESIS**  
Electrophoretic sample insertion --- device for uniformly distributing samples in flow path  
[NASA-CASE-MFS-21395-1] c 25 N74-26948
- Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-MFS-21394-1] c 34 N74-27744
- Automatic multiple-sample applicator and electrophoresis apparatus  
[NASA-CASE-ARC-10991-1] c 25 N78-14104
- Portable electrophoresis apparatus using minimum electrolyte  
[NASA-CASE-NPO-13274-1] c 25 N79-10163
- Microelectrophoretic apparatus and process  
[NASA-CASE-ARC-11121-1] c 25 N79-14169
- Electrophoretic fractional elution apparatus employing a rotational seal fraction collector  
[NASA-CASE-MFS-23284-1] c 37 N80-14397
- Method for separating biological cells --- suspended in aqueous polymer systems  
[NASA-CASE-MFS-23883-1] c 51 N80-16715
- Electrophoresis device  
[NASA-CASE-MFS-25426-1] c 25 N83-10126
- Static continuous electrophoresis device  
[NASA-CASE-MFS-25306-1] c 25 N83-13187
- Moving wall, continuous flow electrophoresis apparatus  
[NASA-CASE-MFS-28142-1] c 25 N88-23845
- Controlled method of reducing electrophoretic mobility of various substances  
[NASA-CASE-MFS-26049-1-NP] c 25 N89-28603
- ELECTROPHOTOMETERS**  
Method and device for detecting voids in low density material Patent  
[NASA-CASE-MFS-20044] c 14 N71-28993
- ELECTROPHYSIOLOGY**  
Flexible conductive disc electrode Patent  
[NASA-CASE-FRC-10029] c 09 N71-24618
- ELECTROPLATING**  
Method of plating copper on aluminum Patent  
[NASA-CASE-XLA-08966-1] c 17 N71-25903
- Method of making shielded flat cable Patent  
[NASA-CASE-MFS-13687] c 09 N71-28691
- Method and apparatus for sputtering utilizing an apertured electrode and a pulsed substrate bias  
[NASA-CASE-LEW-10920-1] c 17 N73-24569
- Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-2] c 44 N81-29524
- Method of forming oxide coatings --- for solar collector heating panels  
[NASA-CASE-LEW-13132-1] c 27 N83-29388
- ELECTROSTATIC BONDING**  
Thin solar cell and lightweight array  
[NASA-CASE-LEW-14959-1] c 44 N91-27614
- ELECTROSTATIC CHARGE**  
Electrostatic charged particle analyzer having deflection members shaped according to the periodic voltage applied thereto Patent  
[NASA-CASE-XAC-05506-1] c 24 N71-16095
- Electrostatic measurement system --- for contact-electrifying a dielectric  
[NASA-CASE-MFS-22129-1] c 33 N75-18477
- Use of glow discharge in fluidized beds  
[NASA-CASE-ARC-11245-1] c 28 N82-18401
- Lightning discharge protection rod  
[NASA-CASE-LAR-13470-1] c 03 N88-14083
- Hazards protection for space suits and spacecraft  
[NASA-CASE-MS-C-21366-1] c 54 N90-25498
- ELECTROSTATIC ENGINES**  
Colloid propulsion method and apparatus Patent  
[NASA-CASE-XLE-00817] c 28 N70-33265
- Ion thruster cathode Patent Application  
[NASA-CASE-LEW-10814-1] c 28 N70-35422
- Ion rocket Patent  
[NASA-CASE-XLE-00376] c 28 N70-37245
- Electrostatic ion rocket engine Patent  
[NASA-CASE-XLE-02066] c 28 N71-15661
- Precision tunable resonant microwave cavity  
[NASA-CASE-LEW-13935-1] c 33 N87-21234
- ELECTROSTATIC GENERATORS**  
Electrostatic plasma modulator for space vehicle re-entry communication Patent  
[NASA-CASE-XLA-01400] c 07 N70-41331
- Closed loop electrostatic levitation system  
[NASA-CASE-NPO-15553-1] c 33 N85-29142
- Piezoelectrostatic generator  
[NASA-CASE-MFS-28298-1] c 76 N91-14872
- ELECTROSTATIC PRECIPITATORS**  
Fine particulate capture device  
[NASA-CASE-LEW-11583-1] c 35 N79-17192
- Small conductive particle sensor --- microfiber size determination  
[NASA-CASE-LAR-12552-1] c 35 N82-11431
- ELECTROSTATIC PROBES**  
Apparatus for field strength measurement of a space vehicle Patent  
[NASA-CASE-XLE-00820] c 14 N71-16014
- Liquid-immersible electrostatic ultrasonic transducer  
[NASA-CASE-LAR-12465-1] c 33 N82-26572
- ELECTROSTATIC PROPULSION**  
Electrostatic thruster with improved insulators Patent  
[NASA-CASE-XLE-01902] c 28 N71-10574
- Annular slit colloid thruster Patent  
[NASA-CASE-GSC-10709-1] c 28 N71-25213
- ELECTROSTATIC SHIELDING**  
Ion beam thruster shield  
[NASA-CASE-LEW-12082-1] c 20 N77-10148
- Shielded conductor cable system  
[NASA-CASE-MS-C-12745-1] c 33 N81-27397
- High voltage isolation transformer  
[NASA-CASE-GSC-12817-1] c 33 N85-29146
- ELECTROSTATICS**  
Controllable high voltage source having fast settling time  
[NASA-CASE-GSC-11844-1] c 33 N75-19522
- Electrostatic discharge test apparatus  
[NASA-CASE-MS-C-21094-1] c 35 N88-24941
- Silicon containing electroconductive polymers and structures made therefrom  
[NASA-CASE-NPO-17826-1-CU] c 27 N90-26952
- Electrostatically suspended rotor for angular encoder  
[NASA-CASE-MFS-28294-1] c 31 N91-14508
- ELECTROTHERMAL ENGINES**  
Electro-thermal rocket Patent  
[NASA-CASE-XLE-00267] c 28 N70-33356
- Electrothermal rockets having improved heat exchangers Patent  
[NASA-CASE-XLE-01783] c 28 N70-34175
- Heat exchanger for electrothermal devices  
[NASA-CASE-LEW-14037-1] c 20 N87-16875
- ELEVATION**  
Optical tracking mount Patent  
[NASA-CASE-MFS-14017] c 14 N71-26627
- Emergency escape system Patent  
[NASA-CASE-XKS-07814] c 15 N71-27067
- Elevated waterproof access floor system and method of making the same  
[NASA-CASE-ARC-11363-1] c 31 N87-16918
- ELEVATORS (LIFTS)**  
Centrifuge mounted motion simulator Patent  
[NASA-CASE-XAC-00399] c 11 N70-34815
- Cable stabilizer for open shaft cable operated elevators  
[NASA-CASE-KSC-10513] c 15 N72-25453
- ELEVONS**  
High speed flight vehicle control Patent  
[NASA-CASE-XLA-08967] c 02 N71-27088
- ELLIPSES**  
Ellipsograph for pantograph Patent  
[NASA-CASE-XLA-03102] c 14 N71-21079
- ELLIPSO METERS**  
Remote sensing of vegetation and soil using microwave ellipsometry  
[NASA-CASE-GSC-11976-1] c 43 N78-10529
- ELONGATION**  
Strain gauge measuring techniques Patent  
[NASA-CASE-XGS-04478] c 14 N71-24233
- Amplifying ribbon extensometer  
[NASA-CASE-LAR-11825-1] c 35 N77-22449
- ELUTION**  
Amino acid analysis  
[NASA-CASE-NPO-12130-1] c 25 N75-14844
- Electrophoretic fractional elution apparatus employing a rotational seal fraction collector  
[NASA-CASE-MFS-23284-1] c 37 N80-14397
- EMBEDDING**  
Method of forming three-dimensional semiconductor structures  
[NASA-CASE-NPO-17835-1-CU] c 76 N90-27518
- EMBRITTLMENT**  
Magneto acoustic emission apparatus for testing materials for embrittlement  
[NASA-CASE-LAR-13817-1] c 26 N90-21170
- EMERGENCIES**  
Silent emergency alarm system for schools and the like  
[NASA-CASE-NPO-11307-1] c 10 N73-30205
- Emergency space-suit helmet  
[NASA-CASE-MS-C-10954-1] c 54 N78-18761
- Integrated launch and emergency vehicle system  
[NASA-CASE-LAR-13780-1] c 18 N91-13481
- Emergency egress fixed rocket package  
[NASA-CASE-MS-C-21332-1] c 03 N91-15142
- Selectable towline spin chute system  
[NASA-CASE-LAR-14322-1] c 02 N91-27139
- Emergency locating transmitter  
[NASA-CASE-GSC-12821-2] c 33 N91-31530
- EMERGENCY BREATHING TECHNIQUES**  
Resuscitation apparatus Patent  
[NASA-CASE-XMS-01115] c 05 N70-39922
- EMERGENCY LIFE SUSTAINING SYSTEMS**  
Orbital escape device Patent  
[NASA-CASE-XMS-06162] c 31 N71-28851
- Emergency lunar communications system  
[NASA-CASE-MFS-21042] c 07 N72-25171
- Emergency descent device  
[NASA-CASE-MFS-23074-1] c 54 N77-21844
- Personnel emergency carrier vehicle  
[NASA-CASE-KSC-11282-1] c 85 N87-21755
- EMERGENCY LOCATOR TRANSMITTERS**  
Legislated emergency locating transmitters and emergency position indicating radio beacons  
[NASA-CASE-GSC-12892-1] c 32 N89-14374
- EMISSION SPECTRA**  
Spectral method for monitoring atmospheric contamination of inert-gas welding shields Patent  
[NASA-CASE-XMF-02039] c 15 N71-15871
- EMITTANCE**  
Process for applying black coating to metals Patent  
[NASA-CASE-XLA-06199] c 15 N71-24875
- Passive fetal monitoring sensor  
[NASA-CASE-LAR-14088-1] c 35 N91-13686
- Gamma ray collimator  
[NASA-CASE-SSC-00013-1] c 38 N91-32515
- EMITTERS**  
Coaxial inverted geometry transistor having buried emitter  
[NASA-CASE-ARC-10330-1] c 09 N73-32112
- Small particle selective emitter  
[NASA-CASE-LEW-14731-1] c 44 N91-13802
- EMULSIONS**  
Apparatus for obtaining isotropic irradiation of a specimen  
[NASA-CASE-MFS-20095] c 24 N72-11595
- ENAMELS**  
Refractory porcelain enamel passive control coating for high temperature alloys  
[NASA-CASE-MFS-22324-1] c 27 N75-27160
- ENCAPSULATING**  
Bacteriostatic conformal coating and methods of application Patent  
[NASA-CASE-GSC-10007] c 18 N71-16046
- Flexible, repairable, pottable material for electrical connectors Patent  
[NASA-CASE-XGS-05180] c 18 N71-25881
- Orifice gross leak tester Patent  
[NASA-CASE-ERC-10150] c 14 N71-28992
- Solar cell matrix  
[NASA-CASE-NPO-11190] c 03 N71-34044
- Method of making encapsulated solar cell modules  
[NASA-CASE-LEW-12185-1] c 44 N78-25528
- Liquid encapsulated crystal growth  
[NASA-CASE-NPO-16808-1-CU] c 76 N87-25868
- Liquid encapsulated float zone process and apparatus  
[NASA-CASE-MFS-28144-1] c 76 N88-24545

Multi-element spherical shell generation  
[NASA-CASE-NPO-17203-1-CU] c 34 N90-23700  
Method of preforming and assembling superconducting circuit elements  
[NASA-CASE-LAR-14395-1-CU] c 33 N91-28490

**ENCLOSURES**  
Radio frequency shielded enclosure Patent  
[NASA-CASE-XMF-09422] c 07 N71-19436  
Totally confined explosive welding  
[NASA-CASE-LAR-10941-2] c 37 N79-13364  
Moisture content and gas sampling device  
[NASA-CASE-MS-18866-1] c 35 N85-29213

**END EFFECTORS**  
Pneumatic inflatable end effector  
[NASA-CASE-MFS-23696-1] c 54 N81-26718  
Apparatus for adapting an end effector device remotely controlled manipulator arm  
[NASA-CASE-MFS-25949-1] c 37 N86-19603  
Self-locking telescoping manipulator arm  
[NASA-CASE-MFS-25906-1] c 37 N86-20789  
Orbital maneuvering end effectors  
[NASA-CASE-MFS-28161-1] c 37 N87-18817  
Passively activated prehensile digit for a robotic end effector  
[NASA-CASE-NPO-16766-1-CU] c 37 N89-13785  
Gripping device  
[NASA-CASE-MS-21365-1] c 37 N90-20408  
Direct drive robotic hand  
[NASA-CASE-NPO-17917-1-CU] c 37 N90-26339  
Spiral lead platen robotic end effector  
[NASA-CASE-LAR-13855-1] c 37 N91-14615  
Multi-fingered robotic hand  
[NASA-CASE-NPO-15959-2] c 37 N91-14616  
Rolling friction robot fingers  
[NASA-CASE-GSC-13261-1] c 37 N91-17401  
Method and apparatus for positioning a robotic end effector  
[NASA-CASE-MS-21476-1] c 37 N91-21542  
Method and apparatus for configuration control of redundant robots  
[NASA-CASE-NPO-17801-1-CU] c 37 N91-21544  
Electromagnetic attachment mechanism  
[NASA-CASE-MS-21463-1] c 37 N91-23490  
Obstacle avoidance for redundant robots using configuration control  
[NASA-CASE-NPO-17852-1-CU] c 63 N91-23783  
Method and apparatus for releasably connecting first and second objects  
[NASA-CASE-MS-21517-1] c 37 N91-24577

**END PLATES**  
Double swivel toggle release  
[NASA-CASE-MS-21436-1] c 37 N90-21390

**ENDOSCOPES**  
Borescope with variable angle scope  
[NASA-CASE-MFS-15162] c 14 N72-32452  
Apparatus for endoscopic examination --- analysis of the propulsion system configuration and transmitter  
[NASA-CASE-NPO-14092-1] c 52 N80-16725

**ENDOTHERMIC REACTIONS**  
Ablation sensor  
[NASA-CASE-XLA-01781] c 14 N69-39975

**ENEMY PERSONNEL**  
Intruder detection system  
[NASA-CASE-ARC-10097-2] c 07 N73-25160

**ENERGY ABSORPTION**  
Non-reusable kinetic energy absorber Patent  
[NASA-CASE-XLE-00810] c 15 N70-34861  
Energy absorbing structure Patent Application  
[NASA-CASE-MS-12279-1] c 15 N70-35679  
Apparatus for absorbing and measuring power Patent  
[NASA-CASE-XLE-00720] c 14 N70-40201  
Shock absorber Patent  
[NASA-CASE-XMS-03722] c 15 N71-21530  
Energy absorbing device Patent  
[NASA-CASE-XMF-10040] c 15 N71-22877  
Suspended mass impact damper Patent  
[NASA-CASE-LAR-10193-1] c 15 N71-27146  
Energy absorption device Patent  
[NASA-CASE-XNP-01848] c 15 N71-28959  
Impact energy absorbing system utilizing fractureable material  
[NASA-CASE-NPO-10671] c 15 N72-20443  
Docking structure for spacecraft  
[NASA-CASE-MFS-20863] c 31 N73-26876  
Metal shearing energy absorber  
[NASA-CASE-HON-10638-1] c 15 N73-30460  
Load limiting, energy absorbing, lightweight debris catcher  
[NASA-CASE-MS-21562-1] c 16 N91-24216

**ENERGY BANDS**  
Tailorable infrared sensing device with strain layer superlattice structure  
[NASA-CASE-NPO-16607-1-CU] c 76 N88-14836  
Tailorable infrared sensing device with strain layer superlattice structure  
[NASA-CASE-NPO-16617-2-CU] c 35 N90-17118

**ENERGY CONSERVATION**  
Remote platform power conserving system  
[NASA-CASE-GSC-11182-1] c 15 N75-13007  
Three axis attitude control system  
[NASA-CASE-GSC-12970-1] c 08 N88-23808

**ENERGY CONSUMPTION**  
Supercritical solvent coal extraction  
[NASA-CASE-NPO-15210-1] c 25 N84-22709

**ENERGY CONVERSION**  
Two-fluid magnetohydrodynamic system and method for thermal-electric power conversion Patent  
[NASA-CASE-XNP-00644] c 03 N70-36803  
Device for directionally controlling electromagnetic radiation Patent  
[NASA-CASE-XLE-01716] c 09 N70-40234  
Electromagnetic wave energy converter  
[NASA-CASE-GSC-11394-1] c 09 N73-32109  
Electric power generation system directory from laser power  
[NASA-CASE-NPO-13308-1] c 36 N75-30524  
Mechanical thermal motor  
[NASA-CASE-MFS-23062-1] c 37 N77-12402  
Low to high temperature energy conversion system  
[NASA-CASE-NPO-13510-1] c 44 N77-32581  
Solar energy collection system  
[NASA-CASE-NPO-13810-1] c 44 N77-32582  
Small particle selective emitter  
[NASA-CASE-LEW-14731-1] c 44 N91-13802  
Wingtip vortex turbine  
[NASA-CASE-LAR-14116-1] c 05 N91-14345  
Copper chloride cathode for a secondary battery  
[NASA-CASE-NPO-17640-1-CU] c 33 N91-14538

**ENERGY CONVERSION EFFICIENCY**  
Triode thermionic energy converter  
[NASA-CASE-XLE-01015] c 03 N69-39898  
Energy conversion apparatus Patent  
[NASA-CASE-XLE-00212] c 03 N70-34134  
Electronic amplifier with power supply switching Patent  
[NASA-CASE-XMS-00945] c 09 N71-10798  
Energy storage apparatus  
[NASA-CASE-GSC-12030-1] c 44 N78-24608  
Method of construction of a multi-cell solar array  
[NASA-CASE-MFS-23540-1] c 44 N79-26475  
Self-reconfiguring solar cell system  
[NASA-CASE-LEW-12586-1] c 44 N80-14472  
Efficiency of silicon solar cells containing chromium  
[NASA-CASE-NPO-15179-1] c 44 N82-26777  
Thermionic energy converters  
[NASA-CASE-LEW-12443-1] c 44 N83-32175  
Bidirectional control system for energy flow in solar powered flywheel  
[NASA-CASE-MFS-25978-1] c 44 N87-21410

**ENERGY DISSIPATION**  
Frangible tube energy dissipation Patent  
[NASA-CASE-XLA-00754] c 15 N70-34850  
Wingtip vortex dissipator for aircraft  
[NASA-CASE-LAR-11645-1] c 02 N77-10001  
Motion restraining device  
[NASA-CASE-NPO-13619-1] c 37 N78-16369  
High temperature refractory member with radiation emissive overcoat  
[NASA-CASE-NPO-17122-1-CU] c 27 N91-14489  
Energy dissipator  
[NASA-CASE-MS-21555-1] c 37 N91-23492

**ENERGY DISTRIBUTION**  
Method and apparatus for measurement of trap density and energy distribution in dielectric films  
[NASA-CASE-NPO-13443-1] c 76 N76-20994

**ENERGY GAPS (SOLID STATE)**  
High band gap 2-6 and 3-5 tunneling junctions for silicon multijunction solar cells  
[NASA-CASE-NPO-16526-1-CU] c 44 N87-17399  
Method and apparatus for measuring minority carrier lifetime in a direct band-gap semiconductor  
[NASA-CASE-NPO-16337-1-CU] c 33 N87-22894  
Field induced gap infrared detector  
[NASA-CASE-NPO-17526-1-CU] c 35 N91-14588  
Molecules with enhanced electronic polarizabilities based on defect-like states in conjugated polymers  
[NASA-CASE-NPO-17633-1-CU] c 27 N91-27372

**ENERGY LEVELS**  
High resolution threshold photoelectron spectroscopy by electron attachment  
[NASA-CASE-NPO-14078-1] c 72 N80-14877  
Low energy electron magnetometer using a monoenergetic electron beam  
[NASA-CASE-LAR-12706-1] c 35 N84-12444

**ENERGY POLICY**  
Solar energy power system  
[NASA-CASE-MFS-21628-2] c 44 N76-23675  
Thermal energy storage system --- operating on superheating of liquids  
[NASA-CASE-MFS-23167-1] c 44 N76-31667

Mount for continuously orienting a collector dish in a system adapted to perform both diurnal and seasonal solar tracking  
[NASA-CASE-MFS-23267-1] c 35 N77-20401  
Lightweight reflector assembly  
[NASA-CASE-NPO-13707-1] c 74 N77-28933  
Solar photolysis of water  
[NASA-CASE-NPO-13675-1] c 44 N77-32580  
Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c 44 N78-19599  
Solar pond  
[NASA-CASE-NPO-13581-2] c 44 N78-31525  
Non-tracking solar energy collector system  
[NASA-CASE-NPO-13813-1] c 44 N78-31526  
Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c 44 N78-31527  
Primary reflector for solar energy collection systems  
[NASA-CASE-NPO-13579-4] c 44 N79-14529  
Primary reflector for solar energy collection systems and method of making same  
[NASA-CASE-NPO-13579-3] c 44 N79-24432  
Solar energy collection system  
[NASA-CASE-NPO-13579-2] c 44 N79-24433  
Combined solar collector and energy storage system  
[NASA-CASE-LAR-12205-1] c 44 N80-20810  
Wind wheel electric power generator  
[NASA-CASE-MFS-23515-1] c 44 N80-21828  
Induced junction solar cell and method of fabrication  
[NASA-CASE-NPO-13786-1] c 44 N80-29835  
Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c 44 N81-17518  
Copper doped polycrystalline silicon solar cell  
[NASA-CASE-NPO-14670-1] c 44 N81-19558  
Solar heated fluidized bed gasification system  
[NASA-CASE-NPO-15071-1] c 44 N82-16475  
Supercritical multicomponent solvent coal extraction  
[NASA-CASE-NPO-15767-1] c 23 N84-16255

**ENERGY SOURCES**  
Passive synchronized spike generator with high input impedance and low output impedance and capacitor power supply Patent  
[NASA-CASE-XGS-03632] c 09 N71-23311  
Controllable high voltage source having fast settling time  
[NASA-CASE-GSC-11844-1] c 33 N75-19522

**ENERGY STORAGE**  
Switching mechanism with energy storage means Patent  
[NASA-CASE-XGS-00473] c 03 N70-38713  
Stored charge transistor  
[NASA-CASE-NPO-11156-2] c 33 N75-31331  
Mechanical energy storage device for hip disarticulation  
[NASA-CASE-ARC-10916-1] c 52 N78-10686  
Energy storage apparatus  
[NASA-CASE-GSC-12030-1] c 44 N78-24608  
Rotatable mass for a flywheel  
[NASA-CASE-MFS-23051-1] c 37 N79-10422  
Combined solar collector and energy storage system  
[NASA-CASE-LAR-12205-1] c 44 N80-20810  
Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c 28 N81-14103  
Negative electrode catalyst for the iron chromium redox energy storage system  
[NASA-CASE-LEW-14028-1] c 44 N86-19721  
Solar thermal energy receiver  
[NASA-CASE-LEW-14949-1] c 44 N91-23617

**ENERGY TECHNOLOGY**  
Solar energy collection system  
[NASA-CASE-NPO-13810-1] c 44 N77-32582  
Method for producing solar energy panels by automation  
[NASA-CASE-LEW-12541-1] c 44 N78-25529  
Hydrogen-fueled engine  
[NASA-CASE-NPO-13763-1] c 44 N78-33526  
Surfactant-assisted liquefaction of particulate carbonaceous substances  
[NASA-CASE-NPO-13904-1] c 25 N79-11152  
Back wall solar cell  
[NASA-CASE-LEW-12236-2] c 44 N79-14528  
Solar cell module assembly jig  
[NASA-CASE-XGS-00829-1] c 44 N79-19447  
Solar energy collection system  
[NASA-CASE-NPO-13579-2] c 44 N79-24433  
Solar concentrator  
[NASA-CASE-MFS-23727-1] c 44 N80-14473  
Method for forming a solar array strip  
[NASA-CASE-NPO-13652-3] c 44 N80-14474

**ENERGY TRANSFER**  
Solar energy absorber  
[NASA-CASE-MFS-22743-1] c 44 N76-22657  
Gas particle radiator  
[NASA-CASE-LEW-14297-1] c 35 N89-12048  
Multi-heat addition turbine engine  
[NASA-CASE-LEW-15094-1] c 07 N91-23180

- Solar thermal energy receiver  
[NASA-CASE-LEW-14949-1] c 44 N91-23617
- ENGINE ANALYZERS**  
Indicated mean-effective pressure instrument  
[NASA-CASE-LEW-12661-1] c 35 N79-14345
- ENGINE CONTROL**  
Regenerative braking system Patent  
[NASA-CASE-XMF-01096] c 10 N71-16030  
Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c 05 N75-12930  
Power control for hot gas engines  
[NASA-CASE-NPO-14220-1] c 37 N81-14318  
Apparatus for sensor failure detection and correction in a gas turbine engine control system  
[NASA-CASE-LEW-12907-2] c 07 N81-19115  
Control means for a gas turbine engine  
[NASA-CASE-LEW-14586-1] c 07 N83-31603  
Brushless DC motor control system responsive to control signals generated by a computer of the like  
[NASA-CASE-NPO-16420-1] c 33 N86-20681
- ENGINE COOLANTS**  
Injector-valve device Patent  
[NASA-CASE-XLE-00303] c 15 N70-36535  
Injector for bipropellant rocket engines Patent  
[NASA-CASE-XMF-00148] c 28 N70-38710
- ENGINE DESIGN**  
Gas turbine combustion apparatus Patent  
[NASA-CASE-XLE-103477-1] c 28 N71-20330  
Construction and method of arranging a plurality of ion engines to form a cluster Patent  
[NASA-CASE-XNP-02923] c 28 N71-23081  
Space vehicle system  
[NASA-CASE-MSC-12561-1] c 18 N76-17185  
Solid propellant motor  
[NASA-CASE-NPO-11458A] c 20 N78-32179  
Hydrogen-fueled engine  
[NASA-CASE-NPO-13763-1] c 44 N78-33526  
Method and apparatus for rapid thrust increases in a turbofan engine  
[NASA-CASE-LEW-12971-1] c 07 N80-18039  
Free-piston regenerative hot gas hydraulic engine  
[NASA-CASE-LEW-12274-1] c 37 N80-31790  
Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c 37 N81-17432  
Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c 37 N81-25370  
Solar engine  
[NASA-CASE-LAR-12148-1] c 44 N82-24640
- ENGINE FAILURE**  
System for monitoring the presence of neutrals in a stream of ions Patent  
[NASA-CASE-XNP-02592] c 24 N71-20518  
Airplane automatic control force trimming device for asymmetric engine failures  
[NASA-CASE-LAR-13280-1] c 08 N87-20999
- ENGINE INLETS**  
Variably positioned guide vanes for aerodynamic choking  
[NASA-CASE-LAR-10642-1] c 07 N74-31270  
The engine air intake system  
[NASA-CASE-ARC-10761-1] c 07 N77-18154  
Self stabilizing sonic inlet  
[NASA-CASE-LEW-11890-1] c 05 N79-24976
- ENGINE MONITORING INSTRUMENTS**  
System for monitoring the presence of neutrals in a stream of ions Patent  
[NASA-CASE-XNP-02592] c 24 N71-20518  
Method and system for monitoring and displaying engine performance parameters  
[NASA-CASE-LAR-14049-1] c 07 N89-23466
- ENGINE NOISE**  
Variably positioned guide vanes for aerodynamic choking  
[NASA-CASE-LAR-10642-1] c 07 N74-31270  
Variable thrust nozzle for quiet turbofan engine and method of operating same  
[NASA-CASE-LEW-12317-1] c 07 N78-17055  
Multiple pure tone elimination strut assembly --- air breathing engines  
[NASA-CASE-FRC-11062-1] c 71 N82-16800  
Noise suppressor for turbo fan jet engines  
[NASA-CASE-ARC-10812-1] c 07 N83-33884
- ENGINE PARTS**  
Gas turbine engine with convertible accessories  
[NASA-CASE-LEW-12390-1] c 07 N78-17056  
Gas path seal  
[NASA-CASE-NPO-12131-3] c 37 N80-18400  
Method of protecting a surface with a silicon-slurry/aluminide coating --- coatings for gas turbine engine blades and vanes  
[NASA-CASE-LEW-13343-1] c 27 N82-28441  
Thermal stress minimized, two component, turbine shroud seal  
[NASA-CASE-LEW-14212-1] c 37 N88-23978  
Composite piston  
[NASA-CASE-LAR-13435-1] c 37 N88-23981
- High-temperature, flexible, thermal barrier seal  
[NASA-CASE-LEW-14672-1] c 37 N91-27560
- ENGINE STARTERS**  
Portable device for use in starting air-start-units for aircraft and having cable lead testing capability  
[NASA-CASE-FRC-10113-1] c 33 N80-26599
- ENGINE TESTS**  
Electric propulsion engine test chamber Patent  
[NASA-CASE-XLE-00252] c 11 N70-34844
- ENGINEERING DRAWINGS**  
High-temperature, high-pressure spherical segment valve Patent  
[NASA-CASE-XAC-00074] c 15 N70-34817  
Lifting body Patent Application  
[NASA-CASE-FRC-10063] c 01 N71-12217  
Optical communications system Patent  
[NASA-CASE-XLA-01090] c 07 N71-12389  
Method of making a molded connector Patent  
[NASA-CASE-XMF-03498] c 15 N71-15986
- ENGRAVING**  
Electrostatically suspended rotor for angular encoder  
[NASA-CASE-MFS-28294-1] c 31 N91-14508
- ENTHALPY**  
Enthalpy and stagnation temperature determination of a high temperature laminar flow gas stream Patent  
[NASA-CASE-XLE-00266] c 14 N70-34156
- ENTRAINMENT**  
Water separator  
[NASA-CASE-XMS-01295-1] c 37 N79-21345
- ENUMERATION**  
Apparatus and process for microbial detection and enumeration  
[NASA-CASE-LAR-12709-1] c 35 N82-28604
- ENVIRONMENT SIMULATION**  
Skeletal stressing method and apparatus Patent  
[NASA-CASE-ARC-10100-1] c 05 N71-24738  
Locomotion and restraint aid Patent  
[NASA-CASE-ARC-10153] c 05 N71-28619
- ENVIRONMENT SIMULATORS**  
Space simulator Patent  
[NASA-CASE-NPO-10141] c 11 N71-24964
- ENVIRONMENTAL CONTROL**  
Portable environmental control system Patent  
[NASA-CASE-XMS-09632-1] c 05 N71-11203  
Portable superclean air column device Patent  
[NASA-CASE-XMF-03212] c 15 N71-22721  
Thermal control panel Patent  
[NASA-CASE-XLA-07728] c 33 N71-22890  
Dual solid cryogens for spacecraft refrigeration Patent  
[NASA-CASE-GSC-10188-1] c 23 N71-24725  
Active vibration isolator for flexible bodies Patent  
[NASA-CASE-LAR-10106-1] c 15 N71-27169  
Autoignition test cell Patent  
[NASA-CASE-KSC-10198] c 11 N71-28629  
Universal environment package with sectional component housing  
[NASA-CASE-KSC-10031] c 15 N72-22486  
Air conditioned suit  
[NASA-CASE-LAR-10076-1] c 05 N73-20137  
Dual stage check valve  
[NASA-CASE-MSC-13587-1] c 15 N73-30459  
Space vehicle with artificial gravity and earth-like environment  
[NASA-CASE-LEW-11101-1] c 31 N73-32750
- ENVIRONMENTAL ENGINEERING**  
Thermal control wall panel Patent  
[NASA-CASE-XLA-01243] c 33 N71-22792
- ENVIRONMENTAL MONITORING**  
System for real-time crustal deformation monitoring  
[NASA-CASE-NPO-14124-1] c 46 N80-14603  
Vapor fragraner  
[NASA-CASE-LAR-13680-1] c 35 N87-25561
- ENVIRONMENTAL TESTS**  
Multiple environment materials test chamber having a multiple port X-ray tube for irradiating a plurality of samples Patent  
[NASA-CASE-XMS-02930] c 11 N71-23042  
Hard space suit Patent  
[NASA-CASE-XAC-07043] c 05 N71-23161  
Flammability test chamber Patent  
[NASA-CASE-KSC-10126] c 11 N71-24985  
Multi axes vibration fixtures  
[NASA-CASE-MFS-20242] c 14 N73-19421  
Fixture for environmental exposure of structural materials under compression load  
[NASA-CASE-LAR-12602-1] c 39 N83-32081
- ENVIRONMENTS**  
Hermetically sealed elbow actuator  
[NASA-CASE-MFS-14710] c 09 N72-22195
- ENZYMATIC ACTIVITY**  
Use of the enzyme hexokinase for the reduction of inherent light levels  
[NASA-CASE-XGS-05533] c 04 N69-27487  
Method of detecting and counting bacteria in body fluids  
[NASA-CASE-GSC-11092-2] c 04 N73-27052
- ENZYMES**  
Protein sterilization method of firefly luciferase using reduced pressure and molecular sieves  
[NASA-CASE-GSC-10225-1] c 06 N73-27086
- EPICYCLOIDS**  
Sequencing device utilizing planetary gear set  
[NASA-CASE-MSC-19514-1] c 37 N79-20377
- EPITAXY**  
Method for the preparation of inorganic single crystal and polycrystalline electronic materials  
[NASA-CASE-XLE-02545-1] c 76 N79-21910  
Epitaxial thinning process  
[NASA-CASE-NPO-15786-1] c 76 N84-35112  
Method of making macrocrystalline or single crystal semiconductor material  
[NASA-CASE-NPO-15904-1] c 76 N86-28760  
Floating emitter solar cell  
[NASA-CASE-NPO-16467-1-CU] c 33 N87-23879  
Method of fabricating germanium and gallium arsenide devices  
[NASA-CASE-GSC-13265-1] c 76 N91-14066  
Process for the homoepitaxial growth of single-crystal silicon carbide films on silicon carbide wafers  
[NASA-CASE-LEW-15223-1] c 76 N91-26967
- EPOXY COMPOUNDS**  
Synthesis of siloxane-containing epoxy polymers Patent  
[NASA-CASE-MFS-13994-1] c 06 N71-11240  
Siloxane containing epoxide compounds  
[NASA-CASE-MFS-13994-2] c 06 N72-25148  
Fire protection covering for small diameter missiles  
[NASA-CASE-ARC-11104-1] c 15 N79-26100  
Antenna grout replacement system  
[NASA-CASE-NPO-15202-1] c 27 N83-34043  
Cellular thermosetting fluorodioxide polymers  
[NASA-CASE-GSC-13008-2] c 27 N90-16949
- EPOXY MATRIX COMPOSITES**  
Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-2] c 27 N86-27451
- EPOXY RESINS**  
Non-magnetic battery case Patent  
[NASA-CASE-XGS-00886] c 03 N71-11053  
Sealing device for an electrochemical cell Patent  
[NASA-CASE-XGS-02630] c 03 N71-22974  
Hydroforming techniques using epoxy molds Patent  
[NASA-CASE-XLE-05641-1] c 15 N71-26346  
Pressure sensitive transducers Patent  
[NASA-CASE-ERC-10087] c 14 N71-27334  
Epoxy-aziridine polymer product Patent  
[NASA-CASE-NPO-10701] c 06 N71-28620  
Method of repairing discontinuity in fiberglass structures  
[NASA-CASE-LAR-10416-1] c 24 N74-30001  
Transparent fire resistant polymeric structures  
[NASA-CASE-ARC-10813-1] c 27 N76-16230  
Curing agent for polyepoxides and epoxy resins and composites cured therewith --- preventing carbon fiber release  
[NASA-CASE-LEW-13226-1] c 27 N81-17260  
Method of neutralizing the corrosive surface of amine-cured epoxy resins  
[NASA-CASE-GSC-12686-1] c 27 N83-34039  
Fluoroether modified epoxy composites  
[NASA-CASE-ARC-11418-1] c 24 N84-11213  
Process for improving mechanical properties of epoxy resins by addition of cobalt ions  
[NASA-CASE-LAR-13230-1] c 24 N84-34571  
Metal (2,4,4',4') phthalocyanine tetraamines as curing agents for epoxy resins  
[NASA-CASE-ARC-11424-1] c 27 N85-34281  
Process for improving moisture resistance of epoxy resins by addition of chromium ions  
[NASA-CASE-LAR-13226-1] c 27 N85-34282  
Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-1] c 24 N86-19380  
Aminophenoxy-cyclotriphosphazene cured epoxy resins and the composites, laminates, adhesives and structures thereof  
[NASA-CASE-ARC-11548-1] c 27 N87-25469
- EQUATIONS OF MOTION**  
Kinesimetric method and apparatus  
[NASA-CASE-MSC-18929-1] c 39 N83-20280
- EQUIPMENT**  
Bimetallic fluid displacement apparatus --- for stirring and heating stored gases and liquids  
[NASA-CASE-ARC-10441-1] c 35 N74-15126  
Apparatus for supplying conditioned air at a substantially constant temperature and humidity  
[NASA-CASE-GSC-12181-1] c 31 N80-32583
- EQUIPMENT SPECIFICATIONS**  
Differential pressure cell Patent  
[NASA-CASE-XAC-00042] c 14 N70-34816

- High-temperature, high-pressure spherical segment valve Patent  
[NASA-CASE-XAC-00074] c 15 N70-34817
- Optical torque meter Patent  
[NASA-CASE-XLE-00503] c 14 N70-34818
- Magnetically centered liquid column float Patent  
[NASA-CASE-XAC-00030] c 14 N70-34820
- Electric propulsion engine test chamber Patent  
[NASA-CASE-XLE-00252] c 11 N70-34844
- Channel-type shell construction for rocket engines and the like Patent  
[NASA-CASE-XLE-00144] c 28 N70-34860
- Non-reusable kinetic energy absorber Patent  
[NASA-CASE-XLE-00810] c 15 N70-34861
- Slit regulated gas journal bearing Patent  
[NASA-CASE-XNP-00476] c 15 N70-38620
- Optical communications system Patent  
[NASA-CASE-XLA-01090] c 07 N71-12389
- Stretcher Patent  
[NASA-CASE-XMF-06589] c 05 N71-23159
- Rocket thrust throttling system  
[NASA-CASE-LEW-10374-1] c 28 N73-13773
- Process for making diamonds  
[NASA-CASE-MFS-20698-2] c 15 N73-19457
- Anti-buckling fatigue test assembly --- for subjecting metal specimen to tensile and compressive loads at constant temperature  
[NASA-CASE-LAR-10426-1] c 09 N74-19528
- Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-MFS-21394-1] c 34 N74-27744
- Thermocouple tape --- developed from thermoelectrically different metals  
[NASA-CASE-LEW-11072-2] c 35 N76-15434
- Field effect transistor and method of construction thereof  
[NASA-CASE-MFS-23312-1] c 33 N78-27326
- Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c 74 N82-24072
- Remotely controlled spray gun  
[NASA-CASE-MFS-28110-1] c 37 N87-24689
- Improved method and apparatus for waste collection and storage  
[NASA-CASE-MSC-21025-1] c 31 N87-25495
- Electrostatic discharge test apparatus  
[NASA-CASE-MSC-21094-1] c 35 N88-24941
- EQUIPOTENTIALS**
- Equipotential space suit Patent  
[NASA-CASE-LAR-10007-1] c 05 N71-11195
- Instrument for measuring potentials on two dimensional electric field plots Patent  
[NASA-CASE-XLA-08493] c 10 N71-19421
- ERGOMETERS**
- Restraint system for ergometer  
[NASA-CASE-MFS-21046-1] c 14 N73-27377
- Ergometer  
[NASA-CASE-MFS-21109-1] c 05 N73-27941
- Tilting table for ergometer and for other biomedical devices  
[NASA-CASE-MFS-21010-1] c 05 N73-30078
- Foot pedal operated fluid type exercising device  
[NASA-CASE-MSC-11561-1] c 05 N73-32014
- Ergometer calibrator --- for any ergometer utilizing rotating shaft  
[NASA-CASE-MFS-21045-1] c 35 N75-15932
- EROSION**
- Thermal shock and erosion resistant tantalum carbide ceramic material  
[NASA-CASE-LAR-11902-1] c 27 N78-17206
- ERROR ANALYSIS**
- Program for computer aided reliability estimation  
[NASA-CASE-NPO-13086-1] c 15 N73-12495
- Bit error rate measurement above and below bit rate tracking threshold  
[NASA-CASE-MSC-12743-1] c 32 N79-10263
- Digital phase-lock loop having an estimator and predictor of error  
[NASA-CASE-NPO-17196-1-CU] c 32 N88-29076
- Self-checking on-line testable static RAM  
[NASA-CASE-NPO-17939-1-CU] c 60 N90-26518
- Detection of multiple-bit errors from single-ion tracks in integrated circuits  
[NASA-CASE-NPO-18075-1-CU] c 33 N91-13622
- ERROR CORRECTING CODES**
- Error correction method and apparatus for electronic timepieces  
[NASA-CASE-LAR-12654-1] c 33 N83-36357
- Self-correcting electronically scanned pressure sensor  
[NASA-CASE-LAR-12686-1] c 35 N84-14491
- Reed-Solomon decoder  
[NASA-CASE-NPO-15982-1] c 60 N87-21591
- Processing circuit with asymmetry corrector and convolutional encoder for digital data  
[NASA-CASE-MSC-20187-1] c 33 N87-25531
- Local area network with fault-checking, priorities, and redundant backup  
[NASA-CASE-NPO-16949-1-CU] c 62 N90-19776
- VLSI architecture for a Reed-Solomon decoder  
[NASA-CASE-NPO-17897-1-CU] c 33 N90-27040
- ERROR CORRECTING DEVICES**
- Automatic fault correction system for parallel signal channels Patent  
[NASA-CASE-XNP-03263] c 09 N71-18843
- Elimination of frequency shift in a multiplex communication system Patent  
[NASA-CASE-XNP-01306] c 07 N71-20814
- Error correcting method and apparatus Patent  
[NASA-CASE-XNP-02748] c 08 N71-22749
- Failure detection and control means for improved drift performance of a gimballed platform system  
[NASA-CASE-MFS-23551-1] c 04 N76-26175
- Guide for a typewriter  
[NASA-CASE-MFS-15218-1] c 37 N77-19457
- ERROR DETECTION CODES**
- Self-testing and repairing computer Patent  
[NASA-CASE-NPO-10567] c 08 N71-24633
- Local area network with fault-checking, priorities, and redundant backup  
[NASA-CASE-NPO-16949-1-CU] c 62 N90-19776
- ERROR SIGNALS**
- Automatic fault correction system for parallel signal channels Patent  
[NASA-CASE-XNP-03263] c 09 N71-18843
- Sampled data controller Patent  
[NASA-CASE-GSC-10554-1] c 08 N71-29033
- Bit error rate measurement above and below bit rate tracking threshold  
[NASA-CASE-MSC-12743-1] c 32 N79-10263
- Triac failure detector  
[NASA-CASE-MFS-25607-1] c 33 N83-34190
- Automated weld torch guidance control system  
[NASA-CASE-MFS-25807-2] c 37 N86-21850
- Comparator with noise suppression  
[NASA-CASE-LAR-13151-1] c 33 N87-21235
- Self-checking on-line testable static RAM  
[NASA-CASE-NPO-17939-1-CU] c 60 N90-26518
- Multistage estimation of received carrier signal parameters under very high dynamic conditions of the receiver  
[NASA-CASE-NPO-17911-1-CU] c 32 N90-27016
- Modified fast frequency acquisition via adaptive least squares algorithm  
[NASA-CASE-NPO-17845-1-CU] c 61 N90-27341
- ERRORS**
- Analog-to-digital converter  
[NASA-CASE-MSC-13110-1] c 08 N72-22163
- Compensation for primary reflector wavefront error  
[NASA-CASE-NPO-16869-1-CU] c 74 N86-33138
- Porous plug for reducing orifice induced pressure error in airfoils  
[NASA-CASE-LAR-13569-1] c 35 N89-12841
- Asymmetric soft-error resistant memory  
[NASA-CASE-NPO-17394-1-CU] c 60 N91-31810
- Feedback controlled optics with wavefront compensation  
[NASA-CASE-NPO-18194-1-CU] c 74 N91-32924
- ESCAPE CAPSULES**
- Aerial capsule emergency separation device Patent  
[NASA-CASE-XLA-00115] c 03 N70-33343
- Emergency escape system Patent  
[NASA-CASE-XKS-02342] c 05 N71-11199
- Emergency earth orbital escape device  
[NASA-CASE-MSC-13281] c 31 N72-18859
- ESCAPE SYSTEMS**
- Emergency escape system Patent  
[NASA-CASE-MSC-12086-1] c 05 N71-12345
- Emergency escape system Patent  
[NASA-CASE-XKS-07814] c 15 N71-27067
- Explosively activated egress area  
[NASA-CASE-LAR-12624-1] c 01 N83-35992
- Assured crew return vehicle  
[NASA-CASE-MSC-21536-1] c 18 N91-13483
- ESCHERICHIA**
- Method for detecting coliform organisms  
[NASA-CASE-ARC-11322-1] c 51 N83-28849
- ESTERS**
- Fluorinated esters of polycarboxylic acids  
[NASA-CASE-MFS-21040-1] c 06 N73-30098
- Addition polyimides with enhanced processability  
[NASA-CASE-LEW-15043-1] c 27 N91-32230
- ESTIMATING**
- Digital phase-lock loop having an estimator and predictor of error  
[NASA-CASE-NPO-17196-1-CU] c 32 N88-29076
- Multistage estimation of received carrier signal parameters under very high dynamic conditions of the receiver  
[NASA-CASE-NPO-17911-1-CU] c 32 N90-27016
- Modified fast frequency acquisition via adaptive least squares algorithm  
[NASA-CASE-NPO-17845-1-CU] c 61 N90-27341
- ETCHING**
- Masking device Patent  
[NASA-CASE-XNP-02092] c 15 N70-42033
- Method for etching copper Patent  
[NASA-CASE-XGS-06306] c 17 N71-16044
- High resolution developing of photosensitive resists Patent  
[NASA-CASE-XGS-04993] c 14 N71-17574
- Etching of aluminum for bonding Patent  
[NASA-CASE-XMF-02303] c 17 N71-23828
- Selective plating of etched circuits without removing previous plating Patent  
[NASA-CASE-XGS-03120] c 15 N71-24047
- Plating nickel on aluminum castings Patent  
[NASA-CASE-XNP-04148] c 17 N71-24830
- Scanning nozzle plating system --- for etching or plating metals on substrates without masking  
[NASA-CASE-NPO-11758-1] c 31 N74-23065
- Method for applying photographic resists to otherwise incompatible substrates  
[NASA-CASE-MSC-18107-1] c 27 N81-25209
- Method of making V-MOS field effect transistors utilizing a two-step anisotropic etching and ion implantation  
[NASA-CASE-GSC-12515-1] c 33 N81-26360
- Liquid immersion apparatus for minute articles  
[NASA-CASE-MFS-25363-1] c 37 N82-12441
- Controlled in situ etch-back  
[NASA-CASE-NPO-15625-1] c 76 N83-20789
- Method of making an ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-2] c 52 N84-23095
- Ion beam sputter etching  
[NASA-CASE-LEW-13899-1] c 31 N87-21160
- Seamless metal-clad fiber-reinforced organic matrix composite structures and process for their manufacture  
[NASA-CASE-LAR-13562-1] c 24 N90-25196
- Method of fabricating germanium and gallium arsenide devices  
[NASA-CASE-GSC-13265-1] c 76 N91-14066
- Metal etching composition  
[NASA-CASE-MFS-29576-1] c 25 N91-15368
- Process for the homoepitaxial growth of single-crystal silicon carbide films on silicon carbide wafers  
[NASA-CASE-LEW-15223-1] c 76 N91-26967
- Etching method for photoresists or polymers  
[NASA-CASE-ARC-11873-2] c 25 N91-31258
- Method for anisotropic etching in the manufacture of semiconductor devices  
[NASA-CASE-MSC-21631-1] c 75 N91-32947
- ETHANE**
- The 1,1,1-triaryl-2,2,2-trifluoroethanes and process for their synthesis  
[NASA-CASE-ARC-11097-1] c 25 N82-24312
- Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-2] c 25 N90-23497
- Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-3] c 23 N91-17141
- Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-4] c 23 N91-25185
- ETHERS**
- Method of producing alternating ether siloxane copolymers Patent  
[NASA-CASE-XMF-02584] c 06 N71-20905
- Hydroxy terminated perfluoro ethers Patent  
[NASA-CASE-NPO-10768] c 06 N71-27254
- Polyurethane resins from hydroxy terminated perfluoro ethers  
[NASA-CASE-NPO-10768-2] c 06 N72-27144
- Process of treating cellulose membrane and alkaline with membrane separator  
[NASA-CASE-GSC-10019-1] c 44 N82-24641
- Separator for alkaline electric cells and method of making  
[NASA-CASE-GSC-10017-1] c 44 N82-24643
- Perfluoro (Imidoylamidine) diamidines  
[NASA-CASE-ARC-11402-3] c 23 N86-21582
- Polyarylene ethers with improved properties  
[NASA-CASE-LAR-13555-1] c 23 N86-32526
- Polyimides with carbonyl and ether connecting groups between the aromatic rings  
[NASA-CASE-LAR-14001-1] c 27 N90-15260
- Imide/arylene ether copolymers  
[NASA-CASE-LAR-14159-1-CU] c 27 N90-26953
- Methyl substituted polyimides containing carbonyl and ether connecting groups  
[NASA-CASE-LAR-14351-1] c 27 N91-13561
- Secondary Li battery incorporating 12-crown-4 ether  
[NASA-CASE-NPO-17922-1-CU] c 33 N91-13621



- Low dielectric fluorinated poly(phenylene ether ketone) film and coating  
[NASA-CASE-LAR-13992-1-CU] c 23 N91-27220
- Ethynyl terminated imidithioethers and resins therefrom  
[NASA-CASE-LAR-13910-2-CU] c 27 N91-31307
- ETHYL COMPOUNDS**
- Precision heat forming of tetrafluoroethylene tubing  
[NASA-CASE-MSC-18430-1] c 37 N82-24491
- Ethynyl and substituted ethynyl-terminated polysulfones  
[NASA-CASE-LAR-12931-1] c 27 N84-22747
- The 5-(4-Ethynylphenoxy) isophthalic chloride  
[NASA-CASE-LAR-13316-2] c 27 N87-14515
- ETHYLENE OXIDE**
- Process for preparing sterile solid propellants Patent  
[NASA-CASE-XNP-01749] c 27 N70-41897
- Processing for producing a sterilized instrument Patent  
[NASA-CASE-XNP-09763] c 14 N71-20461
- System for sterilizing objects --- cleaning space vehicle systems  
[NASA-CASE-KSC-11085-1] c 54 N81-24724
- EUTECTIC ALLOYS**
- Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-1] c 37 N75-15992
- Method of growing composites of the type exhibiting the Soret effect --- improved structure of eutectic alloy crystals  
[NASA-CASE-MFS-22926-1] c 24 N77-27187
- Directionally solidified eutectic gamma plus beta nickel-base superalloys  
[NASA-CASE-LEW-12906-1] c 26 N77-32279
- Directionally solidified eutectic gamma-gamma nickel-base superalloys  
[NASA-CASE-LEW-12905-1] c 26 N78-18183
- Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-3] c 24 N79-25143
- EUTECTICS**
- Method of preparing a thermal barrier coating  
[NASA-CASE-LEW-14999-2] c 27 N91-26376
- EVAQUATING (VACUUM)**
- Method for making a heat insulating and ablative structure  
[NASA-CASE-XMS-01108] c 15 N69-24322
- Evacuation port seal Patent  
[NASA-CASE-XMF-03290] c 15 N71-23256
- Leak detector wherein a probe is monitored with ultraviolet radiation Patent  
[NASA-CASE-ERC-10034] c 15 N71-24896
- Evacuated, displacement compression mold --- of tubular bodies from thermosetting plastics  
[NASA-CASE-LAR-10782-2] c 31 N75-13111
- EVAPORATION**
- Evaporant holder  
[NASA-CASE-XLA-03105] c 15 N69-27483
- Method of evaporation  
[NASA-CASE-NPO-15609-2] c 25 N88-23846
- Convergent strand array liquid pumping system  
[NASA-CASE-NPO-17301-1-CU] c 31 N90-23587
- EVAPORATIVE COOLING**
- Tubular sublimatory evaporator heat sink  
[NASA-CASE-ARC-10912-1] c 34 N77-19353
- Capillary heat transport and fluid management device  
[NASA-CASE-MFS-28217-1] c 34 N89-14392
- EVAPORATORS**
- Evaporant source for vapor deposition Patent  
[NASA-CASE-XMF-06065] c 15 N71-20395
- Deposition apparatus  
[NASA-CASE-LAR-10541-1] c 15 N72-32487
- Thermal control system --- removing waste heat from industrial process spacecraft  
[NASA-CASE-GSC-12771-1] c 34 N84-14461
- Multi-leg heat pipe evaporator  
[NASA-CASE-MSC-20812-1] c 34 N86-27593
- EXAMINATION**
- Apparatus for use in examining the lattice of a semiconductor wafer by X-ray diffraction  
[NASA-CASE-MFS-23315-1] c 76 N78-24950
- Method of examining microcircuit patterns  
[NASA-CASE-NPO-16299-1] c 33 N87-14594
- EXCHANGING**
- Procedure to prepare transparent silica gels  
[NASA-CASE-LAR-13476-1-CU] c 76 N87-29360
- EXCITATION**
- Trochoidal analysis of scattered electrons in a merged electron-ion beam geometry  
[NASA-CASE-NPO-16789-1-CU] c 72 N89-29169
- EXCLUSION**
- Counter pumping debris excluder and separator --- gas turbine shaft seals  
[NASA-CASE-LEW-11855-1] c 07 N78-25090
- EXHAUST EMISSION**
- Apparatus and method for destructive removal of particles contained in flowing fluid  
[NASA-CASE-NPO-15426-1] c 35 N84-17555
- EXHAUST GASES**
- Device for suppressing sound and heat produced by high-velocity exhaust jets Patent  
[NASA-CASE-XMF-01813] c 28 N70-41582
- Gas turbine exhaust nozzle --- for noise reduction  
[NASA-CASE-LEW-11569-1] c 07 N74-15453
- Abating exhaust noises in jet engines  
[NASA-CASE-ARC-10712-1] c 07 N74-33218
- Exhaust flow deflector --- for ducted gas flow  
[NASA-CASE-LAR-11570-1] c 34 N76-18364
- Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c 07 N78-25089
- High performance ammonium nitrate propellant  
[NASA-CASE-NPO-14260-1] c 28 N79-28342
- Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c 07 N81-29129
- EXHAUST NOZZLES**
- Annular rocket motor and nozzle configuration Patent  
[NASA-CASE-XLE-00078] c 28 N70-33284
- Nozzle Patent  
[NASA-CASE-XLA-00154] c 28 N70-33374
- Penshape exhaust nozzle for supersonic engine Patent  
[NASA-CASE-XLE-00057] c 28 N70-38711
- Ejection unit Patent  
[NASA-CASE-XNP-00676] c 15 N70-38996
- Two dimensional wedge/translating shroud nozzle  
[NASA-CASE-LAR-11919-1] c 07 N78-27121
- Variable area exhaust nozzle  
[NASA-CASE-LEW-12378-1] c 07 N79-14097
- Noise suppressor for turbo fan jet engines  
[NASA-CASE-ARC-10812-1] c 07 N83-33884
- Apparatus and method for jet noise suppression  
[NASA-CASE-LAR-11903-2] c 71 N84-14873
- EXOTHERMIC REACTIONS**
- Ambient cure polyimide foams --- thermal resistant foams  
[NASA-CASE-ARC-11170-1] c 27 N79-11215
- Exothermic furnace module  
[NASA-CASE-MFS-25707-1] c 35 N82-26631
- Thermal control system --- removing waste heat from industrial process spacecraft  
[NASA-CASE-GSC-12771-1] c 34 N84-14461
- EXPANDABLE STRUCTURES**
- Connector strips-positive, negative and T tabs  
[NASA-CASE-XGS-01395] c 03 N69-21539
- Reflector space satellite Patent  
[NASA-CASE-XLA-00138] c 31 N70-37981
- Foldable conduit Patent  
[NASA-CASE-XLE-00620] c 32 N70-41579
- Collapsible high gain antenna  
[NASA-CASE-KSC-10392] c 07 N73-26117
- Expandable space frames  
[NASA-CASE-ERC-10365-1] c 31 N73-32749
- Means for accommodating large overstrain in lead wires --- by storing extra length of wire in stretchable loop  
[NASA-CASE-LAR-10168-1] c 33 N74-22865
- Antenna deployment mechanism for use with a spacecraft --- extensible and retractable telescopic antenna mast  
[NASA-CASE-GSC-12331-1] c 18 N80-14183
- Synchronously deployable truss structure  
[NASA-CASE-LAR-13117-1] c 37 N86-25789
- Protective telescoping shield for solar concentrator  
[NASA-CASE-NPO-16236-1] c 44 N86-27706
- Deployable geodesic truss structure  
[NASA-CASE-LAR-13113-1] c 31 N87-25492
- EXPANSION**
- Apparatus for measuring swelling characteristics of membranes  
[NASA-CASE-XGS-03865] c 14 N69-21363
- Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-2] c 24 N81-26179
- Dynamic range compression/expansion of light beams by photorefractive crystals  
[NASA-CASE-NPO-17140-1-CU] c 74 N89-14077
- EXPERIMENT DESIGN**
- Hydrofoil Patent  
[NASA-CASE-XLA-00229] c 12 N70-33305
- Sealed battery gas manifold construction Patent  
[NASA-CASE-XNP-03378] c 03 N71-11051
- Electrode construction Patent  
[NASA-CASE-ARC-10043-1] c 05 N71-11193
- G conditioning suit Patent  
[NASA-CASE-XLA-02898] c 05 N71-20268
- Hard space suit Patent  
[NASA-CASE-XAC-07043] c 05 N71-23161
- EXPERT SYSTEMS**
- Bilevel shared control for teleoperators  
[NASA-CASE-NPO-17800-1-CU] c 37 N91-13724
- General method of pattern classification using the two-domain theory  
[NASA-CASE-MSC-21737-1] c 61 N91-13911
- Discrete event simulation tool for analysis of qualitative models of continuous processing systems  
[NASA-CASE-MSC-21465-1] c 61 N91-14741
- EXPIRED AIR**
- Metabolic rate meter and method  
[NASA-CASE-MSC-12239-1] c 52 N79-21750
- EXPLOSIONS**
- Combustion detector  
[NASA-CASE-LAR-10739-1] c 14 N73-16484
- EXPLOSIVE DEVICES**
- Tubular coupling having frangible connecting means  
[NASA-CASE-XLA-02854] c 15 N69-27490
- Hermetically sealed explosive release mechanism Patent  
[NASA-CASE-XGS-00824] c 15 N71-16078
- Nonmagnetic, explosive actuated indexing device Patent  
[NASA-CASE-XGS-02422] c 15 N71-21529
- Linear explosive comparison  
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- Disconnect unit  
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- Pressure limiting propellant actuating system  
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- Apparatus and method for explosive bonding to edge of flyer plate  
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- EXPLOSIVE FORMING**
- Electrical discharge apparatus for forming Patent  
[NASA-CASE-XMF-00375] c 15 N70-34249
- EXPLOSIVE WELDING**
- Totally confined explosive welding --- apparatus to reduce noise level and protect personnel during explosive bonding  
[NASA-CASE-LAR-10941-1] c 37 N74-21057
- Method of making an explosively welded scarf joint  
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- Totally confined explosive welding  
[NASA-CASE-LAR-10941-2] c 37 N79-13364
- Tool and process for miniature explosive joining of tubes  
[NASA-CASE-LAR-13662-1] c 37 N88-14359
- Apparatus and method for explosive bonding to edge of flyer plate  
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- EXPLOSIVES**
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- Optically detonated explosive device  
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- EXPONENTIAL FUNCTIONS**
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- EXPOSURE**
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- Selective image area control of X-ray film exposure density  
[NASA-CASE-NPO-13808-1] c 35 N78-15461
- Fixture for environmental exposure of structural materials under compression load  
[NASA-CASE-LAR-12602-1] c 39 N83-32081
- Method and apparatus for maintaining thermal control in plasma conditions  
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- EXPULSION**
- Electro-expulsive separation system  
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- EXPULSION BLADDERS**
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[NASA-CASE-XNP-00612] c 11 N70-38182
- EXTENSIONS**
- Extensible cable support Patent  
[NASA-CASE-XMF-07587] c 15 N71-18701
- EXTENSOMETERS**
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- Conductive elastomeric extensometer  
[NASA-CASE-MFS-21049-1] c 52 N74-27864
- Amplifying ribbon extensometer  
[NASA-CASE-LAR-11825-1] c 35 N77-22449
- Laser extensometer  
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- Tensile testing apparatus  
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## EXTERNAL COMBUSTION ENGINES

- Hot gas engine with dual crankshafts  
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- EXTERNAL STORE SEPARATION**  
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[NASA-CASE-MSC-20080-1] c 37 N85-30334  
Remote pivot decoupler pylon: Wing/store flutter suppressor  
[NASA-CASE-LAR-13173-1] c 05 N87-14314
- EXTERNAL STORES**  
Decoupler pylon: wing/store flutter suppressor  
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- EXTERNAL TANKS**  
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[NASA-CASE-MFS-25853-1] c 16 N84-27784  
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[NASA-CASE-MSC-20080-1] c 37 N85-30334
- EXTRACTION**  
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- EXTRAVEHICULAR ACTIVITY**  
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- EXTREME ULTRAVIOLET RADIATION**  
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- EXTRUDING**  
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[NASA-CASE-NPO-10812] c 15 N73-13464  
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[NASA-CASE-NPO-13758-2] c 31 N81-15154  
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[NASA-CASE-LEW-14921-1] c 24 N91-13502
- EYE (ANATOMY)**  
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[NASA-CASE-XMF-03934] c 09 N71-22985  
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[NASA-CASE-LEW-11669-1] c 05 N73-27062  
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[NASA-CASE-LEW-12723-1] c 52 N80-18690  
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[NASA-CASE-LAR-12251-1] c 74 N80-27185  
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- EYE DISEASES**  
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- EYE EXAMINATIONS**  
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[NASA-CASE-NPO-11775] c 26 N72-28761  
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[NASA-CASE-GSC-12022-1] c 44 N76-28635  
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[NASA-CASE-NPO-13652-1] c 44 N79-17314  
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[NASA-CASE-NPO-13786-1] c 44 N80-29835  
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[NASA-TM-76884] c 24 N85-25436  
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[NASA-CASE-GSC-12816-1] c 76 N86-20150  
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[NASA-CASE-LEW-14520-1] c 33 N90-22724  
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[NASA-CASE-NPO-17203-1-CU] c 34 N90-23700  
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[NASA-CASE-LAR-14163-1] c 27 N91-13559  
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[NASA-CASE-GSC-13265-1] c 76 N91-14066  
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[NASA-CASE-NPO-17511-1-CU] c 71 N91-14807  
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[NASA-CASE-NPO-17809-1-CU] c 33 N91-27478  
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- FABRICS**  
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[NASA-CASE-LAR-12147-1] c 31 N79-11246  
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[NASA-CASE-LEW-12933-1] c 27 N81-19296  
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[NASA-CASE-MSC-18382-1] c 27 N82-16238  
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[NASA-CASE-ARC-11310-1] c 27 N82-24339  
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[NASA-CASE-MSC-18382-2] c 27 N84-14324  
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[NASA-CASE-LAR-12894-1] c 27 N85-20125  
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[NASA-CASE-MSC-21082-1] c 27 N87-29672  
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[NASA-CASE-MFS-29241-1] c 24 N90-23480  
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[NASA-CASE-MSC-21360-1] c 18 N91-14374  
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- FABRY-PEROT INTERFEROMETERS**  
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- FACSIMILE COMMUNICATION**  
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[NASA-CASE-GSC-10185-1] c 07 N72-12081  
Spectrometer integrated with a facsimile camera  
[NASA-CASE-LAR-11207-1] c 35 N75-19613
- FACTORIAL DESIGN**  
Space suit pressure stabilizer Patent  
[NASA-CASE-XLA-05332] c 05 N71-11194  
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- FAIL-SAFE SYSTEMS**  
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[NASA-CASE-NPO-11078] c 09 N72-25262  
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[NASA-CASE-MSC-18498-1] c 60 N82-29013
- FAILURE**  
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- FAILURE ANALYSIS**  
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[NASA-CASE-LAR-12027-1] c 39 N79-22537  
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[NASA-CASE-NPO-15696-1] c 33 N85-34333  
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[NASA-CASE-MSC-21463-1] c 37 N91-23490
- FAILURE MODES**  
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[NASA-CASE-LEW-10856-1] c 15 N72-22490  
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[NASA-CASE-NPO-13160-1] c 35 N74-18090  
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- FAIRINGS**  
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[NASA-CASE-GSC-10590-1] c 31 N73-14853  
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[NASA-CASE-FRC-11058-1] c 85 N82-33288
- FALLING SPHERES**  
Gravimeter Patent  
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- FAR FIELDS**  
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- FAR INFRARED RADIATION**  
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- FAR ULTRAVIOLET RADIATION**  
Transient heat transfer gauge Patent  
[NASA-CASE-XNP-09802] c 33 N71-15641
- FARADAY EFFECT**  
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- FAST FOURIER TRANSFORMATIONS**  
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[NASA-CASE-XMF-00456] c 14 N70-34705  
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[NASA-CASE-LAR-14062-1] c 37 N90-27114  
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- FATIGUE (MATERIALS)**  
Strain coupled servo control system Patent  
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- FATIGUE LIFE**  
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- FATIGUE TESTING MACHINES**  
Horizontal cryostat for fatigue testing Patent  
[NASA-CASE-XMF-10988] c 14 N71-24234  
Light shield and infrared reflector for fatigue testing Patent  
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Fatigue testing device Patent  
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[NASA-CASE-LEW-14124-1] c 35 N90-23712  
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Oil and fat absorbing polymers  
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[NASA-CASE-MSC-21025-1] c 31 N87-25495  
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[NASA-CASE-XAC-10607] c 10 N71-23669  
Parametric amplifiers with idler circuit feedback  
[NASA-CASE-LAR-10253-1] c 09 N72-25258  
Pseudonoise sequence generators with three tap linear feedback shift registers  
[NASA-CASE-NPO-11406] c 08 N73-12175  
Logarithmic circuit with wide dynamic range  
[NASA-CASE-GSC-12145-1] c 33 N78-32339  
Automatic level control circuit  
[NASA-CASE-KSC-11170-1] c 33 N83-36356
- FEEDBACK CONTROL**  
Nonlinear analog-to-digital converter Patent  
[NASA-CASE-XAC-04031] c 08 N71-18594  
Pulse-type magnetic core memory element circuit with blocking oscillator feedback Patent  
[NASA-CASE-XGS-03303] c 08 N71-18595  
BCD to decimal decoder Patent  
[NASA-CASE-XKS-06167] c 08 N71-24890  
A dc motor speed control system Patent  
[NASA-CASE-MFS-14610] c 09 N71-28886  
Sampled data controller Patent  
[NASA-CASE-GSC-10554-1] c 08 N71-29033  
A dc servomotor including an ac motor Patent  
[NASA-CASE-NPO-10700] c 07 N71-33613  
Suppression of flutter  
[NASA-CASE-LAR-10682-1] c 02 N73-26004  
Regulated dc-to-dc converter for voltage step-up or step-down with input-output isolation  
[NASA-CASE-HQN-10792-1] c 33 N74-11049  
Diffused waveguiding capillary tube with distributed feedback for a gas laser  
[NASA-CASE-NPO-13544-1] c 36 N76-18428  
The dc-to-dc converters employing staggered-phase power switches with two-loop control  
[NASA-CASE-NPO-13512-1] c 33 N77-10428  
System and method for tracking a signal source --- employing feedback control  
[NASA-CASE-HQN-10880-1] c 17 N78-17140  
Closed loop spray cooling apparatus --- for particle accelerator targets  
[NASA-CASE-LEW-11981-1] c 31 N78-17237  
Wide power range microwave feedback controller  
[NASA-CASE-GSC-12146-1] c 33 N78-32340  
Active notch filter network with variable notch depth, width and frequency  
[NASA-CASE-FRC-11055-1] c 33 N80-29583  
Variable speed drive  
[NASA-CASE-GSC-12643-1] c 37 N83-26078  
Tuned analog network  
[NASA-CASE-GSC-12650-1] c 33 N84-14421  
Three phase power factor controller  
[NASA-CASE-MFS-25535-2] c 33 N84-22885  
Three-phase power factor controller with induced EMF sensing  
[NASA-CASE-MFS-25852-1] c 33 N84-33661  
Closed loop electrostatic levitation system  
[NASA-CASE-NPO-15553-1] c 33 N85-29142  
Method and apparatus for transfer function simulator for testing complex systems  
[NASA-CASE-NPO-15696-1] c 33 N85-34333  
Closed loop fiber optic rotation sensor  
[NASA-CASE-NPO-16558-1-CU] c 74 N87-23259  
Balanced bridge feedback control system  
[NASA-CASE-NPO-17430-1-CU] c 33 N90-21951  
Closed-loop autonomous docking system  
[NASA-CASE-MFS-28421-1] c 18 N90-26861  
Heat exchanger with oscillating flow  
[NASA-CASE-LAR-14033-1] c 34 N90-27072  
Thermal power transfer system using applied potential difference to sustain operating pressure difference  
[NASA-CASE-NPO-18034-1-CU] c 44 N91-13796  
Spiral vane bio-reactor  
[NASA-CASE-MSC-21361-1] c 51 N91-21701  
Permanent magnet flux-biased magnetic actuator with flux feedback  
[NASA-CASE-LAR-13785-1] c 70 N91-21824  
Improved superconducting bearings  
[NASA-CASE-GSC-13346-1] c 37 N91-28578  
Feedback controlled optics with wavefront compensation  
[NASA-CASE-NPO-18194-1-CU] c 74 N91-32924

**FEEDBACK FREQUENCY MODULATION**

Means for communicating through a layer of ionized gases Patent  
 [NASA-CASE-XLA-01127] c 07 N70-41372  
 Data-aided carrier tracking loops  
 [NASA-CASE-NPO-11282] c 10 N73-16205  
 Linear phase demodulator including a phase locked loop with auxiliary feedback loop  
 [NASA-CASE-GSC-12018-1] c 33 N77-14334

**FEEDERS**

Automatic real-time pair-feeding system for animals  
 [NASA-CASE-ARC-10302-1] c 51 N74-15778  
 Static feed water electrolysis subsystem development  
 [NASA-CASE-MSC-21577-1-SB] c 25 N91-23271  
 Plasma gun with coaxial powder feed and adjustable cathode  
 [NASA-CASE-LEW-14901-1] c 75 N91-25875  
 Method and apparatus for waste collection and storage  
 [NASA-CASE-MSC-21025-3] c 54 N91-26747

**FEEDFORWARD CONTROL**

Analog hardware for learning neural networks  
 [NASA-CASE-NPO-17664-1-CU] c 62 N91-32852

**FEET (ANATOMY)**

Drop foot corrective device  
 [NASA-CASE-LAR-12259-2] c 54 N86-22112

**FELTS**

Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles  
 [NASA-CASE-MSC-12619-2] c 27 N79-12221

**FEMALES**

Liquid cooled brassiere and method of diagnosing malignant tumors therewith  
 [NASA-CASE-ARC-11007-1] c 52 N77-14736  
 Urine collection apparatus --- feminine hygiene  
 [NASA-CASE-MSC-18381-1] c 52 N81-28740

**FERMENTATION**

Production of butanol by fermentation in the presence of cocultures of clostridium  
 [NASA-CASE-NPO-16203-1] c 23 N85-35227

**FERRITES**

Magnetic recording head and method of making same Patent  
 [NASA-CASE-GSC-10097-1] c 08 N71-27210  
 Method for making conductors for ferrite memory arrays --- from pre-formed metal conductors  
 [NASA-CASE-LAR-10994-1] c 24 N75-13032  
 Device for measuring the ferrite content in an austenitic stainless-steel weld  
 [NASA-CASE-MFS-22907-1] c 26 N76-18257

**FERROFLUIDS**

Linear motion valve  
 [NASA-CASE-MSC-20148-1] c 37 N85-29284

**FERROMAGNETIC FILMS**

High speed magneto-resistive random access memory  
 [NASA-CASE-NPO-17954-1-CU] c 60 N90-26519

**FERROMAGNETIC MATERIALS**

Magnetic heat pumping  
 [NASA-CASE-LEW-12508-1] c 34 N78-17335  
 Method and apparatus for characterizing residual stress in ferromagnetic materials  
 [NASA-CASE-LAR-14239-1] c 26 N91-13527

**FERROMAGNETISM**

High temperature ferromagnetic cobalt-base alloy Patent  
 [NASA-CASE-XLE-03629] c 17 N71-23248

**FETUSES**

Passive fetal monitoring sensor  
 [NASA-CASE-LAR-14088-1] c 35 N91-13686

**FIBER COMPOSITES**

Fibrous refractory composite insulation --- shielding reusable spacecraft  
 [NASA-CASE-ARC-11169-1] c 24 N79-24062  
 Composition and method for making polyimide resin-reinforced fabric  
 [NASA-CASE-LEW-12933-1] c 27 N81-19296  
 Fuselage structure using advanced technology fiber reinforced composites  
 [NASA-CASE-LAR-11688-1] c 24 N82-26384  
 Low temperature cross linking polyimides  
 [NASA-CASE-LEW-12876-2] c 27 N83-29392  
 Mixed polyvalent-monovalent metal coating for carbon-graphite fibers  
 [NASA-CASE-NPO-14987-1] c 24 N83-33950  
 Phosphorus-containing imide resins  
 [NASA-CASE-ARC-11368-3] c 27 N84-22745  
 Method and apparatus for gripping uniaxial fibrous composite materials  
 [NASA-CASE-LEW-13758-1] c 24 N84-27829  
 Curved cap corrugated sheet  
 [NASA-CASE-LAR-12884-1] c 18 N84-33450  
 Arc spray fabrication of metal matrix composite monotape  
 [NASA-CASE-LEW-13828-1] c 24 N85-30027

Toughening reinforced epoxy composites with brominated polymeric additives  
 [NASA-CASE-ARC-11427-2] c 27 N86-27451  
 Light weight fire resistant graphite composites  
 [US-PATENT-4,598,007] c 24 N86-28131  
 Method of preparing fiber reinforced ceramic material  
 [NASA-CASE-LEW-14392-1] c 27 N87-28656  
 Pultrusion die assembly  
 [NASA-CASE-LAR-13719-1] c 37 N89-12867  
 Light weight polymer matrix composite material  
 [NASA-CASE-LEW-14734-1] c 24 N89-23623  
 Fiber reinforced ceramic material  
 [NASA-CASE-LEW-14392-2] c 27 N89-29538  
 Method of controlling a resin curing process --- for fiber reinforced composites  
 [NASA-CASE-MSC-21169-1] c 27 N89-29539  
 Seamless metal-clad fiber-reinforced organic matrix composite structures and process for their manufacture  
 [NASA-CASE-LAR-13562-1] c 24 N90-25196  
 Process for the manufacture of seamless metal-clad fiber-reinforced organic matrix composite structures  
 [NASA-CASE-LAR-13562-2] c 24 N91-25199

**FIBER OPTICS**

Fiber optic vibration transducer and analyzer Patent  
 [NASA-CASE-XMF-02433] c 14 N71-10616  
 Fiber distributed feedback laser  
 [NASA-CASE-NPO-13531-1] c 36 N76-24553  
 Fiber optic multiplex optical transmission system  
 [NASA-CASE-KSC-11047-1] c 74 N78-14889  
 Low intensity X-ray and gamma-ray imaging device --- fiber optics  
 [NASA-CASE-GSC-12263-1] c 74 N79-20857  
 Precise RF timing signal distribution to remote stations --- fiber optics  
 [NASA-CASE-NPO-14749-1] c 32 N81-14186  
 Interleaving device  
 [NASA-CASE-GSC-12111-2] c 33 N81-29342  
 Optical gyroscope system  
 [NASA-CASE-NPO-14258-1] c 35 N81-33448  
 Fiber optic transmission line stabilization apparatus and method  
 [NASA-CASE-NPO-15036-1] c 74 N82-19029  
 Optical crystal temperature gauge with fiber optic connections  
 [NASA-CASE-MSC-18627-1] c 74 N82-30071  
 Low intensity X-ray and gamma-ray spectrometer  
 [NASA-CASE-GSC-12587-1] c 35 N82-32659  
 Fiber optic crossbar switch for automatically patching optical signals  
 [NASA-CASE-KSC-11104-1] c 74 N83-29032  
 Optical fiber tactile sensor  
 [NASA-CASE-NPO-15375-1] c 74 N84-11921  
 Laser pulse detection method and apparatus  
 [NASA-CASE-NPO-16030-1] c 36 N84-25037  
 Optical fiber coupling method and apparatus  
 [NASA-CASE-NPO-15464-1] c 74 N85-29749  
 Closed loop fiber optic rotation sensor  
 [NASA-CASE-NPO-16558-1-CU] c 74 N87-23259  
 Low-loss, high-isolation, fiber-optic isolator  
 [NASA-CASE-NPO-17207-1-CU] c 74 N88-25304  
 Optical pressure sealing coupling apparatus  
 [NASA-CASE-MFS-29348-1] c 74 N89-25689  
 Optical shutter switching matrix  
 [NASA-CASE-KSC-11392-1] c 74 N90-22383  
 Method and apparatus for determining optical absorption and emission characteristics of a crystal or non-crystalline fiber  
 [NASA-CASE-LAR-13963-1] c 76 N90-24150  
 Apparatus for precision focusing and positioning of a beam waist on a target  
 [NASA-CASE-ARC-11916-1-SB] c 74 N91-14002  
 Laser velocimeter for near-surface measurements  
 [NASA-CASE-ARC-11917-1] c 35 N91-15520  
 Fiber optic microphone  
 [NASA-CASE-LAR-14402-1-CU] c 74 N91-15874  
 Fiber optic sensing system  
 [NASA-CASE-LEW-14795-1] c 74 N91-21871  
 Fiber optic frequency transfer link  
 [NASA-CASE-NPO-17703-1-CU] c 74 N91-27957

**FIBER RELEASE**

Curing agent for polyepoxides and epoxy resins and composites cured therewith --- preventing carbon fiber release  
 [NASA-CASE-LEW-13226-1] c 27 N81-17260  
 Method and device for detection of a substance --- determining carbon fiber release in fire situations  
 [NASA-CASE-NPO-14940-1] c 33 N83-31954

**FIBER STRENGTH**

High resistance and raised modulus carbon fibers  
 [NASA-TM-76884] c 24 N85-25436

**FIBERS**

Method for fiberizing ceramic materials Patent  
 [NASA-CASE-XNP-00597] c 18 N71-23088  
 Method and apparatus for fluffing, separating, and cleaning fibers  
 [NASA-CASE-LAR-11224-1] c 37 N76-18456

Composite lamination method  
 [NASA-CASE-LAR-12019-1] c 24 N78-17150  
 Dual membrane hollow fiber fuel cell and method of operating same  
 [NASA-CASE-NPO-13732-1] c 44 N79-10513  
 Ion-exchange hollow fibers  
 [NASA-CASE-NPO-13309-1] c 25 N81-19244  
 A method and technique for installing light-weight fragile, high-temperature fiber insulation  
 [NASA-CASE-MSC-18934-3] c 24 N82-26387  
 Phosphorus-containing imide resins  
 [NASA-CASE-ARC-11368-3] c 27 N84-22745  
 Hollow fiber cinnostat: Technical abstract  
 [NASA-CASE-MFS-28370-1] c 35 N89-28793  
 Graphite fluoride fiber polymer composite material  
 [NASA-CASE-LEW-14472-1] c 24 N91-15320

**FIELD EFFECT TRANSISTORS**

Frequency to analog converter Patent  
 [NASA-CASE-XNP-07040] c 08 N71-12500  
 Voltage to frequency converter Patent  
 [NASA-CASE-GSC-10022-1] c 10 N71-25882  
 Broadband video process with very high input impedance  
 [NASA-CASE-NPO-10199] c 09 N72-17156  
 Data multiplexer using tree switching configuration  
 [NASA-CASE-NPO-11333] c 08 N72-22162  
 Integrated circuit including field effect transistor and cermet resistor  
 [NASA-CASE-GSC-10835-1] c 09 N72-33205  
 Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential of field effect device  
 [NASA-CASE-GSC-11425-1] c 76 N74-20329  
 Stored charge transistor  
 [NASA-CASE-NPO-11156-2] c 33 N75-31331  
 Field effect transistor and method of construction thereof  
 [NASA-CASE-MFS-23312-1] c 33 N78-27326  
 Method of making V-MOS field effect transistors utilizing a two-step anisotropic etching and ion implantation  
 [NASA-CASE-GSC-12515-1] c 33 N81-26360  
 CCD correlated quadruple sampling processor  
 [NASA-CASE-NPO-14426-1] c 33 N81-27396  
 Electronic system for high power load control --- solar arrays  
 [NASA-CASE-NPO-15358-1] c 33 N83-27126  
 JFET reflection oscillator  
 [NASA-CASE-GSC-12555-1] c 33 N86-19515  
 Hybrid power semiconductor  
 [NASA-CASE-LEW-13922-1] c 33 N86-20672  
 FET charge sensor and voltage probe  
 [NASA-CASE-NPO-16045-1] c 76 N87-13313  
 Microwave field effect transistor  
 [NASA-CASE-GSC-12442-2] c 33 N90-20282

**FIELD EMISSION**

Method and apparatus for limiting field emission current  
 [NASA-CASE-ERC-10015-2] c 10 N72-27246  
 Apparatus for mounting a field emission cathode  
 [NASA-CASE-LEW-14108-1] c 33 N87-28832

**FIELD OF VIEW**

Scanner --- photography from a spin stabilized synchronous satellite  
 [NASA-CASE-GSC-12032-2] c 43 N82-13465  
 Focal plane array optical proximity sensor  
 [NASA-CASE-NPO-15155-1] c 74 N85-22139  
 EMU helmet mounted display  
 [NASA-CASE-MSC-21460-1] c 54 N91-13879  
 Variable magnification glancing incidence x ray telescope  
 [NASA-CASE-MFS-28013-2] c 89 N91-14096

**FILAMENT WINDING**

Tool attachment for spreading loose elements away from work Patent  
 [NASA-CASE-XMF-02107] c 15 N71-10809  
 Method of making a filament-wound container Patent  
 [NASA-CASE-XLE-03803-2] c 15 N71-17651  
 Method of fabricating a twisted composite superconductor  
 [NASA-CASE-LEW-11015] c 26 N73-32571  
 Method of making reinforced composite structure  
 [NASA-CASE-LEW-12619-1] c 24 N77-19171

**FILAMENTS**

Radiant heater having formed filaments Patent  
 [NASA-CASE-XLE-00387] c 33 N70-34812  
 Twisted multifilament superconductor  
 [NASA-CASE-LEW-11726-1] c 26 N73-26752

**FILLERS**

Method for making a heat insulating and ablative structure  
 [NASA-CASE-XMS-01108] c 15 N69-24322  
 Intumescent-ablator coatings using endothermic fillers  
 [NASA-CASE-ARC-11043-1] c 24 N78-27180  
 Polymeric compositions and their method of manufacture --- forming filled polymer systems using cryogenics  
 [NASA-CASE-NPO-10424-1] c 27 N81-24258

- Polyvinyl alcohol battery separator containing inert filler  
--- alkaline batteries  
[NASA-CASE-LEW-13556-1] c 44 N81-27615  
Adjustable high emittance gap filler --- reentry shielding for space shuttle vehicles  
[NASA-CASE-ARC-11310-1] c 27 N82-24339  
Multi-element spherical shell generation  
[NASA-CASE-NPO-17203-1-CU] c 34 N90-23700  
Thermally activated retainer means  
[NASA-CASE-MSC-21793-1] c 16 N91-28186
- FILLING**  
Rapidly quantifying the relative distention of a human bladder  
[NASA-CASE-LAR-13901-1-NP] c 52 N90-21519
- FILM COOLING**  
Multilist film cooled pyrolytic graphite rocket nozzle  
Patent  
[NASA-CASE-XNP-04389] c 28 N71-20942  
Curved film cooling admission tube  
[NASA-CASE-LEW-13174-1] c 34 N83-27144  
Covering solid, film cooled surfaces with a duplex thermal barrier coating  
[NASA-CASE-LEW-13450-1] c 31 N83-35177  
Vortex generating flow passage design for increased film cooling effectiveness  
[NASA-CASE-LEW-14039-1] c 34 N85-33433
- FILM THICKNESS**  
Chemical vapor deposition reactor --- providing uniform film thickness  
[NASA-CASE-NPO-13650-1] c 25 N79-28253  
Dual-beam skin friction interferometer  
[NASA-CASE-ARC-11354-1] c 74 N83-21949  
Degassing and mixing apparatus for liquids --- potable water for spacecraft  
[NASA-CASE-MSC-18936-1] c 35 N83-29652  
Epitaxial thinning process  
[NASA-CASE-NPO-15786-1] c 76 N84-35112
- FILMS**  
Apparatus for obtaining isotropic irradiation of a specimen  
[NASA-CASE-MFS-20095] c 24 N72-11595  
Method and apparatus for measurement of trap density and energy distribution in dielectric films  
[NASA-CASE-NPO-13443-1] c 76 N76-20994  
X ray sensitive area detection device  
[NASA-CASE-MFS-28232-1] c 74 N91-14835
- FILTERS**  
Filter system for control of outgas contamination in vacuum Patent  
[NASA-CASE-MFS-14711] c 15 N71-26185  
Method for removing oxygen impurities from cesium Patent  
[NASA-CASE-XNP-04262-2] c 17 N71-26773  
Centrifugal lyophobic separator  
[NASA-CASE-LAR-10194-1] c 34 N74-30608  
Sample holder support for microscopes  
[NASA-CASE-MFS-28420-1] c 37 N91-21545
- FILTRATION**  
Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c 28 N81-15119  
Method for treating wastewater using microorganisms and vascular aquatic plants  
[NASA-CASE-NSTL-10] c 45 N84-12654  
Acoustic agglomeration methods and apparatus  
[NASA-CASE-NPO-15466-1] c 71 N85-22104  
Infusion extractor  
[NASA-CASE-MSC-20761-1] c 37 N87-15465  
Sample holder support for microscopes  
[NASA-CASE-MFS-28420-1] c 37 N91-21545
- FINGERS**  
Preloaded latching device  
[NASA-CASE-MSC-21730-1] c 37 N91-23493  
Rotationally actuated prosthetic helping hand  
[NASA-CASE-MFS-28426-1] c 54 N91-32795
- FINS**  
Thrust and direction control apparatus Patent  
[NASA-CASE-XLE-03583] c 31 N81-17629  
Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft  
[NASA-CASE-LAR-10753-1] c 08 N74-30421
- FIRE EXTINGUISHERS**  
Fire extinguishing apparatus having a slidable mass for a penetrator nozzle --- for penetrating aircraft and shuttle orbiter skin  
[NASA-CASE-KSC-11064-1] c 31 N81-14137  
Synthesis of dawsonites --- for use in fire extinguishing operations  
[NASA-CASE-ARC-11326-1] c 25 N83-33977  
Fire extinguishant materials  
[NASA-CASE-ARC-11252-1] c 25 N83-36118
- FIRE PREVENTION**  
Hydrogen fire blink detector  
[NASA-CASE-MFS-15063] c 14 N87-25412  
Method and apparatus for checking fire detectors  
[NASA-CASE-GSC-11600-1] c 35 N74-21019
- Fire resistant polyamide based on 1-(diorganoxyphosphonyl)methyl-2,4- and -2,6-diamino benzene  
[NASA-CASE-ARC-11512-2] c 27 N86-32568
- FIREPROOFING**  
Fire resistant coating composition Patent  
[NASA-CASE-GSC-10072] c 18 N71-14014  
Intumescent paint containing nitrile rubber  
[NASA-CASE-ARC-10196-1] c 18 N73-13562  
Intumescent composition, foamed product prepared therewith, and process for making same  
[NASA-CASE-ARC-10304-1] c 18 N73-26572  
Flexible fire retardant polyisocyanate modified neoprene foam --- for thermal protective devices  
[NASA-CASE-ARC-10180-1] c 27 N74-12814  
Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[NASA-CASE-MSC-14331-1] c 27 N76-24405  
Flame retardant spandex type polyurethanes  
[NASA-CASE-MSC-14331-2] c 27 N78-17213  
Fire protection covering for small diameter missiles  
[NASA-CASE-ARC-11104-1] c 15 N79-26100
- FIRES**  
Combustion products generating and metering device  
[NASA-CASE-GSC-11095-1] c 14 N72-10375  
Hydrogen fire detection system with logic circuit to analyze the spectrum of temporal variations of the optical spectrum  
[NASA-CASE-MFS-13130] c 10 N72-17173
- FIRING (IGNITING)**  
Separation nut Patent  
[NASA-CASE-XGS-01971] c 15 N71-15922
- FITTING**  
Cantilever clamp fitting  
[NASA-CASE-MFS-28328-1] c 37 N91-13731
- FITTINGS**  
Quick release connector Patent  
[NASA-CASE-XLA-01141] c 15 N71-13789  
Flared tube strainer  
[NASA-CASE-XLA-05056] c 15 N72-11389  
Apparatus for adapting an end effector device remotely controlled manipulator arm  
[NASA-CASE-MFS-25949-1] c 37 N86-19603  
Self indexing latch system  
[NASA-CASE-MFS-25956-1] c 37 N87-21333  
Expandable pallet for space station interface attachments  
[NASA-CASE-MSC-21117-1] c 18 N88-28958  
Dual diaphragm tank with telltale drain  
[NASA-CASE-MSC-21703-1] c 31 N91-25305
- FIXED WINGS**  
Supersonic aircraft Patent  
[NASA-CASE-XLA-04451] c 02 N71-12243
- FIXTURES**  
Tool for use in lifting pin supported objects  
[NASA-CASE-NPO-13157-1] c 37 N74-32918  
Apparatus for positioning modular components on a vertical or overhead surface  
[NASA-CASE-LAR-11465-1] c 37 N76-21554  
Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c 26 N80-28492  
Fixture for environmental exposure of structural materials under compression load  
[NASA-CASE-LAR-12602-1] c 39 N83-32081
- FLAME PROBES**  
Flame detector operable in presence of proton radiation  
[NASA-CASE-MFS-21577-1] c 19 N74-29410
- FLAME RETARDANTS**  
Flame retardant spandex type polyurethanes  
[NASA-CASE-MSC-14331-2] c 27 N78-17213  
Process for spinning flame retardant elastomeric compositions --- fabricating synthetic fibers for high oxygen environments  
[NASA-CASE-MSC-14331-3] c 27 N78-32262  
Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams  
[NASA-CASE-ARC-11107-1] c 25 N80-16116  
Crystalline polyimides --- reinforcing fibers for high temperature composites and adhesives as well as flame retardation  
[NASA-CASE-LAR-12099-1] c 27 N80-16158  
Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-3] c 27 N80-24438  
Structural wood panels with improved fire resistance  
[NASA-CASE-ARC-11174-1] c 24 N81-13999  
Heat sealable, flame and abrasion resistant coated fabric --- clothing and containers for space exploration  
[NASA-CASE-MSC-18382-1] c 27 N82-16238  
Elastomer coated filler and composites thereof comprising at least 60% by weight of a hydrated filler and an elastomer containing an acid substituent  
[NASA-CASE-NPO-14857-1] c 27 N83-19900  
Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c 27 N83-31854
- Heat sealable, flame and abrasion resistant coated fabric  
[NASA-CASE-MSC-18382-2] c 27 N84-14324  
Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-3] c 27 N84-22745  
Fire blocking systems for aircraft seat cushions  
[NASA-CASE-ARC-11423-1] c 03 N84-33394  
Segmented tubular cushion springs and spring assembly  
[NASA-CASE-ARC-11349-1] c 37 N86-20797  
Polymer of phosphonylmethyl-2,4- and -2,6-diamino benzene and polyfunctional monomer  
[NASA-CASE-ARC-11506-2] c 23 N86-32525  
Fire and heat resistant laminating resins based on maleimido and citraconimido substituted 1-(diorgano oxyphosphonyl) methyl -2,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11533-3] c 27 N87-24564  
The 1-(diorganooxy phosphonyl) methyl-2,4- and -2,6-diamino benzenes and their derivatives  
[NASA-CASE-ARC-11425-2] c 23 N87-28605  
Fire and heat resistant laminating resin based on maleimido and citraconimido substituted 1-(diorganooxyphosphonyl-methyl)-2,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11533-2] c 27 N89-16042
- FLAME SPRAYING**  
Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent  
[NASA-CASE-XLA-00302] c 15 N71-16077  
Modified polyurethane foams for fuel-fire Patent  
[NASA-CASE-ARC-10098-1] c 06 N71-24739  
Method of making pressure tight seal for super alloy  
[NASA-CASE-LAR-10170-1] c 37 N74-11301  
Thermal barrier coating system  
[NASA-CASE-LEW-14057-1] c 24 N85-35233
- FLAME TEMPERATURE**  
Direct heating surface combustor  
[NASA-CASE-LEW-11877-1] c 34 N78-27357
- FLAMES**  
Temperature reducing coating for metals subject to flame exposure Patent  
[NASA-CASE-XLE-00035] c 33 N71-29151  
Modulated hydrogen ion flame detector  
[NASA-CASE-ARC-10322-1] c 35 N76-18403
- FLAMMABILITY**  
Flammability test chamber Patent  
[NASA-CASE-KSC-10126] c 11 N71-24985  
Burn rate testing apparatus  
[NASA-CASE-XMS-09690] c 33 N72-25913  
Compound oxidized styrylphosphine --- flame resistant vinyl polymers  
[NASA-CASE-MSC-14903-2] c 27 N80-10358  
Violet process for producing flame resistant polyamides and products produced thereby --- protective clothing for high oxygen environments  
[NASA-CASE-MSC-16074-1] c 27 N80-26446  
Light weight fire resistant graphite composites  
[US-PATENT-4,598,007] c 24 N86-28131  
Fire and heat resistant laminating resins based on maleimido substituted aromatic cyclotriphosphazene polymer  
[NASA-CASE-ARC-11428-2] c 27 N87-16909  
Ignitability test method and apparatus  
[NASA-CASE-LAR-13996-1-SB] c 25 N90-15161
- FLANGES**  
Cassegrainian antenna subreflector flange for suppressing ground noise Patent  
[NASA-CASE-XNP-00683] c 09 N70-35425  
Anti-glare improvement for optical imaging systems Patent  
[NASA-CASE-NPO-10337] c 14 N71-15604  
Flanged major modular assembly jig  
[NASA-CASE-MSC-19372-1] c 39 N76-31562
- FLAPS (CONTROL SURFACES)**  
Jet aircraft configuration Patent  
[NASA-CASE-XLA-00087] c 02 N70-33332  
Assembly for recovering a capsule Patent  
[NASA-CASE-XMF-00641] c 31 N70-36410  
Direct lift control system Patent  
[NASA-CASE-LAR-10249-1] c 02 N71-26110  
Reversed cowl flap inlet thrust augmentor --- with adjustable airfoil  
[NASA-CASE-ARC-10754-1] c 07 N75-24736
- FLARED BODIES**  
Flared tube strainer  
[NASA-CASE-XLA-05056] c 15 N72-11389
- FLASH LAMPS**  
Active lamp pulse driver circuit --- optical pumping of laser media  
[NASA-CASE-GSC-12566-1] c 33 N83-34189
- FLAT CONDUCTORS**  
Method of making a molded connector Patent  
[NASA-CASE-XMF-03498] c 15 N71-15986  
Method of making shielded flat cable Patent  
[NASA-CASE-MFS-13687] c 09 N71-28691

- Shielded flat cable  
[NASA-CASE-MFS-13687-2] c 09 N72-22198  
Electrical connector  
[NASA-CASE-MFS-20757] c 09 N72-28225  
Method and apparatus for preparing multiconductor cable with flat conductors  
[NASA-CASE-MFS-10946-1] c 31 N79-21226  
Edge coating of flat wires  
[NASA-CASE-XMF-05757-1] c 31 N79-21227
- FLAT PLATES**  
Reduced gravity liquid configuration simulator  
[NASA-CASE-XLE-02624] c 12 N69-39988  
Apparatus for making diamonds  
[NASA-CASE-MFS-20698] c 15 N72-20446  
Heat transfer device  
[NASA-CASE-MFS-22938-1] c 34 N76-18374  
Flat-plate heat pipe  
[NASA-CASE-GSC-11998-1] c 34 N77-32413  
Solar engine  
[NASA-CASE-LAR-12148-1] c 44 N82-24640  
Two-dimensional scanner apparatus --- flaw detector in small flat plates  
[NASA-CASE-MFS-25687-1] c 35 N84-22928
- FLEXIBILITY**  
Weatherproof helix antenna Patent  
[NASA-CASE-XKS-08485] c 07 N71-19493  
Spherical shield Patent  
[NASA-CASE-XNP-01855] c 15 N71-28937  
Flexible joint for pressurizable garment  
[NASA-CASE-MSC-11072] c 54 N74-32546  
Nozzle extraction process and handlemeter for measuring handle  
[NASA-CASE-LAR-12147-1] c 31 N79-11246  
Safety flywheel --- using flexible materials energy storage  
[NASA-CASE-HQN-10888-1] c 44 N79-14527  
Sun shield  
[NASA-CASE-MSC-20162-1] c 37 N87-17036  
Method of making a flexible diaphragm  
[NASA-CASE-MSC-20797-1] c 37 N87-23981  
Space module assembly apparatus with docking alignment flexibility and restraint  
[NASA-CASE-MSC-21211-1] c 18 N89-28553  
Copolyimide with a combination of flexibilizing groups  
[NASA-CASE-LAR-13821-1] c 27 N90-16950  
High temperature flexible seal  
[NASA-CASE-LEW-14695-1] c 37 N90-23751  
Flexible diaphragm-extreme temperature usage  
[NASA-CASE-MSC-20797-2] c 35 N91-21494
- FLEXIBLE BODIES**  
Flexible back-up bar Patent  
[NASA-CASE-XMF-00722] c 15 N70-40204  
Deflective rod switch with elastic support and sealing means Patent  
[NASA-CASE-XNP-09808] c 09 N71-12518  
Flexible composite membrane Patent  
[NASA-CASE-XNP-08837] c 18 N71-16210  
Self supporting space vehicle Patent  
[NASA-CASE-XLA-00117] c 31 N71-17680  
Extravehicular tunnel suit system Patent  
[NASA-CASE-MSC-12243-1] c 05 N71-24728  
Active vibration isolator for flexible bodies Patent  
[NASA-CASE-LAR-10106-1] c 15 N71-27169  
Fluid impervious barrier including liquid metal alloy and method of making same Patent  
[NASA-CASE-XNP-08881] c 17 N71-28747  
Low cycle fatigue testing machine  
[NASA-CASE-LAR-10270-1] c 32 N72-25877  
Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft  
[NASA-CASE-LAR-10753-1] c 08 N74-30421  
Internally supported flexible duct joint --- device for conducting fluids in high pressure systems  
[NASA-CASE-MFS-19193-1] c 37 N75-19686  
Strong thin membrane structure --- solar sails  
[NASA-CASE-NPO-14021-2] c 27 N80-16163  
Suspension mechanism and method  
[NASA-CASE-LAR-14142-1] c 37 N90-27116  
Synchronously deployable double fold beam and planar truss structure  
[NASA-CASE-LAR-13490-1] c 18 N91-27199  
High-temperature, flexible, thermal barrier seal  
[NASA-CASE-LEW-14672-1] c 37 N91-27560
- FLEXIBLE WINGS**  
Aeroflexible structures  
[NASA-CASE-XLA-06095] c 01 N69-39981  
Flexible wing deployment device Patent  
[NASA-CASE-XLA-01220] c 02 N70-41863  
Control for flexible parawing Patent  
[NASA-CASE-XLA-06958] c 02 N71-11038
- FLEXING**  
Two degree inverted flexure  
[NASA-CASE-ARC-10345-1] c 15 N73-12488  
Pressure suit joint analyzer  
[NASA-CASE-ARC-11314-1] c 54 N82-26987
- Unidirectional flexural pivot  
[NASA-CASE-GSC-12622-1] c 37 N84-12492
- FLIGHT**  
Traversing probe Patent  
[NASA-CASE-XFR-02007] c 12 N71-24692
- FLIGHT ALTITUDE**  
Altitude measuring system  
[NASA-CASE-ERC-10412-1] c 09 N73-12211  
Terminal guidance system --- for guiding aircraft into preselected altitude and/or heading at terminal point  
[NASA-CASE-FRC-10049-1] c 04 N74-13420  
Apparatus for measuring an aircraft's speed and height  
[NASA-CASE-LAR-12275-1] c 35 N79-18296  
System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-FRC-11005-1] c 06 N82-16075  
CAT altitude avoidance system  
[NASA-CASE-NPO-15351-1] c 06 N83-10040  
Sidelooking laser altimeter for a flight simulator  
[NASA-CASE-ARC-11312-1] c 36 N83-34304  
System for indicating fuel-efficient aircraft altitude  
[NASA-CASE-NPO-15351-2] c 06 N84-34443
- FLIGHT CLOTHING**  
Absorbent product and articles made therefrom  
[NASA-CASE-MSC-18223-2] c 54 N84-11758
- FLIGHT CONTROL**  
Aircraft instrument Patent  
[NASA-CASE-XLA-00487] c 14 N70-40157  
Two-axis controller Patent  
[NASA-CASE-XFR-04104] c 03 N70-42073  
Mechanically limited, electrically operated hydraulic valve system for aircraft controls Patent  
[NASA-CASE-XAC-00048] c 02 N71-29128  
Numerical computer peripheral interactive device with manual controls  
[NASA-CASE-NPO-11497] c 08 N73-25206  
Solid state controller three axes controller  
[NASA-CASE-MSC-12394-1] c 08 N74-10942  
Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c 05 N75-12930  
Deploy/release system --- model aircraft flight control  
[NASA-CASE-LAR-11575-1] c 02 N76-16014  
Apparatus for damping operator induced oscillations of a controlled system --- flight control  
[NASA-CASE-FRC-11041-1] c 33 N82-18493  
Aircraft body-axis rotation measurement system  
[NASA-CASE-FRC-11043-1] c 06 N83-33882  
Aircraft control position indicator  
[NASA-CASE-LAR-12984-1] c 06 N87-22678  
Miniaturization of flight deflection measurement system  
[NASA-CASE-LAR-13628-1] c 35 N90-23707  
Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13854-1-CU] c 04 N91-31120  
Rotatable non-circular forebody flow controller  
[NASA-CASE-LAR-14212-1-CU] c 05 N91-31140
- FLIGHT CREWS**  
Survival couch Patent  
[NASA-CASE-XLA-00118] c 05 N70-33285
- FLIGHT INSTRUMENTS**  
Heads up display  
[NASA-CASE-LAR-12630-1] c 06 N84-27733  
Aircraft control position indicator  
[NASA-CASE-LAR-12984-1] c 06 N87-22678
- FLIGHT PATHS**  
Improving the geometric fidelity of imaging systems employing sensor arrays  
[NASA-CASE-NPO-17970-1-CU] c 43 N90-26384
- FLIGHT RECORDERS**  
Event recorder Patent  
[NASA-CASE-XLA-01832] c 14 N71-21006
- FLIGHT SAFETY**  
Aerial capsule emergency separation device Patent  
[NASA-CASE-XLA-00115] c 03 N70-33343  
Apparatus for aiding a pilot in avoiding a midair collision between aircraft  
[NASA-CASE-LAR-10717-1] c 21 N73-30641
- FLIGHT SIMULATION**  
Lunar landing flight research vehicle Patent  
[NASA-CASE-XFR-00929] c 31 N70-34966  
Television simulation for aircraft and space flight Patent  
[NASA-CASE-XFR-03107] c 09 N71-19449  
Separation simulator Patent  
[NASA-CASE-XKS-04631] c 10 N71-23663  
Real-time simulation clock  
[NASA-CASE-LAR-14056-1] c 35 N90-23713
- FLIGHT SIMULATORS**  
Centrifuge mounted motion simulator Patent  
[NASA-CASE-XAC-00399] c 11 N70-34815  
Means for visually indicating flight paths of vehicles between the Earth, Venus, and Mercury Patent  
[NASA-CASE-XNP-00708] c 14 N70-35394
- Wind tunnel test section  
[NASA-CASE-MFS-20509] c 11 N72-17183  
Numerical computer peripheral interactive device with manual controls  
[NASA-CASE-NPO-11497] c 08 N73-25206  
Apparatus for applying simulator g-forces to an arm of an aircraft simulator pilot  
[NASA-CASE-LAR-10550-1] c 09 N74-30597  
Vehicle simulator binocular multiplanar visual display system  
[NASA-CASE-ARC-10808-1] c 09 N76-24280  
Full color hybrid display for aircraft simulators --- landing aids  
[NASA-CASE-ARC-10903-1] c 09 N78-18083  
Seat cushion to provide realistic acceleration cues to aircraft simulator pilot  
[NASA-CASE-LAR-12149-2] c 09 N79-31228  
Chromatically corrected virtual image visual display --- reducing eye strain in flight simulators  
[NASA-CASE-LAR-12251-1] c 74 N80-27185  
Helmet weight simulator  
[NASA-CASE-LAR-12320-1] c 54 N81-27806  
Biocentrifuge system capable of exchanging specimen cages while in operational mode  
[NASA-CASE-MFS-23825-1] c 51 N81-32829  
Environmental fog/rain visual display system for aircraft simulators  
[NASA-CASE-ARC-11158-1] c 09 N82-24212  
Sidelooking laser altimeter for a flight simulator  
[NASA-CASE-ARC-11312-1] c 36 N83-34304  
Inflight IFR procedures simulator  
[NASA-CASE-KSC-11218-1] c 09 N85-19990  
Simulator scene display evaluation device  
[NASA-CASE-ARC-11504-1] c 09 N86-32447
- FLIGHT TESTS**  
Air frame drag balance Patent  
[NASA-CASE-XLA-00113] c 14 N70-33386
- FLIGHT TRAINING**  
Inflight IFR procedures simulator  
[NASA-CASE-KSC-11218-1] c 09 N85-19990
- FLIGHT VEHICLES**  
Leading edge curvature based on convective heating Patent  
[NASA-CASE-XLA-01486] c 01 N71-23497  
Altitude sensing device  
[NASA-CASE-XMS-01994-1] c 14 N72-17326
- FLIP-FLOPS**  
AC logic flip-flop circuits Patent  
[NASA-CASE-XGS-00823] c 10 N71-15910  
Stepping motor control circuit Patent  
[NASA-CASE-GSC-10366-1] c 10 N71-18772  
Flipflop interrogator and bi-polar current driver Patent  
[NASA-CASE-XGS-03058] c 10 N71-19547
- FLOAT ZONES**  
Floating emitter solar cell  
[NASA-CASE-NPO-16467-1-CU] c 33 N87-23879  
Liquid encapsulated float zone process and apparatus  
[NASA-CASE-MFS-28144-1] c 76 N86-24545
- FLOATING**  
Floating baffle to improve efficiency of liquid transfer from tanks  
[NASA-CASE-KSC-10639] c 15 N73-26472  
Modification of one man life raft  
[NASA-CASE-LAR-10241-1] c 54 N74-14845  
Floating nut retention system  
[NASA-CASE-MSC-16938-1] c 37 N80-23653
- FLOATS**  
Magnetically centered liquid column float Patent  
[NASA-CASE-XAC-00030] c 14 N70-34820
- FLOORS**  
Elevated waterproof access floor system and method of making the same  
[NASA-CASE-ARC-11363-1] c 31 N87-16918
- FLOTATION**  
Rescue litter flotation assembly Patent  
[NASA-CASE-XMS-04170] c 05 N71-22748
- FLOW CHAMBERS**  
Multi-chamber controllable heat pipe  
[NASA-CASE-ARC-10199] c 34 N78-17337  
Jet pump-drive system for heat removal  
[NASA-CASE-NPO-16494-1-CU] c 34 N85-29182  
Moving wall, continuous flow electrophoresis apparatus  
[NASA-CASE-MFS-28142-1] c 25 N88-23845
- FLOW CHARACTERISTICS**  
Vaporizing particle velocimeter  
[NASA-CASE-LAR-14685-1] c 02 N91-28135
- FLOW DIRECTION INDICATORS**  
Polarity sensitive circuit Patent  
[NASA-CASE-XNP-00952] c 10 N71-23271  
Flow angle sensor and read out system Patent  
[NASA-CASE-XLE-04503] c 14 N71-24864  
Miniature electrooptical air flow sensor  
[NASA-CASE-LAR-13065-1] c 35 N85-20295

**FLOW DISTORTION**

Moving wall, continuous flow electrophoresis apparatus  
[NASA-CASE-MFS-28142-1] c 25 N88-23845

**FLOW DISTRIBUTION**

Full flow with shut off and selective drainage control valve Patent application  
[NASA-CASE-ERC-10208] c 15 N70-10867

Method of obtaining permanent record of surface flow phenomena Patent  
[NASA-CASE-XLA-01353] c 14 N70-41366

Method of recording a gas flow pattern Patent  
[NASA-CASE-XMF-01779] c 12 N71-20815

Dual wavelength scanning Doppler velocimeter --- without perturbation of flow fields  
[NASA-CASE-ARC-10637-1] c 35 N75-16783

Controlled separation combustor --- airflow distribution in gas turbine engines  
[NASA-CASE-LEW-11593-1] c 20 N76-14190

Static continuous electrophoresis device  
[NASA-CASE-MFS-25306-1] c 25 N83-13187

Method and apparatus for rebalancing a REDOX flow cell system  
[NASA-CASE-LEW-14127-1] c 33 N86-20680

Self-compensating solenoid valve  
[NASA-CASE-ARC-11620-1] c 37 N87-25573

High effectiveness contour matching contact heat exchanger  
[NASA-CASE-MSC-20840-1] c 34 N88-29132

Low-noise nozzle valve  
[NASA-CASE-MFS-28383-1] c 34 N91-14563

Method and apparatus for detecting laminar flow separation and reattachment  
[NASA-CASE-LAR-13952-2-SB] c 34 N91-31596

**FLOW MEASUREMENT**

Flow test device  
[NASA-CASE-XMS-04917] c 14 N69-24257

Nuclear mass flowmeter  
[NASA-CASE-MFS-20485] c 14 N72-11365

Flow velocity and directional instrument  
[NASA-CASE-LAR-10855-1] c 14 N73-13415

Flow measuring apparatus  
[NASA-CASE-LEW-12078-1] c 35 N75-30503

Method for making a hot wire anemometer and product thereof  
[NASA-CASE-ARC-10900-1] c 35 N77-24454

Fluid velocity measuring device  
[NASA-CASE-LAR-11729-1] c 34 N79-12359

Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c 34 N81-26402

Aeroelastic instability stoppers for wind tunnel models  
[NASA-CASE-LAR-12720-1] c 44 N83-21504

Bio-medical flow sensor --- intravenous procedures  
[NASA-CASE-MSC-18761-1] c 52 N83-27577

Miniature electrooptical air flow sensor  
[NASA-CASE-LAR-13065-1] c 35 N85-20295

Auto covariance computer  
[NASA-CASE-LAR-12968-1] c 60 N86-21154

Fluid flow meter for measuring the rate of fluid flow in a conduit  
[NASA-CASE-MFS-28030-1] c 35 N86-25752

Spinning disk calibration method and apparatus for laser Doppler velocimeter  
[NASA-CASE-ARC-11510-1] c 35 N86-32697

Vibration-free Raman Doppler velocimeter  
[NASA-CASE-LAR-13268-1] c 35 N87-14669

Dual mode laser velocimeter  
[NASA-CASE-ARC-11634-1] c 36 N88-14350

Crossflow vorticity sensor  
[NASA-CASE-LAR-13436-1-CU] c 02 N88-23759

Method of forming a multiple layer dielectric and a hot film sensor therewith  
[NASA-CASE-LAR-13678-1] c 76 N90-24168

Three-dimensional laser velocimeter simultaneity detector  
[NASA-CASE-ARC-11876-1] c 36 N90-25340

Measurement of waves in flows across a surface  
[NASA-CASE-NPO-17479-1-CU] c 34 N91-13658

**FLOW REGULATORS**

Anti-backlash circuit for hydraulic drive system Patent  
[NASA-CASE-XNP-01020] c 03 N71-12260

Fluid flow restrictor Patent  
[NASA-CASE-NPO-10117] c 15 N71-15608

Fluid flow control valve Patent  
[NASA-CASE-XLE-00703] c 15 N71-15967

Gas regulator Patent  
[NASA-CASE-NPO-10298] c 12 N71-17661

Semitoroidal diaphragm cavitating valve Patent  
[NASA-CASE-XNP-09704] c 12 N71-18615

Temperature sensitive flow regulator Patent  
[NASA-CASE-MFS-14259] c 15 N71-19213

Pneumatic amplifier Patent  
[NASA-CASE-MSC-12121-1] c 15 N71-27147

Gas flow control device  
[NASA-CASE-NPO-11479] c 15 N73-13462

Pressure modulating valve  
[NASA-CASE-MSC-14905-1] c 37 N77-28487

Automotive gas turbine fuel control  
[NASA-CASE-LEW-12785-1] c 37 N78-24545

Flow diverter valve and flow diversion method  
[NASA-CASE-HQN-00573-1] c 37 N79-33468

Automatic thermal switch  
[NASA-CASE-GSC-12415-1] c 33 N82-24419

Bio-medical flow sensor --- intravenous procedures  
[NASA-CASE-MSC-18761-1] c 52 N83-27577

Fluidized bed desulfurization  
[NASA-CASE-NPO-15924-1] c 25 N85-35253

Combined riblet and lebu drag reduction system  
[NASA-CASE-LAR-13286-1] c 02 N88-14071

Moving wall, continuous flow electrophoresis apparatus  
[NASA-CASE-MFS-28142-1] c 25 N88-23845

Bio-reactor chamber  
[NASA-CASE-MSC-20929-1] c 51 N91-14703

Energy efficient continuous flow ash lockhopper  
[NASA-CASE-NPO-16985-1-CU] c 31 N91-15423

Variable orifice flow regulator  
[NASA-CASE-MSC-21549-1] c 34 N91-27504

**FLOW RESISTANCE**

Flow resistivity instrument  
[NASA-CASE-LAR-13053-1] c 43 N83-29783

**FLOW STABILITY**

Continuous detonation reaction engine Patent  
[NASA-CASE-XMF-06926] c 28 N71-22983

Apparatus for establishing flow of a fluid mass having a known velocity  
[NASA-CASE-MFS-21424-1] c 34 N74-27730

Aeroelastic instability stoppers for wind tunnel models  
[NASA-CASE-LAR-12720-1] c 44 N83-21504

**FLOW VELOCITY**

Method for continuous variation of propellant flow and thrust in propulsive devices Patent  
[NASA-CASE-XLE-00177] c 28 N70-40367

Densitometer Patent  
[NASA-CASE-XLE-00688] c 14 N70-41330

Device for suppressing sound and heat produced by high-velocity exhaust jets Patent  
[NASA-CASE-XMF-01813] c 28 N70-41582

Positive displacement flowmeter Patent  
[NASA-CASE-XMF-02822] c 14 N70-41994

Zeta potential flowmeter Patent  
[NASA-CASE-XNP-06509] c 14 N71-23226

Method for measuring the characteristics of a gas Patent  
[NASA-CASE-XLA-03375] c 16 N71-24074

Laser fluid velocity detector Patent  
[NASA-CASE-XAC-10770-1] c 16 N71-24828

Gas low pressure low flow rate metering system Patent  
[NASA-CASE-FRC-10022] c 12 N71-26546

Force-balanced, throttle valve Patent  
[NASA-CASE-NPO-10808] c 15 N71-27432

Flow rate switch  
[NASA-CASE-NPO-10722] c 09 N72-20199

Flow velocity and directional instrument  
[NASA-CASE-LAR-10855-1] c 14 N73-13415

Apparatus for establishing flow of a fluid mass having a known velocity  
[NASA-CASE-MFS-21424-1] c 34 N74-27730

Wind tunnel flow generation section  
[NASA-CASE-ARC-10710-1] c 09 N75-12969

Combined dual scatter, local oscillator laser Doppler velocimeter  
[NASA-CASE-ARC-10642-1] c 36 N76-14447

System for measuring three fluctuating velocity components in a turbulently flowing fluid  
[NASA-CASE-ARC-10974-1] c 34 N77-27345

Fluid velocity measuring device  
[NASA-CASE-LAR-11729-1] c 34 N79-12359

Wind tunnel supplementary Mach number minimum section insert  
[NASA-CASE-LAR-12532-1] c 09 N82-11088

Flow modifying device  
[NASA-CASE-LEW-13562-2] c 07 N85-35195

Multi-colored layers for visualizing aerodynamic flow effects  
[NASA-CASE-LAR-13742-1] c 02 N91-16999

**FLOW VISUALIZATION**

Shock-layer radiation measurement  
[NASA-CASE-XAC-02970] c 14 N69-39896

Method of recording a gas flow pattern Patent  
[NASA-CASE-XMF-01779] c 12 N71-20815

Vaporizing particle velocimeter  
[NASA-CASE-LAR-14685-1] c 02 N91-28135

Continuous laminar smoke generator  
[NASA-CASE-LAR-13014-1] c 09 N85-21178

Method for laminar boundary layer transition visualization in flight  
[NASA-CASE-LAR-13554-1] c 02 N89-12551

Dual wavelength holographic interferometry system  
[NASA-CASE-MFS-28242-1] c 35 N89-26202

Multi-colored layers for visualizing aerodynamic flow effects  
[NASA-CASE-LAR-13742-1] c 02 N91-16999

Synchronous strobe apparatus for flow visualization  
[NASA-CASE-LAR-14556-1] c 36 N91-25392

**FLOWMETERS**

Flow test device  
[NASA-CASE-MSC-04917] c 14 N69-24257

Positive displacement flowmeter Patent  
[NASA-CASE-XMF-02822] c 14 N70-41994

Heated element fluid flow sensor Patent  
[NASA-CASE-MSC-12084-1] c 12 N71-17569

Laser Doppler system for measuring three dimensional vector velocity Patent  
[NASA-CASE-MFS-20386] c 21 N71-19212

Zeta potential flowmeter Patent  
[NASA-CASE-XNP-06509] c 14 N71-23226

Traversing probe Patent  
[NASA-CASE-XFR-02007] c 12 N71-24692

Laser fluid velocity detector Patent  
[NASA-CASE-XAC-10770-1] c 16 N71-24828

Gas low pressure low flow rate metering system Patent  
[NASA-CASE-FRC-10022] c 12 N71-26546

Nuclear mass flowmeter  
[NASA-CASE-MFS-20485] c 14 N72-11365

Respiratory analysis system and method  
[NASA-CASE-MSC-13436-1] c 05 N73-32015

Low power electromagnetic flowmeter providing accurate zero set  
[NASA-CASE-ARC-10362-1] c 14 N73-32326

Electromagnetic flow rate meter --- for liquid metals  
[NASA-CASE-LEW-10981-1] c 35 N74-21018

Leak detector  
[NASA-CASE-MFS-21761-1] c 35 N75-15931

System for measuring three fluctuating velocity components in a turbulently flowing fluid  
[NASA-CASE-ARC-10974-1] c 34 N77-27345

Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c 34 N81-26402

Miniature electrooptical air flow sensor  
[NASA-CASE-LAR-13065-1] c 35 N85-20295

State-of-charge coulometer  
[NASA-CASE-NPO-15759-1] c 35 N85-21596

Technique for measuring gas conversion factors  
[NASA-CASE-LAR-13220-1] c 34 N86-12547

Fluid flow meter for measuring the rate of fluid flow in a conduit  
[NASA-CASE-MFS-28030-1] c 35 N86-25752

Crossflow vorticity sensor  
[NASA-CASE-LAR-13436-1-CU] c 02 N88-23759

**FLUID AMPLIFIERS**

Fluid jet amplifier  
[NASA-CASE-XLE-03512] c 12 N69-21466

Multway vortex valve system Patent  
[NASA-CASE-XMF-04709] c 15 N71-15609

Shear modulated fluid amplifier Patent  
[NASA-CASE-MFS-10412] c 12 N71-17578

Rocket thrust throttling system  
[NASA-CASE-LEW-10374-1] c 28 N73-13773

Fluid pressure amplifier and system  
[NASA-CASE-LAR-10868-1] c 33 N74-11050

Fluid thrust control system --- for liquid propellant rocket engines  
[NASA-CASE-XMF-05964-1] c 20 N79-21124

**FLUID DYNAMICS**

Degassing and mixing apparatus for liquids --- potable water for spacecraft  
[NASA-CASE-MSC-18936-1] c 35 N83-29652

**FLUID FILLED SHELLS**

Method and apparatus for producing gas-filled hollow spheres --- target pellets for inertial confinement fusion  
[NASA-CASE-NPO-14596-3] c 31 N83-31896

**FLUID FILMS**

Journal bearings --- for lubricant films  
[NASA-CASE-LEW-11076-1] c 37 N74-21061

Fluid journal bearings  
[NASA-CASE-LEW-11076-4] c 37 N76-15461

Fluid seal for rotating shafts  
[NASA-CASE-LEW-11676-1] c 37 N76-22541

**FLUID FILTERS**

Liquid-gas separator for zero gravity environment Patent  
[NASA-CASE-XMS-01492] c 05 N70-41297

High pressure filter Patent  
[NASA-CASE-XNP-00732] c 28 N70-41447

Water separating system Patent  
[NASA-CASE-XMS-13052] c 14 N71-20427

Fluid control apparatus and method  
[NASA-CASE-LAR-11110-1] c 34 N75-26282

Filter regeneration systems --- a system for regenerating a system filter in a fluid flow line  
[NASA-CASE-MSC-14273-1] c 34 N75-33342

Quick disconnect filter coupling  
[NASA-CASE-MFS-22323-1] c 37 N76-14463

Fluid sample collection and distribution system --- qualitative analysis of aqueous samples from several points  
 [NASA-CASE-MSC-16841-1] c 34 N79-24285  
 Air removal device --- life support systems  
 [NASA-CASE-XLA-08914-2] c 25 N82-21269  
 Rapid, quantitative determination of bacteria in water --- adenosine triphosphate  
 [NASA-CASE-GSC-12158-1] c 51 N83-27569

**FLUID FLOW**  
 Fluid jet amplifier  
 [NASA-CASE-XLE-03512] c 12 N69-21466  
 Pneumatic system for controlling and actuating pneumatic cyclic devices  
 [NASA-CASE-XMS-04843] c 03 N69-21469  
 Full flow with shut off and selective drainage control valve Patent application  
 [NASA-CASE-ERC-10208] c 15 N70-10867  
 Conical valve plug Patent  
 [NASA-CASE-XLE-00715] c 15 N70-34859  
 Pressure regulating system Patent  
 [NASA-CASE-XNP-00450] c 15 N70-38603  
 Antiflutter ball check valve Patent  
 [NASA-CASE-XNP-01152] c 15 N70-41811  
 Inductive liquid level detection system Patent  
 [NASA-CASE-XLE-01609] c 14 N71-10500  
 Multiway vortex valve system Patent  
 [NASA-CASE-XMF-04709] c 15 N71-15609  
 Heated element fluid flow sensor Patent  
 [NASA-CASE-MSC-12084-1] c 12 N71-17569  
 Multiple orifice throttle valve Patent  
 [NASA-CASE-XNP-09698] c 15 N71-18580  
 Fluid flow meter with comparator reference means Patent  
 [NASA-CASE-XGS-01331] c 14 N71-22996  
 Pressure transducer calibrator Patent  
 [NASA-CASE-XNP-01660] c 14 N71-23036  
 Dual latching solenoid valve Patent  
 [NASA-CASE-XMS-05890] c 09 N71-23191  
 Gas low pressure low flow rate metering system Patent  
 [NASA-CASE-FRC-10022] c 12 N71-26546  
 Electrohydrodynamic control valve Patent  
 [NASA-CASE-NPO-10416] c 12 N71-27332  
 Fluid jet amplifier Patent  
 [NASA-CASE-XLE-09341] c 12 N71-28741  
 Nuclear mass flowmeter  
 [NASA-CASE-MFS-20485] c 14 N72-11365  
 Flow rate switch  
 [NASA-CASE-NPO-10722] c 09 N72-20199  
 Torsional disconnect unit  
 [NASA-CASE-NPO-10704] c 15 N72-20445  
 Capacitive tank gaging apparatus being independent of liquid distribution  
 [NASA-CASE-MFS-21629] c 14 N72-22442  
 Cryogenic feedthrough  
 [NASA-CASE-LAR-10031] c 15 N72-22484  
 Geysering inhibitor for vertical cryogenic transfer pipe  
 [NASA-CASE-KSC-10615] c 15 N73-12486  
 Pump for delivering heated fluids  
 [NASA-CASE-NPO-11417] c 15 N73-24513  
 Flow control valve --- for high temperature fluids  
 [NASA-CASE-NPO-11951-1] c 37 N74-21065  
 Apparatus for establishing flow of a fluid mass having a known velocity  
 [NASA-CASE-MFS-21424-1] c 34 N74-27730  
 Internally supported flexible duct joint --- device for conducting fluids in high pressure systems  
 [NASA-CASE-MFS-19193-1] c 37 N75-19686  
 Flow measuring apparatus  
 [NASA-CASE-LEW-12078-1] c 35 N75-30503  
 Filter regeneration systems --- a system for regenerating a system filter in a fluid flow line  
 [NASA-CASE-MSC-14273-1] c 34 N75-33342  
 Combined dual scatter, local oscillator laser Doppler velocimeter  
 [NASA-CASE-ARC-10642-1] c 36 N76-14447  
 Externally supported internally stabilized flexible duct joint  
 [NASA-CASE-MFS-19194-1] c 37 N76-14460  
 Vortex generator for controlling the dispersion of effluents in a flowing liquid  
 [NASA-CASE-LAR-12045-1] c 34 N77-24423  
 Pseudo-backscatter laser Doppler velocimeter employing antiparallel-reflector in the forward direction  
 [NASA-CASE-ARC-10970-1] c 36 N77-25501  
 Accumulator  
 [NASA-CASE-MFS-19287-1] c 34 N77-30399  
 Apparatus for measuring a sorbate dispersed in a fluid stream  
 [NASA-CASE-ARC-10896-1] c 35 N78-19465  
 Flow compensating pressure regulator  
 [NASA-CASE-LEW-12718-1] c 34 N78-25351  
 Fluid valve assembly  
 [NASA-CASE-MSC-12731-1] c 37 N78-25426

Positive isolation disconnect  
 [NASA-CASE-MSC-16043-1] c 37 N79-11402  
 Fluid velocity measuring device  
 [NASA-CASE-LAR-11729-1] c 34 N79-12359  
 Hot foil transducer skin friction sensor  
 [NASA-CASE-LAR-12321-1] c 35 N82-24470  
 Dual laser optical system and method for studying fluid flow  
 [NASA-CASE-MFS-25315-1] c 36 N83-29680  
 Flow modifying device  
 [NASA-CASE-LEW-13562-2] c 07 N85-35195  
 Fluid leak indicator  
 [NASA-CASE-MSC-20783-1] c 35 N86-20756  
 Fluid flow meter for measuring the rate of fluid flow in a conduit  
 [NASA-CASE-MFS-28030-1] c 35 N86-25752  
 Two-axis, self-nulling skin friction balance  
 [NASA-CASE-LAR-13294-1] c 35 N86-32696  
 Multi-path peristaltic pump  
 [NASA-CASE-MSC-20907-1] c 37 N87-18818  
 Dual motion valve with single motion input  
 [NASA-CASE-MFS-28058-1] c 37 N87-21332  
 Pressure measuring probe  
 [NASA-CASE-LAR-13853-1] c 35 N89-14423  
 Fluidic momentum controller  
 [NASA-CASE-MSC-20906-2] c 35 N89-15379  
 Dual wavelength holographic interferometry system  
 [NASA-CASE-MFS-28242-1] c 35 N89-26202  
 Apparatus for mixing solutions in low gravity environments  
 [NASA-CASE-MFS-26047-1] c 29 N90-21209  
 Heat exchanger with oscillating flow  
 [NASA-CASE-LAR-14033-1] c 34 N90-27072  
 Liquid sheet radiator apparatus  
 [NASA-CASE-LEW-14295-1] c 31 N91-15424  
 Multi-colored layers for visualizing aerodynamic flow effects  
 [NASA-CASE-LAR-13742-1] c 02 N91-16999

**FLUID INJECTION**  
 Apparatus for igniting solid propellants Patent  
 [NASA-CASE-XLE-00207] c 28 N70-33375  
 Method of igniting solid propellants Patent  
 [NASA-CASE-XLE-01988] c 27 N71-15634  
 Aerodynamic spike nozzle Patent  
 [NASA-CASE-XGS-01143] c 31 N71-15647  
 Process of forming particles in a cryogenic path Patent  
 [NASA-CASE-NPO-10250] c 23 N71-16212  
 Apparatus for purging systems handling toxic, corrosive, noxious and other fluids Patent  
 [NASA-CASE-XMS-01905] c 12 N71-21089  
 Tertiary flow injection thrust vectoring system Patent  
 [NASA-CASE-MFS-20831] c 28 N71-29153  
 Programmable physiological infusion  
 [NASA-CASE-ARC-10447-1] c 52 N74-22771

**FLUID JETS**  
 Propeller blade loading control Patent  
 [NASA-CASE-XAC-00139] c 02 N70-34856

**FLUID LOGIC**  
 Logic AND gate for fluid circuits Patent  
 [NASA-CASE-XLA-07391] c 12 N71-17579

**FLUID MANAGEMENT**  
 Capillary heat transport and fluid management device  
 [NASA-CASE-MFS-28217-1] c 34 N89-14392

**FLUID MECHANICS**  
 Leak detector Patent  
 [NASA-CASE-LAR-10323-1] c 12 N71-17573  
 Parallel-plate viscometer with double diaphragm suspension  
 [NASA-CASE-NPO-11387] c 14 N73-14429  
 Modified face seal for positive film stiffness  
 [NASA-CASE-LEW-12989-1] c 37 N82-12442

**FLUID POWER**  
 Fluid power transmission Patent  
 [NASA-CASE-XMS-01445] c 12 N71-16031  
 Fluid power transmitting gas bearing Patent  
 [NASA-CASE-ERC-10097] c 15 N71-28465

**FLUID PRESSURE**  
 Flow compensating pressure regulator  
 [NASA-CASE-LEW-12718-1] c 34 N78-25351  
 Self-stabilizing radial face seal  
 [NASA-CASE-LEW-12991-1] c 37 N81-24442  
 Pressure letdown method and device for coal conversion systems  
 [NASA-CASE-NPO-15100-1] c 44 N84-14583  
 Damping seal for turbomachinery  
 [NASA-CASE-MFS-25842-2] c 37 N86-20788  
 Thermal power transfer system using applied potential difference to sustain operating pressure difference  
 [NASA-CASE-NPO-18034-1-CU] c 44 N91-13796

**FLUID ROTOR GYROSCOPES**  
 Piezoelectric pump Patent  
 [NASA-CASE-XNP-05429] c 26 N71-21824

**FLUID SWITCHING ELEMENTS**  
 Booster tank system Patent  
 [NASA-CASE-MSC-12390] c 27 N71-29155

**FLUID TRANSMISSION LINES**  
 Low heat leak connector for cryogenic system  
 [NASA-CASE-XLE-02367-1] c 31 N79-21225

**FLUIDIC CIRCUITS**  
 Technique of duplicating fragile core  
 [NASA-CASE-XLA-07829] c 15 N72-16329  
 Flow measuring apparatus  
 [NASA-CASE-LEW-12078-1] c 35 N75-30503

**FLUIDICS**  
 Fluidic-thermochromic display device Patent  
 [NASA-CASE-ERC-10031] c 12 N71-18603  
 Plasma fluidic hybrid display Patent  
 [NASA-CASE-ERC-10100] c 09 N71-33519  
 Fluidic proportional thruster system  
 [NASA-CASE-ARC-10106-1] c 28 N72-22769  
 Fluid pressure amplifier and system  
 [NASA-CASE-LAR-10868-1] c 33 N74-11050  
 Fluid valve assembly  
 [NASA-CASE-MSC-12731-1] c 37 N78-25426  
 Fluidic angular velocity sensor  
 [NASA-CASE-NPO-16479-ICU] c 35 N86-32695  
 Heat exchanger with oscillating flow  
 [NASA-CASE-LAR-14033-1] c 34 N90-27072  
 Coupling device with improved thermal interface  
 [NASA-CASE-GSC-13251-1] c 37 N91-28582

**FLUIDIZED BED PROCESSORS**  
 Continuous coal processing method  
 [NASA-CASE-NPO-13758-2] c 31 N81-15154  
 Fluidized bed coal combustion reactor  
 [NASA-CASE-NPO-14273-1] c 25 N82-11144  
 Solar heated fluidized bed gasification system  
 [NASA-CASE-NPO-15071-1] c 44 N82-16475  
 Use of glow discharge in fluidized beds  
 [NASA-CASE-ARC-11245-1] c 28 N82-18401  
 Fluidized bed desulfurization  
 [NASA-CASE-NPO-15924-1] c 25 N85-35253

**FLUIDS**  
 Automated fluid chemical analyzer Patent  
 [NASA-CASE-XNP-09451] c 06 N71-26754  
 Bacteria detection instrument and method  
 [NASA-CASE-GSC-11533-1] c 14 N73-13435  
 Low outgassing polydimethylsiloxane material and preparation thereof  
 [NASA-CASE-GSC-11358-1] c 06 N73-26100  
 Fluid mass sensor for a zero gravity environment  
 [NASA-CASE-MSC-14653-1] c 35 N77-19385  
 Self-charging metering and dispensing device for fluids  
 [NASA-CASE-MSC-20275-1] c 35 N85-21595  
 Adjustable choke for fluids nozzle  
 [NASA-CASE-NPO-17625-1-CU] c 34 N90-27070  
 Fluid-loop reaction system  
 [NASA-CASE-NPO-17204-1-CU] c 34 N91-25380

**FLUORESCENCE**  
 Apparatus for producing three-dimensional recordings of fluorescence spectra Patent  
 [NASA-CASE-XGS-01231] c 14 N70-41676  
 Internal work light Patent  
 [NASA-CASE-XKS-05932] c 09 N71-26787  
 Chromato-fluorographic drug detector --- device for detecting and recording fluorescence properties of materials  
 [NASA-CASE-ARC-10633-1] c 25 N74-26947  
 Fluorescence detector for monitoring atmospheric pollutants  
 [NASA-CASE-NPO-13231-1] c 45 N75-27585  
 Fluorescent radiation converter  
 [NASA-CASE-GSC-12528-1] c 74 N81-24900  
 Optical multiple sample vacuum integrating sphere  
 [NASA-CASE-GSC-12849-1] c 74 N86-26190  
 Metal etching composition  
 [NASA-CASE-MFS-29576-1] c 25 N91-15368

**FLUORIDES**  
 Self-lubricating fluoride metal composite materials Patent  
 [NASA-CASE-XLE-08511] c 18 N71-23710  
 Corrosion resistant beryllium Patent  
 [NASA-CASE-LEW-10327] c 17 N71-33408  
 Perfluoro polyether acyl fluorides  
 [NASA-CASE-NPO-10765] c 06 N72-20121  
 Carbide-fluoride-silver self-lubricating composite  
 [NASA-CASE-LEW-14196-2] c 37 N87-25585  
 Graphite fluoride fiber polymer composite material  
 [NASA-CASE-LEW-14472-1] c 24 N91-15320  
 Tm,Ho:YLF laser end-pumped by a semiconductor diode laser array  
 [NASA-CASE-NPO-17282-1-CU] c 36 N91-15528  
 Polyimides prepared from 3,5-diamino benzo trifluoride  
 [NASA-CASE-LAR-14206-1] c 27 N91-28425

**FLUORINATION**  
 Highly fluorinated polyurethanes  
 [NASA-CASE-NPO-10767-2] c 06 N72-27151  
 Fluorinated esters of polycarboxylic acids  
 [NASA-CASE-MFS-21040-1] c 06 N73-30098



- FLUORINE**  
Reaction of fluorine with polyperfluoropolyenes  
[NASA-CASE-NPO-10862] c 06 N72-22107  
Process for the preparation of fluorine containing crosslinked elastomeric polytriazine and product so produced  
[NASA-CASE-ARC-11248-1] c 27 N81-17259
- FLUORINE COMPOUNDS**  
Fluorine-containing polyformals  
[NASA-CASE-XMF-06900-1] c 27 N79-21191  
Precision heat forming of tetrafluoroethylene tubing  
[NASA-CASE-MS-C-18430-1] c 37 N82-24491  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-4] c 23 N91-25185
- FLUORINE ORGANIC COMPOUNDS**  
Low dielectric fluorinated poly(phenylene ether ketone) film and coating  
[NASA-CASE-LAR-13992-1-CU] c 23 N91-27220
- FLURO COMPOUNDS**  
New polymers of perfluorobutadiene and method of manufacture Patent application  
[NASA-CASE-NPO-10863] c 06 N70-11251  
Method of polymerizing perfluorobutadiene Patent application  
[NASA-CASE-NPO-10447] c 06 N70-11252  
Fluorohydroxy ethers  
[NASA-CASE-MFS-10507] c 06 N73-30101  
Highly fluorinated polymers  
[NASA-CASE-MFS-11492] c 06 N73-30102  
Highly fluorinated polyurethanes  
[NASA-CASE-NPO-10767-1] c 06 N73-33076  
Utilization of oxygen difluoride for syntheses of fluoropolymers  
[NASA-CASE-NPO-12061-1] c 27 N76-16228  
The 1,1,1-triaryl-2,2,2-trifluoroethanes and process for their synthesis  
[NASA-CASE-ARC-11097-1] c 25 N82-24312  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-2] c 25 N90-23497
- FLUOROCARBONS**  
Electrically conductive fluorocarbon polymer  
[NASA-CASE-XLE-06774-2] c 06 N72-25150  
Substituted 1,1,1-Triaryl-2,2,2-Trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-1] c 23 N88-26404
- FLUOROHYDROCARBONS**  
New Condensation polyimides containing 1,1,1-triaryl-2,2,2-trifluoroethane structures  
[NASA-CASE-LEW-14346-1] c 23 N90-19300  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-3] c 23 N91-17141
- FLUOROPOLYMERS**  
Perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups  
[NASA-CASE-ARC-11241-1] c 25 N81-14016  
Texturing polymer surfaces by transfer casting --- cardiovascular prosthesis  
[NASA-CASE-LEW-13120-1] c 27 N82-28440  
Surface texturing of fluoropolymers  
[NASA-CASE-LEW-13028-1] c 27 N82-33521  
Cellular thermosetting fluoropolymers and process for making them  
[NASA-CASE-GSC-13008-1] c 27 N88-23894  
Substituted 1,1,1-Triaryl-2,2,2-Trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-1] c 23 N88-26404  
Cellular thermosetting fluorodiepoxide polymers  
[NASA-CASE-GSC-13008-2] c 27 N90-16949  
New Condensation polyimides containing 1,1,1-triaryl-2,2,2-trifluoroethane structures  
[NASA-CASE-LEW-14346-1] c 23 N90-19300
- FLUTTER**  
Antiflutter ball check valve Patent  
[NASA-CASE-XNP-01152] c 15 N70-41811  
Suppression of flutter  
[NASA-CASE-LAR-10682-1] c 02 N73-26004  
Decoupler pylon: wing/store flutter suppressor  
[NASA-CASE-LAR-12468-1] c 08 N82-32373  
Remote pivot decoupler pylon: Wing/store flutter suppressor  
[NASA-CASE-LAR-13173-1] c 05 N87-14314  
Airfoil flutter model suspension system  
[NASA-CASE-LAR-13522-1-SB] c 09 N87-25334
- FLUTTER ANALYSIS**  
Model mount system for testing flutter  
[NASA-CASE-LAR-12950-1] c 09 N84-34448
- FLUX (RATE)**  
Two axis fluxgate magnetometer Patent  
[NASA-CASE-GSC-10441-1] c 14 N71-27325  
Apparatus for measuring charged particle beam  
[NASA-CASE-MFS-25641-1] c 72 N84-28575
- FLUX DENSITY**  
Particle beam measurement apparatus using beam kinetic energy to change the heat sensitive resistance of the detection probe Patent  
[NASA-CASE-XLE-00243] c 14 N70-38602  
Apparatus for measuring charged particle beam  
[NASA-CASE-MFS-25641-1] c 72 N84-28575  
Copper chloride cathode for a secondary battery  
[NASA-CASE-NPO-17640-1-CU] c 33 N91-14538
- FLUXES**  
Solder flux which leaves corrosion-resistant coating Patent  
[NASA-CASE-XNP-03459-2] c 18 N71-15688  
Soldering with solder flux which leaves corrosion resistant coating Patent  
[NASA-CASE-XNP-03459] c 15 N71-21078
- FLYING PLATFORMS**  
System and method for measuring ocean surface currents at locations remote from land masses using synthetic aperture radar  
[NASA-CASE-NPO-17937-1-CU] c 43 N91-21621
- FLYWHEELS**  
Energy storage apparatus  
[NASA-CASE-GSC-12030-1] c 44 N78-24608  
Rotatable mass for a flywheel  
[NASA-CASE-MFS-23051-1] c 37 N79-10422  
Safety flywheel --- using flexible materials energy storage  
[NASA-CASE-HQN-10888-1] c 44 N79-14527  
Method of manufacture of bonded fiber flywheel --- fiberglass-epoxy  
[NASA-CASE-MFS-23674-1] c 24 N81-29163  
Bidirectional control system for energy flow in solar powered flywheel  
[NASA-CASE-MFS-25978-1] c 44 N87-21410  
Three axis attitude control system  
[NASA-CASE-GSC-12970-1] c 08 N88-23808
- FOAMS**  
Foam generator Patent  
[NASA-CASE-XLA-00838] c 03 N70-36778  
Method for continuous variation of propellant flow and thrust in propulsive devices Patent  
[NASA-CASE-XLE-00177] c 28 N70-40367  
Filament wound container Patent  
[NASA-CASE-XLE-03803] c 15 N71-23816  
Novel polycarboxylic prepolymeric materials and polymers thereof Patent  
[NASA-CASE-NPO-10596] c 06 N71-25929  
Thermally activated foaming compositions Patent  
[NASA-CASE-LAR-10373-1] c 18 N71-26155  
Method of making a solid propellant rocket motor Patent  
[NASA-CASE-XLA-04126] c 28 N71-26779  
Thickness measuring and injection device Patent  
[NASA-CASE-MFS-20261] c 14 N71-27005  
Method of making foamed materials in zero gravity  
[NASA-CASE-XMF-09902] c 15 N72-11387  
Polyimide foam for the thermal insulation and fire protection  
[NASA-CASE-ARC-10464-1] c 27 N74-12812  
Intumescent composition, foamed product prepared therewith and process for making same  
[NASA-CASE-ARC-10304-2] c 27 N74-27037  
Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c 27 N78-31232  
Ambient cure polyimide foams --- thermal resistant foams  
[NASA-CASE-ARC-11170-1] c 27 N79-11215  
Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams  
[NASA-CASE-ARC-11107-1] c 25 N80-16116  
Impacting device for testing insulation  
[NASA-CASE-MFS-25862-2] c 37 N84-33807  
Insulation bonding test system  
[NASA-CASE-MFS-25862-1] c 27 N85-20126  
Cryogenic insulation strength and bond tester  
[NASA-CASE-MFS-25910-1] c 39 N86-20841  
Cellular thermosetting fluoropolymers and process for making them  
[NASA-CASE-GSC-13008-1] c 27 N88-23894  
Cellular thermosetting fluorodiepoxide polymers  
[NASA-CASE-GSC-13008-2] c 27 N90-16949
- FOCAL PLANE DEVICES**  
Antenna array at focal plane of reflector with coupling network for beam switching Patent  
[NASA-CASE-GSC-10220-1] c 07 N71-27233  
High speed multi focal plane optical system  
[NASA-CASE-GSC-12683-1] c 74 N83-36898  
Focal plane array optical proximity sensor  
[NASA-CASE-NPO-15155-1] c 74 N85-22139  
Projection lens scanning laser velocimeter system  
[NASA-CASE-ARC-11547-1] c 36 N87-17026  
Laterally stacked Schottky diodes for infrared sensor applications  
[NASA-CASE-NPO-17426-1-CU] c 33 N91-21434
- FOCI**  
High speed multi focal plane optical system  
[NASA-CASE-GSC-12683-1] c 74 N83-36898
- FOCUSING**  
X-ray reflection collimator adapted to focus X-radiation directly on a detector Patent  
[NASA-CASE-XHQ-04106] c 14 N70-40240  
Focussing system for an ion source having apertured electrodes Patent  
[NASA-CASE-XNP-03332] c 09 N71-10618  
Petzval type objective including field shaping lens Patent  
[NASA-CASE-GSC-10700] c 23 N71-30027  
Absolute focus lock for microscopes  
[NASA-CASE-LAR-10184] c 14 N72-22445  
Electron beam controller --- using magnetic field to refocus spent electron beam in microwave oscillator tube  
[NASA-CASE-LEW-11617-1] c 33 N74-10195  
Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c 35 N75-15014  
Multiplate focusing collimator --- for scanning small near radiation sources  
[NASA-CASE-MFS-20932-1] c 35 N75-19616  
RF beam center location method and apparatus for power transmission system  
[NASA-CASE-NPO-13821-1] c 44 N78-28594  
Scanning afocal laser velocimeter projection lens system  
[NASA-CASE-LAR-12328-1] c 36 N82-32712  
Gyrotron transmitting tube  
[NASA-CASE-LEW-13429-1] c 33 N83-31952  
Dual mode laser velocimeter  
[NASA-CASE-ARC-11634-1] c 36 N88-14350  
Apparatus for precision focusing and positioning of a beam waist on a target  
[NASA-CASE-ARC-11916-1-SB] c 74 N91-14002
- FOG**  
Anti-fog composition --- for prevention of fogging on surfaces such as space helmet visors and windshields  
[NASA-CASE-MS-C-13530-2] c 23 N75-14834  
Environmental fog/rain visual display system for aircraft simulators  
[NASA-CASE-ARC-11158-1] c 09 N82-24212  
Warm fog dissipation using large volume water sprays  
[NASA-CASE-MFS-25962-1] c 09 N89-25242
- FOILS (MATERIALS)**  
Foil seal  
[NASA-CASE-XLE-05130] c 15 N69-21362  
Method of making an insulation foil  
[NASA-CASE-LEW-11484-1] c 24 N75-33181  
Partial interlaminar separation system for composites  
[NASA-CASE-LAR-12065-1] c 24 N81-14000  
Method of making a partial interlaminar separation composite system  
[NASA-CASE-LAR-12065-2] c 24 N81-33235  
Oxygen diffusion barrier coating  
[NASA-CASE-LAR-13474-1-SB] c 26 N87-25455
- FOLDING**  
Folding apparatus Patent  
[NASA-CASE-XLA-00137] c 15 N70-33180
- FOLDING STRUCTURES**  
Space and atmospheric reentry vehicle Patent  
[NASA-CASE-XGS-00260] c 31 N70-37924  
Collapsible loop antenna for space vehicle Patent  
[NASA-CASE-XMF-00437] c 07 N70-40202  
Folding boom assembly Patent  
[NASA-CASE-XGS-00936] c 32 N70-41367  
Foldable conduit Patent  
[NASA-CASE-XLE-00620] c 32 N70-41579  
Foldable solar concentrator Patent  
[NASA-CASE-XLA-04622] c 03 N70-41580  
Wing deployment method and apparatus Patent  
[NASA-CASE-XMS-00907] c 02 N70-41630  
Variable sweep aircraft Patent  
[NASA-CASE-XLA-03659] c 02 N71-11041  
Radiator deployment actuator Patent  
[NASA-CASE-MS-C-11817-1] c 15 N71-26611  
Foldable construction block  
[NASA-CASE-MS-C-12233-1] c 15 N72-25454  
Folding structure fabricated of rigid panels  
[NASA-CASE-XHQ-02146] c 18 N75-27040  
Collapsible corrugated horn antenna  
[NASA-CASE-LAR-11745-1] c 32 N80-29539  
Foldable beam  
[NASA-CASE-LAR-12077-1] c 31 N81-25259  
Telescoping columns --- parabolic antenna support  
[NASA-CASE-LAR-12195-1] c 31 N81-27324  
Sequentially deployable maneuverable tetrahedral beam  
[NASA-CASE-LAR-13098-1] c 31 N86-19479  
Self-locking telescoping manipulator arm  
[NASA-CASE-MFS-25906-1] c 37 N86-20789  
Shuttle-launch triangular space station  
[NASA-CASE-MS-C-20678-1] c 18 N86-24729

- Synchronously deployable truss structure  
[NASA-CASE-LAR-13117-1] c 37 N86-25789  
Protective telescoping shield for solar concentrator  
[NASA-CASE-NPO-16236-1] c 44 N86-27706  
Deployable M-braced truss structure  
[NASA-CASE-LAR-13081-1] c 37 N86-32737  
Foldable self-erecting joint  
[NASA-CASE-MS-C-20635-1] c 18 N87-14373  
Sun shield  
[NASA-CASE-MS-C-20162-1] c 37 N87-17036  
Deployable geodesic truss structure  
[NASA-CASE-LAR-13113-1] c 31 N87-25492
- FOOD**  
Bacteria detection instrument and method  
[NASA-CASE-GSC-11533-1] c 14 N73-13435
- FOOTPRINTS**  
Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-2] c 32 N83-31918
- FORCE**  
Ferromagnetic solenoid  
[NASA-CASE-NPO-11738-1] c 09 N73-30185
- FORCE DISTRIBUTION**  
Device for handling heavy loads  
[NASA-CASE-XNP-04969] c 11 N69-27466  
Two force component measuring device Patent  
[NASA-CASE-XAC-04886-1] c 14 N71-20439  
Tensile strength testing device Patent  
[NASA-CASE-XNP-05634] c 15 N71-24834  
Impact monitoring apparatus  
[NASA-CASE-MS-C-15626-1] c 14 N72-25411  
Variable direction force coupler  
[NASA-CASE-MFS-20317] c 15 N73-13463  
Subminiature insertable force transducer --- including a strain gage to measure forces in muscles  
[NASA-CASE-NPO-13423-1] c 33 N75-31329  
Device for quick changeover between wind tunnel force and pressure testing  
[NASA-CASE-LAR-13512-1] c 35 N87-28884  
Linear force device  
[NASA-CASE-MS-C-20549-2] c 35 N88-24927
- FORCED VIBRATION**  
Seismic vibration source  
[NASA-CASE-NPO-14112-1] c 46 N79-22679
- FOREBODIES**  
Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c 02 N81-14968  
Actuated forebody strakes  
[NASA-CASE-LAR-13983-1] c 05 N90-23390
- FORMALDEHYDE**  
Synthesis of polyformals  
[NASA-CASE-ARC-11244-1] c 23 N82-16174  
Synthesis of 2,4,8,10-tetroxaspiro[5,5]undecane  
[NASA-CASE-ARC-11243-2] c 23 N85-33187
- FORMAT**  
Digital data reformatter/deserializer  
[NASA-CASE-NPO-13676-1] c 60 N79-20751
- FORMATES**  
Fluorine containing polyurethane  
[NASA-CASE-MFS-10509] c 06 N73-30103
- FORMING TECHNIQUES**  
Wire grid forming apparatus Patent  
[NASA-CASE-XLE-00023] c 15 N70-33330  
Method for forming plastic materials Patent  
[NASA-CASE-XMS-05516] c 15 N71-17803  
Method of making tubes Patent  
[NASA-CASE-XGS-04175] c 15 N71-18579  
Magnetomotive metal working device Patent  
[NASA-CASE-XMF-03793] c 15 N71-24833  
Apparatus for making curved reflectors Patent  
[NASA-CASE-XLE-08917-2] c 15 N71-24836  
Method of forming shapes from planar sheets of thermosetting materials  
[NASA-CASE-NPO-11036] c 15 N72-24522  
Method of heat treating a formed powder product material  
[NASA-CASE-LEW-10805-3] c 26 N74-10521  
Molding apparatus --- for thermosetting plastic compositions  
[NASA-CASE-LAR-10489-2] c 31 N74-32920  
Process for making sheets with parallel pores of uniform size  
[NASA-CASE-GSC-10984-1] c 37 N75-26371  
Drilled ball bearing with a one piece anti-tipping cage assembly  
[NASA-CASE-LEW-11925-1] c 37 N75-31446  
Apparatus for forming dished ion thruster grids  
[NASA-CASE-LEW-11694-2] c 37 N76-14461  
Acoustic energy shaping  
[NASA-CASE-NPO-13802-1] c 71 N78-10837  
Method of forming metal hydride films  
[NASA-CASE-LEW-12083-1] c 37 N78-13436  
Method of producing complex aluminum alloy parts of high temper, and products thereof  
[NASA-CASE-MS-C-19693-1] c 26 N78-24333
- Solar cell with improved N-region contact and method of forming the same  
[NASA-CASE-NPO-14205-1] c 44 N79-31752  
Method and apparatus for producing concentric hollow spheres --- inertial confinement fusion targets  
[NASA-CASE-NPO-14596-1] c 31 N81-33319  
Precision heat forming of tetrafluoroethylene tubing  
[NASA-CASE-MS-C-18430-1] c 37 N82-24491  
Sphere forming method and apparatus  
[NASA-CASE-NPO-15070-1] c 31 N83-35176  
Method of fabricating composite structures  
[NASA-CASE-MFS-28390-1] c 24 N91-15333
- FOSSIL FUELS**  
Supercritical solvent coal extraction  
[NASA-CASE-NPO-15210-1] c 25 N84-22709
- FOUNDATIONS**  
Expandable support means  
[NASA-CASE-NPO-11059] c 15 N72-17454  
Adjustable securing base  
[NASA-CASE-MS-C-19666-1] c 37 N78-17383  
Space station erectable manipulator placement system  
[NASA-CASE-MS-C-21096-1] c 18 N89-12621
- FOURIER TRANSFORMATION**  
Continuous Fourier transform method and apparatus --- for the analysis of simultaneous analog signal components  
[NASA-CASE-ARC-10466-1] c 60 N75-13539  
Remotely controllable real-time optical processor  
[NASA-CASE-NPO-16750-1-CU] c 74 N89-14078
- FRACTIONATION**  
Method and apparatus for distillation of liquids Patent  
[NASA-CASE-XNP-08124] c 15 N71-27184  
Electrophoretic fractional elution apparatus employing a rotational seal fraction collector  
[NASA-CASE-MFS-23284-1] c 37 N80-14397  
Electrophoresis device  
[NASA-CASE-MFS-25426-1] c 25 N83-10126  
Spillage detector for liquid chromatography systems  
[NASA-CASE-MS-C-20206-1] c 25 N86-27431
- FRACTURE MECHANICS**  
Apparatus for positioning and loading a test specimen Patent  
[NASA-CASE-XLE-01300] c 15 N70-41993
- FRACTURE STRENGTH**  
Process for making a high toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-2] c 26 N79-22271  
High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-3] c 26 N80-32484  
Method of making a partial interlaminar separation composite system  
[NASA-CASE-LAR-12065-2] c 24 N81-33235  
Process of end-capping a polyimide system  
[NASA-CASE-LAR-13135-1] c 27 N86-19456  
Polyimides containing carbonyl and ether connecting groups  
[NASA-CASE-LAR-13633-1] c 27 N87-24575  
Directional solidification of superalloys  
[NASA-CASE-MFS-28314-1] c 26 N91-14462  
Fully articulated four-point-bend loading fixture  
[NASA-CASE-LEW-14776-1] c 37 N91-21540
- FRAMES**  
Articulated multiple couch assembly Patent  
[NASA-CASE-MS-C-11253] c 05 N71-12343  
Soft frame adjustable eyeglasses Patent  
[NASA-CASE-XMS-06064] c 05 N71-23096  
Expandable space frames  
[NASA-CASE-ERC-10365-1] c 31 N73-32749  
Laser measuring system for incremental assemblies --- measuring wire-wrapped frame assemblies in spark chambers  
[NASA-CASE-GSC-12321-1] c 36 N82-16396  
Inorganic spark chamber frame and method of making the same  
[NASA-CASE-GSC-12354-1] c 35 N82-24471
- FRAMING CAMERAS**  
High speed photo-optical time recording  
[NASA-CASE-KSC-10294] c 14 N72-18411
- FREE FLIGHT TEST APPARATUS**  
Support apparatus for dynamic testing Patent  
[NASA-CASE-XMF-01772] c 11 N70-41677  
Hydraulic support for dynamic testing Patent  
[NASA-CASE-XMF-03248] c 11 N71-10604  
Test unit free-flight suspension system Patent  
[NASA-CASE-XLA-00939] c 11 N71-15926
- FREE WING AIRCRAFT**  
Free wing assembly for an aircraft  
[NASA-CASE-FRC-10092-1] c 05 N79-12061
- FREEZE DRYING**  
Modification of the physical properties of freeze-dried rice  
[NASA-CASE-MS-C-13540-1] c 05 N72-33096
- FREEZING**  
System for and method of freezing biological tissue  
[NASA-CASE-GSC-12173-1] c 51 N79-10694
- Method of forming frozen spheres in a force-free drop tower  
[NASA-CASE-NPO-14845-1] c 27 N82-28442
- FREON**  
Solar energy power system --- using Freon  
[NASA-CASE-MFS-21628-1] c 44 N75-32581
- FREQUENCIES**  
Controlled oscillator system with a time dependent output frequency  
[NASA-CASE-NPO-11962-1] c 33 N74-10194  
High efficiency multifrequency feed  
[NASA-CASE-GSC-11909] c 32 N74-20863  
Modified fast frequency acquisition via adaptive least squares algorithm  
[NASA-CASE-NPO-17845-1-CU] c 61 N90-27341
- FREQUENCY ANALYZERS**  
Digital frequency discriminator Patent  
[NASA-CASE-MFS-14322] c 08 N71-18692  
Broadband frequency discriminator Patent  
[NASA-CASE-NPO-10096] c 07 N71-24583  
Audio frequency marker system  
[NASA-CASE-NPO-11147] c 14 N72-27408  
Continuous Fourier transform method and apparatus --- for the analysis of simultaneous analog signal components  
[NASA-CASE-ARC-10466-1] c 60 N75-13539  
Frequency discriminator and phase detector circuit  
[NASA-CASE-NPO-11515-1] c 33 N77-13315  
Vibration analyzer  
[NASA-CASE-MS-C-21408-1] c 37 N91-14607
- FREQUENCY CONTROL**  
Bus voltage compensation circuit for controlling direct current motor  
[NASA-CASE-XMS-04215-1] c 09 N69-39987  
Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00458] c 09 N70-38604  
Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00131] c 09 N70-38995  
Automatic frequency discriminators and control for a phase-lock loop providing frequency preset capabilities Patent  
[NASA-CASE-XMF-08665] c 10 N71-19467  
Linear accelerator frequency control system Patent  
[NASA-CASE-XGS-05441] c 10 N71-22962  
Tuning arrangement for an electron discharge device or the like Patent  
[NASA-CASE-XNP-09771] c 09 N71-24841  
Low loss dichroic plate  
[NASA-CASE-NPO-13171-1] c 32 N74-11000  
Automatic frequency control for FM transmitter  
[NASA-CASE-MFS-21540-1] c 32 N74-19790  
Acoustically controlled distributed feedback laser  
[NASA-CASE-NPO-13175-1] c 36 N75-31427  
Reflex feed system for dual frequency antenna with frequency cutoff means  
[NASA-CASE-NPO-14022-1] c 32 N78-31321  
Cam-operated pitch-change apparatus  
[NASA-CASE-LEW-13050-1] c 07 N79-14095  
Digital numerically controlled oscillator  
[NASA-CASE-MS-C-16747-1] c 33 N81-17349  
High stability buffered phase comparator  
[NASA-CASE-GSC-12645-1] c 33 N84-16454  
Spectrophone stabilized laser with line center offset frequency control  
[NASA-CASE-NPO-15516-1] c 36 N84-22943  
Automatic oscillator frequency control system  
[NASA-CASE-GSC-12804-1] c 33 N86-20668
- FREQUENCY CONVERTERS**  
Frequency to analog converter Patent  
[NASA-CASE-XNP-07040] c 08 N71-12500  
Static inverters which sum a plurality of waves Patent  
[NASA-CASE-XMF-00663] c 08 N71-18752  
Voltage to frequency converter Patent  
[NASA-CASE-GSC-10022-1] c 10 N71-25882  
Family of frequency to amplitude converters  
[NASA-CASE-MS-C-12395] c 09 N72-25257  
Variable frequency inverter for ac induction motors with torque, speed and braking control  
[NASA-CASE-MFS-22088-1] c 33 N75-15874
- FREQUENCY DISCRIMINATORS**  
PN lock indicator for dithered PN code tracking loop  
[NASA-CASE-NPO-14435-1] c 33 N81-33405  
Programmable electronic synthesized capacitance  
[NASA-CASE-GSC-12961-1] c 33 N87-22895  
Acoustic emission frequency discrimination  
[NASA-CASE-MS-C-20467-1] c 35 N88-23966
- FREQUENCY DISTRIBUTION**  
Antenna system using parasitic elements and two driven elements at 90 deg angle fed 180 deg out of phase Patent  
[NASA-CASE-XLA-00414] c 07 N70-38200  
Variable frequency oscillator with temperature compensation Patent  
[NASA-CASE-XNP-03916] c 09 N71-28810  
Ultra stable frequency distribution system  
[NASA-CASE-NPO-13836-1] c 32 N78-15323

## FREQUENCY DIVIDERS

- Low phase noise digital frequency divider  
[NASA-CASE-NPO-11569] c 10 N73-26229  
Technique for extending the frequency range of digital dividers  
[NASA-CASE-LAR-10730-1] c 33 N74-10223  
Symmetrical odd-modulus frequency divider  
[NASA-CASE-NPO-13426-1] c 33 N75-31330  
Electronic analog divider  
[NASA-CASE-LEW-11881-1] c 33 N77-17354

## FREQUENCY DIVISION MULTIPLEXING

- Satellite communication system and method Patent  
[NASA-CASE-GSC-10118-1] c 07 N71-24621  
Frequency division multiplex technique  
[NASA-CASE-KSC-10521] c 07 N73-20176

## FREQUENCY MEASUREMENT

- Measurement system  
[NASA-CASE-MFS-20658-1] c 14 N73-30386  
Frequency measurement by coincidence detection with standard frequency  
[NASA-CASE-MS-C-14649-1] c 33 N76-16331  
Time domain phase measuring apparatus  
[NASA-CASE-GSC-12228-1] c 33 N79-10338  
Method and apparatus for measuring frequency and phase difference  
[NASA-CASE-MS-C-20865-1] c 32 N87-18692  
Frequency domain laser velocimeter signal processor  
[NASA-CASE-LAR-13552-1-CU] c 33 N89-14385  
Apparatus for using a time interval counter to measure frequency stability  
[NASA-CASE-NPO-17325-1-CU] c 32 N90-17005  
Edge technique for measurement of laser frequency shifts including the Doppler shift  
[NASA-CASE-GSC-13343-1] c 36 N91-28557

## FREQUENCY MODULATION

- Accelerometer with FM output Patent  
[NASA-CASE-XLA-00492] c 14 N70-34799  
Means for generating a sync signal in an FM communication system Patent  
[NASA-CASE-XNP-10830] c 07 N71-11281  
Bi-carrier demodulator with modulation Patent  
[NASA-CASE-XMF-01160] c 07 N71-11298  
Optical tracker having overlapping reticles on parallel axes Patent  
[NASA-CASE-XGS-05715] c 23 N71-16100  
Atomic hydrogen maser with bulb temperature control to remove wall shift in maser output frequency  
[NASA-CASE-HQN-10654-1] c 16 N73-13489  
Junction range finder  
[NASA-CASE-KSC-10108] c 14 N73-25461  
Automatic frequency control for FM transmitter  
[NASA-CASE-MFS-21540-1] c 32 N74-19790  
Symmetrical odd-modulus frequency divider  
[NASA-CASE-NPO-13426-1] c 33 N75-31330  
Frequency modulated oscillator  
[NASA-CASE-MFS-23181-1] c 33 N77-17351  
FM/CW radar system  
[NASA-CASE-MFS-22234-1] c 32 N79-10264  
Thickness measurement system  
[NASA-CASE-MFS-23721-1] c 31 N79-28370  
Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14524-1] c 32 N80-24510  
Adaptive control system for line-commutated inverters  
[NASA-CASE-MFS-25209-1] c 33 N83-35227  
Fiber optic frequency transfer link  
[NASA-CASE-NPO-17703-1-CU] c 74 N91-27957

## FREQUENCY MULTIPLIERS

- Multiple varactor frequency doubler Patent  
[NASA-CASE-XMF-04958-1] c 10 N71-26414  
Open loop digital frequency multiplier  
[NASA-CASE-MS-C-12709-1] c 33 N77-24375  
Millimeter-wave monolithic diode-grid frequency multiplier  
[NASA-CASE-NPO-17258-1-CU] c 33 N91-14551

## FREQUENCY RANGES

- Variable time constant smoothing circuit Patent  
[NASA-CASE-XGS-01983] c 10 N70-41964  
Variable frequency nuclear magnetic resonance spectrometer Patent  
[NASA-CASE-XNP-09830] c 14 N71-26266  
Technique for extending the frequency range of digital dividers  
[NASA-CASE-LAR-10730-1] c 33 N74-10223  
Multichannel logarithmic RF level detector  
[NASA-CASE-LAR-11021-1] c 32 N76-14321  
Multiple rate digital command detection system with range clean-up capability  
[NASA-CASE-NPO-13753-1] c 32 N77-20289  
Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-1] c 32 N79-19195  
Improving the geometric fidelity of imaging systems employing sensor arrays  
[NASA-CASE-NPO-17970-1-CU] c 43 N90-26384

## FREQUENCY SCANNING

- Automatic communication signal monitoring system  
[NASA-CASE-NPO-13941-1] c 32 N79-10262  
Frequency-scanning particle size spectrometer  
[NASA-CASE-NPO-13606-2] c 35 N80-18364  
Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c 32 N81-27341

## FREQUENCY SHIFT

- Doppler frequency spread correction device for multiplex transmissions  
[NASA-CASE-XGS-02749] c 07 N69-39978  
Serrrodyne frequency converter re-entrant amplifier system Patent  
[NASA-CASE-XGS-01022] c 07 N71-16088  
Elimination of frequency shift in a multiplex communication system Patent  
[NASA-CASE-XNP-01306] c 07 N71-20814  
Laser fluid velocity detector Patent  
[NASA-CASE-XAC-10770-1] c 16 N71-24828  
Laser Doppler velocity simulator --- to induce frequency shift  
[NASA-CASE-LAR-12176-1] c 36 N80-16321  
Edge technique for measurement of laser frequency shifts including the Doppler shift  
[NASA-CASE-GSC-13343-1] c 36 N91-28557

## FREQUENCY SHIFT KEYING

- Frequency shift keyed demodulator Patent  
[NASA-CASE-XGS-02889] c 07 N71-11282  
Frequency shift keying apparatus Patent  
[NASA-CASE-XGS-01537] c 07 N71-23405  
Single frequency multitransmitter telemetry  
[NASA-CASE-LAR-13006-1] c 17 N87-16863

## FREQUENCY STABILITY

- Method and apparatus for stabilizing a gaseous optical maser Patent  
[NASA-CASE-XGS-03644] c 16 N71-18614  
Broadband stable power multiplier Patent  
[NASA-CASE-XNP-10854] c 10 N71-26331  
Low phase noise oscillator using two parallel connected amplifiers  
[NASA-CASE-GSC-13018-1] c 33 N87-21232  
Apparatus for using a time interval counter to measure frequency stability  
[NASA-CASE-NPO-17325-1-CU] c 32 N90-17005

## FREQUENCY STANDARDS

- Method of resolving clock synchronization error and means therefor Patent  
[NASA-CASE-XNP-08875] c 10 N71-23099  
Atomic standard with variable storage volume  
[NASA-CASE-GSC-11895-1] c 35 N76-15436  
Ultra stable frequency distribution system  
[NASA-CASE-NPO-13836-1] c 32 N78-15323  
External bulb variable volume maser  
[NASA-CASE-GSC-12334-1] c 36 N79-14362  
Precise RF timing signal distribution to remote stations --- fiber optics  
[NASA-CASE-NPO-14749-1] c 32 N81-14186

## FREQUENCY SYNCHRONIZATION

- Pseudonoise (PN) synchronization of data system with derivation of clock frequency from received signal for clocking receiver PN generator  
[NASA-CASE-XNP-03623] c 09 N73-28084  
Ultra stable frequency distribution system  
[NASA-CASE-NPO-13836-1] c 32 N78-15323  
System for synchronizing synthesizers of communication systems  
[NASA-CASE-GSC-12148-1] c 32 N79-20296

## FREQUENCY SYNTHESIZERS

- Digitally controlled frequency synthesizer Patent  
[NASA-CASE-XGS-02317] c 09 N71-23525  
System for synchronizing synthesizers of communication systems  
[NASA-CASE-GSC-12148-1] c 32 N79-20296  
Method for shaping and aiming narrow beams --- sonar mapping and target identification  
[NASA-CASE-NPO-14632-1] c 32 N82-18443  
Reactanceless synthesized impedance bandpass amplifier  
[NASA-CASE-GSC-12788-1] c 33 N85-29145  
JFET reflection oscillator  
[NASA-CASE-GSC-12555-1] c 33 N86-19515

## FRICTION

- Refractory coatings  
[NASA-CASE-LEW-13169-2] c 26 N82-30371  
Missile rolling tail brake torque system --- simulating bearing friction on canard controlled missiles  
[NASA-CASE-LAR-12751-1] c 15 N84-16231  
Thumb-actuated two-axis controller  
[NASA-CASE-ARC-11372-1] c 08 N86-27288  
Multi-colored layers for visualizing aerodynamic flow effects  
[NASA-CASE-LAR-13742-1] c 02 N91-16999  
Rolling friction robot fingers  
[NASA-CASE-GSC-13261-1] c 37 N91-17401

- Energy dissipator  
[NASA-CASE-MS-C-21555-1] c 37 N91-23492

## FRICTION DRAG

- Combined riblet and lebu drag reduction system  
[NASA-CASE-LAR-13286-1] c 02 N88-14071

## FRICTION FACTOR

- Self-lubricating gears and other mechanical parts Patent  
[NASA-CASE-MFS-14971] c 15 N71-24984  
Unidirectional flexural pivot  
[NASA-CASE-GSC-12622-1] c 37 N84-12492  
Magnetostrictive roller drive motor  
[NASA-CASE-GSC-13369-1] c 33 N91-23380  
Linear mass actuator  
[NASA-CASE-LAR-14352-1] c 37 N91-32511  
Bidirectional drive and brake mechanism  
[NASA-CASE-MS-C-21540-1] c 37 N91-32514

## FRICTION MEASUREMENT

- Friction measuring apparatus Patent  
[NASA-CASE-XNP-08680] c 14 N71-22995  
Static coefficient test method and apparatus  
[NASA-CASE-GSC-11893-1] c 35 N76-31489  
Two-axis, self-nulling skin friction balance  
[NASA-CASE-LAR-13294-1] c 35 N86-32696

## FRICTION REDUCTION

- Low friction magnetic recording tape Patent  
[NASA-CASE-XGS-00373] c 23 N71-15978  
Production of hollow components for rolling element bearings by diffusion welding  
[NASA-CASE-LEW-11026-1] c 15 N73-33383  
Hydrodynamic skin-friction reduction  
[NASA-CASE-LAR-14078-1-CU] c 34 N90-27071  
Polymer/riblet combination for hydrodynamic skin friction reduction  
[NASA-CASE-LAR-14271-1-CU] c 27 N91-13558

## FRICTIONLESS ENVIRONMENTS

- Air bearing Patent  
[NASA-CASE-XMF-01887] c 15 N71-10617  
Air cushion lift pad Patent  
[NASA-CASE-MFS-14685] c 31 N71-15689  
Method and apparatus of simulating zero gravity conditions Patent  
[NASA-CASE-MFS-12750] c 27 N71-16223

## FROST

- Insulating structure Patent  
[NASA-CASE-XMF-00341] c 15 N70-33323  
Device for determining frost depth and density  
[NASA-CASE-MFS-25754-1] c 35 N84-28018

## FROZEN FOODS

- Low temperature storage container for transporting perishables to space station  
[NASA-CASE-MFS-28248-1] c 31 N88-24817

## FRUSTUMS

- Metallic threaded composite fastener  
[NASA-CASE-MS-C-21580-1] c 37 N91-23491

## FUEL CAPSULES

- Acoustic suspension system  
[NASA-CASE-NPO-15435-1] c 71 N83-36846

## FUEL CELL POWER PLANTS

- Reactant pressure differential control for fuel cell gases  
[NASA-CASE-MS-C-20127-2] c 37 N85-34403

## FUEL CELLS

- Method of making membranes  
[NASA-CASE-XNP-04264] c 03 N69-21337  
Combined electrolysis device and fuel cell and method of operation Patent  
[NASA-CASE-XLE-01645] c 03 N71-20904  
Sealing member and combination thereof and method of producing said sealing member Patent  
[NASA-CASE-XMS-01625] c 15 N71-23022  
Ion-exchange membrane with platinum electrode assembly Patent  
[NASA-CASE-XMS-02063] c 03 N71-29044  
Reconstituted asbestos matrix --- for use in fuel or electrolysis cells  
[NASA-CASE-MS-C-12568-1] c 24 N76-14204  
Dual membrane hollow fiber fuel cell and method of operating same  
[NASA-CASE-NPO-13732-1] c 44 N79-10513  
Method of making a light weight battery plaque  
[NASA-CASE-LEW-13349-1] c 26 N84-22734  
Reactant pressure differential control for fuel cell gases  
[NASA-CASE-MS-C-20127-2] c 37 N85-34403

## FUEL COMBUSTION

- Fuel combustor  
[NASA-CASE-LEW-12137-1] c 25 N78-10224  
Heat pipes to reduce engine exhaust emissions  
[NASA-CASE-LEW-12590-1] c 37 N84-22958

## FUEL CONSUMPTION

- Method for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-2] c 07 N86-20389

Methods and apparatus for providing real-time control of a gaseous propellant rocket propulsion system  
[NASA-CASE-MSC-21542-1] c 20 N90-26073

**FUEL CONTROL**

Attitude and propellant flow control system and method Patent  
[NASA-CASE-XMF-00185] c 21 N70-34539  
Flexible ring slosh damping baffle Patent  
[NASA-CASE-LAR-10317-1] c 32 N71-16103  
Buoyant anti-slosh system Patent  
[NASA-CASE-XLA-04605] c 32 N71-16106  
Control valve and co-axial variable injector Patent  
[NASA-CASE-XNP-09702] c 15 N71-17654  
Force-balanced, throttle valve Patent  
[NASA-CASE-NPO-10808] c 15 N71-27432  
Gas turbine engine fuel control  
[NASA-CASE-LEW-11187-1] c 28 N73-19793  
Automotive gas turbine fuel control  
[NASA-CASE-LEW-12785-1] c 37 N78-24545  
Electrical servo actuator bracket --- fuel control valves on jet engines  
[NASA-CASE-FRC-11044-1] c 37 N81-33483  
Heat pipes to reduce engine exhaust emissions  
[NASA-CASE-LEW-12590-1] c 37 N84-22958

**FUEL FLOW**

System for preconditioning a combustible vapor  
[NASA-CASE-NPO-12072] c 28 N72-22772

**FUEL FLOW REGULATORS**

Two-step rocket engine bipropellant valve Patent  
[NASA-CASE-XMS-04890-1] c 15 N70-22192  
Passively regulated water electrolysis rocket engine Patent  
[NASA-CASE-XGS-08729] c 28 N71-14044  
Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12830-1] c 07 N77-23106

**FUEL GAGES**

Response analyzers for sensors Patent  
[NASA-CASE-MFS-11204] c 14 N71-29134

**FUEL INJECTION**

Injector-valve device Patent  
[NASA-CASE-XLE-00303] c 15 N70-36535  
Rocket engine injector Patent  
[NASA-CASE-XLE-00111] c 28 N70-38199  
Injector assembly for liquid fueled rocket engines Patent  
[NASA-CASE-XMF-00968] c 28 N71-15660  
Injection head for delivering liquid fuel and oxidizers  
[NASA-CASE-NPO-10046] c 28 N72-17843  
Injector for use in high voltage isolators for liquid feed lines  
[NASA-CASE-NPO-11377] c 15 N73-27406  
Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c 07 N81-29129  
Low thrust monopropellant engine  
[NASA-CASE-GSC-12194-2] c 20 N82-18314  
Heat pipes to reduce engine exhaust emissions  
[NASA-CASE-LEW-12590-1] c 37 N84-22958  
Low loss injector for liquid propellant rocket engines  
[NASA-CASE-MFS-25989-1] c 20 N87-14420  
Method of injecting fluid propellants into a rocket combustion chamber  
[NASA-CASE-LEW-14846-2] c 20 N91-26200

**FUEL OILS**

Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12830-1] c 07 N77-23106

**FUEL PUMPS**

Fuel injection pump for internal combustion engines Patent  
[NASA-CASE-MSC-12139-1] c 28 N71-14058

**FUEL SYSTEMS**

Propellant feed isolator Patent  
[NASA-CASE-LEW-10210-1] c 28 N71-26781  
System for preconditioning a combustible vapor  
[NASA-CASE-NPO-12072] c 28 N72-22772  
Supersonic-combustion rocket  
[NASA-CASE-LEW-11058-1] c 20 N74-13502  
Fuel combustor  
[NASA-CASE-LEW-12137-1] c 25 N78-10224  
Fuel delivery system including heat exchanger means  
[NASA-CASE-LEW-12793-1] c 37 N79-11403  
Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c 07 N81-29129  
Apparatus for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-1] c 07 N83-36029  
Method for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-2] c 07 N86-20389

**FUEL TANK PRESSURIZATION**

Venting vapor apparatus Patent  
[NASA-CASE-XLE-00288] c 15 N70-34247  
Automatic pump Patent  
[NASA-CASE-XNP-04731] c 15 N71-24042  
Propellant tank pressurization system Patent  
[NASA-CASE-XNP-00650] c 27 N71-28929

**FUEL TANKS**

Reduced gravity liquid configuration simulator  
[NASA-CASE-XLE-02624] c 12 N69-39988  
Flexible ring slosh damping baffle Patent  
[NASA-CASE-LAR-10317-1] c 32 N71-16103  
Buoyant anti-slosh system Patent  
[NASA-CASE-XLA-04605] c 32 N71-16106  
Instrument for measuring the dynamic behavior of liquids Patent  
[NASA-CASE-XLA-05541] c 12 N71-26387  
Electrical apparatus for detection of thermal decomposition of insulation Patent  
[NASA-CASE-XMF-03968] c 14 N71-27186  
High performance channel injection sealant invention abstract  
[NASA-CASE-ARC-14408-1] c 27 N82-33523  
Tanker orbit transfer vehicle and method  
[NASA-CASE-MSC-20543-1] c 18 N84-22610  
Cryogenic insulation strength and bond tester  
[NASA-CASE-MFS-25910-1] c 39 N86-20841  
Cryogenic insulation system  
[NASA-CASE-LAR-13506-1] c 27 N89-12741  
Tank gauging apparatus and method  
[NASA-CASE-MSC-21059-2] c 35 N91-15511  
Tank gauging apparatus and method  
[NASA-CASE-MSC-21059-3] c 35 N91-21495

**FUEL VALVES**

Injector-valve device Patent  
[NASA-CASE-XLE-00303] c 15 N70-36535  
Semitoroidal diaphragm cavitating valve Patent  
[NASA-CASE-XNP-09704] c 12 N71-18615  
Filler valve Patent  
[NASA-CASE-XNP-01747] c 15 N71-23024  
Combination automatic-starting electrical plasma torch and gas shutoff valve --- for satellite attitude control  
[NASA-CASE-XLE-10717] c 37 N75-29426

**FUEL-AIR RATIO**

Flow modifying device  
[NASA-CASE-LEW-13562-2] c 07 N85-35195

**FUELS**

Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c 28 N81-14103

**FUNCTION GENERATORS**

Line following servosystem Patent  
[NASA-CASE-XAC-00001] c 15 N71-28952  
Digital quasi-exponential function generator  
[NASA-CASE-NPO-11130] c 08 N72-20176  
Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-10503-1] c 09 N72-21248  
Function generator for synthesizing complex vibration mode patterns  
[NASA-CASE-LAR-10310-1] c 10 N73-20253  
Derivation of a tangent function using an integrated circuit four-quadrant multiplier  
[NASA-CASE-MSC-13907-1] c 10 N73-26230  
A generalized compliant motion primitive  
[NASA-CASE-NPO-18134-1-CU] c 37 N91-32510

**FURLABLE ANTENNAS**

Unfurlable structure including coiled strips thrust launched upon tension release Patent  
[NASA-CASE-HQN-00937] c 07 N71-28979  
Singly-curved reflector for use in high-gain antennas  
[NASA-CASE-NPO-11361] c 07 N72-32169  
Furlable antenna --- antenna design  
[NASA-CASE-NPO-13553-1] c 33 N76-32457

**FURNACES**

High-speed infrared furnace  
[NASA-CASE-XLE-10466] c 17 N69-25147  
Black-body furnace Patent  
[NASA-CASE-XLE-01399] c 33 N71-15625  
Induction furnace with perforated tungsten foil shielding Patent  
[NASA-CASE-XLE-04026] c 14 N71-23267  
High temperature furnace for melting materials in space  
[NASA-CASE-MFS-20710] c 11 N72-23215  
High temperature strain gage calibration fixture  
[NASA-CASE-LAR-11500-1] c 35 N76-24523  
Exothermic furnace module  
[NASA-CASE-MFS-25707-1] c 35 N82-26631  
Apparatus and method for heating a material in a transparent ampoule --- crystal growth  
[NASA-CASE-MFS-25436-1] c 27 N83-36220  
Apparatus ad method for quiescent containerless processing of high temperature metals and alloys in low gravity  
[NASA-CASE-MFS-28087-1] c 35 N87-23944  
Method of preparing radially homogeneous mercury cadmium telluride crystals  
[NASA-CASE-MFS-25786-2] c 76 N90-20896  
High temperature electric arc furnace and method  
[NASA-CASE-MFS-28281-1] c 09 N90-23415  
Furnace for tensile/fatigue testing  
[NASA-CASE-LEW-14848-1] c 14 N91-27175

**FUSELAGES**

Fuselage structure using advanced technology fiber reinforced composites  
[NASA-CASE-LAR-11688-1] c 24 N82-26384  
Adapter for mounting a microphone flush with the external surface of the skin of a pressurized aircraft  
[NASA-CASE-FRC-11072-1] c 05 N83-27975  
Helicopter anti-torque system using strakes  
[NASA-CASE-LAR-13233-1] c 05 N84-33400  
Multi-body aircraft with an all-movable center fuselage actively controlling fuselage pressure drag  
[NASA-CASE-LAR-13511-1] c 05 N88-23765  
Helicopter anti-torque system using fuselage strakes  
[NASA-CASE-LAR-13630-1] c 08 N88-23809

**FUSION (MELTING)**

Bonding graphite with fused silver chloride  
[NASA-CASE-XGS-00963] c 15 N69-39735  
Method for fiberizing ceramic materials Patent  
[NASA-CASE-XNP-00597] c 18 N71-23088  
One-step dual purpose joining technique  
[NASA-CASE-LAR-12595-1] c 33 N82-26571  
Absorbable-susceptor joining of ceramic surfaces  
[NASA-CASE-NPO-15640-1] c 27 N84-22748  
Multicolor printing plate joining  
[NASA-CASE-LEW-13598-1] c 35 N84-22930  
Induction heating gun  
[NASA-CASE-LAR-13181-1] c 31 N85-29083

**FUSION WELDING**

Method for producing a solar cell having an integral protective covering  
[NASA-CASE-XGS-04531] c 03 N69-24267  
Weld control system using thermocouple wire Patent  
[NASA-CASE-MFS-06074] c 15 N71-20393  
Butt welder for fine gauge tungsten/rhenium thermocouple wire  
[NASA-CASE-LAR-10103-1] c 15 N73-14468  
Diffusion welding in air --- solid state welding of butt joint by fusion-welding, surface cleaning, and heating  
[NASA-CASE-LEW-11387-1] c 37 N74-18128

**G**

**GADOLINIUM**

Method of making a silicon semiconductor device Patent  
[NASA-CASE-XLE-02792] c 26 N71-10607  
Gd or Sm doped silicon semiconductor composition Patent  
[NASA-CASE-XLE-10715] c 26 N71-23292

**GALILEO PROJECT**

Reed-Solomon decoder  
[NASA-CASE-NPO-15982-1] c 60 N87-21591

**GALLIUM**

Floating two force component measuring device Patent  
[NASA-CASE-XAC-04885] c 14 N71-23790

**GALLIUM ARSENIDES**

GaAs solar detector using manganese as a doping agent Patent  
[NASA-CASE-XNP-01328] c 26 N71-18064  
Simple method of making photovoltaic junctions Patent  
[NASA-CASE-XNP-01960] c 09 N71-23027  
Method of changing the conductivity of vapor deposited gallium arsenide by the introduction of water into the vapor deposition atmosphere Patent  
[NASA-CASE-XNP-01961] c 26 N71-29156  
Vapor phase growth of groups 3-5 compounds by hydrogen chloride transport of the elements  
[NASA-CASE-LAR-11144-1] c 25 N75-26043  
Vapor deposition apparatus --- semiconductors and gallium arsenides  
[NASA-CASE-HQN-10462] c 25 N75-29192  
GaAs Schottky barrier photo-responsive device and method of fabrication  
[NASA-CASE-GSC-12816-1] c 76 N86-20150  
Liquid encapsulated crystal growth  
[NASA-CASE-NPO-16808-1-CU] c 76 N87-25868  
MBE growth technology for high quality strained III-V layers  
[NASA-CASE-NPO-17723-1-CU] c 76 N90-26685  
Motion detection, novelty filtering, and target tracking using an interferometric technique with a GaAs phase conjugate mirror  
[NASA-CASE-NPO-17784-1-CU] c 74 N91-13998  
Method of fabricating germanium and gallium arsenide devices  
[NASA-CASE-GSC-13265-1] c 76 N91-14066  
Millimeter-wave monolithic diode-grid frequency multiplier  
[NASA-CASE-NPO-17258-1-CU] c 33 N91-14551

**GALLIUM PHOSPHIDES**

Liquid encapsulated crystal growth  
[NASA-CASE-NPO-16808-1-CU] c 76 N87-25868

- Annealing group III-V compound doped silicon-germanium alloy for improved thermo-electric conversion efficiency  
[NASA-CASE-NPO-17259-1-CU] c 76 N90-19884
- GALVANIC SKIN RESPONSE**  
Method and apparatus for attaching physiological monitoring electrodes Patent  
[NASA-CASE-XFR-07658-1] c 05 N71-26293
- GAMMA RAY SPECTROMETERS**  
Low intensity X-ray and gamma-ray spectrometer  
[NASA-CASE-GSC-12587-1] c 35 N82-32659  
Method and apparatus for mapping the distribution of chemical elements in an extended medium  
[NASA-CASE-GSC-12808-1] c 25 N85-21279
- GAMMA RAYS**  
Compton scatter attenuation gamma ray spectrometer  
[NASA-CASE-MFS-21441-1] c 14 N73-30392  
Low intensity X-ray and gamma-ray imaging device --- fiber optics  
[NASA-CASE-GSC-12263-1] c 74 N79-20857  
Real-time 3-D X-ray and gamma-ray viewer  
[NASA-CASE-GSC-12640-1] c 74 N84-11920  
Three-dimensional and tomographic imaging device for X-ray and gamma-ray emitting objects  
[NASA-CASE-GSC-12851-1] c 35 N85-30281  
Gamma ray collimator  
[NASA-CASE-GSC-00013-1] c 38 N91-32515
- GANTRY CRANES**  
Mechanically extendible telescoping boom  
[NASA-CASE-NPO-11118] c 03 N72-25021
- GAPS**  
Electromagnetic transducer recording head having a laminated core section and tapered gap  
[NASA-CASE-NPO-10711-1] c 35 N77-21392  
Method of making a high voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c 44 N82-29709  
Thermally activated retainer means  
[NASA-CASE-MS-C-21793-1] c 16 N91-28186
- GARMENTS**  
Biomedical electrode arrangement Patent  
[NASA-CASE-XFR-10856] c 05 N71-11189  
Flexible joint for pressurizable garment  
[NASA-CASE-MS-C-11072] c 54 N74-32546  
Spacesuit torso closure  
[NASA-CASE-ARC-11100-1] c 54 N78-31736  
Urine collection apparatus --- feminine hygiene  
[NASA-CASE-MS-C-18381-1] c 52 N81-28740  
Thermal garment  
[NASA-CASE-XMS-03694-1] c 54 N82-29002
- GAS ANALYSIS**  
Gas analyzer for bi-gaseous mixtures Patent  
[NASA-CASE-XLA-01131] c 14 N71-10774  
Microbalance including crystal oscillators for measuring contaminants in a gas system Patent  
[NASA-CASE-NPO-10144] c 14 N71-17701  
Time of flight mass spectrometer with feedback means from the detector to the low source and a specific counter Patent  
[NASA-CASE-XNP-01056] c 14 N71-23041  
Dual resonant cavity absorption cell Patent  
[NASA-CASE-LAR-10305] c 14 N71-26137  
Ion microprobe mass spectrometer for analyzing fluid materials Patent  
[NASA-CASE-EFC-10014] c 14 N71-28863  
Nondispersive gas analyzing method and apparatus wherein radiation is serially passed through a reference and unknown gas  
[NASA-CASE-ARC-10308-1] c 06 N72-31141  
Method and apparatus for determining the contents of contained gas samples  
[NASA-CASE-GSC-10903-1] c 14 N73-12444  
Coaxial anode wire for gas radiation counters  
[NASA-CASE-GSC-11492-1] c 35 N74-26949  
Fast scan control for deflection type mass spectrometers  
[NASA-CASE-LAR-11428-1] c 35 N74-34857  
NDIR gas analyzer based on absorption modulation ratios for known and unknown samples  
[NASA-CASE-ARC-10802-1] c 35 N75-30502  
Stack plume visualization system  
[NASA-CASE-LAR-11675-1] c 45 N76-17656  
Nulling device for detection of trace gases by NDIR absorption  
[NASA-CASE-ARC-10760-1] c 25 N76-22323  
Analysis of volatile organic compounds --- trace amounts of organic volatiles in gas samples  
[NASA-CASE-MS-C-14428-1] c 23 N77-17161  
Fluid sampling device  
[NASA-CASE-GSC-12143-1] c 35 N77-32456  
Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c 25 N81-14015  
Stark effect spectrophone for continuous absorption spectra monitoring --- a technique for gas analysis  
[NASA-CASE-NPO-15102-1] c 25 N81-25159
- Method and device for determining heats of combustion of gaseous hydrocarbons  
[NASA-CASE-LAR-13528-1] c 25 N88-29002  
Device for quickly sensing the amount of O<sub>2</sub> in a combustion product gas  
[NASA-CASE-LAR-13816-1] c 35 N90-22025  
Apparatus and method for characterizing the transmission efficiency of a mass spectrometer  
[NASA-CASE-NPO-16989-1-CU] c 35 N91-14587
- GAS BAGS**  
Omnidirectional multiple impact landing system Patent  
[NASA-CASE-XLA-09881] c 31 N71-16085
- GAS BEARINGS**  
Externally pressurized fluid bearing Patent  
[NASA-CASE-XMF-00515] c 15 N70-34664  
Slit regulated gas journal bearing Patent  
[NASA-CASE-XNP-00476] c 15 N70-38620  
Air bearing Patent  
[NASA-CASE-XMF-00339] c 15 N70-39896  
Air bearing Patent  
[NASA-CASE-XMF-01887] c 15 N71-10617  
Fluid power transmission Patent  
[NASA-CASE-XMS-01445] c 12 N71-16031  
Bismuth-lead coatings for gas bearings used in atmospheric environments and vacuum chambers Patent  
[NASA-CASE-XGS-02011] c 15 N71-20739  
Swivel support for gas bearings Patent  
[NASA-CASE-XMF-07808] c 15 N71-23812  
Fluid power transmitting gas bearing Patent  
[NASA-CASE-ERC-10097] c 15 N71-28465  
Angular displacement indicating gas bearing support system Patent  
[NASA-CASE-XLA-09346] c 15 N71-28740  
Air bearing assembly for curved surfaces  
[NASA-CASE-MFS-20423] c 15 N72-11388  
Air bearing  
[NASA-CASE-WLP-10002] c 15 N72-17451  
Axially and radially controllable magnetic bearing  
[NASA-CASE-GSC-11551-1] c 37 N76-18459  
Thrust bearing  
[NASA-CASE-LEW-11949-1] c 37 N76-29588  
Cantilever mounted resilient pad gas bearing  
[NASA-CASE-LEW-12569-1] c 37 N79-10418  
Compliant hydrodynamic fluid journal bearing  
[NASA-CASE-LEW-13670-1] c 37 N86-19606
- GAS CHROMATOGRAPHY**  
Micropacked column for a chromatographic system  
[NASA-CASE-XNP-04816] c 06 N69-39936  
Baseline stabilization system for ionization detector Patent  
[NASA-CASE-XNP-03128] c 10 N70-41991  
Procedure and apparatus for determination of water in nitrogen tetroxide  
[NASA-CASE-NPO-10234] c 06 N72-17094  
Analysis of hydrogen-deuterium mixtures  
[NASA-CASE-NPO-11322] c 06 N72-25146  
Ultraviolet atomic emission detector  
[NASA-CASE-HQN-10756-1] c 14 N72-25428  
Method and apparatus for determining the contents of contained gas samples  
[NASA-CASE-GSC-10903-1] c 14 N73-12444  
Gas chromatograph injection system  
[NASA-CASE-ARC-10344-2] c 35 N75-26334  
Chelate-modified polymers for atmospheric gas chromatography  
[NASA-CASE-ARC-11154-1] c 25 N80-23383
- GAS COMPOSITION**  
Method and means for helium/hydrogen ratio measurement by alpha scattering  
[NASA-CASE-NPO-14079-1] c 25 N80-20334  
Microwave limb sounder --- measuring trace gases in the upper atmosphere  
[NASA-CASE-NPO-14544-1] c 46 N82-12685  
Mobile sampler for use in acquiring samples of terrestrial atmospheric gases  
[NASA-CASE-NPO-15220-1] c 45 N83-25217  
Moisture content and gas sampling device  
[NASA-CASE-MS-C-18866-1] c 35 N85-29213
- GAS COOLED REACTORS**  
Gas core nuclear reactor Patent  
[NASA-CASE-LEW-10250-1] c 22 N71-28759
- GAS COOLING**  
Refrigeration apparatus  
[NASA-CASE-NPO-10309] c 15 N69-23190  
Gas cooled high temperature thermocouple Patent  
[NASA-CASE-XLE-09475-1] c 33 N71-15568  
Apparatus and method for heating a material in a transparent ampoule --- crystal growth  
[NASA-CASE-MFS-25436-1] c 27 N83-36220
- GAS DENSITY**  
Dynamic sensor Patent  
[NASA-CASE-XAC-02877] c 14 N70-41681  
Method for measuring the characteristics of a gas Patent  
[NASA-CASE-XLA-03375] c 16 N71-24074
- Device for measuring light scattering wherein the measuring beam is successively reflected between a pair of parallel reflectors Patent  
[NASA-CASE-XER-11203] c 14 N71-28994  
Gaseous control system for nuclear reactors  
[NASA-CASE-XLE-04599] c 22 N72-20597  
Method of producing crystalline materials  
[NASA-CASE-NPO-10440] c 15 N72-21466  
Wide range dynamic pressure sensor  
[NASA-CASE-ARC-10263-1] c 14 N72-22438  
Apparatus for absolute pressure measurement  
[NASA-CASE-LAR-10000] c 14 N73-30394  
Method and apparatus for compensating reflection losses in a path length modulated absorption-absorption trace gas detector --- for determining density of gas  
[NASA-CASE-ARC-10631-1] c 74 N76-20958  
Method and apparatus for convection control of metallic halide vapor density in a metallic halide laser  
[NASA-CASE-NPO-15021-1] c 36 N83-10417
- GAS DETECTORS**  
Method for detecting hydrogen gas  
[NASA-CASE-XMF-03873] c 06 N69-39733  
Hydrogen leak detection device Patent  
[NASA-CASE-MFS-11537] c 14 N71-20442  
Leak detector wherein a probe is monitored with ultraviolet radiation Patent  
[NASA-CASE-ERC-10034] c 15 N71-24896  
Miniature carbon dioxide sensor and methods  
[NASA-CASE-MS-C-13332-1] c 14 N72-21408  
Fluorescence detector for monitoring atmospheric pollutants  
[NASA-CASE-NPO-13231-1] c 45 N75-27585  
Carbon monoxide monitor --- using real time operation  
[NASA-CASE-MFS-22060-1] c 35 N75-29380  
Method and apparatus for compensating reflection losses in a path length modulated absorption-absorption trace gas detector --- for determining density of gas  
[NASA-CASE-ARC-10631-1] c 74 N76-20958  
Indicator providing continuous indication of the presence of a specific pollutant in air  
[NASA-CASE-NPO-13474-1] c 45 N76-21742  
Particulate and aerosol detector  
[NASA-CASE-LAR-11434-1] c 35 N76-22509  
Cryogenic liquid sensor  
[NASA-CASE-NPO-10619-1] c 35 N77-21393  
Optically selective, acoustically resonant gas detecting transducer  
[NASA-CASE-ARC-10639-1] c 35 N78-13400  
Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c 25 N81-14015  
Stark effect spectrophone for continuous absorption spectra monitoring --- a technique for gas analysis  
[NASA-CASE-NPO-15102-1] c 25 N81-25159  
Portable remote laser sensor for methane leak detection  
[NASA-CASE-NPO-15790-1] c 36 N85-21631  
Predictive sensor method and apparatus  
[NASA-CASE-SSC-00006-1] c 35 N91-13691
- GAS DISCHARGE TUBES**  
Self-repeating plasma generator having communicating annular and linear arc discharge passages Patent  
[NASA-CASE-XLA-03103] c 25 N71-21693
- GAS DISCHARGES**  
Parametric microwave noise generator Patent  
[NASA-CASE-XER-11019] c 09 N71-23598  
Multiplex electric discharge gas laser system  
[NASA-CASE-NPO-16433-1] c 36 N87-23961  
Etching method for photoresists or polymers  
[NASA-CASE-ARC-11873-2] c 25 N91-31258
- GAS EVOLUTION**  
Filter system for control of outgas contamination in vacuum Patent  
[NASA-CASE-MFS-14711] c 15 N71-26185
- GAS EXPANSION**  
Sealed battery gas manifold construction Patent  
[NASA-CASE-XNP-03378] c 03 N71-11051  
Refrigeration apparatus Patent  
[NASA-CASE-XNP-08877] c 15 N71-23025  
Gas operated actuator  
[NASA-CASE-NPO-11340] c 15 N72-33477  
Multicomponent gas sorption Joule-Thomson refrigerator  
[NASA-CASE-NPO-17569-1-CU] c 31 N90-26176
- GAS FLOW**  
Fluid flow restrictor Patent  
[NASA-CASE-NPO-10117] c 15 N71-15608  
High pressure gas filter system Patent  
[NASA-CASE-MFS-12806] c 14 N71-17588  
Burst diaphragm flow initiator Patent  
[NASA-CASE-MFS-12915] c 11 N71-17600  
Method of recording a gas flow pattern Patent  
[NASA-CASE-XMF-01779] c 12 N71-20815  
Respiration monitor  
[NASA-CASE-FRC-10012] c 14 N72-17329

- Shock tube bypass piston tunnel  
[NASA-CASE-NPO-12109] c 11 N72-22245
- Fluidic proportional thruster system  
[NASA-CASE-ARC-10106-1] c 28 N72-22769
- Gas filter mounting structure  
[NASA-CASE-MSC-12297] c 14 N72-23457
- Pressurized lighting system  
[NASA-CASE-KSC-10644] c 09 N72-27227
- Method for controlling vapor content of a gas  
[NASA-CASE-NPO-10633] c 03 N72-28025
- Gas flow control device  
[NASA-CASE-NPO-11479] c 15 N73-13462
- Compact hydrogenator  
[NASA-CASE-NPO-11682-1] c 35 N74-15127
- Apparatus for establishing flow of a fluid mass having a known velocity  
[NASA-CASE-MFS-21424-1] c 34 N74-27730
- Condensate removal device for heat exchanger  
[NASA-CASE-MSC-14143-1] c 77 N75-20139
- Flow measuring apparatus  
[NASA-CASE-LEW-12078-1] c 35 N75-30503
- Gas compression apparatus  
[NASA-CASE-MSC-14757-1] c 35 N78-10428
- Variable cycle gas turbine engines  
[NASA-CASE-LEW-12916-1] c 37 N78-17384
- Covering solid, film cooled surfaces with a duplex thermal barrier coating  
[NASA-CASE-LEW-13450-1] c 31 N83-35177
- Apparatus and method for destructive removal of particles contained in flowing fluid  
[NASA-CASE-NPO-15426-1] c 35 N84-17555
- Vortex generating flow passage design for increased film cooling effectiveness  
[NASA-CASE-LEW-14039-1] c 34 N85-33433
- Technique for measuring gas conversion factors  
[NASA-CASE-LAR-13220-1] c 34 N86-12547
- Low noise lead screw positioner  
[NASA-CASE-NPO-15617-1] c 35 N87-21304
- High velocity gas particulate sampling system  
[NASA-CASE-MSC-21729-1] c 34 N91-17340
- Tank gauging apparatus and method  
[NASA-CASE-MSC-21059-3] c 35 N91-21495
- Arc/gas electrode  
[NASA-CASE-MFS-29766-1] c 33 N91-25335
- GAS GENERATORS**
- Specialized halogen generator for purification of water  
Patent  
[NASA-CASE-XLA-08913] c 14 N71-28933
- Quick disconnect coupling  
[NASA-CASE-NPO-11202] c 15 N72-25450
- Electrolytic gas operated actuator  
[NASA-CASE-NPO-11369] c 15 N73-13467
- Vortex breech high pressure gas generator  
[NASA-CASE-LAR-10549-1] c 31 N73-13898
- Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-1] c 37 N76-16446
- Hydrogen-rich gas generator  
[NASA-CASE-NPO-13464-1] c 44 N76-18642
- Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-2] c 44 N76-29700
- Hydrogen rich gas generator  
[NASA-CASE-NPO-13464-2] c 44 N76-29704
- Hydrogen-rich gas generator  
[NASA-CASE-NPO-13560-1] c 44 N77-10636
- GAS GUNS**
- Electric arc device for heating gases Patent  
[NASA-CASE-XAC-00319] c 25 N70-41628
- GAS HEATING**
- Bimetallic fluid displacement apparatus --- for stirring and heating stored gases and liquids  
[NASA-CASE-ARC-10441-1] c 35 N74-15126
- GAS INJECTION**
- Burning rate control of solid propellants Patent  
[NASA-CASE-XLE-03494] c 27 N71-21819
- Compact hydrogenator  
[NASA-CASE-NPO-11682-1] c 35 N74-15127
- Gas chromatograph injection system  
[NASA-CASE-ARC-10344-2] c 35 N75-26334
- In-situ laser retorting of oil shale  
[NASA-CASE-LEW-12217-1] c 43 N78-14452
- Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c 07 N78-25089
- Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c 45 N80-14579
- Solid sorbent air sampler  
[NASA-CASE-MSC-20653-1] c 35 N86-26595
- GAS IONIZATION**
- Electrostatic plasma modulator for space vehicle re-entry communication Patent  
[NASA-CASE-XLA-01400] c 07 N70-41331
- A multichannel photoionization chamber for absorption analysis Patent  
[NASA-CASE-ERC-10044-1] c 14 N71-27090
- Modulated hydrogen ion flame detector  
[NASA-CASE-ARC-10322-1] c 35 N76-18403
- Gas ion laser construction for electrically isolating the pressure gauge thereof  
[NASA-CASE-MFS-22597] c 36 N78-17366
- Charge transfer reaction laser with preionization means  
[NASA-CASE-NPO-13945-1] c 36 N78-27402
- Hydrogen hollow cathode ion source  
[NASA-CASE-LEW-12940-1] c 72 N80-33186
- Reversal electron attachment ionizer for detection of trace species  
[NASA-CASE-NPO-17596-1-CU] c 35 N89-28795
- GAS JETS**
- Apparatus and method to keep the walls of a free-space reactor free from deposits of solid materials  
[NASA-CASE-NPO-15851-1] c 37 N85-21652
- GAS LASERS**
- Method and apparatus for stabilizing a gaseous optical maser Patent  
[NASA-CASE-XGS-03644] c 16 N71-18614
- Inert gas metallic vapor laser  
[NASA-CASE-NPO-13449-1] c 36 N75-32441
- Diffused waveguiding capillary tube with distributed feedback for a gas laser  
[NASA-CASE-NPO-13544-1] c 36 N76-18428
- Gas ion laser construction for electrically isolating the pressure gauge thereof  
[NASA-CASE-MFS-22597] c 36 N78-17366
- Charge transfer reaction laser with preionization means  
[NASA-CASE-NPO-13945-1] c 36 N78-27402
- Solar pumped laser  
[NASA-CASE-LAR-12870-1] c 36 N84-16542
- Spectrophone stabilized laser with line center offset frequency control  
[NASA-CASE-NPO-15516-1] c 36 N84-22943
- Long gain length solar pumped box laser  
[NASA-CASE-LAR-13256-1] c 36 N86-29204
- GAS LUBRICANTS**
- Gas lubricant compositions Patent  
[NASA-CASE-XLE-00353] c 18 N70-39897
- Thrust bearing  
[NASA-CASE-LEW-11949-1] c 37 N76-29588
- Canilerver mounted resilient pad gas bearing  
[NASA-CASE-LEW-12569-1] c 37 N79-10418
- Dual clearance squeeze film damper  
[NASA-CASE-LEW-13506-1] c 37 N85-33490
- GAS MASERS**
- Solid state chemical source for ammonia beam maser Patent  
[NASA-CASE-XGS-01504] c 16 N70-41578
- Atomic hydrogen maser with bulb temperature control to remove wall shift in maser output frequency  
[NASA-CASE-HQN-10654-1] c 16 N73-13489
- Method of producing a storage bulb for an atomic hydrogen maser  
[NASA-CASE-NPO-13050-1] c 36 N75-15029
- Atomic standard with variable storage volume  
[NASA-CASE-GSC-11895-1] c 35 N76-15436
- GAS MIXTURES**
- Gas analyzer for bi-gaseous mixtures Patent  
[NASA-CASE-XLA-01131] c 14 N71-10774
- Vapor pressure measuring system and method Patent  
[NASA-CASE-XMS-01618] c 14 N71-20741
- Mixture separation cell Patent  
[NASA-CASE-XMS-02952] c 18 N71-20742
- Analysis of hydrogen-deuterium mixtures  
[NASA-CASE-NPO-11322] c 06 N72-25146
- Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-2] c 44 N76-29700
- Hydrogen-rich gas generator  
[NASA-CASE-NPO-13560-1] c 44 N77-10636
- Chemical vapor deposition reactor --- providing uniform film thickness  
[NASA-CASE-NPO-13650-1] c 25 N79-28253
- Multicomponent gas sorption Joule-Thomson refrigerator  
[NASA-CASE-NPO-17569-1-CU] c 31 N90-26176
- GAS PIPES**
- Fluid flow restrictor Patent  
[NASA-CASE-NPO-10117] c 15 N71-15608
- Trailer shield assembly for a welding torch  
[NASA-CASE-MFS-29260-1] c 37 N90-19602
- GAS PRESSURE**
- Measuring device Patent  
[NASA-CASE-XMS-01546] c 14 N70-40233
- Dynamic sensor Patent  
[NASA-CASE-XAC-02877] c 14 N70-41681
- Wide range dynamic pressure sensor  
[NASA-CASE-ARC-10263-1] c 14 N72-22438
- Measurement of gas production of microorganisms --- using pressure sensors  
[NASA-CASE-LAR-11326-1] c 35 N75-33368
- Depressurization of arc lamps  
[NASA-CASE-NPO-10790-1] c 33 N77-21316
- Pressure limiting propellant actuating system  
[NASA-CASE-MSC-18179-1] c 20 N80-18097
- Method and apparatus for producing gas-filled hollow spheres --- target pellets for inertial confinement fusion  
[NASA-CASE-NPO-14596-3] c 31 N83-31896
- Arc/gas electrode  
[NASA-CASE-MFS-29766-1] c 33 N91-25335
- Pressure vessel flex joint  
[NASA-CASE-MSC-21748-1] c 37 N91-25415
- GAS STREAMS**
- Method for measuring the characteristics of a gas  
Patent  
[NASA-CASE-XLA-03375] c 16 N71-24074
- Stagnation pressure probe --- for measuring pressure of supersonic gas streams  
[NASA-CASE-LAR-11139-1] c 35 N74-32878
- Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c 07 N78-18067
- Simultaneous treatment of SO<sub>2</sub> containing stack gases and waste water  
[NASA-CASE-MSC-16258-1] c 45 N79-12584
- Gas levitator having fixed levitation node for containerless processing  
[NASA-CASE-MFS-25509-1] c 35 N83-24828
- GAS TEMPERATURE**
- Method for measuring the characteristics of a gas  
Patent  
[NASA-CASE-XLA-03375] c 16 N71-24074
- GAS TRANSPORT**
- Purging means and method for Xenon arc lamps  
[NASA-CASE-NPO-11978] c 31 N78-17238
- GAS TUBES**
- Toggle mechanism for pinching metal tubes  
[NASA-CASE-GSC-12274-1] c 37 N79-28550
- GAS TUNGSTEN ARC WELDING**
- Internal wire guide for GTAW welding  
[NASA-CASE-MFS-29489-1] c 31 N90-23586
- Electrode carrying wire for GTAW welding  
[NASA-CASE-MFS-29491-1] c 31 N90-26168
- GAS TURBINE ENGINES**
- Gas turbine engine fuel control  
[NASA-CASE-LEW-11187-1] c 28 N73-19793
- Swirl can primary combustor  
[NASA-CASE-LEW-11326-1] c 23 N73-30665
- Controlled separation combustor --- airflow distribution in gas turbine engines  
[NASA-CASE-LEW-11593-1] c 20 N76-14190
- Fused silicite coatings containing discrete particles for protection niobium alloys --- used in space shuttle thermal protection systems and turbine engine components  
[NASA-CASE-LEW-11179-1] c 27 N76-16229
- Dual output variable pitch turbofan actuation system  
[NASA-CASE-LEW-12419-1] c 07 N77-14025
- Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12830-1] c 07 N77-23106
- Blade retainer assembly  
[NASA-CASE-LEW-12608-1] c 07 N77-27116
- Nickel base alloy --- for gas turbine engine stator vanes  
[NASA-CASE-LEW-12270-1] c 26 N77-32280
- Bearing seat usable in a gas turbine engine  
[NASA-CASE-LEW-12477-1] c 37 N77-32501
- Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12321-1] c 37 N78-10467
- Variable cycle gas turbine engines  
[NASA-CASE-LEW-12916-1] c 37 N78-17384
- Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-2] c 07 N78-18066
- Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c 07 N78-18067
- Automotive gas turbine fuel control  
[NASA-CASE-LEW-12785-1] c 37 N78-24545
- Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c 07 N78-25089
- Independent power generator  
[NASA-CASE-LAR-11208-1] c 44 N78-32539
- Redundant disc  
[NASA-CASE-LEW-12496-1] c 07 N78-33101
- Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-3] c 07 N79-14096
- Variable area exhaust nozzle  
[NASA-CASE-LEW-12378-1] c 07 N79-14097
- Power control for hot gas engines  
[NASA-CASE-NPO-14220-1] c 37 N81-14318
- Curved centerline air intake for a gas turbine engine  
[NASA-CASE-LEW-13201-1] c 07 N81-14999
- Apparatus for sensor failure detection and correction in a gas turbine engine control system  
[NASA-CASE-LEW-12907-2] c 07 N81-19115
- Active clearance control system for a turbomachine  
[NASA-CASE-LEW-12938-1] c 07 N82-32366
- Control means for a gas turbine engine  
[NASA-CASE-LEW-14586-1] c 07 N83-31603
- Silicon-slurry/aluminide coating --- protecting gas turbine engine vanes and blades  
[NASA-CASE-LEW-13343] c 26 N83-31795

- Apparatus for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-1] c 07 N83-36029
- Tip cap for a rotor blade  
[NASA-CASE-LEW-13654-1] c 07 N84-22560
- Combustor liner construction  
[NASA-CASE-LEW-14035-1] c 07 N84-24577
- Air modulation apparatus  
[NASA-CASE-LEW-13524-1] c 07 N84-33410
- Dual clearance squeeze film damper  
[NASA-CASE-LEW-13506-1] c 37 N85-33490
- Compliant hydrodynamic fluid journal bearing  
[NASA-CASE-LEW-13670-1] c 37 N86-19606
- Method for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-2] c 07 N86-20389
- Thermal stress minimized, two component, turbine shroud seal  
[NASA-CASE-LEW-14212-1] c 37 N88-23978
- GAS TURBINES**
- Gas turbine combustor Patent  
[NASA-CASE-LEW-10286-1] c 28 N71-28915
- Gas turbine exhaust nozzle --- for noise reduction  
[NASA-CASE-LEW-11569-1] c 07 N74-15453
- Gas turbine engine with convertible accessories  
[NASA-CASE-LEW-12390-1] c 07 N78-17056
- Counter pumping debris excluder and separator --- gas turbine shaft seals  
[NASA-CASE-LEW-11855-1] c 07 N78-25090
- Direct heating surface combustor  
[NASA-CASE-LEW-11877-1] c 34 N78-27357
- Apparatus and method for reducing thermal stress in a turbine rotor  
[NASA-CASE-LEW-12232-1] c 07 N79-10057
- Method and turbine for extracting kinetic energy from a stream of two-phase fluid  
[NASA-CASE-NPO-14130-1] c 34 N79-20335
- Corrosion resistant thermal barrier coating --- protecting gas turbines and other engine parts  
[NASA-CASE-LEW-13088-1] c 26 N81-25188
- Multi-heat addition turbine engine  
[NASA-CASE-LEW-15094-1] c 07 N91-23180
- GAS VALVES**
- High-temperature, high-pressure spherical segment valve Patent  
[NASA-CASE-XAC-00074] c 15 N70-34817
- Shrink-fit gas valve Patent  
[NASA-CASE-XGS-00587] c 15 N70-35087
- Thermally operated valve Patent  
[NASA-CASE-XLE-00815] c 15 N70-35407
- Transfer valve Patent  
[NASA-CASE-XAC-01158] c 15 N71-23051
- Slow opening valve --- valve design for shuttle portable oxygen system  
[NASA-CASE-MS-C-20112-1] c 37 N85-20338
- Zero-G phase detector and separator  
[NASA-CASE-LEW-14844-1] c 35 N90-22024
- GAS WELDING**
- Spectral method for monitoring atmospheric contamination of inert-gas welding shields Patent  
[NASA-CASE-XMF-02039] c 15 N71-15871
- Grain refinement control in TIG arc welding  
[NASA-CASE-MS-C-19095-1] c 37 N75-19683
- GAS-LIQUID INTERACTIONS**
- Fluid control apparatus and method  
[NASA-CASE-LAR-11110-1] c 34 N75-26282
- GAS-METAL INTERACTIONS**
- Improved refractory coatings --- sputtered coatings on substrates that form stable nitrides  
[NASA-CASE-LEW-23169-2] c 26 N81-16209
- Refractory coatings and method of producing the same  
[NASA-CASE-LEW-13169-1] c 26 N82-29415
- GASDYNAMIC LASERS**
- Diatom infrared gasdynamic laser --- for producing different wavelengths  
[NASA-CASE-ARC-10370-1] c 36 N75-31426
- GASEOUS DIFFUSION**
- Gas purged dry box glove Patent  
[NASA-CASE-XLE-02531] c 05 N71-23080
- Gas core nuclear reactor Patent  
[NASA-CASE-LEW-10250-1] c 22 N71-28759
- Gas diffusion liquid storage bag and method of use for storing blood  
[NASA-CASE-NPO-13930-1] c 52 N79-14749
- Drop deployment system for crystal growth apparatus  
[NASA-CASE-MFS-28422-1] c 29 N91-17250
- GASEOUS FISSION REACTORS**
- Gas core nuclear reactor Patent  
[NASA-CASE-LEW-10250-1] c 22 N71-28759
- GASEOUS ROCKET PROPELLANTS**
- Ion rocket Patent  
[NASA-CASE-XLE-00376] c 28 N70-37245
- Continuous detonation reaction engine. Patent  
[NASA-CASE-XMF-06926] c 28 N71-22983
- GASES**
- Gas liquefaction and dispensing apparatus Patent  
[NASA-CASE-NPO-10070] c 15 N71-27372
- Observation window for a gas confining chamber  
[NASA-CASE-NPO-10890] c 11 N73-12265
- Combustion detector  
[NASA-CASE-LAR-10739-1] c 14 N73-16484
- Low gravity phase separator  
[NASA-CASE-MS-C-14773-1] c 35 N78-12390
- Water separator  
[NASA-CASE-XMS-01295-1] c 37 N79-21345
- System for venting gas from a liquid storage tank  
[NASA-CASE-MS-C-21253-1] c 31 N90-20254
- Tank gauging apparatus and method  
[NASA-CASE-MS-C-21059-2] c 35 N91-15511
- GASIFICATION**
- Mixed polyvalent-monovalent metal coating for carbon-graphite fibers  
[NASA-CASE-NPO-14987-1] c 24 N83-33950
- GASKETS**
- Cryogenic connector for vacuum use Patent  
[NASA-CASE-XGS-02441] c 15 N70-41629
- Reinforced polyquinoxaline gasket and method of preparing the same --- resistant to ionizing radiation and liquid hydrogen temperatures  
[NASA-CASE-MFS-21364-1] c 37 N74-18126
- Process for preparing perfluorotriazine elastomers and precursors thereof  
[NASA-CASE-ARC-11402-1] c 27 N84-22744
- O-ring gasket test fixture  
[NASA-CASE-MFS-28376-1] c 14 N91-21175
- GATES (CIRCUITS)**
- Flux sensing device using a tubular core with toroidal gating coil and solenoidal output coil wound thereon Patent  
[NASA-CASE-XGS-01881] c 09 N70-40123
- SCR blocking pulse gate amplifier Patent  
[NASA-CASE-XLA-07497] c 09 N71-12514
- Logic AND gate for fluid circuits Patent  
[NASA-CASE-XLA-07391] c 12 N71-17579
- Synchronous counter Patent  
[NASA-CASE-XGS-02440] c 08 N71-19432
- Increasing efficiency of switching type regulator circuits Patent  
[NASA-CASE-XMS-09352] c 09 N71-23316
- Memory device for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-2] c 60 N78-10709
- Transformer regulated self-stabilizing chopper  
[NASA-CASE-XGS-09186] c 33 N78-17295
- Controller for computer control of brushless dc motors --- automobile engines  
[NASA-CASE-NPO-13970-1] c 33 N81-20352
- Combinational logic for generating gate drive signals for phase control rectifiers  
[NASA-CASE-MFS-25208-1] c 33 N83-10345
- Pulsed phase locked loop strain monitor --- voltage controlled oscillators  
[NASA-CASE-LAR-12772-1] c 33 N83-16626
- FET charge sensor and voltage probe  
[NASA-CASE-NPO-16045-1] c 76 N87-13313
- Auto and hetero-associative memory using a 2-D optical logic gate  
[NASA-CASE-NPO-17997-1-CU] c 60 N91-13888
- GATES (OPENINGS)**
- Film feed camera having a detent means Patent  
[NASA-CASE-LAR-10686] c 14 N71-28935
- GAW-1 AIRFOIL**
- Airfoil shape for flight at subsonic speeds --- design analysis and aerodynamic characteristics of the GAW-1 airfoil  
[NASA-CASE-LAR-10585-1] c 02 N76-22154
- GEAR TEETH**
- Wobble gear drive mechanism --- for aerospace environments  
[NASA-CASE-WOO-00625] c 37 N78-17385
- Belt for transmitting power from a cogged driving member to a cogged driven member  
[NASA-CASE-GSC-12289-1] c 37 N80-32717
- GEARS**
- Precision stepping drive Patent  
[NASA-CASE-MFS-14772] c 15 N71-17692
- Bidirectional step torque filter with zero backlash characteristic Patent  
[NASA-CASE-XGS-04227] c 15 N71-21744
- Self-lubricating gears and other mechanical parts Patent  
[NASA-CASE-MFS-14971] c 15 N71-24984
- Concentric differential gearing arrangement  
[NASA-CASE-ARC-10462-1] c 37 N74-27901
- Sequencing device utilizing planetary gear set  
[NASA-CASE-MS-C-19514-1] c 37 N79-20377
- Power control for hot gas engines  
[NASA-CASE-NPO-14220-1] c 37 N81-14318
- Clutchless multiple drive source for output shaft  
[NASA-CASE-ARC-11325-1] c 37 N82-22496
- Directional gear ratio transmissions  
[NASA-CASE-LAR-12644-1] c 37 N84-28084
- Linear force device  
[NASA-CASE-MS-C-20549-2] c 35 N88-24927
- GELATION**
- Method of controlling a resin curing process --- for fiber reinforced composites  
[NASA-CASE-MS-C-21169-1] c 27 N89-29539
- GELLED ROCKET PROPELLANTS**
- Process of forming particles in a cryogenic path Patent  
[NASA-CASE-NPO-10250] c 23 N71-16212
- GELS**
- Intermittent type silica gel adsorption refrigerator Patent  
[NASA-CASE-XNP-00920] c 15 N71-15906
- Cellular thermosetting fluoropolymers and process for making them  
[NASA-CASE-GSC-13008-1] c 27 N88-23894
- Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14162-1] c 27 N90-15259
- Tissue simulating gel for medical research  
[NASA-CASE-LAR-14036-1] c 27 N91-13562
- Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14489-1] c 37 N91-27562
- GENERAL AVIATION AIRCRAFT**
- Explosively activated egress area  
[NASA-CASE-LAR-12624-1] c 01 N83-35992
- GENERATORS**
- Apparatus for establishing flow of a fluid mass having a known velocity  
[NASA-CASE-MFS-21424-1] c 34 N74-27730
- Continuous laminar smoke generator  
[NASA-CASE-LAR-13014-1] c 09 N85-21178
- A digitally controlled system for effecting and presenting a selected electrical resistance  
[NASA-CASE-MFS-29149-1] c 33 N90-19492
- Slow positron beam generator for lifetime studies  
[NASA-CASE-LAR-14250-1-SB] c 72 N91-27936
- GENETIC ENGINEERING**
- Human serum albumin crystals and method of preparation  
[NASA-CASE-MFS-28234-1] c 52 N90-20616
- GEODESY**
- Geodetic distance measuring apparatus  
[NASA-CASE-GSC-12609-2] c 36 N83-29681
- GEODETTIC SURVEYS**
- Geodetic distance measuring apparatus  
[NASA-CASE-GSC-12609-1] c 36 N81-22344
- GEODIMETERS**
- Geodetic distance measuring apparatus  
[NASA-CASE-GSC-12609-1] c 36 N81-22344
- GEOLOGICAL SURVEYS**
- Borehole geological assessment  
[NASA-CASE-NPO-14231-1] c 46 N80-10709
- Geological assessment probe  
[NASA-CASE-NPO-14558-1] c 46 N80-24906
- GEOMETRY**
- Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-1] c 18 N84-22612
- Ice detector  
[NASA-CASE-LAR-13776-1] c 35 N88-29149
- Improving the geometric fidelity of imaging systems employing sensor arrays  
[NASA-CASE-NPO-17970-1-CU] c 43 N90-26384
- GERMANIUM**
- Germanium coated microbridge and method  
[NASA-CASE-MFS-23274-1] c 33 N78-13320
- Method of fabricating germanium and gallium arsenide devices  
[NASA-CASE-GSC-13265-1] c 76 N91-14066
- GERMANIUM ALLOYS**
- Annealing group III-V compound doped silicon-germanium alloy for improved thermo-electric conversion efficiency  
[NASA-CASE-NPO-17259-1-CU] c 76 N90-19884
- GIMBALS**
- Gimbaled, partially submerged rocket nozzle Patent  
[NASA-CASE-XMF-01544] c 28 N70-34162
- Azimuth laying system Patent  
[NASA-CASE-XMF-01669] c 21 N71-23289
- Passive caging mechanism Patent  
[NASA-CASE-GSC-10306-1] c 15 N71-24694
- Hermetic sealed vibration damper Patent  
[NASA-CASE-MSC-10959] c 15 N71-26243
- Bearing and gimbal lock mechanism and spiral flex lead module Patent  
[NASA-CASE-GSC-10556-1] c 31 N71-26537
- Failure detection and control means for improved drift performance of a gimbaled platform system  
[NASA-CASE-MFS-23551-1] c 04 N76-26175
- Autonomous navigation system --- gyroscopic pendulum for air navigation  
[NASA-CASE-ARC-11257-1] c 04 N81-21047

- Aircraft body-axis rotation measurement system  
[NASA-CASE-FRC-11043-1] c 06 N83-33882
- GLANDS (SEALS)**  
Spiral groove seal  
[NASA-CASE-XLE-10326-2] c 15 N72-29488  
Circumferential shaft seal  
[NASA-CASE-LEW-12119-2] c 37 N81-26447
- GLASS**  
Method for producing a solar cell having an integral protective covering  
[NASA-CASE-XGS-04531] c 03 N69-24267  
Reduced gravity liquid configuration simulator  
[NASA-CASE-XLE-02624] c 12 N69-39988  
Silicon solar cell with cover glass bonded to cell by metal pattern Patent  
[NASA-CASE-XLE-08569] c 03 N71-23449  
Apparatus for applying cover slides  
[NASA-CASE-NPO-10575] c 03 N72-25019  
Glass-to-metal seals comprising relatively high expansion metals  
[NASA-CASE-LEW-10698-1] c 37 N74-21063  
Covered silicon solar cells and method of manufacture --- with polymeric films  
[NASA-CASE-LEW-11065-2] c 44 N76-14600  
Window defect planar mapping technique  
[NASA-CASE-MSC-19442-1] c 74 N77-10899  
Method of forming shrink-fit compression seal  
[NASA-CASE-LAR-11563-1] c 37 N77-23482  
Reaction cured glass and glass coatings  
[NASA-CASE-ARC-11051-1] c 27 N78-32260  
Method of forming frozen spheres in a force-free drop tower  
[NASA-CASE-NPO-14845-1] c 27 N82-28442  
Method for milling and drilling glass  
[NASA-CASE-GSC-12636-1] c 31 N83-27058  
Acoustic bubble removal method  
[NASA-CASE-NPO-15334-1] c 71 N83-35781  
Glass heating panels and method for preparing the same from architectural reflective glass  
[NASA-CASE-NPO-15753-1] c 27 N84-33589  
Method of preparing a thermal barrier coating  
[NASA-CASE-LEW-14999-2] c 27 N91-26376  
Thin solar cell and lightweight array  
[NASA-CASE-LEW-14959-1] c 44 N91-27614
- GLASS COATINGS**  
Method of attaching a cover glass to a silicon solar cell Patent  
[NASA-CASE-XLE-08569-2] c 03 N71-24681  
Process for glass coating an ion accelerator grid Patent  
[NASA-CASE-LEW-10278-1] c 15 N71-28582  
Method of coating solar cell with borosilicate glass and resultant product  
[NASA-CASE-GSC-11514-1] c 03 N72-24037  
Transmitting and reflecting diffuser --- using ultraviolet grade fused silica coatings  
[NASA-CASE-LAR-10385-3] c 74 N78-15879  
Method for repair of thin glass coatings --- on space shuttle orbiter tiles  
[NASA-CASE-KSC-11097-1] c 27 N82-33520  
High temperature glass thermal control structure and coating --- for application to spacecraft reusable heat shielding  
[NASA-CASE-ARC-11164-1] c 44 N83-34448
- GLASS ELECTRODES**  
Liquid junction and method of fabricating the same Patent Application  
[NASA-CASE-NPO-10682] c 15 N70-34699  
Apparatus and method of inserting a microelectrode in body tissue or the like using vibration means  
[NASA-CASE-NPO-13910-1] c 52 N79-27836
- GLASS FIBER REINFORCED PLASTICS**  
Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-1] c 24 N79-16915  
Method of manufacture of bonded fiber flywheel --- fiberglass-epoxy  
[NASA-CASE-MFS-23674-1] c 24 N81-29163
- GLASS FIBERS**  
Non-magnetic battery case Patent  
[NASA-CASE-XGS-00886] c 03 N71-11053  
Lathe tool bit and holder for machining fiberglass materials  
[NASA-CASE-XLA-10470] c 15 N72-21489  
Polyimide resin-fiberglass cloth laminates for printed circuit boards  
[NASA-CASE-MFS-20408] c 18 N73-12604  
Method of repairing discontinuity in fiberglass structures  
[NASA-CASE-LAR-10416-1] c 24 N74-30001  
Fiber modified polyurethane foam for ballistic protection  
[NASA-CASE-ARC-10714-1] c 27 N76-15310  
Vacuum pressure molding technique  
[NASA-CASE-LAR-10073-1] c 37 N76-24575
- Glass compositions with a high modulus of elasticity --- nontoxic glass fibers  
[NASA-CASE-HQN-10274-1] c 27 N82-29451  
High modulus invert analog glass compositions containing beryllia  
[NASA-CASE-HQN-10931-2] c 27 N82-29452  
Method and technique for installing light-weight, fragile, high-temperature fiber insulation  
[NASA-CASE-MSC-16934-3] c 24 N84-16262  
Containerless high purity pulling process and apparatus for glass fiber  
[NASA-CASE-MFS-25905-2] c 31 N86-21718  
Quasi-containerless glass formation method and apparatus  
[NASA-CASE-MFS-28090-1] c 27 N87-21111
- GLASSWARE**  
Laboratory glassware rack for seismic safety  
[NASA-CASE-ARC-11422-1] c 35 N86-20751
- GLAUCOMA**  
Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12955-1] c 52 N80-14684
- GLIDE LANDINGS**  
Integrated launch and emergency vehicle system  
[NASA-CASE-LAR-13780-1] c 18 N91-13481
- GLIDE PATHS**  
Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c 05 N75-12930
- GLOBAL POSITIONING SYSTEM**  
Navigation system and method  
[NASA-CASE-GSC-12508-1] c 04 N84-22546  
High dynamic global positioning system receiver  
[NASA-CASE-NPO-16171-1CU] c 04 N86-27270  
Multistage estimation of received carrier signal parameters under very high dynamic conditions of the receiver  
[NASA-CASE-NPO-17911-1-CU] c 32 N90-27016  
System and method for measuring ocean surface currents at locations remote from land masses using synthetic aperture radar  
[NASA-CASE-NPO-17937-1-CU] c 43 N91-21621
- GLOBES**  
Orbital and entry tracking accessory for globes --- to provide range requirements for reentry vehicles to any landing site  
[NASA-CASE-LAR-10626-1] c 19 N74-21015
- GLOVES**  
Gas purged dry box glove Patent  
[NASA-CASE-XLE-02531] c 05 N71-23080  
Restraining mechanism  
[NASA-CASE-MSC-13054] c 54 N78-17677  
Heat resistant protective hand covering  
[NASA-CASE-MSC-20261-2] c 54 N84-23113  
Heat resistant protective hand covering  
[NASA-CASE-MSC-20261-1] c 54 N84-28484  
Ballast system for maintaining constant pressure in a glove box  
[NASA-CASE-NPO-17786-1-CU] c 35 N90-17104
- GLOW DISCHARGES**  
Deposition of alloy films --- on irregularly shaped metal object  
[NASA-CASE-LEW-11262-1] c 27 N74-13270  
Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
[NASA-CASE-ARC-11057-1] c 27 N78-31233  
Electric discharge for treatment of trace contaminants  
[NASA-CASE-ARC-10975-1] c 33 N79-15245  
Use of glow discharge in fluidized beds  
[NASA-CASE-ARC-11245-1] c 28 N82-18401
- GLUCOSE**  
Use of the enzyme hexokinase for the reduction of inherent light levels  
[NASA-CASE-XGS-05533] c 04 N69-27487
- GLYCOLS**  
Stabilized unsaturated polyesters  
[NASA-CASE-NPO-16103-1] c 27 N85-29043
- GOLD COATINGS**  
Thin window, drifted silicon, charged particle detector  
[NASA-CASE-XLE-10529] c 14 N69-23191  
Chromium electrodes for REDOX cells  
[NASA-CASE-LEW-13653-1] c 44 N84-28205
- GONDOLAS**  
System for stabilizing torque between a balloon and gondola  
[NASA-CASE-GSC-11077-1] c 02 N73-13008
- GRADIENTS**  
Alternating gradient photodetector  
[NASA-CASE-NPO-17235-1-CU] c 35 N90-21358
- GRANULAR MATERIALS**  
Soil particles separator, collector and viewer Patent  
[NASA-CASE-XNP-09770] c 15 N71-20440  
Carbon granule probe microphone for leak detection --- recovery boilers  
[NASA-CASE-NPO-16027-1] c 35 N85-21597
- GRAPHITE**  
Bonding graphite with fused silver chloride  
[NASA-CASE-XGS-00963] c 15 N69-39735  
Method of preparing graphite reinforced aluminum composite  
[NASA-CASE-MFS-21077-1] c 24 N75-28135  
Method of adhering bone to a rigid substrate using a graphite fiber reinforced bone cement  
[NASA-CASE-NPO-13764-1] c 27 N78-17215  
Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c 28 N81-14103  
Mixed polyvalent-monovalent metal coating for carbon-graphite fibers  
[NASA-CASE-NPO-14987-1] c 24 N83-33950  
Multistage spent particle collector and a method for making same  
[NASA-CASE-LEW-13914-1] c 37 N85-33489  
Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267  
Light weight fire resistant graphite composites  
[US-PATENT-4,598,007] c 24 N86-28131  
Light weight polymer matrix composite material  
[NASA-CASE-LEW-14734-1] c 24 N89-23623  
Apparatus for intercalating large quantities of fibrous structures  
[NASA-CASE-LEW-15077-2] c 24 N91-28289
- GRAPHITE-EPOXY COMPOSITES**  
Partial interlaminar separation system for composites  
[NASA-CASE-LAR-12065-1] c 24 N81-14000  
Method and device for detection of a substance --- determining carbon fiber release in fire situations  
[NASA-CASE-NPO-14940-1] c 23 N83-31954  
Method for machining holes in composite materials  
[NASA-CASE-MFS-28044-1] c 31 N87-25491
- GRAPHITIZATION**  
Graphite fluoride fiber polymer composite material  
[NASA-CASE-LEW-14472-1] c 24 N91-15320
- GRATINGS (SPECTRA)**  
Concave grating spectrometer Patent  
[NASA-CASE-XGS-01036] c 14 N70-40003  
Diffraction grating configuration for X-ray and ultraviolet focusing  
[NASA-CASE-GSC-12357-1] c 74 N80-21140  
Solar energy converter using surface plasma waves  
[NASA-CASE-LEW-13827-1] c 44 N85-21768
- GRAVIMETERS**  
Gravimeter Patent  
[NASA-CASE-XMF-05844] c 14 N71-17587
- GRAVITATION**  
Alignment apparatus using a laser having a gravitationally sensitive cavity reflector  
[NASA-CASE-ARC-10444-1] c 16 N73-33397  
Anti-gravity device  
[NASA-CASE-MFS-22758-1] c 70 N75-26789
- GRAVITATIONAL CONSTANT**  
Gravity device Patent  
[NASA-CASE-XMF-00424] c 11 N70-38196
- GRAVITATIONAL EFFECTS**  
Locomotion and restraint aid Patent  
[NASA-CASE-ARC-10153] c 05 N71-28619  
Rotary plant growth accelerating apparatus --- weightlessness  
[NASA-CASE-ARC-10722-1] c 51 N75-25503  
Method and apparatus for simulating gravitational forces on a living organism  
[NASA-CASE-MSC-20202-1] c 54 N84-16803  
Load positioning system with gravity compensation  
[NASA-CASE-ARC-11525-1] c 37 N86-27629
- GRAVITATIONAL FIELDS**  
Difference circuit Patent  
[NASA-CASE-XNP-08274] c 10 N71-13537  
Process for preparation of large-particle-size monodisperse latexes  
[NASA-CASE-MFS-25000-1] c 25 N81-19242  
Three-dimensional cell to tissue assembly process  
[NASA-CASE-MSC-21559-1] c 51 N91-13860
- GRAVITY GRADIENT SATELLITES**  
Stabilization of gravity oriented satellites Patent  
[NASA-CASE-XAC-01591] c 31 N71-17729  
Station keeping of a gravity gradient stabilized satellite Patent  
[NASA-CASE-XLA-03132] c 31 N71-22969
- GRAVITY GRADIOMETERS**  
Gravity device Patent  
[NASA-CASE-XMF-00424] c 11 N70-38196  
Gravity gradient attitude control system Patent  
[NASA-CASE-GSC-10555-1] c 21 N71-27324
- GRAZING INCIDENCE**  
Diffraction grating configuration for X-ray and ultraviolet focusing  
[NASA-CASE-GSC-12357-1] c 74 N80-21140  
Multispectral glancing incidence X-ray telescope  
[NASA-CASE-MFS-28013-1] c 89 N86-22459



**GRAZING INCIDENCE TELESCOPES**

Multispectral glancing incidence X-ray telescope  
[NASA-CASE-MFS-28013-1] c 89 N86-22459

**GREENHOUSES**

Method and apparatus for bio-regenerative life support system  
[NASA-CASE-MSC-21629-1] c 54 N91-31803

**GRIDS**

Method of making dished ion thruster grids  
[NASA-CASE-LEW-11694-1] c 20 N75-18310  
Apparatus for forming dished ion thruster grids  
[NASA-CASE-LEW-11694-2] c 37 N76-14461  
Method of constructing dished ion thruster grids to provide hole array spacing compensation  
[NASA-CASE-LEW-11876-1] c 20 N76-21276  
Solar cell grid patterns  
[NASA-CASE-NPO-13087-2] c 44 N76-31666

**GRINDING (MATERIAL REMOVAL)**

Laser apparatus for removing material from rotating objects Patent  
[NASA-CASE-MFS-11279] c 16 N71-20400  
Method for producing dispersion strengthened alloys by converting metal to a halide, comminuting, reducing the metal halide to the metal and sintering  
[NASA-CASE-LEW-10450-1] c 15 N72-25448  
Method of forming a sharp edge on an optical device  
[NASA-CASE-GSC-12348-1] c 74 N80-24149

**GRINDING MACHINES**

Grinding arrangement for ball nose milling cutters  
[NASA-CASE-LAR-10450-1] c 37 N74-27905

**GROOVES**

Energy absorbing device Patent  
[NASA-CASE-XMF-10040] c 15 N71-22877  
Spiral groove seal --- for hydraulic rotating shaft  
[NASA-CASE-LEW-10326-3] c 37 N74-10474  
Spiral groove seal --- for rotating shaft  
[NASA-CASE-XLE-10326-4] c 37 N74-15125  
Monogroove heat pipe design: Insulated liquid channel with bridging wick  
[NASA-CASE-MSC-20497-1] c 34 N85-29180  
Nozzle fabrication technique  
[NASA-CASE-MSC-21299-2] c 37 N91-32508

**GROUND EFFECT (COMMUNICATIONS)**

Ground plane interference elimination by passive element  
[NASA-CASE-NPO-16632-1-CU] c 32 N87-15390

**GROUND EFFECT MACHINES**

Gravity stabilized flying vehicle Patent  
[NASA-CASE-MSC-12111-1] c 02 N71-11039  
Air cushion lift pad Patent  
[NASA-CASE-MFS-14685] c 31 N71-15689  
Open tube guideway for high speed air cushioned vehicles  
[NASA-CASE-LAR-10256-1] c 85 N74-34672

**GROUND HANDLING**

Supporting and protecting device Patent  
[NASA-CASE-XMF-00580] c 11 N70-35383

**GROUND STATE**

Surface modification using low energy ground state ion beams  
[NASA-CASE-NPO-17498-1-CU] c 72 N91-14813

**GROUND STATIONS**

Traffic control system and method Patent  
[NASA-CASE-GSC-10087-1] c 02 N71-19287  
Method and apparatus for mapping planets  
[NASA-CASE-NPO-11001] c 07 N72-21118  
Ultra stable frequency distribution system  
[NASA-CASE-NPO-13836-1] c 32 N78-15323

**GROUND SUPPORT EQUIPMENT**

Dynamic Doppler simulator Patent  
[NASA-CASE-XMS-05454-1] c 07 N71-12391  
Controlled release device Patent  
[NASA-CASE-XKS-03338] c 15 N71-24043  
Apparatus for measuring an aircraft's speed and height  
[NASA-CASE-LAR-12275-1] c 35 N79-18296

**GROUND-AIR-GROUND COMMUNICATION**

Retrodirective optical system  
[NASA-CASE-XGS-04480] c 16 N69-27491  
Closed loop ranging system Patent  
[NASA-CASE-XNP-01501] c 21 N70-41930  
Location identification system  
[NASA-CASE-ERC-10324] c 07 N72-25173  
Satellite personal communications system  
[NASA-CASE-NPO-14480-1] c 32 N80-20448

**GROUT**

Antenna grout replacement system  
[NASA-CASE-NPO-15202-1] c 27 N83-34043

**GUANIDINES**

Method of making contamination-free ceramic bodies  
[NASA-CASE-LEW-14984-1] c 27 N91-16152

**GUARDS (SHIELDS)**

Safety shield for vacuum/pressure chamber viewing port  
[NASA-CASE-GSC-12513-1] c 31 N81-19343

Trailer shield assembly for a welding torch  
[NASA-CASE-MFS-29260-1] c 37 N90-19602

**GUIDANCE (MOTION)**

Gravity stabilized flying vehicle Patent  
[NASA-CASE-MSC-12111-1] c 02 N71-11039  
Adjustable attitude guide device Patent  
[NASA-CASE-XLA-07911] c 15 N71-15571  
Film feed camera having a detent means Patent  
[NASA-CASE-LAR-10686] c 14 N71-28935  
Two component bearing Patent  
[NASA-CASE-XLA-00013] c 15 N71-29136  
Cable stabilizer for open shaft cable operated elevators  
[NASA-CASE-KSC-10513] c 15 N72-25453  
Thumb-actuated two-axis controller  
[NASA-CASE-ARC-11372-1] c 08 N86-27288

**GUIDANCE SENSORS**

Light sensitive digital aspect sensor Patent  
[NASA-CASE-XGS-00359] c 14 N70-34158  
Guidance and maneuver analyzer Patent  
[NASA-CASE-XNP-09572] c 14 N71-15621  
Optical machine tool alignment indicator Patent  
[NASA-CASE-XAC-09489-1] c 15 N71-26673  
Light sensor  
[NASA-CASE-NPO-11311] c 14 N72-25414  
Sun direction detection system  
[NASA-CASE-NPO-13722-1] c 74 N77-22951  
Sun sensing guidance system for high altitude aircraft  
[NASA-CASE-FRC-11052-1] c 04 N82-29231  
Phase sensitive guidance sensor for wire-following vehicles  
[NASA-CASE-NPO-15341-1] c 35 N84-33769

**GUN LAUNCHERS**

Self-obturbating, gas operated launcher  
[NASA-CASE-NPO-11013] c 11 N72-22247

**GUN PROPELLANTS**

Nitramine propellants --- gun propellant burning rate  
[NASA-CASE-NPO-14103-1] c 28 N78-31255  
Hypervelocity gun --- using both electric and chemical energy for projectile propulsion  
[NASA-CASE-XLE-03186-1] c 09 N79-21084

**GUNN EFFECT**

Voltage tunable Gunn-type microwave generator Patent  
[NASA-CASE-XER-07894] c 09 N71-18721  
Shielded cathode mode bulk effect devices  
[NASA-CASE-ERC-10119] c 26 N72-21701  
Gunn-type solid state devices  
[NASA-CASE-LER-07895] c 26 N72-25679  
Magnetically actuated tuning method for Gunn oscillators  
[NASA-CASE-NPO-12106] c 09 N73-15235

**GUNS**

Method of peening and portable peening gun  
[NASA-CASE-MFS-23047-1] c 37 N76-18454

**GUNS (ORDNANCE)**

Ignitability test method and apparatus  
[NASA-CASE-LAR-14454-1] c 25 N91-32196

**GYNECOLOGY**

Cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c 52 N82-22875

**GYRATORS**

Gyrator type circuit Patent  
[NASA-CASE-XAC-10608-1] c 09 N71-12517  
Gyrator employing field effect transistors  
[NASA-CASE-MFS-21433] c 09 N73-20232  
Integrated P-channel MOS gyrator  
[NASA-CASE-MFS-22343-1] c 33 N74-34638  
Integrable power gyrator --- with Z-matrix design using parallel transistors  
[NASA-CASE-MFS-22342-1] c 33 N75-30428

**GYROSCOPES**

Externally pressurized fluid bearing Patent  
[NASA-CASE-XMF-00515] c 15 N70-34664  
Air bearing Patent  
[NASA-CASE-XMF-00339] c 15 N70-39896  
Spacecraft experiment pointing and attitude control system Patent  
[NASA-CASE-XLA-05464] c 21 N71-14132  
Temperature compensated digital inertial sensor --- circuit for maintaining inertial element of gyroscope or accelerometer at constant position  
[NASA-CASE-NPO-13044-1] c 35 N74-15094  
All sky pointing attitude control system  
[NASA-CASE-ARC-10716-1] c 35 N77-20399

**GYROSCOPIC PENDULUMS**

Autonomous navigation system --- gyroscopic pendulum for air navigation  
[NASA-CASE-ARC-11257-1] c 04 N81-21047

**GYROSTABILIZERS**

Passive dual spin misalignment compensators --- gyro-stabilized device  
[NASA-CASE-GSC-11479-1] c 35 N74-28097

Angular momentum control device used for stabilization of space vehicles and the like  
[NASA-CASE-LAR-11051-1] c 15 N76-14158  
Aircraft body-axis rotation measurement system  
[NASA-CASE-FRC-11043-1] c 06 N83-33882

**H****HABITATS**

Method and apparatus for bio-regenerative life support system  
[NASA-CASE-MSC-21629-1] c 54 N91-31803

**HAFNIUM**

Thermal shock resistant hafnia ceramic material  
[NASA-CASE-LAR-10894-1] c 18 N73-14584

**HALIDES**

Method for producing dispersion strengthened alloys by converting metal to a halide, comminuting, reducing the metal halide to the metal and sintering  
[NASA-CASE-LEW-10450-1] c 15 N72-25448  
Zinc-halide battery with molten electrolyte  
[NASA-CASE-NPO-11961-1] c 44 N76-18643

**HALL EFFECT**

Hall current measuring apparatus having a series resistor for temperature compensation Patent  
[NASA-CASE-XAC-01662] c 14 N71-23037  
Brushless direct current tachometer Patent  
[NASA-CASE-MFS-20385] c 09 N71-24904  
Hall effect transducer  
[NASA-CASE-LAR-10620-1] c 09 N72-25255  
Redundant speed control for brushless Hall effect motor  
[NASA-CASE-MFS-20207-1] c 09 N73-32107  
Hall effect magnetometer  
[NASA-CASE-LEW-11632-2] c 35 N75-13213  
Magnetic field control --- electromechanical torquing device  
[NASA-CASE-MFS-23828-1] c 33 N82-26569

**HALL GENERATORS**

Hall current measuring apparatus having a series resistor for temperature compensation Patent  
[NASA-CASE-XAC-01662] c 14 N71-23037

**HALOGENS**

Modified polyurethane foams for fuel-fire Patent  
[NASA-CASE-ARC-10098-1] c 06 N71-24739

**HAMMERS**

Apparatus for making diamonds  
[NASA-CASE-MFS-20698] c 15 N72-20446

**HAND (ANATOMY)**

Mechanically actuated triggered hand  
[NASA-CASE-MFS-20413] c 15 N72-21463  
Therapeutic hand exerciser  
[NASA-CASE-LAR-11667-1] c 52 N76-19785  
Compact artificial hand  
[NASA-CASE-NPO-13906-1] c 54 N79-24652

**HANDLES**

Releasable clamping apparatus  
[NASA-CASE-MFS-28192-1] c 37 N90-17154

**HANDLING EQUIPMENT**

Supporting and protecting device Patent  
[NASA-CASE-XMF-00580] c 11 N70-35383  
Device for handling printed circuit cards Patent  
[NASA-CASE-MFS-20453] c 15 N71-29133

**HARDENING (MATERIALS)**

Method of heat treating age-hardenable alloys  
[NASA-CASE-XNP-01311] c 26 N75-29236

**HARDNESS**

Deposition of diamondlike carbon films  
[NASA-CASE-LEW-14080-1] c 31 N85-20153

**HARMONIC GENERATIONS**

Millimeter-wave monolithic diode-grid frequency multiplier  
[NASA-CASE-NPO-17258-1-CU] c 33 N91-14551

**HARMONIC GENERATORS**

Wide band doubler and sine wave quadrature generator  
[NASA-CASE-NPO-11133] c 10 N72-20223

**HARNESSES**

Pressure suit tie-down mechanism Patent  
[NASA-CASE-XMS-00784] c 05 N71-12335  
One hand backpack harness  
[NASA-CASE-LAR-10102-1] c 05 N72-23085  
Shoulder harness and lap belt restraint system  
[NASA-CASE-ARC-10519-2] c 05 N75-25915

**HATCHES**

Emergency escape system Patent  
[NASA-CASE-MSC-12086-1] c 05 N71-12345  
Hatch cover  
[NASA-CASE-MSC-21356-1] c 18 N90-19278  
Double face sealing device  
[NASA-CASE-MFS-28521-1] c 37 N91-26542

**HAZARDS**

Hazards protection for space suits and spacecraft  
[NASA-CASE-MSC-21366-1] c 54 N90-25498

## HEAD-UP DISPLAYS

Heads up display  
[NASA-CASE-LAR-12630-1] c 06 N84-27733

**HEART**  
Passive fetal monitoring sensor  
[NASA-CASE-LAR-14088-1] c 35 N91-13686

**HEART FUNCTION**  
Ratemeter  
[NASA-CASE-MFS-20418] c 14 N73-24473  
Ultrasonic biomedical measuring and recording apparatus --- for recording motion of internal organs such as heart valves  
[NASA-CASE-ARC-10597-1] c 52 N74-20726

**HEART RATE**  
Digital cardiograph system Patent  
[NASA-CASE-XMS-02399] c 05 N71-22896  
Ratemeter  
[NASA-CASE-MFS-20418] c 14 N73-24473  
Digital computing cardiograph  
[NASA-CASE-MFS-20284-1] c 52 N74-12778  
Pulse transducer with artifact signal attenuator --- heart rate sensors  
[NASA-CASE-FRC-11012-1] c 52 N80-23969

**HEAT**  
Thermionic converter with current augmented by self induced magnetic field Patent  
[NASA-CASE-XLE-01903] c 22 N71-23599

**HEAT EXCHANGERS**  
Electro-thermal rocket Patent  
[NASA-CASE-XLE-00267] c 28 N70-33356  
Space suit heat exchanger Patent  
[NASA-CASE-XMS-09571] c 05 N71-19439  
Dual solid cryogenics for spacecraft refrigeration Patent  
[NASA-CASE-GSC-10188-1] c 23 N71-24725  
Shell side liquid metal boiler  
[NASA-CASE-NPO-10831] c 33 N72-20915  
Helium refrigerator and method for decontaminating the refrigerator  
[NASA-CASE-NPO-10634] c 23 N72-25619  
Condensate removal device for heat exchanger  
[NASA-CASE-MS-C-14143-1] c 77 N75-20139  
Heat exchanger system and method  
[NASA-CASE-LAR-10799-2] c 34 N76-17317  
Heat transfer device  
[NASA-CASE-MFS-22938-1] c 34 N76-18374  
Heat exchanger  
[NASA-CASE-MFS-22991-1] c 34 N77-10463  
Flat-plate heat pipe  
[NASA-CASE-GSC-11998-1] c 34 N77-32413  
Combustor --- low nitrogen oxide formation  
[NASA-CASE-NPO-13958-1] c 25 N79-11151  
Fuel delivery system including heat exchanger means  
[NASA-CASE-LEW-12793-1] c 37 N79-11403  
Heat exchanger --- rocket combustion chambers and cooling systems  
[NASA-CASE-LEW-12252-1] c 34 N79-13288  
Heat exchanger and method of making --- bonding rocket chambers with a porous metal matrix  
[NASA-CASE-LEW-12441-1] c 34 N79-13289  
Thermal energy transformer  
[NASA-CASE-NPO-14058-1] c 44 N79-18443  
Portable breathing system --- a breathing apparatus using a rebreathing system of heat exchangers for carbon dioxide removal  
[NASA-CASE-MS-C-16182-1] c 54 N80-10799  
Heat exchanger and method of making --- rocket lining  
[NASA-CASE-LEW-12441-2] c 34 N80-24573  
Heat exchanger and method of making  
[NASA-CASE-LEW-12441-3] c 44 N81-24519  
Cycling Joule Thomson refrigerator  
[NASA-CASE-NPO-15251-1] c 31 N83-31897  
Reciprocating magnetic refrigerator employing tandem porous matrices within a reciprocating displacer  
[NASA-CASE-NPO-16257-1] c 31 N85-29082  
Heat exchanger for electrothermal devices  
[NASA-CASE-LEW-14037-1] c 20 N87-16875  
Monogroove cold plate  
[NASA-CASE-MS-C-20946-1] c 34 N87-28867  
High effectiveness contour matching contact heat exchanger  
[NASA-CASE-MS-C-20840-1] c 34 N88-29132  
Capillary heat transport and fluid management device  
[NASA-CASE-MFS-28217-1] c 34 N89-14392  
Pressurized bellows flat contact heat exchanger interface  
[NASA-CASE-MS-C-21271-1] c 34 N90-21999  
Heat exchanger with oscillating flow  
[NASA-CASE-LAR-14033-1] c 34 N90-27072  
Thermal power transfer system using applied potential difference to sustain operating pressure difference  
[NASA-CASE-NPO-18034-1-CU] c 44 N91-13796

**HEAT FLUX**  
Heat flux sensor assembly  
[NASA-CASE-XMS-05909-1] c 14 N69-27459

Heat flux measuring system Patent  
[NASA-CASE-XFR-03802] c 33 N71-23085

Radial heat flux transformer  
[NASA-CASE-NPO-10828] c 33 N72-17948

Heat exchanger with oscillating flow  
[NASA-CASE-LAR-14033-1] c 34 N90-27072

Method of producing a plug type heat flux gauge  
[NASA-CASE-LEW-14967-2] c 35 N91-23460

Plug-type heat flux gauge  
[NASA-CASE-LAR-14967-1] c 35 N91-31608

**HEAT MEASUREMENT**  
Thermal detector of electromagnetic energy by means of a vibrating electrode Patent  
[NASA-CASE-XAC-10768] c 09 N71-18830  
Specific wavelength colorimeter --- for measuring given solute concentration in test sample  
[NASA-CASE-MS-C-14081-1] c 35 N74-27860  
Method and device for determining heats of combustion of gaseous hydrocarbons  
[NASA-CASE-LAR-13528-1] c 25 N88-29002

**HEAT OF COMBUSTION**  
Method and device for determining heats of combustion of gaseous hydrocarbons  
[NASA-CASE-LAR-13528-1] c 25 N88-29002

**HEAT OF VAPORIZATION**  
Pumped two-phase heat transfer loop  
[NASA-CASE-MS-C-20841-1] c 34 N87-22950

**HEAT PIPES**  
Heat pipe thermionic diode power system Patent  
[NASA-CASE-XMF-05843] c 03 N71-11055  
Microwave power receiving antenna Patent  
[NASA-CASE-MFS-20333] c 09 N71-13486  
Isothermal cover with thermal reservoirs Patent  
[NASA-CASE-MFS-20355] c 33 N71-25353  
Structural heat pipe --- for spacecraft wall thermal insulation system  
[NASA-CASE-GSC-11619-1] c 34 N75-12222  
Method of forming a wick for a heat pipe  
[NASA-CASE-NPO-13391-1] c 34 N76-27515  
Production of I-123  
[NASA-CASE-LEW-11390-3] c 25 N76-29379  
Heat pipe with dual working fluids  
[NASA-CASE-ARC-10198] c 34 N78-17336  
Multi-chamber controllable heat pipe  
[NASA-CASE-ARC-10199] c 34 N78-17337  
Thermal control canister  
[NASA-CASE-GSC-12253-1] c 34 N79-31523  
High thermal power density heat transfer --- thermionic converters  
[NASA-CASE-LEW-12950-1] c 34 N82-11399  
Heat pipes containing alkali metal working fluid  
[NASA-CASE-LEW-12253-1] c 74 N83-19596  
Heat pipe thermal switch  
[NASA-CASE-GSC-12812-1] c 34 N83-35307  
Thermal control system --- removing waste heat from industrial process spacecraft  
[NASA-CASE-GSC-12771-1] c 34 N84-14461  
Heat pipe cooled probe  
[NASA-CASE-LAR-12588-1] c 34 N85-21568  
High thermal power density heat transfer apparatus providing electrical isolation at high temperature using heat pipes  
[NASA-CASE-LEW-12950-2] c 34 N85-29179  
Multi-leg heat pipe evaporator  
[NASA-CASE-MS-C-20812-1] c 34 N86-27593  
Monogroove cold plate  
[NASA-CASE-MS-C-20946-1] c 34 N87-28867  
Space vehicle thermal rejection system  
[NASA-CASE-LAR-13738-1] c 18 N87-29586  
Polymeric heat pipe wick  
[NASA-CASE-GSC-13019-1] c 34 N88-29133  
Reusable high-temperature heat pipes and heat pipe panels  
[NASA-CASE-LAR-13761-1] c 34 N90-20323  
Ceramic heat pipe wick  
[NASA-CASE-GSC-13199-1] c 27 N90-23541  
Heat tube device  
[NASA-CASE-KSC-11395-1-CU] c 34 N91-21473  
Solar thermal energy receiver  
[NASA-CASE-LEW-14949-1] c 44 N91-23617

**HEAT PUMPS**  
Thermal pump-compressor for space use Patent  
[NASA-CASE-XLA-00377] c 33 N71-17610  
Manually actuated heat pump  
[NASA-CASE-NPO-10677] c 05 N72-11084  
Pump for delivering heated fluids  
[NASA-CASE-NPO-11417] c 15 N73-24513  
Magnetic heat pumping  
[NASA-CASE-LEW-12508-1] c 34 N78-17335  
Cooling system for high speed aircraft  
[NASA-CASE-LAR-12406-1] c 05 N81-26114  
Magnetic heat pumping  
[NASA-CASE-LEW-12508-3] c 34 N83-29625  
Ceramic heat pipe wick  
[NASA-CASE-GSC-13199-1] c 27 N90-23541

Convergent strand array liquid pumping system  
[NASA-CASE-NPO-17301-1-CU] c 31 N90-23587

**HEAT RADIATORS**  
Capillary radiator Patent  
[NASA-CASE-XLE-03307] c 33 N71-14035  
Radiator deployment actuator Patent  
[NASA-CASE-MS-C-11817-1] c 15 N71-26611  
Space simulation and radiative property testing system and method Patent  
[NASA-CASE-MFS-20096] c 14 N71-30026  
Space vehicle thermal rejection system  
[NASA-CASE-LAR-13738-1] c 18 N87-29586  
Arc-textured high emittance radiator surfaces  
[NASA-CASE-LEW-14679-1] c 27 N91-25296

**HEAT RESISTANT ALLOYS**  
High temperature nickel-base alloy Patent  
[NASA-CASE-XLE-00151] c 17 N70-33283  
Nickel-base alloy Patent  
[NASA-CASE-XLE-00283] c 17 N70-36616  
High temperature cobalt-base alloy Patent  
[NASA-CASE-XLE-02991] c 17 N71-16025  
Brazing alloy Patent  
[NASA-CASE-XNP-03063] c 17 N71-23365  
Method of forming superalloys  
[NASA-CASE-LEW-10805-1] c 15 N73-13465  
Method of making pressure tight seal for super alloy  
[NASA-CASE-LAR-10170-1] c 37 N74-11301  
Method of forming articles of manufacture from superalloy powders  
[NASA-CASE-LEW-10805-2] c 37 N74-13179  
Refractory porcelain enamel passive control coating for high temperature alloys  
[NASA-CASE-MFS-22324-1] c 27 N75-27160  
Cermet composition and method of fabrication --- heat resistant alloys and powders  
[NASA-CASE-NPO-13120-1] c 27 N76-15311  
Metallic hot wire anemometer --- for high speed wind tunnel tests  
[NASA-CASE-ARC-10911-1] c 35 N77-20400  
Method of growing composites of the type exhibiting the Soret effect --- improved structure of eutectic alloy crystals  
[NASA-CASE-MFS-22926-1] c 24 N77-27187  
Directionally solidified eutectic gamma plus beta nickel-base superalloys  
[NASA-CASE-LEW-12906-1] c 26 N77-32279  
Nickel base alloy --- for gas turbine engine stator vanes  
[NASA-CASE-LEW-12270-1] c 26 N77-32280  
Directionally solidified eutectic gamma-gamma-nickel-base superalloys  
[NASA-CASE-LEW-12905-1] c 26 N78-18183  
Coating with overlay metallic-cermet alloy systems  
[NASA-CASE-LEW-13639-2] c 26 N84-27855  
Heat treatment for superalloy  
[NASA-CASE-LEW-14262-1] c 26 N87-28647  
Elevated temperature aluminum alloys  
[NASA-CASE-LAR-13632-1] c 26 N87-29650  
Directional solidification of superalloys  
[NASA-CASE-MFS-28314-1] c 26 N91-14462  
Metallic threaded composite fastener  
[NASA-CASE-MS-C-21580-1] c 37 N91-23491

**HEAT SHIELDING**  
Heat flux sensor assembly  
[NASA-CASE-XMS-05909-1] c 14 N69-27459  
Heat shield oven  
[NASA-CASE-XMS-04318] c 15 N69-27871  
Heat shield Patent  
[NASA-CASE-XMS-00486] c 33 N70-33344  
Sandwich panel construction Patent  
[NASA-CASE-XLA-00349] c 33 N70-37979  
Hypersonic reentry vehicle Patent  
[NASA-CASE-XMS-04142] c 31 N70-41631  
Transpirationally cooled heat ablation system Patent  
[NASA-CASE-XMS-02677] c 31 N70-42075  
Azine polymers and process for preparing the same Patent  
[NASA-CASE-XMF-08656] c 06 N71-11242  
Synthesis of polymeric schiff bases by reaction of acetals and amine compounds Patent  
[NASA-CASE-XMF-08652] c 06 N71-11243  
Lightweight refractory insulation and method of preparing the same Patent  
[NASA-CASE-XMF-05279] c 18 N71-16124  
Thermal radiation shielding Patent  
[NASA-CASE-XLE-03432] c 33 N71-24145  
Spacecraft Patent  
[NASA-CASE-MS-C-13047-1] c 31 N71-25434  
Fabric for micrometeoroid protection garment Patent  
[NASA-CASE-MS-C-12109] c 18 N71-26285  
Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles  
[NASA-CASE-MS-C-12619-2] c 27 N79-12221  
Thermal insulation protection means  
[NASA-CASE-MS-C-12737-1] c 24 N79-25142

- Installing fiber insulation  
[NASA-CASE-MSC-16973-1] c 37 N81-14317
- Thermal barrier pressure seal --- shielding junctions between spacecraft control surfaces and structures  
[NASA-CASE-MSC-18134-1] c 37 N81-15363
- Multiwall thermal protection system  
[NASA-CASE-LAR-12620-1] c 24 N82-32417
- High temperature silicon carbide impregnated insulating fabrics  
[NASA-CASE-MSC-18832-1] c 27 N83-18908
- Mechanical fastener  
[NASA-CASE-LAR-12738-2] c 37 N85-30335
- HEAT SINKS**
- Thermal conductive connection and method of making same Patent  
[NASA-CASE-XMS-02087] c 09 N70-41717
- Constant temperature heat sink for calorimeters Patent  
[NASA-CASE-XMF-04208] c 33 N71-29051
- Tubular sublimatory evaporator heat sink  
[NASA-CASE-ARC-10912-1] c 34 N77-19353
- Compact pulsed laser having improved heat conductance  
[NASA-CASE-NPO-13147-1] c 36 N77-25502
- Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c 15 N78-32168
- Electroexplosive device  
[NASA-CASE-NPO-13858-1] c 28 N79-11231
- Thermal control canister  
[NASA-CASE-GSC-12253-1] c 34 N79-31523
- Heat pipe thermal switch  
[NASA-CASE-GSC-12812-1] c 34 N83-35307
- Self-actuating heat switches for redundant refrigeration systems  
[NASA-CASE-NPO-17085-1-CU] c 31 N89-12785
- High temperature refractory member with radiation emissive overcoat  
[NASA-CASE-NPO-17122-1-CU] c 27 N91-14489
- HEAT SOURCES**
- Conically shaped cavity radiometer with a dual purpose cone winding Patent  
[NASA-CASE-XNP-09701] c 14 N71-26475
- Thermally cascaded thermoelectric generator  
[NASA-CASE-NPO-10753] c 03 N72-26031
- Protected isotope heat source --- for atmospheric reentry protection and heat transmission to spacecraft  
[NASA-CASE-LEW-11227-1] c 73 N75-30876
- Portable electrophoresis apparatus using minimum electrolyte  
[NASA-CASE-NPO-13274-1] c 25 N79-10163
- Low gravity exothermic heating/cooling apparatus  
[NASA-CASE-MSC-25707-1] c 35 N85-29214
- High temperature electric arc furnace and method  
[NASA-CASE-MFS-28281-1] c 09 N90-23415
- HEAT STORAGE**
- Solar energy trap  
[NASA-CASE-MFS-22744-1] c 44 N76-24696
- Thermal energy storage system --- operating on superheating of liquids  
[NASA-CASE-MFS-23167-1] c 44 N76-31667
- Saltless solar pond  
[NASA-CASE-NPO-15808-1] c 44 N84-34792
- Stable density stratification solar pond  
[NASA-CASE-NPO-15419-2] c 44 N85-30474
- HEAT TRANSFER**
- Thermal switch Patent  
[NASA-CASE-XNP-00463] c 33 N70-36847
- Sandwich panel construction Patent  
[NASA-CASE-XLA-00349] c 33 N70-37979
- Apparatus for transferring cryogenic liquids Patent  
[NASA-CASE-XLE-00345] c 15 N70-38020
- Method of improving heat transfer characteristics in a nucleate boiling process Patent  
[NASA-CASE-XMS-04268] c 33 N71-16277
- Transmission line thermal short Patent  
[NASA-CASE-XNP-09775] c 09 N71-20445
- Heat sensing instrument Patent  
[NASA-CASE-XLA-01551] c 14 N71-22989
- Fluid phase analyzer Patent  
[NASA-CASE-NPO-10691] c 14 N71-26199
- Heat conductive resiliently compressible structure for space electronics package modules Patent  
[NASA-CASE-MSC-12389] c 33 N71-29052
- Space simulation and radiative property testing system and method Patent  
[NASA-CASE-MFS-20096] c 14 N71-30026
- Manually actuated heat pump  
[NASA-CASE-NPO-10677] c 05 N72-11084
- High intensity radiant energy pulse source having means for opening shutter when light flux has reached a desired level  
[NASA-CASE-ARC-10178-1] c 09 N72-17152
- Apparatus for sensing temperature  
[NASA-CASE-XLE-05230] c 14 N72-27410
- Thermal control system for a spacecraft modular housing  
[NASA-CASE-GSC-11018-1] c 31 N73-30829
- Thermal flux transfer system  
[NASA-CASE-NPO-12070-1] c 28 N73-32606
- Electrostatically controlled heat shutter  
[NASA-CASE-NPO-11942-1] c 33 N73-32818
- Heat transfer device  
[NASA-CASE-NPO-11120-1] c 34 N74-18552
- Heat exchanger  
[NASA-CASE-MFS-22991-1] c 34 N77-10463
- Heat pipe with dual working fluids  
[NASA-CASE-ARC-10198] c 34 N78-17336
- Low cost cryostat  
[NASA-CASE-NPO-14513-1] c 35 N81-14287
- Heat exchanger and method of making  
[NASA-CASE-LEW-12441-3] c 44 N81-24519
- Thermochemical generation of hydrogen  
[NASA-CASE-NPO-15015-1] c 25 N82-28368
- Heat pipes containing alkali metal working fluid  
[NASA-CASE-LEW-12253-1] c 74 N83-19596
- Automatic thermal switch --- spacecraft applications  
[NASA-CASE-GSC-12553-1] c 34 N83-28356
- Heat pipe thermal switch  
[NASA-CASE-GSC-12812-1] c 34 N83-35307
- Tip cap for a rotor blade  
[NASA-CASE-LEW-13654-1] c 07 N84-22560
- Heat pipes to reduce engine exhaust emissions  
[NASA-CASE-LEW-12590-1] c 37 N84-22958
- High thermal power density heat transfer apparatus providing electrical isolation at high temperature using heat pipes  
[NASA-CASE-LEW-12950-2] c 34 N85-29179
- Monogroove heat pipe design: Insulated liquid channel with bridging wick  
[NASA-CASE-MSC-20497-1] c 34 N85-29180
- Pumped two-phase heat transfer loop  
[NASA-CASE-MSC-20841-1] c 34 N87-22950
- Pumped two-phase heat transfer loop  
[NASA-CASE-MSC-20841-2] c 34 N88-23958
- Method and apparatus for growing crystals  
[NASA-CASE-MFS-28137-1] c 76 N88-24544
- Pressurized bellows flat contact heat exchanger interface  
[NASA-CASE-MSC-21271-1] c 34 N90-21999
- Hydrodynamic skin-friction reduction  
[NASA-CASE-LAR-14078-1-CU] c 34 N90-27071
- Heat exchanger with oscillating flow  
[NASA-CASE-LAR-14033-1] c 34 N90-27072
- Heat transfer device and method of making the same  
[NASA-CASE-LEW-14162-1] c 34 N91-13668
- Acoustic transducer apparatus with reduced thermal conduction  
[NASA-CASE-NPO-17620-1-CU] c 71 N91-14808
- Heat tube device  
[NASA-CASE-KSC-11395-1-CU] c 34 N91-21473
- Multi-heat addition turbine engine  
[NASA-CASE-LEW-15094-1] c 07 N91-23180
- Solar thermal energy receiver  
[NASA-CASE-LEW-14949-1] c 44 N91-23617
- Heat transfer device  
[NASA-CASE-LEW-14162-2] c 24 N91-25201
- Flexible thermal apparatus for mounting of thermoelectric cooler  
[NASA-CASE-NPO-17806-1-CU] c 31 N91-27385
- HEAT TRANSMISSION**
- Heat flow calorimeter --- measures output of Ni-Cd batteries  
[NASA-CASE-GSC-11434-1] c 34 N74-27859
- Protected isotope heat source --- for atmospheric reentry protection and heat transmission to spacecraft  
[NASA-CASE-LEW-11227-1] c 73 N75-30876
- Heat transparent high intensity high efficiency solar cell  
[NASA-CASE-LEW-12892-1] c 44 N83-14692
- HEAT TREATMENT**
- High-speed infrared furnace  
[NASA-CASE-XLE-10466] c 17 N69-25147
- Heat shield oven  
[NASA-CASE-XMS-04318] c 15 N69-27871
- Method for molding compounds Patent  
[NASA-CASE-XLA-01091] c 15 N71-10672
- Method of producing refractory bodies having controlled porosity Patent  
[NASA-CASE-LEW-10393-1] c 17 N71-15468
- Inorganic thermal control pigment Patent  
[NASA-CASE-XNP-02139] c 18 N71-24184
- Thermal compression bonding of interconnectors  
[NASA-CASE-GSC-10303] c 15 N72-22487
- Method of heat treating a formed powder product material  
[NASA-CASE-LEW-10805-3] c 26 N74-10521
- Diffusion welding --- heat treatment of nickel alloys following single step vacuum welding process  
[NASA-CASE-LEW-11388-2] c 37 N74-21055
- Heat sterilizable patient ventilator  
[NASA-CASE-NPO-13313-1] c 54 N75-27761
- Method of heat treating age-hardenable alloys  
[NASA-CASE-XNP-01311] c 26 N75-29236
- Method for detecting pollutants --- through chemical reactions and heat treatment  
[NASA-CASE-LAR-11405-1] c 45 N76-31714
- Method of producing complex aluminum alloy parts of high temper. and products thereof  
[NASA-CASE-MSC-19693-1] c 26 N78-24333
- Bakeable McLeod gauge  
[NASA-CASE-XGS-01293-1] c 35 N79-33450
- Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c 26 N80-28492
- Active hold-down for heat treating  
[NASA-CASE-NPO-16892-1-CU] c 37 N87-14704
- Heat treatment for superalloy  
[NASA-CASE-LEW-14262-1] c 26 N87-28647
- Method of preparing fiber reinforced ceramic material  
[NASA-CASE-LEW-14392-1] c 27 N87-28656
- Cellular thermosetting fluoropolymers and process for making them  
[NASA-CASE-GSC-13008-1] c 27 N88-23894
- Solidification processing of alloys using an applied electric field  
[NASA-CASE-MFS-26083-1-CU] c 26 N90-26940
- Thermal treatment of silicon integrated circuit chips to prevent and heal voids in aluminum metallization  
[NASA-CASE-NPO-17678-1-CU] c 76 N91-28014
- HEATERS**
- Inherent redundancy electric heater  
[NASA-CASE-MFS-21462-1] c 33 N74-14935
- HEATING**
- System for preconditioning a combustible vapor  
[NASA-CASE-NPO-12072] c 28 N72-22772
- Diffusion welding in air --- solid state welding of butt joint by fusion welding, surface cleaning, and heating  
[NASA-CASE-LEW-11387-1] c 37 N74-18128
- Heating and cooling system --- for fatigue test specimens  
[NASA-CASE-LAR-12393-1] c 34 N83-34221
- Low gravity exothermic heating/cooling apparatus  
[NASA-CASE-MSC-25707-1] c 35 N85-29214
- Method for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-2] c 07 N86-20389
- Thermocouple for heating and cooling of memory metal actuators  
[NASA-CASE-NPO-17068-1-CU] c 35 N88-29151
- Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-2-SB] c 27 N90-21177
- Acoustic convective system  
[NASA-CASE-NPO-17278-1-CU] c 31 N90-21215
- Convergent strand array liquid pumping system  
[NASA-CASE-NPO-17301-1-CU] c 31 N90-23587
- Furnace for tensile/fatigue testing  
[NASA-CASE-LEW-14848-1] c 14 N91-27175
- HEATING EQUIPMENT**
- Method and apparatus for controllably heating fluid Patent  
[NASA-CASE-XMF-04237] c 33 N71-16278
- Electric arc apparatus Patent  
[NASA-CASE-XAC-01677] c 09 N71-20816
- Radial heat flux transformer  
[NASA-CASE-NPO-10828] c 33 N72-17948
- Self-cycling fluid heater  
[NASA-CASE-MSC-15567-1] c 33 N73-16918
- Portable heatable container  
[NASA-CASE-NPO-14237-1] c 44 N80-20808
- Glass heating panels and method for preparing the same from architectural reflective glass  
[NASA-CASE-NPO-15753-1] c 27 N84-33589
- Precision manipulator heating and cooling apparatus for use in UHV systems with sample transfer capability  
[NASA-CASE-LAR-13040-1] c 37 N85-29286
- Spacecraft component heater control system  
[NASA-CASE-MFS-28327-1] c 16 N89-28556
- Active control of boundary layer transition and turbulence  
[NASA-CASE-LAR-13532-1] c 34 N91-14562
- HEIGHT**
- Sidelooking laser altimeter for a flight simulator  
[NASA-CASE-ARC-11312-1] c 36 N83-34304
- HELICAL ANTENNAS**
- Weatherproof helix antenna Patent  
[NASA-CASE-XKS-08485] c 07 N71-19493
- Collapsible high gain antenna  
[NASA-CASE-KSC-10392] c 07 N73-26117
- HELICOPTER CONTROL**
- Helicopter anti-torque system using fuselage strakes  
[NASA-CASE-LAR-13630-1] c 08 N88-23809
- HELICOPTER DESIGN**
- Helicopter anti-torque system using fuselage strakes  
[NASA-CASE-LAR-13630-1] c 08 N88-23809

## HELICOPTER WAKES

Variable geometry rotor system  
[NASA-CASE-LAR-10557] c 02 N72-11018

**HELICOPTERS**

Hingeless helicopter rotor with improved stability  
[NASA-CASE-ARC-10807-1] c 05 N77-17029

Non-destructive method for applying and removing instrumentation on helicopter rotor blades  
[NASA-CASE-LAR-11201-1] c 35 N78-24515

Constant lift rotor for a heavier than air craft  
[NASA-CASE-ARC-11045-1] c 05 N79-17847

Shapes for rotating airfoils  
[NASA-CASE-LAR-12396-1] c 02 N84-28732

Helicopter anti-torque system using strakes  
[NASA-CASE-LAR-13233-1] c 05 N84-33400

Swashplate control system  
[NASA-CASE-ARC-11633-1] c 08 N87-23631

High lift, low pitching moment airfoils  
[NASA-CASE-LAR-13215-1] c 02 N89-14224

Airborne rescue system  
[NASA-CASE-ARC-11909-1] c 03 N91-31113

**HELIOSTATS**

Solar tracking system  
[NASA-CASE-MFS-23999-1] c 44 N81-24520

**HELIUM**

Helium refining by superfluidity Patent  
[NASA-CASE-XNP-00733] c 06 N70-34946

High pressure helium purifier Patent  
[NASA-CASE-XMF-06888] c 15 N71-24044

Method and apparatus for generating coherent radiation in the ultra-violet region and above by use of distributed feedback  
[NASA-CASE-NPO-13346-1] c 36 N76-29575

Cryostat system for temperatures on the order of 2 deg. K or less  
[NASA-CASE-NPO-13459-1] c 31 N77-10229

Thermal compensator for closed-cycle helium refrigerator --- assuring constant temperature for an infrared laser diode  
[NASA-CASE-GSC-12168-1] c 31 N79-17029

Reciprocating magnetic refrigerator employing tandem porous matrices within a reciprocating displacer  
[NASA-CASE-NPO-16257-1] c 31 N85-29082

**HELIUM HYDROGEN ATMOSPHERES**

Method and means for helium/hydrogen ratio measurement by alpha scattering  
[NASA-CASE-NPO-14079-1] c 25 N80-20334

**HELIUM IONS**

Charge transfer reaction laser with preionization means  
[NASA-CASE-NPO-13945-1] c 36 N78-27402

**HELIUM-NEON LASERS**

Laser communication system for controlling several functions at a location remote to the laser  
[NASA-CASE-LAR-10311-1] c 16 N73-16536

Direction sensitive laser velocimeter --- determining the direction of particles using a helium-neon laser  
[NASA-CASE-LAR-12177-1] c 36 N81-24422

Radiation sensitive area detection device and method  
[NASA-CASE-MFS-28563-1] c 35 N91-25388

**HELMET MOUNTED DISPLAYS**

EMU helmet mounted display  
[NASA-CASE-MS-C-21460-1] c 54 N91-13879

**HELMETS**

Helmet assembly and latch means therefor Patent  
[NASA-CASE-XMS-04935] c 05 N71-11190

Electrode construction Patent  
[NASA-CASE-ARC-10043-1] c 05 N71-11193

Venting device for pressurized space suit helmet Patent  
[NASA-CASE-XMS-09652-1] c 05 N71-26333

Helmet latching and attaching ring  
[NASA-CASE-XMS-04670] c 54 N78-17678

Protective garment ventilation system  
[NASA-CASE-XMS-04928] c 54 N78-17679

Helmet feedport  
[NASA-CASE-XMS-09653] c 54 N78-17680

Emergency space-suit helmet  
[NASA-CASE-MS-C-10954-1] c 54 N78-18761

Helmet weight simulator  
[NASA-CASE-LAR-12320-1] c 54 N81-27806

**HELMHOLTZ RESONATORS**

Acoustic ground impedance meter  
[NASA-CASE-LAR-12995-1] c 35 N84-22933

**Hemispherical Shells**

Anti-glare improvement for optical imaging systems Patent  
[NASA-CASE-NPO-10337] c 14 N71-15604

**HERMETIC SEALS**

Line cutter Patent  
[NASA-CASE-XMS-04072] c 15 N70-42017

Hermetically sealed explosive release mechanism Patent  
[NASA-CASE-XGS-00824] c 15 N71-16078

Traveling sealer for contoured table Patent  
[NASA-CASE-XLA-01494] c 15 N71-24164

Method for detecting leaks in hermetically sealed containers Patent  
[NASA-CASE-ERC-10045] c 15 N71-24910

Hermetic sealed vibration damper Patent  
[NASA-CASE-MSC-10959] c 15 N71-26243

Method of forming ceramic to metal seal Patent  
[NASA-CASE-XNP-01263-2] c 15 N71-26312

Pressure seal Patent  
[NASA-CASE-NPO-10796] c 15 N71-27068

Tube sealing device Patent  
[NASA-CASE-NPO-10431] c 15 N71-29132

Hermetically sealed elbow actuator  
[NASA-CASE-MFS-14710] c 09 N72-22195

Heat transfer device  
[NASA-CASE-NPO-11120-1] c 34 N74-18552

Device for tensioning test specimens within an hermetically sealed chamber  
[NASA-CASE-MFS-23281-1] c 35 N77-22450

Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c 54 N78-32721

Hermetic seal for a shaft  
[NASA-CASE-NPO-15115-1] c 37 N82-24493

Method for forming hermetic seals  
[NASA-CASE-NPO-16423-1-CU] c 37 N87-21334

Hermetically sealable package for hybrid solid-state electronic devices and the like  
[NASA-CASE-MSC-20181-1] c 33 N88-23941

**HETEROJUNCTIONS**

High-gain AlGaAs/GaAs double heterojunction Darlington phototransistors for optical neural networks  
[NASA-CASE-NPO-18101-1-CU] c 74 N91-25841

**HEXAGONS**

Hexagon solar power panel  
[NASA-CASE-NPO-12148-1] c 44 N78-27515

**HEXAMETHYLENETETRAMINE**

Structural wood panels with improved fire resistance  
[NASA-CASE-ARC-11174-1] c 24 N81-13999

**HEXOKINASE**

Use of the enzyme hexokinase for the reduction of inherent light levels  
[NASA-CASE-XGS-05533] c 04 N69-27487

**HIERARCHIES**

Fault tolerant hypercube computer system architecture  
[NASA-CASE-NPO-16859-1-CU] c 60 N90-21527

Bilevel shared control for teleoperators  
[NASA-CASE-NPO-17800-1-CU] c 37 N91-13724

**HIGH ACCELERATION**

Universal pilot restraint suit and body support therefor Patent  
[NASA-CASE-XAC-00405] c 05 N70-41819

High acceleration cable deployment system  
[NASA-CASE-ARC-11256-1] c 15 N82-24272

**HIGH ALTITUDE**

Balanced bellows spirometer  
[NASA-CASE-XAR-01547] c 05 N69-21473

Sun sensing guidance system for high altitude aircraft  
[NASA-CASE-FRC-11052-1] c 04 N82-23231

**HIGH ALTITUDE BALLOONS**

Thin film strain transducer  
[NASA-CASE-WLP-10055-1] c 35 N84-28015

Thin film strain transducer --- suitable for in-flight measurement of scientific balloon strain  
[NASA-CASE-WLP-10055-2] c 35 N85-21598

**HIGH ALTITUDE ENVIRONMENTS**

Method of making a solid propellant rocket motor Patent  
[NASA-CASE-XLA-04126] c 28 N71-26779

**HIGH ASPECT RATIO**

Landing arrangement for aerial vehicles Patent  
[NASA-CASE-XLA-00142] c 02 N70-33286

Landing arrangement for aerial vehicle Patent  
[NASA-CASE-XLA-00806] c 02 N70-34858

Means for controlling aerodynamically induced twist  
[NASA-CASE-LAR-12175-1] c 05 N82-28279

**HIGH FREQUENCIES**

Apparatus for ballasting high frequency transistors  
[NASA-CASE-XGS-05003] c 09 N69-24318

Holder for crystal resonators Patent  
[NASA-CASE-XNP-03637] c 15 N71-21311

Multiple varactor frequency doubler Patent  
[NASA-CASE-XMF-04958-1] c 10 N71-26414

Filtering technique based on high-frequency plant modeling for high-gain control  
[NASA-CASE-LAR-12215-1] c 08 N79-23097

Method of and apparatus for double-exposure holographic interferometry  
[NASA-CASE-MFS-25405-1] c 35 N84-22929

JFET reflection oscillator  
[NASA-CASE-GSC-12555-1] c 33 N86-19515

Improved high power/high frequency inductor  
[NASA-CASE-NPO-17830-1-CU] c 33 N91-14539

**HIGH GAIN**

Filtering technique based on high-frequency plant modeling for high-gain control  
[NASA-CASE-LAR-12215-1] c 08 N79-23097

## HIGH PASS FILTERS

Radio frequency coaxial high pass filter Patent  
[NASA-CASE-XGS-01418] c 09 N71-23573

**HIGH POLYMERS**

Variable stiffness polymeric damper  
[NASA-CASE-XAC-11225] c 14 N69-27486

**HIGH POWER LASERS**

Large volume multiple-path nuclear pumped laser  
[NASA-CASE-LAR-12592-1] c 36 N82-13415

Pulse switching for high energy lasers  
[NASA-CASE-NPO-14556-1] c 33 N82-24418

High power metallic halide laser --- amplifying a copper chloride laser  
[NASA-CASE-NPO-14782-1] c 36 N82-28616

Solar pumped laser  
[NASA-CASE-LAR-12870-1] c 36 N84-16542

**HIGH PRESSURE**

High-temperature, high-pressure spherical segment valve Patent  
[NASA-CASE-XAC-00074] c 15 N70-34817

High pressure four-way valve Patent  
[NASA-CASE-XNP-00214] c 15 N70-36908

High pressure filter Patent  
[NASA-CASE-XNP-00732] c 28 N70-41447

Antiflutter ball check valve Patent  
[NASA-CASE-XNP-01152] c 15 N70-41811

Liquid flow sight assembly Patent  
[NASA-CASE-XLE-02998] c 14 N70-42074

High pressure regulator valve Patent  
[NASA-CASE-XNP-00710] c 15 N71-10778

Hypersonic test facility Patent  
[NASA-CASE-XLA-00378] c 11 N71-15925

High pressure air valve Patent  
[NASA-CASE-MS-C-11010] c 15 N71-19485

Valve seat with resilient support member Patent  
[NASA-CASE-XKS-02582] c 15 N71-21234

High pressure helium purifier Patent  
[NASA-CASE-XMF-06888] c 15 N71-24044

Liquid aerosol dispenser  
[NASA-CASE-MFS-20829] c 12 N72-21310

Gas compression apparatus  
[NASA-CASE-MS-C-14757-1] c 35 N78-10428

Purging means and method for Xenon arc lamps  
[NASA-CASE-NPO-11978] c 31 N78-17238

Shaft seal assembly for high speed and high pressure applications  
[NASA-CASE-LEW-11873-1] c 37 N79-22475

Surface conforming thermal/pressure seal --- tail assemblies of space shuttle orbiters  
[NASA-CASE-MS-C-18422-1] c 37 N82-16408

Damping seal for turbomachinery  
[NASA-CASE-MFS-25842-2] c 37 N86-20788

High-temperature, high-pressure optical cell  
[NASA-CASE-MFS-26000-1] c 74 N87-14971

Ultrasonic depth gauge for liquids under high pressure  
[NASA-CASE-LAR-13300-1-CU] c 35 N89-14407

High-pressure promoted combustion chamber  
[NASA-CASE-MS-C-21470-1] c 09 N91-21157

Variable orifice flow regulator  
[NASA-CASE-MS-C-21549-1] c 34 N91-27504

**HIGH RESOLUTION**

High pulse rate high resolution optical radar system  
[NASA-CASE-NPO-11426] c 07 N73-26119

High resolution Fourier interferometer-spectrophotopolarimeter  
[NASA-CASE-NPO-13604-1] c 35 N76-31490

High resolution threshold photoelectron spectroscopy by electron attachment  
[NASA-CASE-NPO-14078-1] c 72 N80-14877

Interferometer --- high resolution  
[NASA-CASE-NPO-14448-1] c 74 N81-29963

High speed multi focal plane optical system  
[NASA-CASE-GSC-12683-1] c 74 N83-36898

Correlation spectrometer having high resolution and multiplexing capability  
[NASA-CASE-NPO-15558-1] c 35 N84-34705

Multispectral variable magnification glancing incidence x ray telescope  
[NASA-CASE-MFS-28013-4] c 89 N90-27595

Water window imaging x ray microscope  
[NASA-CASE-MFS-28485-1] c 35 N91-15519

**HIGH SPEED**

Balanced bellows spirometer  
[NASA-CASE-XAR-01547] c 05 N69-21473

High speed low level electrical stepping switch Patent  
[NASA-CASE-XAC-00060] c 09 N70-39915

Impact testing machine Patent  
[NASA-CASE-XNP-04817] c 14 N71-23225

Traversing probe Patent  
[NASA-CASE-XFR-02007] c 12 N71-24692

High speed rolling element bearing  
[NASA-CASE-LEW-10856-1] c 15 N72-22490

Two stage light gas-plasma projectile accelerator  
[NASA-CASE-MFS-22287-1] c 75 N76-14931

- Selective data segment monitoring system --- using shift registers  
[NASA-CASE-ARC-10899-1] c 60 N77-19760
- Shaft seal assembly for high speed and high pressure applications  
[NASA-CASE-LEW-11873-1] c 37 N79-22475
- High speed multi focal plane optical system  
[NASA-CASE-GSC-12683-1] c 74 N83-36898
- Pressure measuring probe  
[NASA-CASE-LAR-13853-1] c 35 N89-14423
- High speed magneto-resistive random access memory  
[NASA-CASE-NPO-17954-1-CU] c 60 N90-26519
- HIGH SPEED CAMERAS**
- Electrically-operated rotary shutter Patent  
[NASA-CASE-XNP-00637] c 14 N70-40273
- HIGH STRENGTH**
- Method of making fiber composites  
[NASA-CASE-LEW-10424-2-2] c 18 N72-25539
- High resistance and raised modulus carbon fibers  
[NASA-TM-76884] c 24 N85-25436
- Method of making contamination-free ceramic bodies  
[NASA-CASE-LEW-14984-1] c 27 N91-16152
- HIGH STRENGTH ALLOYS**
- High temperature cobalt-base alloy Patent  
[NASA-CASE-XLE-00726] c 17 N71-15644
- Low temperature aluminum alloy Patent  
[NASA-CASE-XMF-02786] c 17 N71-20743
- Method of producing refractory composites containing tantalum carbide, hafnium carbide, and hafnium boride Patent  
[NASA-CASE-XLE-03940] c 18 N71-26153
- Nickel bas alloy  
[NASA-CASE-LEW-10874-1] c 17 N72-22535
- Cobalt-base alloy  
[NASA-CASE-LEW-10436-1] c 17 N73-32415
- High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-3] c 26 N80-32484
- HIGH STRENGTH STEELS**
- Prevention of hydrogen embrittlement of high strength steel by hydrazine compositions --- by adding potassium hydroxide to hydrazine  
[NASA-CASE-NPO-12122-1] c 24 N76-14203
- Process for making a high toughness-high strength ion alloy  
[NASA-CASE-LEW-12542-2] c 26 N79-22271
- HIGH TEMPERATURE**
- High temperature heat source Patent  
[NASA-CASE-XLE-00490] c 33 N70-34545
- Thermionic diode switch Patent  
[NASA-CASE-NPO-10404] c 03 N71-12255
- Hypersonic test facility Patent  
[NASA-CASE-XLA-00378] c 11 N71-15925
- Method for fiberizing ceramic materials Patent  
[NASA-CASE-XNP-00597] c 18 N71-23088
- Induction furnace with perforated tungsten foil shielding Patent  
[NASA-CASE-XLE-04026] c 14 N71-23267
- Method of forming ceramic to metal seal Patent  
[NASA-CASE-XNP-01263-2] c 15 N71-26312
- Method of making fiber composites  
[NASA-CASE-LEW-10424-2-2] c 18 N72-25539
- Method of forming superalloys  
[NASA-CASE-LEW-10805-1] c 15 N73-13465
- High temperature beryllium oxide capacitor  
[NASA-CASE-LEW-11938-1] c 33 N76-15373
- Low to high temperature energy conversion system  
[NASA-CASE-NPO-13510-1] c 44 N77-32581
- Thermocouples of molybdenum and iridium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12174-2] c 35 N79-14346
- High thermal power density heat transfer --- thermionic converters  
[NASA-CASE-LEW-12950-1] c 34 N82-11399
- Overlay metallic-cermet alloy coating systems  
[NASA-CASE-LEW-13639-1] c 26 N84-33555
- Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-5] c 27 N85-21352
- Multistage spent particle collector and a method for making same  
[NASA-CASE-LEW-13914-1] c 37 N85-33489
- Negative electrode catalyst for the iron chromium redox energy storage system  
[NASA-CASE-LEW-14028-1] c 44 N86-19721
- High-temperature, high-pressure optical cell  
[NASA-CASE-MFS-26000-1] c 74 N87-14971
- Method of making a flexible diaphragm  
[NASA-CASE-MSC-20797-1] c 37 N87-23981
- Bis(4-(3,4-dimethylene-pyrrolidyl)-phenyl) methane  
[NASA-CASE-LAR-13965-1-CU] c 23 N90-21118
- Pressure rig for repetitive casting  
[NASA-CASE-LAR-14050-1] c 31 N90-21216
- High temperature insulation barrier composite  
[NASA-CASE-MFS-29241-1] c 24 N90-23480
- High temperature flexible seal  
[NASA-CASE-LEW-14695-1] c 37 N90-23751
- A tough high performance composite matrix  
[NASA-CASE-LAR-14338-1] c 24 N90-26881
- Braided composite fasteners and method for producing same  
[NASA-CASE-LAR-14062-1] c 37 N90-27114
- Preparation of polyimides from bis(N-isoprenyl)s of aryl diamides  
[NASA-CASE-LAR-14330-1-CU] c 27 N91-13560
- Water cooled static pressure probe  
[NASA-CASE-LAR-14340-1-CU] c 35 N91-13684
- Flexible diaphragm-extreme temperature usage  
[NASA-CASE-MSC-20797-2] c 35 N91-21494
- HIGH TEMPERATURE AIR**
- Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds  
[NASA-CASE-LAR-10612-1] c 12 N73-28144
- HIGH TEMPERATURE ENVIRONMENTS**
- High-speed infrared furnace  
[NASA-CASE-XLE-10466] c 17 N69-25147
- Nickel-base alloy Patent  
[NASA-CASE-XLE-00283] c 17 N70-36616
- Strain sensor for high temperatures Patent  
[NASA-CASE-XNP-09205] c 14 N71-17657
- Trielectrode capacitive pressure transducer  
[NASA-CASE-ARC-10711-2] c 33 N76-21390
- Integrated structure vacuum tube  
[NASA-CASE-ARC-10445-1] c 31 N76-31365
- Installing fiber insulation  
[NASA-CASE-MSC-16973-1] c 37 N81-14317
- Corrosion resistant thermal barrier coating --- protecting gas turbines and other engine parts  
[NASA-CASE-LEW-13088-1] c 26 N81-25188
- High temperature penetrator assembly with bayonet plug and ramp-activated lock  
[NASA-CASE-MSC-18526-1] c 37 N82-24494
- Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-1] c 27 N82-29453
- Heat pipe cooled probe  
[NASA-CASE-LAR-12588-1] c 34 N85-21568
- Thermal barrier coating system  
[NASA-CASE-LEW-14057-1] c 24 N85-35233
- Reusable high-temperature heat pipes and heat pipe panels  
[NASA-CASE-LAR-13761-1] c 34 N90-20323
- HIGH TEMPERATURE FLUIDS**
- Self-cycling fluid heater  
[NASA-CASE-MSC-15567-1] c 33 N73-16918
- High-temperature microphone system --- for measuring pressure fluctuations in gases at high temperature  
[NASA-CASE-LAR-12375-1] c 32 N79-24203
- HIGH TEMPERATURE GASES**
- Instrument for the quantitative measurement of radiation at multiple wave lengths Patent  
[NASA-CASE-XLE-00011] c 14 N70-41946
- Ablative resin Patent  
[NASA-CASE-XLE-05913] c 33 N71-14032
- Transient heat transfer gauge Patent  
[NASA-CASE-XNP-09802] c 33 N71-15641
- Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds  
[NASA-CASE-LAR-10578-1] c 12 N73-25262
- Isotope separation using metallic vapor lasers  
[NASA-CASE-NPO-13550-1] c 36 N77-26477
- Start up system for hydrogen generator used with an internal combustion engine  
[NASA-CASE-NPO-13849-1] c 28 N80-10374
- Free-piston regenerative hot gas hydraulic engine  
[NASA-CASE-LEW-12274-1] c 37 N80-31790
- Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c 37 N81-25370
- Curved film cooling admission tube  
[NASA-CASE-LEW-13174-1] c 34 N83-27144
- Spectroscopic wear detector  
[NASA-CASE-LEW-15200-1] c 20 N91-32167
- HIGH TEMPERATURE LUBRICANTS**
- Method of making self lubricating fluoride- metal composite materials Patent  
[NASA-CASE-XLE-08511-2] c 18 N71-16105
- Self-lubricating fluoride metal composite materials Patent  
[NASA-CASE-XLE-08511] c 18 N71-23710
- Method of making bearing materials --- self-lubricating, oxidation resistant composites for high temperature applications  
[NASA-CASE-LEW-11930-4] c 24 N79-17916
- HIGH TEMPERATURE PLASMAS**
- Method and apparatus for producing a plasma Patent  
[NASA-CASE-XLA-00147] c 25 N70-34661
- HIGH TEMPERATURE PROPELLANTS**
- Feed system for an ion thruster  
[NASA-CASE-NPO-10737] c 28 N72-11709
- HIGH TEMPERATURE RESEARCH**
- Gas cooled high temperature thermocouple Patent  
[NASA-CASE-XLE-09475-1] c 33 N71-15568
- Light shield and infrared reflector for fatigue testing Patent  
[NASA-CASE-XLA-01782] c 14 N71-26136
- High temperature oxidation resistant cermet compositions  
[NASA-CASE-NPO-13666-1] c 27 N77-13217
- HIGH TEMPERATURE SUPERCONDUCTORS**
- Improved superconducting bearings  
[NASA-CASE-GSC-13346-1] c 37 N91-28578
- HIGH TEMPERATURE TESTS**
- High-temperature, high-pressure spherical segment valve Patent  
[NASA-CASE-XAC-00074] c 15 N70-34817
- High temperature testing apparatus Patent  
[NASA-CASE-XLE-00335] c 14 N70-35368
- Apparatus for positioning and loading a test specimen Patent  
[NASA-CASE-XLE-01300] c 15 N70-41993
- Containerless high temperature calorimeter apparatus  
[NASA-CASE-MFS-23923-1] c 35 N81-19426
- Heating and cooling system --- for fatigue test specimens  
[NASA-CASE-LAR-12393-1] c 34 N83-34221
- HIGH VACUUM**
- Sealing device for an electrochemical cell Patent  
[NASA-CASE-XGS-02630] c 03 N71-22974
- Vacuum evaporator with electromagnetic ion steering Patent  
[NASA-CASE-NPO-10331] c 09 N71-26701
- Apparatus for absolute pressure measurement  
[NASA-CASE-LAR-10000] c 14 N73-30394
- Plasma cleaning device --- designed for high vacuum environments  
[NASA-CASE-MFS-22906-1] c 75 N78-27913
- HIGH VACUUM ORBITAL SIMULATOR**
- Space environmental work simulator Patent  
[NASA-CASE-XMF-07488] c 11 N71-16773
- HIGH VOLTAGES**
- Electrode and insulator with shielded dielectric junction  
[NASA-CASE-XLE-03778] c 09 N69-21542
- High-voltage cable Patent  
[NASA-CASE-XNP-00738] c 09 N70-38201
- High voltage pulse generator Patent  
[NASA-CASE-MSC-12178-1] c 09 N71-13518
- High voltage transistor circuit Patent  
[NASA-CASE-XNP-06937] c 09 N71-19516
- High voltage divider system Patent  
[NASA-CASE-XLE-02008] c 09 N71-21583
- High voltage distributor  
[NASA-CASE-GSC-11849-1] c 33 N76-16332
- Sustained arc ignition system  
[NASA-CASE-LEW-12444-1] c 33 N77-28385
- High voltage planar multijunction solar cell  
[NASA-CASE-LEW-13400-1] c 44 N82-31764
- Electronic system for high power load control --- solar arrays  
[NASA-CASE-NPO-15358-1] c 33 N83-27126
- High voltage v-groove solar cell  
[NASA-CASE-LEW-13401-2] c 44 N83-32177
- High voltage isolation transformer  
[NASA-CASE-GSC-12817-1] c 33 N85-29146
- High voltage power supply  
[NASA-CASE-GSC-12818-1] c 33 N85-29147
- Direct drive robotic hand  
[NASA-CASE-NPO-17917-1-CU] c 37 N90-26339
- HIGHWAYS**
- Traffic survey system --- using optical scanners  
[NASA-CASE-MFS-22631-1] c 66 N76-19888
- HINGES**
- Foldable beam  
[NASA-CASE-LAR-12077-1] c 31 N81-25259
- Joint for deployable structures  
[NASA-CASE-NPO-16038-1] c 37 N86-19605
- Locking hinge  
[NASA-CASE-MSC-21056-1] c 18 N88-23827
- Payload deployment method and system  
[NASA-CASE-MSC-21330-1] c 16 N88-24660
- Space station erectable manipulator placement system  
[NASA-CASE-MSC-21096-1] c 18 N89-12621
- Synchronously deployable double fold beam and planar truss structure  
[NASA-CASE-LAR-13490-1] c 18 N91-27199
- HISTOGRAMS**
- Data compression system  
[NASA-CASE-XNP-09785] c 08 N69-21928
- HOLDERS**
- Water cooled contactor for anode in carbon arc mechanism  
[NASA-CASE-XMS-03700] c 15 N69-24266
- Quick disconnect latch and handle combination Patent  
[NASA-CASE-MFS-11132] c 15 N71-17649
- Holder for crystal resonators Patent  
[NASA-CASE-XNP-03637] c 15 N71-21311

- Adjustable force probe  
[NASA-CASE-MFS-20760] c 14 N72-33377  
Fifth wheel  
[NASA-CASE-FRC-10081-1] c 37 N77-14477  
Combined docking and grasping device  
[NASA-CASE-MFS-23088-1] c 37 N77-23483  
Plural output optometric sample cell and analysis system  
[NASA-CASE-NPO-10233-1] c 74 N78-33913  
Method and apparatus for holding two separate metal pieces together for welding  
[NASA-CASE-GSC-12318-1] c 37 N80-23655  
Head for high speed spinner having a vacuum chuck --- holding silicon dioxide chips for etching  
[NASA-CASE-NPO-15227-1] c 37 N81-33482  
Scriber for silicon wafers  
[NASA-CASE-NPO-15539-1] c 37 N82-11469  
Liquid immersion apparatus for minute articles  
[NASA-CASE-MFS-25363-1] c 37 N82-12441  
Spray coating apparatus having a rotatable workpiece holder  
[NASA-CASE-ARC-11110-1] c 37 N82-24492  
Compression test apparatus  
[NASA-CASE-MS-C-18723-1] c 35 N83-21312  
Holding fixture for a hot stamping press  
[NASA-CASE-GSC-12619-1] c 37 N84-12491  
Hot melt recharge system --- repairing damaged or missing tiles on space shuttle orbiter  
[NASA-CASE-LAR-12881-1] c 27 N84-14323  
Method and apparatus for gripping uniaxial fibrous composite materials  
[NASA-CASE-LEW-13758-1] c 24 N84-27829  
Laboratory glassware rack for seismic safety  
[NASA-CASE-ARC-11422-1] c 35 N86-20751  
Apparatus and method for inspecting a bearing ball  
[NASA-CASE-MFS-25833-1] c 35 N86-32698  
Active hold-down for heat treating  
[NASA-CASE-NPO-16892-1-CU] c 37 N87-14704  
Apparatus for mounting a field emission cathode  
[NASA-CASE-LEW-14108-1] c 33 N87-28832  
Ignitability test method and apparatus  
[NASA-CASE-LAR-13996-1-SB] c 25 N90-15161  
Gripping device  
[NASA-CASE-MS-C-21365-1] c 37 N90-20408  
Post clamp  
[NASA-CASE-LEW-14862-1] c 37 N91-14617  
Rolling friction robot fingers  
[NASA-CASE-GSC-13261-1] c 37 N91-17401  
Sample holder support for microscopes  
[NASA-CASE-MFS-28420-1] c 37 N91-21545  
Removable hand hold  
[NASA-CASE-LEW-15196-1] c 37 N91-26543  
Ignitability test method and apparatus  
[NASA-CASE-LAR-14454-1] c 25 N91-32196
- HOLE DISTRIBUTION (MECHANICS)**  
Thermocouple installation  
[NASA-CASE-NPO-13540-1] c 35 N77-14409
- HOLE GEOMETRY (MECHANICS)**  
Device for measuring hole elongation in a bolted joint  
[NASA-CASE-LAR-13453-1] c 37 N88-14361
- HOLE MOBILITY**  
Depositing semiconductor films utilizing a thermal gradient  
[NASA-CASE-XKS-04614] c 15 N69-21460
- HOLES (MECHANICS)**  
Hole cutter --- drill bits and rotating shaft  
[NASA-CASE-MFS-22649-1] c 37 N75-25186  
Device for measuring hole elongation in a bolted joint  
[NASA-CASE-LAR-13453-1] c 37 N88-14361
- HOLLOW**  
Dual membrane hollow fiber fuel cell and method of operating same  
[NASA-CASE-NPO-13732-1] c 44 N79-10513
- HOLLOW CATHODES**  
Hydrogen hollow cathode ion source  
[NASA-CASE-LEW-12940-1] c 72 N80-33186  
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[NASA-CASE-NPO-15560-1] c 33 N85-21491
- HOLMIUM**  
Tm, Ho:YLF laser end-pumped by a semiconductor diode laser array  
[NASA-CASE-NPO-17282-1-CU] c 36 N91-15528
- HOLOGRAPHIC INTERFEROMETRY**  
Interferometric angle monitor  
[NASA-CASE-GSC-12614-1] c 74 N83-32577  
Method of and apparatus for double-exposure holographic interferometry  
[NASA-CASE-MFS-25405-1] c 35 N84-22929  
Dual wavelength holographic interferometry system  
[NASA-CASE-MFS-28242-1] c 35 N89-26202
- HOLOGRAPHY**  
Focused image holography with extended sources Patent  
[NASA-CASE-ERC-10019] c 16 N71-15551
- Hybrid holographic system using reflected and transmitted object beams simultaneously Patent  
[NASA-CASE-MFS-20074] c 16 N71-15565  
Recording and reconstructing focused image holograms Patent  
[NASA-CASE-ERC-10017] c 16 N71-15567  
Method and means for recording and reconstructing holograms without use of a reference beam Patent  
[NASA-CASE-ERC-10020] c 16 N71-26154  
Multiple image storing system for high speed projectile holography  
[NASA-CASE-MFS-20596] c 14 N72-17324  
Holographic thin film analyzer  
[NASA-CASE-MFS-20823-1] c 16 N73-30476  
Method and apparatus for checking the stability of a setup for making reflection type holograms  
[NASA-CASE-MFS-21455-1] c 35 N74-15146  
Real time moving scene holographic camera system  
[NASA-CASE-MFS-21087-1] c 35 N74-17153  
Holography utilizing surface plasmon resonances  
[NASA-CASE-MFS-22040-1] c 35 N74-26946  
Holographic system for nondestructive testing  
[NASA-CASE-MFS-21704-1] c 35 N75-25124  
Real time, large volume, moving scene holographic camera system  
[NASA-CASE-MFS-22537-1] c 35 N75-27328  
Holographic motion picture camera with Doppler shift compensation  
[NASA-CASE-MFS-22517-1] c 35 N76-18402  
Optical process for producing classification maps from multispectral data  
[NASA-CASE-MS-C-14472-1] c 43 N77-10584  
All-optical photochromic spatial light modulators based on photoinduced electron transfer in rigid matrices  
[NASA-CASE-NPO-17612-1-CU] c 74 N90-27487  
Real-time dynamic holographic image storage device  
[NASA-CASE-LAR-13989-1] c 35 N91-13694
- HOMING DEVICES**  
Location identification system  
[NASA-CASE-ERC-10324] c 07 N72-25173
- HONEYCOMB CORES**  
Method of making inflatable honeycomb Patent  
[NASA-CASE-XLA-03492] c 15 N71-22713  
Method of forming shapes from planar sheets of thermosetting materials  
[NASA-CASE-NPO-11036] c 15 N72-24522  
Honeycomb core structures of minimal surface tubule sections  
[NASA-CASE-ERC-10363] c 18 N72-25541
- HONEYCOMB STRUCTURES**  
Method for making a heat insulating and ablative structure  
[NASA-CASE-XMS-01108] c 15 N69-24322  
Inflatable honeycomb Patent  
[NASA-CASE-XLA-00204] c 32 N70-36536  
Fluid flow control valve Patent  
[NASA-CASE-XLE-00703] c 15 N71-15967  
Method and apparatus for making a heat insulating and ablative structure Patent  
[NASA-CASE-XMS-02009] c 33 N71-20834  
Honeycomb panel and method of making same Patent  
[NASA-CASE-XMF-01402] c 18 N71-21651  
Cryogenic thermal insulation Patent  
[NASA-CASE-XMF-05046] c 33 N71-28892  
Honeycomb panels formed of minimal surface periodic tubule layers  
[NASA-CASE-ERC-10364] c 18 N72-25540  
Bonding or repairing process  
[NASA-CASE-MS-C-12357] c 15 N73-12489  
Insert facing tool --- manually operated cutting tool for forming studs in honeycomb material  
[NASA-CASE-MFS-21485-1] c 37 N74-25968  
Vacuum pressure molding technique  
[NASA-CASE-LAR-10073-1] c 37 N76-24575  
Honeycomb-laminate composite structure  
[NASA-CASE-ARC-10913-1] c 24 N78-15180  
Method of making a composite sandwich lattice structure  
[NASA-CASE-LAR-11898-2] c 24 N78-17149  
Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-1] c 24 N79-16915  
Ceramic honeycomb structures and the method thereof  
[NASA-CASE-ARC-11652-1] c 27 N87-23737
- HOOP COLUMN ANTENNAS**  
Latching mechanism for deployable/re-stowable columns useful in satellite construction  
[NASA-CASE-LAR-13169-1] c 37 N86-25791  
Antenna surface contour control system  
[NASA-CASE-LAR-13798-1] c 32 N89-25363
- HOPPERS**  
Energy efficient continuous flow ash lockhopper  
[NASA-CASE-NPO-16985-1-CU] c 31 N91-15423
- HORIZON SCANNERS**  
Electromagnetic mirror drive system  
[NASA-CASE-XLA-03724] c 14 N69-27461  
Multi-lobar scan horizon sensor Patent  
[NASA-CASE-XGS-00809] c 21 N70-35427  
Attitude orientation of spin-stabilized space vehicles Patent  
[NASA-CASE-XLA-00281] c 21 N70-36943  
Amplifier clamping circuit for horizon scanner Patent  
[NASA-CASE-XGS-01784] c 10 N71-20782  
Horizon sensor with a plurality of fixedly positioned radiation compensated radiation sensitive detectors Patent  
[NASA-CASE-XNP-06957] c 14 N71-21088  
Infrared horizon locator  
[NASA-CASE-LAR-10726-1] c 14 N73-20475
- HORIZONTAL SPACECRAFT LANDING**  
Variable-geometry winged reentry vehicle Patent  
[NASA-CASE-XLA-00241] c 31 N70-37986
- HORIZONTAL TAIL SURFACES**  
Translating horizontal tail Patent  
[NASA-CASE-XLA-08801-1] c 02 N71-11043
- HORN ANTENNAS**  
Antenna beam-shaping apparatus Patent  
[NASA-CASE-XNP-00611] c 09 N70-35219  
Parabolic reflector horn feed with spillover correction Patent  
[NASA-CASE-XNP-00540] c 09 N70-35382  
Horn feed having overlapping apertures Patent  
[NASA-CASE-GSC-10452] c 07 N71-12396  
Dual mode horn antenna Patent  
[NASA-CASE-XNP-01057] c 07 N71-15907  
Multi-purpose antenna employing dish reflector with plural coaxial horn feeds  
[NASA-CASE-NPO-11264] c 07 N72-25174  
Horn antenna having V-shaped corrugated slots  
[NASA-CASE-LAR-11112-1] c 32 N76-15330  
Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector  
[NASA-CASE-NPO-13568-1] c 32 N76-21365  
Reflex feed system for dual frequency antenna with frequency cutoff means  
[NASA-CASE-NPO-14022-1] c 32 N78-31321  
Dual band combiner for horn antenna  
[NASA-CASE-NPO-14519-1] c 32 N80-23524  
Collapsible corrugated horn antenna  
[NASA-CASE-LAR-11745-1] c 32 N80-29539  
Multifrequency broadband polarized horn antenna  
[NASA-CASE-NPO-14588-1] c 32 N81-25278
- HOSES**  
Self-contained, single-use hose and tubing cleaning module  
[NASA-CASE-MS-C-20857-1] c 37 N87-17035
- HOT CATHODES**  
Ion thruster cathode  
[NASA-CASE-XLE-07087] c 06 N69-39889
- HOT CORROSION**  
Castable hot corrosion resistant alloy  
[NASA-CASE-LEW-14134-2] c 26 N89-14303
- HOT ISOSTATIC PRESSING**  
One step HIP canning of powder metallurgy composites  
[NASA-CASE-LEW-14719-1] c 24 N90-23493  
Process for HIP canning of composites  
[NASA-CASE-LEW-14990-1-CU] c 24 N91-17145
- HOT PRESSING**  
Method of making a cermet Patent  
[NASA-CASE-LEW-10219-1] c 18 N71-28729  
Holding fixture for a hot stamping press  
[NASA-CASE-GSC-12619-1] c 37 N84-12491
- HOT WORKING**  
Method for forming plastic materials Patent  
[NASA-CASE-XMS-05516] c 15 N71-17803
- HOT-FILM ANEMOMETERS**  
Crossflow vorticity sensor  
[NASA-CASE-LAR-13436-1-CU] c 02 N88-23759  
Method of forming a multiple layer dielectric and a hot film sensor therewith  
[NASA-CASE-LAR-13678-1] c 76 N90-24168
- HOT-WIRE ANEMOMETERS**  
Metallic hot wire anemometer --- for high speed wind tunnel tests  
[NASA-CASE-ARC-10911-1] c 35 N77-20400  
Method for making a hot wire anemometer and product thereof  
[NASA-CASE-ARC-10900-1] c 35 N77-24454
- HOT-WIRE FLOWMETERS**  
Hot wire liquid level detector for cryogenic fluids Patent  
[NASA-CASE-XLE-00454] c 23 N71-17802  
Flow separation detector  
[NASA-CASE-ARC-11046-1] c 35 N78-14364  
Hot foil transducer skin friction sensor  
[NASA-CASE-LAR-12321-1] c 35 N82-24470

## HOUSINGS

- Sealed cabinetry Patent  
[NASA-CASE-MSC-12168-1] c 09 N71-18600
- Open type urine receptacle  
[NASA-CASE-MSC-12324-1] c 05 N72-22093
- Universal environment package with sectional component housing  
[NASA-CASE-KSC-10031] c 15 N72-22486
- Gas flow control device  
[NASA-CASE-NPO-11479] c 15 N73-13462
- Cryogenic gyroscope housing --- with annular disks for gas spin-up  
[NASA-CASE-MFS-21136-1] c 35 N74-18323
- Heat transfer device  
[NASA-CASE-NPO-11120-1] c 34 N74-18552
- Deformable bearing seat  
[NASA-CASE-LEW-12527-1] c 37 N77-32500
- Preloadable vector sensitive latch  
[NASA-CASE-MSC-20910-1] c 37 N87-25582
- Rolling friction robot fingers  
[NASA-CASE-GSC-13261-1] c 37 N91-17401
- Electromagnetic attachment mechanism  
[NASA-CASE-MSC-21463-1] c 37 N91-23490
- Arc/gas electrode  
[NASA-CASE-MFS-29766-1] c 33 N91-25335
- Double face sealing device  
[NASA-CASE-MFS-28521-1] c 37 N91-26542
- Roller locking brake  
[NASA-CASE-GSC-13376-1] c 37 N91-28579
- Device for removing foreign objects from anatomic organs  
[NASA-CASE-GSC-13306-1] c 52 N91-28727
- HOVERING**
- Gravity stabilized flying vehicle Patent  
[NASA-CASE-MSC-12111-1] c 02 N71-11039
- HUBBLE SPACE TELESCOPE**
- System for the measurement of ultra-low stray light levels --- determining the adequacy of large space telescope systems  
[NASA-CASE-MFS-23513-1] c 74 N79-11865
- Orbital maneuvering end effectors  
[NASA-CASE-MFS-28161-1] c 37 N87-18817
- HUBS**
- Self-locking mechanical center joint  
[NASA-CASE-LAR-12864-1] c 37 N85-30336
- HUGONIOT EQUATION OF STATE**
- Determining particle density using known material Hugoniot curves  
[NASA-CASE-LAR-11059-1] c 76 N75-12810
- HULLS (STRUCTURES)**
- Hydrofoil Patent  
[NASA-CASE-XLA-00229] c 12 N70-33305
- HUMAN BEINGS**
- Skeletal stressing method and apparatus Patent  
[NASA-CASE-ARC-10100-1] c 05 N71-24738
- Emergency escape system Patent  
[NASA-CASE-XKS-07814] c 15 N71-27067
- HUMAN BODY**
- Mass measuring system Patent  
[NASA-CASE-XMS-03371] c 05 N70-42000
- Biomedical electrode arrangement Patent  
[NASA-CASE-XFR-10856] c 05 N71-11189
- Garments for controlling the temperature of the body Patent  
[NASA-CASE-XMS-10269] c 05 N71-24147
- Tilting table for ergometer and for other biomedical devices  
[NASA-CASE-MFS-21010-1] c 05 N73-30078
- Method and system for in vivo measurement of bone tissue using a two level energy source  
[NASA-CASE-MSC-14276-1] c 52 N77-14737
- Circumferential pressure probe  
[NASA-CASE-LAR-13775-1] c 35 N90-23706
- HUMAN FACTORS ENGINEERING**
- Shock absorbing support and restraint means Patent  
[NASA-CASE-XMS-01240] c 05 N70-35152
- Harness assembly Patent  
[NASA-CASE-MFS-14671] c 05 N71-12341
- Multiple circuit switch apparatus with improved pivot actuator structure Patent  
[NASA-CASE-XAC-03777] c 10 N71-15909
- Three-axis finger tip controller for switches Patent  
[NASA-CASE-XAC-02405] c 09 N71-16089
- Extravehicular tunnel suit system Patent  
[NASA-CASE-MSC-12243-1] c 05 N71-24728
- EEG sleep analyzer and method of operation Patent  
[NASA-CASE-MSC-13282-1] c 05 N71-24729
- Spacesuit mobility joints  
[NASA-CASE-ARC-11058-1] c 54 N78-31735
- Spacesuit torso closure  
[NASA-CASE-ARC-11100-1] c 54 N78-31736
- Apparatus and method of inserting a microelectrode in body tissue or the like using vibration means  
[NASA-CASE-NPO-13910-1] c 52 N79-27836
- Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c 52 N81-25661

- Urine collection apparatus --- feminine hygiene  
[NASA-CASE-MSC-18381-1] c 52 N81-28740
- Spectrally balanced chromatic landing approach lighting system  
[NASA-CASE-ARC-10990-1] c 04 N82-16059
- Thermal garment  
[NASA-CASE-XMS-03694-1] c 54 N82-29002
- Kinesimetric method and apparatus  
[NASA-CASE-MSC-18929-1] c 39 N83-20280
- Torso sizing ring construction for hard space suit  
[NASA-CASE-ARC-11616-1] c 54 N86-28618
- Shoulder and hip joint for hard space suits  
[NASA-CASE-ARC-11543-1] c 54 N86-28620
- Multi-adjustable headband --- for headsets  
[NASA-CASE-KSC-11322-1] c 54 N89-29953
- Compliant walker  
[NASA-CASE-GSC-13348-2] c 52 N91-29714
- HUMAN PERFORMANCE**
- Color perception tester  
[NASA-CASE-KSC-10278] c 05 N72-16015
- HUMAN REACTIONS**
- Reaction tester  
[NASA-CASE-MSC-13604-1] c 05 N73-13114
- Visual accommodation trainer-tester  
[NASA-CASE-ARC-11426-2] c 52 N89-16256
- HUMAN WASTES**
- Reduced gravity fecal collector seat and urinal  
[NASA-CASE-MFS-22102-1] c 54 N74-20725
- Automatic biowaste sampling  
[NASA-CASE-MSC-14640-1] c 54 N76-14804
- Absorbent-product to absorb fluids --- for collection of human wastes  
[NASA-CASE-MSC-18223-1] c 24 N82-29362
- Absorbent product and articles made therefrom  
[NASA-CASE-MSC-18223-2] c 54 N84-11758
- HUMIDITY**
- Passive intrusion detection system  
[NASA-CASE-NPO-13804-1] c 33 N80-23559
- Apparatus for supplying conditioned air at a substantially constant temperature and humidity  
[NASA-CASE-GSC-12191-1] c 31 N80-32583
- HUMIDITY MEASUREMENT**
- Water-absorbing capacitor system for measuring relative humidity  
[NASA-CASE-NPO-16544-1-CU] c 35 N87-22953
- HYBRID CIRCUITS**
- Integrating IR detector imaging systems  
[NASA-CASE-NPO-15805-1] c 74 N84-28590
- Hybrid power semiconductor  
[NASA-CASE-LEW-13922-1] c 33 N86-20672
- Hermetically sealable package for hybrid solid-state electronic devices and the like  
[NASA-CASE-MSC-20181-1] c 33 N88-23941
- HYBRID COMPUTERS**
- Adaptive voting computer system  
[NASA-CASE-MSC-13932-1] c 62 N74-14920
- HYBRID PROPELLANTS**
- Solid propellant liner Patent  
[NASA-CASE-XNP-09744] c 27 N71-16392
- HYDRAULIC CONTROL**
- Shear modulated fluid amplifier Patent  
[NASA-CASE-MFS-10412] c 12 N71-17578
- Multiple orifice throttle valve Patent  
[NASA-CASE-XNP-09698] c 15 N71-18580
- Fluidic-thermochromic display device Patent  
[NASA-CASE-ERC-10031] c 12 N71-18603
- Hydraulic transformer Patent  
[NASA-CASE-MFS-20830] c 15 N71-30028
- Hydraulic drain means for servo-systems  
[NASA-CASE-NPO-10316-1] c 37 N77-22479
- HYDRAULIC EQUIPMENT**
- Support apparatus for dynamic testing Patent  
[NASA-CASE-XMF-01772] c 11 N70-41677
- Hydraulic support for dynamic testing Patent  
[NASA-CASE-XNF-03248] c 11 N71-10604
- Hydraulic drive mechanism Patent  
[NASA-CASE-XMS-03252] c 15 N71-10658
- Anti-backlash circuit for hydraulic drive system Patent  
[NASA-CASE-XNP-01020] c 03 N71-12260
- Hydraulic grip Patent  
[NASA-CASE-XLA-05100] c 15 N71-17696
- Shock absorber Patent  
[NASA-CASE-XMS-03722] c 15 N71-21530
- Hydraulic casting of liquid polymers Patent  
[NASA-CASE-XNP-07659] c 06 N71-22975
- Energy limiter for hydraulic actuators Patent  
[NASA-CASE-ARC-10131-1] c 15 N71-27754
- Mechanically limited, electrically operated hydraulic valve system for aircraft controls Patent  
[NASA-CASE-XAC-00048] c 02 N71-29128
- Hydraulic transformer Patent  
[NASA-CASE-MFS-20830] c 15 N71-30028
- Mechanically extendible telescoping boom  
[NASA-CASE-NPO-11118] c 03 N72-25021
- Geysering inhibitor for vertical cryogenic transfer pipe  
[NASA-CASE-KSC-10615] c 15 N73-12486

- Redundant hydraulic control system for actuators  
[NASA-CASE-MFS-20944] c 15 N73-13466
- Combined pressure regulator and shutoff valve  
[NASA-CASE-NPO-13201-1] c 37 N75-15050
- Ultrasonically bonded valve assembly  
[NASA-CASE-NPO-13360-1] c 37 N75-25185
- Filter regeneration systems --- a system for regenerating a system filter in a fluid flow line  
[NASA-CASE-MSC-14273-1] c 34 N75-33342
- Quick disconnect filter coupling  
[NASA-CASE-MFS-22323-1] c 37 N76-14463
- Actuator device for artificial leg  
[NASA-CASE-MFS-23225-1] c 52 N77-14735
- Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c 37 N81-17432
- Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c 43 N81-26509
- Gas-to-hydraulic power converter  
[NASA-CASE-MSC-18794-1] c 44 N83-14693
- Tubing and cable cutting tool  
[NASA-CASE-LAR-12786-1] c 37 N84-28085
- Personnel emergency carrier vehicle  
[NASA-CASE-KSC-11282-1] c 85 N87-21755
- Fatigue testing a plurality of test specimens and method  
[NASA-CASE-MFS-28118-1] c 39 N87-25601
- Control surface actuator  
[NASA-CASE-LAR-12852-1] c 05 N89-11738
- Passively activated prehensile digit for a robotic end effector  
[NASA-CASE-NPO-16766-1-CU] c 37 N89-13785
- Hydraulic lifting device  
[NASA-CASE-SSC-00008-1] c 37 N91-13733
- HYDRAULIC FLUIDS**
- Free-piston regenerative hot gas hydraulic engine  
[NASA-CASE-LEW-12274-1] c 37 N80-31790
- HYDRAULIC JETS**
- Warm fog dissipation using large volume water sprays  
[NASA-CASE-MFS-25962-1] c 09 N89-25242
- HYDRAZIDES**
- Poly(1,3,4-oxadiazoles) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14427-1] c 23 N91-23237
- HYDRAZINE ENGINES**
- Reciprocating engines  
[NASA-CASE-MSC-16239-1] c 37 N81-32510
- HYDRAZINE NITROFORM**
- Hydrazinium nitroformate propellant with saturated polymeric hydrocarbon binder  
[NASA-CASE-NPO-12015] c 27 N73-16764
- HYDRAZINES**
- Ignition means for monopropellant Patent  
[NASA-CASE-XNP-00876] c 28 N70-41311
- Solder flux which leaves corrosion-resistant coating Patent  
[NASA-CASE-XNP-03459-2] c 18 N71-15688
- Prevention of hydrogen embrittlement of high strength steel by hydrazine compositions --- by adding potassium hydroxide to hydrazine  
[NASA-CASE-NPO-12122-1] c 24 N76-14203
- HYDRIDES**
- Ten degree Kelvin hydride refrigerator  
[NASA-CASE-NPO-16393-1-CU] c 31 N87-21159
- HYDROCARBON COMBUSTION**
- In-situ laser retorting of oil shale  
[NASA-CASE-LEW-12217-1] c 43 N78-14452
- HYDROCARBON FUEL PRODUCTION**
- Molten salt pyrolysis of latex --- synthetic hydrocarbon fuel production using the Guayule shrub  
[NASA-CASE-NPO-14315-1] c 27 N81-17261
- HYDROCARBON FUELS**
- Apparatus for making a metal slurry product Patent  
[NASA-CASE-XLE-00010] c 15 N70-33382
- Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-2] c 44 N76-29700
- Hydrogen rich gas generator  
[NASA-CASE-NPO-13464-2] c 44 N76-29704
- Dual-fuel, dual-mode rocket engine  
[NASA-CASE-LAR-13773-1] c 20 N90-19298
- HYDROCARBONS**
- Hydrazinium nitroformate propellant with saturated polymeric hydrocarbon binder  
[NASA-CASE-NPO-12015] c 27 N73-16764
- Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-1] c 37 N76-16446
- Combustion engine --- for air pollution control  
[NASA-CASE-NPO-13671-1] c 37 N77-31497
- Curable liquid hydrocarbon prepolymers containing hydroxyl groups and process for producing same  
[NASA-CASE-NPO-13137-1] c 27 N80-32514
- Technique for measuring gas conversion factors  
[NASA-CASE-LAR-13220-1] c 34 N86-12547
- Method and device for determining heats of combustion of gaseous hydrocarbons  
[NASA-CASE-LAR-13528-1] c 25 N88-29002

## HYDROCHLORIC ACID

- Some 1-(diorganoxyphosphonyl)methyl-2,4- and -2,6-dinitro-benzenes  
 [NASA-CASE-ARC-11425-3] c 23 N90-23475  
 Preparation of polyimides from bis(N-isoprenyl)s of aryl diamides  
 [NASA-CASE-LAR-14330-1-CU] c 27 N91-13560
- HYDROCHLORIC ACID**  
 Indicator providing continuous indication of the presence of a specific pollutant in air  
 [NASA-CASE-NPO-13474-1] c 45 N76-21742  
 Metal etching composition  
 [NASA-CASE-MFS-29576-1] c 25 N91-15368
- HYDROCHLORIDES**  
 Method and apparatus for rebalancing a REDOX flow cell system  
 [NASA-CASE-LEW-14127-1] c 33 N86-20680
- HYDRODYNAMICS**  
 Dual clearance squeeze film damper  
 [NASA-CASE-LEW-13506-1] c 37 N85-33490  
 Hydrodynamic skin-friction reduction  
 [NASA-CASE-LAR-14078-1-CU] c 34 N90-27071  
 Polymer/riblet combination for hydrodynamic skin friction reduction  
 [NASA-CASE-LAR-14271-1-CU] c 27 N91-13558  
 Passive laminar flow control of crossflow vorticity  
 [NASA-CASE-LAR-13563-1] c 34 N91-23410
- HYDROFOILS**  
 Hydrofoil Patent  
 [NASA-CASE-XLA-00229] c 12 N70-33305
- HYDROFORMING**  
 Hydroforming techniques using epoxy molds Patent  
 [NASA-CASE-XLE-05641-1] c 15 N71-26346
- HYDROGEN**  
 Method for detecting hydrogen gas  
 [NASA-CASE-XMF-03873] c 06 N69-39733  
 Prevention of pressure build-up in electrochemical cells Patent  
 [NASA-CASE-XGS-01419] c 03 N70-41864  
 Pulse activated polarographic hydrogen detector Patent  
 [NASA-CASE-XMF-06531] c 14 N71-17575  
 Hydrogen leak detection device Patent  
 [NASA-CASE-MFS-11537] c 14 N71-20442  
 Analysis of hydrogen-deuterium mixtures  
 [NASA-CASE-NPO-11322] c 06 N72-25146  
 Hydrogen fire blink detector  
 [NASA-CASE-MFS-15063] c 14 N72-25412  
 Process for separation of dissolved hydrogen from water by use of palladium and process for coating palladium with palladium black  
 [NASA-CASE-MS-C-13335-1] c 06 N72-31140  
 Atomic hydrogen maser with bulb temperature control to remove wall shift in maser output frequency  
 [NASA-CASE-HQN-10654-1] c 16 N73-13489  
 Method of producing a storage bulb for an atomic hydrogen maser  
 [NASA-CASE-NPO-13050-1] c 36 N75-15029  
 Atomic standard with variable storage volume  
 [NASA-CASE-GSC-11895-1] c 35 N76-15436  
 Hydrogen rich gas generator  
 [NASA-CASE-NPO-13342-1] c 37 N76-16446  
 Hydrogen-bromine secondary battery  
 [NASA-CASE-NPO-13237-1] c 44 N76-18641  
 Hydrogen-rich gas generator  
 [NASA-CASE-NPO-13464-1] c 44 N76-18642  
 Solar hydrogen generator  
 [NASA-CASE-LAR-11361-1] c 44 N77-22607  
 Solar photolysis of water  
 [NASA-CASE-NPO-13675-1] c 44 N77-32580  
 Method and automated apparatus for detecting coliform organisms  
 [NASA-CASE-MS-C-16777-1] c 51 N80-27067  
 Method of cross-linking polyvinyl alcohol and other water soluble resins  
 [NASA-CASE-LEW-13103-1] c 27 N80-32516  
 Fluidized bed desulfurization  
 [NASA-CASE-NPO-15924-1] c 25 N85-35253  
 Static feed water electrolysis subsystem development  
 [NASA-CASE-MS-C-21577-1-SB] c 25 N91-23271
- HYDROGEN ATOMS**  
 Atomic hydrogen storage method and apparatus  
 [NASA-CASE-LEW-12081-1] c 28 N78-24365  
 Atomic hydrogen storage --- cryotrapping and magnetic field strength  
 [NASA-CASE-LEW-12081-2] c 28 N80-20402  
 Atomic hydrogen storage method and apparatus  
 [NASA-CASE-LEW-12081-3] c 28 N81-14103
- HYDROGEN EMBRITTLEMENT**  
 Prevention of hydrogen embrittlement of high strength steel by hydrazine compositions --- by adding potassium hydroxide to hydrazine  
 [NASA-CASE-NPO-12122-1] c 24 N76-14203
- HYDROGEN ENGINES**  
 Hydrogen-fueled engine  
 [NASA-CASE-NPO-13763-1] c 44 N78-33526

## HYDROGEN FUELS

- Hydrogen rich gas generator  
 [NASA-CASE-NPO-13342-2] c 44 N76-29700  
 Hydrogen rich gas generator  
 [NASA-CASE-NPO-13464-2] c 44 N76-29704  
 Hydrogen-rich gas generator  
 [NASA-CASE-NPO-13560-1] c 44 N77-10636  
 Dual-fuel, dual-mode rocket engine  
 [NASA-CASE-LAR-13773-1] c 20 N90-19298
- HYDROGEN IONS**  
 Hydrogen hollow cathode ion source  
 [NASA-CASE-LEW-12940-1] c 72 N80-33186
- HYDROGEN OXYGEN FUEL CELLS**  
 Electrolytically regenerative hydrogen-oxygen fuel cell Patent  
 [NASA-CASE-XLE-04526] c 03 N71-11052  
 Passively regulated water electrolysis rocket engine Patent  
 [NASA-CASE-XGS-08729] c 28 N71-14044
- HYDROGEN PEROXIDE**  
 Decomposition unit Patent  
 [NASA-CASE-XMS-00583] c 28 N70-38504
- HYDROGEN PRODUCTION**  
 Start up system for hydrogen generator used with an internal combustion engine  
 [NASA-CASE-NPO-13849-1] c 28 N80-10374  
 Thermochemical generation of hydrogen  
 [NASA-CASE-NPO-15015-1] c 25 N82-28368  
 Liquid hydrogen polygeneration system and process  
 [NASA-CASE-KSC-11304-2] c 28 N91-14495
- HYDROGENATION**  
 Production of high purity silicon carbide Patent  
 [NASA-CASE-XLA-00158] c 26 N70-36805  
 Compact hydrogenator  
 [NASA-CASE-NPO-11682-1] c 35 N74-15127
- HYDROLOGY**  
 Radar target for remotely sensing hydrological phenomena  
 [NASA-CASE-LAR-12344-1] c 43 N80-18498
- HYDROLYSIS**  
 Hydrodesulfurization of chlorinized coal  
 [NASA-CASE-NPO-15304-1] c 25 N83-31743
- HYDROSTATIC PRESSURE**  
 Method and apparatus for simulating gravitational forces on a living organism  
 [NASA-CASE-MS-C-20202-1] c 54 N84-16803
- HYDROSTATICS**  
 Hydrostatic bearing support  
 [NASA-CASE-LEW-11158-1] c 37 N77-28486
- HYDROXIDES**  
 Method for determining presence of OH in magnesium oxide  
 [NASA-CASE-NPO-10774] c 06 N72-17095  
 Separator for alkaline electric batteries and method of making  
 [NASA-CASE-GSC-10018-1] c 44 N82-24644  
 Synthesis of dawsonites --- for use in fire extinguishing operations  
 [NASA-CASE-ARC-11326-1] c 25 N83-33977
- HYDROXYL COMPOUNDS**  
 Synthesis of polyformals  
 [NASA-CASE-ARC-11244-1] c 23 N82-16174
- HYGIENE**  
 Urine collection apparatus --- feminine hygiene  
 [NASA-CASE-MS-C-18381-1] c 52 N81-28740  
 Regenerable biocide delivery unit  
 [NASA-CASE-MS-C-21763-1] c 51 N91-25570
- HYGROMETERS**  
 Polymeric electrolytic hygrometer  
 [NASA-CASE-NPO-13948-1] c 35 N78-25391  
 Trace water sensor  
 [NASA-CASE-NPO-15722-1] c 35 N85-29212
- HYGROSCOPICITY**  
 Method of evaluating moisture barrier properties of encapsulating materials Patent  
 [NASA-CASE-NPO-10051] c 18 N71-24934
- HYPERCUBE MULTIPROCESSORS**  
 Fault tolerant hypercube computer system architecture  
 [NASA-CASE-NPO-16859-1-CU] c 60 N90-21527  
 Method of up-front load balancing for local memory parallel processors  
 [NASA-CASE-MS-C-21348-1] c 62 N91-14769
- HYPERFINE STRUCTURE**  
 Process for producing dispersion strengthened nickel with aluminum Patent  
 [NASA-CASE-XLE-06969] c 17 N71-24142
- HYPERGOLIC ROCKET PROPELLANTS**  
 Apparatus for igniting solid propellants Patent  
 [NASA-CASE-XLE-00207] c 28 N70-33375  
 Small rocket engine Patent  
 [NASA-CASE-XLE-00685] c 28 N70-41992  
 Method of igniting solid propellants Patent  
 [NASA-CASE-XLE-01988] c 27 N71-15634

## HYPERSONIC AIRCRAFT

- Multistage aerospace craft --- perspective drawings of conceptual design  
 [NASA-CASE-XMF-02263] c 05 N74-10907
- HYPERSONIC FLIGHT**  
 Hypersonic airbreathing missile  
 [NASA-CASE-LAR-12264-1] c 15 N78-32168
- HYPERSONIC FLOW**  
 Hypersonic test facility Patent  
 [NASA-CASE-XLA-05378] c 11 N71-21475
- HYPERSONIC SPEED**  
 Reentry vehicle leading edge Patent  
 [NASA-CASE-XLA-00165] c 31 N70-33242  
 Landing arrangement for aerospace vehicle Patent  
 [NASA-CASE-XLA-00805] c 31 N70-38010  
 Variable geometry manned orbital vehicle Patent  
 [NASA-CASE-XLA-03691] c 31 N71-15674  
 High speed flight vehicle control Patent  
 [NASA-CASE-XLA-08967] c 02 N71-27088  
 Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds  
 [NASA-CASE-LAR-10578-1] c 12 N73-25262  
 Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds  
 [NASA-CASE-LAR-10612-1] c 12 N73-28144
- HYPERSONIC VEHICLES**  
 Techniques for insulating cryogenic fuel containers Patent  
 [NASA-CASE-XLA-01967] c 31 N70-42015
- HYPERSONIC WIND TUNNELS**  
 Sound shield  
 [NASA-CASE-LAR-12883-1] c 71 N83-17235  
 Quantitative surface temperature measurement using two-color thermographic phosphors and video equipment  
 [NASA-CASE-LAR-13740-1] c 35 N90-22770
- HYPERTHERMIA**  
 Hyperthermia heating apparatus --- cancer therapy  
 [NASA-CASE-NPO-14549-2] c 52 N82-33996
- HYPERVELOCITY GUNS**  
 Dust particle injector for hypervelocity accelerators Patent  
 [NASA-CASE-XGS-06628] c 24 N71-16213  
 Hypervelocity gun Patent  
 [NASA-CASE-XAC-05902] c 11 N71-18578  
 Collapsible pistons  
 [NASA-CASE-MS-C-13789-1] c 11 N73-32152  
 Hypervelocity gun --- using both electric and chemical energy for projectile propulsion  
 [NASA-CASE-XLE-03186-1] c 09 N79-21084
- HYPERVELOCITY IMPACT**  
 Method of and device for determining the characteristics and flux distribution of micrometeorites --- scanning puncture holes in sheet material with photoelectric cell  
 [NASA-CASE-NPO-12127-1] c 91 N74-13130  
 Hypervelocity impact shield  
 [NASA-CASE-MS-C-21420-1] c 18 N90-26658
- HYPERVELOCITY PROJECTILES**  
 Impact measuring technique  
 [NASA-CASE-LAR-10913] c 14 N72-16282  
 Multiple image storing system for high speed projectile holography  
 [NASA-CASE-MFS-20596] c 14 N72-17324
- HYPERVELOCITY WIND TUNNELS**  
 Hypersonic test facility Patent  
 [NASA-CASE-XLA-00378] c 11 N71-15925  
 Hypersonic test facility Patent  
 [NASA-CASE-XLA-05378] c 11 N71-21475
- HYSTERESIS**  
 Belleville spring assembly with elastic guides  
 [NASA-CASE-XNP-09452] c 15 N69-27504  
 Wind tunnel balance  
 [NASA-CASE-ARC-11877-1-SB] c 09 N91-14357
- ICE**  
 Ice detector  
 [NASA-CASE-LAR-13776-1] c 35 N88-29149
- IDENTIFYING**  
 Lightning discharge identification system  
 [NASA-CASE-KSC-11099-1] c 47 N82-24779
- IGNITERS**  
 Solid propellant rocket motor  
 [NASA-CASE-NPO-11559] c 28 N73-24784  
 Remote fire stack igniter --- with solenoid-controlled valve  
 [NASA-CASE-MFS-21675-1] c 25 N74-33378  
 Molded composite pyrogen igniter for rocket motors --- solid propellant ignition  
 [NASA-CASE-LAR-12018-1] c 20 N78-24275  
 Plasma igniter for internal combustion engine  
 [NASA-CASE-NPO-13828-1] c 37 N79-11405  
 Hollow cathode apparatus  
 [NASA-CASE-NPO-15560-1] c 33 N85-21491



- Low gravity exothermic heating/cooling apparatus  
[NASA-CASE-MSC-25707-1] c 35 N85-29214
- IGNITION**
- Magnetically controlled plasma accelerator Patent  
[NASA-CASE-XLA-00327] c 25 N71-29184
- Device and method for frictionally testing materials for ignitability  
[NASA-CASE-MSC-20622-1] c 25 N86-19413
- Ignitability test method and apparatus  
[NASA-CASE-LAR-13996-1-SB] c 25 N90-15161
- Ignitability test method and apparatus  
[NASA-CASE-LAR-14454-1] c 25 N91-32196
- IGNITION LIMITS**
- High voltage pulse generator Patent  
[NASA-CASE-MSC-12178-1] c 09 N71-13518
- IGNITION SYSTEMS**
- Apparatus for igniting solid propellants Patent  
[NASA-CASE-XLE-00207] c 28 N70-33375
- Ignition system for monopropellant combustion devices Patent  
[NASA-CASE-XNP-00249] c 28 N70-38249
- Rocket motor system Patent  
[NASA-CASE-XLE-00323] c 28 N70-38505
- Ignition means for monopropellant Patent  
[NASA-CASE-XNP-00876] c 28 N70-41311
- Sustained arc ignition system  
[NASA-CASE-LEW-12444-1] c 33 N77-28385
- IGNITION TEMPERATURE**
- Autoignition test cell Patent  
[NASA-CASE-KSC-10198] c 11 N71-28629
- ILLUMINATING**
- EMU helmet mounted display  
[NASA-CASE-MSC-21460-1] c 54 N91-13879
- ILLUMINATORS**
- Image magnification adapter for cameras Patent  
[NASA-CASE-XMF-03844-1] c 14 N71-26474
- Illumination system including a virtual light source Patent  
[NASA-CASE-HQN-10781] c 23 N71-30292
- IMAGE ANALYSIS**
- Real-time image difference detection using a polarization rotation spacial light modulator  
[NASA-CASE-NPO-17144-1-CU] c 74 N88-25305
- Method and apparatus for sensor fusion  
[NASA-CASE-MSC-21334-1] c 32 N91-25317
- IMAGE CONTRAST**
- Video signal enhancement system with dynamic range compression and modulation index expansion Patent  
[NASA-CASE-NPO-10343] c 07 N71-27341
- Method and apparatus for producing an image from a transparent object  
[NASA-CASE-GSC-11989-1] c 74 N77-28932
- IMAGE CONVERTERS**
- Deep trap, laser activated image converting system  
[NASA-CASE-NPO-13131-1] c 36 N75-19652
- Resistive anode image converter  
[NASA-CASE-HQN-10876-1] c 33 N76-27473
- Wedge immersed thermistor bolometers  
[NASA-CASE-XGS-01245-1] c 35 N79-33449
- Photocapacitive image converter  
[NASA-CASE-LAR-12513-1] c 44 N82-32841
- IMAGE CORRELATORS**
- Multiple hologram recording and readout system Patent  
[NASA-CASE-ERC-10151] c 16 N71-29131
- Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c 35 N75-15014
- Azimuth correlator for real-time synthetic aperture radar image processing  
[NASA-CASE-NPO-14019-1] c 32 N79-14268
- Servomechanism for Doppler shift compensation in optical correlator for synthetic aperture radar  
[NASA-CASE-NPO-14998-1] c 32 N83-18975
- Optical stereo video signal processor  
[NASA-CASE-MFS-25752-1] c 74 N86-21348
- IMAGE DISSECTOR TUBES**
- Apparatus for calibrating an image dissector tube  
[NASA-CASE-MFS-22208-1] c 33 N75-26244
- Electronic optical transfer function analyzer  
[NASA-CASE-MFS-21672-1] c 74 N76-19935
- IMAGE ENHANCEMENT**
- Method and means for an improved electron beam scanning system Patent  
[NASA-CASE-ERC-10552] c 09 N71-12539
- Physical correction filter for improving the optical quality of an image  
[NASA-CASE-HQN-10542-1] c 74 N75-25706
- Method of obtaining intensified image from developed photographic films and plates  
[NASA-CASE-MFS-23461-1] c 35 N79-10389
- Dynamic range compression/expansion of light beams by photorefractive crystals  
[NASA-CASE-NPO-17140-1-CU] c 74 N89-14077
- IMAGE FILTERS**
- Motion picture camera for optical pyrometry Patent  
[NASA-CASE-XLA-00062] c 14 N70-33254
- Compact spectroradiometer  
[NASA-CASE-HQN-10683] c 14 N71-34389
- Physical correction filter for improving the optical quality of an image  
[NASA-CASE-HQN-10542-1] c 74 N75-25706
- Method for providing a polarization filter for processing synthetic aperture radar image data  
[NASA-CASE-NPO-17904-1-CU] c 32 N91-13594
- IMAGE INTENSIFIERS**
- Magnifying image intensifier  
[NASA-CASE-GSC-12010-1] c 74 N78-18905
- Method of obtaining intensified image from developed photographic films and plates  
[NASA-CASE-MFS-23461-1] c 35 N79-10389
- IMAGE PROCESSING**
- Azimuth correlator for real-time synthetic aperture radar image processing  
[NASA-CASE-NPO-14019-1] c 32 N79-14268
- Interleaving device  
[NASA-CASE-GSC-12111-2] c 33 N81-29342
- Clutter free synthetic aperture radar correlator  
[NASA-CASE-NPO-14035-1] c 32 N83-19968
- Longwall shearer tracking system  
[NASA-CASE-MFS-25717-1] c 35 N84-33768
- Data volume reduction for imaging radar polarimetry  
[NASA-CASE-NPO-17184-1-CU] c 32 N88-26541
- Programmable pipelined image processor  
[NASA-CASE-NPO-16461-1-CU] c 60 N89-26400
- Method for providing a polarization filter for processing synthetic aperture radar image data  
[NASA-CASE-NPO-17904-1-CU] c 32 N91-13594
- Real-time dynamic holographic image storage device  
[NASA-CASE-LAR-13989-1] c 35 N91-13694
- Programmable remapper with single flow architecture  
[NASA-CASE-MSC-21481-1] c 60 N91-13890
- General method of pattern classification using the two-domain theory  
[NASA-CASE-MSC-21737-1] c 61 N91-13911
- Motion detection, novelty filtering, and target tracking using an interferometric technique with a GaAs phase conjugate mirror  
[NASA-CASE-NPO-17784-1-CU] c 74 N91-13998
- Programmable remapper for image processing  
[NASA-CASE-MSC-21350-1] c 60 N91-23724
- Generation of topographic terrain models utilizing synthetic aperture radar and surface level data  
[NASA-CASE-GSC-13212-1] c 43 N91-32546
- Optoelectronic associative memory  
[NASA-CASE-NPO-18278-1-CU] c 74 N91-32925
- IMAGE RECONSTRUCTION**
- Programmable remapper for image processing  
[NASA-CASE-MSC-21350-1] c 60 N91-23724
- Digital data registration and differencing compression system  
[NASA-CASE-SSC-00010-1] c 82 N91-23976
- IMAGE RESOLUTION**
- Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c 74 N82-24072
- IMAGE ROTATION**
- Rhomboid prism pair for rotating the plane of parallel light beams  
[NASA-CASE-ARC-11311-1] c 74 N83-13978
- IMAGE TUBES**
- Image tube --- deriving electron beam replica of image  
[NASA-CASE-GSC-11602-1] c 33 N74-21850
- System for producing chroma signals  
[NASA-CASE-MSC-14683-1] c 74 N77-18893
- IMAGERY**
- Television monitor field shifter and an opto-electronic method for obtaining a stereo image of optimal depth resolution and reduced depth distortion on a single screen  
[NASA-CASE-NPO-17249-1-CU] c 32 N89-28676
- Atmospheric autrotating imaging device  
[NASA-CASE-NPO-17390-1-CU] c 35 N90-22769
- IMAGES**
- Image magnification adapter for cameras Patent  
[NASA-CASE-XMF-03844-1] c 14 N71-26474
- Stereoscopic television system and apparatus  
[NASA-CASE-ARC-10160-1] c 23 N72-27728
- Wide-angle flat field telescope  
[NASA-CASE-GSC-12825-1] c 74 N86-28732
- IMAGING RADAR**
- Data volume reduction for imaging radar polarimetry  
[NASA-CASE-NPO-17184-1-CU] c 32 N88-26541
- IMAGING TECHNIQUES**
- Optical mirror apparatus Patent  
[NASA-CASE-ERC-10001] c 23 N71-24868
- Method and apparatus for eliminating coherent noise in a coherent energy imaging system without destroying spatial coherence  
[NASA-CASE-GSC-11133-1] c 23 N72-11568
- Phototransistor imaging system  
[NASA-CASE-MFS-20809] c 23 N73-13660
- Multiplexed imaging system  
[NASA-CASE-MSC-12404-1] c 23 N73-13661
- Multiple pass reimaging optical system  
[NASA-CASE-ARC-10194-1] c 23 N73-20741
- Ritchey-Chretien Telescope  
[NASA-CASE-GSC-11487-1] c 14 N73-30393
- Data storage, image tube type  
[NASA-CASE-MSC-14053-1] c 60 N74-12888
- Optical instruments  
[NASA-CASE-MSC-14096-1] c 74 N74-15095
- Electron microscope aperture system  
[NASA-CASE-ARC-10448-3] c 35 N77-14408
- Method and apparatus for producing an image from a transparent object  
[NASA-CASE-GSC-11989-1] c 74 N77-28932
- Full color hybrid display for aircraft simulators --- landing aids  
[NASA-CASE-ARC-10903-1] c 09 N78-18083
- Multispectral imaging and analysis system --- using charge coupled devices and linear arrays  
[NASA-CASE-NPO-13691-1] c 43 N79-17288
- System and method for obtaining wide screen Schlieren photographs  
[NASA-CASE-NPO-14174-1] c 74 N79-20856
- Low intensity X-ray and gamma-ray imaging device --- fiber optics  
[NASA-CASE-GSC-12263-1] c 74 N79-20857
- Diffraction grating configuration for X-ray and ultraviolet focusing  
[NASA-CASE-GSC-12357-1] c 74 N80-21140
- Multispectral scanner optical system  
[NASA-CASE-MSC-18255-1] c 74 N80-33210
- System for forming a quadrified image comprising angularly related fields of view of a three dimensional object  
[NASA-CASE-NPO-14219-1] c 74 N81-17886
- Time delay and integration detectors using charge transfer devices  
[NASA-CASE-GSC-12324-1] c 33 N81-33403
- Image readout device with electronically variable spatial resolution  
[NASA-CASE-LAR-12633-1] c 33 N82-24416
- Low intensity X-ray and gamma-ray spectrometer  
[NASA-CASE-GSC-12587-1] c 35 N82-32659
- Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-2] c 32 N83-31918
- High speed multi focal plane optical system  
[NASA-CASE-GSC-12683-1] c 74 N83-36898
- Real-time 3-D X-ray and gamma-ray viewer  
[NASA-CASE-GSC-12640-1] c 74 N84-11920
- Longwall shearer tracking system  
[NASA-CASE-MFS-25717-1] c 35 N84-33768
- Optical system  
[NASA-CASE-NPO-15801-1] c 74 N85-23396
- Three-dimensional and tomographic imaging device for X-ray and gamma-ray emitting objects  
[NASA-CASE-GSC-12851-1] c 35 N85-30281
- Method and apparatus for Delta Kappa synthetic aperture radar measurement of ocean current  
[NASA-CASE-NPO-15704-1] c 32 N85-34327
- Multispectral linear array multiband selection device  
[NASA-CASE-GSC-12911-1] c 74 N86-29650
- Optical scanner  
[NASA-CASE-GSC-12897-1] c 74 N87-21679
- Noncontact temperature pattern measuring device  
[NASA-CASE-NPO-17824-1-CU] c 36 N90-17132
- Quantitative surface temperature measurement using two-color thermographic phosphors and video equipment  
[NASA-CASE-LAR-13740-1] c 35 N90-22770
- Improving the geometric fidelity of imaging systems employing sensor arrays  
[NASA-CASE-NPO-17970-1-CU] c 43 N90-26384
- Variable magnification variable dispersion glancing incidence imaging x ray spectroscopic telescope  
[NASA-CASE-MFS-28013-3] c 89 N90-27594
- Multispectral variable magnification glancing incidence x ray telescope  
[NASA-CASE-MFS-28013-4] c 89 N90-27595
- Detection of multiple-bit errors from single-ion tracks in integrated circuits  
[NASA-CASE-NPO-18075-1-CU] c 33 N91-13622
- Variable magnification glancing incidence x ray telescope  
[NASA-CASE-MFS-28013-2] c 89 N91-14096
- Water window imaging x ray microscope  
[NASA-CASE-MFS-28485-1] c 35 N91-15519
- Programmable remapper for image processing  
[NASA-CASE-MSC-21350-1] c 60 N91-23724
- IMIDES**
- Imidazopyrrolone/imide copolymers Patent  
[NASA-CASE-XLA-08802] c 06 N71-11238
- Molding process for imidazopyrrolone polymers  
[NASA-CASE-LAR-10547-1] c 31 N74-13177
- Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c 27 N83-31854

Poliphenylene ethers with imide linking groups  
[NASA-CASE-LAR-12980-1] c 27 N84-22749

Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-2] c 27 N85-21347

High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11538-1SB] c 24 N86-21590

Fire and heat resistant laminating resins based on maleimido substituted aromatic cyclotriphosphazene polymer  
[NASA-CASE-ARC-11428-2] c 27 N87-16909

Process for preparing phthalocyanine polymer from imide containing bisphthalonitrile  
[NASA-CASE-ARC-11511-2] c 27 N87-21112

Fire and heat resistant laminating resins based on maleimido and citraconimido substituted 1-(diorgano oxyposphonyl) methyl -2,4- and -2,6- diaminobenzenes  
[NASA-CASE-ARC-11533-3] c 27 N87-24564

Aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-3] c 23 N88-24692

Fire and heat resistant laminating resin based on maleimido and citraconimido substituted 1-(diorgano oxyposphonyl-methyl)-2,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11533-2] c 27 N89-16042

Acetylene terminated aspartimides and resins therefrom  
[NASA-CASE-LAR-14188-1] c 27 N90-23545

Imide/arylene ether copolymers  
[NASA-CASE-LAR-14159-1-CU] c 27 N90-26953

N-(3-ethynylphenyl)maleimide  
[NASA-CASE-LAR-14188-2] c 23 N91-14419

**IMINES**

Synthesis of polymeric schiff bases by schiff-base exchange reactions Patent  
[NASA-CASE-XMF-08651] c 06 N71-11236

Direct synthesis of polymeric schiff bases from two amines and two aldehydes Patent  
[NASA-CASE-XMF-08655] c 06 N71-11239

Synthesis of polymeric schiff bases by reaction of acetals and amine compounds Patent  
[NASA-CASE-XMF-08652] c 06 N71-11243

Aromatic diamine-aromatic dialdehyde high molecular weight Schiff base polymers prepared in a monofunctional Schiff base Patent  
[NASA-CASE-XMF-03074] c 06 N71-24740

**IMMOBILIZATION**

Stretcher Patent  
[NASA-CASE-XMF-06589] c 05 N71-23159

Absolute focus lock for microscopes  
[NASA-CASE-LAR-10184] c 14 N72-22445

Spine immobilization apparatus  
[NASA-CASE-ARC-11167-1] c 52 N81-25662

Active hold-down for heat treating  
[NASA-CASE-NPO-16892-1-CU] c 37 N87-14704

**IMPACT**

Impact energy absorbing system utilizing fractureable material  
[NASA-CASE-NPO-10671] c 15 N72-20443

Cosmic dust or other similar outer space particles impact location detector  
[NASA-CASE-GSC-11291-1] c 25 N72-33696

Impact position detector for outer space particles  
[NASA-CASE-GSC-11829-1] c 35 N75-27331

Method and apparatus for determining time, direction, and composition of impacting space particles  
[NASA-CASE-LAR-13392-1-CU] c 19 N91-14412

**IMPACT ACCELERATION**

Suspended mass impact damper Patent  
[NASA-CASE-LAR-10193-1] c 15 N71-27146

**IMPACT DAMAGE**

Micrometeoroid penetration measuring device Patent  
[NASA-CASE-XLA-00941] c 14 N71-23240

Curved cap corrugated sheet  
[NASA-CASE-LAR-12884-1] c 18 N84-33450

Impact tolerant material  
[NASA-CASE-LAR-12887-3] c 24 N90-21822

**IMPACT LOADS**

Force transducer Patent  
[NASA-CASE-XAC-01101] c 14 N70-41957

Impact testing machine Patent  
[NASA-CASE-XNP-04817] c 14 N71-23225

**IMPACT RESISTANCE**

Electric storage battery  
[NASA-CASE-NPO-11021] c 03 N72-20032

Hybrid composite laminate structures  
[NASA-CASE-LEW-12118-1] c 24 N77-27188

**IMPACT STRENGTH**

High impact pressure regulator Patent  
[NASA-CASE-NPO-10175] c 14 N71-18625

**IMPACT TESTING MACHINES**

Lunar penetrometer Patent  
[NASA-CASE-XLA-00934] c 14 N71-22765

Impact testing machine Patent  
[NASA-CASE-XNP-04817] c 14 N71-23225

Impacting device for testing insulation  
[NASA-CASE-MFS-25862-2] c 37 N84-33807

**IMPACT TESTS**

Impacting device for testing insulation  
[NASA-CASE-MFS-25862-2] c 37 N84-33807

**IMPACT TOLERANCES**

High impact antenna Patent  
[NASA-CASE-NPO-10231] c 07 N71-26101

Vehicular impact absorption system  
[NASA-CASE-NPO-14014-1] c 37 N79-10420

**IMPEDANCE**

Low noise tuned amplifier  
[NASA-CASE-GSC-12567-1] c 33 N84-22887

Power supply conditioning circuit  
[NASA-CASE-NPO-17233-1-CU] c 33 N88-29095

Microwave field effect transistor  
[NASA-CASE-GSC-12442-2] c 33 N90-20282

Noninvasive method and apparatus for monitoring the cure of polymeric materials  
[NASA-CASE-LAR-13465-1] c 27 N90-23544

**IMPEDANCE MATCHING**

Signal multiplexer  
[NASA-CASE-XGS-01110] c 07 N69-24334

Reflector for receiver input impedance match measurement Patent  
[NASA-CASE-XNP-10843] c 07 N71-11267

Radio frequency coaxial high pass filter Patent  
[NASA-CASE-XGS-01418] c 09 N71-23573

Triaxial antenna Patent  
[NASA-CASE-XGS-02290] c 07 N71-28809

**IMPEDANCE MEASUREMENT**

High impedance measuring apparatus Patent  
[NASA-CASE-XMS-08589-1] c 09 N71-20569

Apparatus for measuring semiconductor device resistance  
[NASA-CASE-NPO-14424-1] c 33 N80-32650

**IMPELLERS**

Turbomachinery shaft insert  
[NASA-CASE-MFS-28345-2] c 37 N89-28842

**IMPLANTATION**

Telemeter adaptable for implanting in an animal Patent  
[NASA-CASE-XAC-05706] c 05 N71-12342

Magnetic electrical connectors for biomedical percutaneous implants  
[NASA-CASE-KSC-11030-1] c 52 N77-25772

Prosthetic occlusive device for an internal passageway  
[NASA-CASE-MFS-25740-1] c 52 N84-11744

**IMPLANTED ELECTRODES (BIOLOGY)**

Pocket ECG electrode  
[NASA-CASE-ARC-11258-1] c 52 N80-33081

Subcutaneous electrode structure  
[NASA-CASE-ARC-11117-1] c 52 N81-14612

Implantable electrical device  
[NASA-CASE-GSC-12560-1] c 52 N82-29863

**IMPLOSIONS**

Hypervelocity gun Patent  
[NASA-CASE-XAC-05902] c 11 N71-18578

**IMPREGNATING**

Composite lamination method  
[NASA-CASE-LAR-12019-1] c 24 N78-17150

Insoluble polyelectrolyte and ion-exchange hollow fiber impregnated therewith  
[NASA-CASE-NPO-13530-1] c 25 N81-17187

High temperature silicon carbide impregnated insulating fabrics  
[NASA-CASE-MS-18832-1] c 27 N83-18908

Continuous fiber thermoplastic prepreg  
[NASA-CASE-LAR-14459-1] c 24 N91-15334

**IMPULSE GENERATORS**

Percutaneous connector device  
[NASA-CASE-KSC-10849-1] c 52 N77-14738

**IMPURITIES**

Method of making impurity-type semiconductor electrical contacts Patent  
[NASA-CASE-XMF-01016] c 26 N71-17818

Method of mitigating titanium impurities effects in p-type silicon material for solar cells  
[NASA-CASE-NPO-14635-1] c 44 N80-24741

Electromigration process for the purification of molten silicon during crystal growth  
[NASA-CASE-NPO-14831-1] c 76 N82-30105

**IN-FLIGHT MONITORING**

System for use in conducting wake investigation for a wing in flight -- differential pressure measurements for drag investigations  
[NASA-CASE-FRC-11024-1] c 02 N80-28300

**INCIDENCE**

Method of and means for testing a glancing-incidence mirror system of an X-ray telescope  
[NASA-CASE-MFS-22409-2] c 74 N78-15880

**INCIDENT RADIATION**

Solar cell assembly -- for use under high intensity illumination  
[NASA-CASE-LEW-11549-1] c 44 N77-19571

**INCLINATION**

Hingeless helicopter rotor with improved stability  
[NASA-CASE-ARC-10807-1] c 05 N77-17029

**INCOHERENT SCATTERING**

Rapidly pulsed, high intensity, incoherent light source  
[NASA-CASE-XLE-2529-3] c 33 N74-20859

**INDICATING INSTRUMENTS**

Missile stage separation indicator and stage initiator Patent  
[NASA-CASE-XLA-00791] c 03 N70-39930

Inductive liquid level detection system Patent  
[NASA-CASE-XLE-01609] c 14 N71-10500

Apparatus for the determination of the existence or non-existence of a bonding between two members Patent  
[NASA-CASE-MFS-13686] c 15 N71-18132

Hydrogen fire detection system with logic circuit to analyze the spectrum of temporal variations of the optical spectrum  
[NASA-CASE-MFS-13130] c 10 N72-17173

Fatigue failure load indicator  
[NASA-CASE-LAR-12027-1] c 39 N79-22537

System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-FRC-11005-1] c 06 N82-16075

Film advance indicator  
[NASA-CASE-LAR-12474-1] c 35 N82-26628

Adjustable indicating device for load position  
[NASA-CASE-MFS-28008-1] c 35 N85-20300

Fluid leak indicator  
[NASA-CASE-MS-20783-1] c 35 N86-20756

**INDIUM ALLOYS**

Method for attaching a fused-quartz mirror to a conductive metal substrate  
[NASA-CASE-MFS-23405-1] c 26 N77-29260

Solar cell collector  
[NASA-CASE-LEW-12552-1] c 44 N78-25527

Aluminum alloy  
[NASA-CASE-LAR-13924-1-CU] c 26 N89-28621

**INDIUM COMPOUNDS**

Liquid crystal light valve structures  
[NASA-CASE-MS-20036-1] c 76 N85-33826

**INDUCTANCE**

Current dependent filter inductance  
[NASA-CASE-ERC-10139] c 09 N72-17154

Inductance device with vacuum insulation  
[NASA-CASE-LEW-10330-1] c 09 N72-27226

Direct reading inductance meter  
[NASA-CASE-NPO-13792-1] c 35 N77-32455

**INDUCTION**

Induction-type metal detector with increased scanning area capability  
[NASA-CASE-KSC-11386-1] c 35 N90-22023

**INDUCTION HEATING**

Induction furnace with perforated tungsten foil shielding Patent  
[NASA-CASE-XLE-04026] c 14 N71-23267

Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c 33 N81-19389

One-step dual purpose joining technique  
[NASA-CASE-LAR-12595-1] c 33 N82-26571

Induction heating gun  
[NASA-CASE-LAR-13181-1] c 31 N85-29083

**INDUCTION MOTORS**

Induction motor control system with voltage controlled oscillator circuit  
[NASA-CASE-MFS-21465-1] c 10 N73-32145

Variable frequency inverter for ac induction motors with torque, speed and braking control  
[NASA-CASE-MFS-22088-1] c 33 N75-15874

Power factor control system for AC induction motors  
[NASA-CASE-MFS-23280-1] c 33 N78-10376

Three phase power factor controller  
[NASA-CASE-MFS-25535-1] c 33 N81-12330

Power factor control system for ac induction motors  
[NASA-CASE-MFS-23988-1] c 33 N81-27395

Motor power factor controller with a reduced voltage starter  
[NASA-CASE-MFS-25586-1] c 33 N82-11360

Magnetic field control -- electromechanical torquing device  
[NASA-CASE-MFS-23828-1] c 33 N82-26569

Electrical power generating system  
[NASA-CASE-MFS-25302-1] c 33 N83-28319

Triac failure detector  
[NASA-CASE-MFS-25607-1] c 33 N83-34190

Control system for an induction motor with energy recovery  
[NASA-CASE-MFS-25477-1] c 33 N84-14424

Three phase power factor controller  
[NASA-CASE-MFS-25535-2] c 33 N84-22885

Motor power control circuit for ac induction motors  
[NASA-CASE-MFS-25323-1] c 33 N84-22886

- Coupling an induction motor type generator to ac power lines --- making windmill generators compatible with public power lines  
[NASA-CASE-MFS-25302-2] c 33 N84-33660
- Three-phase power factor controller with induced EMF sensing  
[NASA-CASE-MFS-25852-1] c 33 N84-33661
- Solar powered actuator with continuously variable auxiliary power control  
[NASA-CASE-MFS-25637-1] c 44 N85-21769
- Power control for ac motor  
[NASA-CASE-MFS-25861-1] c 33 N85-22877
- INDUCTORS**
- Inductive liquid level detection system Patent  
[NASA-CASE-XLE-01609] c 14 N71-10500
- Vacuum deposition apparatus Patent  
[NASA-CASE-XMF-01667] c 15 N71-17647
- Constant frequency output two stage induction machine systems Patent  
[NASA-CASE-ERC-10065] c 09 N71-27364
- Elimination of current spikes in buck power converters  
[NASA-CASE-NPO-14505-1] c 33 N81-19393
- Improved high power/high frequency inductor  
[NASA-CASE-NPO-17830-1-CU] c 33 N91-14539
- INDUSTRIAL PLANTS**
- Process for making diamonds  
[NASA-CASE-MFS-20698-2] c 15 N73-19457
- INDUSTRIAL WASTES**
- Process of forming catalytic surfaces for wet oxidation reactions  
[NASA-CASE-MSC-14831-1] c 25 N78-10225
- Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c 85 N79-17747
- INERT ATMOSPHERE**
- Method for retarding dye fading during archival storage of developed color photographic film --- inert atmosphere  
[NASA-CASE-MFS-23250-1] c 35 N82-11432
- INERTIA**
- Bidirectional step torque filter with zero backlash characteristic Patent  
[NASA-CASE-XGS-04227] c 15 N71-21744
- INERTIAL CONFINEMENT FUSION**
- Method and apparatus for producing gas-filled hollow spheres --- target pellets for inertial confinement fusion  
[NASA-CASE-NPO-14596-3] c 31 N83-31896
- Contactless pellet fabrication  
[NASA-CASE-NPO-15592-1] c 71 N84-16940
- INERTIAL GUIDANCE**
- Hermetic sealed vibration damper Patent  
[NASA-CASE-MSC-10959] c 15 N71-26243
- INERTIAL NAVIGATION**
- Autonomous navigation system --- gyroscopic pendulum for air navigation  
[NASA-CASE-ARC-11257-1] c 04 N81-21047
- Assured crew return vehicle  
[NASA-CASE-MSC-21536-1] c 18 N91-13483
- INERTIAL PLATFORMS**
- Clamping assembly for inertial components Patent  
[NASA-CASE-XMS-02184] c 15 N71-20813
- Azimuth laying system Patent  
[NASA-CASE-XMF-01669] c 21 N71-23289
- Temperature compensated digital inertial sensor --- circuit for maintaining inertial element of gyroscope or accelerometer at constant position  
[NASA-CASE-NPO-13044-1] c 35 N74-15094
- Attitude control system  
[NASA-CASE-MFS-22787-1] c 15 N77-10113
- Rim inertial measuring system  
[NASA-CASE-LAR-12052-1] c 18 N81-29152
- INERTIAL REFERENCE SYSTEMS**
- Attitude control system Patent  
[NASA-CASE-XGS-04393] c 21 N71-14159
- Inertial reference apparatus Patent  
[NASA-CASE-XAC-03107] c 23 N71-16098
- INFLATABLE SPACECRAFT**
- Thermal control of space vehicles Patent  
[NASA-CASE-XLA-01291] c 33 N70-36617
- Passive communication satellite Patent  
[NASA-CASE-XLA-00210] c 30 N70-40309
- Rotating mandrel for assembly of inflatable devices Patent  
[NASA-CASE-XLA-04143] c 15 N71-17687
- Method of making an inflatable panel Patent  
[NASA-CASE-XLA-03497] c 15 N71-23052
- Orbital escape device Patent  
[NASA-CASE-XMS-06162] c 31 N71-28851
- INFLATABLE STRUCTURES**
- Aeroflexible structures  
[NASA-CASE-XLA-06095] c 01 N69-39981
- Life raft Patent  
[NASA-CASE-XMS-00863] c 05 N70-34857
- Life preserver Patent  
[NASA-CASE-XMS-00864] c 05 N70-36493
- Inflatable honeycomb Patent  
[NASA-CASE-XLA-00204] c 32 N70-36536
- Inflatable radar reflector unit Patent  
[NASA-CASE-XMS-00893] c 07 N70-40063
- Excessive temperature warning system Patent  
[NASA-CASE-XLA-01926] c 14 N71-15620
- Inflation system for balloon type satellites Patent  
[NASA-CASE-XGS-03351] c 31 N71-16081
- Aerodynamic protection for space flight vehicles Patent  
[NASA-CASE-XNP-02507] c 31 N71-17679
- Self supporting space vehicle Patent  
[NASA-CASE-XLA-00117] c 31 N71-17680
- Conforming polisher for aspheric surface of revolution Patent  
[NASA-CASE-XGS-02884] c 15 N71-22705
- Method of making inflatable honeycomb Patent  
[NASA-CASE-XLA-03492] c 15 N71-22713
- Collapsible antenna boom and transmission line Patent  
[NASA-CASE-MFS-20068] c 07 N71-27191
- Inflatable tether Patent  
[NASA-CASE-XMS-10993] c 15 N71-28936
- Inflatable transpiration cooled nozzle  
[NASA-CASE-MFS-20619] c 28 N72-11708
- Modification of one man life raft  
[NASA-CASE-LAR-10241-1] c 54 N74-14845
- Emergency space-suit helmet  
[NASA-CASE-MSC-10954-1] c 54 N78-18761
- Pressure control valve --- inflating flexible bladders  
[NASA-CASE-ARC-11251-1] c 37 N81-17433
- Pneumatic inflatable end effector  
[NASA-CASE-MFS-23696-1] c 54 N81-26718
- Inflatable device for installing strain gage bridges  
[NASA-CASE-FRC-11068-1] c 35 N84-12443
- Ballast system for maintaining constant pressure in a glove box  
[NASA-CASE-NPO-17786-1-CU] c 35 N90-17104
- INFORMATION RETRIEVAL**
- Multiple hologram recording and readout system Patent  
[NASA-CASE-ERC-10151] c 16 N71-29131
- INFRARED DETECTORS**
- Temperature sensitive capacitor device  
[NASA-CASE-XNP-09750] c 14 N69-39937
- Sight switch using an infrared source and sensor Patent  
[NASA-CASE-XMF-03934] c 09 N71-22985
- Infrared detectors  
[NASA-CASE-LAR-10728-1] c 14 N73-12445
- Doped Josephson tunneling junction for use in a sensitive IR detector  
[NASA-CASE-NPO-13348-1] c 33 N75-31332
- Multispectral scanner optical system  
[NASA-CASE-MSC-18255-1] c 74 N80-33210
- Broadband optical radiation detector  
[US-PATENT-4,262,198] c 74 N83-19597
- Integrating IR detector imaging systems  
[NASA-CASE-NPO-15805-1] c 74 N84-28590
- Integrated photo-responsive metal oxide semiconductor circuit  
[NASA-CASE-GSC-12782-1] c 33 N88-14271
- Field induced gap infrared detector  
[NASA-CASE-NPO-17526-1-CU] c 35 N91-14588
- Laterally stacked Schottky diodes for infrared sensor applications  
[NASA-CASE-NPO-17426-1-CU] c 33 N91-21434
- INFRARED INSTRUMENTS**
- Infrared scanner Patent  
[NASA-CASE-XLA-00120] c 21 N70-33181
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71:NPO-15494-2] c 35 N85-34373
- INFRARED INTERFEROMETERS**
- Over-under double-pass interferometer  
[NASA-CASE-NPO-13999-1] c 35 N78-18395
- INFRARED LASERS**
- Monitoring atmospheric pollutants with a heterodyne radiometer transmitter-receiver  
[NASA-CASE-NPO-11919-1] c 35 N74-11284
- Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c 74 N77-26942
- Thermal compensator for closed-cycle helium refrigerator --- assuring constant temperature for an infrared laser diode  
[NASA-CASE-GSC-12168-1] c 31 N79-17029
- INFRARED PHOTOMETRY**
- Tailorable infrared sensing device with strain layer superlattice structure  
[NASA-CASE-NPO-16607-1-CU] c 76 N88-14836
- Tailorable infrared sensing device with strain layer superlattice structure  
[NASA-CASE-NPO-16617-2-CU] c 35 N90-17118
- INFRARED RADIATION**
- High-speed infrared furnace  
[NASA-CASE-XLE-10466] c 17 N69-25147
- High field CdS detector for infrared radiation  
[NASA-CASE-LAR-11027-1] c 35 N74-18088
- Double photon excitation of high-Rydberg atoms as a long-lived submillimeter detector  
[NASA-CASE-NPO-16372-1] c 72 N86-33127
- INFRARED REFLECTION**
- Electromagnetic radiation energy arrangement --- coatings for solar energy absorption and infrared reflection  
[NASA-CASE-WOO-00428-1] c 32 N79-19186
- INFRARED SCANNERS**
- Infrared scanner Patent  
[NASA-CASE-XLA-00120] c 21 N70-33181
- Infrared horizon locator  
[NASA-CASE-LAR-10726-1] c 14 N73-20475
- INFRARED SPECTRA**
- Diatomic infrared gasdynamic laser --- for producing different wavelengths  
[NASA-CASE-ARC-10370-1] c 36 N75-31426
- Gas particle radiator  
[NASA-CASE-LEW-14297-1] c 35 N89-12048
- INFRARED SPECTROMETERS**
- Telespectrograph Patent  
[NASA-CASE-XLA-03273] c 14 N71-18699
- Cooled echelle grating spectrometer --- for space telescope applications  
[NASA-CASE-NPO-14372-1] c 35 N80-26635
- INFRARED SPECTROSCOPY**
- Apparatus for providing a servo drive signal in a high-speed stepping interferometer  
[NASA-CASE-NPO-13569-2] c 35 N79-14348
- INFRARED TELESCOPES**
- Optical system with reflective baffles  
[NASA-CASE-ARC-11502-1] c 74 N86-20125
- INFRASONIC FREQUENCIES**
- Resonant infrasonic gauging apparatus  
[NASA-CASE-MSC-11847-1] c 14 N72-11363
- INHIBITORS**
- Inhibited solid propellant composition containing beryllium hydride  
[NASA-CASE-NPO-10866-1] c 28 N79-14228
- INITIATORS (EXPLOSIVES)**
- Missile stage separation indicator and stage initiator Patent  
[NASA-CASE-XLA-00791] c 03 N70-39930
- Safe-arm initiator Patent  
[NASA-CASE-LAR-10372] c 09 N71-18599
- Electroexplosive device  
[NASA-CASE-NPO-13858-1] c 28 N79-11231
- Four-terminal electrical testing device --- initiator bridgewire resistance  
[NASA-CASE-MSC-21166-1] c 35 N87-25555
- INJECTION**
- Thickness measuring and injection device Patent  
[NASA-CASE-MFS-20261] c 14 N71-27005
- High performance channel injection sealant invention abstract  
[NASA-CASE-ARC-14408-1] c 27 N82-33523
- INJECTION LASERS**
- Arrangement for damping the resonance in a laser diode  
[NASA-CASE-NPO-15980-1] c 36 N85-30305
- INJECTORS**
- Rocket propellant injector Patent  
[NASA-CASE-XLE-00103] c 28 N70-33241
- Rocket engine injector Patent  
[NASA-CASE-XLE-00111] c 28 N70-38199
- Injector for bipropellant rocket engines Patent  
[NASA-CASE-XMF-00148] c 28 N70-38710
- Dust particle injector for hypervelocity accelerators Patent  
[NASA-CASE-XGS-06628] c 24 N71-16213
- Control valve and co-axial variable injector Patent  
[NASA-CASE-XNP-09702] c 15 N71-17654
- Rocket engine injector Patent  
[NASA-CASE-XLE-03157] c 28 N71-24736
- Bipropellant injector  
[NASA-CASE-XNP-09461] c 28 N72-23809
- Coaxial injector for reaction motors  
[NASA-CASE-NPO-11095] c 15 N72-25455
- Injector for use in high voltage isolators for liquid feed lines  
[NASA-CASE-NPO-11377] c 15 N73-27406
- Rocket injector head  
[NASA-CASE-XMF-04592-1] c 20 N79-21125
- Method of injecting fluid propellants into a rocket combustion chamber  
[NASA-CASE-LEW-14846-2] c 20 N91-26200
- INKS**
- Multicolor printing plate joining  
[NASA-CASE-LEW-13598-1] c 35 N84-22930
- INLET FLOW**
- High pressure four-way valve Patent  
[NASA-CASE-XNP-00214] c 15 N70-36908
- Gas turbine combustor Patent  
[NASA-CASE-LEW-10286-1] c 28 N71-28915

- Airflow control system for supersonic inlets  
 [NASA-CASE-LEW-11188-1] c 02 N74-20646  
 Variably positioned guide vanes for aerodynamic choking  
 [NASA-CASE-LAR-10642-1] c 07 N74-31270  
 Shock position sensor for supersonic inlets --- measuring pressure in the throat of a supersonic inlet  
 [NASA-CASE-LEW-11915-1] c 35 N76-14431  
 Method for fabricating a mass spectrometer inlet leak  
 [NASA-CASE-GSC-12077-1] c 35 N77-24455  
 Gas turbine engine with recirculating bleed  
 [NASA-CASE-LEW-12452-1] c 07 N78-25089  
 Self stabilizing sonic inlet  
 [NASA-CASE-LEW-11890-1] c 05 N79-24976  
 Nozzle diffuser for use with an open test section of a wind tunnel  
 [NASA-CASE-LAR-14424-1-SB] c 09 N91-32149
- INLET NOZZLES**  
 Rocket injector head  
 [NASA-CASE-XMF-04592-1] c 20 N79-21125  
 Nozzle diffuser for use with an open test section of a wind tunnel  
 [NASA-CASE-LAR-14424-1-SB] c 09 N91-32149
- INLET PRESSURE**  
 Fluid jet amplifier  
 [NASA-CASE-XLE-03512] c 12 N69-21466  
 Shock position sensor for supersonic inlets --- measuring pressure in the throat of a supersonic inlet  
 [NASA-CASE-LEW-11915-1] c 35 N76-14431
- INOCULATION**  
 Automatic inoculating apparatus --- includes movable carriage, drive motor, and swabbing motor  
 [NASA-CASE-LAR-11074-1] c 51 N75-13502
- INORGANIC COATINGS**  
 Diffuse reflective coating  
 [NASA-CASE-GSC-12124-1] c 06 N73-13128  
 Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
 [NASA-CASE-ARC-11057-1] c 27 N78-31233
- INORGANIC COMPOUNDS**  
 Method of making membranes  
 [NASA-CASE-XNP-04264] c 03 N69-21337  
 Inorganic solid film lubricants Patent  
 [NASA-CASE-XMF-03988] c 15 N71-21403  
 Modified polyurethane foams for fuel-fire Patent  
 [NASA-CASE-ARC-10098-1] c 06 N71-24739  
 Inorganic thermal control coatings  
 [NASA-CASE-MFS-20011] c 18 N72-22566  
 Inorganic-organic separators for alkaline batteries  
 [NASA-CASE-LEW-12649-1] c 44 N78-25530  
 Method for the preparation of inorganic single crystal and polycrystalline electronic materials  
 [NASA-CASE-XLE-02545-1] c 76 N79-21910
- INORGANIC PEROXIDES**  
 Process for preparing higher oxides of the alkali and alkaline earth metals  
 [NASA-CASE-ARC-10992-1] c 26 N78-32229  
 Process for the preparation of calcium superoxide  
 [NASA-CASE-ARC-11053-1] c 25 N79-10162
- INPUT**  
 Remodulator filter Patent  
 [NASA-CASE-NPO-10198] c 09 N71-24806  
 Active RC networks  
 [NASA-CASE-ARC-10020] c 10 N72-17172  
 High-speed multiplexing of keyboard data inputs  
 [NASA-CASE-NPO-14554-1] c 60 N81-27814
- INPUT/OUTPUT ROUTINES**  
 Analog to digital converter  
 [NASA-CASE-NPO-13385-1] c 33 N76-18345
- INSERTION**  
 Apparatus and method of inserting a microelectrode in body tissue or the like using vibration means  
 [NASA-CASE-NPO-13910-1] c 52 N79-27836
- INSERTION LOSS**  
 Insertion loss measuring apparatus having transformer means connected across a pair of bolometers Patent  
 [NASA-CASE-XNP-01193] c 10 N71-16057
- INSERTS**  
 Method of repairing hidden leaks in tubes  
 [NASA-CASE-MFS-19796-1] c 37 N86-32736  
 Turbomachinery shaft insert  
 [NASA-CASE-MFS-28345-2] c 37 N89-28842  
 Improved method and apparatus for Mach number change in wind tunnel  
 [NASA-CASE-LAR-13548-1] c 09 N91-28175
- INSPECTION**  
 Automatic visual inspection system for microelectronics  
 [NASA-CASE-NPO-13282] c 38 N78-17396  
 Method for refurbishing and processing parachutes  
 [NASA-CASE-KSC-11042-1] c 09 N82-29330  
 Apparatus and method for inspecting a bearing ball  
 [NASA-CASE-MFS-25833-1] c 35 N86-32698  
 Method of radiographic inspection of wooden members  
 [NASA-CASE-LAR-13724-1] c 38 N90-23756
- Tissue simulating gel for medical research  
 [NASA-CASE-LAR-14036-1] c 27 N91-13562
- INSTALLING**  
 Device for installing rocket engines  
 [NASA-CASE-MFS-19220-1] c 20 N76-22296  
 Thermocouple installation  
 [NASA-CASE-NPO-13540-1] c 35 N77-14409  
 A method and technique for installing light-weight fragile, high-temperature fiber insulation  
 [NASA-CASE-MSC-18934-3] c 24 N82-26387  
 Inflatable device for installing strain gage bridges  
 [NASA-CASE-FRC-11068-1] c 35 N84-12443
- INSTRUMENT COMPENSATION**  
 Compensation for primary reflector wavefront error  
 [NASA-CASE-NPO-16869-1CU] c 74 N86-33138
- INSTRUMENT ERRORS**  
 Radiation direction detector including means for compensating for photocell aging Patent  
 [NASA-CASE-XLA-00183] c 14 N70-40239
- INSTRUMENT FLIGHT RULES**  
 Controlled visibility device for an aircraft Patent  
 [NASA-CASE-XFR-04147] c 11 N71-10748
- INSTRUMENTATION**  
 Plurality of photosensitive cells on a pyramidal base for planetary trackers  
 [NASA-CASE-XNP-04180] c 07 N69-39736  
 Azimuth laying system Patent  
 [NASA-CASE-XMF-01669] c 21 N71-23289  
 Optical machine tool alignment indicator Patent  
 [NASA-CASE-XAC-09489-1] c 15 N71-26673  
 Solar energy powered heliotope  
 [NASA-CASE-GSC-10945-1] c 21 N72-31637
- INSTRUMENT PACKAGES**  
 Apparatus for ejection of an instrument cover  
 [NASA-CASE-XMF-04132] c 15 N69-27502  
 Method and apparatus for shock protection Patent  
 [NASA-CASE-XLA-00482] c 15 N70-36409  
 Foam generator Patent  
 [NASA-CASE-XLA-00838] c 03 N70-36778  
 Velocity package Patent  
 [NASA-CASE-XLA-01339] c 31 N71-15692  
 Processing for producing a sterilized instrument Patent  
 [NASA-CASE-XNP-09763] c 14 N71-20461  
 Thermal control canister  
 [NASA-CASE-GSC-12253-1] c 34 N79-31523
- INSTRUMENTS**  
 Radio frequency shielded enclosure Patent  
 [NASA-CASE-XMF-09422] c 07 N71-19436  
 Linear differential pressure sensor Patent  
 [NASA-CASE-XMF-01974] c 14 N71-22752  
 Precision thrust gage Patent  
 [NASA-CASE-XGS-02319] c 14 N71-22965  
 Self-calibrating displacement transducer Patent  
 [NASA-CASE-XLA-00781] c 09 N71-22999  
 Sensing probe  
 [NASA-CASE-LEW-10281-1] c 14 N72-17327  
 Scientific experiment flexible mount  
 [NASA-CASE-MSC-12372-1] c 31 N72-25842  
 Magnetic suspension and pointing system  
 [NASA-CASE-LAR-11889-2] c 37 N78-27424  
 Rotary leveling base platform  
 [NASA-CASE-ARC-10981-1] c 37 N78-27425
- INSULATED STRUCTURES**  
 Piping arrangement through a double chamber structure  
 [NASA-CASE-XNP-08882] c 15 N69-39935
- INSULATION**  
 Electrode construction Patent  
 [NASA-CASE-ARC-10043-1] c 05 N71-11193  
 Foamed in place ceramic refractory insulating material Patent  
 [NASA-CASE-XGS-02435] c 18 N71-22998  
 Method of removing insulated material from insulated wires  
 [NASA-CASE-FRC-10038] c 15 N72-20444  
 Inductance device with vacuum insulation  
 [NASA-CASE-LEW-10330-1] c 09 N72-27226  
 Insulated electrocardiographic electrodes --- without paste electrolyte  
 [NASA-CASE-MSC-14339-1] c 05 N75-24716  
 Silica reusable surface insulation  
 [NASA-CASE-ARC-10721-1] c 27 N76-22376  
 Two-component ceramic coating for silica insulation  
 [NASA-CASE-MSC-14270-1] c 27 N76-22377  
 Three-component ceramic coating for silica insulation  
 [NASA-CASE-MSC-14270-2] c 27 N76-23426  
 Field effect transistor and method of construction thereof  
 [NASA-CASE-MFS-23312-1] c 33 N78-27326  
 Cork-resin ablative insulation for complex surfaces and method for applying the same  
 [NASA-CASE-MFS-23626-1] c 24 N80-26388  
 Impacting device for testing insulation  
 [NASA-CASE-MFS-25862-2] c 37 N84-33807
- Cryogenic insulation system  
 [NASA-CASE-LAR-13506-1] c 27 N89-12741  
 Pressure rig for repetitive casting  
 [NASA-CASE-LAR-14050-1] c 31 N90-21216  
 High temperature insulation barrier composite  
 [NASA-CASE-MFS-29241-1] c 24 N90-23480  
 Improved sprayable lightweight ablative coating  
 [NASA-CASE-MFS-28372-1] c 27 N91-24426
- INSULATORS**  
 Electrostatic thruster with improved insulators Patent  
 [NASA-CASE-XLE-01902] c 28 N71-10574  
 High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
 [NASA-CASE-NPO-13690-1] c 27 N78-19302  
 Pyroelectric detector arrays  
 [NASA-CASE-LAR-12363-2] c 33 N83-24763  
 Process for lowering the dielectric constant of polyimides using diamiac acid additives  
 [NASA-CASE-LAR-13902-1] c 27 N90-23546  
 Enhanced single layer multi-color or luminescent display with coactivators  
 [NASA-CASE-LAR-14181-1] c 76 N91-21911
- INTAKE SYSTEMS**  
 Inlet deflector for jet engines Patent  
 [NASA-CASE-XLE-00388] c 28 N70-34788  
 The engine air intake system  
 [NASA-CASE-ARC-10761-1] c 07 N77-18154  
 Fluid sampling device  
 [NASA-CASE-GSC-12143-1] c 35 N77-32456  
 Passive propellant system  
 [NASA-CASE-MFS-23642-1] c 20 N80-10278  
 Reciprocating engines  
 [NASA-CASE-MSC-16239-1] c 37 N81-32510  
 Continuous laminar smoke generator  
 [NASA-CASE-LAR-13014-1] c 09 N85-21178  
 Solid sorbent air sampler  
 [NASA-CASE-MSC-20653-1] c 35 N86-26595
- INTEGERS**  
 Boron-containing organosilane polymers and ceramic materials thereof  
 [NASA-CASE-ARC-11649-2-SB] c 27 N90-21177
- INTEGRATED CIRCUITS**  
 Counter and shift register Patent  
 [NASA-CASE-XNP-01753] c 08 N71-22897  
 Pulse rise time and amplitude detector Patent  
 [NASA-CASE-XMF-08804] c 09 N71-24717  
 Method and apparatus for swept-frequency impedance measurements of welds  
 [NASA-CASE-ARC-10176-1] c 15 N72-21464  
 Integrated circuit including field effect transistor and cermet resistor  
 [NASA-CASE-GSC-10835-1] c 09 N72-33205  
 Derivation of a tangent function using an integrated circuit four-quadrant multiplier  
 [NASA-CASE-MSC-13907-1] c 10 N73-26230  
 Coaxial inverted geometry transistor having buried emitter  
 [NASA-CASE-ARC-10330-1] c 09 N73-32112  
 Integrated circuit package with lead structure and method of preparing the same  
 [NASA-CASE-MFS-21374-1] c 33 N74-12951  
 Integrated P-channel MOS gyrator  
 [NASA-CASE-MFS-22343-1] c 33 N74-34638  
 Four phase logic systems --- including integrated microcircuits  
 [NASA-CASE-MSC-14240-1] c 33 N75-14957  
 Integrable power gyrator --- with Z-matrix design using parallel transistors  
 [NASA-CASE-MFS-22342-1] c 33 N75-30428  
 Cross correlation anomaly detection system  
 [NASA-CASE-NPO-13283] c 38 N78-17395  
 Complementary DMOS-VMOS integrated circuit structure  
 [NASA-CASE-GSC-12190-1] c 33 N79-12321  
 Method for analyzing radiation sensitivity of integrated circuits  
 [NASA-CASE-NPO-14350-1] c 33 N80-14332  
 Solar cell system having alternating current output  
 [NASA-CASE-LEW-12806-2] c 44 N81-12542  
 Microwave integrated circuit for Josephson voltage standards  
 [NASA-CASE-MFS-23845-1] c 33 N81-17348  
 Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
 [NASA-CASE-MFS-256704-1] c 33 N84-22884  
 Split-cross-bridge resistor for testing for proper fabrication of integrated circuits  
 [NASA-CASE-NPO-16021-1] c 33 N85-30187  
 Cross-contact chain  
 [NASA-CASE-NPO-16784-1] c 33 N87-10231  
 Method of examining microcircuit patterns  
 [NASA-CASE-NPO-16299-1] c 33 N87-14594  
 Ion beam sputter etching  
 [NASA-CASE-LEW-13899-1] c 31 N87-21160

- Integrated photo-responsive metal oxide semiconductor circuit  
[NASA-CASE-GSC-12782-1] c 33 N88-14271
- Integrated circuit reliability testing  
[NASA-CASE-NPO-17393-1-CU] c 33 N89-29679
- Detection of multiple-bit errors from single-ion tracks in integrated circuits  
[NASA-CASE-NPO-18075-1-CU] c 33 N91-13622
- Universal nondestructive mm-wave integrated circuit test fixture  
[NASA-CASE-LEW-14746-1] c 33 N91-14552
- High-gain AlGaAs/GaAs double heterojunction Darlington phototransistors for optical neural networks  
[NASA-CASE-NPO-18101-1-CU] c 74 N91-25841
- Thermal treatment of silicon integrated circuit chips to prevent and heal voids in aluminum metallization  
[NASA-CASE-NPO-17678-1-CU] c 76 N91-28014
- INTEGRATORS**
- Operational integrator Patent  
[NASA-CASE-NPO-10230] c 09 N71-12520
- Variable duration pulse integrator Patent  
[NASA-CASE-XLA-01219] c 10 N71-23084
- Variable width pulse integrator Patent  
[NASA-CASE-XLA-03356] c 10 N71-23315
- Feedback integrator with grounded capacitor Patent  
[NASA-CASE-XAC-10607] c 10 N71-23669
- High speed phase detector Patent  
[NASA-CASE-XNP-01306-2] c 09 N71-24596
- Adaptive control system for line-commutated inverters  
[NASA-CASE-MFS-25209-1] c 33 N83-35227
- INTEGRITY**
- Mechanical strain isolator mount  
[NASA-CASE-LAR-13580-1] c 37 N91-21541
- INTERCALATION**
- Apparatus for intercalating large quantities of fibrous structures  
[NASA-CASE-LEW-15077-2] c 24 N91-28289
- INTERFACES**
- Geometries for roughness shapes in laminar flow  
[NASA-CASE-LAR-13255-1] c 02 N87-16793
- Expandable pallet for space station interface attachments  
[NASA-CASE-MSC-21117-1] c 18 N88-28958
- Laser Doppler velocimeter multiplexer interface for simultaneous measured events  
[NASA-CASE-ARC-11536-1] c 33 N89-14384
- Space module assembly apparatus with docking alignment flexibility and restraint  
[NASA-CASE-MSC-21211-1] c 18 N89-28553
- Expandable pallet for space station interface attachments  
[NASA-CASE-MSC-21117-2] c 18 N89-28554
- INTERFACIAL TENSION**
- Passive propellant system  
[NASA-CASE-MFS-23642-1] c 20 N80-10278
- Sphere forming method and apparatus  
[NASA-CASE-NPO-15070-1] c 31 N83-35176
- Surface tension confined liquid cryogen cooler  
[NASA-CASE-GSC-13112-1] c 31 N89-29578
- Convergent strand array liquid pumping system  
[NASA-CASE-NPO-17301-1-CU] c 31 N90-23587
- INTERFERENCE FIT**
- Cryogenic anti-friction bearing with inner race  
[NASA-CASE-MFS-28384-1] c 37 N90-27112
- INTERFEROMETERS**
- Apparatus for controlling the velocity of an electromechanical drive for interferometers and the like Patent  
[NASA-CASE-XGS-03532] c 14 N71-17627
- Incremental motion drive system Patent  
[NASA-CASE-XNP-08897] c 15 N71-17694
- Laser grating interferometer Patent  
[NASA-CASE-XLA-04295] c 16 N71-24170
- Fringe counter for interferometers Patent  
[NASA-CASE-LAR-10204] c 14 N71-27215
- Interferometer-polarimeter  
[NASA-CASE-NPO-11239] c 14 N73-12446
- Interferometric rotation sensor  
[NASA-CASE-ARC-10278-1] c 14 N73-25463
- High resolution Fourier interferometer-spectrophotopolarimeter  
[NASA-CASE-NPO-13604-1] c 35 N76-31490
- Apparatus for providing a servo drive signal in a high-speed stepping interferometer  
[NASA-CASE-NPO-13569-2] c 35 N79-14348
- Velocity servo for continuous scan Fourier interference spectrometer  
[NASA-CASE-NPO-14093-1] c 35 N80-20563
- Interferometer  
[NASA-CASE-NPO-14502-1] c 74 N81-17888
- Interferometer --- high resolution  
[NASA-CASE-NPO-14448-1] c 74 N81-29963
- Optical gyroscope system  
[NASA-CASE-NPO-14258-1] c 35 N81-33448
- Dual-beam skin friction interferometer  
[NASA-CASE-ARC-11354-1] c 74 N83-21949
- Interferometric angle monitor  
[NASA-CASE-GSC-12614-1] c 74 N83-32577
- Low noise lead screw positioner  
[NASA-CASE-NPO-15617-1] c 35 N87-21304
- Equal path, phase shifting, sample point interferometer for monitoring the configuration of surfaces  
[NASA-CASE-NPO-17913-1-CU] c 74 N90-27488
- Fiber optic sensing system  
[NASA-CASE-LEW-14795-1] c 74 N91-21871
- INTERFEROMETRY**
- Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
[NASA-CASE-NPO-13862-1] c 35 N79-10391
- Interferometric locating system  
[NASA-CASE-NPO-14173-1] c 04 N80-32359
- Dual differential interferometer  
[NASA-CASE-LAR-12966-1] c 35 N85-30282
- Ranging system which compares an object reflected component of a light beam to a reference component of the light beam  
[NASA-CASE-NPO-15865-1] c 74 N85-34629
- Equal path, phase shifting, sample point interferometer for monitoring the configuration of surfaces  
[NASA-CASE-NPO-17913-1-CU] c 74 N90-27488
- Motion detection, novelty filtering, and target tracking using an interferometric technique with a GaAs phase conjugate mirror  
[NASA-CASE-NPO-17784-1-CU] c 74 N91-13998
- Laser optical disk position encoder with active heads  
[NASA-CASE-GSC-13175-1] c 74 N91-14001
- Method for detecting surface motions and mapping small terrestrial or planetary surface deformations with synthetic aperture radar  
[NASA-CASE-NPO-17831-1-CU] c 43 N91-14642
- INTERLAYERS**
- Method of making a partial interlaminar separation composite system  
[NASA-CASE-LAR-12065-2] c 24 N81-33235
- INTERMEDIATE FREQUENCY AMPLIFIERS**
- Multichannel logarithmic RF level detector  
[NASA-CASE-LAR-11021-1] c 32 N76-14321
- INTERMETALLICS**
- Twisted multifilament superconductor  
[NASA-CASE-LEW-11726-1] c 26 N73-26752
- Synthesis of superconducting compounds by explosive compaction of powders  
[NASA-CASE-MFS-20861-1] c 18 N73-32437
- Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267
- Nickel base coating alloy  
[NASA-CASE-LEW-13834-1] c 26 N87-14482
- INTERNAL COMBUSTION ENGINES**
- Fuel injection pump for internal combustion engines Patent  
[NASA-CASE-MSC-12139-1] c 28 N71-14058
- Continuous detonation reaction engine Patent  
[NASA-CASE-XMF-06926] c 28 N71-22983
- System for preconditioning a combustible vapor  
[NASA-CASE-NPO-12072] c 28 N72-22772
- System for minimizing internal combustion engine pollution emission  
[NASA-CASE-NPO-13402-1] c 37 N76-18457
- Combustion engine --- for air pollution control  
[NASA-CASE-NPO-13671-1] c 37 N77-31497
- Hydrogen-fueled engine  
[NASA-CASE-NPO-13763-1] c 44 N78-33526
- Plasma igniter for internal combustion engine  
[NASA-CASE-NPO-13828-1] c 37 N79-11405
- Indicated mean-effective pressure instrument  
[NASA-CASE-LEW-12661-1] c 35 N79-14345
- Start up system for hydrogen generator used with an internal combustion engine  
[NASA-CASE-NPO-13849-1] c 28 N80-10374
- Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c 07 N81-29129
- Automatic compression adjusting mechanism for internal combustion engines  
[NASA-CASE-MSC-18807-1] c 37 N83-36483
- Real time pressure signal system for a rotary engine  
[NASA-CASE-LEW-13622-1] c 07 N84-22559
- Composite piston  
[NASA-CASE-LAR-13435-1] c 37 N88-23981
- Lightweight piston architecture  
[NASA-CASE-LAR-13926-1] c 37 N90-22042
- INTERNAL PRESSURE**
- Pressure vessel flex joint  
[NASA-CASE-MSC-21748-1] c 37 N91-25415
- INTERPLANETARY SPACE**
- Heat shield Patent  
[NASA-CASE-XMS-00486] c 33 N70-33344
- RC networks and amplifiers employing the same  
[NASA-CASE-XAC-05462-2] c 10 N72-17171
- INTERPLANETARY SPACECRAFT**
- Transpirationally cooled heat ablation system Patent  
[NASA-CASE-XMS-02677] c 31 N70-42075
- INTERPLANETARY TRAJECTORIES**
- Means for visually indicating flight paths of vehicles between the Earth, Venus, and Mercury Patent  
[NASA-CASE-XNP-00708] c 14 N70-35394
- INTERPOLATION**
- Two dimensional vernier  
[NASA-CASE-MSC-21700-1] c 35 N91-23462
- INTERPROCESSOR COMMUNICATION**
- Highly parallel computer architecture for robotic computation  
[NASA-CASE-NPO-17632-1-CU] c 60 N91-32805
- INTERVALS**
- Apparatus for using a time interval counter to measure frequency stability  
[NASA-CASE-NPO-17325-1-CU] c 32 N90-17005
- INTRACRANIAL PRESSURE**
- Induction powered biological radiosonde  
[NASA-CASE-ARC-11120-1] c 52 N80-18691
- INTRAOCULAR PRESSURE**
- Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12955-1] c 52 N80-14684
- Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12723-1] c 52 N80-18690
- INTRAVEHICULAR ACTIVITY**
- Space suit  
[NASA-CASE-MSC-12609-1] c 05 N73-32012
- INTRAVENOUS PROCEDURES**
- Bio-medical flow sensor --- intravenous procedures  
[NASA-CASE-MSC-18761-1] c 52 N83-27577
- INTRUSION**
- Passive intrusion detection system  
[NASA-CASE-NPO-13804-1] c 33 N80-23559
- INVENTIONS**
- Active notch filter network with variable notch depth, width and frequency  
[NASA-CASE-FRC-11055-1] c 33 N80-29583
- Ion-exchange hollow fibers  
[NASA-CASE-NPO-13309-1] c 25 N81-19244
- Whole body cleansing agent  
[NASA-CASE-MSC-21589-1] c 54 N91-16566
- Lamina transducer coupler and method of making  
[NASA-CASE-LAR-14361-1] c 71 N91-16707
- Hanging drop crystal growth apparatus  
[NASA-CASE-MFS-26061-1] c 76 N91-16815
- Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14489-1] c 37 N91-27562
- Improving the performance of blasting caps  
[NASA-CASE-LAR-13832-1] c 28 N91-28444
- Noncircular rolling joints for vibrational reduction in slewing maneuvers  
[NASA-CASE-LAR-14515-1-CU] c 37 N91-28580
- Coupling device with improved thermal interface  
[NASA-CASE-GSC-13251-1] c 37 N91-28582
- Single layer multi-color luminescent display  
[NASA-CASE-LAR-13616-1] c 74 N91-31950
- INVERTED CONVERTERS (DC TO AC)**
- Inverter ratio failure detector  
[NASA-CASE-NPO-13160-1] c 35 N74-18090
- Variable frequency inverter for ac induction motors with torque, speed and braking control  
[NASA-CASE-MFS-22088-1] c 33 N75-15874
- Solar cell system having alternating current output  
[NASA-CASE-LEW-12806-2] c 44 N81-12542
- Power converter  
[NASA-CASE-FRC-11014-1] c 33 N82-18494
- INVERTERS**
- Transient-compensated SCR inverter  
[NASA-CASE-XLA-08507] c 09 N69-39984
- Inverter oscillator with voltage feedback  
[NASA-CASE-NPO-10760] c 09 N72-25254
- Overload protection system for power inverter  
[NASA-CASE-NPO-13872-1] c 33 N78-10377
- Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c 33 N79-24254
- Base drive for paralleled inverter systems  
[NASA-CASE-NPO-14163-1] c 33 N81-14220
- Adaptive reference voltage generator for firing angle control of line-commutated inverters  
[NASA-CASE-MFS-25215-1] c 33 N83-31953
- Adaptive control system for line-commutated inverters  
[NASA-CASE-MFS-25209-1] c 33 N83-35227
- INVESTIGATION**
- Method for investigating the formation of crystals in a transparent material  
[NASA-CASE-MFS-26008-1-CU] c 76 N88-14835
- IODINE**
- Method of using photovoltaic cell using poly-N-vinylcarbazole complex Patent  
[NASA-CASE-NPO-10373] c 03 N71-18698

Simple method of making photovoltaic junctions Patent  
 [NASA-CASE-XNP-01960] c 09 N71-23027  
 Iodine generator for reclaimed water purification  
 [NASA-CASE-MS-C-14632-1] c 54 N78-14784  
 Regenerable biocide delivery unit  
 [NASA-CASE-MS-C-21763-1] c 51 N91-25570

**IODINE COMPOUNDS**

Perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups  
 [NASA-CASE-ARC-11241-1] c 25 N81-14016

**IODINE ISOTOPES**

Production of high purity I-123  
 [NASA-CASE-LEW-10518-1] c 24 N72-33681  
 Method of producing I-123 --- by bombardment of cesium causing spallation  
 [NASA-CASE-LEW-11390-2] c 25 N76-27383  
 Production of I-123  
 [NASA-CASE-LEW-11390-3] c 25 N76-29379

**ION ACCELERATORS**

Process for glass coating an ion accelerator grid Patent  
 [NASA-CASE-LEW-10278-1] c 15 N71-28582  
 Ion beam accelerator system  
 [NASA-CASE-NPO-15547-1] c 72 N84-16959

**ION BEAMS**

Ion beam deflector Patent  
 [NASA-CASE-LEW-10689-1] c 28 N71-26173  
 Dispensing targets for ion beam particle generators  
 [NASA-CASE-NPO-13112-1] c 73 N74-26767  
 Sputtering holes with ion beamlets  
 [NASA-CASE-LEW-11646-1] c 20 N74-31269  
 Method of constructing dished ion thruster grids to provide hole array spacing compensation  
 [NASA-CASE-LEW-11876-1] c 20 N76-21276  
 Ion beam thruster shield  
 [NASA-CASE-LEW-12082-1] c 20 N77-10148  
 Targets for producing high purity I-123  
 [NASA-CASE-LEW-10518-3] c 25 N78-27226  
 Method of cold welding using ion beam technology  
 [NASA-CASE-LEW-12982-1] c 37 N81-19455  
 Ion beam accelerator system  
 [NASA-CASE-NPO-15547-1] c 72 N84-16959  
 Method of making an ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
 [NASA-CASE-LEW-13107-2] c 52 N84-23095  
 Ion sputter textured graphite electrode plates  
 [NASA-CASE-LEW-12919-2] c 70 N84-28565  
 Deposition of diamondlike carbon films  
 [NASA-CASE-LEW-14080-1] c 31 N85-20153  
 Diamondlike flakes  
 [NASA-CASE-LEW-13837-2] c 24 N85-21267  
 Heat exchanger for electrothermal devices  
 [NASA-CASE-LEW-14037-1] c 20 N87-16675  
 Ion beam sputter etching  
 [NASA-CASE-LEW-13899-1] c 31 N87-21160  
 Generation of intense negative ion beams  
 [NASA-CASE-NPO-16061-1-CU] c 72 N87-21660  
 Ion-beam nitriding of steels  
 [NASA-CASE-LEW-14104-2] c 26 N88-14179  
 Trochoidal analysis of scattered electrons in a merged electron-ion beam geometry  
 [NASA-CASE-NPO-16789-1-CU] c 72 N89-29169  
 Surface modification using low energy ground state ion beams  
 [NASA-CASE-NPO-17498-1-CU] c 72 N91-14813

**ION CHARGE**

Quadrupole mass filter with means to generate a noise spectrum exclusive of the resonant frequency of the desired ions to deflect stable ions  
 [NASA-CASE-XNP-04231] c 14 N73-32325

**ION CONCENTRATION**

Deposition of alloy films --- on irregularly shaped metal object  
 [NASA-CASE-LEW-11262-1] c 27 N74-13270

**ION CURRENTS**

System for monitoring the presence of neutrals in a stream of ions Patent  
 [NASA-CASE-XNP-02592] c 24 N71-20518

**ION CYCLOTRON RADIATION**

Ion and electron detector for use in an ICR spectrometer  
 [NASA-CASE-NPO-13479-1] c 35 N77-10492

**ION DENSITY (CONCENTRATION)**

Method and apparatus for measurement of trap density and energy distribution in dielectric films  
 [NASA-CASE-NPO-13443-1] c 76 N76-20994

**ION ENGINES**

Ion thruster cathode  
 [NASA-CASE-XLE-07087] c 06 N69-39889  
 High-vacuum condenser tank for ion rocket tests Patent  
 [NASA-CASE-XLE-00168] c 11 N70-33278  
 Ion thruster cathode Patent Application  
 [NASA-CASE-LEW-10814-1] c 28 N70-35422

Ion rocket Patent  
 [NASA-CASE-XLE-00376] c 28 N70-37245  
 Rocket engine Patent  
 [NASA-CASE-XLE-00342] c 28 N70-37980  
 Thrust dynamometer Patent  
 [NASA-CASE-XLE-00702] c 14 N70-40203  
 Apparatus for increasing ion engine beam density Patent  
 [NASA-CASE-XLE-00519] c 28 N70-41576  
 Double optic system for ion engine Patent  
 [NASA-CASE-XNP-02839] c 28 N70-41922  
 Electrostatic ion engine having a permanent magnetic circuit Patent  
 [NASA-CASE-XLE-01124] c 28 N71-14043  
 Electrostatic ion rocket engine Patent  
 [NASA-CASE-XLE-02066] c 28 N71-15661  
 System for monitoring the presence of neutrals in a stream of ions Patent  
 [NASA-CASE-XNP-02592] c 24 N71-20518  
 Construction and method of arranging a plurality of ion engines to form a cluster Patent  
 [NASA-CASE-XNP-02923] c 28 N71-23081  
 Electronic cathode having a brush-like structure and a relatively thick oxide emissive coating Patent  
 [NASA-CASE-XLE-04501] c 09 N71-23190  
 Ion engine casing construction and method of making same Patent  
 [NASA-CASE-XNP-06942] c 28 N71-23293  
 Ion thruster accelerator system Patent  
 [NASA-CASE-LEW-10106-1] c 28 N71-26642  
 Propellant feed isolator Patent  
 [NASA-CASE-LEW-10210-1] c 28 N71-26781  
 High efficiency ionizer assembly Patent  
 [NASA-CASE-XNP-01954] c 28 N71-28850  
 Feed system for an ion thruster  
 [NASA-CASE-NPO-10737] c 28 N72-11709  
 Ion thruster with a combination keeper electrode and electron baffle  
 [NASA-CASE-NPO-11880] c 28 N73-24783  
 Single grid accelerator for an ion thruster  
 [NASA-CASE-XLE-10453-2] c 28 N73-27699  
 Method of making dished ion thruster grids  
 [NASA-CASE-LEW-11694-1] c 20 N75-18310  
 Method of constructing dished ion thruster grids to provide hole array spacing compensation  
 [NASA-CASE-LEW-11876-1] c 20 N76-21276  
 Precision tunable resonant microwave cavity  
 [NASA-CASE-LEW-13935-1] c 33 N87-21234

**ION EXCHANGE MEMBRANE ELECTROLYTES**

Method of making membranes  
 [NASA-CASE-XNP-04264] c 03 N69-21337  
 Ion-exchange membrane with platinum electrode assembly Patent  
 [NASA-CASE-XMS-02063] c 03 N71-29044  
 Formulated plastic separators for soluble electrode cells --- rubber-ion transport membranes  
 [NASA-CASE-LEW-12358-1] c 44 N79-17313  
 Insoluble polyelectrolyte and ion-exchange hollow fiber impregnated therewith  
 [NASA-CASE-NPO-13530-1] c 25 N81-17187  
 Method of making formulated plastic separators for soluble electrode cells  
 [NASA-CASE-LEW-12358-2] c 25 N82-21268  
 Method and apparatus for rebalancing a REDOX flow cell system  
 [NASA-CASE-LEW-14127-1] c 33 N86-20680

**ION EXCHANGE RESINS**

Inorganic-organic separators for alkaline batteries  
 [NASA-CASE-LEW-12649-1] c 44 N78-25530  
 Dialysis system --- using ion exchange resin membranes permeable to urea molecules  
 [NASA-CASE-NPO-14101-1] c 52 N80-14687  
 Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
 [NASA-CASE-NPO-14001-1] c 27 N81-14076

**ION EXCHANGING**

Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
 [NASA-CASE-NPO-14001-1] c 27 N81-14076  
 Ion-exchange hollow fibers  
 [NASA-CASE-NPO-13309-1] c 25 N81-19244  
 Regenerable biocide delivery unit  
 [NASA-CASE-MS-C-21763-1] c 51 N91-25570

**ION EXTRACTION**

Apparatus for extraction and separation of a preferentially photo-dissociated molecular isotope into positive and negative ions by means of an electric field  
 [NASA-CASE-LEW-12465-1] c 25 N78-25148  
 Ion beam accelerator system  
 [NASA-CASE-NPO-15547-1] c 72 N84-16959  
 Ion generator and ion application system  
 [NASA-CASE-MFS-28122-1] c 72 N88-24253

**ION IMPLANTATION**

Method of making V-MOS field effect transistors utilizing a two-step anisotropic etching and ion implantation  
 [NASA-CASE-GSC-12515-1] c 33 N81-26360

**ION IRRADIATION**

Modification of the electrical and optical properties of polymers --- ion irradiation to create texture  
 [NASA-CASE-LEW-13027-1] c 27 N80-24437  
 Ion-beam nitriding of steels  
 [NASA-CASE-LEW-14104-2] c 26 N88-14179

**ION MOTION**

Ion mass spectrometer  
 [NASA-CASE-NPO-15423-1] c 35 N84-28016

**ION PLATING**

Catalyst surfaces for the chromous/chromic redox couple  
 [NASA-CASE-LEW-13148-2] c 44 N81-29524  
 Diamondlike flake composites  
 [NASA-CASE-LEW-13837-1] c 24 N84-22695

**ION PROBES**

Ion microprobe mass spectrometer for analyzing fluid materials Patent  
 [NASA-CASE-ERC-10014] c 14 N71-28863

**ION PROPULSION**

Variable thrust ion engine utilizing thermally decomposable solid fuel Patent  
 [NASA-CASE-XMF-00923] c 28 N70-36802  
 Ion rocket Patent  
 [NASA-CASE-XLE-00376] c 28 N70-37245  
 Rocket engine Patent  
 [NASA-CASE-XLE-00342] c 28 N70-37980  
 Method of producing porous tungsten ionizers for ion rocket engines Patent  
 [NASA-CASE-XLE-00455] c 28 N70-38197  
 Double optic system for ion engine Patent  
 [NASA-CASE-XNP-02839] c 28 N70-41922  
 Electron bombardment ion engine Patent  
 [NASA-CASE-NPO-04124] c 28 N71-21822  
 Ion beam deflector Patent  
 [NASA-CASE-LEW-10689-1] c 28 N71-26173  
 Ion thruster accelerator system Patent  
 [NASA-CASE-LEW-10106-1] c 28 N71-26642  
 Feed system for an ion thruster  
 [NASA-CASE-NPO-10737] c 28 N72-11709  
 Ion thruster  
 [NASA-CASE-LEW-10770-1] c 28 N72-22770  
 Ion thruster magnetic field control  
 [NASA-CASE-LEW-10835-1] c 28 N72-22771  
 Method of making dished ion thruster grids  
 [NASA-CASE-LEW-11694-1] c 20 N75-18310  
 Apparatus for forming dished ion thruster grids  
 [NASA-CASE-LEW-11694-2] c 37 N76-14461  
 Anode for ion thruster  
 [NASA-CASE-LEW-12048-1] c 20 N77-20162  
 Closed Loop solar array-ion thruster system with power control circuitry  
 [NASA-CASE-LEW-12780-1] c 20 N79-20179  
 A dc to dc converter  
 [NASA-CASE-MFS-25430-1] c 33 N84-16453  
 Ring-cusp ion thruster with shell anode  
 [NASA-CASE-LEW-13881-1] c 20 N85-21256

**ION PUMPS**

Mass spectrometer with magnetic pole pieces providing the magnetic fields for both the magnetic sector and an ion-type vacuum pump  
 [NASA-CASE-NPO-13663-1] c 35 N77-14406

**ION SOURCES**

Focussing system for an ion source having apertured electrodes Patent  
 [NASA-CASE-NPO-03332] c 09 N71-10618  
 Multilayer porous ionizer Patent  
 [NASA-CASE-XNP-04338] c 17 N71-23046  
 Ion thruster accelerator system Patent  
 [NASA-CASE-LEW-10106-1] c 28 N71-26642  
 High efficiency ionizer assembly Patent  
 [NASA-CASE-XNP-01954] c 28 N71-28850  
 Apparatus for ionization analysis  
 [NASA-CASE-ARC-10017-1] c 14 N72-29464  
 Sputtering holes with ion beamlets  
 [NASA-CASE-LEW-11646-1] c 20 N74-31269  
 Multitarget sequential sputtering apparatus  
 [NASA-CASE-NPO-13345-1] c 37 N75-19684  
 Miniature cyclotron resonance ion source using small permanent magnet  
 [NASA-CASE-NPO-14324-1] c 72 N80-27163  
 Hydrogen hollow cathode ion source  
 [NASA-CASE-LEW-12940-1] c 72 N80-33186  
 Surface modification using low energy ground state ion beams  
 [NASA-CASE-NPO-17498-1-CU] c 72 N91-14813

**ION TRAPS (INSTRUMENTATION)**

Method and apparatus for measurement of trap density and energy distribution in dielectric films  
 [NASA-CASE-NPO-13443-1] c 76 N76-20994

**IONIC MOBILITY**

Solid electrolyte cell  
[NASA-CASE-NPO-15269-1] c 44 N82-29710

**IONIZATION**

Ion generator and ion application system  
[NASA-CASE-MFS-28122-1] c 72 N88-24253  
Alternating gradient photodetector  
[NASA-CASE-NPO-17235-1-CU] c 35 N90-21358

**IONIZATION CHAMBERS**

Baseline stabilization system for ionization detector Patent  
[NASA-CASE-XNP-03128] c 10 N70-41991  
Electron bombardment ion engine Patent  
[NASA-CASE-XNP-04124] c 28 N71-21822  
A multichannel photoionization chamber for absorption analysis Patent  
[NASA-CASE-ERC-10044-1] c 14 N71-27090  
Apparatus for ionization analysis  
[NASA-CASE-ARC-10017-1] c 14 N72-29464

**IONIZATION CROSS SECTIONS**

Trochoidal analysis of scattered electrons in a merged electron-ion beam geometry  
[NASA-CASE-NPO-16789-1-CU] c 72 N89-29169

**IONIZATION GAGES**

Ionization vacuum gauge Patent  
[NASA-CASE-XNP-00646] c 14 N70-35666  
Pressure monitoring with a plurality of ionization gauges controlled at a central location Patent  
[NASA-CASE-XLE-00787] c 14 N71-21090  
Apparatus for ionization analysis  
[NASA-CASE-ARC-10017-1] c 14 N72-29464  
Ultrahigh vacuum measuring ionization gauge  
[NASA-CASE-XLA-05087] c 14 N73-30391

**IONIZATION POTENTIALS**

Field ionization electrodes Patent  
[NASA-CASE-ERC-10013] c 09 N71-26678  
Modulated voltage metastable ionization detector  
[NASA-CASE-ARC-11503-1] c 35 N85-34374

**IONIZED GASES**

Probes having ring and primary sensor at same potential to prevent collection of stray wall currents in ionized gases  
[NASA-CASE-XLE-00690] c 25 N69-39884  
Transient heat transfer gauge Patent  
[NASA-CASE-XNP-09802] c 33 N71-15641  
Apparatus for extraction and separation of a preferentially photo-dissociated molecular isotope into positive and negative ions by means of an electric field  
[NASA-CASE-LEW-12465-1] c 25 N78-25148  
Hollow cathode apparatus  
[NASA-CASE-NPO-15560-1] c 33 N85-21491  
Arc/gas electrode  
[NASA-CASE-MFS-29766-1] c 33 N91-25335

**IONIZERS**

Water management system and an electrolytic cell therefor Patent  
[NASA-CASE-MSC-10960-1] c 03 N71-24718  
Method of making dished ion thruster grids  
[NASA-CASE-LEW-11694-1] c 20 N75-18310  
Particle analyzing method and apparatus  
[NASA-CASE-NPO-15292-1] c 35 N83-27184

**IONIZING RADIATION**

High-voltage cable Patent  
[NASA-CASE-XNP-00738] c 09 N70-38201  
Reinforced polyquinoxaline gasket and method of preparing the same --- resistant to ionizing radiation and liquid hydrogen temperatures  
[NASA-CASE-MFS-21364-1] c 37 N74-18126  
Process for crosslinking methylene-containing aromatic polymers with ionizing radiation  
[NASA-CASE-LAR-13448-1] c 27 N90-21198

**IONOSPHERIC DISTURBANCES**

Method and apparatus for calibrating the ionosphere and application to surveillance of geophysical events  
[NASA-CASE-NPO-15430-1] c 46 N85-21846

**IONOSPHERIC ELECTRON DENSITY**

Method and apparatus for calibrating the ionosphere and application to surveillance of geophysical events  
[NASA-CASE-NPO-15430-1] c 46 N85-21846

**IONOSPHERIC SOUNDING**

Method and apparatus for calibrating the ionosphere and application to surveillance of geophysical events  
[NASA-CASE-NPO-15430-1] c 46 N85-21846

**IONS**

Micrometeoroid analyzer  
[NASA-CASE-ARC-10443-1] c 14 N73-20477  
Detection of multiple-bit errors from single-ion tracks in integrated circuits  
[NASA-CASE-NPO-18075-1-CU] c 33 N91-13622

**IRIDIUM**

Thermocouples of molybdenum and iridium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12174-2] c 35 N79-14346

**IRISES (MECHANICAL APERTURES)**

Active microwave irises and windows  
[NASA-CASE-LAR-10513-1] c 07 N72-25170

Thin film microwave iris  
[NASA-CASE-LAR-10511-1] c 09 N72-29172

**IRON**

Negative electrode catalyst for the iron chromium redox energy storage system  
[NASA-CASE-LEW-14028-1] c 44 N86-19721

**IRON ALLOYS**

Tantalum modified ferritic iron base alloys  
[NASA-CASE-LEW-12095-1] c 26 N78-18182  
Process for making a high toughness-high strength ion alloy  
[NASA-CASE-LEW-12542-2] c 26 N79-22271  
High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-3] c 26 N80-32484  
Thermal barrier coating system  
[NASA-CASE-LEW-14057-1] c 24 N85-35233

**IRON CHLORIDES**

Chromium electrodes for REDOX cells  
[NASA-CASE-LEW-13653-1] c 44 N84-28205

**IRON COMPOUNDS**

Coal desulfurization --- using iron pentacarbonyl  
[NASA-CASE-NPO-14272-1] c 25 N81-33246

**IRRADIATION**

Solar sensor having coarse and fine sensing with matched preirradiated cells and method of selecting cells Patent  
[NASA-CASE-XLA-01584] c 14 N71-23269  
Apparatus for obtaining isotropic irradiation of a specimen  
[NASA-CASE-MFS-20095] c 24 N72-11595  
Production of pure metals  
[NASA-CASE-LEW-10906-1] c 25 N74-30502  
Method for analyzing radiation sensitivity of integrated circuits  
[NASA-CASE-NPO-14350-1] c 33 N80-14332  
Ultra-violet process for producing flame resistant polyamides and products produced thereby --- protective clothing for high oxygen environments  
[NASA-CASE-MSC-16074-1] c 27 N80-26446  
Method of measuring field funneling and range straggling in semiconductor charge-collecting junctions  
[NASA-CASE-NPO-16584-1-CU] c 76 N86-25269  
Methyl substituted polyimides containing carbonyl and ether connecting groups  
[NASA-CASE-LAR-14351-1] c 27 N91-13561

**IRRIGATION**

Solar-powered pump  
[NASA-CASE-NPO-13567-1] c 44 N76-29701

**ISOLATION**

High voltage isolation transformer  
[NASA-CASE-GSC-12817-1] c 33 N85-29146  
Ballast system for maintaining constant pressure in a glove box  
[NASA-CASE-NPO-17786-1-CU] c 35 N90-17104

**ISOLATORS**

Propellant feed isolator Patent  
[NASA-CASE-LEW-10210-1] c 28 N71-26781  
Positive isolation disconnect  
[NASA-CASE-MSC-16043-1] c 37 N79-11402  
Resonant isolator for maser amplifier  
[NASA-CASE-NPO-15201-1] c 36 N83-35350  
Low-loss, high-isolation, fiber-optic isolator  
[NASA-CASE-NPO-17207-1-CU] c 74 N88-25304  
Mechanical strain isolator mount  
[NASA-CASE-LAR-13580-1] c 37 N91-21541

**ISOPROPYL ALCOHOL**

Highly fluorinated polymers  
[NASA-CASE-MFS-11492] c 06 N73-30102

**ISOTHERMAL LAYERS**

Isothermal cover with thermal reservoirs Patent  
[NASA-CASE-MFS-20355] c 33 N71-25353

**ISOTHERMAL PROCESSES**

Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c 35 N77-27366

**ISOTOPE SEPARATION**

Isotope separation using metallic vapor lasers  
[NASA-CASE-NPO-13550-1] c 36 N77-26477  
Isotope separation using tuned laser and electron beam  
[NASA-CASE-NPO-16907-1-CU] c 25 N88-24732

**J****JET AIRCRAFT**

Inlet deflector for jet engines Patent  
[NASA-CASE-XLE-00388] c 28 N70-34788  
Multiple pure tone elimination strut assembly --- air breathing engines  
[NASA-CASE-FRC-11062-1] c 71 N82-16800

**JET AIRCRAFT NOISE**

Jet aircraft configuration Patent  
[NASA-CASE-XLA-00087] c 02 N70-33332

Noise suppressor --- for turbofan engine by incorporating annular acoustically porous elements in exhaust and inlet ducts  
[NASA-CASE-LAR-11141-1] c 07 N74-32418

Abating exhaust noises in jet engines  
[NASA-CASE-ARC-10712-1] c 07 N74-33218

Instrumentation for measurement of aircraft noise and sonic boom  
[NASA-CASE-LAR-11173-1] c 35 N75-19614

Cascade plug nozzle --- for jet noise reduction  
[NASA-CASE-LAR-11674-1] c 07 N76-18117

Noise suppressor for turbo fan jet engines  
[NASA-CASE-ARC-10812-1] c 07 N83-33884

Apparatus and method for jet noise suppression  
[NASA-CASE-LAR-11903-2] c 71 N84-14873

**JET AMPLIFIERS**

Fluid jet amplifier  
[NASA-CASE-XLE-03512] c 12 N69-21466  
Fluid jet amplifier Patent  
[NASA-CASE-XLE-09341] c 12 N71-28741

**JET BLAST EFFECTS**

Single action separation mechanism Patent  
[NASA-CASE-XLA-00188] c 15 N71-22874

**JET CONTROL**

Attitude control for spacecraft Patent  
[NASA-CASE-XNP-00294] c 21 N70-36938

**JET ENGINES**

Absorptive splitter for closely spaced supersonic engine air inlets Patent  
[NASA-CASE-XLA-02865] c 28 N71-15563  
Thrust dynamometer Patent  
[NASA-CASE-XLE-05260] c 14 N71-20429  
Nacelle afterbody for jet engines Patent  
[NASA-CASE-XLA-10450] c 28 N71-21493  
Welding blades to rotors  
[NASA-CASE-LEW-10533-1] c 15 N73-28515  
Variably positioned guide vanes for aerodynamic choking  
[NASA-CASE-LAR-10642-1] c 07 N74-31270  
Cascade plug nozzle --- for jet noise reduction  
[NASA-CASE-LAR-11674-1] c 07 N76-18117  
The engine air intake system  
[NASA-CASE-ARC-10761-1] c 07 N77-18154  
Stator rotor tools  
[NASA-CASE-MSC-16000-1] c 37 N78-24544  
Electrical servo actuator bracket --- fuel control valves on jet engines  
[NASA-CASE-FRC-11044-1] c 37 N81-33483  
Diffuser/ejector system for a very high vacuum environment  
[NASA-CASE-MFS-25791-1] c 09 N84-27749

**JET EXHAUST**

Jet exhaust noise suppressor  
[NASA-CASE-LEW-11286-1] c 07 N74-27490  
Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c 07 N78-25089  
Reduction of nitric oxide emissions from a combustor  
[NASA-CASE-ARC-10814-2] c 07 N80-26298

**JET FLAPS**

Jet aircraft configuration Patent  
[NASA-CASE-XLA-00087] c 02 N70-33332

**JET FLOW**

Two phase flow system with discrete impinging two-phase jets  
[NASA-CASE-NPO-11556] c 12 N72-25292  
System for venting gas from a liquid storage tank  
[NASA-CASE-MSC-21253-1] c 31 N90-20254

**JET MIXING FLOW**

Rocket engine injector Patent  
[NASA-CASE-XLE-00111] c 28 N70-38199

**JET NOZZLES**

Fluid jet amplifier  
[NASA-CASE-XLE-03512] c 12 N69-21466  
Thrust and direction control apparatus Patent  
[NASA-CASE-XLE-03583] c 31 N71-17629  
Heater-mixer for stored fluids  
[NASA-CASE-ARC-10442-1] c 35 N74-15093

**JET PROPULSION**

Two dimensional wedge/translating shroud nozzle  
[NASA-CASE-LAR-11919-1] c 07 N78-27121

**JET PUMPS**

Jet pump-drive system for heat removal  
[NASA-CASE-NPO-16494-1-CU] c 34 N85-29182

**JET THRUST**

Control system for rocket vehicles Patent  
[NASA-CASE-XLA-01163] c 21 N71-15582  
Reactance control system Patent  
[NASA-CASE-XMF-01598] c 21 N71-15583  
Method and apparatus for rapid thrust increases in a turbofan engine  
[NASA-CASE-LEW-12971-1] c 07 N80-18039  
Method and system for monitoring and displaying engine performance parameters  
[NASA-CASE-LAR-14049-1] c 07 N89-23466

## JETTISON SYSTEMS

Space capsule ejection assembly Patent  
[NASA-CASE-XMF-03169] c 31 N71-15675  
Method and system for ejecting fairing sections from a rocket vehicle  
[NASA-CASE-GSC-10590-1] c 31 N73-14853  
Explosively activated egress area  
[NASA-CASE-LAR-12624-1] c 01 N83-35992

**JIGS**  
Apparatus for positioning modular components on a vertical or overhead surface  
[NASA-CASE-LAR-11465-1] c 37 N76-21554  
Solar cell module assembly jig  
[NASA-CASE-XGS-00829-1] c 44 N79-19447

**JOINING**  
Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-3] c 07 N79-14096

**JOINTS (ANATOMY)**  
Space suit pressure stabilizer Patent  
[NASA-CASE-XLA-05332] c 05 N71-11194  
Equipotential space suit Patent  
[NASA-CASE-LAR-10007-1] c 05 N71-11195  
Omnidirectional joint Patent  
[NASA-CASE-XMS-09635] c 05 N71-24623  
Orthotic arm joint --- for use in mechanical arms  
[NASA-CASE-MFS-21611-1] c 54 N75-12616  
Rotational joint assembly for the prosthetic leg  
[NASA-CASE-KSC-11004-1] c 54 N77-30749  
Spacesuit mobility knee joints  
[NASA-CASE-ARC-11058-2] c 54 N79-24651

**JOINTS (JUNCTIONS)**  
Electrode and insulator with shielded dielectric junction  
[NASA-CASE-XLE-03778] c 09 N69-21542  
Elastic universal joint Patent  
[NASA-CASE-XNP-00416] c 15 N70-36947  
Portable alignment tool Patent  
[NASA-CASE-XMF-01452] c 15 N70-41371  
Pressure garment joint Patent  
[NASA-CASE-XMS-09636] c 05 N71-12344  
Technique of elbow bending small jacketed transfer lines Patent  
[NASA-CASE-XNP-10475] c 15 N71-24679  
Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114-2] c 15 N71-26148  
Frictionless universal joint Patent  
[NASA-CASE-NPO-10646] c 15 N71-28467  
Spherical shield Patent  
[NASA-CASE-XNP-01855] c 15 N71-28937  
Universal restrainer and joint Patent  
[NASA-CASE-XNP-02278] c 15 N71-28951  
Diffusion welding in air --- solid state welding of butt joint by fusion welding, surface cleaning, and heating  
[NASA-CASE-LEW-11387-1] c 37 N74-18128  
Bonded joint and method --- for reducing peak shear stress in adhesive bonds  
[NASA-CASE-LAR-10900-1] c 37 N74-23064  
Flexible joint for pressurizable garment  
[NASA-CASE-MSC-11072] c 54 N74-32546  
Method of making an explosively welded scarf joint  
[NASA-CASE-LAR-11211-1] c 37 N75-12326  
Latching device  
[NASA-CASE-MFS-21606-1] c 37 N75-19685  
Method of determining bond quality of power transistors attached to substrates --- X ray inspection of junction microstructure  
[NASA-CASE-MFS-21931-1] c 37 N75-26372  
Externally supported internally stabilized flexible duct joint  
[NASA-CASE-MFS-19194-1] c 37 N76-14460  
Wrist joint assembly  
[NASA-CASE-MFS-23311-1] c 54 N78-17676  
Spacesuit mobility joints  
[NASA-CASE-ARC-11058-1] c 54 N78-31735  
Thermal barrier pressure seal --- shielding junctions between spacecraft control surfaces and structures  
[NASA-CASE-MSC-18134-1] c 37 N81-15363  
Reusable captive blind fastener  
[NASA-CASE-MSC-18742-1] c 37 N82-26673  
Pressure suit joint analyzer  
[NASA-CASE-ARC-11314-1] c 54 N82-26987  
Mechanical end joint system for structural column elements  
[NASA-CASE-LAR-12482-1] c 37 N82-32732  
Automatic weld torch guidance control system  
[NASA-CASE-MFS-25807] c 37 N83-20154  
Electrical rotary joint apparatus for large space structures  
[NASA-CASE-MFS-23981-1] c 07 N83-20944  
Self-locking mechanical center joint  
[NASA-CASE-LAR-12864-1] c 37 N85-30336  
Joint for deployable structures  
[NASA-CASE-NPO-16038-1] c 37 N86-19605  
Fluid leak indicator  
[NASA-CASE-MSC-20783-1] c 35 N86-20756

Optimized bolted joint  
[NASA-CASE-LAR-13250-1] c 37 N86-27630  
Elbow and knee joint for hard space suits  
[NASA-CASE-ARC-11610-1] c 54 N86-28619  
Shoulder and hip joint for hard space suits  
[NASA-CASE-ARC-11543-1] c 54 N86-28620  
Shoulder and hip joints for hard space suits and the like  
[NASA-CASE-ARC-11534-1] c 54 N86-29507  
Foldable self-erecting joint  
[NASA-CASE-MSC-20635-1] c 18 N87-14373  
Preloaded space structural coupling joints  
[NASA-CASE-LAR-13489-1] c 18 N87-27713  
Bearing-bypass material system test  
[NASA-CASE-LAR-13458-1] c 35 N88-23967  
Method of inseting predesigned disbond areas into composite laminates  
[NASA-CASE-LAR-13225-1] c 24 N90-25197  
Mechanical end joint system for connecting structural column elements  
[NASA-CASE-LAR-14465-1] c 37 N91-14614  
Multi-fingered robotic hand  
[NASA-CASE-NPO-15959-2] c 37 N91-14616  
Compliant joint  
[NASA-CASE-GSC-13153-1] c 37 N91-17387  
Robot cable-compliant devices  
[NASA-CASE-GSC-13127-1] c 37 N91-17388  
Apparatus for joining trusses  
[NASA-CASE-MFS-28545-1] c 31 N91-25306  
Noncircular rolling joints for vibrational reduction in slewing maneuvers  
[NASA-CASE-LAR-14515-1-CU] c 37 N91-28580

**JOSEPHSON JUNCTIONS**  
Doped Josephson tunneling junction for use in a sensitive IR detector  
[NASA-CASE-NPO-13348-1] c 33 N75-31332  
Microwave integrated circuit for Josephson voltage standards  
[NASA-CASE-MFS-23845-1] c 33 N81-17348  
Planar thin film SQUID with integral flux concentrator  
[NASA-CASE-MFS-28282-1] c 76 N88-29602

**JOULE-THOMSON EFFECT**  
Refrigeration apparatus  
[NASA-CASE-NPO-10309] c 15 N69-23190  
Cycling Joule Thomson refrigerator  
[NASA-CASE-NPO-15251-1] c 31 N83-31897  
Joule Thomson refrigerator  
[NASA-CASE-NPO-17143-1-CU] c 31 N89-14351  
Multicomponent gas sorption Joule-Thomson refrigerator  
[NASA-CASE-NPO-17569-1-CU] c 31 N90-26176

**JOURNAL BEARINGS**  
Slit regulated gas journal bearing Patent  
[NASA-CASE-XNP-00476] c 15 N70-38620  
Air bearing assembly for curved surfaces  
[NASA-CASE-MFS-20423] c 15 N72-11388  
Journal bearings --- for lubricant films  
[NASA-CASE-LEW-11076-1] c 37 N74-21061  
Journal Bearings  
[NASA-CASE-LEW-11076-2] c 37 N74-32921  
Lubricated journal bearing  
[NASA-CASE-LEW-11076-3] c 37 N75-30562  
Fluid journal bearings  
[NASA-CASE-LEW-11076-4] c 37 N76-15461  
Compliant hydrodynamic fluid journal bearing  
[NASA-CASE-LEW-13670-1] c 37 N86-19606

**JUNCTION DIODES**

Phototransistor  
[NASA-CASE-MFS-20407] c 09 N73-19235  
Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-2] c 33 N75-25041  
Charge storage diode modulators and demodulators  
[NASA-CASE-NPO-10189-1] c 33 N77-21314  
Integrating IR detector imaging systems  
[NASA-CASE-NPO-15805-1] c 74 N84-28590  
High band gap 2-6 and 3-5 tunneling junctions for silicon multijunction solar cells  
[NASA-CASE-NPO-16526-1CU] c 44 N87-17399

**JUNCTION TRANSISTORS**

Apparatus for ballasting high frequency transistors  
[NASA-CASE-XGS-05003] c 09 N69-24318  
Semiconductor transducer device  
[NASA-CASE-ERC-10087-2] c 14 N72-31446  
Method of determining bond quality of power transistors attached to substrates --- X ray inspection of junction microstructure  
[NASA-CASE-MFS-21931-1] c 37 N75-26372  
Floating emitter solar cell  
[NASA-CASE-NPO-16467-1-CU] c 33 N87-23879

## K

**KALMAN FILTERS**

Systolic VLSI array for implementing the Kalman filter algorithm  
[NASA-CASE-NPO-17108-1-CU] c 33 N89-28713  
Multistage estimation of received carrier signal parameters under very high dynamic conditions of the receiver  
[NASA-CASE-NPO-17911-1-CU] c 32 N90-27016

**KETONES**

Polyenamines from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-1-CU] c 27 N87-22847  
Polyenamines from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-2-CU] c 23 N89-12667  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-4] c 23 N91-25185  
Low dielectric fluorinated poly(phenylene ether ketone) film and coating  
[NASA-CASE-LAR-13992-1-CU] c 23 N91-27220

**KEYING**

High-speed multiplexing of keyboard data inputs  
[NASA-CASE-NPO-14554-1] c 60 N81-27814  
Reconfigurable work station for a video display unit and keyboard  
[NASA-CASE-MFS-26009-1-SB] c 54 N88-24163

**KIDNEY DISEASES**

Aldehyde-containing urea-absorbing polysaccharides  
[NASA-CASE-NPO-13620-1] c 27 N77-30236

**KIDNEYS**

Apparatus for disintegrating kidney stones  
[NASA-CASE-GSC-12652-1] c 52 N84-34913

**KINEMATICS**

Method and apparatus for configuration control of redundant robots  
[NASA-CASE-NPO-17801-1-CU] c 37 N91-21544

**KINETIC ENERGY**

Non-reusable kinetic energy absorber Patent  
[NASA-CASE-XLE-00810] c 15 N70-34861  
Method and turbine for extracting kinetic energy from a stream of two-phase fluid  
[NASA-CASE-NPO-14130-1] c 34 N79-20335  
Energy dissipator  
[NASA-CASE-MSC-21555-1] c 37 N91-23492

**KINETIC FRICTION**

Friction measuring apparatus Patent  
[NASA-CASE-XNP-08680] c 14 N71-22995  
Device and method for frictionally testing materials for ignitability  
[NASA-CASE-MSC-20622-1] c 25 N86-19413

**KINETICS**

Micrometeoroid analyzer  
[NASA-CASE-ARC-10443-1] c 14 N73-20477

**KNEE (ANATOMY)**

Elbow and knee joint for hard space suits  
[NASA-CASE-ARC-11610-1] c 54 N86-28619

**KNOWLEDGE REPRESENTATION**

Discrete event simulation tool for analysis of qualitative models of continuous processing systems  
[NASA-CASE-MSC-21465-1] c 61 N91-14741

**KRAFT PROCESS (WOODPULP)**

Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c 85 N79-17747

**KRYPTON**

Krypton based adsorption type cryogenic refrigerator  
[NASA-CASE-NPO-17334-1-CU] c 31 N88-23917

## L

**LABORATORY EQUIPMENT**

Stirring apparatus for plural test tubes Patent  
[NASA-CASE-XAC-06956] c 15 N71-21177  
Gas purged dry box glove Patent  
[NASA-CASE-XLE-02531] c 05 N71-23080  
Gas liquefaction and dispensing apparatus Patent  
[NASA-CASE-NPO-10070] c 15 N71-27372  
Variable angle tube holder  
[NASA-CASE-LAR-10507-1] c 11 N72-25284  
Method for controlling vapor content of a gas  
[NASA-CASE-NPO-10633] c 03 N72-28025  
Zero gravity liquid mixer  
[NASA-CASE-LAR-10195-1] c 15 N73-19458  
Automatic real-time pair-feeding system for animals  
[NASA-CASE-ARC-10302-1] c 51 N74-15778  
Automated single-slide staining device  
[NASA-CASE-LAR-11649-1] c 51 N77-27677  
Machine for use in monitoring fatigue life for a plurality of elastomeric specimens  
[NASA-CASE-NPO-13731-1] c 39 N78-10493



- The 2 deg/90 deg laboratory scattering photometer ---  
particulate refractivity in hydrosols  
[NASA-CASE-GSC-12088-1] c 74 N78-13874
- Automatic multiple-sample applicator and  
electrophoresis apparatus  
[NASA-CASE-ARC-10991-1] c 25 N78-14104
- Microelectrophoretic apparatus and process  
[NASA-CASE-ARC-11121-1] c 25 N79-14169
- Electrophoresis device  
[NASA-CASE-MFS-25426-1] c 25 N83-10126
- Laboratory glassware rack for seismic safety  
[NASA-CASE-ARC-11422-1] c 35 N86-20751
- Multi-path peristaltic pump  
[NASA-CASE-MSC-20907-1] c 37 N87-18818
- Hanging drop crystal growth apparatus and method  
[NASA-CASE-MFS-28206-1-SB] c 76 N90-23242
- LACQUERS**  
Method for applying photographic resists to otherwise  
incompatible substrates  
[NASA-CASE-MSC-18107-1] c 27 N81-25209
- Oxidation resistant slurry coating for carbon-based  
materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267
- LADDERS**  
Dielectric based submillimeter backward wave oscillator  
circuit  
[NASA-CASE-LEW-13736-1] c 33 N84-27974
- LAMBERT SURFACE**  
A reference standard for bidirectional reflection  
distribution function and bidirectional transmission  
distribution function measurement  
[NASA-CASE-MFS-28183-1] c 74 N89-13253
- LAMINAR BOUNDARY LAYER**  
Method for laminar boundary layer transition visualization  
in flight  
[NASA-CASE-LAR-13554-1] c 02 N89-12551
- Passive laminar flow control of crossflow vorticity  
[NASA-CASE-LAR-13563-1] c 34 N91-23410
- LAMINAR FLOW**  
Laminar flow enhancement Patent  
[NASA-CASE-NPO-10122] c 12 N71-17631
- Detection of the transitional layer between laminar and  
turbulent flow areas on a wing surface --- using an  
accelerometer to measure pressure levels during wind  
tunnel tests  
[NASA-CASE-LAR-12261-1] c 02 N80-20224
- Continuous laminar smoke generator  
[NASA-CASE-LAR-13014-1] c 09 N85-21178
- Method and apparatus for detecting laminar flow  
separation and reattachment  
[NASA-CASE-LAR-13952-1-SB] c 34 N90-19534
- Method of forming a multiple layer dielectric and a hot  
film sensor therewith  
[NASA-CASE-LAR-13678-1] c 76 N90-24168
- Method and apparatus for detecting laminar flow  
separation and reattachment  
[NASA-CASE-LAR-13952-2-SB] c 34 N91-31596
- LAMINAR FLOW AIRFOILS**  
Geometries for roughness shapes in laminar flow  
[NASA-CASE-LAR-13255-1] c 02 N87-16793
- LAMINATES**  
Multilayer porous ionizer Patent  
[NASA-CASE-XNP-04338] c 17 N71-23046
- Polyimide resin-fiberglass cloth laminates for printed  
circuit boards  
[NASA-CASE-MFS-20408] c 18 N73-12604
- Reinforced polyquinoxaline gasket and method of  
preparing the same --- resistant to ionizing radiation and  
liquid hydrogen temperatures  
[NASA-CASE-MFS-21364-1] c 37 N74-18126
- Method of laminating structural members  
[NASA-CASE-XLA-11028-1] c 24 N74-27035
- Bonding method in the manufacture of continuous  
regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c 24 N75-30260
- Transparent fire resistant polymeric structures  
[NASA-CASE-ARC-10813-1] c 27 N76-16230
- Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c 24 N77-19170
- Hybrid composite laminate structures  
[NASA-CASE-LEW-12118-1] c 24 N77-27188
- Honeycomb-laminate composite structure  
[NASA-CASE-ARC-10913-1] c 24 N78-15180
- Composite lamination method  
[NASA-CASE-LAR-12019-1] c 24 N78-17150
- Lightweight electrically-powered flexible thermal  
laminate --- made of metal and nonconductive yarns  
[NASA-CASE-MSC-12662-1] c 33 N79-12331
- Method for alleviating thermal stress damage in  
laminates --- metal matrix composites  
[NASA-CASE-LEW-12493-1] c 24 N81-17170
- Method for alleviating thermal stress damage in  
laminates  
[NASA-CASE-LEW-12493-2] c 24 N81-26179
- Method of making a partial interlaminar separation  
composite system  
[NASA-CASE-LAR-12065-2] c 24 N81-33235
- Fuselage structure using advanced technology fiber  
reinforced composites  
[NASA-CASE-LAR-11688-1] c 24 N82-26384
- Method of tracing contour patterns for use in making  
gradual contour resin matrix composites  
[NASA-CASE-ARC-11246-1] c 31 N83-34073
- Piezoelectric composite materials  
[NASA-CASE-LEW-12582-1] c 76 N83-34796
- High temperature polyimide film laminates and process  
for preparation thereof  
[NASA-CASE-LAR-13384-1] c 27 N86-20561
- Laminate comprising fibers embedded in cured amine  
terminated bis-imide  
[NASA-CASE-ARC-11421-3] c 24 N86-25416
- Fire and heat resistant laminating resins based on  
maleimide and citraconimido substituted 1-,2-,4- and -2,6-  
diaminobenzenes  
[NASA-CASE-ARC-11533-1] c 27 N87-23751
- Method of forming a multiple layer dielectric and a hot  
film sensor therewith  
[NASA-CASE-LAR-13678-1] c 76 N90-24168
- Method of inseting predesigned disbond areas into  
composite laminates  
[NASA-CASE-LAR-13225-1] c 24 N90-25197
- Method of fabricating composite structures  
[NASA-CASE-MFS-28390-1] c 24 N91-15333
- LAND MOBILE SATELLITE SERVICE**  
Trellis coded modulation for transmission over fading  
mobile satellite channel  
[NASA-CASE-NPO-16904-2-CU] c 32 N91-14523
- LANDFORMS**  
Method for observing the features characterizing the  
surface of a land mass  
[NASA-CASE-FRC-11013-1] c 43 N81-17499
- LANDING AIDS**  
Altitude sensing device  
[NASA-CASE-XMS-01994-1] c 14 N72-17326
- Magnetic position detection method and apparatus  
[NASA-CASE-ARC-10179-1] c 21 N72-22619
- Full color hybrid display for aircraft simulators --- landing  
aids  
[NASA-CASE-ARC-10903-1] c 09 N78-18083
- LANDING GEAR**  
Pivotal shock absorbing pad assembly Patent  
[NASA-CASE-XMF-03856] c 31 N70-34159
- Nose gear steering system for vehicle with main skids  
Patent  
[NASA-CASE-XLA-01804] c 02 N70-34160
- Landing pad assembly for aerospace vehicles Patent  
[NASA-CASE-XMF-02853] c 31 N70-36654
- Aircraft wheel spray drag alleviator Patent  
[NASA-CASE-XLA-01583] c 02 N70-36825
- Space craft soft landing system Patent  
[NASA-CASE-XMF-02108] c 31 N70-36845
- Double-acting shock absorber Patent  
[NASA-CASE-XMF-01045] c 15 N70-40354
- Landing gear Patent  
[NASA-CASE-XMF-01174] c 02 N70-41589
- Tire/wheel concept  
[NASA-CASE-LAR-11695-2] c 37 N81-24443
- LANDING MODULES**  
Double-acting shock absorber, Patent  
[NASA-CASE-XMF-01045] c 15 N70-40354
- LANDING SIMULATION**  
Impact simulator Patent  
[NASA-CASE-XLA-00493] c 11 N70-34786
- LANDING SITES**  
Assured crew return vehicle  
[NASA-CASE-MSC-21536-1] c 18 N91-13483
- LANTHANUM COMPOUNDS**  
Stabilized lanthanum sulphur compounds ---  
thermoelectric materials  
[NASA-CASE-NPO-16135-1] c 25 N83-24572
- LAP JOINTS**  
Device for measuring hole elongation in a bolted joint  
[NASA-CASE-LAR-13453-1] c 37 N88-14361
- LARGE SCALE INTEGRATION**  
Combinational logic for generating gate drive signals for  
phase control rectifiers  
[NASA-CASE-MFS-25208-1] c 33 N83-10345
- Method of examining microcircuit patterns  
[NASA-CASE-NPO-16299-1] c 33 N87-14594
- LARGE SPACE STRUCTURES**  
Structural members, method and apparatus  
[NASA-CASE-MSC-16217-1] c 31 N81-27323
- Electrical rotary joint apparatus for large space  
structures  
[NASA-CASE-MFS-23981-1] c 07 N83-20944
- Beam connector apparatus and assembly  
[NASA-CASE-MFS-25134-1] c 31 N83-31895
- Self-locking mechanical center joint  
[NASA-CASE-LAR-12864-1] c 37 N85-30336
- Synchronously deployable truss structure  
[NASA-CASE-LAR-13117-1] c 37 N86-25789
- Latching mechanism for deployable/re-stowable  
columns useful in satellite construction  
[NASA-CASE-LAR-13169-1] c 37 N86-25791
- Measurement apparatus and procedure for the  
determination of surface emissivities  
[NASA-CASE-LAR-13455-1] c 32 N87-21206
- Deployable geodesic truss structure  
[NASA-CASE-LAR-13113-1] c 31 N87-25492
- Preloaded space structural coupling joints  
[NASA-CASE-LAR-13489-1] c 18 N87-27713
- Space spider crane  
[NASA-CASE-LAR-13411-1-SB] c 18 N88-23828
- Mobile remote manipulator system for a tetrahedral  
truss  
[NASA-CASE-MSC-20985-1] c 18 N88-26398
- Antenna surface contour control system  
[NASA-CASE-LAR-13798-1] c 32 N89-25363
- Clevis joint for deployable space structures  
[NASA-CASE-LAR-13898-1] c 37 N91-15544
- Torsional suspension system for testing space  
structures  
[NASA-CASE-LAR-14149-1-SB] c 14 N91-21176
- Synchronously deployable double fold beam and planar  
truss structure  
[NASA-CASE-LAR-13490-1] c 18 N91-27199
- LASER ALTIMETERS**  
Sidelooking laser altimeter for a flight simulator  
[NASA-CASE-ARC-11312-1] c 36 N83-34304
- LASER APPLICATIONS**  
High power laser apparatus and system  
[NASA-CASE-XLE-2529-2] c 36 N75-27364
- Fiber distributed feedback laser  
[NASA-CASE-NPO-13531-1] c 36 N76-24553
- Wind measurement system  
[NASA-CASE-MFS-23362-1] c 47 N77-10753
- Pseudo-backscatter laser Doppler velocimeter  
employing antiparallel-reflector in the forward direction  
[NASA-CASE-ARC-10970-1] c 36 N77-25501
- Compact pulsed laser having improved heat  
conductance  
[NASA-CASE-NPO-13147-1] c 36 N77-25502
- Laser extensometer  
[NASA-CASE-MFS-19259-1] c 36 N78-14380
- Apparatus for extraction and separation of a  
preferentially photo-dissociated molecular isotope into  
positive and negative ions by means of an electric field  
[NASA-CASE-LEW-12465-1] c 25 N78-25148
- Volumetric direct nuclear pumped laser  
[NASA-CASE-LAR-12183-1] c 36 N79-18307
- Rhomboid prism pair for rotating the plane of parallel  
light beams  
[NASA-CASE-ARC-11311-1] c 74 N88-13978
- Dual laser optical system and method for studying fluid  
flow  
[NASA-CASE-MFS-25315-1] c 36 N83-29680
- Portable remote laser sensor for methane leak  
detection  
[NASA-CASE-NPO-15790-1] c 36 N85-21631
- Method of and apparatus for measuring temperature and  
pressure --- atmospheric sounding  
[NASA-CASE-GSC-12558-1] c 36 N85-21639
- Laser activated MTOS microwave device  
[NASA-CASE-NPO-16112-1] c 33 N86-19516
- Discharge cell for optogalvanic spectroscopy having  
orthogonal relationship between the probe laser and  
discharge axis  
[NASA-CASE-NPO-16271-1] c 35 N86-25753
- High-temperature, high-pressure optical cell  
[NASA-CASE-MFS-26000-1] c 74 N87-14971
- Multiplex electric discharge gas laser system  
[NASA-CASE-NPO-16433-1] c 36 N87-23961
- Laser schlieren crystal monitor  
[NASA-CASE-MFS-28060-1] c 76 N87-25862
- Isotope separation using tuned laser and electron  
beam  
[NASA-CASE-NPO-16907-1-CU] c 25 N88-24732
- Optically controlled welding system  
[NASA-CASE-MFS-29291-1] c 37 N89-12868
- Noncontact temperature pattern measuring device  
[NASA-CASE-NPO-17824-1-CU] c 36 N90-17132
- Isotope exchange in oxide-containing catalyst  
[NASA-CASE-LAR-13542-2-SB] c 25 N90-20154
- Electrostatically suspended rotor for angular encoder  
[NASA-CASE-MFS-28294-1] c 31 N91-14508
- Optical joint correlator for real-time image tracking and  
retinal surgery  
[NASA-CASE-MSC-21509-1] c 74 N91-25840
- LASER BEAMS**  
Apparatus for precision focusing and positioning of a  
beam waist on a target  
[NASA-CASE-ARC-11916-1-SB] c 74 N91-14002
- Hanging drop crystal growth apparatus  
[NASA-CASE-MFS-26061-1] c 76 N91-16815

- Quantum well, beam deflecting surface emitting lasers  
[NASA-CASE-NPO-18243-1-CU] c 36 N91-32489
- LASER CAVITIES**
- Laser apparatus  
[NASA-CASE-GSC-12237-1] c 36 N80-14384
- Laser Resonator  
[NASA-CASE-GSC-12565-1] c 36 N84-14509
- Long gain length solar pumped box laser  
[NASA-CASE-LAR-13256-1] c 36 N86-29204
- LASER DOPPLER VELOCIMETERS**
- Dual wavelength scanning Doppler velocimeter --- without perturbation of flow fields  
[NASA-CASE-ARC-10637-1] c 35 N75-16783
- Combined dual scatter, local oscillator laser Doppler velocimeter  
[NASA-CASE-ARC-10642-1] c 36 N76-14447
- Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c 35 N77-10493
- Pseudo-backscatter laser Doppler velocimeter employing antiparallel-reflector in the forward direction  
[NASA-CASE-ARC-10970-1] c 36 N77-25501
- Optical scanner --- laser doppler velocimeters  
[NASA-CASE-LAR-11711-1] c 74 N78-17866
- Versatile LDV burst simulator  
[NASA-CASE-LAR-11859-1] c 35 N79-14349
- Laser Doppler velocity simulator --- to induce frequency shift  
[NASA-CASE-LAR-12176-1] c 36 N80-16321
- Direction sensitive laser velocimeter --- determining the direction of particles using a helium-neon laser  
[NASA-CASE-LAR-12177-1] c 36 N81-24422
- Scanning afocal laser velocimeter projection lens system  
[NASA-CASE-LAR-12328-1] c 36 N82-32712
- Powder fed sheared dispersal particle generator  
[NASA-CASE-LAR-12785-1] c 37 N84-16561
- Auto covariance computer  
[NASA-CASE-LAR-12968-1] c 60 N86-21154
- Spinning disk calibration method and apparatus for laser Doppler velocimeter  
[NASA-CASE-ARC-11510-1] c 35 N86-32697
- Vibration-free Raman Doppler velocimeter  
[NASA-CASE-LAR-13268-1] c 35 N87-14669
- Projection lens scanning laser velocimeter system  
[NASA-CASE-ARC-11547-1] c 36 N87-17026
- Dual mode laser velocimeter  
[NASA-CASE-LAR-11634-1] c 36 N88-14350
- Laser Doppler velocimeter multiplexer interface for simultaneous measured events  
[NASA-CASE-ARC-11536-1] c 33 N89-14384
- Frequency domain laser velocimeter signal processor  
[NASA-CASE-LAR-13552-1-CU] c 33 N89-14385
- Three-dimensional laser velocimeter simultaneity detector  
[NASA-CASE-ARC-11876-1] c 36 N90-25340
- Laser velocimeter for near-surface measurements  
[NASA-CASE-ARC-11917-1] c 35 N91-15520
- LASER DRILLING**
- In-situ laser retorting of oil shale  
[NASA-CASE-LEW-12217-1] c 43 N78-14452
- LASER FUSION**
- Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c 18 N83-20996
- LASER GUIDANCE**
- Scanning afocal laser velocimeter projection lens system  
[NASA-CASE-LAR-12328-1] c 36 N82-32712
- LASER GYROSCOPES**
- Optical gyroscope system  
[NASA-CASE-NPO-14258-1] c 35 N81-33448
- Laser pulse detection method and apparatus  
[NASA-CASE-NPO-16030-1] c 36 N84-25037
- LASER HEATING**
- Electric power generation system directory from laser power  
[NASA-CASE-NPO-13308-1] c 36 N75-30524
- Method and apparatus for shaping and enhancing acoustical levitation forces  
[NASA-CASE-MFS-25050-1] c 71 N81-15767
- LASER INTERFEROMETRY**
- Dual-beam skin friction interferometer  
[NASA-CASE-ARC-11354-1] c 74 N83-21949
- LASER MATERIALS**
- Laser head for simultaneous optical pumping of several dye lasers --- with single flash lamp  
[NASA-CASE-LAR-11341-1] c 36 N75-19655
- Solar pumped laser  
[NASA-CASE-LAR-12870-1] c 36 N84-16542
- LASER MODE LOCKING**
- Laser system with an antiresonant optical ring  
[NASA-CASE-HQN-10844-1] c 36 N75-19653
- Dually mode locked Nd:YAG laser  
[NASA-CASE-GSC-11746-1] c 36 N75-19654
- Length controlled stabilized mode-lock ND:YAG laser  
[NASA-CASE-GSC-11571-1] c 36 N77-25499
- Geodetic distance measuring apparatus  
[NASA-CASE-GSC-12609-2] c 36 N83-29681
- Method and circuit for controlling the evolution time interval of a laser output pulse  
[NASA-CASE-LAR-13772-1] c 36 N89-28816
- LASER MODES**
- Optical pump and driver system for lasers  
[NASA-CASE-ERC-10283] c 16 N72-25485
- Acoustically controlled distributed feedback laser  
[NASA-CASE-NPO-13175-1] c 36 N75-31427
- LASER OUTPUTS**
- Method and apparatus for wavelength tuning of liquid lasers  
[NASA-CASE-ERC-10187] c 16 N69-31343
- Laser Doppler system for measuring three dimensional vector velocity Patent  
[NASA-CASE-MFS-20386] c 21 N71-19212
- Amplitude modulated laser transmitter Patent  
[NASA-CASE-XMS-04269] c 16 N71-22895
- Laser fluid velocity detector Patent  
[NASA-CASE-XAC-10770-1] c 16 N71-24828
- Laser calibrator Patent  
[NASA-CASE-XLA-03410] c 16 N71-25914
- Method and apparatus for optical modulating a light signal Patent  
[NASA-CASE-GSC-10216-1] c 23 N71-26722
- Laser machining apparatus Patent  
[NASA-CASE-HQN-10541-2] c 15 N71-27135
- Optical frequency waveguide and transmission system Patent  
[NASA-CASE-HQN-10541-4] c 16 N71-27183
- Laser communication system for controlling several functions at a location remote to the laser  
[NASA-CASE-LAR-10311-1] c 16 N73-16536
- Power supply for carbon dioxide lasers  
[NASA-CASE-GSC-11222-1] c 16 N73-32391
- Thermomagnetic recording and magneto-optic playback system having constant intensity laser beam control  
[NASA-CASE-NPO-11317-2] c 36 N74-13205
- Apparatus for scanning the surface of a cylindrical body  
[NASA-CASE-NPO-11861-1] c 36 N74-20009
- Optically detonated explosive device  
[NASA-CASE-NPO-11743-1] c 28 N74-27425
- Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c 36 N75-15028
- Dually mode locked Nd:YAG laser  
[NASA-CASE-GSC-11746-1] c 36 N75-19654
- Laser head for simultaneous optical pumping of several dye lasers --- with single flash lamp  
[NASA-CASE-LAR-11341-1] c 36 N75-19655
- Acoustically controlled distributed feedback laser  
[NASA-CASE-NPO-13175-1] c 36 N75-31427
- Optical noise suppression device and method --- laser light exposing film  
[NASA-CASE-MSC-12640-1] c 74 N76-31998
- Length controlled stabilized mode-lock ND:YAG laser  
[NASA-CASE-GSC-11571-1] c 36 N77-25499
- Apparatus for photon excited catalysis  
[NASA-CASE-NPO-13566-1] c 25 N77-32255
- Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14524-1] c 32 N80-24510
- High power metallic halide laser --- amplifying a copper chloride laser  
[NASA-CASE-NPO-14782-1] c 36 N82-28616
- Collimated beam manifold with the number of output beams variable at a given output angle  
[NASA-CASE-MFS-25312-1] c 74 N83-17305
- Method of and apparatus for double-exposure holographic interferometry  
[NASA-CASE-MFS-25405-1] c 35 N84-22929
- Method and apparatus for coating substrates using a laser  
[NASA-CASE-LEW-13526-1] c 36 N84-22944
- Ranging system which compares an object reflected component of a light beam to a reference component of the light beam  
[NASA-CASE-NPO-15865-1] c 74 N85-34629
- Projection lens scanning laser velocimeter system  
[NASA-CASE-ARC-11547-1] c 36 N87-17026
- Multiplex electric discharge gas laser system  
[NASA-CASE-NPO-16433-1] c 36 N87-23961
- Magnetically switched power supply system for lasers  
[NASA-CASE-NPO-16402-2] c 33 N88-24862
- Method and circuit for controlling the evolution time interval of a laser output pulse  
[NASA-CASE-LAR-13772-1] c 36 N89-28816
- Method and circuit for shaping laser output pulses  
[NASA-CASE-LAR-14203-1] c 36 N89-28817
- Laser velocimeter for near-surface measurements  
[NASA-CASE-ARC-11917-1] c 35 N91-15520
- Hanging drop crystal growth apparatus  
[NASA-CASE-MFS-26061-1] c 76 N91-16815
- Cladding for transverse-pumped solid-state laser  
[NASA-CASE-NPO-17355-1-CU] c 36 N91-17360
- Fiber optic sensing system  
[NASA-CASE-LEW-14795-1] c 74 N91-21871
- Synchronous strobe apparatus for flow visualization  
[NASA-CASE-LAR-14556-1] c 36 N91-25392
- Edge technique for measurement of laser frequency shifts including the Doppler shift  
[NASA-CASE-GSC-13343-1] c 36 N91-28557
- LASER PLASMAS**
- Continuous plasma laser --- method and apparatus for producing intense, coherent, monochromatic light from low temperature plasma  
[NASA-CASE-XNP-04167-3] c 36 N77-19416
- LASER POWER BEAMING**
- Long gain length solar pumped box laser  
[NASA-CASE-LAR-13256-1] c 36 N86-29204
- LASER PUMPING**
- Laser apparatus  
[NASA-CASE-GSC-12237-1] c 36 N80-14384
- Large volume multiple-path nuclear pumped laser  
[NASA-CASE-LAR-12592-1] c 36 N82-13415
- Solar pumped laser  
[NASA-CASE-LAR-12870-1] c 36 N84-16542
- Tm,Ho:YLF laser end-pumped by a semiconductor diode laser array  
[NASA-CASE-NPO-17282-1-CU] c 36 N91-15528
- Cladding for transverse-pumped solid-state laser  
[NASA-CASE-NPO-17355-1-CU] c 36 N91-17360
- LASER RANGE FINDERS**
- Laser measuring system for incremental assemblies --- measuring wire-wrapped frame assemblies in spark chambers  
[NASA-CASE-GSC-12321-1] c 36 N82-16396
- Range and range rate system  
[NASA-CASE-MSC-20867-1] c 36 N88-24958
- LASER RANGER/TRACKER**
- Method and apparatus for aligning a laser beam projector Patent  
[NASA-CASE-NPO-11087] c 23 N71-29125
- LASER SPECTROMETERS**
- Method and apparatus for enhancing laser absorption sensitivity  
[NASA-CASE-NPO-16567-1-CU] c 36 N87-28006
- LASER SPECTROSCOPY**
- Stark effect spectrophone for continuous absorption spectra monitoring --- a technique for gas analysis  
[NASA-CASE-NPO-15102-1] c 25 N81-25159
- LASER WINDOWS**
- Optical scanner --- laser doppler velocimeters  
[NASA-CASE-LAR-11711-1] c 74 N78-17866
- LASERS**
- Laser apparatus for removing material from rotating objects Patent  
[NASA-CASE-MFS-11279] c 16 N71-20400
- Laser grating interferometer Patent  
[NASA-CASE-XLA-04295] c 16 N71-24170
- Optical frequency waveguide Patent  
[NASA-CASE-HQN-10541-1] c 07 N71-26291
- Laser camera and diffusion filter therefore Patent  
[NASA-CASE-NPO-10417] c 16 N71-33410
- Optical probing of supersonic flows with statistical correlation  
[NASA-CASE-MFS-20642] c 14 N72-21407
- A technique for breaking ice in the path of a ship  
[NASA-CASE-LAR-10815-1] c 16 N72-22520
- Alignment apparatus using a laser having a gravitationally sensitive cavity reflector  
[NASA-CASE-ARC-10444-1] c 16 N73-33397
- Tunable cavity resonator with ramp shaped supports  
[NASA-CASE-HQN-10790-1] c 36 N74-11313
- Short range laser obstacle detector --- for surface vehicles using laser diode array  
[NASA-CASE-NPO-11856-1] c 36 N74-15145
- Long range laser traversing system  
[NASA-CASE-GSC-11262-1] c 36 N74-21091
- Deep trap, laser activated image converting system  
[NASA-CASE-NPO-13131-1] c 36 N75-19652
- Laser system with an antiresonant optical ring  
[NASA-CASE-HQN-10844-1] c 36 N75-19653
- Acoustically controlled distributed feedback laser  
[NASA-CASE-NPO-13175-1] c 36 N75-31427
- Method and apparatus for generating coherent radiation in the ultra-violet region and above by use of distributed feedback  
[NASA-CASE-NPO-13346-1] c 36 N76-29575
- Polarization compensator for optical communications  
[NASA-CASE-GSC-11782-1] c 74 N76-30053
- Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c 74 N77-26942
- Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c 32 N77-28346
- Method and apparatus for splitting a beam of energy --- optical communication  
[NASA-CASE-GSC-12083-1] c 73 N78-32848

- Shock isolator for operating a diode laser on a closed-cycle refrigerator  
[NASA-CASE-GSC-12297-1] c 37 N79-28549
- Method of and apparatus for double-exposure holographic interferometry  
[NASA-CASE-MFS-25405-1] c 35 N84-22929
- Method and apparatus for coating substrates using a laser  
[NASA-CASE-LEW-13526-1] c 36 N84-22944
- Off-axis coherently pumped laser  
[NASA-CASE-GSC-12592-1] c 36 N84-28065
- Means for phase locking the outputs of a surface emitting laser diode array  
[NASA-CASE-NPO-16542-1-CU] c 36 N87-23960
- Magnetically switched power supply system for lasers  
[NASA-CASE-NPO-16402-2] c 33 N88-24862
- Three-dimensional laser velocimeter simultaneity detector  
[NASA-CASE-ARC-11876-1] c 36 N90-25340
- Laser optical disk position encoder with active heads  
[NASA-CASE-GSC-13175-1] c 74 N91-14001
- Synchronous strobe apparatus for flow visualization  
[NASA-CASE-LAR-14556-1] c 36 N91-25392
- LASING**
- Long gain length solar pumped box laser  
[NASA-CASE-LAR-13256-1] c 36 N86-29204
- Isotope separation using tuned laser and electron beam  
[NASA-CASE-NPO-16907-1-CU] c 25 N88-24732
- LATCHES**
- Despin weight release Patent  
[NASA-CASE-XLA-00679] c 15 N70-38601
- Helmet assembly and latch means therefor Patent  
[NASA-CASE-XMS-04935] c 05 N71-11190
- Quick disconnect latch and handle combination Patent  
[NASA-CASE-MFS-11132] c 15 N71-17649
- Latching mechanism Patent  
[NASA-CASE-XMS-03745] c 15 N71-21076
- Latch/ejector unit Patent  
[NASA-CASE-XLA-03538] c 15 N71-24897
- Latching mechanism Patent  
[NASA-CASE-MS-15474-1] c 15 N71-26162
- Latch mechanism  
[NASA-CASE-MS-12549-1] c 37 N74-27903
- Latching device  
[NASA-CASE-MFS-21606-1] c 37 N75-19685
- Load regulating latch  
[NASA-CASE-MS-19535-1] c 37 N77-32499
- Helmet latching and attaching ring  
[NASA-CASE-XMS-04670] c 54 N78-17678
- Low temperature latching solenoid  
[NASA-CASE-MS-18106-1] c 33 N82-11357
- CAM controlled retractable door latch  
[NASA-CASE-MS-20304-1] c 37 N82-31690
- Mechanical end joint system for structural column elements  
[NASA-CASE-LAR-12482-1] c 37 N82-32732
- Hemispherical latching apparatus  
[NASA-CASE-MFS-25837-1] c 18 N85-29991
- Latching mechanism for deployable/re-stowable columns useful in satellite construction  
[NASA-CASE-LAR-13169-1] c 37 N86-25791
- Self indexing latch system  
[NASA-CASE-MFS-25956-1] c 37 N87-21333
- Preloadable vector sensitive latch  
[NASA-CASE-MS-20910-1] c 37 N87-25582
- Toggle release  
[NASA-CASE-MS-21354-1] c 37 N88-24969
- Preloaded latching device  
[NASA-CASE-MS-21730-1] c 37 N91-23493
- Quick action clamp  
[NASA-CASE-LEW-14887-1] c 37 N91-27561
- LATERAL CONTROL**
- Three-axis controller Patent  
[NASA-CASE-XAC-01404] c 05 N70-41581
- Roll attitude star sensor system Patent  
[NASA-CASE-XNP-01307] c 21 N70-41856
- High speed flight vehicle control Patent  
[NASA-CASE-XLA-08967] c 02 N71-27088
- Vortex-lift roll-control device  
[NASA-CASE-LAR-11868-2] c 08 N79-14108
- Leading edge flap system for aircraft control augmentation  
[NASA-CASE-LAR-12787-2] c 08 N85-19985
- Swashplate control system  
[NASA-CASE-ARC-11633-1] c 08 N87-23631
- LATERAL STABILITY**
- Annular wing  
[NASA-CASE-FRC-11007-2] c 05 N82-26277
- LATEX**
- Molten salt pyrolysis of latex --- synthetic hydrocarbon fuel production using the Guayule shrub  
[NASA-CASE-NPO-14315-1] c 27 N81-17261
- Process for preparation of large-particle-size monodisperse latexes  
[NASA-CASE-MFS-25000-1] c 25 N81-19242
- LATHES**
- Apparatus for machining geometric cones Patent  
[NASA-CASE-XMS-04292] c 15 N71-22722
- Lathe tool bit and holder for machining fiberglass materials  
[NASA-CASE-XLA-10470] c 15 N72-21489
- Universal precision sine bar attachment  
[NASA-CASE-MFS-28253-1] c 37 N89-28831
- LAUNCH ESCAPE SYSTEMS**
- Emergency escape system Patent  
[NASA-CASE-XKS-02342] c 05 N71-11199
- Device for separating occupant from an ejection seat Patent  
[NASA-CASE-XMS-04625] c 05 N71-20718
- LAUNCH VEHICLE CONFIGURATIONS**
- Rotating launch device for a remotely piloted aircraft  
[NASA-CASE-ARC-10979-1] c 09 N77-19076
- LAUNCH VEHICLES**
- A support technique for vertically oriented launch vehicles  
[NASA-CASE-XLA-02704] c 11 N69-21540
- Method and apparatus for detection and location of microleaks Patent  
[NASA-CASE-XMF-02307] c 14 N71-10779
- Three stage rocket vehicle with parallel staging  
[NASA-CASE-MFS-25878-1] c 18 N84-27787
- Earth-to-orbit vehicle providing a reusable orbital stage  
[NASA-CASE-LAR-13486-1] c 16 N90-22584
- Integrated launch and emergency vehicle system  
[NASA-CASE-LAR-13780-1] c 18 N91-13481
- LAUNCHERS**
- Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-15429-1] c 18 N84-22609
- Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-25429-1] c 18 N86-20469
- LAUNCHING PADS**
- Missile launch release system Patent  
[NASA-CASE-XMF-03198] c 30 N70-40353
- Remote controlled tubular disconnect Patent  
[NASA-CASE-XLA-01396] c 03 N71-12259
- Validation device for spacecraft checkout equipment Patent  
[NASA-CASE-XKS-10543] c 07 N71-26292
- LAUNCHING SITES**
- Integrated launch and emergency vehicle system  
[NASA-CASE-LAR-13780-1] c 18 N91-13481
- LAY-UP**
- Method of making a partial interlaminar separation composite system  
[NASA-CASE-LAR-12065-2] c 24 N81-33235
- LAYERS**
- Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-1] c 28 N78-24365
- LEACHING**
- Process for the leaching of AP from propellant  
[NASA-CASE-NPO-14109-1] c 28 N80-23471
- Infusion extractor  
[NASA-CASE-MS-20761-1] c 37 N87-15465
- LEAD (METAL)**
- Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c 44 N76-27664
- Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-2] c 44 N81-29524
- Joining lead wires to thin platinum alloy films  
[NASA-CASE-LEW-13934-1] c 35 N83-35338
- LEAD SULFIDES**
- Integrated photo-responsive metal oxide semiconductor circuit  
[NASA-CASE-GSC-12782-1] c 33 N88-14271
- LEAD TELLURIDES**
- Bonding thermoelectric elements to nonmagnetic refractory metal electrodes  
[NASA-CASE-XGS-04554] c 15 N69-39786
- Segmenting lead telluride-silicon germanium thermoelements Patent  
[NASA-CASE-XGS-05718] c 26 N71-16037
- LEADING EDGE FLAPS**
- Leading edge flap system for aircraft control augmentation  
[NASA-CASE-LAR-12787-2] c 08 N85-19985
- LEADING EDGES**
- Reentry vehicle leading edge Patent  
[NASA-CASE-XLA-00165] c 31 N70-33242
- Leading edge curvature based on convective heating Patent  
[NASA-CASE-XLA-01486] c 01 N71-23497
- Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c 24 N77-19170
- Geometries for roughness shapes in laminar flow  
[NASA-CASE-LAR-13255-1] c 02 N87-16793
- LEAKAGE**
- Rocket chamber leak test fixture  
[NASA-CASE-XFR-09479] c 14 N69-27503
- Method and apparatus for detection and location of microleaks Patent  
[NASA-CASE-XMF-02307] c 14 N71-10779
- Leak detector Patent  
[NASA-CASE-LAR-10323-1] c 12 N71-17573
- Hard space suit Patent  
[NASA-CASE-XAC-07043] c 05 N71-23161
- Method for leakage testing of tanks Patent  
[NASA-CASE-XMF-02392] c 32 N71-24285
- Leak detector wherein a probe is monitored with ultraviolet radiation Patent  
[NASA-CASE-ERC-10034] c 15 N71-24896
- Method for detecting leaks in hermetically sealed containers Patent  
[NASA-CASE-ERC-10045] c 15 N71-24910
- Method and apparatus for detecting gross leaks Patent  
[NASA-CASE-ERC-10033] c 14 N71-26672
- Orifice gross leak tester Patent  
[NASA-CASE-ERC-10150] c 14 N71-28992
- Leak detector  
[NASA-CASE-MFS-21761-1] c 35 N75-15931
- Vacuum leak detector  
[NASA-CASE-LAR-11237-1] c 35 N75-19612
- Low heat leak connector for cryogenic system  
[NASA-CASE-XLE-02367-1] c 31 N79-21225
- Carbon granule probe microphone for leak detection --- recovery boilers  
[NASA-CASE-NPO-16027-1] c 35 N85-21597
- Portable remote laser sensor for methane leak detection  
[NASA-CASE-NPO-15790-1] c 36 N85-21631
- Fluid leak indicator  
[NASA-CASE-MS-20783-1] c 35 N86-20756
- Method of repairing hidden leaks in tubes  
[NASA-CASE-MFS-19796-1] c 37 N86-32736
- Self-compensating solenoid valve  
[NASA-CASE-ARC-11620-1] c 37 N87-25573
- High temperature flexible seal  
[NASA-CASE-LEW-14695-1] c 37 N90-23751
- Dual diaphragm tank with telltale drain  
[NASA-CASE-MS-21703-1] c 31 N91-25305
- LEAST SQUARES METHOD**
- Modified fast frequency acquisition via adaptive least squares algorithm  
[NASA-CASE-NPO-17845-1-CU] c 61 N90-27341
- LEG (ANATOMY)**
- Actuator device for artificial leg  
[NASA-CASE-MFS-23225-1] c 52 N77-14735
- Rotational joint assembly for the prosthetic leg  
[NASA-CASE-KSC-11004-1] c 54 N77-30749
- Mechanical energy storage device for hip disarticulation  
[NASA-CASE-ARC-10916-1] c 52 N78-10686
- Drop foot corrective device  
[NASA-CASE-LAR-12259-2] c 54 N86-22112
- LENSES**
- High temperature lens construction Patent  
[NASA-CASE-XNP-04111] c 14 N71-15622
- Image magnification adapter for cameras Patent  
[NASA-CASE-XMF-03844-1] c 14 N71-26474
- Petzval type objective including field shaping lens Patent  
[NASA-CASE-GSC-10700] c 23 N71-30027
- Method and apparatus for eliminating coherent noise in a coherent energy imaging system without destroying spatial coherence  
[NASA-CASE-GSC-11133-1] c 23 N72-11568
- Plural beam antenna  
[NASA-CASE-GSC-11013-1] c 09 N73-19234
- Spatial filter for Q-switched lasers  
[NASA-CASE-LEW-12164-1] c 36 N77-32478
- Process for producing a well-adhered durable optical coating on an optical plastic substrate --- abrasion resistant polymethyl methacrylate lenses  
[NASA-CASE-ARC-11039-1] c 74 N78-32854
- Chromatically corrected virtual image visual display --- reducing eye strain in flight simulators  
[NASA-CASE-LAR-12251-1] c 74 N80-27185
- Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c 74 N82-24072
- Scanning alocal laser velocimeter projection lens system  
[NASA-CASE-LAR-12328-1] c 36 N82-32712
- Interferometric angle monitor  
[NASA-CASE-GSC-12614-1] c 74 N83-32577
- Projection lens scanning laser velocimeter system  
[NASA-CASE-ARC-11547-1] c 36 N87-17026
- Dual mode laser velocimeter  
[NASA-CASE-ARC-11634-1] c 36 N88-14350
- Portable dynamic fundus instrument  
[NASA-CASE-MS-21675-1] c 52 N91-13865

## LENTICULAR BODIES

## LENTICULAR BODIES

- Space and atmospheric reentry vehicle Patent  
[NASA-CASE-XGS-00260] c 31 N70-37924
- LEVEL (HORIZONTAL)**  
Hot wire liquid level detector for cryogenic fluids Patent  
[NASA-CASE-XLE-00454] c 23 N71-17802  
Rotary leveling base platform  
[NASA-CASE-ARC-10981-1] c 37 N78-27425
- LEVEL (QUANTITY)**  
Spherical tank gauge Patent  
[NASA-CASE-XMS-06236] c 14 N71-21007  
Positive dc to positive dc converter Patent  
[NASA-CASE-XMF-14301] c 09 N71-23188
- LEVELING**  
Adjustable attitude guide device Patent  
[NASA-CASE-XLA-07911] c 15 N71-15571  
Electrical switching device Patent  
[NASA-CASE-NPO-10037] c 09 N71-19610  
Adjustable support  
[NASA-CASE-NPO-10721] c 15 N72-27484  
Automatically operable self-leveling load table  
[NASA-CASE-MFS-22039-1] c 09 N75-12968
- LEVERS**  
Preloaded latching device  
[NASA-CASE-MSC-21730-1] c 37 N91-23493
- LEVITATION**  
Gas levitator having fixed levitation node for containerless processing  
[NASA-CASE-MFS-25509-1] c 35 N83-24828  
Closed loop electrostatic levitation system  
[NASA-CASE-NPO-15553-1] c 33 N85-29142  
Improved superconducting bearings  
[NASA-CASE-GSC-13346-1] c 37 N91-28578
- LEVITATION MELTING**  
High temperature acoustic levitator  
[NASA-CASE-NPO-16022-1] c 71 N85-22105  
Sample levitation and melt in microgravity  
[NASA-CASE-NPO-17022-1-CU] c 29 N87-25489
- LIFE (DURABILITY)**  
Hollow rolling element bearings  
[NASA-CASE-LEW-11087-3] c 37 N74-21064  
Method of increasing minority carrier lifetime in silicon web or the like  
[NASA-CASE-NPO-15530-1] c 76 N83-35888  
Apparatus for disintegrating kidney stones  
[NASA-CASE-GSC-12652-1] c 52 N84-34913  
Method and apparatus for measuring minority carrier lifetime in a direct band-gap semiconductor  
[NASA-CASE-NPO-16337-1-CU] c 33 N87-22894  
Arc-textured high emittance radiator surfaces  
[NASA-CASE-LEW-14679-1] c 27 N91-25296  
Slow positron beam generator for lifetime studies  
[NASA-CASE-LAR-14250-1-SB] c 72 N91-27936
- LIFE DETECTORS**  
Use of the enzyme hexokinase for the reduction of inherent light levels  
[NASA-CASE-XGS-05533] c 04 N69-27487  
Lyophilized reaction mixtures Patent  
[NASA-CASE-XGS-05532] c 06 N71-17705
- LIFE RAFTS**  
Life raft Patent  
[NASA-CASE-XMS-00863] c 05 N70-34857  
Life raft stabilizer  
[NASA-CASE-MSC-12393-1] c 02 N73-26006  
Modification of one man life raft  
[NASA-CASE-LAR-10241-1] c 54 N74-14845
- LIFE SUPPORT SYSTEMS**  
Shock absorbing support and restraint means Patent  
[NASA-CASE-XMS-01240] c 05 N70-35152  
Portable environmental control system Patent  
[NASA-CASE-XMS-09632-1] c 05 N71-11203  
Extravehicular tunnel suit system Patent  
[NASA-CASE-MSC-12243-1] c 05 N71-24728  
Foreshortened convolute section for a pressurized suit Patent  
[NASA-CASE-XMS-09637-1] c 05 N71-24730  
Orbital escape device Patent  
[NASA-CASE-XMS-06162] c 31 N71-28851  
Specialized halogen generator for purification of water Patent  
[NASA-CASE-XLA-08913] c 14 N71-28933  
Life support system  
[NASA-CASE-MSC-12411-1] c 05 N72-20096  
Air removal device  
[NASA-CASE-XLA-08914] c 15 N73-12492  
Space suit  
[NASA-CASE-MSC-12609-1] c 05 N73-32012  
Catalyst cartridge for carbon dioxide reduction unit  
[NASA-CASE-LAR-10551-1] c 25 N74-12813  
Helmet feedport  
[NASA-CASE-XMS-09653] c 54 N78-17680  
Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c 54 N78-32721
- Air removal device --- life support systems  
[NASA-CASE-XLA-08914-2] c 25 N82-21269  
Suitport extra-vehicular access facility  
[NASA-CASE-ARC-11635-1] c 18 N90-16860  
Method and apparatus for bio-regenerative life support system  
[NASA-CASE-MSC-21629-1] c 54 N91-31803
- LIFT**  
Serrated trailing edges for improving lift and drag characteristics of lifting surfaces  
[NASA-CASE-LAR-13870-1] c 05 N90-15094
- LIFT DEVICES**  
Device for handling heavy loads  
[NASA-CASE-XNP-04969] c 11 N69-27466  
Recoverable rocket vehicle Patent  
[NASA-CASE-XMF-00389] c 31 N70-34176  
Direct lift control system Patent  
[NASA-CASE-LAR-10249-1] c 02 N71-26110  
Ferry system  
[NASA-CASE-LAR-10574-1] c 11 N73-13257  
High lift aircraft --- with improved stability, control, performance, and noise characteristics  
[NASA-CASE-LAR-11252-1] c 05 N75-25914  
Device for installing rocket engines  
[NASA-CASE-MFS-19220-1] c 20 N76-22296  
Vortex-lift roll-control device  
[NASA-CASE-LAR-11868-2] c 08 N79-14108  
Serrated trailing edges for improving lift and drag characteristics of lifting surfaces  
[NASA-CASE-LAR-13870-1] c 05 N90-15094
- LIFT DRAG RATIO**  
Ring wing tension vehicle Patent  
[NASA-CASE-XLA-04901] c 31 N71-24315  
Annular wing  
[NASA-CASE-FRC-11007-2] c 05 N82-26277  
Slotted variable camber flap  
[NASA-CASE-LAR-12541-1] c 05 N84-22551  
Over-the-wing propeller  
[NASA-CASE-LAR-13134-2] c 07 N87-16828
- LIFTING BODIES**  
Recoverable rocket vehicle Patent  
[NASA-CASE-XMF-00389] c 31 N70-34176  
Lifting body Patent Application  
[NASA-CASE-FRC-10063] c 01 N71-12217  
Lift balancing device  
[NASA-CASE-LAR-10348-1] c 11 N73-12264
- LIFTING REENTRY VEHICLES**  
Space and atmospheric reentry vehicle Patent  
[NASA-CASE-XGS-00260] c 31 N70-37924  
Variable geometry manned orbital vehicle Patent  
[NASA-CASE-XLA-03691] c 31 N71-15674  
Flight craft Patent  
[NASA-CASE-XAC-02058] c 02 N71-16087
- LIFTING ROTORS**  
High lift, low pitching moment airfoils  
[NASA-CASE-LAR-13215-1] c 02 N89-14224
- LIGANDS**  
Carboranyl(methylene-substituted phosphazenes and polymers thereof  
[NASA-CASE-ARC-11370-1] c 27 N84-22750
- LIGHT (VISIBLE RADIATION)**  
Anti-glare improvement for optical imaging systems Patent  
[NASA-CASE-NPO-10337] c 14 N71-15604  
Maksutov spectrograph Patent  
[NASA-CASE-XLA-10402] c 14 N71-29041  
Combustion detector  
[NASA-CASE-LAR-10739-1] c 14 N73-16484  
Light transmitting window assembly  
[NASA-CASE-MSC-18417-1] c 74 N85-29750
- LIGHT AIRCRAFT**  
Direct lift control system Patent  
[NASA-CASE-LAR-10249-1] c 02 N71-26110
- LIGHT BEAMS**  
Spectroscopy equipment using a slender cylindrical reflector as a substitute for a slit Patent  
[NASA-CASE-XGS-08269] c 23 N71-26206  
Multiple hologram recording and readout system Patent  
[NASA-CASE-ERC-10151] c 16 N71-29131  
Rhomboid prism pair for rotating the plane of parallel light beams  
[NASA-CASE-ARC-11311-1] c 74 N83-13978  
Collimated beam manifold with the number of output beams variable at a given output angle  
[NASA-CASE-MFS-25312-1] c 74 N83-17305  
Ranging system which compares an object reflected component of a light beam to a reference component of the light beam  
[NASA-CASE-NPO-15865-1] c 74 N85-34629  
Double window viewing chamber assembly  
[NASA-CASE-MFS-28057-1] c 09 N87-14355  
Laser schlieren crystal monitor  
[NASA-CASE-MFS-28060-1] c 76 N87-25862  
Laser velocimeter for near-surface measurements  
[NASA-CASE-ARC-11917-1] c 35 N91-15520
- Synchronous strobe apparatus for flow visualization  
[NASA-CASE-LAR-14556-1] c 36 N91-25392
- LIGHT EMISSION**  
Method and apparatus for determining optical absorption and emission characteristics of a crystal or non-crystalline fiber  
[NASA-CASE-LAR-13963-1] c 76 N90-24150
- LIGHT EMITTING DIODES**  
Photoelectric detection system --- manufacturing automation  
[NASA-CASE-MFS-23776-1] c 33 N82-28545  
Heads up display  
[NASA-CASE-LAR-12630-1] c 06 N84-27733  
Focal plane array optical proximity sensor  
[NASA-CASE-NPO-15155-1] c 74 N85-22139  
Means for phase locking the outputs of a surface emitting laser diode array  
[NASA-CASE-NPO-16542-1-CU] c 36 N87-23960  
Field induced gap infrared detector  
[NASA-CASE-NPO-17526-1-CU] c 35 N91-14588  
Fiber optic sensing system  
[NASA-CASE-LEW-14795-1] c 74 N91-21871
- LIGHT GAS GUNS**  
Hypervelocity gun Patent  
[NASA-CASE-GSC-05902] c 11 N71-18578
- LIGHT MODULATION**  
Retrodirective modulator Patent  
[NASA-CASE-GSC-10062] c 14 N71-15605  
Light intensity modulator controller Patent  
[NASA-CASE-XMS-04300] c 09 N71-19479  
Method and apparatus for optical modulating a light signal Patent  
[NASA-CASE-GSC-10216-1] c 23 N71-26722  
Lamp modulator  
[NASA-CASE-KSC-10565] c 09 N72-25250  
Polarization compensator for optical communications  
[NASA-CASE-GSC-11782-1] c 74 N76-30053  
Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14524-1] c 32 N80-24510  
Fluorescent radiation converter  
[NASA-CASE-GSC-12528-1] c 74 N81-24900  
All-optical photochromic spatial light modulators based on photoinduced electron transfer in rigid matrices  
[NASA-CASE-NPO-17612-1-CU] c 74 N90-27487  
Optoelectronic associative memory  
[NASA-CASE-NPO-18278-1-CU] c 74 N91-32925
- LIGHT SCATTERING**  
The 2 deg/90 deg laboratory scattering photometer --- particulate refractivity in hydrosols  
[NASA-CASE-GSC-12088-1] c 74 N78-13874  
A reference standard for bidirectional reflection distribution function and bidirectional transmission distribution function measurement  
[NASA-CASE-MFS-28183-1] c 74 N89-13253  
Real time pre-detection dynamic range compression  
[NASA-CASE-NPO-18098-1-CU] c 74 N91-23890
- LIGHT SCATTERING METERS**  
System for the measurement of ultra-low stray light levels --- determining the adequacy of large space telescope systems  
[NASA-CASE-MFS-23513-1] c 74 N79-11865
- LIGHT SOURCES**  
Light radiation direction indicator with a baffle of two parallel grids  
[NASA-CASE-XNP-03930] c 14 N69-24331  
High intensity heat and light unit Patent  
[NASA-CASE-XLA-00141] c 09 N70-33312  
Photosensitive device to detect bearing deviation Patent  
[NASA-CASE-XNP-00438] c 21 N70-35089  
Light position locating system Patent  
[NASA-CASE-XNP-01059] c 23 N71-21821  
Optical systems having spatially invariant outputs  
[NASA-CASE-ERC-10248] c 14 N72-17323  
Ultrastable calibrated light source  
[NASA-CASE-MSC-12293-1] c 14 N72-27411  
Temperature compensated light source using a light emitting diode  
[NASA-CASE-ARC-10467-1] c 09 N73-14214  
Interferometric rotation sensor  
[NASA-CASE-ARC-10278-1] c 14 N73-25463  
Attitude sensor  
[NASA-CASE-LAR-10586-1] c 19 N74-15089  
Very high intensity light source using a cathode ray tube --- electron beams  
[NASA-CASE-XNP-01296] c 33 N75-27250  
Electric arc light source having undercut recessed anode  
[NASA-CASE-ARC-10266-1] c 33 N75-29318  
Uniform variable light source  
[NASA-CASE-NPO-11429-1] c 74 N77-21941  
Radiation sensitive area detection device and method  
[NASA-CASE-MFS-28563-1] c 35 N91-25388

**LIGHT TRANSMISSION**

- Hybrid holographic system using reflected and transmitted object beams simultaneously Patent  
[NASA-CASE-MFS-20074] c 16 N71-15565
- Optical characteristics measuring apparatus Patent  
[NASA-CASE-XNP-08840] c 23 N71-16365
- Optical monitor panel Patent  
[NASA-CASE-XKS-03509] c 14 N71-23175
- Solar cell panels with light transmitting plate  
[NASA-CASE-NPO-10747] c 03 N72-22042
- Optical frequency waveguide and transmission system  
[NASA-CASE-HQN-10541-3] c 23 N72-23695
- Light regulator  
[NASA-CASE-LAR-10836-1] c 26 N72-27784
- Transmitting and reflecting diffuser --- for ultraviolet light  
[NASA-CASE-LAR-10385-2] c 70 N74-13436
- Optical instrument employing reticle having preselected visual response pattern formed thereon  
[NASA-CASE-ARC-10976-1] c 74 N77-22950
- Transmitting and reflecting diffuser --- using ultraviolet grade fused silica coatings  
[NASA-CASE-LAR-10385-3] c 74 N78-15879
- Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c 74 N82-24072
- Light transmitting window assembly  
[NASA-CASE-MSC-18417-1] c 74 N85-29750
- Low-loss, high-isolation, fiber-optic isolator  
[NASA-CASE-NPO-17207-1-CU] c 74 N88-25304
- Fiber optic frequency transfer link  
[NASA-CASE-NPO-17703-1-CU] c 74 N91-27957

**LIGHT VALVES**

- Liquid crystal light valve structures  
[NASA-CASE-MSC-20036-1] c 76 N85-33826
- Wind dynamic range video camera  
[NASA-CASE-MFS-25750-1] c 32 N86-20647

**LIGHTING EQUIPMENT**

- Internal work light Patent  
[NASA-CASE-XKS-05932] c 09 N71-26787
- Pressurized lighting system  
[NASA-CASE-KSC-10644] c 09 N72-27227
- Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c 33 N79-11315
- Device for removing foreign objects from anatomic organs  
[NASA-CASE-GSC-13306-1] c 52 N91-28727

**LIGHTNING**

- Determining distance to lightning strokes from a single station  
[NASA-CASE-KSC-10698] c 07 N73-20175
- Lightning tracking system  
[NASA-CASE-KSC-10729-1] c 09 N73-32110
- Automatic lightning detection and photographic system  
[NASA-CASE-KSC-10728-1] c 14 N73-32319
- Lightning current measuring systems  
[NASA-CASE-KSC-10807-1] c 33 N75-26246
- Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c 33 N79-10337
- Lightning current detector  
[NASA-CASE-KSC-11057-1] c 33 N79-14305
- Lightning discharge identification system  
[NASA-CASE-KSC-11099-1] c 47 N82-24779
- Lightning discharge protection rod  
[NASA-CASE-LAR-13470-1] c 03 N88-14083
- Method and apparatus for determining return stroke polarity of distant lightning  
[NASA-CASE-MFS-26102-1-CU] c 47 N91-15661

**LIMBS (ANATOMY)**

- Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c 52 N79-26772
- Apparatus for determining changes in limb volume  
[NASA-CASE-MSC-18759-1] c 52 N83-27578

**LIMITER CIRCUITS**

- Variable duration pulse integrator Patent  
[NASA-CASE-XLA-01219] c 10 N71-23084
- Noise limiter Patent  
[NASA-CASE-NPO-10169] c 10 N71-24844
- Velocity limiting safety system Patent  
[NASA-CASE-XLA-07473] c 15 N71-24895
- Low level signal limiter  
[NASA-CASE-XLE-04791] c 32 N74-22096
- Inrush current limiter  
[NASA-CASE-GSC-11789-1] c 33 N77-14333

**LINE OF SIGHT**

- EMU helmet mounted display  
[NASA-CASE-MSC-21460-1] c 54 N91-13879

**LINE SPECTRA**

- Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c 25 N81-14015
- Optical scanner  
[NASA-CASE-GSC-12897-1] c 74 N87-21679

**LINEAR ACCELERATORS**

- Linear accelerator frequency control system Patent  
[NASA-CASE-XGS-05441] c 10 N71-22962

**LINEAR ARRAYS**

- Multispectral imaging and analysis system --- using charge coupled devices and linear arrays  
[NASA-CASE-NPO-13691-1] c 43 N79-17288
- Means for phase locking the outputs of a surface emitting laser diode array  
[NASA-CASE-NPO-16542-1-CU] c 36 N87-23960

**LINEAR CIRCUITS**

- Programmable electronic synthesized capacitance  
[NASA-CASE-GSC-12961-1] c 33 N87-22895

**LINEAR INTEGRATED CIRCUITS**

- Integrating IR detector imaging systems  
[NASA-CASE-NPO-15805-1] c 74 N84-28590

**LINEAR POLARIZATION**

- Wind dynamic range video camera  
[NASA-CASE-MFS-25750-1] c 32 N86-20647
- Equal path, phase shifting, sample point interferometer for monitoring the configuration of surfaces  
[NASA-CASE-NPO-17913-1-CU] c 74 N90-27488

**LINEAR PROGRAMMING**

- Programmable electronic synthesized capacitance  
[NASA-CASE-GSC-12961-1] c 33 N87-22895

**LINEAR RECEIVERS**

- Antenna array at focal plane of reflector with coupling network for beam switching Patent  
[NASA-CASE-GSC-10220-1] c 07 N71-27233

**LINEAR SYSTEMS**

- Linear three-tap feedback shift register Patent  
[NASA-CASE-NPO-10351] c 08 N71-12503
- A m-ary linear feedback shift register with binary logic  
[NASA-CASE-NPO-11868] c 10 N73-20254
- Linear magnetic bearings  
[NASA-CASE-GSC-12582-2] c 37 N85-20337

**LINEARITY**

- Semi-linear ball bearing Patent  
[NASA-CASE-XLA-02809] c 15 N71-22982
- Mechanical actuator Patent  
[NASA-CASE-XGS-04548] c 15 N71-24045
- Linear magnetic bearing  
[NASA-CASE-GSC-12517-1] c 37 N83-32067
- Linear motion valve  
[NASA-CASE-MSC-20148-1] c 37 N85-29284
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71:NPO-15494-2] c 35 N85-34373
- Linearized traveling wave amplifier with hard limiter characteristics  
[NASA-CASE-LEW-13981-2] c 33 N86-21742
- Reciprocating linear motor  
[NASA-CASE-GSC-12773-2] c 33 N87-23904
- Semi-2-interpenetrating networks of high temperature systems  
[NASA-CASE-LAR-13450-1] c 27 N87-28657

**LININGS**

- Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-1] c 27 N82-29453
- Combustor liner construction  
[NASA-CASE-LEW-14035-1] c 07 N84-24577
- Multi-path peristaltic pump  
[NASA-CASE-MSC-20907-1] c 37 N87-18818
- Tapered, tubular polyester fabric  
[NASA-CASE-MSC-21082-1] c 27 N87-29672
- Steam cooled rich-burn combustor liner  
[NASA-CASE-LEW-13609-1] c 25 N90-11824
- Internal wire guide for GTAW welding  
[NASA-CASE-MFS-29489-1] c 31 N90-23586

**LINKAGES**

- Collapsible nozzle extension for rocket engines Patent  
[NASA-CASE-MFS-11497] c 28 N71-16224
- Adjustable force probe  
[NASA-CASE-MFS-20760] c 14 N72-33377
- Locking redundant link  
[NASA-CASE-LAR-11900-1] c 37 N79-14382
- Compensating linkage for main rotor control  
[NASA-CASE-LAR-11797-1] c 05 N81-19087
- Preloadable vector sensitive latch  
[NASA-CASE-MSC-20910-1] c 37 N87-25582
- Payload deployment method and system  
[NASA-CASE-MSC-21330-1] c 16 N88-24660
- Skin friction balance  
[NASA-CASE-LAR-13710-1] c 35 N90-17117
- Releasable clamping apparatus  
[NASA-CASE-MFS-28192-1] c 37 N90-17154

**LIQUEFACTION**

- Ophthalmic liquefaction pump  
[NASA-CASE-LEW-12051-1] c 52 N75-33640

**LIQUID ATOMIZATION**

- Constant-output atomizer --- Inhalation therapy and aerosol research  
[NASA-CASE-MSC-25631-1] c 34 N84-12406

**LIQUID BEARINGS**

- High speed hybrid bearing comprising a fluid bearing and a rolling bearing connected in series  
[NASA-CASE-LEW-11152-1] c 15 N73-32359

**Turbomachinery rotor support with damping**

- [NASA-CASE-MFS-28345-1] c 37 N91-14608

**LIQUID CHROMATOGRAPHY**

- Spillage detector for liquid chromatography systems  
[NASA-CASE-MSC-20206-1] c 25 N86-27431

**LIQUID COOLING**

- Water cooled contactor for anode in carbon arc mechanism  
[NASA-CASE-XMS-03700] c 15 N69-24266
- External liquid-spray cooling of turbine blades Patent  
[NASA-CASE-XLE-00037] c 28 N70-33372
- Solenoid construction Patent  
[NASA-CASE-XNP-01951] c 09 N70-41929
- Laminar flow enhancement Patent  
[NASA-CASE-NPO-10122] c 12 N71-17631
- Space suit heat exchanger Patent  
[NASA-CASE-XMS-09571] c 05 N71-19439
- Power system with heat pipe liquid coolant lines Patent  
[NASA-CASE-MFS-14114-2] c 09 N71-24807
- Power system with heat pipe liquid coolant lines Patent  
[NASA-CASE-MFS-14114] c 33 N71-27862
- Liquid spray cooling method Patent  
[NASA-CASE-XLE-00027] c 33 N71-29152
- Automatic control of liquid cooling garment by cutaneous and external auditory meatus temperatures  
[NASA-CASE-MSC-13917-1] c 05 N72-15098
- Temperature controller for a fluid cooled garment  
[NASA-CASE-ARC-10599-1] c 05 N73-26071
- Heat exchanger system and method  
[NASA-CASE-LAR-10799-2] c 34 N76-17317
- Liquid cooled brassiere and method of diagnosing malignant tumors therewith  
[NASA-CASE-ARC-11007-1] c 52 N77-14736
- Closed loop spray cooling apparatus --- for particle accelerator targets  
[NASA-CASE-LEW-11981-1] c 31 N78-17237
- Low gravity exothermic heating/cooling apparatus  
[NASA-CASE-MSC-25707-1] c 35 N85-29214
- Water cooled static pressure probe  
[NASA-CASE-LAR-14340-1-CU] c 35 N91-13684

**LIQUID CRYSTALS**

- Angular velocity and acceleration measuring apparatus  
[NASA-CASE-ERC-10292] c 14 N72-25410
- Electricity measurement devices employing liquid crystalline materials  
[NASA-CASE-ERC-10275] c 26 N72-25680
- Liquid crystal light valve structures  
[NASA-CASE-MSC-20036-1] c 76 N85-33826
- Method for laminar boundary layer transition visualization in flight  
[NASA-CASE-LAR-13554-1] c 02 N89-12551
- EMU helmet mounted display  
[NASA-CASE-MSC-21460-1] c 54 N91-13879

**LIQUID FILLED SHELLS**

- Liquid rocket system Patent  
[NASA-CASE-XNP-00610] c 28 N70-36910
- Fluid sample collector Patent  
[NASA-CASE-XMS-06767-1] c 14 N71-20435
- Fluid containers and resealable septum therefor Patent  
[NASA-CASE-NPO-10123] c 15 N71-24835
- Omnidirectional acceleration device Patent  
[NASA-CASE-HQN-10780] c 14 N71-30265

**LIQUID FLOW**

- Reduced gravity liquid configuration simulator  
[NASA-CASE-XLE-02624] c 12 N69-39988
- Liquid junction and method of fabricating the same Patent Application  
[NASA-CASE-NPO-10682] c 15 N70-34699
- Valve actuator Patent  
[NASA-CASE-XHQ-01208] c 15 N70-35409
- Fluid coupling Patent  
[NASA-CASE-XLE-00397] c 15 N70-36492
- Positive displacement flowmeter Patent  
[NASA-CASE-XMF-02822] c 14 N70-41994
- Liquid flow sight assembly Patent  
[NASA-CASE-XLE-02998] c 14 N70-42074
- Ablative system  
[NASA-CASE-LEW-10359-2] c 33 N73-25952
- Zero gravity liquid transfer screen  
[NASA-CASE-KSC-10626] c 14 N73-27378
- System for measuring Reynolds in a turbulently flowing fluid --- signal processing  
[NASA-CASE-ARC-10755-2] c 34 N76-27517
- Degassingifying and mixing apparatus for liquids --- potable water for spacecraft  
[NASA-CASE-MSC-18936-1] c 35 N83-29652
- Multicolor printing plate joining  
[NASA-CASE-LEW-13598-1] c 35 N84-22930
- Polymer/riblet combination for hydrodynamic skin friction reduction  
[NASA-CASE-LAR-14271-1-CU] c 27 N91-13558

## LIQUID HELIUM

- Heat operated cryogenic electrical generator  
[NASA-CASE-NPO-13303-1] c 20 N75-24837
- Helium refrigerator  
[NASA-CASE-NPO-13435-1] c 31 N76-14284
- Cryostat system for temperatures on the order of 2 deg K or less  
[NASA-CASE-NPO-13459-1] c 31 N77-10229
- Multistation refrigeration system  
[NASA-CASE-NPO-13839-1] c 31 N78-25256
- Stabilization of He<sub>2</sub>(a 3 Sigma u+ molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c 72 N79-13826
- Low cost cryostat  
[NASA-CASE-NPO-14513-1] c 35 N81-14287

## LIQUID HYDROGEN

- Cryogenic thermal insulation Patent  
[NASA-CASE-XMF-05046] c 33 N71-28892
- Reinforced polyquinoxaline gasket and method of preparing the same --- resistant to ionizing radiation and liquid hydrogen temperatures  
[NASA-CASE-MFS-21364-1] c 37 N74-18126
- Ten degree Kelvin hydride refrigerator  
[NASA-CASE-NPO-16393-1-CU] c 31 N87-21159
- Rotor self-lubricating axial stop  
[NASA-CASE-MFS-28273-1] c 37 N88-23974
- Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-2] c 28 N91-14495

## LIQUID INJECTION

- Thrust vector control apparatus Patent  
[NASA-CASE-XLE-00208] c 28 N70-34294
- Control system for rocket vehicles Patent  
[NASA-CASE-XLA-01163] c 21 N71-15582
- Injector assembly for liquid fueled rocket engines Patent  
[NASA-CASE-XMF-00968] c 28 N71-15660
- Sodium storage and injection system  
[NASA-CASE-NPO-14384-1] c 37 N80-10494
- Method of producing silicon --- gas phase reactor multiple injector liquid feed system  
[NASA-CASE-NPO-14382-1] c 31 N80-18231
- Vortex generating flow passage design for increased film cooling effectiveness  
[NASA-CASE-LEW-14039-1] c 34 N85-33433

## LIQUID LASERS

- Method and apparatus for wavelength tuning of liquid lasers  
[NASA-CASE-ERC-10187] c 16 N69-31343

## LIQUID LEVELS

- Inductive liquid level detection system Patent  
[NASA-CASE-XLE-01609] c 14 N71-10500

## LIQUID METALS

- Slug flow magnetohydrodynamic generator  
[NASA-CASE-XLE-02083] c 03 N69-39983
- Two-fluid magnetohydrodynamic system and method for thermal-electric power conversion Patent  
[NASA-CASE-XNP-00644] c 03 N70-36803
- Analytical test apparatus and method for determining oxide content of alkali metal Patent  
[NASA-CASE-XLE-01997] c 06 N71-23527
- Power system with heat pipe liquid coolant lines Patent  
[NASA-CASE-MFS-14114] c 33 N71-27862
- Fluid impervious barrier including liquid metal alloy and method of making same Patent  
[NASA-CASE-XNP-08881] c 17 N71-28747
- Shell side liquid metal boiler  
[NASA-CASE-NPO-10831] c 33 N72-20915
- Method for distillation of liquids  
[NASA-CASE-XNP-08124-2] c 06 N73-13129
- Electromagnetic flow rate meter --- for liquid metals  
[NASA-CASE-LEW-10981-1] c 35 N74-21018
- Process for preparing liquid metal electrical contact device  
[NASA-CASE-LEW-11978-1] c 33 N77-26385
- Solar driven liquid metal MHD power generator  
[NASA-CASE-LAR-12495-1] c 44 N83-28573
- Arc spray fabrication of metal matrix composite monolape  
[NASA-CASE-LEW-13828-1] c 24 N85-30027
- Organic cathode for a secondary battery  
[NASA-CASE-NPO-17604-1-CU] c 33 N91-14536

## LIQUID NITROGEN

- Cryogenic feedthrough  
[NASA-CASE-LAR-10031] c 15 N72-22484

## LIQUID OXYGEN

- Dye penetrant for surfaces subsequently contacted by liquid oxygen Patent  
[NASA-CASE-XMF-02221] c 18 N71-27170
- Low loss injector for liquid propellant rocket engines  
[NASA-CASE-MFS-25989-1] c 20 N87-14420
- Oxygen chemisorption cryogenic refrigerator  
[NASA-CASE-NPO-16734-1-CU] c 31 N88-14223
- Rotor self-lubricating axial stop  
[NASA-CASE-MFS-28273-1] c 37 N88-23974

## LIQUID PHASES

- Fluid dispensing apparatus and method Patent  
[NASA-CASE-XLE-01182] c 27 N71-15635
- Hydraulic casting of liquid polymers Patent  
[NASA-CASE-XNP-07659] c 06 N71-22975
- Fluid phase analyzer Patent  
[NASA-CASE-NPO-10691] c 14 N71-26199
- Cryogenic liquid sensor  
[NASA-CASE-NPO-10619-1] c 35 N77-21393
- Pumped two-phase heat transfer loop  
[NASA-CASE-MSC-20841-1] c 34 N87-22950
- Solidification processing of alloys using an applied electric field  
[NASA-CASE-MFS-26083-1-CU] c 26 N90-26940
- Apparatus for intercalating large quantities of fibrous structures  
[NASA-CASE-LEW-15077-2] c 24 N91-28289

## LIQUID PROPELLANT ROCKET ENGINES

- Annular rocket motor and nozzle configuration Patent  
[NASA-CASE-XLE-00078] c 28 N70-33284
- Attitude and propellant flow control system and method Patent  
[NASA-CASE-XMF-00185] c 21 N70-34539
- Injector for bipropellant rocket engines Patent  
[NASA-CASE-XMF-00148] c 28 N70-38710
- Zero gravity starting means for liquid propellant motors Patent  
[NASA-CASE-XNP-01390] c 28 N70-41275
- Supersonic-combustion rocket  
[NASA-CASE-LEW-11058-1] c 20 N74-13502
- Space vehicle  
[NASA-CASE-MFS-22734-1] c 18 N75-19329
- Fluid thrust control system --- for liquid propellant rocket engines  
[NASA-CASE-XMF-05964-1] c 20 N79-21124
- Rocket injector head  
[NASA-CASE-XMF-04592-1] c 20 N79-21125
- Low thrust monopropellant engine  
[NASA-CASE-GSC-12194-2] c 20 N82-18314

## LIQUID ROCKET PROPELLANTS

- Rocket propellant injector Patent  
[NASA-CASE-XLE-00103] c 28 N70-33241
- Liquid rocket system Patent  
[NASA-CASE-XNP-00610] c 28 N70-36910
- Rocket motor system Patent  
[NASA-CASE-XLE-00323] c 28 N70-38505
- High temperature spark plug Patent  
[NASA-CASE-XLE-00660] c 28 N70-39925
- High pressure filter Patent  
[NASA-CASE-XNP-00732] c 28 N70-41447
- Liquid storage tank venting device for zero gravity environment Patent  
[NASA-CASE-XLE-01449] c 15 N70-41646
- Tank construction for space vehicles Patent  
[NASA-CASE-XMF-01899] c 31 N70-41948
- Fluid dispensing apparatus and method Patent  
[NASA-CASE-XLE-01182] c 27 N71-15635
- Control valve and co-axial variable injector Patent  
[NASA-CASE-XNP-09702] c 15 N71-17654
- Slosh alleviator Patent  
[NASA-CASE-XLA-05749] c 15 N71-19569
- Filler valve Patent  
[NASA-CASE-XNP-01747] c 15 N71-23024
- Propellant mass distribution metering apparatus Patent  
[NASA-CASE-NPO-10185] c 10 N71-26339
- Fluid impervious barrier including liquid metal alloy and method of making same Patent  
[NASA-CASE-XNP-08881] c 17 N71-28747
- Response analyzers for sensors Patent  
[NASA-CASE-MFS-11204] c 14 N71-29134
- Passive propellant system  
[NASA-CASE-MFS-23642-1] c 20 N80-10278
- Supercharged topping rocket propellant feed system  
[NASA-CASE-XLE-02062-1] c 20 N80-14188
- Low loss injector for liquid propellant rocket engines  
[NASA-CASE-MFS-25989-1] c 20 N87-14420
- Methods and apparatus for providing real-time control of a gaseous propellant rocket propulsion system  
[NASA-CASE-MSC-21542-1] c 20 N90-26073

## LIQUID SLOSHING

- Slosh suppressing device and method Patent  
[NASA-CASE-XMF-00658] c 12 N70-38997
- Flexible ring slosh damping baffle Patent  
[NASA-CASE-LAR-10317-1] c 32 N71-16103
- Buoyant anti-slosh system Patent  
[NASA-CASE-XLA-04605] c 32 N71-16106
- Hot wire liquid level detector for cryogenic fluids Patent  
[NASA-CASE-XLE-00454] c 23 N71-17802
- Slosh alleviator Patent  
[NASA-CASE-XLA-05749] c 15 N71-19569
- Instrument for measuring the dynamic behavior of liquids Patent  
[NASA-CASE-XLA-05541] c 12 N71-26387

## LIQUID SODIUM

- Sodium storage and injection system  
[NASA-CASE-NPO-14384-1] c 37 N80-10494

## LIQUID-GAS MIXTURES

- Liquid-gas separation system Patent  
[NASA-CASE-XMS-01624] c 15 N70-40062
- Liquid-gas separator for zero gravity environment Patent  
[NASA-CASE-XMS-01492] c 05 N70-41297
- Liquid storage tank venting device for zero gravity environment Patent  
[NASA-CASE-XLE-01449] c 15 N70-41646
- Separator Patent  
[NASA-CASE-XLA-00415] c 15 N71-16079
- Vapor liquid separator Patent  
[NASA-CASE-XMF-04042] c 15 N71-23023
- Air removal device --- life support systems  
[NASA-CASE-XLA-08914-2] c 25 N82-21269

## LIQUID-SOLID INTERFACES

- Apparatus and procedure to detect a liquid-solid interface during crystal growth in a bridgman furnace  
[NASA-CASE-LAR-13597-1-CU] c 25 N87-23713

## LIQUID-VAPOR INTERFACES

- Zero gravity separator Patent  
[NASA-CASE-XLE-00586] c 15 N71-15968
- Rotating shaft seal Patent  
[NASA-CASE-XNP-02862-1] c 15 N71-26294
- Response analyzers for sensors Patent  
[NASA-CASE-MFS-11204] c 14 N71-29134
- Acoustic bubble removal method  
[NASA-CASE-NPO-15334-1] c 71 N83-35781

## LIQUIDS

- Liquid-gas separation system Patent  
[NASA-CASE-XMS-01624] c 15 N70-40062
- Electrical switching device Patent  
[NASA-CASE-NPO-10037] c 09 N71-19610
- Method and apparatus for distillation of liquids Patent  
[NASA-CASE-XNP-08124] c 15 N71-27184
- Apparatus for detecting the amount of material in a resonant cavity container Patent  
[NASA-CASE-XNP-02500] c 18 N71-27397
- Resonant infrasonic gauging apparatus  
[NASA-CASE-MSC-11847-1] c 14 N72-11363
- Ablative system  
[NASA-CASE-LEW-10359] c 33 N72-25911
- Liquid waste feed system  
[NASA-CASE-LAR-10365-1] c 05 N72-27102
- Zero gravity liquid mixer  
[NASA-CASE-LAR-10195-1] c 15 N73-19458
- Bimetallic fluid displacement apparatus --- for stirring and heating stored gases and liquids  
[NASA-CASE-ARC-10441-1] c 35 N74-15126
- Method and device for detection of surface discontinuities or defects  
[NASA-CASE-MSC-14187-1] c 35 N74-32879
- Automatic liquid inventory collecting and dispensing unit  
[NASA-CASE-LAR-11071-1] c 35 N75-19611
- Thermal energy storage system --- operating on superheating of liquids  
[NASA-CASE-MFS-23167-1] c 44 N76-31667
- Low gravity phase separator  
[NASA-CASE-MSC-10473-1] c 35 N78-12390
- Automatic fluid dispenser  
[NASA-CASE-ARC-10820-1] c 35 N78-19466
- Liquid-immersible electrostatic ultrasonic transducer  
[NASA-CASE-LAR-12465-1] c 33 N82-26572
- System for monitoring physical characteristics of fluids  
[NASA-CASE-NPO-15400-1] c 34 N83-31993
- Liquid thickness gauge  
[NASA-CASE-LAR-13826-1] c 35 N88-29150
- Tank gauging apparatus and method  
[NASA-CASE-MSC-21059-2] c 35 N91-15511

## LITHIUM

- Lithium counterdoped silicon solar cell  
[NASA-CASE-LEW-14177-1] c 44 N86-32875
- Secondary Li battery incorporating 12-crown-4 ether  
[NASA-CASE-NPO-17922-1-CU] c 33 N91-13621

## LITHIUM ALLOYS

- Elevated temperature aluminum alloys  
[NASA-CASE-LAR-13632-1] c 26 N87-29650
- Aluminum alloy  
[NASA-CASE-LAR-13924-1-CU] c 26 N89-28621

## LITHIUM COMPOUNDS

- Novel polymers and method of preparing same  
[NASA-CASE-NPO-10998-1] c 06 N73-32029

## LOAD DISTRIBUTION (FORCES)

- Force measuring instrument Patent  
[NASA-CASE-XMF-00456] c 14 N70-34705
- Multiple Belleville spring assembly Patent  
[NASA-CASE-XNP-00840] c 15 N70-38225
- Device for use in loading tension members --- characterized by elongated elastic body  
[NASA-CASE-MFS-21488-1] c 14 N75-24794
- Pneumatic load compensating or controlling system  
[NASA-CASE-ARC-10907-1] c 37 N75-32465

- Load positioning system with gravity compensation  
[NASA-CASE-ARC-11525-1] c 37 N86-27629
- LOAD TESTING MACHINES**
- Load cell protection device Patent  
[NASA-CASE-XMS-06782] c 32 N71-15974
- Load relieving device Patent  
[NASA-CASE-XMS-06329-1] c 15 N71-20441
- Method and apparatus for tensile testing of metal foil  
[NASA-CASE-LAR-10208-1] c 35 N76-18400
- Fatigue failure load indicator  
[NASA-CASE-LAR-12027-1] c 39 N79-22537
- Portable 90 degree proof loading device  
[NASA-CASE-MSC-20250-1] c 35 N86-19581
- Cryogenic insulation strength and bond tester  
[NASA-CASE-MFS-25910-1] c 39 N86-20841
- Device for measuring hole elongation in a bolted joint  
[NASA-CASE-LAR-13453-1] c 37 N88-14361
- Bearing-bypass material system test  
[NASA-CASE-LAR-13458-1] c 35 N88-23967
- Delamination test apparatus and method  
[NASA-CASE-LAR-13985-1] c 24 N91-14430
- Fully articulated four-point-bend loading fixture  
[NASA-CASE-LEW-14776-1] c 37 N91-21540
- LOAD TESTS**
- Differential pressure cell Patent  
[NASA-CASE-XAC-00042] c 14 N70-34816
- Fatigue testing a plurality of test specimens and method  
[NASA-CASE-MFS-28118-1] c 39 N87-25601
- Delamination test apparatus and method  
[NASA-CASE-LAR-13985-1] c 24 N91-14430
- LOADING OPERATIONS**
- Air bearing Patent  
[NASA-CASE-XMF-01887] c 15 N71-10617
- Shuttle car loading system  
[NASA-CASE-NPO-15949-1] c 85 N85-34722
- LOADS (FORCES)**
- Device for handling heavy loads  
[NASA-CASE-XNP-04969] c 11 N69-27466
- Two-plane balance Patent  
[NASA-CASE-XAC-00073] c 14 N70-34813
- Method of improving the reliability of a rolling element system Patent  
[NASA-CASE-XLE-02999] c 15 N71-16052
- Load relieving device Patent  
[NASA-CASE-XMS-06329-1] c 15 N71-20441
- Dual latching solenoid valve Patent  
[NASA-CASE-XMS-05890] c 09 N71-23191
- Transverse piezoresistance and pinch effect electromechanical transducers Patent  
[NASA-CASE-ERC-10088] c 26 N71-25490
- Turn on transient limiter Patent  
[NASA-CASE-GSC-10413] c 10 N71-26531
- Synchronous dc direct drive system Patent  
[NASA-CASE-GSC-10065-1] c 10 N71-27136
- Force-balanced, throttle valve Patent  
[NASA-CASE-NPO-10808] c 15 N71-27432
- Energy absorption device Patent  
[NASA-CASE-XNP-01848] c 15 N71-28959
- Air bearing  
[NASA-CASE-WLP-10002] c 15 N72-17451
- Device for measuring bearing preload  
[NASA-CASE-MFS-20434] c 11 N72-25288
- Variable direction force coupler  
[NASA-CASE-MFS-20317] c 15 N73-13463
- Ergometer  
[NASA-CASE-MFS-21109-1] c 05 N73-27941
- Three-axis adjustable loading structure  
[NASA-CASE-FRC-10051-1] c 35 N74-13129
- Spring operated accelerator and constant force spring mechanism therefor  
[NASA-CASE-ARC-10898-1] c 35 N77-18417
- Penetrometer --- for determining load bearing characteristics of inclined surfaces  
[NASA-CASE-NPO-11103-1] c 35 N77-27367
- Load regulating latch  
[NASA-CASE-MSC-19535-1] c 37 N77-32499
- Adjustable indicating device for load position  
[NASA-CASE-MFS-28008-1] c 35 N85-20300
- Aircraft rotor blade with passive tuned tab  
[NASA-CASE-ARC-11444-1] c 05 N85-29947
- Tensile testing apparatus  
[NASA-CASE-LAR-13243-1] c 35 N85-34375
- Dual motion valve with single motion input  
[NASA-CASE-MFS-28058-1] c 37 N87-21332
- Fatigue testing apparatus  
[NASA-CASE-LEW-14124-1] c 35 N90-23712
- Wind tunnel balance  
[NASA-CASE-ARC-11877-1-SB] c 09 N91-14357
- Single element magnetic suspension actuator  
[NASA-CASE-LAR-13981-1] c 37 N91-21539
- Energy dissipator  
[NASA-CASE-MSC-21555-1] c 37 N91-23492
- Load limiting, energy absorbing, lightweight debris catcher  
[NASA-CASE-MSC-21562-1] c 16 N91-24216
- Power saw  
[NASA-CASE-MSC-21469-1] c 37 N91-31655
- LOCAL AREA NETWORKS**
- Local area network with fault-checking, priorities, and redundant backup  
[NASA-CASE-NPO-16949-1-CU] c 62 N90-19776
- LOCATES SYSTEM**
- Lightning tracking system  
[NASA-CASE-KSC-10729-1] c 09 N73-32110
- Position determination systems --- using orbital antenna scan of celestial bodies  
[NASA-CASE-MSC-12593-1] c 17 N76-21250
- LOCKING**
- Coupling device  
[NASA-CASE-XMS-07846-1] c 09 N69-21927
- Self-locking mechanical center joint  
[NASA-CASE-LAR-12864-1] c 37 N85-30336
- Variable length strut with longitudinal compliance and locking capability  
[NASA-CASE-MFS-25907-1] c 37 N85-34401
- Self-locking telescoping manipulator arm  
[NASA-CASE-MFS-25906-1] c 37 N86-20789
- Elbow and knee joint for hard space suits  
[NASA-CASE-ARC-11610-1] c 54 N86-28619
- Locking hinge  
[NASA-CASE-MSC-21056-1] c 18 N88-23827
- Quick connect coupling  
[NASA-CASE-MSC-21539-1] c 37 N91-14610
- System for connecting fluid couplings  
[NASA-CASE-MFS-26042-1-SB] c 37 N91-14613
- Removable hand hold  
[NASA-CASE-LEW-15196-1] c 37 N91-26543
- Quick action clamp  
[NASA-CASE-LEW-14887-1] c 37 N91-27561
- Roller locking brake  
[NASA-CASE-GSC-13376-1] c 37 N91-28579
- LOCKS (FASTENERS)**
- Locking device with rolling detents Patent  
[NASA-CASE-XMF-01371] c 15 N70-41829
- Bearing and gimbal lock mechanism and spiral flex lead module Patent  
[NASA-CASE-GSC-10556-1] c 31 N71-26537
- Locking device for turbine rotor blades Patent  
[NASA-CASE-XNP-00816] c 28 N71-28928
- Film feed camera having a detent means Patent  
[NASA-CASE-LAR-10686] c 14 N71-28935
- Safety-type locking pin  
[NASA-CASE-MFS-18495] c 15 N72-11385
- Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-1] c 54 N76-22914
- Portable appliance security apparatus  
[NASA-CASE-GSC-12399-1] c 33 N81-25299
- Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c 52 N81-25661
- High temperature penetrator assembly with bayonet plug and ramp-activated lock  
[NASA-CASE-MSC-18526-1] c 37 N82-24494
- Aircraft canopy lock  
[NASA-CASE-FRC-11065-1] c 05 N83-19737
- Collet lock joint for space station truss  
[NASA-CASE-MSC-21207-1] c 37 N88-29180
- Spline-locking payload fastener  
[NASA-CASE-GSC-13378-1] c 37 N91-28581
- LOCOMOTION**
- Jet shoes  
[NASA-CASE-XLA-08491] c 05 N69-21380
- Training vehicle for controlling attitude Patent  
[NASA-CASE-XMS-02977] c 11 N71-10746
- Restraint torso for a pressurized suit  
[NASA-CASE-MSC-12397-1] c 05 N72-25119
- Kinesimetric method and apparatus  
[NASA-CASE-MSC-18929-1] c 39 N83-20280
- LOGARITHMIC RECEIVERS**
- Logarithmic circuit with wide dynamic range  
[NASA-CASE-GSC-12145-1] c 33 N78-32339
- LOGARITHMS**
- Logarithmic function generator utilizing an exponentially varying signal in an inverse manner  
[NASA-CASE-ERC-10267] c 09 N72-23173
- LOGIC CIRCUITS**
- A method for selective gold diffusion of monolithic silicon devices and/or circuits Patent application  
[NASA-CASE-ERC-10072] c 09 N70-11148
- Relay binary circuit Patent  
[NASA-CASE-XMF-00421] c 09 N70-34502
- Binary to binary-coded-decimal converter Patent  
[NASA-CASE-XNP-00432] c 08 N70-35423
- Analog-to-digital conversion system Patent  
[NASA-CASE-XAC-00404] c 08 N70-40125
- Data processor having multiple sections activated at different times by selective power coupling to the sections Patent  
[NASA-CASE-XGS-04767] c 08 N71-12494
- Binary sequence detector Patent  
[NASA-CASE-XNP-05415] c 08 N71-12505
- AC logic flip-flop circuits Patent  
[NASA-CASE-XGS-00823] c 10 N71-15910
- Logic AND gate for fluid circuits Patent  
[NASA-CASE-XLA-07391] c 12 N71-17579
- Ripple add and ripple subtract binary counters Patent  
[NASA-CASE-XGS-04766] c 08 N71-18602
- Exclusive-Or digital logic module Patent  
[NASA-CASE-XLA-07732] c 08 N71-18751
- Stepping motor control circuit Patent  
[NASA-CASE-GSC-10366-1] c 10 N71-18772
- Serial digital decoder Patent  
[NASA-CASE-NPO-10150] c 08 N71-24650
- BCD to decimal decoder Patent  
[NASA-CASE-XKS-06167] c 08 N71-24890
- Current steering switch Patent  
[NASA-CASE-XNP-08567] c 09 N71-26000
- Parallel generation of the check bits of a PN sequence Patent  
[NASA-CASE-XNP-04623] c 10 N71-26103
- Adaptive system and method for signal generation Patent  
[NASA-CASE-GSC-11367] c 10 N71-26374
- Fast response low power drain logic circuits  
[NASA-CASE-GSC-10878-1] c 10 N72-22236
- Logical function generator  
[NASA-CASE-XLA-05099] c 09 N73-13209
- A synchronous binary array divider  
[NASA-CASE-ERC-10180-1] c 60 N74-20836
- Four phase logic systems --- including integrated microcircuits  
[NASA-CASE-MSC-14240-1] c 33 N75-14957
- Interleaving device  
[NASA-CASE-GSC-12111-2] c 33 N81-29342
- Logic-controlled occlusive cuff system  
[NASA-CASE-MSC-14836-1] c 52 N82-11770
- Combinational logic for generating gate drive signals for phase control rectifiers  
[NASA-CASE-MFS-25208-1] c 33 N83-10345
- Adaptive reference voltage generator for firing angle control of line-commutated inverters  
[NASA-CASE-MFS-25215-1] c 33 N83-31953
- Adaptive control system for line-commutated inverters  
[NASA-CASE-MFS-25209-1] c 33 N83-35227
- Video processor for air traffic control beacon system  
[NASA-CASE-KSC-11155-1] c 04 N86-19304
- Braille reading system  
[NASA-CASE-LAR-13306-1] c 82 N87-29372
- Nanosequencer digital logic controller  
[NASA-CASE-NPO-16116-2] c 60 N88-29310
- Long period pseudo random number sequence generator  
[NASA-CASE-NPO-17241-1-CU] c 33 N90-23636
- Auto and hetero-associative memory using a 2-D optical logic gate  
[NASA-CASE-NPO-17997-1-CU] c 60 N91-13888
- Dynamic resource allocation scheme for distributed heterogeneous computer systems  
[NASA-CASE-NPO-17197-1-CU] c 62 N91-25693
- Control circuitry using electronic emulation of a synchro signal for accurate control of position and rate of rotation for shafts  
[NASA-CASE-MFS-28458-1] c 33 N91-26459
- LOGIC PROGRAMMING**
- VLSI binary updown counter  
[NASA-CASE-NPO-17205-1-CU] c 60 N90-21525
- LONGERONS**
- Latching mechanism for deployable/re-stowable columns useful in satellite construction  
[NASA-CASE-LAR-13169-1] c 37 N86-25791
- Magnetic spin reduction system for free spinning objects  
[NASA-CASE-MFS-25966-1] c 16 N86-26352
- Deployable geodesic truss structure  
[NASA-CASE-LAR-13113-1] c 31 N87-25492
- LONGITUDINAL CONTROL**
- Three-axis controller Patent  
[NASA-CASE-XAC-01404] c 05 N70-41581
- Pitch attitude stabilization system utilizing engine pressure ratio feedback signals  
[NASA-CASE-LAR-12562-1] c 08 N81-26152
- Remote pivot decoupler pylon: Wing/store flutter suppressor  
[NASA-CASE-LAR-13173-1] c 05 N87-14314
- Swashplate control system  
[NASA-CASE-ARC-11633-1] c 08 N87-23631
- LONGITUDINAL STABILITY**
- Annular wing  
[NASA-CASE-FRC-11007-2] c 05 N82-26277
- LOOK ANGLES (ELECTRONICS)**
- Method and apparatus for contour mapping using synthetic aperture radar  
[NASA-CASE-NPO-15939-1] c 43 N86-19711
- LOOP ANTENNAS**
- Collapsible loop antenna for space vehicle Patent  
[NASA-CASE-XMF-00437] c 07 N70-40202

Automatic carrier acquisition system  
[NASA-CASE-NPO-11628-1] c 07 N73-30113

**LOOPS**  
Endless tape cartridge Patent  
[NASA-CASE-XGS-00769] c 14 N70-41647  
Endless tape transport mechanism Patent  
[NASA-CASE-XGS-01223] c 07 N71-10609  
Filter for third order phase locked loops  
[NASA-CASE-NPO-11941-1] c 10 N73-27171  
High speed shutter --- electrically actuated ribbon loop for shuttering optical or fluid passageways  
[NASA-CASE-ARC-10516-1] c 70 N74-21300  
Means for accommodating large overstrain in lead wires --- by storing extra length of wire in stretchable loop  
[NASA-CASE-LAR-10168-1] c 33 N74-22865  
Closed loop spray cooling apparatus  
[NASA-CASE-LEW-11981-2] c 34 N79-20336  
Pseudonoise code tracking loop  
[NASA-CASE-MSC-18035-1] c 32 N81-15179  
Pulsed phase locked loop strain monitor --- voltage controlled oscillators  
[NASA-CASE-LAR-12772-1] c 33 N83-16626  
Pumped two-phase heat transfer loop  
[NASA-CASE-MSC-20841-1] c 34 N87-22950  
Phase length optical phase-locked-loop sensor  
[NASA-CASE-LAR-13387-1] c 74 N88-25302  
Polymeric heat pipe wick  
[NASA-CASE-GSC-13019-1] c 34 N88-29133

**LOUDNESS**  
Visual aid for the hearing impaired  
[NASA-CASE-GSC-13027-1-CU] c 35 N91-27522

**LOUVERS**  
Solar concentrator protective system  
[NASA-CASE-NPO-15662-1] c 44 N84-28204

**LOW ASPECT RATIO**  
Landing arrangement for aerial vehicles Patent  
[NASA-CASE-XLA-00142] c 02 N70-33286  
Landing arrangement for aerial vehicle Patent  
[NASA-CASE-XLA-00806] c 02 N70-34858

**LOW CONDUCTIVITY**  
High temperature insulation barrier composite  
[NASA-CASE-MFS-29241-1] c 24 N90-23480

**LOW COST**  
Fabrication of polycrystalline solar cells on low-cost substrates  
[NASA-CASE-GSC-12022-1] c 44 N76-28635  
Process for utilizing low-cost graphite substrates for polycrystalline solar cells  
[NASA-CASE-GSC-12022-2] c 44 N78-24609  
Large TV display system  
[NASA-CASE-NPO-16932-1CU] c 33 N87-15413  
Network of dedicated processors for finding lowest-cost map path  
[NASA-CASE-NPO-17716-1-CU] c 62 N90-10608

**LOW CURRENTS**  
Low current linearization of magnetic amplifier for dc transducer  
[NASA-CASE-NPO-14617-1] c 33 N81-24338

**LOW DENSITY MATERIALS**  
Method and device for detecting voids in low density material Patent  
[NASA-CASE-MFS-20044] c 14 N71-28993  
Intumescent composition, foamed product prepared therewith and process for making same  
[NASA-CASE-ARC-10304-2] c 27 N74-27037  
Mixing insert for foam dispensing apparatus  
[NASA-CASE-MFS-20607-1] c 37 N76-19436  
Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety  
[NASA-CASE-ARC-11040-2] c 24 N78-27184  
Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-1] c 24 N79-16915  
Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams  
[NASA-CASE-ARC-11107-1] c 25 N80-16116  
Elevated temperature aluminum alloys  
[NASA-CASE-LAR-13632-1] c 26 N87-29650

**LOW FREQUENCIES**  
Seismic displacement transducer Patent  
[NASA-CASE-XMF-00479] c 14 N70-34794  
Low-frequency radio navigation system  
[NASA-CASE-NPO-15264-1] c 04 N84-27713  
Suspension device for low-frequency structures  
[NASA-CASE-LAR-14272-1-CU] c 14 N91-28184

**LOW GRAVITY MANUFACTURING**  
Method for manufacturing mirrors in zero gravity environment  
[NASA-CASE-MSC-12611-1] c 12 N76-15189  
Gas levitator having fixed levitation node for containerless processing  
[NASA-CASE-MFS-25509-1] c 35 N83-24828  
Method and apparatus for supercooling and solidifying substances  
[NASA-CASE-MFS-25242-1] c 35 N83-29650

Apparatus and method for quiescent containerless processing of high temperature metals and alloys in low gravity  
[NASA-CASE-MFS-28087-1] c 35 N87-23944  
Sample levitation and melt in microgravity  
[NASA-CASE-NPO-17022-1-CU] c 29 N87-25489

**LOW MOLECULAR WEIGHTS**  
Process for preparation of high-molecular-weight polyaryloxyisilanes Patent  
[NASA-CASE-XMF-08674] c 06 N71-28807

**LOW NOISE**  
Low phase noise digital frequency divider  
[NASA-CASE-NPO-11569] c 10 N73-26229  
Reflected-wave maser --- low noise amplifier  
[NASA-CASE-NPO-13490-1] c 36 N76-31512  
Low noise tuned amplifier  
[NASA-CASE-GSC-12567-1] c 33 N84-22887  
Low noise cryogenic dielectric resonator oscillator  
[NASA-CASE-NPO-17157-1-CU] c 33 N88-26596

**LOW PASS FILTERS**  
Filtering technique based on high-frequency plant modeling for high-gain control  
[NASA-CASE-LAR-12215-1] c 08 N79-23097  
Smoothing filter for digital to analog conversion  
[NASA-CASE-FRC-11025-1] c 33 N82-24417  
Discriminator aided phase lock acquisition for suppressed carrier signals  
[NASA-CASE-NPO-14311-1] c 33 N82-29539  
Digital carrier demodulator employing components working beyond normal limits.  
[NASA-CASE-NPO-17628-1-CU] c 32 N89-28684

**LOW PRESSURE**  
Gas low pressure low flow rate metering system Patent  
[NASA-CASE-FRC-10022] c 12 N71-26546  
Bakeable McLeod gauge  
[NASA-CASE-XGS-01293-1] c 35 N79-33450  
Method and apparatus for waste collection and storage  
[NASA-CASE-MSC-21025-3] c 54 N91-26747

**LOW SPEED**  
Variable geometry manned orbital vehicle Patent  
[NASA-CASE-XLA-03691] c 31 N71-15674  
RC rate generator for slow speed measurement Patent  
[NASA-CASE-XMF-02966] c 10 N71-24863

**LOW TEMPERATURE**  
Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c 28 N81-14103  
Cellular thermosetting fluoropolymers and process for making them  
[NASA-CASE-GSC-13008-1] c 27 N88-23894  
Flexible diaphragm-extreme temperature usage  
[NASA-CASE-MSC-20797-2] c 35 N91-21494

**LOW TEMPERATURE ENVIRONMENTS**  
Frangible electrochemical cell  
[NASA-CASE-XGS-10010] c 03 N72-15986

**LOW TEMPERATURE TESTS**  
Low temperature flexure fatigue cryostat Patent  
[NASA-CASE-XMF-02964] c 14 N71-17659  
Horizontal cryostat for fatigue testing Patent  
[NASA-CASE-XMF-10968] c 14 N71-24234  
Heating and cooling system --- for fatigue test specimens  
[NASA-CASE-LAR-12393-1] c 34 N83-34221

**LOW THRUST**  
Low thrust monopropellant engine  
[NASA-CASE-GSC-12194-2] c 20 N82-18314

**LOW VACUUM**  
Vibration damping system Patent  
[NASA-CASE-XMS-01820] c 23 N71-15673

**LOW VOLTAGE**  
High speed low level electrical stepping switch Patent  
[NASA-CASE-XAC-00060] c 09 N70-39915  
Flexible blade antenna Patent  
[NASA-CASE-MSC-12101] c 09 N71-18720  
Failure sensing and protection circuit for converter networks Patent  
[NASA-CASE-GSC-10114-1] c 10 N71-27366

**LOWER BODY NEGATIVE PRESSURE**  
Method and apparatus for simulating gravitational forces on a living organism  
[NASA-CASE-MSC-20202-1] c 54 N84-16803

**LUBRICANTS**  
Metallic film diffusion for boundary lubrication Patent  
[NASA-CASE-XLE-01765] c 18 N71-10772  
Metallic film diffusion for boundary lubrication Patent  
[NASA-CASE-XLE-10337] c 15 N71-24046  
Fluorinated esters of polycarboxylic acids  
[NASA-CASE-MFS-21040-1] c 06 N73-30098  
Thiophenyl ether disiloxanes and trisiloxanes useful as lubricant fluids  
[NASA-CASE-MFS-22411-1] c 37 N74-21058  
Journal bearings --- for lubricant films  
[NASA-CASE-LEW-11076-1] c 37 N74-21061

Method for milling and drilling glass  
[NASA-CASE-GSC-12636-1] c 31 N83-27058

**LUBRICATING OILS**  
Foil seal Patent  
[NASA-CASE-XLE-05130-2] c 15 N71-19570

**LUBRICATION**  
Production of hollow components for rolling element bearings by diffusion welding  
[NASA-CASE-LEW-11026-1] c 15 N73-33383  
Variable resistance constant tension and lubrication device --- using oil-saturated leather wiper  
[NASA-CASE-KSC-10723-1] c 37 N75-13265  
Fluid journal bearings  
[NASA-CASE-LEW-11076-4] c 37 N76-15461  
Pretreatment of lubricated surfaces with sputtered cadmium oxide  
[NASA-CASE-LEW-14474-1] c 27 N91-28423

**LUBRICATION SYSTEMS**  
Hybrid lubrication system and bearing Patent  
[NASA-CASE-XNP-01641] c 15 N71-22997  
Fluid lubricant system Patent  
[NASA-CASE-XNP-03972] c 15 N71-23048  
Journal Bearings  
[NASA-CASE-LEW-11076-2] c 37 N74-32921  
Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12321-1] c 37 N78-10467

**LUGS**  
Don/doff support stand for use with rear entry space suits  
[NASA-CASE-MSC-21364-1] c 54 N89-13889

**LUMINAIRES**  
Visual target for retrofire attitude control  
[NASA-CASE-XMS-12158-1] c 31 N69-27499  
Ultraviolet resonance lamp Patent  
[NASA-CASE-ARC-10030] c 09 N71-12521  
Lamp modulator  
[NASA-CASE-KSC-10565] c 09 N72-25250  
Driving lamps by induction  
[NASA-CASE-MFS-21214-1] c 09 N73-30181  
Uniform variable light source  
[NASA-CASE-NPO-11429-1] c 74 N77-21941  
Direct current ballast circuit for metal halide lamp  
[NASA-CASE-MSC-18407-1] c 33 N82-24427

**LUMINANCE**  
Television camera video level control system  
[NASA-CASE-MSC-18578-1] c 32 N85-21427

**LUMINESCENCE**  
Single layer multi-color luminescent display  
[NASA-CASE-LAR-13616-1] c 74 N91-31950

**LUMINOUSITY**  
Measurement of time differences between luminous events Patent  
[NASA-CASE-XLA-01987] c 23 N71-23976

**LUMINOUS INTENSITY**  
Motion picture camera for optical pyrometry Patent  
[NASA-CASE-XLA-00062] c 14 N70-33254  
Radiant energy intensity measurement system Patent  
[NASA-CASE-XNP-06510] c 14 N71-23797  
Continuous plasma laser --- method and apparatus for producing intense, coherent, monochromatic light from low temperature plasma  
[NASA-CASE-XNP-04167-3] c 36 N77-19416  
Solar cell assembly --- for use under high intensity illumination  
[NASA-CASE-LEW-11549-1] c 44 N77-19571  
Compact, high intensity arc lamp with internal magnetic field producing means  
[NASA-CASE-NPO-11510-1] c 33 N77-21315  
System for the measurement of ultra-low stray light levels --- determining the adequacy of large space telescope systems  
[NASA-CASE-MFS-23513-1] c 74 N79-11865  
Wind dynamic range video camera  
[NASA-CASE-MFS-25750-1] c 32 N86-20647

**LUMPING**  
Acoustic agglomeration methods and apparatus  
[NASA-CASE-NPO-15466-1] c 71 N85-22104

**LUNAR BASES**  
Self-adjusting missegment, deployable, natural circulation radiator Patent  
[NASA-CASE-XHQ-03673] c 33 N71-29046

**LUNAR COMMUNICATION**  
Television signal scan rate conversion system Patent  
[NASA-CASE-XMS-07168] c 07 N71-11300  
Emergency lunar communications system  
[NASA-CASE-MFS-21042] c 07 N72-25171

**LUNAR COMPOSITION**  
Lunar penetrometer Patent  
[NASA-CASE-XLA-00934] c 14 N71-22765

**LUNAR EXPLORATION**  
Backpack carrier Patent  
[NASA-CASE-LAR-10056] c 05 N71-12351  
Lunar penetrometer Patent  
[NASA-CASE-XLA-00934] c 14 N71-22765  
Personal propulsion unit Patent  
[NASA-CASE-MFS-20130] c 28 N71-27585



Emergency lunar communications system  
[NASA-CASE-MFS-21042] c 07 N72-25171

**LUNAR GRAVITATION**  
Subgravity simulator Patent  
[NASA-CASE-XMS-04798] c 11 N71-21474

**LUNAR GRAVITY SIMULATOR**  
Impact simulator Patent  
[NASA-CASE-XLA-00493] c 11 N70-34786

**LUNAR LANDING**  
Lunar landing flight research vehicle Patent  
[NASA-CASE-XFR-00929] c 31 N70-34966

**LUNAR LOGISTICS**  
Personal propulsion unit Patent  
[NASA-CASE-MFS-20130] c 28 N71-27585

**LUNAR ROCKS**  
Sample collecting impact bit Patent  
[NASA-CASE-XNP-01412] c 15 N70-42034

**LUNAR SOIL**  
Soil particles separator, collector and viewer Patent  
[NASA-CASE-XNP-09770] c 15 N71-20440  
Material handling device Patent  
[NASA-CASE-XNP-09770-3] c 11 N71-27036  
Self-recording portable soil penetrometer  
[NASA-CASE-MFS-20774] c 14 N73-19420  
Method for obtaining oxygen from lunar or similar soil  
[NASA-CASE-MSC-12408-1] c 46 N74-13011

**LUNAR SURFACE VEHICLES**  
Deformable vehicle wheel Patent  
[NASA-CASE-MFS-20400] c 31 N71-18611  
Resilient wheel Patent  
[NASA-CASE-MFS-13929] c 15 N71-27091

**LUNGS**  
Instrument for use in performing a controlled Valsalva maneuver Patent  
[NASA-CASE-XMS-01615] c 05 N70-41329

**M**

**MACH NUMBER**  
Wind tunnel supplementary Mach number minimum section insert  
[NASA-CASE-LAR-12532-1] c 09 N82-11088  
Improved method and apparatus for Mach number change in wind tunnel  
[NASA-CASE-LAR-13548-1] c 09 N91-28175

**MACHINE LEARNING**  
Neural network with dynamically adaptable neurons  
[NASA-CASE-NPO-17803-1-CU] c 62 N90-27385  
An accelerated training method for back propagation networks  
[NASA-CASE-MSC-21625-1] c 53 N91-28730

**MACHINE TOOLS**  
Rock drill for recovering samples  
[NASA-CASE-XNP-07478] c 14 N69-21923  
Protective device for machine and metalworking tools Patent  
[NASA-CASE-XLE-01092] c 15 N71-22797  
Aligning and positioning device Patent  
[NASA-CASE-XMS-04178] c 15 N71-22798  
Extrusion die for refractory metals Patent  
[NASA-CASE-XLE-06773] c 15 N71-23817  
Layout tool Patent  
[NASA-CASE-FRC-10005] c 15 N71-26145  
Optical machine tool alignment indicator Patent  
[NASA-CASE-XAC-09489-1] c 15 N71-26673  
Caterpillar micro positioner  
[NASA-CASE-GSC-10780-1] c 14 N72-16283  
Geneva mechanism --- including star wheel and driver  
[NASA-CASE-NPO-13281-1] c 37 N75-13266  
Zero torque gear head wrench  
[NASA-CASE-NPO-13059-1] c 37 N76-20480  
Precision alignment apparatus for cutting a workpiece  
[NASA-CASE-LAR-11658-1] c 37 N77-14478  
Toggle mechanism for pinching metal tubes  
[NASA-CASE-GSC-12274-1] c 37 N79-28550  
Method and tool for machining a transverse slot about a bore  
[NASA-CASE-LAR-11855-1] c 37 N81-14319  
Crystal cleaving machine  
[NASA-CASE-GSC-12584-1] c 37 N82-32730  
Holding fixture for a hot stamping press  
[NASA-CASE-GSC-12619-1] c 37 N84-12491  
Alignment and assembly tool for very large diameter cylinders  
[NASA-CASE-MFS-28001-2] c 37 N88-14360

**MACHINERY**  
Stirring apparatus for plural test tubes Patent  
[NASA-CASE-XAC-06956] c 15 N71-21177  
Precipitation detector Patent  
[NASA-CASE-XLA-02619] c 10 N71-26334  
Apparatus for forming drive belts  
[NASA-CASE-NPO-13205-1] c 31 N74-32917  
Continuous fiber thermoplastic prepreg  
[NASA-CASE-LAR-14459-1] c 24 N91-15334

**MACHINING**

Laser machining apparatus Patent  
[NASA-CASE-HQN-10541-2] c 15 N71-27135  
Lathe tool bit and holder for machining fiberglass materials  
[NASA-CASE-XLA-10470] c 15 N72-21489  
Drilled ball bearing with a one piece anti-tipping cage assembly  
[NASA-CASE-LEW-11925-1] c 37 N75-31446  
Plug-type heat flux gauge  
[NASA-CASE-LEW-14967-1] c 35 N91-31608

**MAGNESIUM**

Nondestructive spot test method for magnesium and magnesium alloys  
[NASA-CASE-LAR-10953-1] c 17 N73-27446

**MAGNESIUM ALLOYS**

Method and apparatus for bonding a plastics sleeve onto a metallic body Patent  
[NASA-CASE-XLA-01262] c 15 N71-21404  
Nondestructive spot test method for magnesium and magnesium alloys  
[NASA-CASE-LAR-10953-1] c 17 N73-27446

**MAGNESIUM OXIDES**

Method for determining presence of OH in magnesium oxide  
[NASA-CASE-NPO-10774] c 06 N72-17095  
Edge geometry superconducting tunnel junctions utilizing an NbN/MgO/NbN thin film structure  
[NASA-CASE-NPO-17812-1-CU] c 76 N90-17456

**MAGNET COILS**

Superconducting alternator  
[NASA-CASE-XLE-02824] c 03 N69-39890  
Circuit breaker utilizing magnetic latching relays Patent  
[NASA-CASE-MSC-11277] c 09 N71-29008

**MAGNETIC AMPLIFIERS**

Low current linearization of magnetic amplifier for dc transducer  
[NASA-CASE-NPO-14617-1] c 33 N81-24338

**MAGNETIC BEARINGS**

Linear magnetic bearing  
[NASA-CASE-GSC-12517-1] c 37 N83-32067  
Linear magnetic bearings  
[NASA-CASE-GSC-12582-2] c 37 N85-20337  
Radial and torsionally controlled magnetic bearing  
[NASA-CASE-GSC-12957-1] c 37 N87-17038  
Improved superconducting bearings  
[NASA-CASE-GSC-13346-1] c 37 N91-28578

**MAGNETIC CHARGE DENSITY**

Electrostatic ion engine having a permanent magnetic circuit Patent  
[NASA-CASE-XLE-01124] c 28 N71-14043

**MAGNETIC CIRCUITS**

Electrostatic ion engine having a permanent magnetic circuit Patent  
[NASA-CASE-XLE-01124] c 28 N71-14043

**MAGNETIC COILS**

Time-division multiplexer Patent  
[NASA-CASE-XNP-00431] c 09 N70-38998  
Linear magnetic brake with two windings Patent  
[NASA-CASE-XLE-05079] c 15 N71-17652  
Safe-arm initiator Patent  
[NASA-CASE-LAR-10372] c 09 N71-18599  
Magnifying image intensifier  
[NASA-CASE-GSC-12010-1] c 74 N78-18905  
Radial and torsionally controlled magnetic bearing  
[NASA-CASE-GSC-12957-1] c 37 N87-17038  
Improved high power/high frequency inductor  
[NASA-CASE-NPO-17830-1-CU] c 33 N91-14539

**MAGNETIC CONTROL**

Fast opening diaphragm Patent  
[NASA-CASE-XLA-03660] c 15 N71-21060  
Magnetically controlled plasma accelerator Patent  
[NASA-CASE-XLA-00327] c 25 N71-29184  
Axially and radially controllable magnetic bearing  
[NASA-CASE-GSC-11551-1] c 37 N76-18459  
Magnetic bearing system  
[NASA-CASE-GSC-11978-1] c 37 N77-17464  
Low temperature latching solenoid  
[NASA-CASE-MSC-18106-1] c 33 N82-11357

**MAGNETIC CORES**

Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00458] c 09 N70-38604  
Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00131] c 09 N70-38995  
Magnetic counter Patent  
[NASA-CASE-XNP-08836] c 09 N71-12515  
Pulse-type magnetic core memory element circuit with blocking oscillator feedback Patent  
[NASA-CASE-XGS-03303] c 08 N71-18595  
Magnetic core current steering commutator Patent  
[NASA-CASE-NPO-10201] c 08 N71-18694  
Drive circuit utilizing two cores Patent  
[NASA-CASE-XNP-01318] c 10 N71-23033

Saturation current protection apparatus for saturable core transformers Patent  
[NASA-CASE-ERC-10075] c 09 N71-24800  
Magnetic power switch Patent  
[NASA-CASE-NPO-10242] c 09 N71-24803  
Unsaturating saturable core transformer Patent  
[NASA-CASE-ERC-10125] c 09 N71-24893  
Thermally cycled magnetometer Patent  
[NASA-CASE-XAC-03740] c 14 N71-26135  
Digital memory sense amplifying means Patent  
[NASA-CASE-XNP-01012] c 08 N71-28925  
Method of detecting impending saturation of magnetic cores  
[NASA-CASE-ERC-10089] c 23 N72-17747  
Current steering commutator  
[NASA-CASE-NPO-10743] c 08 N72-21199  
Banded transformer cores  
[NASA-CASE-NPO-11966-1] c 33 N74-17928  
Electromagnetic attachment mechanism  
[NASA-CASE-MSC-21463-1] c 37 N91-23490

**MAGNETIC DIPOLES**  
Balance torque meter Patent  
[NASA-CASE-GSC-01013] c 14 N71-23725

**MAGNETIC DISKS**  
Disk pack cleaning table Patent Application  
[NASA-CASE-LAR-10590-1] c 15 N70-26819

**MAGNETIC FIELD CONFIGURATIONS**  
Mass spectrometer with magnetic pole pieces providing the magnetic fields for both the magnetic sector and an ion-type vacuum pump  
[NASA-CASE-NPO-13663-1] c 35 N77-14406  
Magnifying image intensifier  
[NASA-CASE-GSC-12010-1] c 74 N78-18905

**MAGNETIC FIELDS**  
Electric-arc heater Patent  
[NASA-CASE-XLA-00330] c 33 N70-34540  
Means for communicating through a layer of ionized gases Patent  
[NASA-CASE-XLA-01127] c 07 N70-41372  
Liquid storage tank venting device for zero gravity environment Patent  
[NASA-CASE-XLE-01449] c 15 N70-41646  
Electrostatic ion engine having a permanent magnetic circuit Patent  
[NASA-CASE-XLE-01124] c 28 N71-14043  
Wide range linear fluxgate magnetometer Patent  
[NASA-CASE-XGS-01587] c 14 N71-15962  
Position sensing device employing misaligned magnetic field generating and detecting apparatus Patent  
[NASA-CASE-XGS-07514] c 23 N71-16099  
Nonmagnetic, explosive actuated indexing device Patent  
[NASA-CASE-XGS-02422] c 15 N71-21529  
Solar cell and circuit array and process for nullifying magnetic fields Patent  
[NASA-CASE-XGS-03390] c 03 N71-23187  
Balance torque meter Patent  
[NASA-CASE-XGS-01013] c 14 N71-23725  
Two axis fluxgate magnetometer Patent  
[NASA-CASE-GSC-10441-1] c 14 N71-27325  
Segmented superconducting magnet for a broadband traveling wave maser Patent  
[NASA-CASE-XGS-10518] c 16 N71-28554  
Magnetic position detection method and apparatus  
[NASA-CASE-ARC-10179-1] c 21 N72-22619  
Ion thruster  
[NASA-CASE-LEW-10770-1] c 28 N72-22770  
Ion thruster magnetic field control  
[NASA-CASE-LEW-10835-1] c 28 N72-22771  
Determining distance to lightning strokes from a single station  
[NASA-CASE-KSC-10698] c 07 N73-20175  
Superconductive magnetic-field-trapping device  
[NASA-CASE-XNP-01185] c 26 N73-28710  
Electron beam controller --- using magnetic field to refocus spent electron beam in microwave oscillator tube  
[NASA-CASE-LEW-11617-1] c 33 N74-10195  
Magnetometer using superconducting rotating body  
[NASA-CASE-NPO-13388-1] c 35 N76-16390  
Compact, high intensity arc lamp with internal magnetic field producing means  
[NASA-CASE-NPO-11510-1] c 33 N77-21315  
Magnetic heat pumping  
[NASA-CASE-LEW-12508-1] c 34 N78-17335  
Atomic hydrogen storage --- cryotrapping and magnetic field strength  
[NASA-CASE-LEW-12081-2] c 28 N80-20402  
Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c 28 N81-14103  
Magnetic field control --- electromechanical torquing device  
[NASA-CASE-MFS-23828-1] c 33 N82-26569  
Magnetic heading reference  
[NASA-CASE-LAR-12638-1] c 04 N84-14132

- Magnetically actuated compressor  
[NASA-CASE-GSC-12799-1] c 31 N85-21404
- Reciprocating magnetic refrigerator employing tandem porous matrices within a reciprocating displacer  
[NASA-CASE-NPO-16257-1] c 31 N85-29082
- Maser cavity servo-tuning system  
[NASA-CASE-NPO-15890-1-CU] c 33 N85-29143
- Magnetic drive coupling  
[NASA-CASE-MS-C-21171-1] c 37 N88-23973
- Magnetic attachment mechanism  
[NASA-CASE-MS-C-21095-1] c 37 N89-12866
- MAGNETIC FILMS**
- Manganese bismuth films with narrow transfer characteristics for Curie-point switching  
[NASA-CASE-NPO-11336-1] c 76 N79-16678
- MAGNETIC FLUX**
- Excitation and detection circuitry for a flux responsive magnetic head  
[NASA-CASE-XNP-04183] c 09 N69-24329
- Cryogenic apparatus for measuring the intensity of magnetic fields  
[NASA-CASE-XAC-02407] c 14 N69-27423
- Flux sensing device using a tubular core with toroidal gating coil and solenoidal output coil wound thereon Patent  
[NASA-CASE-XGS-01881] c 09 N70-40123
- Hybrid lubrication system and bearing Patent  
[NASA-CASE-XNP-01641] c 15 N71-22997
- Saturation current protection apparatus for saturable core transformers Patent  
[NASA-CASE-ERC-10075] c 09 N71-24800
- Continuous magnetic flux pump  
[NASA-CASE-XNP-01187] c 15 N73-28516
- Magnetic-flux pump  
[NASA-CASE-XNP-01188] c 15 N73-32361
- Magnetic bearing --- for supplying magnetic fluxes  
[NASA-CASE-GSC-11079-1] c 37 N75-18574
- Linear magnetic motor/generator --- to generate electric energy using magnetic flux for spacecraft power supply  
[NASA-CASE-GSC-12518-1] c 33 N82-24421
- Linear magnetic bearing  
[NASA-CASE-GSC-12517-1] c 37 N83-32067
- Induction heating gun  
[NASA-CASE-LAR-13181-1] c 31 N85-29083
- Radial and torsionally controlled magnetic bearing  
[NASA-CASE-GSC-12957-1] c 37 N87-17038
- MAGNETIC FORMING**
- Magnetomotive metal working device Patent  
[NASA-CASE-XMF-03793] c 15 N71-24833
- Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114-3] c 15 N71-24865
- MAGNETIC INDUCTION**
- Continuously operating induction plasma accelerator Patent  
[NASA-CASE-XLA-01354] c 25 N70-36946
- Drive circuit for minimizing power consumption in inductive load Patent  
[NASA-CASE-NPO-10716] c 09 N71-24892
- Constant frequency output two stage induction machine systems Patent  
[NASA-CASE-ERC-10065] c 09 N71-27364
- Magnetically actuated tuning method for Gunn oscillators  
[NASA-CASE-NPO-12106] c 09 N73-15235
- High speed shutter --- electrically actuated ribbon loop for shuttering optical or fluid passageways  
[NASA-CASE-ARC-10516-1] c 70 N74-21300
- Magnetic drive coupling  
[NASA-CASE-MS-C-21171-1] c 37 N88-23973
- MAGNETIC LENSES**
- Quadrupole mass filter with means to generate a noise spectrum exclusive of the resonant frequency of the desired ions to deflect stable ions  
[NASA-CASE-XNP-04231] c 14 N73-32325
- MAGNETIC MATERIALS**
- Low viscosity magnetic fluid obtained by the colloidal suspension of magnetic particles Patent  
[NASA-CASE-XLE-01512] c 12 N70-40124
- Preparation of dilute magnetic semiconductor films by metalorganic chemical vapor deposition  
[NASA-CASE-NPO-17399-1-CU] c 76 N89-14120
- MAGNETIC MEASUREMENT**
- Cryogenic apparatus for measuring the intensity of magnetic fields  
[NASA-CASE-XAC-02407] c 14 N69-27423
- Wide range linear fluxgate magnetometer Patent  
[NASA-CASE-XGS-01587] c 14 N71-15962
- RC networks and amplifiers employing the same  
[NASA-CASE-XAC-05462-2] c 10 N72-17171
- Magnetometer using superconducting rotating body  
[NASA-CASE-NPO-13388-1] c 35 N76-16390
- MAGNETIC PERMEABILITY**
- Linear motion valve  
[NASA-CASE-MS-C-20148-1] c 37 N85-29284
- MAGNETIC POLES**
- Magneto-hydrodynamic induction machine  
[NASA-CASE-XNP-07481] c 25 N69-21929
- Mass spectrometer with magnetic pole pieces providing the magnetic fields for both the magnetic sector and an ion-type vacuum pump  
[NASA-CASE-NPO-13663-1] c 35 N77-14406
- MAGNETIC PUMPING**
- Continuous magnetic flux pump  
[NASA-CASE-XNP-01187] c 15 N73-28516
- Magnetic-flux pump  
[NASA-CASE-XNP-01188] c 15 N73-32361
- Magnetocaloric pump --- for cryogenic fluids  
[NASA-CASE-LEW-11672-1] c 37 N74-27904
- Magnetic heat pumping  
[NASA-CASE-LEW-12508-3] c 34 N83-29625
- MAGNETIC RECORDING**
- Incremental tape recorder and data rate converter Patent  
[NASA-CASE-XNP-02778] c 08 N71-22710
- Magnetic recording head and method of making same Patent  
[NASA-CASE-GSC-10097-1] c 08 N71-27210
- Thermomagnetic recording and magneto-optic playback system  
[NASA-CASE-NPO-10872-1] c 35 N79-16246
- Manganese bismuth films with narrow transfer characteristics for Curie-point switching  
[NASA-CASE-NPO-11336-1] c 76 N79-16678
- MAGNETIC SIGNALS**
- Plural recorder system  
[NASA-CASE-XMS-06949] c 09 N69-21467
- MAGNETIC STORAGE**
- Binary magnetic memory device Patent  
[NASA-CASE-XGS-00174] c 08 N70-34743
- Magnetic matrix memory system Patent  
[NASA-CASE-XMF-05835] c 08 N71-12504
- Control apparatus for applying pulses of selectively predetermined duration to a sequence of loads Patent  
[NASA-CASE-XGS-04224] c 10 N71-26418
- Redundant memory organization Patent  
[NASA-CASE-GSC-10564] c 10 N71-29135
- Dual purpose momentum wheels for spacecraft with magnetic recording  
[NASA-CASE-NPO-11481] c 21 N73-13644
- Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-1] c 28 N78-24365
- MAGNETIC SUSPENSION**
- Magnetic suspension and pointing system  
[NASA-CASE-LAR-11889-2] c 37 N78-27424
- Magnetic suspension and pointing system --- on a carrier vehicle  
[NASA-CASE-LAR-11889-1] c 35 N79-26372
- Magnetic bearing and motor  
[NASA-CASE-GSC-12726-1] c 37 N83-34323
- Single element magnetic suspension actuator  
[NASA-CASE-LAR-13981-1] c 37 N91-21539
- Permanent magnet flux-biased magnetic actuator with flux feedback  
[NASA-CASE-LAR-13785-1] c 70 N91-21824
- MAGNETIC SWITCHING**
- Magnetic power switch Patent  
[NASA-CASE-NPO-10242] c 09 N71-24803
- Current steering switch Patent  
[NASA-CASE-XNP-08567] c 09 N71-26000
- Magnetically switched power supply system for lasers  
[NASA-CASE-NPO-16402-2] c 33 N88-24862
- MAGNETIC TAPE TRANSPORTS**
- Reel safety brake  
[NASA-CASE-GSC-11960-1] c 37 N77-14479
- MAGNETIC TAPES**
- Endless tape cartridge Patent  
[NASA-CASE-XGS-00769] c 14 N70-41647
- Endless tape transport mechanism Patent  
[NASA-CASE-XGS-01223] c 07 N71-10609
- Low friction magnetic recording tape Patent  
[NASA-CASE-XGS-00373] c 23 N71-15978
- System for recording and reproducing pulse code modulated data Patent  
[NASA-CASE-XGS-01021] c 08 N71-21042
- Friction measuring apparatus Patent  
[NASA-CASE-XNP-08680] c 14 N71-22995
- Technique for recovery of voice data from heat damaged magnetic tape  
[NASA-CASE-MS-C-14219-1] c 32 N74-27612
- Automatic character skew and spacing checking network --- of digital tape drive systems  
[NASA-CASE-GSC-11925-1] c 33 N76-18353
- Braille reading system  
[NASA-CASE-LAR-13306-1] c 82 N87-29372
- MAGNETIC TRANSDUCERS**
- Magnetometer with a miniature transducer and automatic scanning  
[NASA-CASE-LAR-11617-2] c 35 N78-32397
- MAGNETIZATION**
- Ion engine casing construction and method of making same Patent  
[NASA-CASE-XNP-06942] c 28 N71-23293
- MAGNETO-OPTICS**
- Thermomagnetic recording and magneto-optic playback system having constant intensity laser beam control  
[NASA-CASE-NPO-11317-2] c 36 N74-13205
- MAGNETOACOUSTIC WAVES**
- Magneto acoustic emission apparatus for testing materials for embrittlement  
[NASA-CASE-LAR-13817-1] c 26 N90-21170
- MAGNETOACOUSTICS**
- Method and apparatus for characterizing residual stress in ferromagnetic materials  
[NASA-CASE-LAR-14239-1] c 26 N91-13527
- MAGNETO-HYDRODYNAMIC FLOW**
- Magneto-plasma-dynamic arc thruster  
[NASA-CASE-LEW-11180-1] c 25 N73-25760
- Hybrid plume plasma rocket  
[NASA-CASE-MS-C-20476-2] c 20 N89-25279
- MAGNETO-HYDRODYNAMIC GENERATORS**
- Magneto-hydrodynamic induction machine  
[NASA-CASE-XNP-07481] c 25 N69-21929
- Slug flow magneto-hydrodynamic generator  
[NASA-CASE-XLE-02083] c 03 N69-39983
- Two-fluid magneto-hydrodynamic system and method for thermal-electric power conversion Patent  
[NASA-CASE-XNP-00644] c 03 N70-36803
- Crossed-field MHD plasma generator/accelerator Patent  
[NASA-CASE-XLA-03374] c 25 N71-15562
- Solar driven liquid metal MHD power generator  
[NASA-CASE-LAR-12495-1] c 44 N83-28573
- MAGNETOMETERS**
- Nonmagnetic thermal motor for a magnetometer  
[NASA-CASE-XAR-03786] c 09 N69-21313
- Cryogenic apparatus for measuring the intensity of magnetic fields  
[NASA-CASE-XAC-02407] c 14 N69-27423
- Flux sensing device using a tubular core with toroidal gating coil and solenoidal output coil wound thereon Patent  
[NASA-CASE-XGS-01881] c 09 N70-40123
- Wide range linear fluxgate magnetometer Patent  
[NASA-CASE-XGS-01587] c 14 N71-15962
- Optically pumped resonance magnetometer for determining vectorial components in a spatial coordinate system Patent  
[NASA-CASE-XGS-04879] c 14 N71-20428
- Thermally cycled magnetometer Patent  
[NASA-CASE-XAC-03740] c 14 N71-26135
- Two axis fluxgate magnetometer Patent  
[NASA-CASE-GSC-10441-1] c 14 N71-27325
- Hall effect magnetometer  
[NASA-CASE-LEW-11632-2] c 35 N75-13213
- Magnetometer using superconducting rotating body  
[NASA-CASE-NPO-13388-1] c 35 N76-16390
- Magnetic heading reference  
[NASA-CASE-LAR-11387-1] c 04 N76-20114
- Magnetic heading reference  
[NASA-CASE-LAR-11387-2] c 04 N77-19056
- Magnetometer with a miniature transducer and automatic scanning  
[NASA-CASE-LAR-11617-2] c 35 N78-32397
- Low energy electron magnetometer using a monoenergetic electron beam  
[NASA-CASE-LAR-12706-1] c 35 N84-12444
- MAGNETOSTRICTION**
- Magnetostrictive roller drive motor  
[NASA-CASE-GSC-13369-1] c 33 N91-23380
- MAGNETON SPUTTERING**
- Method of producing high T(subc) superconducting NBN films  
[NASA-CASE-NPO-16681-1-CU] c 76 N88-24543
- MAGNETONS**
- Tuning arrangement for an electron discharge device or the like Patent  
[NASA-CASE-XNP-09771] c 09 N71-24841
- MAGNETS**
- Magnetic electrical connectors for biomedical percutaneous implants  
[NASA-CASE-KSC-11030-1] c 52 N77-25772
- Miniature cyclotron resonance ion source using small permanent magnet  
[NASA-CASE-NPO-14324-1] c 72 N80-27163
- Linear magnetic bearing  
[NASA-CASE-GSC-12517-1] c 37 N83-32067
- Shaft transducer having dc output proportional to angular velocity  
[NASA-CASE-NPO-15706-1] c 35 N84-28017
- Linear motion valve  
[NASA-CASE-MS-C-20148-1] c 37 N85-29284
- MAGNIFICATION**
- Image magnification adapter for cameras Patent  
[NASA-CASE-XMF-03844-1] c 14 N71-26474

- Magnifying scratch gage force transducer  
[NASA-CASE-LAR-10496-1] c 14 N72-22437
- Magnifying image intensifier  
[NASA-CASE-GSC-12010-1] c 74 N78-18905
- Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c 74 N82-24072
- Spectral slicing X-ray telescope with variable magnification  
[NASA-CASE-MFS-25942-1] c 74 N86-20124
- Variable magnification variable dispersion glancing incidence imaging x ray spectroscopic telescope  
[NASA-CASE-MFS-28013-3] c 89 N90-27594
- Multispectral variable magnification glancing incidence x ray telescope  
[NASA-CASE-MFS-28013-4] c 89 N90-27595
- Variable magnification glancing incidence x ray telescope  
[NASA-CASE-MFS-28013-2] c 89 N91-14096
- Stereoscopic camera and viewing systems with undistorted depth presentation and reduced or eliminated erroneous acceleration and deceleration perceptions, or with perceptions produced or enhanced for special effects  
[NASA-CASE-NPO-18028-1-CU] c 74 N91-24878
- MAGNITUDE**  
Balance torquemeter Patent  
[NASA-CASE-XGS-01013] c 14 N71-23725
- MAINTENANCE**  
Self-testing and repairing computer Patent  
[NASA-CASE-NPO-10567] c 08 N71-24633
- Bonding or repairing process  
[NASA-CASE-MSC-12357] c 15 N73-12489
- Method of repairing discontinuity in fiberglass structures  
[NASA-CASE-LAR-10416-1] c 24 N74-30001
- System and method for refurbishing and processing parachutes --- monorial conveyor system  
[NASA-CASE-KSC-11042-2] c 02 N81-26073
- Computer circuit card puller  
[NASA-CASE-FRC-11042-1] c 60 N82-24839
- Method for refurbishing and processing parachutes  
[NASA-CASE-KSC-11042-1] c 09 N82-29330
- Method for repair of thin glass coatings --- on space shuttle orbiter tiles  
[NASA-CASE-KSC-11097-1] c 27 N82-33520
- Method of repairing surface damage to porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MSC-18736-1] c 24 N83-13172
- Method of repairing hidden leaks in tubes  
[NASA-CASE-MFS-19796-1] c 37 N86-32736
- Three-dimensional cell to tissue assembly process  
[NASA-CASE-MSC-21559-1] c 51 N91-13860
- High-pressure promoted combustion chamber  
[NASA-CASE-MSC-21470-1] c 09 N91-21157
- MALEATES**  
Stabilized unsaturated polyesters  
[NASA-CASE-NPO-16103-1] c 27 N85-29043
- Maleimido substituted aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-1] c 23 N86-19376
- Fire and heat resistant laminating resins based on maleimido substituted aromatic cyclotriphosphazene polymer  
[NASA-CASE-ARC-11428-2] c 27 N87-16909
- MALFUNCTIONS**  
Airplane take-off performance indicator Patent  
[NASA-CASE-XLA-00100] c 14 N70-36807
- MAMMALS**  
A culture vessel with large perfusion area to volume ratio  
[NASA-CASE-MSC-21662-1] c 51 N91-17531
- Spiral vane bioreactor  
[NASA-CASE-MSC-21361-1] c 51 N91-21701
- MAN MACHINE SYSTEMS**  
Compliant walker  
[NASA-CASE-GSC-13348-2] c 52 N91-29714
- MANDRELS**  
Mandrel for shaping solid propellant rocket fuel into a motor casing Patent  
[NASA-CASE-XLA-00304] c 27 N70-34783
- Rotating mandrel for assembly of inflatable devices Patent  
[NASA-CASE-XLA-04143] c 15 N71-17687
- Method of making a solid propellant rocket motor Patent  
[NASA-CASE-XLA-04126] c 28 N71-26779
- MANEUVERABILITY**  
Sequentially deployable maneuverable tetrahedral beam  
[NASA-CASE-LAR-13098-1] c 31 N86-19479
- MANGANESE**  
Manganese bismuth films with narrow transfer characteristics for Curie-point switching  
[NASA-CASE-NPO-11336-1] c 76 N79-16678
- MANIFOLDS**  
Injector for bipropellant rocket engines Patent  
[NASA-CASE-XMF-00148] c 28 N70-38710
- Active clearance control system for a turbomachine  
[NASA-CASE-LEW-12938-1] c 07 N82-32366
- Collimated beam manifold with the number of output beams variable at a given output angle  
[NASA-CASE-MSC-25312-1] c 74 N83-17305
- MANIPULATORS**  
Remote control manipulator for zero gravity environment  
[NASA-CASE-MFS-14405] c 15 N72-28495
- Orthotic arm joint --- for use in mechanical arms  
[NASA-CASE-MFS-21611-1] c 54 N75-12616
- Variable ratio mixed-mode bilateral master-slave control system for shuttle remote manipulator system  
[NASA-CASE-MSC-14245-1] c 18 N75-27041
- Cooperative multiaxis sensor for teleoperation of article manipulating apparatus  
[NASA-CASE-NPO-13386-1] c 54 N75-27758
- Remotely operable articulated manipulator  
[NASA-CASE-MFS-22707-1] c 37 N76-15457
- Remote manipulator system  
[NASA-CASE-MFS-22022-1] c 37 N76-15460
- Anthropomorphic master/slave manipulator system  
[NASA-CASE-ARC-10756-1] c 54 N77-32721
- Wrist joint assembly  
[NASA-CASE-MFS-23311-1] c 54 N78-17676
- Compact artificial hand  
[NASA-CASE-NPO-13906-1] c 54 N79-24652
- Controller arm for a remotely related slave arm  
[NASA-CASE-ARC-11052-1] c 37 N79-28551
- Device for coupling a first vehicle to a second vehicle  
[NASA-CASE-GSC-12429-1] c 37 N81-14320
- Pneumatic inflatable end effector  
[NASA-CASE-MFS-23696-1] c 54 N81-26718
- Terminal guidance sensor system --- space shuttle coupling to orbiting satellites  
[NASA-CASE-NPO-14521-1] c 37 N81-27519
- Apparatus for sequentially transporting containers  
[NASA-CASE-MFS-23846-1] c 37 N82-32731
- Precision manipulator heating and cooling apparatus for use in UHV systems with sample transfer capability  
[NASA-CASE-LAR-13040-1] c 37 N85-29286
- Sequentially deployable maneuverable tetrahedral beam  
[NASA-CASE-LAR-13098-1] c 31 N86-19479
- Apparatus for adapting an end effector device remotely controlled manipulator arm  
[NASA-CASE-MFS-25949-1] c 37 N86-19603
- Self-locking telescoping manipulator arm  
[NASA-CASE-MFS-25906-1] c 37 N86-20789
- Magnetic spin reduction system for free spinning objects  
[NASA-CASE-MFS-25966-1] c 16 N86-26352
- Orbital maneuvering end effectors  
[NASA-CASE-MFS-28161-1] c 37 N87-18817
- Space spider crane  
[NASA-CASE-LAR-13411-1-SB] c 18 N88-23828
- Mobile remote manipulator system for a tetrahedral truss  
[NASA-CASE-MSC-20985-1] c 18 N88-26398
- Space station erectable manipulator placement system  
[NASA-CASE-MSC-21096-1] c 18 N89-12621
- Improved docking alignment system  
[NASA-CASE-MSC-21372-1] c 35 N89-12842
- Magnetic attachment mechanism  
[NASA-CASE-MSC-21095-1] c 37 N89-12866
- Robust high-performance control for robotic manipulators  
[NASA-CASE-NPO-17785-1-CU] c 37 N89-28846
- Distributed proximity sensor system  
[NASA-CASE-NPO-17275-1-CU] c 37 N89-29750
- Gripping device  
[NASA-CASE-MSC-21365-1] c 37 N90-20408
- Spiral lead platen robotic end effector  
[NASA-CASE-LAR-13855-1] c 37 N91-14615
- Multi-fingered robotic hand  
[NASA-CASE-NPO-15959-2] c 37 N91-14616
- Method and apparatus for configuration control of redundant robots  
[NASA-CASE-NPO-17801-1-CU] c 37 N91-21544
- Synchronized computational architecture for generalized bilateral control of robot arms  
[NASA-CASE-NPO-17401-1-CU] c 63 N91-31885
- Telerobot control system  
[NASA-CASE-NPO-18116-1-CU] c 37 N91-32509
- A generalized compliant motion primitive  
[NASA-CASE-NPO-18134-1-CU] c 37 N91-32510
- MANNED ORBITAL LABORATORIES**  
Erectable modular space station Patent  
[NASA-CASE-XLA-00678] c 31 N70-34296
- Radial module space station Patent  
[NASA-CASE-XMS-01906] c 31 N70-41373
- Rotating space station simulator Patent  
[NASA-CASE-XLA-03127] c 11 N71-10776
- MANNED SPACE FLIGHT**  
Transfer valve Patent  
[NASA-CASE-XAC-01158] c 15 N71-23051
- Air removal device  
[NASA-CASE-XLA-08914] c 15 N73-12492
- MANNED SPACECRAFT**  
Space capsule Patent  
[NASA-CASE-XLA-00149] c 31 N70-37938
- Variable-geometry winged reentry vehicle Patent  
[NASA-CASE-XLA-00241] c 31 N70-37986
- Vehicle parachute and equipment jettison system Patent  
[NASA-CASE-XLA-00195] c 02 N70-38009
- Space capsule Patent  
[NASA-CASE-XLA-01332] c 31 N71-15664
- Artificial gravity spin deployment system Patent  
[NASA-CASE-XNP-02595] c 31 N71-21881
- Specialized halogen generator for purification of water Patent  
[NASA-CASE-XLA-08913] c 14 N71-28933
- Collapsible Apollo couch  
[NASA-CASE-MSC-13140] c 05 N72-11085
- Space vehicle with artificial gravity and earth-like environment  
[NASA-CASE-LEW-11101-1] c 31 N73-32750
- Hatch cover  
[NASA-CASE-MSC-21356-1] c 18 N90-19278
- MANOMETERS**  
Magnetically centered liquid column float Patent  
[NASA-CASE-XAC-00030] c 14 N70-34820
- Apparatus for absolute pressure measurement  
[NASA-CASE-LAR-10000] c 14 N73-30394
- MANUAL CONTROL**  
Multiple circuit switch apparatus with improved pivot actuator structure Patent  
[NASA-CASE-XAC-03777] c 10 N71-15909
- Null device for hand controller Patent  
[NASA-CASE-XLA-01808] c 15 N71-20740
- Manually actuated heat pump  
[NASA-CASE-NPO-10677] c 05 N72-11084
- Numerical computer peripheral interactive device with manual controls  
[NASA-CASE-NPO-11497] c 08 N73-25206
- Solid state controller three axes controller  
[NASA-CASE-MSC-12394-1] c 08 N74-10942
- G-load measuring and indicator apparatus  
[NASA-CASE-ARC-10806-1] c 35 N75-29381
- Hydraulic actuator mechanism to control aircraft spoiler movements through dual input commands  
[NASA-CASE-LAR-12412-1] c 08 N82-24205
- MANUFACTURING**  
A method for selective gold diffusion of monolithic silicon devices and/or circuits Patent application  
[NASA-CASE-ERC-10072] c 09 N70-11148
- Indexed keyed connection Patent  
[NASA-CASE-XMS-02532] c 15 N70-41808
- Method of making screen by casting Patent  
[NASA-CASE-XLE-00953] c 15 N71-15966
- Space manufacturing machine Patent  
[NASA-CASE-MFS-20410] c 15 N71-19214
- Fluid containers and resealable septum therefor Patent  
[NASA-CASE-NPO-10123] c 15 N71-24835
- Method of making a solid propellant rocket motor Patent  
[NASA-CASE-XLA-04126] c 28 N71-26779
- Method of making shielded flat cable Patent  
[NASA-CASE-MFS-13687] c 09 N71-28691
- Fabrication of controlled-porosity metals Patent  
[NASA-CASE-XNP-04339] c 17 N71-29137
- Method of making porous conductive supports for electrodes --- by electroforming and stacking nickel foils  
[NASA-CASE-GSC-11367-1] c 44 N74-19692
- Apparatus for forming drive belts  
[NASA-CASE-NPO-13205-1] c 31 N74-32917
- Bonding method in the manufacture of continuous regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c 24 N75-30260
- Process for fabricating SiC semiconductor devices  
[NASA-CASE-LEW-12094-1] c 76 N76-25049
- Solar hydrogen generator  
[NASA-CASE-LAR-11361-1] c 44 N77-22607
- Method of forming shrink-fit compression seal  
[NASA-CASE-LAR-11563-1] c 37 N77-23482
- Method for making a hot wire anemometer and product thereof  
[NASA-CASE-ARC-10900-1] c 35 N77-24454
- Aluminium or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-3] c 44 N80-16452
- Polymeric compositions and their method of manufacture --- forming filled polymer systems using cryogenics  
[NASA-CASE-NPO-10424-1] c 27 N81-24258

Inorganic spark chamber frame and method of making the same  
 [NASA-CASE-GSC-12354-1] c 35 N82-24471  
 Photoelectric detection system -- manufacturing automation  
 [NASA-CASE-MFS-23776-1] c 33 N82-28545  
 Glass heating panels and method for preparing the same from architectural reflective glass  
 [NASA-CASE-NPO-15753-1] c 27 N84-33589  
 The 1-(diorganooxy phosphonyl) methyl)-2,4- and -2,6-diamino benzenes and their derivatives  
 [NASA-CASE-ARC-11425-2] c 23 N87-28605  
 New core design for use with precision composite reflectors  
 [NASA-CASE-NPO-17858-1-CU] c 24 N90-26880

**MAPPING**

Random function tracer Patent  
 [NASA-CASE-XLA-01401] c 15 N71-21179  
 Method and apparatus for mapping planets  
 [NASA-CASE-NPO-11001] c 07 N72-21118  
 Seismic vibration source  
 [NASA-CASE-NPO-14112-1] c 46 N79-22679  
 Dual aperture multispectral Schmidt objective  
 [NASA-CASE-GSC-12756-1] c 74 N84-23248  
 Method and apparatus for contour mapping using synthetic aperture radar  
 [NASA-CASE-NPO-15939-1] c 43 N86-19711  
 Network of dedicated processors for finding lowest-cost map path  
 [NASA-CASE-NPO-17716-1-CU] c 62 N90-10608  
 Programmable remapper with single flow architecture  
 [NASA-CASE-MSC-21481-1] c 60 N91-13890  
 Programmable remapper for image processing  
 [NASA-CASE-MSC-21350-1] c 60 N91-23724

**MAPS**

Orbital and entry-tracking accessory for globes -- to provide range requirements for reentry vehicles to any landing site  
 [NASA-CASE-LAR-10626-1] c 19 N74-21015  
 Optical process for producing classification maps from multispectral data  
 [NASA-CASE-MSC-14472-1] c 43 N77-10584

**MASERS**

Segmented superconducting magnet for a broadband traveling wave maser Patent  
 [NASA-CASE-XGS-10518] c 16 N71-28554  
 Maser for frequencies in the 7-20 GHz range  
 [NASA-CASE-NPO-11437] c 16 N72-28521  
 Reflected-wave maser -- low noise amplifier  
 [NASA-CASE-NPO-13490-1] c 36 N76-31512  
 Multistation refrigeration system  
 [NASA-CASE-NPO-13839-1] c 31 N78-25256  
 External bulb variable volume maser  
 [NASA-CASE-GSC-12334-1] c 36 N79-14362  
 Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures  
 [NASA-CASE-NPO-14254-1] c 36 N80-18372  
 Precise RF timing signal distribution to remote stations -- fiber optics  
 [NASA-CASE-NPO-14749-1] c 32 N81-14186  
 Resonant isolator for maser amplifier  
 [NASA-CASE-NPO-15201-1] c 36 N83-35350  
 Maser cavity servo-tuning system  
 [NASA-CASE-NPO-15890-1-CU] c 33 N85-29143

**MASKING**

Masking device Patent  
 [NASA-CASE-XNP-02092] c 15 N70-42033  
 High resolution developing of photosensitive resists Patent  
 [NASA-CASE-XGS-04993] c 14 N71-17574  
 Low defect, high purity crystalline layers grown by selective deposition  
 [NASA-CASE-NPO-15813-1] c 76 N85-30922  
 Method for maintaining precise suction strip porosities  
 [NASA-CASE-LAR-13638-1] c 31 N90-19427

**MASKS**

Ion beam sputter etching  
 [NASA-CASE-LEW-13899-1] c 31 N87-21160

**MASS**

Mass measuring system Patent  
 [NASA-CASE-XMS-03371] c 05 N70-42000  
 Dynamic vibration absorber Patent  
 [NASA-CASE-LAR-10083-1] c 15 N71-27006  
 Fluid mass sensor for a zero gravity environment  
 [NASA-CASE-MSC-14653-1] c 35 N77-19385

**MASS BALANCE**

Two-plane balance Patent  
 [NASA-CASE-XAC-00073] c 14 N70-34813  
 Apparatus for testing a pressure responsive instrument Patent  
 [NASA-CASE-XMF-04134] c 14 N71-23755

**MASS DISTRIBUTION**

Propellant mass distribution metering apparatus Patent  
 [NASA-CASE-NPO-10185] c 10 N71-26339

**MASS FLOW**

Rocket engine injector Patent  
 [NASA-CASE-XLE-03157] c 28 N71-24736  
 Nuclear mass flowmeter  
 [NASA-CASE-MFS-20485] c 14 N72-11365  
 Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds  
 [NASA-CASE-LAR-10578-1] c 12 N73-25262

**MASS SPECTROMETERS**

Analytical photoionization mass spectrometer with an argon gas filter between the light source and monochromator Patent  
 [NASA-CASE-LAR-10180-1] c 06 N71-13461  
 Time of flight mass spectrometer with feedback means from the detector to the low source and a specific counter Patent  
 [NASA-CASE-XNP-01056] c 14 N71-23041  
 Ion microprobe mass spectrometer for analyzing fluid materials Patent  
 [NASA-CASE-ERC-10014] c 14 N71-28863  
 Orifice gross leak tester Patent  
 [NASA-CASE-ERC-10150] c 14 N71-28992  
 Method and apparatus for determining the contents of contained gas samples  
 [NASA-CASE-GSC-10903-1] c 14 N73-12444  
 Quadrupole mass filter with means to generate a noise spectrum exclusive of the resonant frequency of the desired ions to deflect stable ions  
 [NASA-CASE-XNP-04231] c 14 N73-32325  
 Fast scan control for deflection type mass spectrometers  
 [NASA-CASE-LAR-11428-1] c 35 N74-34857  
 Mass spectrometer with magnetic pole pieces providing the magnetic fields for both the magnetic sector and an ion-type vacuum pump  
 [NASA-CASE-NPO-13663-1] c 35 N77-14406  
 Method for fabricating a mass spectrometer inlet leak  
 [NASA-CASE-GSC-12077-1] c 35 N77-24455  
 Dual acting slit control mechanism  
 [NASA-CASE-LAR-11370-1] c 35 N80-28686  
 Ion mass spectrometer  
 [NASA-CASE-NPO-15423-1] c 35 N84-28016  
 Apparatus and method for characterizing the transmission efficiency of a mass spectrometer  
 [NASA-CASE-NPO-16989-1-CU] c 35 N91-14587

**MASS SPECTROSCOPY**

Moving particle composition analyzer  
 [NASA-CASE-GSC-11889-1] c 35 N76-16393  
 Fluid sampling device  
 [NASA-CASE-GSC-12143-1] c 35 N77-32456  
 Particle analyzing method and apparatus  
 [NASA-CASE-NPO-15292-1] c 35 N83-27184

**MASSIVELY PARALLEL PROCESSORS**

Massively parallel processor computer  
 [NASA-CASE-GSC-12223-1] c 60 N83-25378

**MATERIAL ABSORPTION**

Sorption vacuum trap Patent  
 [NASA-CASE-XER-09519] c 14 N71-18483

**MATERIALS**

Low gravity exothermic heating/cooling apparatus  
 [NASA-CASE-MSC-25707-1] c 35 N85-29214

**MATERIALS HANDLING**

Fluid coupling Patent  
 [NASA-CASE-XLE-00397] c 15 N70-36492  
 Catalyst bed removing tool Patent  
 [NASA-CASE-XFR-00811] c 15 N70-36901  
 Air bearing Patent  
 [NASA-CASE-XMF-01887] c 15 N71-10617  
 Quick attach and release fluid coupling assembly Patent  
 [NASA-CASE-XKS-01985] c 15 N71-10782  
 Method and apparatus for cryogenic wire stripping Patent  
 [NASA-CASE-MFS-10340] c 15 N71-17628  
 Apparatus for purging systems handling toxic, corrosive, noxious and other fluids Patent  
 [NASA-CASE-XMS-01905] c 12 N71-21089  
 Method of making foamed materials in zero gravity  
 [NASA-CASE-XMF-09902] c 15 N72-11387  
 Mechanically extendible telescoping boom  
 [NASA-CASE-NPO-11118] c 03 N72-25021  
 Apparatus for recovering matter adhered to a host surface  
 [NASA-CASE-NPO-11213] c 15 N73-20514  
 Apparatus and method for skin packaging articles  
 [NASA-CASE-MFS-20855] c 15 N73-27405  
 Apparatus for inserting and removing specimens from high temperature vacuum furnaces  
 [NASA-CASE-LAR-10841-1] c 31 N74-27900  
 Deployable flexible tunnel  
 [NASA-CASE-MFS-22636-1] c 37 N76-22540  
 Liquid immersion apparatus for minute articles  
 [NASA-CASE-MFS-25363-1] c 37 N82-12441  
 Acoustic system for material transport  
 [NASA-CASE-NPO-15453-1] c 71 N83-32515

Space ultra-vacuum facility and method of operation  
 [NASA-CASE-MFS-28139-1] c 29 N87-18679

**MATERIALS RECOVERY**

Automated system for identifying traces of organic chemical compounds in aqueous solutions  
 [NASA-CASE-NPO-13063-1] c 25 N76-18245  
 Process for the leaching of AP from propellant  
 [NASA-CASE-NPO-14109-1] c 28 N80-23471  
 Recovery of aluminum from composite propellants  
 [NASA-CASE-NPO-14110-1] c 28 N81-15119

**MATERIALS SCIENCE**

Flammability test chamber Patent  
 [NASA-CASE-KSC-10126] c 11 N71-24985  
 Apparatus and method for measuring the Seebeck coefficient and resistivity of materials  
 [NASA-CASE-NPO-11749] c 14 N73-28486

**MATERIALS TESTS**

Thermal shock apparatus Patent  
 [NASA-CASE-XLE-02024] c 14 N71-22964  
 Multiple environment materials test chamber having a multiple port X-ray tube for irradiating a plurality of samples Patent  
 [NASA-CASE-XMS-02930] c 11 N71-23042  
 Resilience testing device Patent  
 [NASA-CASE-XLA-08254] c 14 N71-26161  
 Tube sealing device Patent  
 [NASA-CASE-NPO-10431] c 15 N71-29132  
 Burn rate testing apparatus  
 [NASA-CASE-MFS-09690] c 33 N72-25913  
 Multi axes vibration fixtures  
 [NASA-CASE-MFS-20242] c 14 N73-19421  
 Material fatigue testing system  
 [NASA-CASE-MFS-20673] c 14 N73-20476  
 Slow positron beam generator for lifetime studies  
 [NASA-CASE-LAR-14250-1-SB] c 72 N91-27936

**MATHEMATICAL LOGIC**

Logical function generator  
 [NASA-CASE-XLA-05099] c 09 N73-13209

**MATHEMATICAL MODELS**

Discrete event simulation tool for analysis of qualitative models of continuous processing systems  
 [NASA-CASE-MSC-21465-1] c 61 N91-14741  
 Process for the homoepitaxial growth of single-crystal silicon carbide films on silicon carbide wafers  
 [NASA-CASE-LEW-15223-1] c 76 N91-26967

**MATRICES (CIRCUITS)**

Solar cell submodule Patent  
 [NASA-CASE-XNP-05821] c 03 N71-11056  
 Magnetic matrix memory system Patent  
 [NASA-CASE-XMF-05835] c 08 N71-12504  
 Solar cell matrix Patent  
 [NASA-CASE-NPO-10821] c 03 N71-19545  
 Drive circuit utilizing two cores Patent  
 [NASA-CASE-XNP-01318] c 10 N71-23033  
 Serial digital decoder Patent  
 [NASA-CASE-NPO-10150] c 08 N71-24650  
 Solid state matrices  
 [NASA-CASE-NPO-10591] c 03 N72-22041  
 Optical shutter switching matrix  
 [NASA-CASE-KSC-11392-1] c 74 N90-22383  
 High speed magneto-resistive random access memory  
 [NASA-CASE-NPO-17954-1-CU] c 60 N90-26519

**MATRICES (MATHEMATICS)**

Method and apparatus for second-rank tensor generation  
 [NASA-CASE-NPO-17512-1-CU] c 74 N91-26918  
 An accelerated training method for back propagation networks  
 [NASA-CASE-MSC-21625-1] c 53 N91-28730

**MATRIX MATERIALS**

Chemical approach for controlling nadimide cure temperature and rate with maleimide  
 [NASA-CASE-LEW-13770-3] c 27 N85-21350  
 Chemical approach for controlling nadimide cure temperature and rate with maleimide  
 [NASA-CASE-LEW-13770-4] c 27 N85-21351  
 Chemical approach for controlling nadimide cure temperature and rate  
 [NASA-CASE-LEW-13770-6] c 25 N85-30039  
 Polyarylene ethers with improved properties  
 [NASA-CASE-LAR-13555-1] c 23 N86-32526  
 Novel polyimide molding powder, coating, adhesive, and matrix resin  
 [NASA-CASE-LAR-14163-1] c 27 N91-13559  
 Process for the manufacture of seamless metal-clad fiber-reinforced organic matrix composite structures  
 [NASA-CASE-LAR-13562-2] c 24 N91-25199

**MCLEOD GAGES**

Automatic recording McLeod gauge Patent  
 [NASA-CASE-XLE-03280] c 14 N71-23093  
 Bakeable McLeod gauge  
 [NASA-CASE-XGS-01293-1] c 35 N79-33450

**MEAN SQUARE VALUES**

Electronic precipitator control  
 [NASA-CASE-LAR-13273-2] c 33 N90-20320

## MEASURING INSTRUMENTS

Device for determining the accuracy of the flare on a flared tube  
 [NASA-CASE-XKS-03495] c 14 N69-39785  
 Angular measurement system Patent  
 [NASA-CASE-XMF-00447] c 14 N70-33179  
 Two-plane balance Patent  
 [NASA-CASE-XAC-00073] c 14 N70-34813  
 Parallel motion suspension device Patent  
 [NASA-CASE-XNP-01567] c 15 N70-41310  
 Vibrating structure displacement measuring instrument Patent  
 [NASA-CASE-XLA-03135] c 32 N71-16428  
 Inspection gage for boss Patent  
 [NASA-CASE-XMF-04966] c 14 N71-17658  
 Vapor pressure measuring system and method Patent  
 [NASA-CASE-XMS-01618] c 14 N71-20741  
 Spherical tank gauge Patent  
 [NASA-CASE-XMS-06236] c 14 N71-21007  
 Energy absorbing device Patent  
 [NASA-CASE-XMF-10040] c 15 N71-22877  
 Ablation sensor Patent  
 [NASA-CASE-XLA-01791] c 14 N71-22991  
 Moment of inertia test fixture Patent  
 [NASA-CASE-XGS-01023] c 14 N71-22992  
 Electron beam instrument for measuring electric fields Patent  
 [NASA-CASE-XMF-10289] c 14 N71-23699  
 Floating two force component measuring device Patent  
 [NASA-CASE-XAC-04885] c 14 N71-23790  
 Internal flare angle gauge Patent  
 [NASA-CASE-XMF-04415] c 14 N71-24693  
 RC rate generator for slow speed measurement Patent  
 [NASA-CASE-XMF-02966] c 10 N71-24863  
 Transverse piezoresistance and pinch effect electromechanical transducers Patent  
 [NASA-CASE-ERC-10088] c 26 N71-25490  
 Layout tool Patent  
 [NASA-CASE-FRC-10005] c 15 N71-26145  
 Method and apparatus for detecting gross leaks Patent  
 [NASA-CASE-ERC-10033] c 14 N71-26672  
 Arbitrarily shaped model survey system Patent  
 [NASA-CASE-LAR-10098] c 32 N71-26681  
 Thickness measuring and injection device Patent  
 [NASA-CASE-MFS-20261] c 14 N71-27005  
 Resonant infrasonic gauging apparatus  
 [NASA-CASE-MSC-11847-1] c 14 N72-11363  
 Roll alignment detector  
 [NASA-CASE-GSC-10514-1] c 14 N72-20379  
 Cosmic dust sensor  
 [NASA-CASE-GSC-10503-1] c 14 N72-20381  
 Firefly pump-metering system  
 [NASA-CASE-GSC-10218-1] c 15 N72-21465  
 Capacitive tank gaging apparatus being independent of liquid distribution  
 [NASA-CASE-MFS-21629] c 14 N72-22442  
 Spherical measurement device  
 [NASA-CASE-XLA-06683] c 14 N72-28436  
 Altitude measuring system  
 [NASA-CASE-ERC-10412-1] c 09 N73-12211  
 Flow velocity and directional instrument  
 [NASA-CASE-LAR-10855-1] c 14 N73-13415  
 Multi axes vibration fixtures  
 [NASA-CASE-MFS-20242] c 14 N73-19421  
 Material fatigue testing system  
 [NASA-CASE-MFS-20673] c 14 N73-20476  
 Droplet monitoring probe  
 [NASA-CASE-NPO-10985] c 14 N73-20478  
 Apparatus and method for measuring the Seebeck coefficient and resistivity of materials  
 [NASA-CASE-NPO-11749] c 14 N73-28486  
 RF-source resistance meters  
 [NASA-CASE-NPO-11291-1] c 14 N73-30388  
 Apparatus for absolute pressure measurement  
 [NASA-CASE-LAR-10000] c 14 N73-30394  
 Holographic thin film analyzer  
 [NASA-CASE-MFS-20823-1] c 16 N73-30476  
 Three-axis adjustable loading structure  
 [NASA-CASE-FRC-10051-1] c 35 N74-13129  
 Thin film gauge --- for measuring convective heat transfer rates along test surfaces in wind tunnels  
 [NASA-CASE-NPO-10617-1] c 35 N74-22095  
 Apparatus and method for processing Korotkov sounds --- for blood pressure measurement  
 [NASA-CASE-MSC-13999-1] c 52 N74-26626  
 Electric field measuring and display system --- for cloud formations  
 [NASA-CASE-KSC-10731-1] c 33 N74-27862  
 Device for measuring tensile forces  
 [NASA-CASE-MFS-21728-1] c 35 N74-27865  
 Measuring probe position recorder  
 [NASA-CASE-LAR-10806-1] c 35 N74-32877

Meter for use in detecting tension in straps having predetermined elastic characteristics  
 [NASA-CASE-MFS-22189-1] c 35 N75-19615  
 Thrust measurement  
 [NASA-CASE-XMS-05731] c 35 N75-29382  
 Method and apparatus for measuring web material wound on a reel  
 [NASA-CASE-GSC-11902-1] c 38 N77-17495  
 Optical instrument employing reticle having preselected visual response pattern formed thereon  
 [NASA-CASE-ARC-10976-1] c 74 N77-22950  
 Direct reading inductance meter  
 [NASA-CASE-NPO-13792-1] c 35 N77-32455  
 Ruler for making navigational computations  
 [NASA-CASE-XNP-01458] c 04 N78-17031  
 Apparatus for handling micron size range particulate material  
 [NASA-CASE-NPO-10151] c 37 N78-17386  
 Apparatus for measuring a sorbate dispersed in a fluid stream  
 [NASA-CASE-ARC-10896-1] c 35 N78-19465  
 Condition sensor system and method  
 [NASA-CASE-MSC-14805-1] c 54 N78-32720  
 Lightning current waveform measuring system  
 [NASA-CASE-KSC-11018-1] c 33 N79-10337  
 Time domain phase measuring apparatus  
 [NASA-CASE-GSC-12228-1] c 33 N79-10338  
 Fluid velocity measuring device  
 [NASA-CASE-LAR-11729-1] c 34 N79-12359  
 Method and apparatus for measuring minority carrier lifetimes and bulk diffusion length in P-N junction solar cells  
 [NASA-CASE-NPO-14100-1] c 44 N79-12541  
 Lightning current detector  
 [NASA-CASE-KSC-11057-1] c 33 N79-14305  
 Contour measurement system  
 [NASA-CASE-MFS-23726-1] c 43 N79-26439  
 Borehole geological assessment  
 [NASA-CASE-NPO-14231-1] c 46 N80-10709  
 Displacement probes with self-contained exciting medium  
 [NASA-CASE-LAR-11690-1] c 35 N80-14371  
 Viscosity measuring instrument  
 [NASA-CASE-NPO-14501-1] c 35 N80-18357  
 Geological assessment probe  
 [NASA-CASE-NPO-14558-1] c 46 N80-24906  
 Method and automated apparatus for detecting coilform organisms  
 [NASA-CASE-MSC-16777-1] c 51 N80-27067  
 Skin friction measuring device for aircraft  
 [NASA-CASE-FRC-11029-1] c 06 N81-17057  
 Faraday rotation measurement method and apparatus  
 [NASA-CASE-NPO-14839-1] c 35 N82-15381  
 Lightning discharge identification system  
 [NASA-CASE-KSC-11099-1] c 47 N82-24779  
 Flow resistivity instrument  
 [NASA-CASE-LAR-13053-1] c 43 N83-29783  
 Non-invasive method and apparatus for measuring pressure within a pliable vessel  
 [NASA-CASE-ARC-11264-2] c 52 N83-29991  
 Visual accommodation trainer-tester  
 [NASA-CASE-ARC-11426-1] c 09 N84-12193  
 Electronic scanning pressure measuring system and transducer package  
 [NASA-CASE-ARC-11361-1] c 35 N84-22934  
 Apparatus for measuring charged particle beam  
 [NASA-CASE-MFS-25641-1] c 72 N84-28575  
 Self-charging metering and dispensing device for fluids  
 [NASA-CASE-MSC-20275-1] c 35 N85-21595  
 Instrumentation for sensing moisture content of material using a transient thermal pulse  
 [NASA-CASE-NPO-15494-2] c 35 N85-34373  
 Temperature averaging thermal probe  
 [NASA-CASE-GSC-12795-1] c 35 N86-19580  
 Cylindrical surface profile and diameter measuring tool and method  
 [NASA-CASE-MFS-28287-1] c 35 N88-23959  
 Electrostatic discharge test apparatus  
 [NASA-CASE-MSC-21094-1] c 35 N88-24941  
 Ice detector  
 [NASA-CASE-LAR-13776-1] c 35 N88-29149  
 Liquid thickness gauge  
 [NASA-CASE-LAR-13826-1] c 35 N88-29150  
 Universal precision sine bar attachment  
 [NASA-CASE-MFS-28253-1] c 37 N89-28831  
 Skin friction balance  
 [NASA-CASE-LAR-13710-1] c 35 N90-17117  
 Dual cathode system for electron beam instruments  
 [NASA-CASE-NPO-16878-1-CU] c 35 N90-20351  
 Rapidly quantifying the relative distention of a human bladder  
 [NASA-CASE-LAR-13901-1-NP] c 52 N90-21519  
 Tank gauging apparatus and method  
 [NASA-CASE-MSC-21059-2] c 35 N91-15511

Tank gauging apparatus and method  
 [NASA-CASE-MSC-21059-3] c 35 N91-21495  
 Method of producing a plug type heat flux gauge  
 [NASA-CASE-LEW-14967-2] c 35 N91-23460  
 Plug-type heat flux gauge  
 [NASA-CASE-LEW-14967-1] c 35 N91-31608  
**MECHANICAL DEVICES**  
 Mechanical coordinate converter Patent  
 [NASA-CASE-XNP-00614] c 14 N70-36907  
 Load cell protection device Patent  
 [NASA-CASE-XMS-06782] c 32 N71-15974  
 Satellite despin device Patent  
 [NASA-CASE-XMF-08523] c 31 N71-20396  
 Two force component measuring device Patent  
 [NASA-CASE-XAC-04886-1] c 14 N71-20439  
 Latching mechanism Patent  
 [NASA-CASE-XMS-03745] c 15 N71-21076  
 Stirring apparatus for plural test tubes Patent  
 [NASA-CASE-XAC-06956] c 15 N71-21177  
 Random function tracer Patent  
 [NASA-CASE-XLA-01401] c 15 N71-21179  
 Canister closing device Patent  
 [NASA-CASE-XLA-01446] c 15 N71-21528  
 Nonmagnetic, explosive actuated indexing device Patent  
 [NASA-CASE-XGS-02422] c 15 N71-21529  
 Central spar and module joint Patent  
 [NASA-CASE-XNP-02341] c 15 N71-21531  
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 [NASA-CASE-XMS-07487] c 15 N71-23255  
 Alloys for bearings Patent  
 [NASA-CASE-XLE-05033] c 15 N71-23810  
 Mechanical actuator Patent  
 [NASA-CASE-XGS-04548] c 15 N71-24045  
 Winch having cable position and load indicators Patent  
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 Redundant actuating mechanism Patent  
 [NASA-CASE-XGS-08718] c 15 N71-24600  
 Shock tube powder dispersing apparatus Patent  
 [NASA-CASE-XLE-04946] c 17 N71-24911  
 Self-lubricating gears and other mechanical parts Patent  
 [NASA-CASE-MFS-14971] c 15 N71-24984  
 Layout tool Patent  
 [NASA-CASE-FRC-10005] c 15 N71-26145  
 Thermostatic actuator  
 [NASA-CASE-NPO-10637] c 15 N72-12409  
 Ball screw linear actuator  
 [NASA-CASE-NPO-11222] c 15 N72-25456  
 Spherical measurement device  
 [NASA-CASE-XLA-06683] c 14 N72-28436  
 Thermal compensating structural member  
 [NASA-CASE-MFS-20433] c 15 N72-28496  
 Spiral groove seal  
 [NASA-CASE-XLE-10326-2] c 15 N72-29488  
 Solar energy powered heliotrope  
 [NASA-CASE-GSC-10945-1] c 21 N72-31637  
 Adjustable force probe  
 [NASA-CASE-MFS-20760] c 14 N72-33377  
 Rotary actuator  
 [NASA-CASE-NPO-10680] c 31 N73-14855  
 Collapsible structure for an antenna reflector  
 [NASA-CASE-NPO-11751] c 07 N73-24176  
 Foot pedal operated fluid type exercising device  
 [NASA-CASE-MSC-11561-1] c 05 N73-32014  
 Exposure interlock for oscilloscope cameras  
 [NASA-CASE-LAR-10319-1] c 14 N73-32322  
 Reefing system  
 [NASA-CASE-LAR-10129-2] c 37 N74-20063  
 Sprag solenoid brake --- development and operations of electrically controlled brake  
 [NASA-CASE-MFS-21846-1] c 37 N74-26976  
 Solid medium thermal engine  
 [NASA-CASE-ARC-10461-1] c 44 N74-33379  
 Automatic inoculating apparatus --- includes movable carriage, drive motor, and swabbing motor  
 [NASA-CASE-LAR-11074-1] c 51 N75-13502  
 Clock setter  
 [NASA-CASE-LAR-11458-1] c 35 N76-16392  
 Apparatus for positioning modular components on a vertical or overhead surface  
 [NASA-CASE-LAR-11465-1] c 37 N76-21554  
 Reel safety brake  
 [NASA-CASE-GSC-11960-1] c 37 N77-14479  
 Mechanical sequencer  
 [NASA-CASE-MSC-19536-1] c 37 N77-22482  
 Combined docking and grasping device  
 [NASA-CASE-MFS-23088-1] c 37 N77-23483  
 Wrist joint assembly  
 [NASA-CASE-MFS-23311-1] c 54 N78-17676  
 Tetherline system for orbiting satellites  
 [NASA-CASE-MFS-23564-1] c 15 N78-25119  
 Actuator mechanism  
 [NASA-CASE-GSC-11883-2] c 37 N78-31426

Quartz ball valve  
 [NASA-CASE-NPO-14473-1] c 37 N80-23654  
 Method and apparatus for holding two separate metal pieces together for welding  
 [NASA-CASE-GSC-12318-1] c 37 N80-23655  
 Heat treat fixture and method of heat treating  
 [NASA-CASE-LAR-11821-1] c 26 N80-28492  
 Fire extinguishing apparatus having a slidable mass for a penetrator nozzle --- for penetrating aircraft and shuttle orbiter skin  
 [NASA-CASE-KSC-11064-1] c 31 N81-14137  
 Device for coupling a first vehicle to a second vehicle  
 [NASA-CASE-GSC-12429-1] c 37 N81-14320  
 Locking mechanism for orthopedic braces  
 [NASA-CASE-GSC-12082-2] c 52 N81-25661  
 Reusable captive blind fastener  
 [NASA-CASE-MSC-18742-1] c 37 N82-26673  
 Mechanical end joint system for structural column elements  
 [NASA-CASE-LAR-12482-1] c 37 N82-32732  
 Compression test apparatus  
 [NASA-CASE-MSC-18723-1] c 35 N83-21312  
 Apparatus for accurately preloading auger attachment means for frangible protective material  
 [NASA-CASE-MSC-18791-1] c 37 N83-36482  
 Clamp-mount device  
 [NASA-CASE-MFS-25510-1] c 37 N84-16560  
 Method and apparatus for gripping uniaxial fibrous composite materials  
 [NASA-CASE-LEW-13758-1] c 24 N84-27829  
 Extended moment arm anti-spin device  
 [NASA-CASE-LAR-12979-1] c 05 N85-21147  
 Connection system --- insuring against loss of a tool component without using multiple tethers  
 [NASA-CASE-MSC-20319-1] c 37 N85-21649  
 Self indexing latch system  
 [NASA-CASE-MFS-25956-1] c 37 N87-21333  
 Apparatus for mounting a field emission cathode  
 [NASA-CASE-LEW-14108-1] c 33 N87-28832  
 Device for applying constant pressure to a surface  
 [NASA-CASE-GSC-13230-1] c 37 N91-13734  
 Orbital debris sweeper and method  
 [NASA-CASE-MSC-21534-1] c 18 N91-21222  
 Alignment positioning mechanism  
 [NASA-CASE-MSC-21502-1] c 37 N91-21543

**MECHANICAL DRIVES**  
 Hydraulic drive mechanism Patent  
 [NASA-CASE-XMS-03252] c 15 N71-10658  
 Anti-backlash circuit for hydraulic drive system Patent  
 [NASA-CASE-XNP-01020] c 03 N71-12260  
 Precision stepping drive Patent  
 [NASA-CASE-MFS-14772] c 15 N71-17692  
 Incremental motion drive system Patent  
 [NASA-CASE-XNP-08897] c 15 N71-17694  
 Ratchet mechanism Patent  
 [NASA-CASE-MFS-12805] c 15 N71-17805  
 Welding skate with computerized control Patent  
 [NASA-CASE-XMF-07069] c 15 N71-23815  
 Reversible motion drive system Patent  
 [NASA-CASE-NPO-10173] c 15 N71-24696  
 Synchronous dc direct drive system Patent  
 [NASA-CASE-GSC-10065-1] c 10 N71-27136  
 Energy absorption device Patent  
 [NASA-CASE-XNP-01848] c 15 N71-28959  
 Boring bar drive mechanism Patent  
 [NASA-CASE-XLA-03661] c 15 N71-33518  
 Rotary actuator  
 [NASA-CASE-NPO-10244] c 15 N72-26371  
 Rotary actuator  
 [NASA-CASE-NPO-10680] c 31 N73-14855  
 Optically actuated two position mechanical mover  
 [NASA-CASE-NPO-13105-1] c 37 N74-21060  
 Two speed drive system --- mechanical device for changing speed on rotating vehicle wheel  
 [NASA-CASE-MFS-20645-1] c 37 N74-23070  
 Concentric differential gearing arrangement  
 [NASA-CASE-ARC-10462-1] c 37 N74-27901  
 Geneva mechanism --- including star wheel and driver  
 [NASA-CASE-NPO-13281-1] c 37 N75-13266  
 Mechanical thermal motor  
 [NASA-CASE-MFS-23062-1] c 37 N77-12402  
 Mount for continuously orienting a collector dish in a system adapted to perform both diurnal and seasonal solar tracking  
 [NASA-CASE-MFS-23267-1] c 35 N77-20401  
 Hydraulic drain means for servo-systems  
 [NASA-CASE-NPO-10316-1] c 37 N77-22479  
 Mechanical sequencer  
 [NASA-CASE-MSC-19536-1] c 37 N77-22482  
 Gas turbine engine with convertible accessories  
 [NASA-CASE-LEW-12390-1] c 07 N78-17056  
 Wobble gear drive mechanism --- for aerospace environments  
 [NASA-CASE-WOO-00625] c 37 N78-17385  
 Toggle mechanism for pinching metal tubes  
 [NASA-CASE-GSC-12274-1] c 37 N79-28550

Antenna deployment mechanism for use with a spacecraft --- extensible and retractable telescopic antenna mast  
 [NASA-CASE-GSC-12331-1] c 18 N80-14183  
 Redundant motor drive system  
 [NASA-CASE-MFS-23777-1] c 37 N80-32716  
 Belt for transmitting power from a cogged driving member to a cogged driven member  
 [NASA-CASE-GSC-12289-1] c 37 N80-32717  
 Base drive for paralleled inverter systems  
 [NASA-CASE-NPO-14163-1] c 33 N81-14220  
 Speed control device for a heavy duty shaft --- solar sails for spacecraft propulsion  
 [NASA-CASE-NPO-14170-1] c 37 N81-15364  
 Clutchless multiple drive source for output shaft  
 [NASA-CASE-ARC-11325-1] c 37 N82-22496  
 Electrical rotary joint apparatus for large space structures  
 [NASA-CASE-MFS-23981-1] c 07 N83-20944  
 Variable speed drive  
 [NASA-CASE-GSC-12643-1] c 37 N83-26078  
 Remotely operable peristaltic pump  
 [NASA-CASE-MFS-28059-1] c 37 N86-32738  
 Dual motion valve with single motion input  
 [NASA-CASE-MFS-28058-1] c 37 N87-21332  
 Mobile remote manipulator vehicle system  
 [NASA-CASE-LAR-13393-1] c 54 N87-29118  
 Magnetostrictive roller drive motor  
 [NASA-CASE-GSC-13369-1] c 33 N91-23380  
 Linear mass actuator  
 [NASA-CASE-LAR-14352-1] c 37 N91-32511  
 Bidirectional drive and brake mechanism  
 [NASA-CASE-MSC-21540-1] c 37 N91-32514

**MECHANICAL ENGINEERING**

Manual actuator --- for spacecraft exercising machines  
 [NASA-CASE-MFS-21481-1] c 37 N74-18127  
 Shaft seal assembly for high speed and high pressure applications  
 [NASA-CASE-LEW-11873-1] c 37 N79-22475

**MECHANICAL MEASUREMENT**

Strain gage Patent Application  
 [NASA-CASE-FRC-10053] c 14 N70-35587  
 Apparatus for absorbing and measuring power Patent  
 [NASA-CASE-XLE-00720] c 14 N70-40201  
 Strain sensor for high temperatures Patent  
 [NASA-CASE-XNP-09205] c 14 N71-17657  
 Extensometer Patent  
 [NASA-CASE-XMF-04680] c 15 N71-19489  
 Hall effect transducer  
 [NASA-CASE-LAR-10620-1] c 09 N72-25255  
 Strain gage mounting assembly  
 [NASA-CASE-NPO-13170-1] c 35 N76-14430  
 Photomechanical transducer  
 [NASA-CASE-NPO-14363-1] c 39 N81-25400  
 Cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
 [NASA-CASE-GSC-12081-2] c 52 N82-22875

**MECHANICAL PROPERTIES**

High temperature testing apparatus Patent  
 [NASA-CASE-XLE-00335] c 14 N70-35368  
 Fluoroether modified epoxy composites  
 [NASA-CASE-ARC-11418-1] c 24 N84-11213  
 Process for improving mechanical properties of epoxy resins by addition of cobalt ions  
 [NASA-CASE-LAR-13230-1] c 24 N84-34571  
 Elastomer toughened polyimide adhesives --- bonding metal and composite material structures for aircraft and spacecraft  
 [NASA-CASE-LAR-12775-2] c 27 N85-21349  
 Containerless high purity pulling process and apparatus for glass fiber  
 [NASA-CASE-MFS-25905-2] c 31 N86-21718  
 Polyarylene ethers with improved properties  
 [NASA-CASE-LAR-13555-1] c 23 N86-32526  
 Polyphenylquinoxalines containing alkylendioxy groups  
 [NASA-CASE-LAR-13601-1-CU] c 27 N89-14337  
 Acetylene terminated aspartimides and resins therefrom  
 [NASA-CASE-LAR-14188-1] c 27 N90-23545  
 Silicon containing electroconductive polymers and structures made therefrom  
 [NASA-CASE-NPO-17826-1-CU] c 27 N90-26952  
 A tough performance simultaneous semi-interpenetrating polymer network  
 [NASA-CASE-LAR-14339-1] c 27 N90-26955

**MECHANICS (PHYSICS)**

Gravity stabilized flying vehicle Patent  
 [NASA-CASE-MSC-12111-1] c 02 N71-11039

**MECHANIZATION**

Machine for use in monitoring fatigue life for a plurality of elastomeric specimens  
 [NASA-CASE-NPO-13731-1] c 39 N78-10493

**MEDICAL ELECTRONICS**

Circuit for detecting initial systole and diastolic notch --- for monitoring arterial pressure  
 [NASA-CASE-LEW-11581-1] c 54 N75-13531  
 Pocket ECG electrode  
 [NASA-CASE-ARC-11258-1] c 52 N80-33081  
 Subcutaneous electrode structure  
 [NASA-CASE-ARC-11117-1] c 52 N81-14612

**MEDICAL EQUIPMENT**

Biomedical electrode arrangement Patent  
 [NASA-CASE-XFR-10856] c 05 N71-11189  
 Method and system for respiration analysis Patent  
 [NASA-CASE-XFR-08403] c 05 N71-11202  
 Laser machining apparatus Patent  
 [NASA-CASE-HQN-10541-2] c 15 N71-27135  
 Telemetry actuated switch  
 [NASA-CASE-ARC-10105] c 09 N72-17153  
 Tilting table for ergometer and for other biomedical devices  
 [NASA-CASE-MFS-21010-1] c 05 N73-30078  
 Automatic instrument for chemical processing to detect microorganism in biological samples by measuring light reactions  
 [NASA-CASE-GSC-11169-2] c 05 N73-32011  
 Servo-controlled intravital microscope system  
 [NASA-CASE-NPO-13214-1] c 35 N75-25123  
 Heat sterilizable patient ventilator  
 [NASA-CASE-NPO-13313-1] c 54 N75-27761  
 Medical subject monitoring systems --- multichannel monitoring systems  
 [NASA-CASE-MSC-14180-1] c 52 N76-14757  
 Locking mechanism for orthopedic braces  
 [NASA-CASE-GSC-12082-1] c 54 N76-22914  
 Readout electrode assembly for measuring biological impedance  
 [NASA-CASE-ARC-10816-1] c 35 N76-24525  
 Corneal seal device  
 [NASA-CASE-LEW-12258-1] c 52 N77-28716  
 Snap-in compressible biomedical electrode  
 [NASA-CASE-MSC-14623-1] c 52 N77-28717  
 Tissue macerating instrument  
 [NASA-CASE-LEW-12668-1] c 52 N78-14773  
 Flow compensating pressure regulator  
 [NASA-CASE-LEW-12718-1] c 34 N78-25351  
 Intra-ocular pressure normalization technique and equipment  
 [NASA-CASE-LEW-12723-1] c 52 N80-18690  
 Micro-fluid exchange coupling apparatus  
 [NASA-CASE-ARC-11114-1] c 51 N81-14605  
 Urine collection device  
 [NASA-CASE-MSC-16433-1] c 52 N81-24711  
 Spine immobilization apparatus  
 [NASA-CASE-ARC-11167-1] c 52 N81-25662  
 Cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
 [NASA-CASE-GSC-12081-2] c 52 N82-22875  
 Acoustic tooth cleaner  
 [NASA-CASE-LAR-12471-1] c 52 N82-29862  
 Ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
 [NASA-CASE-LEW-13107-1] c 52 N83-21785  
 System and method for moving a probe to follow movements of tissue  
 [NASA-CASE-NPO-15197-1] c 52 N83-25346  
 Medical clip  
 [NASA-CASE-LAR-12650-1] c 52 N84-28388  
 Process of making medical clip  
 [NASA-CASE-LAR-12650-2] c 52 N84-28389  
 Drop foot corrective device  
 [NASA-CASE-LAR-12259-2] c 54 N86-22112  
 Method and apparatus for characterizing reflected ultrasonic pulses  
 [NASA-CASE-LAR-13966-1] c 71 N91-27914

**MEDICAL SCIENCE**

Tissue simulating gel for medical research  
 [NASA-CASE-LAR-14036-1] c 27 N91-13562

**MEDICAL SERVICES**

Passive fetal monitoring sensor  
 [NASA-CASE-LAR-14088-1] c 35 N91-13686

**MELTING**

Hot melt recharge system --- repairing damaged or missing tiles on space shuttle orbiter  
 [NASA-CASE-LAR-12881-1] c 27 N84-14323  
 Hot melt adhesive attachment pad  
 [NASA-CASE-LAR-12894-1] c 27 N85-20125  
 Method of preparing radially homogeneous mercury cadmium telluride crystals  
 [NASA-CASE-MFS-25786-2] c 76 N90-20896  
 Pressure rig for repetitive casting  
 [NASA-CASE-LAR-14050-1] c 31 N90-21216

**MELTING POINTS**

Mixed diamines for lower melting addition polyimide preparation and utilization  
 [NASA-CASE-LAR-12054-1] c 27 N79-33316  
 Low thrust monopropellant engine  
 [NASA-CASE-GSC-12194-2] c 20 N82-18314

**MELTS (CRYSTAL GROWTH)**

- Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt  
 [NASA-CASE-NPO-13969-1] c 76 N79-23798
- Preparation of monotectic alloys having a controlled microstructure by directional solidification under dopant-induced interface breakdown  
 [NASA-CASE-MFS-23816-1] c 26 N80-23419
- Means for growing ribbon crystals without subjecting the crystals to thermal shock-induced strains  
 [NASA-CASE-NPO-14298-1] c 76 N80-32244
- Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
 [NASA-CASE-NPO-14297-1] c 33 N81-19389
- Electromigration process for the purification of molten silicon during crystal growth  
 [NASA-CASE-NPO-14831-1] c 76 N82-30105
- Controlled in situ etch-back  
 [NASA-CASE-NPO-15625-1] c 76 N83-20789
- Apparatus and method for heating a material in a transparent ampoule --- crystal growth  
 [NASA-CASE-MFS-25436-1] c 27 N83-36220
- Process and apparatus for growing a crystal ribbon  
 [NASA-CASE-NPO-15629-1] c 76 N84-35113
- Containerless high purity pulling process and apparatus for glass fiber  
 [NASA-CASE-MFS-25905-2] c 31 N86-21718
- High-temperature, high-pressure optical cell  
 [NASA-CASE-MFS-26000-1] c 74 N87-14971
- Total immersion crystal growth  
 [NASA-CASE-NPO-15800-2] c 76 N87-23286
- Ribbon growing method and apparatus  
 [NASA-CASE-NPO-16306-1-CU] c 76 N91-15898
- MEMBRANE STRUCTURES**
- Liquid junction and method of fabricating the same  
 Patent Application  
 [NASA-CASE-NPO-10682] c 15 N70-34699
- Measuring device Patent  
 [NASA-CASE-XMS-01546] c 14 N70-40233
- Flexible composite membrane Patent  
 [NASA-CASE-XNP-08837] c 18 N71-16210
- Fluid impervious barrier including liquid metal alloy and method of making same Patent  
 [NASA-CASE-XNP-08881] c 17 N71-28747
- Meteoroid capture cell construction  
 [NASA-CASE-MSC-12423-1] c 91 N76-30131
- Strong thin membrane structure --- solar sails  
 [NASA-CASE-NPO-14021-2] c 27 N80-16163
- In-situ cross linking of polyvinyl alcohol --- application to battery separator films  
 [NASA-CASE-LEW-13135-2] c 27 N81-24257
- Separator for alkaline batteries and method of making same  
 [NASA-CASE-GSC-10350-1] c 44 N82-24642
- Separator for alkaline electric batteries and method of making  
 [NASA-CASE-GSC-10018-1] c 44 N82-24644
- MEMBRANES**
- Apparatus for measuring swelling characteristics of membranes  
 [NASA-CASE-XGS-03865] c 14 N69-21363
- Mixture separation cell Patent  
 [NASA-CASE-XMS-02952] c 18 N71-20742
- Ionene membrane separator  
 [NASA-CASE-NPO-11091] c 18 N72-22567
- Dual membrane hollow fiber fuel cell and method of operating same  
 [NASA-CASE-NPO-13732-1] c 44 N79-10513
- Microelectrophoretic apparatus and process  
 [NASA-CASE-ARC-11121-1] c 25 N79-14169
- Dialysis system --- using ion exchange resin membranes permeable to urea molecules  
 [NASA-CASE-NPO-14101-1] c 52 N80-14687
- Reverse osmosis membrane of high urea rejection properties --- water purification  
 [NASA-CASE-ARC-10980-1] c 27 N80-23452
- Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
 [NASA-CASE-NPO-14001-1] c 27 N81-14076
- Air removal device --- life support systems  
 [NASA-CASE-XLA-08914-2] c 25 N82-21269
- Process of treating cellulosic membrane and alkaline with membrane separator  
 [NASA-CASE-GSC-10019-1] c 44 N82-24641
- Aqueous alkali metal hydroxide insoluble cellulose ether membrane  
 [NASA-CASE-XGS-05584-1] c 25 N82-29370
- Optical fiber tactile sensor  
 [NASA-CASE-NPO-15375-1] c 74 N84-11921
- Method for the preparation of thin-skinned asymmetric reverse osmosis membranes and products thereof  
 [NASA-CASE-ARC-11359-1] c 51 N84-28361
- Method of forming dynamic membrane on stainless steel support  
 [NASA-CASE-MSC-18172-3] c 31 N88-29052

- Adjustable choke for fluids nozzle  
 [NASA-CASE-NPO-17625-1-CU] c 34 N90-27070
- MEMORY**
- Method for making conductors for ferrite memory arrays --- from pre-formed metal conductors  
 [NASA-CASE-LAR-10994-1] c 24 N75-13032
- Thermocouple for heating and cooling of memory metal actuators  
 [NASA-CASE-NPO-17068-1-CU] c 35 N88-29151
- MEMORY (COMPUTERS)**
- Automatic multi-banking of memory for microprocessors  
 [NASA-CASE-NPO-15295-1] c 60 N85-21992
- Real-time garbage collection for list processing  
 [NASA-CASE-MSC-20964-1] c 60 N87-14863
- Hybrid analog-digital associative neural network  
 [NASA-CASE-NPO-17058-1-CU] c 62 N87-25803
- Bus programmable slave module  
 [NASA-CASE-MSC-21387-1] c 61 N90-16411
- Analog hardware for delta-backpropagation neural networks  
 [NASA-CASE-NPO-17564-1-CU] c 32 N90-16974
- Solid state electrical switch employing materials with reversible phase transistors  
 [NASA-CASE-NPO-17621-1-CU] c 33 N90-17010
- Auto and hetero-associative memory using a 2-D optical logic gate  
 [NASA-CASE-NPO-17997-1-CU] c 60 N91-13888
- Method of up-front load balancing for local memory parallel processors  
 [NASA-CASE-MSC-21348-1] c 62 N91-14769
- Asymmetric soft-error resistant memory  
 [NASA-CASE-NPO-17394-1-CU] c 60 N91-31810
- Optoelectronic associative memory  
 [NASA-CASE-NPO-18278-1-CU] c 74 N91-32925
- MENTAL PERFORMANCE**
- General method of pattern classification using the two-domain theory  
 [NASA-CASE-MSC-21737-1] c 61 N91-13911
- MERCURY (METAL)**
- Mercury capillary interrupter Patent  
 [NASA-CASE-XNP-02251] c 12 N71-20896
- Method of forming ceramic to metal seal Patent  
 [NASA-CASE-XNP-01263-2] c 15 N71-26312
- Feed system for an ion thruster  
 [NASA-CASE-NPO-10737] c 28 N72-11709
- MERCURY CADMIUM TELLURIDES**
- Method of preparing radially homogeneous mercury cadmium telluride crystals  
 [NASA-CASE-MSC-25786-2] c 76 N90-20896
- MERCURY VAPOR**
- Mercury capillary interrupter Patent  
 [NASA-CASE-XNP-02251] c 12 N71-20896
- Rotating shaft seal Patent  
 [NASA-CASE-XNP-02862-1] c 15 N71-26294
- MESSAGE PROCESSING**
- Method for Viterbi decoding of large constraint length convolutional codes  
 [NASA-CASE-NPO-17310-1-CU] c 17 N88-28946
- METABOLIC WASTES**
- Cooling system for removing metabolic heat from an hermetically sealed space suit  
 [NASA-CASE-ARC-11059-1] c 54 N78-32721
- Method and automated apparatus for detecting coliform organisms  
 [NASA-CASE-MSC-16777-1] c 51 N80-27067
- METABOLISM**
- Automated analysis of oxidative metabolites  
 [NASA-CASE-ARC-10469-1] c 25 N75-12086
- Process for control of cell division  
 [NASA-CASE-LAR-10773-3] c 51 N77-25769
- Metabolic rate meter and method  
 [NASA-CASE-MSC-12239-1] c 52 N79-21750
- METAL BONDING**
- Bonding thermoelectric elements to nonmagnetic refractory metal electrodes  
 [NASA-CASE-XGS-04554] c 15 N69-39786
- Method of making a diffusion bonded refractory coating  
 Patent  
 [NASA-CASE-XLE-01604-2] c 15 N71-15610
- Metal valve pintle with encapsulated elastomeric body  
 Patent  
 [NASA-CASE-MSC-12116-1] c 15 N71-17648
- Apparatus for the determination of the existence or non-existence of a bonding between two members  
 Patent  
 [NASA-CASE-MFS-13686] c 15 N71-18132
- Soldering with solder flux which leaves corrosion resistant coating  
 Patent  
 [NASA-CASE-XNP-03459] c 15 N71-21078
- Bonded elastomeric seal for electrochemical cells  
 Patent  
 [NASA-CASE-XGS-02631] c 03 N71-23006
- Silicon solar cell with cover glass bonded to cell by metal pattern  
 Patent  
 [NASA-CASE-XLE-08569] c 03 N71-23449

- Positive contact resistance soldering unit  
 [NASA-CASE-KSC-10242] c 15 N72-23497
- Bonding or repairing process  
 [NASA-CASE-MSC-12357] c 15 N73-12489
- Totally confined explosive welding --- apparatus to reduce noise level and protect personnel during explosive bonding  
 [NASA-CASE-LAR-10941-1] c 37 N74-21057
- Ultrasonically bonded valve assembly  
 [NASA-CASE-NPO-13360-1] c 37 N75-25185
- Bimetallic junctions  
 [NASA-CASE-LEW-11573-1] c 26 N77-28265
- Heat exchanger and method of making --- bonding rocket chambers with a porous metal matrix  
 [NASA-CASE-LEW-12441-1] c 34 N79-13289
- Totally confined explosive welding  
 [NASA-CASE-LAR-10941-2] c 37 N79-13364
- Method and apparatus for holding two separate metal pieces together for welding  
 [NASA-CASE-GSC-12318-1] c 37 N80-23655
- Heat exchanger and method of making --- rocket lining  
 [NASA-CASE-LEW-12441-2] c 34 N80-24573
- Aluminum ion-containing polyimide adhesives  
 [NASA-CASE-LAR-12640-1] c 27 N82-11206
- Thermal barrier coating system having improved adhesion  
 [NASA-CASE-LEW-1335901] c 27 N83-31855
- Impacting device for testing insulation  
 [NASA-CASE-MFS-25862-2] c 37 N84-33807
- Method of coating a substrate with a rapidly solidified metal  
 [NASA-CASE-GSC-12880-1] c 26 N86-32550
- Composite piston  
 [NASA-CASE-LAR-13435-1] c 37 N88-23981
- Process for bonding elastomers to metal  
 [NASA-CASE-LAR-13645-1] c 27 N91-28424
- Apparatus and method for explosive bonding to edge of flyer plate  
 [NASA-CASE-LAR-14096-1] c 31 N91-31476
- METAL COATINGS**
- Method of joining aluminum to stainless steel Patent  
 [NASA-CASE-MFS-07369] c 15 N71-20443
- Soldering with solder flux which leaves corrosion resistant coating Patent  
 [NASA-CASE-XNP-03459] c 15 N71-21078
- Thermal control coating Patent  
 [NASA-CASE-XLA-01995] c 18 N71-23047
- Trialkyl-dihalotantalum and niobium compounds Patent  
 [NASA-CASE-XNP-04023] c 06 N71-28808
- Silicide coatings for refractory metals Patent  
 [NASA-CASE-XLE-10910] c 18 N71-29040
- Selective nickel deposition  
 [NASA-CASE-LEW-10965-1] c 15 N72-25452
- Wide temperature range electronic device with lead attachment  
 [NASA-CASE-ERC-10224-2] c 09 N73-27150
- Panel for selectively absorbing solar thermal energy and the method of producing said panel  
 [NASA-CASE-MFS-22562-1] c 44 N76-14595
- Ultraviolet light reflective coating  
 [NASA-CASE-GSC-11786-1] c 24 N76-24363
- Metallic hot wire anemometer --- for high speed wind tunnel tests  
 [NASA-CASE-ARC-10911-1] c 35 N77-20400
- Solar cell collector  
 [NASA-CASE-LEW-12552-1] c 44 N78-25527
- Electromagnetic radiation energy arrangement --- coatings for solar energy absorption and infrared reflection  
 [NASA-CASE-WOO-00428-1] c 32 N79-19186
- Electrodes for solid state devices  
 [NASA-CASE-NPO-15161-1] c 33 N84-16456
- Corrosion resistant coating  
 [NASA-CASE-NPO-15928-1] c 26 N85-29005
- Method of coating a substrate with a rapidly solidified metal  
 [NASA-CASE-GSC-12880-1] c 26 N86-32550
- Nickel base coating alloy  
 [NASA-CASE-LEW-13834-1] c 26 N87-14482
- Method for forming hermetic seals  
 [NASA-CASE-NPO-16423-1-CU] c 37 N87-21334
- Metallic seal for thermal barrier coating systems  
 [NASA-CASE-LEW-15020-1] c 27 N91-15412
- Ceramic coatings on smooth surfaces  
 [NASA-CASE-LEW-15164-1] c 27 N91-25298
- METAL COMPOUNDS**
- Phthalocyanine polymers  
 [NASA-CASE-ARC-11413-1] c 27 N85-21348
- METAL CUTTING**
- Metal shearing energy absorber  
 [NASA-CASE-HQN-10638-1] c 15 N73-30460
- Vee-notching device --- with adjustable carriage  
 [NASA-CASE-MFS-20730-1] c 39 N74-13131
- Hole cutter --- drill bits and rotating shaft  
 [NASA-CASE-MFS-22649-1] c 37 N75-25186

- Method and tool for machining a transverse slot about a bore  
[NASA-CASE-LAR-11855-1] c 37 N81-14319
- METAL FATIGUE**  
Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-2] c 24 N81-26179  
Directional solidification of superalloys  
[NASA-CASE-MFS-28314-1] c 26 N91-14462
- METAL FIBERS**  
Lightweight electrically-powered flexible thermal laminate --- made of metal and nonconductive yarns  
[NASA-CASE-MSC-12662-1] c 33 N79-12331
- METAL FILMS**  
Means and methods of depositing thin films on substrates Patent  
[NASA-CASE-XNP-00595] c 15 N70-34967  
Metallic film diffusion for boundary lubrication Patent  
[NASA-CASE-XLE-01765] c 18 N71-10772  
Bismuth-lead coatings for gas bearings used in atmospheric environments and vacuum chambers Patent  
[NASA-CASE-XGS-02011] c 15 N71-20739  
Metallic film diffusion for boundary lubrication Patent  
[NASA-CASE-XLE-10337] c 15 N71-24046  
Magnetic recording head and method of making same Patent  
[NASA-CASE-GSC-10097-1] c 08 N71-27210  
Light regulator  
[NASA-CASE-LAR-10836-1] c 26 N72-27784  
Deposition of alloy films --- on irregularly shaped metal object  
[NASA-CASE-LEW-11262-1] c 27 N74-13270  
Multitarget sequential sputtering apparatus  
[NASA-CASE-NPO-13345-1] c 37 N75-19684  
Method of forming metal hydride films  
[NASA-CASE-LEW-12083-1] c 37 N78-13436  
Thin film strain transducer  
[NASA-CASE-WLP-10055-1] c 35 N84-28015  
Fire blocking systems for aircraft seat cushions  
[NASA-CASE-ARC-11423-1] c 03 N84-33394  
Glass heating panels and method for preparing the same from architectural reflective glass  
[NASA-CASE-NPO-15753-1] c 27 N84-33589  
Method for forming hermetic seals  
[NASA-CASE-NPO-16423-1-CU] c 37 N87-21334  
Composite flexible blanket insulation  
[NASA-CASE-NPO-11907-1-NP] c 24 N91-31236
- METAL FINISHING**  
Selective plating of etched circuits without removing previous plating Patent  
[NASA-CASE-XGS-03120] c 15 N71-24047  
Surface finishing --- for aircraft wings  
[NASA-CASE-MSC-12631-1] c 24 N77-28225
- METAL FLUORIDES**  
Method of making carbide/fluoride/silver composites  
[NASA-CASE-LEW-14902-1] c 24 N91-27244
- METAL FOILS**  
Folding apparatus Patent  
[NASA-CASE-XLA-00137] c 15 N70-33180  
Thermal control of space vehicles Patent  
[NASA-CASE-XLA-01291] c 33 N70-36617  
Thermal radiation shielding Patent  
[NASA-CASE-XLE-03432] c 33 N71-24145  
Method of making porous conductive supports for electrodes --- by electroforming and stacking nickel foils  
[NASA-CASE-GSC-11367-1] c 44 N74-19692  
Method and apparatus for tensile testing of metal foil  
[NASA-CASE-LAR-10208-1] c 35 N76-18400  
Hot foil transducer skin friction sensor  
[NASA-CASE-LAR-12321-1] c 35 N82-24470  
High temperature insulation barrier composite  
[NASA-CASE-MFS-29241-1] c 24 N90-23480  
Improving the performance of blasting caps  
[NASA-CASE-LAR-13832-1] c 28 N91-28444  
Composite flexible blanket insulation  
[NASA-CASE-NPO-11907-1-NP] c 24 N91-31236
- METAL FUELS**  
Preparing oxidizer coated metal fuel particles  
[NASA-CASE-NPO-11975-1] c 28 N74-33209
- METAL HALIDES**  
Process for making anhydrous metal halides  
[NASA-CASE-LEW-11860-1] c 37 N76-18458  
Direct current ballast circuit for metal halide lamp  
[NASA-CASE-MSC-18407-1] c 33 N82-24427  
High power metallic halide laser --- amplifying a copper chloride laser  
[NASA-CASE-NPO-14782-1] c 36 N82-28616  
Method and apparatus for convection control of metallic halide vapor density in a metallic halide laser  
[NASA-CASE-NPO-15021-1] c 36 N83-10417  
Metal chloride cathode for a battery  
[NASA-CASE-NPO-17809-1-CU] c 33 N91-27478
- METAL HYDRIDES**  
Method of forming metal hydride films  
[NASA-CASE-LEW-12083-1] c 37 N78-13436

**METAL IONS**

- Metal containing polymers from cyclic tetrameric phenylphosphonitrimides Patent  
[NASA-CASE-HQN-10364] c 06 N71-27363  
Aluminum ion-containing polyimide adhesives  
[NASA-CASE-LAR-12640-1] c 27 N82-11206  
Process for improving mechanical properties of epoxy resins by addition of cobalt ions  
[NASA-CASE-LAR-13230-1] c 24 N84-34571

**METAL JOINTS**

- Cryogenic connector for vacuum use Patent  
[NASA-CASE-XGS-02441] c 15 N70-41629  
Mechanical bonding of metal method  
[NASA-CASE-LEW-12941-1] c 26 N83-10170  
X-ray determination of parts alignment  
[NASA-CASE-MSC-20418-1] c 74 N86-20126

**METAL MATRIX COMPOSITES**

- Reinforced metallic composites Patent  
[NASA-CASE-XLE-02428] c 17 N70-33288  
Process for producing dispersion strengthened nickel with aluminum Patent  
[NASA-CASE-XLE-06969] c 17 N71-24142  
Self-lubricating gears and other mechanical parts Patent  
[NASA-CASE-MFS-14971] c 15 N71-24984  
Refractory metal base alloy composites  
[NASA-CASE-XLE-03940-2] c 17 N72-28536  
Method of preparing graphite reinforced aluminum composite  
[NASA-CASE-MFS-21077-1] c 24 N75-28135  
Method of making reinforced composite structure  
[NASA-CASE-LEW-12619-1] c 24 N77-19171  
Heat exchanger and method of making --- bonding rocket chambers with a porous metal matrix  
[NASA-CASE-LEW-12441-1] c 34 N79-13289  
Preparation of monolithic alloys having a controlled microstructure by directional solidification under dopant-induced interface breakdown  
[NASA-CASE-MFS-23816-1] c 26 N80-23419  
Heat exchanger and method of making --- rocket lining  
[NASA-CASE-LEW-12441-2] c 34 N80-24573  
Method for alleviating thermal stress damage in laminates --- metal matrix composites  
[NASA-CASE-LEW-12493-1] c 24 N81-17170  
Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-2] c 24 N81-26179  
Fuselage structure using advanced technology fiber reinforced composites  
[NASA-CASE-LAR-11689-1] c 24 N82-26384  
Metal matrix composite structural panel construction  
[NASA-CASE-LAR-12807-1] c 24 N84-11214  
Arc spray fabrication of metal matrix composite monotype  
[NASA-CASE-LEW-13828-1] c 24 N85-30027  
Oxidation resistant coatings for titanium alloys and titanium alloy matrix composites  
[NASA-CASE-LEW-15155-1] c 27 N91-26375

**METAL OXIDE SEMICONDUCTORS**

- Gyrator employing field effect transistors  
[NASA-CASE-MFS-21433] c 09 N73-20232  
Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential of field effect device  
[NASA-CASE-GSC-11425-1] c 76 N74-20329  
Integrated P-channel MOS gyrator  
[NASA-CASE-MFS-22343-1] c 33 N74-34638  
Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential  
[NASA-CASE-GSC-11425-2] c 76 N75-25730  
Solar cell collector  
[NASA-CASE-LEW-12552-1] c 44 N78-25527  
Multilevel metallization method for fabricating a metal oxide semiconductor device  
[NASA-CASE-MFS-23541-1] c 76 N79-14906  
Method of making V-MOS field effect transistors utilizing a two-step anisotropic etching and ion implantation  
[NASA-CASE-GSC-12515-1] c 33 N81-26360  
Schottky barrier solar cell  
[NASA-CASE-NPO-13689-2] c 44 N81-29525  
High voltage v-groove solar cell  
[NASA-CASE-LEW-13401-2] c 44 N83-32177  
GaAs Schottky barrier photo-responsive device and method of fabrication  
[NASA-CASE-GSC-12816-1] c 76 N86-20150  
Integrated photo-responsive metal oxide semiconductor circuit  
[NASA-CASE-GSC-12782-1] c 33 N88-14271  
Method and apparatus for determining time, direction, and composition of impacting space particles  
[NASA-CASE-LAR-13392-1-CU] c 19 N91-14412
- METAL OXIDES**  
Process for producing dispersion strengthened nickel with aluminum Patent  
[NASA-CASE-XLE-06969] c 17 N71-24142

- Photoetching of metal-oxide layers  
[NASA-CASE-ERC-10108] c 06 N72-21094  
Production of metal powders  
[NASA-CASE-XLE-06461] c 17 N72-22530  
Method for obtaining oxygen from lunar or similar soil  
[NASA-CASE-MSC-12408-1] c 46 N74-13011  
Method for depositing an oxide coating  
[NASA-CASE-LEW-13131-1] c 44 N83-10494  
Method of forming oxide coatings --- for solar collector heating panels  
[NASA-CASE-LEW-13132-1] c 27 N83-29388  
Absorbable-susceptor joining of ceramic surfaces  
[NASA-CASE-NPO-15640-1] c 27 N84-22748  
Thermal barrier coating system  
[NASA-CASE-LEW-13324-2] c 24 N85-21266  
Apparatus for producing oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-2] c 27 N86-32569  
Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-3] c 27 N87-23736
- METAL PARTICLES**  
Slug flow magnetohydrodynamic generator  
[NASA-CASE-XLE-02083] c 03 N69-39983  
Method of making a cermet Patent  
[NASA-CASE-LEW-10219-1] c 18 N71-28729  
Preparing oxidizer coated metal fuel particles  
[NASA-CASE-NPO-11975-1] c 28 N74-33209
- METAL PLATES**  
Detector panels-micrometeoroid impact Patent  
[NASA-CASE-XLA-05906] c 31 N71-16221  
Nuclear fuel elements  
[NASA-CASE-XLE-00209] c 22 N73-32528  
Strain arrester plate for fused silica tile --- bonding of thermal insulation to metallic plates or structural parts  
[NASA-CASE-MSC-14182-1] c 27 N76-14264  
Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c 26 N80-28492  
Multicolor printing plate joining  
[NASA-CASE-LEW-13598-1] c 35 N84-22930  
High effectiveness contour matching contact heat exchanger  
[NASA-CASE-MSC-20840-1] c 34 N88-29132  
Apparatus and method for explosive bonding to edge of flyer plate  
[NASA-CASE-LAR-14096-1] c 31 N91-31476
- METAL POWDER**  
Method of producing refractory bodies having controlled porosity Patent  
[NASA-CASE-LEW-10393-1] c 17 N71-15468  
Sealing member and combination thereof and method of producing said sealing member Patent  
[NASA-CASE-XMS-01625] c 15 N71-23022  
Shock tube powder dispersing apparatus Patent  
[NASA-CASE-XLE-04946] c 17 N71-24911  
Preparation of high purity copper fluoride  
[NASA-CASE-LEW-10794-1] c 06 N72-17093  
Production of metal powders  
[NASA-CASE-XLE-06461] c 17 N72-22530  
Apparatus for producing metal powders  
[NASA-CASE-XLE-06461-2] c 17 N72-28535  
Peen plating  
[NASA-CASE-GSC-11163-1] c 15 N73-32360  
Electrodes for solid state devices  
[NASA-CASE-NPO-15161-1] c 33 N84-16456
- METAL SHEETS**  
Light shield and infrared reflector for fatigue testing Patent  
[NASA-CASE-XLA-01782] c 14 N71-26136  
Method of making pressure tight seal for super alloy  
[NASA-CASE-LAR-10170-1] c 37 N74-11301  
Method of making an explosively welded scarf joint  
[NASA-CASE-LAR-11211-1] c 37 N75-12326  
Process for making sheets with parallel pores of uniform size  
[NASA-CASE-GSC-10984-1] c 37 N75-26371  
Apparatus for welding sheet material --- butt joints  
[NASA-CASE-XMS-01330] c 37 N75-23776  
Method of bonding plasticized elastomer to metal and articles produced thereby  
[NASA-CASE-MFS-25181-1] c 27 N82-24340  
Curved cap corrugated sheet  
[NASA-CASE-LAR-12884-1] c 18 N84-33450
- METAL SHELLS**  
Shell tile thermal protection system  
[NASA-CASE-LAR-12862-1] c 27 N84-27886
- METAL SPINNING**  
Spin forming tubular elbows Patent  
[NASA-CASE-XMF-01083] c 15 N71-22723
- METAL SPRAYING**  
Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N86-32550
- METAL STRIPS**  
Formed metal ribbon wrap Patent  
[NASA-CASE-XLE-00164] c 15 N70-36411



- Interconnection of solar cells Patent  
[NASA-CASE-XGS-01475] c 03 N71-11058
- Method of making tubes Patent  
[NASA-CASE-XGS-04175] c 15 N71-18579
- High speed shutter --- electrically actuated ribbon loop for shuttering optical or fluid passageways  
[NASA-CASE-ARC-10516-1] c 70 N74-21300
- Method for maintaining precise suction strip porosities  
[NASA-CASE-LAR-13638-1] c 31 N90-19427
- High temperature solder device for flat cables  
[NASA-CASE-GSC-13344-1] c 26 N91-28363
- METAL SURFACES**
- Condenser - Separator  
[NASA-CASE-XLA-08645] c 15 N69-21465
- Plating nickel on aluminum castings Patent  
[NASA-CASE-XNP-04148] c 17 N71-24830
- Process for applying black coating to metals Patent  
[NASA-CASE-XLA-06199] c 15 N71-24875
- Process for reducing secondary electron emission Patent  
[NASA-CASE-XNP-09469] c 24 N71-25555
- Method of forming ceramic to metal seal Patent  
[NASA-CASE-XNP-01263-2] c 15 N71-26312
- Temperature reducing coating for metals subject to flame exposure Patent  
[NASA-CASE-XLE-00035] c 33 N71-29151
- Thin film gauge --- for measuring convective heat transfer rates along test surfaces in wind tunnels  
[NASA-CASE-NPO-10617-1] c 35 N74-22095
- Surface finishing  
[NASA-CASE-MS-C-12631-3] c 27 N81-14077
- Improved refractory coatings --- sputtered coatings on substrates that form stable nitrides  
[NASA-CASE-LEW-23169-2] c 26 N81-16209
- Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c 37 N81-19455
- Corrosion resistant thermal barrier coating --- protecting gas turbines and other engine parts  
[NASA-CASE-LEW-13088-1] c 26 N81-25188
- Coating with overlay metallic-cermet alloy systems  
[NASA-CASE-LEW-13639-2] c 26 N84-27855
- Method for forming hermetic seals  
[NASA-CASE-NPO-16423-1-CU] c 37 N87-21334
- Ion-beam nitriding of steels  
[NASA-CASE-LEW-14104-2] c 26 N88-14179
- Metal etching composition  
[NASA-CASE-MFS-29576-1] c 25 N91-15368
- Arc-textured high emittance radiator surfaces  
[NASA-CASE-LEW-14679-1] c 27 N91-25296
- Ceramic coatings on smooth surfaces  
[NASA-CASE-LEW-15164-1] c 27 N91-25298
- Process for bonding elastomers to metal  
[NASA-CASE-LAR-13645-1] c 27 N91-28424
- METAL VAPOR LASERS**
- High power metallic halide laser --- amplifying a copper chloride laser  
[NASA-CASE-NPO-14782-1] c 36 N82-28616
- Method and apparatus for convection control of metallic halide vapor density in a metallic halide laser  
[NASA-CASE-NPO-15021-1] c 36 N83-10417
- METAL VAPORS**
- Slug flow magnetohydrodynamic generator  
[NASA-CASE-XLE-02083] c 03 N69-39983
- Apparatus for making a metal slurry product Patent  
[NASA-CASE-XLE-00010] c 15 N70-33382
- Inert gas metallic vapor laser  
[NASA-CASE-NPO-13449-1] c 36 N75-32441
- Isotope separation using metallic vapor lasers  
[NASA-CASE-NPO-13550-1] c 36 N77-26477
- METAL WORKING**
- Electric arc welding Patent  
[NASA-CASE-XMF-00392] c 15 N70-34814
- Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114] c 15 N71-17650
- Protective device for machine and metalworking tools Patent  
[NASA-CASE-XLE-01092] c 15 N71-22797
- Portable milling tool Patent  
[NASA-CASE-XMF-03511] c 15 N71-22799
- Extrusion die for refractory metals Patent  
[NASA-CASE-XLE-06773] c 15 N71-23817
- Magnetomotive metal working device Patent  
[NASA-CASE-XMF-03793] c 15 N71-24833
- Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114-3] c 15 N71-24865
- Insert facing tool --- manually operated cutting tool for forming studs in honeycomb material  
[NASA-CASE-MFS-21485-1] c 37 N74-25968
- Apparatus for forming dished ion thruster grids  
[NASA-CASE-LEW-11694-2] c 37 N76-14461
- Holding fixture for a hot stamping press  
[NASA-CASE-GSC-12619-1] c 37 N84-12491
- METAL-METAL BONDING**
- Method of joining aluminum to stainless steel Patent  
[NASA-CASE-MFS-07369] c 15 N71-20443
- Honeycomb panel and method of making same Patent  
[NASA-CASE-XMF-01402] c 18 N71-21651
- Capillary flow weld-bonding  
[NASA-CASE-LAR-11726-1] c 37 N76-27568
- Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c 37 N81-19455
- Mechanical bonding of metal method  
[NASA-CASE-LEW-12941-1] c 26 N83-10170
- Joining lead wires to thin platinum alloy films  
[NASA-CASE-LEW-13934-1] c 35 N83-35338
- METALLIC GLASSES**
- Glass compositions with a high modulus of elasticity --- nontoxic glass fibers  
[NASA-CASE-HQN-10274-1] c 27 N82-29451
- High modulus invert analog glass compositions containing beryllia  
[NASA-CASE-HQN-10931-2] c 27 N82-29452
- METALLIZING**
- Multilevel metallization method for fabricating a metal oxide semiconductor device  
[NASA-CASE-MFS-23541-1] c 76 N79-14906
- Overlay metallic-cermet alloy coating systems  
[NASA-CASE-LEW-13639-1] c 26 N84-33555
- Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N86-32550
- Thin solar cell and lightweight array  
[NASA-CASE-LEW-14959-1] c 44 N91-27614
- Thermal treatment of silicon integrated circuit chips to prevent and heal voids in aluminum metallization  
[NASA-CASE-NPO-17678-1-CU] c 76 N91-28014
- METALLOGRAPHY**
- Method for etching copper Patent  
[NASA-CASE-XGS-06306] c 17 N71-16044
- METALLOSILOXANE POLYMER**
- Thiophenyl ester disiloxanes and trisiloxanes useful as lubricant fluids  
[NASA-CASE-MFS-22411-1] c 37 N74-21058
- METALLURGY**
- Induction furnace with perforated tungsten foil shielding Patent  
[NASA-CASE-XLE-04026] c 14 N71-23267
- Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c 26 N80-14229
- METALS**
- Transpiration cooled turbine blade manufactured from wires Patent  
[NASA-CASE-XLE-00020] c 15 N70-33226
- Self-lubricating fluoride metal composite materials Patent  
[NASA-CASE-XLE-08511] c 18 N71-23710
- Convoluting device for forming convolutions and the like Patent  
[NASA-CASE-XNP-05297] c 15 N71-23811
- Forming tool for ribbon or wire  
[NASA-CASE-XLA-05966] c 15 N72-12408
- Peen plating  
[NASA-CASE-GSC-11163-1] c 15 N73-32360
- Glass-to-metal seals comprising relatively high expansion metals  
[NASA-CASE-LEW-10698-1] c 37 N74-21063
- Scanning nozzle plating system --- for etching or plating metals on substrates without masking  
[NASA-CASE-NPO-11758-1] c 31 N74-23065
- Production of pure metals  
[NASA-CASE-LEW-10906-1] c 25 N74-30502
- Thermocouple tape --- developed from thermoelectrically different metals  
[NASA-CASE-LEW-11072-2] c 35 N76-15434
- Method of forming shrink-fit compression seal  
[NASA-CASE-LAR-11563-1] c 37 N77-23482
- Solar cells having integral collector grids  
[NASA-CASE-LEW-12819-1] c 44 N79-11467
- Metal phthalocyanine polymers  
[NASA-CASE-ARC-11405-1] c 27 N84-27884
- Insulation bonding test system  
[NASA-CASE-MFS-25862-1] c 27 N85-20126
- Device and method for frictionally testing materials for ignitability  
[NASA-CASE-MS-C-20622-1] c 25 N86-19413
- Metal phthalocyanine intermediates for the preparation of polymers  
[NASA-CASE-ARC-11405-2] c 27 N86-19455
- Method and apparatus for rebalancing a REDOX flow cell system  
[NASA-CASE-LEW-14127-1] c 33 N86-20680
- Thermocouple for heating and cooling of memory metal actuators  
[NASA-CASE-NPO-17068-1-CU] c 35 N88-29151
- Metal etching composition  
[NASA-CASE-MFS-29576-1] c 25 N91-15368
- Energy dissipator  
[NASA-CASE-MS-C-21555-1] c 37 N91-23492
- METASTABLE STATE**
- Stabilization of He<sub>2</sub>(a 3 Sigma u+ molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c 72 N79-13826
- Modulated voltage metastable ionization detector  
[NASA-CASE-ARC-11503-1] c 35 N85-34374
- METEORITE COLLISIONS**
- Pressurized panel  
[NASA-CASE-XLA-08916-2] c 14 N73-28487
- Method of and device for determining the characteristics and flux distribution of micrometeorites --- scanning puncture holes in sheet material with photoelectric cell  
[NASA-CASE-NPO-12127-1] c 91 N74-13130
- METEORITES**
- Method of making pressurized panel Patent  
[NASA-CASE-XLA-08916] c 15 N71-29018
- METEORITIC DAMAGE**
- Meteoroid sensing apparatus having a coincidence network connected to a pair of capacitors Patent  
[NASA-CASE-XLE-01246] c 14 N71-10797
- METEOROID HAZARDS**
- Meteoroid impact position locator aid for manned space station  
[NASA-CASE-LAR-10629-1] c 35 N75-33367
- METEOROID PROTECTION**
- Aerodynamic protection for space flight vehicles Patent  
[NASA-CASE-XNP-02507] c 31 N71-17679
- METEORIODS**
- Apparatus for photographing meteors  
[NASA-CASE-LAR-10226-1] c 14 N73-19419
- Meteoroid capture cell construction  
[NASA-CASE-MS-C-12423-1] c 91 N76-30131
- Thermally isolated deployable shield for spacecraft  
[NASA-CASE-MFS-28524-1] c 18 N91-25167
- METEOROLOGICAL BALLOONS**
- Meteorological balloon Patent  
[NASA-CASE-XMF-04163] c 02 N71-23007
- METHANE**
- Gas lubricant compositions Patent  
[NASA-CASE-XLE-00353] c 18 N70-39897
- Portable remote laser sensor for methane leak detection  
[NASA-CASE-NPO-15790-1] c 36 N85-21631
- Bis(4-(3,4-dimethylenepyrrolidyl)-phenyl) methane  
[NASA-CASE-LAR-13965-1-CU] c 23 N90-21118
- METHYL ALCOHOL**
- Supercritical multicomponent solvent coal extraction  
[NASA-CASE-NPO-15767-1] c 23 N84-16255
- METHYL COMPOUNDS**
- Process for producing tris (n-methylamino) methylsilane  
[NASA-CASE-MFS-25721-1] c 25 N85-21280
- Polymer of phosphonylmethyl-2,4- and -2,6-diamino benzene and polyfunctional monomer  
[NASA-CASE-ARC-11506-2] c 23 N86-32525
- The 1-((diorganooxyphosphonyl)-methyl)-2,4- and -2,6-diamido benzenes  
[NASA-CASE-ARC-11425-4] c 23 N90-20133
- Some 1-(diorganooxyphosphonyl)methyl-2,4- and -2,6-dinitro-benzenes  
[NASA-CASE-ARC-11425-3] c 23 N90-23475
- Methyl substituted polyimides containing carbonyl and ether connecting groups  
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- METHYLENE**
- Carboranyl-methylene-substituted phosphazenes and polymers thereof  
[NASA-CASE-ARC-11370-1] c 27 N84-22750
- Process for crosslinking methylene-containing aromatic polymers with ionizing radiation  
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- METRIC SPACE**
- General method of pattern classification using the two-domain theory  
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- MICHELSON INTERFEROMETERS**
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[NASA-CASE-NPO-10300] c 14 N71-17662
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- Interferometer mirror tilt correcting system  
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- MICROANALYSIS**
- Plural output optometric sample cell and analysis system  
[NASA-CASE-NPO-10233-1] c 74 N78-33913
- MICROBALANCES**
- Null-type vacuum microbalance Patent  
[NASA-CASE-XAC-00472] c 15 N70-40180
- Microbalance --- for measuring particle mass  
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- Method of forming frozen spheres in a force-free drop tower  
[NASA-CASE-NPO-14845-1] c 27 N82-28442  
Method and apparatus for producing microshells  
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- MICROBIOLOGY**  
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[NASA-CASE-LAR-10507-1] c 11 N72-25284  
Apparatus for microbiological sampling --- including automatic swabbing  
[NASA-CASE-LAR-11069-1] c 35 N75-12272  
Automatic inoculating apparatus --- includes movable carriage, drive motor, and swabbing motor  
[NASA-CASE-LAR-11074-1] c 51 N75-13502  
Automatic microbial transfer device  
[NASA-CASE-LAR-11354-1] c 35 N75-27330  
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[NASA-CASE-GSC-12039-1] c 51 N77-22794  
Electrochemical detection device --- for use in microbiology  
[NASA-CASE-LAR-11922-1] c 25 N79-24073  
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[NASA-CASE-LAR-12520-1] c 51 N81-28698
- MICROCHANNELS**  
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- MICROCRACKS**  
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[NASA-CASE-NPO-14192-1] c 39 N80-10507  
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- MICROELECTRONICS**  
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[NASA-CASE-XFR-07172] c 05 N71-27234  
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[NASA-CASE-XMS-02182] c 10 N71-28783  
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[NASA-CASE-XMF-05999] c 15 N71-29032  
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[NASA-CASE-XLA-09843] c 15 N72-27485  
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[NASA-CASE-LAR-10294-1] c 26 N72-28762  
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[NASA-CASE-GSC-11340-1] c 10 N72-33230  
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[NASA-CASE-NPO-13282] c 38 N78-17396  
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[NASA-CASE-NPO-14416-1] c 44 N81-14389  
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[NASA-CASE-LEW-13401-1] c 44 N82-29709  
Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
[NASA-CASE-MFS-15670-1] c 33 N82-33634  
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[NASA-CASE-MFS-256704-1] c 33 N84-22884  
Method for anisotropic etching in the manufacture of semiconductor devices  
[NASA-CASE-MSC-21631-1] c 75 N91-32947
- MICROFIBERS**  
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- MICROFILMS**  
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- MICROGRAVITY APPLICATIONS**  
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- MICROINSTRUMENTATION**  
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- MICROMETEORITES**  
Method of and device for determining the characteristics and flux distribution of micrometeorites --- scanning puncture holes in sheet material with photoelectric cell  
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- MICROMETEORITIDS**  
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[NASA-CASE-XLA-00495] c 14 N70-41332
- Force transducer Patent  
[NASA-CASE-XAC-01101] c 14 N70-41957  
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[NASA-CASE-XLA-00936] c 14 N71-14996  
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[NASA-CASE-XLA-05906] c 31 N71-16221  
Rotary bead dropper and selector for testing micrometeorite detectors Patent  
[NASA-CASE-XGS-03304] c 09 N71-22988  
Micrometeoroid penetration measuring device Patent  
[NASA-CASE-XLA-00941] c 14 N71-23240  
Fabric for micrometeoroid protection garment Patent  
[NASA-CASE-MSC-12109] c 18 N71-26285  
Micrometeoroid analyzer  
[NASA-CASE-ARC-10443-1] c 14 N73-20477  
Meteoroid detector  
[NASA-CASE-LAR-10483-1] c 14 N73-32327  
Deployable pressurized cell structure for a micrometeoroid detector  
[NASA-CASE-LAR-10295-1] c 35 N74-21062  
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[NASA-CASE-MFS-23008-1] c 35 N78-18390
- MICROMETERS**  
Apparatus for handling micron size range particulate material  
[NASA-CASE-NPO-10151] c 37 N78-17386
- MICROMINIATURIZATION**  
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[NASA-CASE-XLA-04556] c 14 N69-27484
- MICROORGANISMS**  
Bacteriostatic conformal coating and methods of application Patent  
[NASA-CASE-GSC-10007] c 18 N71-16046  
Vacuum probe surface sampler  
[NASA-CASE-LAR-10623-1] c 14 N73-30395  
Measurement of gas production of microorganisms --- using pressure sensors  
[NASA-CASE-LAR-11326-1] c 35 N75-33368  
Biocontamination and particulate detection system  
[NASA-CASE-NPO-13953-1] c 35 N79-28527  
Indirect microbial detection  
[NASA-CASE-LAR-12520-1] c 51 N81-28698  
Apparatus and process for microbial detection and enumeration  
[NASA-CASE-LAR-12709-1] c 35 N82-28604  
Production of butanol by fermentation in the presence of cocultures of clostridium  
[NASA-CASE-NPO-16203-1] c 23 N85-35227  
Regenerable biocide delivery unit  
[NASA-CASE-MSC-21763-1] c 51 N91-25570  
Biofilm monitoring coupon system and method of use  
[NASA-CASE-MSC-21585-1] c 51 N91-31755
- MICROPARTICLES**  
Micropacked column for a chromatographic system  
[NASA-CASE-XNP-04816] c 06 N69-39936  
Powder fed sheared dispersal particle generator  
[NASA-CASE-LAR-12785-1] c 37 N84-16561
- MICROPHONES**  
Audio signal processor Patent  
[NASA-CASE-MSC-12223-1] c 07 N71-26181  
Vibrophonocardiograph Patent  
[NASA-CASE-XFR-07172] c 05 N71-27234  
Wind tunnel microphone structure Patent  
[NASA-CASE-XNP-00250] c 11 N71-28779  
High-temperature microphone system --- for measuring pressure fluctuations in gases at high temperature  
[NASA-CASE-LAR-12375-1] c 32 N79-24203  
Adapter for mounting a microphone flush with the external surface of the skin of a pressurized aircraft  
[NASA-CASE-FRC-11072-1] c 05 N83-27975  
Carbon granule probe microphone for leak detection --- recovery boilers  
[NASA-CASE-NPO-16027-1] c 35 N85-21597  
Measurement of waves in flows across a surface  
[NASA-CASE-NPO-17479-1-CU] c 34 N91-13658  
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[NASA-CASE-LAR-14402-1-CU] c 74 N91-15874
- MICROPOROSITY**  
Microporous structure with layered interstitial surface treatment, and method and apparatus for preparation thereof  
[NASA-CASE-MSC-21487-1] c 25 N90-16887
- MICROPROCESSORS**  
Microcomputerized electric field meter diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c 35 N78-28411  
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[NASA-CASE-NPO-15295-1] c 60 N85-21992  
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[NASA-CASE-SSC-00006-1] c 35 N91-13691
- MICROSCOPES**  
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[NASA-CASE-LAR-10184] c 14 N72-22445  
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[NASA-CASE-ARC-10468-1] c 14 N73-33361
- Method of examining microcircuit patterns  
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[NASA-CASE-MFS-28485-1] c 35 N91-15519  
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[NASA-CASE-MFS-28420-1] c 37 N91-21545
- MICROSTRIP ANTENNAS**  
Multiple band circularly polarized microstrip antenna  
[NASA-CASE-MSC-18334-1] c 32 N80-32604  
Cavity-backed, micro-strip dipole antenna array  
[NASA-CASE-MSC-18606-1] c 32 N82-11336
- MICROSTRIP TRANSMISSION LINES**  
Thin conformal antenna array for microwave power conversions  
[NASA-CASE-NPO-13886-1] c 32 N78-24391  
Cavity-backed, micro-strip dipole antenna array  
[NASA-CASE-MSC-18606-1] c 32 N82-11336  
Stripline feed for a microstrip array of patch elements with teardrop shaped probes  
[NASA-CASE-NPO-17548-1-CU] c 32 N90-16104
- MICROSTRUCTURE**  
Method of producing refractory composites containing tantalum carbide, hafnium carbide, and hafnium boride Patent  
[NASA-CASE-XLE-03940] c 18 N71-26153  
Refractory metal base alloy composites  
[NASA-CASE-XLE-03940-2] c 17 N72-28536  
Diffusion welding --- heat treatment of nickel alloys following single step vacuum welding process  
[NASA-CASE-LEW-11388-2] c 37 N74-21055  
Method of determining bond quality of power transistors attached to substrates --- X ray inspection of junction microstructure  
[NASA-CASE-MFS-21931-1] c 37 N75-26372  
Preparation of monotectic alloys having a controlled microstructure by directional solidification under dopant-induced interface breakdown  
[NASA-CASE-MFS-23816-1] c 26 N80-23419  
Method of making an ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-2] c 52 N84-23095  
Ion beam sputter etching  
[NASA-CASE-LEW-13899-1] c 31 N87-21160  
High temperature electric arc furnace and method  
[NASA-CASE-MFS-28281-1] c 09 N90-23415  
Solidification processing of alloys using an applied electric field  
[NASA-CASE-MFS-26083-1-CU] c 26 N90-26940  
Variable magnification glancing incidence x ray telescope  
[NASA-CASE-MFS-28013-2] c 89 N91-14096
- MICROTHRUST**  
Annular slit colloid thruster Patent  
[NASA-CASE-GSC-10709-1] c 28 N71-25213  
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[NASA-CASE-GSC-10640-1] c 28 N72-18766
- MICROWAVE AMPLIFIERS**  
Temperature-compensating means for cavity resonator of amplifier Patent  
[NASA-CASE-XNP-00449] c 14 N70-35220  
Resonant isolator for maser amplifier  
[NASA-CASE-NPO-15201-1] c 36 N83-35350
- MICROWAVE ANTENNAS**  
Microwave power receiving antenna Patent  
[NASA-CASE-MFS-20333] c 09 N71-13486  
Low noise single aperture multimode monopulse antenna feed system Patent  
[NASA-CASE-XNP-01735] c 07 N71-22750  
Omnidirectional microwave spacecraft antenna Patent  
[NASA-CASE-XLA-03114] c 09 N71-22888  
Validation device for spacecraft checkout equipment Patent  
[NASA-CASE-XKS-10543] c 07 N71-26292  
Multi-purpose antenna employing dish reflector with plural coaxial horn feeds  
[NASA-CASE-NPO-11264] c 07 N72-25174  
Omnidirectional slot antenna for mounting on cylindrical space vehicle  
[NASA-CASE-LAR-10163-1] c 09 N72-25247  
Multiple reflection conical microwave antenna  
[NASA-CASE-NPO-11661] c 07 N73-14130  
Thin conformal antenna array for microwave power conversions  
[NASA-CASE-NPO-13886-1] c 32 N78-24391  
Cavity-backed, micro-strip dipole antenna array  
[NASA-CASE-MSC-18606-1] c 32 N82-11336
- MICROWAVE CIRCUITS**  
Quasi-optical microwave component Patent  
[NASA-CASE-ERC-10011] c 07 N71-29065  
Microwave integrated circuit for Josephson voltage standards  
[NASA-CASE-MFS-23845-1] c 33 N81-17348  
Laser activated MTOS microwave device  
[NASA-CASE-NPO-16112-1] c 33 N86-19516

- Universal nondestructive mm-wave integrated circuit test fixture  
[NASA-CASE-LEW-14746-1] c 33 N91-14552
- MICROWAVE COUPLING**  
Indexing microwave switch Patent  
[NASA-CASE-XNP-06507] c 09 N71-23548  
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[NASA-CASE-NPO-15890-1-CU] c 33 N85-29143
- MICROWAVE EQUIPMENT**  
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[NASA-CASE-ERC-10046] c 10 N71-18722  
Broadband microwave waveguide window Patent  
[NASA-CASE-XNP-08880] c 09 N71-24808  
Dual frequency microwave reflex feed  
[NASA-CASE-NPO-13091-1] c 09 N73-12214  
Resonant waveguide stark cell --- using microwave spectrometers  
[NASA-CASE-LAR-11352-1] c 33 N75-26245  
Refrigerated coaxial coupling --- for microwave equipment  
[NASA-CASE-NPO-13504-1] c 33 N75-30430  
Microwave dichroic plate  
[NASA-CASE-GSC-12171-1] c 33 N79-28416  
Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71:NPO-15494-2] c 35 N85-34373
- MICROWAVE FILTERS**  
High power microwave power divider Patent  
[NASA-CASE-NPO-11031] c 07 N71-33606  
High-Q bandpass resonators utilizing bandstop resonator pairs  
[NASA-CASE-GSC-10990-1] c 09 N73-26195
- MICROWAVE FREQUENCIES**  
Varactor high level mixer  
[NASA-CASE-XGS-02171] c 09 N69-24324  
Voltage tunable Gunn-type microwave generator Patent  
[NASA-CASE-XER-07894] c 09 N71-18721  
Composite antenna feed  
[NASA-CASE-GSC-11046-1] c 07 N73-28013
- MICROWAVE OSCILLATORS**  
Magnetically actuated tuning method for Gunn oscillators  
[NASA-CASE-NPO-12106] c 09 N73-15235  
Electron beam controller --- using magnetic field to refocus spent electron beam in microwave oscillator tube  
[NASA-CASE-LEW-11617-1] c 33 N74-10195  
Low noise cryogenic dielectric resonator oscillator  
[NASA-CASE-NPO-17157-1-CU] c 33 N88-26596
- MICROWAVE RADIOMETERS**  
Method and means for providing an absolute power measurement capability Patent  
[NASA-CASE-ERC-11020] c 14 N71-26774  
Electromagnetic power absorber  
[NASA-CASE-NPO-13830-1] c 32 N80-14281  
Microwave limb sounder --- measuring trace gases in the upper atmosphere  
[NASA-CASE-NPO-14544-1] c 46 N82-12685  
CAT altitude avoidance system  
[NASA-CASE-NPO-15351-1] c 06 N83-10040  
System for indicating fuel-efficient aircraft altitude  
[NASA-CASE-NPO-15351-2] c 06 N84-34443  
Microwave temperature profiler for clear air turbulence prediction  
[NASA-CASE-NPO-18115-1-CU] c 47 N91-23662
- MICROWAVE REFLECTOMETERS**  
Reflectometer for receiver input impedance match measurement Patent  
[NASA-CASE-XNP-10843] c 07 N71-11267  
Microwave flaw detector Patent  
[NASA-CASE-ARC-10009-1] c 15 N71-17822
- MICROWAVE RESONANCE**  
Dual resonant cavity absorption cell Patent  
[NASA-CASE-LAR-10305] c 14 N71-26137
- MICROWAVE SCATTERING**  
Almond test body --- for microwave anechoic chambers  
[NASA-CASE-LAR-13747-1-CU] c 32 N89-28672
- MICROWAVE SENSORS**  
Method and apparatus for sensor fusion  
[NASA-CASE-MSC-21334-1] c 32 N91-25317
- MICROWAVE SWITCHING**  
Gyator type circuit Patent  
[NASA-CASE-XAC-10608-1] c 09 N71-12517  
Microwave switching power divider --- antenna feeds  
[NASA-CASE-GSC-12420-1] c 33 N82-16340
- MICROWAVE TRANSMISSION**  
Frequency translating phase conjugation circuit for active retrodirective antenna array --- microwave transmission  
[NASA-CASE-NPO-14536-1] c 32 N81-14185  
Waveguide cooling system  
[NASA-CASE-NPO-15401-1] c 32 N83-27085
- MICROWAVE TUBES**  
Electrostatic collector for charged particles  
[NASA-CASE-LEW-11192-1] c 09 N73-13208
- MICROWAVES**  
Parametric microwave noise generator Patent  
[NASA-CASE-XER-11019] c 09 N71-23598  
Method and apparatus for optical modulating a light signal Patent  
[NASA-CASE-GSC-10216-1] c 23 N71-26722  
Waveguide mixer  
[NASA-CASE-ERC-10179] c 07 N72-20141  
Microwave power transmission system wherein level of transmitted power is controlled by reflections from receiver  
[NASA-CASE-MFS-21470-1] c 44 N74-19870  
Wide power range microwave feedback controller  
[NASA-CASE-GSC-12146-1] c 33 N78-32340  
Microwave power transmission beam safety system  
[NASA-CASE-NPO-14224-1] c 33 N80-18287  
Doppler radar having phase modulation of both transmitted and reflected return signals  
[NASA-CASE-MSC-18675-1] c 32 N84-22820  
Beam forming network  
[NASA-CASE-NPO-15743-1] c 32 N85-29118  
Precision tunable resonant microwave cavity  
[NASA-CASE-LEW-13935-1] c 33 N87-21234  
Microwave field effect transistor  
[NASA-CASE-GSC-12442-2] c 33 N90-20282
- MIDAIR COLLISIONS**  
Apparatus for aiding a pilot in avoiding a midair collision between aircraft  
[NASA-CASE-LAR-10717-1] c 21 N73-30641
- MILLIMETER WAVES**  
Millimeter wave antenna system Patent Application  
[NASA-CASE-GSC-10949-1] c 07 N71-28965  
Millimeter wave pumped parametric amplifier  
[NASA-CASE-GSC-11617-1] c 33 N74-32660  
Monolithic mm-wave phase shifter using optically activated superconducting switches  
[NASA-CASE-LEW-14878-1] c 74 N91-13996  
Millimeter-wave monolithic diode-grid frequency multiplier  
[NASA-CASE-NPO-17258-1-CU] c 33 N91-14551  
Universal nondestructive mm-wave integrated circuit test fixture  
[NASA-CASE-LEW-14746-1] c 33 N91-14552
- MILLING (MACHINING)**  
Apparatus for machining geometric cones Patent  
[NASA-CASE-XMS-04292] c 15 N71-22722  
Method and tool for machining a transverse slot about a bore  
[NASA-CASE-LAR-11855-1] c 37 N81-14319  
Method for milling and drilling glass  
[NASA-CASE-GSC-12636-1] c 31 N83-27058
- MILLING MACHINES**  
Electro-optical alignment control system Patent  
[NASA-CASE-XMF-00908] c 14 N70-40238  
Portable milling tool Patent  
[NASA-CASE-XMF-03511] c 15 N71-22799  
Grinding arrangement for ball nose milling cutters  
[NASA-CASE-LAR-10450-1] c 37 N74-27905
- MIMD (COMPUTERS)**  
Special purpose parallel computer architecture for real-time control and simulation in robotic applications  
[NASA-CASE-NPO-17629-1-CU] c 60 N90-27268
- MINERAL DEPOSITS**  
Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c 43 N81-26509
- MINERAL METABOLISM**  
Method and system for in vivo measurement of bone tissue using a two level energy source  
[NASA-CASE-MSC-14276-1] c 52 N77-14737
- MINES (EXCAVATIONS)**  
Mining volume measurement system  
[NASA-CASE-LAR-13519-1] c 35 N88-23963
- MINIATURE ELECTRONIC EQUIPMENT**  
Miniature stress transducer Patent  
[NASA-CASE-XNP-02983] c 14 N71-21091  
Transducer circuit and catheter transducer Patent  
[NASA-CASE-ARC-10132-1] c 09 N71-24597  
Solid state television camera system Patent  
[NASA-CASE-XMF-06092] c 07 N71-24612  
Miniature ingestible telemeter devices to measure deep-body temperature  
[NASA-CASE-ARC-10583-1] c 52 N76-29894  
Miniature biaxial strain transducer  
[NASA-CASE-LAR-11648-1] c 35 N77-14407  
Miniature electrooptical air flow sensor  
[NASA-CASE-LAR-13065-1] c 35 N85-20295
- MINIATURIZATION**  
Miniature vibration isolator Patent  
[NASA-CASE-XLA-01019] c 15 N70-40156  
Counter and shift register Patent  
[NASA-CASE-XNP-01753] c 08 N71-22897  
Miniature carbon dioxide sensor and methods  
[NASA-CASE-MSC-13332-1] c 14 N72-21408
- Magnetometer with a miniature transducer and automatic scanning  
[NASA-CASE-LAR-11617-2] c 35 N78-32397  
Miniature cyclotron resonance ion source using small permanent magnet  
[NASA-CASE-NPO-14324-1] c 72 N80-27163  
Thumb-actuated two-axis controller  
[NASA-CASE-ARC-11372-1] c 08 N86-27288  
Miniature traveling wave tube and method of making  
[NASA-CASE-LEW-14520-1] c 33 N90-22724  
Reflection oscillators employing series resonant crystals  
[NASA-CASE-GSC-13173-1] c 33 N90-23635  
Miniaturization of flight deflection measurement system  
[NASA-CASE-LAR-13628-1] c 35 N90-23707  
Method of making single crystal fibers  
[NASA-CASE-LEW-14921-1] c 24 N91-13502  
Laser velocimeter for near-surface measurements  
[NASA-CASE-ARC-11917-1] c 35 N91-15520
- MINING**  
Coal-shale interface detection system  
[NASA-CASE-MFS-23720-2] c 43 N80-14423  
Coal-shale interface detector  
[NASA-CASE-MFS-23720-1] c 43 N80-23711  
Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c 43 N81-26509  
Longwall shearer tracking system  
[NASA-CASE-MFS-25717-1] c 35 N84-33768  
Shuttle car loading system  
[NASA-CASE-NPO-15949-1] c 85 N85-34722
- MINORITY CARRIERS**  
Method of increasing minority carrier lifetime in silicon web or the like  
[NASA-CASE-NPO-15530-1] c 76 N83-35888
- MIRRORS**  
Pneumatic mirror support system  
[NASA-CASE-XLA-03271] c 11 N69-24321  
Electromagnetic mirror drive system  
[NASA-CASE-XLA-03724] c 14 N69-27461  
Interferometer servo system Patent  
[NASA-CASE-NPO-10300] c 14 N71-17662  
Method and apparatus for stabilizing a gaseous optical maser Patent  
[NASA-CASE-XGS-03644] c 16 N71-18614  
Optical mirror apparatus Patent  
[NASA-CASE-ERC-10001] c 23 N71-24868  
Adjustable mount for a trihedral mirror Patent  
[NASA-CASE-XNP-08907] c 23 N71-29123  
Optical range finder having nonoverlapping complete images  
[NASA-CASE-MSC-12105-1] c 14 N72-21409  
Optical system support apparatus  
[NASA-CASE-XER-07896-2] c 23 N72-22673  
Strain gauge ambiguity sensor for segmented mirror active optical system  
[NASA-CASE-MFS-20506-1] c 35 N75-12273  
Method for manufacturing mirrors in zero gravity environment  
[NASA-CASE-MSC-12611-1] c 12 N76-15189  
Method of and means for testing a glancing-incidence, mirror system of an X-ray telescope  
[NASA-CASE-MFS-22409-2] c 74 N78-15880  
Interferometer mirror tilt correcting system  
[NASA-CASE-NPO-13687-1] c 35 N78-18391  
Anastigmatic three-mirror telescope  
[NASA-CASE-MFS-23675-1] c 89 N79-10969  
Dual aperture multispectral Schmidt objective  
[NASA-CASE-GSC-12756-1] c 74 N84-23248  
Spectral slicing X-ray telescope with variable magnification  
[NASA-CASE-MFS-25942-1] c 74 N86-20124  
Wide-angle flat field telescope  
[NASA-CASE-GSC-12825-1] c 74 N86-28732  
Compensation for primary reflector wavefront error  
[NASA-CASE-NPO-16869-1CU] c 74 N86-33138  
Self-clamping arc light reflector for welding torch  
[NASA-CASE-MFS-29207-1] c 74 N87-25843  
Motion detection, novelty filtering, and target tracking using an interferometric technique with a GaAs phase conjugate mirror  
[NASA-CASE-NPO-17784-1-CU] c 74 N91-13998  
Wide acceptance angle, high concentration ratio, optical collector  
[NASA-CASE-MFS-28295-1] c 74 N91-13999  
Water window imaging x ray microscope  
[NASA-CASE-MFS-28485-1] c 35 N91-15519  
Quantum well, beam deflecting surface emitting lasers  
[NASA-CASE-NPO-18243-1-CU] c 36 N91-32489  
Method and apparatus for phasing segmented mirror arrays  
[NASA-CASE-NPO-18095-1-CU] c 74 N91-32923
- MIS (SEMICONDUCTORS)**  
Photocapacitive image converter  
[NASA-CASE-LAR-12513-1] c 44 N82-32841

## MISALIGNMENT

Alignment positioning mechanism  
[NASA-CASE-MSC-21502-1] c 37 N91-21543

**MISSILE CONTROL**  
Turnstile slot antenna  
[NASA-CASE-GSC-11428-1] c 32 N74-20864  
Rotatable non-circular forebody flow controller  
[NASA-CASE-LAR-14212-1-CU] c 05 N91-31140

**MISSILE LAUNCHERS**  
Missile launch release system Patent  
[NASA-CASE-XMF-03198] c 30 N70-40353  
Optical monitor panel Patent  
[NASA-CASE-XKS-03509] c 14 N71-23175  
Controlled release device Patent  
[NASA-CASE-XKS-03338] c 15 N71-24043

**MISSILE STRUCTURES**  
Missile rolling tail brake torque system --- simulating bearing friction on canard controlled missiles  
[NASA-CASE-LAR-12751-1] c 15 N84-16231

**MISSILES**  
Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c 15 N78-32168  
Fire protection covering for small diameter missiles  
[NASA-CASE-ARC-11104-1] c 15 N79-26100

**MITOSIS**  
Process for control of cell division  
[NASA-CASE-LAR-10773-3] c 51 N77-25769

**MIXERS**  
Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c 07 N78-18067  
Planar oscillatory stirring apparatus  
[NASA-CASE-MFS-26002-1-CU] c 35 N86-26598  
Remotely controllable mixing system  
[NASA-CASE-MFS-28153-1] c 31 N86-32589  
Dual-fuel, dual-mode rocket engine  
[NASA-CASE-LAR-13773-1] c 20 N90-19298  
Drop deployment system for crystal growth apparatus  
[NASA-CASE-MFS-28422-1] c 29 N91-17250

**MIXING**  
Remotely controllable mixing system  
[NASA-CASE-MFS-28153-1] c 31 N86-32589  
Cellular thermosetting fluorodiepoxide polymers  
[NASA-CASE-GSC-13008-2] c 27 N90-16949  
Apparatus for mixing solutions in low gravity environments  
[NASA-CASE-MFS-26047-1] c 29 N90-21209

**MIXING CIRCUITS**  
Varactor high level mixer  
[NASA-CASE-XGS-02171] c 09 N69-24324  
Waveguide mixer  
[NASA-CASE-ERC-10179] c 07 N72-20141

**MIXTURES**  
Low gravity phase separator  
[NASA-CASE-MSC-14773-1] c 35 N78-12390  
Process for producing tris (n-methylamino) methylsilane  
[NASA-CASE-MFS-25721-1] c 25 N85-21280  
Preparing composite materials from matrices of processable aromatic polyimide thermoplastic blends  
[NASA-CASE-LAR-14107-1] c 24 N91-25200  
Ethynyl terminated imidothioethers and resins therefrom  
[NASA-CASE-LAR-13910-2-CU] c 27 N91-31307

**MOBILE COMMUNICATION SYSTEMS**  
Ground plane interference elimination by passive element  
[NASA-CASE-NPO-16632-1-CU] c 32 N87-15390

**MOBILITY**  
Traveling wave solid state amplifier utilizing a semiconductor with negative differential mobility  
[NASA-CASE-HQN-10069] c 33 N75-27251  
Mobile sampler for use in acquiring samples of terrestrial atmospheric gases  
[NASA-CASE-NPO-15220-1] c 45 N83-25217  
Mobile remote manipulator vehicle system  
[NASA-CASE-LAR-13393-1] c 54 N87-29118  
Controlled method of reducing electrophoretic mobility of various substances  
[NASA-CASE-MFS-26049-1-NP] c 25 N89-28603

**MODE TRANSFORMERS**  
Transient-compensated SCR inverter  
[NASA-CASE-XLA-08507] c 09 N69-39984  
Dual waveguide mode source having control means for adjusting the relative amplitude of two modes Patent  
[NASA-CASE-XNP-03134] c 07 N71-10676  
Direct current transformer  
[NASA-CASE-MFS-23659-1] c 33 N79-17133

**MODEMS**  
Charge storage diode modulators and demodulators  
[NASA-CASE-NPO-10189-1] c 33 N77-21314

**MODES (STANDING WAVES)**  
Acoustic levitation methods and apparatus  
[NASA-CASE-NPO-15562-1] c 71 N82-27086

**MODULATION**  
Demodulator for carrier transducers  
[NASA-CASE-NUC-10107-1] c 33 N74-17930

Faraday rotation measurement method and apparatus  
[NASA-CASE-NPO-14839-1] c 35 N82-15381

Air modulation apparatus  
[NASA-CASE-LEW-13524-1] c 07 N84-33410

Modulated voltage metastable ionization detector  
[NASA-CASE-ARC-11503-1] c 35 N85-34374

Doppler radar with multiphase modulation of transmitted and reflected signal  
[NASA-CASE-MSC-18808-1] c 32 N90-20280

**MODULATORS**  
Retrodirective optical system  
[NASA-CASE-XGS-04480] c 16 N69-27491  
Retrodirective modulator Patent  
[NASA-CASE-GSC-10062] c 14 N71-15605  
Laser calibrator Patent  
[NASA-CASE-XLA-03410] c 16 N71-25914  
Full wave modulator-demodulator amplifier apparatus --- for generating rectified output signal  
[NASA-CASE-FRC-10072-1] c 33 N74-14939  
Charge storage diode modulators and demodulators  
[NASA-CASE-NPO-10189-1] c 33 N77-21314  
Coherently pulsed laser source  
[NASA-CASE-NPO-15111-1] c 36 N82-29589  
Navigation system and method  
[NASA-CASE-GSC-12508-1] c 04 N84-22546  
Solar energy modulator  
[NASA-CASE-NPO-15388-1] c 44 N84-28203  
Non-mechanical optical path switching and its application to dual beam spectroscopy including gas filter correlation radiometry  
[NASA-CASE-LAR-14588-1-CU] c 74 N91-23889

**MODULES**  
Modular encoder  
[NASA-CASE-NPO-10629] c 08 N72-18184  
Solar cell module assembly jig  
[NASA-CASE-XGS-00829-1] c 44 N79-19447  
Method of fabricating a photovoltaic module of a substantially transparent construction  
[NASA-CASE-NPO-14303-1] c 44 N80-18550  
Shuttle-launch triangular space station  
[NASA-CASE-MSC-20676-1] c 18 N86-24729  
Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-2] c 18 N89-25266  
Bus programmable slave module  
[NASA-CASE-MSC-21387-1] c 61 N90-16411

**MODULUS OF ELASTICITY**  
Glass compositions with a high modulus of elasticity --- nontoxic glass fibers  
[NASA-CASE-HQN-10274-1] c 27 N82-29451  
High modulus invert analog glass compositions containing beryllia  
[NASA-CASE-HQN-10931-2] c 27 N82-29452  
Non-toxic invert analog glass compositions of high modulus  
[NASA-CASE-HQN-10328-2] c 27 N82-29454  
High modulus rare earth and beryllium containing silicate glass compositions --- for glass reinforcing fibers  
[NASA-CASE-HQN-10595-1] c 27 N82-29455  
High resistance and raised modulus carbon fibers  
[NASA-TM-76884] c 24 N85-25436

**MOIRE EFFECTS**  
Three dimensional moire pattern alignment  
[NASA-CASE-MSC-21416-1] c 74 N91-32922

**MOISTURE**  
Gas purged dry box glove Patent  
[NASA-CASE-XLE-02531] c 05 N71-23080  
Trace water sensor  
[NASA-CASE-NPO-15722-1] c 35 N85-29212

**MOISTURE CONTENT**  
Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA-CASE-NPO-15494-1] c 35 N82-25484  
Moisture content and gas sampling device  
[NASA-CASE-MSC-18866-1] c 35 N85-29213  
Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71:NPO-15494-2] c 35 N85-34373  
Wet atmospheric generation apparatus  
[NASA-CASE-MFS-28177-1] c 35 N91-21496

**MOISTURE METERS**  
Method of evaluating moisture barrier properties of encapsulating materials Patent  
[NASA-CASE-NPO-10051] c 18 N71-24934  
Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA-CASE-NPO-15494-1] c 35 N82-25484  
Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71:NPO-15494-2] c 35 N85-34373

**MOISTURE RESISTANCE**  
Process for improving moisture resistance of epoxy resins by addition of chromium ions  
[NASA-CASE-LAR-13226-1] c 27 N85-34282

## MOLDING MATERIALS

Method for molding compounds Patent  
[NASA-CASE-XLA-01091] c 15 N71-10672

Method of making a molded connector Patent  
[NASA-CASE-XMF-03498] c 15 N71-15986

Hydraulic casting of liquid polymers Patent  
[NASA-CASE-XNP-07659] c 06 N71-22975

Hydroforming techniques using epoxy molds Patent  
[NASA-CASE-XLE-05641-1] c 15 N71-26346

Molding process for imidazopyrrolone polymers  
[NASA-CASE-LAR-10547-1] c 31 N74-13177

Evacuated displacement compression molding  
[NASA-CASE-LAR-10782-1] c 31 N74-14133

Molded composite pyrogen igniter for rocket motors --- solid propellant ignition  
[NASA-CASE-LAR-12018-1] c 20 N78-24275

Method of making a rocket nozzle  
[NASA-CASE-XMF-06884-1] c 20 N79-21123

**MOLDS**  
Apparatus for making curved reflectors Patent  
[NASA-CASE-XLE-08917-2] c 15 N71-24836  
Technique of duplicating fragile core  
[NASA-CASE-XLA-07829] c 15 N72-16329  
Evacuated displacement compression molding  
[NASA-CASE-LAR-10782-1] c 31 N74-14133  
Molding apparatus --- for thermosetting plastic compositions  
[NASA-CASE-LAR-10489-2] c 31 N74-32920  
Evacuated, displacement compression mold --- of tubular bodies from thermosetting plastics  
[NASA-CASE-LAR-10782-2] c 31 N75-13111  
Method of making an apertured casting --- using duplicate mold  
[NASA-CASE-LEW-11169-1] c 37 N76-23570

**MOLECULAR BEAM EPITAXY**  
Fabrication of nanometer single crystal metallic CoSi<sub>2</sub> structures on Si  
[NASA-CASE-NPO-17736-1-CU] c 76 N90-17455  
MBE growth technology for high quality strained III-V layers  
[NASA-CASE-NPO-17723-1-CU] c 76 N90-26685  
Growth of III-V films by control of MBE growth front stoichiometry  
[NASA-CASE-NPO-17724-1-CU] c 76 N90-27517  
Method of forming three-dimensional semiconductor structures  
[NASA-CASE-NPO-17835-1-CU] c 76 N90-27518  
Method of fabricating germanium and gallium arsenide devices  
[NASA-CASE-GSC-13265-1] c 76 N91-14066

**MOLECULAR BEAMS**  
Molecular beam velocity selector Patent  
[NASA-CASE-XLE-01533] c 11 N71-10777  
Sputtering holes with ion beamlets  
[NASA-CASE-LEW-11646-1] c 20 N74-31269

**MOLECULAR CHAINS**  
Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c 27 N81-15104  
Ladder polymers for use as high temperature stable resins or coatings  
[NASA-CASE-LEW-14203-1] c 27 N91-15402

**MOLECULAR GASES**  
Compact hydrogenator  
[NASA-CASE-NPO-11682-1] c 35 N74-15127

**MOLECULAR PUMPS**  
Omni-directional anisotropic molecular trap Patent  
[NASA-CASE-XGS-00783] c 30 N71-17788  
Rotating shaft seal Patent  
[NASA-CASE-XNP-02862-1] c 15 N71-26294

**MOLECULAR RELAXATION**  
Double-beam optical method and apparatus for measuring thermal diffusivity and other molecular dynamic processes in utilizing the transient thermal lens effect  
[NASA-CASE-NPO-14657-1] c 74 N81-17887

**MOLECULAR ROTATION**  
Diatomic infrared gasdynamic laser --- for producing different wavelengths  
[NASA-CASE-ARC-10370-1] c 36 N75-31426

**MOLECULAR SPECTRA**  
Correlation spectrometer having high resolution and multiplexing capability  
[NASA-CASE-NPO-15558-1] c 35 N84-34705

**MOLECULAR SPECTROSCOPY**  
Dual resonant cavity absorption cell Patent  
[NASA-CASE-LAR-10305] c 14 N71-26137

**MOLECULAR STRUCTURE**  
Light weight polymer matrix composite material  
[NASA-CASE-LEW-14734-1] c 24 N89-23623  
Aromatic polyimides containing a dimethylsilane-linked dianhydride  
[NASA-CASE-LAR-14198-1] c 27 N90-26956

**MOLECULAR WEIGHT**  
Process of end-capping a polyimide system  
[NASA-CASE-LAR-13135-1] c 27 N86-19456

- Process for crosslinking and extending conjugated diene-containing polymers  
[NASA-CASE-LAR-13452-1] c 27 N87-22848
- Polyimidazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14145-1] c 27 N90-26954
- Aromatic polyimides containing a dimethylsilane-linked dianhydride  
[NASA-CASE-LAR-14198-1] c 27 N90-26956
- Novel polyimide molding powder, coating, adhesive, and matrix resin  
[NASA-CASE-LAR-14163-1] c 27 N91-13559
- Poly(1,3,4-oxadiazoles) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14427-1] c 23 N91-23237
- Addition polyimides with enhanced processability  
[NASA-CASE-LEW-15043-1] c 27 N91-32230
- MOLECULES**
- Stabilization of He<sub>2</sub>(a 3 Sigma u+) molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c 72 N79-13826
- Controlled method of reducing electrophoretic mobility of various substances  
[NASA-CASE-MFS-26049-1-NP] c 25 N89-28603
- Molecules with enhanced electronic polarizabilities based on defect-like states in conjugated polymers  
[NASA-CASE-NPO-17633-1-CU] c 27 N91-27372
- MOLTEN SALT ELECTROLYTES**
- Combined electrolysis device and fuel cell and method of operation Patent  
[NASA-CASE-XLE-01645] c 03 N71-20904
- Zinc-halide battery with molten electrolyte  
[NASA-CASE-NPO-11961-1] c 44 N76-18643
- MOLTEN SALTS**
- Molten salt pyrolysis of latex --- synthetic hydrocarbon fuel production using the Guayule shrub  
[NASA-CASE-NPO-14315-1] c 27 N81-17261
- Organic cathode for a secondary battery  
[NASA-CASE-NPO-17604-1-CU] c 33 N91-14536
- MOLYBDENUM**
- Thermocouples of molybdenum and iridium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12174-2] c 35 N79-14346
- MOLYBDENUM CARBIDES**
- Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent  
[NASA-CASE-XLA-00302] c 15 N71-16077
- MOLYBDENUM DISULFIDES**
- Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c 28 N81-14103
- MOMENTS OF INERTIA**
- Moment of inertia test fixture Patent  
[NASA-CASE-XGS-01023] c 14 N71-22992
- MOMENTUM**
- Attitude control and damping system for spacecraft Patent  
[NASA-CASE-XLA-02551] c 21 N71-21708
- Particle detection apparatus including a ballistic pendulum Patent  
[NASA-CASE-XMS-04201] c 14 N71-22990
- MOMENTUM TRANSFER**
- Fluid-loop reaction system  
[NASA-CASE-NPO-17204-1-CU] c 34 N91-25380
- MONATOMIC GASES**
- Atomic hydrogen storage --- cryotrapping and magnetic field strength  
[NASA-CASE-LEW-12081-2] c 28 N80-20402
- MONITORS**
- Leak detector Patent  
[NASA-CASE-LAR-10323-1] c 12 N71-17573
- Reduced bandwidth video communication system utilizing sampling techniques Patent  
[NASA-CASE-XNP-02791] c 07 N71-23026
- Optical monitor panel Patent  
[NASA-CASE-XKS-03509] c 14 N71-23175
- Peak polarity selector Patent  
[NASA-CASE-FRC-10010] c 10 N71-24862
- Ripple indicator  
[NASA-CASE-KSC-10162] c 09 N72-11225
- Droplet monitoring probe  
[NASA-CASE-NPO-10985] c 14 N73-20478
- Automatic lightning detection and photographic system  
[NASA-CASE-KSC-10728-1] c 14 N73-32319
- Method and apparatus for optically monitoring the angular position of a rotating mirror  
[NASA-CASE-GSC-11353-1] c 74 N74-21304
- Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c 33 N79-11315
- Apparatus including a plurality of spaced transformers for locating short circuits in cables  
[NASA-CASE-KSC-10899-1] c 33 N79-18193
- Indirect microbial detection  
[NASA-CASE-LAR-12520-1] c 51 N81-28698
- Scanning seismic intrusion detection method and apparatus --- monitoring unwanted subterranean entry and departure  
[NASA-CASE-ARC-11317-1] c 35 N83-34272
- Focal plane array optical proximity sensor  
[NASA-CASE-NPO-15155-1] c 74 N85-22139
- Retinally stabilized differential resolution television display  
[NASA-CASE-NPO-15432-1] c 32 N85-29117
- Optical distance measuring instrument  
[NASA-CASE-GSC-12761-1] c 74 N86-32266
- Laser schlieren crystal monitor  
[NASA-CASE-MFS-28060-1] c 76 N87-25862
- Welding monitoring system  
[NASA-CASE-MFS-29177-1] c 37 N88-14362
- Radio Frequency (RF) strain monitor  
[NASA-CASE-LAR-13705-1] c 39 N88-25011
- Television monitor field shifter and an opto-electronic method for obtaining a stereo image of optimal depth resolution and reduced depth distortion on a single screen  
[NASA-CASE-NPO-17249-1-CU] c 32 N89-28676
- Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13734-1-CU] c 09 N90-20096
- Noninvasive method and apparatus for monitoring the cure of polymeric materials  
[NASA-CASE-LAR-13465-1] c 27 N90-23544
- Passive fetal monitoring sensor  
[NASA-CASE-LAR-14088-1] c 35 N91-13686
- Method and apparatus for characterizing reflected ultrasonic pulses  
[NASA-CASE-LAR-13966-1] c 71 N91-27914
- Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13854-1-CU] c 04 N91-31120
- Biofilm monitoring coupon system and method of use  
[NASA-CASE-MSC-21585-1] c 51 N91-31755
- MONOCHROMATIC RADIATION**
- Continuous plasma light source  
[NASA-CASE-XNP-04167-2] c 25 N72-24753
- Laser extensometer  
[NASA-CASE-MFS-19259-1] c 36 N78-14380
- Multiprism collimator  
[NASA-CASE-GSC-12608-1] c 74 N83-10900
- MONOCHROMATORS**
- Analytical photoionization mass spectrometer with an argon gas filter between the light source and monochromator Patent  
[NASA-CASE-LAR-10180-1] c 06 N71-13461
- Color television system  
[NASA-CASE-MSC-12146-1] c 07 N72-17109
- MONOMERS**
- Pressure transducer --- using a monomeric charge transfer complex sensor  
[NASA-CASE-NPO-11150] c 35 N78-17359
- Bifunctional monomers having terminal oxime and cyano or amidine groups  
[NASA-CASE-ARC-11253-3] c 27 N81-24256
- Cross-linked polyvinyl alcohol and method of making same  
[NASA-CASE-LEW-13101-2] c 23 N81-29160
- Preparation of crosslinked 1,2,4-oxadiazole polymer  
[NASA-CASE-ARC-11253-2] c 27 N82-24338
- Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c 27 N83-31854
- Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-1] c 27 N84-27885
- Process for preparing highly optically transparent/colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N86-31727
- Ethynyl terminated ester oligomers and polymers therefrom  
[NASA-CASE-LAR-13118-2] c 27 N87-16907
- Substituted 1,1,1-Triaryl-2,2,2-Trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-1] c 23 N88-26404
- Polyphenylquinoxalines containing alkylendioxo groups  
[NASA-CASE-LAR-13601-1-CU] c 27 N89-14337
- New Condensation polyimides containing 1,1,1-triaryl-2,2,2-trifluoroethane structures  
[NASA-CASE-LEW-14346-1] c 23 N90-19300
- Addition polyimides with enhanced processability  
[NASA-CASE-LEW-15043-1] c 27 N91-32230
- MONOPOLE ANTENNAS**
- Antenna system using parasitic elements and two driven elements at 90 deg angle fed 180 deg out of phase Patent  
[NASA-CASE-XLA-00414] c 07 N70-38200
- Flexible blade antenna Patent  
[NASA-CASE-MSC-12101] c 09 N71-18720
- MONOPROPELLANTS**
- Ignition system for monopropellant combustion devices Patent  
[NASA-CASE-XNP-00249] c 28 N70-38249
- Ignition means for monopropellant Patent  
[NASA-CASE-XNP-00876] c 28 N70-41311
- Low thrust monopropellant engine  
[NASA-CASE-GSC-12194-2] c 20 N82-18314
- MONOPULSE ANTENNAS**
- Monopulse system with an electronic scanner  
[NASA-CASE-XGS-05582] c 07 N69-27460
- Low noise single aperture multimode monopulse antenna feed system Patent  
[NASA-CASE-XNP-01735] c 07 N71-22750
- Electronic scanning of 2-channel monopulse patterns Patent  
[NASA-CASE-GSC-10299-1] c 09 N71-24804
- Switchable beamwidth monopulse method and system  
[NASA-CASE-GSC-11924-1] c 33 N76-27472
- MONOPULSE RADAR**
- Polarization diversity monopulse tracking receiver Patent  
[NASA-CASE-XGS-03501] c 09 N71-20864
- Monopulse tracking system Patent  
[NASA-CASE-XGS-01155] c 10 N71-21483
- MONOSTABLE MULTIVIBRATORS**
- Resettable monostable pulse generator Patent  
[NASA-CASE-GSC-11139] c 09 N71-27016
- Monostable multivibrator with complementary NOR gates Patent  
[NASA-CASE-MSC-13492-1] c 10 N71-28860
- MORPHOLOGY**
- Method for growth of crystals by pressure reduction of supercritical or subcritical solution  
[NASA-CASE-NPO-15772-1] c 76 N85-29800
- MOSSBAUER EFFECT**
- Mossbauer spectrometer radiation detector  
[NASA-CASE-LAR-11155-1] c 35 N74-15091
- Method and apparatus for vibration analysis utilizing the Mossbauer effect  
[NASA-CASE-XMF-05882] c 35 N75-27329
- MOTION**
- Quick attach mechanism Patent  
[NASA-CASE-XFR-05421] c 15 N71-22994
- MOTION PICTURES**
- Real time moving scene holographic camera system  
[NASA-CASE-MFS-21087-1] c 35 N74-17153
- Real time, large volume, moving scene holographic camera system  
[NASA-CASE-MFS-22537-1] c 35 N75-27328
- MOTION SIMULATORS**
- Kinesthetic control simulator --- for pilot training  
[NASA-CASE-LAR-10276-1] c 09 N75-15662
- Helmet weight simulator  
[NASA-CASE-LAR-12320-1] c 54 N81-27806
- MOTION STABILITY**
- Hydraulic drive mechanism Patent  
[NASA-CASE-XMS-03252] c 15 N71-10658
- MOTORS**
- Nonmagnetic thermal motor for a magnetometer  
[NASA-CASE-XAR-03786] c 09 N69-21313
- System for maintaining a motor at a predetermined speed utilizing digital feedback means Patent  
[NASA-CASE-XMF-06892] c 09 N71-24805
- Mechanical thermal motor  
[NASA-CASE-MFS-23062-1] c 37 N77-12402
- Redundant motor drive system  
[NASA-CASE-MFS-23777-1] c 37 N80-32716
- MOUNTING**
- Thermobulb mount Patent  
[NASA-CASE-NPO-10158] c 33 N71-16356
- Mount for thermal control system Patent  
[NASA-CASE-NPO-10138] c 33 N71-16357
- Clamping assembly for inertial components Patent  
[NASA-CASE-XMS-02184] c 15 N71-20813
- Circuit board package with wedge shaped covers  
[NASA-CASE-MFS-21919-1] c 10 N73-25243
- Lubricated journal bearing  
[NASA-CASE-LEW-11076-3] c 37 N75-30562
- Translatory shock absorber for attitude sensors  
[NASA-CASE-MFS-22905-1] c 19 N76-22284
- Deformable bearing seat  
[NASA-CASE-LEW-12527-1] c 37 N77-32500
- Impact absorbing blade mounts for variable pitch blades  
[NASA-CASE-LEW-12313-1] c 37 N78-10468
- Attaching of strain gages to substrates  
[NASA-CASE-FRC-10093-1] c 35 N80-20560
- Adapter for mounting a microphone flush with the external surface of the skin of a pressurized aircraft  
[NASA-CASE-FRC-11072-1] c 05 N83-29795
- Inflatable device for installing strain gage bridges  
[NASA-CASE-FRC-11068-1] c 35 N84-12443
- Clamp-mount device  
[NASA-CASE-MFS-25510-1] c 37 N84-16560

Model mount system for testing flutter  
[NASA-CASE-LAR-12950-1] c 09 N84-34448  
Adjustable mount for electro-optic transducers in an evacuated cryogenic system  
[NASA-CASE-LAR-13100-1] c 37 N87-23982  
Airfoil flutter model suspension system  
[NASA-CASE-LAR-13522-1-SB] c 09 N87-25334  
Almond test body --- for microwave anechoic chambers  
[NASA-CASE-LAR-13747-1-CU] c 32 N89-28672  
Thermal compensating mount  
[NASA-CASE-LAR-14207-1] c 35 N91-14590  
Post clamp  
[NASA-CASE-LEW-14862-1] c 37 N91-14617  
Alignment positioning mechanism  
[NASA-CASE-MS-C-21502-1] c 37 N91-21543  
Double face sealing device  
[NASA-CASE-MFS-28521-1] c 37 N91-26542  
Removable hand hold  
[NASA-CASE-LEW-15196-1] c 37 N91-26543  
Flexible thermal apparatus for mounting of thermoelectric cooler  
[NASA-CASE-NPO-17806-1-CU] c 31 N91-27385  
Flush mounting of thin film sensors  
[NASA-CASE-LAR-14446-1] c 31 N91-28454  
Biofilm monitoring coupon system and method of use  
[NASA-CASE-MS-C-21585-1] c 51 N91-31755

**MOVING TARGET INDICATORS**  
Automatic vehicle location system  
[NASA-CASE-NPO-11850-1] c 32 N74-12912  
Interferometric locating system  
[NASA-CASE-NPO-14173-1] c 04 N80-32359

**MULTIBEAM ANTENNAS**  
Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-2] c 32 N83-31918  
Switched steerable multiple beam antenna system  
[NASA-CASE-MS-C-20873-1-SB] c 32 N89-11961

**MULTICHANNEL COMMUNICATION**  
Tape guidance system and apparatus for the provision thereof Patent  
[NASA-CASE-XNP-09453] c 08 N71-19420  
Phase quadrature-plural channel data transmission system Patent  
[NASA-CASE-XAC-06302] c 08 N71-19763  
Receiver with an improved phase lock loop in a multichannel telemetry system with suppressed carrier  
[NASA-CASE-NPO-11593-1] c 07 N73-28012  
Miniature multichannel biotelemetry system  
[NASA-CASE-NPO-13065-1] c 52 N74-26625  
Medical subject monitoring systems --- multichannel monitoring systems  
[NASA-CASE-MS-C-14180-1] c 52 N76-14757  
Multi-channel rotating optical interface for data transmission  
[NASA-CASE-NPO-14066-1] c 74 N79-34011

**MULTILAYER INSULATION**  
Sealing member and combination thereof and method of producing said sealing member Patent  
[NASA-CASE-XMS-01625] c 15 N71-23022  
Panelized high performance multilayer insulation Patent  
[NASA-CASE-MFS-14023] c 33 N71-25351  
Electrical apparatus for detection of thermal decomposition of insulation Patent  
[NASA-CASE-XMF-03968] c 14 N71-27186  
Method of making an insulation foil  
[NASA-CASE-LEW-11484-1] c 24 N75-33181  
Multiwall thermal protection system  
[NASA-CASE-LAR-12620-1] c 24 N82-32417  
Composite flexible blanket insulation  
[NASA-CASE-NPO-11907-1-NP] c 24 N91-31236

**MULTIPACTOR DISCHARGES**  
High power RF coaxial switch  
[NASA-CASE-NPO-14229-1] c 33 N80-18285

**MULTIPATH TRANSMISSION**  
Anti-multipath digital signal detector  
[NASA-CASE-LAR-11827-1] c 32 N77-10392  
Large volume multiple-path nuclear pumped laser  
[NASA-CASE-LAR-12592-1] c 36 N82-13415

**MULTIPLE BEAM INTERVAL SCANNERS**  
Tracking antenna system Patent  
[NASA-CASE-GSC-10553-1] c 07 N71-19854  
Variable beamwidth antenna --- with multiple beam, variable feed system  
[NASA-CASE-GSC-11862-1] c 32 N76-18295

**MULTIPLE DOCKING ADAPTERS**  
Expanding center probe and drogue Patent  
[NASA-CASE-XMS-03613] c 31 N71-16346

**MULTIPLE OUTPUT PROGRAMS**  
Multi-computer multiple data path hardware exchange system  
[NASA-CASE-NPO-13422-1] c 60 N76-14818

**MULTIPLEXING**

Doppler frequency spread correction device for multiplex transmissions  
[NASA-CASE-XGS-02749] c 07 N69-39978  
Elimination of frequency shift in a multiplex communication system Patent  
[NASA-CASE-XNP-01306] c 07 N71-20814  
Satellite interface synchronization system  
[NASA-CASE-GSC-10390-1] c 07 N72-11149  
Method and apparatus for data compression by a decreasing slope threshold test  
[NASA-CASE-NPO-10769] c 08 N72-11171  
Data multiplexer using tree switching configuration  
[NASA-CASE-NPO-11333] c 08 N72-22162  
Television multiplexing system  
[NASA-CASE-KSC-10654-1] c 07 N73-30115  
Asynchronous, multiplexing, single line transmission and recovery data system --- for satellite use  
[NASA-CASE-NPO-13321-1] c 32 N75-26195  
Correlation type phase detector --- with time correlation integrator for frequency multiplexed signals  
[NASA-CASE-GSC-11744-1] c 33 N75-26243  
System for producing chroma signals  
[NASA-CASE-MS-C-14683-1] c 74 N77-18893  
Fiber optic multiplex optical transmission system  
[NASA-CASE-KSC-11047-1] c 74 N78-14889  
System for a displaying at a remote station data generated at a central station and for powering the remote station from the central station  
[NASA-CASE-GSC-12411-1] c 33 N81-14221  
Multifrequency broadband polarized horn antenna  
[NASA-CASE-NPO-14588-1] c 32 N81-25278  
High-speed multiplexing of keyboard data inputs  
[NASA-CASE-NPO-14554-1] c 60 N81-27814  
Multi-channel temperature measurement amplification system --- solar heating systems  
[NASA-CASE-MFS-23775-1] c 44 N82-16474  
Integrating IR detector imaging systems  
[NASA-CASE-NPO-15805-1] c 74 N84-28590  
Correlation spectrometer having high resolution and multiplexing capability  
[NASA-CASE-NPO-15558-1] c 35 N84-34705  
Laser Doppler velocimeter multiplexer interface for simultaneous measured events  
[NASA-CASE-ARC-11536-1] c 33 N89-14384  
Fault tolerant hypercube computer system architecture  
[NASA-CASE-NPO-16859-1-CU] c 60 N90-21527  
Adaptive data acquisition multiplexing system and method  
[NASA-CASE-MS-C-21170-1] c 17 N91-14371

**MULTIPLIERS**  
Pulse-width modulation multiplier Patent  
[NASA-CASE-XER-09213] c 07 N71-12390  
Variable pulse width multiplier Patent  
[NASA-CASE-XLA-02850] c 09 N71-20447  
Capacitance multiplier and filter synthesizing network  
[NASA-CASE-NPO-11948-1] c 33 N74-32712  
Regulated high efficiency, lightweight capacitor-diode multiplier dc to dc converter  
[NASA-CASE-LEW-12791-1] c 33 N78-32341  
VLSI architecture for a Reed-Solomon decoder  
[NASA-CASE-NPO-17897-1-CU] c 33 N90-27040

**MULTIPROCESSING (COMPUTERS)**  
Fault tolerant hypercube computer system architecture  
[NASA-CASE-NPO-16859-1-CU] c 60 N90-21527  
A universal computer control system for motors  
[NASA-CASE-NPO-17134-1-CU] c 33 N91-31528

**MULTISPECTRAL BAND SCANNERS**  
Optical process for producing classification maps from multispectral data  
[NASA-CASE-MS-C-14472-1] c 43 N77-10584  
Interactive color display for multispectral imagery using correlation clustering  
[NASA-CASE-MS-C-16253-1] c 32 N79-20297  
Multispectral scanner optical system  
[NASA-CASE-MS-C-18255-1] c 74 N80-33210  
Medical diagnosis system and method with multispectral imaging --- depth of burns and optical density of the skin  
[NASA-CASE-NPO-14402-1] c 52 N81-27783  
Dual aperture multispectral Schmidt objective  
[NASA-CASE-GSC-12756-1] c 74 N84-23248

**MULTISPECTRAL LINEAR ARRAYS**  
Time delay and integration detectors using charge transfer devices  
[NASA-CASE-GSC-12324-1] c 33 N81-33403  
Multispectral linear array multiband selection device  
[NASA-CASE-GSC-12911-1] c 74 N86-29650

**MULTISPECTRAL PHOTOGRAPHY**  
Multispectral imaging system  
[NASA-CASE-MS-C-12404-1] c 23 N73-13661  
Optical process for producing classification maps from multispectral data  
[NASA-CASE-MS-C-14472-1] c 43 N77-10584  
Multispectral imaging and analysis system --- using charge coupled devices and linear arrays  
[NASA-CASE-NPO-13691-1] c 43 N79-17288

Interactive color display for multispectral imagery using correlation clustering  
[NASA-CASE-MS-C-16253-1] c 32 N79-20297

**MULTISPECTRAL TRACKING TELESCOPES**  
Multispectral glancing incidence X-ray telescope  
[NASA-CASE-MFS-28013-1] c 89 N86-22459

**MULTISTAGE ROCKET VEHICLES**  
Recoverable rocket vehicle Patent  
[NASA-CASE-XMF-00389] c 31 N70-34176  
Steerable solid propellant rocket motor Patent  
[NASA-CASE-XNP-00234] c 28 N70-38645  
Multi-mission module Patent  
[NASA-CASE-XMF-01543] c 31 N71-17730  
Single action separation mechanism Patent  
[NASA-CASE-XLA-00188] c 15 N71-22874  
Lateral displacement system for separated rocket stages Patent  
[NASA-CASE-XLA-04804] c 31 N71-23008  
Frangible link  
[NASA-CASE-MS-C-11849-1] c 15 N72-22488  
Three stage rocket vehicle with parallel staging  
[NASA-CASE-MS-C-25878-1] c 18 N84-27787

**MULTISTATIC RADAR**  
Method for providing a polarization filter for processing synthetic aperture radar image data  
[NASA-CASE-NPO-17904-1-CU] c 32 N91-13594

**MULTIVIBRATORS**  
Ultra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit Patent  
[NASA-CASE-XGS-00381] c 09 N70-34819  
Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00458] c 09 N70-38604  
Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00131] c 09 N70-38995  
High efficiency multivibrator Patent  
[NASA-CASE-XAC-00942] c 10 N71-16042  
A dc-coupled noninverting one-shot Patent  
[NASA-CASE-XNP-09450] c 10 N71-18723  
Multivibrator circuit with means to prevent false triggering from supply voltage fluctuations Patent  
[NASA-CASE-ARC-10137-1] c 09 N71-28468  
Digital demodulator  
[NASA-CASE-LAR-12659-1] c 33 N82-26570

**MUSCLES**  
Subminiature insertable force transducer --- including a strain gage to measure forces in muscles  
[NASA-CASE-NPO-13423-1] c 33 N75-31329  
Multifunctional transducer  
[NASA-CASE-NPO-14329-1] c 52 N81-20703

**MUSCULAR FUNCTION**  
Miniature muscle displacement transducer  
[NASA-CASE-NPO-13519-1] c 33 N76-19338  
Simultaneous muscle force and displacement transducer  
[NASA-CASE-NPO-14212-1] c 52 N80-27072

**MUSCULOSKELETAL SYSTEM**  
Skeletal stressing method and apparatus Patent  
[NASA-CASE-ARC-10100-1] c 05 N71-24738

**MYOCARDIUM**  
Myocardium wall thickness transducer and measuring method  
[NASA-CASE-NPO-13644-1] c 52 N76-29895  
Simultaneous muscle force and displacement transducer  
[NASA-CASE-NPO-14212-1] c 52 N80-27072

**MYOPIA**  
Visual accommodation trainer-tester  
[NASA-CASE-ARC-11426-1] c 09 N84-12193

**N****N-TYPE SEMICONDUCTORS**

Complementary DMOS-VMOS integrated circuit structure  
[NASA-CASE-GSC-12190-1] c 33 N79-12321

**NACELLES**  
Inlet deflector for jet engines Patent  
[NASA-CASE-XLE-00388] c 28 N70-34788  
Nacelle afterbody for jet engines Patent  
[NASA-CASE-XLA-10450] c 28 N71-21493  
Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-2] c 07 N78-18066  
Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-3] c 07 N79-14096

**NAPHTHALENE**  
Multi-colored layers for visualizing aerodynamic flow effects  
[NASA-CASE-LAR-13742-1] c 02 N91-16999

**NARROWBAND**  
Small particle selective emitter  
[NASA-CASE-LEW-14731-1] c 44 N91-13802  
Integrated filter and detector array for spectral imaging  
[NASA-CASE-NPO-18317-1-CU] c 74 N91-32926

## NASA PROGRAMS

- Retractable environmental seal  
[NASA-CASE-MFS-23646-1] c 37 N79-22474
- NAVIGATION**  
Thumb-actuated two-axis controller  
[NASA-CASE-ARC-11372-1] c 08 N86-27288
- NAVIGATION AIDS**  
Magnetic heading reference  
[NASA-CASE-LAR-11387-1] c 04 N76-20114  
Ruler for making navigational computations  
[NASA-CASE-XNP-01458] c 04 N78-17031  
System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-FRC-11005-1] c 06 N82-16075  
Magnetic heading reference  
[NASA-CASE-LAR-12638-1] c 04 N84-14132  
Low-frequency radio navigation system  
[NASA-CASE-NPO-15264-1] c 04 N84-27713
- NAVIGATION INSTRUMENTS**  
Sun angle calculator  
[NASA-CASE-MS-12617-1] c 35 N76-29552
- NAVIGATION SATELLITES**  
Satellite aided vehicle avoidance system Patent  
[NASA-CASE-ERC-10090] c 21 N71-24948  
System and method for measuring ocean surface currents at locations remote from land masses using synthetic aperture radar  
[NASA-CASE-NPO-17937-1-CU] c 43 N91-21621
- NEAR INFRARED RADIATION**  
Collimator of multiple plates with axially aligned identical random arrays of apertures  
[NASA-CASE-MFS-20546-2] c 14 N73-30389
- NEGATIVE FEEDBACK**  
Complementary regenerative switch Patent  
[NASA-CASE-XGS-02751] c 09 N71-23015  
Solid-state current transformer  
[NASA-CASE-MFS-22560-1] c 33 N77-14335
- NEGATIVE IONS**  
Generation of intense negative ion beams  
[NASA-CASE-NPO-16061-1-CU] c 72 N87-21660
- NEODYMIUM LASERS**  
Length controlled stabilized mode-lock ND:YAG laser  
[NASA-CASE-GSC-11571-1] c 36 N77-25499
- NERVES**  
Implantable electrical device  
[NASA-CASE-GSC-12560-1] c 52 N82-29863
- NETWORK SYNTHESIS**  
Electromagnetic polarization systems and methods Patent  
[NASA-CASE-GSC-10021-1] c 09 N71-24595  
High speed phase detector Patent  
[NASA-CASE-XNP-01306-2] c 09 N71-24596  
Tuned analog network  
[NASA-CASE-GSC-12650-1] c 33 N84-14421
- NEURAL NETS**  
Hybrid analog-digital associative neural network  
[NASA-CASE-NPO-17058-1-CU] c 62 N87-25803  
Analog hardware for delta-backpropagation neural networks  
[NASA-CASE-NPO-17564-1-CU] c 32 N90-16974  
Neural network with dynamically adaptable neurons  
[NASA-CASE-NPO-17803-1-CU] c 62 N90-27385  
Method of up-front load balancing for local memory parallel processors  
[NASA-CASE-MS-21348-1] c 62 N91-14769  
High-gain AlGaAs/GaAs double heterojunction Darlington phototransistors for optical neural networks  
[NASA-CASE-NPO-18101-1-CU] c 74 N91-25841  
An accelerated training method for back propagation neural networks  
[NASA-CASE-MS-21625-1] c 53 N91-28730  
Analog hardware for learning neural networks  
[NASA-CASE-NPO-17664-1-CU] c 62 N91-32852
- NEUROGLIA**  
Percutaneous connector device  
[NASA-CASE-KSC-10849-1] c 52 N77-14738
- NEUROLOGY**  
Implantable electrical device  
[NASA-CASE-GSC-12560-1] c 52 N82-29863
- NEURONS**  
Analog hardware for delta-backpropagation neural networks  
[NASA-CASE-NPO-17564-1-CU] c 32 N90-16974
- NEUTRALIZERS**  
Method and apparatus for neutralizing potentials induced on spacecraft surfaces  
[NASA-CASE-GSC-11963-1] c 33 N77-10429  
Method of neutralizing the corrosive surface of amine-cured epoxy resins  
[NASA-CASE-GSC-12686-1] c 27 N83-34039
- NEUTRON EMISSION**  
Deuterium pass through target --- neutron emitting target  
[NASA-CASE-LEW-11866-1] c 72 N76-15860

## NICKEL

- Process for producing dispersion strengthened nickel with aluminum Patent  
[NASA-CASE-XLE-06969] c 17 N71-24142  
Selective nickel deposition  
[NASA-CASE-LEW-10965-1] c 15 N72-25452  
Brazing alloy composition  
[NASA-CASE-XMF-06053] c 26 N75-27126  
Method of making reinforced composite structure  
[NASA-CASE-LEW-12619-1] c 24 N77-19171  
Directionally solidified eutectic gamma-gamma nickel-base superalloys  
[NASA-CASE-LEW-12905-1] c 26 N78-18183  
Method of making a light weight battery plaque  
[NASA-CASE-LEW-13349-1] c 26 N84-22734  
Metal (2) 4,4',4'' phthalocyanine tetraamines as curing agents for epoxy resins  
[NASA-CASE-ARC-11424-1] c 27 N85-34281  
Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267
- NICKEL ALLOYS**  
High temperature nickel-base alloy Patent  
[NASA-CASE-XLE-00151] c 17 N70-33283  
Nickel-base alloy Patent  
[NASA-CASE-XLE-00283] c 17 N70-36616  
Nickel-base alloy containing Mo-W-Al-Cr-Ta-Zr-C-Nb-B Patent  
[NASA-CASE-XLE-02082] c 17 N71-16026  
Nickel base alloy  
[NASA-CASE-LEW-10874-1] c 17 N72-22535  
Diffusion welding --- heat treatment of nickel alloys following single step vacuum welding process  
[NASA-CASE-LEW-11388-2] c 37 N74-21055  
Method of heat treating age-hardenable alloys  
[NASA-CASE-XNP-01311] c 26 N75-29236  
Zirconium modified nickel-copper alloy  
[NASA-CASE-LEW-12245-1] c 26 N77-20201  
Directionally solidified eutectic gamma plus beta nickel-base superalloys  
[NASA-CASE-LEW-12906-1] c 26 N77-32279  
Nickel base alloy --- for gas turbine engine stator vanes  
[NASA-CASE-LEW-12270-1] c 26 N77-32280  
Nical ternary alloy having improved cyclic oxidation resistance  
[NASA-CASE-LEW-13339-1] c 26 N82-31505  
Nickel base coating alloy  
[NASA-CASE-LEW-13834-1] c 26 N87-14482  
Heat treatment for superalloy  
[NASA-CASE-LEW-14262-1] c 26 N87-28647
- NICKEL CADMIUM BATTERIES**  
Heat flow calorimeter --- measures output of Ni-Cd batteries  
[NASA-CASE-GSC-11434-1] c 34 N74-27859  
Method and apparatus for conditioning of nickel-cadmium batteries  
[NASA-CASE-MFS-23270-1] c 44 N78-25531
- NICKEL COATINGS**  
Nickel aluminide coated low alloy stainless steel  
[NASA-CASE-LEW-11267-1] c 17 N73-32414  
Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c 44 N78-19599
- NICKEL COMPOUNDS**  
Didymium hydrate additive to nickel hydroxide electrodes Patent  
[NASA-CASE-XGS-03505] c 03 N71-10608  
Brazing alloy  
[NASA-CASE-XNP-03878] c 26 N75-27127
- NICKEL HYDROGEN BATTERIES**  
Oxygen recombination in individual pressure vessel nickel-hydrogen batteries  
[NASA-CASE-LEW-13822-1] c 44 N86-25874
- NICKEL PLATE**  
Plating nickel on aluminum castings Patent  
[NASA-CASE-XNP-04148] c 17 N71-24830
- NICKEL ZINC BATTERIES**  
Additive for zinc electrodes --- electric automobiles  
[NASA-CASE-LEW-13286-1] c 33 N84-14422
- NIObIUM**  
Trialkyl-dihalotantalum and niobium compounds Patent  
[NASA-CASE-XNP-04023] c 06 N71-28808
- NIObIUM COMPOUNDS**  
Method of producing high T(subc) superconducting NBN films  
[NASA-CASE-NPO-16681-1-CU] c 76 N88-24543  
Edge geometry superconducting tunnel junctions utilizing an NbN/MgO/NbN thin film structure  
[NASA-CASE-NPO-17812-1-CU] c 76 N90-17456
- NITINOL ALLOYS**  
Coupling device with improved thermal interface  
[NASA-CASE-GSC-13251-1] c 37 N91-28582  
Device for removing foreign objects from anatomic organs  
[NASA-CASE-GSC-13306-1] c 52 N91-28727

## NITRAMINE PROPELLANTS

- Nitramine propellants --- gun propellant burning rate  
[NASA-CASE-NPO-14103-1] c 28 N78-31255
- NITRATION**  
The 1-((diorganooxyphosphonyl)-methyl)-2,4- and -2,6-diamido benzenes  
[NASA-CASE-ARC-11425-4] c 23 N90-20133  
Some 1-((diorganooxyphosphonyl)methyl)-2,4- and -2,6-dinitro-benzenes  
[NASA-CASE-ARC-11425-3] c 23 N90-23475
- NITRIC OXIDE**  
Reduction of nitric oxide emissions from a combustor  
[NASA-CASE-ARC-10814-2] c 07 N80-26298
- NITRIDES**  
Refractory coatings and method of producing the same  
[NASA-CASE-LEW-13169-1] c 26 N82-29415  
Method of producing high T(subc) superconducting NBN films  
[NASA-CASE-NPO-16681-1-CU] c 76 N88-24543  
Edge geometry superconducting tunnel junctions utilizing an NbN/MgO/NbN thin film structure  
[NASA-CASE-NPO-17812-1-CU] c 76 N90-17456
- NITRIDING**  
Ion-beam nitriding of steels  
[NASA-CASE-LEW-14104-2] c 26 N88-14179
- NITRILES**  
Intumescent paint containing nitrile rubber  
[NASA-CASE-ARC-10196-1] c 18 N73-13562  
Trimerization of aromatic nitriles  
[NASA-CASE-LEW-12053-1] c 27 N78-15276  
Process for preparing phthalocyanine polymer from imide containing bisphthalonitrile  
[NASA-CASE-ARC-11511-2] c 27 N87-21112
- NITRO COMPOUNDS**  
Intumescent coatings containing 4,4'-dinitrosulfanilide  
[NASA-CASE-ARC-11042-1] c 24 N78-14096
- NITROAMINES**  
Intumescent paints Patent  
[NASA-CASE-ARC-10099-1] c 18 N71-15469  
Polymeric vehicles as carriers for sulfonic acid salt of nitrosubstituted aromatic amines  
[NASA-CASE-ARC-10325] c 06 N72-25147
- NITROGEN**  
III-V photocathode with nitrogen doping for increased quantum efficiency  
[NASA-CASE-NPO-12134-1] c 33 N76-31409
- NITROGEN COMPOUNDS**  
Method for preparing addition type polyimide prepregs  
[NASA-CASE-LAR-12054-2] c 27 N81-14078
- NITROGEN OXIDES**  
Combustion engine --- for air pollution control  
[NASA-CASE-NPO-13671-1] c 37 N77-31497  
Combustor --- low nitrogen oxide formation  
[NASA-CASE-NPO-13958-1] c 25 N79-11151
- NITROGEN TETROXIDE**  
Procedure and apparatus for determination of water in nitrogen tetroxide  
[NASA-CASE-NPO-10234] c 06 N72-17094
- NITROGENATION**  
Poly(1,3,4-oxadiazoles) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14427-1] c 23 N91-23237
- NITROGUANIDINE**  
Hydrazinium nitroformate propellant stabilized with nitroguanidine  
[NASA-CASE-NPO-12000] c 27 N72-25699
- NOBLE METALS**  
GaAs Schottky barrier photo-responsive device and method of fabrication  
[NASA-CASE-GSC-12816-1] c 76 N86-20150  
Process for making a noble metal on tin oxide catalyst  
[NASA-CASE-LAR-13741-1-SB] c 25 N90-20180
- NODES (STANDING WAVES)**  
System for controlled acoustic rotation of objects  
[NASA-CASE-NPO-15522-1] c 71 N83-32516
- NOISE GENERATORS**  
Pseudo-noise test set for communication system evaluation --- test signals  
[NASA-CASE-MFS-22671-1] c 35 N75-21582  
Method of and means for testing a tape record/playback system  
[NASA-CASE-MFS-22671-2] c 35 N77-17426
- NOISE METERS**  
Instrumentation for measurement of aircraft noise and sonic boom  
[NASA-CASE-LAR-11173-1] c 35 N75-19614  
Differential sound level meter  
[NASA-CASE-LAR-12106-1] c 71 N78-14867  
Ride quality meter  
[NASA-CASE-LAR-12882-1] c 35 N84-12445
- NOISE REDUCTION**  
Jet aircraft configuration Patent  
[NASA-CASE-XLA-00087] c 02 N70-33332

Cassegrainian antenna subreflector flange for suppressing ground noise Patent  
 [NASA-CASE-XNP-00683] c 09 N70-35425  
 Device for suppressing sound and heat produced by high-velocity exhaust jets Patent  
 [NASA-CASE-XMF-01813] c 28 N70-41582  
 Variable time constant smoothing circuit Patent  
 [NASA-CASE-XGS-01983] c 10 N70-41964  
 Digital telemetry system Patent  
 [NASA-CASE-XGS-01812] c 07 N71-23001  
 Audio signal processor Patent  
 [NASA-CASE-MS-12223-1] c 07 N71-26181  
 Variable frequency nuclear magnetic resonance spectrometer Patent  
 [NASA-CASE-XNP-09830] c 14 N71-26266  
 Method and apparatus for eliminating coherent noise in a coherent energy imaging system without destroying spatial coherence  
 [NASA-CASE-GSC-11133-1] c 23 N72-11568  
 Audio system with means for reducing noise effects  
 [NASA-CASE-NPO-11631] c 10 N73-12244  
 Gas turbine exhaust nozzle --- for noise reduction  
 [NASA-CASE-LEW-11569-1] c 07 N74-15453  
 Totally confined explosive welding --- apparatus to reduce noise level and protect personnel during explosive bonding  
 [NASA-CASE-LAR-10941-1] c 37 N74-21057  
 Jet exhaust noise suppressor  
 [NASA-CASE-LEW-11286-1] c 07 N74-27490  
 Supersonic fan blading --- noise reduction in turbofan engines  
 [NASA-CASE-LEW-11402-1] c 07 N74-28226  
 Variably positioned guide vanes for aerodynamic choking  
 [NASA-CASE-LAR-10642-1] c 07 N74-31270  
 Noise suppressor --- for turbofan engine by incorporating annular acoustically porous elements in exhaust and inlet ducts  
 [NASA-CASE-LAR-11141-1] c 07 N74-32418  
 Abating exhaust noises in jet engines  
 [NASA-CASE-ARC-10712-1] c 07 N74-33218  
 Television noise reduction device  
 [NASA-CASE-MS-12607-1] c 32 N75-21485  
 Cascade plug nozzle --- for jet noise reduction  
 [NASA-CASE-LAR-11674-1] c 07 N76-18117  
 Apparatus for reducing aerodynamic noise in a wind tunnel  
 [NASA-CASE-MFS-23099-1] c 09 N76-23273  
 Optical noise suppression device and method --- laser light exposing film  
 [NASA-CASE-MS-12640-1] c 74 N76-31998  
 Variable thrust nozzle for quiet turbofan engine and method of operating same  
 [NASA-CASE-LEW-12317-1] c 07 N78-17055  
 Magneto-optic detection system with noise cancellation  
 [NASA-CASE-NPO-11954-1] c 35 N78-29421  
 Totally confined explosive welding  
 [NASA-CASE-LAR-10941-2] c 37 N79-13364  
 Sound-suppressing structure with thermal relief  
 [NASA-CASE-LEW-12658-1] c 71 N79-14871  
 Acoustically swept rotor --- helicopter noise reduction  
 [NASA-CASE-ARC-11106-1] c 05 N80-14107  
 Support assembly for cryogenically coolable low-noise choke waveguide  
 [NASA-CASE-NPO-14253-1] c 32 N80-32605  
 Curved centerline air intake for a gas turbine engine  
 [NASA-CASE-LEW-13201-1] c 07 N81-14999  
 Multiple pure tone elimination strut assembly --- air breathing engines  
 [NASA-CASE-FRC-11062-1] c 71 N82-16800  
 Sound shield  
 [NASA-CASE-LAR-12883-1] c 71 N83-17235  
 Noise suppressor for turbo fan jet engines  
 [NASA-CASE-ARC-10812-1] c 07 N83-33884  
 Apparatus and method for jet noise suppression  
 [NASA-CASE-LAR-11903-2] c 71 N84-14873  
 Phase sensitive guidance sensor for wire-following vehicles  
 [NASA-CASE-NPO-15341-1] c 35 N84-33769  
 Comparator with noise suppression  
 [NASA-CASE-LAR-13151-1] c 33 N87-21235  
 Low-noise nozzle valve  
 [NASA-CASE-MFS-28383-1] c 34 N91-14563  
 Sound attenuation apparatus  
 [NASA-CASE-LAR-13968-1] c 71 N91-27913

**NOISE TEMPERATURE**  
 Method and means for providing an absolute power measurement capability Patent  
 [NASA-CASE-ERC-11020] c 14 N71-26774

**NOISE THRESHOLD**  
 Frequency modulation demodulator threshold extension device Patent  
 [NASA-CASE-MS-12165-1] c 07 N71-33696

**NONADIABATIC CONDITIONS**  
 Direct heating surface combustor  
 [NASA-CASE-LEW-11877-1] c 34 N78-27357

**NONDESTRUCTIVE TESTS**  
 Determination of spot weld quality Patent  
 [NASA-CASE-XNP-02588] c 15 N71-18613  
 Space simulator Patent  
 [NASA-CASE-NPO-10141] c 11 N71-24964  
 Apparatus for inspecting microfilm Patent  
 [NASA-CASE-MFS-20240] c 14 N71-26788  
 Dye penetrant for surfaces subsequently contacted by liquid oxygen Patent  
 [NASA-CASE-XMF-02221] c 18 N71-27170  
 Method and device for detecting voids in low density material Patent  
 [NASA-CASE-MFS-20044] c 14 N71-28993  
 Holographic system for nondestructive testing  
 [NASA-CASE-MFS-21704-1] c 35 N75-25124  
 Method and apparatus for nondestructive testing of pressure vessels  
 [NASA-CASE-NPO-12142-1] c 38 N76-28563  
 Non-destructive method for applying and removing instrumentation on helicopter rotor blades  
 [NASA-CASE-LAR-11201-1] c 35 N78-24515  
 Hybrid holographic non-destructive test system  
 [NASA-CASE-MFS-23114-1] c 38 N78-32447  
 Insulation bonding test system  
 [NASA-CASE-MFS-25862-1] c 27 N85-20126  
 Method and apparatus for mapping the distribution of chemical elements in an extended medium  
 [NASA-CASE-GSC-12808-1] c 25 N85-21279  
 Ultrasonic angle beam standard reflector --- ultrasonic nondestructive inspection  
 [NASA-CASE-LAR-13153-1] c 71 N86-21276  
 Method and apparatus for measuring minority carrier lifetime in a direct band-gap semiconductor  
 [NASA-CASE-NPO-16337-1-CU] c 33 N87-22894  
 Acoustic emission frequency discrimination  
 [NASA-CASE-MS-20467-1] c 35 N88-23966  
 Magneto acoustic emission apparatus for testing materials for embrittlement  
 [NASA-CASE-LAR-13817-1] c 26 N90-21170  
 Method of radiographic inspection of wooden members  
 [NASA-CASE-LAR-13724-1] c 38 N90-23756  
 Universal nondestructive mm-wave integrated circuit test fixture  
 [NASA-CASE-LEW-14746-1] c 33 N91-14552  
 Spectroscopic wear detector  
 [NASA-CASE-LEW-15200-1] c 20 N91-32167

**NONEQUILIBRIUM CONDITIONS**  
 Condition sensor system and method  
 [NASA-CASE-MS-14805-1] c 54 N78-32720

**NONEQUILIBRIUM PLASMAS**  
 Probes having ring and primary sensor at same potential to prevent collection of stray wall currents in ionized gases  
 [NASA-CASE-XLE-00690] c 25 N69-39884

**NONEQUILIBRIUM RADIATION**  
 Non-equilibrium radiation nuclear reactor  
 [NASA-CASE-HGN-10841-1] c 73 N78-19920

**NONFLAMMABLE MATERIALS**  
 Intumescent paint containing nitrile rubber  
 [NASA-CASE-ARC-10196-1] c 18 N73-13562  
 Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
 [NASA-CASE-MS-14331-1] c 27 N76-24405

**NONLINEAR FEEDBACK**  
 Coherent receiver employing nonlinear coherence detection for carrier tracking  
 [NASA-CASE-NPO-11921-1] c 32 N74-30523  
 Nonlinear nonsingular feedback shift registers  
 [NASA-CASE-NPO-13451-1] c 33 N76-14373

**NONLINEAR FILTERS**  
 Apparatus for damping operator induced oscillations of a controlled system --- flight control  
 [NASA-CASE-FRC-11041-1] c 33 N82-18493

**NONLINEAR OPTICS**  
 Molecules with enhanced electronic polarizabilities based on defect-like states in conjugated polymers  
 [NASA-CASE-NPO-17633-1-CU] c 27 N91-27372

**NONLINEAR SYSTEMS**  
 Phase detector assembly Patent  
 [NASA-CASE-XMF-00701] c 09 N70-40272  
 Nonlinear analog-to-digital converter Patent  
 [NASA-CASE-XAC-04031] c 08 N71-18594  
 Split range transducer  
 [NASA-CASE-XLA-11189] c 10 N72-20222  
 Contour measurement system  
 [NASA-CASE-MFS-23726-1] c 43 N79-26439

**NONLINEARITY**  
 Stereoscopic camera and viewing systems with undistorted depth presentation and reduced or eliminated erroneous acceleration and deceleration perceptions, or with perceptions produced or enhanced for special effects  
 [NASA-CASE-NPO-18028-1-CU] c 74 N91-24878

**NORMAL DENSITY FUNCTIONS**  
 Ultrasonic transducer with Gaussian radial pressure distribution  
 [NASA-CASE-LAR-12967-1] c 35 N84-22932

**NOSE CONES**  
 Automatically deploying nozzle exit cone extension Patent  
 [NASA-CASE-XLE-01640] c 31 N71-15637  
 Nose cone mounted heat resistant antenna Patent  
 [NASA-CASE-XMS-04312] c 07 N71-22984

**NOSE WHEELS**  
 Nose gear steering system for vehicle with main skids Patent  
 [NASA-CASE-XLA-01804] c 02 N70-34160

**NOSES (FOREBODIES)**  
 Rotatable non-circular forebody flow controller  
 [NASA-CASE-LAR-14212-1-CU] c 05 N91-31140

**NOTCH STRENGTH**  
 Active notch filter network with variable notch depth, width and frequency  
 [NASA-CASE-FRC-11055-1] c 33 N80-29583

**NOTCH TESTS**  
 Vee-notching device --- with adjustable carriage  
 [NASA-CASE-MFS-20730-1] c 39 N74-13131  
 Notch filter  
 [NASA-CASE-MFS-23303-1] c 32 N77-18307

**NOTCHES**  
 Notch filter  
 [NASA-CASE-MFS-23303-1] c 32 N77-18307

**NOZZLE DESIGN**  
 Annular rocket motor and nozzle configuration Patent  
 [NASA-CASE-XLE-00078] c 28 N70-33284  
 Penshape exhaust nozzle for supersonic engine Patent  
 [NASA-CASE-XLE-00057] c 28 N70-38711  
 Telescoping-spike supersonic inlet for aircraft engines Patent  
 [NASA-CASE-XLE-00005] c 28 N70-39899  
 Automatically deploying nozzle exit cone extension Patent  
 [NASA-CASE-XLE-01640] c 31 N71-15637  
 Injector assembly for liquid fueled rocket engines Patent  
 [NASA-CASE-XMF-00968] c 28 N71-15660  
 Collapsible nozzle extension for rocket engines Patent  
 [NASA-CASE-MFS-11497] c 28 N71-16224  
 Gas turbine combustion apparatus Patent  
 [NASA-CASE-XLE-103477-1] c 28 N71-20330  
 Prestressed refractory structure Patent  
 [NASA-CASE-XNP-02888] c 18 N71-21068  
 Scanning nozzle plating system --- for etching or plating metals on substrates without masking  
 [NASA-CASE-NPO-11758-1] c 31 N74-23065  
 Variable thrust nozzle for quiet turbofan engine and method of operating same  
 [NASA-CASE-LEW-12317-1] c 07 N78-17055  
 Variable area exhaust nozzle  
 [NASA-CASE-LEW-12378-1] c 07 N79-14097  
 Aircraft engine nozzle  
 [NASA-CASE-ARC-10977-1] c 07 N80-32392  
 Sandblasting nozzle  
 [NASA-CASE-NPO-13823-1] c 37 N81-25371  
 Controlled overspray spray nozzle  
 [NASA-CASE-MFS-25139-1] c 34 N82-13376  
 Low-noise nozzle valve  
 [NASA-CASE-MFS-28383-1] c 34 N91-14563  
 Nozzle fabrication technique  
 [NASA-CASE-MS-21299-2] c 37 N91-32508

**NOZZLE FLOW**  
 Control system for rocket vehicles Patent  
 [NASA-CASE-XLA-01163] c 21 N71-15582  
 Aerodynamic spike nozzle Patent  
 [NASA-CASE-XGS-01143] c 31 N71-15647  
 Propellant mass distribution metering apparatus Patent  
 [NASA-CASE-NPO-10185] c 10 N71-26339  
 Tertiary flow injection thrust vectoring system Patent  
 [NASA-CASE-MFS-20831] c 28 N71-29153  
 Multi-purpose wind tunnel reaction control model block  
 [NASA-CASE-MS-19706-1] c 09 N78-31129  
 Adjustable choke for fluids nozzle  
 [NASA-CASE-NPO-17625-1-CU] c 34 N90-27070

**NOZZLE GEOMETRY**  
 Method of making a rocket nozzle  
 [NASA-CASE-XMF-06884-1] c 20 N79-21123  
 Nozzle fabrication technique  
 [NASA-CASE-MS-21299-1] c 20 N88-24684



**NOZZLE INSERTS**

- Self-sealing, unbonded, rocket motor nozzle closure Patent  
[NASA-CASE-XLA-02651] c 28 N70-41967
- Wind tunnel supplementary Mach number minimum section insert  
[NASA-CASE-LAR-12532-1] c 09 N82-11088

**NUCLEAR EXPLOSION EFFECT**

- Method and construction for protecting heat sensitive bodies from thermal radiation and convective heat Patent  
[NASA-CASE-XNP-01310] c 33 N71-28852

**NUCLEAR FUEL ELEMENTS**

- Nuclear fuel elements  
[NASA-CASE-XLE-00209] c 22 N73-32528

**NUCLEAR MAGNETIC RESONANCE**

- Variable frequency nuclear magnetic resonance spectrometer Patent  
[NASA-CASE-XNP-09830] c 14 N71-26266

**NUCLEAR POWER PLANTS**

- Self-adjusting multisegment, deployable, natural circulation radiator Patent  
[NASA-CASE-XHQ-03673] c 33 N71-29046

**NUCLEAR PUMPED LASERS**

- Volumetric direct nuclear pumped laser  
[NASA-CASE-LAR-12183-1] c 36 N79-18307

**NUCLEAR PUMPING**

- Large volume multiple-path nuclear pumped laser  
[NASA-CASE-LAR-12592-1] c 36 N82-13415

**NUCLEAR REACTOR CONTROL**

- Gaseous control system for nuclear reactors  
[NASA-CASE-XLE-04599] c 22 N72-20597
- Control for nuclear thermionic power source  
[NASA-CASE-NPO-13114-2] c 73 N78-28913

**NUCLEAR REACTORS**

- Nuclear thermionic converter --- tungsten-thorium oxide rods  
[NASA-CASE-NPO-13121-1] c 73 N77-18891
- High thermal power density heat transfer apparatus providing electrical isolation at high temperature using heat pipes  
[NASA-CASE-LEW-12950-2] c 34 N85-29179
- Jet pump-drive system for heat removal  
[NASA-CASE-NPO-16494-1-CU] c 34 N85-29182

**NUCLEATE BOILING**

- Method of improving heat transfer characteristics in a nucleate boiling process Patent  
[NASA-CASE-XMS-04268] c 33 N71-16277

**NUCLEATION**

- Crystal growth in a microgravity environment  
[NASA-CASE-MFS-28473-1] c 76 N91-26968

**NUCLEOPHILES**

- Polyphenylquinoxalines via aromatic nucleophilic displacement  
[NASA-CASE-LAR-13988-1] c 23 N89-11814

**NULL ZONES**

- Null device for hand controller Patent  
[NASA-CASE-XLA-01808] c 15 N71-20740

**NUMBER THEORY**

- Binary concatenated coding system  
[NASA-CASE-MSC-14082-1] c 60 N76-23850

**NUMERICAL ANALYSIS**

- Method of and apparatus for generating an interstitial point in a data stream having an even number of data points  
[NASA-CASE-MFS-25319-1] c 60 N85-33701

**NUMERICAL CONTROL**

- Fringe counter for interferometers Patent  
[NASA-CASE-LAR-10204] c 14 N71-27215
- Digital numerically controlled oscillator  
[NASA-CASE-MSC-16747-1] c 33 N81-17349
- Controller for computer control of brushless dc motors --- automobile engines  
[NASA-CASE-NPO-13970-1] c 33 N81-20352
- Reconfiguring redundancy management  
[NASA-CASE-MSC-18498-1] c 60 N82-29013
- Brushless DC motor control system responsive to control signals generated by a computer or the like  
[NASA-CASE-NPO-16420-1] c 33 N86-20681
- Variable friction secondary seal for face seals  
[NASA-CASE-LEW-14170-1] c 37 N86-25790
- Spacecraft component heater control system  
[NASA-CASE-MFS-28327-1] c 18 N89-28556
- Bus programmable slave module  
[NASA-CASE-MSC-21387-1] c 61 N90-16411
- A digitally controlled system for effecting and presenting a selected electrical resistance  
[NASA-CASE-MFS-29149-1] c 33 N90-19492
- Computer access security code system  
[NASA-CASE-NPO-17525-1-CU] c 60 N90-25583
- Smart tunnel: Docking mechanism  
[NASA-CASE-MSC-21360-1] c 18 N91-14374
- A universal computer control system for motors  
[NASA-CASE-NPO-17134-1-CU] c 33 N91-31528

**NUMERICAL INTEGRATION**

- Apparatus for computing square roots Patent  
[NASA-CASE-XGS-04768] c 08 N71-19437

**NUOTATION**

- Method and means for damping nutation in a satellite Patent  
[NASA-CASE-XMF-00442] c 31 N71-10747
- Nutation damper  
[NASA-CASE-GSC-11205-1] c 15 N73-25513

**NUOTATION DAMPERS**

- Active nutation controller  
[NASA-CASE-GSC-12273-1] c 35 N80-21719
- Method of damping nutation motion with minimum spin axis attitude disturbance  
[NASA-CASE-GSC-12551-1] c 18 N83-28064

**NUTS (FASTENERS)**

- Separation nut Patent  
[NASA-CASE-XGS-01971] c 15 N71-15922
- Split nut separation system Patent  
[NASA-CASE-XNP-06914] c 15 N71-21489
- Fastener stretcher  
[NASA-CASE-GSC-11149-1] c 15 N73-30457
- High-torque open-end wrench  
[NASA-CASE-NPO-13541-1] c 37 N79-14383
- Floating nut retention system  
[NASA-CASE-MSC-16938-1] c 37 N80-23653
- Daze fasteners  
[NASA-CASE-LAR-13009-2] c 37 N87-22976
- Tube coupling device  
[NASA-CASE-MFS-25964-2] c 37 N87-22977
- Spline-locking payload fastener  
[NASA-CASE-GSC-13378-1] c 37 N91-28581

**O RING SEALS**

- High pressure four-way valve Patent  
[NASA-CASE-XNP-00214] c 15 N70-36908
- Self-stabilizing radial face seal  
[NASA-CASE-LEW-12991-1] c 37 N81-24442
- Circumferential shaft seal  
[NASA-CASE-LEW-12119-2] c 37 N81-26447
- Modified spiral wound retaining ring  
[NASA-CASE-LAR-12361-1] c 37 N83-19091
- Resilient seal ring assembly with spring means applying force to wedge member --- cryogenic applications  
[NASA-CASE-MFS-25678-1] c 37 N84-11497
- Variable friction secondary seal for face seals  
[NASA-CASE-LEW-14170-1] c 37 N86-25790
- O-ring gasket test fixture  
[NASA-CASE-MFS-28376-1] c 14 N91-21175

**OBLIQUE WINGS**

- Oblique-wing supersonic aircraft  
[NASA-CASE-ARC-10470-3] c 05 N76-29217

**OBSERVATION**

- Method for investigating the formation of crystals in a transparent material  
[NASA-CASE-MFS-26008-1-CU] c 76 N88-14835

**OBSTACLE AVOIDANCE**

- Method and apparatus for configuration control of redundant robots  
[NASA-CASE-NPO-17801-1-CU] c 37 N91-21544
- Obstacle avoidance for redundant robots using configuration control  
[NASA-CASE-NPO-17852-1-CU] c 63 N91-23783

**OCCLUSION**

- Prosthetic occlusive device for an internal passageway  
[NASA-CASE-MFS-25740-1] c 52 N84-11744

**OCEAN CURRENTS**

- Method and apparatus for Delta Kappa synthetic aperture radar measurement of ocean current  
[NASA-CASE-NPO-15704-1] c 32 N85-34327

**OCEAN DATA ACQUISITIONS SYSTEMS**

- Oceanic wave measurement system  
[NASA-CASE-MFS-23862-1] c 48 N80-18667
- Method of measuring sea surface water temperature with a satellite including wideband passive synthetic-aperture multichannel receiver  
[NASA-CASE-NPO-15651-1] c 43 N85-21723

**OCEAN SURFACE**

- Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
[NASA-CASE-NPO-13862-1] c 35 N79-10391
- Oceanic wave measurement system  
[NASA-CASE-MFS-23862-1] c 48 N80-18667
- System and method for measuring ocean surface currents at locations remote from land masses using synthetic aperture radar  
[NASA-CASE-NPO-17937-1-CU] c 43 N91-21621

**OCEAN THERMAL ENERGY CONVERSION**

- Ocean thermal plant  
[NASA-CASE-KSC-11034-1] c 44 N78-32542

**ODORS**

- Vapor fragrancier  
[NASA-CASE-LAR-13680-1] c 35 N87-25561

**OFFSHORE PLATFORMS**

- Ocean thermal plant  
[NASA-CASE-KSC-11034-1] c 44 N78-32542

**OHMMETERS**

- Positive contact resistance soldering unit  
[NASA-CASE-KSC-10242] c 15 N72-23497
- Four-terminal electrical testing device --- initiator bridgewire resistance  
[NASA-CASE-MSC-21166-1] c 35 N87-25555

**OIL EXPLORATION**

- Underwater seismic source --- for petroleum exploration  
[NASA-CASE-NPO-14255-1] c 46 N79-23555
- Borehole geological assessment  
[NASA-CASE-NPO-14231-1] c 46 N80-10709

**OIL RECOVERY**

- Oil and fat absorbing polymers  
[NASA-CASE-NPO-11609-2] c 27 N77-31308
- In-situ laser retorting of oil shale  
[NASA-CASE-LEW-12217-1] c 43 N78-14452
- Crude oil desulfurization  
[NASA-CASE-NPO-14542-1] c 25 N82-23282
- Solar heated oil shale pyrolysis process  
[NASA-CASE-NPO-16392-1] c 25 N86-25428

**OILS**

- Method of recording a gas flow pattern Patent  
[NASA-CASE-XMF-01779] c 12 N71-20815
- Oil and fat absorbing polymers  
[NASA-CASE-NPO-11609-2] c 27 N77-31308

**OLIGOMERS**

- N-(3-ethynylphenyl)maleimide  
[NASA-CASE-LAR-14188-2] c 23 N91-14419

**OMNIDIRECTIONAL ANTENNAS**

- Omnidirectional microwave spacecraft antenna Patent  
[NASA-CASE-XLA-03114] c 09 N71-22888
- Stacked array of omnidirectional antennas  
[NASA-CASE-LAR-10545-1] c 09 N72-21244
- Omnidirectional slot antenna for mounting on cylindrical space vehicle  
[NASA-CASE-LAR-10163-1] c 09 N72-25247

**ON-LINE SYSTEMS**

- Self-checking on-line testable static RAM  
[NASA-CASE-NPO-17939-1-CU] c 60 N90-26518

**ONBOARD EQUIPMENT**

- Survival couch Patent  
[NASA-CASE-XLA-00118] c 05 N70-33285
- Cryogenic storage system Patent  
[NASA-CASE-XMS-04390] c 31 N70-41871
- Fiber optic vibration transducer and analyzer Patent  
[NASA-CASE-XMF-02433] c 14 N71-10616
- Satellite appendage tie down cord Patent  
[NASA-CASE-XGS-02554] c 31 N71-21064
- Satellite aided vehicle avoidance system Patent  
[NASA-CASE-ERC-10090] c 21 N71-24948
- A dc servosystem including an ac motor Patent  
[NASA-CASE-NPO-10700] c 07 N71-33613
- Collapsible Apollo couch  
[NASA-CASE-MSC-13140] c 05 N72-11085
- Monostable multivibrator  
[NASA-CASE-GSC-10082-1] c 10 N72-20221
- Delayed simultaneous release mechanism  
[NASA-CASE-GSC-10814-1] c 03 N73-20039
- Electronic strain-level counter  
[NASA-CASE-LAR-10756-1] c 32 N73-26910
- Magnetic heading reference  
[NASA-CASE-LAR-11387-1] c 04 N76-20114

**OPEN CHANNEL FLOW**

- Monogroove heat pipe design: Insulated liquid channel with bridging wick  
[NASA-CASE-MSC-20497-1] c 34 N85-29180

**OPENINGS**

- Double face sealing device  
[NASA-CASE-MFS-28521-1] c 37 N91-26542

**OPERATING TEMPERATURE**

- Solar cell having improved back surface reflector  
[NASA-CASE-LEW-13620-1] c 44 N83-13579

**OPERATIONAL AMPLIFIERS**

- Digital automatic gain amplifier  
[NASA-CASE-KSC-11008-1] c 33 N79-22373
- Automatic level control circuit  
[NASA-CASE-KSC-11170-1] c 33 N83-36356
- Phase detector for three-phase power factor controller  
[NASA-CASE-MFS-25854-1] c 33 N84-27975
- Temperature sensitive oscillator  
[NASA-CASE-GSC-12958-1] c 33 N86-32624

**OPHTHALMOLOGY**

- Ophthalmic method and apparatus  
[NASA-CASE-LEW-11669-1] c 05 N73-27062
- Ophthalmic liquifaction pump  
[NASA-CASE-LEW-12051-1] c 52 N75-33640

**OPTICAL COMMUNICATION**

- Retrodirective optical system  
[NASA-CASE-XGS-04480] c 16 N69-27491

- Optical communications system Patent  
[NASA-CASE-XLA-01090] c 07 N71-12389
- Optical frequency waveguide and transmission system Patent  
[NASA-CASE-HQN-10541-4] c 16 N71-27183
- High pulse rate high resolution optical radar system  
[NASA-CASE-NPO-11426] c 07 N73-26119
- Apparatus for simulating optical transmission links  
[NASA-CASE-GSC-11877-1] c 74 N76-18913
- Fiber distributed feedback laser  
[NASA-CASE-NPO-13531-1] c 36 N76-24553
- Polarization compensator for optical communications  
[NASA-CASE-GSC-11782-1] c 74 N76-30053
- Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c 74 N77-26942
- Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c 32 N77-28346
- Fiber optic multiplex optical transmission system  
[NASA-CASE-KSC-11047-1] c 74 N78-14889
- Fiber optic crossbar switch for automatically patching optical signals  
[NASA-CASE-KSC-11104-1] c 74 N83-29032
- Synchronization tracking in pulse position modulation receiver  
[NASA-CASE-NPO-16256-1] c 32 N87-21207
- Optical shutter switching matrix  
[NASA-CASE-KSC-11392-1] c 74 N90-22383
- OPTICAL CORRELATORS**
- Optical joint correlator for real-time image tracking and retinal surgery  
[NASA-CASE-MS-C-21509-1] c 74 N91-25840
- OPTICAL COUPLING**
- Automatic quadrature control and measuring system --- using optical coupling circuitry  
[NASA-CASE-MFS-21660-1] c 35 N74-21017
- Optical fiber coupling method and apparatus  
[NASA-CASE-NPO-15464-1] c 74 N85-29749
- OPTICAL DATA PROCESSING**
- Optical data processing using paraboloidal mirror segments  
[NASA-CASE-GSC-11296-1] c 23 N73-30666
- Recorder/processor apparatus --- for optical data processing  
[NASA-CASE-GSC-11553-1] c 35 N74-15831
- Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-1] c 32 N79-19195
- Interleaving device  
[NASA-CASE-GSC-12111-2] c 33 N81-29342
- Real-time multiple-look synthetic aperture radar processor for spacecraft applications  
[NASA-CASE-NPO-14054-1] c 32 N82-12297
- Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-2] c 32 N83-31918
- Optical stereo video signal processor  
[NASA-CASE-MFS-25752-1] c 74 N86-21348
- Remotely controllable real-time optical processor  
[NASA-CASE-NPO-16750-1-CU] c 74 N89-14078
- OPTICAL DENSITY**
- Medical diagnosis system and method with multispectral imaging --- depth of burns and optical density of the skin  
[NASA-CASE-NPO-14402-1] c 52 N81-27783
- Laser schlieren crystal monitor  
[NASA-CASE-MFS-28060-1] c 76 N87-25862
- OPTICAL DISKS**
- Laser optical disk position encoder with active heads  
[NASA-CASE-GSC-13175-1] c 74 N91-14001
- OPTICAL EMISSION SPECTROSCOPY**
- Maksutov spectrograph Patent  
[NASA-CASE-XLA-10402] c 14 N71-29041
- Method and apparatus for determining optical absorption and emission characteristics of a crystal or non-crystalline fiber  
[NASA-CASE-LAR-13963-1] c 76 N90-24150
- OPTICAL EQUIPMENT**
- Light detection instrument Patent  
[NASA-CASE-XGS-05534] c 23 N71-16355
- Optical characteristics measuring apparatus Patent  
[NASA-CASE-XNP-08840] c 23 N71-16365
- Combined optical attitude and altitude indicating instrument Patent  
[NASA-CASE-XLA-01907] c 14 N71-23268
- Laser grating interferometer Patent  
[NASA-CASE-XLA-04295] c 16 N71-24170
- Optical mirror apparatus Patent  
[NASA-CASE-ERC-10001] c 23 N71-24868
- Method for generating ultra-precise angles Patent  
[NASA-CASE-XGS-04173] c 19 N71-26674
- Petzval type objective including field shaping lens Patent  
[NASA-CASE-GSC-10700] c 23 N71-30027
- Compact spectroradiometer  
[NASA-CASE-HQN-10683] c 14 N71-34389
- Fine adjustment mount  
[NASA-CASE-MFS-20249] c 15 N72-11366
- Method of coating solar cell with borosilicate glass and resultant product  
[NASA-CASE-GSC-11514-1] c 03 N72-24037
- Light sensor  
[NASA-CASE-NPO-11311] c 14 N72-25414
- Borescope with variable angle scope  
[NASA-CASE-MFS-15162] c 14 N72-32452
- Cyclically operable optical shutter  
[NASA-CASE-NPO-10758] c 14 N73-14427
- Star tracking reticles and process for the production thereof  
[NASA-CASE-GSC-11188-2] c 21 N73-19630
- Infrared horizon locator  
[NASA-CASE-LAR-10726-1] c 14 N73-20475
- Multiple pass reimaging optical system  
[NASA-CASE-ARC-10194-1] c 23 N73-20741
- Attitude sensor  
[NASA-CASE-LAR-10586-1] c 19 N74-15089
- Formation of star tracking reticles  
[NASA-CASE-GSC-11188-3] c 74 N74-20008
- Method and apparatus for optically monitoring the angular position of a rotating mirror  
[NASA-CASE-GSC-11353-1] c 74 N74-21304
- Single reflector interference spectrometer and drive system therefor  
[NASA-CASE-NPO-11932-1] c 35 N74-23040
- Strain gauge ambiguity sensor for segmented mirror active optical system  
[NASA-CASE-MFS-20506-1] c 35 N75-12273
- Optical alignment device  
[NASA-CASE-ARC-10932-1] c 74 N76-22993
- Visual examination apparatus  
[US-PATENT-RE-28,921] c 52 N76-30793
- Optical instrument employing reticle having preselected visual response pattern formed thereon  
[NASA-CASE-ARC-10976-1] c 74 N77-22950
- Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c 35 N77-27366
- Method and apparatus for producing an image from a transparent object  
[NASA-CASE-GSC-11989-1] c 74 N77-28932
- Method of treating the surface of a glass member  
[NASA-CASE-GSC-12110-1] c 27 N77-32308
- Process for producing a well-adhered durable optical coating on an optical plastic substrate --- abrasion resistant polymethyl methacrylate lenses  
[NASA-CASE-ARC-11039-1] c 74 N78-32854
- Water system virus detection  
[NASA-CASE-MS-C-16098-1] c 51 N79-10693
- Method of forming a sharp edge on an optical device  
[NASA-CASE-GSC-12348-1] c 74 N80-24149
- Rhomboid prism pair for rotating the plane of parallel light beams  
[NASA-CASE-ARC-11311-1] c 74 N83-13978
- High speed multi focal plane optical system  
[NASA-CASE-GSC-12683-1] c 74 N83-36898
- Optical system  
[NASA-CASE-NPO-15801-1] c 74 N85-23396
- High-temperature, high-pressure optical cell  
[NASA-CASE-MFS-26000-1] c 74 N87-14971
- Apparatus for precision focusing and positioning of a beam waist on a target  
[NASA-CASE-ARC-11916-1-SB] c 74 N91-14002
- Feedback controlled optics with wavefront compensation  
[NASA-CASE-NPO-18194-1-CU] c 74 N91-32924
- OPTICAL FIBERS**
- Method and apparatus for determining optical absorption and emission characteristics of a crystal or non-crystalline fiber  
[NASA-CASE-LAR-13963-1] c 76 N90-24150
- Apparatus for precision focusing and positioning of a beam waist on a target  
[NASA-CASE-ARC-11916-1-SB] c 74 N91-14002
- Fiber optic microphone  
[NASA-CASE-LAR-14402-1-CU] c 74 N91-15874
- Radiation sensitive area detection device and method  
[NASA-CASE-MFS-28563-1] c 35 N91-25388
- OPTICAL FILTERS**
- High temperature lens construction Patent  
[NASA-CASE-XNP-04111] c 14 N71-15622
- Method and apparatus for eliminating coherent noise in a coherent energy imaging system without destroying spatial coherence  
[NASA-CASE-GSC-11133-1] c 23 N72-11568
- Optical noise suppression device and method --- laser light exposing film  
[NASA-CASE-MS-C-12640-1] c 74 N76-31998
- System for producing chroma signals  
[NASA-CASE-MS-C-14683-1] c 74 N77-18893
- Optical conversion method --- for spacecraft television  
[NASA-CASE-MS-C-12618-1] c 74 N78-17865
- Partial polarizer filter  
[NASA-CASE-GSC-12225-1] c 74 N79-14891
- Portable reflectance spectrometer  
[NASA-CASE-NPO-13556-1] c 35 N84-33766
- Multispectral linear array multiband selection device  
[NASA-CASE-GSC-12911-1] c 74 N86-29650
- Method and apparatus for making an optical element having a dielectric film  
[NASA-CASE-ARC-11611-1] c 74 N87-28416
- Integrated filter and detector array for spectral imaging  
[NASA-CASE-NPO-18317-1-CU] c 74 N91-32926
- OPTICAL GYROSCOPES**
- Optical gyroscope system  
[NASA-CASE-NPO-14258-1] c 35 N81-33448
- Laser pulse detection method and apparatus  
[NASA-CASE-NPO-16030-1] c 36 N84-25037
- Closed loop fiber optic rotation sensor  
[NASA-CASE-NPO-16558-1-CU] c 74 N87-23259
- OPTICAL HETERODYNING**
- Multispectral imaging system  
[NASA-CASE-MS-C-12404-1] c 23 N73-13661
- Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c 74 N77-26942
- Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c 32 N77-28346
- OPTICAL MATERIALS**
- Process for producing a well-adhered durable optical coating on an optical plastic substrate --- abrasion resistant polymethyl methacrylate lenses  
[NASA-CASE-ARC-11039-1] c 74 N78-32854
- Containerless high purity pulling process and apparatus for glass fiber  
[NASA-CASE-MFS-25905-2] c 31 N86-21718
- OPTICAL MEASUREMENT**
- Passive optical wind and turbulence detection system Patent  
[NASA-CASE-XMF-14032] c 20 N71-16340
- Ellipsoidal mirror reflectometer including means for averaging the radiation reflected from the sample Patent  
[NASA-CASE-XGS-05291] c 23 N71-16341
- Single reflector interference spectrometer and drive system therefor  
[NASA-CASE-NPO-11932-1] c 35 N74-23040
- Hybrid holographic non-destructive test system  
[NASA-CASE-MFS-23114-1] c 38 N78-32447
- Plural output optometric sample cell and analysis system  
[NASA-CASE-NPO-10233-1] c 74 N78-33913
- Film advance indicator  
[NASA-CASE-LAR-12474-1] c 35 N82-26628
- Interferometric angle monitor  
[NASA-CASE-GSC-12614-1] c 74 N83-32577
- Rotary target V-block  
[NASA-CASE-LAR-12007-3] c 35 N84-16523
- Portable reflectance spectrometer  
[NASA-CASE-NPO-13556-1] c 35 N84-33766
- Optical multiple sample vacuum integrating sphere  
[NASA-CASE-GSC-12849-1] c 74 N86-26190
- OPTICAL MEASURING INSTRUMENTS**
- Optically pumped resonance magnetometer for determining vectorial components in a spatial coordinate system Patent  
[NASA-CASE-XGS-04879] c 14 N71-20428
- Optical machine tool alignment indicator Patent  
[NASA-CASE-XAC-09489-1] c 15 N71-26673
- Optical systems having spatially invariant outputs  
[NASA-CASE-ERC-10248] c 14 N72-17323
- Optical probing of supersonic flows with statistical correlation  
[NASA-CASE-MFS-20642] c 14 N72-21407
- Multiparameter vision testing apparatus  
[NASA-CASE-MS-C-13601-2] c 54 N75-27759
- Noncontacting method for measuring angular deflection  
[NASA-CASE-LAR-12178-1] c 74 N80-21138
- Visible and infrared polarization ratio spectroradiometer  
[NASA-CASE-LAR-12285-1] c 35 N80-28687
- Interferometer  
[NASA-CASE-NPO-14502-1] c 74 N81-17888
- Optical crystal temperature gauge with fiber optic connections  
[NASA-CASE-MS-C-18627-1] c 74 N82-30071
- Optical fiber tactile sensor  
[NASA-CASE-NPO-15375-1] c 74 N84-11921
- Optical distance measuring instrument  
[NASA-CASE-GSC-12761-1] c 74 N86-32266
- Vibration-free Raman Doppler velocimeter  
[NASA-CASE-LAR-13268-1] c 35 N87-14669
- Phase length optical phase-locked-loop sensor  
[NASA-CASE-LAR-13387-1] c 74 N88-25302
- OPTICAL MEMORY (DATA STORAGE)**
- Real-time dynamic holographic image storage device  
[NASA-CASE-LAR-13989-1] c 35 N91-13694

- Optoelectronic associative memory  
[NASA-CASE-NPO-18278-1-CU] c 74 N91-32925
- OPTICAL PATHS**  
Optical instruments  
[NASA-CASE-MS-C-14096-1] c 74 N74-15095  
Large volume multiple-path nuclear pumped laser  
[NASA-CASE-LAR-12592-1] c 36 N82-13415  
Phase length optical phase-locked-loop sensor  
[NASA-CASE-LAR-13387-1] c 74 N88-25302  
Optical shutter switching matrix  
[NASA-CASE-KSC-11392-1] c 74 N90-22383  
Motion detection, novelty filtering, and target tracking using an interferometric technique with a GaAs phase conjugate mirror  
[NASA-CASE-NPO-17784-1-CU] c 74 N91-13998  
Non-mechanical optical path switching and its application to dual beam spectroscopy including gas filter correlation radiometry  
[NASA-CASE-LAR-14588-1-CU] c 74 N91-23889
- OPTICAL POLARIZATION**  
Real-time image difference detection using a polarization rotation spatial light modulator  
[NASA-CASE-NPO-17144-1-CU] c 74 N88-25305
- OPTICAL PROPERTIES**  
Optical torque meter Patent  
[NASA-CASE-XLE-00503] c 14 N70-34818  
Quasi-optical microwave component Patent  
[NASA-CASE-ERC-10011] c 07 N71-29065  
Light sensor  
[NASA-CASE-NPO-11311] c 14 N72-25414  
Light direction sensor  
[NASA-CASE-NPO-11201] c 14 N72-27409  
Device and method for determining X ray reflection efficiency of optical surfaces  
[NASA-CASE-MFS-20243] c 23 N73-13662  
Formation of star tracking reticles  
[NASA-CASE-GSC-11188-3] c 74 N74-20008  
Optically actuated two position mechanical mover  
[NASA-CASE-NPO-13105-1] c 37 N74-21060  
Modification of the electrical and optical properties of polymers --- ion irradiation to create texture  
[NASA-CASE-LEW-13027-1] c 27 N80-24437  
Real time pre-detection dynamic range compression  
[NASA-CASE-NPO-18098-1-CU] c 74 N91-23890
- OPTICAL PUMPING**  
Optical pump and driver system for lasers  
[NASA-CASE-ERC-10283] c 16 N72-25485  
Laser head for simultaneous optical pumping of several dye lasers --- with single flash lamp  
[NASA-CASE-LAR-11341-1] c 36 N75-19655  
Stabilization of He2(a 3 Sigma u+) molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c 72 N79-13826  
Active lamp pulse driver circuit --- optical pumping of laser media  
[NASA-CASE-GSC-12566-1] c 33 N83-34189  
Off-axis coherently pumped laser  
[NASA-CASE-GSC-12592-1] c 36 N84-28065
- OPTICAL PYROMETERS**  
Motion picture camera for optical pyrometry Patent  
[NASA-CASE-XLA-00062] c 14 N70-33254
- OPTICAL RADAR**  
Acquisition and tracking system for optical radar  
[NASA-CASE-MFS-20125] c 16 N72-13437
- OPTICAL RANGE FINDERS**  
Altitude sensing device  
[NASA-CASE-XMS-01994-1] c 14 N72-17326  
Optical range finder having nonoverlapping complete images  
[NASA-CASE-MS-C-12105-1] c 14 N72-21409
- OPTICAL REFLECTION**  
Hybrid holographic system using reflected and transmitted object beams simultaneously Patent  
[NASA-CASE-MFS-20074] c 16 N71-15565  
Method for generating ultra-precise angles Patent  
[NASA-CASE-XGS-04173] c 19 N71-26674  
Illumination system including a virtual light source Patent  
[NASA-CASE-HQN-10781] c 23 N71-30292  
Diffuse reflective coating  
[NASA-CASE-GSC-11214-1] c 06 N73-13128  
Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c 74 N77-26942  
Lightweight reflector assembly  
[NASA-CASE-NPO-13707-1] c 74 N77-28933  
Method and apparatus for splitting a beam of energy --- optical communication  
[NASA-CASE-GSC-12083-1] c 73 N78-32848  
Apparatus for and method of compensating dynamic unbalance  
[NASA-CASE-GSC-12550-1] c 37 N84-28082  
Phase length optical phase-locked-loop sensor  
[NASA-CASE-LAR-13387-1] c 74 N88-25302
- OPTICAL RESONANCE**  
Optically pumped resonance magnetometer for determining vectoral components in a spatial coordinate system Patent  
[NASA-CASE-XGS-04879] c 14 N71-20428  
Laser system with an antiresonant optical ring  
[NASA-CASE-HQN-10844-1] c 36 N75-19653
- OPTICAL SCANNERS**  
Optical spin compensator  
[NASA-CASE-XGS-02401] c 14 N69-27485  
Optical inspection apparatus Patent  
[NASA-CASE-XMF-00462] c 14 N70-34298  
Electro-optical scanning apparatus Patent Application  
[NASA-CASE-NPO-11106] c 14 N70-34697  
Multi-lobe scan horizon sensor Patent  
[NASA-CASE-XGS-00809] c 21 N70-35427  
Optical binocular scanning apparatus  
[NASA-CASE-NPO-11002] c 14 N72-22441  
Spacecraft attitude sensor  
[NASA-CASE-GSC-10890-1] c 21 N73-30640  
Optical instruments  
[NASA-CASE-MS-C-14096-1] c 74 N74-15095  
Dual digital video switcher  
[NASA-CASE-KSC-10782-1] c 33 N75-30431  
Traffic survey system --- using optical scanners  
[NASA-CASE-MFS-22631-1] c 66 N76-19888  
Optical scanner --- laser doppler velocimeters  
[NASA-CASE-LAR-11711-1] c 74 N78-17866  
Device for measuring the contour of a surface  
[NASA-CASE-LAR-11869-1] c 74 N78-27904  
Velocity servo for continuous scan Fourier interference spectrometer  
[NASA-CASE-NPO-14093-1] c 35 N80-20563  
Method of growing a ribbon crystal particularly suited for facilitating automated control of ribbon width  
[NASA-CASE-NPO-14295-1] c 76 N80-32245  
Scanning afocal laser velocimeter projection lens system  
[NASA-CASE-LAR-12328-1] c 36 N82-32712  
Optical scanner  
[NASA-CASE-GSC-12897-1] c 74 N87-21679  
Induction-type metal detector with increased scanning area capability  
[NASA-CASE-KSC-11386-1] c 35 N90-22023
- OPTICAL SWITCHING**  
Optical shutter switching matrix  
[NASA-CASE-KSC-11392-1] c 74 N90-22383  
Non-mechanical optical path switching and its application to dual beam spectroscopy including gas filter correlation radiometry  
[NASA-CASE-LAR-14588-1-CU] c 74 N91-23889
- OPTICAL TRACKING**  
Sun tracker with rotatable plane-parallel plate and two photocells Patent  
[NASA-CASE-XGS-01159] c 21 N71-10678  
Optical tracker having overlapping reticles on parallel axes Patent  
[NASA-CASE-XGS-05715] c 23 N71-16100  
Optical tracking mount Patent  
[NASA-CASE-MFS-14017] c 14 N71-26627  
Solar tracking system  
[NASA-CASE-MFS-23999-1] c 44 N81-24520  
Longwall shearer tracking system  
[NASA-CASE-MFS-25717-1] c 35 N84-33768  
Retinally stabilized differential resolution television display  
[NASA-CASE-NPO-15432-1] c 32 N85-29117  
Optical stereo video signal processor  
[NASA-CASE-XMF-25752-1] c 74 N86-21348  
Real-time optical multiple object recognition and tracking system and method  
[NASA-CASE-NPO-17139-1-CU] c 74 N88-25301
- OPTICAL TRANSFER FUNCTION**  
Electronic optical transfer function analyzer  
[NASA-CASE-MFS-21672-1] c 74 N76-19935
- OPTICAL WAVEGUIDES**  
Fiber optic transmission line stabilization apparatus and method  
[NASA-CASE-NPO-15036-1] c 74 N82-19029
- OPTIMIZATION**  
Maximum power point tracker Patent  
[NASA-CASE-GSC-10376-1] c 14 N71-27407
- OPTOELECTRONIC DEVICES**  
Television monitor field shifter and an opto-electronic method for obtaining a stereo image of optimal depth resolution and reduced depth distortion on a single screen  
[NASA-CASE-NPO-17249-1-CU] c 32 N89-28676  
Optoelectronic associative memory  
[NASA-CASE-NPO-18278-1-CU] c 74 N91-32925
- OPTOGALVANIC SPECTROSCOPY**  
Discharge cell for optogalvanic spectroscopy having orthogonal relationship between the probe laser and discharge axis  
[NASA-CASE-NPO-16271-1] c 35 N86-25753
- ORAL HYGIENE**  
Acoustic tooth cleaner  
[NASA-CASE-LAR-12471-1] c 52 N82-29862
- ORBIT TRANSFER VEHICLES**  
Tanker orbit transfer vehicle and method  
[NASA-CASE-MS-C-20543-1] c 18 N84-22610
- ORBITAL ASSEMBLY**  
Structural members, method and apparatus  
[NASA-CASE-MS-C-16217-1] c 31 N81-27323  
Beam connector apparatus and assembly  
[NASA-CASE-MFS-25134-1] c 31 N83-31895  
Space spider crane  
[NASA-CASE-LAR-13411-1-SB] c 18 N88-23828  
Bi-stem gripping apparatus  
[NASA-CASE-MFS-28185-1] c 37 N88-23979  
Mobile remote manipulator system for a tetrahedral truss  
[NASA-CASE-MS-C-20985-1] c 18 N88-26398  
Mechanical end joint system for connecting structural column elements  
[NASA-CASE-LAR-14465-1] c 37 N91-14614  
Synchronously deployable double fold beam and planar truss structure  
[NASA-CASE-LAR-13490-1] c 18 N91-27199
- ORBITAL LAUNCHING**  
Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-25429-1] c 18 N86-20469
- ORBITAL MANEUVERING VEHICLES**  
Orbital maneuvering end effectors  
[NASA-CASE-MFS-28161-1] c 37 N87-18817  
Mobile remote manipulator vehicle system  
[NASA-CASE-LAR-13393-1] c 54 N87-29118
- ORBITAL MANEUVERS**  
Passive propellant system  
[NASA-CASE-MFS-23642-1] c 20 N80-10278
- ORBITAL MECHANICS**  
A method of delivering a vehicle to earth orbit and returning the reusable portion thereof to earth  
[NASA-CASE-MSC-12391] c 30 N73-12884
- ORBITAL SERVICING**  
Electrical self-aligning connector --- orbital servicer vehicles  
[NASA-CASE-MFS-25211-2] c 33 N84-14423  
Tanker orbit transfer vehicle and method  
[NASA-CASE-MS-C-20543-1] c 18 N84-22610  
Shuttle-launch triangular space station  
[NASA-CASE-MS-C-20676-1] c 18 N86-24729  
Mobile remote manipulator vehicle system  
[NASA-CASE-LAR-13393-1] c 54 N87-29118  
Quick-disconnect inflatable seal assembly  
[NASA-CASE-KSC-11368-1] c 37 N89-13786  
System for connecting fluid couplings  
[NASA-CASE-MFS-26042-1-SB] c 37 N91-14613
- ORDNANCE**  
Timing control system  
[NASA-CASE-NPO-16882-1-CU] c 33 N88-24863
- ORGANIC CHEMISTRY**  
Process for interfacial polymerization of pyromellitic dianhydride and 1,2,4,5-tetraamino-benzene Patent  
[NASA-CASE-XLA-03104] c 06 N71-11235  
Amino acid analysis  
[NASA-CASE-NPO-12130-1] c 25 N75-14844  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-3] c 23 N91-17141
- ORGANIC COMPOUNDS**  
Process for preparation of dianilinosilanes Patent  
[NASA-CASE-XMF-06409] c 06 N71-23230  
Dicyanoacetylene polymers Patent  
[NASA-CASE-XNP-03250] c 06 N71-23500  
Epoxy-aziridine polymer product Patent  
[NASA-CASE-NPO-10701] c 06 N71-28620  
Diffuse reflective coating  
[NASA-CASE-GSC-11214-1] c 06 N73-13128  
Automated system for identifying traces of organic chemical compounds in aqueous solutions  
[NASA-CASE-NPO-13063-1] c 25 N76-18245  
Analysis of volatile organic compounds --- trace amounts of organic volatiles in gas samples  
[NASA-CASE-MS-C-14428-1] c 23 N77-17161  
Electrophotolysis oxidation system for measurement of organic concentration in water  
[NASA-CASE-MS-C-16497-1] c 25 N82-12166  
Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups  
[NASA-CASE-LAR-12723-2] c 27 N84-22746  
Amine terminated bisaspartamide polymer  
[NASA-CASE-ARC-11421-2] c 27 N86-31726  
The 1-(diorganoxy phosphonyl) methyl)-2,4- and -2,6-diamino benzenes and their derivatives  
[NASA-CASE-ARC-11425-2] c 23 N87-28605
- ORGANIC MATERIALS**  
Process for crosslinking methylene-containing aromatic polymers with ionizing radiation  
[NASA-CASE-LAR-13448-1] c 27 N90-21198

## ORGANIC SILICON COMPOUNDS

- Oxygen post-treatment of plastic surface coated with plasma polymerized silicon-containing monomers  
[NASA-CASE-ARC-10915-2] c 27 N79-18052
- Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-1-SB] c 27 N88-29040
- ORGANIC SULFUR COMPOUNDS**  
Coal desulfurization --- using iron pentacarbonyl  
[NASA-CASE-NPO-14272-1] c 25 N81-33246
- ORGANOMETALLIC COMPOUNDS**  
Ammonium perchlorate composite propellant containing an organic transitional metal chelate catalytic additive Patent  
[NASA-CASE-LAR-10173-1] c 27 N71-14090
- Trialkyl-dihalotantalum and niobium compounds Patent  
[NASA-CASE-XNP-04023] c 06 N71-28808
- Carboranyl-methylene-substituted phosphazenes and polymers thereof  
[NASA-CASE-ARC-11370-1] c 27 N84-22750
- Method for forming hermetic seals  
[NASA-CASE-NPO-16423-1-CU] c 37 N87-21334
- ORGANOMETALLIC POLYMERS**  
Metal containing polymers from cyclic tetrameric phenylphosphonitrimides Patent  
[NASA-CASE-HQN-10364] c 06 N71-27363
- Thiophenyl ether disiloxanes and trisiloxanes useful as lubricant fluids  
[NASA-CASE-MFS-22411-1] c 37 N74-21058
- ORGANS**  
Device for removing foreign objects from anatomic organs  
[NASA-CASE-GSC-13306-1] c 52 N91-28727
- ORIFICE FLOW**  
Relief valve  
[NASA-CASE-XMS-05894-1] c 15 N69-21924
- Variable orifice flow regulator  
[NASA-CASE-MS-21549-1] c 34 N91-27504
- ORIFICES**  
Rocket engine injector Patent  
[NASA-CASE-XLE-03157] c 28 N71-24736
- Liquid seeding atomizer  
[NASA-CASE-ARC-11631-1] c 34 N87-21255
- Adjustable choke for fluids nozzle  
[NASA-CASE-NPO-17625-1-CU] c 34 N90-27070
- Arc/gas electrode  
[NASA-CASE-MFS-29766-1] c 33 N91-25335
- Variable orifice flow regulator  
[NASA-CASE-MS-21549-1] c 34 N91-27504
- ORTHO HYDROGEN**  
Cooling by conversion of para to ortho-hydrogen  
[NASA-CASE-GSC-12770-1] c 25 N83-29324
- ORTHO PARA CONVERSION**  
Cooling by conversion of para to ortho-hydrogen  
[NASA-CASE-GSC-12770-1] c 25 N83-29324
- ORTHOGONAL MULTIPLEXING THEORY**  
Minimal logic block encoder Patent  
[NASA-CASE-NPO-10595] c 10 N71-25917
- ORTHOGONALITY**  
Floating two force component measuring device Patent  
[NASA-CASE-XAC-04885] c 14 N71-23790
- Geometries for roughness shapes in laminar flow  
[NASA-CASE-LAR-13255-1] c 02 N87-16793
- ORTHOPEDECS**  
Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-1] c 54 N76-22914
- Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c 52 N81-25661
- ORTHOTROPIC CYLINDERS**  
Method of making a rocket motor casing Patent  
[NASA-CASE-XLE-00409] c 28 N71-15658
- Rocket motor casing Patent  
[NASA-CASE-XLE-05689] c 28 N71-15659
- OSCILLATING FLOW**  
Heat exchanger with oscillating flow  
[NASA-CASE-LAR-14033-1] c 34 N90-27072
- OSCILLATION DAMPERS**  
Viscous-pendulum-damper Patent  
[NASA-CASE-XLA-02079] c 12 N71-16894
- Stabilization of gravity oriented satellites Patent  
[NASA-CASE-XAC-01591] c 31 N71-17729
- Suspended mass impact damper Patent  
[NASA-CASE-LAR-10193-1] c 15 N71-27146
- Wind tunnel model damper Patent  
[NASA-CASE-XLA-09480] c 11 N71-33612
- Apparatus for damping operator induced oscillations of a controlled system --- flight control  
[NASA-CASE-FRC-11041-1] c 33 N82-18493
- Method of damping nutation motion with minimum spin axis attitude disturbance  
[NASA-CASE-GSC-12551-1] c 18 N83-28064
- Variable force, eddy-current or magnetic damper  
[NASA-CASE-LEW-13717-1] c 37 N85-30333

## OSCILLATIONS

- Parasitic suppressing circuit  
[NASA-CASE-ERC-10403-1] c 10 N73-26228
- Stabilization and oscillation of an acoustically levitated object  
[NASA-CASE-NPO-16896-1-CU] c 71 N89-13236
- OSCILLATORS**  
Electromagnetic mirror drive system  
[NASA-CASE-XLA-03724] c 14 N69-27461
- Frequency control network for a current feedback oscillator Patent  
[NASA-CASE-GSC-10041-1] c 10 N71-19418
- Static inverter Patent  
[NASA-CASE-XGS-05289] c 09 N71-19470
- Signal ratio system utilizing voltage controlled oscillators Patent  
[NASA-CASE-XMF-04367] c 09 N71-23545
- Pneumatic oscillator Patent  
[NASA-CASE-LEW-10345-1] c 10 N71-25899
- Wideband VCO with high phase stability Patent  
[NASA-CASE-XLA-03893] c 10 N71-27271
- Variable frequency oscillator with temperature compensation Patent  
[NASA-CASE-XNP-03916] c 09 N71-28810
- Inverter oscillator with voltage feedback  
[NASA-CASE-NPO-10760] c 09 N72-25254
- Controlled oscillator system with a time dependent output frequency  
[NASA-CASE-NPO-11962-1] c 33 N74-10194
- Ultra-stable oscillator with complementary transistors  
[NASA-CASE-GSC-11513-1] c 33 N74-20862
- LC-oscillator with automatic stabilized amplitude via bias current control --- power supply circuit for transducers  
[NASA-CASE-MFS-21698-1] c 33 N74-26732
- Frequency modulated oscillator  
[NASA-CASE-MFS-23181-1] c 33 N77-17351
- Distributed feedback acoustic surface wave oscillator  
[NASA-CASE-NPO-13673-1] c 71 N77-26919
- Digital numerically controlled oscillator  
[NASA-CASE-MS-16747-1] c 33 N81-17349
- Laser Resonator  
[NASA-CASE-GSC-12565-1] c 36 N84-14509
- Ladder supported ring bar circuit  
[NASA-CASE-LEW-13570-1] c 33 N84-16452
- Dielectric based submillimeter backward wave oscillator circuit  
[NASA-CASE-LEW-13736-1] c 33 N84-27974
- JFET reflection oscillator  
[NASA-CASE-GSC-12555-1] c 33 N86-19515
- Temperature sensitive oscillator  
[NASA-CASE-GSC-12958-1] c 33 N86-32624
- Low phase noise oscillator using two parallel connected amplifiers  
[NASA-CASE-GSC-13018-1] c 33 N87-21232
- Programmable electronic synthesized capacitance  
[NASA-CASE-GSC-12961-1] c 33 N87-22895
- Water-absorbing capacitor system for measuring relative humidity  
[NASA-CASE-NPO-16544-1-CU] c 35 N87-22953
- Reflection oscillators employing series resonant crystals  
[NASA-CASE-GSC-13173-1] c 33 N90-23635
- Modified fast frequency acquisition via adaptive least squares algorithm  
[NASA-CASE-NPO-17845-1-CU] c 61 N90-27341
- OSCILLOSCOPES**  
Waveform simulator Patent  
[NASA-CASE-NPO-10251] c 10 N71-27365
- Method and apparatus for mapping the sensitivity of the face of a photodetector specifically a PMT  
[NASA-CASE-LAR-10320-1] c 09 N72-23172
- Exposure interlock for oscilloscope cameras  
[NASA-CASE-LAR-10319-1] c 14 N73-32322
- X-Y alphanumeric character generator for oscilloscopes  
[NASA-CASE-GSC-11582-1] c 33 N75-19517
- OUTER PLANETS EXPLORERS**  
Spectrometer integrated with a facsimile camera  
[NASA-CASE-LAR-11207-1] c 35 N75-19613
- OUTGASSING**  
Optical characteristics measuring apparatus Patent  
[NASA-CASE-XNP-08840] c 23 N71-16365
- Process for glass coating an ion accelerator grid Patent  
[NASA-CASE-LEW-10278-1] c 15 N71-28582
- Low outgassing polydimethylsiloxane material and preparation thereof  
[NASA-CASE-GSC-11358-1] c 06 N73-26100
- Process for HIP canning of composites  
[NASA-CASE-LEW-14990-1-CU] c 24 N91-17145
- OUTLET FLOW**  
Amplified wind turbine apparatus  
[NASA-CASE-MFS-23830-1] c 44 N82-24639
- Continuous laminar smoke generator  
[NASA-CASE-LAR-13014-1] c 09 N85-21178

## OUTPUT

- Nonlinear nonsingular feedback shift registers  
[NASA-CASE-NPO-13451-1] c 33 N76-14373
- Programmable electronic synthesized capacitance  
[NASA-CASE-GSC-12961-1] c 33 N87-22895
- Ovens**  
Heat shield oven  
[NASA-CASE-XMS-04318] c 15 N69-27871
- Thermocouple, multiple junction reference oven  
[NASA-CASE-FRC-10112-1] c 35 N81-26431
- OVERPRESSURE**  
Method and apparatus for suppressing ignition overpressure in solid rocket propulsion systems  
[NASA-CASE-MFS-25843-1] c 20 N83-17588
- OVERVOLTAGE**  
Protective circuit of the spark gap type  
[NASA-CASE-XAC-08981] c 09 N69-39897
- Power responsive overload sensing circuit Patent  
[NASA-CASE-GSC-10667-1] c 10 N71-33129
- Overvoltage protection network  
[NASA-CASE-ARC-10197-1] c 33 N74-17929
- Overload protection system for power inverter  
[NASA-CASE-NPO-13872-1] c 33 N78-10377
- OXAZOLE**  
Preparation of heterocyclic block copolymer omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c 27 N79-22300
- The 1,2,4-oxadiazole elastomers --- heat resistant polymers  
[NASA-CASE-ARC-11253-1] c 27 N81-17262
- Preparation of perfluorinated 1,2,4-oxadiazoles  
[NASA-CASE-ARC-11267-2] c 23 N82-28353
- OXIDATION**  
Silicic coatings for refractory metals Patent  
[NASA-CASE-XLE-10910] c 18 N71-29040
- Automated analysis of oxidative metabolites  
[NASA-CASE-ARC-10469-1] c 25 N75-12086
- Hydrogen rich gas generator  
[NASA-CASE-NPO-13464-2] c 44 N76-29704
- Process of forming catalytic surfaces for wet oxidation reactions  
[NASA-CASE-MS-14831-1] c 25 N78-10225
- Compound oxidized styrylphosphine --- flame resistant vinyl polymers  
[NASA-CASE-MS-14903-2] c 27 N80-10358
- Overlay metallic-cermet alloy coating systems  
[NASA-CASE-LEW-13639-1] c 26 N84-33555
- Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-1] c 27 N86-19458
- Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-3] c 27 N87-23736
- Novel polyimide compositions based on 4,4': isophthaloyldiphthalic anhydride (IDPA)  
[NASA-CASE-LAR-14194-1] c 24 N90-15148
- Catalyst for carbon monoxide oxidation  
[NASA-CASE-LAR-14155-1-SB] c 25 N90-23517
- Vinyl capped addition polyimides  
[NASA-CASE-LEW-15027-1] c 27 N91-13566
- Catalyst for carbon monoxide oxidation  
[NASA-CASE-LAR-14155-2-SB] c 25 N91-21270
- Oxidation resistant coatings for titanium alloys and titanium alloy matrix composites  
[NASA-CASE-LEW-15155-1] c 27 N91-26375
- Low cost, formable, high T(sub c) superconducting wire  
[NASA-CASE-LEW-14676-1] c 33 N91-31529
- OXIDATION RESISTANCE**  
Nickel-base alloy containing Mo-W-Al-Cr-Ta-Zr-C-Nb-B Patent  
[NASA-CASE-XLE-02082] c 17 N71-16026
- Method of protecting the surface of a substrate --- by applying aluminate coating  
[NASA-CASE-LEW-11696-1] c 37 N75-13261
- Duplex aluminized coatings  
[NASA-CASE-LEW-11696-2] c 26 N75-19408
- High temperature oxidation resistant cermet compositions  
[NASA-CASE-NPO-13666-1] c 27 N77-13217
- High temperature resistant cermet and ceramic compositions  
[NASA-CASE-NPO-13690-2] c 27 N79-14213
- Method of making bearing materials --- self-lubricating, oxidation resistant composites for high temperature applications  
[NASA-CASE-LEW-11930-4] c 24 N79-17916
- Nicral ternary alloy having improved cyclic oxidation resistance  
[NASA-CASE-LEW-13339-1] c 26 N82-31505
- Thermal barrier coating system  
[NASA-CASE-LEW-14057-1] c 24 N85-35233
- High temperature resistant polyimide from tetra ester, diamine, diester and N-arylnadimide  
[NASA-CASE-LEW-13864-1] c 27 N86-19457
- Apparatus for producing oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-2] c 27 N86-32569

- Nickel base coating alloy  
[NASA-CASE-LEW-13834-1] c 26 N87-14482
- Oxygen diffusion barrier coating  
[NASA-CASE-LAR-13474-1-SB] c 26 N87-25455
- High temperature insulation barrier composite  
[NASA-CASE-MFS-29241-1] c 24 N90-23480
- Oxidation resistant coatings for titanium alloys and titanium alloy matrix composites  
[NASA-CASE-LEW-15155-1] c 27 N91-26375
- OXIDATION-REDUCTION REACTIONS**
- Electrochemical cell for rebalancing REDOX flow system  
[NASA-CASE-LEW-13150-1] c 44 N79-26474
- Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-1] c 33 N80-20487
- Method of making formulated plastic separators for soluble electrode cells  
[NASA-CASE-LEW-12358-2] c 25 N82-21268
- OXIDE FILMS**
- Method of forming oxide coatings --- for solar collector heating panels  
[NASA-CASE-LEW-13132-1] c 27 N83-29388
- Thermal barrier coating system  
[NASA-CASE-LEW-14057-1] c 24 N85-35233
- Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-1] c 27 N86-19458
- Apparatus for producing oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-2] c 27 N86-32569
- Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-3] c 27 N87-23736
- OXIDES**
- Novel polymers and method of preparing same  
[NASA-CASE-NPO-10998-1] c 06 N73-32029
- Pretreatment of lubricated surfaces with sputtered cadmium oxide  
[NASA-CASE-LEW-14474-1] c 27 N91-28423
- OXIDIZERS**
- Electrolytically regenerative hydrogen-oxygen fuel cell Patent  
[NASA-CASE-XLE-04526] c 03 N71-11052
- Injection head for delivering liquid fuel and oxidizers  
[NASA-CASE-NPO-10046] c 28 N72-17843
- Device and method for frictionally testing materials for ignitability  
[NASA-CASE-MS-C-20622-1] c 25 N86-19413
- OXIMETRY**
- Method and apparatus for continuously monitoring blood oxygenation, blood pressure, pulse rate and the pressure pulse curve utilizing an ear oximeter as transducer Patent  
[NASA-CASE-XAC-05422] c 04 N71-23185
- OXYGEN**
- Analytical test apparatus and method for determining oxide content of alkali metal Patent  
[NASA-CASE-XLE-01997] c 06 N71-23527
- Method for removing oxygen impurities from cesium Patent  
[NASA-CASE-XNP-04262-2] c 17 N71-26773
- Method of detecting oxygen in a gas  
[NASA-CASE-LAR-10668-1] c 06 N73-16106
- Method for obtaining oxygen from lunar or similar soil  
[NASA-CASE-MS-C-12408-1] c 46 N74-13011
- Nonflammable coating compositions --- for use in high oxygen environments  
[NASA-CASE-MFS-20486-2] c 27 N74-17283
- A system for controlling the oxygen content of a gas produced by combustion  
[NASA-CASE-LAR-13257-1] c 25 N84-32447
- Technique for measuring gas conversion factors  
[NASA-CASE-LAR-13220-1] c 34 N86-12547
- Oxygen recombination in individual pressure vessel nickel-hydrogen batteries  
[NASA-CASE-LEW-13822-1] c 44 N86-25874
- Method and apparatus for maintaining thermal control in plasma conditions  
[NASA-CASE-MFS-28368-1] c 75 N90-10717
- Device for quickly sensing the amount of O<sub>2</sub> in a combustion product gas  
[NASA-CASE-LAR-13816-1] c 35 N90-22025
- Static feed water electrolysis subsystem development  
[NASA-CASE-MS-C-21577-1-SB] c 25 N91-23271
- OXYGEN ATOMS**
- Variable energy, high flux, ground-state atomic oxygen source  
[NASA-CASE-NPO-16640-1-CU] c 72 N87-21661
- Method for anisotropic etching in the manufacture of semiconductor devices  
[NASA-CASE-MS-C-21631-1] c 75 N91-32947
- OXYGEN CONSUMPTION**
- Method and system for respiration analysis Patent  
[NASA-CASE-XFR-08403] c 05 N71-11202
- OXYGEN FLUORIDES**
- Utilization of oxygen difluoride for syntheses of fluoropolymers  
[NASA-CASE-NPO-12061-1] c 27 N76-16228
- OXYGEN ISOTOPES**
- Isotope exchange in oxide-containing catalyst  
[NASA-CASE-LAR-13542-2-SB] c 25 N90-20154
- OXYGEN METABOLISM**
- Metabolic analyzer --- for measuring metabolic rate and breathing dynamics of human beings  
[NASA-CASE-MFS-21415-1] c 52 N74-20728
- OXYGEN PLASMA**
- Oxygen post-treatment of plastic surface coated with plasma polymerized silicon-containing monomers  
[NASA-CASE-ARC-10915-2] c 27 N79-18052
- OXYGEN REGULATORS**
- Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c 44 N76-27664
- OXYGEN SUPPLY EQUIPMENT**
- Self-contained breathing apparatus  
[NASA-CASE-MS-C-14733-1] c 54 N76-24900
- Slow opening valve --- valve design for shuttle portable oxygen system  
[NASA-CASE-MS-C-20112-1] c 37 N85-20338
- OZONE**
- Thermoluminescent aerosol analysis  
[NASA-CASE-LAR-12046-1] c 25 N78-15210
- Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c 45 N80-14579
- Curable liquid hydrocarbon prepolymers containing hydroxyl groups and process for producing same  
[NASA-CASE-NPO-13137-1] c 27 N80-32514

## P

- P-I-N JUNCTIONS**
- High voltage v-groove solar cell  
[NASA-CASE-LEW-13401-2] c 44 N83-32177
- P-N JUNCTIONS**
- Thin window, drifted silicon, charged particle detector  
[NASA-CASE-XLE-10529] c 14 N69-23191
- Semiconductor p-n junction stress and strain sensor  
[NASA-CASE-XLA-04980] c 09 N69-27422
- Radiation resistant silicon semiconductor devices Patent  
[NASA-CASE-XGS-07801] c 09 N71-12513
- Biomedical radiation detecting probe Patent  
[NASA-CASE-XMS-01177] c 05 N71-19440
- Method of making electrical contact on silicon solar cell and resultant product Patent  
[NASA-CASE-XLE-04787] c 03 N71-20492
- Method of changing the conductivity of vapor deposited gallium arsenide by the introduction of water into the vapor deposition atmosphere Patent  
[NASA-CASE-XNP-01961] c 26 N71-29156
- Method of making semiconductor p-n junction stress and strain sensor  
[NASA-CASE-XLA-04980-2] c 14 N72-28438
- Semiconductor surface protection material  
[NASA-CASE-ERC-10339-1] c 18 N73-30532
- Method and apparatus for measuring minority carrier lifetimes and bulk diffusion length in P-N junction solar cells  
[NASA-CASE-NPO-14100-1] c 44 N79-12541
- Back wall solar cell  
[NASA-CASE-LEW-12236-2] c 44 N79-14528
- P-TYPE SEMICONDUCTORS**
- Semiconductor material and method of making same Patent  
[NASA-CASE-XLE-02798] c 26 N71-23654
- Integrated P-channel MOS gyrator  
[NASA-CASE-MFS-22343-1] c 33 N74-34638
- Method of Fabricating Schottky Barrier solar cell  
[NASA-CASE-NPO-13689-4] c 44 N82-28780
- PACKAGES**
- Impact testing machine Patent  
[NASA-CASE-XNP-04817] c 14 N71-23225
- One hand backpack harness  
[NASA-CASE-LAR-10102-1] c 05 N72-23085
- PACKAGING**
- Folding apparatus Patent  
[NASA-CASE-XLA-00137] c 15 N70-33180
- Reflector space satellite Patent  
[NASA-CASE-XLA-00138] c 31 N70-37981
- Apparatus and method for skin packaging articles  
[NASA-CASE-MFS-20855] c 15 N73-27405
- Double-sided solar cell package  
[NASA-CASE-NPO-14199-1] c 44 N79-25482
- PACKET TRANSMISSION**
- Multicomputer communication system  
[NASA-CASE-NPO-15433-1] c 32 N85-21428
- PACKING DENSITY**
- Micropacked column for a chromatographic system  
[NASA-CASE-XNP-04816] c 06 N69-39936
- High density tape casting system  
[NASA-CASE-NPO-16901-1-CU] c 31 N90-19425
- PACKINGS (SEALS)**
- Fluid seal for rotating shafts  
[NASA-CASE-LEW-11676-1] c 37 N76-22541
- PAD**
- Lubricated journal bearing  
[NASA-CASE-LEW-11076-3] c 37 N75-30562
- PAINTS**
- Intumescent paints Patent  
[NASA-CASE-ARC-10099-1] c 18 N71-15469
- Alkali metal silicate protective coating Patent  
[NASA-CASE-XGS-04799] c 18 N71-24183
- Inorganic thermal control pigment Patent  
[NASA-CASE-XNP-02139] c 18 N71-24184
- Diffusely reflecting paints including polytetrafluoroethylene and method of manufacture  
[NASA-CASE-GSC-12883-1] c 27 N85-29044
- PALLADIUM**
- Electrically conductive palladium containing polyimide films  
[NASA-CASE-LAR-12705-1] c 25 N82-26396
- PALLADIUM COMPOUNDS**
- Prevention of pressure build-up in electrochemical cells Patent  
[NASA-CASE-XGS-01419] c 03 N70-41864
- Process for separation of dissolved hydrogen from water by use of palladium and process for coating palladium with palladium black  
[NASA-CASE-MS-C-13335-1] c 06 N72-31140
- PANELS**
- All-directional fastener Patent  
[NASA-CASE-XLA-01807] c 15 N71-10799
- Panelized high performance multilayer insulation Patent  
[NASA-CASE-MFS-14023] c 33 N71-25351
- Solar panel fabrication Patent  
[NASA-CASE-XNP-03413] c 03 N71-26726
- Method of making pressurized panel Patent  
[NASA-CASE-XLA-08916] c 15 N71-29018
- Honeycomb panels formed of minimal surface periodic tubule layers  
[NASA-CASE-ERC-10364] c 18 N72-25540
- Pressurized panel  
[NASA-CASE-XLA-08916-2] c 14 N73-28487
- Ultrasonic scanner for radial and flat panels  
[NASA-CASE-MFS-20335-1] c 35 N74-10415
- Folding structure fabricated of rigid panels  
[NASA-CASE-XHQ-02146] c 18 N75-27040
- Method of making a composite sandwich lattice structure  
[NASA-CASE-LAR-11898-2] c 24 N78-17149
- Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c 44 N78-19599
- Hexagon solar power panel  
[NASA-CASE-NPO-12148-1] c 44 N78-27515
- Aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-3] c 44 N80-16452
- Structural wood panels with improved fire resistance  
[NASA-CASE-ARC-11174-1] c 24 N81-13999
- Method of forming oxide coatings --- for solar collector heating panels  
[NASA-CASE-LEW-13132-1] c 27 N83-29388
- Combustor liner construction  
[NASA-CASE-LEW-14035-1] c 07 N84-24577
- Saltless solar pond  
[NASA-CASE-NPO-15808-1] c 44 N84-34792
- Structural panels  
[NASA-CASE-ARC-11429-2-CU] c 27 N87-22845
- Truss-core corrugation for compressive loads  
[NASA-CASE-LAR-13438-1] c 31 N89-12786
- Reusable high-temperature heat pipes and heat pipe panels  
[NASA-CASE-LAR-13761-1] c 34 N90-20323
- High temperature flexible seal  
[NASA-CASE-LEW-14695-1] c 37 N90-23751
- Orbital debris sweeper and method  
[NASA-CASE-MS-C-21534-1] c 18 N91-21222
- Thermally isolated deployable shield for spacecraft  
[NASA-CASE-MFS-28524-1] c 18 N91-25167
- PANORAMIC SCANNING**
- Atmospheric autorotating imaging device  
[NASA-CASE-NPO-17390-1-CU] c 35 N90-22769
- PAPER (MATERIAL)**
- Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c 85 N79-17747
- PAPERS**
- Guide for a typewriter  
[NASA-CASE-MFS-15218-1] c 37 N77-19457
- PARA HYDROGEN**
- Cooling by conversion of para to ortho-hydrogen  
[NASA-CASE-GSC-12770-1] c 25 N83-29324

**PARABOLIC ANTENNAS**

Antenna beam-shaping apparatus Patent  
 [NASA-CASE-XNP-00611] c 09 N70-35219  
 Reversible motion drive system Patent  
 [NASA-CASE-NPO-10173] c 15 N71-24696  
 Switchable beamwidth monopulse method and system  
 [NASA-CASE-GSC-11924-1] c 33 N76-27472  
 Telescoping columns --- parabolic antenna support  
 [NASA-CASE-LAR-12195-1] c 31 N81-27324  
 Focal axis resolver for offset reflector antennas  
 [NASA-CASE-GSC-12630-1] c 33 N83-36355  
 Antenna surface contour control system  
 [NASA-CASE-LAR-13798-1] c 32 N89-25363

**PARABOLIC REFLECTORS**

Parabolic reflector horn feed with spillover correction  
 Patent  
 [NASA-CASE-XNP-00540] c 09 N70-35382  
 Foldable solar concentrator Patent  
 [NASA-CASE-XLA-04622] c 03 N70-41580  
 Collapsible reflector Patent  
 [NASA-CASE-XMS-03454] c 09 N71-20658  
 Plural beam antenna  
 [NASA-CASE-GSC-11013-1] c 09 N73-19234  
 Composite antenna feed  
 [NASA-CASE-GSC-11046-1] c 07 N73-28013  
 Single frequency, two feed dish antenna having  
 switchable beamwidth  
 [NASA-CASE-GSC-11968-1] c 32 N76-15329  
 Sun tracking solar energy collector  
 [NASA-CASE-NPO-13921-1] c 44 N79-14526  
 Horizontally mounted solar collector  
 [NASA-CASE-MFS-23349-1] c 44 N79-23481  
 Solar concentrator  
 [NASA-CASE-MFS-23727-1] c 44 N80-14473  
 Apparatus for and method of compensating dynamic  
 unbalance  
 [NASA-CASE-GSC-12550-1] c 37 N84-28082  
 Antenna surface contour control system  
 [NASA-CASE-LAR-13798-1] c 32 N89-25363

**PARABOLOID MIRRORS**

Optical data processing using paraboloidal mirror  
 segments  
 [NASA-CASE-GSC-11296-1] c 23 N73-30666  
 Three mirror glancing incidence system for X-ray  
 telescope  
 [NASA-CASE-MFS-21372-1] c 74 N74-27866

**PARACHUTE DESCENT**

Parachute glider Patent  
 [NASA-CASE-XLA-00898] c 02 N70-36804  
 Vehicle parachute and equipment jettison system  
 Patent  
 [NASA-CASE-XLA-00195] c 02 N70-38009  
 Line cutter Patent  
 [NASA-CASE-XMS-04072] c 15 N70-42017  
 Vortex breech high pressure gas generator  
 [NASA-CASE-LAR-10549-1] c 31 N73-13898

**PARACHUTE FABRICS**

Lightweight, variable solidity knitted parachute fabric ---  
 for aerodynamic decelerators  
 [NASA-CASE-LAR-10776-1] c 02 N74-10034  
 Method for refurbishing and processing parachutes  
 [NASA-CASE-KSC-11042-1] c 09 N82-29330

**PARACHUTES**

System for stabilizing torque between a balloon and  
 gondola  
 [NASA-CASE-GSC-11077-1] c 02 N73-13008  
 Deploy/release system --- model aircraft flight control  
 [NASA-CASE-LAR-11575-1] c 02 N76-16014  
 System and method for refurbishing and processing  
 parachutes --- monorial conveyor system  
 [NASA-CASE-KSC-11042-2] c 02 N81-26073  
 Method for refurbishing and processing parachutes  
 [NASA-CASE-KSC-11042-1] c 09 N82-29330  
 Dual towline spin-recovery device  
 [NASA-CASE-LAR-13076-1] c 08 N85-35200

**PARAGLIDERS**

Parachute glider Patent  
 [NASA-CASE-XLA-00898] c 02 N70-36804

**PARALLAX**

Projection system for display of parallax and  
 perspective  
 [NASA-CASE-MFS-23194-1] c 35 N78-17357  
 Ranging system which compares an object reflected  
 component of a light beam to a reference component of  
 the light beam  
 [NASA-CASE-NPO-15865-1] c 74 N85-34629

**PARALLEL COMPUTERS**

Special purpose parallel computer architecture for  
 real-time control and simulation in robotic applications  
 [NASA-CASE-NPO-17629-1-CU] c 60 N90-27268

**PARALLEL PLATES**

Parallel plate viscometer Patent  
 [NASA-CASE-XNP-09462] c 14 N71-17584  
 Dynamic capacitor having a peripherally driven element  
 and system incorporating the same  
 [NASA-CASE-XNP-02899-1] c 33 N79-21265

Multiple plate hydrostatic viscous damper  
 [NASA-CASE-LEW-12445-1] c 37 N81-22360

**PARALLEL PROCESSING (COMPUTERS)**

Digital data reformatter/deserializer  
 [NASA-CASE-NPO-13676-1] c 60 N79-20751  
 Massively parallel processor computer  
 [NASA-CASE-GSC-12223-1] c 60 N83-25378  
 Memory-based parallel data output controller  
 [NASA-CASE-GSC-12447-2] c 60 N84-28491  
 Analog hardware for delta-backpropagation neural  
 networks  
 [NASA-CASE-NPO-17564-1-CU] c 32 N90-16974  
 Special purpose parallel computer architecture for  
 real-time control and simulation in robotic applications  
 [NASA-CASE-NPO-17629-1-CU] c 60 N90-27268  
 Programmable remapper with single flow architecture  
 [NASA-CASE-MSC-21481-1] c 60 N91-13890  
 Method of up-front load balancing for local memory  
 parallel processors  
 [NASA-CASE-MSC-21348-1] c 62 N91-14769  
 Highly parallel computer architecture for robotic  
 computation  
 [NASA-CASE-NPO-17632-1-CU] c 60 N91-32805  
 Analog hardware for learning neural networks  
 [NASA-CASE-NPO-17664-1-CU] c 62 N91-32852

**PARAMETER IDENTIFICATION**

Efficient detection and signal parameter estimation with  
 application to high dynamic GPS receiver  
 [NASA-CASE-NPO-17820-1-CU] c 04 N91-14321

**PARAMETRIC AMPLIFIERS**

Parametric amplifiers with idler circuit feedback  
 [NASA-CASE-LAR-10253-1] c 09 N72-25258  
 Millimeter wave pumped parametric amplifier  
 [NASA-CASE-GSC-11617-1] c 33 N74-32660

**PARAMETRIC FREQUENCY CONVERTERS**

Method and apparatus for quadrature-phase-shift-key and  
 linear phase modulation  
 [NASA-CASE-NPO-14444-1] c 33 N81-15192

**PARAWINGS**

Wing deployment method and apparatus Patent  
 [NASA-CASE-XMS-00907] c 02 N70-41630

**PARKING**

Automated multi-level vehicle parking system  
 [NASA-CASE-NPO-13058-1] c 37 N77-22480

**PARTIAL PRESSURE**

Vapor pressure measuring system and method Patent  
 [NASA-CASE-XMS-01618] c 14 N71-20741

**PARTICLE ACCELERATION**

Molecular beam velocity selector Patent  
 [NASA-CASE-XLE-01533] c 11 N71-10777  
 Dust particle injector for hypervelocity accelerators  
 Patent  
 [NASA-CASE-XGS-06628] c 24 N71-16213

**PARTICLE ACCELERATOR TARGETS**

Dispensing targets for ion beam particle generators  
 [NASA-CASE-NPO-13112-1] c 73 N74-26767  
 Deuterium pass through target --- neutron emitting  
 target  
 [NASA-CASE-LEW-11866-1] c 72 N76-15860  
 Closed loop spray cooling apparatus --- for particle  
 accelerator targets  
 [NASA-CASE-LEW-11981-1] c 31 N78-17237

**PARTICLE BEAMS**

Particle beam measurement apparatus using beam  
 kinetic energy to change the heat sensitive resistance of  
 the detection probe Patent  
 [NASA-CASE-XLE-00243] c 14 N70-38602  
 Doppler shift system --- system for measuring velocities  
 of radiating particles  
 [NASA-CASE-HQN-10740-1] c 72 N74-19310  
 Apparatus for measuring charged particle beam  
 [NASA-CASE-MFS-25641-1] c 72 N84-28575  
 Slow positron beam generator for lifetime studies  
 [NASA-CASE-LAR-14250-1-SB] c 72 N91-27936

**PARTICLE COLLISIONS**

Particle detection apparatus including a ballistic  
 pendulum Patent  
 [NASA-CASE-XMS-04201] c 14 N71-22990  
 Ion generator and ion application system  
 [NASA-CASE-MFS-28122-1] c 72 N88-24253

**PARTICLE DENSITY (CONCENTRATION)**

Micrometeoroid velocity measuring device Patent  
 [NASA-CASE-XLA-00495] c 14 N70-41332

**PARTICLE EMISSION**

Extended area semiconductor radiation detectors and  
 a novel readout arrangement Patent  
 [NASA-CASE-XGS-03230] c 14 N71-23401  
 Coincidence apparatus for detecting particles  
 [NASA-CASE-XLA-07813] c 14 N72-17328

**PARTICLE ENERGY**

Particle detection apparatus Patent  
 [NASA-CASE-XLA-00135] c 14 N70-33322  
 Particulate and aerosol detector  
 [NASA-CASE-LAR-11434-1] c 35 N76-22509

**PARTICLE INTERACTIONS**

Surface modification using low energy ground state ion  
 beams  
 [NASA-CASE-NPO-17498-1-CU] c 72 N91-14813

**PARTICLE MASS**

Cosmic dust analyzer  
 [NASA-CASE-MSC-13802-2] c 35 N76-15431  
 Microbalance --- for measuring particle mass  
 [NASA-CASE-MSC-11242] c 35 N78-17358

**PARTICLE MOTION**

Moving particle composition analyzer  
 [NASA-CASE-GSC-11889-1] c 35 N76-16393  
 Method and apparatus for determining time, direction,  
 and composition of impacting space particles  
 [NASA-CASE-LAR-13392-1-CU] c 19 N91-14412  
 Vaporizing particle velocimeter  
 [NASA-CASE-LAR-14685-1] c 02 N91-28135

**PARTICLE PRODUCTION**

Production of I-123  
 [NASA-CASE-LEW-11390-3] c 25 N76-29379

**PARTICLE SIZE DISTRIBUTION**

Micropacked column for a chromatographic system  
 [NASA-CASE-XNP-04816] c 06 N69-39936  
 Apparatus for making a metal slurry product Patent  
 [NASA-CASE-LAR-00010] c 15 N70-33382  
 Method of producing refractory composites containing  
 tantalum carbide, hafnium carbide, and hafnium boride  
 Patent  
 [NASA-CASE-XLE-03940] c 18 N71-26153  
 Grain refinement control in TIG arc welding  
 [NASA-CASE-MSC-19095-1] c 37 N75-19683  
 Apparatus for handling micron size range particulate  
 material  
 [NASA-CASE-NPO-10151] c 37 N78-17386  
 Frequency-scanning particle size spectrometer  
 [NASA-CASE-NPO-13606-2] c 35 N80-18364  
 Process for preparation of large-particle-size  
 monodisperse latexes  
 [NASA-CASE-MFS-25000-1] c 25 N81-19242  
 Polyvinyl alcohol battery separator containing inert filler  
 --- alkaline batteries  
 [NASA-CASE-LEW-13556-1] c 44 N81-27615  
 Powder fed sheared dispersal particle generator  
 [NASA-CASE-LAR-12785-1] c 37 N84-16561  
 Method of evaporation  
 [NASA-CASE-NPO-15609-2] c 25 N88-23846  
 Hypervelocity impact shield  
 [NASA-CASE-MSC-21420-1] c 18 N90-26858

**PARTICLE TRACKS**

Detection of multiple-bit errors from single-ion tracks  
 in integrated circuits  
 [NASA-CASE-NPO-18075-1-CU] c 33 N91-13622

**PARTICLE TRAJECTORIES**

Micrometeoroid velocity and trajectory analyzer  
 [NASA-CASE-GSC-11892-1] c 35 N76-15433  
 Direction sensitive laser velocimeter --- determining the  
 direction of particles using a helium-neon laser  
 [NASA-CASE-LAR-12177-1] c 36 N81-24422

**PARTICLES**

Soil particles separator, collector and viewer Patent  
 [NASA-CASE-XNP-09770] c 15 N71-20440  
 Apparatus for producing metal powders  
 [NASA-CASE-XLE-06461-2] c 17 N72-28535  
 Particle parameter analyzing system --- x-y plotter circuits  
 and display  
 [NASA-CASE-XLE-06094] c 33 N78-17293  
 Surfactant-assisted liquefaction of particulate  
 carbonaceous substances  
 [NASA-CASE-NPO-13904-1] c 25 N79-11152  
 Acoustic particle separation  
 [NASA-CASE-NPO-15559-1] c 71 N85-30765  
 Solar heated oil shale pyrolysis process  
 [NASA-CASE-NPO-16392-1] c 25 N86-25428  
 Controlled method of reducing electrophoretic mobility  
 of various substances  
 [NASA-CASE-MFS-26049-1-NP] c 25 N89-28603

**PARTICULATE SAMPLING**

Apparatus for sampling particulates in gases  
 [NASA-CASE-HQN-10037-1] c 14 N73-27376  
 Electrophoretic sample insertion --- device for uniformly  
 distributing samples in flow path  
 [NASA-CASE-MFS-21395-1] c 25 N74-26948  
 Sampler of gas borne particles  
 [NASA-CASE-NPO-13396-1] c 35 N76-18401  
 Fine particulate capture device  
 [NASA-CASE-LEW-11583-1] c 35 N79-17192  
 Biocontamination and particulate detection system  
 [NASA-CASE-NPO-13953-1] c 35 N79-28527  
 Particle analyzing method and apparatus  
 [NASA-CASE-NPO-15292-1] c 35 N83-27184  
 High velocity gas particulate sampling system  
 [NASA-CASE-MSC-21729-1] c 34 N91-17340  
 Sample holder support for microscopes  
 [NASA-CASE-MFS-28420-1] c 37 N91-21545

## PARTICULATES

- Apparatus for sampling particulates in gases  
[NASA-CASE-HQN-10037-1] c 14 N73-27376  
High velocity gas particulate sampling system  
[NASA-CASE-MSC-21729-1] c 34 N91-17340

## PASSAGEWAYS

- Inflatable tether Patent  
[NASA-CASE-XMS-10993] c 15 N71-28936  
Apparatus for mixing solutions in low gravity environments  
[NASA-CASE-MFS-26047-1] c 29 N90-21209

## PASSENGERS

- Ride quality meter  
[NASA-CASE-LAR-12882-1] c 35 N84-12445

## PASSIVE SATELLITES

- Passive communication satellite Patent  
[NASA-CASE-XLA-00210] c 30 N70-40309  
Method and apparatus for determining electromagnetic characteristics of large surface area passive reflectors Patent  
[NASA-CASE-XGS-02608] c 07 N70-41678  
Method of making an inflatable panel Patent  
[NASA-CASE-XLA-03497] c 15 N71-23052

## PASTES

- Whole body cleansing agent  
[NASA-CASE-MSC-21589-1] c 54 N91-16586

## PATENT APPLICATIONS

- Energy dissipator  
[NASA-CASE-MSC-21555-1] c 37 N91-23492

## PATENTS

- Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c 74 N82-24072  
Method for depositing an oxide coating  
[NASA-CASE-LEW-13131-1] c 44 N83-10494  
High stability amplifier  
[NASA-CASE-GSC-12646-1] c 33 N83-34191

## PATIENTS

- Stretcher Patent  
[NASA-CASE-XMF-06589] c 05 N71-23159  
Rapidly quantifying the relative distention of a human bladder  
[NASA-CASE-LAR-13901-1-NP] c 52 N90-21519

## PATTERN RECOGNITION

- Surface roughness detector Patent  
[NASA-CASE-XLA-00203] c 14 N70-34161  
Auditory display for the blind  
[NASA-CASE-HQN-10832-1] c 71 N74-21014  
Real-time optical multiple object recognition and tracking system and method  
[NASA-CASE-NPO-17139-1-CU] c 74 N88-25301  
Remotely controllable real-time optical processor  
[NASA-CASE-NPO-16750-1-CU] c 74 N89-14078  
Programmable pipelined image processor  
[NASA-CASE-NPO-16461-1CU] c 80 N89-26400  
General method of pattern classification using the two-domain theory  
[NASA-CASE-MSC-21737-1] c 61 N91-13911  
Method and apparatus for sensor fusion  
[NASA-CASE-MSC-21334-1] c 32 N91-25317

## PATTERN REGISTRATION

- Digital data registration and differencing compression system  
[NASA-CASE-SSC-00010-1] c 82 N91-23976

## PAYLOAD DELIVERY (STS)

- Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-25429-1] c 18 N86-20469

## PAYLOAD DEPLOYMENT &amp; RETRIEVAL SYSTEM

- Payload deployment method and system  
[NASA-CASE-MSC-21330-1] c 16 N88-24660

## PAYLOAD INTEGRATION

- Spline-locking payload fastener  
[NASA-CASE-GSC-13378-1] c 37 N91-28581

## PAYLOAD RETRIEVAL (STS)

- Simulator method and apparatus for practicing the mating of an observer-controlled object with a target  
[NASA-CASE-MFS-23052-2] c 74 N79-13855  
Satellite retrieval system  
[NASA-CASE-MFS-25403-1] c 18 N83-29303

## PAYLOADS

- Foam generator Patent  
[NASA-CASE-XLA-00838] c 03 N70-36778  
Spacecraft separation system for spinning vehicles and/or payloads Patent  
[NASA-CASE-XLA-02132] c 31 N71-10582  
Payload/burned-out motor case separation system Patent  
[NASA-CASE-XLA-05369] c 31 N71-15687  
Velocity package Patent  
[NASA-CASE-XLA-01339] c 31 N71-15692  
Omnidirectional multiple impact landing system Patent  
[NASA-CASE-XLA-09881] c 31 N71-16085  
Zero gravity apparatus Patent  
[NASA-CASE-XMF-06515] c 14 N71-23227

- Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-15429-1] c 18 N84-22609  
Rotating-unbalanced-mass devices and methods for scanning balloon-borne-experiments, free-flying spacecraft, and space shuttle/space station attached experiments  
[NASA-CASE-MFS-28425-1] c 35 N90-26304  
Integrated launch and emergency vehicle system  
[NASA-CASE-LAR-13780-1] c 18 N91-13481

## PCM TELEMETRY

- Variable time constant smoothing circuit Patent  
[NASA-CASE-XGS-01983] c 10 N70-41964  
Data transfer system Patent  
[NASA-CASE-NPO-12107] c 08 N71-27255  
High speed direct binary-to-binary coded decimal converter  
[NASA-CASE-KSC-10326] c 08 N72-21197

## PEELING

- Wire stripper  
[NASA-CASE-FRC-10111-1] c 37 N79-10419

## PEENING

- Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N86-32550

## PELLETS

- Support structure for irradiated elements Patent  
[NASA-CASE-XNP-06031] c 15 N71-15606  
Contactless pellet fabrication  
[NASA-CASE-NPO-15592-1] c 71 N84-16940

## Peltier Effects

- Protection for energy conversion systems  
[NASA-CASE-XGS-04808] c 03 N69-25146  
Memory metal actuator  
[NASA-CASE-NPO-15960-1] c 37 N86-19604

## PELVIS

- Shoulder and hip joints for hard space suits and the like  
[NASA-CASE-ARC-11534-1] c 54 N86-29507

## PENETRANTS

- Dye penetrant for surfaces subsequently contacted by liquid oxygen Patent  
[NASA-CASE-XMF-02221] c 18 N71-27170  
Metal etching composition  
[NASA-CASE-MFS-29576-1] c 25 N91-15368

## PENETRATION

- Method and device for detection of surface discontinuities or defects  
[NASA-CASE-MSC-14187-1] c 35 N74-32879  
Fire extinguishing apparatus having a slidable mass for a penetrator nozzle --- for penetrating aircraft and shuttle orbiter skin  
[NASA-CASE-KSC-11064-1] c 31 N81-14137

## PENETROMETERS

- Lunar penetrometer Patent  
[NASA-CASE-XLA-00934] c 14 N71-22765  
Self-recording portable soil penetrometer  
[NASA-CASE-MFS-20774] c 14 N73-19420  
Soil penetrometer  
[NASA-CASE-XNP-05530] c 14 N73-32321  
Penetrometer --- for determining load bearing characteristics of inclined surfaces  
[NASA-CASE-NPO-11103-1] c 35 N77-27367  
Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c 43 N79-25443

## PERCEPTION

- Method for measuring cutaneous sensory perception  
[NASA-CASE-MSC-13609-1] c 05 N72-25122  
Stereoscopic camera and viewing systems with undistorted depth presentation and reduced or eliminated erroneous acceleration and deceleration perceptions, or with perceptions produced or enhanced for special effects  
[NASA-CASE-NPO-18028-1-CU] c 74 N91-24878

## PERFLUORO COMPOUNDS

- Hydroxy terminated perfluoro ethers Patent  
[NASA-CASE-NPO-10768] c 06 N71-27254  
Perfluoro polyether acyl fluorides  
[NASA-CASE-NPO-10765] c 06 N72-20121  
Reaction of fluorine with polyperfluoropolyenes  
[NASA-CASE-NPO-10862] c 06 N72-22107  
Silphenylenesiloxane polymers having in-chain perfluoroalkyl groups  
[NASA-CASE-MFS-20979] c 06 N72-25151  
Polymers of perfluorobutadiene and method of manufacture  
[NASA-CASE-NPO-10863-2] c 06 N72-25152  
Polyurethane resins from hydroxy terminated perfluoro ethers  
[NASA-CASE-NPO-10768-2] c 06 N72-27144  
Polymerizable disilanols having in-chain perfluoroalkyl groups  
[NASA-CASE-MFS-20979-2] c 06 N73-32030  
Perfluoro alkylene dioxy-bis-(4-phthalic anhydrides and oxy-bis-(perfluoroalkyleneoxyphthalic anhydrides  
[NASA-CASE-MFS-22356-1] c 23 N75-30256

- Preparation of perfluorinated 1,2,4-oxadiazoles  
[NASA-CASE-ARC-11267-2] c 23 N82-28353  
High performance channel injection sealant invention abstract  
[NASA-CASE-ARC-14408-1] c 27 N82-33523  
Fluoroether modified epoxy composites  
[NASA-CASE-ARC-11418-1] c 24 N84-11213  
Process for preparing perfluorotriazine elastomers and precursors thereof  
[NASA-CASE-ARC-11402-1] c 27 N84-22744  
Perfluoro (imidoylamidine) diamidines  
[NASA-CASE-ARC-11402-3] c 23 N86-21582

## PERFLUOROALKANE

- Preparation of heterocyclic block copolymer omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c 27 N79-22300

## PERFORATED PLATES

- Process for glass coating an ion accelerator grid Patent  
[NASA-CASE-LEW-10278-1] c 15 N71-28582

## PERFORATED SHELLS

- Method of fabricating an article with cavities --- with thin bottom walls  
[NASA-CASE-LAR-10318-1] c 31 N74-18089

## PERFORMANCE PREDICTION

- Failure detection and control means for improved drift performance of a gimbaled platform system  
[NASA-CASE-MFS-23551-1] c 04 N76-26175  
Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13734-1-CU] c 09 N90-20096

## PERFORMANCE TESTS

- Frangible electrochemical cell  
[NASA-CASE-XGS-10010] c 03 N72-15986  
Solar cell assembly test method  
[NASA-CASE-NPO-10401] c 03 N72-20033  
Linear explosive comparison  
[NASA-CASE-LAR-10800-1] c 33 N72-27959  
Split-cross-bridge resistor for testing for proper fabrication of integrated circuits  
[NASA-CASE-NPO-16021-1] c 33 N85-30187  
Integrated circuit reliability testing  
[NASA-CASE-NPO-17393-1-CU] c 33 N89-29679  
O-ring gasket test fixture  
[NASA-CASE-MFS-28376-1] c 14 N91-21175  
Torsional suspension system for testing space structures  
[NASA-CASE-LAR-14149-1-SB] c 14 N91-21176

## PERIODIC VARIATIONS

- Mount for continuously orienting a collector dish in a system adapted to perform both diurnal and seasonal solar tracking  
[NASA-CASE-MFS-23267-1] c 35 N77-20401

## PERIPHERAL EQUIPMENT (COMPUTERS)

- Digital interface for bi-directional communication between a computer and a peripheral device  
[NASA-CASE-MSC-20258-1] c 60 N84-28492

## PERISCOPES

- Welding monitoring system  
[NASA-CASE-MFS-29177-1] c 37 N88-14362

## PERMANENT MAGNETS

- Permanent magnet flux-biased magnetic actuator with flux feedback  
[NASA-CASE-LAR-13785-1] c 70 N91-21824

## PERMEABILITY

- Ionene membrane separator  
[NASA-CASE-NPO-11091] c 18 N72-22567  
System for detecting substructure microfractures and method therefore  
[NASA-CASE-NPO-14192-1] c 39 N80-10507  
Dialysis system --- using ion exchange resin membranes permeable to urea molecules  
[NASA-CASE-NPO-14101-1] c 52 N80-14687  
Geological assessment probe  
[NASA-CASE-NPO-14558-1] c 46 N80-24906

## PERMITTIVITY

- Process for lowering the dielectric constant of polyimides using diamic acid additives  
[NASA-CASE-LAR-13902-1] c 27 N90-23546

## PEROXIDES

- Method of polymerizing perfluorobutadiene Patent application  
[NASA-CASE-NPO-10447] c 06 N70-11252

## PERSPIRATION

- Method of making a perspiration resistant biopotential electrode  
[NASA-CASE-MSC-90153-2] c 05 N72-25120  
Sweat collection capsule  
[NASA-CASE-ARC-11031-1] c 52 N81-29763

## PERTURBATION

- Gaseous control system for nuclear reactors  
[NASA-CASE-XLE-04599] c 22 N72-20597  
Measurement of waves in flows across a surface  
[NASA-CASE-NPO-17479-1-CU] c 34 N91-13658  
Passive laminar flow control of crossflow vorticity  
[NASA-CASE-LAR-13563-1] c 34 N91-23410

## PERTURBATION THEORY

- Dual wavelength scanning Doppler velocimeter --- without perturbation of flow fields  
[NASA-CASE-ARC-10637-1] c 35 N75-16783
- PH FACTOR**  
Method for determining the point of zero zeta potential of semiconductor  
[NASA-CASE-LAR-12893-1] c 76 N85-30923
- PHASE COHERENCE**  
Signal phase estimator  
[NASA-CASE-NPO-11203] c 10 N72-20224  
Coherent receiver employing nonlinear coherence detection for carrier tracking  
[NASA-CASE-NPO-11921-1] c 32 N74-30523
- PHASE CONJUGATION**  
Motion detection, novelty filtering, and target tracking using an interferometric technique with a GaAs phase conjugate mirror  
[NASA-CASE-NPO-17784-1-CU] c 74 N91-13998
- PHASE CONTRAST**  
Laser pulse detection method and apparatus  
[NASA-CASE-NPO-16030-1] c 36 N84-25037
- PHASE CONTROL**  
Rapid sync acquisition system Patent  
[NASA-CASE-NPO-10214] c 10 N71-26577  
Wideband VCO with high phase stability Patent  
[NASA-CASE-XLA-03893] c 10 N71-27271  
Induction motor control system with voltage controlled oscillator circuit  
[NASA-CASE-MFS-21465-1] c 10 N73-32145  
System for generating timing and control signals  
[NASA-CASE-NPO-13125-1] c 33 N75-19519  
Digital numerically controlled oscillator  
[NASA-CASE-MS-C-16747-1] c 33 N81-17349  
Combinational logic for generating gate drive signals for phase control rectifiers  
[NASA-CASE-MFS-25208-1] c 33 N83-10345  
System for controlled acoustic rotation of objects  
[NASA-CASE-NPO-15522-1] c 71 N83-32516  
Method and apparatus for self-calibration and phasing of array antenna  
[NASA-CASE-NPO-15920-1] c 33 N85-21493
- PHASE DEMODULATORS**  
Phase demodulation system with two phase locked loops Patent  
[NASA-CASE-XNP-00777] c 10 N71-19469  
Linear phase demodulator including a phase locked loop with auxiliary feedback loop  
[NASA-CASE-GSC-12018-1] c 33 N77-14334
- PHASE DETECTORS**  
Phase detector assembly Patent  
[NASA-CASE-XMF-00701] c 09 N70-40272  
Bi-polar phase detector and corrector for split phase PCM data signals Patent  
[NASA-CASE-XGS-01590] c 07 N71-12392  
High speed phase detector Patent  
[NASA-CASE-XNP-01306-2] c 09 N71-24596  
Phase protection system for ac power lines  
[NASA-CASE-MS-C-17832-1] c 33 N74-14956  
Low distortion automatic phase control circuit --- voltage controlled phase shifter  
[NASA-CASE-MFS-21671-1] c 33 N74-22885  
Correlation type phase detector --- with time correlation integrator for frequency multiplexed signals  
[NASA-CASE-GSC-11744-1] c 33 N75-26243  
Impact position detector for outer space particles  
[NASA-CASE-GSC-11829-1] c 35 N75-27331  
Frequency discriminator and phase detector circuit  
[NASA-CASE-NPO-11515-1] c 33 N77-13315  
Phase substitution of spare converter for a failed one of parallel phase staggered converters  
[NASA-CASE-NPO-13812-1] c 33 N77-30365  
Apparatus and method for stabilized phase detection for binary signal tracking loops  
[NASA-CASE-MS-C-16461-1] c 33 N79-11313  
High stability buffered phase comparator  
[NASA-CASE-GSC-12645-1] c 33 N84-16454  
Three phase power factor controller  
[NASA-CASE-MFS-25535-2] c 33 N84-22885  
Method and apparatus for receiving and tracking phase modulated signals  
[NASA-CASE-MS-C-16170-2] c 32 N84-27952  
Phase detector for three-phase power factor controller  
[NASA-CASE-MFS-25854-1] c 33 N84-27975  
Maser cavity servo-tuning system  
[NASA-CASE-NPO-15890-1-CU] c 33 N85-29143  
Double reference pulsed phase locked loop  
[NASA-CASE-LAR-13310-1] c 32 N87-14559  
Method and apparatus for measuring frequency and phase difference  
[NASA-CASE-MS-C-20865-1] c 32 N87-18692  
Zero-G phase detector and separator  
[NASA-CASE-LEW-14844-1] c 35 N90-22024

## PHASE DEVIATION

- System for stabilizing cable phase delay utilizing a coaxial cable under pressure  
[NASA-CASE-NPO-13138-1] c 33 N74-17927
- PHASE ERROR**  
Modified fast frequency acquisition via adaptive least squares algorithm  
[NASA-CASE-NPO-17845-1-CU] c 61 N90-27341
- PHASE LOCK DEMODULATORS**  
Compensating bandwidth switching transients in an amplifier circuit Patent  
[NASA-CASE-XNP-01107] c 10 N71-28859  
Phase ambiguity resolution for offset QPSK modulation systems  
[NASA-CASE-NPO-17853-1-CU] c 32 N91-25318
- PHASE LOCKED SYSTEMS**  
Automatic acquisition system for phase-lock loop  
[NASA-CASE-XGS-04994] c 09 N69-21543  
Phase-locked loop with sideband rejecting properties Patent  
[NASA-CASE-XNP-02723] c 07 N70-41680  
Automatic frequency discriminators and control for a phase-lock loop providing frequency preset capabilities Patent  
[NASA-CASE-XMF-08665] c 10 N71-19467  
Burst synchronization detection system Patent  
[NASA-CASE-XMS-05605-1] c 10 N71-19468  
Phase demodulation system with two phase locked loops Patent  
[NASA-CASE-XNP-00777] c 10 N71-19469  
Diversity receiving system with diversity phase lock Patent  
[NASA-CASE-XGS-01222] c 10 N71-20841  
Phase locked phase modulator including a voltage controlled oscillator Patent  
[NASA-CASE-XNP-05382] c 10 N71-23544  
Video sync processor Patent  
[NASA-CASE-KSC-10002] c 10 N71-25865  
Transition tracking bit synchronization system  
[NASA-CASE-NPO-10844] c 07 N72-20140  
Data-aided carrier tracking loops  
[NASA-CASE-NPO-11282] c 10 N73-16205  
Filter for third order phase locked loops  
[NASA-CASE-NPO-11941-1] c 10 N73-27171  
Receiver with an improved phase lock loop in a multichannel telemetry system with suppressed carrier  
[NASA-CASE-NPO-11593-1] c 07 N73-28012  
Automatic carrier acquisition system  
[NASA-CASE-NPO-11628-1] c 07 N73-30113  
Digital second-order phase-locked loop  
[NASA-CASE-NPO-11905-1] c 33 N74-12887  
Phase-locked servo system --- for synchronizing the rotation of slip ring assembly  
[NASA-CASE-MFS-22073-1] c 33 N75-13139  
Low speed phaselock speed control system --- for brushless dc motor  
[NASA-CASE-GSC-11127-1] c 09 N75-24758  
Digital phase-locked loop  
[NASA-CASE-GSC-11623-1] c 33 N75-25040  
Telemetry synchronizer  
[NASA-CASE-GSC-11868-1] c 17 N76-22245  
Linear phase demodulator including a phase locked loop with auxiliary feedback loop  
[NASA-CASE-GSC-12018-1] c 33 N77-14334  
Frequency translating phase conjugation circuit for active retrodirective antenna array --- microwave transmission  
[NASA-CASE-NPO-14536-1] c 32 N81-14185  
PN lock indicator for dithered PN code tracking loop  
[NASA-CASE-NPO-14435-1] c 33 N81-33405  
Discriminator aided phase lock acquisition for suppressed carrier signals  
[NASA-CASE-NPO-14311-1] c 33 N82-29539  
Pulsed phase locked loop strain monitor --- voltage controlled oscillators  
[NASA-CASE-LAR-12772-1] c 33 N83-16626  
Double reference pulsed phase locked loop  
[NASA-CASE-LAR-13310-1] c 32 N87-14559  
Means for phase locking the outputs of a surface emitting laser diode array  
[NASA-CASE-NPO-16542-1-CU] c 36 N87-23960  
Processing circuit with asymmetry corrector and convolutional encoder for digital data  
[NASA-CASE-MS-C-20187-1] c 33 N87-25531  
Phase length optical phase-locked-loop sensor  
[NASA-CASE-LAR-13387-1] c 74 N88-25302  
Digital phase-lock loop having an estimator and predictor of error  
[NASA-CASE-NPO-17196-1-CU] c 32 N88-29076  
Direct drive robotic hand  
[NASA-CASE-NPO-17917-1-CU] c 37 N90-26339
- PHASE MODULATION**  
Phase quadrature-plural channel data transmission system Patent  
[NASA-CASE-XAC-06302] c 08 N71-19763

- Adaptive tracking notch filter system Patent  
[NASA-CASE-XMF-01892] c 10 N71-22986  
Phase locked phase modulator including a voltage controlled oscillator Patent  
[NASA-CASE-XNP-05382] c 10 N71-23544  
Phase multiplying electronic scanning system Patent  
[NASA-CASE-NPO-10302] c 10 N71-26142  
Phase modulator Patent  
[NASA-CASE-MS-C-13201-1] c 07 N71-28429  
Two carrier communication system with single transmitter  
[NASA-CASE-NPO-11548] c 07 N73-26118  
Decision feedback loop for tracking a polyphase modulated carrier  
[NASA-CASE-NPO-13103-1] c 32 N74-20811  
Modulator for tone and binary signals --- phase of modulation of tone and binary signals on carrier waves in communication systems  
[NASA-CASE-GSC-11743-1] c 32 N75-24981  
Phase modulating with odd and even finite power series of a modulating signal  
[NASA-CASE-LAR-11607-1] c 32 N77-14292  
Swept group delay measurement  
[NASA-CASE-NPO-13909-1] c 33 N78-25319  
Quadrature demodulation  
[NASA-CASE-GSC-12137-1] c 33 N78-32338  
Closed Loop solar array-ion thruster system with power control circuitry  
[NASA-CASE-LEW-12780-1] c 20 N79-20179  
Baseband signal combiner for large aperture antenna array  
[NASA-CASE-NPO-14641-1] c 32 N81-29308  
Doppler radar having phase modulation of both transmitted and reflected return signals  
[NASA-CASE-MS-C-18675-1] c 32 N84-22820  
Method and apparatus for receiving and tracking phase modulated signals  
[NASA-CASE-MS-C-16170-2] c 32 N84-27952  
Integrating IR detector imaging systems  
[NASA-CASE-NPO-15805-1] c 74 N84-28590
- PHASE SHIFT**  
Bi-polar phase detector and corrector for split phase PCM data signals Patent  
[NASA-CASE-XGS-01590] c 07 N71-12392  
Electromagnetic polarization systems and methods Patent  
[NASA-CASE-GSC-10021-1] c 09 N71-24595  
Method and apparatus for frequency-division multiplex communications by digital phase shift of carrier  
[NASA-CASE-NPO-11338] c 08 N72-25208  
Time domain phase measuring apparatus  
[NASA-CASE-GSC-12228-1] c 33 N79-10338  
Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c 37 N81-17432  
JFET reflection oscillator  
[NASA-CASE-GSC-12555-1] c 33 N86-19515  
Double reference pulsed phase locked loop  
[NASA-CASE-LAR-13310-1] c 32 N87-14559  
Ground plane interference elimination by passive element  
[NASA-CASE-NPO-16632-1-CU] c 32 N87-15390  
Method and apparatus for measuring minority carrier lifetime in a direct band-gap semiconductor  
[NASA-CASE-NPO-16337-1-CU] c 33 N87-22894  
Doppler radar with multiphase modulation of transmitted and reflected signal  
[NASA-CASE-MS-C-18808-1] c 32 N90-20280
- PHASE SHIFT CIRCUITS**  
Gyrator type circuit Patent  
[NASA-CASE-XAC-10608-1] c 09 N71-12517  
Phase shift circuit apparatus  
[NASA-CASE-ARC-10269-1] c 10 N72-16172  
Continuously variable voltage controlled phase shifter  
[NASA-CASE-NPO-11129] c 09 N72-33204  
Induction motor control system with voltage controlled oscillator circuit  
[NASA-CASE-MFS-21465-1] c 10 N73-32145  
Low distortion automatic phase control circuit --- voltage controlled phase shifter  
[NASA-CASE-MFS-21671-1] c 33 N74-22885  
Pseudonoise code tracking loop  
[NASA-CASE-MS-C-18035-1] c 32 N81-15179  
Fiber optic transmission line stabilization apparatus and method  
[NASA-CASE-NPO-15036-1] c 74 N82-19029
- PHASE SHIFT KEYING**  
Decision feedback loop for tracking a polyphase modulated carrier  
[NASA-CASE-NPO-13103-1] c 32 N74-20811  
Differential phase shift keyed communication system  
[NASA-CASE-MS-C-14065-1] c 32 N74-26654  
Differential phase shift keyed signal resolver  
[NASA-CASE-MS-C-14066-1] c 33 N74-27705  
Unbalanced quadrature demodulator  
[NASA-CASE-MS-C-14840-1] c 32 N77-24331



- Method and apparatus for quadriphase-shift-key and linear phase modulation  
[NASA-CASE-NPO-14444-1] c 33 N81-15192
- Digital demodulator  
[NASA-CASE-LAR-12659-1] c 33 N82-26570
- Trellis coded modulation for transmission over fading mobile satellite channel  
[NASA-CASE-NPO-16904-2-CU] c 32 N91-14523
- Doppler-corrected differential detection system  
[NASA-CASE-NPO-16987-1-CU] c 32 N91-25316
- Phase ambiguity resolution for offset QPSK modulation systems  
[NASA-CASE-NPO-17853-1-CU] c 32 N91-25318
- Multiple symbol differential detection  
[NASA-CASE-NPO-17896-1-CU] c 32 N91-27439
- PHASE SWITCHING INTERFEROMETERS**  
Radar antenna system for acquisition and tracking  
Patent  
[NASA-CASE-XMS-09610] c 07 N71-24625
- PHASE TRANSFORMATIONS**  
Slug flow magnetohydrodynamic generator  
[NASA-CASE-XLE-02083] c 03 N69-39983
- Fluid dispensing apparatus and method Patent  
[NASA-CASE-XLE-01182] c 27 N71-15635
- Ten degree Kelvin hydride refrigerator  
[NASA-CASE-NPO-18639-1-CU] c 31 N87-21159
- PHASE VELOCITY**  
Ultrasonic calibration device --- for producing changes in acoustic attenuation and phase velocity  
[NASA-CASE-LAR-11435-1] c 35 N76-15432
- PHASE ARRAYS**  
Phase control circuits using frequency multiplications for phased array antennas  
[NASA-CASE-ERC-10285] c 10 N73-16206
- Phased array antenna control  
[NASA-CASE-MS-14939-1] c 32 N79-11264
- Phase conjugation method and apparatus for an active retrodirective antenna array  
[NASA-CASE-NPO-13641-1] c 32 N79-24210
- Coaxial phased array antenna  
[NASA-CASE-MS-16800-1] c 32 N81-14187
- Spiral slotted phased antenna array  
[NASA-CASE-MS-18532-1] c 32 N82-27558
- Method and apparatus for self-calibration and phasing of array antenna  
[NASA-CASE-NPO-15920-1] c 33 N85-21493
- Ground plane interference elimination by passive element  
[NASA-CASE-NPO-16632-1-CU] c 32 N87-15390
- Millimeter-wave monolithic diode-grid frequency multiplier  
[NASA-CASE-NPO-17258-1-CU] c 33 N91-14551
- PHENOLIC RESINS**  
Bonding method in the manufacture of continuous regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c 24 N75-30260
- Fire and heat resistant laminating resins based on maleimido substituted aromatic cyclotriphosphazene polymer  
[NASA-CASE-ARC-11428-2] c 27 N87-16909
- PHENOLS**  
Novel polymers and method of preparing same  
[NASA-CASE-NPO-10998-1] c 06 N73-32029
- Method and device for the detection of phenol and related compounds --- in an electrochemical cell  
[NASA-CASE-LEW-12513-1] c 25 N79-22235
- PHENYLS**  
The 1,1,1-triaryl-2,2,2-trifluoroethanes and process for their synthesis  
[NASA-CASE-ARC-11097-1] c 25 N82-24312
- Bis(4-(3,4-dimethylenepyrrolidyl)-phenyl) methane  
[NASA-CASE-LAR-13965-1-CU] c 23 N90-21118
- Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-2-SB] c 27 N90-21177
- Acetylene terminated aspartimides and resins therefrom  
[NASA-CASE-LAR-14188-1] c 27 N90-23545
- Bis(4-(3,4-dimethylene-pyrrolidyl)-phenyl) methane  
[NASA-CASE-LAR-13965-2-CU] c 23 N91-14418
- Poly(1,3,4-oxadiazoles) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14427-1] c 23 N91-23237
- PHONOCARDIOGRAPHY**  
Phonocardiogram simulator Patent  
[NASA-CASE-XKS-10804] c 05 N71-24606
- Vibrophonocardiograph Patent  
[NASA-CASE-XFR-07172] c 05 N71-27234
- PHOSPHATES**  
Thermal control coating Patent  
[NASA-CASE-XLA-01995] c 18 N71-23047
- PHOSPHAZENE**  
Process for the preparation of polycarboranylphosphazenes --- thermal insulation  
[NASA-CASE-ARC-11176-2] c 27 N81-27271
- Carboranyl cyclotriphosphazenes and their polymers --- thermal insulation  
[NASA-CASE-ARC-11176-1] c 27 N82-18389
- Carboranyl methylene-substituted phosphazenes and polymers thereof  
[NASA-CASE-ARC-11370-1] c 27 N84-22750
- Maleimido substituted aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-1] c 23 N86-19376
- Fire and heat resistant laminating resins based on maleimido substituted aromatic cyclotriphosphazene polymer  
[NASA-CASE-ARC-11428-2] c 27 N87-16909
- Aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-3] c 23 N88-24692
- PHOSPHINES**  
Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MS-14903-1] c 27 N78-32256
- Compound oxidized styrylphosphine --- flame resistant vinyl polymers  
[NASA-CASE-MS-14903-2] c 27 N80-10358
- Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MS-14903-3] c 27 N80-24438
- Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c 27 N83-31854
- Elastomer-modified phosphorus-containing imide resins  
[NASA-CASE-ARC-11400-1] c 27 N84-14322
- Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-2] c 27 N85-21347
- PHOSPHONITRILES**  
Metal containing polymers from cyclic tetrameric phenylphosphonitrimides Patent  
[NASA-CASE-HQN-10364] c 06 N71-27363
- PHOSPHORIC ACID**  
Metal etching composition  
[NASA-CASE-MFS-29576-1] c 25 N91-15368
- PHOSPHORS**  
High contrast cathode ray tube  
[NASA-CASE-ERC-10468] c 09 N72-20206
- Thin wire pointing method  
[NASA-CASE-NPO-15789-1] c 31 N83-19947
- Flat-panel, full-color, electroluminescent display  
[NASA-CASE-LAR-13407-1] c 33 N87-28831
- X ray sensitive area detection device  
[NASA-CASE-MFS-28232-1] c 74 N91-14835
- Radiation sensitive area detection device and method  
[NASA-CASE-MFS-28563-1] c 35 N91-25388
- Single layer multi-color luminescent display  
[NASA-CASE-LAR-13616-1] c 74 N91-31950
- PHOSPHORUS**  
Photoelectrochemical cells including chalcogenophosphate photoelectrodes  
[NASA-CASE-LAR-12958-1] c 44 N84-23019
- Fire-resistant phosphorus containing polyimides and copolyimides  
[NASA-CASE-ARC-11522-2] c 27 N85-34280
- The 1-((diorganoxyphosphonyl)-methyl)-2,4- and -2,6-diamido benzenes  
[NASA-CASE-ARC-11425-4] c 23 N90-20133
- Some 1-((diorganoxyphosphonyl)methyl)-2,4- and -2,6-dinitro-benzenes  
[NASA-CASE-ARC-11425-3] c 23 N90-23475
- PHOSPHORUS COMPOUNDS**  
Phosphorus-containing bisimide resins  
[NASA-CASE-ARC-11321-1] c 27 N81-27272
- Polymer of phosphonylmethyl-2,4- and -2,6-diamino benzene and polyfunctional monomer  
[NASA-CASE-ARC-11506-2] c 23 N86-32525
- The 1-((diorganoxy phosphonyl) methyl)-2,4- and -2,6-diamino benzenes and their derivatives  
[NASA-CASE-ARC-11425-2] c 23 N87-28605
- PHOSPHORUS POLYMERS**  
Process for the preparation of polycarboranylphosphazenes --- thermal insulation  
[NASA-CASE-ARC-11176-2] c 27 N81-27271
- Carboranyl cyclotriphosphazenes and their polymers --- thermal insulation  
[NASA-CASE-ARC-11176-1] c 27 N82-18389
- Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-2] c 27 N85-21347
- PHOTOABSORPTION**  
Photomechanical transducer  
[NASA-CASE-NPO-14363-1] c 39 N81-25400
- PHOTOCATHODES**  
Photoelectric energy spectrometer Patent  
[NASA-CASE-XNP-04161] c 14 N71-15599
- III-V photocathode with nitrogen doping for increased quantum efficiency  
[NASA-CASE-NPO-12134-1] c 33 N76-31409
- PHOTOCHEMICAL REACTIONS**  
Apparatus for photon excited catalysis  
[NASA-CASE-NPO-13566-1] c 25 N77-32255
- Apparatus for extraction and separation of a preferentially photo-dissociated molecular isotope into positive and negative ions by means of an electric field  
[NASA-CASE-LEW-12465-1] c 25 N78-25148
- Ultra-violet process for producing flame resistant polyamides and products produced thereby --- protective clothing for high oxygen environments  
[NASA-CASE-MS-18074-1] c 27 N80-26446
- Real-time dynamic holographic image storage device  
[NASA-CASE-LAR-13989-1] c 35 N91-13694
- PHOTOCHROMISM**  
All-optical photochromic spatial light modulators based on photoinduced electron transfer in rigid matrices  
[NASA-CASE-NPO-17612-1-CU] c 74 N90-27487
- PHOTOCONDUCTIVE CELLS**  
Two-dimensional radiant energy array computers and computing devices  
[NASA-CASE-GSC-11839-1] c 60 N77-14751
- Plural output optometric sample cell and analysis system  
[NASA-CASE-NPO-10233-1] c 74 N78-33913
- Photocapacitive image converter  
[NASA-CASE-LAR-12513-1] c 44 N82-32841
- PHOTOCONDUCTIVITY**  
Photoetching of metal-oxide layers  
[NASA-CASE-ERC-10108] c 06 N72-21094
- PHOTOCONDUCTORS**  
Electronic divider and multiplier using photocells  
Patent  
[NASA-CASE-XFR-05637] c 09 N71-19480
- Etching method for photoresists or polymers  
[NASA-CASE-ARC-11873-2] c 25 N91-31258
- PHOTODIODES**  
Shock isolator for operating a diode laser on a closed-cycle refrigerator  
[NASA-CASE-GSC-12297-1] c 37 N79-28549
- Focal plane array optical proximity sensor  
[NASA-CASE-NPO-15155-1] c 74 N85-22139
- PHOTODISSOCIATION**  
Apparatus for extraction and separation of a preferentially photo-dissociated molecular isotope into positive and negative ions by means of an electric field  
[NASA-CASE-LEW-12465-1] c 25 N78-25148
- PHOTOELECTRIC CELLS**  
Sun tracker with rotatable plane-parallel plate and two photocells Patent  
[NASA-CASE-XGS-01159] c 21 N71-10678
- Method of and device for determining the characteristics and flux distribution of micrometeorites --- scanning puncture holes in sheet material with photoelectric cell  
[NASA-CASE-NPO-12127-1] c 91 N74-13130
- Noncontacting method for measuring angular deflection  
[NASA-CASE-LAR-12178-1] c 74 N80-21138
- Photoelectric detection system --- manufacturing automation  
[NASA-CASE-MFS-23776-1] c 33 N82-28545
- PHOTOELECTRIC EFFECT**  
Photoelectric energy spectrometer Patent  
[NASA-CASE-XNP-04161] c 14 N71-15599
- PHOTOELECTRIC EMISSION**  
High resolution threshold photoelectron spectroscopy by electron attachment  
[NASA-CASE-NPO-14078-1] c 72 N80-14877
- PHOTOELECTRIC MATERIALS**  
Light radiation direction indicator with a baffle of two parallel grids  
[NASA-CASE-XNP-03930] c 14 N69-24331
- Use of thin film light detector  
[NASA-CASE-NPO-11432-2] c 35 N74-15090
- Photoelectrochemical cells including chalcogenophosphate photoelectrodes  
[NASA-CASE-LAR-12958-1] c 44 N84-23019
- Increased voltage photovoltaic cell  
[NASA-CASE-NPO-16155-1] c 44 N85-30475
- PHOTOELECTRICITY**  
Photoelectrochemical cells including chalcogenophosphate photoelectrodes  
[NASA-CASE-LAR-12958-1] c 44 N84-23019
- PHOTOELECTROCHEMICAL DEVICES**  
Photoelectrochemical electrodes  
[NASA-CASE-NPO-15458-1] c 25 N84-12262
- Method for determining the point of zero zeta potential of semiconductor  
[NASA-CASE-LAR-12893-1] c 76 N85-30923
- PHOTOELECTRON SPECTROSCOPY**  
Photoelectron spectrometer with means for stabilizing sample surface potential  
[NASA-CASE-NPO-13772-1] c 35 N78-10429
- High resolution threshold photoelectron spectroscopy by electron attachment  
[NASA-CASE-NPO-14078-1] c 72 N80-14877
- Low intensity X-ray and gamma-ray spectrometer ---  
[NASA-CASE-GSC-12587-1] c 35 N82-32659
- PHOTOGRAPHIC EMULSIONS**  
Method for applying photographic resists to otherwise incompatible substrates  
[NASA-CASE-MS-18107-1] c 27 N81-25209

- Method for retarding dye fading during archival storage of developed color photographic film --- inert atmosphere  
[NASA-CASE-MFS-23250-1] c 35 N82-11432
- PHOTOGRAPHIC EQUIPMENT**  
Apparatus and method for protecting a photographic device Patent  
[NASA-CASE-NPO-10174] c 14 N71-18465  
Method of treating the surface of a glass member  
[NASA-CASE-GSC-12110-1] c 27 N77-32308  
System for forming a quadrified image comprising angularly related fields of view of a three dimensional object  
[NASA-CASE-NPO-14219-1] c 74 N81-17886
- PHOTOGRAPHIC FILM**  
Film feed camera having a detent means Patent  
[NASA-CASE-LAR-10686] c 14 N71-28935  
Exposure interlock for oscilloscope cameras  
[NASA-CASE-LAR-10319-1] c 14 N73-32322  
Optical noise suppression device and method --- laser light exposing film  
[NASA-CASE-MS-C-12640-1] c 74 N76-31998  
Selective image area control of X-ray film exposure density  
[NASA-CASE-NPO-13808-1] c 35 N78-15461  
Method for retarding dye fading during archival storage of developed color photographic film --- inert atmosphere  
[NASA-CASE-MFS-23250-1] c 35 N82-11432  
Method and apparatus for making an optical element having a dielectric film  
[NASA-CASE-ARC-11611-1] c 74 N87-28416  
Variable magnification glancing incidence x ray telescope  
[NASA-CASE-MFS-28013-2] c 89 N91-14096
- PHOTOGRAPHIC MEASUREMENT**  
Means and method of measuring viscoelastic strain Patent  
[NASA-CASE-XNP-01153] c 32 N71-17645  
Impact measuring technique  
[NASA-CASE-LAR-10913] c 14 N72-16282  
TV fatigue crack monitoring system  
[NASA-CASE-LAR-11490-1] c 39 N78-16387
- PHOTOGRAPHIC PROCESSING**  
Method and apparatus for producing an image from a transparent object  
[NASA-CASE-GSC-11989-1] c 74 N77-28932  
Method of obtaining intensified image from developed photographic films and plates  
[NASA-CASE-MFS-23461-1] c 35 N79-10389
- PHOTOGRAPHIC PROCESSING EQUIPMENT**  
Drying apparatus for photographic sheet material  
[NASA-CASE-GSC-11074-1] c 14 N73-28469
- PHOTOGRAPHIC RECORDING**  
Method of obtaining permanent record of surface flow phenomena Patent  
[NASA-CASE-XLA-01353] c 14 N70-41366  
Focused image holography with extended sources Patent  
[NASA-CASE-ERC-10019] c 16 N71-15551  
Recording and reconstructing focused image holograms Patent  
[NASA-CASE-ERC-10017] c 16 N71-15567  
Method and means for recording and reconstructing holograms without use of a reference beam Patent  
[NASA-CASE-ERC-10020] c 16 N71-26154  
Multiple image storing system for high speed projectile holography  
[NASA-CASE-MFS-20596] c 14 N72-17324  
Phototropic composition of matter  
[NASA-CASE-XGS-03736] c 14 N72-22443  
Method for determining thermo-physical properties of specimens --- photographic recording of changes in thin film phase-change temperature indicating material in wind tunnel  
[NASA-CASE-LAR-11053-1] c 25 N74-18551
- PHOTOGRAPHY**  
System for forming a quadrified image comprising angularly related fields of view of a three dimensional object  
[NASA-CASE-NPO-14219-1] c 74 N81-17886  
Photorefractor ocular screening system  
[NASA-CASE-MFS-26011-1-SB] c 52 N87-24874
- PHOTOIONIZATION**  
A multichannel photoionization chamber for absorption analysis Patent  
[NASA-CASE-ERC-10044-1] c 14 N71-27090
- PHOTOLYSIS**  
Solar photolysis of water  
[NASA-CASE-NPO-13675-1] c 44 N77-32580  
Solar photolysis of water  
[NASA-CASE-NPO-14126-1] c 44 N79-11470
- PHOTOMAPPING**  
Window defect planar mapping technique  
[NASA-CASE-MS-C-19442-1] c 74 N77-10899
- PHOTOMASKS**  
Method for applying photographic resists to otherwise incompatible substrates  
[NASA-CASE-MS-C-18107-1] c 27 N81-25209
- PHOTOMECHANICAL EFFECT**  
Photomechanical transducer  
[NASA-CASE-NPO-14363-1] c 39 N81-25400
- PHOTOMETERS**  
Interferometer direction sensor Patent  
[NASA-CASE-NPO-10320] c 14 N71-17655  
Method and device for determining battery state of charge Patent  
[NASA-CASE-NPO-10194] c 03 N71-20407  
Light position locating system Patent  
[NASA-CASE-XNP-01059] c 23 N71-21821  
Fluid flow meter with comparator reference means Patent  
[NASA-CASE-XGS-01331] c 14 N71-22996  
Two color horizon sensor  
[NASA-CASE-ERC-10174] c 14 N72-25409  
Infrared detectors  
[NASA-CASE-LAR-10728-1] c 14 N73-12445  
Chromato-fluorographic drug detector --- device for detecting and recording fluorescent properties of materials  
[NASA-CASE-ARC-10633-1] c 25 N74-26947  
The 2 deg/90 deg laboratory scattering photometer --- particulate refractivity in hydrosols  
[NASA-CASE-GSC-12088-1] c 74 N78-13874  
Magneto-optic detection system with noise cancellation  
[NASA-CASE-NPO-11954-1] c 35 N78-29421  
Alternating gradient photodetector  
[NASA-CASE-NPO-17235-1-CU] c 35 N90-21358  
Integrated filter and detector array for spectral imaging  
[NASA-CASE-NPO-18317-1-CU] c 74 N91-32926
- PHOTOMICROGRAPHY**  
Stereo photomicrography system  
[NASA-CASE-LAR-10176-1] c 14 N72-20380  
Hand-held photomicroscope  
[NASA-CASE-ARC-10468-1] c 14 N73-33361  
Method of examining microcircuit patterns  
[NASA-CASE-NPO-16299-1] c 33 N87-14594
- PHOTOMULTIPLIER TUBES**  
Canopus detector including automotive gain control of photomultiplier tube Patent  
[NASA-CASE-XNP-03914] c 21 N71-10771  
Electronic divider and multiplier using photocells Patent  
[NASA-CASE-XFR-05637] c 09 N71-19480  
Coincidence apparatus for detecting particles  
[NASA-CASE-XLA-07813] c 14 N72-17328  
Method and apparatus for mapping the sensitivity of the face of a photodetector specifically a PMT  
[NASA-CASE-LAR-10320-1] c 09 N72-23172  
Light direction sensor  
[NASA-CASE-NPO-11201] c 14 N72-27409  
Photomultiplier circuit including means for rapidly reducing the sensitivity thereof --- and protection from radiation damage  
[NASA-CASE-ARC-10593-1] c 33 N74-27682
- PHOTON BEAMS**  
Apparatus for photon excited catalysis  
[NASA-CASE-NPO-13566-1] c 25 N77-32255
- PHOTON-ELECTRON INTERACTION**  
Means and method for calibrating a photon detector utilizing electron-photon coincidence  
[NASA-CASE-NPO-15644-1] c 35 N84-33767
- PHOTONS**  
Solar cell collector  
[NASA-CASE-LEW-12552-1] c 44 N78-25527  
Means and method for calibrating a photon detector utilizing electron-photon coincidence  
[NASA-CASE-NPO-15644-1] c 35 N84-33767  
Double photon excitation of high-Rydberg atoms as a long-lived submillimeter detector  
[NASA-CASE-NPO-16372-1] c 72 N86-33127
- PHOTOSENSITIVITY**  
Photosensitive device to detect bearing deviation Patent  
[NASA-CASE-XNP-00438] c 21 N70-35089  
Solar optical telescope dome control system Patent  
[NASA-CASE-MS-C-10966] c 14 N71-19568  
Method and apparatus for mapping the sensitivity of the face of a photodetector specifically a PMT  
[NASA-CASE-LAR-10320-1] c 09 N72-23172  
Holography utilizing surface plasmon resonances  
[NASA-CASE-MFS-22040-1] c 35 N74-26946  
Apparatus for calibrating an image dissector tube  
[NASA-CASE-MFS-22208-1] c 33 N75-26244  
Photoelectrochemical cells including chalcogenophosphate photoelectrodes  
[NASA-CASE-LAR-12958-1] c 44 N84-23019  
Liquid crystal light valve structures  
[NASA-CASE-MS-C-20036-1] c 76 N85-33826
- Dynamic range compression/expansion of light beams by photorefractive crystals  
[NASA-CASE-NPO-17140-1-CU] c 74 N89-14077
- PHOTOTHERMAL CONVERSION**  
Predictive aging of polymers  
[NASA-CASE-NPO-17524-1-CU] c 27 N90-10261
- PHOTOTRANSISTORS**  
Phototransistor imaging system  
[NASA-CASE-MFS-20809] c 23 N73-13660  
Phototransistor  
[NASA-CASE-MFS-20407] c 09 N73-19235  
Distributed proximity sensor system  
[NASA-CASE-NPO-17275-1-CU] c 37 N89-29750  
High-gain AlGaAs/GaAs double heterojunction Darlington phototransistors for optical neural networks  
[NASA-CASE-NPO-18101-1-CU] c 74 N91-25841
- PHOTOTROPISM**  
Phototropic composition of matter  
[NASA-CASE-XGS-03736] c 14 N72-22443
- PHOTOVISCOELASTICITY**  
Means and method of measuring viscoelastic strain Patent  
[NASA-CASE-XNP-01153] c 32 N71-17645
- PHOTOVOLTAIC CELLS**  
Plurality of photosensitive cells on a pyramidal base for planetary trackers  
[NASA-CASE-XNP-04180] c 07 N69-39736  
Light sensitive digital aspect sensor Patent  
[NASA-CASE-XGS-00359] c 14 N70-34158  
Method of using photovoltaic cell using poly-N-vinylcarbazole complex Patent  
[NASA-CASE-NPO-10373] c 03 N71-18698  
Use of thin film light detector  
[NASA-CASE-NPO-11432-2] c 35 N74-15090  
Photovoltaic cell array  
[NASA-CASE-MFS-22458-1] c 44 N77-10635  
Solar cells having integral collector grids  
[NASA-CASE-LEW-12819-1] c 44 N79-11467  
Double-sided solar cell package  
[NASA-CASE-NPO-14199-1] c 44 N79-25482  
Method of construction of a multi-cell solar array  
[NASA-CASE-MFS-23540-1] c 44 N79-26475  
Solar cell with improved N-region contact and method of forming the same  
[NASA-CASE-NPO-14205-1] c 44 N79-31752  
Method of fabricating a photovoltaic module of a substantially transparent construction  
[NASA-CASE-NPO-14303-1] c 44 N80-18550  
Copper doped polycrystalline silicon solar cell  
[NASA-CASE-NPO-14670-1] c 44 N81-19558  
Efficiency of silicon solar cells containing chromium  
[NASA-CASE-NPO-15179-1] c 44 N82-26777  
Method of making a high voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c 44 N82-29709  
High voltage planar multijunction solar cell  
[NASA-CASE-LEW-13400-1] c 44 N82-31764  
Heat transparent high intensity high efficiency solar cell  
[NASA-CASE-LEW-12892-1] c 44 N83-14692  
Miniature spectrally selective dosimeter  
[NASA-CASE-LAR-12469-1] c 35 N83-21311  
Cloud cover sensor  
[NASA-CASE-NPO-14936-1] c 47 N83-32232  
Process and apparatus for growing a crystal ribbon  
[NASA-CASE-NPO-15629-1] c 76 N84-35113  
Increased voltage photovoltaic cell  
[NASA-CASE-NPO-16155-1] c 44 N85-30475  
Thermionic photovoltaic energy converter  
[NASA-CASE-LEW-14077-1] c 44 N85-34441  
GaAs Schottky barrier photo-responsive device and method of fabrication  
[NASA-CASE-GSC-12816-1] c 76 N86-20150  
Method of making macrocrystalline or single crystal semiconductor material  
[NASA-CASE-NPO-15904-1] c 76 N86-28760  
Small particle selective emitter  
[NASA-CASE-LEW-14731-1] c 44 N91-13802
- PHOTOVOLTAIC CONVERSION**  
Photoelectrochemical cells including chalcogenophosphate photoelectrodes  
[NASA-CASE-LAR-12958-1] c 44 N84-23019
- PHOTOVOLTAIC EFFECT**  
System for improving signal-to-noise ratio of a communication signal Patent Application  
[NASA-CASE-MS-C-12259-1] c 07 N70-12616  
Use of thin film light detector  
[NASA-CASE-NPO-11432-2] c 35 N74-15090  
Thermionic photovoltaic energy converter  
[NASA-CASE-LEW-14077-1] c 44 N85-34441
- PHthalATES**  
Stabilized unsaturated polyesters  
[NASA-CASE-NPO-16103-1] c 27 N85-29043
- PHthalOCYANIN**  
Metal phthalocyanine polymers  
[NASA-CASE-ARC-11405-1] c 27 N84-27884

- Phthalocyanine polymers  
[NASA-CASE-ARC-11413-1] c 27 N85-21348
- Metal (2) 4,4',4'',4''' phthalocyanine tetraamines as curing agents for epoxy resins  
[NASA-CASE-ARC-11424-1] c 27 N85-34281
- Metal phthalocyanine intermediates for the preparation of polymers  
[NASA-CASE-ARC-11405-2] c 27 N86-19455
- Process for preparing phthalocyanine polymer from imide containing bisphthalonitrile  
[NASA-CASE-ARC-11511-2] c 27 N87-21112
- PHYSICAL EXERCISE**
- Restraint system for ergometer  
[NASA-CASE-MFS-21046-1] c 14 N73-27377
- Tilting table for ergometer and for other biomedical devices  
[NASA-CASE-MFS-21010-1] c 05 N73-30078
- Manual actuator --- for spacecraft exercising machines  
[NASA-CASE-MFS-21481-1] c 37 N74-18127
- Therapeutic hand exerciser  
[NASA-CASE-LAR-11667-1] c 52 N76-19785
- PHYSICAL PROPERTIES**
- Polyurethanes of fluorine containing polycarbonates  
[NASA-CASE-MFS-10512] c 06 N73-30099
- System for monitoring physical characteristics of fluids  
[NASA-CASE-NPO-15400-1] c 34 N83-31993
- PHYSIOLOGICAL EFFECTS**
- Restraint torso for a pressurized suit  
[NASA-CASE-MS-C-12397-1] c 05 N72-25119
- PHYSIOLOGICAL TESTS**
- Vibrophonocardiograph Patent  
[NASA-CASE-XFR-07172] c 05 N71-27234
- Medical subject monitoring systems --- multichannel monitoring systems  
[NASA-CASE-MS-C-14180-1] c 52 N76-14757
- PHYSIOLOGY**
- Phonocardiograph transducer Patent  
[NASA-CASE-XMS-05365] c 14 N71-22993
- Method of detecting and counting bacteria  
[NASA-CASE-GSC-11917-2] c 51 N76-28891
- Dual physiological rate measurement instrument  
[NASA-CASE-MS-C-20078-3] c 52 N91-14709
- PHYTOTRONS**
- Protein crystal growth tray assembly  
[NASA-CASE-MFS-28507-1] c 76 N91-23933
- PIERCING**
- Pressurized cell micrometeoroid detector Patent  
[NASA-CASE-XLA-00936] c 14 N71-14996
- Hypervelocity impact shield  
[NASA-CASE-MS-C-21420-1] c 18 N90-26858
- PIEZOELECTRIC CRYSTALS**
- Miniature stress transducer Patent  
[NASA-CASE-XNP-02983] c 14 N71-21091
- Ultra-stable oscillator with complementary transistors  
[NASA-CASE-GSC-11513-1] c 33 N74-20862
- CDS solid state phase insensitive ultrasonic transducer --- annealing cadmium sulfide crystals  
[NASA-CASE-LAR-12304-1] c 35 N80-20559
- PIEZOELECTRIC GAGES**
- Torque sensor having a spoked sensor element support structure  
[NASA-CASE-NPO-17461-1-CU] c 35 N91-17350
- PIEZOELECTRIC TRANSDUCERS**
- Force transducer Patent  
[NASA-CASE-XAC-01101] c 14 N70-41957
- Microbalance including crystal oscillators for measuring contaminants in a gas system Patent  
[NASA-CASE-NPO-10144] c 14 N71-17701
- Phonocardiograph transducer Patent  
[NASA-CASE-XMS-05365] c 14 N71-22993
- Semiconductor transducer device  
[NASA-CASE-ERC-10087-2] c 14 N72-31446
- Length mode piezoelectric ultrasonic transducer for inspection of solid objects  
[NASA-CASE-MS-C-19672-1] c 38 N79-14398
- Piezoelectric deicing device  
[NASA-CASE-LEW-13773-2] c 33 N86-20671
- PIEZOELECTRICITY**
- Missile stage separation indicator and stage initiator Patent  
[NASA-CASE-XLA-00791] c 03 N70-39930
- Piezoelectric pump Patent  
[NASA-CASE-XNP-05429] c 26 N71-21824
- Pressure sensitive transducers Patent  
[NASA-CASE-ERC-10087] c 14 N71-27334
- Piezoelectric composite materials  
[NASA-CASE-LEW-12582-1] c 76 N83-34796
- Piezoelectrostatic generator  
[NASA-CASE-MFS-28298-1] c 76 N91-14872
- PIEZORESISTIVE TRANSDUCERS**
- Miniature stress transducer Patent  
[NASA-CASE-XNP-02983] c 14 N71-21091
- Transverse piezoresistance and pinch effect electromechanical transducers Patent  
[NASA-CASE-ERC-10088] c 26 N71-25490
- PIGMENTS**
- Stabilized zinc oxide coating compositions Patent  
[NASA-CASE-XMF-07770-2] c 18 N71-26772
- PILOT TRAINING**
- Controlled visibility device for an aircraft Patent  
[NASA-CASE-XFR-04147] c 11 N71-10748
- Kinesthetic control simulator --- for pilot training  
[NASA-CASE-LAR-10276-1] c 09 N75-15662
- PILOTS (PERSONNEL)**
- System for indicating direction of intruder aircraft  
[NASA-CASE-ERC-10226-1] c 14 N73-16483
- PINCH EFFECT**
- Toggle mechanism for pinching metal tubes  
[NASA-CASE-GSC-12274-1] c 37 N79-28550
- PINHOLE CAMERAS**
- Three-dimensional and tomographic imaging device for X-ray and gamma-ray emitting objects  
[NASA-CASE-GSC-12851-1] c 35 N85-30281
- PINS**
- Fatigue-resistant shear pin  
[NASA-CASE-XLA-09122] c 15 N69-27505
- Turbo-machine blade vibration damper Patent  
[NASA-CASE-XLE-00155] c 28 N71-29154
- Safety-type locking pin  
[NASA-CASE-MFS-18495] c 15 N72-11385
- Self-locking double retention redundant full pin release  
[NASA-CASE-NPO-16233-1] c 37 N86-20801
- Method and apparatus for releasably connecting first and second objects  
[NASA-CASE-MS-C-21517-1] c 37 N91-24577
- Coupling device with improved thermal interface  
[NASA-CASE-GSC-13251-1] c 37 N91-28582
- PINTLES**
- Metal valve pintle with encapsulated elastomeric body Patent  
[NASA-CASE-MS-C-12116-1] c 15 N71-17648
- PIPE FLOW**
- Flat-plate heat pipe  
[NASA-CASE-GSC-11998-1] c 34 N77-32413
- Monogroove heat pipe design: Insulated liquid channel with bridging wick  
[NASA-CASE-MS-C-20497-1] c 34 N85-29180
- Energy efficient continuous flow ash lockhopper  
[NASA-CASE-NPO-16985-1-CU] c 31 N91-15423
- PIPELINES**
- Spherical shield Patent  
[NASA-CASE-XNP-01855] c 15 N71-28937
- PIPELINING (COMPUTERS)**
- Pipelined digital SAR azimuth correlator using hybrid FFT-transversal filter  
[NASA-CASE-NPO-15519-1] c 32 N84-34651
- Neighborhood comparison operator  
[NASA-CASE-NPO-16464-1-CU] c 60 N86-24224
- Real time pipelined system for forming the sum of products in the processing of video data  
[NASA-CASE-NPO-16462-1-CU] c 60 N88-24169
- Programmable pipelined image processor  
[NASA-CASE-NPO-16461-1-CU] c 60 N89-26400
- Pipeline synthetic aperture radar data compression utilizing systolic binary tree-searched architecture for vector quantization  
[NASA-CASE-NPO-17941-1-CU] c 32 N91-13595
- Highly parallel computer architecture for robotic computation  
[NASA-CASE-NPO-17632-1-CU] c 60 N91-32805
- PIPES (TUBES)**
- Device for determining the accuracy of the flare on a flared tube  
[NASA-CASE-XKS-03495] c 14 N69-39785
- Piping arrangement through a double chamber structure  
[NASA-CASE-XNP-08882] c 15 N69-39935
- Foldable conduit Patent  
[NASA-CASE-XLE-00620] c 32 N70-41579
- Thermobulb mount Patent  
[NASA-CASE-NPO-10158] c 33 N71-16356
- Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114] c 15 N71-17650
- Sealed separable connection Patent  
[NASA-CASE-NPO-10064] c 15 N71-17693
- Electrical switching device Patent  
[NASA-CASE-NPO-10037] c 09 N71-19610
- Tube dimpling tool Patent  
[NASA-CASE-XMS-06876] c 15 N71-21536
- Plasma device feed system Patent  
[NASA-CASE-XLE-02902] c 25 N71-21694
- Spin forming tubular elbows Patent  
[NASA-CASE-XMF-01083] c 15 N71-22723
- Portable milling tool Patent  
[NASA-CASE-XMF-03511] c 15 N71-22799
- Internal flare angle gauge Patent  
[NASA-CASE-XMF-04415] c 14 N71-24693
- Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114-3] c 15 N71-24865
- Weld preparation machine Patent  
[NASA-CASE-XKS-07953] c 15 N71-26134
- Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114-2] c 15 N71-26148
- Collapsible antenna boom and transmission line Patent  
[NASA-CASE-MFS-20068] c 07 N71-27191
- Tube fabricating process  
[NASA-CASE-LAR-10203-1] c 15 N72-16330
- Torsional disconnect unit  
[NASA-CASE-NPO-10704] c 15 N72-20445
- Open type urine receptacle  
[NASA-CASE-MS-C-12324-1] c 05 N72-22093
- Method for measuring cutaneous sensory perception  
[NASA-CASE-MS-C-13609-1] c 05 N72-25122
- Low mass truss structure  
[NASA-CASE-LAR-10546-1] c 11 N72-25287
- Honeycomb panels formed of minimal surface periodic tubule layers  
[NASA-CASE-ERC-10364] c 18 N72-25540
- Honeycomb core structures of minimal surface tubule sections  
[NASA-CASE-ERC-10363] c 18 N72-25541
- Method for distillation of liquids  
[NASA-CASE-XNP-08124-2] c 06 N73-13129
- Cable restraint  
[NASA-CASE-LAR-10129-1] c 15 N73-25512
- Method of fabricating a twisted composite superconductor  
[NASA-CASE-LEW-11015] c 26 N73-32571
- Open tube guideway for high speed air cushioned vehicles  
[NASA-CASE-LAR-10256-1] c 85 N74-34672
- Method for fabricating a mass spectrometer inlet leak  
[NASA-CASE-GSC-12077-1] c 35 N77-24455
- Precision heat forming of tetrafluoroethylene tubing  
[NASA-CASE-MS-C-18430-1] c 37 N82-24491
- Open ended tubing cutters  
[NASA-CASE-MS-C-18538-1] c 37 N82-26672
- Method of making an ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-2] c 52 N84-23095
- Tubing and cable cutting tool  
[NASA-CASE-LAR-12786-1] c 37 N84-28085
- Fluid leak indicator  
[NASA-CASE-MS-C-20783-1] c 35 N86-20756
- Method of repairing hidden leaks in tubes  
[NASA-CASE-MFS-19796-1] c 37 N86-32736
- Self-contained, single-use hose and tubing cleaning module  
[NASA-CASE-MS-C-20857-1] c 37 N87-17035
- Liquid seeding atomizer  
[NASA-CASE-ARC-11631-1] c 34 N87-21255
- Tube coupling device  
[NASA-CASE-MFS-25964-2] c 37 N87-22977
- Tapered, tubular polyester fabric  
[NASA-CASE-MS-C-21082-1] c 27 N87-29672
- Tool and process for miniature explosive joining of tubes  
[NASA-CASE-LAR-13662-1] c 37 N88-14359
- Quick connect coupling  
[NASA-CASE-MS-C-21539-1] c 37 N91-14610
- PISTON ENGINES**
- Stirling cycle engine and refrigeration systems  
[NASA-CASE-NPO-13613-1] c 37 N76-29590
- Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c 37 N81-25370
- Solar engine  
[NASA-CASE-LAR-12148-1] c 44 N82-24640
- Stirling cycle cryogenic cooler  
[US-PATENT-4,389,849] c 44 N83-28574
- PISTONS**
- Automatic pump Patent  
[NASA-CASE-XNP-04731] c 15 N71-24042
- Firefly pump-metering system  
[NASA-CASE-GSC-10218-1] c 15 N72-21465
- Collapsible pistons  
[NASA-CASE-MS-C-13789-1] c 11 N73-32152
- Airflow control system for supersonic inlets  
[NASA-CASE-LEW-11188-1] c 02 N74-20646
- Free-piston regenerative hot gas hydraulic engine  
[NASA-CASE-LEW-12274-1] c 37 N80-31790
- Power control for hot gas engines  
[NASA-CASE-NPO-14220-1] c 37 N81-14318
- Multiple plate hydrostatic viscous damper  
[NASA-CASE-LEW-12445-1] c 37 N81-22360
- Gas-to-hydraulic power converter  
[NASA-CASE-MS-C-18794-1] c 44 N83-14693
- Centrifugal-reciprocating compressor  
[NASA-CASE-NPO-14597-2] c 37 N84-28081
- Lightweight piston  
[NASA-CASE-LAR-13150-1] c 24 N87-27742
- Composite piston  
[NASA-CASE-LAR-13435-1] c 37 N88-23981

- Lightweight piston architecture  
[NASA-CASE-LAR-13926-1] c 37 N90-22042
- Method and apparatus for waste collection and storage  
[NASA-CASE-MSC-21025-3] c 54 N91-26747
- PITCH (INCLINATION)**
- Reverse pitch fan with divided splitter  
[NASA-CASE-LEW-12760-1] c 07 N77-17059
- Velocity vector control system augmented with direct lift control  
[NASA-CASE-LAR-12268-1] c 08 N81-24106
- Pitch attitude stabilization system utilizing engine pressure ratio feedback signals  
[NASA-CASE-LAR-12562-1] c 08 N81-26152
- Swashplate control system  
[NASA-CASE-ARC-11633-1] c 08 N87-23631
- PITCHING MOMENTS**
- High lift, low pitching moment airfoils  
[NASA-CASE-LAR-13215-1] c 02 N89-14224
- PIVOTS**
- Tension measurement device Patent  
[NASA-CASE-XMS-04545] c 15 N71-22878
- Unidirectional flexural pivot  
[NASA-CASE-GSC-12622-1] c 37 N84-12492
- Joint for deployable structures  
[NASA-CASE-NPO-16038-1] c 37 N86-19605
- Thumb-actuated two-axis controller  
[NASA-CASE-ARC-11372-1] c 08 N86-27288
- PIXELS**
- Programmable remapper with single flow architecture  
[NASA-CASE-MSC-21481-1] c 60 N91-13890
- Programmable remapper for image processing  
[NASA-CASE-MSC-21350-1] c 60 N91-23724
- PLANAR STRUCTURES**
- Window defect planar mapping technique  
[NASA-CASE-MSC-19442-1] c 74 N77-10899
- Method and apparatus for preparing multiconductor cable with flat conductors  
[NASA-CASE-MFS-10946-1] c 31 N79-21226
- High voltage planar multijunction solar cell  
[NASA-CASE-LEW-13400-1] c 44 N82-31764
- Dual cathode system for electron beam instruments  
[NASA-CASE-NPO-16878-1-CU] c 35 N90-20351
- PLANE WAVES**
- Multiple reflection conical microwave antenna  
[NASA-CASE-NPO-11661] c 07 N73-14130
- PLANETARY ATMOSPHERES**
- Method of planetary atmospheric investigation using a split-trajectory dual flyby mode Patent  
[NASA-CASE-XAC-08494] c 30 N71-15990
- Flow field simulation Patent  
[NASA-CASE-LAR-11138] c 12 N71-20436
- Ablation sensor Patent  
[NASA-CASE-XLA-01791] c 14 N71-22991
- PLANETARY GRAVITATION**
- Impact simulator Patent  
[NASA-CASE-XLA-00493] c 11 N70-34786
- Means for visually indicating flight paths of vehicles between the Earth, Venus, and Mercury Patent  
[NASA-CASE-XNP-00708] c 14 N70-35394
- PLANETARY LANDING**
- Parachute glider Patent  
[NASA-CASE-XLA-00898] c 02 N70-36804
- Omnidirectional multiple impact landing system Patent  
[NASA-CASE-XLA-09881] c 31 N71-16085
- PLANETARY MAPPING**
- Method for detecting surface motions and mapping small terrestrial or planetary surface deformations with synthetic aperture radar  
[NASA-CASE-NPO-17831-1-CU] c 43 N91-14642
- PLANETARY ORBITS**
- Flexible foam erectable space structures Patent  
[NASA-CASE-XLA-00686] c 31 N70-34135
- Erectable modular space station Patent  
[NASA-CASE-XLA-00678] c 31 N70-34296
- PLANETARY RADIATION**
- Attitude sensor for space vehicles Patent  
[NASA-CASE-XLA-00793] c 21 N71-22880
- PLANETARY SURFACES**
- Method and apparatus for mapping planets  
[NASA-CASE-NPO-11001] c 07 N72-21118
- Method for detecting surface motions and mapping small terrestrial or planetary surface deformations with synthetic aperture radar  
[NASA-CASE-NPO-17831-1-CU] c 43 N91-14642
- PLANTS (BOTANY)**
- Rotary plant growth accelerating apparatus -- weightlessness  
[NASA-CASE-ARC-10722-1] c 51 N75-25503
- Molten salt pyrolysis of latex -- synthetic hydrocarbon fuel production using the Guayule shrub  
[NASA-CASE-NPO-14315-1] c 27 N81-17261
- Enhancement of in vitro guayule propagation  
[NASA-CASE-NPO-15213-1] c 51 N83-17045
- Method and apparatus for bio-regenerative life support system  
[NASA-CASE-MSC-21629-1] c 54 N91-31803
- PLASMA ACCELERATION**
- Apparatus for increasing ion engine beam density Patent  
[NASA-CASE-XLE-00519] c 28 N70-41576
- Coaxial high density, hypervelocity plasma generator and accelerator with ionizable metal disc  
[NASA-CASE-MFS-20589] c 25 N72-32688
- PLASMA ACCELERATORS**
- Plasma accelerator Patent  
[NASA-CASE-XLA-00675] c 25 N70-33267
- Continuously operating induction plasma accelerator Patent  
[NASA-CASE-XLA-01354] c 25 N70-36946
- Crossed-field MHD plasma generator/ accelerator Patent  
[NASA-CASE-XLA-03374] c 25 N71-15562
- Self-repeating plasma generator having communicating annular and linear arc discharge passages Patent  
[NASA-CASE-XLA-03103] c 25 N71-21693
- Magnetically controlled plasma accelerator Patent  
[NASA-CASE-XLA-00327] c 25 N71-29184
- Two stage light gas-plasma projectile accelerator  
[NASA-CASE-MFS-22287-1] c 75 N76-14931
- PLASMA ARC WELDING**
- ARC length control for plasma welding  
[NASA-CASE-MSC-20900-1] c 37 N88-30131
- PLASMA CONTROL**
- Superconductive magnetic-field-trapping device  
[NASA-CASE-XNP-01185] c 26 N73-28710
- Self-energized plasma compressor -- for compressing plasma discharged from coaxial plasma generator  
[NASA-CASE-MFS-22145-1] c 75 N75-13625
- PLASMA CYLINDERS**
- Plasma fluidic hybrid display Patent  
[NASA-CASE-ERC-10100] c 09 N71-33519
- PLASMA DENSITY**
- Focussing system for an ion source having apertured electrodes Patent  
[NASA-CASE-XNP-03332] c 09 N71-10618
- Measurement of plasma temperature and density using radiation absorption  
[NASA-CASE-ARC-10598-1] c 75 N74-30156
- Hollow cathode apparatus  
[NASA-CASE-NPO-15560-1] c 33 N85-21491
- PLASMA DIAGNOSTICS**
- Probes having ring and primary sensor at same potential to prevent collection of stray wall currents in ionized gases  
[NASA-CASE-XLE-00690] c 25 N69-39884
- Apparatus for measuring conductivity and velocity of plasma utilizing a plurality of sensing coils positioned in the plasma Patent  
[NASA-CASE-XAC-05695] c 25 N71-16073
- Measurement of plasma temperature and density using radiation absorption  
[NASA-CASE-ARC-10598-1] c 75 N74-30156
- Trochoidal analysis of scattered electrons in a merged electron-ion beam geometry  
[NASA-CASE-NPO-16789-1-CU] c 72 N89-29169
- PLASMA DYNAMICS**
- Apparatus for measuring conductivity and velocity of plasma utilizing a plurality of sensing coils positioned in the plasma Patent  
[NASA-CASE-XAC-05695] c 25 N71-16073
- Self-energized plasma compressor -- for compressing plasma discharged from coaxial plasma generator  
[NASA-CASE-MFS-22145-1] c 75 N75-13625
- PLASMA ENGINES**
- Plasma device feed system Patent  
[NASA-CASE-XLE-02902] c 25 N71-21694
- Hybrid plume plasma rocket  
[NASA-CASE-MSC-20476-2] c 20 N89-25279
- High temperature refractory member with radiation emissive overcoat  
[NASA-CASE-NPO-17122-1-CU] c 27 N91-14489
- PLASMA GENERATORS**
- Method and apparatus for producing a plasma Patent  
[NASA-CASE-XLA-00147] c 25 N70-34661
- Crossed-field MHD plasma generator/ accelerator Patent  
[NASA-CASE-XLA-03374] c 25 N71-15562
- Coaxial high density, hypervelocity plasma generator and accelerator with ionizable metal disc  
[NASA-CASE-MFS-20589] c 25 N72-32688
- Self-energized plasma compressor -- for compressing plasma discharged from coaxial plasma generator  
[NASA-CASE-MFS-22145-1] c 75 N75-13625
- Self-energized plasma compressor  
[NASA-CASE-MFS-22145-2] c 75 N76-17951
- Continuous plasma laser -- method and apparatus for producing intense, coherent, monochromatic light from low temperature plasma  
[NASA-CASE-XNP-04167-3] c 36 N77-19416
- PLASMA GUNS**
- Method of making a diffusion bonded refractory coating Patent  
[NASA-CASE-XLE-01604-2] c 15 N71-15610
- Plasma gun with coaxial powder feed and adjustable cathode  
[NASA-CASE-LEW-14901-1] c 75 N91-25875
- PLASMA JETS**
- Method of preparing water purification membranes -- polymerization of allyl amine as thin films in plasma discharge  
[NASA-CASE-ARC-10643-1] c 25 N75-12087
- Combination automatic-starting electrical plasma torch and gas shutoff valve -- for satellite attitude control  
[NASA-CASE-XLE-10717] c 37 N75-29426
- Plasma cleaning device -- designed for high vacuum environments  
[NASA-CASE-MFS-22906-1] c 75 N78-27913
- Etching method for photoresists or polymers  
[NASA-CASE-ARC-11873-2] c 25 N91-31258
- PLASMA LAYERS**
- Electrostatic plasma modulator for space vehicle re-entry communication Patent  
[NASA-CASE-XLA-01400] c 07 N70-41331
- Means for communicating through a layer of ionized gases Patent  
[NASA-CASE-XLA-01127] c 07 N70-41372
- Reentry communication by material addition Patent  
[NASA-CASE-XLA-01552] c 07 N71-11284
- PLASMA POTENTIALS**
- Method and apparatus for neutralizing potentials induced on spacecraft surfaces  
[NASA-CASE-GSC-11963-1] c 33 N77-10429
- PLASMA PROBES**
- Probes having ring and primary sensor at same potential to prevent collection of stray wall currents in ionized gases  
[NASA-CASE-XLE-00690] c 25 N69-39884
- Small plasma probe Patent  
[NASA-CASE-XLE-02578] c 25 N71-20747
- PLASMA PROPELLSION**
- Method of making dish ion thruster grids  
[NASA-CASE-LEW-11694-1] c 20 N75-18310
- Ring-cusp ion thruster with shell anode  
[NASA-CASE-LEW-13881-1] c 20 N85-21256
- Hybrid plume plasma rocket  
[NASA-CASE-MSC-20476-2] c 20 N89-25279
- PLASMA RADIATION**
- Means for measuring the electron density gradients of the plasma sheath formed around a space vehicle Patent  
[NASA-CASE-XLA-06232] c 25 N71-20563
- Continuous plasma light source  
[NASA-CASE-XNP-04167-2] c 25 N72-24753
- PLASMA SHEATHS**
- Apparatus for measuring electric field strength on the surface of a model vehicle Patent  
[NASA-CASE-LEW-02038] c 09 N71-16086
- Means for measuring the electron density gradients of the plasma sheath formed around a space vehicle Patent  
[NASA-CASE-XLA-06232] c 25 N71-20563
- PLASMA SPRAYING**
- Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent  
[NASA-CASE-XLA-00302] c 15 N71-16077
- Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-2] c 37 N82-26674
- Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-1] c 27 N82-29453
- Thermal barrier coating system  
[NASA-CASE-LEW-14057-1] c 24 N85-35233
- Composite thermal barrier coating  
[NASA-CASE-LEW-14999-1] c 24 N91-13500
- Process for HIP canning of composites  
[NASA-CASE-LEW-14990-1-CU] c 24 N91-17145
- Plasma gun with coaxial powder feed and adjustable cathode  
[NASA-CASE-LEW-14901-1] c 75 N91-25875
- Method of preparing a thermal barrier coating  
[NASA-CASE-LEW-14999-2] c 27 N91-26376
- PLASMA TEMPERATURE**
- Measurement of plasma temperature and density using radiation absorption  
[NASA-CASE-ARC-10598-1] c 75 N74-30156
- PLASMA-ELECTROMAGNETIC INTERACTION**
- Plasma igniter for internal combustion engine  
[NASA-CASE-NPO-13828-1] c 37 N79-11405
- PLASMAS (PHYSICS)**
- Apparatus for measuring conductivity and velocity of plasma utilizing a plurality of sensing coils positioned in the plasma Patent  
[NASA-CASE-XAC-05695] c 25 N71-16073

- Hollow cathode apparatus  
[NASA-CASE-NPO-15560-1] c 33 N85-21491  
Method and apparatus for maintaining thermal control in plasma conditions  
[NASA-CASE-MFS-28368-1] c 75 N90-10717  
Ceramic coatings on smooth surfaces  
[NASA-CASE-LEW-15164-1] c 27 N91-25298
- PLASMONS**  
Inelastic tunnel diodes  
[NASA-CASE-LEW-13833-1] c 33 N85-21492  
Solar energy converter using surface plasma waves  
[NASA-CASE-LEW-13827-1] c 44 N85-21768
- PLASTIC COATINGS**  
Coating process  
[NASA-CASE-XNP-06508] c 18 N69-39895  
Apparatus and method for skin packaging articles  
[NASA-CASE-MFS-20855] c 15 N73-27405  
Silicon nitride coated, plastic covered solar cell  
[NASA-CASE-LEW-11496-1] c 44 N77-14580  
Oxygen post-treatment of plastic surface coated with plasma polymerized silicon-containing monomers  
[NASA-CASE-ARC-10915-2] c 27 N79-18052  
Advanced inorganic separators for alkaline batteries  
[NASA-CASE-LEW-13171-1] c 44 N82-29708  
Process for preparing highly optically transparent/colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N86-31727
- PLASTIC DEFORMATION**  
Light intensity strain analysis  
[NASA-CASE-LAR-10765-1] c 32 N73-20740  
Mechanical bonding of metal method  
[NASA-CASE-LEW-12941-1] c 26 N83-10170
- PLASTIC TAPES**  
Thermocouple tape  
[NASA-CASE-LEW-11072-1] c 14 N73-24472
- PLASTICIZERS**  
Inorganic-organic separators for alkaline batteries  
[NASA-CASE-LEW-12649-1] c 44 N78-25530  
Tackifier for addition polyimides containing monoethylphthalate  
[NASA-CASE-LAR-12642-1] c 27 N81-29229  
Method of bonding plasticized elastomer to metal and articles produced thereby  
[NASA-CASE-MFS-25181-1] c 27 N82-24340  
Advanced inorganic separators for alkaline batteries  
[NASA-CASE-LEW-13171-1] c 44 N82-29708
- PLASTICS**  
Method for forming plastic materials Patent  
[NASA-CASE-XMS-05516] c 15 N71-17803  
Method of making inflatable honeycomb Patent  
[NASA-CASE-XLA-03492] c 15 N71-22713  
Sealing member and combination thereof and method of producing said sealing member Patent  
[NASA-CASE-XMS-01625] c 15 N71-23022  
Dielectric molding apparatus Patent  
[NASA-CASE-LAR-10121-1] c 15 N71-26721  
Radar calibration sphere  
[NASA-CASE-XLA-11154] c 07 N72-21117  
Molding apparatus --- for thermosetting plastic compositions  
[NASA-CASE-LAR-10489-2] c 31 N74-32920  
Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c 27 N76-32315
- PLATENS**  
Compression test apparatus  
[NASA-CASE-MS-C-18723-1] c 35 N83-21312
- PLATES**  
Pressurized bellows flat contact heat exchanger interface  
[NASA-CASE-MS-C-12171-1] c 34 N90-21999  
Fully articulated four-point-bend loading fixture  
[NASA-CASE-LEW-14776-1] c 37 N91-21540
- PLATES (STRUCTURAL MEMBERS)**  
Foil seal  
[NASA-CASE-XLE-05130] c 15 N69-21362  
Fifth wheel  
[NASA-CASE-FRC-10081-1] c 37 N77-14477  
Microwave dichroic plate  
[NASA-CASE-GSC-12171-1] c 33 N79-28416  
Floating nut retention system  
[NASA-CASE-MS-C-16938-1] c 37 N80-23653  
Optimized bolted joint  
[NASA-CASE-LAR-13250-1] c 37 N86-27630  
Method and apparatus for making an optical element having a dielectric film  
[NASA-CASE-ARC-11611-1] c 74 N87-28416
- PLATFORMS**  
Expandable pallet for space station interface attachments  
[NASA-CASE-MS-C-21117-2] c 18 N89-28554
- PLATING**  
Selective plating of etched circuits without removing previous plating Patent  
[NASA-CASE-XGS-03120] c 15 N71-24047  
Peen plating  
[NASA-CASE-GSC-11163-1] c 15 N73-32360  
Scanning nozzle plating system --- for etching or plating metals on substrates without masking  
[NASA-CASE-NPO-11758-1] c 31 N74-23065  
Method for depositing an oxide coating  
[NASA-CASE-LEW-13131-1] c 44 N83-10494
- PLATINUM**  
Electrolytic cell structure  
[NASA-CASE-LAR-11042-1] c 33 N75-27252  
Platinum resistance thermometer circuit  
[NASA-CASE-MS-C-12327-1] c 35 N77-27368
- PLATINUM ALLOYS**  
Joining lead wires to thin platinum alloy films  
[NASA-CASE-LEW-13934-1] c 35 N83-35338
- PLAYBACKS**  
Method of and means for testing a tape record/playback system  
[NASA-CASE-MFS-22671-2] c 35 N77-17426  
Thermomagnetic recording and magnetic-optic playback system  
[NASA-CASE-NPO-10872-1] c 35 N79-16246
- PLENUM CHAMBERS**  
Air cushion lift pad Patent  
[NASA-CASE-MFS-14685] c 31 N71-15689  
Gas filter mounting structure  
[NASA-CASE-MS-C-12297] c 14 N72-23457  
Micro-fluid exchange coupling apparatus  
[NASA-CASE-ARC-11114-1] c 51 N81-14605  
Sonic levitation apparatus  
[NASA-CASE-MFS-25828-1] c 71 N84-28568
- PLETHYSMOGRAPHY**  
Readout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c 35 N76-24525  
Apparatus for determining changes in limb volume  
[NASA-CASE-MS-C-18759-1] c 52 N83-27578
- PLOTTERS**  
Automated equipotential plotter  
[NASA-CASE-NPO-11134] c 09 N72-21246  
Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c 32 N81-27341
- PLOTTING**  
Instrument for measuring potentials on two dimensional electric field plots Patent  
[NASA-CASE-XLA-08493] c 10 N71-19421
- PLUG NOZZLES**  
Cascade plug nozzle --- for jet noise reduction  
[NASA-CASE-LAR-11674-1] c 07 N76-18117  
Apparatus and method for jet noise suppression  
[NASA-CASE-LAR-11903-2] c 71 N84-14873
- PLUGS**  
Rocket chamber leak test fixture  
[NASA-CASE-XFR-09479] c 14 N69-27503  
Fatigue-resistant shear pin  
[NASA-CASE-XLA-09122] c 15 N69-27505  
Gas regulator Patent  
[NASA-CASE-NPO-10298] c 12 N71-17661  
Heated porous plug microthruster  
[NASA-CASE-GSC-10640-1] c 28 N72-18766  
High temperature penetrator assembly with bayonet plug and ramp-activated lock  
[NASA-CASE-MS-C-18526-1] c 37 N82-24494  
Rotor self-lubricating axial stop  
[NASA-CASE-MFS-28273-1] c 37 N88-23974  
Porous plug for reducing orifice induced pressure error in airfoils  
[NASA-CASE-LAR-13569-1] c 35 N89-12841  
Method of producing a plug type heat flux gauge  
[NASA-CASE-LEW-14967-2] c 35 N91-23460
- PLUMES**  
Hypervelocity impact shield  
[NASA-CASE-MS-C-21420-1] c 18 N90-26858
- PLUNGERS**  
Method and apparatus for releasably connecting first and second objects  
[NASA-CASE-MS-C-21517-1] c 37 N91-24577
- PNEUMATIC CONTROL**  
Pneumatic system for controlling and actuating pneumatic cyclic devices  
[NASA-CASE-XMS-04843] c 03 N69-21469  
Pneumatic mirror support system  
[NASA-CASE-XLA-03271] c 11 N69-24321  
Valve actuator Patent  
[NASA-CASE-XHQ-01208] c 15 N70-35409  
Quick release hook tape Patent  
[NASA-CASE-XMS-10660-1] c 15 N71-25975  
Foot pedal operated fluid type exercising device  
[NASA-CASE-MS-C-11561-1] c 05 N73-32014  
Pneumatic load compensating or controlling system  
[NASA-CASE-ARC-10907-1] c 37 N75-32465
- PNEUMATIC EQUIPMENT**  
High pressure air valve Patent  
[NASA-CASE-MS-C-11010] c 15 N71-19485  
Inflatable support structure Patent  
[NASA-CASE-XLA-01731] c 32 N71-21045
- Apparatus for purging systems handling toxic, corrosive, noxious and other fluids Patent  
[NASA-CASE-XMS-01905] c 12 N71-21089  
Zero gravity apparatus Patent  
[NASA-CASE-XMF-06515] c 14 N71-23227  
Pneumatic amplifier Patent  
[NASA-CASE-MS-C-12121-1] c 15 N71-27147  
Life raft stabilizer  
[NASA-CASE-MS-C-12393-1] c 02 N73-26006  
Airlock  
[NASA-CASE-MFS-20922-1] c 18 N74-22136  
Pneumatic load compensating or controlling system  
[NASA-CASE-ARC-10907-1] c 37 N75-32465  
Gas-to-hydraulic power converter  
[NASA-CASE-MS-C-18794-1] c 44 N83-14693  
System and method for moving a probe to follow movements of tissue  
[NASA-CASE-NPO-15197-1] c 52 N83-25346  
Apparatus for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-1] c 07 N83-36029  
Inflatable device for installing strain gage bridges  
[NASA-CASE-FRC-11068-1] c 35 N84-12443  
Method for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-2] c 07 N86-20389  
Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-25429-1] c 18 N86-20469
- POINT SOURCES**  
Electronic background suppression method and apparatus for a field scanning sensor  
[NASA-CASE-XGS-05211] c 07 N69-39980  
X-ray reflection collimator adapted to focus X-radiation directly on a detector Patent  
[NASA-CASE-XHQ-04106] c 14 N70-40240  
Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c 32 N81-27341
- POINTING CONTROL SYSTEMS**  
Rotable accurate reflector system for telescopes Patent  
[NASA-CASE-NPO-10468] c 23 N71-33229  
All sky pointing attitude control system  
[NASA-CASE-ARC-10716-1] c 35 N77-20399  
Magnetic suspension and pointing system  
[NASA-CASE-LAR-11889-2] c 37 N78-27424  
Magnetic suspension and pointing system --- on a carrier vehicle  
[NASA-CASE-LAR-11889-1] c 35 N79-26372  
Solar tracking system  
[NASA-CASE-MFS-23999-1] c 44 N81-24520  
Balanced bridge feedback control system  
[NASA-CASE-NPO-17430-1-CU] c 33 N90-21951
- POINTS (MATHEMATICS)**  
Method of and apparatus for generating an interstitial point in a data stream having an even number of data points  
[NASA-CASE-MFS-25319-1] c 60 N85-33701
- POLAR ORBITS**  
Cartwheel satellite synchronization system Patent  
[NASA-CASE-XGS-05579] c 31 N71-15676
- POLARIMETERS**  
Polarimeter for transient measurement Patent  
[NASA-CASE-XNP-08883] c 23 N71-16101  
Interferometer-polarimeter  
[NASA-CASE-NPO-11239] c 14 N73-12446
- POLARIMETRY**  
Data volume reduction for imaging radar polarimetry  
[NASA-CASE-NPO-17184-1-CU] c 32 N88-26541  
Method for providing a polarization filter for processing synthetic aperture radar image data  
[NASA-CASE-NPO-17904-1-CU] c 32 N91-13594
- POLARITY**  
Positive dc to negative dc converter Patent  
[NASA-CASE-XMF-08217] c 03 N71-23239  
Peak polarity selector Patent  
[NASA-CASE-FRC-10010] c 10 N71-24862  
Precision rectifier with FET switching means Patent  
[NASA-CASE-ARC-10101-1] c 09 N71-33109  
Method and apparatus for determining return stroke polarity of distant lightning  
[NASA-CASE-MFS-26102-1-CU] c 47 N91-15661
- POLARIZATION (WAVES)**  
System for interference signal nulling by polarization adjustment  
[NASA-CASE-NPO-13140-1] c 32 N75-24982  
Multifrequency broadband polarized horn antenna  
[NASA-CASE-NPO-14588-1] c 32 N81-25278  
Faraday rotation measurement method and apparatus  
[NASA-CASE-NPO-14839-1] c 35 N82-15381
- POLARIZED ELECTROMAGNETIC RADIATION**  
Antenna beam-shaping apparatus Patent  
[NASA-CASE-XNP-00611] c 09 N70-35219

- Parabolic reflector horn feed with spillover correction Patent  
[NASA-CASE-XNP-00540] c 09 N70-35382
- Antenna feed system for receiving circular polarization and transmitting linear polarization  
[NASA-CASE-NPO-14362-1] c 32 N80-16261
- Coaxial phased array antenna  
[NASA-CASE-MS-C-16800-1] c 32 N81-14187
- Reciprocating linear motor  
[NASA-CASE-GSC-12773-2] c 33 N87-23904
- POLARIZED LIGHT**
- Polarization compensator for optical communications  
[NASA-CASE-GSC-11782-1] c 74 N76-30053
- Visible and infrared polarization ratio spectrophotometer  
[NASA-CASE-LAR-12285-1] c 35 N80-28687
- POLARIZED RADIATION**
- Microwave limb sounder --- measuring trace gases in the upper atmosphere  
[NASA-CASE-NPO-14544-1] c 46 N82-12685
- POLARIZERS**
- Partial polarizer filter  
[NASA-CASE-GSC-12225-1] c 74 N79-14891
- Wind dynamic range video camera  
[NASA-CASE-MFS-25750-1] c 32 N86-20647
- Non-mechanical optical path switching and its application to dual beam spectroscopy including gas filter correlation radiometry  
[NASA-CASE-LAR-14588-1-CU] c 74 N91-23889
- POLES**
- Radial and torsionally controlled magnetic bearing  
[NASA-CASE-GSC-12957-1] c 37 N87-17038
- POLISHING**
- Conforming polisher for aspheric surface of revolution Patent  
[NASA-CASE-XGS-02884] c 15 N71-22705
- Method of forming a sharp edge on an optical device  
[NASA-CASE-GSC-12348-1] c 74 N80-24149
- POLLUTION CONTROL**
- System for minimizing internal combustion engine pollution emission  
[NASA-CASE-NPO-13402-1] c 37 N76-18457
- Combustion engine --- for air pollution control  
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- Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c 07 N81-29129
- Apparatus and method for destructive removal of particles contained in flowing fluid  
[NASA-CASE-NPO-15426-1] c 35 N84-17555
- Combined air and water pollution control system  
[NASA-CASE-NST-00007-1] c 45 N91-14662
- POLLUTION MONITORING**
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[NASA-CASE-NPO-13231-1] c 45 N75-27585
- Stack plume visualization system  
[NASA-CASE-LAR-11675-1] c 45 N76-17656
- Indicator providing continuous indication of the presence of a specific pollutant in air  
[NASA-CASE-NPO-13474-1] c 45 N76-21742
- Method for detecting pollutants --- through chemical reactions and heat treatment  
[NASA-CASE-LAR-11405-1] c 45 N76-31714
- Automated syringe sampler --- remote sampling of air and water  
[NASA-CASE-LAR-12308-1] c 35 N81-29407
- POLYAMIDE RESINS**
- Ultra-violet process for producing flame resistant polyamides and products produced thereby --- protective clothing for high oxygen environments  
[NASA-CASE-MS-C-16074-1] c 27 N80-26446
- Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups  
[NASA-CASE-LAR-12723-2] c 27 N84-22746
- Heat resistant protective hand covering  
[NASA-CASE-MS-C-20261-1] c 54 N84-28484
- Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups  
[NASA-CASE-LAR-12723-1] c 27 N85-20123
- Process for preparing highly optically transparent/colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N86-31727
- Fire and heat resistant laminating resins based on maleimide and citraconimide substituted 1-,2-,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11533-1] c 27 N87-23751
- Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14162-1] c 27 N90-15259
- POLYBENZIMIDAZOLE**
- Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c 27 N78-31232
- POLYBUTADIENE**
- New polymers of perfluorobutadiene and method of manufacture Patent application  
[NASA-CASE-NPO-10863] c 06 N70-11251
- Method of polymerizing perfluorobutadiene Patent application  
[NASA-CASE-NPO-10447] c 06 N70-11252
- Inhibited solid propellant composition containing beryllium hydride  
[NASA-CASE-NPO-10866-1] c 28 N79-14228
- POLYCARBONATES**
- Helmet assembly and latch means therefor Patent  
[NASA-CASE-XMS-04935] c 05 N71-11190
- Poly(carbonate-mide) polymer  
[NASA-CASE-LAR-13292-1] c 27 N86-24841
- POLYCRYSTALS**
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[NASA-CASE-GSC-12022-1] c 44 N76-28635
- Process for utilizing low-cost graphite substrates for polycrystalline solar cells  
[NASA-CASE-GSC-12022-2] c 44 N78-24609
- Method for the preparation of inorganic single crystal and polycrystalline electronic materials  
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- Quasi-containerless glass formation method and apparatus  
[NASA-CASE-MFS-28090-1] c 27 N87-21111
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[NASA-CASE-NPO-10596] c 06 N71-25929
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[NASA-CASE-NPO-16103-1] c 27 N85-29043
- Sulfone-ester polymers containing pendent ethynyl groups  
[NASA-CASE-LAR-13316-1] c 27 N86-27450
- Ethynyl terminated ester oligomers and polymers therefrom  
[NASA-CASE-LAR-13118-2] c 27 N87-16907
- Tapered, tubular polyester fabric  
[NASA-CASE-MS-C-21082-1] c 27 N87-29672
- Polyether-polyester graft copolymer  
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- Fluorohydroxy ethers  
[NASA-CASE-MFS-10507] c 06 N73-30101
- Highly fluorinated polymers  
[NASA-CASE-MFS-11492] c 06 N73-30102
- Aqueous alkali metal hydroxide insoluble cellulose ether membrane  
[NASA-CASE-XGS-05584-1] c 25 N82-29370
- Phenoxy resins containing pendent ethynyl groups and cured resins obtained therefrom  
[NASA-CASE-LAR-13262-1] c 23 N85-28973
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- Polyimide adhesives  
[NASA-CASE-LAR-11397-1] c 27 N75-29263
- Polyimide adhesives  
[NASA-CASE-LAR-12181-1] c 27 N78-17205
- Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety  
[NASA-CASE-ARC-11040-2] c 24 N78-27184
- Mixed diamines for lower melting addition polyimide preparation and utilization  
[NASA-CASE-LAR-12054-1] c 27 N79-33316
- Composition and method for making polyimide resin-reinforced fabric  
[NASA-CASE-LEW-12933-1] c 27 N81-19296
- Tackifier for addition polyimides containing monoethylphthalate  
[NASA-CASE-LAR-12642-1] c 27 N81-29229
- Low temperature cross linking polyimides  
[NASA-CASE-LEW-12876-2] c 27 N83-29392
- Elastomer-modified phosphorus-containing imide resins  
[NASA-CASE-ARC-11400-1] c 27 N84-14322
- Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-1] c 27 N84-27885
- Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-2] c 27 N85-21347
- Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-3] c 27 N85-21350
- Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-4] c 27 N85-21351
- Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-5] c 27 N85-21352
- Chemical control of nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-2] c 25 N85-28982
- Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-6] c 25 N85-30039
- High temperature resistant polyimide from tetra ester, diamine, diester and N-arylnadimide  
[NASA-CASE-LEW-13864-1] c 27 N86-19457
- Process for curing bismaleimide resins  
[NASA-CASE-ARC-11429-4CU] c 27 N87-15304
- Semiinterpenetrating polymer network for tougher and more microcracking resistant high temperature polymers  
[NASA-CASE-LAR-13925-1] c 27 N89-25334
- Vinyl capped addition polyimides  
[NASA-CASE-LEW-15027-1] c 27 N91-13566
- Addition polyimides with enhanced processability  
[NASA-CASE-LEW-15043-1] c 27 N91-32230
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[NASA-CASE-LEW-11325-1] c 06 N73-27980
- Polyimide foam for the thermal insulation and fire protection  
[NASA-CASE-ARC-10464-1] c 27 N74-12812
- Reinforced structural plastics  
[NASA-CASE-LEW-10199-1] c 27 N74-23125
- Polyimides of ether-linked aryl tetracarboxylic dianhydrides  
[NASA-CASE-MFS-22355-1] c 23 N76-15268
- Process for preparing thermoplastic aromatic polyimides  
[NASA-CASE-LAR-11828-1] c 27 N78-32261
- Ambient cure polyimide foams --- thermal resistant foams  
[NASA-CASE-ARC-11170-1] c 27 N79-11215
- Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams  
[NASA-CASE-ARC-11107-1] c 25 N80-16116
- Crystalline polyimides --- reinforcing fibers for high temperature composites and adhesives as well as flame retardation  
[NASA-CASE-LAR-12099-1] c 27 N80-16158
- Method for preparing addition type polyimide prepregs  
[NASA-CASE-LAR-12054-2] c 27 N81-14078
- Aluminum ion-containing polyimide adhesives  
[NASA-CASE-LAR-12640-1] c 27 N82-11206
- Electrically conductive palladium containing polyimide films  
[NASA-CASE-LAR-12705-1] c 25 N82-26396
- Elastomer toughened polyimide adhesives  
[NASA-CASE-LAR-12775-1] c 27 N83-28240
- Solvent resistant thermoplastic aromatic poly(imidesulfone) and process for preparing same  
[NASA-CASE-LAR-12858-2] c 27 N83-34041
- Process for preparing solvent resistant, thermoplastic aromatic poly(imidesulfone)  
[NASA-CASE-LAR-12858-2] c 27 N85-20124
- Elastomer toughened polyimide adhesives --- bonding metal and composite material structures for aircraft and spacecraft  
[NASA-CASE-LAR-12775-2] c 27 N85-21349
- Fire-resistant phosphorus containing polyimides and copolyimides  
[NASA-CASE-ARC-11522-2] c 27 N85-34280
- Maleimido substituted aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-1] c 23 N86-19376
- Process of end-capping a polyimide system  
[NASA-CASE-LAR-13135-1] c 27 N86-19456
- High temperature polyimide film laminates and process for preparation thereof  
[NASA-CASE-LAR-13384-1] c 27 N86-20561
- Poly(carbonate-mide) polymer  
[NASA-CASE-LAR-13292-1] c 27 N86-24841
- Laminate comprising fibers embedded in cured amine terminated bis-imide  
[NASA-CASE-ARC-11421-3] c 24 N86-25416
- Process for preparing essentially colorless polyimide film containing phenoxy-linked diamines  
[NASA-CASE-LAR-13353-1] c 27 N86-29039
- Acetylene (ethynyl) terminated polyimide siloxane and process for preparation thereof  
[NASA-CASE-LAR-13318-1] c 27 N87-14516
- Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-3] c 27 N87-23736
- Polyimides containing carbonyl and ether connecting groups  
[NASA-CASE-LAR-13633-1] c 27 N87-24575
- Process for developing crystallinity in linear aromatic polyimides  
[NASA-CASE-LAR-13732-1] c 27 N87-25474
- Semi-2-interpenetrating networks of high temperature systems  
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- Substituted 1,1,1-Triaryl-2,2,2-Trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-1] c 23 N88-26404
- Novel polyimide compositions based on 4,4': Isophthaloyldiphthalic anhydride (IDPA)  
[NASA-CASE-LAR-14194-1] c 24 N90-15148
- Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14162-1] c 27 N90-15259
- Polyimides with carbonyl and ether connecting groups between the aromatic rings  
[NASA-CASE-LAR-14001-1] c 27 N90-15260
- New Condensation polyimides containing 1,1,1-triaryl-2,2,2-trifluoroethane structures  
[NASA-CASE-LEW-14346-1] c 23 N90-19300
- Bis(4-(3,4-dimethylenepyrrolidyl)-phenyl) methane  
[NASA-CASE-LAR-13965-1-CU] c 23 N90-21118
- Process for lowering the dielectric constant of polyimides using diamic acid additives  
[NASA-CASE-LAR-13902-1] c 27 N90-23546
- A tough high performance composite matrix  
[NASA-CASE-LAR-14338-1] c 24 N90-26881
- Polyimidazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14145-1] c 27 N90-26954
- A tough performance simultaneous semi-interpenetrating polymer network  
[NASA-CASE-LAR-14339-1] c 27 N90-26955
- Aromatic polyimides containing a dimethylsilane-linked dianhydride  
[NASA-CASE-LAR-14198-1] c 27 N90-26956
- Novel polyimide molding powder, coating, adhesive, and matrix resin  
[NASA-CASE-LAR-14163-1] c 27 N91-13559
- Preparation of polyimides from bis(N-isoprenyl)s of aryl diamides  
[NASA-CASE-LAR-14330-1-CU] c 27 N91-13560
- Methyl substituted polyimides containing carbonyl and ether connecting groups  
[NASA-CASE-LAR-14351-1] c 27 N91-13561
- Bis (4-(3,4-dimethylene-pyrrolidyl)-phenyl) methane  
[NASA-CASE-LAR-13965-2-CU] c 23 N91-14418
- Processable polyimide adhesive and matrix composite resin  
[NASA-CASE-LAR-14101-1] c 27 N91-15403
- Preparing composite materials from matrices of processable aromatic polyimide thermoplastic blends  
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- Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14489-1] c 37 N91-27562
- Polyimides prepared from 3,5-diamino benzo trifluoride  
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- POLYISOPRENES**  
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- POLYMER CHEMISTRY**  
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[NASA-CASE-NPO-10714] c 06 N69-31244
- Synthesis of siloxane-containing epoxy polymers  
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- Apparatus for testing polymeric materials Patent  
[NASA-CASE-XNP-09699] c 06 N71-24607
- Polyimide adhesives  
[NASA-CASE-LAR-11397-1] c 27 N75-29263
- Trimerization of aromatic nitriles  
[NASA-CASE-LEW-12053-1] c 27 N78-15276
- Polyimide adhesives  
[NASA-CASE-LAR-12181-1] c 27 N78-17205
- Infusible silazane polymer and process for producing same --- protective coatings  
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- In situ self cross-linking of polyvinyl alcohol battery separators  
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- In-situ cross linking of polyvinyl alcohol --- application to battery separator films  
[NASA-CASE-LEW-13135-2] c 27 N81-24257
- Polymeric compositions and their method of manufacture --- forming filled polymer systems using cryogenics  
[NASA-CASE-NPO-10424-1] c 27 N81-24258
- Process for the preparation of polycarbonarylphosphazenes --- thermal insulation  
[NASA-CASE-ARC-11176-2] c 27 N81-27271
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[NASA-CASE-ARC-11321-1] c 27 N81-27272
- Preparation of crosslinked 1,2,4-oxadiazole polymer  
[NASA-CASE-ARC-11253-2] c 27 N82-24338
- Preparation of perfluorinated 1,2,4-oxadiazoles  
[NASA-CASE-ARC-11267-2] c 23 N82-28353
- Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-6] c 25 N85-30039
- Amine terminated bisaspartimide polymer  
[NASA-CASE-ARC-11421-2] c 27 N86-31726
- Aminophenoxycyclotriphosphazene cured epoxy resins and the composites, laminates, adhesives and structures thereof  
[NASA-CASE-ARC-11548-1] c 27 N87-25469
- The 1-(diorganoxy phosphonyl) methyl-2,4- and -2,6-diamino benzenes and their derivatives  
[NASA-CASE-ARC-11425-2] c 23 N87-28605
- Substituted 1,1,1-Triaryl-2,2,2-Trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-1] c 23 N88-26404
- Polyphenylquinoxalines via aromatic nucleophilic displacement  
[NASA-CASE-LAR-13988-1] c 23 N89-11814
- New Condensation polyimides containing 1,1,1-triaryl-2,2,2-trifluoroethane structures  
[NASA-CASE-LEW-14346-1] c 23 N90-19300
- N-(3-ethynylphenyl)maleimide  
[NASA-CASE-LAR-14188-2] c 23 N91-14419
- Ladder polymers for use as high temperature stable resins or coatings  
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- Copolymers of vinyl styrylpyridines or vinyl stilbazoles with bismaleimide  
[NASA-CASE-ARC-11429-1-CU] c 27 N86-20560
- Light weight polymer matrix composite material  
[NASA-CASE-LEW-14734-1] c 24 N89-23623
- Seminterpenetrating polymer network for tougher and more microcracking resistant high temperature polymers  
[NASA-CASE-LAR-13925-1] c 27 N89-25334
- Processable polyimide adhesive and matrix composite resin  
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- Thermodielectric radiometer utilizing polymer film  
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- Apparatus and method for skin packaging articles  
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[NASA-CASE-LEW-11065-2] c 44 N76-14600
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[NASA-CASE-ARC-10892-2] c 27 N79-14214
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- Surface finishing  
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- Cross-linked polyvinyl alcohol and method of making same  
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- Separator for alkaline electric cells and method of making  
[NASA-CASE-GSC-10017-1] c 44 N82-24643
- Electrically conductive palladium containing polyimide films  
[NASA-CASE-LAR-12705-1] c 25 N82-26396
- Texturing polymer surfaces by transfer casting --- cardiovascular prosthesis  
[NASA-CASE-LEW-13120-1] c 27 N82-28440
- Method for the preparation of thin-skinned asymmetric reverse osmosis membranes and products thereof  
[NASA-CASE-ARC-11359-1] c 51 N84-28361
- Metal phthalocyanine intermediates for the preparation of polymers  
[NASA-CASE-ARC-11405-2] c 27 N86-19455
- High temperature polyimide film laminates and process for preparation thereof  
[NASA-CASE-LAR-13384-1] c 27 N86-20561
- Process for preparing essentially colorless polyimide film containing phenoxy-linked diamines  
[NASA-CASE-LAR-13353-1] c 27 N86-29039
- Process for preparing highly optically transparent/colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N86-31727
- Polycarbonarylphosphazenes from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-1-CU] c 27 N87-22847
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[NASA-CASE-NPO-16544-1-CU] c 35 N87-22953
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- Polycarbonarylphosphazenes from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-2-CU] c 23 N89-12667
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[NASA-CASE-MFS-28368-1] c 75 N90-10717
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[NASA-CASE-NPO-11907-1-NP] c 24 N91-31236
- POLYMERIZATION**  
New polymers of perfluorobutadiene and method of manufacture Patent application  
[NASA-CASE-NPO-10863] c 06 N70-11251
- Method of polymerizing perfluorobutadiene Patent application  
[NASA-CASE-NPO-10447] c 06 N70-11252
- Process for interfacial polymerization of pyromellitic dianhydride and 1,2,4, 5-tetraamino-benzene Patent  
[NASA-CASE-XLA-03104] c 06 N71-11235
- Imidazopyrrolone/imide copolymers Patent  
[NASA-CASE-XLA-08802] c 06 N71-11238
- Direct synthesis of polymeric schiff bases from two amines and two aldehydes Patent  
[NASA-CASE-XMF-08655] c 06 N71-11239
- Azine polymers and process for preparing the same Patent  
[NASA-CASE-XMF-08656] c 06 N71-11242
- Synthesis of polymeric schiff bases by reaction of acetals and amine compounds Patent  
[NASA-CASE-XMF-08652] c 06 N71-11243
- Elastomeric silazane polymers and process for preparing the same Patent  
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- Reaction of fluorine with polyperfluoropolyenes  
[NASA-CASE-NPO-10862] c 06 N72-22107
- Silphenylenesiloxane polymers having in-chain perfluoroalkyl groups  
[NASA-CASE-MFS-20979] c 06 N72-25151
- Polymers of perfluorobutadiene and method of manufacture  
[NASA-CASE-NPO-10863-2] c 06 N72-25152
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[NASA-CASE-MFS-10507] c 06 N73-30101
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[NASA-CASE-MFS-11492] c 06 N73-30102
- Method of preparing water purification membranes --- polymerization of allyl amine as thin films in plasma discharge  
[NASA-CASE-ARC-10643-1] c 25 N75-12087
- Utilization of oxygen difluoride for syntheses of fluoropolymers  
[NASA-CASE-NPO-12061-1] c 27 N76-16228
- Nuclear alkylated pyridine aldehyde polymers and conductive compositions thereof  
[NASA-CASE-NPO-10557] c 27 N78-17214
- Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c 27 N78-31232
- Ambient cure polyimide foams --- thermal resistant foams  
[NASA-CASE-ARC-11170-1] c 27 N79-11215
- Preparation of heterocyclic block copolymer omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c 27 N79-22300
- Catalytic trimerization of aromatic nitriles and triaryl-s-triazine ring cross-linked high temperature resistant polymers and copolymers made thereby  
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- Mixed diamines for lower melting addition polyimide preparation and utilization  
[NASA-CASE-LAR-12054-1] c 27 N79-33316
- Compound oxidized styrylphosphine --- flame resistant vinyl polymers  
[NASA-CASE-MSC-14903-2] c 27 N80-10358
- Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-3] c 27 N80-24438
- Perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups  
[NASA-CASE-ARC-11241-1] c 25 N81-14016
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[NASA-CASE-NPO-10830-1] c 27 N81-15104
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- The 1,2,4-oxadiazole elastomers --- heat resistant polymers  
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 [NASA-CASE-NPO-13309-1] c 25 N81-19244  
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 [NASA-CASE-ARC-11176-1] c 27 N82-18389  
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 [NASA-CASE-LAR-12723-2] c 27 N84-22746  
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 [NASA-CASE-LAR-12980-1] c 27 N84-22749  
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 [NASA-CASE-ARC-11370-1] c 27 N84-22750  
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 [NASA-CASE-ARC-11405-1] c 27 N84-27884  
 Phthalocyanine polymers  
 [NASA-CASE-ARC-11413-1] c 27 N85-21348  
 Stabilized unsaturated polyesters  
 [NASA-CASE-NPO-16103-1] c 27 N85-29043  
 Maleimido substituted aromatic cyclotriphosphazenes  
 [NASA-CASE-ARC-11428-1] c 23 N86-19376  
 Ethynyl and substituted ethynyl-terminated polysulfones  
 [NASA-CASE-LAR-12931-2] c 27 N86-21675  
 Laminate comprising fibers embedded in cured amine terminated bis-imide  
 [NASA-CASE-ARC-11421-3] c 24 N86-25416  
 Sulfone-ester polymers containing pendent ethynyl groups  
 [NASA-CASE-LAR-13316-1] c 27 N86-27450  
 Polymer of phosphonylmethyl-2,4- and -2,6-diamino benzene and polyfunctional monomer  
 [NASA-CASE-ARC-11506-2] c 23 N86-32525  
 Polyarylene ethers with improved properties  
 [NASA-CASE-LAR-13555-1] c 23 N86-32526  
 The 5-(4-Ethynylphenoxy) isophthalic chloride  
 [NASA-CASE-LAR-13316-2] c 27 N87-14515  
 Ethynyl terminated ester oligomers and polymers thereof  
 [NASA-CASE-LAR-13118-2] c 27 N87-16907  
 Process for preparing phthalocyanine polymer from imide containing bisphthalonitrile  
 [NASA-CASE-ARC-11511-2] c 27 N87-21112  
 Polyenamines from aromatic diacetylenic diketones and diamines  
 [NASA-CASE-LAR-13444-1-CU] c 27 N87-22847  
 Process for crosslinking and extending conjugated diene-containing polymers  
 [NASA-CASE-LAR-13452-1] c 27 N87-22848  
 Fire and heat resistant laminating resins based on maleimido and citraconimido substituted 1-2,4- and -2,6-diaminobenzenes  
 [NASA-CASE-ARC-11533-1] c 27 N87-23751  
 Fire and heat resistant laminating resins based on maleimido and citraconimido substituted 1-(diorgano oxyphosphonyl) methyl -2,4- and -2,6-diaminobenzenes  
 [NASA-CASE-ARC-11533-3] c 27 N87-24564  
 Polyimides containing carbonyl and ether connecting groups  
 [NASA-CASE-LAR-13633-1] c 27 N87-24575  
 Process for developing crystallinity in linear aromatic polyimides  
 [NASA-CASE-LAR-13732-1] c 27 N87-25474  
 Semi-2-interpenetrating networks of high temperature systems  
 [NASA-CASE-LAR-13450-1] c 27 N87-28657  
 Aromatic cyclotriphosphazenes  
 [NASA-CASE-ARC-11428-3] c 23 N88-24692  
 Polyenamines from aromatic diacetylenic diketones and diamines  
 [NASA-CASE-LAR-13444-2-CU] c 23 N89-12667  
 Predictive aging of polymers  
 [NASA-CASE-NPO-17524-1-CU] c 27 N90-10261  
 Cellular thermosetting fluorodiepoxide polymers  
 [NASA-CASE-GSC-13008-2] c 27 N90-16949  
 Copolyimide with a combination of flexibilizing groups  
 [NASA-CASE-LAR-13821-1] c 27 N90-16950
- New Condensation polyimides containing 1,1,1-triaryl-2,2,2-trifluoroethane structures  
 [NASA-CASE-LEW-14346-1] c 23 N90-19300  
 The 1-((diorganooxyphosphonyl)-methyl)-2,4- and -2,6-diamino benzenes  
 [NASA-CASE-ARC-11425-4] c 23 N90-20133  
 Process for crosslinking methylene-containing aromatic polymers with ionizing radiation  
 [NASA-CASE-LAR-13448-1] c 27 N90-21198  
 Some 1-(diorganooxyphosphonyl)methyl-2,4- and -2,6-dinitro-benzenes  
 [NASA-CASE-ARC-11425-3] c 23 N90-23475  
 Nonintrusive method and apparatus for monitoring the cure of polymeric materials  
 [NASA-CASE-LAR-13465-1] c 27 N90-23544  
 Graphite fluoride fiber polymer composite material  
 [NASA-CASE-LEW-14472-1] c 24 N91-15320  
 Ladder polymers for use as high temperature stable resins or coatings  
 [NASA-CASE-LEW-14203-1] c 27 N91-15402  
 Processable polyimide adhesive and matrix composite resin  
 [NASA-CASE-LAR-14101-1] c 27 N91-15403  
 Poly(1,3,4-oxadiazoles) via aromatic nucleophilic displacement  
 [NASA-CASE-LAR-14427-1] c 23 N91-23237  
 Low dielectric fluorinated poly(phenylene ether ketone) film and coating  
 [NASA-CASE-LAR-13992-1-CU] c 23 N91-27220  
 Molecules with enhanced electronic polarizabilities based on defect-like states in conjugated polymers  
 [NASA-CASE-NPO-17633-1-CU] c 27 N91-27372  
 Polyimides prepared from 3,5-diamino benzo trifluoride  
 [NASA-CASE-LAR-14206-1] c 27 N91-28425  
 Addition polyimides with enhanced processability  
 [NASA-CASE-LEW-15043-1] c 27 N91-32230
- POLYMERS**  
 Preparation of ordered poly /arylenesiloxane/ polymers  
 [NASA-CASE-XMF-10753] c 06 N71-11237  
 Aromatic diamine-aromatic dialdehyde high molecular weight Schiff base polymers prepared in a monofunctional Schiff base Patent  
 [NASA-CASE-XMF-03074] c 06 N71-24740  
 Resilience testing device Patent  
 [NASA-CASE-XLA-08254] c 14 N71-26161  
 Epoxy-aziridine polymer product Patent  
 [NASA-CASE-NPO-10701] c 06 N71-28620  
 Solid state thermal control polymer coating Patent  
 [NASA-CASE-XLA-01745] c 33 N71-28903  
 Polymeric vehicles as carriers for sulfonic acid salt of nitrosubstituted aromatic amines  
 [NASA-CASE-ARC-10325] c 06 N72-25147  
 Hydrazinium nitroformate propellant with saturated polymeric hydrocarbon binder  
 [NASA-CASE-NPO-12015] c 27 N73-16764  
 Method of forming difunctional polyisobutylene  
 [NASA-CASE-NPO-10893] c 27 N73-22710  
 Novel polymers and method of preparing same  
 [NASA-CASE-NPO-10998-1] c 06 N73-32029  
 Ultraviolet and thermally stable polymer compositions  
 [NASA-CASE-ARC-10592-1] c 27 N74-21156  
 Ultraviolet and thermally stable polymer compositions  
 [NASA-CASE-ARC-10592-2] c 27 N76-32315  
 Oil and fat absorbing polymers  
 [NASA-CASE-NPO-11609-2] c 27 N77-31308  
 Method for separating biological cells --- suspended in aqueous polymer systems  
 [NASA-CASE-MFS-23883-1] c 51 N80-16715  
 Chelate-modified polymers for atmospheric gas chromatography  
 [NASA-CASE-ARC-11154-1] c 25 N80-23383  
 Modification of the electrical and optical properties of polymers --- ion irradiation to create texture  
 [NASA-CASE-LEW-13027-1] c 27 N80-24437  
 Phosphorus-containing imide resins  
 [NASA-CASE-ARC-11368-3] c 27 N84-22745  
 Carboranyl methylene-substituted phosphazenes and polymers thereof  
 [NASA-CASE-ARC-11370-1] c 27 N84-22750  
 Process for improving moisture resistance of epoxy resins by addition of chromium ions  
 [NASA-CASE-LAR-13226-1] c 27 N85-34282  
 Polyarylene ethers with improved properties  
 [NASA-CASE-LAR-13555-1] c 23 N86-32526  
 Oxidation protection coatings for polymers  
 [NASA-CASE-LEW-14072-3] c 27 N87-23736  
 Preparation of polyimides from bis(N-isoprenyl)s of aryl diamides  
 [NASA-CASE-LAR-14330-1-CU] c 27 N91-13560  
 Etching method for photoresists or polymers  
 [NASA-CASE-ARC-11873-2] c 25 N91-31258
- POLYMETHYL METHACRYLATE**  
 Durable antistatic coating for polymethylmethacrylate  
 [NASA-CASE-NPO-13867-1] c 27 N78-14164
- Process for producing a well-adhered durable optical coating on an optical plastic substrate --- abrasion resistant polymethyl methacrylate lenses  
 [NASA-CASE-ARC-11039-1] c 74 N78-32854
- POLYPHENYL ETHER**  
 Polyphenylene ethers with imide linking groups  
 [NASA-CASE-LAR-12980-1] c 27 N84-22749  
 Low dielectric fluorinated poly(phenylene ether ketone) film and coating  
 [NASA-CASE-LAR-13992-1-CU] c 23 N91-27220
- POLYPHENYLENE**  
 Polyphenylquinoxalines containing pendant phenylethynyl and ethynyl groups --- for thermoplastic resins  
 [NASA-CASE-LAR-12838-1] c 27 N83-34040  
 Polyphenylene ethers with imide linking groups  
 [NASA-CASE-LAR-12980-1] c 27 N84-22749  
 Polyphenylquinoxalines via aromatic nucleophilic displacement  
 [NASA-CASE-LAR-13988-1] c 23 N89-11814  
 Polyphenylquinoxalines containing alkylenedioxy groups  
 [NASA-CASE-LAR-13601-1-CU] c 27 N89-14337  
 Low dielectric fluorinated poly(phenylene ether ketone) film and coating  
 [NASA-CASE-LAR-13992-1-CU] c 23 N91-27220  
 Addition polyimides with enhanced processability  
 [NASA-CASE-LEW-15043-1] c 27 N91-32230
- POLYQUINOXALINES**  
 Polyphenylquinoxalines containing alkylenedioxy groups  
 [NASA-CASE-LAR-13601-1-CU] c 27 N89-14337
- POLYSACCHARIDES**  
 Aldehyde-containing urea-absorbing polysaccharides  
 [NASA-CASE-NPO-13620-1] c 27 N77-30236
- POLYTETRAFLUOROETHYLENE**  
 Method and apparatus for bonding a plastics sleeve onto a metallic body Patent  
 [NASA-CASE-XLA-01262] c 15 N71-21404  
 Diffusely reflecting paints including polytetrafluoroethylene and method of manufacture  
 [NASA-CASE-GSC-12883-1] c 27 N85-29044
- POLYURETHANE FOAM**  
 Flexible foam erectable space structures Patent  
 [NASA-CASE-XLA-00686] c 31 N70-34135  
 Modified polyurethane foams for fuel-fire Patent  
 [NASA-CASE-ARC-10098-1] c 06 N71-24739  
 Flexible fire retardant polyisocyanate modified neoprene foam --- for thermal protective devices  
 [NASA-CASE-ARC-10180-1] c 27 N74-12814  
 Fiber modified polyurethane foam for ballistic protection  
 [NASA-CASE-ARC-10714-1] c 27 N76-15310  
 Mixing insert for foam dispensing apparatus  
 [NASA-CASE-MFS-20607-1] c 37 N76-19436  
 Segmented tubular cushion springs and spring assembly  
 [NASA-CASE-ARC-11349-1] c 37 N86-20797
- POLYURETHANE RESINS**  
 Hydroxy terminated perfluoro ethers Patent  
 [NASA-CASE-NPO-10768] c 06 N71-27254  
 Polyurethane resins from hydroxy terminated perfluoro ethers  
 [NASA-CASE-NPO-10768-2] c 06 N72-27144  
 Highly fluorinated polyurethanes  
 [NASA-CASE-NPO-10767-2] c 06 N72-27151  
 Polyurethanes of fluorine containing polycarbonates  
 [NASA-CASE-MFS-10512] c 06 N73-30099  
 Polyurethanes from fluoroalkyl propylene glycol polyethers  
 [NASA-CASE-MFS-10506] c 06 N73-30100  
 Fluorine containing polyurethane  
 [NASA-CASE-MFS-10509] c 06 N73-30103  
 Highly fluorinated polyurethanes  
 [NASA-CASE-NPO-10767-1] c 06 N73-33076  
 Flame retardant spandex type polyurethanes  
 [NASA-CASE-MSC-14331-2] c 27 N78-17213
- POLYVINYL ALCOHOL**  
 In situ self cross-linking of polyvinyl alcohol battery separators  
 [NASA-CASE-LEW-12972-1] c 44 N79-25481  
 Method of cross-linking polyvinyl alcohol and other water soluble resins  
 [NASA-CASE-LEW-13103-1] c 27 N80-32516  
 In-situ cross linking of polyvinyl alcohol --- application to battery separator films  
 [NASA-CASE-LEW-13135-2] c 27 N81-24257  
 Polyvinyl alcohol battery separator containing inert filler --- alkaline batteries  
 [NASA-CASE-LEW-13556-1] c 44 N81-27615  
 Cross-linked polyvinyl alcohol and method of making same  
 [NASA-CASE-LEW-13101-2] c 23 N81-29160  
 Polyvinyl alcohol cross-linked with two aldehydes  
 [NASA-CASE-LEW-13504-1] c 25 N83-13188



- POLYVINYL CHLORIDE**  
Hydraulic lifting device  
[NASA-CASE-SSC-00008-1] c 37 N91-13733
- PONDS**  
Stable density stratification solar pond  
[NASA-CASE-NPO-15419-2] c 44 N85-30474
- PORCELAIN**  
Refractory porcelain enamel passive control coating for high temperature alloys  
[NASA-CASE-MFS-22324-1] c 27 N75-27160
- POROSITY**  
Process for making sheets with parallel pores of uniform size  
[NASA-CASE-GSC-10984-1] c 37 N75-26371  
Krypton based adsorption type cryogenic refrigerator  
[NASA-CASE-NPO-17334-1-CU] c 31 N88-23917  
Porous plug for reducing orifice induced pressure error in airfoils  
[NASA-CASE-LAR-13569-1] c 35 N89-12841  
Method for maintaining precise suction strip porosities  
[NASA-CASE-LAR-13638-1] c 31 N90-19427
- POROUS MATERIALS**  
Method of producing refractory bodies having controlled porosity Patent  
[NASA-CASE-LEW-10393-1] c 17 N71-15468  
Multilayer porous ionizer Patent  
[NASA-CASE-XNP-04338] c 17 N71-23046  
Fluid lubricant system Patent  
[NASA-CASE-XNP-03972] c 15 N71-23048  
Method and device for detecting voids in low density material Patent  
[NASA-CASE-MFS-20044] c 14 N71-28993  
Fabrication of controlled-porosity metals Patent  
[NASA-CASE-XNP-04339] c 17 N71-29137  
Compressible biomedical electrode  
[NASA-CASE-MS-C-13648] c 05 N72-27103  
Porous electrode comprising a bonded stack of pieces of corrugated metal foil  
[NASA-CASE-GSC-11368-1] c 09 N73-32108  
Method of making porous conductive supports for electrodes --- by electroforming and stacking nickel foils  
[NASA-CASE-GSC-11367-1] c 44 N74-19692  
Fluid valve assembly  
[NASA-CASE-MS-C-12731-1] c 37 N78-25426  
Heat exchanger and method of making --- bonding rocket chambers with a porous metal matrix  
[NASA-CASE-LEW-12441-1] c 34 N79-13289  
Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-3] c 37 N82-19540  
Densification of porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MS-C-18737-1] c 24 N83-13171  
Method of repairing surface damage to porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MS-C-18736-1] c 24 N83-13172  
Advanced inorganic separators for alkaline batteries and method of making the same  
[NASA-CASE-LEW-13171-2] c 44 N83-32176  
Water-absorbing capacitor system for measuring relative humidity  
[NASA-CASE-NPO-16544-1-CU] c 35 N87-22953
- POROUS PLATES**  
Method of producing porous tungsten ionizers for ion rocket engines Patent  
[NASA-CASE-XLE-00455] c 28 N70-38197
- PORPHYRINS**  
Method and apparatus for eliminating luminol interference material  
[NASA-CASE-MS-C-16260-1] c 51 N80-16714
- PORTABLE EQUIPMENT**  
Split welding chamber Patent  
[NASA-CASE-LEW-11531] c 15 N71-14932  
Portable superclean air column device Patent  
[NASA-CASE-XMF-03212] c 15 N71-22721  
Weld preparation machine Patent  
[NASA-CASE-XKS-07953] c 15 N71-26134  
Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114-2] c 15 N71-26148  
Cryogenic cooling system Patent  
[NASA-CASE-NPO-10467] c 23 N71-26654  
Boring bar drive mechanism Patent  
[NASA-CASE-XLA-03661] c 15 N71-33518  
One hand backpack harness  
[NASA-CASE-LAR-10102-1] c 05 N72-23085  
Bacterial contamination monitor  
[NASA-CASE-GSC-10879-1] c 14 N72-25413  
Self-recording portable soil penetrometer  
[NASA-CASE-MFS-20774] c 14 N73-19420  
Hand-held photomicroscope  
[NASA-CASE-ARC-10468-1] c 14 N73-33361  
System for enhancing tool-exchange capabilities of a portable wrench  
[NASA-CASE-MFS-22283-1] c 37 N75-33395  
Method of peening and portable peening gun  
[NASA-CASE-MFS-23047-1] c 37 N76-18454
- Portable electrophoresis apparatus using minimum electrolyte  
[NASA-CASE-NPO-13274-1] c 25 N79-10163  
Portable heatable container  
[NASA-CASE-NPO-14237-1] c 44 N80-20808  
Portable device for use in starting air-start-units for aircraft and having cable lead testing capability  
[NASA-CASE-FRC-10113-1] c 33 N80-26599  
Portable appliance security apparatus  
[NASA-CASE-GSC-12399-1] c 33 N81-25299  
Dual-beam skin friction interferometer  
[NASA-CASE-ARC-11354-1] c 74 N83-21949  
Two-dimensional scanner apparatus --- flaw detector in small flat plates  
[NASA-CASE-MFS-25687-1] c 35 N84-22928  
Portable reflectance spectrometer  
[NASA-CASE-NPO-13556-1] c 35 N84-33766  
Portable pallet weighing apparatus  
[NASA-CASE-GSC-12789-1] c 35 N85-20294  
Portable remote laser sensor for methane leak detection  
[NASA-CASE-NPO-15790-1] c 36 N85-21631  
Portable 90 degree proof loading device  
[NASA-CASE-MS-C-20250-1] c 35 N86-19581  
Acoustic guide for noise-transmission testing of aircraft  
[NASA-CASE-LAR-13111-1-CU] c 71 N87-21652
- PORTABLE LIFE SUPPORT SYSTEMS**  
Portable breathing system --- a breathing apparatus using a rebreathing system of heat exchangers for carbon dioxide removal  
[NASA-CASE-MS-C-16182-1] c 54 N80-10799
- PORTS (OPENINGS)**  
Evacuation port seal Patent  
[NASA-CASE-XMF-03290] c 15 N71-23256  
Safety shield for vacuum/pressure chamber viewing port  
[NASA-CASE-GSC-12513-1] c 31 N81-19343
- POSITION (LOCATION)**  
Position location system and method Patent  
[NASA-CASE-GSC-10087-2] c 21 N71-13958  
Position location and data collection system and method Patent  
[NASA-CASE-GSC-10083-1] c 30 N71-16090  
Emergency escape system Patent  
[NASA-CASE-XKS-07814] c 15 N71-27067  
Position location system and method  
[NASA-CASE-GSC-10087-3] c 07 N72-12080  
Location identification system  
[NASA-CASE-ERC-10324] c 07 N72-25173  
Cosmic dust or other similar outer space particles impact location detector  
[NASA-CASE-GSC-11291-1] c 25 N72-33696  
Collimator of multiple plates with axially aligned identical random arrays of apertures  
[NASA-CASE-MFS-20546-2] c 14 N73-30389  
Measuring probe position recorder  
[NASA-CASE-LAR-10806-1] c 35 N74-32877  
Vehicle locating system utilizing AM broadcasting station carriers  
[NASA-CASE-NPO-13217-1] c 32 N75-26194  
Impact position detector for outer space particles  
[NASA-CASE-GSC-11829-1] c 35 N75-27331  
Aircraft-mounted crash-activated transmitter device  
[NASA-CASE-MFS-16609-3] c 03 N76-32140  
Twin-capacitive shaft angle encoder with analog output signal  
[NASA-CASE-ARC-10897-1] c 33 N77-31404  
X-ray position detector  
[NASA-CASE-NPO-12087-1] c 74 N81-19898  
Adjustable indicating device for load position  
[NASA-CASE-MFS-28008-1] c 35 N85-20300  
Controlled sample orientation and rotation in an acoustic levitator  
[NASA-CASE-NPO-17086-1-CU] c 35 N89-14422  
Acoustic controlled rotation and orientation  
[NASA-CASE-NPO-16995-1-CU] c 71 N90-12289  
Apparatus for precision focusing and positioning of a beam waist on a target  
[NASA-CASE-ARC-11916-1-SB] c 74 N91-14002  
Variable magnification glancing incidence x ray telescope  
[NASA-CASE-MFS-28013-2] c 89 N91-14096  
Acoustic positioning and orientation prediction  
[NASA-CASE-NPO-17511-1-CU] c 71 N91-14807  
Remote object configuration/orientation determination  
[NASA-CASE-NPO-17436-1-CU] c 35 N91-15512  
System and method for measuring ocean surface currents at locations remote from land masses using synthetic aperture radar  
[NASA-CASE-NPO-17937-1-CU] c 43 N91-21621  
Two dimensional vernier  
[NASA-CASE-MS-C-21700-1] c 35 N91-23462  
Emergency locating transmitter  
[NASA-CASE-GSC-12821-2] c 33 N91-31530
- POSITION INDICATORS**  
Scanning aspect sensor employing an apertured disc and a commutator  
[NASA-CASE-XGS-08266] c 14 N69-27432  
Angular measurement system Patent  
[NASA-CASE-XMF-00447] c 14 N70-33179  
Position sensing device employing misaligned magnetic field generating and detecting apparatus Patent  
[NASA-CASE-XGS-07514] c 23 N71-16099  
Angular position and velocity sensing apparatus Patent  
[NASA-CASE-XGS-05680] c 14 N71-17585  
Extended area semiconductor radiation detectors and a novel readout arrangement Patent  
[NASA-CASE-XGS-03230] c 14 N71-23401  
Doppler compensation by shifting transmitted object frequency within limits  
[NASA-CASE-GSC-10087-4] c 07 N73-20174  
Meteoroid impact position locator aid for manned space station  
[NASA-CASE-LAR-10629-1] c 35 N75-33367  
Position determination systems --- using orbital antenna scan of celestial bodies  
[NASA-CASE-MS-C-12593-1] c 17 N76-21250  
Solar cell angular position transducer  
[NASA-CASE-LAR-11999-1] c 44 N80-18552  
Synchronization tracking in pulse position modulation receiver  
[NASA-CASE-NPO-16256-1] c 32 N87-21207  
Aircraft control position indicator  
[NASA-CASE-LAR-12894-1] c 06 N87-22678  
Legislated emergency locating transmitters and emergency position indicating radio beacons  
[NASA-CASE-GSC-12892-1] c 32 N89-14374  
Visual aid for the hearing impaired  
[NASA-CASE-GSC-13027-1-CU] c 35 N91-27522
- POSITION SENSING**  
Position sensing device employing misaligned magnetic field generating and detecting apparatus Patent  
[NASA-CASE-XGS-07514] c 23 N71-16099  
Laser optical disk position encoder with active heads  
[NASA-CASE-GSC-13175-1] c 74 N91-14001
- POSITIONING**  
Instrument support with precise lateral adjustment Patent  
[NASA-CASE-XMF-00480] c 14 N70-39898  
Portable alignment tool Patent  
[NASA-CASE-XMF-01452] c 15 N70-41371  
Optical alignment system Patent  
[NASA-CASE-XNP-02029] c 14 N70-41955  
Null device for hand controller Patent  
[NASA-CASE-XLA-01808] c 15 N71-20740  
Rotating raster generator  
[NASA-CASE-FRC-10071-1] c 32 N74-20813  
Low noise lead screw positioner  
[NASA-CASE-NPO-15617-1] c 35 N87-21304  
Apparatus for precision focusing and positioning of a beam waist on a target  
[NASA-CASE-ARC-11916-1-SB] c 74 N91-14002  
Acoustic positioning and orientation prediction  
[NASA-CASE-NPO-17511-1-CU] c 71 N91-14807  
Alignment positioning mechanism  
[NASA-CASE-MS-C-21502-1] c 37 N91-21543
- POSITIONING DEVICES (MACHINERY)**  
Swivel support for gas bearings Patent  
[NASA-CASE-XMF-07808] c 15 N71-23812  
Caterpillar micro positioner  
[NASA-CASE-GSC-10780-1] c 14 N72-16283  
Positioning mechanism  
[NASA-CASE-NPO-10679] c 15 N72-21462  
Test stand system for vacuum chambers  
[NASA-CASE-MFS-21362] c 11 N73-20267  
Method and apparatus for optically monitoring the angular position of a rotating mirror  
[NASA-CASE-GSC-11353-1] c 74 N74-21304  
Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c 35 N75-15014  
Reference apparatus for medical ultrasonic transducer  
[NASA-CASE-ARC-10753-1] c 54 N75-27760  
Controlled caging and uncaging mechanism  
[NASA-CASE-GSC-11063-1] c 37 N77-27400  
Workpiece positioning vise  
[NASA-CASE-GSC-12762-1] c 37 N84-28083  
Load positioning system with gravity compensation  
[NASA-CASE-ARC-11525-1] c 37 N86-27629  
Gripping device  
[NASA-CASE-MS-C-21365-1] c 37 N90-20408
- POSITIVE FEEDBACK**  
Complementary regenerative switch Patent  
[NASA-CASE-XGS-02751] c 09 N71-23015
- POSITRONS**  
Slow positron beam generator for lifetime studies  
[NASA-CASE-LAR-14250-1-SB] c 72 N91-27936

## POTABLE WATER

## POTABLE WATER

- Recovery of potable water from human wastes in below-G conditions Patent  
[NASA-CASE-XLA-03213] c 05 N71-11207
- Compact solar still Patent  
[NASA-CASE-XMS-04533] c 15 N71-23086
- Specialized halogen generator for purification of water Patent  
[NASA-CASE-XLA-08913] c 14 N71-28933
- Potable water dispenser  
[NASA-CASE-MFS-21115-1] c 54 N74-12779
- Metering gun for dispensing precisely measured charges of fluid  
[NASA-CASE-MFS-21163-1] c 54 N74-17853
- Iodine generator for reclaimed water purification  
[NASA-CASE-MSC-14632-1] c 54 N78-14784
- Degassifying and mixing apparatus for liquids --- potable water for spacecraft  
[NASA-CASE-MSC-18936-1] c 35 N83-29652
- Regenerable biocide delivery unit  
[NASA-CASE-MSC-21763-1] c 51 N91-25570

## POTASSIUM SILICATES

- Fire resistant coating composition Patent  
[NASA-CASE-GSC-10072] c 18 N71-14014

## POTENTIOMETERS

- Angle detector  
[NASA-CASE-ARC-11036-1] c 35 N78-32395

## POTENTIOMETERS (INSTRUMENTS)

- Two-axis controller Patent  
[NASA-CASE-XFR-04104] c 03 N70-42073
- Control device Patent  
[NASA-CASE-XAC-10019] c 15 N71-23809
- Line following servosystem Patent  
[NASA-CASE-XAC-00001] c 15 N71-28952
- Indirect microbial detection  
[NASA-CASE-LAR-12520-1] c 51 N81-28698

## POTTING COMPOUNDS

- Method and apparatus for shock protection Patent  
[NASA-CASE-XLA-00482] c 15 N70-36409
- Flexible, repairable, pottable material for electrical connectors Patent  
[NASA-CASE-XGS-05180] c 18 N71-25881
- Thermally conductive polymers  
[NASA-CASE-GSC-11304-1] c 06 N72-21105

## POWDER (PARTICLES)

- Method for forming pyrrone molding powders and products of said method  
[NASA-CASE-LAR-10423-1] c 23 N82-29358
- Powder fed sheared dispersal particle generator  
[NASA-CASE-LAR-12785-1] c 37 N84-16561
- Method of making single crystal fibers  
[NASA-CASE-LEW-14921-1] c 24 N91-13502
- Novel polyimide molding powder, coating, adhesive, and matrix resin  
[NASA-CASE-LAR-14163-1] c 27 N91-13559
- Method of making contamination-free ceramic bodies  
[NASA-CASE-LEW-14984-1] c 27 N91-16152
- Preparing composite materials from matrices of processable aromatic polyimide thermoplastic blends  
[NASA-CASE-LAR-14107-1] c 24 N91-25200

## POWDER METALLURGY

- Process of casting heavy slips Patent  
[NASA-CASE-XLE-00106] c 15 N71-16076
- Fabrication of controlled-porosity metals Patent  
[NASA-CASE-XNP-04339] c 17 N71-29137
- Method of making dry electrodes  
[NASA-CASE-FRC-10029-2] c 05 N72-25121
- Method for producing dispersion strengthened alloys by converting metal to a halide, comminuting, reducing the metal halide to the metal and sintering  
[NASA-CASE-LEW-10450-1] c 15 N72-25448
- Method of forming superalloys  
[NASA-CASE-LEW-10805-1] c 15 N73-13465
- Method of heat treating a formed powder product material  
[NASA-CASE-LEW-10805-3] c 26 N74-10521
- Method of forming articles of manufacture from superalloy powders  
[NASA-CASE-LEW-10805-2] c 37 N74-13179
- Cermet composition and method of fabrication --- heat resistant alloys and powders  
[NASA-CASE-NPO-13120-1] c 27 N76-15311
- Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267
- Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N86-32550
- One step HIP canning of powder metallurgy composites  
[NASA-CASE-LEW-14719-1] c 24 N90-23493
- Method of making carbide/fluoride/silver composites  
[NASA-CASE-LEW-14902-1] c 24 N91-27244

## POWDERED ALUMINUM

- Aluminum ion-containing polyimide adhesives  
[NASA-CASE-LAR-12640-1] c 27 N82-11206

## POWER AMPLIFIERS

- Ac power amplifier Patent Application  
[NASA-CASE-LAR-10218-1] c 09 N70-34559
- Power supply Patent  
[NASA-CASE-XMS-02159] c 10 N71-22961
- Broadband stable power multiplier Patent  
[NASA-CASE-XNP-10854] c 10 N71-26331
- Signal path series step biased multidevice high efficiency amplifier Patent  
[NASA-CASE-GSC-10668-1] c 07 N71-28430
- Isolated output system for a class D switching-mode amplifier  
[NASA-CASE-MFS-21616-1] c 33 N75-30429

## POWER CONDITIONING

- Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c 33 N79-24254
- Self-reconfiguring solar cell system  
[NASA-CASE-LEW-12586-1] c 44 N80-14472
- Inelastic tunnel diodes  
[NASA-CASE-LEW-13833-1] c 33 N85-21492
- Power supply conditioning circuit  
[NASA-CASE-NPO-17233-1-CU] c 33 N88-29095

## POWER CONVERTERS

- Gas-to-hydraulic power converter  
[NASA-CASE-MSC-18794-1] c 44 N83-14693

## POWER EFFICIENCY

- Low power drain semi-conductor circuit  
[NASA-CASE-XGS-04999] c 09 N69-24317
- Excitation and detection circuitry for a flux responsive magnetic head  
[NASA-CASE-XNP-04183] c 09 N69-24329
- Apparatus for increasing ion engine beam density Patent  
[NASA-CASE-XLE-00519] c 28 N70-41576
- Gaseous control system for nuclear reactors  
[NASA-CASE-XLE-04599] c 22 N72-20597
- Remote platform power conserving system  
[NASA-CASE-GSC-11182-1] c 15 N75-13007
- Family of airfoil shapes for rotating blades --- for increased power efficiency and blade stability  
[NASA-CASE-LAR-12843-1] c 02 N84-11136
- Increased voltage photovoltaic cell  
[NASA-CASE-NPO-16155-1] c 44 N85-30475
- Wingtip vortex propeller  
[NASA-CASE-LAR-13019-1] c 07 N85-35194
- Linearized traveling wave amplifier with hard limiter characteristics  
[NASA-CASE-LEW-13981-2] c 33 N86-21742
- Low power consumption current transducer  
[NASA-CASE-NPO-16888-1-CU] c 33 N89-29681

## POWER FACTOR CONTROLLERS

- Triac failure detector  
[NASA-CASE-MFS-25607-1] c 33 N83-34190
- Control system for an induction motor with energy recovery  
[NASA-CASE-MFS-25477-1] c 33 N84-14424
- Motor power control circuit for ac induction motors  
[NASA-CASE-MFS-25323-1] c 33 N84-22886
- Solar powered actuator with continuously variable auxiliary power control  
[NASA-CASE-MFS-25637-1] c 44 N85-21769
- Power control for ac motor  
[NASA-CASE-MFS-25861-1] c 33 N85-22877

## POWER GAIN

- Serrodyne frequency converter re-entrant amplifier system Patent  
[NASA-CASE-XGS-01022] c 07 N71-16088
- CRT blanking and brightness control circuit  
[NASA-CASE-KSC-10647-1] c 10 N72-31273

## POWER LIMITERS

- Monostable multivibrator  
[NASA-CASE-GSC-10082-1] c 10 N72-20221

## POWER LINES

- Electrical connector for flat cables Patent  
[NASA-CASE-XMF-00324] c 09 N70-34596
- Motor run-up system --- power lines  
[NASA-CASE-NPO-13374-1] c 33 N75-19524
- Apparatus including a plurality of spaced transformers for locating short circuits in cables  
[NASA-CASE-KSC-10899-1] c 33 N79-18193
- Shielded conductor cable system  
[NASA-CASE-MSC-12745-1] c 33 N81-27397
- Electrical power generating system  
[NASA-CASE-MFS-25302-1] c 33 N83-28319
- Rotatable electric cable connecting system  
[NASA-CASE-GSC-12899-1] c 33 N86-20669

## POWER REACTORS

- Low power consumption current transducer  
[NASA-CASE-NPO-16888-1-CU] c 33 N89-29681

## POWER SERIES

- Computing apparatus Patent  
[NASA-CASE-XGS-04765] c 08 N71-18693

- Phase modulating with odd and even finite power series of a modulating signal  
[NASA-CASE-LAR-11607-1] c 32 N77-14292

## POWER SPECTRA

- Method and apparatus for high resolution spectral analysis  
[NASA-CASE-NPO-10748] c 08 N72-20177
- Instrument for determining coincidence and elapse time between independent sources of random sequential events  
[NASA-CASE-LAR-12531-1] c 35 N83-29651

## POWER SUPPLIES

- Tape recorder Patent  
[NASA-CASE-XGS-08259] c 14 N71-23698
- Current dependent filter inductance  
[NASA-CASE-ERC-10139] c 09 N72-17154
- Power supply for carbon dioxide lasers  
[NASA-CASE-GSC-11222-1] c 16 N73-32391
- High voltage distributor  
[NASA-CASE-GSC-11849-1] c 33 N76-16332
- Method and apparatus for precision control of radiometer  
[NASA-CASE-NPO-15398-1] c 35 N84-22931

## POWER SUPPLY CIRCUITS

- Regulated dc to dc converter  
[NASA-CASE-XGS-03429] c 03 N69-21330
- Power control circuit  
[NASA-CASE-XNP-02713] c 10 N69-39888
- Electronic amplifier with power supply switching Patent  
[NASA-CASE-XMS-00945] c 09 N71-10798
- Heat pipe thermionic diode power system Patent  
[NASA-CASE-XMF-05843] c 03 N71-11055
- Pulsed energy power system Patent  
[NASA-CASE-MSC-13112] c 03 N71-11057
- Data processor having multiple sections activated at different times by selective power coupling to the sections Patent  
[NASA-CASE-XGS-04767] c 08 N71-12494
- Microwave power receiving antenna Patent  
[NASA-CASE-MFS-20333] c 09 N71-13486
- Regulated power supply Patent  
[NASA-CASE-XMS-01991] c 09 N71-21449
- Power supply Patent  
[NASA-CASE-XMS-02159] c 10 N71-22961
- Polarity sensitive circuit Patent  
[NASA-CASE-XNP-00952] c 10 N71-23271
- Power supply circuit Patent  
[NASA-CASE-XMS-00913] c 10 N71-23543
- Drive circuit for minimizing power consumption in inductive load Patent  
[NASA-CASE-NPO-10716] c 09 N71-24892
- Unsaturating saturable core transformer Patent  
[NASA-CASE-ERC-10125] c 09 N71-24893
- Voltage dropout sensor Patent  
[NASA-CASE-KSC-10020] c 10 N71-27338
- Maximum power point tracker Patent  
[NASA-CASE-GSC-10376-1] c 14 N71-27407
- High power microwave power divider Patent  
[NASA-CASE-NPO-11031] c 07 N71-33606
- Ripple indicator  
[NASA-CASE-KSC-10162] c 09 N72-11225
- A dc to ac to dc converter having transistor synchronous rectifiers  
[NASA-CASE-GSC-11126-1] c 09 N72-25253
- LC-oscillator with automatic stabilized amplitude via bias current control --- power supply circuit for transducers  
[NASA-CASE-MFS-21698-1] c 33 N74-26732
- Integrable power gyrator --- with Z-matrix design using parallel transistors  
[NASA-CASE-MFS-22342-1] c 33 N75-30428
- The dc-to-dc converters employing staggered-phase power switches with two-loop control  
[NASA-CASE-NPO-13512-1] c 33 N77-10428
- Control for nuclear thermionic power source  
[NASA-CASE-NPO-13114-2] c 73 N78-28913
- Closed Loop solar array-ion thruster system with power control circuitry  
[NASA-CASE-LEW-12780-1] c 20 N79-20179
- Three phase power factor controller  
[NASA-CASE-MFS-25535-1] c 33 N81-12330
- Power factor control system for ac induction motors  
[NASA-CASE-MFS-23988-1] c 33 N81-27395
- Triac failure detector  
[NASA-CASE-MFS-25607-1] c 33 N83-34190
- Arc lamp power supply using a voltage multiplier  
[NASA-CASE-LAR-13202-1] c 33 N88-23942

## PREBURNERS

- Turbomachinery shaft insert  
[NASA-CASE-MFS-28345-2] c 37 N89-28842

## PRECESSION

- Dynamic precession damper for spin stabilized vehicles Patent  
[NASA-CASE-XLA-01989] c 21 N70-34295

**PRECIPITATION (CHEMISTRY)**

- Production of pure metals  
[NASA-CASE-LEW-10906-1] c 25 N74-30502  
Human serum albumin crystals and method of preparation  
[NASA-CASE-MFS-28234-1] c 52 N90-20616

**PRECIPITATORS**

- Acoustic agglomeration methods and apparatus  
[NASA-CASE-NPO-15466-1] c 71 N85-22104  
Electronic precipitator control  
[NASA-CASE-LAR-13273-2] c 33 N90-20320

**PRECISION**

- Precision stepping drive Patent  
[NASA-CASE-MFS-14772] c 15 N71-17692  
Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114-2] c 15 N71-26148

**PREDICTIONS**

- Digital phase-lock loop having an estimator and predictor of error  
[NASA-CASE-NPO-17196-1-CU] c 32 N88-29076  
Predictive aging of polymers  
[NASA-CASE-NPO-17524-1-CU] c 27 N90-10261  
Predictive sensor method and apparatus  
[NASA-CASE-SSC-00006-1] c 35 N91-13691  
Acoustic positioning and orientation prediction  
[NASA-CASE-NPO-17511-1-CU] c 71 N91-14807  
Microwave temperature profiler for clear air turbulence prediction  
[NASA-CASE-NPO-18115-1-CU] c 47 N91-23662

**PREFLIGHT OPERATIONS**

- Automatic balancing device. Patent  
[NASA-CASE-LAR-10774] c 10 N71-13545

**PREFORMS**

- Method of preparing fiber reinforced ceramic material  
[NASA-CASE-LEW-14392-1] c 27 N87-28656  
Lightweight piston architecture  
[NASA-CASE-LAR-13926-1] c 37 N90-22042  
Braided composite fasteners and method for producing same  
[NASA-CASE-LAR-14062-1] c 37 N90-27114

**PRELAUNCH TESTS**

- Parasitic probe antenna Patent  
[NASA-CASE-XKS-09348] c 09 N71-13521  
Electronic checkout system for space vehicles Patent  
[NASA-CASE-XKS-08012-2] c 31 N71-15566

**PREPOLYMERS**

- Novel polycarboxylic prepolymeric materials and polymers thereof Patent  
[NASA-CASE-NPO-10596] c 06 N71-25929  
Curable liquid hydrocarbon prepolymers containing hydroxyl groups and process for producing same  
[NASA-CASE-NPO-13137-1] c 27 N80-32514  
Prepolymer dianhydrides  
[NASA-CASE-NPO-13899-1] c 27 N80-32515  
Structural wood panels with improved fire resistance  
[NASA-CASE-ARC-11174-1] c 24 N81-13999  
Method for forming pyrrone molding powders and products of said method  
[NASA-CASE-LAR-10423-1] c 23 N82-29358  
Elastomer toughened polyimide adhesives  
[NASA-CASE-LAR-12775-1] c 27 N83-28240  
Polyphenylquinoxalines containing pendant phenylethynyl and ethynyl groups --- for thermoplastic resins  
[NASA-CASE-LAR-12838-1] c 27 N83-34040

**PREPREGS**

- Tackifier for addition polyimides containing monoethylphthalate  
[NASA-CASE-LAR-12642-1] c 27 N81-29229  
Continuous fiber thermoplastic prepreg  
[NASA-CASE-LAR-14459-1] c 24 N91-15334  
Preparing composite materials from matrices of processable aromatic polyimide thermoplastic blends  
[NASA-CASE-LAR-14107-1] c 24 N91-25200

**PRESSURE**

- Strain gage mounting assembly  
[NASA-CASE-NPO-13170-1] c 35 N76-14430

**PRESSURE CHAMBERS**

- Electric arc driven wind tunnel Patent  
[NASA-CASE-XMF-00411] c 11 N70-36913  
Whole body measurement systems --- for weightlessness simulation  
[NASA-CASE-MSC-13972-1] c 52 N74-10975  
Accumulator  
[NASA-CASE-MFS-19287-1] c 34 N77-30399  
Safety shield for vacuum/pressure chamber viewing port  
[NASA-CASE-GSC-12513-1] c 31 N81-19343  
Weightlessness simulation system and process  
[NASA-CASE-ARC-11646-1] c 14 N87-25344

**PRESSURE DISTRIBUTION**

- Instrument for use in performing a controlled Valsalva maneuver Patent  
[NASA-CASE-XMS-01615] c 05 N70-41329

**Prevention of pressure build-up in electrochemical cells**

- Patent  
[NASA-CASE-XGS-01419] c 03 N70-41864  
Accumulator  
[NASA-CASE-MFS-19287-1] c 34 N77-30399  
Thermal barrier pressure seal --- shielding junctions between spacecraft control surfaces and structures  
[NASA-CASE-MSC-18134-1] c 37 N81-15363  
Continuous self-locking spiral wound seal --- for maintaining pressure between chambers in cryogenic wind tunnels  
[NASA-CASE-LAR-12315-1] c 37 N82-24490  
Ultrasonic transducer with Gaussian radial pressure distribution  
[NASA-CASE-LAR-12967-1] c 35 N84-22932

**PRESSURE DRAG**

- Multi-body aircraft with an all-movable center fuselage actively controlling fuselage pressure drag  
[NASA-CASE-LAR-13511-1] c 05 N88-23765

**PRESSURE DROP**

- Leak detector  
[NASA-CASE-MFS-21761-1] c 35 N75-15931

**PRESSURE EFFECTS**

- System for stabilizing cable phase delay utilizing a coaxial cable under pressure  
[NASA-CASE-NPO-13138-1] c 33 N74-17927  
Evacuated, displacement compression mold --- of tubular bodies from thermosetting plastics  
[NASA-CASE-LAR-10782-2] c 31 N75-13111  
Internally supported flexible duct joint --- device for conducting fluids in high pressure systems  
[NASA-CASE-MFS-19193-1] c 37 N75-19686  
Fluid pressure balanced seal  
[NASA-CASE-XGS-01286-1] c 37 N79-33469  
Real time pressure signal system for a rotary engine  
[NASA-CASE-LEW-13622-1] c 07 N84-22559  
Optical pressure sealing coupling apparatus  
[NASA-CASE-MFS-29348-1] c 74 N89-25689  
Ballast system for maintaining constant pressure in a glove box  
[NASA-CASE-NPO-17786-1-CU] c 35 N90-17104  
Device for applying constant pressure to a surface  
[NASA-CASE-GSC-13230-1] c 37 N91-13734  
Thermal power transfer system using applied potential difference to sustain operating pressure difference  
[NASA-CASE-NPO-18034-1-CU] c 44 N91-13796

**PRESSURE GAGES**

- Differential pressure cell Patent  
[NASA-CASE-XAC-00042] c 14 N70-34816  
Blood pressure measuring system for separating and separately recording dc signal and an ac signal Patent  
[NASA-CASE-XMS-06061] c 05 N71-23317  
Apparatus for testing a pressure responsive instrument Patent  
[NASA-CASE-XMF-04134] c 14 N71-23755  
Device for measuring pressure Patent  
[NASA-CASE-XAC-04458] c 14 N71-24232  
Ultrahigh vacuum gauge having two collector electrodes  
[NASA-CASE-LAR-02743] c 14 N73-32324  
Gas ion laser construction for electrically isolating the pressure gauge thereof  
[NASA-CASE-MFS-22597] c 36 N78-17366

**PRESSURE GRADIENTS**

- Positive displacement flowmeter Patent  
[NASA-CASE-XMF-02822] c 14 N70-41994  
Dual laser optical system and method for studying fluid flow  
[NASA-CASE-MFS-25315-1] c 36 N83-29680

**PRESSURE HEADS**

- Head for high speed spinner having a vacuum chuck --- holding silicon dioxide chips for etching  
[NASA-CASE-NPO-15227-1] c 37 N81-33482

**PRESSURE MEASUREMENT**

- Inertia diaphragm pressure transducer Patent  
[NASA-CASE-XAC-02981] c 14 N71-21072  
Linear differential pressure sensor Patent  
[NASA-CASE-XMF-01974] c 14 N71-22752  
Device for measuring pressure Patent  
[NASA-CASE-XAC-04458] c 14 N71-24232  
Device for measuring light scattering wherein the measuring beam is successively reflected between a pair of parallel reflectors Patent  
[NASA-CASE-XER-11203] c 14 N71-28994  
Sensing probe  
[NASA-CASE-LEW-10281-1] c 14 N72-17327  
Gauge calibration by diffusion  
[NASA-CASE-XGS-07752] c 14 N73-30390  
Apparatus for absolute pressure measurement  
[NASA-CASE-LAR-10000] c 14 N73-30394  
Wind tunnel model and method  
[NASA-CASE-LAR-10812-1] c 09 N74-17955  
Indicated mean-effective pressure instrument  
[NASA-CASE-LEW-12661-1] c 35 N79-14345

**High-temperature microphone system --- for measuring pressure fluctuations in gases at high temperature**

- [NASA-CASE-LAR-12375-1] c 32 N79-24203  
Static pressure orifice system testing method and apparatus  
[NASA-CASE-LAR-12269-1] c 35 N80-18358  
Detection of the transitional layer between laminar and turbulent flow areas on a wing surface --- using an accelerometer to measure pressure levels during wind tunnel tests  
[NASA-CASE-LAR-12261-1] c 02 N80-20224  
Non-invasive method and apparatus for measuring pressure within a pliable vessel  
[NASA-CASE-ARC-11264-2] c 52 N83-29991  
Electronic scanning pressure measuring system and transducer package  
[NASA-CASE-ARC-11361-1] c 35 N84-22934  
Method of and apparatus for measuring temperature and pressure --- atmospheric sounding  
[NASA-CASE-GSC-12558-1] c 36 N85-21639  
Device for quick changeover between wind tunnel force and pressure testing  
[NASA-CASE-LAR-13512-1] c 35 N87-28884  
Porous plug for reducing orifice induced pressure error in airfoils  
[NASA-CASE-LAR-13569-1] c 35 N89-12841  
Pressure measuring probe  
[NASA-CASE-LAR-13853-1] c 35 N89-14423  
Measurement of waves in flows across a surface  
[NASA-CASE-NPO-17479-1-CU] c 34 N91-13658  
Probe insertion apparatus with inflatable seal  
[NASA-CASE-LEW-14965-1] c 37 N91-13732  
Fiber optic microphone  
[NASA-CASE-LAR-14402-1-CU] c 74 N91-15874  
Volumetric measurement of tank volume  
[NASA-CASE-MSC-21500-1] c 35 N91-21493  
Tank gauging apparatus and method  
[NASA-CASE-MSC-21059-3] c 35 N91-21495

**PRESSURE PULSES**

- Passive fetal monitoring sensor  
[NASA-CASE-LAR-14088-1] c 35 N91-13686

**PRESSURE REDUCTION**

- Relief valve  
[NASA-CASE-XMS-05894-1] c 15 N69-21924  
Sealed battery gas manifold construction Patent  
[NASA-CASE-XNP-03378] c 03 N71-11051  
Depressurization of arc lamps  
[NASA-CASE-NPO-10790-1] c 33 N77-21316  
Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c 26 N80-14229  
Pressure letdown method and device for coal conversion systems  
[NASA-CASE-NPO-15100-1] c 44 N84-14583  
Method of making an ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-2] c 52 N84-23095  
Method for growth of crystals by pressure reduction of supercritical or subcritical solution  
[NASA-CASE-NPO-15772-1] c 76 N85-29800  
System for venting gas from a liquid storage tank  
[NASA-CASE-MSC-21253-1] c 31 N90-20254  
Volumetric measurement of tank volume  
[NASA-CASE-MSC-21500-1] c 35 N91-21493

**PRESSURE REGULATORS**

- Pressure regulating system Patent  
[NASA-CASE-XNP-00450] c 15 N70-38603  
Resuscitation apparatus Patent  
[NASA-CASE-XMS-01115] c 05 N70-39922  
High pressure regulator valve Patent  
[NASA-CASE-XNP-00710] c 15 N71-10778  
Space suit pressure stabilizer Patent  
[NASA-CASE-XLA-05332] c 05 N71-11194  
Portable environmental control system Patent  
[NASA-CASE-XMS-09632-1] c 05 N71-11203  
Anti-backlash circuit for hydraulic drive system Patent  
[NASA-CASE-XNP-01020] c 03 N71-12260  
High impact pressure regulator Patent  
[NASA-CASE-NPO-10175] c 14 N71-18625  
Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332] c 05 N72-20097  
Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332-2] c 05 N73-25125  
Combined pressure regulator and shutoff valve  
[NASA-CASE-NPO-13201-1] c 37 N75-15050  
Pressure modulating valve  
[NASA-CASE-MSC-14905-1] c 37 N77-28487  
Flow compensating pressure regulator  
[NASA-CASE-LEW-12718-1] c 34 N78-25351  
Flow diverter valve and flow diversion method  
[NASA-CASE-HQN-00573-1] c 37 N79-33468  
Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12955-1] c 52 N80-14684

- Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12723-1] c 52 N80-18690
- Pressure control valve --- inflating flexible bladders  
[NASA-CASE-ARC-11251-1] c 37 N81-17433
- Prosthetic urinary sphincter  
[NASA-CASE-MFS-23717-1] c 52 N81-25660
- Ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-1] c 52 N83-21785
- Vibration isolation and pressure compensation apparatus for sensitive instrumentation  
[NASA-CASE-LAR-12728-1] c 35 N83-32026
- Apparatus and method for jet noise suppression  
[NASA-CASE-LAR-11903-2] c 71 N84-14873
- Bio-reactor chamber  
[NASA-CASE-MSC-20929-1] c 51 N91-14703
- PRESSURE SENSORS**
- Pressure variable capacitor  
[NASA-CASE-XNP-09752] c 14 N69-21541
- Aerodynamic measuring device Patent  
[NASA-CASE-XLA-00481] c 14 N70-36824
- Check valve assembly for a probe Patent  
[NASA-CASE-XLA-00128] c 15 N70-37925
- Dynamic sensor Patent  
[NASA-CASE-XAC-02877] c 14 N70-41681
- Inertia diaphragm pressure transducer Patent  
[NASA-CASE-XAC-02981] c 14 N71-21072
- Linear differential pressure sensor Patent  
[NASA-CASE-XMF-01974] c 14 N71-22752
- Pressure transducer calibrator Patent  
[NASA-CASE-XNP-01660] c 14 N71-23036
- Instrument for measuring the dynamic behavior of liquids Patent  
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- Circuit board package with wedge shaped covers  
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[NASA-CASE-XMS-09691-1] c 18 N71-15545  
Biological isolation garment Patent  
[NASA-CASE-MSC-12206-1] c 05 N71-17599  
Garments for controlling the temperature of the body  
Patent  
[NASA-CASE-XMS-10269] c 05 N71-24147  
Foreshortened convolute section for a pressurized suit  
Patent  
[NASA-CASE-XMS-09637-1] c 05 N71-24730  
Protective suit having an audio transceiver Patent  
[NASA-CASE-KSC-10164] c 07 N71-33108  
Protective garment ventilation system  
[NASA-CASE-XMS-04928] c 54 N78-17679  
Vitra-violet process for producing flame resistant  
polyamides and products produced thereby --- protective  
clothing for high oxygen environments  
[NASA-CASE-MSC-16074-1] c 27 N80-26446  
Heat resistant protective hand covering  
[NASA-CASE-MSC-20261-2] c 54 N84-23113

**PROTECTIVE COATINGS**

Coating process  
[NASA-CASE-XNP-06508] c 18 N69-39895  
Alkali-metal silicate protective coating  
[NASA-CASE-XGS-04119] c 18 N69-39979  
Process for applying a protective coating for salt bath  
brazing Patent  
[NASA-CASE-XLE-00046] c 15 N70-33311  
Method and apparatus for shock protection Patent  
[NASA-CASE-XLA-00482] c 15 N70-36409  
Thermal control of space vehicles Patent  
[NASA-CASE-XLA-01291] c 33 N70-36617  
Process for preparing sterile solid propellants Patent  
[NASA-CASE-XNP-01749] c 27 N70-41897  
Fire resistant coating composition Patent  
[NASA-CASE-GSC-10072] c 18 N71-14014  
Bacteriostatic conformal coating and methods of  
application Patent  
[NASA-CASE-GSC-10007] c 18 N71-16046  
Method of coating carbonaceous base to prevent  
oxidation destruction and coated base Patent  
[NASA-CASE-XLA-00284] c 15 N71-16075  
Method of coating carbonaceous base to prevent  
oxidation destruction and coated base Patent  
[NASA-CASE-XLA-00302] c 15 N71-16077  
Aerodynamic protection for space flight vehicles  
Patent  
[NASA-CASE-XNP-02507] c 31 N71-17679  
Heat protection apparatus Patent  
[NASA-CASE-XLA-00892] c 33 N71-17897  
Bismuth-lead coatings for gas bearings used in  
atmospheric environments and vacuum chambers Patent  
[NASA-CASE-XGS-02011] c 15 N71-20739  
Alkali metal silicate protective coating Patent  
[NASA-CASE-XGS-04799] c 18 N71-24183  
Process for reducing secondary electron emission  
Patent  
[NASA-CASE-XNP-09469] c 24 N71-25555  
Solid state thermal control polymer coating Patent  
[NASA-CASE-XLA-01745] c 33 N71-28903  
Method of coating through-holes Patent  
[NASA-CASE-XMF-05999] c 15 N71-29032  
Potassium silicate zinc coatings  
[NASA-CASE-GSC-10361-1] c 18 N72-23581  
Method of coating solar cell with borosilicate glass and  
resulant product  
[NASA-CASE-GSC-11514-1] c 03 N72-24037  
Semiconductor surface protection material  
[NASA-CASE-ERC-10339-1] c 18 N73-30532

Nonflammable coating compositions --- for use in high  
oxygen environments  
[NASA-CASE-MFS-20486-2] c 27 N74-17283  
Fused silicite coatings containing discrete particles for  
protecting niobium alloys --- used in space shuttle thermal  
protection systems and turbine engine components  
[NASA-CASE-LEW-11179-1] c 27 N76-16229  
High temperature oxidation resistant cermet  
compositions  
[NASA-CASE-NPO-13666-1] c 27 N77-13217  
Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c 24 N77-19170  
Intumescent coatings containing 4,4'-dinitrosulfanilide  
[NASA-CASE-ARC-11042-1] c 24 N78-14096  
Sprayable low density ablator and application process  
[NASA-CASE-MFS-23506-1] c 24 N78-24290  
Reaction cured glass and glass coatings  
[NASA-CASE-ARC-11051-1] c 27 N78-32260  
Infusible silazane polymer and process for producing  
same --- protective coatings  
[NASA-CASE-XMF-02526-1] c 27 N79-21190  
Fire protection covering for small diameter missiles  
[NASA-CASE-ARC-11104-1] c 15 N79-26100  
Improved refractory coatings --- sputtered coatings on  
substrates that form stable nitrides  
[NASA-CASE-LEW-23169-2] c 26 N81-16209  
Corrosion resistant thermal barrier coating --- protecting  
gas turbines and other engine parts  
[NASA-CASE-LEW-13088-1] c 26 N81-25188  
Heat sealable, flame and abrasion resistant coated fabric  
--- clothing and containers for space exploration  
[NASA-CASE-MSC-18382-1] c 27 N82-16238  
Method of protecting a surface with a  
silicon-slurry/aluminide coating --- coatings for gas turbine  
engine blades and vanes  
[NASA-CASE-LEW-13343-1] c 27 N82-28441  
Curved film cooling admission tube  
[NASA-CASE-LEW-13174-1] c 34 N83-27144  
Silicon-slurry/aluminide coating --- protecting gas turbine  
engine vanes and blades  
[NASA-CASE-LEW-13343] c 26 N83-31795  
Covering solid, film cooled surfaces with a duplex thermal  
barrier coating  
[NASA-CASE-LEW-13450-1] c 31 N83-35177  
Heat sealable, flame and abrasion resistant coated  
fabric  
[NASA-CASE-MSC-18382-2] c 27 N84-14324  
Method and apparatus for coating substrates using a  
laser  
[NASA-CASE-LEW-13526-1] c 36 N84-22944  
Coating with overlay metallic-cermet alloy systems  
[NASA-CASE-LEW-13639-2] c 26 N84-27855  
Overlay metallic-cermet alloy coating systems  
[NASA-CASE-LEW-13639-1] c 26 N84-33555  
Corrosion resistant coating  
[NASA-CASE-NPO-15928-1] c 26 N85-29005  
Spray applicator for spraying coatings and other fluids  
in space  
[NASA-CASE-MSC-18852-1] c 37 N85-29283  
Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-1] c 27 N86-19458  
Process for preparing essentially colorless polyimide film  
containing phenoxy-linked diamines  
[NASA-CASE-LAR-13353-1] c 27 N86-29039  
Apparatus for producing oxidation protection coatings  
for polymers  
[NASA-CASE-LEW-14072-2] c 27 N86-32569  
Nickel base coating alloy  
[NASA-CASE-LEW-13834-1] c 26 N87-14482  
Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-3] c 27 N87-23736  
Oxygen diffusion barrier coating  
[NASA-CASE-LAR-13474-1-SB] c 26 N87-25455  
Hazards protection for space suits and spacecraft  
[NASA-CASE-MSC-21366-1] c 54 N90-25498  
High temperature refractory member with radiation  
emissive overcoat  
[NASA-CASE-NPO-17122-1-CU] c 27 N91-14489  
Metallic seal for thermal barrier coating systems  
[NASA-CASE-LEW-15020-1] c 27 N91-15412  
Oxidation resistant coatings for titanium alloys and  
titanium alloy matrix composites  
[NASA-CASE-LEW-15155-1] c 27 N91-26375  
Ceramic coatings on smooth surfaces  
[NASA-CASE-LEW-15164-2] c 27 N91-32229

**PROTECTORS**

Load cell protection device Patent  
[NASA-CASE-XMS-06782] c 32 N71-15974  
Omnidirectional multiple impact landing system Patent  
[NASA-CASE-XLA-09881] c 31 N71-16085  
Protective telescoping shield for solar concentrator  
[NASA-CASE-NPO-16236-1] c 44 N86-27706

**PROTEIN CRYSTAL GROWTH**

Drop deployment system for crystal growth apparatus  
[NASA-CASE-MFS-28422-1] c 29 N91-17250

Protein crystal growth tray assembly  
[NASA-CASE-MFS-28507-1] c 76 N91-23933

**PROTEINS**

Protein sterilization method of firefly luciferase using  
reduced pressure and molecular sieves  
[NASA-CASE-GSC-10225-1] c 06 N73-27086  
Hanging drop crystal growth apparatus and method  
[NASA-CASE-MFS-28206-1-SB] c 76 N90-23242  
Crystal growth apparatus  
[NASA-CASE-MFS-28182-1] c 76 N90-24169  
Pseudomonas diagnostic assay  
[NASA-CASE-NPO-17653-1-CU] c 51 N90-27239

**PROTOCOL (COMPUTERS)**

Multicomputer communication system  
[NASA-CASE-NPO-15433-1] c 32 N85-21428  
System and method for a general purpose architecture  
for intelligent computer-aided training  
[NASA-CASE-MSC-21381-1] c 63 N91-13944

**PROTON FLUX DENSITY**

Flame detector operable in presence of proton  
radiation  
[NASA-CASE-MFS-21577-1] c 19 N74-29410

**PROXIMITY**

Focal plane array optical proximity sensor  
[NASA-CASE-NPO-15155-1] c 74 N85-22139  
Distributed proximity sensor system  
[NASA-CASE-NPO-17275-1-CU] c 37 N89-29750

**PSEUDOMONAS**

Pseudomonas diagnostic assay  
[NASA-CASE-NPO-17653-1-CU] c 51 N90-27239

**PSEUDONOISE**

Rapid sync acquisition system Patent  
[NASA-CASE-NPO-10214] c 10 N71-26577  
Pseudonoise sequence generators with three tap linear  
feedback shift registers  
[NASA-CASE-NPO-11406] c 08 N73-12175  
Two carrier communication system with single  
transmitter  
[NASA-CASE-NPO-11548] c 07 N73-26118  
Pseudo-noise test set for communication system  
evaluation --- test signals  
[NASA-CASE-MFS-22671-1] c 35 N75-21582  
Pseudonoise code tracking loop  
[NASA-CASE-MSC-18035-1] c 32 N81-15179

**PULLEYS**

Tension measurement device Patent  
[NASA-CASE-XMS-04545] c 15 N71-22878  
Tensile strength testing device Patent  
[NASA-CASE-XNP-05634] c 15 N71-24834

**PULLING**

Dual motion valve with single motion input  
[NASA-CASE-MFS-28058-1] c 37 N87-21332

**PULMONARY CIRCULATION**

Resuscitation apparatus Patent  
[NASA-CASE-XMS-01115] c 05 N70-39922

**PULMONARY FUNCTIONS**

Instrument for use in performing a controlled Valsalva  
maneuver Patent  
[NASA-CASE-XMS-01615] c 05 N70-41329

**PULSE AMPLITUDE**

System for monitoring signal amplitude ranges  
[NASA-CASE-XMS-04061-1] c 09 N69-39885  
Analog to digital converter Patent  
[NASA-CASE-XLA-00670] c 08 N71-12501  
Pulse amplitude and width detector Patent  
[NASA-CASE-XMF-06519] c 09 N71-12519  
Analog-to-digital converter  
[NASA-CASE-XNP-00477] c 08 N73-28045  
Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-11389-1] c 33 N77-26387  
Speech analyzer  
[NASA-CASE-GSC-11898-1] c 32 N77-30309  
Power factor control system for ac induction motors  
[NASA-CASE-MFS-23988-1] c 33 N81-27395  
Video processor for air traffic control beacon system  
[NASA-CASE-KSC-11155-1] c 04 N86-19304  
Method and apparatus for characterizing reflected  
ultrasonic pulses  
[NASA-CASE-LAR-13966-1] c 71 N91-27914

**PULSE AMPLITUDE MODULATION**

Signal ratio system utilizing voltage controlled oscillators  
Patent  
[NASA-CASE-XMF-04367] c 09 N71-23545  
Pulse switching for high energy lasers  
[NASA-CASE-NPO-14556-1] c 33 N82-24418

**PULSE CODE MODULATION**

Adaptive compression of communication signals  
Patent  
[NASA-CASE-XLA-03076] c 07 N71-11266  
Bi-polar phase detector and corrector for split phase  
PCM data signals Patent  
[NASA-CASE-XGS-01590] c 07 N71-12392  
System for recording and reproducing pulse code  
modulated data Patent  
[NASA-CASE-XGS-01021] c 08 N71-21042

- Frequency shift keying apparatus Patent  
[NASA-CASE-XGS-01537] c 07 N71-23405
- Data compression system  
[NASA-CASE-NPO-11243] c 07 N72-20154
- Method and apparatus for frequency-division multiplex communications by digital phase shift of carrier  
[NASA-CASE-NPO-11338] c 08 N72-25208
- Apparatus for deriving synchronizing pulses from pulses in a single channel PCM communications system  
[NASA-CASE-NPO-11302-1] c 07 N73-13149
- Method and apparatus for a single channel digital communications system -- synchronization of received PCM signal by digital correlation with reference signal  
[NASA-CASE-NPO-11302-2] c 32 N74-10132
- Multifunction audio digitizer --- producing direct delta and pulse code modulation  
[NASA-CASE-MSC-13855-1] c 35 N74-17885
- Pulse code modulated signal synchronizer  
[NASA-CASE-MSC-12462-1] c 32 N74-20809
- Pulse code modulated signal synchronizer  
[NASA-CASE-MSC-12494-1] c 32 N74-20810
- Digital transmitter for data bus communications system  
[NASA-CASE-MSC-14558-1] c 32 N75-21486
- Compact-bi-phase pulse coded modulation decoder  
[NASA-CASE-KSC-10834-1] c 33 N76-14371
- Low distortion receiver for bi-level baseband PCM waveforms  
[NASA-CASE-MSC-14557-1] c 32 N76-16249
- Differential pulse code modulation  
[NASA-CASE-MSC-12506-1] c 32 N77-12239
- Digital demodulator  
[NASA-CASE-LAR-12659-1] c 33 N82-26570
- Method and apparatus for operating on companded PCM voice data  
[NASA-CASE-KSC-11285-1] c 32 N86-27513
- PULSE COMMUNICATION**
- Phase-shift data transmission system having a pseudo-noise SYNC code modulated with the data in a single channel Patent  
[NASA-CASE-XNP-00911] c 08 N70-41961
- Differential pulse code modulation  
[NASA-CASE-MSC-12506-1] c 32 N77-12239
- Memory-based frame synchronizer --- for digital communication systems  
[NASA-CASE-GSC-12430-1] c 60 N82-16747
- Method and apparatus for operating on companded PCM voice data  
[NASA-CASE-KSC-11285-1] c 32 N86-27513
- Trellis coded modulation for transmission over fading mobile satellite channel  
[NASA-CASE-NPO-16904-2-CU] c 32 N91-14523
- PULSE DURATION**
- Frequency to analog converter Patent  
[NASA-CASE-XNP-07040] c 08 N71-12500
- Pulse amplitude and width detector Patent  
[NASA-CASE-XMF-06519] c 09 N71-12519
- Variable pulse width multiplier Patent  
[NASA-CASE-XLA-02850] c 09 N71-20447
- Pulse width inverter Patent  
[NASA-CASE-MFS-10068] c 10 N71-25139
- Multivibrator circuit with means to prevent false triggering from supply voltage fluctuations Patent  
[NASA-CASE-ARC-10137-1] c 09 N71-28468
- Pulse stretcher for narrow pulses  
[NASA-CASE-MSC-14130-1] c 33 N74-32711
- PULSE DURATION MODULATION**
- Pulse-width modulation multiplier Patent  
[NASA-CASE-XER-09213] c 07 N71-12390
- Variable duration pulse integrator Patent  
[NASA-CASE-XLA-01219] c 10 N71-23084
- Transistor servo system including a unique differential amplifier circuit Patent  
[NASA-CASE-XMF-05195] c 10 N71-24861
- Control apparatus for applying pulses of selectively predetermined duration to a sequence of loads Patent  
[NASA-CASE-XGS-04224] c 10 N71-26418
- Monostable multivibrator with complementary NOR gates Patent  
[NASA-CASE-MSC-13492-1] c 10 N71-28860
- Load current sensor for a series pulse width modulated power supply  
[NASA-CASE-GSC-10656-1] c 09 N72-25249
- Buck/boost regulator  
[NASA-CASE-GSC-12360-1] c 33 N81-19392
- PULSE FREQUENCY MODULATION**
- Apparatus for measuring current flow Patent  
[NASA-CASE-XGS-02439] c 14 N71-19431
- Digitally controlled frequency synthesizer Patent  
[NASA-CASE-XGS-02317] c 09 N71-23525
- Noninterruptable digital counting system Patent  
[NASA-CASE-XNP-09759] c 08 N71-24891
- Frequency modulation demodulator threshold extension device Patent  
[NASA-CASE-MSC-12165-1] c 07 N71-33696
- Versatile LDV burst simulator  
[NASA-CASE-LAR-11859-1] c 35 N79-14349
- PULSE GENERATORS**
- High voltage pulse generator Patent  
[NASA-CASE-MSC-12178-1] c 09 N71-13518
- Flipflop interrogator and bi-polar current driver Patent  
[NASA-CASE-XGS-03058] c 10 N71-19547
- Pulse modulator providing fast rise and fall times Patent  
[NASA-CASE-XMS-04919] c 09 N71-23270
- Passive synchronized spike generator with high input impedance and low output impedance and capacitor power supply Patent  
[NASA-CASE-XGS-03632] c 09 N71-23311
- Resetable monostable pulse generator Patent  
[NASA-CASE-GSC-11139] c 09 N71-27016
- Pulse generating circuit employing switch means on ends of delay line for alternately charging and discharging same Patent  
[NASA-CASE-XNP-00745] c 10 N71-28960
- Pulse coupling circuit  
[NASA-CASE-LEW-10433-1] c 09 N72-22197
- Method and apparatus for nondestructive testing --- using high frequency arc discharges  
[NASA-CASE-MFS-21233-1] c 38 N74-15395
- Random pulse generator  
[NASA-CASE-MSC-14131-1] c 33 N75-19515
- Active lamp pulse driver circuit --- optical pumping of laser media  
[NASA-CASE-GSC-12566-1] c 33 N83-34189
- Synchronization tracking in pulse position modulation receiver  
[NASA-CASE-NPO-16256-1] c 32 N87-21207
- PULSE HEATING**
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA-CASE-NPO-15494-1] c 35 N82-25484
- PULSE MODULATION**
- Synchronization tracking in pulse position modulation receiver  
[NASA-CASE-NPO-16256-1] c 32 N87-21207
- PULSE RATE**
- Counter Patent  
[NASA-CASE-XNP-06234] c 10 N71-27137
- Peak holding circuit for extremely narrow pulses  
[NASA-CASE-MSC-14129-1] c 33 N75-18479
- Dual physiological rate measurement instrument  
[NASA-CASE-MSC-20078-3] c 52 N91-14709
- PULSED LASERS**
- Repetitively pulsed, wavelength selective laser Patent  
[NASA-CASE-ERC-10178] c 16 N71-24832
- Dually mode locked Nd:YAG laser  
[NASA-CASE-GSC-11746-1] c 36 N75-19654
- Isotope separation using metallic vapor lasers  
[NASA-CASE-NPO-13550-1] c 36 N77-26477
- Double-beam optical method and apparatus for measuring thermal diffusivity and other molecular dynamic processes in utilizing the transient thermal lens effect  
[NASA-CASE-NPO-14657-1] c 74 N81-17887
- Pulse switching for high energy lasers  
[NASA-CASE-NPO-14556-1] c 33 N82-24418
- Coherently pulsed laser source  
[NASA-CASE-NPO-15111-1] c 36 N82-29589
- Active lamp pulse driver circuit --- optical pumping of laser media  
[NASA-CASE-GSC-12566-1] c 33 N83-34189
- Ranging system which compares an object reflected component of a light beam to a reference component of the light beam  
[NASA-CASE-NPO-15865-1] c 74 N85-34629
- PULSED RADIATION**
- Cyclically operable optical shutter  
[NASA-CASE-NPO-10758] c 14 N73-14427
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71:NPO-15494-2] c 35 N85-34373
- Acoustic radiation stress measurement  
[NASA-CASE-LAR-13440-1] c 71 N87-21653
- Method and apparatus for characterizing reflected ultrasonic pulses  
[NASA-CASE-LAR-13966-1] c 71 N91-27914
- PULSES**
- High pulse rate high resolution optical radar system  
[NASA-CASE-NPO-11426] c 07 N73-26119
- PULTRUSION**
- Pultrusion die assembly  
[NASA-CASE-LAR-13719-1] c 37 N89-12867
- Continuous fiber thermoplastic prepreg  
[NASA-CASE-LAR-14459-1] c 24 N91-15334
- PUMP SEALS**
- Fluid impervious barrier including liquid metal alloy and method of making same Patent  
[NASA-CASE-XNP-08881] c 17 N71-28747
- Spiral groove seal --- for hydraulic rotating shaft  
[NASA-CASE-LEW-10326-3] c 37 N74-10474
- PUMPS**
- Piezoelectric pump Patent  
[NASA-CASE-XNP-05429] c 26 N71-21824
- Vapor liquid separator Patent  
[NASA-CASE-XMF-04042] c 15 N71-23023
- Automatic pump Patent  
[NASA-CASE-XNP-04731] c 15 N71-24042
- Hydraulic transformer Patent  
[NASA-CASE-MFS-20830] c 15 N71-30028
- Firely pump-metering system  
[NASA-CASE-GSC-10218-1] c 15 N72-21465
- Magnetocaloric pump --- for cryogenic fluids  
[NASA-CASE-LEW-11672-1] c 37 N74-27904
- Continuous coal processing method  
[NASA-CASE-NPO-13758-2] c 31 N81-15154
- Gas-to-hydraulic power converter  
[NASA-CASE-MSC-18794-1] c 44 N83-14693
- Variable speed drive  
[NASA-CASE-GSC-12643-1] c 37 N83-26078
- Reciprocating magnetic refrigerator employing tandem porous matrices within a reciprocating displacer  
[NASA-CASE-NPO-16257-1] c 31 N85-29082
- Remotely operable peristaltic pump  
[NASA-CASE-MFS-28059-1] c 37 N86-32738
- Multi-path peristaltic pump  
[NASA-CASE-MSC-20907-1] c 37 N87-18818
- Pumped two-phase heat transfer loop  
[NASA-CASE-MSC-20841-1] c 34 N87-22950
- Pumped two-phase heat transfer loop  
[NASA-CASE-MSC-20841-2] c 34 N88-23958
- Polymeric heat pipe wick  
[NASA-CASE-GSC-13019-1] c 34 N88-29133
- PUNCHED CARDS**
- File card marker Patent  
[NASA-CASE-XLA-02705] c 08 N71-15908
- Device for handling printed circuit cards Patent  
[NASA-CASE-MFS-20453] c 15 N71-29133
- PUNCHES**
- Convoluting device for forming convolutions and the like Patent  
[NASA-CASE-XNP-05297] c 15 N71-23811
- PURGING**
- Techniques for insulating cryogenic fuel containers Patent  
[NASA-CASE-XLA-01967] c 31 N70-42015
- High pressure gas filter system Patent  
[NASA-CASE-MFS-12806] c 14 N71-17588
- Apparatus for purging systems handling toxic, corrosive, noxious and other fluids Patent  
[NASA-CASE-XMS-01905] c 12 N71-21089
- Purge device for thrust engines Patent  
[NASA-CASE-XMS-04826] c 28 N71-28849
- Purging means and method for Xenon arc lamps  
[NASA-CASE-NPO-11978] c 31 N78-17238
- PURIFICATION**
- High pressure helium purifier Patent  
[NASA-CASE-XMF-06888] c 15 N71-24044
- Method and apparatus for distillation of liquids Patent  
[NASA-CASE-XNP-08124] c 15 N71-27184
- Targets for producing high purity I-123  
[NASA-CASE-LEW-10518-3] c 25 N78-27226
- Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c 85 N79-17747
- Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c 26 N80-14229
- Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NPO-14001-1] c 27 N81-14076
- Electromigration process for the purification of molten silicon during crystal growth  
[NASA-CASE-NPO-14831-1] c 76 N82-30105
- Nebulization reflux concentrator  
[NASA-CASE-LAR-13254-1CU] c 35 N86-29174
- Purification system  
[NASA-CASE-MSC-21584-1] c 25 N91-24362
- PURITY**
- Process for preparation of dianilinosilanes Patent  
[NASA-CASE-XMF-06409] c 06 N71-23230
- Low defect, high purity crystalline layers grown by selective deposition  
[NASA-CASE-NPO-15813-1] c 76 N85-30922
- Quasi-containerless glass formation method and apparatus  
[NASA-CASE-MFS-28090-1] c 27 N87-21111
- PUSH-PULL AMPLIFIERS**
- Frequency modulated oscillator  
[NASA-CASE-MFS-23181-1] c 33 N77-17351
- Low current linearization of magnetic amplifier for dc transducer  
[NASA-CASE-NPO-14617-1] c 33 N81-24338
- Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NPO-14316-1] c 33 N81-33404

## PUSHING

- Dual motion valve with single motion input  
[NASA-CASE-MFS-28058-1] c 37 N87-21332
- PYLONS**  
Decoupler pylon: wing/store flutter suppressor  
[NASA-CASE-LAR-12468-1] c 08 N82-32373  
Compression pylon  
[NASA-CASE-LAR-13777-1] c 05 N90-20078
- PYRIDINES**  
Nuclear alkylated pyridine aldehyde polymers and conductive compositions thereof  
[NASA-CASE-NPO-10557] c 27 N78-17214  
Copolymers of vinyl styrylpyridines or vinyl stilbazoles with bismaleimide  
[NASA-CASE-ARC-11429-1-CU] c 27 N86-20560  
Vinyl stilbazoles  
[NASA-CASE-ARC-11429-3CU] c 27 N87-16908  
Structural panels  
[NASA-CASE-ARC-11429-2-CU] c 27 N87-22845
- PYROELECTRICITY**  
Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c 35 N82-31659  
Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-2] c 33 N83-24763
- PYROGEN**  
Molded composite pyrogen igniter for rocket motors --- solid propellant ignition  
[NASA-CASE-LAR-12018-1] c 20 N78-24275
- PYROLYSIS**  
Molten salt pyrolysis of latex --- synthetic hydrocarbon fuel production using the Guayule shrub  
[NASA-CASE-NPO-14315-1] c 27 N81-17261  
Thermal reactor --- liquid silicon production from silane gas  
[NASA-CASE-NPO-14369-1] c 44 N83-10501  
Solar heated oil shale pyrolysis process  
[NASA-CASE-NPO-16392-1] c 25 N86-25428  
Ceramic honeycomb structures and the method thereof  
[NASA-CASE-ARC-11652-1] c 27 N87-23737
- PYROLYTIC GRAPHITE**  
Multislit film cooled pyrolytic graphite rocket nozzle Patent  
[NASA-CASE-XNP-04389] c 28 N71-20942  
Ion sputter textured graphite --- anode collector plates in electron tube devices  
[NASA-CASE-LEW-12919-1] c 24 N83-10117  
Ion sputter textured graphite electrode plates  
[NASA-CASE-LEW-12919-2] c 70 N84-28565  
Heat transfer device and method of making the same  
[NASA-CASE-LEW-14162-1] c 34 N91-13668  
Heat transfer device  
[NASA-CASE-LEW-14162-2] c 24 N91-25201
- PYROLYTIC MATERIALS**  
Ablation structures Patent  
[NASA-CASE-XMS-01816] c 33 N71-15623
- PYROMETERS**  
Ablation sensor  
[NASA-CASE-XLA-01781] c 14 N69-39975  
Noncontact temperature pattern measuring device  
[NASA-CASE-NPO-17024-1-CU] c 35 N88-24943  
Noncontact temperature pattern measuring device  
[NASA-CASE-NPO-17824-1-CU] c 36 N90-17132
- PYROTECHNICS**  
Disconnect unit  
[NASA-CASE-NPO-11330] c 33 N73-26958  
Fully redundant mechanical release actuator  
[NASA-CASE-LAR-13198-1] c 37 N87-23983  
Double swivel toggle release  
[NASA-CASE-MSC-21436-1] c 37 N90-21390
- PYRRONES (TRADEMARK)**  
Method for forming pyrrone molding powders and products of said method  
[NASA-CASE-LAR-10423-1] c 23 N82-29358

## Q

## Q SWITCHED LASERS

- Optically detonated explosive device  
[NASA-CASE-NPO-11743-1] c 28 N74-27425  
Spatial filter for Q-switched lasers  
[NASA-CASE-LEW-12164-1] c 36 N77-32478  
Laser Resonator  
[NASA-CASE-GSC-12565-1] c 36 N84-14509  
Method and circuit for controlling the evolution time interval of a laser output pulse  
[NASA-CASE-LAR-13772-1] c 36 N89-28816  
Method and circuit for shaping laser output pulses  
[NASA-CASE-LAR-14203-1] c 36 N89-28817
- Q VALUES**  
Active RC networks  
[NASA-CASE-ARC-10042-2] c 10 N72-11256
- QUADRANTS**  
Remote object configuration/orientation determination  
[NASA-CASE-NPO-17436-1-CU] c 35 N91-15512

## QUADRATIC PROGRAMMING

- Quadrature demodulation  
[NASA-CASE-GSC-12137-1] c 33 N78-32338
- QUADRATURES**  
Automatic quadrature control and measuring system --- using optical coupling circuitry  
[NASA-CASE-MFS-21660-1] c 35 N74-21017  
Modified fast frequency acquisition via adaptive least squares algorithm  
[NASA-CASE-NPO-17845-1-CU] c 61 N90-27341
- QUALITATIVE ANALYSIS**  
Ultraviolet atomic emission detector  
[NASA-CASE-HQN-10756-1] c 14 N72-25428  
Analysis of volatile organic compounds --- trace amounts of organic volatiles in gas samples  
[NASA-CASE-MSC-14428-1] c 23 N77-17161  
Fluid sample collection and distribution system --- qualitative analysis of aqueous samples from several points  
[NASA-CASE-MSC-16841-1] c 34 N79-24285
- QUANTITATIVE ANALYSIS**  
Fluid phase analyzer Patent  
[NASA-CASE-NPO-10691] c 14 N71-26199  
Apparatus for detecting the amount of material in a resonant cavity container Patent  
[NASA-CASE-XNP-02500] c 18 N71-27397  
Ultraviolet atomic emission detector  
[NASA-CASE-HQN-10756-1] c 14 N72-25428  
Nondispersive gas analyzing method and apparatus wherein radiation is serially passed through a reference and unknown gas  
[NASA-CASE-ARC-10308-1] c 06 N72-31141  
Analysis of volatile organic compounds --- trace amounts of organic volatiles in gas samples  
[NASA-CASE-MSC-14428-1] c 23 N77-17161  
Electrophotolysis oxidation system for measurement of organic concentration in water  
[NASA-CASE-MSC-16497-1] c 25 N82-12166  
Method for detecting coliform organisms  
[NASA-CASE-ARC-11322-1] c 51 N83-28849
- QUANTUM THEORY**  
III-V photocathode with nitrogen doping for increased quantum efficiency  
[NASA-CASE-NPO-12134-1] c 33 N76-31409
- QUANTUM WELLS**  
Growth of III-V films by control of MBE growth front stoichiometry  
[NASA-CASE-NPO-17724-1-CU] c 76 N90-27517  
Quantum well, beam deflecting surface emitting lasers  
[NASA-CASE-NPO-18243-1-CU] c 36 N91-32489
- QUARTZ**  
Ultraviolet filter  
[NASA-CASE-XNP-02340] c 23 N69-24332  
Method for attaching a fused-quartz mirror to a conductive metal substrate  
[NASA-CASE-MFS-23405-1] c 26 N77-29260  
Quartz ball valve  
[NASA-CASE-NPO-14473-1] c 37 N80-23654  
Ampoule sealing apparatus and process --- for housing a semiconductor growth charge under vacuum  
[NASA-CASE-LAR-12847-1] c 33 N83-16633
- QUARTZ LAMPS**  
High intensity heat and light unit Patent  
[NASA-CASE-XLA-00141] c 09 N70-33312  
Light shield and cooling apparatus --- high intensity ultraviolet lamp  
[NASA-CASE-LAR-10089-1] c 34 N74-23066
- QUINOXALINES**  
Polyphenylquinoxalines containing pendant phenylethynyl and ethynyl groups --- for thermoplastic resins  
[NASA-CASE-LAR-12838-1] c 27 N83-34040  
Polyphenylquinoxalines via aromatic nucleophilic displacement  
[NASA-CASE-LAR-13988-1] c 23 N89-11814

## R

## RACKS (FRAMES)

- Test stand system for vacuum chambers  
[NASA-CASE-MFS-21362] c 11 N73-20267  
Thrust-isolating mounting --- characteristics of support for loads mounted in spacecraft  
[NASA-CASE-MFS-21680-1] c 18 N74-27397  
Automated syringe sampler --- remote sampling of air and water  
[NASA-CASE-LAR-12308-1] c 35 N81-29407  
Laboratory glassware rack for seismic safety  
[NASA-CASE-ARC-11422-1] c 35 N86-20751
- RADAR ANTENNAS**  
Radar antenna system for acquisition and tracking Patent  
[NASA-CASE-XMS-09610] c 07 N71-24625

- Variable beamwidth antenna --- with multiple beam, variable feed system  
[NASA-CASE-GSC-11862-1] c 32 N76-18295  
Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector  
[NASA-CASE-NPO-13568-1] c 32 N76-21365  
Baseband signal combiner for large aperture antenna array  
[NASA-CASE-NPO-14641-1] c 32 N81-29308
- RADAR ATTENUATION**  
FM/CW radar system  
[NASA-CASE-MFS-22234-1] c 32 N79-10264
- RADAR BEACONS**  
Video processor for air traffic control beacon system  
[NASA-CASE-KSC-11155-1] c 04 N86-19304
- RADAR BEAMS**  
Method and apparatus for measuring frequency and phase difference  
[NASA-CASE-MSC-20865-1] c 32 N87-18692
- RADAR CROSS SECTIONS**  
Almond test body --- for microwave anechoic chambers  
[NASA-CASE-LAR-13747-1-CU] c 32 N89-28672  
Method and apparatus for sensor fusion  
[NASA-CASE-MSC-21334-1] c 32 N91-25317
- RADAR DATA**  
Charge-coupled device data processor for an airborne imaging radar system  
[NASA-CASE-NPO-13587-1] c 32 N77-32342  
Pipeline synthetic aperture radar data compression utilizing systolic binary tree-searched architecture for vector quantization  
[NASA-CASE-NPO-17941-1-CU] c 32 N91-13595  
Generation of topographic terrain models utilizing synthetic aperture radar and surface level data  
[NASA-CASE-GSC-13212-1] c 43 N91-32546
- RADAR DETECTION**  
Method and apparatus for measuring frequency and phase difference  
[NASA-CASE-MSC-20865-1] c 32 N87-18692
- RADAR ECHOES**  
Charge-coupled device data processor for an airborne imaging radar system  
[NASA-CASE-NPO-13587-1] c 32 N77-32342
- RADAR EQUIPMENT**  
Method and apparatus for mapping planets  
[NASA-CASE-NPO-11001] c 07 N72-21118  
FM/CW radar system  
[NASA-CASE-MFS-22234-1] c 32 N79-10264
- RADAR IMAGERY**  
Method of locating persons in distress --- by using radar imagery from radar reflectors  
[NASA-CASE-LAR-11390-1] c 32 N77-21267  
Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-1] c 32 N79-19195  
Radar target for remotely sensing hydrological phenomena  
[NASA-CASE-LAR-12344-1] c 43 N80-18498  
Real-time multiple-look synthetic aperture radar processor for spacecraft applications  
[NASA-CASE-NPO-14054-1] c 32 N82-12297  
Clutter free synthetic aperture radar correlator  
[NASA-CASE-NPO-14035-1] c 32 N83-19968  
Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-2] c 32 N83-31918  
Method and apparatus for contour mapping using synthetic aperture radar  
[NASA-CASE-NPO-15939-1] c 43 N86-19711  
Method for providing a polarization filter for processing synthetic aperture radar image data  
[NASA-CASE-NPO-17904-1-CU] c 32 N91-13594  
Method for detecting surface motions and mapping small terrestrial or planetary surface deformations with synthetic aperture radar  
[NASA-CASE-NPO-17831-1-CU] c 43 N91-14642  
Generation of topographic terrain models utilizing synthetic aperture radar and surface level data  
[NASA-CASE-GSC-13212-1] c 43 N91-32546
- RADAR MEASUREMENT**  
Thickness measurement system  
[NASA-CASE-MFS-23721-1] c 31 N79-28370
- RADAR RANGE**  
Radar ranging receiver Patent  
[NASA-CASE-XNP-00748] c 07 N70-36911
- RADAR RECEIVERS**  
Polarization diversity monopulse tracking receiver Patent  
[NASA-CASE-XGS-03501] c 09 N71-20864
- RADAR RECEPTION**  
Radar ranging receiver Patent  
[NASA-CASE-XNP-00748] c 07 N70-36911
- RADAR REFLECTORS**  
Inflatable radar reflector unit Patent  
[NASA-CASE-XMS-00893] c 07 N70-40063



- Method of locating persons in distress --- by using radar imagery from radar reflectors  
[NASA-CASE-LAR-11390-1] c 32 N77-21267
- RADAR TARGETS**  
Radar target for remotely sensing hydrological phenomena  
[NASA-CASE-LAR-12344-1] c 43 N80-18498  
Synthetic aperture radar target simulator  
[NASA-CASE-NPO-15024-1] c 32 N84-27951
- RADAR TRACKING**  
Tracking antenna system Patent  
[NASA-CASE-GSC-10553-1] c 07 N71-19854  
Polarization diversity monopulse tracking receiver Patent  
[NASA-CASE-XGS-03501] c 09 N71-20864  
Monopulse tracking system Patent  
[NASA-CASE-XGS-01155] c 10 N71-21483  
Radar calibration sphere  
[NASA-CASE-XLA-11154] c 07 N72-21117  
Echo tracker/range finder for radars and sonars  
[NASA-CASE-NPO-14361-1] c 32 N82-23376
- RADAR TRANSMITTERS**  
High pulse rate high resolution optical radar system  
[NASA-CASE-NPO-11426] c 07 N73-26119
- RADIAL DISTRIBUTION**  
Ultrasonic transducer with Gaussian radial pressure distribution  
[NASA-CASE-LAR-12967-1] c 35 N84-22932
- RADIAL FLOW**  
Radial heat flux transformer  
[NASA-CASE-NPO-10828] c 33 N72-17948  
Axially and radially controllable magnetic bearing  
[NASA-CASE-GSC-11551-1] c 37 N76-18459
- RADIANCE**  
Shock-layer radiation measurement  
[NASA-CASE-XAC-02970] c 14 N69-39896
- RADIANT COOLING**  
Direct radiation cooling of the collector of linear beam tubes  
[NASA-CASE-XNP-09227] c 15 N69-24319  
Process for applying black coating to metals Patent  
[NASA-CASE-XLA-06199] c 15 N71-24875  
Method for attaching a fused-quartz mirror to a conductive metal substrate  
[NASA-CASE-MFS-23405-1] c 26 N77-29260  
Radiative cooler --- spacecraft radiators  
[NASA-CASE-NPO-15465-1] c 34 N84-22903  
Liquid sheet radiator apparatus  
[NASA-CASE-LEW-14295-1] c 31 N91-15424
- RADIANT FLUX DENSITY**  
High intensity radiant energy pulse source having means for opening shutter when light flux has reached a desired level  
[NASA-CASE-ARC-10178-1] c 09 N72-17152  
Microwave power transmission beam safety system  
[NASA-CASE-NPO-14224-1] c 33 N80-18287
- RADIANT HEATING**  
High intensity heat and light unit Patent  
[NASA-CASE-XLA-00141] c 09 N70-33312  
High temperature heat source Patent  
[NASA-CASE-XLE-00490] c 33 N70-34545  
Radiant heater having formed filaments Patent  
[NASA-CASE-XLE-00387] c 33 N70-34812  
Ceramic insulation for radiant heating environments and method of preparing the same Patent  
[NASA-CASE-MFS-14253] c 33 N71-24858  
Portable linear-focused solar thermal energy collecting system  
[NASA-CASE-NPO-13734-1] c 44 N78-10554  
High thermal power density heat transfer --- thermionic converters  
[NASA-CASE-LEW-12950-1] c 34 N82-11399
- RADIATION**  
Two color horizon sensor  
[NASA-CASE-ERC-10174] c 14 N72-25409  
Irradiance measuring device  
[NASA-CASE-NPO-11493] c 14 N73-12447  
Analog to digital converter for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-3] c 60 N77-32731  
Memory device for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-2] c 60 N78-10709
- RADIATION ABSORPTION**  
NDIR gas analyzer based on absorption modulation ratios for known and unknown samples  
[NASA-CASE-ARC-10802-1] c 35 N75-30502  
Method for making an aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-1] c 44 N79-11469  
Broadband optical radiation detector  
[US-PATENT-4,262,198] c 74 N83-19597
- RADIATION COUNTERS**  
Particle detection apparatus Patent  
[NASA-CASE-XLA-00135] c 14 N70-33322
- Method and apparatus for determining satellite orientation utilizing spatial energy sources Patent  
[NASA-CASE-XGS-00466] c 21 N70-34297  
Particle beam measurement apparatus using beam kinetic energy to change the heat sensitive resistance of the detection probe Patent  
[NASA-CASE-XLE-00243] c 14 N70-38602  
Baseline stabilization system for ionization detector Patent  
[NASA-CASE-XNP-03128] c 10 N70-41991  
Method of forming thin window drifted silicon charged particle detector Patent  
[NASA-CASE-XLE-00808] c 24 N71-10560  
Dosimeter for high levels of absorbed radiation Patent  
[NASA-CASE-XLA-03645] c 14 N71-20430  
Coincidence apparatus for detecting particles  
[NASA-CASE-XLA-07813] c 14 N72-17328  
Radiation and particle detector and amplifier  
[NASA-CASE-NPO-12128-1] c 14 N73-32317  
Coaxial anode wire for gas radiation counters  
[NASA-CASE-GSC-11492-1] c 35 N74-26949  
Particle parameter analyzing system --- x-y plotter circuits and display  
[NASA-CASE-XLE-06094] c 33 N78-17293  
Method and means for helium/hydrogen ratio measurement by alpha scattering  
[NASA-CASE-NPO-14079-1] c 25 N80-20334  
Ion mass spectrometer  
[NASA-CASE-NPO-15423-1] c 35 N84-28016  
Radionuclide counting technique for measuring wind velocity and direction  
[NASA-CASE-LAR-12971-1] c 47 N84-28292
- RADIATION DAMAGE**  
Semiconductor material and method of making same Patent  
[NASA-CASE-XLE-02798] c 26 N71-23654  
Recovery of radiation damaged solar cells through thermal annealing  
[NASA-CASE-XGS-04047-2] c 03 N72-11062  
Photomultiplier circuit including means for rapidly reducing the sensitivity thereof --- and protection from radiation damage  
[NASA-CASE-ARC-10593-1] c 33 N74-27682  
Lithium counterdoped silicon solar cell  
[NASA-CASE-LEW-14177-1] c 44 N86-32875
- RADIATION DETECTORS**  
Penetrating radiation system for detecting the amount of liquid in a tank Patent  
[NASA-CASE-MS-C-12280] c 27 N71-16348  
Light detection instrument Patent  
[NASA-CASE-XGS-05534] c 23 N71-16355  
Attitude sensor for space vehicles Patent  
[NASA-CASE-XLA-00793] c 21 N71-22880  
Extended area semiconductor radiation detectors and a novel readout arrangement Patent  
[NASA-CASE-XGS-03230] c 14 N71-23401  
Nondispersive gas analyzing method and apparatus wherein radiation is serially passed through a reference and unknown gas  
[NASA-CASE-ARC-10308-1] c 06 N72-31141  
Radiant source tracker independent of nonconstant irradiance  
[NASA-CASE-NPO-11686] c 14 N73-25462  
Radiation and particle detector and amplifier  
[NASA-CASE-NPO-12128-1] c 14 N73-32317  
Mossbauer spectrometer radiation detector  
[NASA-CASE-LAR-11155-1] c 35 N74-15091  
High field CdS detector for infrared radiation  
[NASA-CASE-LAR-11027-1] c 35 N74-18088  
Flame detector operable in presence of proton radiation  
[NASA-CASE-MFS-21577-1] c 19 N74-29410  
Wide angle sun sensor --- consisting of cylinder, insulation and pair of detectors  
[NASA-CASE-NPO-13327-1] c 35 N75-23910  
Detector absorptivity measuring method and apparatus  
[NASA-CASE-LAR-10907-1] c 35 N76-29551  
Wedge immersed thermistor bolometers  
[NASA-CASE-XGS-01245-1] c 35 N79-33449  
X-ray position detector  
[NASA-CASE-NPO-12087-1] c 74 N81-19898  
Broadband optical radiation detector  
[US-PATENT-4,262,198] c 74 N83-19597  
Miniature spectrally selective dosimeter  
[NASA-CASE-LAR-12469-1] c 35 N83-21311  
Method and apparatus for precision control of radiometer  
[NASA-CASE-NPO-15398-1] c 35 N84-22931  
Double photon excitation of high-Rydberg atoms as a long-lived submillimeter detector  
[NASA-CASE-NPO-16372-1] c 72 N86-33127  
Apparatus and procedure to detect a liquid-solid interface during crystal growth in a bridgman furnace  
[NASA-CASE-LAR-13597-1-CU] c 25 N87-23713
- X ray sensitive area detection device  
[NASA-CASE-MFS-28232-1] c 74 N91-14835
- RADIATION DISTRIBUTION**  
Space simulator Patent  
[NASA-CASE-XNP-00459] c 11 N70-38675
- RADIATION DOSAGE**  
Dosimeter for high levels of absorbed radiation Patent  
[NASA-CASE-XLA-03645] c 14 N71-20430  
Method for analyzing radiation sensitivity of integrated circuits  
[NASA-CASE-NPO-14350-1] c 33 N80-14332  
Miniature spectrally selective dosimeter  
[NASA-CASE-LAR-12469-1] c 35 N83-21311
- RADIATION EFFECTS**  
Method of temperature compensating semiconductor strain gages Patent  
[NASA-CASE-XLA-04555-1] c 14 N71-25892  
Gamma ray collimator  
[NASA-CASE-SSC-00013-1] c 38 N91-32515
- RADIATION HARDENING**  
Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential of field effect device  
[NASA-CASE-GSC-11425-1] c 76 N74-20329
- RADIATION HAZARDS**  
Miniature spectrally selective dosimeter  
[NASA-CASE-LAR-12469-1] c 35 N83-21311
- RADIATION MEASUREMENT**  
Irradiance measuring device  
[NASA-CASE-NPO-11493] c 14 N73-12447
- RADIATION MEASURING INSTRUMENTS**  
Scanning aspect sensor employing an apertured disc and a commutator  
[NASA-CASE-XGS-08266] c 14 N69-27432  
Infrared scanner Patent  
[NASA-CASE-XLA-00120] c 21 N70-33181  
Instrument for the quantitative measurement of radiation at multiple wave lengths Patent  
[NASA-CASE-XLE-00011] c 14 N70-41946  
Method for improving the signal-to-noise ratio of the Wheatstone bridge type bolometer Patent  
[NASA-CASE-XLA-02810] c 14 N71-25901  
Irradiance measuring device  
[NASA-CASE-NPO-11493] c 14 N73-12447  
Phototransistor  
[NASA-CASE-MFS-20407] c 09 N73-19235  
Method and apparatus for measuring electromagnetic radiation  
[NASA-CASE-LEW-11159-1] c 14 N73-28488  
Compton scatter attenuation gamma ray spectrometer  
[NASA-CASE-MFS-21441-1] c 14 N73-30392  
Coaxial anode wire for gas radiation counters  
[NASA-CASE-GSC-11492-1] c 35 N74-26949  
Cloud cover sensor  
[NASA-CASE-NPO-14936-1] c 47 N83-32232
- RADIATION MEDICINE**  
Method of producing I-123 --- by bombardment of cesium causing spallation  
[NASA-CASE-LEW-11390-2] c 25 N76-27383
- RADIATION PROTECTION**  
Method and construction for protecting heat sensitive bodies from thermal radiation and convective heat Patent  
[NASA-CASE-XNP-01310] c 33 N71-28852  
Laser coolant and ultraviolet filter  
[NASA-CASE-MFS-20180] c 16 N72-12440  
Photomultiplier circuit including means for rapidly reducing the sensitivity thereof --- and protection from radiation damage  
[NASA-CASE-ARC-10593-1] c 33 N74-27682  
Sun shield  
[NASA-CASE-MS-C-20162-1] c 37 N87-17036  
Hazards protection for space suits and spacecraft  
[NASA-CASE-MSC-21366-1] c 54 N90-25498
- RADIATION SHIELDING**  
Ion thruster cathode Patent Application  
[NASA-CASE-LEW-10814-1] c 28 N70-35422  
Ionization vacuum gauge with all but the end of the ion collector shielded Patent  
[NASA-CASE-XLA-07424] c 14 N71-18482  
Sealed cabinetry Patent  
[NASA-CASE-MSC-12168-1] c 09 N71-18600  
Propellant feed isolator Patent  
[NASA-CASE-LEW-10210-1] c 28 N71-26781  
Zero gravity shadow shield aligner  
[NASA-CASE-KSC-10622-1] c 31 N72-21893  
Light shield and cooling apparatus --- high intensity ultraviolet lamp  
[NASA-CASE-LAR-10089-1] c 34 N74-23066  
Gamma ray collimator  
[NASA-CASE-SSC-00013-1] c 38 N91-32515
- RADIATION SOURCES**  
Sight switch using an infrared source and sensor Patent  
[NASA-CASE-XMF-03934] c 09 N71-22985

- Apparatus for obtaining isotropic irradiation of a specimen  
[NASA-CASE-MFS-20095] c 24 N72-11595  
Radiant source tracker independent of nonconstant irradiance  
[NASA-CASE-NPO-11686] c 14 N73-25462  
High powered arc electrodes --- producing solar simulator radiation  
[NASA-CASE-LEW-11162-1] c 33 N74-12913  
Electric arc light source having undercut recessed anode  
[NASA-CASE-ARC-10266-1] c 33 N75-29318  
Variable magnification variable dispersion glancing incidence imaging x ray spectroscopic telescope  
[NASA-CASE-MFS-28013-3] c 89 N90-27594  
Multispectral variable magnification glancing incidence x ray telescope  
[NASA-CASE-MFS-28013-4] c 89 N90-27595  
Variable magnification glancing incidence x ray telescope  
[NASA-CASE-MFS-28013-2] c 89 N91-14096  
Purification system  
[NASA-CASE-MS-21584-1] c 25 N91-24362  
Radiation sensitive area detection device and method  
[NASA-CASE-MFS-28563-1] c 35 N91-25388
- RADIATION SPECTRA**  
Maksutov spectrograph Patent  
[NASA-CASE-XLA-10402] c 14 N71-29041
- RADIATION THERAPY**  
Cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c 52 N82-22875
- RADIATION TOLERANCE**  
Alkali-metal silicate protective coating  
[NASA-CASE-XGS-04119] c 18 N69-39979  
Method of making a silicon semiconductor device Patent  
[NASA-CASE-XLE-02792] c 26 N71-10607  
Radiation resistant silicon semiconductor devices Patent  
[NASA-CASE-XGS-07801] c 09 N71-12513  
Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential  
[NASA-CASE-GSC-11425-2] c 76 N75-25730  
Method for analyzing radiation sensitivity of integrated circuits  
[NASA-CASE-NPO-14350-1] c 33 N80-14332  
Lithium counterdoped silicon solar cell  
[NASA-CASE-LEW-14177-1] c 44 N86-32875
- RADIATIVE HEAT TRANSFER**  
Heat flux sensor assembly  
[NASA-CASE-XMS-05909-1] c 14 N69-27459  
Capillary radiator Patent  
[NASA-CASE-XLE-03307] c 33 N71-14035  
Transient heat transfer gauge Patent  
[NASA-CASE-XNP-09802] c 33 N71-15641  
Construction and method of arranging a plurality of ion engines to form a cluster Patent  
[NASA-CASE-XNP-02923] c 28 N71-23081  
Apparatus and method for heating a material in a transparent ampoule --- crystal growth  
[NASA-CASE-MFS-25436-1] c 27 N83-36220
- RADIATORS**  
Self-adjusting multisegment, deployable, natural circulation radiator Patent  
[NASA-CASE-XHQ-03673] c 33 N71-29046
- RADIO ANTENNAS**  
Parasitic probe antenna Patent  
[NASA-CASE-XKS-09348] c 09 N71-13521  
VHF/UHF parasitic probe antenna Patent  
[NASA-CASE-XKS-09340] c 07 N71-24614  
Unfurlable structure including coiled strips thrust launched upon tension release Patent  
[NASA-CASE-HQN-00937] c 07 N71-28979  
Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector  
[NASA-CASE-NPO-13568-1] c 32 N76-21365  
Switched steerable multiple beam antenna system  
[NASA-CASE-MS-20873-1-SB] c 32 N89-11961  
Antenna surface contour control system  
[NASA-CASE-LAR-13798-1] c 32 N89-25363
- RADIO ASTRONOMY**  
Millimeter wave radiometer for radio astronomy Patent  
[NASA-CASE-XNP-09832] c 30 N71-23723
- RADIO BEACONS**  
RF beam center location method and apparatus for power transmission system  
[NASA-CASE-NPO-13821-1] c 44 N78-28594  
Legislated emergency locating transmitters and emergency position indicating radio beacons  
[NASA-CASE-GSC-12892-1] c 32 N89-14374
- RADIO COMMUNICATION**  
System for synchronizing synthesizers of communication systems  
[NASA-CASE-GSC-12148-1] c 32 N79-20296
- Antimultipath communication by injecting tone into null in signal spectrum  
[NASA-CASE-NPO-16414-1-CU] c 32 N87-25511
- RADIO CONTROL**  
RF controlled solid state switch  
[NASA-CASE-ARC-10136-1] c 09 N72-22202  
Timing control system  
[NASA-CASE-NPO-16882-1-CU] c 33 N88-24863
- RADIO EQUIPMENT**  
System for synchronizing synthesizers of communication systems  
[NASA-CASE-GSC-12148-1] c 32 N79-20296
- RADIO FREQUENCIES**  
Helical coaxial resonator RF filter  
[NASA-CASE-XGS-02816] c 07 N69-24323  
Automatic gain control system  
[NASA-CASE-XMS-05307] c 09 N69-24330  
Radio frequency shielded enclosure Patent  
[NASA-CASE-XMF-09422] c 07 N71-19436  
Automatic frequency discriminators and control for a phase-lock loop providing frequency preset capabilities Patent  
[NASA-CASE-XMF-08665] c 10 N71-19467  
Sidereal frequency generator Patent  
[NASA-CASE-XGS-02610] c 14 N71-23174  
Radio frequency coaxial high pass filter Patent  
[NASA-CASE-XGS-01418] c 09 N71-23573  
Variable frequency nuclear magnetic resonance spectrometer Patent  
[NASA-CASE-XNP-09830] c 14 N71-26266  
Signal path series step biased multidevice high efficiency amplifier Patent  
[NASA-CASE-GSC-10668-1] c 07 N71-28430  
Method and apparatus for sputtering utilizing an apertured electrode and a pulsed substrate bias  
[NASA-CASE-LEW-10920-1] c 17 N73-24569  
RF-source resistance meters  
[NASA-CASE-NPO-11291-1] c 14 N73-30388  
Multichannel logarithmic RF level detector  
[NASA-CASE-LAR-11021-1] c 32 N76-14321  
Ion and electron detector for use in an ICR spectrometer  
[NASA-CASE-NPO-13479-1] c 35 N77-10492  
Radio frequency arraying method for receivers  
[NASA-CASE-NPO-14328-1] c 32 N80-18253  
Precise RF timing signal distribution to remote stations --- fiber optics  
[NASA-CASE-NPO-14749-1] c 32 N81-14186  
Hyperthermia heating apparatus --- cancer therapy  
[NASA-CASE-NPO-14549-2] c 52 N82-33996  
High stability buffered phase comparator  
[NASA-CASE-GSC-12645-1] c 33 N84-16454  
Linearized traveling wave amplifier with hard limiter characteristics  
[NASA-CASE-LEW-13981-2] c 33 N86-21742  
Precision tunable resonant microwave cavity  
[NASA-CASE-LEW-13935-1] c 33 N87-21234  
Antimultipath communication by injecting tone into null in signal spectrum  
[NASA-CASE-NPO-16414-1-CU] c 32 N87-25511  
Radio Frequency (RF) strain monitor  
[NASA-CASE-LAR-13705-1] c 39 N88-25011  
Fiber optic sensing system  
[NASA-CASE-LEW-14795-1] c 74 N91-21871  
Acoustophoresis method and apparatus  
[NASA-CASE-LAR-13388-1] c 25 N91-28321
- RADIO FREQUENCY DISCHARGE**  
Electric discharge for treatment of trace contaminants  
[NASA-CASE-ARC-10975-1] c 33 N79-15245
- RADIO FREQUENCY HEATING**  
Gyrotion transmitting tube  
[NASA-CASE-LEW-13429-1] c 33 N83-31952
- RADIO FREQUENCY INTERFERENCE**  
Parametric microwave noise generator Patent  
[NASA-CASE-XER-11019] c 09 N71-23598  
System for interference signal nulling by polarization adjustment  
[NASA-CASE-NPO-13140-1] c 32 N75-24982  
Systems and methods for determining radio frequency interference  
[NASA-CASE-GSC-12150-1] c 32 N79-11265  
Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c 32 N81-27341  
Method and apparatus for measuring distance  
[NASA-CASE-MS-20912-1] c 32 N88-26568
- RADIO FREQUENCY SHIELDING**  
Shielded cathode mode bulk effect devices  
[NASA-CASE-ERC-10119] c 26 N72-21701  
Process for making RF shielded cable connector assemblies and the products formed thereby  
[NASA-CASE-GSC-11215-1] c 09 N73-28083
- RADIO INTERFEROMETERS**  
System for real-time crustal deformation monitoring  
[NASA-CASE-NPO-14124-1] c 46 N80-14603
- RADIO PROBING**  
Method and apparatus for calibrating the ionosphere and application to surveillance of geophysical events  
[NASA-CASE-NPO-15430-1] c 46 N85-21846
- RADIO RECEIVERS**  
Multiple input radio receiver Patent  
[NASA-CASE-XLA-00901] c 07 N71-10775  
Optimum predetection diversity receiving system Patent  
[NASA-CASE-XGS-00740] c 07 N71-23098  
Radio frequency arraying method for receivers  
[NASA-CASE-NPO-14328-1] c 32 N80-18253  
Interferometric locating system  
[NASA-CASE-NPO-14173-1] c 04 N80-32359  
Efficient detection and signal parameter estimation with application to high dynamic GPS receiver  
[NASA-CASE-NPO-17820-1-CU] c 04 N91-14321
- RADIO RELAY SYSTEMS**  
Satellite communication system Patent  
[NASA-CASE-XNP-02389] c 07 N71-28900  
Systems and methods for determining radio frequency interference  
[NASA-CASE-GSC-12150-1] c 32 N79-11265
- RADIO SIGNALS**  
Passive communication satellite Patent  
[NASA-CASE-XLA-00210] c 30 N70-40309  
Millimeter wave radiometer for radio astronomy Patent  
[NASA-CASE-XNP-09832] c 30 N71-23723
- RADIO SOURCES (ASTRONOMY)**  
Conical scan tracking system employing a large antenna  
[NASA-CASE-NPO-14009-1] c 32 N79-13214
- RADIO STARS**  
Sidereal frequency generator Patent  
[NASA-CASE-XGS-02610] c 14 N71-23174
- RADIO TELEMETRY**  
Digital telemetry system Patent  
[NASA-CASE-XGS-01812] c 07 N71-23001
- RADIO TELESCOPES**  
Antenna grout replacement system  
[NASA-CASE-NPO-15202-1] c 27 N83-34043
- RADIO TRANSMITTERS**  
Vehicle locating system utilizing AM broadcasting station carriers  
[NASA-CASE-NPO-13217-1] c 32 N75-26194  
Aircraft-mounted crash-activated transmitter device  
[NASA-CASE-MFS-16609-3] c 03 N76-32140  
Low-frequency radio navigation system  
[NASA-CASE-NPO-15264-1] c 04 N84-27713  
Antimultipath communication by injecting tone into null in signal spectrum  
[NASA-CASE-NPO-16414-1-CU] c 32 N87-25511
- RADIO WAVES**  
Shielded cathode mode bulk effect devices  
[NASA-CASE-ERC-10119] c 26 N72-21701
- RADIOACTIVE ISOTOPES**  
Thermally cascaded thermoelectric generator  
[NASA-CASE-NPO-10753] c 03 N72-26031  
Protected isotope heat source --- for atmospheric reentry protection and heat transmission to spacecraft  
[NASA-CASE-LEW-11227-1] c 73 N75-30876  
Radionuclide counting technique for measuring wind velocity and direction  
[NASA-CASE-LAR-12971-1] c 47 N84-28292
- RADIOBIOLOGY**  
Production of high purity I-123  
[NASA-CASE-LEW-10518-1] c 24 N72-33681
- RADIOGRAPHY**  
Determination of spot weld quality Patent  
[NASA-CASE-XNP-02588] c 15 N71-18613  
Method and system for in vivo measurement of bone tissue using a two level energy source  
[NASA-CASE-MS-14276-1] c 52 N77-14737  
Medical clip  
[NASA-CASE-LAR-12650-1] c 52 N84-28388  
Process of making medical clip  
[NASA-CASE-LAR-12650-2] c 52 N84-28389  
X-ray determination of parts alignment  
[NASA-CASE-MS-20418-1] c 74 N86-20126  
Method of radiographic inspection of wooden members  
[NASA-CASE-LAR-13724-1] c 38 N90-23756
- RADIOLOGY**  
Hyperthermia heating apparatus --- cancer therapy  
[NASA-CASE-NPO-14549-2] c 52 N82-33996
- RADIOLYSIS**  
Process for making anhydrous metal halides  
[NASA-CASE-LEW-11860-1] c 37 N76-18458
- RADIOMETERS**  
Compensating radiometer  
[NASA-CASE-XLA-04556] c 14 N69-27484  
Conically shaped cavity radiometer with a dual purpose cone winding Patent  
[NASA-CASE-XNP-09701] c 14 N71-26475  
Black body cavity radiometer Patent  
[NASA-CASE-NPO-10810] c 14 N71-27323

- Thermoelectric radiometer utilizing polymer film  
[NASA-CASE-ARC-10138-1] c 14 N72-24477
- Two color horizon sensor  
[NASA-CASE-ERC-10174] c 14 N72-25409
- Clear air turbulence detector  
[NASA-CASE-ERC-10081] c 14 N72-28437
- Method and apparatus for measuring solar activity and atmospheric radiation effects  
[NASA-CASE-ERC-10276] c 14 N73-26432
- Steady state thermal radiometers  
[NASA-CASE-MFS-21108-1] c 34 N74-27861
- Method and apparatus for precision control of radiometer  
[NASA-CASE-NPO-15398-1] c 35 N84-22931
- Non-mechanical optical path switching and its application to dual beam spectroscopy including gas filter correlation radiometry  
[NASA-CASE-LAR-14588-1-CU] c 74 N91-23889
- RADIOSONDES**  
Induction powered biological radiosonde  
[NASA-CASE-ARC-11120-1] c 52 N80-18691
- RAILS**  
Removable hand hold  
[NASA-CASE-LEW-15196-1] c 37 N91-26543
- RAIN**  
Precipitation detector Patent  
[NASA-CASE-XLA-02619] c 10 N71-26334
- Environmental fog/rain visual display system for aircraft simulators  
[NASA-CASE-ARC-11158-1] c 09 N82-24212
- RAMJET ENGINES**  
Telescoping-spike supersonic inlet for aircraft engines Patent  
[NASA-CASE-XLE-00005] c 28 N70-39899
- Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c 15 N78-32168
- RAMPS (STRUCTURES)**  
Automated multi-level vehicle parking system  
[NASA-CASE-NPO-13058-1] c 37 N77-22480
- RANDOM ACCESS MEMORY**  
Memory-based frame synchronizer --- for digital communication systems  
[NASA-CASE-GSC-12430-1] c 60 N82-16747
- Memory-based parallel data output controller  
[NASA-CASE-GSC-12447-2] c 60 N84-28491
- Hybrid analog-digital associative neural network  
[NASA-CASE-NPO-17058-1-CU] c 62 N87-25803
- Self-checking on-line testable static RAM  
[NASA-CASE-NPO-17939-1-CU] c 60 N90-26518
- High speed magneto-resistive random access memory  
[NASA-CASE-NPO-17954-1-CU] c 60 N90-26519
- RANDOM LOADS**  
Fatigue testing device Patent  
[NASA-CASE-XLA-02131] c 32 N70-42003
- RANDOM NOISE**  
Noise limiter Patent  
[NASA-CASE-NPO-10169] c 10 N71-24844
- Digital servo control of random sound test excitation --- in reverberant acoustic chamber  
[NASA-CASE-NPO-11623-1] c 71 N74-31148
- Random pulse generator  
[NASA-CASE-MSC-14131-1] c 33 N75-19515
- Pseudo noise code and data transmission method and apparatus  
[NASA-CASE-GSC-12017-1] c 32 N77-30308
- Low phase noise oscillator using two parallel connected amplifiers  
[NASA-CASE-GSC-13018-1] c 33 N87-21232
- RANDOM NUMBERS**  
Long period pseudo random number sequence generator  
[NASA-CASE-NPO-17241-1-CU] c 33 N90-23636
- RANGE (EXTREMES)**  
Logarithmic circuit with wide dynamic range  
[NASA-CASE-GSC-12145-1] c 33 N78-32339
- RANGE AND RANGE RATE TRACKING**  
Range and range rate system  
[NASA-CASE-MSC-20867-1] c 36 N88-24958
- RANGE FINDERS**  
Closed loop ranging system Patent  
[NASA-CASE-XNP-01501] c 21 N70-41930
- Digital demodulator-correlator  
[NASA-CASE-NPO-13982-1] c 32 N79-14267
- Echo tracker/range finder for radars and sonars  
[NASA-CASE-NPO-14361-1] c 32 N82-23376
- Ranging system which compares an object reflected component of a light beam to a reference component of the light beam  
[NASA-CASE-NPO-15865-1] c 74 N85-34629
- Optical distance measuring instrument  
[NASA-CASE-GSC-12761-1] c 74 N86-32266
- RANGEFINDING**  
Dynamic Doppler simulator Patent  
[NASA-CASE-XMS-05454-1] c 07 N71-12391
- Ranging system Patent  
[NASA-CASE-NPO-10066] c 09 N71-18598
- Binary coded sequential acquisition ranging system  
[NASA-CASE-NPO-11194] c 08 N72-25209
- Code regenerative clean-up loop transponder for a mu-type ranging system  
[NASA-CASE-NPO-11707] c 07 N73-25161
- Orbital and entry tracking accessory for globes --- to provide range requirements for reentry vehicles to any landing site  
[NASA-CASE-LAR-10626-1] c 19 N74-21015
- RARE EARTH COMPOUNDS**  
Didymium hydrate additive to nickel hydroxide electrodes Patent  
[NASA-CASE-XGS-03505] c 03 N71-10608
- High modulus rare earth and beryllium containing silicate glass compositions --- for glass reinforcing fibers  
[NASA-CASE-HQN-10595-1] c 27 N82-29455
- RARE GASES**  
Inert gas metallic vapor laser  
[NASA-CASE-NPO-13449-1] c 36 N75-32441
- Fluidized bed desulfurization  
[NASA-CASE-NPO-15924-1] c 25 N85-35253
- Low noise lead screw positioner  
[NASA-CASE-NPO-15617-1] c 35 N87-21304
- RAREFIED GASES**  
Magnetically controlled plasma accelerator Patent  
[NASA-CASE-XLA-00327] c 25 N71-29184
- RASTER SCANNING**  
Rotating-unbalanced-mass devices and methods for scanning balloon-borne-experiments, free-flying spacecraft, and space shuttle/space station attached experiments  
[NASA-CASE-MFS-28425-1] c 35 N90-26304
- RATES (PER TIME)**  
Rate data encoder  
[NASA-CASE-LAR-10128-1] c 08 N73-20217
- Ranging system which compares an object reflected component of a light beam to a reference component of the light beam  
[NASA-CASE-NPO-15865-1] c 74 N85-34629
- RAY TRACING**  
Feedback controlled optics with wavefront compensation  
[NASA-CASE-NPO-18194-1-CU] c 74 N91-32924
- RC CIRCUITS**  
Pulse counting circuit which simultaneously indicates the occurrence of the nth pulse Patent  
[NASA-CASE-XMF-00906] c 09 N70-41655
- RC rate generator for slow speed measurement Patent  
[NASA-CASE-XMF-02966] c 10 N71-24863
- Transient augmentation circuit for pulse amplifiers Patent  
[NASA-CASE-XNP-01068] c 10 N71-28739
- Active RC networks  
[NASA-CASE-ARC-10042-2] c 10 N72-11256
- RC networks and amplifiers employing the same  
[NASA-CASE-XAC-05462-2] c 10 N72-17171
- Active RC networks  
[NASA-CASE-ARC-10020] c 10 N72-17172
- Multiloop RC active filter apparatus having low parameter sensitivity with low amplifier gain  
[NASA-CASE-ARC-10192] c 09 N72-21245
- Temperature control system with a pulse width modulated bridge  
[NASA-CASE-NPO-11304] c 14 N73-26430
- Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-3] c 33 N75-19520
- REACTION BONDING**  
Fiber reinforced ceramic material  
[NASA-CASE-LEW-14392-2] c 27 N89-29538
- REACTION CONTROL**  
Voice operated controller Patent  
[NASA-CASE-XLA-04063] c 31 N71-33160
- REACTION KINETICS**  
Synthesis of polyformals  
[NASA-CASE-ARC-11244-1] c 23 N82-16174
- REACTION PRODUCTS**  
Process for crosslinking and extending conjugated diene-containing polymers  
[NASA-CASE-LAR-13452-1] c 27 N87-22848
- REACTION TIME**  
Pseudonoise code tracking loop  
[NASA-CASE-MSC-18035-1] c 32 N81-15179
- REACTION WHEELS**  
Reaction wheel scanner Patent  
[NASA-CASE-XGS-02629] c 14 N71-21082
- Gravity gradient attitude control system Patent  
[NASA-CASE-GSC-10555-1] c 21 N71-27324
- Emitted vibration measurement device and method  
[NASA-CASE-MFS-25981-1] c 35 N87-14670
- REACTIVITY**  
Gaseous control system for nuclear reactors  
[NASA-CASE-XLE-04599] c 22 N72-20597
- REACTOR CORES**  
Uninsulated in-core thermionic diode  
[NASA-CASE-NPO-10542] c 09 N72-27228
- REACTOR DESIGN**  
Non-equilibrium radiation nuclear reactor  
[NASA-CASE-HQN-10841-1] c 73 N78-19920
- Thermal reactor --- liquid silicon production from silane gas  
[NASA-CASE-NPO-14369-1] c 44 N83-10501
- REACTOR MATERIALS**  
Zirconium modified nickel-copper alloy  
[NASA-CASE-LEW-12245-1] c 26 N77-20201
- REACTOR PHYSICS**  
Non-equilibrium radiation nuclear reactor  
[NASA-CASE-HQN-10841-1] c 73 N78-19920
- READ-ONLY MEMORY DEVICES**  
Method and apparatus for operating on compacted PCM voice data  
[NASA-CASE-KSC-11285-1] c 32 N86-27513
- READERS**  
Braille reading system  
[NASA-CASE-LAR-13306-1] c 82 N87-29372
- READOUT**  
Flow angle sensor and read out system Patent  
[NASA-CASE-XLE-04503] c 14 N71-24864
- Plural position switch status and operativeness checker Patent  
[NASA-CASE-XLA-08799] c 10 N71-27272
- Magneto-optic detection system with noise cancellation  
[NASA-CASE-NPO-11954-1] c 35 N78-29421
- REAL TIME OPERATION**  
Respiratory analysis system and method  
[NASA-CASE-MSC-13436-1] c 05 N73-32015
- Real time moving scene holographic camera system  
[NASA-CASE-MFS-21087-1] c 35 N74-17153
- Real time, large volume, moving scene holographic camera system  
[NASA-CASE-MFS-22537-1] c 35 N75-27328
- Carbon monoxide monitor --- using real time operation  
[NASA-CASE-MFS-22060-1] c 35 N75-29380
- Real time analysis of voiced sounds  
[NASA-CASE-NPO-13465-1] c 32 N76-31372
- Real time reflectometer --- measurement of specular reflectance  
[NASA-CASE-MFS-23118-1] c 35 N77-31465
- Contour detector and data acquisition system for the left ventricular outline  
[NASA-CASE-ARC-10985-1] c 52 N79-10724
- Azimuth correlator for real-time synthetic aperture radar image processing  
[NASA-CASE-NPO-14019-1] c 32 N79-14268
- System for real-time crustal deformation monitoring  
[NASA-CASE-NPO-14124-1] c 46 N80-14603
- X-ray position detector  
[NASA-CASE-NPO-12087-1] c 74 N81-19898
- Real-time multiple-look synthetic aperture radar processor for spacecraft applications  
[NASA-CASE-NPO-14054-1] c 32 N82-12297
- Pipelined digital SAR azimuth correlator using hybrid FFT-transversal filter  
[NASA-CASE-NPO-15519-1] c 32 N84-34651
- Optical stereo video signal processor  
[NASA-CASE-MFS-25752-1] c 74 N86-21348
- Real-time garbage collection for list processing  
[NASA-CASE-MSC-20964-1] c 60 N87-14863
- Real-time optical multiple object recognition and tracking system and method  
[NASA-CASE-NPO-17139-1-CU] c 74 N88-25301
- Real-time image difference detection using a polarization rotation spatial light modulator  
[NASA-CASE-NPO-17144-1-CU] c 74 N88-25305
- Remotely controllable real-time optical processor  
[NASA-CASE-NPO-16750-1-CU] c 74 N89-14078
- Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13734-1-CU] c 09 N90-20096
- Methods and apparatus for providing real-time control of a gaseous propellant rocket propulsion system  
[NASA-CASE-MSC-21542-1] c 20 N90-26073
- Special purpose parallel computer architecture for real-time control and simulation in robotic applications  
[NASA-CASE-NPO-17629-1-CU] c 60 N90-27268
- Modified fast frequency acquisition via adaptive least squares algorithm  
[NASA-CASE-NPO-17845-1-CU] c 61 N90-27341
- Neural network with dynamically adaptable neurons  
[NASA-CASE-NPO-17803-1-CU] c 62 N90-27385
- Real-time data compression of broadcast video signals  
[NASA-CASE-LEW-14945-1] c 32 N91-13598
- Predictive sensor method and apparatus  
[NASA-CASE-SSC-00006-1] c 35 N91-13691
- Real-time dynamic holographic image storage device  
[NASA-CASE-LAR-13989-1] c 35 N91-13694
- Programmable remapper with single flow architecture  
[NASA-CASE-MSC-21481-1] c 60 N91-13890
- Real time pre-detection dynamic range compression  
[NASA-CASE-NPO-18098-1-CU] c 74 N91-23890

Synchronized computational architecture for generalized bilateral control of robot arms  
[NASA-CASE-NPO-17401-1-CU] c 63 N91-31885

**REATTACHED FLOW**  
Method and apparatus for detecting laminar flow separation and reattachment  
[NASA-CASE-LAR-13952-1-SB] c 34 N90-19534  
Method and apparatus for detecting laminar flow separation and reattachment  
[NASA-CASE-LAR-13952-2-SB] c 34 N91-31596

**REBREATHING**  
Portable breathing system -- a breathing apparatus using a rebreathing system of heat exchangers for carbon dioxide removal  
[NASA-CASE-MSC-16182-1] c 54 N80-10799

**RECEIVERS**  
System for improving signal-to-noise ratio of a communication signal Patent Application  
[NASA-CASE-MSC-12259-1] c 07 N70-12616  
Receiver with an improved phase lock loop in a multichannel telemetry system with suppressed carrier  
[NASA-CASE-NPO-11593-1] c 07 N73-28012  
Automatic carrier acquisition system  
[NASA-CASE-NPO-11628-1] c 07 N73-30113  
Coherent receiver employing nonlinear coherence detection for carrier tracking  
[NASA-CASE-NPO-11921-1] c 32 N74-30523  
Low distortion receiver for bi-level baseband PCM waveforms  
[NASA-CASE-MSC-14557-1] c 32 N76-16249  
Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c 32 N77-28346  
Self-calibrating threshold detector  
[NASA-CASE-MSC-16370-1] c 35 N81-19427  
Method and apparatus for receiving and tracking phase modulated signals  
[NASA-CASE-MSC-16170-2] c 32 N84-27952  
Method of measuring sea surface water temperature with a satellite including wideband passive synthetic-aperture multichannel receiver  
[NASA-CASE-NPO-15651-1] c 43 N85-21723  
High dynamic global positioning system receiver  
[NASA-CASE-NPO-16171-1CU] c 04 N86-27270  
Miniaturization of flight deflection measurement system  
[NASA-CASE-LAR-13628-1] c 35 N90-23707  
Solar thermal energy receiver  
[NASA-CASE-LEW-14949-1] c 44 N91-23617

**RECIPROICATION**  
Reciprocating magnetic refrigerator employing tandem porous matrices within a reciprocating displacer  
[NASA-CASE-NPO-16257-1] c 31 N85-29082  
Reciprocating linear motor  
[NASA-CASE-GSC-12773-2] c 33 N87-23904

**RECOMBINATION REACTIONS**  
Oxygen recombination in individual pressure vessel nickel-hydrogen batteries  
[NASA-CASE-LEW-13822-1] c 44 N86-25874  
Isotope exchange in oxide-containing catalyst  
[NASA-CASE-LAR-13542-2-SB] c 25 N90-20154

**RECONSTRUCTION**  
Method and means for recording and reconstructing holograms without use of a reference beam Patent  
[NASA-CASE-ERC-10020] c 16 N71-26154

**RECORDING HEADS**  
Electromagnetic transducer recording head having a laminated core section and tapered gap  
[NASA-CASE-NPO-10711-1] c 35 N77-21392

**RECORDING INSTRUMENTS**  
Automatic force measuring system Patent  
[NASA-CASE-XLA-02605] c 14 N71-10773  
Blood pressure measuring system for separating and separately recording dc signal and an ac signal Patent  
[NASA-CASE-XMS-06061] c 05 N71-23317  
Helical recorder arrangement for multiple channel recording on both sides of the tape  
[NASA-CASE-GSC-10614-1] c 09 N72-11224  
Thermomagnetic recording and magneto-optic playback system having constant intensity laser beam control  
[NASA-CASE-NPO-11317-2] c 36 N74-13205  
Holography utilizing surface plasmon resonances  
[NASA-CASE-MFS-22040-1] c 35 N74-26946  
Measuring probe position recorder  
[NASA-CASE-LAR-10806-1] c 35 N74-32877

**RECOVERABILITY**  
Ejectable underwater sound source recovery assembly  
[NASA-CASE-LAR-10595-1] c 35 N74-16135

**RECOVERABLE LAUNCH VEHICLES**  
Recoverable rocket vehicle Patent  
[NASA-CASE-XMF-00389] c 31 N70-34176  
Orbiter/launch system  
[NASA-CASE-LAR-12250-1] c 14 N81-26161

**RECOVERABLE SPACECRAFT**  
Space capsule ejection assembly Patent  
[NASA-CASE-XMF-03169] c 31 N71-15675

**RECOVERY PARACHUTES**

Vehicle parachute and equipment jettison system Patent  
[NASA-CASE-XLA-00195] c 02 N70-38009  
Vortex breach high pressure gas generator  
[NASA-CASE-LAR-10549-1] c 31 N73-13898  
Selectable towline spin chute system  
[NASA-CASE-LAR-14322-1] c 02 N91-27139

**RECTANGULAR PANELS**

Stacked solar cell arrays  
[NASA-CASE-NPO-11771] c 03 N73-20040  
Composite sandwich lattice structure  
[NASA-CASE-LAR-11898-1] c 24 N78-10214

**RECTIFIERS**

Thin window, drifted silicon, charged particle detector  
[NASA-CASE-XLE-10529] c 14 N69-23191  
Power control circuit  
[NASA-CASE-XNP-02713] c 10 N69-39888  
Precision rectifier with FET switching means Patent  
[NASA-CASE-ARF-10101-1] c 09 N71-33109  
SCR lamp driver  
[NASA-CASE-GSC-10221-1] c 09 N72-23171  
A dc to ac to dc converter having transistor synchronous rectifiers  
[NASA-CASE-GSC-11126-1] c 09 N72-25253  
Elimination of current spikes in buck power converters  
[NASA-CASE-NPO-14505-1] c 33 N81-19393

**RECTUM**

Cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c 52 N82-22875

**REDOX CELLS**

Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-2] c 44 N81-29524  
Zirconium carbide as an electrocatalyst for the chromous-chromic redox couple  
[NASA-CASE-LEW-13246-1] c 44 N83-27344  
Chromium electrodes for REDOX cells  
[NASA-CASE-LEW-13653-1] c 44 N84-28205  
Negative electrode catalyst for the iron chromium redox energy storage system  
[NASA-CASE-LEW-14028-1] c 44 N86-19721  
Method and apparatus for rebalancing a REDOX flow cell system  
[NASA-CASE-LEW-14127-1] c 33 N86-20680

**REDUCED GRAVITY**

Reduced gravity liquid configuration simulator  
[NASA-CASE-XLE-02624] c 12 N69-39988  
Mass measuring system Patent  
[NASA-CASE-XMS-03371] c 05 N70-42000  
Reduced gravity simulator Patent  
[NASA-CASE-XLA-01787] c 11 N71-16028  
Restraint system for ergometer  
[NASA-CASE-MFS-21046-1] c 14 N73-27377  
Method of forming frozen spheres in a force-free drop tower  
[NASA-CASE-NPO-14845-1] c 27 N82-28442  
Spray applicator for spraying coatings and other fluids in space  
[NASA-CASE-MSC-18852-1] c 37 N85-29283  
Improved method and apparatus for waste collection and storage  
[NASA-CASE-MSC-21025-1] c 31 N87-25495  
Gas particle radiator  
[NASA-CASE-LEW-14297-1] c 35 N89-12048  
Don/doff support stand for use with rear entry space suits  
[NASA-CASE-MSC-21364-1] c 54 N89-13889  
Hollow fiber clinostat: Technical abstract  
[NASA-CASE-MFS-28370-1] c 35 N89-28793  
Apparatus for mixing solutions in low gravity environments  
[NASA-CASE-MFS-26047-1] c 29 N90-21209  
Acoustic convective system  
[NASA-CASE-NPO-17278-1-CU] c 31 N90-21215  
Acoustic transducer apparatus with reduced thermal conduction  
[NASA-CASE-NPO-17620-1-CU] c 71 N91-14808  
Tank gauging apparatus and method  
[NASA-CASE-MSC-21059-2] c 35 N91-15511  
Spiral vane bioreactor  
[NASA-CASE-MSC-21361-1] c 51 N91-21701  
Crystal growth in a microgravity environment  
[NASA-CASE-MFS-28473-1] c 76 N91-26968

**REDUCTION (CHEMISTRY)**

Production of metal powders  
[NASA-CASE-XLE-06461] c 17 N72-22530  
Process for making anhydrous metal halides  
[NASA-CASE-LEW-11860-1] c 37 N76-18458  
Curable liquid hydrocarbon prepolymers containing hydroxyl groups and process for producing same  
[NASA-CASE-NPO-13137-1] c 27 N80-32514  
Hydrodesulfurization of chlorinated coal  
[NASA-CASE-NPO-15304-1] c 25 N83-31743

**REDUNDANCY**

Reconfiguring redundancy management  
[NASA-CASE-MSC-18498-1] c 60 N82-29013

**REDUNDANT COMPONENTS**

Redundant memory organization Patent  
[NASA-CASE-GSC-10564] c 10 N71-29135  
Redundant disc  
[NASA-CASE-LEW-12496-1] c 07 N78-33101  
Redundant motor drive system  
[NASA-CASE-MFS-23777-1] c 37 N80-32716  
Redundant operation of counter modules  
[NASA-CASE-NPO-14162-1] c 60 N81-15706

**REELS**

Method and apparatus for measuring web material wound on a reel  
[NASA-CASE-GSC-11902-1] c 38 N77-17495  
Rotatable electric cable connecting system  
[NASA-CASE-GSC-12899-1] c 33 N86-20669

**REENTRY COMMUNICATION**

Electrostatic plasma modulator for space vehicle re-entry communication Patent  
[NASA-CASE-XLA-01400] c 07 N70-41331  
Means for communicating through a layer of ionized gases Patent  
[NASA-CASE-XLA-01127] c 07 N70-41372  
Reentry communication by material addition Patent  
[NASA-CASE-XLA-01552] c 07 N71-11284

**REENTRY SHIELDING**

Transpirationally cooled heat ablation system Patent  
[NASA-CASE-XMS-02677] c 31 N70-42075  
Method and apparatus for making a heat insulating and ablative structure Patent  
[NASA-CASE-XMS-02009] c 33 N71-20834  
Stand-off type ablative heat shield  
[NASA-CASE-MSC-12143-1] c 33 N72-17947  
Protected isotope heat source --- for atmospheric reentry protection and heat transmission to spacecraft  
[NASA-CASE-LEW-11227-1] c 73 N75-30876  
Fibrous refractory composite insulation --- shielding reusable spacecraft  
[NASA-CASE-ARC-11169-1] c 24 N79-24062  
Adjustable high emittance gap filler --- reentry shielding for space shuttle vehicles  
[NASA-CASE-ARC-11310-1] c 27 N82-24339  
Method for repair of thin glass coatings --- on space shuttle orbiter tiles  
[NASA-CASE-KSC-11097-1] c 27 N82-33520  
Ceramic-ceramic shell tile thermal protection system and method thereof  
[NASA-CASE-ARC-11641-1] c 24 N88-18628

**REENTRY TRAJECTORIES**

Hypersonic reentry vehicle Patent  
[NASA-CASE-XMS-04142] c 31 N70-41631

**REENTRY VEHICLES**

Reentry vehicle leading edge Patent  
[NASA-CASE-XLA-00165] c 31 N70-33242  
Variable-geometry winged reentry vehicle Patent  
[NASA-CASE-XLA-00241] c 31 N70-37986  
Telespectrograph Patent  
[NASA-CASE-XLA-03273] c 14 N71-18699  
Ablation sensor Patent  
[NASA-CASE-XLA-01791] c 14 N71-22991  
Ring wing tension vehicle Patent  
[NASA-CASE-XLA-04901] c 31 N71-24315  
Ferry system  
[NASA-CASE-LAR-10574-1] c 11 N73-13257  
Vortex breach high pressure gas generator  
[NASA-CASE-LAR-10549-1] c 31 N73-13898  
Three-component ceramic coating for silica insulation  
[NASA-CASE-MSC-14270-2] c 27 N76-23426  
Earth-to-orbit vehicle providing a reusable orbital stage  
[NASA-CASE-LAR-13486-1] c 16 N90-22584

**REFERENCE SYSTEMS**

Automatic frequency control loop including synchronous switching circuits  
[NASA-CASE-KSC-10393] c 09 N72-21247  
Magnetic heading reference  
[NASA-CASE-LAR-11387-2] c 04 N77-19056

**REFINING**

Helium refining by superfluidity Patent  
[NASA-CASE-XNP-00733] c 06 N70-34946

**REFLECTANCE**

Optical characteristics measuring apparatus Patent  
[NASA-CASE-XNP-08840] c 23 N71-16365  
Gravimeter Patent  
[NASA-CASE-XMF-05844] c 14 N71-17587  
Optical mirror apparatus Patent  
[NASA-CASE-ERC-10001] c 23 N71-24868  
Portable reflectance spectrometer  
[NASA-CASE-NPO-13556-1] c 35 N84-33766  
Diffusely reflecting paints including polytetrafluoroethylene and method of manufacture  
[NASA-CASE-GSC-12883-1] c 27 N85-29044  
Wide-angle flat field telescope  
[NASA-CASE-GSC-12825-1] c 74 N86-28732

- Doppler radar with multiphase modulation of transmitted and reflected signal  
[NASA-CASE-MSC-18808-1] c 32 N90-20280
- Water window imaging x ray microscope  
[NASA-CASE-MFS-28485-1] c 35 N91-15519
- REFLECTED WAVES**  
Device and method for determining X ray reflection efficiency of optical surfaces  
[NASA-CASE-MFS-20243] c 23 N73-13662
- Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c 36 N75-15028
- Reflected-wave maser --- low noise amplifier  
[NASA-CASE-NPO-13490-1] c 36 N76-31512
- Method and apparatus for characterizing reflected ultrasonic pulses  
[NASA-CASE-LAR-13966-1] c 71 N91-27914
- REFLECTING TELESCOPES**  
Anastigmatic three-mirror telescope  
[NASA-CASE-MFS-23675-1] c 89 N79-10969
- Wide-angle flat field telescope  
[NASA-CASE-GSC-12825-1] c 74 N86-28732
- REFLECTION**  
Synthesis of zinc titanate pigment and coatings containing the same  
[NASA-CASE-MFS-13532] c 18 N72-17532
- Method and apparatus for compensating reflection losses in a path length modulated absorption-absorption trace gas detector --- for determining density of gas  
[NASA-CASE-ARC-10631-1] c 74 N76-20958
- Ranging system which compares an object reflected component of a light beam to a reference component of the light beam  
[NASA-CASE-NPO-15865-1] c 74 N85-34629
- REFLECTOMETERS**  
Ellipsoidal mirror reflectometer including means for averaging the radiation reflected from the sample  
Patent  
[NASA-CASE-XGS-05291] c 23 N71-16341
- Real time reflectometer --- measurement of specular reflectance  
[NASA-CASE-MFS-23118-1] c 35 N77-31465
- Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c 43 N79-25443
- Visible and infrared polarization ratio spectrorreflectometer  
[NASA-CASE-LAR-12285-1] c 35 N80-28687
- REFLECTOR ANTENNAS**  
Focal axis resolver for offset reflector antennas  
[NASA-CASE-GSC-12630-1] c 33 N83-36355
- REFLECTORS**  
Reflector space satellite Patent  
[NASA-CASE-XLA-00138] c 31 N70-37981
- Self-erecting reflector Patent  
[NASA-CASE-XGS-09190] c 31 N71-16102
- Spectroscopy equipment using a slender cylindrical reflector as a substitute for a slit Patent  
[NASA-CASE-XGS-08269] c 23 N71-26206
- Conical reflector antenna  
[NASA-CASE-NPO-10303] c 07 N72-22127
- Target acquisition antenna  
[NASA-CASE-GSC-10064-1] c 10 N72-22235
- Multi-purpose antenna employing dish reflector with plural coaxial horn feeds  
[NASA-CASE-NPO-11264] c 07 N72-25174
- Multiple reflection conical microwave antenna  
[NASA-CASE-NPO-11661] c 07 N73-14130
- Non-tracking solar energy collector system  
[NASA-CASE-NPO-13813-1] c 44 N78-31526
- Solar cell having improved back surface reflector  
[NASA-CASE-LEW-13620-1] c 44 N83-13579
- Acoustic suspension system  
[NASA-CASE-NPO-15435-1] c 71 N83-36846
- Optical system with reflective baffles  
[NASA-CASE-ARC-11502-1] c 74 N86-20125
- Ultrasonic angle beam standard reflector --- ultrasonic nondestructive inspection  
[NASA-CASE-LAR-13153-1] c 71 N86-21276
- Compensation for primary reflector wavefront error  
[NASA-CASE-NPO-16869-1CU] c 74 N86-33138
- Welding torch with arc light reflector  
[NASA-CASE-MFS-29134-1] c 74 N87-17493
- Self-clamping arc light reflector for welding torch  
[NASA-CASE-MFS-29207-1] c 74 N87-25843
- Reflection oscillators employing series resonant crystals  
[NASA-CASE-GSC-13173-1] c 33 N90-23635
- New core design for use with precision composite reflectors  
[NASA-CASE-NPO-17858-1-CU] c 24 N90-26880
- Method and apparatus for phasing segmented mirror arrays  
[NASA-CASE-NPO-18095-1-CU] c 74 N91-32923
- REFRACTION**  
Method and apparatus for second-rank tensor generation  
[NASA-CASE-NPO-17512-1-CU] c 74 N91-26918
- REFRACTIVITY**  
The 2 deg/90 deg laboratory scattering photometer --- particulate refractivity in hydrosols  
[NASA-CASE-GSC-12088-1] c 74 N78-13874
- Chromatically corrected virtual image visual display --- reducing eye strain in flight simulators  
[NASA-CASE-LAR-12251-1] c 74 N80-27185
- Dual laser optical system and method for studying fluid flow  
[NASA-CASE-MFS-25315-1] c 36 N83-29680
- Photorefractor ocular screening system  
[NASA-CASE-MFS-26011-1-SB] c 52 N87-24874
- Dynamic range compression/expansion of light beams by photorefractive crystals  
[NASA-CASE-NPO-17140-1-CU] c 74 N89-14077
- REFRACTORY COATINGS**  
Refractory coatings and method of producing the same  
[NASA-CASE-LEW-13169-1] c 26 N82-29415
- Refractory coatings  
[NASA-CASE-LEW-13169-2] c 26 N82-30371
- Method for repair of thin glass coatings --- on space shuttle orbiter tiles  
[NASA-CASE-KSC-11097-1] c 27 N82-33520
- Thermal barrier coating system  
[NASA-CASE-LEW-13324-2] c 24 N85-21266
- REFRACTORY MATERIALS**  
High temperature testing apparatus Patent  
[NASA-CASE-XLE-00335] c 14 N70-35368
- Prestressed refractory structure Patent  
[NASA-CASE-XNP-02888] c 18 N71-21068
- Method of manufacturing semiconductor devices using refractory dielectrics  
[NASA-CASE-XER-08476-1] c 26 N72-17820
- High temperature furnace for melting materials in space  
[NASA-CASE-MFS-20710] c 11 N72-23215
- High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
[NASA-CASE-NPO-13690-1] c 27 N78-19302
- High temperature resistant cermet and ceramic compositions  
[NASA-CASE-NPO-13690-2] c 27 N79-14213
- Fibrous refractory composite insulation --- shielding reusable spacecraft  
[NASA-CASE-ARC-11169-1] c 24 N79-24062
- Catalytic trimerization of aromatic nitriles and triaryl-s-triazine ring cross-linked high temperature resistant polymers and copolymers made thereby  
[NASA-CASE-LEW-12053-2] c 27 N79-28307
- Improved refractory coatings --- sputtered coatings on substrates that form stable nitrides  
[NASA-CASE-LEW-23169-2] c 26 N81-16209
- Adjustable high emittance gap filler --- reentry shielding for space shuttle vehicles  
[NASA-CASE-ARC-11310-1] c 27 N82-24339
- Attachment system for silica tiles --- thermal protection for space shuttle orbiter  
[NASA-CASE-MSC-18741-1] c 27 N82-29456
- Densification of porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MSC-18737-1] c 24 N83-13171
- Method of repairing surface damage to porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MSC-18736-1] c 24 N83-13172
- High temperature silicon carbide impregnated insulating fabrics  
[NASA-CASE-MSC-18832-1] c 27 N83-18908
- Apparatus for accurately preloading auger attachment means for frangible protective material  
[NASA-CASE-MSC-18791-1] c 37 N83-36482
- High temperature resistant polyimide from tetra ester, diamine, diester and N-arylnadimide  
[NASA-CASE-LEW-13864-1] c 27 N86-19457
- Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-2-SB] c 27 N90-21177
- Lightweight ceramic insulation and method  
[NASA-CASE-MSC-20782-1] c 27 N90-23566
- Metallic threaded composite fastener  
[NASA-CASE-MSC-21580-1] c 37 N91-23491
- REFRACTORY METALS**  
Radiant heater having formed filaments Patent  
[NASA-CASE-XLE-00387] c 33 N70-34812
- Method of producing refractory bodies having controlled porosity Patent  
[NASA-CASE-LEW-10393-1] c 17 N71-15468
- Multilayer porous ionizer Patent  
[NASA-CASE-XNP-04338] c 17 N71-23046
- Brazing alloy Patent  
[NASA-CASE-XNP-03063] c 17 N71-23365
- Thermal radiation shielding Patent  
[NASA-CASE-XLE-03432] c 33 N71-24145
- Method of producing refractory composites containing tantalum carbide, hafnium carbide, and hafnium boride Patent  
[NASA-CASE-XLE-03940] c 18 N71-26153
- Silicicide coatings for refractory metals Patent  
[NASA-CASE-XLE-10910] c 18 N71-29040
- Refractory metal base alloy composites  
[NASA-CASE-XLE-03940-2] c 17 N72-28536
- Fused silicide coatings containing discrete particles for protecting niobium alloys --- used in space shuttle thermal protection systems and turbine engine components  
[NASA-CASE-LEW-11179-1] c 27 N76-16229
- Method of making an apertured casting --- using duplicate mold  
[NASA-CASE-LEW-11169-1] c 37 N76-23570
- Absorbable-susceptor joining of ceramic surfaces  
[NASA-CASE-NPO-15640-1] c 27 N84-22748
- One step HIP canning of powder metallurgy composites  
[NASA-CASE-LEW-14719-1] c 24 N90-23493
- High temperature refractory member with radiation emissive overcoat  
[NASA-CASE-NPO-17122-1-CU] c 27 N91-14489
- REFRIGERATING**  
Helium refrigerator and method for decontaminating the refrigerator  
[NASA-CASE-NPO-10634] c 23 N72-25619
- Magnetic heat pumping  
[NASA-CASE-LEW-12508-3] c 34 N83-29625
- REFRIGERATING MACHINERY**  
Refrigeration apparatus  
[NASA-CASE-NPO-10309] c 15 N69-23190
- Refrigeration apparatus Patent  
[NASA-CASE-XNP-08877] c 15 N71-23025
- Dual solid cryogens for spacecraft refrigeration Patent  
[NASA-CASE-GSC-10188-1] c 23 N71-24725
- Stirling cycle engine and refrigeration systems  
[NASA-CASE-NPO-13613-1] c 37 N76-29590
- Cycling Joule Thomson refrigerator  
[NASA-CASE-NPO-15251-1] c 31 N83-31897
- Vibration isolation and pressure compensation apparatus for sensitive instrumentation  
[NASA-CASE-LAR-12728-1] c 35 N83-32026
- Magnetically actuated compressor  
[NASA-CASE-GSC-12799-1] c 31 N85-21404
- Oxygen chemisorption cryogenic refrigerator  
[NASA-CASE-NPO-16734-1-CU] c 31 N88-14223
- REFRIGERATORS**  
Intermittent type silica gel adsorption refrigerator Patent  
[NASA-CASE-XNP-00920] c 15 N71-15906
- Helium refrigerator  
[NASA-CASE-NPO-13435-1] c 31 N76-14284
- Thermal compensator for closed-cycle helium refrigerator --- assuring constant temperature for an infrared laser diode  
[NASA-CASE-GSC-12168-1] c 31 N79-17029
- Reciprocating magnetic refrigerator employing tandem porous matrices within a reciprocating displacer  
[NASA-CASE-NPO-16257-1] c 31 N85-29082
- Ten degree Kelvin hydride refrigerator  
[NASA-CASE-NPO-16393-1-CU] c 31 N87-21159
- Krypton based adsorption type cryogenic refrigerator  
[NASA-CASE-NPO-17334-1-CU] c 31 N88-23917
- Cryogenic regenerator including saran-carbon heat conduction matrix  
[NASA-CASE-NPO-17291-1-CU] c 34 N88-23946
- Self-actuating heat switches for redundant refrigeration systems  
[NASA-CASE-NPO-17085-1-CU] c 31 N89-12785
- Joule Thomson refrigerator  
[NASA-CASE-NPO-17143-1-CU] c 31 N89-14351
- Two stage sorption type cryogenic refrigerator including heat regeneration system  
[NASA-CASE-NPO-17630-1-CU] c 31 N89-29577
- Multicomponent gas sorption Joule-Thomson refrigerator  
[NASA-CASE-NPO-17569-1-CU] c 31 N90-26176
- REFUELING**  
Quick-disconnect inflatable seal assembly  
[NASA-CASE-KSC-11368-1] c 37 N89-13786
- System for connecting fluid couplings  
[NASA-CASE-MFS-26042-1-SB] c 37 N91-14613
- REGENERATION (ENGINEERING)**  
Switching circuit employing regeneratively connected complementary transistors Patent  
[NASA-CASE-XNP-02654] c 10 N70-42032
- Regenerative braking system Patent  
[NASA-CASE-XMF-01096] c 10 N71-16030
- Free-piston regenerative hot gas hydraulic engine  
[NASA-CASE-LEW-12274-1] c 37 N80-31790
- Cryogenic regenerator including saran-carbon heat conduction matrix  
[NASA-CASE-NPO-17291-1-CU] c 34 N88-23946

**REGENERATION (PHYSIOLOGY)**

Implantable electrical device  
 [NASA-CASE-GSC-12560-1] c 52 N82-29863  
 Method and apparatus for bio-regenerative life support system  
 [NASA-CASE-MSC-21629-1] c 54 N91-31803

**REGENERATIVE COOLING**

Formed metal ribbon wrap Patent  
 [NASA-CASE-XLE-00164] c 15 N70-36411  
 Method of making a regeneratively cooled combustion chamber Patent  
 [NASA-CASE-XLE-00150] c 28 N70-41818  
 Small rocket engine Patent  
 [NASA-CASE-XLE-00685] c 28 N70-41992  
 Combustion chamber Patent  
 [NASA-CASE-XLE-04857] c 28 N71-23968  
 Method of making apparatus for sensing temperature  
 [NASA-CASE-XLE-05230-2] c 14 N73-13417

**REGENERATIVE FUEL CELLS**

Electrolytically regenerative hydrogen-oxygen fuel cell Patent  
 [NASA-CASE-XLE-04526] c 03 N71-11052

**REGENERATORS**

Code regenerative clean-up loop transponder for a mu-type ranging system  
 [NASA-CASE-NPO-11707] c 07 N73-25161  
 Magnetic heat pumping  
 [NASA-CASE-LEW-12508-3] c 34 N83-29625  
 Two stage sorption type cryogenic refrigerator including heat regeneration system  
 [NASA-CASE-NPO-17630-1-CU] c 31 N89-29577

**REGISTERS (COMPUTERS)**

Variable digital processor including a register for shifting and rotating bits in either direction Patent  
 [NASA-CASE-GSC-10186] c 08 N71-33110  
 Priority interrupt system --- comprised of four registers  
 [NASA-CASE-NPO-13067-1] c 60 N76-18800

**REGULATORS**

Coupling device with improved thermal interface  
 [NASA-CASE-GSC-13251-1] c 37 N91-28582

**REINFORCED PLASTICS**

Tube fabricating process  
 [NASA-CASE-LAR-10203-1] c 15 N72-16330  
 Reinforced structural plastics  
 [NASA-CASE-LEW-10199-1] c 27 N74-23125

**REINFORCEMENT (STRUCTURES)**

Reinforcing means for diaphragms Patent  
 [NASA-CASE-XNP-01962] c 32 N70-41370  
 Thermally activated retainer means  
 [NASA-CASE-MSC-21793-1] c 16 N91-28186

**REINFORCEMENT RINGS**

Tube coupling device  
 [NASA-CASE-MFS-25964-2] c 37 N87-22977

**REINFORCING FIBERS**

Reinforced metallic composites Patent  
 [NASA-CASE-XLE-02428] c 17 N70-33288  
 Method of making fiber reinforced metallic composites Patent  
 [NASA-CASE-XLE-00231] c 17 N70-38198  
 Method for producing fiber reinforced metallic composites Patent  
 [NASA-CASE-XLE-03925] c 18 N71-22894  
 Thermal protection ablation spray system Patent  
 [NASA-CASE-XLA-04251] c 18 N71-26100

Method of preparing graphite reinforced aluminum composite  
 [NASA-CASE-MFS-21077-1] c 24 N75-28135  
 Crystalline polyimides --- reinforcing fibers for high temperature composites and adhesives as well as flame retardation  
 [NASA-CASE-LAR-12099-1] c 27 N80-16158

Composition and method for making polyimide resin-reinforced fabric  
 [NASA-CASE-LEW-12933-1] c 27 N81-19296  
 High modulus rare earth and beryllium containing silicate glass compositions --- for glass reinforcing fibers  
 [NASA-CASE-HQN-10595-1] c 27 N82-29455  
 Method of carbonizing polyacrylonitrile fibers  
 [NASA-CASE-ARC-11261-1] c 24 N83-25789  
 Fluoroether modified epoxy composites  
 [NASA-CASE-ARC-11418-1] c 24 N84-11213

Lightweight piston  
 [NASA-CASE-LAR-13150-1] c 24 N87-27742  
 Seamless metal-clad fiber-reinforced organic matrix composite structures and process for their manufacture  
 [NASA-CASE-LAR-13562-1] c 24 N90-25196  
 Continuous fiber thermoplastic prepreg  
 [NASA-CASE-LAR-14459-1] c 24 N91-15334  
 Process for the manufacture of seamless metal-clad fiber-reinforced organic matrix composite structures  
 [NASA-CASE-LAR-13562-2] c 24 N91-25199

**RELAXATION OSCILLATORS**

Voltage to frequency converter Patent  
 [NASA-CASE-GSC-10022-1] c 10 N71-25882

**RELAY SATELLITES**

Satellite communication system and method Patent  
 [NASA-CASE-GSC-10118-1] c 07 N71-24621  
 Satellite personal communications system  
 [NASA-CASE-NPO-14480-1] c 32 N80-20448

**RELEASING**

Despin weight release Patent  
 [NASA-CASE-XLA-00679] c 15 N70-38601  
 Quick attach and release fluid coupling assembly Patent  
 [NASA-CASE-XKS-01985] c 15 N71-10782  
 Redundant actuating mechanism Patent  
 [NASA-CASE-XGS-08718] c 15 N71-24600  
 Quick release hook tape Patent  
 [NASA-CASE-XMS-10660-1] c 15 N71-25975  
 Delayed simultaneous release mechanism  
 [NASA-CASE-GSC-10814-1] c 03 N73-20039  
 Slide release mechanism --- for space shuttle orbiter/external tank connection device  
 [NASA-CASE-MSC-20080-1] c 37 N85-30334  
 Fully redundant mechanical release actuator  
 [NASA-CASE-LAR-13198-1] c 37 N87-23983  
 Prefloadable vector sensitive latch  
 [NASA-CASE-MSC-20910-1] c 37 N87-25582  
 Releasable clamping apparatus  
 [NASA-CASE-MFS-28192-1] c 37 N90-17154  
 Double swivel toggle release  
 [NASA-CASE-MSC-21436-1] c 37 N90-21390  
 Method and apparatus for releasably connecting first and second objects  
 [NASA-CASE-MSC-21517-1] c 37 N91-24577  
 Quick action clamp  
 [NASA-CASE-LEW-14887-1] c 37 N91-27561

**RELIABILITY ANALYSIS**

Program for computer aided reliability estimation  
 [NASA-CASE-NPO-13086-1] c 15 N73-12495  
 Integrated circuit reliability testing  
 [NASA-CASE-NPO-17393-1-CU] c 33 N89-29679

**RELIABILITY ENGINEERING**

Method of improving the reliability of a rolling element system Patent  
 [NASA-CASE-XLE-02999] c 15 N71-16052  
 Inspection gage for boss Patent  
 [NASA-CASE-XMF-04966] c 14 N71-17658  
 Valving device for automatic refilling in cryogenic liquid systems  
 [NASA-CASE-NPO-11177] c 15 N72-17453  
 Electrical connector  
 [NASA-CASE-NPO-10694] c 09 N72-20200  
 Inherent redundancy electric heater  
 [NASA-CASE-MFS-21462-1] c 33 N74-14935  
 Hollow rolling element bearings  
 [NASA-CASE-LEW-11087-3] c 37 N74-21064  
 Reconfiguring redundancy management  
 [NASA-CASE-MSC-18498-1] c 60 N82-29013  
 Phase sensitive guidance sensor for wire-following vehicles  
 [NASA-CASE-NPO-15341-1] c 35 N84-33769  
 Lightweight piston  
 [NASA-CASE-LAR-13150-1] c 24 N87-27742

**RELIEF MAPS**

Method and apparatus for contour mapping using synthetic aperture radar  
 [NASA-CASE-NPO-15939-1] c 43 N86-19711

**RELIEF VALVES**

Relief valve  
 [NASA-CASE-XMS-05894-1] c 15 N69-21924  
 Zero gravity separator Patent  
 [NASA-CASE-XLE-00586] c 15 N71-15968  
 Redundant hydraulic control system for actuators  
 [NASA-CASE-MFS-20944] c 15 N73-13466  
 Prosthetic urinary sphincter  
 [NASA-CASE-MFS-23717-1] c 52 N81-25660  
 Ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
 [NASA-CASE-LEW-13107-1] c 52 N83-21785

**REMOTE CONTROL**

Electromagnetic mirror drive system  
 [NASA-CASE-XLA-03724] c 14 N69-27461  
 Tubular coupling having frangible connecting means  
 [NASA-CASE-XLA-02854] c 15 N69-27490  
 Bimetallic power controlled actuator  
 [NASA-CASE-XNP-09776] c 09 N69-39929  
 Fluid coupling Patent  
 [NASA-CASE-XLE-00397] c 15 N70-36492  
 Umbilical disconnect Patent  
 [NASA-CASE-XLA-00711] c 03 N71-12258  
 Remote controlled tubular disconnect Patent  
 [NASA-CASE-XLA-01396] c 03 N71-12259  
 Three-axis finger tip controller for switches Patent  
 [NASA-CASE-XAC-02405] c 09 N71-16089  
 Satellite communication system Patent  
 [NASA-CASE-XNP-02389] c 07 N71-28900  
 Method and apparatus for aligning a laser beam projector Patent  
 [NASA-CASE-NPO-11087] c 23 N71-29125

Solid state remote circuit selector switch  
 [NASA-CASE-LEW-10387] c 09 N72-22201  
 Laser communication system for controlling several functions at a location remote to the laser  
 [NASA-CASE-LAR-10311-1] c 16 N73-16536  
 Cooperative multiaxis sensor for teleoperation of article manipulating apparatus  
 [NASA-CASE-NPO-13386-1] c 54 N75-27758  
 Remotely operable articulated manipulator  
 [NASA-CASE-MFS-22707-1] c 37 N76-15457  
 Remote manipulator system  
 [NASA-CASE-MFS-22022-1] c 37 N76-15460  
 Remote lightning monitor system  
 [NASA-CASE-KSC-11031-1] c 33 N79-11315  
 Simulator method and apparatus for practicing the mating of an observer-controlled object with a target  
 [NASA-CASE-MFS-23052-2] c 74 N79-13855  
 Terminal guidance sensor system --- space shuttle coupling to orbiting satellites  
 [NASA-CASE-NPO-14521-1] c 37 N81-27519  
 Retinally stabilized differential resolution television display  
 [NASA-CASE-NPO-15432-1] c 32 N85-29117  
 Digital control of diode laser for atmospheric spectroscopy  
 [NASA-CASE-NPO-16000-1] c 36 N85-29264  
 Remotely controllable mixing system  
 [NASA-CASE-MFS-28153-1] c 31 N86-32589  
 Remotely operable peristaltic pump  
 [NASA-CASE-MFS-28059-1] c 37 N86-32738  
 Radial and torsionally controlled magnetic bearing  
 [NASA-CASE-GSC-12957-1] c 37 N87-17038  
 Apparatus and method of capturing an orbiting spacecraft  
 [NASA-CASE-MSC-20979-1] c 37 N87-22985  
 Remotely controlled spray gun  
 [NASA-CASE-MFS-28110-1] c 37 N87-24689  
 Improved docking alignment system  
 [NASA-CASE-MSC-21372-1] c 35 N89-12842  
 Magnetic attachment mechanism  
 [NASA-CASE-MSC-21095-1] c 37 N89-12866  
 Remotely controllable real-time optical processor  
 [NASA-CASE-NPO-16750-1-CU] c 74 N89-14078  
 A generalized compliant motion primitive  
 [NASA-CASE-NPO-18134-1-CU] c 37 N91-32510

**REMOTE HANDLING**

Remote control manipulator for zero gravity environment  
 [NASA-CASE-MFS-14405] c 15 N72-28495  
 Apparatus for remote handling of materials --- mixing or analyzing dangerous chemicals  
 [NASA-CASE-LAR-10634-1] c 37 N74-18123  
 Anthropomorphic master/slave manipulator system  
 [NASA-CASE-ARC-10756-1] c 54 N77-32721  
 Controller arm for a remotely related slave arm  
 [NASA-CASE-ARC-11052-1] c 37 N79-28551  
 Apparatus for sequentially transporting containers  
 [NASA-CASE-MFS-23846-1] c 37 N82-32731  
 Precision manipulator heating and cooling apparatus for use in UHV systems with sample transfer capability  
 [NASA-CASE-LAR-13040-1] c 37 N85-29286  
 Space spider crane  
 [NASA-CASE-LAR-13411-1-SB] c 18 N88-23828  
 Mobile remote manipulator system for a tetrahedral truss  
 [NASA-CASE-MSC-20985-1] c 18 N88-26398

**REMOTE MANIPULATOR SYSTEM**

Coupling device for moving vehicles  
 [NASA-CASE-GSC-12322-1] c 37 N80-14398  
 Apparatus and method of capturing an orbiting spacecraft  
 [NASA-CASE-MSC-20979-1] c 37 N79-22985  
 Mobile remote manipulator vehicle system  
 [NASA-CASE-LAR-13393-1] c 54 N87-29118  
 Electromagnetic attachment mechanism  
 [NASA-CASE-MSC-21463-1] c 37 N91-23490  
 Standard remote manipulator system docking target augmentation for automated docking  
 [NASA-CASE-MFS-28419-1] c 18 N91-27200  
 Synchronized computational architecture for generalized bilateral control of robot arms  
 [NASA-CASE-NPO-17401-1-CU] c 63 N91-31885

**REMOTE SENSING**

Method and apparatus for calibrating the ionosphere and application to surveillance of geophysical events  
 [NASA-CASE-NPO-15430-1] c 46 N85-21846  
 Thermal remote anemometer system  
 [NASA-CASE-LAR-13508-1] c 35 N88-23962  
 Method for detecting surface motions and mapping small terrestrial or planetary surface deformations with synthetic aperture radar  
 [NASA-CASE-NPO-17831-1-CU] c 43 N91-14642  
 Remote object configuration/orientation determination  
 [NASA-CASE-NPO-17436-1-CU] c 35 N91-15512

## REMOTE SENSORS

- Passive optical wind and turbulence detection system Patent  
[NASA-CASE-XMF-14032] c 20 N71-16340
- Pressure monitoring with a plurality of ionization gauges controlled at a central location Patent  
[NASA-CASE-XLE-00787] c 14 N71-21090
- Flow angle sensor and read out system Patent  
[NASA-CASE-XLE-04503] c 14 N71-24864
- Time synchronization system utilizing moon reflected coded signals Patent  
[NASA-CASE-NPO-10143] c 10 N71-26326
- Clear air turbulence detector  
[NASA-CASE-ERC-10081] c 14 N72-28437
- Intruder detection system  
[NASA-CASE-ARC-10097-2] c 07 N73-25160
- Microwave power transmission system wherein level of transmitted power is controlled by reflections from receiver  
[NASA-CASE-MFS-21470-1] c 44 N74-19870
- Voltage monitoring system  
[NASA-CASE-KSC-10736-1] c 33 N75-19521
- Wind sensor  
[NASA-CASE-NPO-13462-1] c 35 N76-24524
- Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c 35 N77-10493
- Wind measurement system  
[NASA-CASE-MFS-23362-1] c 47 N77-10753
- Penetrometer --- for determining load bearing characteristics of inclined surfaces  
[NASA-CASE-NPO-11103-1] c 35 N77-27367
- Remote sensing of vegetation and soil using microwave ellipsometry  
[NASA-CASE-GSC-11976-1] c 43 N78-10529
- Remote water monitoring system  
[NASA-CASE-LAR-11973-1] c 35 N78-27384
- Radar target for remotely sensing hydrological phenomena  
[NASA-CASE-LAR-12344-1] c 43 N80-18498
- Method of and apparatus for measuring temperature and pressure --- atmospheric sounding  
[NASA-CASE-GSC-12558-1] c 36 N85-21639
- REMOTELY PILOTED VEHICLES**
- Rotating launch device for a remotely piloted aircraft  
[NASA-CASE-ARC-10979-1] c 09 N77-19076
- REMOVAL**
- Catalyst bed removing tool Patent  
[NASA-CASE-XFR-00811] c 15 N70-36901
- Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c 28 N81-15119
- Acoustic bubble removal method  
[NASA-CASE-NPO-15334-1] c 71 N83-35781
- Device for removing foreign objects from anatomic organs  
[NASA-CASE-GSC-13306-1] c 52 N91-28727
- REPEATERS**
- Time division radio relay synchronizing system using different sync code words for in sync and out of sync conditions Patent  
[NASA-CASE-GSC-10373-1] c 07 N71-19773
- REPLACING**
- Electron beam tube containing a multiple cathode array employing indexing means for cathode substitution Patent  
[NASA-CASE-NPO-10625] c 09 N71-26182
- RESCUE OPERATIONS**
- Backpack carrier Patent  
[NASA-CASE-LAR-10056] c 05 N71-12351
- Rescue litter flotation assembly Patent  
[NASA-CASE-XMS-04170] c 05 N71-22748
- Method of locating persons in distress --- by using radar imagery from radar reflectors  
[NASA-CASE-LAR-11390-1] c 32 N77-21267
- Apparatus and method of capturing an orbiting spacecraft  
[NASA-CASE-MSC-20979-1] c 37 N87-22985
- Airborne rescue system  
[NASA-CASE-ARC-11909-1] c 03 N91-31113
- RESEARCH AIRCRAFT**
- Miniature electrooptical air flow sensor  
[NASA-CASE-LAR-13065-1] c 35 N85-20295
- RESEARCH AND DEVELOPMENT**
- Tube fabricating process  
[NASA-CASE-LAR-10203-1] c 15 N72-16330
- RESEARCH FACILITIES**
- Nano-G research laboratory for a spacecraft  
[NASA-CASE-GSC-13197-1] c 18 N91-27201
- RESEARCH VEHICLES**
- Lunar landing flight research vehicle Patent  
[NASA-CASE-XFR-00929] c 31 N70-34966
- Velocity limiting safety system Patent  
[NASA-CASE-XLA-07473] c 15 N71-24895
- RESERVOIRS**
- Water cooled static pressure probe  
[NASA-CASE-LAR-14340-1-CU] c 35 N91-13684

## RESIDUAL STRESS

- Miniature stress transducer Patent  
[NASA-CASE-XNP-02983] c 14 N71-21091
- Method of making a perspiration resistant biopotential electrode  
[NASA-CASE-MSC-90153-2] c 05 N72-25120
- Method and apparatus for characterizing residual stress in ferromagnetic materials  
[NASA-CASE-LAR-14239-1] c 26 N91-13527
- RESILIENCE**
- Resilience testing device Patent  
[NASA-CASE-XLA-08254] c 14 N71-26161
- RESIN BONDING**
- Method and apparatus for bonding a plastics sleeve onto a metallic body Patent  
[NASA-CASE-XLA-01262] c 15 N71-21404
- Covered silicon solar cells and method of manufacture --- with polymeric films  
[NASA-CASE-LEW-11065-2] c 44 N76-14600
- Method of manufacture of bonded fiber flywheel --- fiberglass-epoxy  
[NASA-CASE-MFS-23674-1] c 24 N81-29163
- RESIN MATRIX COMPOSITES**
- Phosphorus-containing bisimide resins  
[NASA-CASE-ARC-11321-1] c 27 N81-27272
- Elastomer coated filler and composites thereof comprising at least 60% by weight of a hydrated filler and an elastomer containing an acid substituent  
[NASA-CASE-NPO-14857-1] c 27 N83-19900
- Method of tracing contour patterns for use in making gradual contour resin matrix composites  
[NASA-CASE-ARC-11246-1] c 31 N83-34073
- Copolymers of vinyl styrylpyridines or vinyl stilbazoles with bismaleimide  
[NASA-CASE-ARC-11429-1-CU] c 27 N86-20560
- High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11538-1SB] c 24 N86-21590
- Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-2] c 27 N86-27451
- Process for preparing phthalocyanine polymer from imide containing bisphthalonitrile  
[NASA-CASE-ARC-11511-2] c 27 N87-21112
- Semiinterpenetrating polymer network for tougher and more microcracking resistant high temperature polymers  
[NASA-CASE-LAR-13925-1] c 27 N89-25334
- Method of controlling a resin curing process --- for fiber reinforced composites  
[NASA-CASE-MSC-21169-1] c 27 N89-29539
- Ladder polymers for use as high temperature stable resins or coatings  
[NASA-CASE-LEW-14203-1] c 27 N91-15402
- Processable polyimide adhesive and matrix composite resin  
[NASA-CASE-LAR-14101-1] c 27 N91-15403
- RESINS**
- Modified polyurethane foams for fuel-fire Patent  
[NASA-CASE-ARC-10098-1] c 06 N71-24739
- Bonding or repairing process  
[NASA-CASE-MSC-12357] c 15 N73-12489
- Semiconductor surface protection material  
[NASA-CASE-ERC-10339-1] c 18 N73-30532
- Composite lamination method  
[NASA-CASE-LAR-12019-1] c 24 N78-17150
- Polyvinyl alcohol cross-linked with two aldehydes  
[NASA-CASE-LEW-13504-1] c 25 N83-13188
- Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c 27 N83-31854
- Fire and heat resistant laminating resins based on maleimido and citraconimido substituted 1-(diorgano oxyphosphonyl) methyl -2,4- and -2,6- diaminobenzenes  
[NASA-CASE-ARC-11533-3] c 27 N87-24564
- Fire and heat resistant laminating resin based on maleimido and citraconimido substituted 1-(diorganoxyphosphonyl-methyl)-2,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11533-2] c 27 N89-16042
- A tough high performance composite matrix  
[NASA-CASE-LAR-14338-1] c 24 N90-26881
- Novel polyimide molding powder, coating, adhesive, and matrix resin  
[NASA-CASE-LAR-14163-1] c 27 N91-13559
- Regenerable biocide delivery unit  
[NASA-CASE-MSC-21763-1] c 51 N91-25570
- Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14489-1] c 37 N91-27562
- Ethynyl terminated imidothioethers and resins therefrom  
[NASA-CASE-LAR-13910-2-CU] c 27 N91-31307
- RESISTANCE**
- Method of making a perspiration resistant biopotential electrode  
[NASA-CASE-MSC-90153-2] c 05 N72-25120

- Variable resistance constant tension and lubrication device --- using oil-saturated leather wiper  
[NASA-CASE-KSC-10723-1] c 37 N75-13265
- Acoustic ground impedance meter  
[NASA-CASE-LAR-12995-1] c 35 N84-22933
- RESISTANCE HEATING**
- Electrothermal rockets having improved heat exchangers Patent  
[NASA-CASE-XLE-01783] c 28 N70-34175
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71:NPO-15494-2] c 35 N85-34373
- RESISTORS**
- High isolation RF signal selection switches  
[NASA-CASE-NPO-13081-1] c 33 N74-22814
- Resistive anode image converter  
[NASA-CASE-HQN-10876-1] c 33 N76-27473
- Amplifier for measuring low-level signals in the presence of high common mode voltage  
[NASA-CASE-MFS-25868-1] c 33 N86-20670
- RESOLUTION**
- Analogue-to-digital conversion system Patent  
[NASA-CASE-XAC-00404] c 08 N70-40125
- Spectroscopy equipment using a slender cylindrical reflector as a substitute for a slit Patent  
[NASA-CASE-XGS-08269] c 23 N71-26206
- Resolution enhanced sound detecting apparatus  
[NASA-CASE-NPO-14134-1] c 71 N79-23753
- Television monitor field shifter and an opto-electronic method for obtaining a stereo image of optimal depth resolution and reduced depth distortion on a single screen  
[NASA-CASE-NPO-17249-1-CU] c 32 N89-28676
- Phase ambiguity resolution for offset QPSK modulation systems  
[NASA-CASE-NPO-17853-1-CU] c 32 N91-25318
- RESOLVERS**
- Differential phase shift keyed signal resolver  
[NASA-CASE-MSC-14066-1] c 33 N74-27705
- Focal axis resolver for offset reflector antennas  
[NASA-CASE-GSC-12630-1] c 33 N83-36355
- Magnetic heading reference  
[NASA-CASE-LAR-12638-1] c 04 N84-14132
- Angular measurement system  
[NASA-CASE-MFS-25825-1] c 31 N86-29055
- RESONANCE**
- Optically selective, acoustically resonant gas detecting transducer  
[NASA-CASE-ARC-10639-1] c 35 N78-13400
- Resonant isolator for maser amplifier  
[NASA-CASE-NPO-15201-1] c 36 N83-35350
- Arrangement for damping the resonance in a laser diode  
[NASA-CASE-NPO-15980-1] c 36 N85-30305
- Precision tunable resonant microwave cavity  
[NASA-CASE-LEW-13935-1] c 33 N87-21234
- RESONANT FREQUENCIES**
- Vibrating element electrometer with output signal magnified over input signal by a function of the mechanical Q of the vibrating element Patent  
[NASA-CASE-XAC-02807] c 09 N71-23021
- Apparatus for detecting the amount of material in a resonant cavity container Patent  
[NASA-CASE-XNP-02500] c 18 N71-27397
- Parasitic suppressing circuit  
[NASA-CASE-ERC-10403-1] c 10 N73-26228
- CW ultrasonic bolt tensioning monitor  
[NASA-CASE-LAR-12016-1] c 39 N78-15512
- Microbalance --- for measuring particle mass  
[NASA-CASE-MSC-11242] c 35 N78-17358
- Method and apparatus for shaping and enhancing acoustical levitation forces  
[NASA-CASE-MFS-25050-1] c 71 N81-15767
- Acoustic bubble removal method  
[NASA-CASE-NPO-15334-1] c 71 N83-35781
- Low noise tuned amplifier  
[NASA-CASE-GSC-12567-1] c 33 N84-22887
- Acoustic ground impedance meter  
[NASA-CASE-LAR-12995-1] c 35 N84-22933
- Vibrating-chamber levitation systems  
[NASA-CASE-NPO-16142-1-CU] c 35 N86-20752
- Single mode levitation and translation  
[NASA-CASE-NPO-16675-1-CU] c 71 N88-24241
- Reflection oscillators employing series resonant crystals  
[NASA-CASE-GSC-13173-1] c 33 N90-23635
- Acoustic positioning and orientation prediction  
[NASA-CASE-NPO-17511-1-CU] c 71 N91-14807
- RESONANT VIBRATION**
- Acoustic agglomeration methods and apparatus  
[NASA-CASE-NPO-15466-1] c 71 N85-22104
- Acoustophoresis method and apparatus  
[NASA-CASE-LAR-13388-1] c 25 N91-28321

RESONATORS

- High-Q bandpass resonators utilizing bandstop resonator pairs  
[NASA-CASE-GSC-10990-1] c 09 N73-26195
- Low noise cryogenic dielectric resonator oscillator  
[NASA-CASE-NPO-17157-1-CU] c 33 N88-26596
- Method and circuit for shaping laser output pulses  
[NASA-CASE-LAR-14203-1] c 36 N89-28817

RESOURCE ALLOCATION

- Dynamic resource allocation scheme for distributed heterogeneous computer systems  
[NASA-CASE-NPO-17197-1-CU] c 62 N91-25693

RESPIRATION

- Method and system for respiration analysis Patent  
[NASA-CASE-XFR-08403] c 05 N71-11202

RESPIRATORS

- Respiration monitor  
[NASA-CASE-FRC-10012] c 14 N72-17329

RESPIRATORY RATE

- Gas low pressure low flow rate metering system Patent  
[NASA-CASE-FRC-10022] c 12 N71-26546
- Respiratory analysis system and method  
[NASA-CASE-MS-C-13436-1] c 05 N73-32015
- Metabolic analyzer --- for measuring metabolic rate and breathing dynamics of human beings  
[NASA-CASE-MFS-21415-1] c 52 N74-20728

RESPIROMETERS

- Metabolic analyzer --- for measuring metabolic rate and breathing dynamics of human beings  
[NASA-CASE-MFS-21415-1] c 52 N74-20728

RESPONSE TIME (COMPUTERS)

- Dynamic resource allocation scheme for distributed heterogeneous computer systems  
[NASA-CASE-NPO-17197-1-CU] c 62 N91-25693

RESPONSES

- Frequency division multiplex technique  
[NASA-CASE-KSC-10521] c 07 N73-20176

RESTARTABLE ROCKET ENGINES

- Zero gravity starting means for liquid propellant motors Patent  
[NASA-CASE-XNP-01390] c 28 N70-41275
- Small rocket engine Patent  
[NASA-CASE-XLE-00685] c 28 N70-41992

RESUSCITATION

- Resuscitation apparatus Patent  
[NASA-CASE-XMS-01115] c 05 N70-39922

RETAINING

- Floating nut retention system  
[NASA-CASE-MS-C-16938-1] c 37 N80-23653
- Modified spiral wound retaining ring  
[NASA-CASE-LAR-12361-1] c 37 N83-19091

RETARDERS (DEVICES)

- Thrust reverser for a long duct fan engine --- for turbofan engines  
[NASA-CASE-LEW-13199-1] c 07 N82-26293

RETARDING

- Ablative resin Patent  
[NASA-CASE-XLE-05913] c 33 N71-14032

RETICLES

- Optical tracker having overlapping reticles on parallel axes Patent  
[NASA-CASE-XGS-05715] c 23 N71-16100
- Star tracking reticles and process for the production thereof  
[NASA-CASE-GSC-11188-2] c 21 N73-19630
- Star tracking reticles  
[NASA-CASE-GSC-11188-1] c 14 N73-32320
- Formation of star tracking reticles  
[NASA-CASE-GSC-11188-3] c 74 N74-20008
- Star scanner --- with a reticle with a pair of slits having differing separation  
[NASA-CASE-GSC-11569-1] c 89 N74-30886
- Multiple axis reticle  
[NASA-CASE-ARC-11886-1-SB] c 35 N91-14591

RETINA

- Portable dynamic fundus instrument  
[NASA-CASE-MS-C-21675-1] c 52 N91-13865
- Optical joint correlator for real-time image tracking and retinal surgery  
[NASA-CASE-MS-C-21509-1] c 74 N91-25840

RETINAL IMAGES

- Retinally stabilized differential resolution television display  
[NASA-CASE-NPO-15432-1] c 32 N85-29117

RETRACTABLE EQUIPMENT

- Runway light Patent  
[NASA-CASE-XLA-00119] c 11 N70-33329
- Extensible cable support Patent  
[NASA-CASE-XMF-07587] c 15 N71-18701
- Retractable environmental seal  
[NASA-CASE-MFS-23646-1] c 37 N79-22474
- Antenna deployment mechanism for use with a spacecraft --- extensible and retractable telescopic antenna mast  
[NASA-CASE-GSC-12331-1] c 18 N80-14183

- CAM controlled retractable door latch  
[NASA-CASE-MS-C-20304-1] c 37 N82-31690
- Satellite retrieval system  
[NASA-CASE-MFS-25403-1] c 18 N83-29303

RETROFIRING

- Visual target for retrofire attitude control  
[NASA-CASE-XMS-12158-1] c 31 N69-27499
- Discrete local altitude sensing device Patent  
[NASA-CASE-XMS-03792] c 14 N70-41812

RETROREFLECTION

- Interferometer servo system Patent  
[NASA-CASE-NPO-10300] c 14 N71-17662
- Over-under double-pass interferometer  
[NASA-CASE-NPO-13999-1] c 35 N78-18395
- Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14524-1] c 32 N80-24510
- Remote object configuration/orientation determination  
[NASA-CASE-NPO-17436-1-CU] c 35 N91-15512

RETROREFLECTORS

- Interferometer --- high resolution  
[NASA-CASE-NPO-14448-1] c 74 N81-29963
- Low noise lead screw positioner  
[NASA-CASE-NPO-15617-1] c 35 N87-21304
- Equal path, phase shifting, sample point interferometer for monitoring the configuration of surfaces  
[NASA-CASE-NPO-17913-1-CU] c 74 N90-27488

RETROCKET ENGINES

- Steerable solid propellant rocket motor Patent  
[NASA-CASE-XNP-00234] c 28 N70-38645

RETURN TO EARTH SPACE FLIGHT

- Assured crew return vehicle  
[NASA-CASE-MS-C-21536-1] c 18 N91-13483

REUSABLE HEAT SHIELDING

- High temperature glass thermal control structure and coating --- for application to spacecraft reusable heat shielding  
[NASA-CASE-ARC-11164-1] c 44 N83-34448
- Thermally activated retainer means  
[NASA-CASE-MS-C-21793-1] c 16 N91-28186

REUSABLE ROCKET ENGINES

- Earth-to-orbit vehicle providing a reusable orbital stage  
[NASA-CASE-LAR-13486-1] c 16 N90-22584

REUSABLE SPACECRAFT

- Recoverable single stage spacecraft booster Patent  
[NASA-CASE-XMF-01973] c 31 N70-41588
- Space shuttle vehicle and system  
[NASA-CASE-MS-C-12433] c 31 N73-14854
- Aerospace vehicle  
[NASA-CASE-LAR-13155-1] c 05 N86-19310

REUSE

- Silica reusable surface insulation  
[NASA-CASE-ARC-10721-1] c 27 N76-22376
  - Reusable captive blind fastener  
[NASA-CASE-MS-C-18742-1] c 37 N82-26673
  - Cryogenic insulation system  
[NASA-CASE-LAR-13506-1] c 27 N89-12741
  - Reusable high-temperature heat pipes and heat pipe panels  
[NASA-CASE-LAR-13761-1] c 34 N90-20323
- REVERSE OSMOSIS**
- Reverse osmosis membrane of high urea rejection properties --- water purification  
[NASA-CASE-ARC-10980-1] c 27 N80-23452
  - Method for the preparation of thin-skinned asymmetric reverse osmosis membranes and products thereof  
[NASA-CASE-ARC-11359-1] c 51 N84-28361

REVERSED FLOW

- Multistage multiple-reentry turbine Patent  
[NASA-CASE-XLE-00170] c 15 N70-36412
- Reversible current control apparatus Patent  
[NASA-CASE-XLA-09371] c 10 N71-18724
- Positive locking check valve Patent  
[NASA-CASE-XMS-09310] c 15 N71-22706
- Reverse pitch fan with divided splitter  
[NASA-CASE-LEW-12760-1] c 07 N77-17059
- Reversal electron attachment ionizer for detection of trace species  
[NASA-CASE-NPO-17596-1-CU] c 35 N89-28795

REYNOLDS NUMBER

- Wind tunnel test section  
[NASA-CASE-MFS-20509] c 11 N72-17183

REYNOLDS STRESS

- System for measuring Reynolds in a turbulently flowing fluid --- signal processing  
[NASA-CASE-ARC-10755-2] c 34 N76-27517

RHENIUM

- Thermocouples of tantalum and rhenium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12050-1] c 35 N77-32454

RHEOMETERS

- Viscosity measuring instrument  
[NASA-CASE-NPO-14501-1] c 35 N80-18357

RHOMBOIDS

- Rhomboid prism pair for rotating the plane of parallel light beams  
[NASA-CASE-ARC-11311-1] c 74 N83-13978

RIBBONS

- Formed metal ribbon wrap Patent  
[NASA-CASE-XLE-00164] c 15 N70-36411
- Forming tool for ribbon or wire  
[NASA-CASE-XLA-05966] c 15 N72-12408
- Twisted multifilament superconductor  
[NASA-CASE-LEW-11726-1] c 26 N73-26752
- Method of controlling defect orientation in silicon crystal ribbon growth  
[NASA-CASE-NPO-13918-1] c 76 N79-11920
- Solar array strip and a method for forming the same  
[NASA-CASE-NPO-13652-1] c 44 N79-17314
- Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt  
[NASA-CASE-NPO-13969-1] c 76 N79-23798
- Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c 44 N79-24431
- Method for forming a solar array strip  
[NASA-CASE-NPO-13652-3] c 44 N80-14474
- Means for growing ribbon crystals without subjecting the crystals to thermal shock-induced strains  
[NASA-CASE-NPO-14298-1] c 76 N80-32244
- Method of growing a ribbon crystal particularly suited for facilitating automated control of ribbon width  
[NASA-CASE-NPO-14295-1] c 76 N80-32245
- Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c 33 N81-19389
- Method of increasing minority carrier lifetime in silicon web or the like  
[NASA-CASE-NPO-15530-1] c 76 N83-35888
- Ribbon growing method and apparatus  
[NASA-CASE-NPO-16306-1-CU] c 76 N91-15898

RIBLETS

- Combined riblet and lebu drag reduction system  
[NASA-CASE-LAR-13286-1] c 02 N88-14071
- Polymer/riblet combination for hydrodynamic skin friction reduction  
[NASA-CASE-LAR-14271-1-CU] c 27 N91-13558

RIBOFLAVIN

- Flavin coenzyme assay  
[NASA-CASE-GSC-10565-1] c 06 N72-25149

RIBS (SUPPORTS)

- Aeroflexible structures  
[NASA-CASE-XLA-06095] c 01 N69-39981

RICE

- Modification of the physical properties of freeze-dried rice  
[NASA-CASE-MS-C-13540-1] c 05 N72-33096

RIDING QUALITY

- Ride quality meter  
[NASA-CASE-LAR-12882-1] c 35 N84-12445

RIGID ROTORS

- Hingeless helicopter rotor with improved stability  
[NASA-CASE-ARC-10807-1] c 05 N77-17029

RIGID STRUCTURES

- Quick release hook tape Patent  
[NASA-CASE-XMS-10660-1] c 15 N71-25975
- Thermally activated foaming compositions Patent  
[NASA-CASE-LAR-10373-1] c 18 N71-26155
- Adjustable mount for a trihedral mirror Patent  
[NASA-CASE-XNP-08907] c 23 N71-29123
- Folding structure fabricated of rigid panels  
[NASA-CASE-XHQ-02146] c 18 N75-27040
- Telescoping columns --- parabolic antenna support  
[NASA-CASE-LAR-12195-1] c 31 N81-27324

RIGID WINGS

- Flexible wing deployment device Patent  
[NASA-CASE-XLA-01220] c 02 N70-41863

RIMS

- Rim inertial measuring system  
[NASA-CASE-LAR-12052-1] c 18 N81-29152

RING CURRENTS

- Ring counter  
[NASA-CASE-XGS-03095] c 09 N69-27463

RING STRUCTURES

- Reversible ring counter employing cascaded single SCR stages Patent  
[NASA-CASE-XGS-01473] c 09 N71-10673
- Energy absorbing device Patent  
[NASA-CASE-XMF-10040] c 15 N71-22877



- Phase-locked servo system --- for synchronizing the rotation of slip ring assembly  
[NASA-CASE-MFS-22073-1] c 33 N75-13139
- Laser system with an antiresonant optical ring  
[NASA-CASE-HQN-10844-1] c 36 N75-19653
- Helmet latching and attaching ring  
[NASA-CASE-XMS-04670-1] c 54 N78-17678
- Collapsible corrugated horn antenna  
[NASA-CASE-LAR-11745-1] c 32 N80-29539
- Modified spiral wound retaining ring  
[NASA-CASE-LAR-12361-1] c 37 N83-19091
- Torso sizing ring construction for hard space suit  
[NASA-CASE-ARC-11616-1] c 54 N86-28618
- Method and apparatus for making an optical element having a dielectric film  
[NASA-CASE-ARC-11611-1] c 74 N87-28416
- RING WINGS**  
Ring wing tension vehicle Patent  
[NASA-CASE-XLA-04901] c 31 N71-24315
- RIPPLES**  
Ripple indicator  
[NASA-CASE-KSC-10162] c 09 N72-11225
- RIVETS**  
Printed circuit board with bellows rivet connection Patent  
[NASA-CASE-XNP-05082] c 15 N70-41960
- ROBOT ARMS**  
Direct drive robotic hand  
[NASA-CASE-NPO-17917-1-CU] c 37 N90-26339
- Spiral lead platen robotic end effector  
[NASA-CASE-LAR-13855-1] c 37 N91-14615
- Multi-fingered robotic hand  
[NASA-CASE-NPO-15959-2] c 37 N91-14616
- Robot cable-compliant devices  
[NASA-CASE-GSC-13127-1] c 37 N91-17388
- Method and apparatus for positioning a robotic end effector  
[NASA-CASE-MS-21476-1] c 37 N91-21542
- Method and apparatus for configuration control of redundant robots  
[NASA-CASE-NPO-17801-1-CU] c 37 N91-21544
- Driven shielding capacitive proximity sensor  
[NASA-CASE-GSC-13377-1] c 63 N91-28785
- Robotic tool change mechanism  
[NASA-CASE-GSC-13239-1] c 37 N91-31656
- Synchronized computational architecture for generalized bilateral control of robot arms  
[NASA-CASE-NPO-17401-1-CU] c 63 N91-31885
- Telerobot control system  
[NASA-CASE-NPO-18116-1-CU] c 37 N91-32509
- A generalized compliant motion primitive  
[NASA-CASE-NPO-18134-1-CU] c 37 N91-32510
- ROBOT CONTROL**  
Robust high-performance control for robotic manipulators  
[NASA-CASE-NPO-17785-1-CU] c 37 N89-28846
- Special purpose parallel computer architecture for real-time control and simulation in robotic applications  
[NASA-CASE-NPO-17629-1-CU] c 60 N90-27268
- Bilevel shared control for teleoperators  
[NASA-CASE-NPO-17800-1-CU] c 37 N91-13724
- Spiral lead platen robotic end effector  
[NASA-CASE-LAR-13855-1] c 37 N91-14615
- Method and apparatus for positioning a robotic end effector  
[NASA-CASE-MS-21476-1] c 37 N91-21542
- Obstacle avoidance for redundant robots using configuration control  
[NASA-CASE-NPO-17852-1-CU] c 63 N91-23783
- A universal computer control system for motors  
[NASA-CASE-NPO-17134-1-CU] c 33 N91-31528
- ROBOT DYNAMICS**  
Spiral lead platen robotic end effector  
[NASA-CASE-LAR-13855-1] c 37 N91-14615
- Multi-fingered robotic hand  
[NASA-CASE-NPO-15959-2] c 37 N91-14616
- Robot cable-compliant devices  
[NASA-CASE-GSC-13127-1] c 37 N91-17388
- Method and apparatus for configuration control of redundant robots  
[NASA-CASE-NPO-17801-1-CU] c 37 N91-21544
- Robotic tool change mechanism  
[NASA-CASE-GSC-13239-1] c 37 N91-31656
- ROBOT SENSORS**  
Method and apparatus for positioning a robotic end effector  
[NASA-CASE-MS-21476-1] c 37 N91-21542
- ROBOTICS**  
Self-locking telescoping manipulator arm  
[NASA-CASE-MFS-25906-1] c 37 N86-20789
- Remotely controlled spray gun  
[NASA-CASE-MFS-28110-1] c 37 N87-24689
- Optically controlled welding system  
[NASA-CASE-MFS-29291-1] c 37 N89-12868
- Passively activated prehensile digit for a robotic end effector  
[NASA-CASE-NPO-16766-1-CU] c 37 N89-13785
- Distributed proximity sensor system  
[NASA-CASE-NPO-17275-1-CU] c 37 N89-29750
- Gripping device  
[NASA-CASE-MS-21365-1] c 37 N90-20408
- Special purpose parallel computer architecture for real-time control and simulation in robotic applications  
[NASA-CASE-NPO-17629-1-CU] c 60 N90-27268
- Compliant joint  
[NASA-CASE-GSC-13153-1] c 37 N91-17387
- Power saw  
[NASA-CASE-MS-21469-1] c 37 N91-31655
- A generalized compliant motion primitive  
[NASA-CASE-NPO-18134-1-CU] c 37 N91-32510
- ROBOTS**  
Optically controlled welding system  
[NASA-CASE-MFS-29291-1] c 37 N89-12868
- Robust high-performance control for robotic manipulators  
[NASA-CASE-NPO-17785-1-CU] c 37 N89-28846
- Distributed proximity sensor system  
[NASA-CASE-NPO-17275-1-CU] c 37 N89-29750
- Bilevel shared control for teleoperators  
[NASA-CASE-NPO-17800-1-CU] c 37 N91-13724
- Robot cable-compliant devices  
[NASA-CASE-GSC-13127-1] c 37 N91-17388
- Method and apparatus for configuration control of redundant robots  
[NASA-CASE-NPO-17801-1-CU] c 37 N91-21544
- Obstacle avoidance for redundant robots using configuration control  
[NASA-CASE-NPO-17852-1-CU] c 63 N91-23783
- Telerobot control system  
[NASA-CASE-NPO-18116-1-CU] c 37 N91-32509
- A generalized compliant motion primitive  
[NASA-CASE-NPO-18134-1-CU] c 37 N91-32510
- ROBUSTNESS (MATHEMATICS)**  
Direct drive robotic hand  
[NASA-CASE-NPO-17917-1-CU] c 37 N90-26339
- ROCKET ENGINE CASES**  
Method of making a rocket motor casing Patent  
[NASA-CASE-XLE-00409] c 28 N71-15658
- Rocket motor casing Patent  
[NASA-CASE-XLE-05689] c 28 N71-15659
- Payload/burned-out motor case separation system Patent  
[NASA-CASE-XLA-05369] c 31 N71-15667
- Solid propellant liner Patent  
[NASA-CASE-XNP-09744] c 27 N71-16392
- Ion engine casing construction and method of making same Patent  
[NASA-CASE-XNP-06942] c 28 N71-23293
- Casting propellant in rocket engine  
[NASA-CASE-LAR-11995-1] c 28 N77-10213
- Solid propellant rocket motor and method of making same  
[NASA-CASE-XLA-01349] c 20 N77-17143
- ROCKET ENGINE CONTROL**  
Fluid thrust control system --- for liquid propellant rocket engines  
[NASA-CASE-XMF-05964-1] c 20 N79-21124
- ROCKET ENGINE DESIGN**  
Annular rocket motor and nozzle configuration Patent  
[NASA-CASE-XLE-00078] c 28 N70-33284
- Spherical solid-propellant rocket motor Patent  
[NASA-CASE-XLA-00105] c 28 N70-33331
- Spherically-shaped rocket motor Patent  
[NASA-CASE-XHQ-01897] c 28 N70-35381
- Rocket engine Patent  
[NASA-CASE-XLE-00342] c 28 N70-37980
- Swirling flow nozzle Patent  
[NASA-CASE-XNP-03692] c 28 N71-24321
- Ion thruster with a combination keeper electrode and electron baffle  
[NASA-CASE-NPO-11880] c 28 N73-24783
- Supersonic-combustion rocket  
[NASA-CASE-LEW-11058-1] c 20 N74-13502
- Rocket chamber and method of making  
[NASA-CASE-LEW-11118-2] c 20 N76-14191
- System for imposing directional stability on a rocket-propelled vehicle  
[NASA-CASE-MFS-21311-1] c 20 N76-21275
- Dual-fuel, dual-mode rocket engine  
[NASA-CASE-LAR-13773-1] c 20 N90-19298
- ROCKET ENGINES**  
Channel-type shell construction for rocket engines and the like Patent  
[NASA-CASE-XLE-00144] c 28 N70-34860
- Ion thruster cathode Patent Application  
[NASA-CASE-LEW-10814-1] c 28 N70-35422
- Injector-valve device Patent  
[NASA-CASE-XLE-00303] c 15 N70-36535
- Elastic universal joint Patent  
[NASA-CASE-XNP-00416] c 15 N70-36947
- Passively regulated water electrolysis rocket engine Patent  
[NASA-CASE-XGS-08729] c 28 N71-14044
- Method of igniting solid propellants  
[NASA-CASE-XLE-01988] c 27 N71-15634
- Laminar flow enhancement Patent  
[NASA-CASE-NPO-10122] c 12 N71-17631
- Swirling flow nozzle Patent  
[NASA-CASE-XNP-03692] c 28 N71-24321
- Thruster maintenance system Patent  
[NASA-CASE-MFS-20325] c 28 N71-27095
- Purge device for thrust engines Patent  
[NASA-CASE-XMS-04826] c 28 N71-28849
- Method and device for cooling Patent  
[NASA-CASE-HQN-00938] c 33 N71-29053
- Ion thruster magnetic field control  
[NASA-CASE-LEW-10835-1] c 28 N72-22771
- Altitude simulation chamber for rocket engine testing  
[NASA-CASE-MFS-20620] c 11 N72-27262
- Method of making apparatus for sensing temperature  
[NASA-CASE-XLE-05230-2] c 14 N73-13417
- Magneto-plasma-dynamic arc thruster  
[NASA-CASE-LEW-11180-1] c 25 N73-25760
- Method of electroforming a rocket chamber  
[NASA-CASE-LEW-11118-1] c 20 N74-32919
- Device for installing rocket engines  
[NASA-CASE-MFS-19220-1] c 20 N76-22296
- Ion beam thruster shield  
[NASA-CASE-LEW-12082-1] c 20 N77-10148
- Anode for ion thruster  
[NASA-CASE-LEW-12048-1] c 20 N77-20162
- General purpose rocket furnace  
[NASA-CASE-MFS-23460-1] c 12 N79-26075
- Diffuser/ejector system for a very high vacuum environment  
[NASA-CASE-MFS-25791-1] c 09 N84-27749
- Ring-cusp ion thruster with shell anode  
[NASA-CASE-LEW-13881-1] c 20 N85-21256
- Low loss injector for liquid propellant rocket engines  
[NASA-CASE-MFS-25989-1] c 20 N87-14420
- Integrated launch and emergency vehicle system  
[NASA-CASE-LAR-13780-1] c 18 N91-13481
- Emergency egress fixed rocket package  
[NASA-CASE-MS-21332-1] c 03 N91-15142
- ROCKET EXHAUST**  
Thrust vector control apparatus Patent  
[NASA-CASE-XLE-00208] c 28 N70-34294
- Rocket thrust throttling system  
[NASA-CASE-LEW-10374-1] c 28 N73-13773
- Method and apparatus for suppressing ignition overpressure in solid rocket propulsion systems  
[NASA-CASE-MFS-25843-1] c 20 N83-17588
- Hybrid plume plasma rocket  
[NASA-CASE-MS-20476-2] c 20 N89-25279
- ROCKET FIRING**  
Alleviation of divergence during rocket launch Patent  
[NASA-CASE-XLA-00256] c 31 N71-15663
- ROCKET FLIGHT**  
Technique for control of free-flight rocket vehicles Patent  
[NASA-CASE-XLA-00937] c 31 N71-17691
- ROCKET LAUNCHING**  
Alleviation of divergence during rocket launch Patent  
[NASA-CASE-XLA-00256] c 31 N71-15663
- Controlled release device Patent  
[NASA-CASE-XKS-03338] c 15 N71-24043
- ROCKET LININGS**  
Heat exchanger and method of making --- rocket lining  
[NASA-CASE-LEW-12441-2] c 34 N80-24573
- ROCKET NOZZLES**  
Gimballed, partially submerged rocket nozzle Patent  
[NASA-CASE-XMF-01544] c 28 N70-34162
- Rocket thrust chamber Patent  
[NASA-CASE-XLE-00145] c 28 N70-36806
- Self-sealing, unbonded, rocket motor nozzle closure Patent  
[NASA-CASE-XLA-02651] c 28 N70-41967
- Automatically deploying nozzle exit cone extension Patent  
[NASA-CASE-XLE-01640] c 31 N71-15637
- Rocket nozzle test method Patent  
[NASA-CASE-NPO-10311] c 31 N71-15643
- Collapsible nozzle extension for rocket engines Patent  
[NASA-CASE-MFS-11497] c 28 N71-16224
- Apparatus and method for protecting a photographic device Patent  
[NASA-CASE-NPO-10174] c 14 N71-18465
- Multilist film cooled pyrolytic graphite rocket nozzle Patent  
[NASA-CASE-XNP-04389] c 28 N71-20942
- Prestressed refractory structure Patent  
[NASA-CASE-XNP-02888] c 18 N71-21068
- Swirling flow nozzle Patent  
[NASA-CASE-XNP-03692] c 28 N71-24321

- Method and device for cooling Patent  
[NASA-CASE-HON-00938] c 33 N71-29053
- Inflatable transpiration cooled nozzle  
[NASA-CASE-MFS-20619] c 28 N72-11708
- Solid propellant rocket motor nozzle  
[NASA-CASE-NPO-11458] c 28 N72-23810
- Method of making a rocket nozzle  
[NASA-CASE-XMF-06884-1] c 20 N79-21123
- Retractable environmental seal  
[NASA-CASE-MFS-23646-1] c 37 N79-22474
- Nozzle fabrication technique  
[NASA-CASE-MSC-21299-1] c 20 N88-24684
- Hybrid plume plasma rocket  
[NASA-CASE-MSC-20476-2] c 20 N89-25279
- Nozzle fabrication technique  
[NASA-CASE-MSC-21299-2] c 37 N91-32508
- ROCKET OXIDIZERS**
- Preparing oxidizer coated metal fuel particles  
[NASA-CASE-NPO-11975-1] c 28 N74-33209
- ROCKET PROPELLANTS**
- Two-step rocket engine bipropellant valve Patent  
[NASA-CASE-XMS-04890-1] c 15 N70-22192
- Rocket engine injector Patent  
[NASA-CASE-XLE-03157] c 28 N71-24736
- Bipropellant injector  
[NASA-CASE-XNP-09461] c 28 N72-23809
- ROCKET TEST FACILITIES**
- High-vacuum condenser tank for ion rocket tests Patent  
[NASA-CASE-XLE-00166] c 11 N70-33278
- Micro-pound extended range thrust stand Patent  
[NASA-CASE-GSC-10710-1] c 28 N71-27094
- ROCKET THRUST**
- Apparatus and method for control of a solid fueled rocket vehicle Patent  
[NASA-CASE-XNP-00217] c 28 N70-38181
- Electrostatic thruster with improved insulators Patent  
[NASA-CASE-XLE-01902] c 28 N71-10574
- Solid propellant rocket motor  
[NASA-CASE-NPO-11559] c 28 N73-24784
- Thrust measurement  
[NASA-CASE-XMS-05731] c 35 N75-29382
- ROCKET VEHICLES**
- Umbilical separator for rockets Patent  
[NASA-CASE-XNP-00425] c 11 N70-38202
- Support apparatus for dynamic testing Patent  
[NASA-CASE-XMF-01772] c 11 N70-41677
- Alleviation of divergence during rocket launch Patent  
[NASA-CASE-XLA-00256] c 31 N71-15663
- Technique for control of free-flight rocket vehicles Patent  
[NASA-CASE-XLA-00937] c 31 N71-17691
- Coupling device for moving vehicles  
[NASA-CASE-GSC-12322-1] c 37 N80-14398
- High acceleration cable deployment system  
[NASA-CASE-ARC-11256-1] c 15 N82-24272
- ROCKET-BORNE INSTRUMENTS**
- Scanning aspect sensor employing an apertured disc and a commutator  
[NASA-CASE-XGS-08266] c 14 N69-27432
- ROCKETS**
- Hydrogen fire detection system with logic circuit to analyze the spectrum of temporal variations of the optical spectrum  
[NASA-CASE-MFS-13130] c 10 N72-17173
- ROCKS**
- Rock drill for recovering samples  
[NASA-CASE-XNP-07478] c 14 N69-21923
- Rock sampling --- apparatus for controlling particle size  
[NASA-CASE-XNP-10007-1] c 46 N74-23068
- Rock sampling --- method for controlling particle size distribution  
[NASA-CASE-XNP-09755] c 46 N74-23069
- Coal-rock interface detector  
[NASA-CASE-MFS-23725-1] c 43 N79-31706
- RODS**
- Nuclear thermionic converter --- tungsten-thorium oxide rods  
[NASA-CASE-NPO-13121-1] c 73 N77-18891
- Quasi-containerless glass formation method and apparatus  
[NASA-CASE-MFS-28090-1] c 27 N87-21111
- Lightning discharge protection rod  
[NASA-CASE-LAR-13470-1] c 03 N88-14083
- Preloaded latching device  
[NASA-CASE-MSC-21730-1] c 37 N91-23493
- ROLL**
- Roll alignment detector  
[NASA-CASE-GSC-10514-1] c 14 N72-20379
- ROLLER BEARINGS**
- Method of lubricating rolling element bearings Patent  
[NASA-CASE-XLE-09527] c 15 N71-17688
- Semi-linear ball bearing Patent  
[NASA-CASE-XLA-02809] c 15 N71-22982
- Low mass rolling element for bearings  
[NASA-CASE-LEW-11087-1] c 15 N73-30458
- Method of making rolling element bearings  
[NASA-CASE-LEW-11087-2] c 37 N74-15128
- Bearing material --- composite material with low friction surface for rolling or sliding contact  
[NASA-CASE-LEW-11930-1] c 24 N76-22309
- ROLLERS**
- Method of improving the reliability of a rolling element system Patent  
[NASA-CASE-XLE-02999] c 15 N71-16052
- Load regulating latch  
[NASA-CASE-MSC-19535-1] c 37 N77-32499
- Suspension system for a wheel rolling on a flat track --- bearings for directional antennas  
[NASA-CASE-NPO-14395-1] c 37 N82-21587
- Rolling friction robot fingers  
[NASA-CASE-GSC-13261-1] c 37 N91-17401
- Fully articulated four-point-bend loading fixture  
[NASA-CASE-LEW-14776-1] c 37 N91-21540
- Magnetostrictive roller drive motor  
[NASA-CASE-GSC-13369-1] c 33 N91-23380
- Roller locking brake  
[NASA-CASE-GSC-13376-1] c 37 N91-28579
- Linear mass actuator  
[NASA-CASE-LAR-14352-1] c 37 N91-32511
- ROLLING**
- Device for applying constant pressure to a surface  
[NASA-CASE-GSC-13230-1] c 37 N91-13734
- ROLLING CONTACT LOADS**
- Rolling element bearings Patent  
[NASA-CASE-XLE-09527-2] c 15 N71-26189
- ROLLING MOMENTS**
- Roll attitude star sensor system Patent  
[NASA-CASE-XNP-01307] c 21 N70-41856
- ROOM TEMPERATURE**
- Coating process  
[NASA-CASE-XNP-06508] c 18 N69-39895
- ROTARY GYROSCOPES**
- Closed loop fiber optic rotation sensor  
[NASA-CASE-NPO-16558-1-CU] c 74 N87-23259
- ROTARY STABILITY**
- Reactance control system Patent  
[NASA-CASE-XMF-01598] c 21 N71-15583
- Two component bearing Patent  
[NASA-CASE-XLA-00013] c 15 N71-29136
- Lubricated journal bearing  
[NASA-CASE-LEW-11076-3] c 37 N75-30562
- Cyclical bi-directional rotary actuator  
[NASA-CASE-GSC-11883-1] c 37 N77-19458
- Family of airfoil shapes for rotating blades --- for increased power efficiency and blade stability  
[NASA-CASE-LAR-12843-1] c 02 N84-11136
- Apparatus for and method of compensating dynamic unbalance  
[NASA-CASE-GSC-12550-1] c 37 N84-28082
- Dual motion valve with single motion input  
[NASA-CASE-MFS-28058-1] c 37 N87-21332
- ROTARY WING AIRCRAFT**
- Aircraft control system  
[NASA-CASE-ERC-10439] c 02 N73-19004
- Swashplate control system  
[NASA-CASE-ARC-11633-1] c 08 N87-23631
- High lift, low pitching moment airfoils  
[NASA-CASE-LAR-13215-1] c 02 N89-14224
- ROTARY WINGS**
- Variable geometry rotor system  
[NASA-CASE-LAR-10557] c 02 N72-11018
- Hingeless helicopter rotor with improved stability  
[NASA-CASE-ARC-10807-1] c 05 N77-17029
- Locking redundant link  
[NASA-CASE-LAR-11900-1] c 37 N79-14382
- Acoustically swept rotor --- helicopter noise reduction  
[NASA-CASE-ARC-11106-1] c 05 N80-14107
- Compensating linkage for main rotor control  
[NASA-CASE-LAR-11797-1] c 05 N81-19087
- Family of airfoil shapes for rotating blades --- for increased power efficiency and blade stability  
[NASA-CASE-LAR-12843-1] c 02 N84-11136
- Shapes for rotating airfoils  
[NASA-CASE-LAR-12396-1] c 02 N84-28732
- Helicopter anti-torque system using strakes  
[NASA-CASE-LAR-13233-1] c 05 N84-33400
- ROTATING BODIES**
- Optical spin compensator  
[NASA-CASE-XGS-02401] c 14 N69-27485
- Laser apparatus for removing material from rotating objects Patent  
[NASA-CASE-MFS-11279] c 16 N71-20400
- Phase-locked servo system --- for synchronizing the rotation of slip ring assembly  
[NASA-CASE-MFS-22073-1] c 33 N75-13139
- Annular momentum control device used for stabilization of space vehicles and the like  
[NASA-CASE-LAR-11051-1] c 15 N76-14158
- Axially and radially controllable magnetic bearing  
[NASA-CASE-GSC-11551-1] c 37 N76-18459
- Multiple in-line docking capability for rotating space stations  
[NASA-CASE-MFS-20855-1] c 15 N77-10112
- Rotatable mass for a flywheel  
[NASA-CASE-MFS-23051-1] c 37 N79-10422
- Acoustic driving of rotor  
[NASA-CASE-NPO-14005-1] c 71 N79-20827
- Multi-channel rotating optical interface for data transmission  
[NASA-CASE-NPO-14066-1] c 74 N79-34011
- Apparatus for and method of compensating dynamic unbalance  
[NASA-CASE-GSC-12550-1] c 37 N84-28082
- Airborne tracking sunphotometer apparatus and system  
[NASA-CASE-ARC-11622-1] c 44 N88-14492
- Orbital debris sweeper and method  
[NASA-CASE-MSC-21534-1] c 18 N91-21222
- ROTATING CYLINDERS**
- Tread drum for animals --- having an electrical shock station  
[NASA-CASE-ARC-10917-1] c 51 N78-27733
- Head for high speed spinner having a vacuum chuck --- holding silicon dioxide chips for etching  
[NASA-CASE-NPO-15227-1] c 37 N81-33482
- Non-backdrivable free wheeling coupling  
[NASA-CASE-MSC-20475-1] c 37 N87-17037
- ROTATING DISKS**
- Foil seal  
[NASA-CASE-XLE-05130] c 15 N69-21362
- Scanning aspect sensor employing an apertured disc and a commutator  
[NASA-CASE-XGS-08266] c 14 N69-27432
- Redundant disc  
[NASA-CASE-LEW-12496-1] c 07 N78-33101
- Spinning disk calibration method and apparatus for laser Doppler velocimeter  
[NASA-CASE-ARC-11510-1] c 35 N86-32697
- Electrostatically suspended rotor for angular encoder  
[NASA-CASE-MFS-28294-1] c 31 N91-14508
- ROTATING ELECTRICAL MACHINES**
- Light intensity modulator controller Patent  
[NASA-CASE-XMS-04300] c 09 N71-19479
- Direct current motor with stationary armature and field Patent  
[NASA-CASE-XGS-05290] c 09 N71-25999
- Constant frequency output two stage induction machine systems Patent  
[NASA-CASE-ERC-10065] c 09 N71-27364
- ROTATING ENVIRONMENTS**
- Radial module space station Patent  
[NASA-CASE-XMS-01906] c 31 N70-41373
- Rotating space station simulator Patent  
[NASA-CASE-XLA-03127] c 11 N71-10776
- ROTATING GENERATORS**
- Rotating raster generator  
[NASA-CASE-FRC-10071-1] c 32 N74-20813
- Wind wheel electric power generator  
[NASA-CASE-MFS-23515-1] c 44 N80-21828
- ROTATING MIRRORS**
- Retrodirective modulator Patent  
[NASA-CASE-GSC-10062] c 14 N71-15605
- Attitude sensor for space vehicles Patent  
[NASA-CASE-XLA-00793] c 21 N71-22880
- Method for generating ultra-precise angles Patent  
[NASA-CASE-XGS-04173] c 19 N71-26674
- Method and apparatus for optically monitoring the angular position of a rotating mirror  
[NASA-CASE-GSC-11353-1] c 74 N74-21304
- Multispectral glancing incidence X-ray telescope  
[NASA-CASE-MFS-28013-1] c 89 N86-22459
- ROTATING SHAFTS**
- Foil seal Patent  
[NASA-CASE-XLE-05130-2] c 15 N71-19570
- Anemometer with braking mechanism Patent  
[NASA-CASE-XMF-05224] c 14 N71-23726
- Detenting servomotor Patent  
[NASA-CASE-XNP-06936] c 15 N71-24695
- Rotating shaft seal Patent  
[NASA-CASE-XNP-02862-1] c 15 N71-26294
- Two component bearing Patent  
[NASA-CASE-XLA-00013] c 15 N71-29136
- Hall effect transducer  
[NASA-CASE-LAR-10620-1] c 09 N72-25255
- Spiral groove seal --- for rotating shaft  
[NASA-CASE-XLE-10326-4] c 37 N74-15125
- Digital servo controller --- for rotating antenna shaft  
[NASA-CASE-KSC-10769-1] c 33 N74-29556
- Solid medium thermal engine  
[NASA-CASE-ARC-10461-1] c 44 N74-33379
- Ergometer calibrator --- for any ergometer utilizing rotating shaft  
[NASA-CASE-MFS-21045-1] c 35 N75-15932

- Fluid seal for rotating shafts  
[NASA-CASE-LEW-11676-1] c 37 N76-22541
- Cyclical bi-directional rotary actuator  
[NASA-CASE-GSC-11883-1] c 37 N77-19458
- Tachometer  
[NASA-CASE-MFS-23175-1] c 35 N77-30436
- Rotary leveling base platform  
[NASA-CASE-ARC-10981-1] c 37 N78-27425
- Rotary electric device  
[NASA-CASE-GSC-12138-1] c 33 N79-20314
- Circumferential shaft seal  
[NASA-CASE-LEW-12119-1] c 37 N80-28711
- Multiple plate hydrostatic viscous damper  
[NASA-CASE-LEW-12445-1] c 37 N81-22360
- Clutchless multiple drive source for output shaft  
[NASA-CASE-ARC-11325-1] c 37 N82-22496
- Resilient seal ring assembly with spring means applying force to wedge member --- cryogenic applications  
[NASA-CASE-MFS-25678-1] c 37 N84-11497
- Vertical shaft windmill  
[NASA-CASE-LAR-12923-1] c 37 N84-12493
- Directional gear ratio transmissions  
[NASA-CASE-LAR-12644-1] c 37 N84-28084
- Variable force, eddy-current or magnetic damper  
[NASA-CASE-LEW-13717-1] c 37 N85-30333
- Rotary stepping device with memory metal actuator  
[NASA-CASE-NPO-15482-1] c 37 N87-23970
- Cryogenic anti-friction bearing with inner race  
[NASA-CASE-MFS-28384-1] c 37 N90-27112
- Control circuitry using electronic emulation of a synchro signal for accurate control of position and rate of rotation for shafts  
[NASA-CASE-MFS-28458-1] c 33 N91-26459
- ROTATION**
- Semi-linear ball bearing Patent  
[NASA-CASE-XLA-02809] c 15 N71-22982
- Mechanical actuator Patent  
[NASA-CASE-XGS-04548] c 15 N71-24045
- Positioning mechanism  
[NASA-CASE-NPO-10679] c 15 N72-21462
- Spray coating apparatus having a rotatable workpiece holder  
[NASA-CASE-ARC-11110-1] c 37 N82-24492
- System for controlled acoustic rotation of objects  
[NASA-CASE-NPO-15522-1] c 71 N83-32516
- Acoustic rotation control  
[NASA-CASE-NPO-15689-1] c 71 N84-23233
- Improved docking alignment system  
[NASA-CASE-MSC-21372-1] c 35 N89-12842
- Controlled sample orientation and rotation in an acoustic levitator  
[NASA-CASE-NPO-17086-1-CU] c 35 N89-14422
- Hollow fiber clinostat: Technical abstract  
[NASA-CASE-MFS-28370-1] c 35 N89-28793
- Acoustic controlled rotation and orientation  
[NASA-CASE-NPO-16995-1-CU] c 71 N90-12289
- Apparatus for mixing solutions in low gravity environments  
[NASA-CASE-MFS-26047-1] c 29 N90-21209
- Atmospheric autorotating imaging device  
[NASA-CASE-NPO-17390-1-CU] c 35 N90-22769
- Rotating-unbalanced-mass devices and methods for scanning balloon-borne-experiments, free-flying spacecraft, and space shuttle/space station attached experiments  
[NASA-CASE-MFS-28425-1] c 35 N90-26304
- Cantilever clamp fitting  
[NASA-CASE-MFS-28328-1] c 37 N91-13731
- Hybrid butterfly valve  
[NASA-CASE-SSC-00004-1] c 37 N91-14609
- Compliant joint  
[NASA-CASE-GSC-13153-1] c 37 N91-17387
- Control circuitry using electronic emulation of a synchro signal for accurate control of position and rate of rotation for shafts  
[NASA-CASE-MFS-28458-1] c 33 N91-26459
- Suspension device for low-frequency structures  
[NASA-CASE-LAR-14272-1-CU] c 14 N91-28184
- Apparatus for intercalating large quantities of fibrous structures  
[NASA-CASE-LEW-15077-2] c 24 N91-28289
- Linear mass actuator  
[NASA-CASE-LAR-14352-1] c 37 N91-32511
- Rotationally actuated prosthetic helping hand  
[NASA-CASE-MFS-28426-1] c 54 N91-32795
- Three dimensional moire pattern alignment  
[NASA-CASE-MSC-21416-1] c 74 N91-32922
- ROTOR AERODYNAMICS**
- Acoustically swept rotor --- helicopter noise reduction  
[NASA-CASE-ARC-11106-1] c 05 N80-14107
- ROTOR BLADES**
- Non-destructive method for applying and removing instrumentation on helicopter rotor blades  
[NASA-CASE-LAR-11201-1] c 35 N78-24515
- Apparatus and method for reducing thermal stress in a turbine rotor  
[NASA-CASE-LEW-12232-1] c 07 N79-10057
- ROTOR BLADES (TURBOMACHINERY)**
- Locking device for turbine rotor blades Patent  
[NASA-CASE-XNP-00816] c 28 N71-28928
- Turbo-machine blade vibration damper Patent  
[NASA-CASE-XLE-00155] c 28 N71-29154
- Apparatus for welding blades to rotors  
[NASA-CASE-LEW-10533-2] c 37 N74-11300
- Supersonic fan blading --- noise reduction in turbofan engines  
[NASA-CASE-LEW-11402-1] c 07 N74-28226
- Blade retainer assembly  
[NASA-CASE-LEW-12608-1] c 07 N77-27116
- Platform for a swing root turbomachinery blade  
[NASA-CASE-LEW-12312-1] c 07 N77-32148
- Tip cap for a rotor blade  
[NASA-CASE-LEW-13654-1] c 07 N84-22560
- Shapes for rotating airfoils  
[NASA-CASE-LAR-12396-1] c 02 N84-28732
- ROTOR LIFT**
- Constant lift rotor for a heavier than air craft  
[NASA-CASE-ARC-11045-1] c 05 N79-17847
- ROTOR SPEED**
- Brushless direct current tachometer Patent  
[NASA-CASE-MFS-20385] c 09 N71-24904
- ROTORCRAFT AIRCRAFT**
- Constant lift rotor for a heavier than air craft  
[NASA-CASE-ARC-11045-1] c 05 N79-17847
- ROTORs**
- Multistage multiple-reentry turbine Patent  
[NASA-CASE-XLE-00085] c 28 N70-39895
- Angular position and velocity sensing apparatus Patent  
[NASA-CASE-XGS-05680] c 14 N71-17585
- Indexing microwave switch Patent  
[NASA-CASE-XNP-06507] c 09 N71-23548
- Detentling servomotor Patent  
[NASA-CASE-XNP-06936] c 15 N71-24695
- Rotary vane attenuator wherein rotor has orthogonally disposed resistive and dielectric cards  
[NASA-CASE-NPO-11418-1] c 14 N73-13420
- Welding blades to rotors  
[NASA-CASE-LEW-10533-1] c 15 N73-28515
- Magnetic field control --- electromechanical torquing device  
[NASA-CASE-MFS-23828-1] c 33 N82-26569
- Damping seal for turbomachinery  
[NASA-CASE-MFS-25842-2] c 37 N86-20788
- Swashplate control system  
[NASA-CASE-ARC-11633-1] c 08 N87-23631
- Electrostatically suspended rotor for angular encoder  
[NASA-CASE-MFS-28294-1] c 31 N91-14508
- Turbomachinery rotor support with damping  
[NASA-CASE-MFS-28345-1] c 37 N91-14608
- Dynamic tester for rotor seals and bearings  
[NASA-CASE-MFS-28493-1] c 09 N91-25155
- Improved superconducting bearings  
[NASA-CASE-GSC-13346-1] c 37 N91-28578
- RUBBER**
- Thermoplastic rubber comprising ethylene-vinyl acetate copolymer, asphalt and fluxing oil  
[NASA-CASE-NPO-08835-1] c 27 N78-33228
- Formulated plastic separators for soluble electrode cells --- rubber-ion transport membranes  
[NASA-CASE-LEW-12358-1] c 44 N79-17313
- Enhancement of in vitro guayule propagation  
[NASA-CASE-NPO-15213-1] c 51 N83-17045
- Method and apparatus for cleaning rubber deposits from airport runways and roadways  
[NASA-CASE-LAR-14483-1] c 31 N91-28455
- RUBBER COATINGS**
- Intumescent paint containing nitrile rubber  
[NASA-CASE-ARC-10196-1] c 18 N73-13562
- RUBY**
- Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-1] c 37 N75-15992
- Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-3] c 24 N79-25143
- RUBY LASERS**
- Laser coolant and ultraviolet filter  
[NASA-CASE-MFS-20180] c 16 N72-12440
- RUNWAY ALIGNMENT**
- Magnetic position detection method and apparatus  
[NASA-CASE-ARC-10179-1] c 21 N72-22619
- RUNWAY CONDITIONS**
- Warm fog dissipation using large volume water sprays  
[NASA-CASE-MFS-25962-1] c 09 N89-25242
- RUNWAY LIGHTS**
- Runway light Patent  
[NASA-CASE-XLA-00119] c 11 N70-33329
- Spectrally balanced chromatic landing approach lighting system  
[NASA-CASE-ARC-10990-1] c 04 N82-16059
- RUNWAYS**
- Warm fog dissipation using large volume water sprays  
[NASA-CASE-MFS-25962-1] c 09 N89-25242
- Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13854-1-CU] c 04 N91-31120
- RUPTURING**
- Means for controlling rupture of shock tube diaphragms Patent  
[NASA-CASE-XAC-00731] c 11 N71-15960
- Fully articulated four-point-bend loading fixture  
[NASA-CASE-LEW-14776-1] c 37 N91-21540
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- SABOT PROJECTILES**
- Hypervelocity gun --- using both electric and chemical energy for projectile propulsion  
[NASA-CASE-XLE-03186-1] c 09 N79-21084
- SAFETY**
- Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-3] c 27 N84-22745
- SAFETY DEVICES**
- Pressure suit tie-down mechanism Patent  
[NASA-CASE-XMS-00784] c 05 N71-12335
- Positive locking check valve Patent  
[NASA-CASE-XMS-09310] c 15 N71-22706
- Protective device for machine and metalworking tools Patent  
[NASA-CASE-XLE-01092] c 15 N71-22797
- Velocity limiting safety system Patent  
[NASA-CASE-XLA-07473] c 15 N71-24895
- Combustion products generating and metering device  
[NASA-CASE-GSC-11095-1] c 14 N72-10375
- Restraint torso for a pressurized suit  
[NASA-CASE-MSC-12397-1] c 05 N72-25119
- Totally confined explosive welding --- apparatus to reduce noise level and protect personnel during explosive bonding  
[NASA-CASE-LAR-10941-1] c 37 N74-21057
- Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft  
[NASA-CASE-LAR-10753-1] c 08 N74-30421
- Shoulder harness and lap belt restraint system  
[NASA-CASE-ARC-10519-2] c 05 N75-25915
- Fifth wheel  
[NASA-CASE-FRC-10081-1] c 37 N77-14477
- Microwave power transmission beam safety system  
[NASA-CASE-NPO-14224-1] c 33 N80-18287
- Safety shield for vacuum/pressure chamber viewing port  
[NASA-CASE-GSC-12513-1] c 31 N81-19343
- Self-locking double retention redundant full pin release  
[NASA-CASE-NPO-16233-1] c 37 N86-20801
- Variable response load limiting device  
[NASA-CASE-LAR-12801-1] c 37 N88-23982
- Timing control system  
[NASA-CASE-NPO-16882-1-CU] c 33 N88-24863
- SAFETY FACTORS**
- Safety flywheel --- using flexible materials energy storage  
[NASA-CASE-HQN-10888-1] c 44 N79-14527
- Airborne rescue system  
[NASA-CASE-ARC-11909-1] c 03 N91-31113
- SAHA EQUATIONS**
- Cosmic dust analyzer  
[NASA-CASE-MSC-13802-2] c 35 N76-15431
- SALT BATHS**
- Process for applying a protective coating for salt bath brazing Patent  
[NASA-CASE-XLE-00046] c 15 N70-33311
- SAMARIUM**
- Gd or Sm doped silicon semiconductor composition Patent  
[NASA-CASE-XLE-10715] c 26 N71-23292
- SAMPLERS**
- Vacuum probe surface sampler  
[NASA-CASE-LAR-10623-1] c 14 N73-30395
- Automated syringe sampler --- remote sampling of air and water  
[NASA-CASE-LAR-12308-1] c 35 N81-29407
- SAMPLES**
- Plural output optometric sample cell and analysis system  
[NASA-CASE-NPO-10233-1] c 74 N78-33913
- Mobile sampler for use in acquiring samples of terrestrial atmospheric gases  
[NASA-CASE-NPO-15220-1] c 45 N83-25217
- SAMPLING**
- Sample collecting impact bit Patent  
[NASA-CASE-XNP-01412] c 15 N70-42034

- Fluid sample collector Patent  
[NASA-CASE-XMS-06767-1] c 14 N71-20435
- Atmospheric sampling devices  
[NASA-CASE-NPO-11373] c 13 N72-25323
- Digital to analog conversion apparatus  
[NASA-CASE-MS-C-12458-1] c 08 N73-32081
- Rock sampling --- apparatus for controlling particle size  
[NASA-CASE-XNP-10007-1] c 46 N74-23068
- Rock sampling --- method for controlling particle size distribution  
[NASA-CASE-XNP-09755] c 46 N74-23069
- Apparatus for microbiological sampling --- including automatic swabbing  
[NASA-CASE-LAR-11069-1] c 35 N75-12272
- Automatic biowaste sampling  
[NASA-CASE-MS-C-14640-1] c 54 N76-14804
- Remote water monitoring system  
[NASA-CASE-LAR-11973-1] c 35 N78-27384
- Fluid sample collection and distribution system --- qualitative analysis of aqueous samples from several points  
[NASA-CASE-MS-C-16841-1] c 34 N79-24285
- Method for detecting coliform organisms  
[NASA-CASE-ARC-11322-1] c 51 N83-28849
- Moisture content and gas sampling device  
[NASA-CASE-MS-C-18866-1] c 35 N85-29213
- Optical multiple sample vacuum integrating sphere  
[NASA-CASE-GSC-12849-1] c 74 N86-26190
- Solid sorbent air sampler  
[NASA-CASE-MS-C-20653-1] c 35 N86-26595
- Digital carrier demodulator employing components working beyond normal limits  
[NASA-CASE-NPO-17628-1-CU] c 32 N89-28684
- High velocity gas particulate sampling system  
[NASA-CASE-MS-C-21729-1] c 34 N91-17340
- High-pressure promoted combustion chamber  
[NASA-CASE-MS-C-21470-1] c 09 N91-21157
- Biofilm monitoring coupon system and method of use  
[NASA-CASE-MS-C-21585-1] c 51 N91-31755
- SANDWICH STRUCTURES**
- Sandwich panel construction Patent  
[NASA-CASE-XLA-00349] c 33 N70-37979
- Micrometeoroid velocity measuring device Patent  
[NASA-CASE-XLA-00495] c 14 N70-41332
- Meteoroid sensing apparatus having a coincidence network connected to a pair of capacitors Patent  
[NASA-CASE-XLE-01246] c 14 N71-10797
- Method of making inflatable honeycomb Patent  
[NASA-CASE-XLA-03492] c 15 N71-22713
- Convoluting device for forming convolutions and the like Patent  
[NASA-CASE-XNP-05297] c 15 N71-23811
- Composite sandwich lattice structure  
[NASA-CASE-LAR-11898-1] c 24 N78-10214
- Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-1] c 24 N79-16915
- Superplastically formed diffusion bonded metallic structure  
[NASA-CASE-FRC-11026-1] c 24 N82-24296
- Multiwall thermal protection system  
[NASA-CASE-LAR-12620-1] c 24 N82-32417
- New core design for use with precision composite reflectors  
[NASA-CASE-NPO-17858-1-CU] c 24 N90-26880
- SAPPHIRE**
- Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-1] c 37 N75-15992
- Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-3] c 24 N79-25143
- SATELLITE ANTENNAS**
- Antenna system using parasitic elements and two driven elements at 90 deg angle fed 180 deg out of phase Patent  
[NASA-CASE-XLA-00414] c 07 N70-38200
- Apparatus providing a directive field pattern and attitude sensing of a spin stabilized satellite Patent  
[NASA-CASE-XGS-02607] c 31 N71-23009
- Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c 32 N81-27341
- Microwave switching power divider --- antenna feeds  
[NASA-CASE-GSC-12420-1] c 33 N82-16340
- Antenna surface contour control system  
[NASA-CASE-LAR-13798-1] c 32 N89-25363
- SATELLITE ATTITUDE CONTROL**
- Photosensitive device to detect bearing deviation Patent  
[NASA-CASE-XNP-00438] c 21 N70-35089
- Attitude control for spacecraft Patent  
[NASA-CASE-XNP-02982] c 31 N70-41855
- Satellite despin device Patent  
[NASA-CASE-XMF-08523] c 31 N71-20396
- Attitude control and damping system for spacecraft Patent  
[NASA-CASE-XLA-02551] c 21 N71-21708
- Gravity gradient attitude control system Patent  
[NASA-CASE-GSC-10555-1] c 21 N71-27324
- Spacecraft attitude control method and apparatus  
[NASA-CASE-HQN-10439] c 21 N72-21624
- Dual purpose momentum wheels for spacecraft with magnetic recording  
[NASA-CASE-NPO-11481] c 21 N73-13644
- Combination automatic-starting electrical plasma torch and gas shutoff valve --- for satellite attitude control  
[NASA-CASE-XLE-10717] c 37 N75-29426
- Attitude control system  
[NASA-CASE-MFS-22787-1] c 15 N77-10113
- Rim inertial measuring system  
[NASA-CASE-LAR-12052-1] c 18 N81-29152
- SATELLITE COMMUNICATION**
- Satellite communication system and method Patent  
[NASA-CASE-GSC-10118-1] c 07 N71-24621
- Satellite communication system Patent  
[NASA-CASE-XNP-02389] c 07 N71-28900
- Ground plane interference elimination by passive element  
[NASA-CASE-NPO-16632-1-CU] c 32 N87-15390
- Trellis coded modulation for transmission over fading mobile satellite channel  
[NASA-CASE-NPO-16904-2-CU] c 32 N91-14523
- SATELLITE CONTROL**
- Stabilization of gravity oriented satellites Patent  
[NASA-CASE-XAC-01591] c 31 N71-17729
- Fluid-loop reaction system  
[NASA-CASE-NPO-17204-1-CU] c 34 N91-25380
- SATELLITE DESIGN**
- Inflation system for balloon type satellites Patent  
[NASA-CASE-XGS-03351] c 31 N71-16081
- SATELLITE INSTRUMENTS**
- Reaction wheel scanner Patent  
[NASA-CASE-XGS-02629] c 14 N71-21082
- SATELLITE NETWORKS**
- Satellite interface synchronization system  
[NASA-CASE-GSC-10390-1] c 07 N72-11149
- SATELLITE OBSERVATION**
- Method and apparatus for Delta Kappa synthetic aperture radar measurement of ocean current  
[NASA-CASE-NPO-15704-1] c 32 N85-34327
- SATELLITE ORBITS**
- Apparatus for changing the orientation and velocity of a spinning body traversing a path Patent  
[NASA-CASE-HQN-00936] c 31 N71-29050
- SATELLITE ORIENTATION**
- Method and apparatus for determining satellite orientation utilizing spatial energy sources Patent  
[NASA-CASE-XGS-00466] c 21 N70-34297
- Cartwheel satellite synchronization system Patent  
[NASA-CASE-XGS-05579] c 31 N71-15676
- Apparatus for changing the orientation and velocity of a spinning body traversing a path Patent  
[NASA-CASE-HQN-00936] c 31 N71-29050
- Analog spatial maneuver computer  
[NASA-CASE-GSC-10880-1] c 08 N72-11172
- SATELLITE PERTURBATION**
- Method and means for damping nutation in a satellite Patent  
[NASA-CASE-XMF-00442] c 31 N71-10747
- SATELLITE POWER TRANSMISSION**
- Microwave power transmission beam safety system  
[NASA-CASE-NPO-14224-1] c 33 N80-18287
- SATELLITE ROTATION**
- Optical spin compensator  
[NASA-CASE-XGS-02401] c 14 N69-27485
- Stretch de-spin mechanism Patent  
[NASA-CASE-XGS-00619] c 30 N70-40016
- Apparatus for changing the orientation and velocity of a spinning body traversing a path Patent  
[NASA-CASE-HQN-00936] c 31 N71-29050
- Magnetic spin reduction system for free spinning objects  
[NASA-CASE-MFS-25966-1] c 16 N86-26352
- SATELLITE TELEVISION**
- Adaptive system and method for signal generation Patent  
[NASA-CASE-GSC-11367] c 10 N71-26374
- SATELLITE TRACKING**
- Tracking receiver Patent  
[NASA-CASE-XGS-08679] c 10 N71-21473
- Simultaneous acquisition of tracking data from two stations  
[NASA-CASE-NPO-13292-1] c 32 N75-15854
- Switchable beamwidth monopulse method and system  
[NASA-CASE-GSC-11924-1] c 33 N76-27472
- SATELLITE TRANSMISSION**
- Asynchronous, multiplexing, single line transmission and recovery data system --- for satellite use  
[NASA-CASE-NPO-13321-1] c 32 N75-26195
- SATELLITE-BORNE INSTRUMENTS**
- Method of measuring sea surface water temperature with a satellite including wideband passive synthetic-aperture multichannel receiver  
[NASA-CASE-NPO-15651-1] c 43 N85-21723
- SATELLITE-BORNE PHOTOGRAPHY**
- Rotary solenoid shutter drive assembly and rotary inertia damper and stop plate assembly --- for use with cameras mounted in satellites  
[NASA-CASE-GSC-11560-1] c 33 N74-20861
- Scanner --- photography from a spin stabilized synchronous satellite  
[NASA-CASE-GSC-12032-2] c 43 N82-13465
- SATURABLE REACTORS**
- Pulse switching for high energy lasers  
[NASA-CASE-NPO-14556-1] c 33 N82-24418
- Low power consumption current transducer  
[NASA-CASE-NPO-16888-1-CU] c 33 N89-29681
- SATURATION**
- Method of detecting impending saturation of magnetic cores  
[NASA-CASE-ERC-10089] c 23 N72-17747
- SAWS**
- Ingot slicing machine and method  
[NASA-CASE-NPO-15483-1] c 37 N85-21650
- Power saw  
[NASA-CASE-MS-C-21469-1] c 37 N91-31655
- SAWTOOTH WAVEFORMS**
- Linear sawtooth voltage-wave generator employing transistor timing circuit having capacitor-zener diode combination feedback Patent  
[NASA-CASE-XMS-01315] c 09 N70-41675
- SCANNERS**
- Monopulse system with an electronic scanner  
[NASA-CASE-XGS-05582] c 07 N69-27460
- Electronic background suppression method and apparatus for a field scanning sensor  
[NASA-CASE-XGS-05211] c 07 N69-39980
- Method and means for an improved electron beam scanning system Patent  
[NASA-CASE-ERC-10552] c 09 N71-12539
- Reaction wheel scanner Patent  
[NASA-CASE-XGS-02629] c 14 N71-21082
- Electronic scanning of 2-channel monopulse patterns Patent  
[NASA-CASE-GSC-10299-1] c 09 N71-24804
- Method and apparatus for mapping the sensitivity of the face of a photodetector specifically a PMT  
[NASA-CASE-LAR-10320-1] c 09 N72-23172
- Ultrasonic scanner for radial and flat panels  
[NASA-CASE-MFS-20335-1] c 35 N74-10415
- Apparatus for scanning the surface of a cylindrical body  
[NASA-CASE-NPO-11861-1] c 36 N74-20009
- Fast scan control for deflection type mass spectrometers  
[NASA-CASE-LAR-11428-1] c 35 N74-34857
- Electronically scanned pressure sensor module with in situ calibration capability  
[NASA-CASE-LAR-12230-1] c 35 N79-14347
- Scannable beam forming interferometer antenna array system  
[NASA-CASE-GSC-12365-1] c 32 N80-28578
- Scanner --- photography from a spin stabilized synchronous satellite  
[NASA-CASE-GSC-12032-2] c 43 N82-13465
- Optical crystal temperature gauge with fiber optic connections  
[NASA-CASE-MS-C-18627-1] c 74 N82-30071
- Scanning seismic intrusion detection method and apparatus --- monitoring unwanted subterranean entry and departure  
[NASA-CASE-ARC-11317-1] c 35 N83-34272
- Self-correcting electronically scanned pressure sensor  
[NASA-CASE-LAR-12686-1] c 35 N84-14491
- Two-dimensional scanner apparatus --- flaw detector in small flat plates  
[NASA-CASE-MFS-25687-1] c 35 N84-22928
- Electronic scanning pressure measuring system and transducer package  
[NASA-CASE-ARC-11361-1] c 35 N84-22934
- Programmable scan/read circuitry for charge coupled device imaging detectors --- spacecraft attitude control and star trackers  
[NASA-CASE-NPO-15345-1] c 74 N84-23247
- Atmospheric autrotating imaging device  
[NASA-CASE-NPO-17390-1-CU] c 35 N90-22769
- SCANNING**
- Television signal scan rate conversion system Patent  
[NASA-CASE-XMS-07168] c 07 N71-11300
- Method of erasing target material of a vidicon tube or the like Patent  
[NASA-CASE-XNP-06028] c 09 N71-23189
- Position determination systems --- using orbital antenna scan of celestial bodies  
[NASA-CASE-MS-C-12593-1] c 17 N76-21250

- Magnetometer with a miniature transducer and automatic scanning  
[NASA-CASE-LAR-11617-2] c 35 N78-32397
- System and method for character recognition  
[NASA-CASE-NPO-11337-1] c 74 N81-19896
- SCATTERING CROSS SECTIONS**
- Method and means for helium/hydrogen ratio measurement by alpha scattering  
[NASA-CASE-NPO-14079-1] c 25 N80-20334
- Method and apparatus for sensor fusion  
[NASA-CASE-MS-C-21334-1] c 32 N91-25317
- SCENE ANALYSIS**
- Simulator scene display evaluation device  
[NASA-CASE-ARC-11504-1] c 09 N86-32447
- SCHLIEREN PHOTOGRAPHY**
- System and method for obtaining wide screen Schlieren photographs  
[NASA-CASE-NPO-14174-1] c 74 N79-20856
- SCHMIDT CAMERAS**
- Cooled echelle grating spectrometer --- for space telescope applications  
[NASA-CASE-NPO-13472-1] c 35 N80-26635
- SCHMIDT TELESCOPES**
- Dual aperture multispectral Schmidt objective  
[NASA-CASE-GSC-12756-1] c 74 N84-23248
- SCHOOLS**
- Silent emergency alarm system for schools and the like  
[NASA-CASE-NPO-11307-1] c 10 N73-30205
- SCHOTTKY DIODES**
- High voltage, high current Schottky barrier solar cell  
[NASA-CASE-NPO-13482-1] c 44 N78-13526
- Solar cells having integral collector grids  
[NASA-CASE-LEW-12819-1] c 44 N79-11467
- Back wall solar cell  
[NASA-CASE-LEW-12236-2] c 44 N79-14528
- Schottky barrier solar cell  
[NASA-CASE-NPO-13689-2] c 44 N81-29525
- Method of Fabricating Schottky Barrier solar cell  
[NASA-CASE-NPO-13689-4] c 44 N82-28780
- Thin wire pointing method  
[NASA-CASE-NPO-15789-1] c 31 N83-19947
- Epitaxial thinning process  
[NASA-CASE-NPO-15786-1] c 76 N84-35112
- GaAs Schottky barrier photo-responsive device and method of fabrication  
[NASA-CASE-GSC-12816-1] c 76 N86-20150
- Laterally stacked Schottky diodes for infrared sensor applications  
[NASA-CASE-NPO-17426-1-CU] c 33 N91-21434
- SCIENTIFIC SATELLITES**
- Nano-G research laboratory for a spacecraft  
[NASA-CASE-GSC-13197-1] c 18 N91-27201
- SCOOPS**
- Aeroflexible structures  
[NASA-CASE-XLA-06095] c 01 N69-39981
- SCORING**
- Scriber for silicon wafers  
[NASA-CASE-NPO-15539-1] c 37 N82-11469
- SCRAMBLING (COMMUNICATION)**
- Random digital encryption secure communication system  
[NASA-CASE-MS-C-16462-1] c 32 N82-31583
- SCREWS**
- Electromechanical control actuator system Patent  
[NASA-CASE-ERC-10022] c 15 N71-26635
- Adjustable support  
[NASA-CASE-NPO-10721] c 15 N72-27484
- Low noise lead screw positioner  
[NASA-CASE-NPO-15617-1] c 35 N87-21304
- SCRUBBERS**
- High pressure gas filter system Patent  
[NASA-CASE-MFS-12806] c 14 N71-17588
- Nebulization reflux concentrator  
[NASA-CASE-LAR-13254-1CU] c 35 N86-29174
- SEA ICE**
- A technique for breaking ice in the path of a ship  
[NASA-CASE-LAR-10815-1] c 16 N72-22520
- SEA STATES**
- Oceanic wave measurement system  
[NASA-CASE-MFS-23862-1] c 48 N80-18667
- SEA SURFACE TEMPERATURE**
- Method of measuring sea surface water temperature with a satellite including wideband passive synthetic-aperture multichannel receiver  
[NASA-CASE-NPO-15651-1] c 43 N85-21723
- SEALERS**
- Pressure garment joint Patent  
[NASA-CASE-XMS-09636] c 05 N71-12344
- Sealing device for an electrochemical cell Patent  
[NASA-CASE-XGS-02630] c 03 N71-22974
- Bonded elastomeric seal for electrochemical cells Patent  
[NASA-CASE-XGS-02631] c 03 N71-23006
- Self-lubricating fluoride metal composite materials Patent  
[NASA-CASE-XLE-08511] c 18 N71-23710
- Polyimides of ether-linked aryl tetracarboxylic dianhydrides  
[NASA-CASE-MFS-22355-1] c 23 N76-15268
- High performance channel injection sealant invention abstract  
[NASA-CASE-ARC-14408-1] c 27 N82-33523
- SEALING**
- Foil seal  
[NASA-CASE-XLE-05130] c 15 N69-21362
- Sealed battery gas manifold construction Patent  
[NASA-CASE-XNP-03378] c 03 N71-11051
- Sealing device for an electrochemical cell Patent  
[NASA-CASE-XGS-02630] c 03 N71-22974
- Sealing member and combination thereof and method of producing said sealing member Patent  
[NASA-CASE-XMS-01625] c 15 N71-23022
- Evacuation port seal Patent  
[NASA-CASE-XMF-03290] c 15 N71-23256
- Valve seat  
[NASA-CASE-NPO-10606] c 15 N72-25451
- Ampoule seating apparatus and process --- for housing a semiconductor growth charge under vacuum  
[NASA-CASE-LAR-12847-1] c 33 N83-16633
- Optical pressure sealing coupling apparatus  
[NASA-CASE-MFS-29348-1] c 74 N89-25689
- High temperature flexible seal  
[NASA-CASE-LEW-14695-1] c 37 N90-23751
- Cantilever clamp fitting  
[NASA-CASE-MFS-28328-1] c 37 N91-13731
- Probe insertion apparatus with inflatable seal  
[NASA-CASE-LEW-14965-1] c 37 N91-13732
- O-ring gasket test fixture  
[NASA-CASE-MFS-28376-1] c 14 N91-21175
- Method of applying a thermal barrier coating system to a substrate  
[NASA-CASE-LEW-15020-2] c 24 N91-25202
- Double face sealing device  
[NASA-CASE-MFS-28521-1] c 37 N91-26542
- SEALS (STOPPERS)**
- Spacecraft battery seals  
[NASA-CASE-XGS-03864] c 15 N69-24320
- Flexible seal for valves Patent  
[NASA-CASE-XLE-00101] c 15 N70-33376
- Shrink-fit gas valve Patent  
[NASA-CASE-XGS-00587] c 15 N70-35087
- Thin-walled pressure vessel Patent  
[NASA-CASE-XLE-04677] c 15 N71-10577
- Foil seal Patent  
[NASA-CASE-XLE-05130-2] c 15 N71-19570
- Storage container for electronic devices Patent  
[NASA-CASE-MFS-20075] c 09 N71-26133
- Rotating shaft seal Patent  
[NASA-CASE-XNP-02862-1] c 15 N71-26294
- Spiral groove seal --- for rotating shaft  
[NASA-CASE-XLE-10326-4] c 37 N74-15125
- Glass-to-metal seals comprising relatively high expansion metals  
[NASA-CASE-LEW-10698-1] c 37 N74-21063
- High speed, self-acting shaft seal --- for use in turbine engines  
[NASA-CASE-LEW-11274-1] c 37 N75-21631
- Method of forming shrink-fit compression seal  
[NASA-CASE-LAR-11563-1] c 37 N77-23482
- Counter pumping debris excluder and separator --- gas turbine shaft seals  
[NASA-CASE-LEW-11855-1] c 07 N78-25090
- Composite seal for turbomachinery --- backings for turbine engine shrouds  
[NASA-CASE-LEW-12131-1] c 37 N79-18318
- Retractable environmental seal  
[NASA-CASE-MFS-23646-1] c 37 N79-22474
- Shaft seal assembly for high speed and high pressure applications  
[NASA-CASE-LEW-11873-1] c 37 N79-22475
- Fluid pressure balanced seal  
[NASA-CASE-XGS-01286-1] c 37 N79-33469
- Gas path seal  
[NASA-CASE-NPO-12131-3] c 37 N80-18400
- Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-2] c 37 N80-26658
- Circumferential shaft seal  
[NASA-CASE-LEW-12119-1] c 37 N80-28711
- Thermal barrier pressure seal --- shielding junctions between spacecraft control surfaces and structures  
[NASA-CASE-MS-C-18134-1] c 37 N81-15363
- Modified face seal for positive film stiffness  
[NASA-CASE-LEW-12989-1] c 37 N82-12442
- Surface conforming thermal/pressure seal --- tail assemblies of space shuttle orbiters  
[NASA-CASE-MS-C-18422-1] c 37 N82-16408
- Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-3] c 37 N82-19540
- Continuous self-locking spiral wound seal --- for maintaining pressure between chambers in cryogenic wind tunnels  
[NASA-CASE-LAR-12315-1] c 37 N82-24490
- Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-2] c 37 N82-26674
- Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-1] c 27 N82-29453
- Process for preparing perfluorotriazine elastomers and precursors thereof  
[NASA-CASE-ARC-11402-1] c 27 N84-22744
- Method of fabricating an abrasible gas path seal  
[NASA-CASE-LEW-13269-2] c 37 N84-22957
- Damping seal for turbomachinery  
[NASA-CASE-MFS-25842-2] c 37 N86-20788
- Dual motion valve with single motion input  
[NASA-CASE-MFS-28058-1] c 37 N87-21332
- Thermal stress minimized, two component, turbine shroud seal  
[NASA-CASE-LEW-14212-1] c 37 N88-23978
- Quick-disconnect inflatable seal assembly  
[NASA-CASE-KSC-11368-1] c 37 N89-13786
- High temperature flexible seal  
[NASA-CASE-LEW-14695-1] c 37 N90-23751
- Turbomachinery rotor support with damping  
[NASA-CASE-MFS-28345-1] c 37 N91-14608
- High-temperature, flexible, thermal barrier seal  
[NASA-CASE-LEW-14672-1] c 37 N91-27560
- SEAMS (JOINTS)**
- Traveling sealer for contoured table Patent  
[NASA-CASE-XLA-01494] c 15 N71-24164
- Omnidirectional joint Patent  
[NASA-CASE-XMS-09635] c 05 N71-24623
- Method of making pressure tight seal for super alloy  
[NASA-CASE-LAR-10170-1] c 37 N74-11301
- SEAT BELTS**
- Shoulder harness and lap belt restraint system  
[NASA-CASE-ARC-10519-2] c 05 N75-25915
- SEATS**
- Seat cushion to provide realistic acceleration cues to aircraft simulator pilot  
[NASA-CASE-LAR-12149-2] c 09 N79-31228
- Fire blocking systems for aircraft seat cushions  
[NASA-CASE-ARC-11423-1] c 03 N84-33394
- Segmented tubular cushion springs and spring assembly  
[NASA-CASE-ARC-11349-1] c 37 N86-20797
- Variable response load limiting device  
[NASA-CASE-LAR-12801-1] c 37 N88-23982
- Hydraulic lifting device  
[NASA-CASE-GSC-00008-1] c 37 N91-13733
- Method and apparatus for waste collection and storage  
[NASA-CASE-MS-C-21025-3] c 54 N91-26747
- SECONDARY EMISSION**
- Textured carbon surfaces on copper by sputtering  
[NASA-CASE-LEW-14130-1] c 31 N86-32587
- SECONDARY FLOW**
- Heat exchanger with oscillating flow  
[NASA-CASE-LAR-14033-1] c 34 N90-27072
- SECTORS**
- Journal Bearings  
[NASA-CASE-LEW-11076-2] c 37 N74-32921
- SECURITY**
- Passive intrusion detection system  
[NASA-CASE-NPO-13804-1] c 33 N80-23559
- Portable appliance security apparatus  
[NASA-CASE-GSC-12399-1] c 33 N81-25299
- Random digital encryption secure communication system  
[NASA-CASE-MS-C-16462-1] c 32 N82-31583
- Scanning seismic intrusion detection method and apparatus --- monitoring unwanted subterranean entry and departure  
[NASA-CASE-ARC-11317-1] c 35 N83-34272
- SEDIMENTS**
- Three-dimensional cell to tissue assembly process  
[NASA-CASE-MS-C-21559-1] c 51 N91-13860
- SEGMENTS**
- Method and apparatus for making curved reflectors Patent  
[NASA-CASE-XLE-08917] c 15 N71-15597
- Equal path, phase shifting, sample point interferometer for monitoring the configuration of surfaces  
[NASA-CASE-NPO-17913-1-CU] c 74 N90-27488
- Method and apparatus for phasing segmented mirror arrays  
[NASA-CASE-NPO-18095-1-CU] c 74 N91-32923
- SEISMIC WAVES**
- Seismic displacement transducer Patent  
[NASA-CASE-XMF-00479] c 14 N70-34794
- Seismic vibration source  
[NASA-CASE-NPO-14112-1] c 46 N79-22679

- Underwater seismic source --- for petroleum exploration  
[NASA-CASE-NPO-14255-1] c 46 N79-23555
- SEISMOGRAPHS**  
Scanning seismic intrusion detection method and apparatus --- monitoring unwanted subterranean entry and departure  
[NASA-CASE-ARC-11317-1] c 35 N83-34272
- SELECTORS**  
Molecular beam velocity selector Patent  
[NASA-CASE-XLE-01533] c 11 N71-10777  
Peak polarity selector Patent  
[NASA-CASE-FRC-10010] c 10 N71-24862
- SELF ADAPTIVE CONTROL SYSTEMS**  
Self-actuating heat switches for redundant refrigeration systems  
[NASA-CASE-NPO-17085-1-CU] c 31 N89-12785
- SELF ALIGNMENT**  
Electro-optical alignment control system Patent  
[NASA-CASE-XMF-00908] c 14 N70-40238  
Electrical self-aligning connector --- orbital servicer vehicles  
[NASA-CASE-MFS-25211-2] c 33 N84-14423
- SELF ERECTING DEVICES**  
Flexible foam erectable space structures Patent  
[NASA-CASE-XLA-00686] c 31 N70-34135  
Erectable modular space station Patent  
[NASA-CASE-XLA-00678] c 31 N70-34296  
Manned space station Patent  
[NASA-CASE-XLA-00258] c 31 N70-38676  
Foldable conduit Patent  
[NASA-CASE-XLE-00620] c 32 N70-41579  
Self-erecting reflector Patent  
[NASA-CASE-XGS-09190] c 31 N71-16102  
Collapsible reflector Patent  
[NASA-CASE-XMS-03454] c 09 N71-20658  
Foldable self-erecting joint  
[NASA-CASE-MSC-20635-1] c 18 N87-14373
- SELF FOCUSING**  
Focal axis resolver for offset reflector antennas  
[NASA-CASE-GSC-12630-1] c 33 N83-36355
- SELF LUBRICATING MATERIALS**  
Self-lubricating fluoride metal composite materials Patent  
[NASA-CASE-XLE-08511] c 18 N71-23710  
Self-lubricating gears and other mechanical parts Patent  
[NASA-CASE-MFS-14971] c 15 N71-24984  
Method of making bearing material  
[NASA-CASE-LEW-11930-3] c 24 N80-33482
- SELF LUBRICATION**  
Method of making bearing materials --- self-lubricating, oxidation resistant composites for high temperature applications  
[NASA-CASE-LEW-11930-4] c 24 N79-17916  
Carbide-fluoride-silver self-lubricating composite  
[NASA-CASE-LEW-14196-2] c 37 N87-25585
- SELF MANEUVERING UNITS**  
Hand-held self-maneuvering unit Patent  
[NASA-CASE-XMS-05304] c 05 N71-12336  
Personal propulsion unit Patent  
[NASA-CASE-MFS-20130] c 28 N71-27585
- SELF PROPAGATION**  
Optical frequency waveguide Patent  
[NASA-CASE-HQN-10541-1] c 07 N71-26291
- SELF SEALING**  
Modification of one man life raft  
[NASA-CASE-LAR-10241-1] c 54 N74-14845  
Self-stabilizing radial face seal  
[NASA-CASE-LEW-12991-1] c 37 N81-24442  
Self-compensating solenoid valve  
[NASA-CASE-ARC-11620-1] c 37 N87-25573
- SELF TESTS**  
Self-testing and repairing computer Patent  
[NASA-CASE-NPO-10567] c 08 N71-24633  
Self-checking on-line testable static RAM  
[NASA-CASE-NPO-17939-1-CU] c 60 N90-26518
- SEMICONDUCTOR DEVICES**  
Test fixture for pellet-like electrical elements  
[NASA-CASE-XNP-06032] c 09 N69-21926  
Semiconductor p-n junction stress and strain sensor  
[NASA-CASE-XLA-04980] c 09 N69-27422  
A method for selective gold diffusion of monolithic silicon devices and/or circuits Patent application  
[NASA-CASE-ERC-10072] c 09 N70-11148  
Ultra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit Patent  
[NASA-CASE-XGS-00381] c 09 N70-34819  
Method of forming thin window drifted silicon charged particle detector Patent  
[NASA-CASE-XLE-00808] c 24 N71-10560  
Method of making a silicon semiconductor device Patent  
[NASA-CASE-XLE-02792] c 26 N71-10607
- Apparatus and method for separating a semiconductor wafer Patent  
[NASA-CASE-ERC-10138] c 26 N71-14354  
Voltage tunable Gunn-type microwave generator Patent  
[NASA-CASE-XER-07894] c 09 N71-18721  
Method and device for determining battery state of charge Patent  
[NASA-CASE-NPO-10194] c 03 N71-20407  
Multialarm summary alarm Patent  
[NASA-CASE-XLE-03061-1] c 10 N71-24798  
Method of temperature compensating semiconductor strain gages Patent  
[NASA-CASE-XLA-04555-1] c 14 N71-25892  
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- SHEAR CREEP**
- Instrument for measuring torsional creep and recovery Patent  
[NASA-CASE-XLE-01481] c 14 N71-10781
- SHEAR FLOW**
- Shear modulated fluid amplifier Patent  
[NASA-CASE-MFS-10412] c 12 N71-17578
- SHEAR PROPERTIES**
- Parallel plate viscometer Patent  
[NASA-CASE-XNP-09462] c 14 N71-17584
- SHEAR STRESS**
- Fatigue-resistant shear pin  
[NASA-CASE-XLA-09122] c 15 N69-27505
- Angular velocity and acceleration measuring apparatus  
[NASA-CASE-ERC-10292] c 14 N72-25410
- Bonded joint and method --- for reducing peak shear stress in adhesive bonds  
[NASA-CASE-LAR-10900-1] c 37 N74-23064
- Method and apparatus for detecting laminar flow separation and reattachment  
[NASA-CASE-LAR-13952-1-SB] c 34 N90-19534
- Three-dimensional cell to tissue assembly process  
[NASA-CASE-MS-C-21559-1] c 51 N91-13860
- SHEARING**
- Elastomer coated filler and composites thereof comprising at least 60% by weight of a hydrated filler and an elastomer containing an acid substituent  
[NASA-CASE-NPO-14857-1] c 27 N83-19900
- SHELL ANODES**
- Ring-cusp ion thruster with shell anode  
[NASA-CASE-LEW-13881-1] c 20 N85-21256
- SHELLS (STRUCTURAL FORMS)**
- Channel-type shell construction for rocket engines and the like Patent  
[NASA-CASE-XLE-00144] c 28 N70-34860
- SHIELDING**
- Spherical shield Patent  
[NASA-CASE-XNP-01855] c 15 N71-28937
- Shielded flat cable  
[NASA-CASE-MFS-13687-2] c 09 N72-22198
- System for the measurement of ultra-low stray light levels --- determining the adequacy of large space telescope systems  
[NASA-CASE-MFS-23513-1] c 74 N79-11865
- Space ultra-vacuum facility and method of operation  
[NASA-CASE-MFS-28139-1] c 29 N87-18679
- Trailer shield assembly for a welding torch  
[NASA-CASE-MFS-29260-1] c 37 N90-19602
- Electrode carrying wire for GTAW welding  
[NASA-CASE-MFS-29491-1] c 31 N90-26168
- Hypervelocity impact shield  
[NASA-CASE-MS-C-21420-1] c 18 N90-26858
- Driven shielding capacitive proximity sensor  
[NASA-CASE-GSC-13377-1] c 63 N91-28785
- SHIFT REGISTERS**
- Binary to binary-coded-decimal converter Patent  
[NASA-CASE-XNP-00432] c 08 N70-35423
- Linear three-tap feedback shift register Patent  
[NASA-CASE-NPO-10351] c 08 N71-12503
- Counter and shift register Patent  
[NASA-CASE-XNP-01753] c 08 N71-22897
- Current steering commutator  
[NASA-CASE-NPO-10743] c 08 N72-21199
- Feedback shift register with states decomposed into cycles of equal length  
[NASA-CASE-NPO-11082] c 08 N72-22167
- MOD 2 sequential function generator for multibit binary sequence  
[NASA-CASE-NPO-10636] c 08 N72-25210
- Pseudonoise sequence generators with three tap linear feedback shift registers  
[NASA-CASE-NPO-11406] c 08 N73-12175
- A m-ary linear feedback shift register with binary logic  
[NASA-CASE-NPO-11868] c 10 N73-20254
- Counting digital filters  
[NASA-CASE-NPO-11821-1] c 08 N73-26175
- Event sequence detector  
[NASA-CASE-NPO-11703-1] c 10 N73-32144
- Method and apparatus for decoding compatible convolutional codes  
[NASA-CASE-MS-C-14070-1] c 32 N74-32598
- Nonlinear nonsingular feedback shift registers  
[NASA-CASE-NPO-13451-1] c 33 N76-14373
- Selective data segment monitoring system --- using shift registers  
[NASA-CASE-ARC-10899-1] c 60 N77-19760
- Digital data reformatter/deserializer  
[NASA-CASE-NPO-13676-1] c 60 N79-20751
- SHIP HULLS**
- Hydrodynamic skin-friction reduction  
[NASA-CASE-LAR-14078-1-CU] c 34 N90-27071
- SHOCK ABSORBERS**
- Pivotal shock absorbing pad assembly Patent  
[NASA-CASE-XMF-03856] c 31 N70-34159
- Frangible tube energy dissipation Patent  
[NASA-CASE-XLA-00754] c 15 N70-34850
- Shock absorbing support and restraint means Patent  
[NASA-CASE-XMS-01240] c 05 N70-35152
- Energy absorbing structure Patent Application  
[NASA-CASE-MS-C-12279-1] c 15 N70-35679
- Landing pad assembly for aerospace vehicles Patent  
[NASA-CASE-XMF-02853] c 31 N70-36654
- Space craft soft landing system Patent  
[NASA-CASE-XMF-02108] c 31 N70-36845
- Double-acting shock absorber Patent  
[NASA-CASE-XMF-01045] c 15 N70-40354
- Articulated multiple couch assembly Patent  
[NASA-CASE-MS-C-11253] c 05 N71-12343
- Shock absorber Patent  
[NASA-CASE-XMS-03722] c 15 N71-21530
- Impact energy absorber Patent  
[NASA-CASE-XLA-01530] c 14 N71-23092
- Low onset rate energy absorber  
[NASA-CASE-MS-C-12279] c 15 N72-17450
- Impact energy absorbing system utilizing fractureable material  
[NASA-CASE-NPO-10671] c 15 N72-20443
- Translatory shock absorber for attitude sensors  
[NASA-CASE-MFS-22905-1] c 19 N76-22284
- Vehicular impact absorption system  
[NASA-CASE-NPO-14014-1] c 37 N79-10420
- Variable response load limiting device  
[NASA-CASE-LAR-12801-1] c 37 N88-23982
- Energy dissipator  
[NASA-CASE-MS-C-21555-1] c 37 N91-23492
- SHOCK LOADS**
- Wind tunnel model damper Patent  
[NASA-CASE-XLA-09480] c 11 N71-33612
- SHOCK MEASURING INSTRUMENTS**
- Semiconductor projectile impact detector  
[NASA-CASE-MFS-23008-1] c 35 N78-18390
- SHOCK RESISTANCE**
- Method and apparatus for shock protection Patent  
[NASA-CASE-XLA-00482] c 15 N70-36409
- Thermal shock resistant hafnia ceramic material  
[NASA-CASE-LAR-10894-1] c 18 N73-14584
- Thermal shock and erosion resistant tantalum carbide ceramic material  
[NASA-CASE-LAR-11902-1] c 27 N78-17206
- Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c 18 N83-20996
- Method of fabricating an abradable gas path seal  
[NASA-CASE-LEW-13269-2] c 37 N84-22957
- SHOCK TUBES**
- Means for controlling rupture of shock tube diaphragms Patent  
[NASA-CASE-XAC-00731] c 11 N71-15960
- Shock tube bypass piston tunnel  
[NASA-CASE-NPO-12109] c 11 N72-22245
- Annular arc accelerator shock tube  
[NASA-CASE-NPO-13528-1] c 09 N77-10071
- SHOCK WAVE INTERACTION**
- Absorptive splitter for closely spaced supersonic engine air inlets Patent  
[NASA-CASE-XLA-02865] c 28 N71-15563
- SHOCK WAVE LUMINESCENCE**
- Shock-layer radiation measurement  
[NASA-CASE-XAC-02970] c 14 N69-39896
- SHOCK WAVE PROFILES**
- Shock-layer radiation measurement  
[NASA-CASE-XAC-02970] c 14 N69-39896
- Adapter for mounting a microphone flush with the external surface of the skin of a pressurized aircraft  
[NASA-CASE-FRC-11072-1] c 05 N83-27975
- SHOCK WAVES**
- Shock tube powder dispersing apparatus Patent  
[NASA-CASE-XLE-04946] c 17 N71-24911
- Shock wave convergence apparatus  
[NASA-CASE-MFS-20890] c 14 N72-22439
- Synthesis of superconducting compounds by explosive compaction of powders  
[NASA-CASE-MFS-20861-1] c 18 N73-32437
- Shock position sensor for supersonic inlets --- measuring pressure in the throat of a supersonic inlet  
[NASA-CASE-LEW-11915-1] c 35 N76-14431
- Impact tolerant material  
[NASA-CASE-LAR-12887-3] c 24 N90-21822
- SHOES**
- Jet shoes  
[NASA-CASE-XLA-08491] c 05 N69-21380



**SHORT CIRCUITS**

- Protection for energy conversion systems  
[NASA-CASE-XGS-04808] c 03 N69-25146
- Triode thermionic energy converter  
[NASA-CASE-XLE-01015] c 03 N69-39898
- Analogue to digital converter tester Patent  
[NASA-CASE-XLA-06713] c 14 N71-28991
- Apparatus including a plurality of spaced transformers for locating short circuits in cables  
[NASA-CASE-KSC-10899-1] c 33 N79-18193
- Test apparatus for locating shorts during assembly of electrical buses  
[NASA-CASE-ARC-11116-1] c 33 N82-24420
- Thermal switch disc for short circuit protection of batteries  
[NASA-CASE-MSC-21428-1] c 33 N91-14537

**SHOT PEENING**

- Method of peening and portable peening gun  
[NASA-CASE-MFS-23047-1] c 37 N76-18454

**SHOULDERS**

- Shoulder and hip joint for hard space suits  
[NASA-CASE-ARC-11543-1] c 54 N86-28620
- Shoulder and hip joints for hard space suits and the like  
[NASA-CASE-ARC-11534-1] c 54 N86-29507

**SHROUDED NOZZLES**

- Two dimensional wedge/translating shroud nozzle  
[NASA-CASE-LAR-11919-1] c 07 N78-27121

**SHROUDED TURBINES**

- Composite seal for turbomachinery --- backings for turbine engine shrouds  
[NASA-CASE-LEW-12131-1] c 37 N79-18318
- Gas path seal  
[NASA-CASE-NPO-12131-3] c 37 N80-18400
- Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-2] c 37 N80-26658
- Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c 18 N83-20996
- Thermal stress minimized, two component, turbine shroud seal  
[NASA-CASE-LEW-14212-1] c 37 N88-23978

**SHROUDS**

- Composite powerplant and shroud therefor Patent  
[NASA-CASE-XLA-01043] c 28 N71-10780
- Composite seal for turbomachinery --- backings for turbine engine shrouds  
[NASA-CASE-LEW-12131-1] c 37 N79-18318
- Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-3] c 37 N82-19540
- Active clearance control system for a turbomachine  
[NASA-CASE-LEW-12938-1] c 07 N82-32366
- Method of fabricating an abradable gas path seal  
[NASA-CASE-LEW-13269-2] c 37 N84-22957

**SHUTTERS**

- High speed shutter --- electrically actuated ribbon loop for shuttering optical or fluid passageways  
[NASA-CASE-ARC-10516-1] c 70 N74-21300

**SHUTTLE DERIVED VEHICLES**

- Three stage rocket vehicle with parallel staging  
[NASA-CASE-MFS-25878-1] c 18 N84-27787

**SIDE INLETS**

- Low-drag ground vehicle particularly suited for use in safely transporting livestock  
[NASA-CASE-FRC-11058-1] c 85 N82-33288

**SIDEBANDS**

- Phase-locked loop with sideband rejecting properties Patent  
[NASA-CASE-XNP-02723] c 07 N70-41680
- Method and means for generation of tunable laser sidebands in the far-infrared region  
[NASA-CASE-NPO-16497-1-CU] c 36 N87-25567

**SIDELobe REDUCTION**

- Dual mode horn antenna Patent  
[NASA-CASE-XNP-01057] c 07 N71-15907
- Video processor for air traffic control beacon system  
[NASA-CASE-KSC-11155-1] c 04 N86-19304

**SIGNAL ANALYSIS**

- Signal detection and tracking apparatus Patent  
[NASA-CASE-XGS-03502] c 10 N71-20852
- Method and apparatus for a single channel digital communications system --- synchronization of received PCM signal by digital correlation with reference signal  
[NASA-CASE-NPO-11302-2] c 32 N74-10132
- Differential phase shift keyed signal resolver  
[NASA-CASE-MSC-14066-1] c 33 N74-27705
- Correlation type phase detector --- with time correlation integrator for frequency multiplexed signals  
[NASA-CASE-GSC-11744-1] c 33 N75-26243
- Real time analysis of voiced sounds  
[NASA-CASE-NPO-13465-1] c 32 N76-31372
- Digital plus analog output encoder  
[NASA-CASE-GSC-12115-1] c 62 N76-31946
- Serial data correlator/code translator  
[NASA-CASE-KSC-11025-1] c 32 N83-13323

- Video processor for air traffic control beacon system  
[NASA-CASE-KSC-11155-1] c 04 N86-19304
- Acoustic emission frequency discrimination  
[NASA-CASE-MSC-20467-1] c 35 N88-23966

**SIGNAL ANALYZERS**

- System for monitoring signal amplitude ranges  
[NASA-CASE-XMS-04061-1] c 09 N69-39885
- Sampled data controller Patent  
[NASA-CASE-GSC-10554-1] c 08 N71-29033
- Family of frequency to amplitude converters  
[NASA-CASE-MSC-12395] c 09 N72-25257
- Apparatus for statistical time-series analysis of electrical signals  
[NASA-CASE-MSC-12428-1] c 10 N73-25240
- Pulse stretcher for narrow pulses  
[NASA-CASE-MSC-14130-1] c 33 N74-32711
- Electronic optical transfer function analyzer  
[NASA-CASE-MFS-21672-1] c 74 N76-19935
- Speech analyzer  
[NASA-CASE-GSC-11898-1] c 32 N77-30309

**SIGNAL DETECTION**

- Position location system and method Patent  
[NASA-CASE-GSC-10087-2] c 21 N71-13958
- Method of detecting impending saturation of magnetic cores  
[NASA-CASE-ERC-10089] c 23 N72-17747
- Anti-multipath digital signal detector  
[NASA-CASE-LAR-11827-1] c 32 N77-10392
- Multiple rate digital command detection system with range clean-up capability  
[NASA-CASE-NPO-13753-1] c 32 N77-20289
- Automatic communication signal monitoring system  
[NASA-CASE-NPO-13941-1] c 32 N79-10262
- Apparatus and method for stabilized phase detection for binary signal tracking loops  
[NASA-CASE-MSC-16461-1] c 33 N79-11313
- Method and apparatus for receiving and tracking phase modulated signals  
[NASA-CASE-MSC-16170-2] c 32 N84-27952
- Vibration analyzer  
[NASA-CASE-MSC-21408-1] c 37 N91-14607
- Real time pre-detection dynamic range compression  
[NASA-CASE-NPO-18098-1-CU] c 74 N91-23890
- Multiple symbol differential detection  
[NASA-CASE-NPO-17896-1-CU] c 32 N91-27439
- Integrated filter and detector array for spectral imaging  
[NASA-CASE-NPO-18317-1-CU] c 74 N91-32926

**SIGNAL DETECTORS**

- Surface roughness detector Patent  
[NASA-CASE-XLA-00203] c 14 N70-34161
- Pulse amplitude and width detector Patent  
[NASA-CASE-XMF-06519] c 09 N71-12519
- System for monitoring the presence of neutrals in a stream of ions Patent  
[NASA-CASE-XNP-02592] c 24 N71-20518
- Digital modulator and demodulator Patent  
[NASA-CASE-ERC-10041] c 08 N71-29138
- Coal-shale interface detection system  
[NASA-CASE-MFS-23720-2] c 43 N80-14423
- Pulse transducer with artifact signal attenuator --- heart rate sensors  
[NASA-CASE-FRC-11012-1] c 52 N80-23969
- Self-calibrating threshold detector  
[NASA-CASE-MSC-16370-1] c 35 N81-19427
- Triac failure detector  
[NASA-CASE-MFS-25607-1] c 33 N83-34190
- Method and apparatus for detecting laminar flow separation and reattachment  
[NASA-CASE-LAR-13952-1-SB] c 34 N90-19534

**SIGNAL DISTORTION**

- Low distortion receiver for bi-level baseband PCM waveforms  
[NASA-CASE-MSC-14557-1] c 32 N76-16249

**SIGNAL ENCODING**

- Adaptive compression of communication signals Patent  
[NASA-CASE-XLA-03076] c 07 N71-11266
- Self-calibrating threshold detector  
[NASA-CASE-MSC-16370-1] c 35 N81-19427
- Random digital encryption secure communication system  
[NASA-CASE-MSC-16462-1] c 32 N82-31583
- Trellis coded modulation for transmission over fading mobile satellite channel  
[NASA-CASE-NPO-16904-2-CU] c 32 N91-14523

**SIGNAL GENERATORS**

- Plural recorder system  
[NASA-CASE-XMS-06949] c 09 N69-21467
- Signal generator  
[NASA-CASE-XNP-05612] c 09 N69-21468
- Means for generating a sync signal in an FM communication system Patent  
[NASA-CASE-XNP-10830] c 07 N71-11281
- Array phasing device Patent  
[NASA-CASE-ERC-10046] c 10 N71-18722

- Sidereal frequency generator Patent  
[NASA-CASE-XGS-02610] c 14 N71-23174
- Controllers Patent  
[NASA-CASE-XMS-07487] c 15 N71-23255
- Signal ratio system utilizing voltage controlled oscillators Patent  
[NASA-CASE-XMF-04367] c 09 N71-23545
- Signal processing apparatus for multiplex transmission Patent  
[NASA-CASE-NPO-10388] c 07 N71-24622
- Multialarm summary alarm Patent  
[NASA-CASE-XLE-03061-1] c 10 N71-24798
- Adaptive system and method for signal generation Patent  
[NASA-CASE-GSC-11367] c 10 N71-26374
- Voltage dropout sensor Patent  
[NASA-CASE-KSC-10020] c 10 N71-27338
- System for controlling the operation of a variable signal device  
[NASA-CASE-NPO-11064] c 07 N72-11150
- Digital function generator  
[NASA-CASE-NPO-11104] c 08 N72-22165
- Hall effect transducer  
[NASA-CASE-LAR-10620-1] c 09 N72-25255
- Gunn-type solid state devices  
[NASA-CASE-XER-07895] c 26 N72-25679
- Audio frequency marker system  
[NASA-CASE-NPO-11147] c 14 N72-27408
- Digital servo control of random sound test excitation --- in reverberant acoustic chamber  
[NASA-CASE-NPO-11623-1] c 71 N74-31148
- Signal conditioner test set  
[NASA-CASE-KSC-10750-1] c 35 N75-12270
- System for generating timing and control signals  
[NASA-CASE-NPO-13125-1] c 33 N75-19519
- Pseudo-noise test set for communication system evaluation --- test signals  
[NASA-CASE-MFS-22671-1] c 35 N75-21582
- NDIR gas analyzer based on absorption modulation ratios for known and unknown samples  
[NASA-CASE-ARC-10802-1] c 35 N75-30502
- Twin-capacitive shaft angle encoder with analog output signal  
[NASA-CASE-ARC-10897-1] c 33 N77-31404
- Apparatus for providing a servo drive signal in a high-speed stepping interferometer  
[NASA-CASE-NPO-13569-2] c 35 N79-14348
- Versatile LDV burst simulator  
[NASA-CASE-LAR-11859-1] c 35 N79-14349
- Underwater seismic source --- for petroleum exploration  
[NASA-CASE-NPO-14255-1] c 46 N79-23555
- Frequency translating phase conjugation circuit for active retrodirective antenna array --- microwave transmission  
[NASA-CASE-NPO-14536-1] c 32 N81-14185
- Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c 07 N81-19116
- Motor power factor controller with a reduced voltage starter  
[NASA-CASE-MFS-25586-1] c 33 N82-11360
- Combinational logic for generating gate drive signals for phase control rectifiers  
[NASA-CASE-MFS-25208-1] c 33 N83-10345
- Adaptive reference voltage generator for firing angle control of line-commutated inverters  
[NASA-CASE-MFS-25215-1] c 33 N83-31953
- Magnetic heading reference  
[NASA-CASE-LAR-12638-1] c 04 N84-14132
- Brushless DC motor control system responsive to control signals generated by a computer or the like  
[NASA-CASE-NPO-16420-1] c 33 N86-20681

**SIGNAL MEASUREMENT**

- Amplifier for measuring low-level signals in the presence of high common mode voltage  
[NASA-CASE-MFS-25868-1] c 33 N86-20670

**SIGNAL MIXING**

- Signal multiplexer  
[NASA-CASE-XGS-01110] c 07 N69-24334
- Baseband signal combiner for large aperture antenna array  
[NASA-CASE-NPO-14641-1] c 32 N81-29308

**SIGNAL PROCESSING**

- Adaptive compression of communication signals Patent  
[NASA-CASE-XLA-03076] c 07 N71-11266
- Television signal scan rate conversion system Patent  
[NASA-CASE-XMS-07168] c 07 N71-11300
- Difference circuit Patent  
[NASA-CASE-XNP-08274] c 10 N71-13537
- Correlation function apparatus Patent  
[NASA-CASE-XNP-00746] c 07 N71-21476
- Sidereal frequency generator Patent  
[NASA-CASE-XGS-02610] c 14 N71-23174
- Feedback integrator with grounded capacitor Patent  
[NASA-CASE-XAC-10607] c 10 N71-23669

- Signal processing apparatus for multiplex transmission Patent  
 [NASA-CASE-NPO-10388] c 07 N71-24622  
 Television signal processing system Patent  
 [NASA-CASE-NPO-10140] c 07 N71-24742  
 Electronic scanning of 2-channel monopulse patterns Patent  
 [NASA-CASE-GSC-10299-1] c 09 N71-24804  
 Remodulator filter Patent  
 [NASA-CASE-NPO-10198] c 09 N71-24806  
 Video sync processor Patent  
 [NASA-CASE-KSC-10002] c 10 N71-25865  
 Transient video signal recording with expanded playback Patent  
 [NASA-CASE-ARC-10003-1] c 09 N71-25866  
 Phase multiplying electronic scanning system Patent  
 [NASA-CASE-NPO-10302] c 10 N71-26142  
 Variable frequency nuclear magnetic resonance spectrometer Patent  
 [NASA-CASE-XNP-09830] c 14 N71-26266  
 Digital modulator and demodulator Patent  
 [NASA-CASE-ERC-10041] c 08 N71-29138  
 Digital pulse width selection circuit Patent  
 [NASA-CASE-XLA-07788] c 09 N71-29139  
 Phase shift circuit apparatus  
 [NASA-CASE-ARC-10269-1] c 10 N72-16172  
 Contourograph system for monitoring electrocardiograms  
 [NASA-CASE-MSC-13407-1] c 10 N72-20225  
 Recorder using selective noise filter  
 [NASA-CASE-ERC-10112] c 07 N72-21119  
 Logarithmic function generator utilizing an exponentially varying signal in an inverse manner  
 [NASA-CASE-ERC-10267] c 09 N72-23173  
 Flexible computer accessed telemetry  
 [NASA-CASE-NPO-11358] c 07 N72-25172  
 Data processor with conditionally supplied clock signals  
 [NASA-CASE-GSC-10975-1] c 08 N73-13187  
 Multichannel telemetry system  
 [NASA-CASE-NPO-11572] c 07 N73-16121  
 Measurement system  
 [NASA-CASE-MFS-20658-1] c 14 N73-30386  
 Digital to analog conversion apparatus  
 [NASA-CASE-MSC-12458-1] c 08 N73-32081  
 Fluid pressure amplifier and system  
 [NASA-CASE-LAR-10868-1] c 33 N74-11050  
 Low level signal limiter  
 [NASA-CASE-XLE-04791] c 32 N74-22096  
 Miniature multichannel biotelemetry system  
 [NASA-CASE-NPO-13065-1] c 52 N74-26625  
 Apparatus and method for processing Korotkov sounds --- for blood pressure measurement  
 [NASA-CASE-MSC-13999-1] c 52 N74-26626  
 Pulse stretcher for narrow pulses  
 [NASA-CASE-MSC-14130-1] c 33 N74-32711  
 Continuous Fourier transform method and apparatus --- for the analysis of simultaneous analog signal components  
 [NASA-CASE-ARC-10466-1] c 60 N75-13539  
 Signal conditioning circuit apparatus --- with constant input impedance  
 [NASA-CASE-ARC-10348-1] c 33 N75-19518  
 Television noise reduction device  
 [NASA-CASE-MSC-12607-1] c 32 N75-21485  
 Isolated output system for a class D switching-mode amplifier  
 [NASA-CASE-MFS-21616-1] c 33 N75-30429  
 Compact-bi-phase pulse coded modulation decoder  
 [NASA-CASE-KSC-10834-1] c 33 N76-14371  
 Filtering device --- removing electromagnetic noise from voice communication signals  
 [NASA-CASE-MFS-22729-1] c 32 N76-21366  
 System for measuring Reynolds in a turbulently flowing fluid --- signal processing  
 [NASA-CASE-ARC-10755-2] c 34 N76-27517  
 Three phase full wave dc motor decoder  
 [NASA-CASE-GSC-11824-1] c 33 N77-26386  
 Apparatus for determining thermophysical properties of test specimens  
 [NASA-CASE-LAR-11883-1] c 09 N77-27131  
 Analog to digital converter for two-dimensional radiant energy array computers  
 [NASA-CASE-GSC-11839-3] c 60 N77-32731  
 Hearing aid malfunction detection system  
 [NASA-CASE-MSC-14916-1] c 33 N78-10375  
 Swept group delay measurement  
 [NASA-CASE-NPO-13909-1] c 33 N78-25319  
 Quadrature demodulation  
 [NASA-CASE-GSC-12137-1] c 33 N78-32338  
 Bit error rate measurement above and below bit rate tracking threshold  
 [NASA-CASE-MSC-12743-1] c 32 N79-10263  
 Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
 [NASA-CASE-NPO-14525-1] c 32 N79-19195  
 Electrochemical detection device --- for use in microbiology  
 [NASA-CASE-LAR-11922-1] c 25 N79-24073  
 Scannable beam forming interferometer antenna array system  
 [NASA-CASE-GSC-12365-1] c 32 N80-28578  
 System for plotting subsoil structure and method therefor  
 [NASA-CASE-NPO-14191-1] c 31 N80-32584  
 CCD correlated quadruple sampling processor  
 [NASA-CASE-NPO-14426-1] c 33 N81-27396  
 Interleaving device  
 [NASA-CASE-GSC-12111-2] c 33 N81-29342  
 Reconfiguring redundancy management  
 [NASA-CASE-MSC-18498-1] c 60 N82-29013  
 Discriminator aided phase lock acquisition for suppressed carrier signals  
 [NASA-CASE-NPO-14311-1] c 33 N82-29539  
 Serial data correlator/code translator  
 [NASA-CASE-KSC-11025-1] c 32 N83-13323  
 Interferometric angle monitor  
 [NASA-CASE-GSC-12614-1] c 74 N83-32577  
 Real time pressure signal system for a rotary engine  
 [NASA-CASE-LEW-13622-1] c 07 N84-22559  
 Digital interface for bi-directional communication between a computer and a peripheral device  
 [NASA-CASE-MSC-20258-1] c 60 N84-28492  
 Pipelined digital SAR azimuth correlator using hybrid FFT-transversal filter  
 [NASA-CASE-NPO-15519-1] c 32 N84-34651  
 Optical stereo video signal processor  
 [NASA-CASE-MFS-25752-1] c 74 N86-21348  
 Method and apparatus for telemetry adaptive bandwidth compression  
 [NASA-CASE-MSC-20821-1] c 17 N87-25348  
 Processing circuit with asymmetry corrector and convolutional encoder for digital data  
 [NASA-CASE-MSC-20187-1] c 33 N87-25531  
 Frequency domain laser velocimeter signal processor  
 [NASA-CASE-LAR-13552-1-CU] c 33 N89-14385  
 Digital carrier demodulator employing components working beyond normal limits  
 [NASA-CASE-NPO-17628-1-CU] c 32 N89-28684  
 Network of dedicated processors for finding lowest-cost map path  
 [NASA-CASE-NPO-17716-1-CU] c 62 N90-10608  
 Doppler radar with multiphase modulation of transmitted and reflected signal  
 [NASA-CASE-MSC-18808-1] c 32 N90-20280  
 Magneto acoustic emission apparatus for testing materials for embrittlement  
 [NASA-CASE-LAR-13817-1] c 26 N90-21170  
 Balanced bridge feedback control system  
 [NASA-CASE-NPO-17430-1-CU] c 33 N90-21951  
 Zero-G phase detector and separator  
 [NASA-CASE-LEW-14844-1] c 35 N90-22024  
 Quantitative surface temperature measurement using two-color thermographic phosphors and video equipment  
 [NASA-CASE-LAR-13740-1] c 35 N90-22770  
 Three-dimensional laser velocimeter simultaneity detector  
 [NASA-CASE-ARC-11876-1] c 36 N90-25340  
 Closed-loop autonomous docking system  
 [NASA-CASE-MFS-28421-1] c 18 N90-26861  
 Multistage estimation of received carrier signal parameters under very high dynamic conditions of the receiver  
 [NASA-CASE-NPO-17911-1-CU] c 32 N90-27016  
 Real-time data compression of broadcast video signals  
 [NASA-CASE-LEW-14945-1] c 32 N91-13598  
 Passive fetal monitoring sensor  
 [NASA-CASE-LAR-14088-1] c 35 N91-13686  
 Auto and hetero-associative memory using a 2-D optical logic gate  
 [NASA-CASE-NPO-17997-1-CU] c 60 N91-13888  
 Efficient detection and signal parameter estimation with application to high dynamic GPS receiver  
 [NASA-CASE-NPO-17820-1-CU] c 04 N91-14321  
 Real time pre-detection dynamic range compression  
 [NASA-CASE-NPO-18098-1-CU] c 74 N91-23690  
 Doppler-corrected differential detection system  
 [NASA-CASE-NPO-16987-1-CU] c 32 N91-25316  
 Phase ambiguity resolution for offset QPSK modulation systems  
 [NASA-CASE-NPO-17853-1-CU] c 32 N91-25318  
 Radiation sensitive area detection device and method  
 [NASA-CASE-MFS-28563-1] c 35 N91-25388  
 Multiple symbol differential detection  
 [NASA-CASE-NPO-17896-1-CU] c 32 N91-27439  
 Fiber optic frequency transfer link  
 [NASA-CASE-NPO-17703-1-CU] c 74 N91-27957  
**SIGNAL RECEPTION**  
 Radar ranging receiver Patent  
 [NASA-CASE-XNP-00748] c 07 N70-36911  
 Reflectometer for receiver input impedance match measurement Patent  
 [NASA-CASE-XNP-10843] c 07 N71-11267  
 Diversity receiving system with diversity phase lock Patent  
 [NASA-CASE-XGS-01222] c 10 N71-20841  
 Signal detection and tracking apparatus Patent  
 [NASA-CASE-XGS-03502] c 10 N71-20852  
 Optimum predetection diversity receiving system Patent  
 [NASA-CASE-XGS-00740] c 07 N71-23098  
 Decoder system Patent  
 [NASA-CASE-NPO-10118] c 07 N71-24741  
 Antenna array phase quadrature tracking system Patent  
 [NASA-CASE-MSC-12205-1] c 07 N71-27056  
 Electricity measurement devices employing liquid crystalline materials  
 [NASA-CASE-ERC-10275] c 26 N72-25680  
 Filter for third order phase locked loops  
 [NASA-CASE-NPO-11941-1] c 10 N73-27171  
 Ferrofluidic solenoid  
 [NASA-CASE-NPO-11738-1] c 09 N73-30185  
 Scan converting video tape recorder  
 [NASA-CASE-NPO-10166-2] c 35 N76-16391  
 Faraday rotation measurement method and apparatus  
 [NASA-CASE-NPO-14839-1] c 35 N82-15381  
 Method and apparatus for receiving and tracking phase modulated signals  
 [NASA-CASE-MSC-16170-2] c 32 N84-27952  
 Single frequency multitransmitter telemetry  
 [NASA-CASE-LAR-13006-1] c 17 N87-16863  
**SIGNAL REFLECTION**  
 Reflectometer for receiver input impedance match measurement Patent  
 [NASA-CASE-XNP-10843] c 07 N71-11267  
 Reflex feed system for dual frequency antenna with frequency cutoff means  
 [NASA-CASE-NPO-14022-1] c 32 N78-31321  
**SIGNAL STABILIZATION**  
 Linear accelerator frequency control system Patent  
 [NASA-CASE-XGS-05441] c 10 N71-22962  
 Digital modulator and demodulator Patent  
 [NASA-CASE-ERC-10041] c 08 N71-29138  
 System for interference signal nulling by polarization adjustment  
 [NASA-CASE-NPO-13140-1] c 32 N75-24982  
 Fiber optic transmission line stabilization apparatus and method  
 [NASA-CASE-NPO-15036-1] c 74 N82-19029  
**SIGNAL TO NOISE RATIOS**  
 System for improving signal-to-noise ratio of a communication signal Patent Application  
 [NASA-CASE-MSC-12259-1] c 07 N70-12616  
 Radar ranging receiver Patent  
 [NASA-CASE-XNP-00748] c 07 N70-36911  
 Phase detector assembly Patent  
 [NASA-CASE-XMF-00701] c 09 N70-40272  
 Signal-to-noise ratio estimating by taking ratio of mean and standard deviation of integrated signal samples Patent  
 [NASA-CASE-XNP-05254] c 07 N71-20791  
 Signal ratio system utilizing voltage controlled oscillators Patent  
 [NASA-CASE-XMF-04367] c 09 N71-23545  
 Recorder using selective noise filter  
 [NASA-CASE-ERC-10112] c 07 N72-21119  
 Parametric amplifiers with idler circuit feedback  
 [NASA-CASE-LAR-10253-1] c 09 N72-25258  
 System for improving signal-to-noise ratio of a communication signal  
 [NASA-CASE-MSC-12259-2] c 07 N72-33146  
 Signal-to-noise ratio determination circuit  
 [NASA-CASE-GSC-11239-1] c 10 N73-25241  
 Gated compressor, distortionless signal limiter  
 [NASA-CASE-NPO-11820-1] c 32 N74-19788  
 Direct drive robotic hand  
 [NASA-CASE-NPO-17917-1-CU] c 37 N90-26339  
**SIGNAL TRANSMISSION**  
 Time division multiplex system  
 [NASA-CASE-XGS-05918] c 07 N69-39974  
 Apparatus for coupling a plurality of ungrounded circuits to a grounded circuit Patent  
 [NASA-CASE-XAC-00086] c 09 N70-33182  
 Bi-carrier demodulator with modulation Patent  
 [NASA-CASE-XMF-01160] c 07 N71-11298  
 Bi-polar phase detector and corrector for split phase PCM data signals Patent  
 [NASA-CASE-XGS-01590] c 07 N71-12392  
 Signal-to-noise ratio estimating by taking ratio of mean and standard deviation of integrated signal samples Patent  
 [NASA-CASE-XNP-05254] c 07 N71-20791  
 Elimination of frequency shift in a multiplex communication system Patent  
 [NASA-CASE-XNP-01306] c 07 N71-20814

- Adaptive tracking notch filter system Patent  
[NASA-CASE-XMF-01892] c 10 N71-22986
- Passive synchronized spike generator with high input impedance and low output impedance and capacitor power supply Patent  
[NASA-CASE-XGS-03632] c 09 N71-23311
- Junction range finder  
[NASA-CASE-KSC-10108] c 14 N73-25461
- Television multiplexing system  
[NASA-CASE-KSC-10654-1] c 07 N73-30115
- Controlled oscillator system with a time dependent output frequency  
[NASA-CASE-NPO-11962-1] c 33 N74-10194
- Pulse code modulated signal synchronizer  
[NASA-CASE-MS-C-12462-1] c 32 N74-20809
- Pulse code modulated signal synchronizer  
[NASA-CASE-MS-C-12494-1] c 32 N74-20810
- Digital transmitter for data bus communications system  
[NASA-CASE-MS-C-14558-1] c 32 N75-21486
- Modulator for tone and binary signals --- phase of modulation of tone and binary signals on carrier waves in communication systems  
[NASA-CASE-GSC-11743-1] c 32 N75-24981
- Method and apparatus for background signal reduction in opto-acoustic absorption measurement  
[NASA-CASE-NPO-13683-1] c 35 N77-14411
- Automatic transponder --- measurement of the internal delay time of a transponder  
[NASA-CASE-GSC-12075-1] c 32 N77-31350
- Fiber optic multiplex optical transmission system  
[NASA-CASE-KSC-11047-1] c 74 N78-14889
- Telephone multiline signaling using common signal pair  
[NASA-CASE-KSC-11023-1] c 32 N79-23310
- Precise RF timing signal distribution to remote stations --- fiber optics  
[NASA-CASE-NPO-14749-1] c 32 N81-14186
- Digital numerically controlled oscillator  
[NASA-CASE-MS-C-16747-1] c 33 N81-17349
- High stability amplifier  
[NASA-CASE-GSC-12646-1] c 33 N83-34191
- Navigation system and method  
[NASA-CASE-GSC-12508-1] c 04 N84-22546
- Doppler radar having phase modulation of both transmitted and reflected return signals  
[NASA-CASE-MS-C-18675-1] c 32 N84-22820
- Doppler radar with multiphase modulation of transmitted and reflected signal  
[NASA-CASE-MS-C-18808-1] c 32 N90-20280
- Emergency locating transmitter  
[NASA-CASE-GSC-12821-2] c 33 N91-31530
- SIGNATURE ANALYSIS**  
Multispectral imaging and analysis system --- using charge coupled devices and linear arrays  
[NASA-CASE-NPO-13691-1] c 43 N79-17288
- SILANES**  
Elastomeric silazane polymers and process for preparing the same Patent  
[NASA-CASE-XMF-04133] c 06 N71-20717
- Process for preparation of dianilinosilanes Patent  
[NASA-CASE-XMF-06409] c 06 N71-23230
- Process for preparation of high-molecular-weight polyaryloxysilanes Patent  
[NASA-CASE-XMF-08674] c 06 N71-28807
- Oxygen post-treatment of plastic surface coated with plasma polymerized silicon-containing monomers  
[NASA-CASE-ARC-10915-2] c 27 N79-18052
- Thermal reactor --- liquid silicon production from silane gas  
[NASA-CASE-NPO-14369-1] c 44 N83-10501
- Process for producing tris (n-methylamino) methylsilane  
[NASA-CASE-MFS-25721-1] c 25 N85-21280
- Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-1-SB] c 27 N88-29040
- SILICA GEL**  
Gels as battery separators for soluble electrode cells  
[NASA-CASE-LEW-12364-1] c 44 N77-22606
- Procedure to prepare transparent silica gels  
[NASA-CASE-LAR-13476-1-CU] c 76 N87-29360
- SILICA GLASS**  
Non-toxic invert analog glass compositions of high modulus  
[NASA-CASE-HQN-10328-2] c 27 N82-29454
- High modulus rare earth and beryllium containing silicate glass compositions --- for glass reinforcing fibers  
[NASA-CASE-HQN-10595-1] c 27 N82-29455
- SILICATES**  
Alkali-metal silicate protective coating  
[NASA-CASE-XGS-04119] c 18 N69-39979
- Alkali-metal silicate binders and methods of manufacture  
[NASA-CASE-GSC-12303-1] c 24 N79-31347
- SILICIDES**  
Silicide coatings for refractory metals Patent  
[NASA-CASE-XLE-10910] c 18 N71-29040
- Fused silicide coatings containing discrete particles for protecting niobium alloys --- used in space shuttle thermal protection systems and turbine engine components  
[NASA-CASE-LEW-11179-1] c 27 N76-16229
- Method of forming three-dimensional semiconductor structures  
[NASA-CASE-NPO-17835-1-CU] c 76 N90-27518
- SILICON**  
Method of forming thin window drifted silicon charged particle detector Patent  
[NASA-CASE-XLE-00808] c 24 N71-10560
- Gd or Sm doped silicon semiconductor composition Patent  
[NASA-CASE-XLE-10715] c 26 N71-23292
- Silicon solar cell with cover glass bonded to cell by metal pattern Patent  
[NASA-CASE-XLE-08569] c 03 N71-23449
- Covered silicon solar cells and method of manufacture --- with polymeric films  
[NASA-CASE-LEW-11065-2] c 44 N76-14600
- Method of controlling defect orientation in silicon crystal ribbon growth  
[NASA-CASE-NPO-13918-1] c 76 N79-11920
- Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c 26 N80-14229
- Method of producing silicon --- gas phase reactor multiple injector liquid feed system  
[NASA-CASE-NPO-14382-1] c 31 N80-18231
- System for slicing silicon wafers  
[NASA-CASE-NPO-14406-1] c 37 N80-29703
- Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c 33 N81-19389
- Scriber for silicon wafers  
[NASA-CASE-NPO-15539-1] c 37 N82-11469
- Method of protecting a surface with a silicon-slurry/aluminide coating --- coatings for gas turbine engine blades and vanes  
[NASA-CASE-LEW-13343-1] c 27 N82-28441
- Thermal reactor --- liquid silicon production from silane gas  
[NASA-CASE-NPO-14369-1] c 44 N83-10501
- Process and apparatus for growing a crystal ribbon  
[NASA-CASE-NPO-15629-1] c 76 N84-35113
- Increased voltage photovoltaic cell  
[NASA-CASE-NPO-16155-1] c 44 N85-30475
- Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267
- Oxygen diffusion barrier coating  
[NASA-CASE-LAR-13474-1-SB] c 26 N87-25455
- Silicon containing electroconductive polymers and structures made therefrom  
[NASA-CASE-NPO-17826-1-CU] c 27 N90-26952
- Method of forming three-dimensional semiconductor structures  
[NASA-CASE-NPO-17835-1-CU] c 76 N90-27518
- Ribbon growing method and apparatus  
[NASA-CASE-NPO-16306-1-CU] c 76 N91-15898
- Thermal treatment of silicon integrated circuit chips to prevent and heal voids in aluminum metallization  
[NASA-CASE-NPO-17678-1-CU] c 76 N91-28014
- Pressure transducer and system for cryogenic environments  
[NASA-CASE-LAR-14579-1] c 35 N91-28546
- SILICON ALLOYS**  
Annealing group III-V compound doped silicon-germanium alloy for improved thermo-electric conversion efficiency  
[NASA-CASE-NPO-17259-1-CU] c 76 N90-19884
- SILICON CARBIDES**  
A method for the deposition of beta-silicon carbide by isopitaxy  
[NASA-CASE-ERC-10120] c 26 N69-33482
- Production of high purity silicon carbide Patent  
[NASA-CASE-XLA-00158] c 26 N70-36805
- Apparatus for producing high purity silicon carbide crystals Patent  
[NASA-CASE-XLA-02057] c 26 N70-40015
- Process for fabricating SiC semiconductor devices  
[NASA-CASE-LEW-12094-1] c 76 N76-25049
- Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt  
[NASA-CASE-NPO-13969-1] c 76 N79-23798
- High temperature silicon carbide impregnated insulating fabrics  
[NASA-CASE-MS-C-18832-1] c 27 N83-18908
- Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267
- Method of preparing fiber reinforced ceramic material  
[NASA-CASE-LEW-14392-1] c 27 N87-28656
- Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-1-SB] c 27 N88-29040
- Process for the controlled growth of single-crystal films of silicon carbide polytypes on silicon carbide wafers  
[NASA-CASE-LEW-15222-1] c 76 N91-26966
- Process for the homoepitaxial growth of single-crystal silicon carbide films on silicon carbide wafers  
[NASA-CASE-LEW-15223-1] c 76 N91-26967
- Composite flexible blanket insulation  
[NASA-CASE-NPO-11907-1-NP] c 24 N91-31236
- SILICON COMPOUNDS**  
Method of making a silicon semiconductor device Patent  
[NASA-CASE-XLE-02792] c 26 N71-10607
- Polymerizable disilanois having in-chain perfluoroalkyl groups  
[NASA-CASE-MFS-20979-2] c 06 N73-32030
- Infusible silazane polymer and process for producing same --- protective coatings  
[NASA-CASE-XMF-02526-1] c 27 N79-21190
- Silicon-slurry/aluminide coating --- protecting gas turbine engine vanes and blades  
[NASA-CASE-LEW-13343] c 26 N83-31795
- Fabrication of nanometer single crystal metallic CoSi<sub>2</sub> structures on Si  
[NASA-CASE-NPO-17736-1-CU] c 76 N90-17455
- SILICON CONTROLLED RECTIFIERS**  
Protection for energy conversion systems  
[NASA-CASE-XGS-04808] c 03 N69-25146
- Transient-compensated SCR inverter  
[NASA-CASE-XLA-08507] c 09 N69-39984
- Reversible ring counter employing cascaded single SCR stages Patent  
[NASA-CASE-XGS-01473] c 09 N71-10673
- SCR blocking pulse gate amplifier Patent  
[NASA-CASE-XLA-07497] c 09 N71-12514
- Combinational logic for generating gate drive signals for phase control rectifiers  
[NASA-CASE-MFS-25208-1] c 33 N83-10345
- SILICON DIOXIDE**  
Intermittent type silica gel adsorption refrigerator Patent  
[NASA-CASE-XNP-00920] c 15 N71-15906
- Nose cone mounted heat resistant antenna Patent  
[NASA-CASE-XMS-04312] c 07 N71-22984
- Method and apparatus for stable silicon dioxide layers on silicon grown in silicon nitride ambient  
[NASA-CASE-ERC-10073-1] c 24 N74-19769
- Silica reusable surface insulation  
[NASA-CASE-ARC-10721-1] c 27 N76-22376
- Two-component ceramic coating for silica insulation  
[NASA-CASE-MS-C-14270-1] c 27 N76-22377
- Transmitting and reflecting diffuser --- using ultraviolet grade fused silica coatings  
[NASA-CASE-LAR-10385-3] c 74 N78-15879
- Field effect transistor and method of construction thereof  
[NASA-CASE-MFS-23312-1] c 33 N78-27326
- Fibrous refractory composite insulation --- shielding reusable spacecraft  
[NASA-CASE-ARC-11169-1] c 24 N79-24062
- Attachment system for silica tiles --- thermal protection for space shuttle orbiter  
[NASA-CASE-MS-C-18741-1] c 27 N82-29456
- Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-2] c 33 N83-24763
- Apparatus and method for heating a material in a transparent ampoule --- crystal growth  
[NASA-CASE-MFS-25436-1] c 27 N83-36220
- SILICON FILMS**  
A method for the deposition of beta-silicon carbide by isopitaxy  
[NASA-CASE-ERC-10120] c 26 N69-33482
- Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c 35 N82-31659
- Ingot slicing machine and method  
[NASA-CASE-NPO-15483-1] c 37 N85-21650
- SILICON JUNCTIONS**  
Radiation resistant silicon semiconductor devices Patent  
[NASA-CASE-XGS-07801] c 09 N71-12513
- SILICON NITRIDES**  
Method and apparatus for stable silicon dioxide layers on silicon grown in silicon nitride ambient  
[NASA-CASE-ERC-10073-1] c 24 N74-19769
- Silicon nitride coated, plastic covered solar cell  
[NASA-CASE-LEW-11496-1] c 44 N77-14580
- Sandblasting nozzle  
[NASA-CASE-NPO-13823-1] c 37 N81-25371
- SILICON OXIDES**  
Three-component ceramic coating for silica insulation  
[NASA-CASE-MS-C-14270-2] c 27 N76-23426

## SILICON POLYMERS

- Oxygen post-treatment of plastic surface coated with plasma polymerized silicon-containing monomers  
[NASA-CASE-ARC-10915-2] c 27 N79-18052
- Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-1-SB] c 27 N88-29040
- Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-2-SB] c 27 N90-21177

## SILICON RADIATION DETECTORS

- Thin window, drifted silicon, charged particle detector  
[NASA-CASE-XLE-10529] c 14 N69-23191
- Biomedical radiation detecting probe Patent  
[NASA-CASE-XMS-01177] c 05 N71-19440
- Imaging X-ray spectrometer  
[NASA-CASE-GSC-12682-1] c 35 N84-33765

## SILICON TRANSISTORS

- Tungsten contacts on silicon substrates  
[NASA-CASE-GSC-10695-1] c 09 N72-25259
- Method and apparatus for detecting surface ions on silicon diodes and transistors  
[NASA-CASE-ERC-10325] c 15 N72-25457

## SILICONE RESINS

- Vacuum pressure molding technique  
[NASA-CASE-LAR-10073-1] c 37 N76-24575

## SILICONES

- Silicone containing solid propellant  
[NASA-CASE-NPO-14477-1] c 28 N80-28536

## SILICONIZING

- Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent  
[NASA-CASE-XLA-00284] c 15 N71-16075

## SILOXANES

- Synthesis of siloxane-containing epoxy polymers Patent  
[NASA-CASE-MFS-13994-1] c 06 N71-11240
- Method of producing alternating ether siloxane copolymers Patent  
[NASA-CASE-XMF-02584] c 06 N71-20905
- Siloxane containing epoxide compounds  
[NASA-CASE-MFS-13994-2] c 06 N72-25148
- Silphenylenesiloxane polymers having in-chain perfluoroalkyl groups  
[NASA-CASE-MFS-20979] c 06 N72-25151
- Low outgassing polydimethylsiloxane material and preparation thereof  
[NASA-CASE-GSC-11358-1] c 06 N73-26100
- Acetylene (ethynyl) terminated polyimide siloxane and process for preparation thereof  
[NASA-CASE-LAR-13318-1] c 27 N87-14516

## SILVER

- Method of making dry electrodes  
[NASA-CASE-FRC-10029-2] c 05 N72-25121
- Method for forming hermetic seals  
[NASA-CASE-NPO-16423-1-CU] c 37 N87-21334
- Carbide-fluoride-silver self-lubricating composite  
[NASA-CASE-LEW-14196-2] c 37 N87-25585

## SILVER ALLOYS

- Brazing alloy composition  
[NASA-CASE-XMF-06053] c 26 N75-27126

## SILVER CHLORIDES

- Electrode for biological recording  
[NASA-CASE-XMS-02872] c 05 N69-21925
- Bonding graphite with fused silver chloride  
[NASA-CASE-XGS-00963] c 15 N69-39735

## SILVER COMPOUNDS

- Water management system and an electrolytic cell thereof Patent  
[NASA-CASE-MSC-10960-1] c 03 N71-24718
- Method of making carbide/fluoride/silver composites  
[NASA-CASE-LEW-14902-1] c 24 N91-27244

## SILVER ZINC BATTERIES

- Electric battery and method for operating same Patent  
[NASA-CASE-XGS-01674] c 03 N71-29129
- Additive for zinc electrodes -- electric automobiles  
[NASA-CASE-LEW-13286-1] c 33 N84-14422

## SIMD (COMPUTERS)

- Special purpose parallel computer architecture for real-time control and simulation in robotic applications  
[NASA-CASE-NPO-17629-1-CU] c 60 N90-27268
- Highly parallel computer architecture for robotic computation  
[NASA-CASE-NPO-17632-1-CU] c 60 N91-32805

## SIMULATION

- Method and apparatus for simulating gravitational forces on a living organism  
[NASA-CASE-MSC-20202-1] c 54 N84-16803
- Tissue simulating gel for medical research  
[NASA-CASE-LAR-14036-1] c 27 N91-13562
- Suspension device for low-frequency structures  
[NASA-CASE-LAR-14272-1-CU] c 14 N91-28184

## SIMULATORS

- Method and apparatus of simulating zero gravity conditions Patent  
[NASA-CASE-MFS-12750] c 27 N71-16223

- Phonocardiogram simulator Patent  
[NASA-CASE-XKS-10804] c 05 N71-24606
- Waveform simulator Patent  
[NASA-CASE-NPO-10251] c 10 N71-27365
- Laser Doppler velocity simulator --- to induce frequency shift  
[NASA-CASE-LAR-12176-1] c 36 N80-16321
- Weightlessness simulation system and process  
[NASA-CASE-ARC-11646-1] c 14 N87-25344
- Telerobot control system  
[NASA-CASE-NPO-18116-1-CU] c 37 N91-32509

## SIMULTANEOUS EQUATIONS

- Method and apparatus for self-calibration and phasing of array antenna  
[NASA-CASE-NPO-15920-1] c 33 N85-21493

## SINE SERIES

- Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-10503-1] c 09 N72-21248
- Function generator for synthesizing complex vibration mode patterns  
[NASA-CASE-LAR-10310-1] c 10 N73-20253

## SINE WAVES

- Waveform simulator Patent  
[NASA-CASE-NPO-10251] c 10 N71-27365
- Wide band doubler and sine wave quadrature generator  
[NASA-CASE-NPO-11133] c 10 N72-20223
- Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-11389-1] c 33 N77-26387

## SINGLE CRYSTALS

- Production of high purity silicon carbide Patent  
[NASA-CASE-XLA-00158] c 26 N70-36805
- Fabrication of single crystal film semiconductor devices  
[NASA-CASE-ERC-10222] c 09 N72-22199
- Hall effect magnetometer  
[NASA-CASE-LEW-11632-2] c 35 N75-13213
- Vapor phase growth of groups 3-5 compounds by hydrogen chloride transport of the elements  
[NASA-CASE-LAR-11144-1] c 25 N75-26043
- Method for the preparation of inorganic single crystal and polycrystalline electronic materials  
[NASA-CASE-XLE-02545-1] c 76 N79-21910
- Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt  
[NASA-CASE-NPO-13969-1] c 76 N79-23798
- Diamondlike flakes  
[NASA-CASE-LEW-13837-2] c 24 N85-21267
- Method of making macrocrystalline or single crystal semiconductor material  
[NASA-CASE-NPO-15904-1] c 76 N86-28760
- Total immersion crystal growth  
[NASA-CASE-NPO-15800-2] c 76 N87-23286
- Laser schlieren crystal monitor  
[NASA-CASE-MFS-28060-1] c 76 N87-25862
- Procedure to prepare transparent silica gels  
[NASA-CASE-LAR-13476-1-CU] c 76 N87-29360
- Fabrication of nanometer single crystal metallic CoSi<sub>2</sub> structures on Si  
[NASA-CASE-NPO-17736-1-CU] c 76 N90-17455
- Method of forming three-dimensional semiconductor structures  
[NASA-CASE-NPO-17835-1-CU] c 76 N90-27518
- Method of making single crystal fibers  
[NASA-CASE-LEW-14921-1] c 24 N91-13502
- Process for the controlled growth of single-crystal films of silicon carbide polytypes on silicon carbide wafers  
[NASA-CASE-LEW-15222-1] c 76 N91-26966
- Process for the homoepitaxial growth of single-crystal silicon carbide films on silicon carbide wafers  
[NASA-CASE-LEW-15223-1] c 76 N91-26967

## SINTERING

- Condenser - Separator  
[NASA-CASE-XLA-08645] c 15 N69-21465
- Method of producing refractory bodies having controlled porosity Patent  
[NASA-CASE-LEW-10393-1] c 17 N71-15468
- Electrodes for solid state devices  
[NASA-CASE-NPO-15161-1] c 33 N84-16456
- Method of making a light weight battery plaque  
[NASA-CASE-LEW-13349-1] c 26 N84-22734
- Method of making single crystal fibers  
[NASA-CASE-LEW-14921-1] c 24 N91-13502
- Method of making contamination-free ceramic bodies  
[NASA-CASE-LEW-14984-1] c 27 N91-16152

## SIS (SUPERCONDUCTORS)

- Edge geometry superconducting tunnel junctions utilizing an NBN/MgO/NBN thin film structure  
[NASA-CASE-NPO-17812-1-CU] c 76 N90-17456

## SIZE (DIMENSIONS)

- Apparatus for producing metal powders  
[NASA-CASE-XLE-06461-2] c 17 N72-28535
- Torso sizing ring construction for hard space suit  
[NASA-CASE-ARC-11616-1] c 54 N86-28618

## SIZE DETERMINATION

- Impact measuring technique  
[NASA-CASE-LAR-10913] c 14 N72-16282
- Small conductive particle sensor --- microfiber size determination  
[NASA-CASE-LAR-12552-1] c 35 N82-11431

## SIZE SEPARATION

- Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114-2] c 15 N71-26148
- Material handling device Patent  
[NASA-CASE-XNP-09770-3] c 11 N71-27036
- Acoustic particle separation  
[NASA-CASE-NPO-15559-1] c 71 N85-30765

## SIZING (SHAPING)

- Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114] c 15 N71-17650

## SIZING SCREENS

- Method of making screen by casting Patent  
[NASA-CASE-XLE-00953] c 15 N71-15966
- Screen particle separator  
[NASA-CASE-XNP-09770-2] c 15 N72-22483

## SKEWNESS

- Tape guidance system and apparatus for the provision thereof Patent  
[NASA-CASE-XNP-09453] c 08 N71-19420
- Automatic character skew and spacing checking network --- of digital tape drive systems  
[NASA-CASE-GSC-11925-1] c 33 N76-18353

## SKID LANDINGS

- Nose gear steering system for vehicle with main skids Patent  
[NASA-CASE-XLA-01804] c 02 N70-34160

## SKIN (ANATOMY)

- Process for conditioning tanned sharkskin and articles made therefrom Patent  
[NASA-CASE-XMS-09691-1] c 18 N71-15545
- Percutaneous connector device  
[NASA-CASE-KSC-10849-1] c 52 N77-14738
- Medical diagnosis system and method with multispectral imaging --- depth of burns and optical density of the skin  
[NASA-CASE-NPO-14402-1] c 52 N81-27783

## SKIN (STRUCTURAL MEMBER)

- Flexibly connected support and skin Patent  
[NASA-CASE-XLA-01027] c 31 N71-24035
- Fire extinguishing apparatus having a slidable mass for a penetrator nozzle --- for penetrating aircraft and shuttle orbiter skin  
[NASA-CASE-KSC-11064-1] c 31 N81-14137

## SKIN FRICTION

- Skin friction measuring device for aircraft  
[NASA-CASE-FRC-11029-1] c 06 N81-17057
- Hot foil transducer skin friction sensor  
[NASA-CASE-LAR-12321-1] c 35 N82-24470
- Dual-beam skin friction interferometer  
[NASA-CASE-ARC-11354-1] c 74 N83-21949
- Two-axis, self-nulling skin friction balance  
[NASA-CASE-LAR-13294-1] c 35 N86-32696
- Skin friction balance  
[NASA-CASE-LAR-13710-1] c 35 N90-17117
- Hydrodynamic skin-friction reduction  
[NASA-CASE-LAR-14078-1-CU] c 34 N90-27071
- Polymer/riblet combination for hydrodynamic skin friction reduction  
[NASA-CASE-LAR-14271-1-CU] c 27 N91-13558

## SKIN TEMPERATURE (BIOLOGY)

- Thermistor holder for skin temperature measurements  
[NASA-CASE-ARC-10855-1] c 52 N77-10780

## SKIN TEMPERATURE (NON-BIOLOGICAL)

- Heat flux measuring system Patent  
[NASA-CASE-XFR-03802] c 33 N71-23085

## SKIPTS

- Inflatable transpiration cooled nozzle  
[NASA-CASE-MFS-20619] c 28 N72-11708

## SKY BRIGHTNESS

- Cloud cover sensor  
[NASA-CASE-NPO-14936-1] c 47 N83-32232

## SLEEP

- EEG sleep analyzer and method of operation Patent  
[NASA-CASE-MSC-13282-1] c 05 N71-24729

## SLEEVEES

- Energy absorbing device Patent  
[NASA-CASE-XMF-10040] c 15 N71-22877
- System for enhancing tool-exchange capabilities of a portable wrench  
[NASA-CASE-MFS-22283-1] c 37 N75-33395
- Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c 52 N79-26772
- Fire extinguishing apparatus having a slidable mass for a penetrator nozzle --- for penetrating aircraft and shuttle orbiter skin  
[NASA-CASE-KSC-11064-1] c 31 N81-14137
- Tapered, tubular polyester fabric  
[NASA-CASE-MSC-21082-1] c 27 N87-29672

## SLENDER BODIES

A support technique for vertically oriented launch vehicles  
[NASA-CASE-XLA-02704] c 11 N69-21540

## SLEWING

Noncircular rolling joints for vibrational reduction in slewing maneuvers  
[NASA-CASE-LAR-14515-1-CU] c 37 N91-28580

## SLICING

Method and apparatus for slicing crystals  
[NASA-CASE-GSC-12291-1] c 76 N80-18951  
System for slicing silicon wafers  
[NASA-CASE-NPO-14406-1] c 37 N80-29703  
Scriber for silicon wafers  
[NASA-CASE-NPO-15539-1] c 37 N82-11469  
Workpiece positioning vise  
[NASA-CASE-GSC-12762-1] c 37 N84-28083

## SLIDING

Hybrid butterfly valve  
[NASA-CASE-SSC-00004-1] c 37 N91-14609

## SLIDING CONTACT

Electrical connector pin with wiping action  
[NASA-CASE-XMF-04238] c 09 N69-39734  
Continuous turning slip ring assembly Patent  
[NASA-CASE-XMF-01049] c 15 N71-23049  
Electrical rotary joint apparatus for large space structures  
[NASA-CASE-MFS-23981-1] c 07 N83-20944

## SLIDING FRICTION

Bearing material --- composite material with low friction surface for rolling or sliding contact  
[NASA-CASE-LEW-11930-1] c 24 N76-22309

## SLIP CASTING

Process of casting heavy slips Patent  
[NASA-CASE-XLE-00106] c 15 N71-16076

## SLITS

Slit regulated gas journal bearing Patent  
[NASA-CASE-XNP-00476] c 15 N70-38620  
Method of fabricating an object with a thin wall having a precisely shaped slit  
[NASA-CASE-LAR-10409-1] c 31 N74-21059  
Dual acting slit control mechanism  
[NASA-CASE-LAR-11370-1] c 35 N80-28686

## SLOPES

Penetrometer --- for determining load bearing characteristics of inclined surfaces  
[NASA-CASE-NPO-11103-1] c 35 N77-27367  
Family of airfoil shapes for rotating blades --- for increased power efficiency and blade stability  
[NASA-CASE-LAR-12843-1] c 02 N84-11136

## SLOT ANTENNAS

Virtual wall slot circularly polarized planar array antenna  
[NASA-CASE-NPO-10301] c 07 N72-11148  
Omnidirectional slot antenna for mounting on cylindrical space vehicle  
[NASA-CASE-LAR-10163-1] c 09 N72-25247  
Circularly polarized antenna  
[NASA-CASE-ERC-10214] c 09 N72-31235  
Turnstile slot antenna  
[NASA-CASE-GSC-11428-1] c 32 N74-20864  
Horn antenna having V-shaped corrugated slots  
[NASA-CASE-LAR-11112-1] c 32 N76-15330  
Spiral slotted phased antenna array  
[NASA-CASE-MS-18532-1] c 32 N82-27558

## SLOTS

Belleville spring assembly with elastic guides  
[NASA-CASE-XNP-09452] c 15 N69-27504  
Direct lift control system Patent  
[NASA-CASE-LAR-10249-1] c 02 N71-26110  
Fine adjustment mount  
[NASA-CASE-MFS-20249] c 15 N72-11386  
Method and tool for machining a transverse slot about a bore  
[NASA-CASE-LAR-11855-1] c 37 N81-14319

## SLUDGE

Sewage sludge additive  
[NASA-CASE-NPO-13877-1] c 45 N82-11634

## SLURRIES

Silicon-slurry/aluminide coating --- protecting gas turbine engine vanes and blades  
[NASA-CASE-LEW-13343] c 26 N83-31795  
Preparing composite materials from matrices of processable aromatic polyimide thermoplastic blends  
[NASA-CASE-LAR-14107-1] c 24 N91-25200

## SLURRY PROPELLANTS

Apparatus for making a metal slurry product Patent  
[NASA-CASE-XLE-00010] c 15 N70-33382

## SMOKE

Method and construction for protecting heat sensitive bodies from thermal radiation and convective heat Patent  
[NASA-CASE-XNP-01310] c 33 N71-28852  
Stack plume visualization system  
[NASA-CASE-LAR-11675-1] c 45 N76-17656

Smoke generator  
[NASA-CASE-ARC-10905-1] c 37 N77-13418  
Continuous laminar smoke generator  
[NASA-CASE-LAR-13014-1] c 09 N85-21178

## SODIUM CHLORIDES

Diffuse reflective coating  
[NASA-CASE-GSC-11214-1] c 06 N73-13128  
Separator for alkaline electric batteries and method of making  
[NASA-CASE-GSC-10018-1] c 44 N82-24644

## SODIUM VAPOR

Method of producing silicon --- gas phase reactor multiple injector liquid feed system  
[NASA-CASE-NPO-14382-1] c 31 N80-18231

## SOFT LANDING

Non-reusable kinetic energy absorber Patent  
[NASA-CASE-XLE-00810] c 15 N70-34861  
Space craft soft landing system Patent  
[NASA-CASE-XMF-02108] c 31 N70-36845  
Omnidirectional multiple impact landing system Patent  
[NASA-CASE-XLA-09881] c 31 N71-16085

## SOFT LANDING SPACECRAFT

Pivotal shock absorbing pad assembly Patent  
[NASA-CASE-XMF-03856] c 31 N70-34159

## SOIL MECHANICS

Penetrometer --- for determining load bearing characteristics of inclined surfaces  
[NASA-CASE-NPO-11103-1] c 35 N77-27367

## SOIL MOISTURE

Radar target for remotely sensing hydrological phenomena  
[NASA-CASE-LAR-12344-1] c 43 N80-18498

## SOIL SCIENCE

Soil penetrometer  
[NASA-CASE-XNP-05530] c 14 N73-32321  
System for plotting subsoil structure and method therefor  
[NASA-CASE-NPO-14191-1] c 31 N80-32584

## SOILS

Screen particle separator  
[NASA-CASE-XNP-09770-2] c 15 N72-22483  
Burrowing apparatus  
[NASA-CASE-XNP-07169] c 15 N73-32362  
Remote sensing of vegetation and soil using microwave ellipsometry  
[NASA-CASE-GSC-11976-1] c 43 N78-10529

## SOL-GEL PROCESSES

Alkali-metal silicate binders and methods of manufacture  
[NASA-CASE-GSC-12303-1] c 24 N79-31347

## SOLAR ACTIVITY

Method and apparatus for measuring solar activity and atmospheric radiation effects  
[NASA-CASE-ERC-10276] c 14 N73-26432

## SOLAR ARRAYS

Deployable solar cell array  
[NASA-CASE-NPO-10883] c 31 N72-22874  
Use of unilluminated solar cells as shunt diodes for a solar array  
[NASA-CASE-GSC-10344-1] c 03 N72-27053  
Solar energy powered heliotope  
[NASA-CASE-GSC-10945-1] c 21 N72-31637  
Method of making silicon solar cell array --- and mounting on flexible substrate  
[NASA-CASE-LEW-11069-1] c 44 N74-14784  
Solar cell shingle  
[NASA-CASE-LEW-12587-1] c 44 N77-31601  
Hexagon solar power panel  
[NASA-CASE-NPO-12148-1] c 44 N78-27515  
Solar array strip and a method for forming the same  
[NASA-CASE-NPO-13652-1] c 44 N79-17314  
Closed Loop solar array-ion thruster system with power control circuitry  
[NASA-CASE-LEW-12780-1] c 20 N79-20179  
Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c 44 N79-24431  
Double-sided solar cell package  
[NASA-CASE-NPO-14199-1] c 44 N79-25482  
Method of construction of a multi-cell solar array  
[NASA-CASE-MFS-23540-1] c 44 N79-26475  
Method for forming a solar array strip  
[NASA-CASE-NPO-13652-3] c 44 N80-14474  
Electrical rotary joint apparatus for large space structures  
[NASA-CASE-MFS-23981-1] c 07 N83-20944  
Electronic system for high power load control --- solar arrays  
[NASA-CASE-NPO-15358-1] c 33 N83-27126  
Solar powered actuator with continuously variable auxiliary power control  
[NASA-CASE-MFS-25637-1] c 44 N85-21769  
Small particle selective emitter  
[NASA-CASE-LEW-14731-1] c 44 N91-13802  
Thin solar cell and lightweight array  
[NASA-CASE-LEW-14959-1] c 44 N91-27614

## SOLAR CELLS

Method for producing a solar cell having an integral protective covering  
[NASA-CASE-XGS-04531] c 03 N69-24267  
Radiation direction detector including means for compensating for photocell aging Patent  
[NASA-CASE-XLA-00183] c 14 N70-40239  
Attitude control for spacecraft Patent  
[NASA-CASE-XNP-02982] c 31 N70-41855  
Voltage-current characteristic simulator Patent  
[NASA-CASE-XMS-01554] c 10 N71-10578  
Method of making a silicon semiconductor device Patent  
[NASA-CASE-XLE-02792] c 26 N71-10607  
Solar cell including second surface mirrors Patent  
[NASA-CASE-NPO-10109] c 03 N71-11049  
Solar battery with interconnecting means for plural cells Patent  
[NASA-CASE-XNP-06506] c 03 N71-11050  
Solar cell submodule Patent  
[NASA-CASE-XNP-05821] c 03 N71-11056  
Interconnection of solar cells Patent  
[NASA-CASE-XGS-01475] c 03 N71-11058  
Solar cell matrix Patent  
[NASA-CASE-NPO-10821] c 03 N71-19545  
Roll-up solar array Patent  
[NASA-CASE-NPO-10188] c 03 N71-20273  
Method of making electrical contact on silicon solar cell and resultant product Patent  
[NASA-CASE-XLE-04787] c 03 N71-20492  
Solar cell mounting Patent  
[NASA-CASE-XNP-00826] c 03 N71-20895  
Simple method of making photovoltaic junctions Patent  
[NASA-CASE-XNP-01960] c 09 N71-23027  
Gd or Sm doped silicon semiconductor composition Patent  
[NASA-CASE-XLE-10715] c 26 N71-23292  
Protection of serially connected solar cells against open circuits by the use of shunting diode Patent  
[NASA-CASE-XLE-04535] c 03 N71-23354  
Silicon solar cell with cover glass bonded to cell by metal pattern Patent  
[NASA-CASE-XLE-08569] c 03 N71-23449  
Semiconductor material and method of making same Patent  
[NASA-CASE-XLE-02798] c 26 N71-23654  
Method of attaching a cover glass to a silicon solar cell Patent  
[NASA-CASE-XLE-08569-2] c 03 N71-24681  
Solar panel fabrication Patent  
[NASA-CASE-XNP-03413] c 03 N71-26726  
Solar cell Patent  
[NASA-CASE-ARC-10050] c 03 N71-33409  
Solar cell matrix  
[NASA-CASE-NPO-11190] c 03 N71-34044  
Recovery of radiation damaged solar cells through thermal annealing  
[NASA-CASE-XGS-04047-2] c 03 N72-11062  
Optimum performance spacecraft solar cell system  
[NASA-CASE-GSC-10669-1] c 03 N72-20031  
Solar cell assembly test method  
[NASA-CASE-NPO-10401] c 03 N72-20033  
Solid state matrices  
[NASA-CASE-NPO-10591] c 03 N72-22041  
Solar cell panels with light transmitting plate  
[NASA-CASE-NPO-10747] c 03 N72-22042  
Method of coating solar cell with borosilicate glass and resultant product  
[NASA-CASE-GSC-11514-1] c 03 N72-24037  
Apparatus for applying cover slides  
[NASA-CASE-NPO-10575] c 03 N72-25019  
Use of unilluminated solar cells as shunt diodes for a solar array  
[NASA-CASE-GSC-10344-1] c 03 N72-27053  
Stacked solar cell arrays  
[NASA-CASE-NPO-11771] c 03 N73-20040  
Method of making silicon solar cell array --- and mounting on flexible substrate  
[NASA-CASE-LEW-11069-1] c 44 N74-14784  
Covered silicon solar cells and method of manufacture --- with polymeric films  
[NASA-CASE-LEW-11065-2] c 44 N76-14600  
Fabrication of polycrystalline solar cells on low-cost substrates  
[NASA-CASE-GSC-12022-1] c 44 N76-28635  
Solar cell grid patterns  
[NASA-CASE-NPO-13087-2] c 44 N76-31666  
Photovoltaic cell array  
[NASA-CASE-MFS-22458-1] c 44 N77-10635  
Silicon nitride coated, plastic covered solar cell  
[NASA-CASE-LEW-11496-1] c 44 N77-14580  
Solar cell assembly --- for use under high intensity illumination  
[NASA-CASE-LEW-11549-1] c 44 N77-19571

- High voltage, high current Schottky barrier solar cell  
[NASA-CASE-NPO-13482-1] c 44 N78-13526
- Shunt regulation electric power system  
[NASA-CASE-GSC-10135] c 33 N78-17296
- Process for utilizing low-cost graphite substrates for polycrystalline solar cells  
[NASA-CASE-GSC-12022-2] c 44 N78-24609
- Method of making encapsulated solar cell modules  
[NASA-CASE-LEW-12185-1] c 44 N78-25528
- Method for producing solar energy panels by automation  
[NASA-CASE-LEW-12541-1] c 44 N78-25529
- Hexagon solar power panel  
[NASA-CASE-NPO-12148-1] c 44 N78-27515
- Application of semiconductor diffusants to solar cells by screen printing  
[NASA-CASE-LEW-12775-1] c 44 N79-11468
- Method and apparatus for measuring minority carrier lifetimes and bulk diffusion length in P-N junction solar cells  
[NASA-CASE-NPO-14100-1] c 44 N79-12541
- Back wall solar cell  
[NASA-CASE-LEW-12236-2] c 44 N79-14528
- Method for fabricating solar cells having integrated collector grits  
[NASA-CASE-LEW-12819-2] c 44 N79-18444
- Solar cell module assembly jig  
[NASA-CASE-XGS-00829-1] c 44 N79-19447
- Double-sided solar cell package  
[NASA-CASE-NPO-14199-1] c 44 N79-25482
- Solar cell with improved N-region contact and method of forming the same  
[NASA-CASE-NPO-14205-1] c 44 N79-31752
- Solar cell module  
[NASA-CASE-NPO-14467-1] c 44 N79-31753
- Self-reconfiguring solar cell system  
[NASA-CASE-LEW-12586-1] c 44 N80-14472
- Driver for solar cell I-V characteristic plots  
[NASA-CASE-NPO-14096-1] c 44 N80-18551
- Solar cell angular position transducer  
[NASA-CASE-LAR-11999-1] c 44 N80-18552
- Method of mitigating titanium impurities effects in p-type silicon material for solar cells  
[NASA-CASE-NPO-14635-1] c 44 N80-24741
- Induced junction solar cell and method of fabrication  
[NASA-CASE-NPO-13786-1] c 44 N80-29835
- Solar cell system having alternating current output  
[NASA-CASE-LEW-12806-2] c 44 N81-12542
- Method and apparatus for fabricating improved solar cell modules  
[NASA-CASE-NPO-14416-1] c 44 N81-14389
- Copper doped polycrystalline silicon solar cell  
[NASA-CASE-NPO-14670-1] c 44 N81-19558
- Schottky barrier solar cell  
[NASA-CASE-NPO-13689-2] c 44 N81-29525
- Efficiency of silicon solar cells containing chromium  
[NASA-CASE-NPO-15179-1] c 44 N82-26777
- Method of Fabricating Schottky Barrier solar cell  
[NASA-CASE-NPO-13689-4] c 44 N82-28780
- Method of making a high voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c 44 N82-29709
- High voltage planar multijunction solar cell  
[NASA-CASE-LEW-13400-1] c 44 N82-31764
- Solar cell having improved back surface reflector  
[NASA-CASE-LEW-13620-1] c 44 N83-13579
- Heat transparent high intensity high efficiency solar cell  
[NASA-CASE-LEW-12892-1] c 44 N83-14692
- High voltage v-groove solar cell  
[NASA-CASE-LEW-13401-2] c 44 N83-32177
- Screen printed interdigitated back contact solar cell  
[NASA-CASE-LEW-13414-1] c 44 N85-20530
- Lithium counterdoped silicon solar cell  
[NASA-CASE-LEW-14177-1] c 44 N86-32875
- High band gap 2-6 and 3-5 tunneling junctions for silicon multijunction solar cells  
[NASA-CASE-NPO-16526-1CU] c 44 N87-17399
- Floating emitter solar cell  
[NASA-CASE-NPO-16467-1CU] c 33 N87-23879
- Thin solar cell and lightweight array  
[NASA-CASE-LEW-14959-1] c 44 N91-27614
- SOLAR COLLECTORS**
- Connector strips-positive, negative and T tabs  
[NASA-CASE-XGS-01395] c 03 N69-21539
- Device for directionally controlling electromagnetic radiation Patent  
[NASA-CASE-XLE-01716] c 09 N70-40234
- Roll-up solar array Patent  
[NASA-CASE-NPO-10188] c 03 N71-20273
- Thermally activated foaming compositions Patent  
[NASA-CASE-LAR-10373-1] c 18 N71-26155
- Solar cell Patent  
[NASA-CASE-ARC-10050] c 03 N71-33409
- Mount for continuously orienting a collector dish in a system adapted to perform both diurnal and seasonal solar tracking  
[NASA-CASE-MFS-23267-1] c 35 N77-20401
- Solar cell shingle  
[NASA-CASE-LEW-12587-1] c 44 N77-31601
- Solar energy collection system  
[NASA-CASE-NPO-13810-1] c 44 N77-32582
- Three-dimensional tracking solar energy concentrator and method for making same  
[NASA-CASE-NPO-13736-1] c 44 N77-32583
- Portable linear-focused solar thermal energy collecting system  
[NASA-CASE-NPO-13734-1] c 44 N78-10554
- Solar heating system  
[NASA-CASE-LAR-12009-1] c 44 N78-15560
- Low cost solar energy collection system  
[NASA-CASE-NPO-13579-1] c 44 N78-17460
- Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c 44 N78-19599
- Solar cell collector  
[NASA-CASE-LEW-12552-1] c 44 N78-25527
- Non-tracking solar energy collector system  
[NASA-CASE-NPO-13813-1] c 44 N78-31526
- Solar cells having integral collector grids  
[NASA-CASE-LEW-12819-1] c 44 N79-11467
- Method for making an aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-1] c 44 N79-11469
- Non-tracking solar energy collector system  
[NASA-CASE-NPO-13817-1] c 44 N79-11471
- Solar cell collector and method for producing same  
[NASA-CASE-LEW-12552-2] c 44 N79-11472
- Electromagnetic radiation energy arrangement --- coatings for solar energy absorption and infrared reflection  
[NASA-CASE-WOO-00428-1] c 32 N79-19186
- Horizontally mounted solar collector  
[NASA-CASE-MFS-23349-1] c 44 N79-23481
- Primary reflector for solar energy collection systems and method of making same  
[NASA-CASE-NPO-13579-3] c 44 N79-24432
- Solar energy collection system  
[NASA-CASE-NPO-13579-2] c 44 N79-24433
- Solar concentrator  
[NASA-CASE-MFS-23727-1] c 44 N80-14473
- Combined solar collector and energy storage system  
[NASA-CASE-LAR-12205-1] c 44 N80-20810
- Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c 44 N81-17518
- Solar tracking system  
[NASA-CASE-MFS-23999-1] c 44 N81-24520
- Automotive absorption air conditioner utilizing solar and motor waste heat  
[NASA-CASE-NPO-15183-1] c 44 N82-26776
- Method of forming oxide coatings --- for solar collector heating panels  
[NASA-CASE-LEW-13132-1] c 27 N83-29388
- Solar concentrator protective system  
[NASA-CASE-NPO-15662-1] c 44 N84-28204
- Protective telescoping shield for solar concentrator  
[NASA-CASE-NPO-16236-1] c 44 N86-27706
- Wide acceptance angle, high concentration ratio, optical collector  
[NASA-CASE-MFS-28295-1] c 74 N91-13999
- SOLAR ELECTRIC PROPULSION**
- Closed Loop solar array-ion thruster system with power control circuitry  
[NASA-CASE-LEW-12780-1] c 20 N79-20179
- SOLAR ENERGY**
- Stacked solar cell arrays  
[NASA-CASE-NPO-11771] c 03 N73-20040
- Solar energy power system --- using Freon  
[NASA-CASE-MFS-21628-1] c 44 N75-32581
- Thermostatically controlled non-tracking type solar energy concentrator  
[NASA-CASE-NPO-13497-1] c 44 N76-14602
- Solar photolysis of water  
[NASA-CASE-NPO-13675-1] c 44 N77-32580
- Three-dimensional tracking solar energy concentrator and method for making same  
[NASA-CASE-NPO-13736-1] c 44 N77-32583
- Solar heating system  
[NASA-CASE-LAR-12009-1] c 44 N78-15560
- Method for producing solar energy panels by automation  
[NASA-CASE-LEW-12541-1] c 44 N78-25529
- Method for making an aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-1] c 44 N79-11469
- Primary reflector for solar energy collection systems  
[NASA-CASE-NPO-13579-4] c 44 N79-14529
- Method of construction of a multi-cell solar array  
[NASA-CASE-MFS-23540-1] c 44 N79-26475
- Solar cell module  
[NASA-CASE-NPO-14467-1] c 44 N79-31753
- Solar energy modulator  
[NASA-CASE-NPO-15388-1] c 44 N84-28203
- Saltless solar pond  
[NASA-CASE-NPO-15808-1] c 44 N84-34792
- Solar thermal energy receiver  
[NASA-CASE-LEW-14949-1] c 44 N91-23617
- SOLAR ENERGY ABSORBERS**
- Panel for selectively absorbing solar thermal energy and the method of producing said panel  
[NASA-CASE-MFS-22562-1] c 44 N76-14595
- Solar energy absorber  
[NASA-CASE-MFS-22743-1] c 44 N76-22657
- Solar energy trap  
[NASA-CASE-MFS-22744-1] c 44 N76-24696
- Solar cell shingle  
[NASA-CASE-LEW-12587-1] c 44 N77-31601
- Low cost solar energy collection system  
[NASA-CASE-NPO-13579-1] c 44 N78-17460
- Electromagnetic radiation energy arrangement --- coatings for solar energy absorption and infrared reflection  
[NASA-CASE-WOO-00428-1] c 32 N79-19186
- Aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-3] c 44 N80-16452
- SOLAR ENERGY CONVERSION**
- Solar energy power system  
[NASA-CASE-MFS-21628-2] c 44 N76-23675
- High voltage, high current Schottky barrier solar cell  
[NASA-CASE-NPO-13482-1] c 44 N78-13526
- Process for utilizing low-cost graphite substrates for polycrystalline solar cells  
[NASA-CASE-GSC-12022-2] c 44 N78-24609
- Solar photolysis of water  
[NASA-CASE-NPO-14126-1] c 44 N79-11470
- Thermal energy transformer  
[NASA-CASE-NPO-14058-1] c 44 N79-18443
- Solar concentrator  
[NASA-CASE-MFS-23727-1] c 44 N80-14473
- Copper doped polycrystalline silicon solar cell  
[NASA-CASE-NPO-14670-1] c 44 N81-19558
- Solar energy control system --- temperature measurement  
[NASA-CASE-MFS-25287-1] c 44 N82-18686
- Solar engine  
[NASA-CASE-LAR-12148-1] c 44 N82-24640
- Solar driven liquid metal MHD power generator  
[NASA-CASE-LAR-12495-1] c 44 N83-28573
- Photoelectrochemical electrodes  
[NASA-CASE-NPO-15458-1] c 25 N84-12262
- Solar pumped laser  
[NASA-CASE-LAR-12870-1] c 36 N84-16542
- Wind and solar powered turbine  
[NASA-CASE-NPO-15496-1] c 44 N84-23018
- Solar energy converter using surface plasma waves  
[NASA-CASE-LEW-13827-1] c 44 N85-21768
- Bidirectional control system for energy flow in solar powered flywheel  
[NASA-CASE-MFS-25978-1] c 44 N87-21410
- SOLAR FLUX DENSITY**
- Solar energy modulator  
[NASA-CASE-NPO-15388-1] c 44 N84-28203
- SOLAR FURNACES**
- High temperature lens construction Patent  
[NASA-CASE-XNP-04111] c 14 N71-15622
- SOLAR GENERATORS**
- GaAs solar detector using manganese as a doping agent Patent  
[NASA-CASE-XNP-01328] c 26 N71-18064
- Wind and solar powered turbine  
[NASA-CASE-NPO-15496-1] c 44 N84-23018
- SOLAR GRAVITATION**
- Means for visually indicating flight paths of vehicles between the Earth, Venus, and Mercury Patent  
[NASA-CASE-XNP-00708] c 14 N70-35394
- SOLAR HEATING**
- Portable linear-focused solar thermal energy collecting system  
[NASA-CASE-NPO-13734-1] c 44 N78-10554
- Solar heating system  
[NASA-CASE-LAR-12009-1] c 44 N78-15560
- Combined solar collector and energy storage system  
[NASA-CASE-LAR-12205-1] c 44 N80-20810
- Multi-channel temperature measurement amplification system --- solar heating systems  
[NASA-CASE-MFS-23775-1] c 44 N82-16474
- Solar heated fluidized bed gasification system  
[NASA-CASE-NPO-15071-1] c 44 N82-16475
- Solar energy control system --- temperature measurement  
[NASA-CASE-MFS-25287-1] c 44 N82-18686
- SOLAR OBSERVATORIES**
- Solar optical telescope dome control system Patent  
[NASA-CASE-MSC-10966] c 14 N71-19568

**SOLAR PONDS (HEAT STORAGE)**

- Solar pond  
[NASA-CASE-NPO-13581-2] c 44 N78-31525  
Saltless solar pond  
[NASA-CASE-NPO-15808-1] c 44 N84-34792

**SOLAR POSITION**

- Sun angle calculator  
[NASA-CASE-MSC-12617-1] c 35 N76-29552  
Solar tracking system  
[NASA-CASE-MFS-23999-1] c 44 N81-24520

**SOLAR POWERED AIRCRAFT**

- Solar powered aircraft  
[NASA-CASE-LAR-12615-1] c 05 N84-12154

**SOLAR RADIATION**

- Space simulator Patent  
[NASA-CASE-XNP-00459] c 11 N70-38675  
Solar vane actuator Patent  
[NASA-CASE-XNP-05535] c 14 N71-23040  
Compact solar still Patent  
[NASA-CASE-XMS-04533] c 15 N71-23086  
Wide angle sun sensor --- consisting of cylinder, insulation and pair of detectors  
[NASA-CASE-NPO-13327-1] c 35 N75-23910  
Particulate and solar radiation stable coating for spacecraft  
[NASA-CASE-LAR-10805-2] c 34 N77-18382  
Solar concentrator protective system  
[NASA-CASE-NPO-15662-1] c 44 N84-28204  
Stable density stratification solar pond  
[NASA-CASE-NPO-15419-2] c 44 N85-30474  
Long gain length solar pumped box laser  
[NASA-CASE-LAR-13256-1] c 36 N86-29204

**SOLAR RADIATION SHIELDING**

- High temperature glass thermal control structure and coating --- for application to spacecraft reusable heat shielding  
[NASA-CASE-ARC-11164-1] c 44 N83-34448  
Variable anodic thermal control coating  
[NASA-CASE-LAR-12719-1] c 44 N83-34449  
Protective telescoping shield for solar concentrator  
[NASA-CASE-NPO-16236-1] c 44 N86-27706  
Sun shield  
[NASA-CASE-MSC-20162-1] c 37 N87-17036

**SOLAR RADIO EMISSION**

- Sidereal frequency generator Patent  
[NASA-CASE-XGS-02610] c 14 N71-23174

**SOLAR REFLECTORS**

- Foldable solar concentrator Patent  
[NASA-CASE-XLA-04622] c 03 N70-41580  
Solar cell including second surface mirrors Patent  
[NASA-CASE-NPO-10109] c 03 N71-11049  
Method and apparatus for making curved reflectors Patent  
[NASA-CASE-XLE-08917] c 15 N71-15597  
Thermal pump-compressor for space use Patent  
[NASA-CASE-XLA-00377] c 33 N71-17610  
Apparatus for making curved reflectors Patent  
[NASA-CASE-XLE-08917-2] c 15 N71-24836  
Inorganic thermal control coatings  
[NASA-CASE-MFS-20011] c 18 N72-22566  
Lightweight reflector assembly  
[NASA-CASE-NPO-13707-1] c 74 N77-28933  
Primary reflector for solar energy collection systems  
[NASA-CASE-NPO-13579-4] c 44 N79-14529  
Primary reflector for solar energy collection systems and method of making same  
[NASA-CASE-NPO-13579-3] c 44 N79-24432  
Solar energy collection system  
[NASA-CASE-NPO-13579-2] c 44 N79-24433

**SOLAR SAILS**

- Strong thin membrane structure --- solar sails  
[NASA-CASE-NPO-14021-2] c 27 N80-16163  
Speed control device for a heavy duty shaft --- solar sails for spacecraft propulsion  
[NASA-CASE-NPO-14170-1] c 37 N81-15364

**SOLAR SENSORS**

- Plurality of photosensitive cells on a pyramidal base for planetary trackers  
[NASA-CASE-XNP-04180] c 07 N69-39736  
Space vehicle attitude control Patent  
[NASA-CASE-XNP-00465] c 21 N70-35395  
Sun tracker with rotatable plane-parallel plate and two photocells Patent  
[NASA-CASE-XGS-01159] c 21 N71-10678  
Solar sensor having coarse and fine sensing with matched preirradiated cells and method of selecting cells Patent  
[NASA-CASE-XLA-01584] c 14 N71-23269  
Sun direction detection system  
[NASA-CASE-NPO-13722-1] c 74 N77-22951  
Sun tracking solar energy collector  
[NASA-CASE-NPO-13921-1] c 44 N79-14526  
Solar tracking system  
[NASA-CASE-MFS-23999-1] c 44 N81-24520  
Sun sensing guidance system for high altitude aircraft  
[NASA-CASE-FRC-11052-1] c 04 N82-23231

- Cloud cover sensor  
[NASA-CASE-NPO-14936-1] c 47 N83-32232  
Airborne tracking sunphotometer apparatus and system  
[NASA-CASE-ARC-11622-1] c 44 N88-14492

**SOLAR SIMULATORS**

- High temperature lens construction Patent  
[NASA-CASE-XNP-04111] c 14 N71-15622  
High powered arc electrodes --- producing solar simulator radiation  
[NASA-CASE-LEW-11162-1] c 33 N74-12913

**SOLAR-PUMPED LASERS**

- Long gain length solar pumped box laser  
[NASA-CASE-LAR-13256-1] c 36 N86-29204

**SOLDERED JOINTS**

- Soldering device Patent  
[NASA-CASE-XLA-08911] c 15 N71-27214

**SOLDERING**

- Solder flux which leaves corrosion-resistant coating Patent  
[NASA-CASE-XNP-03459-2] c 18 N71-15688  
Soldering with solder flux which leaves corrosion resistant coating Patent  
[NASA-CASE-XNP-03459] c 15 N71-21078  
Method of plating copper on aluminum Patent  
[NASA-CASE-XLA-08966-1] c 17 N71-25903  
Resistance soldering apparatus  
[NASA-CASE-GSC-10913] c 15 N72-22491  
Positive contact resistance soldering unit  
[NASA-CASE-KSC-10242] c 15 N72-23497  
Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c 44 N79-24431  
High temperature solder device for flat cables  
[NASA-CASE-GSC-13344-1] c 26 N91-28363

**SOLDERS**

- Method of coating circuit paths on printed circuit boards with solder Patent  
[NASA-CASE-XMF-01599] c 09 N71-20705  
Method for attaching a fused-quartz mirror to a conductive metal substrate  
[NASA-CASE-MFS-23405-1] c 26 N77-29260  
Solder dross removal apparatus  
[NASA-CASE-MFS-28406-1] c 37 N91-13729

**SOLENOID VALVES**

- Two-step rocket engine bipropellant valve Patent  
[NASA-CASE-XMS-04890-1] c 15 N70-22192  
Automatic recording McLeod gauge Patent  
[NASA-CASE-XLE-03280] c 14 N71-23093  
Solenoid valve including guide for armature and valve member  
[NASA-CASE-GSC-10607-1] c 15 N72-20442  
Remote fire stack igniter --- with solenoid-controlled valve  
[NASA-CASE-MFS-21675-1] c 25 N74-33378  
Automatically operable self-leveling load table  
[NASA-CASE-MFS-22039-1] c 09 N75-12968  
Self-compensating solenoid valve  
[NASA-CASE-ARC-11620-1] c 37 N87-25573

**SOLENOIDS**

- Solenoid construction Patent  
[NASA-CASE-XNP-01951] c 09 N70-41929  
Drive circuit for minimizing power consumption in inductive load Patent  
[NASA-CASE-NPO-10716] c 09 N71-24892  
Rotary solenoid shutter drive assembly and rotary inertia damper and stop plate assembly --- for use with cameras mounted in satellites  
[NASA-CASE-GSC-11560-1] c 33 N74-20861  
Sprag solenoid brake --- development and operations of electrically controlled brake  
[NASA-CASE-MFS-21846-1] c 37 N74-26976  
Low temperature latching solenoid  
[NASA-CASE-MSC-18106-1] c 33 N82-11357

**SOLID CRYOGEN COOLING**

- Cooling by conversion of para to ortho-hydrogen  
[NASA-CASE-GSC-12770-1] c 25 N83-29324

**SOLID ELECTRODES**

- Polymeric electrolytic hygrometer  
[NASA-CASE-NPO-13948-1] c 35 N78-25391  
Additive for zinc electrodes --- electric automobiles  
[NASA-CASE-LEW-13286-1] c 33 N84-14422

**SOLID ELECTROLYTES**

- Secondary Li battery incorporating 12-crown-4 ether  
[NASA-CASE-NPO-17922-1-CU] c 33 N91-13621

**SOLID LUBRICANTS**

- Bonded solid lubricant coating Patent  
[NASA-CASE-XMS-00259] c 18 N70-36400  
Method of lubricating rolling element bearings Patent  
[NASA-CASE-XLE-09527] c 15 N71-17688  
Inorganic solid film lubricants Patent  
[NASA-CASE-XMF-03988] c 15 N71-21403  
Rolling element bearings Patent  
[NASA-CASE-XLE-09527-2] c 15 N71-26189

- Method of making bearing materials --- self-lubricating, oxidation resistant composites for high temperature applications  
[NASA-CASE-LEW-11930-4] c 24 N79-17916  
Pretreatment of lubricated surfaces with sputtered cadmium oxide  
[NASA-CASE-LEW-14474-1] c 27 N91-28423

**SOLID PHASES**

- Solid electrolyte cell  
[NASA-CASE-NPO-15269-1] c 44 N82-29710

**SOLID PROPELLANT IGNITION**

- Apparatus for igniting solid propellants Patent  
[NASA-CASE-XLE-00207] c 28 N70-33375  
Method of igniting solid propellants Patent  
[NASA-CASE-XLE-01988] c 27 N71-15634  
Molded composite pyrogen igniter for rocket motors --- solid propellant ignition  
[NASA-CASE-LAR-12018-1] c 20 N78-24275  
Method and apparatus for suppressing ignition overpressure in solid rocket propulsion systems  
[NASA-CASE-MFS-25843-1] c 20 N83-17588

**SOLID PROPELLANT ROCKET ENGINES**

- Spherical solid-propellant rocket motor Patent  
[NASA-CASE-XHQ-00105] c 28 N70-33331  
Mandrel for shaping solid propellant rocket fuel into a motor casing Patent  
[NASA-CASE-XLA-00304] c 27 N70-34783  
Spherically-shaped rocket motor Patent  
[NASA-CASE-XHQ-01897] c 28 N70-35381  
Propellant grain for rocket motors Patent  
[NASA-CASE-XGS-03556] c 27 N70-35534  
Apparatus and method for control of a solid fueled rocket vehicle Patent  
[NASA-CASE-XNP-00217] c 28 N70-38181  
Steerable solid propellant rocket motor Patent  
[NASA-CASE-NPO-00234] c 28 N70-38645  
Method of making a solid propellant rocket motor Patent  
[NASA-CASE-XLA-04126] c 28 N71-26779  
Electrical apparatus for detection of thermal decomposition of insulation Patent  
[NASA-CASE-XMF-03968] c 14 N71-27186  
Solid propellant rocket motor  
[NASA-CASE-XNP-03282] c 28 N72-20758  
Solid propellant rocket motor nozzle  
[NASA-CASE-NPO-11458] c 28 N72-23810  
Solid propellant rocket motor  
[NASA-CASE-NPO-11559] c 28 N73-24784  
Space vehicle  
[NASA-CASE-MFS-22734-1] c 18 N75-19329  
Solid propellant rocket motor and method of making same  
[NASA-CASE-XLA-01349] c 20 N77-17143  
Molded composite pyrogen igniter for rocket motors --- solid propellant ignition  
[NASA-CASE-LAR-12018-1] c 20 N78-24275  
Solid propellant motor  
[NASA-CASE-NPO-11458A] c 20 N78-32179  
Method and apparatus for suppressing ignition overpressure in solid rocket propulsion systems  
[NASA-CASE-MFS-25843-1] c 20 N83-17588  
Space Shuttle with rail system and aft thrust structure securing solid rocket boosters to external tank  
[NASA-CASE-MFS-25853-1] c 16 N84-27784

**SOLID PROPELLANTS**

- Variable thrust ion engine utilizing thermally decomposable solid fuel Patent  
[NASA-CASE-XMF-00923] c 28 N70-36802  
Means and method of measuring viscoelastic strain Patent  
[NASA-CASE-XNP-01153] c 32 N71-17645  
Processing for producing a sterilized instrument Patent  
[NASA-CASE-XNP-09763] c 14 N71-20461  
Method of forming difunctional polyisobutylene  
[NASA-CASE-NPO-10893] c 27 N73-22710

**SOLID ROCKET BINDERS**

- Solid propellant liner Patent  
[NASA-CASE-XNP-09744] c 27 N71-16392  
Silicone containing solid propellant  
[NASA-CASE-NPO-14477-1] c 28 N80-28536

**SOLID ROCKET PROPELLANTS**

- Process for preparing sterile solid propellants Patent  
[NASA-CASE-NPO-01749] c 27 N70-41897  
Burning rate control of solid propellants Patent  
[NASA-CASE-XLE-03494] c 27 N71-21819  
Hydrazinium nitroformate propellant stabilized with nitroguanidine  
[NASA-CASE-NPO-12000] c 27 N72-25699  
Hydrazinium nitroformate propellant with saturated polymeric hydrocarbon binder  
[NASA-CASE-NPO-12015] c 27 N73-16764  
Preparing oxidizer coated metal fuel particles  
[NASA-CASE-NPO-11975-1] c 28 N74-33209  
Casting propellant in rocket engine  
[NASA-CASE-LAR-11995-1] c 28 N77-10213

Solid propellant rocket motor and method of making same  
[NASA-CASE-XLA-01349] c 20 N77-17143  
High performance ammonium nitrate propellant  
[NASA-CASE-NPO-14260-1] c 28 N79-28342  
Process for the leaching of AP from propellant  
[NASA-CASE-NPO-14109-1] c 28 N80-23471  
Silicone containing solid propellant  
[NASA-CASE-NPO-14477-1] c 28 N80-28536

**SOLID STATE**  
Solid state chemical source for ammonia beam maser Patent  
[NASA-CASE-XGS-01504] c 16 N70-41578

**SOLID STATE DEVICES**  
Solid state switch  
[NASA-CASE-XNP-09228] c 09 N69-27500  
Temperature compensated solid state differential amplifier Patent  
[NASA-CASE-XAC-00435] c 09 N70-35440  
Operational integrator Patent  
[NASA-CASE-NPO-10230] c 09 N71-12520  
Microwave power receiving antenna Patent  
[NASA-CASE-MFS-20333] c 09 N71-13486  
Counter and shift register Patent  
[NASA-CASE-XNP-01753] c 08 N71-22897  
Solid state television camera system Patent  
[NASA-CASE-XMF-06092] c 07 N71-24612  
Switching circuit Patent  
[NASA-CASE-XNP-06505] c 10 N71-24799  
Transverse piezoresistance and pinch effect electromechanical transducers Patent  
[NASA-CASE-ERC-10088] c 26 N71-25490  
A solid state acoustic variable time delay line Patent  
[NASA-CASE-ERC-10032] c 10 N71-25900  
Broadband stable power multiplier Patent  
[NASA-CASE-XNP-10854] c 10 N71-26331  
Solid state remote circuit selector switch  
[NASA-CASE-LEW-10387] c 09 N72-22201  
RF controlled solid state switch  
[NASA-CASE-ARC-10136-1] c 09 N72-22202  
Thermal to electrical power conversion system with solid-state switches with Seebeck effect compensation  
[NASA-CASE-NPO-11388] c 03 N72-23048  
Radiation sensitive solid state switch  
[NASA-CASE-NPO-10817-1] c 08 N73-30135  
Full wave modulator-demodulator amplifier apparatus --- for generating rectified output signal  
[NASA-CASE-FRC-10072-1] c 33 N74-14939  
Traveling wave solid state amplifier utilizing a semiconductor with negative differential mobility  
[NASA-CASE-HON-10069] c 33 N75-27251  
Solid-state current transformer  
[NASA-CASE-MFS-22560-1] c 33 N77-14335  
Space-charge-limited solid-state triode  
[NASA-CASE-NPO-13064-1] c 33 N79-11314  
Control means for a solid state crossbar switch  
[NASA-CASE-NPO-15066-1] c 33 N82-29538  
Self-correcting electronically scanned pressure sensor  
[NASA-CASE-LAR-12686-1] c 35 N84-14491  
Imaging X-ray spectrometer  
[NASA-CASE-GSC-12682-1] c 35 N84-33765  
Solar energy converter using surface plasma waves  
[NASA-CASE-LEW-13827-1] c 44 N85-21768  
Hermetically sealable package for hybrid solid-state electronic devices and the like  
[NASA-CASE-MS-20181-1] c 33 N88-23941  
Solid state electrical switch employing materials with reversible phase transistors  
[NASA-CASE-NPO-17621-1-CU] c 33 N90-17010

**SOLID STATE LASERS**  
Cladding for transverse-pumped solid-state laser  
[NASA-CASE-NPO-17355-1-CU] c 36 N91-17360

**SOLID SURFACES**  
Dye penetrant for surfaces subsequently contacted by liquid oxygen Patent  
[NASA-CASE-XMF-02221] c 18 N71-27170

**SOLID WASTES**  
Process of forming catalytic surfaces for wet oxidation reactions  
[NASA-CASE-MS-14831-1] c 25 N78-10225

**SOLID-SOLID INTERFACES**  
Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c 43 N79-25443  
Coal-rock interface detector  
[NASA-CASE-MFS-23725-1] c 43 N79-31706

**SOLIDIFICATION**  
Method and apparatus for supercooling and solidifying substances  
[NASA-CASE-MFS-25242-1] c 35 N83-29650  
Hot melt adhesive attachment pad  
[NASA-CASE-LAR-12894-1] c 27 N85-20125  
Method of preparing radially homogeneous mercury cadmium telluride crystals  
[NASA-CASE-MFS-25786-2] c 76 N90-20896

Solidification processing of alloys using an applied electric field  
[NASA-CASE-MFS-26083-1-CU] c 26 N90-26940

**SOLIDIFIED GASES**  
Cooling by conversion of para to ortho-hydrogen  
[NASA-CASE-GSC-12770-1] c 25 N83-29324

**SOLIDS FLOW**  
Use of glow discharge in fluidized beds  
[NASA-CASE-ARC-11245-1] c 28 N82-18401

**SOLUBILITY**  
Fire resistant coating composition Patent  
[NASA-CASE-GSC-10072] c 18 N71-14014  
Insoluble polyelectrolyte and ion-exchange hollow fiber impregnated therewith  
[NASA-CASE-NPO-13530-1] c 25 N81-17187  
Method for the preparation of thin-skinned asymmetric reverse osmosis membranes and products thereof  
[NASA-CASE-ARC-11359-1] c 51 N84-28361  
Method for growth of crystals by pressure reduction of supercritical or subcritical solution  
[NASA-CASE-NPO-15772-1] c 76 N85-29800

**SOLUTIONS**  
Specific wavelength colorimeter --- for measuring given solute concentration in test sample  
[NASA-CASE-MS-14081-1] c 35 N74-27860

**SOLUTIONS**  
Method and apparatus for minimizing convection during crystal growth from solution  
[NASA-CASE-NPO-15811-1] c 76 N84-12968  
Preparation of dilute magnetic semiconductor films by metalorganic chemical vapor deposition  
[NASA-CASE-NPO-17399-1-CU] c 76 N89-14120

**SOLVENT EXTRACTION**  
Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c 28 N81-15119  
Supercritical multicomponent solvent coal extraction  
[NASA-CASE-NPO-15767-1] c 23 N84-16255  
Infusion extractor  
[NASA-CASE-MS-20761-1] c 37 N87-15465

**SOLVENTS**  
Coal desulfurization --- using iron pentacarbonyl  
[NASA-CASE-NPO-14272-1] c 25 N81-33246  
Supercritical solvent coal extraction  
[NASA-CASE-NPO-15210-1] c 25 N84-22709  
Process for producing tris (n-methylamino) methylsilane  
[NASA-CASE-MFS-25721-1] c 25 N85-21280  
Method for growth of crystals by pressure reduction of supercritical or subcritical solution  
[NASA-CASE-NPO-15772-1] c 76 N85-29800  
Production of butanol by fermentation in the presence of cocultures of clostridium  
[NASA-CASE-NPO-16203-1] c 23 N85-35227  
Acetylene terminated aspartimides and resins therefrom  
[NASA-CASE-LAR-14188-1] c 27 N90-23545  
Imide/arylene ether copolymers  
[NASA-CASE-LAR-14159-1-CU] c 27 N90-26953  
Aromatic polyimides containing a dimethylsilane-linked dianhydride  
[NASA-CASE-LAR-14198-1] c 27 N90-26956  
N-(3-ethynylphenyl)maleimide  
[NASA-CASE-LAR-14188-2] c 23 N91-14419  
Hanging drop crystal growth apparatus  
[NASA-CASE-MFS-26061-1] c 76 N91-16815  
Ethynyl terminated imidothioethers and resins therefrom  
[NASA-CASE-LAR-13910-2-CU] c 27 N91-31307

**SONAR**  
Method for shaping and aiming narrow beams --- sonar mapping and target identification  
[NASA-CASE-NPO-14632-1] c 32 N82-18443  
Echo tracker/range finder for radars and sonars  
[NASA-CASE-NPO-14361-1] c 32 N82-23376

**SONIC BOOMS**  
Instrumentation for measurement of aircraft noise and sonic boom  
[NASA-CASE-LAR-11173-1] c 35 N75-19614  
Instrumentation for measuring aircraft noise and sonic boom  
[NASA-CASE-LAR-11476-1] c 07 N76-27232

**SORBATES**  
Apparatus for measuring a sorbate dispersed in a fluid stream  
[NASA-CASE-ARC-10896-1] c 35 N78-19465

**SORBENTS**  
Multicomponent gas sorption Joule-Thomson refrigerator  
[NASA-CASE-NPO-17569-1-CU] c 31 N90-26176

**SORET COEFFICIENT**  
Method of growing composites of the type exhibiting the Soret effect --- improved structure of eutectic alloy crystals  
[NASA-CASE-MFS-22926-1] c 24 N77-27187

**SORPTION**

Two stage sorption type cryogenic refrigerator including heat regeneration system  
[NASA-CASE-NPO-17630-1-CU] c 31 N89-29577  
Multicomponent gas sorption Joule-Thomson refrigerator  
[NASA-CASE-NPO-17569-1-CU] c 31 N90-26176

**SOUND FIELDS**  
Acoustic positioning and orientation prediction  
[NASA-CASE-NPO-17511-1-CU] c 71 N91-14807

**SOUND GENERATORS**  
Ejectable underwater sound source recovery assembly  
[NASA-CASE-LAR-10595-1] c 35 N74-16135  
Acoustic suspension system  
[NASA-CASE-NPO-15435-1] c 71 N83-36846  
Acoustic agglomeration methods and apparatus  
[NASA-CASE-NPO-15466-1] c 71 N85-22104

**SOUND LOCALIZATION**  
Resolution enhanced sound detecting apparatus  
[NASA-CASE-NPO-14134-1] c 71 N79-23753  
Visual aid for the hearing impaired  
[NASA-CASE-GSC-13027-1-CU] c 35 N91-27522

**SOUND PRESSURE**  
Instrumentation for measurement of aircraft noise and sonic boom  
[NASA-CASE-LAR-11173-1] c 35 N75-19614  
Differential sound level meter  
[NASA-CASE-LAR-12106-1] c 71 N78-14867

**SOUND PROPAGATION**  
System for plotting subsoil structure and method therefor  
[NASA-CASE-NPO-14191-1] c 31 N80-32584  
Sound attenuation apparatus  
[NASA-CASE-LAR-13968-1] c 71 N91-27913

**SOUND RANGING**  
Echo tracker/range finder for radars and sonars  
[NASA-CASE-NPO-14361-1] c 32 N82-23376

**SOUND TRANSDUCERS**  
Method for detecting hydrogen gas  
[NASA-CASE-XMF-03873] c 06 N69-39733  
Cosmic dust sensor  
[NASA-CASE-GSC-10503-1] c 14 N72-20381  
Resolution enhanced sound detecting apparatus  
[NASA-CASE-NPO-14134-1] c 71 N79-23753  
Pulse transducer with artifact signal attenuator --- heart rate sensors  
[NASA-CASE-FRC-11012-1] c 52 N80-23969  
Acoustic system for material transport  
[NASA-CASE-NPO-15453-1] c 71 N83-32515  
Vibrating-chamber levitation systems  
[NASA-CASE-NPO-16142-1-CU] c 35 N86-20752

**SOUND TRANSMISSION**  
Sound attenuation apparatus  
[NASA-CASE-LAR-13968-1] c 71 N91-27913

**SOUND WAVES**  
Phonocardiograph transducer Patent  
[NASA-CASE-XMS-05365] c 14 N71-22993  
Material suspension within an acoustically excited resonant chamber --- at near weightless conditions  
[NASA-CASE-NPO-13263-1] c 12 N75-24774  
Acoustic energy shaping  
[NASA-CASE-NPO-13802-1] c 71 N78-10837  
Acoustic driving of rotor  
[NASA-CASE-NPO-14005-1] c 71 N79-20827  
Acoustic bubble removal method  
[NASA-CASE-NPO-15334-1] c 71 N83-35781  
Acoustic ground impedance meter  
[NASA-CASE-LAR-12995-1] c 35 N84-22933  
Acoustic rotation control  
[NASA-CASE-NPO-15689-1] c 71 N84-23233  
Acoustic agglomeration methods and apparatus  
[NASA-CASE-NPO-15466-1] c 71 N85-22104  
Dual differential interferometer  
[NASA-CASE-LAR-12966-1] c 35 N85-30282  
Acoustic particle separation  
[NASA-CASE-NPO-15559-1] c 71 N85-30765  
Acoustic radiation stress measurement  
[NASA-CASE-LAR-13440-1] c 71 N87-21653  
Rapidly quantifying the relative distention of a human bladder  
[NASA-CASE-LAR-13901-1-NP] c 52 N90-21519  
Impact tolerant material  
[NASA-CASE-LAR-12887-3] c 24 N90-21822  
Acoustic positioning and orientation prediction  
[NASA-CASE-NPO-17511-1-CU] c 71 N91-14807  
Acoustic transducer apparatus with reduced thermal conduction  
[NASA-CASE-NPO-17620-1-CU] c 71 N91-14808  
Acoustophoresis method and apparatus  
[NASA-CASE-LAR-13388-1] c 25 N91-28321

**SOUNDING ROCKETS**  
Attitude control system for sounding rockets Patent  
[NASA-CASE-XGS-01654] c 31 N71-24750  
Method and system for ejecting fairing sections from a rocket vehicle  
[NASA-CASE-GSC-10590-1] c 31 N73-14853



## SPACE CAPSULES

- Assembly for recovering a capsule Patent  
[NASA-CASE-XMF-00641] c 31 N70-36410
- Space capsule Patent  
[NASA-CASE-XLA-01332] c 31 N71-15664
- Space capsule ejection assembly Patent  
[NASA-CASE-XMF-03169] c 31 N71-15675

## SPACE CHARGE

- Space-charge-limited solid-state triode  
[NASA-CASE-NPO-13064-1] c 33 N79-11314

## SPACE COMMUNICATION

- Multiple input radio receiver Patent  
[NASA-CASE-XLA-00901] c 07 N71-10775
- Tracking receiver Patent  
[NASA-CASE-XGS-08679] c 10 N71-21473
- Apparatus providing a directive field pattern and attitude sensing of a spin stabilized satellite Patent  
[NASA-CASE-XGS-02607] c 31 N71-23009
- Space communication system for compressed data with a concatenated Reed-Solomon-Viterbi coding channel  
[NASA-CASE-NPO-13545-1] c 32 N77-12240

## SPACE DEBRIS

- Orbital debris sweeper and method  
[NASA-CASE-MSC-21534-1] c 18 N91-21222

## SPACE ENVIRONMENT SIMULATION

- Voltage-current characteristic simulator Patent  
[NASA-CASE-XMS-01554] c 10 N71-10578
- Fluid dispensing apparatus and method Patent  
[NASA-CASE-XLE-01182] c 27 N71-15635
- Reduced gravity simulator Patent  
[NASA-CASE-XLA-01787] c 11 N71-16028
- Apparatus for measuring electric field strength on the surface of a model vehicle Patent  
[NASA-CASE-XLE-02038] c 09 N71-16086
- Optical characteristics measuring apparatus Patent  
[NASA-CASE-XNP-08840] c 23 N71-16365
- Omni-directional anisotropic molecular trap Patent  
[NASA-CASE-XGS-00783] c 30 N71-17788
- Space environmental work simulator Patent  
[NASA-CASE-XMF-07488] c 11 N71-18773
- Mechanical simulator of low gravity conditions Patent  
[NASA-CASE-MFS-10555] c 11 N71-19494
- Self-lubricating fluoride metal composite materials Patent  
[NASA-CASE-XLE-08511] c 18 N71-23710
- Autoignition test cell Patent  
[NASA-CASE-KSC-10198] c 11 N71-28629
- Illumination system including a virtual light source Patent  
[NASA-CASE-HQN-10781] c 23 N71-30292
- Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332] c 05 N72-20097
- Diffuser/ejector system for a very high vacuum environment  
[NASA-CASE-MFS-25791-1] c 09 N84-27749
- Variable energy, high flux, ground-state atomic oxygen source  
[NASA-CASE-NPO-16640-1-CU] c 72 N87-21661

## SPACE ERECTABLE STRUCTURES

- Flexible foam erectable space structures Patent  
[NASA-CASE-XLA-00686] c 31 N70-34135
- Erectable modular space station Patent  
[NASA-CASE-XLA-00678] c 31 N70-34296
- Manned space station Patent  
[NASA-CASE-XLA-00258] c 31 N70-38676
- Collapsible loop antenna for space vehicle Patent  
[NASA-CASE-XMF-00437] c 07 N70-40202
- Passive communication satellite Patent  
[NASA-CASE-XLA-00210] c 30 N70-40309
- Flexible wing deployment device Patent  
[NASA-CASE-XLA-01220] c 02 N70-41863
- Capillary radiator Patent  
[NASA-CASE-XLE-03307] c 33 N71-14035
- Space manufacturing machine Patent  
[NASA-CASE-MFS-20410] c 15 N71-19214
- Roll-up solar array Patent  
[NASA-CASE-NPO-10188] c 03 N71-20273
- Collapsible reflector Patent  
[NASA-CASE-XMS-03454] c 09 N71-20658
- Inflatable support structure Patent  
[NASA-CASE-XLA-01731] c 32 N71-21045
- Radiator deployment actuator Patent  
[NASA-CASE-MSC-11817-1] c 15 N71-26611
- Inflatable tether Patent  
[NASA-CASE-XMS-10993] c 15 N71-28936
- Expandable space frames  
[NASA-CASE-ERC-10365-1] c 31 N73-32749
- Apparatus for assembling space structure  
[NASA-CASE-MFS-23579-1] c 18 N79-11108
- Lightweight structural columns --- space erectable trusses  
[NASA-CASE-LAR-12095-1] c 31 N81-25258
- Telescoping columns --- parabolic antenna support  
[NASA-CASE-LAR-12195-1] c 31 N81-27324
- Joint for deployable structures  
[NASA-CASE-NPO-16038-1] c 37 N86-19605

- Foldable self-erecting joint  
[NASA-CASE-MSC-20635-1] c 18 N87-14373
- Bi-stem gripping apparatus  
[NASA-CASE-MFS-28185-1] c 37 N88-23979
- Space station erectable manipulator placement system  
[NASA-CASE-MSC-21096-1] c 18 N89-12621
- Antenna surface contour control system  
[NASA-CASE-LAR-13798-1] c 32 N89-25363
- Mechanical end joint system for connecting structural column elements  
[NASA-CASE-LAR-14465-1] c 37 N91-14614
- Clevis joint for deployable space structures  
[NASA-CASE-LAR-13898-1] c 37 N91-15544

## SPACE EXPLORATION

- Vehicle for use in planetary exploration  
[NASA-CASE-NPO-11366] c 11 N73-26238

## SPACE FLIGHT

- Portable environmental control system Patent  
[NASA-CASE-XMS-09632-1] c 05 N71-11203
- Television simulation for aircraft and space flight Patent  
[NASA-CASE-XFR-03107] c 09 N71-19449
- Whole body cleansing agent  
[NASA-CASE-MSC-21589-1] c 54 N91-16566

## SPACE FLIGHT FEEDING

- Helmet feedport  
[NASA-CASE-XMS-09653] c 54 N78-17680
- Self-charging metering and dispensing device for fluids  
[NASA-CASE-MSC-20275-1] c 35 N85-21595

## SPACE INDUSTRIALIZATION

- Apparatus for assembling space structure  
[NASA-CASE-MFS-23579-1] c 18 N79-11108

## SPACE LABORATORIES

- Nano-G research laboratory for a spacecraft  
[NASA-CASE-GSC-13197-1] c 18 N91-27201

## SPACE MAINTENANCE

- Thruster maintenance system Patent  
[NASA-CASE-MFS-20325] c 28 N71-27095
- Hot melt recharge system --- repairing damaged or missing tiles on space shuttle orbiter  
[NASA-CASE-LAR-12881-1] c 27 N84-14323

## SPACE MANUFACTURING

- Material suspension within an acoustically excited resonant chamber --- at near weightless conditions  
[NASA-CASE-NPO-13263-1] c 12 N75-24774
- Method for manufacturing mirrors in zero gravity environment  
[NASA-CASE-MSC-12611-1] c 12 N76-15189
- Apparatus for assembling space structure  
[NASA-CASE-MFS-23579-1] c 18 N79-11108
- Structural members, method and apparatus  
[NASA-CASE-MSC-16217-1] c 31 N81-27323
- Low gravity exothermic heating/cooling apparatus  
[NASA-CASE-MSC-25707-1] c 35 N85-29214

## SPACE MISSIONS

- Method of planetary atmospheric investigation using a split-trajectory dual flyby mode Patent  
[NASA-CASE-XAC-08494] c 30 N71-15990
- Deep space monitor communication satellite system Patent  
[NASA-CASE-XAC-06029-1] c 31 N71-24813
- A method of delivering a vehicle to earth orbit and returning the reusable portion thereof to earth  
[NASA-CASE-MSC-12391] c 30 N73-12884

## SPACE NAVIGATION

- Trigonometric vehicle guidance assembly which aligns the three perpendicular axes of two three-axis systems Patent  
[NASA-CASE-XMF-00684] c 21 N71-21688
- Dual purpose momentum wheels for spacecraft with magnetic recording  
[NASA-CASE-NPO-11481] c 21 N73-13644
- Star tracking techniques and process for the production thereof  
[NASA-CASE-GSC-11188-2] c 21 N73-19630

## SPACE ORIENTATION

- Method and apparatus for determining satellite orientation utilizing spatial energy sources Patent  
[NASA-CASE-XGS-00466] c 21 N70-34297

## SPACE PLATFORMS

- Joint for deployable structures  
[NASA-CASE-NPO-16038-1] c 37 N86-19605
- Mobile remote manipulator vehicle system  
[NASA-CASE-LAR-13393-1] c 54 N87-29118
- Expandable pallet for space station interface attachments  
[NASA-CASE-MSC-21117-1] c 18 N88-28958

## SPACE PROBES

- Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-15429-1] c 18 N84-22609

## SPACE PROCESSING

- Exothermic furnace module  
[NASA-CASE-MFS-25707-1] c 35 N82-26631

- High gradient directional solidification furnace  
[NASA-CASE-MFS-25963-1] c 35 N86-20750
- Infusion extractor  
[NASA-CASE-MSC-20761-1] c 37 N87-15465
- Space ultra-vacuum facility and method of operation  
[NASA-CASE-MFS-28139-1] c 29 N87-18679
- Sample levitation and melt in microgravity  
[NASA-CASE-NPO-17022-1-CU] c 29 N87-25489
- Spiral vane bioreactor  
[NASA-CASE-MSC-21361-1] c 51 N91-21701
- Nano-G research laboratory for a spacecraft  
[NASA-CASE-GSC-13197-1] c 18 N91-27201

## SPACE RENDEZVOUS

- Method and apparatus for securing to a spacecraft Patent  
[NASA-CASE-MFS-11133] c 31 N71-16222
- Apparatus for releasably connecting first and second objects in predetermined space relationship  
[NASA-CASE-MSC-18969-1] c 18 N84-22605
- Rotatable electric cable connecting system  
[NASA-CASE-GSC-12899-1] c 33 N86-20669

## SPACE SHUTTLE BOOSTERS

- Space Shuttle with rail system and aft thrust structure securing solid rocket boosters to external tank  
[NASA-CASE-MFS-25853-1] c 16 N84-27784

## SPACE SHUTTLE ORBITERS

- Surface conforming thermal/pressure seal --- tail assemblies of space shuttle orbiters  
[NASA-CASE-MSC-18422-1] c 37 N82-16408
- CAM controlled retractable door latch  
[NASA-CASE-MSC-20304-1] c 37 N82-31690
- High temperature glass thermal control structure and coating --- for application to spacecraft reusable heat shielding  
[NASA-CASE-ARC-11164-1] c 44 N83-34448
- Hot melt recharge system --- repairing damaged or missing tiles on space shuttle orbiter  
[NASA-CASE-LAR-12881-1] c 27 N84-14323
- Pre-stressed thermal protection systems  
[NASA-CASE-MSC-20254-1] c 16 N84-22601
- Space Shuttle with rail system and aft thrust structure securing solid rocket boosters to external tank  
[NASA-CASE-MFS-25853-1] c 16 N84-27784
- Shell tile thermal protection system  
[NASA-CASE-LAR-12862-1] c 27 N84-27886

## SPACE SHUTTLE PAYLOADS

- Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-1] c 18 N84-22612
- Shuttle-launch triangular space station  
[NASA-CASE-MSC-20676-1] c 18 N86-24729
- Payload deployment method and system  
[NASA-CASE-MSC-21330-1] c 16 N88-24660

## SPACE SHUTTLES

- Flight craft Patent  
[NASA-CASE-XAC-02058] c 02 N71-16087
- A method of delivering a vehicle to earth orbit and returning the reusable portion thereof to earth  
[NASA-CASE-MSC-12391] c 30 N73-12884
- Space shuttle vehicle and system  
[NASA-CASE-MSC-12433] c 31 N73-14854
- Variable ratio mixed-mode bilateral master-slave control system for shuttle remote manipulator system  
[NASA-CASE-MSC-14245-1] c 18 N75-27041
- Fused silicide coatings containing discrete particles for protecting niobium alloys --- used in space shuttle thermal protection systems and turbine engine components  
[NASA-CASE-LEW-11179-1] c 27 N76-16229
- Device for coupling a first vehicle to a second vehicle  
[NASA-CASE-GSC-12429-1] c 37 N81-14320
- System for sterilizing objects --- cleaning space vehicle systems  
[NASA-CASE-KSC-11085-1] c 54 N81-24724
- Terminal guidance sensor system --- space shuttle coupling to orbiting satellites  
[NASA-CASE-NPO-14521-1] c 37 N81-27519
- Adjustable high emittance gap filler --- reentry shielding for space shuttle vehicles  
[NASA-CASE-ARC-11310-1] c 27 N82-24339
- Hemispherical latching apparatus  
[NASA-CASE-MFS-25837-1] c 18 N85-29991
- Slide release mechanism --- for space shuttle orbiter/external tank connection device  
[NASA-CASE-MSC-20080-1] c 37 N85-30334
- Preloaded brake disc  
[NASA-CASE-MSC-21132-1] c 37 N88-29181
- Docking mechanism for spacecraft  
[NASA-CASE-MSC-21386-1] c 18 N90-20126
- Emergency egress fixed rocket package  
[NASA-CASE-MSC-21332-1] c 03 N91-15142

## SPACE SIMULATORS

- Space simulator Patent  
[NASA-CASE-XNP-00459] c 11 N70-38675
- Variable geometry manned orbital vehicle Patent  
[NASA-CASE-XLA-03691] c 31 N71-15674

- Space simulation and radiative property testing system and method Patent  
[NASA-CASE-MFS-20096] c 14 N71-30026
- Biocentrifuge system capable of exchanging specimen cages while in operational mode  
[NASA-CASE-MFS-23825-1] c 51 N81-32829
- SPACE STATION STRUCTURES**
- Mobile remote manipulator system for a tetrahedral truss  
[NASA-CASE-MSC-20985-1] c 18 N88-26398
- Expandable pallet for space station interface attachments  
[NASA-CASE-MSC-21117-2] c 18 N89-28554
- Smart tunnel: Docking mechanism  
[NASA-CASE-MSC-21360-1] c 18 N91-14374
- Overcenter collet space station truss fastener  
[NASA-CASE-MSC-21504-1] c 18 N91-21221
- SPACE STATIONS**
- Manned space station Patent  
[NASA-CASE-XLA-00258] c 31 N70-38676
- Radial module space station Patent  
[NASA-CASE-XMS-01906] c 31 N70-41373
- Serpentuator Patent  
[NASA-CASE-XMF-05344] c 31 N71-16345
- Space manufacturing machine Patent  
[NASA-CASE-MFS-20410] c 15 N71-19214
- Meteoroid impact position locator aid for manned space station  
[NASA-CASE-LAR-10629-1] c 35 N75-33367
- Multiple in-line docking capability for rotating space stations  
[NASA-CASE-MFS-20855-1] c 15 N77-10112
- Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-1] c 18 N84-22612
- Shuttle-launch triangular space station  
[NASA-CASE-MSC-20676-1] c 18 N86-24729
- Vapor fragrancener  
[NASA-CASE-LAR-13680-1] c 35 N87-25561
- Locking hinge  
[NASA-CASE-MSC-21056-1] c 18 N88-23827
- Expandable pallet for space station interface attachments  
[NASA-CASE-MSC-21117-1] c 18 N88-28958
- Collet lock joint for space station truss  
[NASA-CASE-MSC-21207-1] c 37 N88-29180
- Space station erectable manipulator placement system  
[NASA-CASE-MSC-21096-1] c 18 N89-12621
- Quick-disconnect inflatable seal assembly  
[NASA-CASE-KSC-11368-1] c 37 N89-13786
- Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-2] c 18 N89-25266
- Docking system for spacecraft  
[NASA-CASE-MSC-21327-1] c 18 N90-11798
- Docking mechanism for spacecraft  
[NASA-CASE-MSC-21386-1] c 18 N90-20126
- Rotating-unbalanced-mass devices and methods for scanning balloon-borne-experiments, free-flying spacecraft, and space shuttle/space station attached experiments  
[NASA-CASE-MFS-28425-1] c 35 N90-26304
- Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-2] c 28 N91-14495
- SPACE STORAGE**
- Hemispherical latching apparatus  
[NASA-CASE-MFS-25837-1] c 18 N85-29991
- SPACE SUITS**
- Universal pilot restraint suit and body support therefor Patent  
[NASA-CASE-XAC-00405] c 05 N70-41819
- Space suit pressure stabilizer Patent  
[NASA-CASE-XLA-05332] c 05 N71-11194
- Equipotential space suit Patent  
[NASA-CASE-LAR-10007-1] c 05 N71-11195
- Biological isolation garment Patent  
[NASA-CASE-MSC-12206-1] c 05 N71-17599
- Space environmental work simulator Patent  
[NASA-CASE-XMF-07488] c 11 N71-18773
- Space suit heat exchanger Patent  
[NASA-CASE-XMS-09571] c 05 N71-19439
- G conditioning suit Patent  
[NASA-CASE-XLA-02898] c 05 N71-20268
- Hard space suit Patent  
[NASA-CASE-XAC-07043] c 05 N71-23161
- Evacuation port seal Patent  
[NASA-CASE-XMF-03290] c 15 N71-23256
- Fabric for micrometeoroid protection garment Patent  
[NASA-CASE-MSC-12109] c 18 N71-26285
- Venting device for pressurized space suit helmet Patent  
[NASA-CASE-XMS-09652-1] c 05 N71-26333
- Automatic control of liquid cooling garment by cutaneous and external auditory meatus temperatures  
[NASA-CASE-MSC-13917-1] c 05 N72-15098
- Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332] c 05 N72-20097
- Space suit having improved waist and torso movement  
[NASA-CASE-ARC-10275-1] c 05 N72-22092
- Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332-2] c 05 N73-25125
- Temperature controller for a fluid cooled garment  
[NASA-CASE-ARC-10599-1] c 05 N73-26071
- Space suit  
[NASA-CASE-MSC-12609-1] c 05 N73-32012
- Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[NASA-CASE-MSC-14331-1] c 27 N76-24405
- Protective garment ventilation system  
[NASA-CASE-XMS-04928] c 54 N78-17679
- Emergency space-suit helmet  
[NASA-CASE-MSC-10954-1] c 54 N78-18761
- Spacesuit mobility joints  
[NASA-CASE-ARC-11058-1] c 54 N78-31735
- Spacesuit torso closure  
[NASA-CASE-ARC-11100-1] c 54 N78-31736
- Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c 54 N78-32721
- Spacesuit mobility knee joints  
[NASA-CASE-ARC-11058-2] c 54 N79-24651
- Absorbent product to absorb fluids --- for collection of human wastes  
[NASA-CASE-MSC-18223-1] c 24 N82-29362
- Torso sizing ring construction for hard space suit  
[NASA-CASE-ARC-11616-1] c 54 N86-28618
- Elbow and knee joint for hard space suits  
[NASA-CASE-ARC-11610-1] c 54 N86-28619
- Shoulder and hip joint for hard space suits  
[NASA-CASE-ARC-11543-1] c 54 N86-28620
- Shoulder and hip joints for hard space suits and the like  
[NASA-CASE-ARC-11534-1] c 54 N86-29507
- Weightlessness simulation system and process  
[NASA-CASE-ARC-11646-1] c 14 N87-25344
- Tapered, tubular polyester fabric  
[NASA-CASE-MSC-21082-1] c 27 N87-29672
- Don/doff support stand for use with rear entry space suits  
[NASA-CASE-MSC-21364-1] c 54 N89-13889
- Suitport extra-vehicular access facility  
[NASA-CASE-ARC-11635-1] c 18 N90-16860
- Hazards protection for space suits and spacecraft  
[NASA-CASE-MSC-21366-1] c 54 N90-25498
- SPACE TOOLS**
- Pneumatic inflatable end effector  
[NASA-CASE-MFS-23696-1] c 54 N81-26718
- SPACE TRANSPORTATION SYSTEM**
- Coupling device for moving vehicles  
[NASA-CASE-GSC-12322-1] c 37 N80-14398
- Three stage rocket vehicle with parallel staging  
[NASA-CASE-MFS-25878-1] c 18 N84-27787
- SPACE VEHICLE CHECKOUT PROGRAM**
- Hydraulic support for dynamic testing Patent  
[NASA-CASE-XMF-03248] c 11 N71-10604
- Electronic checkout system for space vehicles Patent  
[NASA-CASE-XKS-08012-2] c 31 N71-15566
- High pressure gas filter system Patent  
[NASA-CASE-MFS-12806] c 14 N71-17588
- SPACEBORNE EXPERIMENTS**
- Space ultra-vacuum facility and method of operation  
[NASA-CASE-MFS-28139-1] c 29 N87-18679
- Nano-G research laboratory for a spacecraft  
[NASA-CASE-GSC-13197-1] c 18 N91-27201
- SPACEBORNE TELESCOPES**
- Anastigmatic three-mirror telescope  
[NASA-CASE-MFS-23675-1] c 89 N79-10969
- Cooled echelle grating spectrometer --- for space telescope applications  
[NASA-CASE-NPO-14372-1] c 35 N80-26635
- Extended range X-ray telescope  
[NASA-CASE-MFS-25282-1] c 34 N83-19015
- Dual aperture multispectral Schmidt objective  
[NASA-CASE-GSC-12756-1] c 74 N84-23248
- Spectral slicing X-ray telescope with variable magnification  
[NASA-CASE-MFS-25942-1] c 74 N86-20124
- Self indexing latch system  
[NASA-CASE-MFS-25956-1] c 37 N87-21333
- SPACECRAFT**
- Interconnection of solar cells Patent  
[NASA-CASE-XGS-01475] c 03 N71-11058
- Attitude sensor for space vehicles Patent  
[NASA-CASE-XLA-00793] c 21 N71-22880
- Solar cell and circuit array and process for nullifying magnetic fields Patent  
[NASA-CASE-XGS-03390] c 03 N71-23187
- High efficiency ionizer assembly Patent  
[NASA-CASE-XNP-01954] c 28 N71-28850
- Altitude simulation chamber for rocket engine testing  
[NASA-CASE-MFS-20620] c 11 N72-27262
- Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-15429-1] c 18 N84-22609
- SPACECRAFT ANTENNAS**
- Parasitic probe antenna Patent  
[NASA-CASE-XKS-09348] c 09 N71-13521
- Millimeter wave antenna system Patent Application  
[NASA-CASE-GSC-10949-1] c 07 N71-28965
- Integrated thermoelectric generator/space antenna combination  
[NASA-CASE-XER-09521] c 09 N72-12136
- Omnidirectional slot antenna for mounting on cylindrical space vehicle  
[NASA-CASE-LAR-10163-1] c 09 N72-25247
- Singly-curved reflector for use in high-gain antennas  
[NASA-CASE-NPO-11361] c 07 N72-32169
- Collapsible structure for an antenna reflector  
[NASA-CASE-NPO-11751] c 07 N73-24176
- Multi-channel rotating optical interface for data transmission  
[NASA-CASE-NPO-14066-1] c 74 N79-34011
- Antenna deployment mechanism for use with a spacecraft --- extensible and retractable telescopic antenna mast  
[NASA-CASE-GSC-12331-1] c 18 N80-14183
- Spiral slotted phased antenna array  
[NASA-CASE-MSC-18532-1] c 32 N82-27558
- SPACECRAFT CABIN ATMOSPHERES**
- Thermal control wall panel Patent  
[NASA-CASE-XLA-01243] c 33 N71-22792
- Nonflammable coating compositions --- for use in high oxygen environments  
[NASA-CASE-MFS-20486-2] c 27 N74-17283
- Regenerable device for scrubbing breathable air of CO2 and moisture without special heat exchanger equipment  
[NASA-CASE-MSC-14771-1] c 54 N77-32722
- SPACECRAFT CABINS**
- Suitport extra-vehicular access facility  
[NASA-CASE-ARC-11635-1] c 18 N90-16860
- SPACECRAFT COMMUNICATION**
- Time division multiplex system  
[NASA-CASE-XGS-05918] c 07 N69-39974
- Phase-shift data transmission system having a pseudo-noise SYNC code modulated with the data in a single channel Patent  
[NASA-CASE-XNP-00911] c 08 N70-41961
- Tracking receiver Patent  
[NASA-CASE-XGS-08679] c 10 N71-21473
- Omnidirectional microwave spacecraft antenna Patent  
[NASA-CASE-XLA-03114] c 09 N71-22888
- VHF/UHF parasitic probe antenna Patent  
[NASA-CASE-XKS-09340] c 07 N71-24614
- Rapid sync acquisition system Patent  
[NASA-CASE-NPO-10214] c 10 N71-26577
- Turnstile slot antenna  
[NASA-CASE-GSC-11428-1] c 32 N74-20864
- Switchable beamwidth monopulse method and system  
[NASA-CASE-GSC-11924-1] c 33 N76-27422
- Antenna feed system for receiving circular polarization and transmitting linear polarization  
[NASA-CASE-NPO-14362-1] c 32 N80-16261
- Common data buffer system --- communication with computational equipment utilized in spacecraft operations  
[NASA-CASE-KSC-11048-1] c 62 N81-24779
- Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c 32 N81-27341
- Measurement apparatus and procedure for the determination of surface emissivities  
[NASA-CASE-LAR-13455-1] c 32 N87-21206
- Reed-Solomon decoder  
[NASA-CASE-NPO-15982-1] c 60 N87-21591
- SPACECRAFT COMPONENTS**
- Electrical connector Patent Application  
[NASA-CASE-MFS-14741] c 09 N70-20737
- Vibration damping system Patent  
[NASA-CASE-XMS-01620] c 23 N71-15673
- Intermittent type silica gel adsorption refrigerator Patent  
[NASA-CASE-XNP-00920] c 15 N71-15906
- Omni-directional anisotropic molecular trap Patent  
[NASA-CASE-XGS-00783] c 30 N71-17788
- Spacecraft airlock Patent  
[NASA-CASE-XLA-02050] c 31 N71-22968
- Docking structure for spacecraft Patent  
[NASA-CASE-XMF-05941] c 31 N71-23912
- Redundant actuating mechanism Patent  
[NASA-CASE-XGS-08718] c 15 N71-24600

- Space simulator Patent  
[NASA-CASE-NPO-10141] c 11 N71-24964
- Spacecraft Patent  
[NASA-CASE-MSC-13047-1] c 31 N71-25434
- Peak acceleration limiter for vibrational tester Patent  
[NASA-CASE-NPO-10556] c 14 N71-27185
- Solid state thermal control polymer coating Patent  
[NASA-CASE-XLA-01745] c 33 N71-28903
- Scientific experiment flexible mount  
[NASA-CASE-MSC-12372-1] c 31 N72-25842
- Airlock  
[NASA-CASE-MFS-20922-1] c 18 N74-22136
- Thrust-isolating mounting --- characteristics of support for loads mounted in spacecraft  
[NASA-CASE-MFS-21680-1] c 18 N74-27397
- Variable ratio mixed-mode bilateral master-slave control system for shuttle remote manipulator system  
[NASA-CASE-MSC-14245-1] c 18 N75-27041
- High temperature penetrator assembly with bayonet plug and ramp-activated lock  
[NASA-CASE-MSC-18526-1] c 37 N82-24494
- Apparatus for releasably connecting first and second objects in predetermined space relationship  
[NASA-CASE-MSC-18969-1] c 18 N84-22605
- Aerospace vehicle  
[NASA-CASE-LAR-13155-1] c 05 N86-19310
- Spacecraft component heater control system  
[NASA-CASE-MFS-28327-1] c 18 N89-28556
- Docking system for spacecraft  
[NASA-CASE-MSC-21327-1] c 18 N90-11798
- SPACECRAFT CONFIGURATIONS**
- Inflatable honeycomb Patent  
[NASA-CASE-XLA-00204] c 32 N70-36536
- Space and atmospheric reentry vehicle Patent  
[NASA-CASE-XGS-00260] c 31 N70-37924
- Spacecraft separation system for spinning vehicles and/or payloads Patent  
[NASA-CASE-XLA-02132] c 31 N71-10582
- Space shuttle vehicle and system  
[NASA-CASE-MSC-12433] c 31 N73-14854
- Space vehicle  
[NASA-CASE-MFS-22734-1] c 18 N75-19329
- Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-1] c 18 N84-22612
- Space Shuttle with rail system and aft thrust structure securing solid rocket boosters to external tank  
[NASA-CASE-MFS-25853-1] c 16 N84-27784
- SPACECRAFT CONSTRUCTION MATERIALS**
- Pressurized cell micrometeoroid detector Patent  
[NASA-CASE-XLA-00936] c 14 N71-14996
- Fluid impervious barrier including liquid metal alloy and method of making same Patent  
[NASA-CASE-XNP-08881] c 17 N71-28747
- Method of making a composite sandwich lattice structure  
[NASA-CASE-LAR-11898-2] c 24 N78-17149
- Fixture for environmental exposure of structural materials under compression load  
[NASA-CASE-LAR-12602-1] c 39 N83-32081
- Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-3] c 27 N87-23736
- Aluminum alloy  
[NASA-CASE-LAR-13924-1-CU] c 26 N89-28621
- SPACECRAFT CONTROL**
- Light sensitive digital aspect sensor Patent  
[NASA-CASE-XGS-00359] c 14 N70-34158
- Space vehicle attitude control Patent  
[NASA-CASE-XNP-00465] c 21 N70-35395
- Parachute glider Patent  
[NASA-CASE-XLA-00898] c 02 N70-36804
- Attitude control for spacecraft Patent  
[NASA-CASE-XNP-00294] c 21 N70-36938
- Attitude orientation of spin-stabilized space vehicles Patent  
[NASA-CASE-XLA-00281] c 21 N70-36943
- Hypersonic reentry vehicle Patent  
[NASA-CASE-XMS-04142] c 31 N70-41631
- Roll attitude star sensor system Patent  
[NASA-CASE-XNP-01307] c 21 N70-41856
- Canopus detector including automotive gain control of photomultiplier tube Patent  
[NASA-CASE-XNP-03914] c 21 N71-10771
- Spacecraft experiment pointing and attitude control system Patent  
[NASA-CASE-XLA-05464] c 21 N71-14132
- Attitude control system Patent  
[NASA-CASE-XGS-04393] c 21 N71-14159
- Reactance control system Patent  
[NASA-CASE-XMF-01598] c 21 N71-15583
- Spacecraft attitude detection system by stellar reference Patent  
[NASA-CASE-XGS-03431] c 21 N71-15642
- Inertial reference apparatus Patent  
[NASA-CASE-XAC-03107] c 23 N71-16098
- Construction and method of arranging a plurality of ion engines to form a cluster Patent  
[NASA-CASE-XNP-02923] c 28 N71-23081
- Ion beam deflector Patent  
[NASA-CASE-LEW-10689-1] c 28 N71-26173
- Heated porous plug microthruster  
[NASA-CASE-GSC-10640-1] c 28 N72-18766
- Flight control system  
[NASA-CASE-MSC-13397-1] c 21 N72-25595
- All sky pointing attitude control system  
[NASA-CASE-ARC-10716-1] c 35 N77-20399
- Propulsion apparatus and method using boil-off gas from a cryogenic liquid  
[NASA-CASE-MFS-25946-1] c 20 N86-26368
- Three axis attitude control system  
[NASA-CASE-GSC-12970-1] c 08 N88-23808
- SPACECRAFT DESIGN**
- Lunar landing flight research vehicle Patent  
[NASA-CASE-XFR-00929] c 31 N70-34966
- Space capsule Patent  
[NASA-CASE-XLA-01332] c 31 N71-15664
- Spacecraft radiator cover Patent  
[NASA-CASE-MSC-12049] c 31 N71-16080
- Method and apparatus for securing to a spacecraft Patent  
[NASA-CASE-MFS-11133] c 31 N71-16222
- Aerodynamic protection for space flight vehicles Patent  
[NASA-CASE-XNP-02507] c 31 N71-17679
- Self supporting space vehicle Patent  
[NASA-CASE-XLA-00117] c 31 N71-17680
- Multi-mission module Patent  
[NASA-CASE-XMF-01543] c 31 N71-17730
- Docking structure for spacecraft Patent  
[NASA-CASE-XMF-05941] c 31 N71-23912
- Spacecraft Patent  
[NASA-CASE-MSC-13047-1] c 31 N71-25434
- Emergency earth orbital escape device  
[NASA-CASE-MSC-13281] c 31 N72-18859
- Space vehicle  
[NASA-CASE-MFS-22734-1] c 18 N75-19329
- Space vehicle system  
[NASA-CASE-MSC-12561-1] c 18 N76-17185
- Method and apparatus for neutralizing potentials induced on spacecraft surfaces  
[NASA-CASE-GSC-11963-1] c 33 N77-10429
- Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-1] c 18 N84-22612
- Aerospace vehicle  
[NASA-CASE-LAR-13155-1] c 05 N86-19310
- A two-stage earth-to-orbit transport with translating oblique wings for booster recovery  
[NASA-CASE-LAR-14156-1] c 16 N90-16781
- Fluid-loop reaction system  
[NASA-CASE-NPO-17204-1-CU] c 34 N91-25380
- SPACECRAFT DOCKING**
- Expanding center probe and drogue Patent  
[NASA-CASE-XMS-03613] c 31 N71-16346
- Docking structure for spacecraft Patent  
[NASA-CASE-XMF-05941] c 31 N71-23912
- Latching mechanism Patent  
[NASA-CASE-MSC-15474-1] c 15 N71-26162
- Docking structure for spacecraft  
[NASA-CASE-MFS-20863] c 31 N73-26876
- Latch mechanism  
[NASA-CASE-MSC-12549-1] c 37 N74-27903
- Spacecraft docking and alignment system --- using television camera system  
[NASA-CASE-MSC-12559-1] c 18 N76-14186
- Multiple in-line docking capability for rotating space stations  
[NASA-CASE-MFS-20855-1] c 15 N77-10112
- Combined docking and grasping device  
[NASA-CASE-MFS-23088-1] c 37 N77-23483
- Terminal guidance sensor system --- space shuttle coupling to orbiting satellites  
[NASA-CASE-NPO-14521-1] c 37 N81-27519
- Satellite retrieval system  
[NASA-CASE-MFS-25403-1] c 18 N83-29303
- Apparatus for releasably connecting first and second objects in predetermined space relationship  
[NASA-CASE-MSC-18969-1] c 18 N84-22605
- Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-1] c 18 N84-22612
- Rotatable electric cable connecting system  
[NASA-CASE-GSC-12899-1] c 33 N86-20669
- Preloadable vector sensitive latch  
[NASA-CASE-MSC-20910-1] c 37 N87-25582
- Range and range rate system  
[NASA-CASE-MSC-20867-1] c 36 N88-24958
- Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-2] c 18 N89-25266
- Space module assembly apparatus with docking alignment flexibility and restraint  
[NASA-CASE-MSC-21211-1] c 18 N89-28553
- Docking system for spacecraft  
[NASA-CASE-MSC-21327-1] c 18 N90-11798
- Docking mechanism for spacecraft  
[NASA-CASE-MSC-21386-1] c 18 N90-20126
- Closed-loop autonomous docking system  
[NASA-CASE-MFS-28421-1] c 18 N90-26861
- Smart tunnel: Docking mechanism  
[NASA-CASE-MSC-21360-1] c 18 N91-14374
- Pressure vessel flex joint  
[NASA-CASE-MSC-21748-1] c 37 N91-25415
- Standard remote manipulator system docking target augmentation for automated docking  
[NASA-CASE-MFS-28419-1] c 18 N91-27200
- SPACECRAFT ELECTRONIC EQUIPMENT**
- Dynamic Doppler simulator Patent  
[NASA-CASE-XMS-05454-1] c 07 N71-12391
- Vacuum deposition apparatus Patent  
[NASA-CASE-XMF-01667] c 15 N71-17647
- Nose cone mounted heat resistant antenna Patent  
[NASA-CASE-XMS-04312] c 07 N71-22984
- Electrical self-aligning connector --- orbital servicer vehicles  
[NASA-CASE-MFS-25211-2] c 33 N84-14423
- Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-1] c 18 N84-22612
- SPACECRAFT ENVIRONMENTS**
- Portable environmental control system Patent  
[NASA-CASE-XMS-09632-1] c 05 N71-11203
- Quick disconnect latch and handle combination Patent  
[NASA-CASE-MFS-11132] c 15 N71-17649
- Dual solid cryogenics for spacecraft refrigeration Patent  
[NASA-CASE-GSC-10188-1] c 23 N71-24725
- Dual stage check valve  
[NASA-CASE-MSC-13587-1] c 15 N73-30459
- Metering gun for dispensing precisely measured charges of fluid  
[NASA-CASE-MFS-21163-1] c 54 N74-17853
- Automatic thermal switch --- spacecraft applications  
[NASA-CASE-GSC-12553-1] c 34 N83-28356
- SPACECRAFT EQUIPMENT**
- Four-terminal electrical testing device --- initiator bridgewire resistance  
[NASA-CASE-MSC-21166-1] c 35 N87-25555
- Range and range rate system  
[NASA-CASE-MSC-20867-1] c 36 N88-24958
- Capillary heat transport and fluid management device  
[NASA-CASE-MFS-28217-1] c 34 N89-14392
- Surface tension confined liquid cryogen cooler  
[NASA-CASE-GSC-13112-1] c 31 N89-29578
- Acoustic convective system  
[NASA-CASE-NPO-17278-1-CU] c 31 N90-21215
- System for connecting fluid couplings  
[NASA-CASE-MFS-26042-1-SB] c 37 N91-14613
- Two fault tolerant toggle-hook release  
[NASA-CASE-MSC-21671-1] c 37 N91-32498
- SPACECRAFT GUIDANCE**
- Ejection unit Patent  
[NASA-CASE-XNP-00676] c 15 N70-38996
- Trigonometric vehicle guidance assembly which aligns the three perpendicular axes of two three-axes systems Patent  
[NASA-CASE-XMF-00684] c 21 N71-21688
- Solar vane actuator Patent  
[NASA-CASE-XNP-05535] c 14 N71-23040
- Azimuth laying system Patent  
[NASA-CASE-XMF-01669] c 21 N71-23289
- Hermetic sealed vibration damper Patent  
[NASA-CASE-MSC-10959] c 15 N71-26243
- Echo tracker/range finder for radars and sonars  
[NASA-CASE-NPO-14361-1] c 32 N82-23376
- SPACECRAFT INSTRUMENTS**
- Mechanical coordinate converter Patent  
[NASA-CASE-XNP-00614] c 14 N70-36907
- Air bearing Patent  
[NASA-CASE-XMF-00339] c 15 N70-39896
- Folding boom assembly Patent  
[NASA-CASE-XGS-00938] c 32 N70-41367
- Pressurized cell micrometeoroid detector Patent  
[NASA-CASE-XLA-00936] c 14 N71-14996
- Guidance and maneuver analyzer Patent  
[NASA-CASE-XNP-09572] c 14 N71-15621
- Clamping assembly for inertial components Patent  
[NASA-CASE-XMS-02184] c 15 N71-20813
- Optical projector system Patent  
[NASA-CASE-XNP-03853] c 23 N71-21882

- Combined optical attitude and altitude indicating instrument Patent  
[NASA-CASE-XLA-01907] c 14 N71-23268
- Method and apparatus for mapping planets  
[NASA-CASE-NPO-11001] c 07 N72-21118
- Spacecraft attitude control method and apparatus  
[NASA-CASE-HQN-10439] c 21 N72-21624
- Pump for delivering heated fluids  
[NASA-CASE-NPO-11417] c 15 N73-24513
- Deployable pressurized cell structure for a micrometeoroid detector  
[NASA-CASE-LAR-10295-1] c 35 N74-21062
- Distributed-switch Dickc radiometers  
[NASA-CASE-GSC-12219-1] c 35 N80-18359
- Real-time multiple-look synthetic aperture radar processor for spacecraft applications  
[NASA-CASE-NPO-14054-1] c 32 N82-12297
- Stirling cycle cryogenic cooler  
[US-PATENT-4,389,849] c 44 N83-28574
- Vibration isolation and pressure compensation apparatus for sensitive instrumentation  
[NASA-CASE-LAR-12728-1] c 35 N83-32026
- Optical system  
[NASA-CASE-NPO-15801-1] c 74 N85-23396
- Fully redundant mechanical release actuator  
[NASA-CASE-LAR-13198-1] c 37 N87-23983
- SPACECRAFT LANDING**
- Non-reusable kinetic energy absorber Patent  
[NASA-CASE-XLE-00810] c 15 N70-34861
- Foam generator Patent  
[NASA-CASE-XLA-00838] c 03 N70-36778
- Discrete local altitude sensing device Patent  
[NASA-CASE-XMS-03792] c 14 N70-41812
- SPACECRAFT LAUNCHING**
- Passive caging mechanism Patent  
[NASA-CASE-GSC-10306-1] c 15 N71-24694
- Disconnect unit  
[NASA-CASE-NPO-11330] c 33 N73-26958
- SPACECRAFT MODELS**
- Apparatus for measuring electric field strength on the surface of a model vehicle Patent  
[NASA-CASE-XLE-02038] c 09 N71-16086
- SPACECRAFT MODULES**
- Radial module space station Patent  
[NASA-CASE-XMS-01906] c 31 N70-41373
- Multi-mission module Patent  
[NASA-CASE-XMF-01543] c 31 N71-17730
- Spacecraft Patent  
[NASA-CASE-MS-13047-1] c 31 N71-25434
- Thermal control system for a spacecraft modular housing  
[NASA-CASE-GSC-11018-1] c 31 N73-30829
- SPACECRAFT MOTION**
- Magnetic suspension and pointing system --- on a carrier vehicle  
[NASA-CASE-LAR-11889-1] c 35 N79-26372
- SPACECRAFT POSITION INDICATORS**
- Device for determining relative angular position between a spacecraft and a radiation emitting celestial body  
[NASA-CASE-GSC-11444-1] c 14 N73-28490
- Spacecraft attitude sensor  
[NASA-CASE-GSC-10890-1] c 21 N73-30640
- SPACECRAFT POWER SUPPLIES**
- Spacecraft battery seals  
[NASA-CASE-XGS-03864] c 15 N69-24320
- Space vehicle electrical system Patent  
[NASA-CASE-XMF-00517] c 03 N70-34157
- Ionospheric battery Patent  
[NASA-CASE-XGS-01593] c 03 N70-35408
- Generator for a space power system Patent  
[NASA-CASE-XLE-04250] c 09 N71-20446
- Monostable multivibrator  
[NASA-CASE-GSC-10082-1] c 10 N72-20221
- Stacked solar cell arrays  
[NASA-CASE-NPO-11771] c 03 N73-20040
- Thermoelectric power system --- for spacecraft  
[NASA-CASE-MFS-22002-1] c 44 N76-16612
- Solar energy power system  
[NASA-CASE-MFS-21628-2] c 44 N76-23675
- Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c 33 N79-24254
- Linear magnetic motor/generator --- to generate electric energy using magnetic flux for spacecraft power supply  
[NASA-CASE-GSC-12518-1] c 33 N82-24421
- Solar driven liquid metal MHD power generator  
[NASA-CASE-LAR-12495-1] c 44 N83-28573
- Rotatable electric cable connecting system  
[NASA-CASE-GSC-12899-1] c 33 N86-20669
- Bidirectional control system for energy flow in solar powered flywheel  
[NASA-CASE-MFS-25978-1] c 44 N87-21410
- Arcjet power supply and start circuit  
[NASA-CASE-LEW-14374-1] c 09 N88-28939
- Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-2] c 28 N91-14495
- SPACECRAFT PROPULSION**
- Colloid propulsion method and apparatus Patent  
[NASA-CASE-XLE-00817] c 28 N70-33265
- Trajectory-correction propulsion system Patent  
[NASA-CASE-XNP-01104] c 28 N70-39931
- Ion engine casing construction and method of making same Patent  
[NASA-CASE-XNP-06942] c 28 N71-23293
- Voice operated controller Patent  
[NASA-CASE-XLA-04063] c 31 N71-33160
- Solid propellant motor  
[NASA-CASE-NPO-11458A] c 20 N78-32179
- General purpose rocket furnace  
[NASA-CASE-MFS-23460-1] c 12 N79-26075
- Speed control device for a heavy duty shaft --- solar sails for spacecraft propulsion  
[NASA-CASE-NPO-14170-1] c 37 N81-15364
- SPACECRAFT RADIATORS**
- Thermal control canister  
[NASA-CASE-GSC-12253-1] c 34 N79-31523
- Thermal control system --- removing waste heat from industrial process spacecraft  
[NASA-CASE-GSC-12771-1] c 34 N84-14461
- Radiative cooler --- spacecraft radiators  
[NASA-CASE-NPO-15465-1] c 34 N84-22903
- Multi-leg heat pipe evaporator  
[NASA-CASE-MS-20812-1] c 34 N86-27593
- Space vehicle thermal rejection system  
[NASA-CASE-LAR-13738-1] c 18 N87-29586
- Gas particle radiator  
[NASA-CASE-LEW-14297-1] c 35 N89-12048
- Liquid sheet radiator apparatus  
[NASA-CASE-LEW-14295-1] c 31 N91-15424
- SPACECRAFT RECOVERY**
- Assembly for recovering a capsule Patent  
[NASA-CASE-XMF-00641] c 31 N70-36410
- Wing deployment method and apparatus Patent  
[NASA-CASE-XMS-00907] c 02 N70-41630
- Satellite retrieval system  
[NASA-CASE-MFS-25403-1] c 18 N83-29303
- Apparatus and method of capturing an orbiting spacecraft  
[NASA-CASE-MS-20979-1] c 37 N87-22985
- SPACECRAFT REENTRY**
- Space capsule Patent  
[NASA-CASE-XLA-00149] c 31 N70-37938
- Event recorder Patent  
[NASA-CASE-XLA-01832] c 14 N71-21006
- Ceramic-ceramic shell tile thermal protection system and method thereof  
[NASA-CASE-ARC-11641-1] c 24 N88-18628
- SPACECRAFT SHIELDING**
- Aerodynamic protection for space flight vehicles Patent  
[NASA-CASE-XNP-02507] c 31 N71-17679
- Isothermal cover with thermal reservoirs Patent  
[NASA-CASE-MFS-20355] c 33 N71-25353
- Stabilized zinc oxide coating compositions Patent  
[NASA-CASE-XMF-07770-2] c 18 N71-26772
- Electrically conductive thermal control coatings  
[NASA-CASE-GSC-12207-1] c 24 N79-14156
- Thermal insulation protection means  
[NASA-CASE-MS-12737-1] c 24 N79-25142
- Thermal barrier pressure seal --- shielding junctions between spacecraft control surfaces and structures  
[NASA-CASE-MS-18134-1] c 37 N81-15363
- High temperature glass thermal control structure and coating --- for application to spacecraft reusable heat shielding  
[NASA-CASE-ARC-11164-1] c 44 N83-34448
- Variable anodic thermal control coating  
[NASA-CASE-LAR-12719-1] c 44 N83-34449
- Shell tile thermal protection system  
[NASA-CASE-LAR-12862-1] c 27 N84-27886
- Mechanical fastener  
[NASA-CASE-LAR-12738-2] c 37 N85-30335
- Thermally isolated deployable shield for spacecraft  
[NASA-CASE-MFS-28524-1] c 18 N91-25167
- Thermally activated retainer means  
[NASA-CASE-MS-21793-1] c 16 N91-28186
- SPACECRAFT STABILITY**
- Reaction wheel scanner Patent  
[NASA-CASE-XGS-02629] c 14 N71-21082
- Attitude sensor  
[NASA-CASE-LAR-10586-1] c 19 N74-15089
- Annular momentum control device used for stabilization of space vehicles and the like  
[NASA-CASE-LAR-11051-1] c 15 N76-14158
- Tetherline system for orbiting satellites  
[NASA-CASE-MFS-23564-1] c 15 N78-25119
- Active nutation controller  
[NASA-CASE-GSC-12273-1] c 35 N80-21719
- Method of damping nutation motion with minimum spin axis attitude disturbance  
[NASA-CASE-GSC-12551-1] c 18 N83-28064
- SPACECRAFT STRUCTURES**
- Collapsible loop antenna for space vehicle Patent  
[NASA-CASE-XMF-00437] c 07 N70-40202
- Electro-optical alignment control system Patent  
[NASA-CASE-XMF-00908] c 14 N70-40238
- Spacecraft radiator cover Patent  
[NASA-CASE-MS-12049] c 31 N71-16080
- Satellite appendage tie down cord Patent  
[NASA-CASE-XGS-02554] c 31 N71-21064
- Thermal control panel Patent  
[NASA-CASE-XLA-07728] c 33 N71-22890
- Inflatable tether Patent  
[NASA-CASE-XMS-10993] c 15 N71-28936
- Delayed simultaneous release mechanism  
[NASA-CASE-GSC-10814-1] c 03 N73-20039
- Pressurized panel  
[NASA-CASE-XLA-08916-2] c 14 N73-28487
- Structural heat pipe --- for spacecraft wall thermal insulation system  
[NASA-CASE-GSC-11619-1] c 34 N75-12222
- Auger attachment method for insulation --- of spacecraft  
[NASA-CASE-MS-12615-1] c 37 N76-19437
- Particulate and solar radiation stable coating for spacecraft  
[NASA-CASE-LAR-10805-2] c 34 N77-18382
- Pneumatic inflatable end effector  
[NASA-CASE-MFS-23696-1] c 54 N81-26718
- Curved cap corrugated sheet  
[NASA-CASE-LAR-12884-1] c 18 N84-33450
- Elastomer toughened polyimide adhesives --- bonding metal and composite material structures for aircraft and spacecraft  
[NASA-CASE-LAR-12775-2] c 27 N85-21349
- SPACECRAFT TELEVISION**
- Electrically-operated rotary shutter Patent  
[NASA-CASE-XNP-00637] c 14 N70-40273
- Television signal scan rate conversion system Patent  
[NASA-CASE-XMS-07168] c 07 N71-11300
- Optical conversion method --- for spacecraft television  
[NASA-CASE-MS-12618-1] c 74 N78-17865
- SPACECRAFT TEMPERATURE**
- Space vehicle thermal rejection system  
[NASA-CASE-LAR-13738-1] c 18 N87-29586
- Capillary heat transport and fluid management device  
[NASA-CASE-MFS-28217-1] c 34 N89-14392
- SPACECRAFT TRACKING**
- Ranging system Patent  
[NASA-CASE-NPO-10066] c 09 N71-18598
- Deep space monitor communication satellite system Patent  
[NASA-CASE-XAC-06029-1] c 31 N71-24813
- Optical tracking mount Patent  
[NASA-CASE-MFS-14017] c 14 N71-26627
- Orbital and entry tracking accessory for globes --- to provide range requirements for reentry vehicles to any landing site  
[NASA-CASE-LAR-10626-1] c 19 N74-21015
- Conical scan tracking system employing a large antenna  
[NASA-CASE-NPO-14009-1] c 32 N79-13214
- Efficient detection and signal parameter estimation with application to high dynamic GPS receiver  
[NASA-CASE-NPO-17820-1-CU] c 04 N91-14321
- SPACECREWS**
- Orbital escape device Patent  
[NASA-CASE-XMS-06162] c 31 N71-28851
- Integrated launch and emergency vehicle system  
[NASA-CASE-LAR-13780-1] c 18 N91-13481
- SPACELAB PAYLOADS**
- Hemispherical latching apparatus  
[NASA-CASE-MFS-25837-1] c 18 N85-29991
- SPALLATION**
- Method of producing I-123 --- by bombardment of cesium causing spallation  
[NASA-CASE-LEW-11390-2] c 25 N76-27383
- SPARK CHAMBERS**
- Laser measuring system for incremental assemblies --- measuring wire-wrapped frame assemblies in spark chambers  
[NASA-CASE-GSC-12321-1] c 36 N82-16396
- Inorganic spark chamber frame and method of making the same  
[NASA-CASE-GSC-12354-1] c 35 N82-24471
- SPARK GAPS**
- Protective circuit of the spark gap type  
[NASA-CASE-XAC-08981] c 09 N69-39897
- Measurement of time differences between luminous events Patent  
[NASA-CASE-XLA-01987] c 23 N71-23976
- SPARK IGNITION**
- High temperature spark plug Patent  
[NASA-CASE-XLE-00660] c 28 N70-39925

- Plasma igniter for internal combustion engine  
[NASA-CASE-NPO-13828-1] c 37 N79-11405
- SPARK PLUGS**  
High temperature spark plug Patent  
[NASA-CASE-XLE-00660] c 28 N70-39925
- SPARKS**  
Electronic precipitator control  
[NASA-CASE-LAR-13273-2] c 33 N90-20320
- SPATIAL DISTRIBUTION**  
Propellant mass distribution metering apparatus  
Patent  
[NASA-CASE-NPO-10185] c 10 N71-26339
- SPATIAL FILTERING**  
Spatial filter for Q-switched lasers  
[NASA-CASE-LEW-12164-1] c 36 N77-32478  
Real-time optical multiple object recognition and tracking system and method  
[NASA-CASE-NPO-17139-1-CU] c 74 N88-25301
- SPATIAL RESOLUTION**  
Wide-angle flat field telescope  
[NASA-CASE-GSC-12825-1] c 74 N86-28732
- SPECIMENS**  
Low temperature storage container for transporting perishables to space station  
[NASA-CASE-MFS-28248-1] c 31 N88-24817  
Method of radiographic inspection of wooden members  
[NASA-CASE-LAR-13724-1] c 38 N90-23756
- SPECTRAL BANDS**  
Multispectral linear array multiband selection device  
[NASA-CASE-GSC-12911-1] c 74 N86-29650
- SPECTRAL CORRELATION**  
Correlation spectrometer having high resolution and multiplexing capability  
[NASA-CASE-NPO-15558-1] c 35 N84-34705
- SPECTRAL REFLECTANCE**  
Single reflector interference spectrometer and drive system therefor  
[NASA-CASE-NPO-11932-1] c 35 N74-23040
- SPECTRAL SENSITIVITY**  
Method and apparatus for enhancing laser absorption sensitivity  
[NASA-CASE-NPO-16567-1-CU] c 36 N87-28006
- SPECTRAL SIGNATURES**  
Multispectral imaging and analysis system --- using charge coupled devices and linear arrays  
[NASA-CASE-NPO-13691-1] c 43 N79-17288
- SPECTROMETERS**  
Photoelectric energy spectrometer Patent  
[NASA-CASE-XNP-04161] c 14 N71-15599  
Variable frequency nuclear magnetic resonance spectrometer Patent  
[NASA-CASE-XNP-09830] c 14 N71-26266  
Maksutov spectrograph Patent  
[NASA-CASE-XLA-10402] c 14 N71-29041  
Dual purpose optical instrument capable of simultaneously acting as spectrometer and diffractometer  
[NASA-CASE-XNP-05231] c 14 N73-28491  
Compton scatter attenuation gamma ray spectrometer  
[NASA-CASE-MFS-21441-1] c 14 N73-30392  
Mossbauer spectrometer radiation detector  
[NASA-CASE-LAR-11155-1] c 35 N74-15091  
Single reflector interference spectrometer and drive system therefor  
[NASA-CASE-NPO-11932-1] c 35 N74-23040  
Spectrometer integrated with a facsimile camera  
[NASA-CASE-LAR-11207-1] c 35 N75-19613  
Resonant waveguide stark cell --- using microwave spectrometers  
[NASA-CASE-LAR-11352-1] c 33 N75-26245  
Ion and electron detector for use in an ICR spectrometer  
[NASA-CASE-NPO-13479-1] c 35 N77-10492  
Frequency-scanning particle size spectrometer  
[NASA-CASE-NPO-13606-2] c 35 N80-18364  
Velocity servo for continuous scan Fourier interference spectrometer  
[NASA-CASE-NPO-14093-1] c 35 N80-20563  
Visible and infrared polarization ratio spectroradiometer  
[NASA-CASE-LAR-12285-1] c 35 N80-28687  
Portable reflectance spectrometer  
[NASA-CASE-NPO-13556-1] c 35 N84-33766  
Correlation spectrometer having high resolution and multiplexing capability  
[NASA-CASE-NPO-15558-1] c 35 N84-34705  
FET charge sensor and voltage probe  
[NASA-CASE-NPO-16045-1] c 76 N87-13313  
Method of fabricating an imaging X-ray spectrometer  
[NASA-CASE-GSC-12956-1] c 35 N87-14671
- SPECTROPHOTOMETERS**  
Apparatus for producing three-dimensional recordings of fluorescence spectra Patent  
[NASA-CASE-XGS-01231] c 14 N70-41676
- High resolution Fourier  
interferometer-spectrophotopolarimeter  
[NASA-CASE-NPO-13604-1] c 35 N76-31490  
Differential optoacoustic absorption detector  
[NASA-CASE-NPO-13759-1] c 74 N78-17867
- SPECTRORADIOMETERS**  
Compact spectroradiometer  
[NASA-CASE-HCN-10683] c 14 N71-34389
- SPECTROSCOPIC ANALYSIS**  
Spectroscopy equipment using a slender cylindrical reflector as a substitute for a slit Patent  
[NASA-CASE-XGS-08269] c 23 N71-26206  
Method and apparatus for determining optical absorption and emission characteristics of a crystal or non-crystalline fiber  
[NASA-CASE-LAR-13963-1] c 76 N90-24150  
Spectroscopic wear detector  
[NASA-CASE-LEW-15200-1] c 20 N91-32167
- SPECTROSCOPIC TELESCOPES**  
Variable magnification variable dispersion glancing incidence imaging x ray spectroscopic telescope  
[NASA-CASE-MFS-28013-3] c 89 N90-27594
- SPECTROSCOPY**  
Non-mechanical optical path switching and its application to dual beam spectroscopy including gas filter correlation radiometry  
[NASA-CASE-LAR-14588-1-CU] c 74 N91-23889
- SPECTRUM ANALYSIS**  
Photoelectric energy spectrometer Patent  
[NASA-CASE-XNP-04161] c 14 N71-15599  
Spectral method for monitoring atmospheric contamination of inert-gas welding shields Patent  
[NASA-CASE-XMF-02039] c 15 N71-15871  
Method and apparatus for high resolution spectral analysis  
[NASA-CASE-NPO-10748] c 08 N72-20177  
Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c 25 N81-14015  
Method and circuit for controlling the evolution time interval of a laser output pulse  
[NASA-CASE-LAR-13772-1] c 36 N89-28816
- SPECULAR REFLECTION**  
Real time reflectometer --- measurement of specular reflectance  
[NASA-CASE-MFS-23118-1] c 35 N77-31465
- SPEECH BASEBAND COMPRESSION**  
Method and apparatus for telemetry adaptive bandwidth compression  
[NASA-CASE-MSC-20821-1] c 17 N87-25348
- SPEECH RECOGNITION**  
Speech analyzer  
[NASA-CASE-GSC-11898-1] c 32 N77-30309
- SPEED CONTROL**  
System for maintaining a motor at a predetermined speed utilizing digital feedback means Patent  
[NASA-CASE-XMF-06892] c 09 N71-24805  
Optimal control system for an electric motor driven vehicle  
[NASA-CASE-NPO-11210] c 11 N72-20244  
Two speed drive system --- mechanical device for changing speed on rotating vehicle wheel  
[NASA-CASE-MFS-20645-1] c 37 N74-23070  
Low speed phaselock speed control system --- for brushless dc motor  
[NASA-CASE-GSC-11127-1] c 09 N75-24758  
Speed control device for a heavy duty shaft --- solar sails for spacecraft propulsion  
[NASA-CASE-NPO-14170-1] c 37 N81-15364  
Variable speed drive  
[NASA-CASE-GSC-12643-1] c 37 N83-26078
- SPEED INDICATORS**  
Miniature electrooptical air flow sensor  
[NASA-CASE-LAR-13065-1] c 35 N85-20295
- SPEED REGULATORS**  
A dc motor speed control system Patent  
[NASA-CASE-MFS-14610] c 09 N71-28886
- SPENT FUELS**  
Gamma ray collimator  
[NASA-CASE-SSC-00013-1] c 38 N91-32515
- SPHERES**  
Guidance and maneuver analyzer Patent  
[NASA-CASE-XNP-09572] c 14 N71-15621  
Radar calibration sphere  
[NASA-CASE-XLA-11154] c 07 N72-21117  
Method of forming frozen spheres in a force-free drop tower  
[NASA-CASE-NPO-14845-1] c 27 N82-28442  
Sphere forming method and apparatus  
[NASA-CASE-NPO-15070-1] c 31 N83-35176  
Contactless pellet fabrication  
[NASA-CASE-NPO-15592-1] c 71 N84-16940  
Process for making a noble metal on tin oxide catalyst  
[NASA-CASE-LAR-13741-1-SB] c 25 N90-20180
- SPHERICAL SHELLS**  
Electrode and insulator with shielded dielectric junction  
[NASA-CASE-XLE-03778] c 09 N69-21542  
Spherical measurement device  
[NASA-CASE-XLA-06683] c 14 N72-28436  
Method and apparatus for growing crystals  
[NASA-CASE-MFS-28137-1] c 76 N88-24544  
Multi-element spherical shell generation  
[NASA-CASE-NPO-17203-1-CU] c 34 N90-23700
- SPHERICAL TANKS**  
Spherical tank gauge Patent  
[NASA-CASE-XMS-06236] c 14 N71-21007
- SPHERICAL WAVES**  
Shock wave convergence apparatus  
[NASA-CASE-MFS-20890] c 14 N72-22439
- SPHYGMOGRAPHY**  
Logic-controlled occlusive cuff system  
[NASA-CASE-MSC-14836-1] c 52 N82-11770
- SPIKE NOZZLES**  
Aerodynamic spike nozzle Patent  
[NASA-CASE-XGS-01143] c 31 N71-15647
- SPIKE POTENTIALS**  
Elimination of current spikes in buck power converters  
[NASA-CASE-NPO-14505-1] c 33 N81-19393
- SPILLING**  
Spillage detector for liquid chromatography systems  
[NASA-CASE-MSC-20206-1] c 25 N86-27431
- SPIN DYNAMICS**  
Nutation damper  
[NASA-CASE-GSC-11205-1] c 15 N73-25513  
Stabilization of He2(a 3 Sigma u+ molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c 72 N79-13826  
Dual towline spin-recovery device  
[NASA-CASE-LAR-13076-1] c 08 N85-35200  
Miniaturization of flight deflection measurement system  
[NASA-CASE-LAR-13628-1] c 35 N90-23707
- SPIN REDUCTION**  
Optical spin compensator  
[NASA-CASE-XGS-02401] c 14 N69-27485  
Despin weight release Patent  
[NASA-CASE-XLA-00679] c 15 N70-38601  
Stretch de-spin mechanism Patent  
[NASA-CASE-XGS-00619] c 30 N70-40016  
Spacecraft separation system for spinning vehicles and/or payloads Patent  
[NASA-CASE-XLA-02132] c 31 N71-10582  
Method and means for damping nutation in a satellite  
[NASA-CASE-XMF-00442] c 31 N71-10747
- SPIN STABILIZATION**  
Dynamic precession damper for spin stabilized vehicles  
Patent  
[NASA-CASE-XLA-01989] c 21 N70-34295  
Attitude orientation of spin-stabilized space vehicles  
Patent  
[NASA-CASE-XLA-00281] c 21 N70-36943  
Spacecraft attitude detection system by stellar reference  
Patent  
[NASA-CASE-XGS-03431] c 21 N71-15642  
Cartwheel satellite synchronization system Patent  
[NASA-CASE-XGS-05579] c 31 N71-15676  
Velocity package Patent  
[NASA-CASE-XLA-01339] c 31 N71-15692  
Passive dual spin misalignment compensators --- gyro-stabilized device  
[NASA-CASE-GSC-11479-1] c 35 N74-28097  
Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft  
[NASA-CASE-LAR-10753-1] c 08 N74-30421  
Active nutation controller  
[NASA-CASE-GSC-12273-1] c 35 N80-21719  
Thrust augmented spin recovery device  
[NASA-CASE-LAR-11970-2] c 08 N81-19130  
Scanner --- photography from a spin stabilized synchronous satellite  
[NASA-CASE-GSC-12032-2] c 43 N82-13465
- SPINDLES**  
Variable contour securing system  
[NASA-CASE-MSC-16270-1] c 37 N78-27423  
Noncircular rolling joints for vibrational reduction in slewing maneuvers  
[NASA-CASE-LAR-14515-1-CU] c 37 N91-28580
- SPINE**  
Spine immobilization apparatus  
[NASA-CASE-ARC-11167-1] c 52 N81-25662
- SPIRAL ANTENNAS**  
Spiral slotted phased antenna array  
[NASA-CASE-MSC-18532-1] c 32 N82-27558
- SPIRAL WRAPPING**  
Adjustable tension wire guide Patent  
[NASA-CASE-XMS-02383] c 15 N71-15918

- Continuous self-locking spiral wound seal --- for maintaining pressure between chambers in cryogenic wind tunnels  
[NASA-CASE-LAR-12315-1] c 37 N82-24490
- Modified spiral wound retaining ring  
[NASA-CASE-LAR-12361-1] c 37 N83-19091
- SPIRALS (CONCENTRATORS)**
- Spiral groove seal --- for hydraulic rotating shaft  
[NASA-CASE-LEW-10326-3] c 37 N74-10474
- SPIROMETERS**
- Balanced bellows spirometer  
[NASA-CASE-XAR-01547] c 05 N69-21473
- SPLICING**
- Optimized bolted joint  
[NASA-CASE-LAR-13250-1] c 37 N86-27630
- SPLINES**
- Spline-locking payload fastener  
[NASA-CASE-GSC-13378-1] c 37 N91-28581
- SPLINTS**
- Stretcher Patent  
[NASA-CASE-XMF-06589] c 05 N71-23159
- SPOILERS**
- Hydraulic actuator mechanism to control aircraft spoiler movements through dual input commands  
[NASA-CASE-LAR-12412-1] c 08 N82-24205
- SPOKES**
- Torque sensor having a spoked sensor element support structure  
[NASA-CASE-NPO-17461-1-CU] c 35 N91-17350
- SPORES**
- Lyophilized spore dispenser  
[NASA-CASE-LAR-10544-1] c 37 N74-13178
- SPOT WELDS**
- Electric arc welding Patent  
[NASA-CASE-XMF-00392] c 15 N70-34814
- Automatic closed circuit television arc guidance control Patent  
[NASA-CASE-MFS-13046] c 07 N71-19433
- SPRAY CHARACTERISTICS**
- Constant-output atomizer --- Inhalation therapy and aerosol research  
[NASA-CASE-MFS-25631-1] c 34 N84-12406
- SPRAY NOZZLES**
- Rocket injector head  
[NASA-CASE-XMF-04592-1] c 20 N79-21125
- Fire extinguishing apparatus having a slidable mass for a penetrator nozzle --- for penetrating aircraft and shuttle orbiter skin  
[NASA-CASE-KSC-11064-1] c 31 N81-14137
- Controlled overspray spray nozzle  
[NASA-CASE-MFS-25139-1] c 34 N82-13376
- Remotely controlled spray gun  
[NASA-CASE-MFS-28110-1] c 37 N87-24689
- SPRAYED COATINGS**
- Method of making a diffusion bonded refractory coating Patent  
[NASA-CASE-XLE-01604-2] c 15 N71-15610
- Thermal protection ablation spray system Patent  
[NASA-CASE-XLA-04251] c 18 N71-26100
- Peen plating  
[NASA-CASE-GSC-11163-1] c 15 N73-32360
- Sprayable low density ablator and application process  
[NASA-CASE-MFS-23506-1] c 24 N78-24290
- Spray coating apparatus having a rotatable workpiece holder  
[NASA-CASE-ARC-11110-1] c 37 N82-24492
- Thermal barrier coating system having improved adhesion  
[NASA-CASE-LEW-1335901] c 27 N83-31855
- Spray applicator for spraying coatings and other fluids in space  
[NASA-CASE-MSC-18852-1] c 37 N85-29283
- Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N86-32550
- SPRAYERS**
- External liquid-spray cooling of turbine blades Patent  
[NASA-CASE-XLE-00037] c 28 N70-33372
- Method and apparatus for attaching physiological monitoring electrodes Patent  
[NASA-CASE-XFR-07658-1] c 05 N71-26293
- Liquid spray cooling method Patent  
[NASA-CASE-XLE-00027] c 33 N71-29152
- Closed loop spray cooling apparatus --- for particle accelerator targets  
[NASA-CASE-LEW-11981-1] c 31 N78-17237
- Spray coating apparatus having a rotatable workpiece holder  
[NASA-CASE-ARC-11110-1] c 37 N82-24492
- Spray applicator for spraying coatings and other fluids in space  
[NASA-CASE-MSC-18852-1] c 37 N85-29283
- Liquid seeding atomizer  
[NASA-CASE-ARC-11631-1] c 34 N87-21255
- Remotely controlled spray gun  
[NASA-CASE-MFS-28110-1] c 37 N87-24689
- Warm fog dissipation using large volume water sprays  
[NASA-CASE-MFS-25962-1] c 09 N89-25242
- Tissue simulating gel for medical research  
[NASA-CASE-LAR-14036-1] c 27 N91-13562
- Improved sprayable lightweight ablative coating  
[NASA-CASE-MFS-28372-1] c 27 N91-24426
- SPRAYING**
- Aircraft wheel spray drag alleviator Patent  
[NASA-CASE-XLA-01583] c 02 N70-36825
- Closed loop spray cooling apparatus  
[NASA-CASE-LEW-11981-2] c 34 N79-20336
- Method and apparatus for suppressing ignition overpressure in solid rocket propulsion systems  
[NASA-CASE-MFS-25843-1] c 20 N83-17588
- SPREAD SPECTRUM TRANSMISSION**
- Navigation system and method  
[NASA-CASE-GSC-12508-1] c 04 N84-22546
- SPREADING**
- Tool attachment for spreading loose elements away from work Patent  
[NASA-CASE-XMF-02107] c 15 N71-10809
- SPRINGS (ELASTIC)**
- Bellefonte spring assembly with elastic guides  
[NASA-CASE-XNP-09452] c 15 N69-27504
- Multiple Bellefonte spring assembly Patent  
[NASA-CASE-XNP-00840] c 15 N70-38225
- Switching mechanism with energy storage means Patent  
[NASA-CASE-XGS-00473] c 03 N70-38713
- Load cell protection device Patent  
[NASA-CASE-XMS-06782] c 32 N71-15974
- Vibration isolation system using compression springs  
[NASA-CASE-NPO-11012] c 15 N72-11391
- Spring operated accelerator and constant force spring mechanism therefor  
[NASA-CASE-ARC-10898-1] c 35 N77-18417
- Natural turbulence electrical power generator --- using wave action or random motion  
[NASA-CASE-LAR-11551-1] c 44 N80-29834
- Resilient seal ring assembly with spring means applying force to wedge member --- cryogenic applications  
[NASA-CASE-MFS-25678-1] c 37 N84-11497
- Unidirectional flexural pivot  
[NASA-CASE-GSC-12622-1] c 37 N84-12492
- Segmented tubular cushion springs and spring assembly  
[NASA-CASE-ARC-11349-1] c 37 N86-20797
- Rotary stepping device with memory metal actuator  
[NASA-CASE-NPO-15482-1] c 37 N87-23970
- Locking hinge  
[NASA-CASE-MSC-21056-1] c 18 N88-23827
- SPUTTERING**
- A method for the deposition of beta-silicon carbide by isoeptitaxy  
[NASA-CASE-ERC-10120] c 26 N69-33482
- Method of forming transparent films of ZnO  
[NASA-CASE-FRC-10019] c 15 N73-12487
- Method and apparatus for sputtering utilizing an apertured electrode and a pulsed substrate bias  
[NASA-CASE-LEW-10920-1] c 17 N73-24569
- Sputtering holes with ion beamlets  
[NASA-CASE-LEW-11646-1] c 20 N74-31269
- Multitarget sequential sputtering apparatus  
[NASA-CASE-NPO-13345-1] c 37 N75-19684
- Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c 37 N81-19455
- Refractory coatings and method of producing the same  
[NASA-CASE-LEW-13169-1] c 26 N82-29415
- Ion sputter textured graphite --- anode collector plates in electron tube devices  
[NASA-CASE-LEW-12919-1] c 24 N83-10117
- Mechanical bonding of metal method  
[NASA-CASE-LEW-12941-1] c 26 N83-10170
- Diamondlike flake composites  
[NASA-CASE-LEW-13837-1] c 24 N84-22695
- Method of making an ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-2] c 52 N84-23095
- Ion sputter textured graphite electrode plates  
[NASA-CASE-LEW-12919-2] c 70 N84-28565
- Diamondlike flakes  
[NASA-CASE-LEW-13837-2] c 24 N85-21267
- Liquid crystal light valve structures  
[NASA-CASE-MSC-20036-1] c 76 N85-33826
- Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-1] c 27 N86-19458
- Textured carbon surfaces on copper by sputtering  
[NASA-CASE-LEW-14130-1] c 31 N86-32587
- Ion beam sputter etching  
[NASA-CASE-LEW-13899-1] c 31 N87-21160
- SQUARE WAVES**
- High speed phase detector Patent  
[NASA-CASE-XNP-01306-2] c 09 N71-24596
- SQUARES (MATHEMATICS)**
- Apparatus for computing square roots Patent  
[NASA-CASE-XGS-04768] c 08 N71-19437
- SQUEEZE FILMS**
- Dual clearance squeeze film damper  
[NASA-CASE-LEW-13506-1] c 37 N85-33490
- SQUIBS**
- Separation nut Patent  
[NASA-CASE-XGS-01971] c 15 N71-15922
- SQUID (DETECTORS)**
- Planar thin film SQUID with integral flux concentrator  
[NASA-CASE-MFS-28282-1] c 76 N88-29602
- STABILITY**
- Variable friction secondary seal for face seals  
[NASA-CASE-LEW-14170-1] c 37 N86-25790
- Optical distance measuring instrument  
[NASA-CASE-GSC-12761-1] c 74 N86-32266
- Reflection oscillators employing series resonant crystals  
[NASA-CASE-GSC-13173-1] c 33 N90-23635
- Adjustable choke for fluids nozzle  
[NASA-CASE-NPO-17625-1-CU] c 34 N90-27070
- Vinyl capped addition polyimides  
[NASA-CASE-LEW-15027-1] c 27 N91-13566
- STABILITY AUGMENTATION**
- Velocity vector control system augmented with direct lift control  
[NASA-CASE-LAR-12268-1] c 08 N81-24106
- Leading edge flap system for aircraft control augmentation  
[NASA-CASE-LAR-12787-2] c 08 N85-19985
- STABILITY TESTS**
- Method and apparatus for checking the stability of a setup for making reflection type holograms  
[NASA-CASE-MFS-21455-1] c 35 N74-15146
- STABILIZATION**
- Ultrastable calibrated light source  
[NASA-CASE-MSC-12293-1] c 14 N72-27411
- System for stabilizing torque between a balloon and gondola  
[NASA-CASE-GSC-11077-1] c 02 N73-13008
- Suppression of flutter  
[NASA-CASE-LAR-10682-1] c 02 N73-26004
- Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential  
[NASA-CASE-GSC-11425-2] c 76 N75-25730
- Arc control in compact arc lamps  
[NASA-CASE-NPO-10870-1] c 33 N77-22386
- Self-stabilizing radial face seal  
[NASA-CASE-LEW-12991-1] c 37 N81-24442
- Method and apparatus for transfer function simulator for testing complex systems  
[NASA-CASE-NPO-15696-1] c 33 N85-34333
- Stabilization and oscillation of an acoustically levitated object  
[NASA-CASE-NPO-16896-1-CU] c 71 N89-13236
- STABILIZED PLATFORMS**
- Hydraulic drive mechanism Patent  
[NASA-CASE-XMS-03252] c 15 N71-10658
- Failure detection and control means for improved drift performance of a gimbaled platform system  
[NASA-CASE-MFS-23551-1] c 04 N76-26175
- Rotary leveling base platform  
[NASA-CASE-ARC-10981-1] c 37 N78-27425
- Magnetic bearing and motor  
[NASA-CASE-GSC-12726-1] c 37 N83-34323
- STABILIZERS**
- Satellite despin device Patent  
[NASA-CASE-XMF-08523] c 31 N71-20396
- STABILIZERS (AGENTS)**
- Hydrazinium nitroformate propellant stabilized with nitroguanidine  
[NASA-CASE-NPO-12000] c 27 N72-25699
- STABILIZERS (FLUID DYNAMICS)**
- Assembly for recovering a capsule Patent  
[NASA-CASE-XMF-00641] c 31 N70-36410
- Mechanical stability augmentation system Patent  
[NASA-CASE-XLA-06339] c 02 N71-13422
- Apparatus for automatically stabilizing the attitude of a nonguided vehicle  
[NASA-CASE-ARC-10134] c 30 N72-17873
- Life raft stabilizer  
[NASA-CASE-MSC-12393-1] c 02 N73-26006
- Externally supported internally stabilized flexible duct joint  
[NASA-CASE-MFS-19194-1] c 37 N76-14460
- STABLE OSCILLATIONS**
- Amplifier drift tester  
[NASA-CASE-XMS-05562-1] c 09 N69-39986
- Real-time dynamic holographic image storage device  
[NASA-CASE-LAR-13989-1] c 35 N91-13694
- STACKS**
- Remote fire stack igniter --- with solenoid-controlled valve  
[NASA-CASE-MFS-21675-1] c 25 N74-33378

**STAGE SEPARATION**

Tubular coupling having frangible connecting means  
[NASA-CASE-XLA-02854] c 15 N69-27490

Missile stage separation indicator and stage initiator  
Patent  
[NASA-CASE-XLA-00791] c 03 N70-39930

Quick release separation mechanism Patent  
[NASA-CASE-XLA-01441] c 15 N70-41679

Spacecraft separation system for spinning vehicles  
and/or payloads Patent  
[NASA-CASE-XLA-02132] c 31 N71-10582

Payload/burned-out motor case separation system  
Patent  
[NASA-CASE-XLA-05369] c 31 N71-15687

Single action separation mechanism Patent  
[NASA-CASE-XLA-00188] c 15 N71-22874

Lateral displacement system for separated rocket stages  
Patent  
[NASA-CASE-XLA-04804] c 31 N71-23008

Separation simulator Patent  
[NASA-CASE-XKS-04631] c 10 N71-23663

Frangible link  
[NASA-CASE-MSC-11849-1] c 15 N72-22488

Tanker orbit transfer vehicle and method  
[NASA-CASE-MSC-20543-1] c 18 N84-22610

**STAGNATION PRESSURE**

Traversing probe Patent  
[NASA-CASE-XFR-02007] c 12 N71-24692

Stagnation pressure probe --- for measuring pressure  
of supersonic gas streams  
[NASA-CASE-LAR-11139-1] c 35 N74-32878

**STAGNATION TEMPERATURE**

Enthalpy and stagnation temperature determination of  
a high temperature laminar flow gas stream Patent  
[NASA-CASE-XLE-00266] c 14 N70-34156

**STAINING**

Automated single-slide staining device  
[NASA-CASE-LAR-11649-1] c 51 N77-27677

**STAINLESS STEELS**

Method of joining aluminum to stainless steel Patent  
[NASA-CASE-MFS-07369] c 15 N71-20443

Ultrasonic scanning system for in-place inspection of  
brazed tube joints  
[NASA-CASE-MFS-20767-1] c 38 N74-15130

Method of forming a wick for a heat pipe  
[NASA-CASE-NPO-13391-1] c 34 N76-27515

Method of making reinforced composite structure  
[NASA-CASE-LEW-12619-1] c 24 N77-19171

Moving body velocity arresting line --- stainless steel  
cables with energy absorbing sleeves  
[NASA-CASE-LAR-12372-1] c 37 N82-18601

Method of forming dynamic membrane on stainless steel  
support  
[NASA-CASE-MSC-18172-3] c 31 N88-29052

**STAMPING**

Holding fixture for a hot stamping press  
[NASA-CASE-GSC-12619-1] c 37 N84-12491

Ultrasonic angle beam standard reflector --- ultrasonic  
nondestructive inspection  
[NASA-CASE-LAR-13153-1] c 71 N86-21276

**STANDARD DEVIATION**

An accelerated training method for back propagation  
networks  
[NASA-CASE-MSC-21625-1] c 53 N91-28730

**STANDARDS**

Microwave integrated circuit for Josephson voltage  
standards  
[NASA-CASE-MFS-23845-1] c 33 N81-17348

Ultrasonic angle beam standard reflector --- ultrasonic  
nondestructive inspection  
[NASA-CASE-LAR-13153-1] c 71 N86-21276

A reference standard for bidirectional reflection  
distribution function and bidirectional transmission  
distribution function measurement  
[NASA-CASE-MFS-28183-1] c 74 N89-13253

**STANDING WAVES**

Method and apparatus for shaping and enhancing  
acoustical levitation forces  
[NASA-CASE-MFS-25050-1] c 71 N81-15767

Image readout device with electronically variable spatial  
resolution  
[NASA-CASE-LAR-12633-1] c 33 N82-24416

Acoustic levitation methods and apparatus  
[NASA-CASE-NPO-15562-1] c 71 N82-27086

System for controlled acoustic rotation of objects  
[NASA-CASE-NPO-15522-1] c 71 N83-32516

Vibrating-chamber levitation systems  
[NASA-CASE-NPO-16142-1-CU] c 35 N86-20752

**STAR TRACKERS**

Roll attitude star sensor system Patent  
[NASA-CASE-XNP-01307] c 21 N70-41856

Sun tracker with rotatable plane-parallel plate and two  
photocells Patent  
[NASA-CASE-XGS-01159] c 21 N71-10678

Canopus detector including automotive gain control of  
photomultiplier tube Patent  
[NASA-CASE-XNP-03914] c 21 N71-10771

Spacecraft attitude detection system by stellar reference  
Patent  
[NASA-CASE-XGS-03431] c 21 N71-15642

Reference voltage switching unit  
[NASA-CASE-NPO-11253] c 09 N72-17157

Star tracking reticles and process for the production  
thereof  
[NASA-CASE-GSC-11188-2] c 21 N73-19630

Star tracking reticles  
[NASA-CASE-GSC-11188-1] c 14 N73-32320

Formation of star tracking reticles  
[NASA-CASE-GSC-11188-3] c 74 N74-20008

Star scanner --- with a reticle with a pair of slits having  
differing separation  
[NASA-CASE-GSC-11569-1] c 89 N74-30886

Programmable scan/read circuitry for charge coupled  
device imaging detectors --- spacecraft attitude control and  
star trackers  
[NASA-CASE-NPO-15345-1] c 74 N84-23247

**STARK EFFECT**

Resonant waveguide stark cell --- using microwave  
spectrometers  
[NASA-CASE-LAR-11352-1] c 33 N75-26245

Stark-effect modulation of CO<sub>2</sub> laser with NH<sub>2</sub>D  
[NASA-CASE-NPO-11945-1] c 36 N76-18427

Stark cell optoacoustic detection of constituent gases  
in sample  
[NASA-CASE-NPO-14143-1] c 25 N81-14015

Stark effect spectrophotometer for continuous absorption  
spectra monitoring --- a technique for gas analysis  
[NASA-CASE-NPO-15102-1] c 25 N81-25159

**STARTERS**

Starting circuit for vapor lamps and the like Patent  
[NASA-CASE-XNP-01058] c 09 N71-12540

Motor run-up system --- power lines  
[NASA-CASE-NPO-13374-1] c 33 N75-19524

Motor power factor controller with a reduced voltage  
starter  
[NASA-CASE-MFS-25586-1] c 33 N82-11360

**STARTING**

Portable device for use in starting air-start-units for  
aircraft and having cable lead testing capability  
[NASA-CASE-FRC-10113-1] c 33 N80-26599

Arcjet power supply and start circuit  
[NASA-CASE-LEW-14374-1] c 09 N88-28939

**STATE VECTORS**

Assured crew return vehicle  
[NASA-CASE-MSC-21536-1] c 18 N91-13483

**STATIC DEFORMATION**

Acoustic radiation stress measurement  
[NASA-CASE-LAR-13440-1] c 71 N87-21653

**STATIC DISCHARGERS**

Use of glow discharge in fluidized beds  
[NASA-CASE-ARC-11245-1] c 28 N82-18401

**STATIC FRICTION**

Friction measuring apparatus Patent  
[NASA-CASE-XNP-08680] c 14 N71-22995

Static coefficient test method and apparatus  
[NASA-CASE-GSC-11893-1] c 35 N76-31489

**STATIC INVERTERS**

Static inverters which sum a plurality of waves Patent  
[NASA-CASE-XMF-00663] c 08 N71-18752

Static inverter Patent  
[NASA-CASE-XGS-05289] c 09 N71-19470

**STATIC LOADS**

Instrument for measuring torsional creep and recovery  
Patent  
[NASA-CASE-XLE-01481] c 14 N71-10781

Tension measurement device Patent  
[NASA-CASE-XMS-04545] c 15 N71-22878

Static feed water electrolysis subsystem development  
[NASA-CASE-MSC-21577-1-SB] c 25 N91-23271

**STATIC PRESSURE**

Aerodynamic measuring device Patent  
[NASA-CASE-XLA-00481] c 14 N70-36824

Check valve assembly for a probe Patent  
[NASA-CASE-XLA-00128] c 15 N70-37925

Static pressure probe  
[NASA-CASE-LAR-11552-1] c 35 N76-14429

Static pressure orifice system testing method and  
apparatus  
[NASA-CASE-LAR-12269-1] c 35 N80-18358

Apparatus and method for jet noise suppression  
[NASA-CASE-LAR-11903-2] c 71 N84-14873

Porous plug for reducing orifice induced pressure error  
in airfoils  
[NASA-CASE-LAR-13569-1] c 35 N89-12841

Water cooled static pressure probe  
[NASA-CASE-LAR-14340-1-CU] c 35 N91-13684

Dynamic tester for rotor seals and bearings  
[NASA-CASE-MFS-28493-1] c 09 N91-25155

**STATIONKEEPING**

Station keeping of a gravity gradient stabilized satellite  
Patent  
[NASA-CASE-XLA-03132] c 31 N71-22969

**STATISTICAL ANALYSIS**

Multistage estimation of received carrier signal  
parameters under very high dynamic conditions of the  
receiver  
[NASA-CASE-NPO-17911-1-CU] c 32 N90-27016

**STATISTICAL CORRELATION**

Optical probing of supersonic flows with statistical  
correlation  
[NASA-CASE-MFS-20642] c 14 N72-21407

**STATOR BLADES**

Stator rotor tools  
[NASA-CASE-MSC-16000-1] c 37 N78-24544

**STATORS**

Nickel base alloy --- for gas turbine engine stator  
vanes  
[NASA-CASE-LEW-12270-1] c 26 N77-32280

Natural turbulence electrical power generator --- using  
wave action or random motion  
[NASA-CASE-LAR-11551-1] c 44 N80-29834

Brushless DC motor control system responsive to control  
signals generated by a computer or the like  
[NASA-CASE-NPO-16420-1] c 33 N86-20681

Damping seal for turbomachinery  
[NASA-CASE-MFS-25642-2] c 37 N86-20788

Radial and torsionally controlled magnetic bearing  
[NASA-CASE-GSC-12957-1] c 37 N87-17038

Turbomachinery rotor support with damping  
[NASA-CASE-MFS-28345-1] c 37 N91-14608

**STEADY STATE**

Steady state thermal radiometers  
[NASA-CASE-MFS-21108-1] c 34 N74-27861

Predictive sensor method and apparatus  
[NASA-CASE-SSC-00006-1] c 35 N91-13691

**STEAM**

Steam cooled rich-burn combustor liner  
[NASA-CASE-LEW-13609-1] c 25 N90-11824

Wet atmospheric generation apparatus  
[NASA-CASE-MFS-28177-1] c 35 N91-21496

**STEAM TURBINES**

Boiler for generating high quality vapor Patent  
[NASA-CASE-XLE-00785] c 33 N71-16104

**STEELS**

Potassium silicate zinc coatings  
[NASA-CASE-GSC-10361-1] c 18 N72-23581

Ion-beam nitriding of steels  
[NASA-CASE-LEW-14104-2] c 26 N88-14179

Magneto acoustic emission apparatus for testing  
materials for embrittlement  
[NASA-CASE-LAR-13817-1] c 26 N90-21170

**STEERABLE ANTENNAS**

Array phasing device Patent  
[NASA-CASE-ERC-10046] c 10 N71-18722

Satellite communication system Patent  
[NASA-CASE-XNP-02389] c 07 N71-28900

Amplitude steered array  
[NASA-CASE-GSC-11446-1] c 33 N74-20860

Phased array antenna control  
[NASA-CASE-MSC-14939-1] c 32 N79-11264

Switched steerable multiple beam antenna system  
[NASA-CASE-MSC-20873-1-SB] c 32 N89-11961

**STEERING**

Steerable solid propellant rocket motor Patent  
[NASA-CASE-XNP-00234] c 28 N70-38645

Closed-loop autonomous docking system  
[NASA-CASE-MFS-28421-1] c 18 N90-26861

**STELLAR LUMINOSITY**

Radiant energy intensity measurement system Patent  
[NASA-CASE-XNP-06510] c 14 N71-23797

**STELLAR SPECTRA**

Radiant energy intensity measurement system Patent  
[NASA-CASE-XNP-06510] c 14 N71-23797

**STENCIL PROCESSES**

Method of tracing contour patterns for use in making  
gradual contour resin matrix composites  
[NASA-CASE-ARC-11246-1] c 31 N83-34073

**STEPPING MOTORS**

Scanner --- photography from a spin stabilized  
synchronous satellite  
[NASA-CASE-GSC-12032-2] c 43 N82-13465

**STEREOPHOTOGRAPHY**

Stereo photomicrography system  
[NASA-CASE-LAR-10176-1] c 14 N72-20380

Optical stereo video signal processor  
[NASA-CASE-MFS-25752-1] c 74 N86-21348

Stereoscopic camera and viewing systems with  
undistorted depth presentation and reduced or eliminated  
erroneous acceleration and deceleration perceptions, or  
with perceptions produced or enhanced for special  
effects  
[NASA-CASE-NPO-18028-1-CU] c 74 N91-24878

## STEREOSCOPIC VISION

Stereoscopic television system and apparatus  
[NASA-CASE-ARC-10160-1] c 23 N72-27728  
Television monitor field shifter and an opto-electronic method for obtaining a stereo image of optimal depth resolution and reduced depth distortion on a single screen  
[NASA-CASE-NPO-17249-1-CU] c 32 N89-28676

## STEREOSCOPY

Real-time 3-D X-ray and gamma-ray viewer  
[NASA-CASE-GSC-12640-1] c 74 N84-11920

## STERILIZATION

Process for preparing sterile solid propellants Patent  
[NASA-CASE-XNP-01749] c 27 N70-41897  
Processing for producing a sterilized instrument Patent  
[NASA-CASE-XNP-09763] c 14 N71-20461  
Air conditioned suit  
[NASA-CASE-LAR-10076-1] c 05 N73-20137  
Protein sterilization method of firefly luciferase using reduced pressure and molecular sieves  
[NASA-CASE-GSC-10225-1] c 06 N73-27086  
Heat sterilizable patient ventilator  
[NASA-CASE-NPO-13313-1] c 54 N75-27761  
Portable heatable container  
[NASA-CASE-NPO-14237-1] c 44 N80-20808  
System for sterilizing objects --- cleaning space vehicle systems  
[NASA-CASE-KSC-11085-1] c 54 N81-24724

## STERILIZATION EFFECTS

Electrical connector  
[NASA-CASE-NPO-10694] c 09 N72-20200

## STIFFENING

Metal matrix composite structural panel construction  
[NASA-CASE-LAR-12607-1] c 24 N84-11214

## STIFFNESS

Modified face seal for positive film stiffness  
[NASA-CASE-LEW-12989-1] c 37 N82-12442

## STILBENE

Vinyl stilbazoles  
[NASA-CASE-ARC-11429-3CU] c 27 N87-16908

## STIMULATED EMISSION

Repetitively pulsed, wavelength selective laser Patent  
[NASA-CASE-ERC-10178] c 16 N71-24832

## STIRLING CYCLE

Stirling cycle engine and refrigeration systems  
[NASA-CASE-NPO-13613-1] c 37 N76-29590  
Power control for hot gas engines  
[NASA-CASE-NPO-14220-1] c 37 N81-14318  
Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c 37 N81-17432  
Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c 44 N81-17518  
Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c 37 N81-25370  
Stirling cycle cryogenic cooler  
[US-PATENT-4,389,849] c 44 N83-28574  
Magnetically actuated compressor  
[NASA-CASE-GSC-12799-1] c 31 N85-21404

## STIRLING ENGINES

Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c 37 N81-17432  
Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c 44 N81-17518  
Solar thermal energy receiver  
[NASA-CASE-LEW-14949-1] c 44 N91-23617

## STIRRING

Stirring apparatus for plural test tubes Patent  
[NASA-CASE-XAC-06956] c 15 N71-21177  
Planar oscillatory stirring apparatus  
[NASA-CASE-MFS-26002-1-CU] c 35 N86-26598

## STOICHIOMETRY

Sulfone-ester polymers containing pendent ethynyl groups  
[NASA-CASE-LAR-13316-1] c 27 N86-27450  
The 5-(4-Ethynylphenoxy) isophthalic chloride  
[NASA-CASE-LAR-13316-2] c 27 N87-14515  
MBE growth technology for high quality strained III-V layers  
[NASA-CASE-NPO-17723-1-CU] c 76 N90-26685  
Growth of III-V films by control of MBE growth front stoichiometry  
[NASA-CASE-NPO-17724-1-CU] c 76 N90-27517  
Method of forming three-dimensional semiconductor structures  
[NASA-CASE-NPO-17835-1-CU] c 76 N90-27518  
Novel polyimide molding powder, coating, adhesive, and matrix resin  
[NASA-CASE-LAR-14163-1] c 27 N91-13559

## STOPPING

Obstacle avoidance for redundant robots using configuration control  
[NASA-CASE-NPO-17852-1-CU] c 63 N91-23783

## STORAGE

Fluid sample collector. Patent  
[NASA-CASE-XMS-06767-1] c 14 N71-20435

Sodium storage and injection system  
[NASA-CASE-NPO-14384-1] c 37 N80-10494

## STORAGE BATTERIES

Bonded elastomeric seal for electrochemical cells Patent  
[NASA-CASE-XGS-02631] c 03 N71-23006  
Automatic battery charger Patent  
[NASA-CASE-XNP-04758] c 03 N71-24605  
Electric battery and method for operating same Patent  
[NASA-CASE-XGS-01674] c 03 N71-29129  
Electric storage battery  
[NASA-CASE-NPO-11021] c 03 N72-20032  
Hydrogen-bromine secondary battery  
[NASA-CASE-NPO-13237-1] c 44 N76-18641  
Rechargeable battery which combats shape change of the zinc anode  
[NASA-CASE-HQN-10862-1] c 44 N76-29699  
Electrically rechargeable REDOX flow cell  
[NASA-CASE-LEW-12220-1] c 44 N77-14581  
Formulated plastic separators for soluble electrode cells --- rubber-ion transport membranes  
[NASA-CASE-LEW-12358-1] c 44 N79-17313  
Toroidal cell and battery --- storage battery for high amp-hour load applications  
[NASA-CASE-LEW-12918-1] c 44 N81-24521  
Secondary Li battery incorporating 12-crown-4 ether  
[NASA-CASE-NPO-17922-1-CU] c 33 N91-13621

## STORAGE STABILITY

Thermally activated foaming compositions Patent  
[NASA-CASE-LAR-10373-1] c 18 N71-26155  
Gas diffusion liquid storage bag and method of use for storing blood  
[NASA-CASE-NPO-13930-1] c 52 N79-14749  
Method for retarding dye fading during archival storage of developed color photographic film --- inert atmosphere  
[NASA-CASE-MFS-23250-1] c 35 N82-11432

## STORAGE TANKS

Expulsion bladder-equipped storage tank structure Patent  
[NASA-CASE-XNP-00612] c 11 N70-38182  
Method for leakage testing of tanks  
[NASA-CASE-XMF-02392] c 32 N71-24285  
Zero gravity shadow shield aligner  
[NASA-CASE-KSC-10622-1] c 31 N72-21893  
Cryogenic container compound suspension strap  
[NASA-CASE-ARC-11157-1] c 37 N80-18393  
System for venting gas from a liquid storage tank  
[NASA-CASE-MSC-21253-1] c 31 N90-20254  
Dual diaphragm tank with telltale drain  
[NASA-CASE-MSC-21703-1] c 31 N91-25305

## STOWAGE (ONBOARD EQUIPMENT)

Hemispherical latching apparatus  
[NASA-CASE-MFS-25837-1] c 18 N85-29991  
Locking hinge  
[NASA-CASE-MSC-21056-1] c 18 N88-23827  
Expandable pallet for space station interface attachments  
[NASA-CASE-MSC-21117-1] c 18 N88-28958

## STRAIN DISTRIBUTION

Mechanical strain isolator mount  
[NASA-CASE-LAR-13580-1] c 37 N91-21541

## STRAIN GAGE ACCELEROMETERS.

Accelerometer with FM output Patent  
[NASA-CASE-XLA-00492] c 14 N70-34799  
Angular accelerometer Patent  
[NASA-CASE-XMS-05936] c 14 N70-41682

## STRAIN GAGE BALANCES

Self-balancing strain gage transducer Patent  
[NASA-CASE-MFS-12827] c 14 N71-17656

## STRAIN GAGES

Semiconductor p-n junction stress and strain sensor  
[NASA-CASE-XLA-04980] c 09 N69-27422  
Wire grid forming apparatus Patent  
[NASA-CASE-XLE-00023] c 15 N70-33330  
Force measuring instrument Patent  
[NASA-CASE-XMF-00456] c 14 N70-34705  
Strain gage Patent Application  
[NASA-CASE-FRC-10053] c 14 N70-35587  
Difference circuit Patent  
[NASA-CASE-XNP-08274] c 10 N71-13537  
Strain sensor for high temperatures Patent  
[NASA-CASE-XNP-09205] c 14 N71-17657  
Extensometer Patent  
[NASA-CASE-XMF-04680] c 15 N71-19489  
Strain gauge measuring techniques Patent  
[NASA-CASE-XGS-04478] c 14 N71-24233  
Method of temperature compensating semiconductor strain gages Patent  
[NASA-CASE-XLA-04555-1] c 14 N71-25892  
Pulsed excitation voltage circuit for transducers  
[NASA-CASE-FRC-10036] c 09 N72-22200  
Method of making semiconductor p-n junction stress and strain sensor  
[NASA-CASE-XLA-04980-2] c 14 N72-28438

Device for monitoring a change in mass in varying gravimetric environments  
[NASA-CASE-MFS-21556-1] c 35 N74-26945  
Strain gauge ambiguity sensor for segmented mirror active optical system  
[NASA-CASE-MFS-20506-1] c 35 N75-12273  
Subminiature insertable force transducer --- including a strain gage to measure forces in muscles  
[NASA-CASE-NPO-13423-1] c 33 N75-31329  
Self-supporting strain transducer  
[NASA-CASE-LAR-11263-1] c 35 N75-33369  
Strain gage mounting assembly  
[NASA-CASE-NPO-13170-1] c 35 N76-14430  
High temperature strain gage calibration fixture  
[NASA-CASE-LAR-11500-1] c 35 N76-24523  
Miniature biaxial strain transducer  
[NASA-CASE-LAR-11648-1] c 35 N77-14407  
CW ultrasonic bolt tensioning monitor  
[NASA-CASE-LAR-12016-1] c 39 N78-15512  
Attaching of strain gages to substrates  
[NASA-CASE-FRC-10093-1] c 35 N80-20560  
Photomechanical transducer  
[NASA-CASE-NPO-14363-1] c 39 N81-25400  
Pulsed phase locked loop strain monitor --- voltage controlled oscillators  
[NASA-CASE-LAR-12772-1] c 33 N83-16626  
Inflatable device for installing strain gage bridges  
[NASA-CASE-FRC-11068-1] c 35 N84-12443  
Thin film strain transducer  
[NASA-CASE-WLP-10055-1] c 35 N84-28015  
Strain gage calibration  
[NASA-CASE-LAR-12743-1] c 35 N84-28019  
Thin film strain transducer --- suitable for in-flight measurement of scientific balloon strain  
[NASA-CASE-WLP-10055-2] c 35 N85-21598  
Method of attaching strain gauges to various materials  
[NASA-CASE-LAR-13797-1] c 35 N88-30108  
Wind tunnel balance  
[NASA-CASE-ARC-11877-1-SB] c 09 N91-14357

## STRAIN MEASUREMENT

Thin film strain transducer --- suitable for in-flight measurement of scientific balloon strain  
[NASA-CASE-WLP-10055-2] c 35 N85-21598  
Radio Frequency (RF) strain monitor  
[NASA-CASE-LAR-13705-1] c 39 N88-25011

## STRAIN RATE

Light intensity strain analysis  
[NASA-CASE-LAR-10765-1] c 32 N73-20740  
Strain gage calibration  
[NASA-CASE-LAR-12743-1] c 35 N84-28019

## STRAKES

Helicopter anti-torque system using strakes  
[NASA-CASE-LAR-13233-1] c 05 N84-33400  
Helicopter anti-torque system using fuselage strakes  
[NASA-CASE-LAR-13630-1] c 08 N88-23809  
Actuated forebody strakes  
[NASA-CASE-LAR-13983-1] c 05 N90-23390

## STRANDS

Convergent strand array liquid pumping system  
[NASA-CASE-NPO-17301-1-CU] c 31 N90-23587

## STRAPDOWN INERTIAL GUIDANCE

All sky pointing attitude control system  
[NASA-CASE-ARC-10716-1] c 35 N77-20399

## STRAPS

Meter for use in detecting tension in straps having predetermined elastic characteristics  
[NASA-CASE-MFS-22189-1] c 35 N75-19615  
Cryogenic container compound suspension strap  
[NASA-CASE-ARC-11157-1] c 37 N80-18393  
Load limiting, energy absorbing, lightweight debris catcher  
[NASA-CASE-MSC-21562-1] c 16 N91-24216

## STRATIGRAPHY

System for plotting subsoil structure and method therefor  
[NASA-CASE-NPO-14191-1] c 31 N80-32584

## STREAMS

Apparatus for measuring a sorbate dispersed in a fluid stream  
[NASA-CASE-ARC-10896-1] c 35 N78-19465

## STRESS ANALYSIS

Method and apparatus for measuring the damping characteristics of a structure  
[NASA-CASE-ARC-10154-1] c 14 N72-22440  
Light intensity strain analysis  
[NASA-CASE-LAR-10765-1] c 32 N73-20740  
High temperature strain gage calibration fixture  
[NASA-CASE-LAR-11500-1] c 35 N76-24523  
Method and apparatus for characterizing residual stress in ferromagnetic materials  
[NASA-CASE-LAR-14239-1] c 26 N91-13527

## STRESS CONCENTRATION

Self-supporting strain transducer  
[NASA-CASE-LAR-11263-1] c 35 N75-33369



**STRESS CORROSION**

Method of inhibiting stress corrosion cracks in titanium alloys Patent  
 [NASA-CASE-NPO-10271] c 17 N71-16393  
 Controlled glass bead peening Patent  
 [NASA-CASE-XLA-07390] c 15 N71-18616

**STRESS MEASUREMENT**

Semiconductor p-n junction stress and strain sensor  
 [NASA-CASE-XLA-04980] c 09 N69-27422  
 Force measuring instrument Patent  
 [NASA-CASE-XMF-00456] c 14 N70-34705  
 Self-balancing strain gage transducer Patent  
 [NASA-CASE-MFS-12827] c 14 N71-17656  
 Strain coupled servo control system Patent  
 [NASA-CASE-XLA-08530] c 32 N71-25360  
 Amplifying ribbon extensometer  
 [NASA-CASE-LAR-11825-1] c 35 N77-22449  
 CW ultrasonic bolt tensioning monitor  
 [NASA-CASE-LAR-12016-1] c 39 N78-15512  
 Acoustic radiation stress measurement  
 [NASA-CASE-LAR-13440-1] c 71 N87-21653

**STRESS RELAXATION**

Method for alleviating thermal stress damage in laminates --- metal matrix composites  
 [NASA-CASE-LEW-12493-1] c 24 N81-17170

**STRESS RELIEVING**

All-directional fastener Patent  
 [NASA-CASE-XLA-01807] c 15 N71-10799  
 Steam cooled rich-burn combustor liner  
 [NASA-CASE-LEW-13609-1] c 25 N90-11824

**STRESSES**

Tape recorder Patent  
 [NASA-CASE-XGS-08259] c 14 N71-23698  
 Strain gauge measuring techniques Patent  
 [NASA-CASE-XGS-04478] c 14 N71-24233  
 Strain arrestor plate for fused silica tile --- bonding of thermal insulation to metallic plates or structural parts  
 [NASA-CASE-MSC-14182-1] c 27 N76-14264  
 Fixture for environmental exposure of structural materials under compression load  
 [NASA-CASE-LAR-12602-1] c 39 N83-32081

**STRETCHERS**

Rescue litter flotation assembly Patent  
 [NASA-CASE-XMS-04170] c 05 N71-22748  
 Stretcher Patent  
 [NASA-CASE-XMF-06589] c 05 N71-23159

**STRETCHING**

Fastener stretcher  
 [NASA-CASE-GSC-11149-1] c 15 N73-30457

**STRINGERS**

Preloaded space structural coupling joints  
 [NASA-CASE-LAR-13489-1] c 18 N87-27713

**STRINGS**

Omnidirectional joint Patent  
 [NASA-CASE-XMS-09635] c 05 N71-24623

**STRIP TRANSMISSION LINES**

Microwave integrated circuit for Josephson voltage standards  
 [NASA-CASE-MFS-23845-1] c 33 N81-17348  
 Microwave switching power divider --- antenna feeds  
 [NASA-CASE-GSC-12420-1] c 33 N82-16340

**STROBOSCOPES**

Synchronous strobe apparatus for flow visualization  
 [NASA-CASE-LAR-14556-1] c 36 N91-25392

**STRUCTURAL ANALYSIS**

Window defect planar mapping technique  
 [NASA-CASE-MSC-19442-1] c 74 N77-10899

**STRUCTURAL DESIGN**

Life raft Patent  
 [NASA-CASE-XMS-00863] c 05 N70-34857  
 High pressure regulator valve Patent  
 [NASA-CASE-XNP-00710] c 15 N71-10778  
 Lifting body Patent Application  
 [NASA-CASE-FRC-10063] c 01 N71-12217  
 Ring wing tension vehicle Patent  
 [NASA-CASE-XLA-04901] c 31 N71-24315  
 Opto-mechanical subsystem with temperature compensation through isothermal design  
 [NASA-CASE-GSC-12059-1] c 35 N77-27366  
 Lightweight reflector assembly  
 [NASA-CASE-NPO-13707-1] c 74 N77-28933  
 Horizontally mounted solar collector  
 [NASA-CASE-MFS-23349-1] c 44 N79-23481  
 Fluid flow meter for measuring the rate of fluid flow in a conduit  
 [NASA-CASE-MFS-28030-1] c 35 N86-25752  
 Remotely controlled spray gun  
 [NASA-CASE-MFS-28110-1] c 37 N87-24689  
 Improved method and apparatus for waste collection and storage  
 [NASA-CASE-MSC-21025-1] c 31 N87-25495  
 Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
 [NASA-CASE-ARC-11505-2] c 18 N89-25266

Suitport extra-vehicular access facility  
 [NASA-CASE-ARC-11635-1] c 18 N90-16860  
 Noncontact temperature pattern measuring device  
 [NASA-CASE-NPO-17824-1-CU] c 36 N90-17132  
 Releasable clamping apparatus  
 [NASA-CASE-MFS-28192-1] c 37 N90-17154  
 Cable suspended windmill  
 [NASA-CASE-LAR-13434-1] c 37 N90-23742  
 Composite passive damping struts for large precision structures  
 [NASA-CASE-NPO-17914-1-CU] c 39 N91-13767  
 Hybrid butterfly valve  
 [NASA-CASE-SSC-00004-1] c 37 N91-14609  
 Bio-reactor chamber  
 [NASA-CASE-MSC-20929-1] c 51 N91-14703  
 High-pressure promoted combustion chamber  
 [NASA-CASE-MSC-21470-1] c 09 N91-21157  
 Synchronous demodulator  
 [NASA-CASE-GSC-13179-1] c 33 N91-26438  
 Robotic tool change mechanism  
 [NASA-CASE-GSC-13239-1] c 37 N91-31656

**STRUCTURAL DESIGN CRITERIA**

Compliant hydrodynamic fluid journal bearing  
 [NASA-CASE-LEW-13670-1] c 37 N86-19606  
 Geometries for roughness shapes in laminar flow  
 [NASA-CASE-LAR-13255-1] c 02 N87-16793

**STRUCTURAL ENGINEERING**

Beam connector apparatus and assembly  
 [NASA-CASE-MFS-25134-1] c 31 N83-31895

**STRUCTURAL FAILURE**

Method and apparatus for nondestructive testing of pressure vessels  
 [NASA-CASE-NPO-12142-1] c 38 N76-28563

**STRUCTURAL MEMBERS**

Broadband choke for antenna structure  
 [NASA-CASE-XMS-05303] c 07 N69-27462  
 Optical alignment system Patent  
 [NASA-CASE-XNP-02029] c 14 N70-41955  
 All-directional fastener Patent  
 [NASA-CASE-XLA-01807] c 15 N71-10799  
 Frictionless universal joint Patent  
 [NASA-CASE-NPO-10646] c 15 N71-28467  
 Fastener stretcher  
 [NASA-CASE-GSC-11149-1] c 15 N73-30457  
 Method of laminating structural members  
 [NASA-CASE-XLA-11028-1] c 24 N74-27035  
 Folding structure fabricated of rigid panels  
 [NASA-CASE-XHQ-02146] c 18 N75-27040  
 Strain arrestor plate for fused silica tile --- bonding of thermal insulation to metallic plates or structural parts  
 [NASA-CASE-MSC-14182-1] c 27 N76-14264  
 Mechanical end joint system for structural column elements  
 [NASA-CASE-LAR-12482-1] c 37 N82-32732  
 Daze fasteners  
 [NASA-CASE-LAR-13009-1] c 37 N85-29285  
 Daze fasteners  
 [NASA-CASE-LAR-13009-2] c 37 N87-22976

**STRUCTURAL STABILITY**

Latching device  
 [NASA-CASE-MFS-21606-1] c 37 N75-19685  
 Flanged major modular assembly jig  
 [NASA-CASE-MSC-19372-1] c 39 N76-31562  
 Deployable M-braced truss structure  
 [NASA-CASE-LAR-13081-1] c 37 N86-32737

**STRUCTURAL VIBRATION**

Electrical connector Patent Application  
 [NASA-CASE-MFS-14741] c 09 N70-20737  
 Seismic displacement transducer Patent  
 [NASA-CASE-XMF-00479] c 14 N70-34794  
 Vibrating structure displacement measuring instrument Patent  
 [NASA-CASE-XLA-03135] c 32 N71-16428  
 Active notch filter network with variable notch depth, width and frequency  
 [NASA-CASE-FRC-11055-1] c 33 N80-29583

**STRUCTURES**

Arbitrarily shaped model survey system Patent  
 [NASA-CASE-LAR-10098] c 32 N71-26681

**STRUTS**

Energy absorbing structure Patent Application  
 [NASA-CASE-MSC-12279-1] c 15 N70-35679  
 Collapsible structure for an antenna reflector  
 [NASA-CASE-NPO-11751] c 07 N73-24176  
 Locking redundant link  
 [NASA-CASE-LAR-11900-1] c 37 N79-14382  
 Multiple pure tone elimination strut assembly --- air breathing engines  
 [NASA-CASE-FRC-11062-1] c 71 N82-16800  
 Variable length strut with longitudinal compliance and locking capability  
 [NASA-CASE-MFS-25907-1] c 37 N85-34401  
 Composite passive damping struts for large precision structures  
 [NASA-CASE-NPO-17914-1-CU] c 39 N91-13767

**STUDS (STRUCTURAL MEMBERS)**

Safety-type locking pin  
 [NASA-CASE-MFS-18495] c 15 N72-11385  
 Stud-bonding gun  
 [NASA-CASE-MFS-20299] c 15 N72-11392  
 Insert facing tool --- manually operated cutting tool for forming studs in honeycomb material  
 [NASA-CASE-MFS-21485-1] c 37 N74-25968

**STYRENES**

Heat resistant polymers of oxidized styrylphosphine  
 [NASA-CASE-MSC-14903-1] c 27 N78-32256  
 Compound oxidized styrylphosphine --- flame resistant vinyl polymers  
 [NASA-CASE-MSC-14903-2] c 27 N80-10358  
 Heat resistant polymers of oxidized styrylphosphine  
 [NASA-CASE-MSC-14903-3] c 27 N80-24438  
 Stabilized unsaturated polyesters  
 [NASA-CASE-NPO-16103-1] c 27 N85-29043

**SUBASSEMBLIES**

Multistage spent particle collector and a method for making same  
 [NASA-CASE-LEW-13914-1] c 37 N85-33489

**SUBCRITICAL FLOW**

Method for growth of crystals by pressure reduction of supercritical or subcritical solution  
 [NASA-CASE-NPO-15772-1] c 76 N85-29800

**SUBLIMATION**

Tubular sublimatory evaporator heat sink  
 [NASA-CASE-ARC-10912-1] c 34 N77-19353  
 Polymeric compositions and their method of manufacture --- forming filled polymer systems using cryogenics  
 [NASA-CASE-NPO-10424-1] c 27 N81-24258

**SUBMARINES**

Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety  
 [NASA-CASE-ARC-11040-2] c 24 N78-27184

**SUBMERGING**

Liquid immersion apparatus for minute articles  
 [NASA-CASE-MFS-25363-1] c 37 N82-12441  
 Liquid-immersible electrostatic ultrasonic transducer  
 [NASA-CASE-LAR-12465-1] c 33 N82-26572  
 Apparatus for intercalating large quantities of fibrous structures  
 [NASA-CASE-LEW-15077-2] c 24 N91-28289

**SUBMILLIMETER WAVES**

Ladder supported ring bar circuit  
 [NASA-CASE-LEW-13570-1] c 33 N84-16452  
 Double photon excitation of high-Rydberg atoms as a long-lived submillimeter detector  
 [NASA-CASE-NPO-16372-1] c 72 N86-33127  
 Millimeter-wave monolithic diode-grid frequency multiplier  
 [NASA-CASE-NPO-17258-1-CU] c 33 N91-14551

**SUBMINIATURIZATION**

Micro current measuring device using plural logarithmic response heated filamentary type diodes Patent  
 [NASA-CASE-XNP-00384] c 09 N71-13530

**SUBREFLECTORS**

Dish antenna having switchable beamwidth --- with truncated concave ellipsoid subreflector  
 [NASA-CASE-GSC-11760-1] c 33 N75-19516

**SUBSONIC SPEED**

Landing arrangement for aerospace vehicle Patent  
 [NASA-CASE-XLA-00805] c 31 N70-38010  
 Leading edge curvature based on convective heating Patent  
 [NASA-CASE-XLA-01486] c 01 N71-23497  
 Airfoil shape for flight at subsonic speeds --- design analysis and aerodynamic characteristics of the GAW-1 airfoil  
 [NASA-CASE-LAR-10585-1] c 02 N76-22154  
 Self stabilizing sonic inlet  
 [NASA-CASE-LEW-11890-1] c 05 N79-24976

**SUBSONIC WIND TUNNELS**

Variable geometry wind tunnels  
 [NASA-CASE-XLA-07430] c 11 N72-22246

**SUBSTRATES**

Means and methods of depositing thin films on substrates Patent  
 [NASA-CASE-XNP-00595] c 15 N70-34967  
 Solar cell mounting Patent  
 [NASA-CASE-XNP-00826] c 03 N71-20895  
 Solar panel fabrication Patent  
 [NASA-CASE-XNP-03413] c 03 N71-26726  
 Fabrication of polycrystalline solar cells on low-cost substrates  
 [NASA-CASE-GSC-12022-1] c 44 N76-28635  
 Process for producing a well-adhered durable optical coating on an optical plastic substrate --- abrasion resistant polymethyl methacrylate lenses  
 [NASA-CASE-ARC-11039-1] c 74 N78-32854  
 Attaching of strain gages to substrates  
 [NASA-CASE-FRC-10093-1] c 35 N80-20560

- Method for applying photographic resists to otherwise incompatible substrates  
[NASA-CASE-MSC-18107-1] c 27 N81-25209
- Refractory coatings  
[NASA-CASE-LEW-13169-2] c 26 N82-30371
- Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c 35 N82-31659
- Method for depositing an oxide coating  
[NASA-CASE-LEW-13131-1] c 44 N83-10494
- Densification of porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MSC-18737-1] c 24 N83-13171
- Method of forming oxide coatings --- for solar collector heating panels  
[NASA-CASE-LEW-13132-1] c 27 N83-29388
- Method and apparatus for coating substrates using a laser  
[NASA-CASE-LEW-13526-1] c 36 N84-22944
- Coating with overlay metallic-cermet alloy systems  
[NASA-CASE-LEW-13639-2] c 26 N84-27855
- Overlay metallic-cermet alloy coating systems  
[NASA-CASE-LEW-13639-1] c 26 N84-33555
- Increased voltage photovoltaic cell  
[NASA-CASE-NPO-16155-1] c 44 N85-30475
- Liquid crystal light valve structures  
[NASA-CASE-MSC-20036-1] c 76 N85-33826
- Thermal barrier coating system  
[NASA-CASE-LEW-14057-1] c 24 N85-35233
- Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267
- Oxygen diffusion barrier coating  
[NASA-CASE-LAR-13474-1-SB] c 26 N87-25455
- Process for making a noble metal on tin oxide catalyst  
[NASA-CASE-LAR-13741-1-SB] c 25 N90-20180
- Alternating gradient photodetector  
[NASA-CASE-NPO-17235-1-CU] c 35 N90-21358
- MBE growth technology for high quality strained III-V layers  
[NASA-CASE-NPO-17723-1-CU] c 76 N90-26685
- Method of applying a thermal barrier coating system to a substrate  
[NASA-CASE-LEW-15020-2] c 24 N91-25202
- Pressure transducer and system for cryogenic environments  
[NASA-CASE-LAR-14579-1] c 35 N91-28546
- Etching method for photoresists or polymers  
[NASA-CASE-ARC-11873-2] c 25 N91-31258
- Ceramic coatings on smooth surfaces  
[NASA-CASE-LEW-15164-2] c 27 N91-32229
- SUBSTRUCTURES**
- Support structure for irradiated elements Patent  
[NASA-CASE-XNP-06031] c 15 N71-15606
- Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c 35 N77-27366
- System for detecting substructure microfractures and method therefore  
[NASA-CASE-NPO-14192-1] c 39 N80-10507
- Elevated waterproof access floor system and method of making the same  
[NASA-CASE-ARC-11363-1] c 31 N87-16918
- SUCTION**
- Method for maintaining precise suction strip porosities  
[NASA-CASE-LAR-13638-1] c 31 N90-19427
- SUGARS**
- Production of butanol by fermentation in the presence of cocultures of clostridium  
[NASA-CASE-NPO-16203-1] c 23 N85-35227
- SULFATES**
- Intumescent paints Patent  
[NASA-CASE-ARC-10099-1] c 18 N71-15469
- SULFIDES**
- Stabilized lanthanum sulphur compounds --- thermoelectric materials  
[NASA-CASE-NPO-16135-1] c 25 N83-24572
- SULFONES**
- Electrolytic cell structure  
[NASA-CASE-LAR-11042-1] c 33 N75-27252
- Solvent resistant thermoplastic aromatic poly(imidesulfone) and process for preparing same  
[NASA-CASE-LAR-12858-1] c 27 N83-34041
- Ethynyl and substituted ethynyl-terminated polysulfones  
[NASA-CASE-LAR-12931-1] c 27 N84-22747
- Process for preparing solvent resistant, thermoplastic aromatic poly(imidesulfone)  
[NASA-CASE-LAR-12858-2] c 27 N85-20124
- Ethynyl and substituted ethynyl-terminated polysulfones  
[NASA-CASE-LAR-12931-2] c 27 N86-21675
- Sulfone-ester polymers containing pendent ethynyl groups  
[NASA-CASE-LAR-13316-1] c 27 N86-27450
- Semi-2-interpenetrating networks of high temperature systems  
[NASA-CASE-LAR-13450-1] c 27 N87-28657
- Ethynyl terminated imidothioethers and resins therefrom  
[NASA-CASE-LAR-13910-2-CU] c 27 N91-31307
- SULFONIC ACID**
- Intumescent coatings containing 4,4'-dinitrosulfanilide  
[NASA-CASE-ARC-11042-1] c 24 N78-14096
- The 1,1,1-triaryl-2,2,2-trifluoroethanes and process for their synthesis  
[NASA-CASE-ARC-11097-1] c 25 N82-24312
- SULFUR COMPOUNDS**
- Polymeric vehicles as carriers for sulfonic acid salt of nitrosubstituted aromatic amines  
[NASA-CASE-ARC-10325] c 06 N72-25147
- SULFUR DIOXIDES**
- Stack plume visualization system  
[NASA-CASE-LAR-11675-1] c 45 N76-17656
- Simultaneous treatment of SO<sub>2</sub> containing stack gases and waste water  
[NASA-CASE-MSC-16258-1] c 45 N79-12584
- SULFURIC ACID**
- Synthesis of 2,4,8,10-tetroxaspiro[5,5]undecane  
[NASA-CASE-ARC-11243-2] c 23 N85-33187
- SUM RULES**
- Computing apparatus Patent  
[NASA-CASE-XGS-04765] c 08 N71-18693
- SUN**
- Sun tracking solar energy collector  
[NASA-CASE-NPO-13921-1] c 44 N79-14526
- SUNGLASSES**
- Soft frame adjustable eyeglasses Patent  
[NASA-CASE-XMS-06064] c 05 N71-23096
- SUNLIGHT**
- Illumination system including a virtual light source Patent  
[NASA-CASE-HQN-10781] c 23 N71-30292
- Illumination control apparatus for compensating solar light  
[NASA-CASE-KSC-11010-1] c 74 N79-12890
- Cloud cover sensor  
[NASA-CASE-NPO-14936-1] c 47 N83-32232
- Sun shield  
[NASA-CASE-MSC-20162-1] c 37 N87-17036
- SUPERCHARGERS**
- Supercharged topping rocket propellant feed system  
[NASA-CASE-XLE-02062-1] c 20 N80-14188
- Diesel engine catalytic combustor system --- aircraft engines  
[NASA-CASE-LEW-12995-1] c 37 N84-33808
- SUPERCONDUCTING FILMS**
- Method of producing high T(subc) superconducting NBN films  
[NASA-CASE-NPO-16681-1-CU] c 76 N88-24543
- SUPERCONDUCTING MAGNETS**
- Cryogenic apparatus for measuring the intensity of magnetic fields  
[NASA-CASE-XAC-02407] c 14 N69-27423
- Superconducting alternator  
[NASA-CASE-XLE-02824] c 03 N69-39890
- Segmented superconducting magnet for a broadband traveling wave maser Patent  
[NASA-CASE-XGS-10518] c 16 N71-28554
- Superconducting magnet Patent  
[NASA-CASE-XNP-06503] c 23 N71-29049
- Magnetometer using superconducting rotating body  
[NASA-CASE-NPO-13388-1] c 35 N76-16390
- Stable superconducting magnet --- high current levels below critical temperature  
[NASA-CASE-XMF-05373-1] c 33 N79-21264
- Reciprocating magnetic refrigerator employing tandem porous matrices within a reciprocating displacer  
[NASA-CASE-NPO-16257-1] c 31 N85-29082
- Improved superconducting bearings  
[NASA-CASE-GSC-13346-1] c 37 N91-28578
- SUPERCONDUCTIVITY**
- Superconducting alternator Patent  
[NASA-CASE-XLE-02823] c 09 N71-23443
- System for improving signal-to-noise ratio of a communication signal  
[NASA-CASE-MSC-12259-2] c 07 N72-33146
- Superconductive magnetic-field-trapping device  
[NASA-CASE-XNP-01185] c 26 N73-28710
- Doped Josephson tunneling junction for use in a sensitive IR detector  
[NASA-CASE-NPO-13348-1] c 33 N75-31332
- Method of producing high T(subc) superconducting NBN films  
[NASA-CASE-NPO-16681-1-CU] c 76 N88-24543
- Planar thin film SQUID with integral flux concentrator  
[NASA-CASE-MFS-28282-1] c 76 N88-29602
- Monolithic mm-wave phase shifter using optically activated superconducting switches  
[NASA-CASE-LEW-14878-1] c 74 N91-13996
- Method of preforming and assembling superconducting circuit elements  
[NASA-CASE-LAR-14395-1-CU] c 33 N91-28490
- Improved superconducting bearings  
[NASA-CASE-GSC-13346-1] c 37 N91-28578
- Low cost, formable, high T(sub c) superconducting wire  
[NASA-CASE-LEW-14676-1] c 33 N91-31529
- SUPERCONDUCTORS**
- Superconductive accelerometer Patent  
[NASA-CASE-XMF-01099] c 14 N71-15969
- Twisted multifilament superconductor  
[NASA-CASE-LEW-11726-1] c 26 N73-26752
- Method of fabricating a twisted composite superconductor  
[NASA-CASE-LEW-11015] c 26 N73-32571
- Germanium coated microbridge and method  
[NASA-CASE-MFS-23274-1] c 33 N78-13320
- Method of forming low cost, formable High T(subc) superconducting wire  
[NASA-CASE-LEW-14676-2] c 76 N90-17454
- Method of preforming and assembling superconducting circuit elements  
[NASA-CASE-LAR-14395-1-CU] c 33 N91-28490
- Low cost, formable, high T(sub c) superconducting wire  
[NASA-CASE-LEW-14676-1] c 33 N91-31529
- SUPERCOOLING**
- Method and apparatus for supercooling and solidifying substances  
[NASA-CASE-MFS-25242-1] c 35 N83-29650
- SUPERCritical FLUIDS**
- Method for growth of crystals by pressure reduction of supercritical or subcritical solution  
[NASA-CASE-NPO-15772-1] c 76 N85-29800
- SUPERCritical PRESSURES**
- Oil shale extraction using super-critical extraction  
[NASA-CASE-NPO-15656-1] c 43 N84-23012
- SUPERFLUIDITY**
- Helium refining by superfluidity Patent  
[NASA-CASE-XNP-00733] c 06 N70-34946
- Method and apparatus for generating coherent radiation in the ultra-violet region and above by use of distributed feedback  
[NASA-CASE-NPO-13346-1] c 36 N76-29575
- SUPERHEATING**
- Thermal energy storage system --- operating on superheating of liquids  
[NASA-CASE-MFS-23167-1] c 44 N76-31667
- SUPERHIGH FREQUENCIES**
- Dual band combiner for horn antenna  
[NASA-CASE-NPO-14519-1] c 32 N80-23524
- SUPERLATTICES**
- Tailorable infrared sensing device with strain layer superlattice structure  
[NASA-CASE-NPO-16607-1-CU] c 76 N88-14836
- Tailorable infrared sensing device with strain layer superlattice structure  
[NASA-CASE-NPO-16617-2-CU] c 35 N90-17118
- SUPERPLASTICITY**
- Superplastically formed diffusion bonded metallic structure  
[NASA-CASE-FRC-11026-1] c 24 N82-24296
- SUPERSATURATION**
- Crystal growth in a microgravity environment  
[NASA-CASE-MFS-28473-1] c 76 N91-26968
- SUPERSONIC AIRCRAFT**
- Variable sweep wing configuration Patent  
[NASA-CASE-XLA-00230] c 02 N70-33255
- Variable sweep aircraft wing Patent  
[NASA-CASE-XLA-00350] c 02 N70-38011
- Variable sweep aircraft Patent  
[NASA-CASE-XLA-03659] c 02 N71-11041
- Translating horizontal tail Patent  
[NASA-CASE-XLA-08801-1] c 02 N71-11043
- Supersonic aircraft Patent  
[NASA-CASE-XLA-04451] c 02 N71-12243
- Absorptive splitter for closely spaced supersonic engine air inlets Patent  
[NASA-CASE-XLA-02865] c 28 N71-15563
- Oblique-wing supersonic aircraft  
[NASA-CASE-ARC-10470-3] c 05 N76-29217
- Passive venting technique for shallow cavities  
[NASA-CASE-LAR-14031-1] c 05 N90-20079
- Passive venting technique for shallow cavities  
[NASA-CASE-LAR-13875-1] c 05 N91-27156
- SUPERSONIC COMBUSTION**
- Supersonic-combustion rocket  
[NASA-CASE-LEW-11058-1] c 20 N74-13502
- Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c 15 N78-32168
- SUPERSONIC DRAG**
- Annular supersonic decelerator or drogue Patent  
[NASA-CASE-XLE-00222] c 02 N70-37939

**SUPERSONIC FLIGHT**

- Variable sweep wing aircraft Patent  
[NASA-CASE-XLA-00221] c 02 N70-33266  
High speed flight vehicle control Patent  
[NASA-CASE-XLA-08967] c 02 N71-27088

**SUPERSONIC FLOW**

- Optical probing of supersonic flows with statistical correlation  
[NASA-CASE-MFS-20642] c 14 N72-21407  
Stagnation pressure probe --- for measuring pressure of supersonic gas streams  
[NASA-CASE-LAR-11139-1] c 35 N74-32878  
Multi-body aircraft with an all-movable center fuselage actively controlling fuselage pressure drag  
[NASA-CASE-LAR-13511-1] c 05 N88-23765  
Compression pylon  
[NASA-CASE-LAR-13777-1] c 05 N90-20078  
Liquid cooled supersonic total temperature probe  
[NASA-CASE-LAR-14435-1-CU] c 09 N91-26159

**SUPERSONIC INLETS**

- Airflow control system for supersonic inlets  
[NASA-CASE-LEW-11188-1] c 02 N74-20646  
Shock position sensor for supersonic inlets --- measuring pressure in the throat of a supersonic inlet  
[NASA-CASE-LEW-11915-1] c 35 N76-14431  
Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c 15 N78-32168

**SUPERSONIC JET FLOW**

- Water cooled static pressure probe  
[NASA-CASE-LAR-14340-1-CU] c 35 N91-13684

**SUPERSONIC NOZZLES**

- Penshape exhaust nozzle for supersonic engine Patent  
[NASA-CASE-XLE-00057] c 28 N70-38711  
Telescoping-spike supersonic inlet for aircraft engines Patent  
[NASA-CASE-XLE-00005] c 28 N70-39899  
Electric arc apparatus Patent  
[NASA-CASE-XAC-01677] c 09 N71-20816  
Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c 07 N80-32392

**SUPERSONIC SPEED**

- Continuously operating induction plasma accelerator Patent  
[NASA-CASE-XLA-01354] c 25 N70-36946  
Static pressure probe  
[NASA-CASE-LAR-11552-1] c 35 N76-14429

**SUPERSONIC TRANSPORTS**

- Position location system and method Patent  
[NASA-CASE-GSC-10087-2] c 21 N71-13958  
Traffic control system and method Patent  
[NASA-CASE-GSC-10087-1] c 02 N71-19287  
Position location system and method  
[NASA-CASE-GSC-10087-3] c 07 N72-12080  
Doppler compensation by shifting transmitted object frequency within limits  
[NASA-CASE-GSC-10087-4] c 07 N73-20174  
Supersonic transport --- using canard surfaces  
[NASA-CASE-LAR-11932-1] c 05 N78-32086

**SUPERSONIC WIND TUNNELS**

- Wind tunnel  
[NASA-CASE-LAR-10135-1] c 09 N79-21083  
Sound shield  
[NASA-CASE-LAR-12883-1] c 71 N83-17235

**SUPPLYING**

- Integrated launch and emergency vehicle system  
[NASA-CASE-LAR-13780-1] c 18 N91-13481

**SUPPORT INTERFERENCE**

- Spherical bearing --- to reduce vibration effects  
[NASA-CASE-MFS-23447-1] c 37 N79-11404

**SUPPORT SYSTEMS**

- Hydraulic support for dynamic testing Patent  
[NASA-CASE-XMF-03248] c 11 N71-10604  
Support structure for irradiated elements Patent  
[NASA-CASE-XNP-06031] c 15 N71-15606  
Multilegged support system Patent  
[NASA-CASE-XLA-01326] c 11 N71-21481  
Adjustable support  
[NASA-CASE-NPO-10721] c 15 N72-27484  
Hydrostatic bearing support  
[NASA-CASE-LEW-11158-1] c 37 N77-28486  
Metric half-span model support system  
[NASA-CASE-LAR-12441-1] c 09 N82-23254

**SUPPORTS**

- A support technique for vertically oriented launch vehicles  
[NASA-CASE-XLA-02704] c 11 N69-21540  
Pneumatic mirror support system  
[NASA-CASE-XLA-03271] c 11 N69-24321  
Optical spin compensator  
[NASA-CASE-XGS-02401] c 14 N69-27485  
Extensible cable support Patent  
[NASA-CASE-XMF-07587] c 15 N71-18701  
Swivel support for gas bearings Patent  
[NASA-CASE-XMF-07808] c 15 N71-23812

- Optical tracking mount Patent  
[NASA-CASE-MFS-14017] c 14 N71-26627  
Angular displacement indicating gas bearing support system Patent  
[NASA-CASE-XLA-09346] c 15 N71-28740  
Adjustable mount for a trihedral mirror Patent  
[NASA-CASE-XNP-08907] c 23 N71-29123  
Fine adjustment mount  
[NASA-CASE-MFS-20249] c 15 N72-11386  
Expandible support means  
[NASA-CASE-NPO-11059] c 15 N72-17454  
Optical system support apparatus  
[NASA-CASE-XER-07896-2] c 23 N72-22673  
Fixture for supporting articles during vibration tests  
[NASA-CASE-MFS-20523] c 14 N72-27412  
Test stand system for vacuum chambers  
[NASA-CASE-MFS-21362] c 11 N73-20267  
Collapsible structure for an antenna reflector  
[NASA-CASE-NPO-11751] c 07 N73-24176  
Method of making porous conductive supports for electrodes --- by electroforming and stacking nickel foils  
[NASA-CASE-GSC-11367-1] c 44 N74-19692  
Thrust-isolating mounting --- characteristics of support for loads mounted in spacecraft  
[NASA-CASE-MFS-21680-1] c 18 N74-27397  
Variable contour securing system  
[NASA-CASE-MSC-16270-1] c 37 N78-27423  
Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c 26 N80-28492  
Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c 52 N81-25661  
Model mount system for testing flutter  
[NASA-CASE-LAR-12950-1] c 09 N84-34448  
Portable pallet weighing apparatus  
[NASA-CASE-GSC-12789-1] c 35 N85-20294  
Drop foot corrective device  
[NASA-CASE-LAR-12259-2] c 54 N86-22112  
Remote pivot decoupler pylon: Wing/store flutter suppressor  
[NASA-CASE-LAR-13173-1] c 05 N87-14314  
Airfoil flutter model suspension system  
[NASA-CASE-LAR-13522-1-SB] c 09 N87-25334  
Method of forming dynamic membrane on stainless steel support  
[NASA-CASE-MSC-18172-3] c 31 N88-29052  
Don/doff support stand for use with rear entry space suits  
[NASA-CASE-MSC-21364-1] c 54 N89-13889  
Almond test body --- for microwave anechoic chambers  
[NASA-CASE-LAR-13747-1-CU] c 32 N89-28672  
Tensile film clamps and mounting block for the rheovibron and autovibron viscoelastometer  
[NASA-CASE-LAR-13696-1] c 37 N90-20409  
Turbomachinery rotor support with damping  
[NASA-CASE-MFS-28345-1] c 37 N91-14608  
Post clamp  
[NASA-CASE-LEW-14862-1] c 37 N91-14617  
Mechanical strain isolator mount  
[NASA-CASE-LAR-13580-1] c 37 N91-21541  
Alignment positioning mechanism  
[NASA-CASE-MSC-21502-1] c 37 N91-21543

**SUPPRESSORS**

- Electronic background suppression method and apparatus for a field scanning sensor  
[NASA-CASE-XGS-05211] c 07 N69-39980

**SURFACE ACOUSTIC WAVE DEVICES**

- Distributed feedback acoustic surface wave oscillator  
[NASA-CASE-NPO-13673-1] c 71 N77-26919

**SURFACE CRACKS**

- Elastomer coated filler and composites thereof comprising at least 60% by weight of a hydrated filler and an elastomer containing an acid substituent  
[NASA-CASE-NPO-14857-1] c 27 N83-19900

**SURFACE DEFECTS**

- Microwave flaw detector Patent  
[NASA-CASE-ARC-10009-1] c 15 N71-17822  
Method and device for detection of surface discontinuities or defects  
[NASA-CASE-MSC-14187-1] c 35 N74-32879

**SURFACE DIFFUSION**

- Metallic film diffusion for boundary lubrication Patent  
[NASA-CASE-XLE-01765] c 18 N71-10772  
Double-beam optical method and apparatus for measuring thermal diffusivity and other molecular dynamic processes in utilizing the transient thermal lens effect  
[NASA-CASE-NPO-14657-1] c 74 N81-17887

**SURFACE DISTORTION**

- Method for detecting surface motions and mapping small terrestrial or planetary surface deformations with synthetic aperture radar  
[NASA-CASE-NPO-17831-1-CU] c 43 N91-14642

**SURFACE FINISHING**

- Method of forming transparent films of ZnO  
[NASA-CASE-FRC-10019] c 15 N73-12487

- Device and method for determining X ray reflection efficiency of optical surfaces  
[NASA-CASE-MFS-20243] c 23 N73-13662  
Surface finishing --- for aircraft wings  
[NASA-CASE-MS-12631-1] c 24 N77-28225  
Modification of the electrical and optical properties of polymers --- ion irradiation to create texture  
[NASA-CASE-LEW-13027-1] c 27 N80-24437  
Surface finishing  
[NASA-CASE-MS-12631-3] c 27 N81-14077  
Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c 37 N81-19455  
Surface texturing of fluoropolymers  
[NASA-CASE-LEW-13028-1] c 27 N82-33521  
Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c 18 N83-20996  
Electrodes for solid state devices  
[NASA-CASE-NPO-15161-1] c 33 N84-16456  
Diamondlike flakes  
[NASA-CASE-LEW-13837-2] c 24 N85-21267  
Textured carbon surfaces on copper by sputtering  
[NASA-CASE-LEW-14130-1] c 31 N86-32587  
Method and apparatus for making an optical element having a dielectric film  
[NASA-CASE-ARC-11611-1] c 74 N87-28416  
Ion-beam nitriding of steels  
[NASA-CASE-LEW-14104-2] c 26 N88-14179  
Microporous structure with layered interstitial surface treatment, and method and apparatus for preparation thereof  
[NASA-CASE-MS-21487-1] c 25 N90-16887  
Metallic seal for thermal barrier coating systems  
[NASA-CASE-LEW-15020-1] c 27 N91-15412

**SURFACE GEOMETRY**

- Cylindrical surface profile and diameter measuring tool and method  
[NASA-CASE-MFS-28287-1] c 35 N88-23959

**SURFACE IONIZATION**

- Field ionization electrodes Patent  
[NASA-CASE-ERC-10013] c 09 N71-26678  
Method and apparatus for detecting surface ions on silicon diodes and transistors  
[NASA-CASE-ERC-10325] c 15 N72-25457

**SURFACE LAYERS**

- Bismuth-lead coatings for gas bearings used in atmospheric environments and vacuum chambers Patent  
[NASA-CASE-XGS-02011] c 15 N71-20739  
Method and apparatus for stable silicon dioxide layers on silicon grown in silicon nitride ambient  
[NASA-CASE-ERC-10073-1] c 24 N74-19769  
Method of neutralizing the corrosive surface of amine-cured epoxy resins  
[NASA-CASE-GSC-12686-1] c 27 N83-34039  
Pretreatment of lubricated surfaces with sputtered cadmium oxide  
[NASA-CASE-LEW-14474-1] c 27 N91-28423

**SURFACE PROPERTIES**

- Pretreatment method for anti-wettable materials  
[NASA-CASE-XMS-03537] c 15 N69-21471  
Ablation article and method  
[NASA-CASE-LAR-10439-1] c 33 N73-27796  
Dual measurement ablation sensor  
[NASA-CASE-LAR-10105-1] c 34 N74-15652  
Apparatus for scanning the surface of a cylindrical body  
[NASA-CASE-NPO-11861-1] c 36 N74-20009  
Apparatus for microbiological sampling --- including automatic swabbing  
[NASA-CASE-LAR-11069-1] c 35 N75-12272  
Penetrometer --- for determining load bearing characteristics of inclined surfaces  
[NASA-CASE-NPO-11103-1] c 35 N77-27367  
Device for measuring the contour of a surface  
[NASA-CASE-LAR-11869-1] c 74 N78-27904  
Displacement probes with self-contained exciting medium  
[NASA-CASE-LAR-11690-1] c 35 N80-14371  
Apparatus for electrolytically tapered or contoured cavities  
[NASA-CASE-XNP-08835-1] c 37 N80-14395  
Mechanical bonding of metal method  
[NASA-CASE-LEW-12941-1] c 26 N83-10170  
Apparatus and method for inspecting a bearing ball  
[NASA-CASE-MFS-25833-1] c 35 N86-32698  
Ion beam sputter etching  
[NASA-CASE-LEW-13899-1] c 31 N87-21160  
Liquid thickness gauge  
[NASA-CASE-LAR-13826-1] c 35 N88-29150

**SURFACE REACTIONS**

- Nondestructive spot test method for magnesium and magnesium alloys  
[NASA-CASE-LAR-10953-1] c 17 N73-27446  
Means for phase locking the outputs of a surface emitting laser diode array  
[NASA-CASE-NPO-16542-1-CU] c 36 N87-23960

Quantitative surface temperature measurement using two-color thermographic phosphors and video equipment  
 [NASA-CASE-LAR-13740-1] c 35 N90-22770  
 Arc-textured high emittance radiator surfaces  
 [NASA-CASE-LEW-14679-1] c 27 N91-25296  
 Etching method for photoresists or polymers  
 [NASA-CASE-ARC-11873-2] c 25 N91-31258

**SURFACE ROUGHNESS**  
 Surface roughness detector Patent  
 [NASA-CASE-XLA-00203] c 14 N70-34161  
 Optical inspection apparatus Patent  
 [NASA-CASE-XMF-00462] c 14 N70-34298  
 Contour surveying system Patent  
 [NASA-CASE-XLA-08646] c 14 N71-17586  
 Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
 [NASA-CASE-NPO-13862-1] c 35 N79-10391  
 Texturing polymer surfaces by transfer casting --- cardiovascular prosthesis  
 [NASA-CASE-LEW-13120-1] c 27 N82-28440  
 Ion sputter textured graphite --- anode collector plates in electron tube devices  
 [NASA-CASE-LEW-12919-1] c 24 N83-10117  
 Ion sputter textured graphite electrode plates  
 [NASA-CASE-LEW-12919-2] c 70 N84-28565

**SURFACE ROUGHNESS EFFECTS**  
 Meteorological balloon Patent  
 [NASA-CASE-XMF-04163] c 02 N71-23007

**SURFACE TEMPERATURE**  
 Curved film cooling admission tube  
 [NASA-CASE-LEW-13174-1] c 34 N83-27144

**SURFACE VEHICLES**  
 Optimal control system for an electric motor driven vehicle  
 [NASA-CASE-NPO-11210] c 11 N72-20244  
 Vehicle for use in planetary exploration  
 [NASA-CASE-NPO-11366] c 11 N73-26238  
 Short range laser obstacle detector --- for surface vehicles using laser diode array  
 [NASA-CASE-NPO-11856-1] c 36 N74-15145  
 Vehicle locating system utilizing AM broadcasting station carriers  
 [NASA-CASE-NPO-13217-1] c 32 N75-26194  
 Vehicular impact absorption system  
 [NASA-CASE-NPO-14014-1] c 37 N79-10420  
 Personnel emergency carrier vehicle  
 [NASA-CASE-KSC-11282-1] c 85 N87-21755  
 Articulated suspension system  
 [NASA-CASE-NPO-17354-1-CU] c 37 N90-17153

**SURFACE WAVES**  
 Antenna design for surface wave suppression Patent  
 [NASA-CASE-XLA-10772] c 07 N71-28980  
 Solar energy converter using surface plasma waves  
 [NASA-CASE-LEW-13827-1] c 44 N85-21768  
 Dual differential interferometer  
 [NASA-CASE-LAR-12966-1] c 35 N85-30282

**SURFACES**  
 Recoverable rocket vehicle Patent  
 [NASA-CASE-XMF-00389] c 31 N70-34176  
 Friction measuring apparatus Patent  
 [NASA-CASE-XNP-08680] c 14 N71-22995  
 Three-axis adjustable loading structure  
 [NASA-CASE-FRC-10051-1] c 35 N74-13129  
 Photoelectron spectrometer with means for stabilizing sample surface potential  
 [NASA-CASE-NPO-13772-1] c 35 N78-10429

**SURFACTANTS**  
 Surfactant-assisted liquefaction of particulate carbonaceous substances  
 [NASA-CASE-NPO-13904-1] c 25 N79-11152

**SURGERY**  
 Tissue macerating instrument  
 [NASA-CASE-LEW-12668-1] c 52 N78-14773  
 Intra-ocular pressure normalization technique and equipment  
 [NASA-CASE-LEW-12955-1] c 52 N80-14684  
 Process of making medical clip  
 [NASA-CASE-LAR-12650-2] c 52 N84-28389  
 Optical joint correlator for real-time image tracking and retinal surgery  
 [NASA-CASE-MS-C-21509-1] c 74 N91-25840

**SURGES**  
 Transient-compensated SCR inverter  
 [NASA-CASE-XLA-08507] c 09 N69-39984  
 Turn on transient limiter Patent  
 [NASA-CASE-GSC-10413] c 10 N71-26531

**SURGICAL INSTRUMENTS**  
 Ophthalmic method and apparatus  
 [NASA-CASE-LEW-11669-1] c 05 N73-27062  
 Ophthalmic liquefaction pump  
 [NASA-CASE-LEW-12051-1] c 52 N75-33640  
 Cutting head for ultrasonic lithotripsy  
 [NASA-CASE-GSC-12944-1] c 52 N86-19885

**SURVIVAL EQUIPMENT**

Survival couch Patent  
 [NASA-CASE-XLA-00118] c 05 N70-33285  
 Life preserver Patent  
 [NASA-CASE-XMS-00864] c 05 N70-36493  
 Soft frame adjustable eyeglasses Patent  
 [NASA-CASE-XMS-06064] c 05 N71-23096

**SUSPENDING (HANGING)**  
 Parallel motion suspension device Patent  
 [NASA-CASE-XNP-01567] c 15 N70-41310  
 Reduced gravity simulator Patent  
 [NASA-CASE-XLA-01787] c 11 N71-16028  
 Suspended mass impact damper Patent  
 [NASA-CASE-LAR-10193-1] c 15 N71-27146  
 Airfoil flutter model suspension system  
 [NASA-CASE-LAR-13522-1-SB] c 09 N87-25334  
 Hanging drop crystal growth apparatus and method  
 [NASA-CASE-MFS-28206-1-SB] c 76 N90-23242  
 Cable suspended windmill  
 [NASA-CASE-LAR-13434-1] c 37 N90-23742  
 Suspension mechanism and method  
 [NASA-CASE-LAR-14142-1] c 37 N90-27116  
 Electrostatically suspended rotor for angular encoder  
 [NASA-CASE-MFS-28294-1] c 31 N91-14508  
 Torsional suspension system for testing space structures  
 [NASA-CASE-LAR-14149-1-SB] c 14 N91-21176

**SUSPENSION SYSTEMS (VEHICLES)**  
 Suspension system for a wheel rolling on a flat track --- bearings for directional antennas  
 [NASA-CASE-NPO-14395-1] c 37 N82-21587  
 Articulated suspension system  
 [NASA-CASE-NPO-17354-1-CU] c 37 N90-17153

**SWEAT**  
 Sweat collection capsule  
 [NASA-CASE-ARC-11031-1] c 52 N81-29763

**SWEAT COOLING**  
 Transpiration cooled turbine blade manufactured from wires Patent  
 [NASA-CASE-XLE-00020] c 15 N70-33226  
 Transpirationally cooled heat ablation system Patent  
 [NASA-CASE-XMS-02677] c 31 N70-42075  
 Method of electroforming a rocket chamber  
 [NASA-CASE-LEW-11118-1] c 20 N74-32919

**SWEEP CIRCUITS**  
 Multiple slope sweep generator Patent  
 [NASA-CASE-XMS-03542] c 09 N71-28926

**SWEEP EFFECT**  
 High speed flight vehicle control Patent  
 [NASA-CASE-XLA-08967] c 02 N71-27088  
 Acoustically swept rotor --- helicopter noise reduction  
 [NASA-CASE-ARC-11106-1] c 05 N80-14107

**SWEEP FREQUENCY**  
 Swept group delay measurement  
 [NASA-CASE-NPO-13909-1] c 33 N78-25319

**SWELLING**  
 Intumescent composition, foamed product prepared therewith, and process for making same  
 [NASA-CASE-ARC-10304-1] c 18 N73-26572

**SWEEP FORWARD WINGS**  
 High performance forward swept wing aircraft  
 [NASA-CASE-ARC-11636-1] c 05 N88-28914

**SWEPT WINGS**  
 Supersonic aircraft Patent  
 [NASA-CASE-XLA-04451] c 02 N71-12243

**SWIRLING**  
 Slosh alleviator Patent  
 [NASA-CASE-XLA-05749] c 15 N71-19569  
 Swirl can primary combustor  
 [NASA-CASE-LEW-11326-1] c 23 N73-30665  
 Flow modifying device  
 [NASA-CASE-LEW-13562-2] c 07 N85-35195  
 Vortex motion phase separator for zero gravity liquid transfer  
 [NASA-CASE-KSC-11387-1] c 29 N90-20236

**SWITCHES**  
 Switching mechanism with energy storage means Patent  
 [NASA-CASE-XGS-00473] c 03 N70-38713  
 Digital memory in which the driving of each word location is controlled by a switch core Patent  
 [NASA-CASE-XNP-01466] c 10 N71-26434  
 RF controlled solid state switch  
 [NASA-CASE-ARC-10136-1] c 09 N72-22202  
 High power RF coaxial switch  
 [NASA-CASE-NPO-14229-1] c 33 N80-18285  
 Automatic thermal switch  
 [NASA-CASE-GSC-12415-1] c 33 N82-24419  
 Fiber optic crossbar switch for automatically patching optical signals  
 [NASA-CASE-KSC-11104-1] c 74 N83-29032  
 Triac failure detector  
 [NASA-CASE-MFS-25607-1] c 33 N83-34190  
 Heat pipe thermal switch  
 [NASA-CASE-GSC-12812-1] c 34 N83-35307

Three-phase power factor controller with induced EMF sensing  
 [NASA-CASE-MFS-25852-1] c 33 N84-33661  
 Laser activated MTOS microwave device  
 [NASA-CASE-NPO-16112-1] c 33 N86-19516  
 Self-actuating heat switches for redundant refrigeration systems  
 [NASA-CASE-NPO-17085-1-CU] c 31 N89-12785  
 Solid state electrical switch employing materials with reversible phase transistors  
 [NASA-CASE-NPO-17621-1-CU] c 33 N90-17010  
 Long period pseudo random number sequence generator  
 [NASA-CASE-NPO-17241-1-CU] c 33 N90-23636  
 Monolithic mm-wave phase shifter using optically activated superconducting switches  
 [NASA-CASE-LEW-14878-1] c 74 N91-13996  
 Thermal switch disc for short circuit protection of batteries  
 [NASA-CASE-MS-C-21428-1] c 33 N91-14537  
 Synchronous demodulator  
 [NASA-CASE-GSC-13179-1] c 33 N91-26438  
 Asymmetric soft-error resistant memory  
 [NASA-CASE-NPO-17394-1-CU] c 60 N91-31810

**SWITCHING**  
 Phase detector for three-phase power factor controller  
 [NASA-CASE-MFS-25854-1] c 33 N84-27975  
 Long period pseudo random number sequence generator  
 [NASA-CASE-NPO-17241-1-CU] c 33 N90-23636  
 Asymmetric soft-error resistant memory  
 [NASA-CASE-NPO-17394-1-CU] c 60 N91-31810

**SWITCHING CIRCUITS**  
 Solid state switch  
 [NASA-CASE-XNP-09228] c 09 N69-27500  
 Power control circuit  
 [NASA-CASE-NPO-02713] c 10 N69-39888  
 A method for selective gold diffusion of monolithic silicon devices and/or circuits Patent application  
 [NASA-CASE-ERC-10072] c 09 N70-11148  
 Space vehicle electrical system Patent  
 [NASA-CASE-XMF-00517] c 03 N70-34157  
 High speed low level electrical stepping switch Patent  
 [NASA-CASE-XAC-00060] c 09 N70-39915  
 Switching circuit employing regeneratively connected complementary transistors Patent  
 [NASA-CASE-XNP-02654] c 10 N70-42032  
 Electronic beam switching commutator Patent  
 [NASA-CASE-XGS-01451] c 09 N71-10677  
 Electronic amplifier with power supply switching Patent  
 [NASA-CASE-XMS-00945] c 09 N71-10798  
 SCR blocking pulse gate amplifier Patent  
 [NASA-CASE-XLA-07497] c 09 N71-12514  
 Magnetic core current steering commutator Patent  
 [NASA-CASE-NPO-10201] c 08 N71-18694  
 A dc-coupled noninverting one-shot Patent  
 [NASA-CASE-XNP-09450] c 10 N71-18723  
 Reversible current control apparatus Patent  
 [NASA-CASE-XLA-09371-1] c 10 N71-18724  
 Exclusive-Or digital logic module Patent  
 [NASA-CASE-XLA-07732] c 08 N71-18751  
 Polarization diversity monopulse tracking receiver Patent  
 [NASA-CASE-XGS-03501] c 09 N71-20864  
 Sight switch using an infrared source and sensor Patent  
 [NASA-CASE-XMF-03934] c 09 N71-22985  
 Complementary regenerative switch Patent  
 [NASA-CASE-XGS-02751] c 09 N71-23015  
 Drive circuit utilizing two cores Patent  
 [NASA-CASE-XNP-01318] c 10 N71-23033  
 Pulse modulator providing fast rise and fall times Patent  
 [NASA-CASE-XMS-04919] c 09 N71-23270  
 Polarity sensitive circuit Patent  
 [NASA-CASE-XNP-00952] c 10 N71-23271  
 Increasing efficiency of switching type regulator circuits Patent  
 [NASA-CASE-XMS-09352] c 09 N71-23316  
 Indexing microwave switch Patent  
 [NASA-CASE-XNP-06507] c 09 N71-23548  
 Multialarm summary alarm Patent  
 [NASA-CASE-XLE-03061-1] c 10 N71-24798  
 Switching circuit Patent  
 [NASA-CASE-XNP-06505] c 10 N71-24799  
 Inverter with means for base current shaping for sweeping charge carriers from base region Patent  
 [NASA-CASE-XGS-04226] c 10 N71-25950  
 Current steering switch Patent  
 [NASA-CASE-XNP-08567] c 09 N71-26000  
 Control apparatus for applying pulses of selectively predetermined duration to a sequence of loads Patent  
 [NASA-CASE-XGS-04224] c 10 N71-26418  
 Turn on transient limiter Patent  
 [NASA-CASE-GSC-10413] c 10 N71-26531

- Method and means for providing an absolute power measurement capability Patent  
[NASA-CASE-ERC-11020] c 14 N71-26774
- Transistor drive regulator Patent  
[NASA-CASE-LEW-10233] c 10 N71-27126
- Compensating bandwidth switching transients in an amplifier circuit Patent  
[NASA-CASE-XNP-01107] c 10 N71-28859
- Monostable multivibrator with complementary NOR gates Patent  
[NASA-CASE-MSC-13492-1] c 10 N71-28860
- Digital memory sense amplifying means Patent  
[NASA-CASE-XNP-01012] c 08 N71-28925
- Current regulating voltage divider  
[NASA-CASE-MFS-20935] c 09 N71-34212
- Reference voltage switching unit  
[NASA-CASE-NPO-11253] c 09 N72-17157
- Optimum performance spacecraft solar cell system  
[NASA-CASE-GSC-10669-1] c 03 N72-20031
- Flow rate switch  
[NASA-CASE-NPO-10722] c 09 N72-20199
- Switching regulator  
[NASA-CASE-LEW-11005-1] c 09 N72-21243
- Data multiplexer using tree switching configuration  
[NASA-CASE-NPO-11333] c 08 N72-22162
- Pulse coupling circuit  
[NASA-CASE-LEW-10433-1] c 09 N72-22197
- Solid state remote circuit selector switch  
[NASA-CASE-LEW-10387] c 09 N72-22201
- Pressure operated electrical switch responsive to a pressure decrease after a pressure increase  
[NASA-CASE-LAR-10137-1] c 09 N72-22204
- Fast response low power drain logic circuits  
[NASA-CASE-GSC-10878-1] c 10 N72-22236
- CRT blanking and brightness control circuit  
[NASA-CASE-KSC-10647-1] c 10 N72-31273
- Electronic video editor  
[NASA-CASE-KSC-10003] c 10 N73-13235
- Radiation sensitive solid state switch  
[NASA-CASE-NPO-10817-1] c 08 N73-30135
- Transparent switchboard  
[NASA-CASE-MSC-13746-1] c 10 N73-32143
- High isolation RF signal selection switches  
[NASA-CASE-NPO-13081-1] c 33 N74-22814
- Isolated output system for a class D switching-mode amplifier  
[NASA-CASE-MFS-21616-1] c 33 N75-30429
- Dual digital video switcher  
[NASA-CASE-KSC-10782-1] c 33 N75-30431
- Multi-computer multiple data path hardware exchange system  
[NASA-CASE-NPO-13422-1] c 60 N76-14818
- Sustained arc ignition system  
[NASA-CASE-LEW-12444-1] c 33 N77-28385
- Window comparator  
[NASA-CASE-FRC-10090-1] c 33 N78-18308
- Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c 33 N79-24254
- System for automatically switching transformer coupled lines  
[NASA-CASE-MSC-16697-1] c 33 N79-28415
- Self-reconfiguring solar cell system  
[NASA-CASE-LEW-12586-1] c 44 N80-14472
- Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NPO-14316-1] c 33 N81-33404
- Microwave switching power divider --- antenna feeds  
[NASA-CASE-GSC-12420-1] c 33 N82-18340
- Control means for a solid state crossbar switch  
[NASA-CASE-NPO-15066-1] c 33 N82-29538
- Active lamp pulse driver circuit --- optical pumping of laser media  
[NASA-CASE-GSC-12566-1] c 33 N83-34189
- Pulsed thyristor trigger control circuit  
[NASA-CASE-MFS-25616-1] c 33 N84-16455
- Simplified dc to dc converter  
[NASA-CASE-LEW-13495-1] c 33 N84-33663
- Hybrid power semiconductor  
[NASA-CASE-LEW-13922-1] c 33 N86-20672
- Four quadrant control circuit for a brushless three-phase dc motor  
[NASA-CASE-MFS-28080-1] c 33 N87-21233
- Optical shutter switching matrix  
[NASA-CASE-KSC-11392-1] c 74 N90-22383
- SWITCHING THEORY**  
Multiple circuit switch apparatus with improved pivot actuator structure Patent  
[NASA-CASE-XAC-03777] c 10 N71-15909
- SWIVELS**  
Swivel support for gas bearings Patent  
[NASA-CASE-XMF-07808] c 15 N71-23812
- Double swivel toggle release  
[NASA-CASE-MSC-21436-1] c 37 N90-21390
- SYMBOLS**  
Multiple symbol differential detection  
[NASA-CASE-NPO-17896-1-CU] c 32 N91-27439
- SYNAPSES**  
Analog hardware for delta-backpropagation neural networks  
[NASA-CASE-NPO-17564-1-CU] c 32 N90-16974
- SYNCHRONISM**  
Time division multiplex system  
[NASA-CASE-XGS-05918] c 07 N69-39974
- Means for generating a sync signal in an FM communication system Patent  
[NASA-CASE-XNP-10830] c 07 N71-11281
- Method of resolving clock synchronization error and means therefor Patent  
[NASA-CASE-XNP-08875] c 10 N71-23099
- Passive synchronized spike generator with high input impedance and low output impedance and capacitor power supply Patent  
[NASA-CASE-XGS-03632] c 09 N71-23311
- Time synchronization system utilizing moon reflected coded signals Patent  
[NASA-CASE-NPO-10143] c 10 N71-26326
- Rapid sync acquisition system Patent  
[NASA-CASE-NPO-10214] c 10 N71-26577
- Synchronized voltage contrast display analysis system  
[NASA-CASE-NPO-14567-1] c 33 N83-18996
- Digitized synchronous demodulator  
[NASA-CASE-GSC-13237-1] c 33 N91-14550
- Synchronized computational architecture for generalized bilateral control of robot arms  
[NASA-CASE-NPO-17401-1-CU] c 63 N91-31885
- SYNCHRONIZED OSCILLATORS**  
Phase demodulation system with two phase locked loops Patent  
[NASA-CASE-XNP-00777] c 10 N71-19469
- Phase locked phase modulator including a voltage controlled oscillator Patent  
[NASA-CASE-XNP-05382] c 10 N71-23544
- Automatic frequency control loop including synchronous switching circuits  
[NASA-CASE-KSC-10393] c 09 N72-21247
- SYNCHRONIZERS**  
Burst synchronization detection system Patent  
[NASA-CASE-XMS-05605-1] c 10 N71-19468
- Time division radio relay synchronizing system using different sync code words for in sync and out of sync conditions Patent  
[NASA-CASE-GSC-10373-1] c 07 N71-19773
- Synchronous servo loop control system Patent  
[NASA-CASE-XNP-03744] c 10 N71-20448
- Digital synchronizer Patent  
[NASA-CASE-NPO-10851] c 07 N71-24613
- Video sync processor Patent  
[NASA-CASE-KSC-10002] c 10 N71-25865
- Pulse code modulated signal synchronizer  
[NASA-CASE-MSC-12462-1] c 32 N74-20809
- Pulse code modulated signal synchronizer  
[NASA-CASE-MSC-12494-1] c 32 N74-20810
- System for generating timing and control signals  
[NASA-CASE-NPO-13125-1] c 33 N75-19519
- Telemetry synchronizer  
[NASA-CASE-GSC-11868-1] c 17 N76-22245
- Memory-based frame synchronizer --- for digital communication systems  
[NASA-CASE-GSC-12430-1] c 60 N82-16747
- SYNCHRONOUS MOTORS**  
Synchronous dc direct drive system Patent  
[NASA-CASE-GSC-10065-1] c 10 N71-27136
- Motor run-up system --- power lines  
[NASA-CASE-NPO-13374-1] c 33 N75-19524
- SYNCHRONOUS SATELLITES**  
Position location system and method Patent  
[NASA-CASE-GSC-10087-2] c 21 N71-13958
- Serrrodyne frequency converter re-entrant amplifier system Patent  
[NASA-CASE-XGS-01022] c 07 N71-16088
- Traffic control system and method Patent  
[NASA-CASE-GSC-10087-1] c 02 N71-19287
- Tracking antenna system Patent  
[NASA-CASE-GSC-10553-1] c 07 N71-19854
- Satellite interlace synchronization system  
[NASA-CASE-GSC-10390-1] c 07 N72-11149
- Synchronous orbit battery cyclor  
[NASA-CASE-GSC-11211-1] c 03 N72-25020
- Systems and methods for determining radio frequency interference  
[NASA-CASE-GSC-12150-1] c 32 N79-11265
- Satellite personal communications system  
[NASA-CASE-NPO-14480-1] c 32 N80-20448
- SYNTHESIS**  
Synthesis of polymeric schiff bases by schiff-base exchange reactions Patent  
[NASA-CASE-XMF-08651] c 06 N71-11236
- Preparation of ordered poly /arylenesiloxane/ polymers  
[NASA-CASE-XMF-10753] c 06 N71-11237
- Imidazopyrrolone/imide copolymers Patent  
[NASA-CASE-XLA-08802] c 06 N71-11238
- Preparation of polyimides from mixtures of monomeric diamines and esters of polycarboxylic acids  
[NASA-CASE-LEW-11325-1] c 06 N73-27980
- SYNTHESIS (CHEMISTRY)**  
Prepolymer dianhydrides  
[NASA-CASE-NPO-13899-1] c 27 N80-32515
- Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c 27 N81-15104
- Bifunctional monomers having terminal oxime and cyano or amide groups  
[NASA-CASE-ARC-11253-3] c 27 N81-24256
- Synthesis of polyformals  
[NASA-CASE-ARC-11244-1] c 23 N82-16174
- Electrically conductive palladium containing polyimide films  
[NASA-CASE-LAR-12705-1] c 25 N82-26396
- Polyvinyl alcohol cross-linked with two aldehydes  
[NASA-CASE-LEW-13504-1] c 25 N83-13188
- Synthesis of dawsonites --- for use in fire extinguishing operations  
[NASA-CASE-ARC-11326-1] c 25 N83-33977
- Solvent resistant thermoplastic aromatic poly(imidesulfone) and process for preparing same  
[NASA-CASE-LAR-12858-1] c 27 N83-34041
- Polyphenylene ethers with imide linking groups  
[NASA-CASE-LAR-12980-1] c 27 N84-22749
- Phenoxy resins containing pendent ethynyl groups and cured resins obtained therefrom  
[NASA-CASE-LAR-13262-1] c 23 N85-28973
- Synthesis of 2,4,8,10-tetroxaspiro5,5undecane  
[NASA-CASE-ARC-11243-2] c 23 N85-33187
- Fire-resistant phosphorus containing polyimides and copolyimides  
[NASA-CASE-ARC-11522-2] c 27 N85-34280
- Metal phthalocyanine intermediates for the preparation of polymers  
[NASA-CASE-ARC-11405-2] c 27 N86-19455
- Copolymers of vinyl styrylpyridines or vinyl stilbazoles with bismaleimide  
[NASA-CASE-ARC-11429-1-CU] c 27 N86-20560
- Perfluoro (Imidoylamidino) diamidines  
[NASA-CASE-ARC-11402-3] c 23 N86-21582
- Ethynyl and substituted ethynyl-terminated polysulfones  
[NASA-CASE-LAR-12931-2] c 27 N86-21675
- Sulfone-ester polymers containing pendent ethynyl groups  
[NASA-CASE-LAR-13316-1] c 27 N86-27450
- Polymer of phosphonylmethyl-2,4- and -2,6-diamino benzene and polyfunctional monomer  
[NASA-CASE-ARC-11506-2] c 23 N86-32525
- Polyarylene ethers with improved properties  
[NASA-CASE-LAR-13555-1] c 23 N86-32526
- The 5-(4-Ethynylphenoxy) isophthalic chloride  
[NASA-CASE-LAR-13316-2] c 27 N87-14515
- Acetylene (ethynyl) terminated polyimide siloxane and process for preparation thereof  
[NASA-CASE-LAR-13318-1] c 27 N87-14516
- Ethynyl terminated ester oligomers and polymers therefrom  
[NASA-CASE-LAR-13118-2] c 27 N87-16907
- Process for preparing phthalocyanine polymer from imide containing bisphthalonitrile  
[NASA-CASE-ARC-11511-2] c 27 N87-21112
- Polyenamines from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-1-CU] c 27 N87-22847
- Preparation of B-trichloroborazine  
[NASA-CASE-ARC-11643-1-SB] c 23 N87-23698
- Fire and heat resistant laminating resins based on maleimido and citraconimido substituted 1-(diorgano oxyphosphonyl) methyl -2,4- and -2,6- diaminobenzenes  
[NASA-CASE-ARC-11533-3] c 27 N87-24564
- Polyimides containing carbonyl and ether connecting groups  
[NASA-CASE-LAR-13633-1] c 27 N87-24575
- Aminophenoxycyclotriposphazene cured epoxy resins and the composites, laminates, adhesives and structures thereof  
[NASA-CASE-ARC-11548-1] c 27 N87-25469
- Process for developing crystallinity in linear aromatic polyimides  
[NASA-CASE-LAR-13732-1] c 27 N87-25474
- Aromatic cyclotriposphazenes  
[NASA-CASE-ARC-11428-3] c 23 N88-24692
- Substituted 1,1,1-Triaryl-2,2,2-Trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-1] c 23 N88-26404

- Boron-containing organosilane polymers and ceramic materials thereof  
 [NASA-CASE-ARC-11649-1-SB] c 27 N88-29040  
 Polyphenylquinoxalines via aromatic nucleophilic displacement  
 [NASA-CASE-LAR-13988-1] c 23 N89-11814  
 Polyenamines from aromatic diacetylenic diketones and diamines  
 [NASA-CASE-LAR-13444-2-CU] c 23 N89-12667  
 Polyphenylquinoxalines containing alkylendioxy groups  
 [NASA-CASE-LAR-13601-1-CU] c 27 N89-14337  
 Novel polyimide compositions based on 4,4': isophthaloyldiphthalic anhydride (IDPA)  
 [NASA-CASE-LAR-14194-1] c 24 N90-15148  
 Wet spinning of solid polyamic acid fibers  
 [NASA-CASE-LAR-14162-1] c 27 N90-15259  
 Polyimides with carbonyl and ether connecting groups between the aromatic rings  
 [NASA-CASE-LAR-14001-1] c 27 N90-15260  
 Microporous structure with layered interstitial surface treatment, and method and apparatus for preparation thereof  
 [NASA-CASE-MSC-21487-1] c 25 N90-16887  
 Copolyimide with a combination of flexibilizing groups  
 [NASA-CASE-LAR-13821-1] c 27 N90-16950  
 New Condensation polyimides containing 1,1,1-triaryl-2,2,2-trifluoroethane structures  
 [NASA-CASE-LEW-14346-1] c 23 N90-19300  
 The 1-((diorganooxyphosphonyl)-methyl)-2,4- and -2,6-diamido benzenes  
 [NASA-CASE-ARC-11425-4] c 23 N90-20133  
 Process for making a noble metal on tin oxide catalyst  
 [NASA-CASE-LAR-13741-1-SB] c 25 N90-20180  
 Human serum albumin crystals and method of preparation  
 [NASA-CASE-MFS-28234-1] c 52 N90-20616  
 Bis(4-(3,4-dimethylenepyrrolidyl)-phenyl) methane  
 [NASA-CASE-LAR-13965-1-CU] c 23 N90-21118  
 Apparatus for mixing solutions in low gravity environments  
 [NASA-CASE-MFS-26047-1] c 29 N90-21209  
 Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
 [NASA-CASE-LEW-14345-2] c 25 N90-23497  
 Acetylene terminated aspartimides and resins therefrom  
 [NASA-CASE-LAR-14188-1] c 27 N90-23545  
 Process for lowering the dielectric constant of polyimides using diamic acid additives  
 [NASA-CASE-LAR-13902-1] c 27 N90-23546  
 Imide/arylene ether copolymers  
 [NASA-CASE-LAR-14159-1-CU] c 27 N90-26953  
 Polyimidazoles via aromatic nucleophilic displacement  
 [NASA-CASE-LAR-14145-1] c 27 N90-26954  
 Aromatic polyimides containing a dimethylsilane-linked dianhydride  
 [NASA-CASE-LAR-14198-1] c 27 N90-26956  
 Preparation of polyimides from bis(N-isoprenyl)s of aryl diamides  
 [NASA-CASE-LAR-14330-1-CU] c 27 N91-13560  
 N-(3-ethynylphenyl)maleimide  
 [NASA-CASE-LAR-14188-2] c 23 N91-14419  
 Ladder polymers for use as high temperature stable resins or coatings  
 [NASA-CASE-LEW-14203-1] c 27 N91-15402  
 Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
 [NASA-CASE-LEW-14345-3] c 23 N91-17141  
 Poly(1,3,4-oxadiazoles) via aromatic nucleophilic displacement  
 [NASA-CASE-LAR-14427-1] c 23 N91-23237  
 Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
 [NASA-CASE-LEW-14345-4] c 23 N91-25185  
 Polyimides prepared from 3,5-diamino benzo trifluoride  
 [NASA-CASE-LAR-14206-1] c 27 N91-28425
- SYNTHESIZERS**  
 Digitally controlled frequency synthesizer Patent  
 [NASA-CASE-XGS-02317] c 09 N71-23525
- SYNTHETIC APERTURE RADAR**  
 Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
 [NASA-CASE-NPO-13862-1] c 35 N79-10391  
 Azimuth correlator for real-time synthetic aperture radar image processing  
 [NASA-CASE-NPO-14019-1] c 32 N79-14268  
 Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
 [NASA-CASE-NPO-14525-1] c 32 N79-19195  
 Real-time multiple-look synthetic aperture radar processor for spacecraft applications  
 [NASA-CASE-NPO-14054-1] c 32 N82-12297
- Servomechanism for Doppler shift compensation in optical correlator for synthetic aperture radar  
 [NASA-CASE-NPO-14998-1] c 32 N83-18975  
 Clutter free synthetic aperture radar correlator  
 [NASA-CASE-NPO-14035-1] c 32 N83-19568  
 Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
 [NASA-CASE-NPO-14525-2] c 32 N83-31918  
 Synthetic aperture radar target simulator  
 [NASA-CASE-NPO-15024-1] c 32 N84-27951  
 Pipelined digital SAR azimuth correlator using hybrid FFT-transversal filter  
 [NASA-CASE-NPO-15519-1] c 32 N84-34651  
 Method and apparatus for Delta Kappa synthetic aperture radar measurement of ocean current  
 [NASA-CASE-NPO-15704-1] c 32 N85-34327  
 Method and apparatus for contour mapping using synthetic aperture radar  
 [NASA-CASE-NPO-15939-1] c 43 N86-19711  
 Data volume reduction for imaging radar polarimetry  
 [NASA-CASE-NPO-17184-1-CU] c 32 N88-26541  
 Method for providing a polarization filter for processing synthetic aperture radar image data  
 [NASA-CASE-NPO-17904-1-CU] c 32 N91-13594  
 Pipeline synthetic aperture radar data compression utilizing systolic binary tree-searched architecture for vector quantization  
 [NASA-CASE-NPO-17941-1-CU] c 32 N91-13595  
 Method for detecting surface motions and mapping small terrestrial or planetary surface deformations with synthetic aperture radar  
 [NASA-CASE-NPO-17831-1-CU] c 43 N91-14642  
 System and method for measuring ocean surface currents at locations remote from land masses using synthetic aperture radar  
 [NASA-CASE-NPO-17937-1-CU] c 43 N91-21621  
 Generation of topographic terrain models utilizing synthetic aperture radar and surface level data  
 [NASA-CASE-GSC-13212-1] c 43 N91-32546
- SYNTHETIC FIBERS**  
 Fluid containers and resealable septum therefor Patent  
 [NASA-CASE-NPO-10123] c 15 N71-24835  
 Fabric for micrometeoroid protection garment Patent  
 [NASA-CASE-MSC-12109] c 18 N71-26285  
 Fluid impervious barrier including liquid metal alloy and method of making same Patent  
 [NASA-CASE-XNP-08881] c 17 N71-28747  
 Polymeric electrolytic hygrometer  
 [NASA-CASE-NPO-13948-1] c 35 N78-25391  
 Process for spinning flame retardant elastomeric compositions --- fabricating synthetic fibers for high oxygen environments  
 [NASA-CASE-MSC-14331-3] c 27 N78-32262  
 Insoluble polyelectrolyte and ion-exchange hollow fiber impregnated therewith  
 [NASA-CASE-NPO-13530-1] c 25 N81-17187  
 Wet spinning of solid polyamic acid fibers  
 [NASA-CASE-LAR-14489-1] c 37 N91-27562
- SYNTHETIC FUELS**  
 Molten salt pyrolysis of latex --- synthetic hydrocarbon fuel production using the Guayule shrub  
 [NASA-CASE-NPO-14315-1] c 27 N81-17261  
 Solar heated fluidized bed gasification system  
 [NASA-CASE-NPO-15071-1] c 44 N82-16475
- SYNTHETIC RESINS**  
 Coating process  
 [NASA-CASE-XNP-06508] c 18 N69-39895  
 Phosphorus-containing bisimide resins  
 [NASA-CASE-ARC-11321-1] c 27 N81-27272  
 Method for forming pyrrole molding powders and products of said method  
 [NASA-CASE-LAR-10423-1] c 23 N82-29358  
 Copolymers of vinyl styrylpyridines or vinyl stilbazoles with bismaleimide  
 [NASA-CASE-ARC-11429-1-CU] c 27 N86-20560  
 Acetylene terminated aspartimides and resins therefrom  
 [NASA-CASE-LAR-14188-1] c 27 N90-23545  
 N-(3-ethynylphenyl)maleimide  
 [NASA-CASE-LAR-14188-2] c 23 N91-14419
- SYNTHETIC RUBBERS**  
 Process for the preparation of polycarbonarylphosphazenes --- thermal insulation  
 [NASA-CASE-ARC-11176-2] c 27 N81-27271
- SYRINGES**  
 Micro-fluid exchange coupling apparatus  
 [NASA-CASE-ARC-11114-1] c 51 N81-14605  
 Automated syringe sampler --- remote sampling of air and water  
 [NASA-CASE-LAR-12308-1] c 35 N81-29407
- SYSTEM EFFECTIVENESS**  
 System for the measurement of ultra-low stray light levels --- determining the adequacy of large space telescope systems  
 [NASA-CASE-MFS-23513-1] c 74 N79-11865
- SYSTEM FAILURES**  
 Tape recorder Patent  
 [NASA-CASE-XGS-08259] c 14 N71-23698  
 Fault tolerant clock apparatus utilizing a controlled minority of clock elements  
 [NASA-CASE-MSC-12531-1] c 35 N75-30504  
 Apparatus for sensor failure detection and correction in a gas turbine engine control system  
 [NASA-CASE-LEW-12907-2] c 07 N81-19115
- SYSTEMS ANALYSIS**  
 Analog-to-digital converter analyzing system  
 [NASA-CASE-NPO-10560] c 08 N72-22166
- SYSTEMS ENGINEERING**  
 Magneto-hydrodynamic induction machine  
 [NASA-CASE-XNP-07481] c 25 N69-21929  
 Gravity stabilized flying vehicle Patent  
 [NASA-CASE-MSC-12111-1] c 02 N71-11039  
 Solar battery with interconnecting means for plural cells Patent  
 [NASA-CASE-XNP-06506] c 03 N71-11050  
 Helmet assembly and latch means therefor Patent  
 [NASA-CASE-XMS-04935] c 05 N71-11190  
 Multi-feed cone Cassegrain antenna Patent  
 [NASA-CASE-NPO-10539] c 07 N71-11285  
 Viscous-pendulum-damper Patent  
 [NASA-CASE-XLA-02079] c 12 N71-16894  
 Out of tolerance warning alarm system for plurality of monitored circuits Patent  
 [NASA-CASE-XMS-10984-1] c 10 N71-19417  
 Wide range data compression system Patent  
 [NASA-CASE-XGS-02612] c 08 N71-19435  
 Space suit heat exchanger Patent  
 [NASA-CASE-XMS-09571] c 05 N71-19439  
 Biomedical radiation detecting probe Patent  
 [NASA-CASE-XMS-01177] c 05 N71-19440  
 High speed binary to decimal conversion system Patent  
 [NASA-CASE-XGS-01230] c 08 N71-19544  
 Evaporant source for vapor deposition Patent  
 [NASA-CASE-XMF-06065] c 15 N71-20395  
 Method and apparatus for making a heat insulating and ablative structure Patent  
 [NASA-CASE-XMS-02009] c 33 N71-20834  
 Polarization diversity monopulse tracking receiver Patent  
 [NASA-CASE-XGS-03501] c 09 N71-20864  
 Inflatable support structure Patent  
 [NASA-CASE-XLA-01731] c 32 N71-21045  
 Fast opening diaphragm Patent  
 [NASA-CASE-XLA-03660] c 15 N71-21060  
 Portable superclean air column device Patent  
 [NASA-CASE-XMF-03212] c 15 N71-22721  
 Apparatus for machining geometric cones Patent  
 [NASA-CASE-XMS-04292] c 15 N71-22722  
 Spin forming tubular elbows Patent  
 [NASA-CASE-XMF-01083] c 15 N71-22723  
 Spacecraft airlock Patent  
 [NASA-CASE-XLA-02050] c 31 N71-22968  
 Station keeping of a gravity gradient stabilized satellite Patent  
 [NASA-CASE-XLA-03132] c 31 N71-22969  
 Filler valve Patent  
 [NASA-CASE-XNP-01747] c 15 N71-23024  
 Refrigeration apparatus Patent  
 [NASA-CASE-XNP-08877] c 15 N71-23025  
 Reduced bandwidth video communication system utilizing sampling techniques Patent  
 [NASA-CASE-XNP-02791] c 07 N71-23026  
 Multiple environment materials test chamber having a multiple port X-ray tube for irradiating a plurality of samples Patent  
 [NASA-CASE-XMS-02930] c 11 N71-23042  
 Variable duration pulse integrator Patent  
 [NASA-CASE-XLA-01219] c 10 N71-23084  
 Sealed electrochemical cell provided with a flexible casing Patent  
 [NASA-CASE-XGS-01513] c 03 N71-23336  
 Extended area semiconductor radiation detectors and a novel readout arrangement Patent  
 [NASA-CASE-XGS-03230] c 14 N71-23401  
 Floating two force component measuring device Patent  
 [NASA-CASE-XAC-04885] c 14 N71-23790  
 Transducer circuit and catheter transducer Patent  
 [NASA-CASE-ARC-10132-1] c 09 N71-24597  
 Method of attaching a cover glass to a silicon solar cell Patent  
 [NASA-CASE-XLE-08569-2] c 03 N71-24681  
 Attitude control system for sounding rockets Patent  
 [NASA-CASE-XGS-01654] c 31 N71-24750  
 Temperature telemetric transmitter Patent  
 [NASA-CASE-NPO-10649] c 07 N71-24840  
 Tuning arrangement for an electron discharge device or the like Patent  
 [NASA-CASE-XNP-09771] c 09 N71-24841

- Broadband modified turnstile antenna Patent  
[NASA-CASE-MSC-12209] c 09 N71-24842
- Apparatus for determining the deflection of an electron beam impinging on a target Patent  
[NASA-CASE-XMF-06617] c 09 N71-24843
- BCD to decimal decoder Patent  
[NASA-CASE-XKS-06167] c 08 N71-24890
- Noninterruptable digital counting system Patent  
[NASA-CASE-XNP-09759] c 08 N71-24891
- Duct coupling for single-handed operation Patent  
[NASA-CASE-MFS-20395] c 15 N71-24903
- Brushless direct current tachometer Patent  
[NASA-CASE-MFS-20385] c 09 N71-24904
- Quick release hook tape Patent  
[NASA-CASE-XMS-10660-1] c 15 N71-25975
- Internal work light Patent  
[NASA-CASE-XKS-05932] c 09 N71-26787
- Apparatus for inspecting microfilm Patent  
[NASA-CASE-MFS-20240] c 14 N71-26788
- Apparatus for remote measurement of displacement of marks on a specimen undergoing a tensile test  
[NASA-CASE-NPO-10778] c 14 N72-11364
- Optimum performance spacecraft solar cell system  
[NASA-CASE-GSC-10669-1] c 03 N72-20031
- Electric storage battery  
[NASA-CASE-NPO-11021] c 03 N72-20032
- Spacecraft attitude control method and apparatus  
[NASA-CASE-HQN-10439] c 21 N72-21624
- Light sensor  
[NASA-CASE-NPO-11311] c 14 N72-25414
- Flight control system  
[NASA-CASE-MSC-13397-1] c 21 N72-25595
- Program for computer aided reliability estimation  
[NASA-CASE-NPO-13086-1] c 15 N73-12495
- Measurement system  
[NASA-CASE-MFS-20658-1] c 14 N73-30386
- Alignment apparatus using a laser having a gravitationally sensitive cavity reflector  
[NASA-CASE-ARC-10444-1] c 16 N73-33397
- System for calibrating pressure transducer  
[NASA-CASE-LAR-10910-1] c 35 N74-13132
- Three mirror glancing incidence system for X-ray telescope  
[NASA-CASE-MFS-21372-1] c 74 N74-27866
- Holographic system for nondestructive testing  
[NASA-CASE-MFS-21704-1] c 35 N75-25124
- Compact pulsed laser having improved heat conductance  
[NASA-CASE-NPO-13147-1] c 36 N77-25502
- Tetherline system for orbiting satellites  
[NASA-CASE-MFS-23564-1] c 15 N78-25119
- Non-tracking solar energy collector system  
[NASA-CASE-NPO-13813-1] c 44 N78-31526
- Horizontally mounted solar collector  
[NASA-CASE-MFS-23349-1] c 44 N79-23481
- Contour measurement system  
[NASA-CASE-MFS-23726-1] c 43 N79-26439
- Redundant motor drive system  
[NASA-CASE-MFS-23777-1] c 37 N80-32716
- System for sterilizing objects --- cleaning space vehicle systems  
[NASA-CASE-KSC-11085-1] c 54 N81-24724
- A system for controlling the oxygen content of a gas produced by combustion  
[NASA-CASE-LAR-13257-1] c 25 N84-32447
- Multiplex electric discharge gas laser system  
[NASA-CASE-NPO-16433-1] c 36 N87-23961
- Convergent strand array liquid pumping system  
[NASA-CASE-NPO-17301-1-CU] c 31 N90-23587
- SYSTOLIC ARRAYS**
- Systolic VLSI array for implementing the Kalman filter algorithm  
[NASA-CASE-NPO-17108-1-CU] c 33 N89-28713
- Pipeline synthetic aperture radar data compression utilizing systolic binary tree-searched architecture for vector quantization  
[NASA-CASE-NPO-17941-1-CU] c 32 N91-13595
- T**
- TABS (CONTROL SURFACES)**
- Aircraft rotor blade with passive tuned tab  
[NASA-CASE-ARC-11444-1] c 05 N85-29947
- Robotic tool change mechanism  
[NASA-CASE-GSC-13239-1] c 37 N91-31656
- TACHOMETERS**
- Digital cardi tachometer system Patent  
[NASA-CASE-XMS-02399] c 05 N71-22896
- Brushless direct current tachometer Patent  
[NASA-CASE-MFS-20385] c 09 N71-24904
- Ratemeter  
[NASA-CASE-MFS-20418] c 14 N73-24473
- Tachometer  
[NASA-CASE-MFS-23175-1] c 35 N77-30436
- Shaft transducer having dc output proportional to angular velocity  
[NASA-CASE-NPO-15706-1] c 35 N84-28017
- TACTILE SENSORS (ROBOTICS)**
- Tactile sensing means for prosthetic limbs  
[NASA-CASE-MFS-16570-1] c 05 N73-32013
- Optical fiber tactile sensor  
[NASA-CASE-NPO-15375-1] c 74 N84-11921
- TAIL ASSEMBLIES**
- Surface conforming thermal/pressure seal --- tail assemblies of space shuttle orbiters  
[NASA-CASE-MSC-18422-1] c 37 N82-16408
- Missile rolling tail brake torque system --- simulating bearing friction on canard controlled missiles  
[NASA-CASE-LAR-12751-1] c 15 N84-16231
- TAKEOFF**
- Airplane take-off performance indicator Patent  
[NASA-CASE-XLA-00100] c 14 N70-36807
- Aircraft instrument Patent  
[NASA-CASE-XLA-00487] c 14 N70-40157
- Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13734-1-CU] c 09 N90-20096
- TANGENTS**
- Derivation of a tangent function using an integrated circuit four-quadrant multiplier  
[NASA-CASE-MSC-13907-1] c 10 N73-26230
- TANK GEOMETRY**
- Tank construction for space vehicles Patent  
[NASA-CASE-XMF-01899] c 31 N70-41948
- TANKERS**
- Tanker orbit transfer vehicle and method  
[NASA-CASE-MSC-20543-1] c 18 N84-22610
- TANKS (COMBAT VEHICLES)**
- Tank tread assemblies with track-linking mechanism  
[NASA-CASE-NPO-16321-1CU] c 37 N87-17034
- TANKS (CONTAINERS)**
- Penetrating radiation system for detecting the amount of liquid in a tank Patent  
[NASA-CASE-MSC-12280] c 27 N71-16348
- Method for leakage testing of tanks Patent  
[NASA-CASE-XMF-02392] c 32 N71-24285
- Floating baffle to improve efficiency of liquid transfer from tanks  
[NASA-CASE-KSC-10639] c 15 N73-26472
- Method of producing a storage bulb for an atomic hydrogen maser  
[NASA-CASE-NPO-13050-1] c 36 N75-15029
- Tank gauging apparatus and method  
[NASA-CASE-MSC-21059-2] c 35 N91-15511
- TANTALUM**
- Thermionic tantalum emitter doped with oxygen Patent Application  
[NASA-CASE-NPO-11138] c 03 N70-34646
- Arc electrode of graphite with ball tip Patent  
[NASA-CASE-XLE-04788] c 09 N71-22987
- Trialkyl-dihalotantalum and niobium compounds Patent  
[NASA-CASE-XNP-04023] c 06 N71-28808
- Thermocouples of tantalum and rhenium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12050-1] c 35 N77-32454
- TANTALUM ALLOYS**
- Evaporant holder  
[NASA-CASE-XLA-03105] c 15 N69-27483
- Tantalum modified ferritic iron base alloys  
[NASA-CASE-LEW-12095-1] c 26 N78-18182
- TANTALUM CARBIDES**
- Thermal shock and erosion resistant tantalum carbide ceramic material  
[NASA-CASE-LAR-11902-1] c 27 N78-17206
- TANTALUM OXIDES**
- Thin film temperature sensor and method of making same  
[NASA-CASE-NPO-11775] c 26 N72-28761
- TAPE RECORDERS**
- Plural recorder system  
[NASA-CASE-XMS-06949] c 09 N69-21467
- Endless tape transport mechanism Patent  
[NASA-CASE-XGS-01223] c 07 N71-10609
- Low friction magnetic recording tape Patent  
[NASA-CASE-XGS-00373] c 23 N71-15978
- Tape guidance system and apparatus for the provision thereof Patent  
[NASA-CASE-XNP-09453] c 08 N71-19420
- Synchronous servo loop control system Patent  
[NASA-CASE-XNP-03744] c 10 N71-20448
- Incremental tape recorder and data rate converter Patent  
[NASA-CASE-XNP-02778] c 08 N71-22710
- Digital telemetry system Patent  
[NASA-CASE-XGS-01812] c 07 N71-23001
- Tape recorder Patent  
[NASA-CASE-XGS-08259] c 14 N71-23698
- A dc servosystem including an ac motor Patent  
[NASA-CASE-NPO-10700] c 07 N71-33613
- Recorder using selective noise filter  
[NASA-CASE-ERC-10112] c 07 N72-21119
- Method of and means for testing a tape record/playback system  
[NASA-CASE-MFS-22671-2] c 35 N77-17426
- TAPERED COLUMNS**
- Method of making a rocket motor casing Patent  
[NASA-CASE-XLE-00409] c 28 N71-15658
- Rocket motor casing Patent  
[NASA-CASE-XLE-05689] c 28 N71-15659
- TAPERING**
- Tapered, tubular polyester fabric  
[NASA-CASE-MSC-21082-1] c 27 N87-29672
- TAPES**
- High density tape casting system  
[NASA-CASE-NPO-16901-1-CU] c 31 N90-19425
- TARGET ACQUISITION**
- Acquisition and tracking system for optical radar  
[NASA-CASE-MFS-20125] c 16 N72-13437
- Target acquisition antenna  
[NASA-CASE-GSC-10064-1] c 10 N72-22235
- Intruder detection system  
[NASA-CASE-ARC-10097-2] c 07 N73-25160
- TARGET RECOGNITION**
- Electronic background suppression method and apparatus for a field scanning sensor  
[NASA-CASE-XGS-05211] c 07 N69-39980
- Real-time optical multiple object recognition and tracking system and method  
[NASA-CASE-NPO-17139-1-CU] c 74 N88-25301
- TARGET SIMULATORS**
- Simulator method and apparatus for practicing the mating of an observer-controlled object with a target  
[NASA-CASE-MFS-23052-2] c 74 N79-13855
- Synthetic aperture radar target simulator  
[NASA-CASE-NPO-15024-1] c 32 N84-27951
- TARGETS**
- Method and apparatus for producing concentric hollow spheres --- inertial confinement fusion targets  
[NASA-CASE-NPO-14596-1] c 31 N81-33319
- Method and apparatus for producing gas-filled hollow spheres --- target pellets for inertial confinement fusion  
[NASA-CASE-NPO-14596-3] c 31 N83-31896
- Optical distance measuring instrument  
[NASA-CASE-GSC-12761-1] c 74 N86-32266
- Bilevel shared control for teleoperators  
[NASA-CASE-NPO-17800-1-CU] c 37 N91-13724
- Motion detection, novelty filtering, and target tracking using an interferometric technique with a GaAs phase conjugate mirror  
[NASA-CASE-NPO-17784-1-CU] c 74 N91-13998
- Apparatus for precision focusing and positioning of a beam waist on a target  
[NASA-CASE-ARC-11916-1-SB] c 74 N91-14002
- Standard remote manipulator system docking target augmentation for automated docking  
[NASA-CASE-MFS-28419-1] c 18 N91-27200
- TECHNOLOGY UTILIZATION**
- Induction-type metal detector with increased scanning area capability  
[NASA-CASE-KSC-11386-1] c 35 N90-22023
- TECTONICS**
- Method for detecting surface motions and mapping small terrestrial or planetary surface deformations with synthetic aperture radar  
[NASA-CASE-NPO-17831-1-CU] c 43 N91-14642
- TEETH**
- Acoustic tooth cleaner  
[NASA-CASE-LAR-12471-1] c 52 N82-29862
- TEFLON (TRADEMARK)**
- Bonding of reinforced Teflon to metals  
[NASA-CASE-MFS-20482] c 15 N72-22492
- Method of producing a storage bulb for an atomic hydrogen maser  
[NASA-CASE-NPO-13050-1] c 36 N75-15029
- Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c 44 N76-27664
- TELECOMMUNICATION**
- Adaptive compression of communication signals Patent  
[NASA-CASE-XLA-03076] c 07 N71-11266
- Means for generating a sync signal in an FM communication system Patent  
[NASA-CASE-XNP-10830] c 07 N71-11281
- Signal-to-noise ratio estimating by taking ratio of mean and standard deviation of integrated signal samples Patent  
[NASA-CASE-XNP-05254] c 07 N71-20791
- Digital synchronizer Patent  
[NASA-CASE-NPO-10851] c 07 N71-24613
- Minimal logic block encoder Patent  
[NASA-CASE-NPO-10595] c 10 N71-25917
- Two carrier communication system with single transmitter  
[NASA-CASE-NPO-11548] c 07 N73-26118

Pseudonoise (PN) synchronization of data system with derivation of clock frequency from received signal for clocking receiver PN generator  
 [NASA-CASE-XNP-03623] c 09 N73-28084  
 Coherent receiver employing nonlinear coherence detection for carrier tracking  
 [NASA-CASE-NPO-11921-1] c 32 N74-30523  
 Pseudo-noise test set for communication system evaluation --- test signals  
 [NASA-CASE-MFS-22671-1] c 35 N75-21582  
 Modulator for tone and binary signals --- phase of modulation of tone and binary signals on carrier waves in communication systems  
 [NASA-CASE-GSC-11743-1] c 32 N75-24981  
 Method and apparatus for quadriphase-shift-key and linear phase modulation  
 [NASA-CASE-NPO-14444-1] c 33 N81-15192  
 Random digital encryption secure communication system  
 [NASA-CASE-MSC-16462-1] c 32 N82-31583

**TELEMETRY**  
 Pressure variable capacitor  
 [NASA-CASE-XNP-09752] c 14 N69-21541  
 Telemetry word forming unit  
 [NASA-CASE-XNP-09225] c 09 N69-24333  
 Position location and data collection system and method Patent  
 [NASA-CASE-GSC-10083-1] c 30 N71-16090  
 Telespectrograph Patent  
 [NASA-CASE-XLA-03273] c 14 N71-18699  
 Digitally controlled frequency synthesizer Patent  
 [NASA-CASE-XGS-02317] c 09 N71-23525  
 Programmable telemetry system Patent  
 [NASA-CASE-GSC-10131-1] c 07 N71-24624  
 Temperature telemetric transmitter Patent  
 [NASA-CASE-NPO-10649] c 07 N71-24840  
 Rapid sync acquisition system Patent  
 [NASA-CASE-NPO-10214] c 10 N71-26577  
 Telemetry actuated switch  
 [NASA-CASE-ARC-10105] c 09 N72-17153  
 Flexible computer accessed telemetry  
 [NASA-CASE-NPO-11358] c 07 N72-25172  
 Digital control and information system  
 [NASA-CASE-NPO-11016] c 08 N72-31226  
 Multichannel telemetry system  
 [NASA-CASE-NPO-11572] c 07 N73-16121  
 Receiver with an improved phase lock loop in a multichannel telemetry system with suppressed carrier  
 [NASA-CASE-NPO-11593-1] c 07 N73-28012  
 Telemetry synchronizer  
 [NASA-CASE-GSC-11868-1] c 17 N76-22245  
 Memory-based parallel data output controller  
 [NASA-CASE-GSC-12447-2] c 60 N84-28491  
 Single frequency multitransmitter telemetry  
 [NASA-CASE-LAR-13006-1] c 17 N87-16863  
 Method and apparatus for telemetry adaptive bandwidth compression  
 [NASA-CASE-MSC-20821-1] c 17 N87-25348  
 VLSI single-chip (255,223) Reed-Solomon encoder with interleaver  
 [NASA-CASE-NPO-17280-1-CU] c 17 N90-21061  
 Adaptive data acquisition multiplexing system and method  
 [NASA-CASE-MSC-21170-1] c 17 N91-14371

**TELEOPERATORS**  
 Cooperative multiaxis sensor for teleoperation of article manipulating apparatus  
 [NASA-CASE-NPO-13386-1] c 54 N75-27758  
 Bilevel shared control for teleoperators  
 [NASA-CASE-NPO-17800-1-CU] c 37 N91-13724  
 Method and apparatus for positioning a robotic end effector  
 [NASA-CASE-MSC-21476-1] c 37 N91-21542  
 Telerobot control system  
 [NASA-CASE-NPO-18116-1-CU] c 37 N91-32509  
 A generalized compliant motion primitive  
 [NASA-CASE-NPO-18134-1-CU] c 37 N91-32510

**TELEPHONES**  
 Telephone multiline signaling using common signal pair  
 [NASA-CASE-KSC-11023-1] c 32 N79-23310

**TELEPHONY**  
 Digital communication system  
 [NASA-CASE-MSC-13912-1] c 32 N74-30524

**TELESCOPES**  
 Pneumatic mirror support system  
 [NASA-CASE-XLA-03271] c 11 N69-24321  
 Solar optical telescope dome control system Patent  
 [NASA-CASE-MSC-10966] c 14 N71-19568  
 Optical tracking mount Patent  
 [NASA-CASE-MFS-14017] c 14 N71-26627  
 Method and apparatus for aligning a laser beam projector Patent  
 [NASA-CASE-NPO-11087] c 23 N71-29125

Rotable accurate reflector system for telescopes Patent  
 [NASA-CASE-NPO-10468] c 23 N71-33229  
 Star image motion compensator  
 [NASA-CASE-LAR-10523-1] c 14 N72-22444  
 Light direction sensor  
 [NASA-CASE-NPO-11201] c 14 N72-27409  
 Borescope with variable angle scope  
 [NASA-CASE-MFS-15162] c 14 N72-32452  
 Ritchey-Chretien Telescope  
 [NASA-CASE-GSC-11487-1] c 14 N73-30393  
 Servo-controlled intravitral microscope system  
 [NASA-CASE-NPO-13214-1] c 35 N75-25123  
 Compensation for primary reflector wavefront error  
 [NASA-CASE-NPO-16869-1CU] c 74 N86-33138  
 Method and apparatus for phasing segmented mirror arrays  
 [NASA-CASE-NPO-18095-1-CU] c 74 N91-32923

**TELETYPEWRITER SYSTEMS**  
 Video communication system and apparatus Patent  
 [NASA-CASE-XNP-06611] c 07 N71-26102

**TELEVISION CAMERAS**  
 Electrically-operated rotary shutter Patent  
 [NASA-CASE-XNP-00637] c 14 N70-40273  
 Digital television camera control system Patent  
 [NASA-CASE-XNP-01472] c 14 N70-41807  
 Solid state television camera system Patent  
 [NASA-CASE-XMF-06092] c 07 N71-24612  
 Color television system  
 [NASA-CASE-MSC-12146-1] c 07 N72-17109  
 TV fatigue crack monitoring system  
 [NASA-CASE-LAR-11490-1] c 39 N78-16387  
 Optical conversion method --- for spacecraft television  
 [NASA-CASE-MSC-12618-1] c 74 N78-17865  
 Automatic weld torch guidance control system  
 [NASA-CASE-MFS-25807] c 37 N83-20154  
 Television camera video level control system  
 [NASA-CASE-MSC-18578-1] c 32 N85-21427  
 Wind dynamic range video camera  
 [NASA-CASE-MFS-25750-1] c 32 N86-20647  
 Automated weld torch guidance control system  
 [NASA-CASE-MFS-25807-2] c 37 N86-21850

**TELEVISION EQUIPMENT**  
 Television signal scan rate conversion system Patent  
 [NASA-CASE-XMS-07168] c 07 N71-11300  
 Automatic closed circuit television arc guidance control Patent  
 [NASA-CASE-MFS-13046] c 07 N71-19433  
 Color television systems using a single gun color cathode ray tube Patent  
 [NASA-CASE-ERC-10098] c 09 N71-28618  
 Television multiplexing system  
 [NASA-CASE-KSC-10654-1] c 07 N73-30115  
 Rotating raster generator  
 [NASA-CASE-FRC-10071-1] c 32 N74-20813  
 Auditory display for the blind  
 [NASA-CASE-HQN-10832-1] c 71 N74-21014  
 Spacecraft docking and alignment system --- using television camera system  
 [NASA-CASE-MSC-12559-1] c 18 N76-14186  
 System for producing chroma signals  
 [NASA-CASE-MSC-14683-1] c 74 N77-18893

**TELEVISION RECEIVERS**  
 Narrow bandwidth video Patent  
 [NASA-CASE-XMS-06740-1] c 07 N71-26579

**TELEVISION RECEPTION**  
 Retinally stabilized differential resolution television display  
 [NASA-CASE-NPO-15432-1] c 32 N85-29117

**TELEVISION SYSTEMS**  
 Method and means for an improved electron beam scanning system Patent  
 [NASA-CASE-ERC-10552] c 09 N71-12539  
 Burst synchronization detection system Patent  
 [NASA-CASE-XMS-05605-1] c 10 N71-19468  
 Narrow bandwidth video Patent  
 [NASA-CASE-XMS-06740-1] c 07 N71-26579  
 Stereoscopic television system and apparatus  
 [NASA-CASE-ARC-10160-1] c 23 N72-27728  
 Large TV display system  
 [NASA-CASE-NPO-16932-1CU] c 33 N87-15413  
 Optical joint correlator for real-time image tracking and retinal surgery  
 [NASA-CASE-MSC-21509-1] c 74 N91-25840

**TELEVISION TRANSMISSION**  
 Television simulation for aircraft and space flight Patent  
 [NASA-CASE-XFR-03107] c 09 N71-19449  
 Automatic frequency control for FM transmitter  
 [NASA-CASE-MFS-21540-1] c 32 N74-19790  
 Television noise reduction device  
 [NASA-CASE-MSC-12607-1] c 32 N75-21485

**TELLURIUM**  
 Targets for producing high purity I-123  
 [NASA-CASE-LEW-10518-3] c 25 N78-27226

**TEMPERATURE**

Fluorinated esters of polycarboxylic acids  
 [NASA-CASE-MFS-21040-1] c 06 N73-30098

**TEMPERATURE COMPENSATION**  
 Temperature compensated solid state differential amplifier Patent  
 [NASA-CASE-XAC-00435] c 09 N70-35440  
 Variable frequency magnetic multivibrator Patent  
 [NASA-CASE-XGS-00458] c 09 N70-38604  
 Matched thermistors for microwave power meters Patent  
 [NASA-CASE-NPO-10348] c 10 N71-12554  
 Precision thrust gage Patent  
 [NASA-CASE-XGS-02319] c 14 N71-22965  
 Variable frequency oscillator with temperature compensation Patent  
 [NASA-CASE-XNP-03916] c 09 N71-28810  
 Omnidirectional acceleration device Patent  
 [NASA-CASE-HQN-10780] c 14 N71-30265  
 Thermal compensating structural member  
 [NASA-CASE-MFS-20433] c 15 N72-28496  
 Temperature compensated light source using a light emitting diode  
 [NASA-CASE-ARC-10467-1] c 09 N73-14214  
 Opto-mechanical subsystem with temperature compensation through isothermal design  
 [NASA-CASE-GSC-12059-1] c 35 N77-27366  
 Temperature compensated current source  
 [NASA-CASE-MSC-11235] c 33 N78-17294

**TEMPERATURE CONTROL**  
 Method and apparatus for wavelength tuning of liquid lasers  
 [NASA-CASE-ERC-10187] c 16 N69-31343  
 Alkali-metal silicate protective coating  
 [NASA-CASE-XGS-04119] c 18 N69-39979  
 Thermal control of space vehicles Patent  
 [NASA-CASE-XLA-01291] c 33 N70-36617  
 Thermal switch Patent  
 [NASA-CASE-XNP-00463] c 33 N70-36847  
 Sandwich panel construction Patent  
 [NASA-CASE-XLA-00349] c 33 N70-37979  
 Device for suppressing sound and heat produced by high-velocity exhaust jets Patent  
 [NASA-CASE-XMF-01813] c 28 N70-41582  
 Solar cell including second surface mirrors Patent  
 [NASA-CASE-NPO-10109] c 03 N71-11049  
 Excessive temperature warning system Patent  
 [NASA-CASE-XLA-01926] c 14 N71-15620  
 Intermittent type silica gel adsorption refrigerator Patent  
 [NASA-CASE-XNP-00920] c 15 N71-15906  
 Method and apparatus for controllably heating fluid Patent  
 [NASA-CASE-XMF-04237] c 33 N71-16278  
 Mount for thermal control system Patent  
 [NASA-CASE-NPO-10138] c 33 N71-16357  
 Transmission line thermal short Patent  
 [NASA-CASE-XNP-09775] c 09 N71-20445  
 Thermal control wall panel Patent  
 [NASA-CASE-XLA-01243] c 33 N71-22792  
 Thermal control panel Patent  
 [NASA-CASE-XLA-07728] c 33 N71-22890  
 Method and apparatus for varying thermal conductivity Patent  
 [NASA-CASE-XNP-05524] c 33 N71-24876  
 Temperature regulation circuit Patent  
 [NASA-CASE-XNP-02792] c 14 N71-28958  
 Automatic control of liquid cooling garment by cutaneous and external auditory meatus temperatures  
 [NASA-CASE-MSC-13917-1] c 05 N72-15098  
 Method for controlling vapor content of a gas  
 [NASA-CASE-NPO-10633] c 03 N72-28025  
 Atomic hydrogen maser with bulb temperature control to remove wall shift in maser output frequency  
 [NASA-CASE-HQN-10654-1] c 16 N73-13489  
 Pump for delivering heated fluids  
 [NASA-CASE-NPO-11417] c 15 N73-24513  
 Temperature controller for a fluid cooled garment  
 [NASA-CASE-ARC-10599-1] c 05 N73-26071  
 Temperature control system with a pulse width modulated bridge  
 [NASA-CASE-NPO-11304] c 14 N73-26430  
 Thermal control system for a spacecraft modular housing  
 [NASA-CASE-GSC-11018-1] c 31 N73-30829  
 Apparatus for controlling the temperature of balloon-borne equipment  
 [NASA-CASE-GSC-11620-1] c 34 N74-23039  
 Self-regulating proportionally controlled heating apparatus and technique  
 [NASA-CASE-GSC-11752-1] c 77 N75-20140  
 Rocket chamber and method of making  
 [NASA-CASE-LEW-11118-2] c 20 N76-14191  
 Thermostatically controlled non-tracking type solar energy concentrator  
 [NASA-CASE-NPO-13497-1] c 44 N76-14602



- Multi-chamber controllable heat pipe  
[NASA-CASE-ARC-10199] c 34 N78-17337
- Thermal compensator for closed-cycle helium refrigerator --- assuring constant temperature for an infrared laser diode  
[NASA-CASE-GSC-12168-1] c 31 N79-17029
- Low heat leak connector for cryogenic system  
[NASA-CASE-XLE-02367-1] c 31 N79-21225
- Thermal control canister  
[NASA-CASE-GSC-12253-1] c 34 N79-31523
- Automatic thermal switch  
[NASA-CASE-GSC-12415-1] c 33 N82-24419
- Automatic thermal switch --- spacecraft applications  
[NASA-CASE-GSC-12553-1] c 34 N83-28356
- Magnetic heat pumping  
[NASA-CASE-LEW-12508-3] c 34 N83-29625
- Heating and cooling system --- for fatigue test specimens  
[NASA-CASE-LAR-12393-1] c 34 N83-34221
- Heat pipe thermal switch  
[NASA-CASE-GSC-12812-1] c 34 N83-35307
- Method and apparatus for minimizing convection during crystal growth from solution  
[NASA-CASE-NPO-15811-1] c 76 N84-12968
- Thermal control system --- removing waste heat from industrial process spacecraft  
[NASA-CASE-GSC-12771-1] c 34 N84-14461
- High temperature acoustic levitator  
[NASA-CASE-NPO-16022-1] c 71 N85-22105
- Method and apparatus for growing crystals  
[NASA-CASE-MFS-28137-1] c 76 N88-24544
- Capillary heat transport and fluid management device  
[NASA-CASE-MFS-28217-1] c 34 N89-14392
- Method and apparatus for maintaining thermal control in plasma conditions  
[NASA-CASE-MFS-28368-1] c 75 N90-10717
- Thermal switch disc for short circuit protection of batteries  
[NASA-CASE-MS-C-21428-1] c 33 N91-14537
- TEMPERATURE DISTRIBUTION**
- Heat shield oven  
[NASA-CASE-XMS-04318] c 15 N69-27871
- Apparatus for supplying conditioned air at a substantially constant temperature and humidity  
[NASA-CASE-GSC-12191-1] c 31 N80-32583
- Noncontact temperature pattern measuring device  
[NASA-CASE-NPO-17024-1-CU] c 35 N88-24943
- TEMPERATURE EFFECTS**
- Variable stiffness polymeric damper  
[NASA-CASE-XAC-11225] c 14 N69-27486
- Differential pressure cell Patent  
[NASA-CASE-XAC-00042] c 14 N70-34816
- Fluid flow control valve Patent  
[NASA-CASE-XLE-00703] c 15 N71-15967
- Temperature sensitive flow regulator Patent  
[NASA-CASE-MFS-14259] c 15 N71-19213
- Thermally cycled magnetometer Patent  
[NASA-CASE-XAC-03740] c 14 N71-26135
- Radiometric temperature reference Patent  
[NASA-CASE-MS-C-13276-1] c 14 N71-27058
- Low temperature cross linking polyimides  
[NASA-CASE-LEW-12876-2] c 27 N83-29392
- High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11538-1SB] c 24 N86-21590
- Poly(carbonate-mide) polymer  
[NASA-CASE-LAR-13292-1] c 27 N86-24841
- Process for curing bismaleimide resins  
[NASA-CASE-ARC-11429-4CU] c 27 N87-15304
- Method for forming hermetic seals  
[NASA-CASE-NPO-16423-1-CU] c 37 N87-21334
- Predictive aging of polymers  
[NASA-CASE-NPO-17524-1-CU] c 27 N90-10261
- Pressure rig for repetitive casting  
[NASA-CASE-LAR-14050-1] c 31 N90-21216
- Flexible diaphragm-extreme temperature usage  
[NASA-CASE-MS-C-20797-2] c 35 N91-21494
- TEMPERATURE GRADIENTS**
- Differential temperature transducer Patent  
[NASA-CASE-XAC-00812] c 14 N71-15598
- Temperature compensated light source using a light emitting diode  
[NASA-CASE-ARC-10467-1] c 09 N73-14214
- Method for compression molding of thermosetting plastics utilizing a temperature gradient across the plastic to cure the article  
[NASA-CASE-LAR-10489-1] c 31 N74-18124
- Method and apparatus for checking fire detectors  
[NASA-CASE-GSC-11600-1] c 35 N74-21019
- Dual laser optical system and method for studying fluid flow  
[NASA-CASE-MFS-25315-1] c 36 N83-29680
- Temperature averaging thermal probe  
[NASA-CASE-GSC-12795-1] c 35 N86-19580
- High gradient directional solidification furnace  
[NASA-CASE-MFS-25963-1] c 35 N86-20750
- TEMPERATURE MEASUREMENT**
- Motion picture camera for optical pyrometry Patent  
[NASA-CASE-XLA-00062] c 14 N70-33254
- Apparatus for measuring thermal conductivity Patent  
[NASA-CASE-XGS-01052] c 14 N71-15992
- Thermocouple assembly Patent  
[NASA-CASE-XNP-01659] c 14 N71-23039
- Cavity radiometer Patent  
[NASA-CASE-XNP-08961] c 14 N71-24809
- Sensing probe  
[NASA-CASE-LEW-10281-1] c 14 N72-17327
- Apparatus for sensing temperature  
[NASA-CASE-XLE-05230] c 14 N72-27410
- Method of making apparatus for sensing temperature  
[NASA-CASE-XLE-05230-2] c 14 N73-13417
- Heat detection and compositions and devices therefor  
[NASA-CASE-NPO-10764-1] c 14 N73-14428
- Method of fabricating an article with cavities --- with thin bottom walls  
[NASA-CASE-LAR-10318-1] c 31 N74-18089
- Method for determining thermo-physical properties of specimens --- photographic recording of changes in thin film phase-change temperature indicating material in wind tunnel  
[NASA-CASE-LAR-11053-1] c 25 N74-18551
- Wind sensor  
[NASA-CASE-NPO-13462-1] c 35 N76-24524
- Miniature ingestible telemeter devices to measure deep-body temperature  
[NASA-CASE-ARC-10583-1] c 52 N76-29894
- Thermocouple, multiple junction reference oven  
[NASA-CASE-FRC-10112-1] c 35 N81-26431
- Multi-channel temperature measurement amplification system --- solar heating systems  
[NASA-CASE-MFS-23775-1] c 44 N82-16474
- Solar energy control system --- temperature measurement  
[NASA-CASE-MFS-25287-1] c 44 N82-18686
- Method of and apparatus for measuring temperature and pressure --- atmospheric sounding  
[NASA-CASE-GSC-12558-1] c 36 N85-21639
- Method of measuring sea surface water temperature with a satellite including wideband passive synthetic-aperture multichannel receiver  
[NASA-CASE-NPO-15651-1] c 43 N85-21723
- Method for thermal monitoring subcutaneous tissue  
[NASA-CASE-LAR-13028-1] c 52 N85-30618
- Temperature sensitive oscillator  
[NASA-CASE-GSC-12958-1] c 33 N86-32624
- Noncontact temperature pattern measuring device  
[NASA-CASE-NPO-17824-1-CU] c 36 N90-17132
- Quantitative surface temperature measurement using two-color thermographic phosphors and video equipment  
[NASA-CASE-LAR-13740-1] c 35 N90-22770
- Tank gauging apparatus and method  
[NASA-CASE-MS-C-21059-3] c 35 N91-21495
- Plug-type heat flux gauge  
[NASA-CASE-LEW-14967-1] c 35 N91-31608
- TEMPERATURE MEASURING INSTRUMENTS**
- Excessive temperature warning system Patent  
[NASA-CASE-XLA-01926] c 14 N71-15620
- Condition and condition duration indicator Patent  
[NASA-CASE-XMF-01097] c 10 N71-16058
- Thermal detector of electromagnetic energy by means of a vibrating electrode Patent  
[NASA-CASE-XAC-10768] c 09 N71-18830
- Method and means for providing an absolute power measurement capability Patent  
[NASA-CASE-ERC-11020] c 14 N71-26774
- High intensity radiant energy pulse source having means for opening shutter when light flux has reached a desired level  
[NASA-CASE-ARC-10178-1] c 09 N72-17152
- Thermocouple tape  
[NASA-CASE-LEW-11072-1] c 14 N73-24472
- Thermocouples of tantalum and rhenium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12050-1] c 35 N77-32454
- Temperature averaging thermal probe  
[NASA-CASE-GSC-12795-1] c 35 N86-19580
- TEMPERATURE PROBES**
- Temperature-compensating means for cavity resonator of amplifier Patent  
[NASA-CASE-XNP-00449] c 14 N70-35220
- Sensing probe  
[NASA-CASE-LEW-10281-1] c 14 N72-17327
- Temperature averaging thermal probe  
[NASA-CASE-GSC-12795-1] c 35 N86-19580
- Liquid cooled supersonic total temperature probe  
[NASA-CASE-LAR-14435-1-CU] c 09 N91-26159
- TEMPERATURE PROFILES**
- Exothermic furnace module  
[NASA-CASE-MFS-25707-1] c 35 N82-26631
- Microwave temperature profiler for clear air turbulence prediction  
[NASA-CASE-NPO-18115-1-CU] c 47 N91-23662
- TEMPERATURE SENSORS**
- Compensating radiometer  
[NASA-CASE-XLA-04556] c 14 N69-27484
- Thermobulb mount Patent  
[NASA-CASE-NPO-10158] c 33 N71-16356
- Mount for thermal control system Patent  
[NASA-CASE-NPO-10138] c 33 N71-16357
- Heat flux measuring system Patent  
[NASA-CASE-XFR-03802] c 33 N71-23085
- Temperature telemetric transmitter Patent  
[NASA-CASE-NPO-10649] c 07 N71-24840
- Conically shaped cavity radiometer with a dual purpose cone winding Patent  
[NASA-CASE-XNP-09701] c 14 N71-26475
- Thin film capacitive bolometer and temperature sensor Patent  
[NASA-CASE-NPO-10607] c 09 N71-27232
- Thin film temperature sensor and method of making same  
[NASA-CASE-NPO-11775] c 26 N72-28761
- Heat detection and compositions and devices therefor  
[NASA-CASE-NPO-10764-2] c 35 N75-25122
- Optical crystal temperature gauge with fiber optic connections  
[NASA-CASE-MS-C-18627-1] c 74 N82-30071
- Temperature sensitive oscillator  
[NASA-CASE-GSC-12958-1] c 33 N86-32624
- Wind tunnel balance  
[NASA-CASE-ARC-11877-1-SB] c 09 N91-14357
- TEMPLATES**
- Microcircuit negative cutter  
[NASA-CASE-XLA-09843] c 15 N72-27485
- Method of insetting predesigned disbond areas into composite laminates  
[NASA-CASE-LAR-13225-1] c 24 N90-25197
- TENSILE PROPERTIES**
- Tensile film clamps and mounting block for the rheovibron and autovibron viscoelastometer  
[NASA-CASE-LAR-13696-1] c 37 N90-20409
- Imide/arylene ether copolymers  
[NASA-CASE-LAR-14159-1-CU] c 27 N90-26953
- Furnace for tensile/fatigue testing  
[NASA-CASE-LEW-14848-1] c 14 N91-27175
- Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14489-1] c 37 N91-27562
- TENSILE STRENGTH**
- Method of making fiber reinforced metallic composites Patent  
[NASA-CASE-XLE-00231] c 17 N70-38198
- Reinforced metallic composites Patent  
[NASA-CASE-XLE-00228] c 17 N70-38490
- Apparatus for tensile testing Patent  
[NASA-CASE-XKS-06250] c 14 N71-15600
- Method for fiberizing ceramic materials Patent  
[NASA-CASE-XNP-00597] c 18 N71-23088
- Tensile strength testing device Patent  
[NASA-CASE-XNP-05634] c 15 N71-24834
- Device for use in loading tension members --- characterized by elongated elastic body  
[NASA-CASE-MFS-21488-1] c 14 N75-24794
- Method of carbonizing polyacrylonitrile fibers  
[NASA-CASE-ARC-11261-1] c 24 N83-25789
- Cryogenic insulation strength and bond tester  
[NASA-CASE-MFS-25910-1] c 39 N86-20841
- Polyimides containing carbonyl and ether connecting groups  
[NASA-CASE-LAR-13633-1] c 27 N87-24575
- Heat treatment for superalloy  
[NASA-CASE-LEW-14262-1] c 26 N87-28647
- Directional solidification of superalloys  
[NASA-CASE-MFS-28314-1] c 26 N91-14462
- TENSILE STRESS**
- Rocket nozzle test method Patent  
[NASA-CASE-NPO-10311] c 31 N71-15643
- Device for measuring tensile forces  
[NASA-CASE-MFS-21728-1] c 35 N74-27865
- Solid medium thermal engine  
[NASA-CASE-ARC-10461-1] c 44 N74-33379
- TENSILE TESTS**
- Apparatus for tensile testing Patent  
[NASA-CASE-XKS-06250] c 14 N71-15600
- Tension measurement device Patent  
[NASA-CASE-XMS-04545] c 15 N71-22878
- Tensile strength testing device Patent  
[NASA-CASE-XNP-05634] c 15 N71-24834
- Apparatus for remote measurement of displacement of marks on a specimen undergoing a tensile test  
[NASA-CASE-NPO-10778] c 14 N72-11364
- Anti-buckling fatigue test assembly --- for subjecting metal specimen to tensile and compressive loads at constant temperature  
[NASA-CASE-LAR-10426-1] c 09 N74-19528

- Method and apparatus for tensile testing of metal foil  
[NASA-CASE-LAR-10208-1] c 35 N76-18400
- Device for tensioning test specimens within an hermetically sealed chamber  
[NASA-CASE-MFS-23281-1] c 35 N77-22450
- Method and apparatus for gripping uniaxial fibrous composite materials  
[NASA-CASE-LEW-13758-1] c 24 N84-27829
- Tensile testing apparatus  
[NASA-CASE-LAR-13243-1] c 35 N85-34375
- Fatigue testing a plurality of test specimens and method  
[NASA-CASE-MFS-28118-1] c 39 N87-25601
- Device for measuring hole elongation in a bolted joint  
[NASA-CASE-LAR-13453-1] c 37 N88-14361
- Bearing-bypass material system test  
[NASA-CASE-LAR-13458-1] c 35 N88-23967
- Furnace for tensile/fatigue testing  
[NASA-CASE-LEW-14848-1] c 14 N91-27175
- TENSION**
- Meter for use in detecting tension in straps having predetermined elastic characteristics  
[NASA-CASE-MFS-22189-1] c 35 N75-19615
- TENSORS**
- Method and apparatus for second-rank tensor generation  
[NASA-CASE-NPO-17512-1-CU] c 74 N91-26918
- TERMINAL GUIDANCE**
- Energy management system for glider type vehicle Patent  
[NASA-CASE-XFR-00756] c 02 N71-13421
- Terminal guidance system -- for guiding aircraft into preselected altitude and/or heading at terminal point  
[NASA-CASE-FRC-10049-1] c 04 N74-13420
- Terminal guidance sensor system --- space shuttle coupling to orbiting satellites  
[NASA-CASE-NPO-14521-1] c 37 N81-27519
- TERNARY SYSTEMS**
- Nicral ternary alloy having improved cyclic oxidation resistance  
[NASA-CASE-LEW-13339-1] c 26 N82-31505
- Liquid encapsulated crystal growth  
[NASA-CASE-NPO-16808-1-CU] c 76 N87-25868
- TERRAIN**
- Landing gear Patent  
[NASA-CASE-XMF-01174] c 02 N70-41589
- Generation of topographic terrain models utilizing synthetic aperture radar and surface level data  
[NASA-CASE-GSC-13212-1] c 43 N91-32546
- TERRAIN ANALYSIS**
- Surface roughness measuring system -- synthetic aperture radar measurements of ocean wave height and terrain peaks  
[NASA-CASE-NPO-13862-1] c 35 N79-10391
- Method for observing the features characterizing the surface of a land mass  
[NASA-CASE-FRC-11013-1] c 43 N81-17499
- Improving the geometric fidelity of imaging systems employing sensor arrays  
[NASA-CASE-NPO-17970-1-CU] c 43 N90-26384
- TEST CHAMBERS**
- Exposure system for animals Patent  
[NASA-CASE-XAC-05333] c 11 N71-22875
- Multiple environment materials test chamber having a multiple port X-ray tube for irradiating a plurality of samples Patent  
[NASA-CASE-XMS-02930] c 11 N71-23042
- Flammability test chamber Patent  
[NASA-CASE-KSC-10126] c 11 N71-24985
- Pressure seal Patent  
[NASA-CASE-NPO-10796] c 15 N71-27068
- Autoignition test cell Patent  
[NASA-CASE-KSC-10198] c 11 N71-28629
- Orifice gross leak tester Patent  
[NASA-CASE-ERC-10150] c 14 N71-28992
- Method for measuring biaxial stress in a body subjected to stress inducing loads  
[NASA-CASE-MFS-23299-1] c 39 N77-28511
- Device and method for frictionally testing materials for ignitability  
[NASA-CASE-MSC-20622-1] c 25 N86-19413
- TEST EQUIPMENT**
- Dynamic Doppler simulator Patent  
[NASA-CASE-XMS-05454-1] c 07 N71-12391
- Apparatus for tensile testing Patent  
[NASA-CASE-XKS-06250] c 14 N71-15600
- Black-body furnace Patent  
[NASA-CASE-XLE-01399] c 33 N71-15625
- Thermocouple assembly Patent  
[NASA-CASE-XNP-01659] c 14 N71-23039
- Automatic fatigue test temperature programmer Patent  
[NASA-CASE-XLA-02059] c 33 N71-24276
- Pulse rise time and amplitude detector Patent  
[NASA-CASE-XMF-08804] c 09 N71-24717
- Resilience testing device Patent  
[NASA-CASE-XLA-08254] c 14 N71-26161
- Validation device for spacecraft checkout equipment Patent  
[NASA-CASE-XKS-10543] c 07 N71-26292
- Apparatus for testing wiring harness by vibration generating means  
[NASA-CASE-MSC-15158-1] c 14 N72-17325
- Atmospheric sampling devices  
[NASA-CASE-NPO-11373] c 13 N72-25323
- Burn rate testing apparatus  
[NASA-CASE-XMS-09690] c 33 N72-25913
- Linear explosive comparison  
[NASA-CASE-LAR-10800-1] c 33 N72-27959
- Apparatus for vibrational testing of articles  
[NASA-CASE-GSC-11302-1] c 14 N73-13416
- Test stand system for vacuum chambers  
[NASA-CASE-MFS-21362] c 11 N73-20267
- Rocket borne instrument to measure electric fields inside electrified clouds  
[NASA-CASE-KSC-10730-1] c 14 N73-32318
- Compression test assembly  
[NASA-CASE-LAR-10440-1] c 14 N73-32323
- Wind tunnel model and method  
[NASA-CASE-LAR-10812-1] c 09 N74-17955
- Anti-buckling fatigue test assembly -- for subjecting metal specimen to tensile and compressive loads at constant temperature  
[NASA-CASE-LAR-10426-1] c 09 N74-19528
- Method and apparatus for checking fire detectors  
[NASA-CASE-GSC-11600-1] c 35 N74-21019
- Battery testing device --- for testing cells of multiple-cell battery  
[NASA-CASE-MFS-20761-1] c 44 N74-27519
- Signal conditioner test set  
[NASA-CASE-KSC-10750-1] c 35 N75-12270
- Particulate and aerosol detector  
[NASA-CASE-LAR-11434-1] c 35 N76-22509
- High temperature strain gage calibration fixture  
[NASA-CASE-LAR-11500-1] c 35 N76-24523
- Method of and means for testing a tape record/playback system  
[NASA-CASE-MFS-22671-2] c 35 N77-17426
- Method of and means for testing a glancing-incidence mirror system of an X-ray telescope  
[NASA-CASE-MFS-22409-2] c 74 N78-15880
- Ignitability test method and apparatus  
[NASA-CASE-LAR-13996-1-SB] c 25 N90-15161
- Electro-optical spin measurement system  
[NASA-CASE-LAR-13629-1] c 09 N91-14356
- Slow position beam generator for lifetime studies  
[NASA-CASE-LAR-14250-1-SB] c 72 N91-27936
- TEST FACILITIES**
- Electric propulsion engine test chamber Patent  
[NASA-CASE-XLE-00252] c 11 N70-34844
- High temperature testing apparatus Patent  
[NASA-CASE-XLE-00335] c 14 N70-35368
- Gas analyzer for bi-gaseous mixtures Patent  
[NASA-CASE-XLA-01131] c 14 N71-10774
- Model launcher for wind tunnels Patent  
[NASA-CASE-XNP-03578] c 11 N71-23030
- Shock tube bypass piston tunnel  
[NASA-CASE-NPO-12109] c 11 N72-22245
- TEST STANDS**
- Automatic balancing device Patent  
[NASA-CASE-LAR-10774] c 10 N71-13545
- Micro-pound extended range thrust stand Patent  
[NASA-CASE-GSC-10710-1] c 28 N71-27094
- Device for quick changeover between wind tunnel force and pressure testing  
[NASA-CASE-LAR-13512-1] c 35 N87-28884
- TEST VEHICLES**
- Longwall shearer tracking system  
[NASA-CASE-MFS-25717-1] c 35 N84-33768
- TETHERED SATELLITES**
- Tetherline system for orbiting satellites  
[NASA-CASE-MFS-23564-1] c 15 N78-25119
- TETHERING**
- Cable arrangement for rigid tethering Patent  
[NASA-CASE-XLA-02332] c 32 N71-17609
- Inflatable tether Patent  
[NASA-CASE-XMS-10993] c 15 N71-28936
- TETHERLINES**
- Flexible/rigidifiable cable assembly  
[NASA-CASE-MSC-13512-1] c 15 N72-22465
- Tetherline system for orbiting satellites  
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- Non-backdrivable free wheeling coupling  
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- TETRAETHYL ORTHOSILICATE**
- Densification of porous refractory substrates -- space shuttle orbiter tiles  
[NASA-CASE-MSC-18737-1] c 24 N83-13171
- Method of repairing surface damage to porous refractory substrates -- space shuttle orbiter tiles  
[NASA-CASE-MSC-18736-1] c 24 N83-13172
- TETRAPHENYLS**
- Metal containing polymers from cyclic tetrameric phenylphosphonitramidates Patent  
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- TEXTILES**
- Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[NASA-CASE-MSC-14331-1] c 27 N76-24405
- TEXTS**
- Braille reading system  
[NASA-CASE-LAR-13306-1] c 82 N87-29372
- TEXTURES**
- Modification of the electrical and optical properties of polymers --- ion irradiation to create texture  
[NASA-CASE-LEW-13027-1] c 27 N80-24437
- Texturing polymer surfaces by transfer casting --- cardiovascular prosthesis  
[NASA-CASE-LEW-13120-1] c 27 N82-28440
- Surface texturing of fluoropolymers  
[NASA-CASE-LEW-13028-1] c 27 N82-33521
- Ion sputter textured graphite --- anode collector plates in electron tube devices  
[NASA-CASE-LEW-12919-1] c 24 N83-10117
- THERAPY**
- Hyperthermia heating apparatus --- cancer therapy  
[NASA-CASE-NPO-14549-2] c 52 N82-33996
- THERMAL ABSORPTION**
- Constant temperature heat sink for calorimeters Patent  
[NASA-CASE-XMF-04208] c 33 N71-29051
- Solar pond  
[NASA-CASE-NPO-13581-2] c 44 N78-31525
- THERMAL ANALYSIS**
- Thermal remote anemometer system  
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- THERMAL COMFORT**
- Thermal garment  
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- THERMAL CONDUCTIVITY**
- Enthalpy and stagnation temperature determination of a high temperature laminar flow gas stream Patent  
[NASA-CASE-XLE-00266] c 14 N70-34156
- Apparatus for measuring thermal conductivity Patent  
[NASA-CASE-XGS-01052] c 14 N71-15992
- Heated element fluid flow sensor Patent  
[NASA-CASE-MSC-12084-1] c 12 N71-17569
- Method and apparatus for varying thermal conductivity Patent  
[NASA-CASE-XNP-05524] c 33 N71-24876
- Thermally conductive polymers  
[NASA-CASE-GSC-11304-1] c 06 N72-21105
- Electrostatically controlled heat shutter  
[NASA-CASE-NPO-11942-1] c 33 N73-32818
- Thermal barrier coating system  
[NASA-CASE-LEW-12554-1] c 34 N78-18355
- Support assembly for cryogenically coolable low-noise choke waveguide  
[NASA-CASE-NPO-14253-1] c 32 N80-32605
- Automatic thermal switch --- spacecraft applications  
[NASA-CASE-GSC-12553-1] c 34 N83-28356
- Heat transfer device and method of making the same  
[NASA-CASE-LEW-14162-1] c 34 N91-13668
- Heat transfer device  
[NASA-CASE-LEW-14162-2] c 24 N91-25201
- Flexible thermal apparatus for mounting of thermoelectric cooler  
[NASA-CASE-NPO-17806-1-CU] c 31 N91-27385
- Coupling device with improved thermal interface  
[NASA-CASE-GSC-13251-1] c 37 N91-28582
- THERMAL CONDUCTORS**
- Thermal conductive connection and method of making same Patent  
[NASA-CASE-XMS-02087] c 09 N70-41717
- Solar energy absorber  
[NASA-CASE-MFS-22743-1] c 44 N76-22657
- THERMAL CONTROL COATINGS**
- Thermal control coating Patent  
[NASA-CASE-XLA-01995] c 18 N71-23047
- Stabilized zinc oxide coating compositions Patent  
[NASA-CASE-XMF-0770-2] c 18 N71-26772
- Inorganic thermal control coatings  
[NASA-CASE-MFS-20011] c 18 N72-22566
- Polymeric vehicles as carriers for sulfonic acid salt of nitrosubstituted aromatic amines  
[NASA-CASE-ARC-10325] c 06 N72-25147
- Refractory porcelain enamel passive control coating for high temperature alloys  
[NASA-CASE-MFS-22324-1] c 27 N75-27160
- Particulate and solar radiation stable coating for spacecraft  
[NASA-CASE-LAR-10805-2] c 34 N77-18382
- Method of preparing zinc orthotitanate pigment  
[NASA-CASE-MFS-23345-1] c 27 N77-30237
- Intumescent coatings containing 4,4'-dinitrosulfanilide  
[NASA-CASE-ARC-11042-1] c 24 N78-14096

- Thermal barrier coating system  
[NASA-CASE-LEW-12554-1] c 34 N78-18355
- High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
[NASA-CASE-NPO-13690-1] c 27 N78-19302
- Intumescent-ablator coatings using endothermic fillers  
[NASA-CASE-ARC-11043-1] c 24 N78-27180
- Lightweight electrically-powered flexible thermal laminate --- made of metal and nonconductive yarns  
[NASA-CASE-MSC-12662-1] c 33 N79-12331
- Electrically conductive thermal control coatings  
[NASA-CASE-GSC-12207-1] c 24 N79-14156
- High temperature glass thermal control structure and coating --- for application to spacecraft reusable heat shielding  
[NASA-CASE-ARC-11164-1] c 44 N83-34448
- Variable anodic thermal control coating  
[NASA-CASE-LAR-12719-1] c 44 N83-34449
- Composite thermal barrier coating  
[NASA-CASE-LEW-14999-1] c 24 N91-13500
- Metallic seal for thermal barrier coating systems  
[NASA-CASE-LEW-15020-1] c 27 N91-15412
- Method of applying a thermal barrier coating system to a substrate  
[NASA-CASE-LEW-15020-2] c 24 N91-25202
- Method of preparing a thermal barrier coating  
[NASA-CASE-LEW-14999-2] c 27 N91-26376
- THERMAL DEGRADATION**
- Protection for energy conversion systems  
[NASA-CASE-XGS-04808] c 03 N69-25146
- Electrical apparatus for detection of thermal decomposition of insulation Patent  
[NASA-CASE-XMF-03968] c 14 N71-27186
- Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-2-SB] c 27 N90-21177
- THERMAL DIFFUSION**
- Crystal growth in a microgravity environment  
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- THERMAL DIFFUSIVITY**
- Double-beam optical method and apparatus for measuring thermal diffusivity and other molecular dynamic processes in utilizing the transient thermal lens effect  
[NASA-CASE-NPO-14657-1] c 74 N81-17887
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- Electromagnetic radiation energy arrangement --- coatings for solar energy absorption and infrared reflection  
[NASA-CASE-WOO-00428-1] c 32 N79-19186
- Continuous laminar smoke generator  
[NASA-CASE-LAR-13014-1] c 09 N85-21178
- Arc-textured high emittance radiator surfaces  
[NASA-CASE-LEW-14679-1] c 27 N91-25296
- THERMAL ENERGY**
- Energy conversion apparatus Patent  
[NASA-CASE-XLE-00212] c 03 N70-34134
- Device for directionally controlling electromagnetic radiation Patent  
[NASA-CASE-XLE-01716] c 09 N70-40234
- Thermally activated foaming compositions Patent  
[NASA-CASE-LAR-10373-1] c 18 N71-26155
- Gas core nuclear reactor Patent  
[NASA-CASE-LEW-10250-1] c 22 N71-28759
- Electrostatically controlled heat shutter  
[NASA-CASE-NPO-11942-1] c 33 N73-32818
- Solid medium thermal engine  
[NASA-CASE-ARC-10461-1] c 44 N74-33379
- Panel for selectively absorbing solar thermal energy and the method of producing said panel  
[NASA-CASE-MFS-22562-1] c 44 N76-14595
- Thermal energy storage system --- operating on superheating of liquids  
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- Low to high temperature energy conversion system  
[NASA-CASE-NPO-13510-1] c 44 N77-32581
- Thermal energy transformer  
[NASA-CASE-NPO-14058-1] c 44 N79-18443
- Apparatus for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-1] c 07 N83-36029
- Method for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-2] c 07 N86-20389
- Thermal power transfer system using applied potential difference to sustain operating pressure difference  
[NASA-CASE-NPO-18034-1-CU] c 44 N91-13796
- Small particle selective emitter  
[NASA-CASE-LEW-14731-1] c 44 N91-13802
- Solar thermal energy receiver  
[NASA-CASE-LEW-14949-1] c 44 N91-23617
- THERMAL EXPANSION**
- Thermally operated valve Patent  
[NASA-CASE-XLE-00815] c 15 N70-35407
- Adjustable mount for a trihedral mirror Patent  
[NASA-CASE-XNP-08907] c 23 N71-29123
- Thermal motor  
[NASA-CASE-NPO-11283] c 09 N72-25260
- Glass-to-metal seals comprising relatively high expansion metals  
[NASA-CASE-LEW-10698-1] c 37 N74-21063
- Daze fasteners  
[NASA-CASE-LAR-13009-1] c 37 N85-29285
- High effectiveness contour matching contact heat exchanger  
[NASA-CASE-MSC-20840-1] c 34 N88-29132
- Seamless metal-clad fiber-reinforced organic matrix composite structures and process for their manufacture  
[NASA-CASE-LAR-13562-1] c 24 N90-25196
- Thermal compensating mount  
[NASA-CASE-LAR-14207-1] c 35 N91-14590
- Method of fabricating composite structures  
[NASA-CASE-MFS-28390-1] c 24 N91-15333
- Flush mounting of thin film sensors  
[NASA-CASE-LAR-14446-1] c 31 N91-28454
- THERMAL FATIGUE**
- Automatic fatigue test temperature programmer Patent  
[NASA-CASE-XLA-02059] c 33 N71-24276
- THERMAL INSULATION**
- Piping arrangement through a double chamber structure  
[NASA-CASE-XNP-08882] c 15 N69-39935
- Insulating structure Patent  
[NASA-CASE-XMF-00341] c 15 N70-33323
- Unfired-ceramic flame-resistant insulation and method of making the same Patent  
[NASA-CASE-XMF-01030] c 18 N70-41583
- Techniques for insulating cryogenic fuel containers Patent  
[NASA-CASE-XLA-01967] c 31 N70-42015
- Lightweight refractory insulation and method of preparing the same Patent  
[NASA-CASE-XMF-05279] c 18 N71-16124
- Heat protection apparatus Patent  
[NASA-CASE-XLA-00892] c 33 N71-17897
- Cryogenic insulation system Patent  
[NASA-CASE-XLE-04222] c 23 N71-22881
- Insulation system Patent  
[NASA-CASE-XLE-02647] c 18 N71-23658
- Filament wound container Patent  
[NASA-CASE-XLE-03803] c 15 N71-23816
- Panelized high performance multilayer insulation Patent  
[NASA-CASE-MFS-14023] c 33 N71-25351
- Isothermal cover with thermal reservoirs Patent  
[NASA-CASE-MFS-20355] c 33 N71-25353
- Fabric for micrometeoroid protection garment Patent  
[NASA-CASE-MSC-12109] c 18 N71-26285
- Thickness measuring and injection device Patent  
[NASA-CASE-MFS-20261] c 14 N71-27005
- Cryogenic thermal insulation Patent  
[NASA-CASE-XMF-05046] c 33 N71-28892
- Intumescent composition, foamed product prepared therewith, and process for making same  
[NASA-CASE-ARC-10304-1] c 18 N73-26572
- Thermal control system for a spacecraft modular housing  
[NASA-CASE-GSC-11018-1] c 31 N73-30829
- Heater-mixer for stored fluids  
[NASA-CASE-ARC-10442-1] c 35 N74-15093
- Intumescent composition, foamed product prepared therewith and process for making same  
[NASA-CASE-ARC-10304-2] c 27 N74-27037
- High current electrical lead --- for thermionic converters  
[NASA-CASE-LEW-10950-1] c 33 N74-27683
- Structural heat pipe --- for spacecraft wall thermal insulation system  
[NASA-CASE-GSC-11619-1] c 34 N75-12222
- Strain arrestor plate for fused silica tile --- bonding of thermal insulation to metallic plates or structural parts  
[NASA-CASE-MSC-14182-1] c 27 N76-14264
- Auger attachment method for insulation --- of spacecraft  
[NASA-CASE-MSC-12615-1] c 37 N76-19437
- Flexible pile thermal barrier insulator  
[NASA-CASE-MSC-19568-1] c 34 N78-25350
- Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles  
[NASA-CASE-MSC-12619-2] c 27 N79-12221
- Fibrous refractory composite insulation --- shielding reusable spacecraft  
[NASA-CASE-ARC-11169-1] c 24 N79-24062
- Thermal insulation protection means  
[NASA-CASE-MSC-12737-1] c 24 N79-25142
- Installing fiber insulation  
[NASA-CASE-MSC-16973-1] c 37 N81-14317
- Process for the preparation of polycarboranylphosphazenes --- thermal insulation  
[NASA-CASE-ARC-11176-2] c 27 N81-27271
- Carboranylphosphazenes and their polymers --- thermal insulation  
[NASA-CASE-ARC-11176-1] c 27 N82-18389
- A method and technique for installing light-weight fragile, high-temperature fiber insulation  
[NASA-CASE-MSC-18934-3] c 24 N82-26387
- Thermal garment  
[NASA-CASE-XMS-03694-1] c 54 N82-29002
- Method and technique for installing light-weight, fragile, high-temperature fiber insulation  
[NASA-CASE-MSC-16934-3] c 24 N84-16262
- Insulation bonding test system  
[NASA-CASE-MFS-25862-1] c 27 N85-20126
- Cryogenic insulation strength and bond tester  
[NASA-CASE-MFS-25910-1] c 39 N86-20841
- Ceramic-ceramic shell tile thermal protection system and method thereof  
[NASA-CASE-ARC-11641-1] c 24 N88-18628
- Lightweight ceramic insulation and method  
[NASA-CASE-MSC-20782-1] c 27 N90-23566
- Ceramic coatings on smooth surfaces  
[NASA-CASE-LEW-15164-2] c 27 N91-32229
- THERMAL MAPPING**
- Noncontact temperature pattern measuring device  
[NASA-CASE-NPO-17024-1-CU] c 35 N88-24943
- THERMAL PLASMAS**
- Continuous plasma light source  
[NASA-CASE-XNP-04167-2] c 25 N72-24753
- THERMAL PROTECTION**
- Thermo-protective device for balances Patent  
[NASA-CASE-XAC-00648] c 14 N70-40400
- Ablation structures Patent  
[NASA-CASE-XMS-01816] c 33 N71-15623
- Spacecraft radiator cover Patent  
[NASA-CASE-MSC-12049] c 31 N71-16080
- Foamed in place ceramic refractory insulating material Patent  
[NASA-CASE-XGS-02435] c 18 N71-22998
- Ceramic insulation for radiant heating environments and method of preparing the same Patent  
[NASA-CASE-MFS-14253] c 33 N71-24858
- Solid state thermal control polymer coating Patent  
[NASA-CASE-XLA-01745] c 33 N71-28903
- Temperature reducing coating for metals subject to flame exposure Patent  
[NASA-CASE-XLE-00035] c 33 N71-29151
- Stand-off type ablative heat shield  
[NASA-CASE-MSC-12143-1] c 33 N72-17947
- Flexible fire retardant polyisocyanate modified neoprene foam --- for thermal protective devices  
[NASA-CASE-ARC-10180-1] c 27 N74-12814
- Adjustable securing base  
[NASA-CASE-MSC-19666-1] c 37 N78-17383
- Reaction cured glass and glass coatings  
[NASA-CASE-ARC-11051-1] c 27 N78-32260
- Corrosion resistant thermal barrier coating --- protecting gas turbines and other engine parts  
[NASA-CASE-LEW-13088-1] c 26 N81-25188
- Attachment system for silica tiles --- thermal protection for space shuttle orbiter  
[NASA-CASE-MSC-18741-1] c 27 N82-29456
- Multilayer thermal protection system  
[NASA-CASE-LAR-12620-1] c 24 N82-32417
- High temperature silicon carbide impregnated insulating fabrics  
[NASA-CASE-MSC-18832-1] c 27 N83-18908
- Silicon-slurry/aluminate coating --- protecting gas turbine engine vanes and blades  
[NASA-CASE-LEW-13343] c 26 N83-31795
- Thermal barrier coating system having improved adhesion  
[NASA-CASE-LEW-1335901] c 27 N83-31855
- Covering solid, film cooled surfaces with a duplex thermal barrier coating  
[NASA-CASE-LEW-13450-1] c 31 N83-35177
- Pre-stressed thermal protection systems  
[NASA-CASE-MSC-20254-1] c 16 N84-22601
- Shell tile thermal protection system  
[NASA-CASE-LAR-12862-1] c 27 N84-27886
- Propulsion apparatus and method using boil-off gas from a cryogenic liquid  
[NASA-CASE-MFS-25946-1] c 20 N86-26368
- Process for preparing essentially colorless polyimide film containing phenoxy-linked diamines  
[NASA-CASE-LAR-13353-1] c 27 N86-29039
- Process for preparing highly optically transparent/colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N86-31727
- Thermal stress minimized, two component, turbine shroud seal  
[NASA-CASE-LEW-14212-1] c 37 N88-23978
- Thermal switch disc for short circuit protection of batteries  
[NASA-CASE-MSC-21428-1] c 33 N91-14537
- Metallic seal for thermal barrier coating systems  
[NASA-CASE-LEW-15020-1] c 27 N91-15412

- Thermally isolated deployable shield for spacecraft  
[NASA-CASE-MFS-28524-1] c 18 N91-25167  
High-temperature, flexible, thermal barrier seal  
[NASA-CASE-LEW-14672-1] c 37 N91-27560
- THERMAL RADIATION**
- Compensating radiometer  
[NASA-CASE-XLA-04556] c 14 N69-27484  
Temperature sensitive capacitor device  
[NASA-CASE-XNP-09750] c 14 N69-39937  
High temperature heat source Patent  
[NASA-CASE-XLE-00490] c 33 N70-34545  
Thermal radiation shielding Patent  
[NASA-CASE-XLE-03432] c 33 N71-24145  
Cavity radiometer Patent  
[NASA-CASE-XNP-08961] c 14 N71-24809  
Method and construction for protecting heat sensitive bodies from thermal radiation and convective heat Patent  
[NASA-CASE-XNP-01310] c 33 N71-28852  
Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71:NPO-15494-2] c 35 N85-34373
- THERMAL REACTORS**
- Non-equilibrium radiation nuclear reactor  
[NASA-CASE-HQN-10841-1] c 73 N78-19920
- THERMAL RESISTANCE**
- Diode and protection fuse unit Patent  
[NASA-CASE-XKS-03381] c 09 N71-22796  
Polyimide foam for the thermal insulation and fire protection  
[NASA-CASE-ARC-10464-1] c 27 N74-12812  
Dual measurement ablation sensor  
[NASA-CASE-LAR-10105-1] c 34 N74-15652  
Self-regulating proportionally controlled heating apparatus and technique  
[NASA-CASE-GSC-11752-1] c 77 N75-20140  
Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MS-14903-1] c 27 N78-32256  
Ambient cure polyimide foams --- thermal resistant foams  
[NASA-CASE-ARC-11170-1] c 27 N79-11215  
The 1,2,4-oxadiazole elastomers --- heat resistant polymers  
[NASA-CASE-ARC-11253-1] c 27 N81-17262  
Surface conforming thermal/pressure seal --- tail assemblies of space shuttle orbiters  
[NASA-CASE-MS-18422-1] c 37 N82-16408  
Heat resistant protective hand covering  
[NASA-CASE-MS-20261-2] c 54 N84-23113  
Heat resistant protective hand covering  
[NASA-CASE-MS-20261-1] c 54 N84-28484  
Thermal barrier coating system  
[NASA-CASE-LEW-13324-2] c 24 N85-21266  
High temperature polyimide film laminates and process for preparation thereof  
[NASA-CASE-LAR-13384-1] c 27 N86-20561  
Fire resistant polyamide based on 1-(diorganoxyphosphonyl)methyl-2,4- and -2,6-diaminobenzene  
[NASA-CASE-ARC-11512-2] c 27 N86-32568  
Fire and heat resistant laminating resins based on maleimido substituted aromatic cyclotriphosphazene polymer  
[NASA-CASE-ARC-11428-2] c 27 N87-16909  
Fire and heat resistant laminating resins based on maleimido and citraconimido substituted 1-2,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11533-1] c 27 N87-23751  
Method of making a flexible diaphragm  
[NASA-CASE-MS-20797-1] c 37 N87-23981  
Fire and heat resistant laminating resins based on maleimido and citraconimido substituted 1-(diorgano oxyphosphonyl) methyl-2,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11533-3] c 27 N87-24564  
Fire and heat resistant laminating resin based on maleimido and citraconimido substituted 1-(diorganoxyphosphonyl-methyl)-2,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11533-2] c 27 N89-16042
- THERMAL SHOCK**
- Thermal shock apparatus Patent  
[NASA-CASE-XLE-02024] c 14 N71-22964  
Thermal shock resistant hafnia ceramic material  
[NASA-CASE-LAR-10894-1] c 18 N73-14584  
Thermal shock and erosion resistant tantalum carbide ceramic material  
[NASA-CASE-LAR-11902-1] c 27 N78-17206  
Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c 18 N83-20996
- THERMAL SIMULATION**
- Thermopile vacuum gage tube simulator Patent  
[NASA-CASE-XLA-02758] c 14 N71-18481
- THERMAL STABILITY**
- Bonded solid lubricant coating Patent  
[NASA-CASE-XMS-00259] c 18 N70-36400
- Portable environmental control system Patent  
[NASA-CASE-XMS-09632-1] c 05 N71-11203  
Metal containing polymers from cyclic tetrameric phenylphosphonitrimides Patent  
[NASA-CASE-HQN-10364] c 06 N71-27363  
Method of making a cermet Patent  
[NASA-CASE-LEW-10219-1] c 18 N71-28729  
Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-1] c 27 N74-21156  
Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c 27 N76-32315  
Sound-suppressing structure with thermal relief  
[NASA-CASE-LEW-12658-1] c 71 N79-14871  
Infusible silazane polymer and process for producing same --- protective coatings  
[NASA-CASE-XMF-02526-1] c 27 N79-21190  
Catalytic trimerization of aromatic nitriles and triaryl-s-triazine ring cross-linked high temperature resistant polymers and copolymers made thereby  
[NASA-CASE-LEW-12053-2] c 27 N79-28307  
Aluminum ion-containing polyimide adhesives  
[NASA-CASE-LAR-12640-1] c 27 N82-11206  
Low temperature cross linking polyimides  
[NASA-CASE-LEW-12876-2] c 27 N83-29392  
Metal phthalocyanine polymers  
[NASA-CASE-ARC-11405-1] c 27 N84-27884  
High temperature resistant polyimide from tetra ester, diamine, diester and N-arylnadimide  
[NASA-CASE-LEW-13864-1] c 27 N86-19457  
Ethynyl and substituted ethynyl-terminated polysulfones  
[NASA-CASE-LAR-12931-2] c 27 N86-21675  
Sulfone-ester polymers containing pendent ethynyl groups  
[NASA-CASE-LAR-13316-1] c 27 N86-27450
- THERMAL STRESSES**
- Strain gage Patent Application  
[NASA-CASE-FRC-10053] c 14 N70-35587  
Multilegged support system Patent  
[NASA-CASE-XLA-01326] c 11 N71-21481  
Low cycle fatigue testing machine  
[NASA-CASE-LAR-10270-1] c 32 N72-25877  
Apparatus and method for reducing thermal stress in a turbine rotor  
[NASA-CASE-LEW-12232-1] c 07 N79-10057  
Method for alleviating thermal stress damage in laminates --- metal matrix composites  
[NASA-CASE-LEW-12493-1] c 24 N81-17170  
Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-2] c 24 N81-26179  
Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-2] c 37 N82-26674  
Daze fasteners  
[NASA-CASE-LAR-13009-1] c 37 N85-29285  
Thermal stress minimized, two component, turbine shroud seal  
[NASA-CASE-LEW-14212-1] c 37 N88-23978
- THERMIONIC CATHODES**
- Cavity emitter for thermionic converter Patent  
[NASA-CASE-NPO-10412] c 09 N71-28421
- THERMIONIC CONVERTERS**
- Triode thermionic energy converter  
[NASA-CASE-XLE-01015] c 03 N69-39898  
Thermionic converter with current augmented by self induced magnetic field Patent  
[NASA-CASE-XLE-01903] c 22 N71-23599  
Cavity emitter for thermionic converter Patent  
[NASA-CASE-NPO-10412] c 09 N71-28421  
Solar cell Patent  
[NASA-CASE-ARC-10050] c 03 N71-33409  
Uninsulated in-core thermionic diode  
[NASA-CASE-NPO-10542] c 09 N72-27228  
High current electrical lead --- for thermionic converters  
[NASA-CASE-LEW-10950-1] c 33 N74-27683  
Electric power generation system directory from laser power  
[NASA-CASE-NPO-13308-1] c 36 N75-30524  
Nuclear thermionic converter --- tungsten-thorium oxide rods  
[NASA-CASE-NPO-13121-1] c 73 N77-18891  
High thermal power density heat transfer --- thermionic converters  
[NASA-CASE-LEW-12950-1] c 34 N82-11399  
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[NASA-CASE-LEW-12443-1] c 44 N83-32175
- THERMIONIC DIODES**
- Heat pipe thermionic diode power system Patent  
[NASA-CASE-XMF-05843] c 03 N71-11055  
Thermionic diode switch Patent  
[NASA-CASE-NPO-10404] c 03 N71-12255  
Micro current measuring device using plural logarithmic response heated filamentary type diodes Patent  
[NASA-CASE-XNP-00384] c 09 N71-13530
- Power system with heat pipe liquid coolant lines Patent  
[NASA-CASE-MFS-14114] c 33 N71-27862  
Uninsulated in-core thermionic diode  
[NASA-CASE-NPO-10542] c 09 N72-27228
- THERMIONIC EMITTERS**
- Thermionic tantalum emitter doped with oxygen Patent Application  
[NASA-CASE-NPO-11138] c 03 N70-34646
- THERMIONIC POWER GENERATION**
- Control for nuclear thermionic power source  
[NASA-CASE-NPO-13114-2] c 73 N78-28913  
High thermal power density heat transfer apparatus providing electrical isolation at high temperature using heat pipes  
[NASA-CASE-LEW-12950-2] c 34 N85-29179  
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[NASA-CASE-LEW-14077-1] c 44 N85-34441
- THERMISTORS**
- Matched thermistors for microwave power meters Patent  
[NASA-CASE-NPO-10348] c 10 N71-12554  
Thermistor holder for skin temperature measurements  
[NASA-CASE-ARC-10855-1] c 52 N77-10780  
Wedge immersed thermistor bolometers  
[NASA-CASE-XGS-01245-1] c 35 N79-33449
- THERMOCHEMISTRY**
- Thermochemical generation of hydrogen  
[NASA-CASE-NPO-15015-1] c 25 N82-28368
- THERMOCHROMATIC MATERIALS**
- Heat detection and compositions and devices therefor  
[NASA-CASE-NPO-10764-1] c 14 N73-14428  
Heat detection and compositions and devices therefor  
[NASA-CASE-NPO-10764-2] c 35 N75-25122
- THERMOCOUPLE PYROMETERS**
- Dual measurement ablation sensor  
[NASA-CASE-LAR-10105-1] c 34 N74-15652
- THERMOCOUPLES**
- Heat flux sensor assembly  
[NASA-CASE-XMS-05909-1] c 14 N69-27459  
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[NASA-CASE-XLE-09475-1] c 33 N71-15568  
Weld control system using thermocouple wire Patent  
[NASA-CASE-MFS-06074] c 15 N71-20393  
Heat sensing instrument Patent  
[NASA-CASE-XLA-01551] c 14 N71-22989  
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[NASA-CASE-XNP-01659] c 14 N71-23039  
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[NASA-CASE-NPO-10691] c 14 N71-26199  
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[NASA-CASE-XLE-05230] c 14 N72-27410  
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[NASA-CASE-XLE-05230-2] c 14 N73-13417  
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[NASA-CASE-LAR-10103-1] c 15 N73-14468  
Thermocouple tape  
[NASA-CASE-LEW-11072-1] c 14 N73-24472  
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[NASA-CASE-LEW-11072-2] c 35 N76-15434  
Thermocouple installation  
[NASA-CASE-NPO-13540-1] c 35 N77-14409  
Thermocouples of tantalum and rhenium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12050-1] c 35 N77-32454  
Thermocouples of molybdenum and iridium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12174-2] c 35 N79-14346  
Thermocouple, multiple junction reference oven  
[NASA-CASE-FRC-10112-1] c 35 N81-26431  
Solar energy control system --- temperature measurement  
[NASA-CASE-MFS-25287-1] c 44 N82-18686  
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[NASA-CASE-LEW-13934-1] c 35 N83-35338  
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[NASA-CASE-NPO-17068-1-CU] c 35 N88-29151  
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[NASA-CASE-LEW-14967-2] c 35 N91-23460  
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[NASA-CASE-LAR-14435-1-CU] c 09 N91-26159  
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[NASA-CASE-LEW-14967-1] c 35 N91-31608
- THERMODYNAMIC CYCLES**
- Solar engine  
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- THERMODYNAMIC EFFICIENCY**
- Automatic compression adjusting mechanism for internal combustion engines  
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- THERMODYNAMIC PROPERTIES**
- Thermal shock apparatus Patent  
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- Foamed in place ceramic refractory insulating material Patent  
[NASA-CASE-XGS-02435] c 18 N71-22998
- Superconducting magnet Patent  
[NASA-CASE-XNP-06503] c 23 N71-29049
- Cobalt-base alloy  
[NASA-CASE-LEW-10436-1] c 17 N73-32415
- High stability amplifier  
[NASA-CASE-GSC-12646-1] c 33 N83-34191
- Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-5] c 27 N85-21352
- Fire resistant polyamide based on 1-(diorganooxyphosphonyl)methyl-2,4- and -2,6diamino benzene  
[NASA-CASE-ARC-11512-2] c 27 N86-32568
- THERMODYNAMICS**
- Joule Thomson refrigerator  
[NASA-CASE-NPO-17143-1-CU] c 31 N89-14351
- THERMOELECTRIC GENERATORS**
- Protection for energy conversion systems  
[NASA-CASE-XGS-04808] c 03 N69-25146
- Segmenting lead telluride-silicon germanium thermoelements Patent  
[NASA-CASE-XGS-05718] c 26 N71-16037
- Integrated thermoelectric generator/space antenna combination  
[NASA-CASE-XER-09521] c 09 N72-12136
- Thermally cascaded thermoelectric generator  
[NASA-CASE-NPO-10753] c 03 N72-26031
- THERMOELECTRIC MATERIALS**
- Bonding thermoelectric elements to nonmagnetic refractory metal electrodes  
[NASA-CASE-XGS-04554] c 15 N69-39786
- Segmenting lead telluride-silicon germanium thermoelements Patent  
[NASA-CASE-XGS-05718] c 26 N71-16037
- Stabilized lanthanum sulphur compounds --- thermoelectric materials  
[NASA-CASE-NPO-16135-1] c 25 N83-24572
- THERMOELECTRIC POWER GENERATION**
- Two-fluid magnetohydrodynamic system and method for thermal-electric power conversion Patent  
[NASA-CASE-XNP-00644] c 03 N70-36803
- Combined electrolysis device and fuel cell and method of operation Patent  
[NASA-CASE-XLE-01645] c 03 N71-20904
- Thermoelectric power system --- for spacecraft  
[NASA-CASE-MFS-22002-1] c 44 N76-16612
- THERMOELECTRICITY**
- Thermocouple tape  
[NASA-CASE-LEW-11072-1] c 14 N73-24472
- Apparatus and method for measuring the Seebeck coefficient and resistivity of materials  
[NASA-CASE-NPO-11749] c 14 N73-28486
- Annealing group III-V compound doped silicon-germanium alloy for improved thermo-electric conversion efficiency  
[NASA-CASE-NPO-17259-1-CU] c 76 N90-19884
- Flexible thermal apparatus for mounting of thermoelectric cooler  
[NASA-CASE-NPO-17806-1-CU] c 31 N91-27385
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- Method of detecting oxygen in a gas  
[NASA-CASE-LAR-10668-1] c 06 N73-16106
- Thermoluminescent aerosol analysis  
[NASA-CASE-LAR-12046-1] c 25 N78-15210
- THERMOMAGNETIC EFFECTS**
- Thermomagnetic recording and magneto-optic playback system having constant intensity laser beam control  
[NASA-CASE-NPO-11317-2] c 36 N74-13205
- Thermomagnetic recording and magnetic-optic playback system  
[NASA-CASE-NPO-10872-1] c 35 N79-16246
- THERMOMETERS**
- Platinum resistance thermometer circuit  
[NASA-CASE-MSC-12327-1] c 35 N77-27368
- Temperature sensitive oscillator  
[NASA-CASE-GSC-12958-1] c 33 N86-32624
- THERMOPHYSICAL PROPERTIES**
- Method for determining thermo-physical properties of specimens --- photographic recording of changes in thin film phase-change temperature indicating material in wind tunnel  
[NASA-CASE-LAR-11053-1] c 25 N74-18551
- Apparatus for determining thermophysical properties of test specimens  
[NASA-CASE-LAR-11883-1] c 09 N77-27131
- THERMOPILES**
- Differential temperature transducer Patent  
[NASA-CASE-XAC-00812] c 14 N71-15598
- Horizon sensor with a plurality of fixedly positioned radiation compensated radiation sensitive detectors Patent  
[NASA-CASE-XNP-06957] c 14 N71-21088
- Irradiance measuring device  
[NASA-CASE-NPO-11493] c 14 N73-12447
- THERMOPLASTIC FILMS**
- Advanced inorganic separators for alkaline batteries  
[NASA-CASE-LEW-13171-1] c 44 N82-29708
- Hot melt recharge system --- repairing damaged or missing tiles on space shuttle orbiter  
[NASA-CASE-LAR-12881-1] c 27 N84-14323
- Heat sealable, flame and abrasion resistant coated fabric  
[NASA-CASE-MSC-18382-2] c 27 N84-14324
- Induction heating gun  
[NASA-CASE-LAR-13181-1] c 31 N85-29083
- Polyphenylquinoxalines via aromatic nucleophilic displacement  
[NASA-CASE-LAR-13988-1] c 23 N89-11814
- THERMOPLASTIC RESINS**
- Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
[NASA-CASE-ARC-11057-1] c 27 N78-31233
- Thermoplastic rubber comprising ethylene-vinyl acetate copolymer, asphalt and fluxing oil  
[NASA-CASE-NPO-08835-1] c 27 N78-33228
- Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NPO-14001-1] c 27 N81-14076
- Method of making formulated plastic separators for soluble electrode cells  
[NASA-CASE-LEW-12358-2] c 25 N82-21268
- One-step dual purpose joining technique  
[NASA-CASE-LAR-12595-1] c 33 N82-26571
- Advanced inorganic separators for alkaline batteries  
[NASA-CASE-LEW-13171-1] c 44 N82-29708
- Advanced inorganic separators for alkaline batteries and method of making the same  
[NASA-CASE-LEW-13171-2] c 44 N83-32176
- Polyphenylquinoxalines containing pendant phenylethynyl and ethynyl groups --- for thermoplastic resins  
[NASA-CASE-LAR-12838-1] c 27 N83-34040
- Solvent resistant thermoplastic aromatic poly(imidesulfone) and process for preparing same  
[NASA-CASE-LAR-12858-1] c 27 N83-34041
- Ethynyl and substituted ethynyl-terminated polysulfones  
[NASA-CASE-LAR-12931-1] c 27 N84-22747
- Hot melt adhesive attachment pad  
[NASA-CASE-LAR-12894-1] c 27 N85-20125
- Phenoxyl resins containing pendant ethynyl groups and cured resins obtained therefrom  
[NASA-CASE-LAR-13262-1] c 23 N85-28973
- Process for crosslinking and extending conjugated diene-containing polymers  
[NASA-CASE-LAR-13452-1] c 27 N87-22848
- Pultrusion die assembly  
[NASA-CASE-LAR-13719-1] c 37 N89-12867
- Semiinterpenetrating polymer network for tougher and more microcracking resistant high temperature polymers  
[NASA-CASE-LAR-13925-1] c 27 N89-25334
- Continuous fiber thermoplastic prepreg  
[NASA-CASE-LAR-14459-1] c 24 N91-15334
- THERMOPLASTICITY**
- Process for preparing thermoplastic aromatic polyimides  
[NASA-CASE-LAR-11828-1] c 27 N78-32261
- Heat sealable, flame and abrasion resistant coated fabric --- clothing and containers for space exploration  
[NASA-CASE-MSC-18382-1] c 27 N82-16238
- Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups  
[NASA-CASE-LAR-12723-2] c 27 N84-22746
- Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups  
[NASA-CASE-LAR-12723-1] c 27 N85-20123
- Process for preparing solvent resistant, thermoplastic aromatic poly(imidesulfone)  
[NASA-CASE-LAR-12858-2] c 27 N85-20124
- A tough high performance composite matrix  
[NASA-CASE-LAR-14338-1] c 24 N90-26881
- A tough performance simultaneous semi-interpenetrating polymer network  
[NASA-CASE-LAR-14339-1] c 27 N90-26955
- THERMOREGULATION**
- Garments for controlling the temperature of the body Patent  
[NASA-CASE-XMS-10269] c 05 N71-24147
- THERMOSETTING RESINS**
- Method for molding compounds Patent  
[NASA-CASE-XLA-01091] c 15 N71-10672
- Method and apparatus for bonding a plastics sleeve onto a metallic body Patent  
[NASA-CASE-XLA-01262] c 15 N71-21404
- Honeycomb panel and method of making same Patent  
[NASA-CASE-XMF-01402] c 18 N71-21651
- Method of forming shapes from planar sheets of thermosetting materials  
[NASA-CASE-NPO-11036] c 15 N72-24522
- Highly fluorinated polyurethanes  
[NASA-CASE-NPO-10767-2] c 06 N72-27151
- Evacuated displacement compression molding  
[NASA-CASE-LAR-10782-1] c 31 N74-14133
- Method for compression molding of thermosetting plastics utilizing a temperature gradient across the plastic to cure the article  
[NASA-CASE-LAR-10489-1] c 31 N74-18124
- Evacuated, displacement compression mold --- of tubular bodies from thermosetting plastics  
[NASA-CASE-LAR-10782-2] c 31 N75-13111
- Cork-resin ablative insulation for complex surfaces and method for applying the same  
[NASA-CASE-MFS-23626-1] c 24 N80-26388
- Polymeric compositions and their method of manufacture --- forming filled polymer systems using cryogenics  
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- Elastomer toughened polyimide adhesives  
[NASA-CASE-LAR-12775-1] c 27 N83-28240
- Cellular thermosetting fluoropolymers and process for making them  
[NASA-CASE-GSC-13008-1] c 27 N88-23894
- Semiinterpenetrating polymer network for tougher and more microcracking resistant high temperature polymers  
[NASA-CASE-LAR-13925-1] c 27 N89-25334
- Method of controlling a resin curing process --- for fiber reinforced composites  
[NASA-CASE-MSC-21169-1] c 27 N89-29539
- Cellular thermosetting fluorodiepoxy polymers  
[NASA-CASE-GSC-13008-2] c 27 N90-16949
- THERMOSTATS**
- Thermal switch Patent  
[NASA-CASE-XNP-00463] c 33 N70-36847
- Thermostatic actuator  
[NASA-CASE-NPO-10637] c 15 N72-12409
- Thermostatically controlled non-tracking type solar energy concentrator  
[NASA-CASE-NPO-13497-1] c 44 N76-14602
- THICK FILMS**
- Screened circuit capacitors  
[NASA-CASE-LAR-10294-1] c 26 N72-28762
- THICKNESS**
- Myocardium wall thickness transducer and measuring method  
[NASA-CASE-NPO-13644-1] c 52 N76-29895
- Thickness measurement system  
[NASA-CASE-MFS-23721-1] c 31 N79-28370
- Strong thin membrane structure --- solar sails  
[NASA-CASE-NPO-14021-2] c 27 N80-16163
- Ice detector  
[NASA-CASE-LAR-13776-1] c 35 N88-29149
- Liquid thickness gauge  
[NASA-CASE-LAR-13826-1] c 35 N88-29150
- THIN FILMS**
- Temperature sensitive capacitor device  
[NASA-CASE-XNP-09750] c 14 N69-39937
- Means and methods of depositing thin films on substrates Patent  
[NASA-CASE-XNP-00595] c 15 N70-34967
- Method of forming thin window drifted silicon charged particle detector Patent  
[NASA-CASE-XLE-00808] c 24 N71-10560
- Vacuum deposition apparatus Patent  
[NASA-CASE-XMF-01667] c 15 N71-17647
- GaAs solar detector using manganese as a doping agent Patent  
[NASA-CASE-XNP-01328] c 26 N71-18064
- Stable amplifier having a stable quiescent point Patent  
[NASA-CASE-XGS-02812] c 09 N71-19466
- Evaporant source for vapor deposition Patent  
[NASA-CASE-XMF-06065] c 15 N71-20395
- Method of electrolytically binding a layer of semiconductors together Patent  
[NASA-CASE-XNP-01959] c 26 N71-23043
- Vacuum evaporator with electromagnetic ion steering Patent  
[NASA-CASE-NPO-10331] c 09 N71-26701
- Magnetic recording head and method of making same Patent  
[NASA-CASE-GSC-10097-1] c 08 N71-27210
- Thin film capacitive bolometer and temperature sensor Patent  
[NASA-CASE-NPO-10607] c 09 N71-27232
- Microelectronic module package Patent  
[NASA-CASE-XMS-02182] c 10 N71-28783
- Fabrication of single crystal film semiconductor devices  
[NASA-CASE-ERC-10222] c 09 N72-22199
- Active microwave irises and windows  
[NASA-CASE-LAR-10513-1] c 07 N72-25170

- Light regulator  
[NASA-CASE-LAR-10836-1] c 26 N72-27784  
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[NASA-CASE-LAR-10511-1] c 09 N72-29172  
Method of forming transparent films of ZnO  
[NASA-CASE-FRC-10019] c 15 N73-12487  
Light intensity strain analysis  
[NASA-CASE-LAR-10765-1] c 32 N73-20740  
Monitoring deposition of films  
[NASA-CASE-MFS-20675] c 26 N73-26751  
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[NASA-CASE-MFS-20823-1] c 16 N73-30476  
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[NASA-CASE-MSC-13746-1] c 10 N73-32143  
Method for determining thermo-physical properties of specimens --- photographic recording of changes in thin film phase-change temperature-indicating material in wind tunnel  
[NASA-CASE-LAR-11053-1] c 25 N74-18551  
Method of preparing water purification membranes --- polymerization of allyl amine as thin films in plasma discharge  
[NASA-CASE-ARC-10643-1] c 25 N75-12087  
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[NASA-CASE-MFS-20775-1] c 31 N75-12161  
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[NASA-CASE-NPO-13050-1] c 36 N75-15029  
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[NASA-CASE-ARC-10445-1] c 31 N76-31365  
Method of forming metal hydride films  
[NASA-CASE-LEW-12083-1] c 37 N78-13436  
Strong thin membrane structure --- solar sails  
[NASA-CASE-NPO-14021-2] c 27 N80-16163  
Partial interlaminar separation system for composites  
[NASA-CASE-LAR-12065-1] c 24 N81-14000  
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[NASA-CASE-WLP-10055-1] c 35 N84-28015  
Integrating IR detector imaging systems  
[NASA-CASE-NPO-15805-1] c 74 N84-28590  
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[NASA-CASE-NPO-15753-1] c 27 N84-33589  
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[NASA-CASE-NPO-15786-1] c 76 N84-35112  
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[NASA-CASE-LEW-14080-1] c 31 N85-20153  
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[NASA-CASE-ARC-11611-1] c 74 N87-28416  
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[NASA-CASE-NPO-17399-1-CU] c 76 N89-14120  
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High density tape casting system  
[NASA-CASE-NPO-16901-1-CU] c 31 N90-19425  
Liquid sheet radiator apparatus  
[NASA-CASE-LEW-14295-1] c 31 N91-15424  
Process for the controlled growth of single-crystal films of silicon carbide polytypes on silicon carbide wafers  
[NASA-CASE-LEW-15222-1] c 76 N91-26966  
Slow positron beam generator for lifetime studies  
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[NASA-CASE-LAR-14446-1] c 31 N91-28454  
Low cost, formable, high T(sub c) superconducting wire  
[NASA-CASE-LEW-14676-1] c 33 N91-31529  
Biofilm monitoring coupon system and method of use  
[NASA-CASE-MSC-21585-1] c 51 N91-31755
- THIN PLATES**  
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[NASA-CASE-NPO-13506-1] c 35 N76-15435  
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[NASA-CASE-MSC-19666-1] c 37 N78-17383  
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[NASA-CASE-LAR-13887-1] c 36 N91-23472
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[NASA-CASE-XLE-04677] c 15 N71-10577  
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[NASA-CASE-NPO-16635-1-CU] c 31 N91-32240
- THIN WALLS**  
Channel-type shell construction for rocket engines and the like Patent  
[NASA-CASE-XLE-00144] c 28 N70-34860  
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[NASA-CASE-NPO-10064] c 15 N71-17693  
Low mass truss structure  
[NASA-CASE-LAR-10546-1] c 11 N72-25287
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[NASA-CASE-MFS-14216] c 14 N73-13418  
Method of fabricating an article with cavities --- with thin bottom walls  
[NASA-CASE-LAR-10318-1] c 31 N74-18089  
Method of fabricating an object with a thin wall having a precisely shaped slit  
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[NASA-CASE-XNP-02340] c 23 N69-24332
- THORIUM OXIDES**  
Nuclear thermionic converter --- tungsten-thorium oxide rods  
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- THREADS**  
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[NASA-CASE-XMF-04966] c 14 N71-17658  
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[NASA-CASE-XFR-05302] c 15 N71-23254
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Three axis attitude control system  
[NASA-CASE-GSC-12970-1] c 08 N88-23808
- THREE DIMENSIONAL FLOW**  
Three-dimensional laser velocimeter simultaneity detector  
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- THREE DIMENSIONAL MODELS**  
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[NASA-CASE-MSC-21560-1] c 51 N90-18852  
Generation of animation sequences of three dimensional models  
[NASA-CASE-MSC-21379-1-SB] c 61 N90-27340  
Digital data registration and differencing compression system  
[NASA-CASE-SSC-00010-1] c 82 N91-23976
- THREE DIMENSIONAL MOTION**  
Solid state controller three axes controller  
[NASA-CASE-MSC-12394-1] c 08 N74-10942  
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[NASA-CASE-MSC-21372-1] c 35 N89-12842  
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[NASA-CASE-MSC-21416-1] c 74 N91-32922
- THRESHOLD GATES**  
Method and apparatus for data compression by a decreasing slope threshold test  
[NASA-CASE-NPO-10769] c 08 N72-11171  
Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential  
[NASA-CASE-GSC-11425-2] c 76 N75-25730
- THRESHOLD LOGIC**  
SCR blocking pulse gate amplifier Patent  
[NASA-CASE-XLA-07497] c 09 N71-12514
- THROATS**  
Method of making a rocket nozzle  
[NASA-CASE-XMF-06884-1] c 20 N79-21123
- THROTTLING**  
Hybrid butterfly valve  
[NASA-CASE-SSC-00004-1] c 37 N91-14609
- THRUST AUGMENTATION**  
Nozzle Patent  
[NASA-CASE-XLA-00154] c 28 N70-33374  
Construction and method of arranging a plurality of ion engines to form a cluster Patent  
[NASA-CASE-XNP-02923] c 28 N71-23081  
Reversed cowl flap inlet thrust augmentor --- with adjustable airfoil  
[NASA-CASE-ARC-10754-1] c 07 N75-24736  
Method and apparatus for rapid thrust increases in a turbofan engine  
[NASA-CASE-LEW-12971-1] c 07 N80-18039  
Thrust augmented spin recovery device  
[NASA-CASE-LAR-11970-2] c 08 N81-19130
- THRUST BEARINGS**  
Thrust bearing  
[NASA-CASE-LEW-11949-1] c 37 N76-29588
- THRUST CHAMBER PRESSURE**  
Pitch attitude stabilization system utilizing engine pressure ratio feedback signals  
[NASA-CASE-LAR-12562-1] c 08 N81-26152
- THRUST CHAMBERS**  
Rocket chamber leak test fixture  
[NASA-CASE-XFR-09479] c 14 N69-27503  
Supporting and protecting device Patent  
[NASA-CASE-XMF-00580] c 11 N70-35383  
Rocket thrust chamber Patent  
[NASA-CASE-XLE-00145] c 28 N70-36806  
Method of making a rocket motor casing Patent  
[NASA-CASE-XLE-00409] c 28 N71-15658  
Rocket motor casing Patent  
[NASA-CASE-XLE-05689] c 28 N71-15659  
Rocket engine injector Patent  
[NASA-CASE-XLE-03157] c 28 N71-24736  
Injection head for delivering liquid fuel and oxidizers  
[NASA-CASE-NPO-10046] c 28 N72-17843
- Fluidic proportional thruster system  
[NASA-CASE-ARC-10106-1] c 28 N72-22769  
Ion thruster  
[NASA-CASE-LEW-10770-1] c 28 N72-22770  
Thermal flux transfer system  
[NASA-CASE-NPO-12070-1] c 28 N73-32606  
Heat exchanger --- rocket combustion chambers and cooling systems  
[NASA-CASE-LEW-12252-1] c 34 N79-13288  
Heat exchanger and method of making --- bonding rocket chambers with a porous metal matrix  
[NASA-CASE-LEW-12441-1] c 34 N79-13289  
Method of injecting fluid propellants into a rocket combustion chamber  
[NASA-CASE-LEW-14846-2] c 20 N91-26200
- THRUST CONTROL**  
Electromechanical actuator  
[NASA-CASE-XNP-05975] c 15 N69-23185  
Apparatus and method for control of a solid fueled rocket vehicle Patent  
[NASA-CASE-XNP-00217] c 28 N70-38181  
Thrust and direction control apparatus Patent  
[NASA-CASE-XLE-03583] c 31 N71-17629  
Continuous detonation reaction engine Patent  
[NASA-CASE-XMF-06926] c 28 N71-22983  
High efficiency ionizer assembly Patent  
[NASA-CASE-XNP-01954] c 28 N71-28850  
Heated porous plug microthruster  
[NASA-CASE-GSC-10640-1] c 28 N72-18766  
Multi-purpose wind tunnel reaction control model block  
[NASA-CASE-MSC-19706-1] c 09 N78-31129  
Fluid thrust control system --- for liquid propellant rocket engines  
[NASA-CASE-XMF-05964-1] c 20 N79-21124
- THRUST LOADS**  
Thrust measurement  
[NASA-CASE-XMS-05731] c 35 N75-29382
- THRUST MEASUREMENT**  
Thrust dynamometer Patent  
[NASA-CASE-XLE-00702] c 14 N70-40203  
Thrust dynamometer Patent  
[NASA-CASE-XLE-05260] c 14 N71-20429  
Precision thrust gage Patent  
[NASA-CASE-XGS-02319] c 14 N71-22965  
Micro-pound extended range thrust stand Patent  
[NASA-CASE-GSC-10710-1] c 28 N71-27094
- THRUST REVERSAL**  
Thrust reverser for a long duct fan engine --- for turbofan engines  
[NASA-CASE-LEW-13199-1] c 07 N82-26293
- THRUST VECTOR CONTROL**  
Thrust vector control apparatus Patent  
[NASA-CASE-XLE-00208] c 28 N70-34294  
Velocity package Patent  
[NASA-CASE-XLA-01339] c 31 N71-15692  
Ion beam deflector Patent  
[NASA-CASE-LEW-10689-1] c 28 N71-26173  
Tertiary flow injection thrust vectoring system Patent  
[NASA-CASE-MFS-20831] c 28 N71-29153  
Flight control system  
[NASA-CASE-MSC-13397-1] c 21 N72-25595  
Rocket thrust throttling system  
[NASA-CASE-LEW-10374-1] c 28 N73-13773  
System for imposing directional stability on a rocket-propelled vehicle  
[NASA-CASE-MFS-21311-1] c 20 N76-21275  
Hybrid plume plasma rocket  
[NASA-CASE-MSC-20476-2] c 20 N89-25279
- THRUST-WEIGHT RATIO**  
Missile launch release system Patent  
[NASA-CASE-XMF-03198] c 30 N70-40353
- THULIUM**  
Tm, Ho: YLF laser end-pumped by a semiconductor diode laser array  
[NASA-CASE-NPO-17282-1-CU] c 36 N91-15528
- THYRISTORS**  
Electrical power generating system --- for windpowered generation  
[NASA-CASE-MFS-24368-3] c 33 N81-22280  
Pulsed thyristor trigger control circuit  
[NASA-CASE-MFS-25616-1] c 33 N84-16455  
Phase detector for three-phase power factor controller  
[NASA-CASE-MFS-25854-1] c 33 N84-27975  
Three-phase power factor controller with induced EMF sensing  
[NASA-CASE-MFS-25852-1] c 33 N84-33661
- TILES**  
Strain arrestor plate for fused silica tile --- bonding of thermal insulation to metallic plates or structural parts  
[NASA-CASE-MSC-14182-1] c 27 N76-14264  
Attachment system for silica tiles --- thermal protection for space shuttle orbiter  
[NASA-CASE-MSC-18741-1] c 27 N82-29456

- Method for repair of thin glass coatings --- on space shuttle orbiter tiles  
[NASA-CASE-KSC-11097-1] c 27 N82-33520
- Densification of porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MS-C-18737-1] c 24 N83-13171
- Method of repairing surface damage to porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MS-C-18736-1] c 24 N83-13172
- Apparatus for accurately preloading auger attachment means for frangible protective material  
[NASA-CASE-MS-C-18791-1] c 37 N83-36482
- Shell tile thermal protection system  
[NASA-CASE-LAR-12862-1] c 27 N84-27886
- Mechanical fastener  
[NASA-CASE-LAR-12738-2] c 37 N85-30335
- Ceramic-ceramic shell tile thermal protection system and method thereof  
[NASA-CASE-ARC-11641-1] c 24 N88-18628
- Thermally activated retainer means  
[NASA-CASE-MS-C-21793-1] c 16 N91-28186
- TILT WING AIRCRAFT**  
Free wing assembly for an aircraft  
[NASA-CASE-FRC-10092-1] c 05 N79-12061
- TIME**  
Apparatus for using a time interval counter to measure frequency stability  
[NASA-CASE-NPO-17325-1-CU] c 32 N90-17005
- TIME CONSTANT**  
Variable time constant smoothing circuit Patent  
[NASA-CASE-XGS-01983] c 10 N70-41964
- TIME DEPENDENCE**  
Instrument for determining coincidence and elapse time between independent sources of random sequential events  
[NASA-CASE-LAR-12531-1] c 35 N83-29651
- TIME DISCRIMINATION**  
Ultra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit Patent  
[NASA-CASE-XGS-00381] c 09 N70-34819
- TIME DIVISION MULTIPLEXING**  
Time division multiplex system  
[NASA-CASE-XGS-05918] c 07 N69-39974
- Time-division multiplexer Patent  
[NASA-CASE-XNP-00431] c 09 N70-38998
- Data processor having multiple sections activated at different times by selective power coupling to the sections Patent  
[NASA-CASE-XGS-04767] c 08 N71-12494
- Data compression system with a minimum time delay unit Patent  
[NASA-CASE-XNP-08832] c 08 N71-12506
- Time division radio relay synchronizing system using different sync code words for in sync and out of sync conditions Patent  
[NASA-CASE-GSC-10373-1] c 07 N71-19773
- Signal processing apparatus for multiplex transmission Patent  
[NASA-CASE-NPO-10388] c 07 N71-24622
- Programmable telemetry system Patent  
[NASA-CASE-GSC-10131-1] c 07 N71-24624
- High dynamic global positioning system receiver  
[NASA-CASE-NPO-16171-1CU] c 04 N86-27270
- TIME FUNCTIONS**  
Single or joint amplitude distribution analyzer Patent  
[NASA-CASE-XNP-01383] c 09 N71-10659
- TIME LAG**  
Closed loop ranging system Patent  
[NASA-CASE-XNP-01501] c 21 N70-41930
- Data compression system with a minimum time delay unit Patent  
[NASA-CASE-XNP-08832] c 08 N71-12506
- Signal phase estimator  
[NASA-CASE-NPO-11203] c 10 N72-20224
- Automatic transponder --- measurement of the internal delay time of a transponder  
[NASA-CASE-GSC-12075-1] c 32 N77-31350
- Time delay and integration detectors using charge transfer devices  
[NASA-CASE-GSC-12324-1] c 33 N81-33403
- TIME MEASUREMENT**  
Time domain phase measuring apparatus  
[NASA-CASE-GSC-12228-1] c 33 N79-10338
- Synchronization tracking in pulse position modulation receiver  
[NASA-CASE-NPO-16256-1] c 32 N87-21207
- TIME MEASURING INSTRUMENTS**  
Measurement of time differences between luminous events Patent  
[NASA-CASE-XLA-01987] c 23 N71-23976
- Error correction method and apparatus for electronic timepieces  
[NASA-CASE-LAR-12654-1] c 33 N83-36357
- TIME OF FLIGHT SPECTROMETERS**  
Time of flight mass spectrometer with feedback means from the detector to the low source and a specific counter Patent  
[NASA-CASE-XNP-01056] c 14 N71-23041
- TIME SERIES ANALYSIS**  
Apparatus for statistical time-series analysis of electrical signals  
[NASA-CASE-MS-C-12428-1] c 10 N73-25240
- Solid sorbent air sampler  
[NASA-CASE-MS-C-20653-1] c 35 N86-26595
- TIME SHARING**  
Integrated time shared instrumentation display Patent  
[NASA-CASE-XLA-01952] c 08 N71-12507
- TIME SIGNALS**  
System for monitoring signal amplitude ranges  
[NASA-CASE-XMS-04061-1] c 09 N69-39885
- Method of resolving clock synchronization error and means therefor Patent  
[NASA-CASE-XNP-08875] c 10 N71-23099
- Time synchronization system utilizing moon reflected coded signals Patent  
[NASA-CASE-NPO-10143] c 10 N71-26326
- Counter Patent  
[NASA-CASE-XNP-06234] c 10 N71-27137
- System for generating timing and control signals  
[NASA-CASE-NPO-13125-1] c 33 N75-19519
- Precise RF timing signal distribution to remote stations --- fiber optics  
[NASA-CASE-NPO-14749-1] c 32 N81-14186
- TIMING DEVICES**  
Synchronous servo loop control system Patent  
[NASA-CASE-XNP-03744] c 10 N71-20448
- Method of resolving clock synchronization error and means therefor Patent  
[NASA-CASE-XNP-08875] c 10 N71-23099
- Resettable monostable pulse generator Patent  
[NASA-CASE-GSC-11139] c 09 N71-27016
- Data transfer system Patent  
[NASA-CASE-NPO-12107] c 08 N71-27255
- High speed photo-optical time recording  
[NASA-CASE-KSC-10294] c 14 N72-18411
- Timing control system  
[NASA-CASE-NPO-16882-1-CU] c 33 N88-24863
- TIN OXIDES**  
Process for making a noble metal on tin oxide catalyst  
[NASA-CASE-LAR-13741-1-SB] c 25 N90-20180
- TIPS**  
Thin wire pointing method  
[NASA-CASE-NPO-15789-1] c 31 N83-19947
- TIRES**  
Excessive temperature warning system Patent  
[NASA-CASE-XLA-01926] c 14 N71-15620
- Resilient wheel Patent  
[NASA-CASE-MFS-13929] c 15 N71-27091
- Method and apparatus for cleaning rubber deposits from airport runways and roadways  
[NASA-CASE-LAR-14483-1] c 31 N91-28455
- TISSUES (BIOLOGY)**  
Servo-controlled intravital microscope system  
[NASA-CASE-NPO-13214-1] c 35 N75-25123
- Method and system for in vivo measurement of bone tissue using a two level energy source  
[NASA-CASE-MS-C-14276-1] c 52 N77-14737
- System for and method of freezing biological tissue  
[NASA-CASE-GSC-12173-1] c 51 N79-10694
- Coupling apparatus for ultrasonic medical diagnostic system  
[NASA-CASE-NPO-13935-1] c 52 N79-14751
- Apparatus and method of inserting a microelectrode in body tissue or the like using vibration means  
[NASA-CASE-NPO-13910-1] c 52 N79-27836
- Multifunctional transducer  
[NASA-CASE-NPO-14329-1] c 52 N81-20703
- Enhancement of in vitro guayule propagation  
[NASA-CASE-NPO-15213-1] c 51 N83-17045
- Method for thermal monitoring subcutaneous tissue  
[NASA-CASE-LAR-13028-1] c 52 N85-30618
- Three-dimensional coculture process  
[NASA-CASE-MS-C-21560-1] c 51 N90-18852
- Three-dimensional cell to tissue assembly process  
[NASA-CASE-MS-C-21559-1] c 51 N91-13860
- Spiral vane bioreactor  
[NASA-CASE-MS-C-21361-1] c 51 N91-21701
- Horizontally rotated cell culture system with a coaxial tubular oxygenator  
[NASA-CASE-MS-C-21294-1] c 51 N91-30667
- TITANATES**  
Synthesis of zinc titanate pigment and coatings containing the same  
[NASA-CASE-MFS-13532] c 18 N72-17532
- TITANIUM**  
Method of joining aluminum to stainless steel Patent  
[NASA-CASE-MFS-07369] c 15 N71-20443
- Weld-bonded titanium structures  
[NASA-CASE-LAR-11549-1] c 37 N77-11397
- Method of mitigating titanium impurities effects in p-type silicon material for solar cells  
[NASA-CASE-NPO-14635-1] c 44 N80-24741
- Method and apparatus for coating substrates using a laser  
[NASA-CASE-LEW-13526-1] c 36 N84-22944
- Oxygen diffusion barrier coating  
[NASA-CASE-LAR-13474-1-SB] c 26 N87-25455
- TITANIUM ALLOYS**  
Method of inhibiting stress corrosion cracks in titanium alloys Patent  
[NASA-CASE-NPO-10271] c 17 N71-16393
- Nondestructive spot test method for titanium and titanium alloys  
[NASA-CASE-LAR-10539-1] c 17 N73-12547
- Method and apparatus for coating substrates using a laser  
[NASA-CASE-LEW-13526-1] c 36 N84-22944
- Oxidation resistant coatings for titanium alloys and titanium alloy matrix composites  
[NASA-CASE-LEW-15155-1] c 27 N91-26375
- TITANIUM NITRIDES**  
Improved refractory coatings --- sputtered coatings on substrates that form stable nitrides  
[NASA-CASE-LEW-23169-2] c 26 N81-16209
- TITANIUM OXIDES**  
Method of preparing zinc orthotitanate pigment  
[NASA-CASE-MFS-23345-1] c 27 N77-30237
- TOILETS**  
Hydraulic lifting device  
[NASA-CASE-SSC-00008-1] c 37 N91-13733
- Valve for waste collection and storage  
[NASA-CASE-MS-C-21025-4] c 54 N91-14723
- Method for waste collection and storage  
[NASA-CASE-MS-C-21025-2] c 54 N91-14724
- Method and apparatus for waste collection and storage  
[NASA-CASE-MS-C-21025-3] c 54 N91-26747
- TOLERANCES (MECHANICS)**  
Universal restrainer and joint Patent  
[NASA-CASE-XNP-02278] c 15 N71-28951
- A tough performance simultaneous semi-interpenetrating polymer network  
[NASA-CASE-LAR-14339-1] c 27 N90-26955
- TOLUENE**  
Supercritical multicomponent solvent coal extraction  
[NASA-CASE-NPO-15767-1] c 23 N84-16255
- TOMOGRAPHY**  
System for plotting subsoil structure and method therefor  
[NASA-CASE-NPO-14191-1] c 31 N80-32584
- Three-dimensional and tomographic imaging device for X-ray and gamma-ray emitting objects  
[NASA-CASE-GSC-12851-1] c 35 N85-30281
- TOOLS**  
Tool attachment for spreading loose elements away from work Patent  
[NASA-CASE-XMF-02107] c 15 N71-10809
- Adjustable attitude guide device Patent  
[NASA-CASE-XLA-07911] c 15 N71-15571
- Tube dimpling tool Patent  
[NASA-CASE-XMS-06876] c 15 N71-21536
- Stud-bonding gun  
[NASA-CASE-MFS-20299] c 15 N72-11392
- Insert facing tool --- manually operated cutting tool for forming studs in honeycomb material  
[NASA-CASE-MFS-21485-1] c 37 N74-25968
- Stator rotor tools  
[NASA-CASE-MS-C-16000-1] c 37 N78-24544
- Computer circuit card puller  
[NASA-CASE-FRC-11042-1] c 60 N82-24839
- Open ended tubing cutters  
[NASA-CASE-MS-C-18538-1] c 37 N82-26672
- Apparatus for accurately preloading auger attachment means for frangible protective material  
[NASA-CASE-MS-C-18791-1] c 37 N83-36482
- Tubing and cable cutting tool  
[NASA-CASE-LAR-12786-1] c 37 N84-28085
- Connection system --- insuring against loss of a tool component without using multiple tethers  
[NASA-CASE-MS-C-20319-1] c 37 N85-21649
- Tool and process for miniature explosive joining of tubes  
[NASA-CASE-LAR-13662-1] c 37 N88-14359
- Adjustable depth gage  
[NASA-CASE-LEW-14880-1] c 35 N90-10415
- TOOTH DISEASES**  
Process for the preparation of brushite crystals  
[NASA-CASE-ERC-10338] c 04 N72-33072
- TOPOGRAPHY**  
Method for observing the features characterizing the surface of a land mass  
[NASA-CASE-FRC-11013-1] c 43 N81-17499
- Generation of topographic terrain models utilizing synthetic aperture radar and surface level data  
[NASA-CASE-GSC-13212-1] c 43 N91-32546

## TORCHES

Apparatus for welding torch angle and seam tracking control Patent  
[NASA-CASE-XMF-03287] c 15 N71-15607

Electric welding torch Patent  
[NASA-CASE-XMF-02330] c 15 N71-23798

Computerized system for translating a torch head  
[NASA-CASE-MFS-23620-1] c 37 N79-10421

Welding torch with arc light reflector  
[NASA-CASE-MFS-29134-1] c 74 N87-17493

Welding torch gas cup extension  
[NASA-CASE-MFS-29252-1] c 37 N88-23980

Internal wire guide for GTAW welding  
[NASA-CASE-MFS-29489-1] c 31 N90-23586

Electrode carrying wire for GTAW welding  
[NASA-CASE-MFS-29491-1] c 31 N90-26168

**TOROIDAL SHELLS**

Toroidal cell and battery --- storage battery for high amp-hour load applications  
[NASA-CASE-LEW-12918-1] c 44 N81-24521

**TOROIDS**

Flux sensing device using a tubular core with toroidal gating coil and solenoidal output coil wound thereon Patent  
[NASA-CASE-XGS-01881] c 09 N70-40123

Shaft transducer having dc output proportional to angular velocity  
[NASA-CASE-NPO-15706-1] c 35 N84-28017

Improved high power/high frequency inductor  
[NASA-CASE-NPO-17830-1-CU] c 33 N91-14539

**TORQUE**

Bidirectional step torque filter with zero backlash characteristic Patent  
[NASA-CASE-XGS-04227] c 15 N71-21744

Isolation coupling arrangement for a torque measuring system  
[NASA-CASE-XLA-04897] c 15 N72-22482

High-torque open-end wrench  
[NASA-CASE-NPO-13541-1] c 37 N79-14383

Acoustic driving of rotor  
[NASA-CASE-NPO-14005-1] c 71 N79-20827

Magnetic field control --- electromechanical torquing device  
[NASA-CASE-MFS-23828-1] c 33 N82-26569

Missile rolling tail brake torque system --- simulating bearing friction on canard controlled missiles  
[NASA-CASE-LAR-12751-1] c 15 N84-16231

Directional gear ratio transmissions  
[NASA-CASE-LAR-12644-1] c 37 N84-28084

Helicopter anti-torque system using strakes  
[NASA-CASE-LAR-13233-1] c 05 N84-33400

Dual towline spin-recovery device  
[NASA-CASE-LAR-13076-1] c 08 N85-35200

Helicopter anti-torque system using fuselage strakes  
[NASA-CASE-LAR-13630-1] c 08 N88-23809

Direct drive robotic hand  
[NASA-CASE-NPO-17917-1-CU] c 37 N90-26339

Metallic threaded composite fastener  
[NASA-CASE-MSC-21580-1] c 37 N91-23491

Roller locking brake  
[NASA-CASE-GSC-13376-1] c 37 N91-28579

**TORQUE MOTORS**

Low speed phaselock speed control system --- for brushless dc motor  
[NASA-CASE-GSC-11127-1] c 09 N75-24758

Magnetic bearing and motor  
[NASA-CASE-GSC-12726-1] c 37 N83-34323

A universal computer control system for motors  
[NASA-CASE-NPO-17134-1-CU] c 33 N91-31528

**TORQUE SENSORS (ROBOTICS)**

Direct drive robotic hand  
[NASA-CASE-NPO-17917-1-CU] c 37 N90-26339

Torque sensor having a spoked sensor element support structure  
[NASA-CASE-NPO-17461-1-CU] c 35 N91-17350

**TORQUEMETERS**

Optical torque meter Patent  
[NASA-CASE-XLE-00503] c 14 N70-34818

Balance torque meter Patent  
[NASA-CASE-XGS-01013] c 14 N71-23725

System for stabilizing torque between a balloon and gondola  
[NASA-CASE-GSC-11077-1] c 02 N73-13008

Pressure suit joint analyzer  
[NASA-CASE-ARC-11314-1] c 54 N82-26987

**TORSION**

Torsional suspension system for testing space structures  
[NASA-CASE-LAR-14149-1-SB] c 14 N91-21176

Suspension device for low-frequency structures  
[NASA-CASE-LAR-14272-1-CU] c 14 N91-28184

**TORSO**

Restraint torso for a pressurized suit  
[NASA-CASE-MSC-12397-1] c 05 N72-25119

Spacesuit torso closure  
[NASA-CASE-ARC-11100-1] c 54 N78-31736

Torso sizing ring construction for hard space suit  
[NASA-CASE-ARC-11616-1] c 54 N86-28618

**TOUCH**

Mechanically actuated triggered hand  
[NASA-CASE-MFS-20413] c 15 N72-21463

Method for measuring cutaneous sensory perception  
[NASA-CASE-MSC-13609-1] c 05 N72-25122

Tactile sensing means for prosthetic limbs  
[NASA-CASE-MFS-16570-1] c 05 N73-32013

**TOUGHNESS**

Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-1] c 24 N86-19380

High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11538-1SB] c 24 N86-21590

Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-2] c 27 N86-27451

**TOWERS**

Aerial capsule emergency separation device Patent  
[NASA-CASE-XLA-00115] c 03 N70-33343

**TOXICITY**

Glass compositions with a high modulus of elasticity --- nontoxic glass fibers  
[NASA-CASE-HQN-10274-1] c 27 N82-29451

**TOXICITY AND SAFETY HAZARD**

Apparatus for remote handling of materials --- mixing or analyzing dangerous chemicals  
[NASA-CASE-LAR-10634-1] c 37 N74-18123

**TOXICOLOGY**

Exposure system for animals Patent  
[NASA-CASE-XAC-05333] c 11 N71-22875

**TRACE CONTAMINANTS**

Microbalance including crystal oscillators for measuring contaminants in a gas system Patent  
[NASA-CASE-NPO-10144] c 14 N71-17701

Method for removing oxygen impurities from cesium Patent  
[NASA-CASE-XNP-04262-2] c 17 N71-26773

Electric discharge for treatment of trace contaminants  
[NASA-CASE-ARC-10975-1] c 33 N79-15245

Nebulization reflux concentrator  
[NASA-CASE-LAR-13254-1CU] c 35 N86-29174

**TRACE ELEMENTS**

Ion microprobe mass spectrometer for analyzing fluid materials Patent  
[NASA-CASE-ERC-10014] c 14 N71-28863

Automated system for identifying traces of organic chemical compounds in aqueous solutions  
[NASA-CASE-NPO-13063-1] c 25 N76-18245

Nulling device for detection of trace gases by NDIR absorption  
[NASA-CASE-ARC-10760-1] c 25 N76-22323

Thermoluminescent aerosol analysis  
[NASA-CASE-LAR-12046-1] c 25 N78-15210

Reversal electron attachment ionizer for detection of trace species  
[NASA-CASE-NPO-17596-1-CU] c 35 N89-28795

**TRACKED VEHICLES**

Tank tread assemblies with track-linking mechanism  
[NASA-CASE-NPO-16321-1CU] c 37 N87-17034

**TRACKING (POSITION)**

Plurality of photosensitive cells on a pyramidal base for planetary trackers  
[NASA-CASE-XNP-04180] c 07 N69-39736

Telespectrograph Patent  
[NASA-CASE-XLA-03273] c 14 N71-18699

Method and apparatus for aligning a laser beam projector Patent  
[NASA-CASE-NPO-11087] c 23 N71-29125

Mount for continuously orienting a collector dish in a system adapted to perform both diurnal and seasonal solar tracking  
[NASA-CASE-MFS-23267-1] c 35 N77-20401

System and method for tracking a signal source --- employing feedback control  
[NASA-CASE-HQN-10880-1] c 17 N78-17140

Sun tracking solar energy collector  
[NASA-CASE-NPO-13921-1] c 44 N79-14526

Motion detection, novelty filtering, and target tracking using an interferometric technique with a GaAs phase conjugate mirror  
[NASA-CASE-NPO-17784-1-CU] c 74 N91-13998

Method and apparatus for positioning a robotic end effector  
[NASA-CASE-MSC-21476-1] c 37 N91-21542

Optical joint correlator for real-time image tracking and retinal surgery  
[NASA-CASE-MSC-21509-1] c 74 N91-25840

**TRACKING FILTERS**

Automatic acquisition system for phase-lock loop  
[NASA-CASE-XGS-04994] c 09 N69-21543

Apparatus and method for stabilized phase detection for binary signal tracking loops  
[NASA-CASE-MSC-16461-1] c 33 N79-11313

PN lock indicator for dithered PN code tracking loop  
[NASA-CASE-NPO-14435-1] c 33 N81-33405

**TRACKING RADAR**

Monopulse system with an electronic scanner  
[NASA-CASE-XGS-05582] c 07 N69-27460

Phase-locked loop with sideband rejecting properties Patent  
[NASA-CASE-XNP-02723] c 07 N70-41680

Radar antenna system for acquisition and tracking Patent  
[NASA-CASE-XMS-09610] c 07 N71-24625

Acquisition and tracking system for optical radar  
[NASA-CASE-MFS-20125] c 16 N72-13437

Synthetic aperture radar target simulator  
[NASA-CASE-NPO-15024-1] c 32 N84-27951

**TRACKING STATIONS**

Optical monitor panel Patent  
[NASA-CASE-XKS-03509] c 14 N71-23175

Simultaneous acquisition of tracking data from two stations  
[NASA-CASE-NPO-13292-1] c 32 N75-15854

**TRACTION**

Articulated suspension system  
[NASA-CASE-NPO-17354-1-CU] c 37 N90-17153

**TRAFFIC CONTROL**

Traffic survey system --- using optical scanners  
[NASA-CASE-MFS-22631-1] c 66 N76-19888

**TRAILERS**

Low-drag ground vehicle particularly suited for use in safely transporting livestock  
[NASA-CASE-FRC-11058-1] c 85 N82-33288

**TRAILING EDGES**

Serrated trailing edges for improving lift and drag characteristics of lifting surfaces  
[NASA-CASE-LAR-13870-1] c 05 N90-15094

**TRAILING-EDGE FLAPS**

Double hinged flap Patent  
[NASA-CASE-XLA-01290] c 02 N70-42016

Variable area exhaust nozzle  
[NASA-CASE-LEW-12378-1] c 07 N79-14097

**TRAINING DEVICES**

Visual accommodation trainer-tester  
[NASA-CASE-ARC-11426-1] c 09 N84-12193

**TRAINING SIMULATORS**

Mechanical simulator of low gravity conditions Patent  
[NASA-CASE-MFS-10555] c 11 N71-19494

Subgravity simulator Patent  
[NASA-CASE-XMS-04798] c 11 N71-21474

Kinesthetic control simulator --- for pilot training  
[NASA-CASE-LAR-10276-1] c 09 N75-15662

**TRAJECTORIES**

Bilevel shared control for teleoperators  
[NASA-CASE-NPO-17800-1-CU] c 37 N91-13724

A generalized compliant motion primitive  
[NASA-CASE-NPO-18134-1-CU] c 37 N91-32510

**TRAJECTORY ANALYSIS**

Means for visually indicating flight paths of vehicles between the Earth, Venus, and Mercury Patent  
[NASA-CASE-XNP-00708] c 14 N70-35394

Method of planetary atmospheric investigation using a split-trajectory dual flyby mode Patent  
[NASA-CASE-XAC-08494] c 30 N71-15990

**TRAJECTORY CONTROL**

Trajectory-correction propulsion system Patent  
[NASA-CASE-XNP-01104] c 28 N70-39931

Technique for control of free-flight rocket vehicles Patent  
[NASA-CASE-XLA-00937] c 31 N71-17691

Apparatus for automatically stabilizing the attitude of a nonguided vehicle  
[NASA-CASE-ARC-10134] c 30 N72-17873

**TRANSDUCERS**

Pressure variable capacitor  
[NASA-CASE-XNP-09752] c 14 N69-21541

Bootstrap unloader Patent  
[NASA-CASE-XNP-09768] c 09 N71-12516

Vibrating structure displacement measuring instrument Patent  
[NASA-CASE-XLA-03135] c 32 N71-16428

Contour surveying system Patent  
[NASA-CASE-XLA-08646] c 14 N71-17586

Rotary bead dropper and selector for testing micrometeorite detectors Patent  
[NASA-CASE-XGS-03304] c 09 N71-22988

Self-calibrating displacement transducer Patent  
[NASA-CASE-XLA-00781] c 09 N71-22999

Extensometer frame  
[NASA-CASE-XLA-10322] c 15 N72-17452

Split range transducer  
[NASA-CASE-XLA-11189] c 10 N72-20222

Pulsed excitation voltage circuit for transducers  
[NASA-CASE-FRC-10036] c 09 N72-22200

Magnifying scratch gauge force transducer  
[NASA-CASE-LAR-10496-1] c 14 N72-22437

Intruder detection system  
[NASA-CASE-ARC-10097-2] c 07 N73-25160



- Acoustical transducer calibrating system and apparatus  
[NASA-CASE-FRC-10060-1] c 14 N73-27379
- Demodulator for carrier transducers  
[NASA-CASE-NUC-10107-1] c 33 N74-17930
- LC-oscillator with automatic stabilized amplitude via bias current control --- power supply circuit for transducers  
[NASA-CASE-MFS-21698-1] c 33 N74-26732
- Arterial pulse wave pressure transducer  
[NASA-CASE-GSC-11531-1] c 52 N74-27566
- Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-3] c 33 N75-19520
- Subminiature insertable force transducer --- including a strain gage to measure forces in muscles  
[NASA-CASE-NPO-13423-1] c 33 N75-31329
- Self-supporting strain transducer  
[NASA-CASE-LAR-11263-1] c 35 N75-33369
- Miniature muscle displacement transducer  
[NASA-CASE-NPO-19519-1] c 33 N76-19338
- Method and apparatus for nondestructive testing of pressure vessels  
[NASA-CASE-NPO-12142-1] c 38 N76-28563
- Myocardium wall thickness transducer and measuring method  
[NASA-CASE-NPO-13644-1] c 52 N76-29895
- Solar cell angular position transducer  
[NASA-CASE-LAR-11999-1] c 44 N80-18552
- Simultaneous muscle force and displacement transducer  
[NASA-CASE-NPO-14212-1] c 52 N80-27072
- Multifunctional transducer  
[NASA-CASE-NPO-14329-1] c 52 N81-20703
- Photomechanical transducer  
[NASA-CASE-NPO-14363-1] c 39 N81-25400
- Hot foil transducer skin friction sensor  
[NASA-CASE-LAR-12321-1] c 35 N82-24470
- Thin film strain transducer  
[NASA-CASE-WLP-10055-1] c 35 N84-28015
- Strain gage calibration  
[NASA-CASE-LAR-12743-1] c 35 N84-28019
- Thin film strain transducer --- suitable for in-flight measurement of scientific balloon strain  
[NASA-CASE-WLP-10055-2] c 35 N85-21598
- Gravity enhanced acoustic levitation method and apparatus  
[NASA-CASE-NPO-16147-1-CU] c 71 N85-29693
- Adjustable mount for electro-optic transducers in an evacuated cryogenic system  
[NASA-CASE-LAR-13100-1] c 37 N87-23982
- Single mode levitation and translation  
[NASA-CASE-NPO-16675-1-CU] c 71 N88-24241
- Low power consumption current transducer  
[NASA-CASE-NPO-16888-1-CU] c 33 N89-29681
- Lamina transducer coupler and method of making  
[NASA-CASE-LAR-14361-1] c 71 N91-16707
- Acoustophoresis method and apparatus  
[NASA-CASE-LAR-13388-1] c 25 N91-28321
- TRANSFER FUNCTIONS**  
Method and apparatus for transfer function simulator for testing complex systems  
[NASA-CASE-NPO-15696-1] c 33 N85-34333
- TRANSFORMATIONS (MATHEMATICS)**  
Programmable remapper with single flow architecture  
[NASA-CASE-MSC-21481-1] c 60 N91-13890
- TRANSFORMERS**  
Signal multiplexer  
[NASA-CASE-XGS-01110] c 07 N69-24334
- Insertion loss measuring apparatus having transformer means connected across a pair of bolometers Patent  
[NASA-CASE-XNP-01193] c 10 N71-16057
- Saturation current protection apparatus for saturable core transformers Patent  
[NASA-CASE-ERC-10075] c 09 N71-24800
- Unsaturating saturable core transformer Patent  
[NASA-CASE-ERC-10125] c 09 N71-24893
- Electronically resettable fuse Patent  
[NASA-CASE-XGS-11177] c 09 N71-27001
- Voltage regulator Patent  
[NASA-CASE-ERC-10113] c 09 N71-27053
- Radial heat flux transformer  
[NASA-CASE-NPO-10828] c 33 N72-17948
- Saturation current protection apparatus for saturable core transformers  
[NASA-CASE-ERC-10075-2] c 09 N72-22196
- Failsafe multiple transformer circuit configuration  
[NASA-CASE-NPO-11078] c 09 N72-25262
- Banded transformer cores  
[NASA-CASE-NPO-11966-1] c 33 N74-17928
- Solid-state current transformer  
[NASA-CASE-MFS-22560-1] c 33 N77-14335
- Transformer regulated self-stabilizing chopper  
[NASA-CASE-XGS-09186] c 33 N78-17295
- Apparatus including a plurality of spaced transformers for locating short circuits in cables  
[NASA-CASE-KSC-10899-1] c 33 N79-18193
- Circuit for automatic load sharing in parallel converter modules  
[NASA-CASE-NPO-14056-1] c 33 N79-24257
- System for automatically switching transformer coupled lines  
[NASA-CASE-MSC-16697-1] c 33 N79-28415
- Three phase power factor controller  
[NASA-CASE-MFS-2535-1] c 33 N81-12330
- Base drive for paralleled inverter systems  
[NASA-CASE-NPO-14163-1] c 33 N81-14220
- Low current linearization of magnetic amplifier for dc transducer  
[NASA-CASE-NPO-14617-1] c 33 N81-24338
- Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NPO-14316-1] c 33 N81-33404
- Non-contacting power transfer device  
[NASA-CASE-GSC-12595-1] c 33 N82-24422
- High voltage isolation transformer  
[NASA-CASE-GSC-12817-1] c 33 N85-29146
- TRANSIENT HEATING**  
Thermocouple installation  
[NASA-CASE-NPO-13540-1] c 35 N77-14409
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA-CASE-NPO-15494-1] c 35 N82-25484
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71:NPO-15494-2] c 35 N85-34373
- TRANSIENT LOADS**  
Deployable solar cell array  
[NASA-CASE-NPO-10883] c 31 N72-22874
- TRANSISTOR AMPLIFIERS**  
Apparatus for overcurrent protection of a push-pull amplifier Patent  
[NASA-CASE-MSC-12033-1] c 09 N71-13531
- TRANSISTOR CIRCUITS**  
Low power drain semi-conductor circuit  
[NASA-CASE-XGS-04999] c 09 N69-24317
- Ring counter  
[NASA-CASE-XGS-03095] c 09 N69-27463
- Pulse counting circuit which simultaneously indicates the occurrence of the nth pulse Patent  
[NASA-CASE-XMF-00906] c 09 N70-41655
- Linear sawtooth voltage-wave generator employing transistor timing circuit having capacitor-zener diode combination feedback Patent  
[NASA-CASE-XMS-01315] c 09 N70-41675
- Switching circuit employing regeneratively connected complementary transistors Patent  
[NASA-CASE-XNP-02654] c 10 N70-42032
- High voltage transistor circuit Patent  
[NASA-CASE-XNP-06937] c 09 N71-19516
- Complementary regenerative switch Patent  
[NASA-CASE-XGS-02751] c 09 N71-23015
- Transistor drive regulator Patent  
[NASA-CASE-LEW-10233] c 10 N71-27126
- Multiple slope sweep generator Patent  
[NASA-CASE-XMS-03542] c 09 N71-28926
- Broadband video process with very high input impedance  
[NASA-CASE-NPO-10199] c 09 N72-17156
- Ultra-stable oscillator with complementary transistors  
[NASA-CASE-GSC-11513-1] c 33 N74-20862
- Inrush current limiter  
[NASA-CASE-GSC-11789-1] c 33 N77-14333
- Temperature compensated current source  
[NASA-CASE-MSC-11235] c 33 N78-17294
- Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NPO-14316-1] c 33 N81-33404
- Power converter  
[NASA-CASE-FRC-11014-1] c 33 N82-18494
- TRANSISTORS**  
Power supply circuit Patent  
[NASA-CASE-XMS-00913] c 10 N71-23543
- Switching circuit Patent  
[NASA-CASE-XNP-06505] c 10 N71-24799
- Cascaded complementary pair broadband transistor amplifiers Patent  
[NASA-CASE-NPO-10003] c 10 N71-26415
- Fast response low power drain logic circuits  
[NASA-CASE-GSC-10878-1] c 10 N72-22236
- Coaxial inverted geometry transistor having buried emitter  
[NASA-CASE-ARC-10330-1] c 09 N73-32112
- Four phase logic systems --- including integrated microcircuits  
[NASA-CASE-MSC-14240-1] c 33 N75-14957
- Complementary DMOS-VMOS integrated circuit structure  
[NASA-CASE-GSC-12190-1] c 33 N79-12321
- Circuit for automatic load sharing in parallel converter modules  
[NASA-CASE-NPO-14056-1] c 33 N79-24257
- Base drive for paralleled inverter systems  
[NASA-CASE-NPO-14163-1] c 33 N81-14220
- Four quadrant control circuit for a brushless three-phase dc motor  
[NASA-CASE-MFS-28080-1] c 33 N87-21233
- TRANSITION FLOW**  
Ablation article and method  
[NASA-CASE-LAR-10439-1] c 33 N73-27796
- TRANSITION TEMPERATURE**  
Process for preparing thermoplastic aromatic polyimides  
[NASA-CASE-LAR-11828-1] c 27 N78-32261
- Method of producing high T(subc) superconducting NBN films  
[NASA-CASE-NPO-16681-1-CU] c 76 N88-24543
- TRANSLATIONAL MOTION**  
Centrifuge mounted motion simulator Patent  
[NASA-CASE-XAC-00399] c 11 N70-34815
- Translating horizontal tail Patent  
[NASA-CASE-XLA-08801-1] c 02 N71-11043
- Semi-linear ball bearing Patent  
[NASA-CASE-XLA-02809] c 15 N71-22982
- Positioning mechanism  
[NASA-CASE-NPO-10679] c 15 N72-21462
- Improved docking alignment system  
[NASA-CASE-MSC-21372-1] c 35 N89-12842
- Suspension mechanism and method  
[NASA-CASE-LAR-14142-1] c 37 N90-27116
- Connection space reduction mechanism  
[NASA-CASE-GSC-13220-1] c 37 N91-21525
- TRANSLATORS**  
Serial data correlator/code translator  
[NASA-CASE-KSC-11025-1] c 32 N83-13323
- TRANSLUCENCE**  
Light transmitting window assembly  
[NASA-CASE-MSC-18417-1] c 74 N85-29750
- TRANSMISSION CIRCUITS**  
Beam forming network  
[NASA-CASE-NPO-15743-1] c 32 N85-29118
- TRANSMISSION EFFICIENCY**  
Microwave power transmission system wherein level of transmitted power is controlled by reflections from receiver  
[NASA-CASE-MFS-21470-1] c 44 N74-19870
- Linear phase demodulator including a phase locked loop with auxiliary feedback loop  
[NASA-CASE-GSC-12018-1] c 33 N77-14334
- Apparatus and method for characterizing the transmission efficiency of a mass spectrometer  
[NASA-CASE-NPO-16989-1-CU] c 35 N91-14587
- TRANSMISSION LINES**  
Validation device for spacecraft checkout equipment Patent  
[NASA-CASE-XKS-10543] c 07 N71-26292
- Collapsible antenna boom and transmission line Patent  
[NASA-CASE-MFS-20068] c 07 N71-27191
- Phase modulator Patent  
[NASA-CASE-MSC-13201-1] c 07 N71-28429
- Shielded flat cable  
[NASA-CASE-MFS-13687-2] c 09 N72-22198
- Phase control circuits using frequency multiplications for phased array antennas  
[NASA-CASE-ERC-10285] c 10 N73-16206
- Phase protection system for ac power lines  
[NASA-CASE-MSC-17832-1] c 33 N74-14956
- System for stabilizing cable phase delay utilizing a coaxial cable under pressure  
[NASA-CASE-NPO-13138-1] c 33 N74-17927
- Telephone multiline signaling using common signal pair  
[NASA-CASE-KSC-11023-1] c 32 N79-23310
- System for automatically switching transformer coupled lines  
[NASA-CASE-MSC-16697-1] c 33 N79-28415
- TRANSMISSION LOSS**  
Low-loss, high-isolation, fiber-optic isolator  
[NASA-CASE-NPO-17207-1-CU] c 74 N88-25304
- TRANSMISSIONS (MACHINE ELEMENTS)**  
Compensating linkage for main rotor control  
[NASA-CASE-LAR-11797-1] c 05 N81-19087
- Directional gear ratio transmissions  
[NASA-CASE-LAR-12644-1] c 37 N84-28084
- Magnetic drive coupling  
[NASA-CASE-MSC-21171-1] c 37 N88-23973
- TRANSMISSIVITY**  
Process of making medical clip  
[NASA-CASE-LAR-12650-2] c 52 N84-28389
- TRANSMITTANCE**  
Light transmitting window assembly  
[NASA-CASE-MSC-18417-1] c 74 N85-29750
- TRANSMITTER RECEIVERS**  
Integrated thermoelectric generator/space antenna combination  
[NASA-CASE-XER-09521] c 09 N72-12136

Location identification system  
[NASA-CASE-ERC-10324] c 07 N72-25173

Automatic vehicle location system  
[NASA-CASE-NPO-11850-1] c 32 N74-12912

Digital communication system  
[NASA-CASE-MS-C-13912-1] c 32 N74-30524

Electro-optical spin measurement system  
[NASA-CASE-LAR-13629-1] c 09 N91-14356

**TRANSMITTERS**

Temperature telemetric transmitter Patent  
[NASA-CASE-NPO-10649] c 07 N71-24840

Two carrier communication system with single transmitter  
[NASA-CASE-NPO-11548] c 07 N73-26118

Miniature multichannel biotelemeter system  
[NASA-CASE-NPO-13065-1] c 52 N74-26625

Digital transmitter for data bus communications system  
[NASA-CASE-MS-C-14558-1] c 32 N75-21486

Apparatus for endoscopic examination --- analysis of the propulsion system configuration and transmitter  
[NASA-CASE-NPO-14092-1] c 52 N80-16725

Single frequency multitransmitter telemetry  
[NASA-CASE-LAR-13006-1] c 17 N87-16863

Emergency locating transmitter  
[NASA-CASE-GSC-12821-2] c 33 N91-31530

**TRANSONIC SPEED**

Leading edge curvature based on convective heating Patent  
[NASA-CASE-XLA-01486] c 01 N71-23497

**TRANSONIC WIND TUNNELS**

Wind tunnel test section  
[NASA-CASE-MFS-20509] c 11 N72-17183

Miniature remote dead weight calibrator  
[NASA-CASE-LAR-13564-1] c 35 N87-25558

**TRANSPARENCE**

Helmet assembly and latch means therefor Patent  
[NASA-CASE-XMS-04935] c 05 N71-11190

Method and apparatus for producing an image from a transparent object  
[NASA-CASE-GSC-11989-1] c 74 N77-28932

Method of fabricating a photovoltaic module of a substantially transparent construction  
[NASA-CASE-NPO-14303-1] c 44 N80-18550

Light transmitting window assembly  
[NASA-CASE-MS-C-18417-1] c 74 N85-29750

Process for preparing essentially colorless polyimide film containing phenoxy-linked diamines  
[NASA-CASE-LAR-13353-1] c 27 N86-29039

Process for preparing highly optically transparent/colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N86-31727

Procedure to prepare transparent silica gels  
[NASA-CASE-LAR-13476-1-CU] c 76 N87-29360

Method for investigating the formation of crystals in a transparent material  
[NASA-CASE-MFS-26008-1-CU] c 76 N88-14835

Purification system  
[NASA-CASE-MS-C-21584-1] c 25 N91-24362

Single layer multi-color luminescent display  
[NASA-CASE-LAR-13616-1] c 74 N91-31950

**TRANSPARATION**

Rocket chamber and method of making  
[NASA-CASE-LEW-11118-2] c 20 N76-14191

**TRANSPONDERS**

Dynamic Doppler simulator Patent  
[NASA-CASE-XMS-05454-1] c 07 N71-12391

Method and apparatus for mapping planets  
[NASA-CASE-NPO-11001] c 07 N72-21118

Code regenerative clean-up loop transponder for a mu-type ranging system  
[NASA-CASE-NPO-11707] c 07 N73-25161

Automatic vehicle location system  
[NASA-CASE-NPO-11850-1] c 32 N74-12912

Simultaneous acquisition of tracking data from two stations  
[NASA-CASE-NPO-13292-1] c 32 N75-15854

Automatic transponder --- measurement of the internal delay time of a transponder  
[NASA-CASE-GSC-12075-1] c 32 N77-31350

Video processor for air traffic control beacon system  
[NASA-CASE-KSC-11155-1] c 04 N86-19304

**TRANSPORT VEHICLES**

Bidirectional drive and brake mechanism  
[NASA-CASE-MS-C-21540-1] c 37 N91-32514

**TRANSPORTATION**

Supporting and protecting device Patent  
[NASA-CASE-XMF-00580] c 11 N70-35383

Shuttle car loading system  
[NASA-CASE-NPO-15949-1] c 85 N85-34722

**TRANSVERSE ACCELERATION**

Rim inertial measuring system  
[NASA-CASE-LAR-12052-1] c 18 N81-29152

**TRAPPED PARTICLES**

Method and apparatus for determining time, direction, and composition of impacting space particles  
[NASA-CASE-LAR-13392-1-CU] c 19 N91-14412

**TRAPS**

Deep trap, laser activated image converting system  
[NASA-CASE-NPO-13131-1] c 36 N75-19652

**TRAVELING WAVE AMPLIFIERS**

Serrodyne frequency converter re-entrant amplifier system Patent  
[NASA-CASE-XGS-01022] c 07 N71-16088

Traveling wave solid state amplifier utilizing a semiconductor with negative differential mobility  
[NASA-CASE-HQN-10069] c 33 N75-27251

Resonant isolator for maser amplifier  
[NASA-CASE-NPO-15201-1] c 36 N83-35350

Ladder supported ring bar circuit  
[NASA-CASE-LEW-13570-1] c 33 N84-16452

**TRAVELING WAVE MASERS**

Folded traveling wave maser structure Patent  
[NASA-CASE-XNP-05219] c 16 N71-15550

High-gain, broadband traveling wave maser Patent  
[NASA-CASE-NPO-10548] c 16 N71-24831

Independent gain and bandwidth control of a traveling wave maser  
[NASA-CASE-NPO-13801-1] c 36 N78-18410

**TRAVELING WAVE TUBES**

Segmented superconducting magnet for a broadband traveling wave maser Patent  
[NASA-CASE-XGS-10518] c 16 N71-28554

Traveling wave tube circuit  
[NASA-CASE-LEW-12013-1] c 33 N79-10339

Multistage depressed collector for dual mode operation --- for microwave transmitting tubes  
[NASA-CASE-LEW-13282-1] c 33 N82-24415

Linearized traveling wave amplifier with hard limiter characteristics  
[NASA-CASE-LEW-13981-2] c 33 N86-21742

Miniature traveling wave tube and method of making  
[NASA-CASE-LEW-14520-1] c 33 N90-22724

**TRAVELING WAVES**

Maser for frequencies in the 7-20 GHz range  
[NASA-CASE-NPO-11437] c 16 N72-28521

**TRAYS**

Protein crystal growth tray assembly  
[NASA-CASE-MFS-28507-1] c 76 N91-23933

**TREADMILLS**

Tread drum for animals --- having an electrical shock station  
[NASA-CASE-ARC-10917-1] c 51 N78-27733

**TREADS**

Tank tread assemblies with track-linking mechanism  
[NASA-CASE-NPO-16321-1CU] c 37 N87-17034

**TRIGGER CIRCUITS**

Ring counter  
[NASA-CASE-XGS-03095] c 09 N69-27463

Electric arc driven wind tunnel Patent  
[NASA-CASE-XMF-00411] c 11 N70-36913

Automatic signal range selector for metering devices Patent  
[NASA-CASE-XMS-06497] c 14 N71-26244

Multivibrator circuit with means to prevent false triggering from supply voltage fluctuations Patent  
[NASA-CASE-ARC-10137-1] c 09 N71-28468

SCR lamp driver  
[NASA-CASE-GSC-10221-1] c 09 N72-23171

Rapidly pulsed, high intensity, incoherent light source  
[NASA-CASE-XLE-2529-3] c 33 N74-20859

Pulsed thyristor trigger control circuit  
[NASA-CASE-MFS-25616-1] c 33 N84-16455

**TRIGONOMETRY**

Trigonometric vehicle guidance assembly which aligns the three perpendicular axes of two three-axes systems Patent  
[NASA-CASE-XMF-00684] c 21 N71-21688

**TRIMERS**

Trifunctional alcohol  
[NASA-CASE-NPO-10714] c 06 N69-31244

Trimerization of aromatic nitriles  
[NASA-CASE-LEW-12053-1] c 27 N78-15276

Catalytic trimerization of aromatic nitriles and triaryl-s-triazine ring cross-linked high temperature resistant polymers and copolymers made thereby  
[NASA-CASE-LEW-12053-2] c 27 N79-28307

**TRIODES**

Triode thermionic energy converter  
[NASA-CASE-XLE-01015] c 03 N69-39898

Textured carbon surfaces on copper by sputtering  
[NASA-CASE-LEW-14130-1] c 31 N86-32587

**TRITIUM**

Method for determining the state of charge of batteries by the use of tracers Patent  
[NASA-CASE-XNP-01464] c 03 N71-10728

**TROPOPAUSE**

CAT altitude avoidance system  
[NASA-CASE-NPO-15351-1] c 06 N83-10040

**TRUCKS**

Fifth wheel  
[NASA-CASE-FRC-10081-1] c 37 N77-14477

Low-drag ground vehicle particularly suited for use in safely transporting livestock  
[NASA-CASE-FRC-11058-1] c 85 N82-33288

**TRUSSES**

Low mass truss structure  
[NASA-CASE-LAR-10546-1] c 11 N72-25287

Lightweight structural columns --- space erectable trusses  
[NASA-CASE-LAR-12095-1] c 31 N81-25258

Structural members, method and apparatus  
[NASA-CASE-MS-C-16217-1] c 31 N81-27323

Sequentially deployable maneuverable tetrahedral beam  
[NASA-CASE-LAR-13098-1] c 31 N86-19479

Shuttle-launch triangular space station  
[NASA-CASE-MS-C-20676-1] c 18 N86-24729

Synchronously deployable truss structure  
[NASA-CASE-LAR-13117-1] c 37 N86-25789

Deployable M-braced truss structure  
[NASA-CASE-LAR-13081-1] c 37 N86-32737

Deployable geodesic truss structure  
[NASA-CASE-LAR-13113-1] c 31 N87-25492

Preloaded space structural coupling joints  
[NASA-CASE-LAR-13489-1] c 18 N87-27713

Mobile remote manipulator system for a tetrahedral truss  
[NASA-CASE-MS-C-20985-1] c 18 N88-26398

Collet lock joint for space station truss  
[NASA-CASE-MS-C-21207-1] c 37 N88-29180

Clevis joint for deployable space structures  
[NASA-CASE-LAR-13898-1] c 37 N91-15544

Overcenter collet space station truss fastener  
[NASA-CASE-MS-C-21504-1] c 18 N91-21221

Apparatus for joining trusses  
[NASA-CASE-MFS-28545-1] c 31 N91-25306

Synchronously deployable double fold beam and planar truss structure  
[NASA-CASE-LAR-13490-1] c 18 N91-27199

**TUBE GRIDS**

Method for fabricating solar cells having integrated collector grids  
[NASA-CASE-LEW-12819-2] c 44 N79-18444

**TUBE HEAT EXCHANGERS**

Electrothermal rockets having improved heat exchangers Patent  
[NASA-CASE-XLE-01783] c 28 N70-34175

Procedure and apparatus for determination of water in nitrogen tetroxide  
[NASA-CASE-NPO-10234] c 06 N72-17094

Liquid cooled brassiere and method of diagnosing malignant tumors therewith  
[NASA-CASE-ARC-11007-1] c 52 N77-14736

Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c 44 N81-17518

**TUBES**

Method of making tubes Patent  
[NASA-CASE-XGS-04175] c 15 N71-18579

Tube sealing device Patent  
[NASA-CASE-NPO-10431] c 15 N71-29132

**TUMBLING MOTION**

Tumbler system to provide random motion  
[NASA-CASE-XGS-02437] c 15 N69-21472

**TUMORS**

Liquid cooled brassiere and method of diagnosing malignant tumors therewith  
[NASA-CASE-ARC-11007-1] c 52 N77-14736

**TUNABLE LASERS**

Spectrophone stabilized laser with line center offset frequency control  
[NASA-CASE-NPO-15516-1] c 36 N84-22943

Portable remote laser sensor for methane leak detection  
[NASA-CASE-NPO-15790-1] c 36 N85-21631

Digital control of diode laser for atmospheric spectroscopy  
[NASA-CASE-NPO-16000-1] c 36 N85-29264

Method and means for generation of tunable laser sidebands in the far-infrared region  
[NASA-CASE-NPO-16497-1-CU] c 36 N87-25567

Isotope separation using tuned laser and electron beam  
[NASA-CASE-NPO-16907-1-CU] c 25 N88-24732

Field induced gap infrared detector  
[NASA-CASE-NPO-17526-1-CU] c 35 N91-14588

Birefringent filter design  
[NASA-CASE-LAR-13887-1] c 36 N91-23472

**TUNGSTEN**

Bonding thermoelectric elements to nonmagnetic refractory metal electrodes  
[NASA-CASE-XGS-04554] c 15 N69-39786

Method of producing porous tungsten ionizers for ion rocket engines Patent  
[NASA-CASE-XLE-00455] c 28 N70-38197

- Small plasma probe Patent  
[NASA-CASE-XLE-02578] c 25 N71-20747
- Fabrication of controlled-porosity metals Patent  
[NASA-CASE-XNP-04339] c 17 N71-29137
- Tungsten contacts on silicon substrates  
[NASA-CASE-GSC-10695-1] c 09 N72-25259
- Nuclear thermionic converter --- tungsten-thorium oxide rods  
[NASA-CASE-NPO-13121-1] c 73 N77-18891
- TUNGSTEN ALLOYS**
- Evaporant holder  
[NASA-CASE-XLA-03105] c 15 N69-27483
- Cobalt-base alloy  
[NASA-CASE-LEW-10436-1] c 17 N73-32415
- Directionally solidified eutectic gamma plus beta nickel-base superalloys  
[NASA-CASE-LEW-12906-1] c 26 N77-32279
- TUNING**
- Active tuned circuit  
[NASA-CASE-GSC-11340-1] c 10 N72-33230
- Magnetically actuated tuning method for Gunn oscillators  
[NASA-CASE-NPO-12106] c 09 N73-15235
- Tuned analog network  
[NASA-CASE-GSC-12650-1] c 33 N84-14421
- Spectrophone stabilized laser with line center offset frequency control  
[NASA-CASE-NPO-15516-1] c 36 N84-22943
- Aircraft rotor blade with passive tuned tab  
[NASA-CASE-ARC-11444-1] c 05 N85-29947
- Precision tunable resonant microwave cavity  
[NASA-CASE-LEW-13935-1] c 33 N87-21234
- Programmable electronic synthesized capacitance  
[NASA-CASE-GSC-12961-1] c 33 N87-22895
- Tailorable infrared sensing device with strain layer superlattice structure  
[NASA-CASE-NPO-16607-1-CU] c 76 N88-14836
- Birefringent filter design  
[NASA-CASE-LAR-13887-1] c 36 N91-23472
- TUNNEL DIODES**
- Low power drain semi-conductor circuit  
[NASA-CASE-XGS-04999] c 09 N69-24317
- High band gap p-2 and 3-5 tunneling junctions for silicon multijunction solar cells  
[NASA-CASE-NPO-16526-1CU] c 44 N87-17399
- TUNNELING (EXCAVATION)**
- Scanning seismic intrusion detection method and apparatus --- monitoring unwanted subterranean entry and departure  
[NASA-CASE-ARC-11317-1] c 35 N83-34272
- TUNNELS**
- Deployable flexible tunnel  
[NASA-CASE-MFS-22636-1] c 37 N76-22540
- Smart tunnel: Docking mechanism  
[NASA-CASE-MSC-21360-1] c 18 N91-14374
- TURBINE BLADES**
- Transpiration cooled turbine blade manufactured from wires Patent  
[NASA-CASE-XLE-00020] c 15 N70-33226
- Modification and improvements to cooled blades Patent  
[NASA-CASE-XLE-00092] c 15 N70-33264
- High temperature nickel-base alloy Patent  
[NASA-CASE-XLE-00151] c 17 N70-33283
- External liquid-spray cooling of turbine blades Patent  
[NASA-CASE-XLE-00037] c 28 N70-33372
- Liquid spray cooling method Patent  
[NASA-CASE-XLE-00027] c 33 N71-29152
- Welding blades to rotors  
[NASA-CASE-LEW-10533-1] c 15 N73-28515
- Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c 24 N77-19170
- Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-2] c 37 N82-26674
- Method of protecting a surface with a silicon-slurry/aluminate coating --- coatings for gas turbine engine blades and vanes  
[NASA-CASE-LEW-13343-1] c 27 N82-28441
- Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-1] c 27 N82-29453
- Vertical shaft windmill  
[NASA-CASE-LAR-12923-1] c 37 N84-12493
- TURBINE ENGINES**
- High speed, self-acting shaft seal --- for use in turbine engines  
[NASA-CASE-LEW-11274-1] c 37 N75-21631
- Dual cycle aircraft turbine engine  
[NASA-CASE-LAR-11310-1] c 07 N77-28118
- Composite seal for turbomachinery --- backings for turbine engine shrouds  
[NASA-CASE-LEW-12131-1] c 37 N79-18318
- Self stabilizing sonic inlet  
[NASA-CASE-LEW-11890-1] c 05 N79-24976
- Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-2] c 37 N80-26658
- Multi-heat addition turbine engine  
[NASA-CASE-LEW-15094-1] c 07 N91-23180
- TURBINE PUMPS**
- Pulsed energy power system Patent  
[NASA-CASE-MSC-13112] c 03 N71-11057
- Cryogenic cooling system Patent  
[NASA-CASE-NPO-10467] c 23 N71-26654
- Supersonic-combustion rocket  
[NASA-CASE-LEW-11058-1] c 20 N74-13502
- Supercharged topping rocket propellant feed system  
[NASA-CASE-XLE-02062-1] c 20 N80-14188
- Rotor self-lubricating axial stop  
[NASA-CASE-MFS-28273-1] c 37 N88-23974
- TURBINE WHEELS**
- Locking device for turbine rotor blades Patent  
[NASA-CASE-XNP-00816] c 28 N71-28928
- Apparatus for welding blades to rotors  
[NASA-CASE-LEW-10533-2] c 37 N74-11300
- Blade retainer assembly  
[NASA-CASE-LEW-12608-1] c 07 N77-27116
- TURBINES**
- Rotating shaft seal Patent  
[NASA-CASE-LAR-02862-1] c 15 N71-26294
- Method for driving two-phase turbines with enhanced efficiency  
[NASA-CASE-NPO-15037-2] c 37 N85-29282
- Wingtip vortex turbine  
[NASA-CASE-LAR-14116-1] c 05 N91-14345
- TURBOCOMPRESSORS**
- Multistage multiple-reentry turbine Patent  
[NASA-CASE-XLE-00170] c 15 N70-36412
- Apparatus and method for reducing thermal stress in a turbine rotor  
[NASA-CASE-LEW-12232-1] c 07 N79-10057
- Combustor liner construction  
[NASA-CASE-LEW-14035-1] c 07 N84-24577
- Diesel engine catalytic combustor system --- aircraft engines  
[NASA-CASE-LEW-12995-1] c 37 N84-33808
- TURBOFAN ENGINES**
- Supersonic fan blading --- noise reduction in turbofan engines  
[NASA-CASE-LEW-11402-1] c 07 N74-28226
- Noise suppressor --- for turbofan engine by incorporating annular acoustically porous elements in exhaust and inlet ducts  
[NASA-CASE-LAR-11141-1] c 07 N74-32418
- Variable thrust nozzle for quiet turbofan engine and method of operating same  
[NASA-CASE-LEW-12317-1] c 07 N78-17055
- Method and apparatus for rapid thrust increases in a turbofan engine  
[NASA-CASE-LEW-12971-1] c 07 N80-18039
- Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c 07 N81-19116
- Thrust reverser for a long duct fan engine --- for turbofan engines  
[NASA-CASE-LEW-13199-1] c 07 N82-26293
- Noise suppressor for turbo fan jet engines  
[NASA-CASE-ARC-10812-1] c 07 N83-33884
- TURBOFANS**
- Dual output variable pitch turbofan actuation system  
[NASA-CASE-LEW-12419-1] c 07 N77-14025
- Reverse pitch fan with divided splitter  
[NASA-CASE-LEW-12760-1] c 07 N77-17059
- TURBOGENERATORS**
- Wind and solar powered turbine  
[NASA-CASE-NPO-15496-1] c 44 N84-23018
- Wingtip vortex turbine  
[NASA-CASE-LAR-14116-1] c 05 N91-14345
- TURBOJET ENGINE CONTROL**
- Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c 07 N81-19116
- TURBOJET ENGINES**
- Telescoping-spike supersonic inlet for aircraft engines Patent  
[NASA-CASE-XLE-00005] c 28 N70-39899
- Gas turbine combustion apparatus Patent  
[NASA-CASE-XLE-103477-1] c 28 N71-20330
- Reduction of nitric oxide emissions from a combustor  
[NASA-CASE-ARC-10814-2] c 07 N80-26298
- TURBOMACHINE BLADES**
- Platform for a swing root turbomachinery blade  
[NASA-CASE-LEW-12312-1] c 07 N77-32148
- Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-2] c 37 N80-26658
- TURBOMACHINERY**
- Turbo-machine blade vibration damper Patent  
[NASA-CASE-XLE-00155] c 28 N71-29154
- Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-3] c 37 N82-19540
- Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-1] c 27 N82-29453
- Method of fabricating an abradable gas path seal  
[NASA-CASE-LEW-13269-2] c 37 N84-22957
- Wind and solar powered turbine  
[NASA-CASE-NPO-15496-1] c 44 N84-23018
- Compliant hydrodynamic fluid journal bearing  
[NASA-CASE-LEW-13670-1] c 37 N86-19606
- Damping seal for turbomachinery  
[NASA-CASE-MFS-25842-2] c 37 N86-20788
- Turbomachinery shaft insert  
[NASA-CASE-MFS-28345-2] c 37 N89-28842
- TURBOSHAPTS**
- Optical torque meter Patent  
[NASA-CASE-XLE-00503] c 14 N70-34818
- High speed, self-acting shaft seal --- for use in turbine engines  
[NASA-CASE-LEW-11274-1] c 37 N75-21631
- TURBULENCE**
- Active control of boundary layer transition and turbulence  
[NASA-CASE-LAR-13532-1] c 34 N91-14562
- TURBULENCE EFFECTS**
- Hydrodynamic skin-friction reduction  
[NASA-CASE-LAR-14078-1-CU] c 34 N90-27071
- TURBULENCE METERS**
- Hot foil transducer skin friction sensor  
[NASA-CASE-LAR-12321-1] c 35 N82-24470
- TURBULENT BOUNDARY LAYER**
- Sound shield  
[NASA-CASE-LAR-12883-1] c 71 N83-17235
- Method for laminar boundary layer transition visualization in flight  
[NASA-CASE-LAR-13554-1] c 02 N89-12551
- TURBULENT FLOW**
- Exhaust flow deflector --- for ducted gas flow  
[NASA-CASE-LAR-11570-1] c 34 N76-18364
- System for measuring Reynolds in a turbulently flowing fluid --- signal processing  
[NASA-CASE-ARC-10755-2] c 34 N76-27517
- System for measuring three fluctuating velocity components in a turbulently flowing fluid  
[NASA-CASE-ARC-10974-1] c 34 N77-27345
- Detection of the transitional layer between laminar and turbulent flow areas on a wing surface --- using an accelerometer to measure pressure levels during wind tunnel tests  
[NASA-CASE-LAR-12261-1] c 02 N80-20224
- Amplified wind turbine apparatus  
[NASA-CASE-MFS-23830-1] c 44 N82-24639
- TURNSTILE ANTENNAS**
- Method and means for damping nutation in a satellite Patent  
[NASA-CASE-XMF-00442] c 31 N71-10747
- Broadband modified turnstile antenna Patent  
[NASA-CASE-MSC-12209] c 09 N71-24842
- Turnstile slot antenna  
[NASA-CASE-GSC-11428-1] c 32 N74-20864
- Turnstile and flared cone UHF antenna  
[NASA-CASE-LAR-10970-1] c 33 N76-14372
- TURRET**
- Electron beam tube containing a multiple cathode array employing indexing means for cathode substitution Patent  
[NASA-CASE-NPO-10625] c 09 N71-26182
- TWISTING**
- Means for controlling aerodynamically induced twist  
[NASA-CASE-LAR-12175-1] c 05 N82-28279
- TWO BODY PROBLEM**
- Instrument for measuring potentials on two dimensional electric field plots Patent  
[NASA-CASE-XLA-08493] c 10 N71-19421
- TWO DIMENSIONAL BODIES**
- Two-dimensional radiant energy array computers and computing devices  
[NASA-CASE-GSC-11839-1] c 60 N77-14751
- TWO PHASE FLOW**
- Two-step rocket engine bipropellant valve Patent  
[NASA-CASE-XMS-04890-1] c 15 N70-22192
- Booster tank system Patent  
[NASA-CASE-MSC-12390] c 27 N71-29155
- Two phase flow system with discrete impinging two-phase jets  
[NASA-CASE-NPO-11556] c 12 N72-25292
- Method and turbine for extracting kinetic energy from a stream of two-phase fluid  
[NASA-CASE-NPO-14130-1] c 34 N79-20335
- Method for driving two-phase turbines with enhanced efficiency  
[NASA-CASE-NPO-15037-2] c 37 N85-29282
- Pumped two-phase heat transfer loop  
[NASA-CASE-MSC-20841-1] c 34 N87-22950
- Pumped two-phase heat transfer loop  
[NASA-CASE-MSC-20841-2] c 34 N88-23958
- TYPEWRITERS**
- Guide for a typewriter  
[NASA-CASE-MFS-15218-1] c 37 N77-19457

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## U BENDS

- Technique of elbow bending small jacketed transfer lines Patent  
[NASA-CASE-XNP-10475] c 15 N71-24679
- Method for distillation of liquids  
[NASA-CASE-XNP-08124-2] c 06 N73-13129
- ULCERS**
- Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-2] c 52 N81-14613
- Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-1] c 52 N81-29764
- ULLAGE**
- Penetrating radiation system for detecting the amount of liquid in a tank Patent  
[NASA-CASE-MSC-12280] c 27 N71-16348
- ULTRAHIGH FREQUENCIES**
- Turnstile and flared cone UHF antenna  
[NASA-CASE-LAR-10970-1] c 33 N76-14372
- Dual band combiner for horn antenna  
[NASA-CASE-NPO-14519-1] c 32 N80-23524
- ULTRAHIGH VACUUM**
- Method of lubricating rolling element bearings Patent  
[NASA-CASE-XLE-09527] c 15 N71-17688
- Gauge calibration by diffusion  
[NASA-CASE-XGS-07752] c 14 N73-30390
- Ultrahigh vacuum gauge having two collector electrodes  
[NASA-CASE-LAR-02743] c 14 N73-32324
- In situ transfer standard for ultrahigh vacuum gage calibration  
[NASA-CASE-LAR-10862-1] c 35 N74-15092
- Precision manipulator heating and cooling apparatus for use in UHV systems with sample transfer capability  
[NASA-CASE-LAR-13040-1] c 37 N85-29286
- ULTRAPURE METALS**
- Apparatus for production of ultrapure amorphous metals utilizing acoustic cooling  
[NASA-CASE-NPO-15658-1] c 26 N86-32551
- ULTRASONIC AGITATION**
- Apparatus for recovering matter adhered to a host surface  
[NASA-CASE-NPO-11213] c 15 N73-20514
- ULTRASONIC CLEANING**
- Acoustic tooth cleaner  
[NASA-CASE-LAR-12471-1] c 52 N82-29862
- ULTRASONIC FLAW DETECTION**
- Length mode piezoelectric ultrasonic transducer for inspection of solid objects  
[NASA-CASE-MSC-19672-1] c 38 N79-14398
- Two-dimensional scanner apparatus --- flaw detector in small flat plates  
[NASA-CASE-MFS-25687-1] c 35 N84-22928
- Ultrasonic angle beam standard reflector --- ultrasonic nondestructive inspection  
[NASA-CASE-LAR-13153-1] c 71 N86-21276
- Ultrasonic method and apparatus for determining crack opening load  
[NASA-CASE-LAR-13889-1] c 39 N88-30160
- ULTRASONIC RADIATION**
- Ultrasonic biomedical measuring and recording apparatus --- for recording motion of internal organs such as heart valves  
[NASA-CASE-ARC-10597-1] c 52 N74-20726
- Biomedical ultrasonoscope<sup>o</sup>  
[NASA-CASE-ARC-10994-1] c 52 N76-33835
- Biomedical ultrasonoscope<sup>o</sup>  
[NASA-CASE-ARC-10994-2] c 52 N79-26771
- Dual differential interferometer  
[NASA-CASE-LAR-12966-1] c 35 N85-30282
- Method for thermal monitoring subcutaneous tissue  
[NASA-CASE-LAR-13028-1] c 52 N85-30618
- Acoustic radiation stress measurement  
[NASA-CASE-LAR-13440-1] c 71 N87-21653
- Method and apparatus for characterizing reflected ultrasonic pulses  
[NASA-CASE-LAR-13966-1] c 71 N91-27914
- ULTRASONIC SCANNERS**
- Cutting head for ultrasonic lithotripsy  
[NASA-CASE-GSC-12944-1] c 52 N86-19885
- ULTRASONIC TESTS**
- Ultrasonic scanner for radial and flat panels  
[NASA-CASE-MFS-20335-1] c 35 N74-10415
- Ultrasonic scanning system for in-place inspection of brazed tube joints  
[NASA-CASE-MFS-20767-1] c 38 N74-15130
- Method and apparatus for nondestructive testing --- using high frequency arc discharges  
[NASA-CASE-MFS-21233-1] c 38 N74-15395
- CW ultrasonic bolt tensioning monitor  
[NASA-CASE-LAR-12016-1] c 39 N78-15512

- Rapid quantification of an internal property --- ultrasonic determination of bladder urine quantity  
[NASA-CASE-LAR-13689-1-NP] c 35 N87-23941
- Ultrasonic method and apparatus for determining crack opening load  
[NASA-CASE-LAR-13889-1] c 39 N88-30160
- ULTRASONIC WAVE TRANSDUCERS**
- Apparatus for recovering matter adhered to a host surface  
[NASA-CASE-NPO-11213] c 15 N73-20514
- Ultrasonic bone densitometer  
[NASA-CASE-MFS-20994-1] c 35 N75-12271
- Reference apparatus for medical ultrasonic transducer  
[NASA-CASE-ARC-10753-1] c 54 N75-27760
- Ultrasonic calibration device --- for producing changes in acoustic attenuation and phase velocity  
[NASA-CASE-LAR-11435-1] c 35 N76-15432
- Coupling apparatus for ultrasonic medical diagnostic system  
[NASA-CASE-NPO-13935-1] c 52 N79-14751
- CDS solid state phase insensitive ultrasonic transducer --- annealing cadmium sulfide crystals  
[NASA-CASE-LAR-12304-1] c 35 N80-20559
- Liquid-immersible electrostatic ultrasonic transducer  
[NASA-CASE-LAR-12465-1] c 33 N82-26572
- Ultrasonic transducer with Gaussian radial pressure distribution  
[NASA-CASE-LAR-12967-1] c 35 N84-22932
- Apparatus for disintegrating kidney stones  
[NASA-CASE-GSC-12652-1] c 52 N84-34913
- Ultrasonic depth gauge for liquids under high pressure  
[NASA-CASE-LAR-13300-1-CU] c 35 N89-14407
- ULTRASONIC WELDING**
- Ultrasonically bonded valve assembly  
[NASA-CASE-NPO-13360-1] c 37 N75-25185
- ULTRASONICS**
- Methods and apparatus employing vibratory energy for wrenching Patent  
[NASA-CASE-MFS-20586] c 15 N71-17686
- Pseudo continuous wave instrument --- ultrasonics  
[NASA-CASE-LAR-12260-1] c 35 N79-10390
- Dual differential interferometer  
[NASA-CASE-LAR-12966-1] c 35 N85-30282
- Method for thermal monitoring subcutaneous tissue  
[NASA-CASE-LAR-13028-1] c 52 N85-30618
- Ultrasonic depth gauge for liquids under high pressure  
[NASA-CASE-LAR-13300-1-CU] c 35 N89-14407
- ULTRAVIOLET FILTERS**
- Ultraviolet filter  
[NASA-CASE-XNP-02340] c 23 N69-24332
- Ultraviolet resonance lamp Patent  
[NASA-CASE-ARC-10030] c 09 N71-12521
- ULTRAVIOLET LASERS**
- Stabilization of He<sub>2</sub>(a 3 Sigma u + molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c 72 N79-13826
- ULTRAVIOLET RADIATION**
- Alkali-metal silicate protective coating  
[NASA-CASE-XGS-04119] c 18 N69-39979
- Ultraviolet resonance lamp Patent  
[NASA-CASE-ARC-10030] c 09 N71-12521
- Leak detector wherein a probe is monitored with ultraviolet radiation Patent  
[NASA-CASE-ERC-10034] c 15 N71-24896
- Phototropic composition of matter  
[NASA-CASE-XGS-03736] c 14 N72-22443
- Transmitting and reflecting diffuser --- for ultraviolet light  
[NASA-CASE-LAR-10385-2] c 70 N74-13436
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-1] c 27 N74-21156
- Light shield and cooling apparatus --- high intensity ultraviolet lamp  
[NASA-CASE-LAR-10089-1] c 34 N74-23066
- Flame detector operable in presence of proton radiation  
[NASA-CASE-MFS-21577-1] c 19 N74-29410
- Method and apparatus for generating coherent radiation in the ultra-violet region and above by use of distributed feedback  
[NASA-CASE-NPO-13346-1] c 36 N76-29575
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c 27 N76-32315
- Violet process for producing flame resistant polyamides and products produced thereby --- protective clothing for high oxygen environments  
[NASA-CASE-MSC-16074-1] c 27 N80-26446
- Purification system  
[NASA-CASE-MSC-21584-1] c 25 N91-24362
- ULTRAVIOLET REFLECTION**
- Alkali metal silicate protective coating Patent  
[NASA-CASE-XGS-04799] c 18 N71-24183
- Ultraviolet light reflective coating  
[NASA-CASE-GSC-11786-1] c 24 N76-24363

- Transmitting and reflecting diffuser --- using ultraviolet grade fused silica coatings  
[NASA-CASE-LAR-10385-3] c 74 N78-15879
- ULTRAVIOLET SPECTRA**
- Ultraviolet atomic emission detector  
[NASA-CASE-HQN-10756-1] c 14 N72-25428
- ULTRAVIOLET SPECTROMETERS**
- Concave grating spectrometer Patent  
[NASA-CASE-XGS-01036] c 14 N70-40003
- Telespectrograph Patent  
[NASA-CASE-XLA-03273] c 14 N71-18699
- UMBILICAL CONNECTORS**
- Umbilical separator for rockets Patent  
[NASA-CASE-XNP-00425] c 11 N70-38202
- Umbilical disconnect Patent  
[NASA-CASE-XLA-00711] c 03 N71-12258
- Remote controlled tubular disconnect Patent  
[NASA-CASE-XLA-01396] c 03 N71-12259
- Serpentuator Patent  
[NASA-CASE-XMF-05344] c 31 N71-16345
- Breakaway connector  
[NASA-CASE-NPO-11140] c 15 N72-17455
- Quick disconnect coupling  
[NASA-CASE-NPO-11202] c 15 N72-25450
- Deployable flexible tunnel  
[NASA-CASE-MFS-22636-1] c 37 N76-22540
- High acceleration cable deployment system  
[NASA-CASE-ARC-11256-1] c 15 N82-24272
- UMBILICAL TOWERS**
- Emergency escape system Patent  
[NASA-CASE-XKS-02342] c 05 N71-11199
- UNDERWATER ENGINEERING**
- Ejectable underwater sound source recovery assembly  
[NASA-CASE-LAR-10595-1] c 35 N74-16135
- Underwater seismic source --- for petroleum exploration  
[NASA-CASE-NPO-14255-1] c 46 N79-23555
- UNDERWATER TESTS**
- Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332] c 05 N72-20097
- Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332-2] c 05 N73-25125
- UNIFORM FLOW**
- Wind tunnel flow generation section  
[NASA-CASE-ARC-10710-1] c 09 N75-12969
- UNIONS (CONNECTORS)**
- Beam connector apparatus and assembly  
[NASA-CASE-MFS-25134-1] c 31 N83-31895
- Preloaded space structural coupling joints  
[NASA-CASE-LAR-13489-1] c 18 N87-27713
- UNLOADING**
- Bootstrap unloader Patent  
[NASA-CASE-XNP-09768] c 09 N71-12516
- UNMANNED SPACECRAFT**
- Material handling device Patent  
[NASA-CASE-XNP-09770-3] c 11 N71-27036
- UNSATURATION (CHEMISTRY)**
- Stabilized unsaturated polyesters  
[NASA-CASE-NPO-16103-1] c 27 N85-29043
- UP-CONVERTERS**
- Method and apparatus for quadrupole-shift-key and linear phase modulation  
[NASA-CASE-NPO-14444-1] c 33 N81-15192
- UPPER ATMOSPHERE**
- Telespectrograph Patent  
[NASA-CASE-XLA-03273] c 14 N71-18699
- Apparatus for sampling particulates in gases  
[NASA-CASE-HQN-10037-1] c 14 N73-27376
- Rocket having barium release system to create ion clouds in the upper atmosphere  
[NASA-CASE-LAR-10670-2] c 15 N74-27360
- Microwave limb sounder --- measuring trace gases in the upper atmosphere  
[NASA-CASE-NPO-14544-1] c 46 N82-12685
- UPPER SURFACE BLOWING**
- Method and apparatus for detecting laminar flow separation and reattachment  
[NASA-CASE-LAR-13952-2-SB] c 34 N91-31596
- URANIUM 235**
- Isotope separation using metallic vapor lasers  
[NASA-CASE-NPO-13550-1] c 36 N77-26477
- UREAS**
- Aldehyde-containing urea-absorbing polysaccharides  
[NASA-CASE-NPO-13620-1] c 27 N77-30236
- Dialysis system --- using ion exchange resin membranes permeable to urea molecules  
[NASA-CASE-NPO-14101-1] c 52 N80-14687
- Reverse osmosis membrane of high urea rejection properties --- water purification  
[NASA-CASE-ARC-10980-1] c 27 N80-23452
- URETHANES**
- Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c 27 N81-15104

- URINALYSIS**  
Automated fluid chemical analyzer Patent  
[NASA-CASE-XNP-09451] c 06 N71-26754  
Method of detecting and counting bacteria in body fluids\*  
[NASA-CASE-GSC-11092-2] c 04 N73-27052  
Automatic instrument for chemical processing to detect microorganism in biological samples by measuring light reactions  
[NASA-CASE-GSC-11169-2] c 05 N73-32011  
Determination of antimicrobial susceptibilities on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c 52 N79-14750
- URINATION**  
Open type urine receptacle  
[NASA-CASE-MSC-12324-1] c 05 N72-22093  
Urine collection device  
[NASA-CASE-MSC-16433-1] c 52 N81-24711  
Urine collection apparatus --- feminine hygiene  
[NASA-CASE-MSC-18381-1] c 52 N81-28740
- URINE**  
Rapid quantification of an internal property --- ultrasonic determination of bladder urine quantity  
[NASA-CASE-LAR-13689-1-NP] c 35 N87-23941
- UROLOGY**  
Urine collection device  
[NASA-CASE-MSC-16433-1] c 52 N81-24711
- UTERUS**  
Cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c 52 N82-22875
- V**
- V GROOVES**  
Vee-notching device --- with adjustable carriage  
[NASA-CASE-MFS-20730-1] c 39 N74-13131  
Complementary DMOS-VMOS integrated circuit structure  
[NASA-CASE-GSC-12190-1] c 33 N79-12321  
High voltage v-groove solar cell  
[NASA-CASE-LEW-13401-2] c 44 N83-32177
- VACANCIES (CRYSTAL DEFECTS)**  
Bimetallic junctions  
[NASA-CASE-LEW-11573-1] c 26 N77-28265
- VACUUM**  
Depositing semiconductor films utilizing a thermal gradient  
[NASA-CASE-XKS-04614] c 15 N69-21460  
Superconducting magnet Patent  
[NASA-CASE-XNP-06503] c 23 N71-29049  
Thermocouples of molybdenum and iridium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12174-2] c 35 N79-14346  
Bakeable McLeod gauge  
[NASA-CASE-XGS-01293-1] c 35 N79-33450  
Spray applicator for spraying coatings and other fluids in space  
[NASA-CASE-MSC-18852-1] c 37 N85-29283  
Non-mechanical optical path switching and its application to dual beam spectroscopy including gas filter correlation radiometry  
[NASA-CASE-LAR-14588-1-CU] c 74 N91-23889
- VACUUM APPARATUS**  
Null-type vacuum microbalance Patent  
[NASA-CASE-XAC-00472] c 15 N70-40180  
Evacuation port seal Patent  
[NASA-CASE-XMF-03290] c 15 N71-23256  
Apparatus for testing polymeric materials Patent  
[NASA-CASE-XNP-09699] c 06 N71-24607  
Trap for preventing diffusion pump backstreaming  
[NASA-CASE-GSC-10518-1] c 15 N72-22489  
Inductance device with vacuum insulation  
[NASA-CASE-LEW-10330-1] c 09 N72-27226  
Apparatus for producing metal powders  
[NASA-CASE-XLE-06461-2] c 17 N72-28535  
Vacuum probe surface sampler  
[NASA-CASE-LAR-10623-1] c 14 N73-30395  
Vacuum leak detector  
[NASA-CASE-LAR-11237-1] c 35 N75-19612  
Apparatus for positioning modular components on a vertical or overhead surface  
[NASA-CASE-LAR-11465-1] c 37 N76-21554  
Safety shield for vacuum/pressure chamber viewing port  
[NASA-CASE-GSC-12513-1] c 31 N81-19343  
Head for high speed spinner having a vacuum chuck --- holding silicon dioxide chips for etching  
[NASA-CASE-NPO-15227-1] c 37 N81-33482  
Static continuous electrophoresis device  
[NASA-CASE-MFS-25306-1] c 25 N83-13187  
Method and apparatus for supercooling and solidifying substances  
[NASA-CASE-MFS-25242-1] c 35 N83-29650
- Space ultra-vacuum facility and method of operation  
[NASA-CASE-MFS-28139-1] c 29 N87-18679  
Low temperature storage container for transporting perishables to space station  
[NASA-CASE-MFS-28248-1] c 31 N88-24817
- VACUUM CHAMBERS**  
High-vacuum condenser tank for ion rocket tests Patent  
[NASA-CASE-XLE-00168] c 11 N70-33278  
Split welding chamber Patent  
[NASA-CASE-LEW-11531] c 15 N71-14932  
Space environmental work simulator Patent  
[NASA-CASE-XMF-07488] c 11 N71-18773  
Pressure monitoring with a plurality of ionization gauges controlled at a central location Patent  
[NASA-CASE-XLE-00787] c 14 N71-21090  
Device for measuring light scattering wherein the measuring beam is successively reflected between a pair of parallel reflectors Patent  
[NASA-CASE-XER-11203] c 14 N71-28994  
Cryogenic feedthrough  
[NASA-CASE-LAR-10031] c 15 N72-22484  
Altitude simulation chamber for rocket engine testing  
[NASA-CASE-MFS-20620] c 11 N72-27262  
Evacuation valve  
[NASA-CASE-LAR-10061-1] c 15 N72-31483  
Method and apparatus for determining the contents of contained gas samples  
[NASA-CASE-GSC-10903-1] c 14 N73-12444  
Test stand system for vacuum chambers  
[NASA-CASE-MFS-21362] c 11 N73-20267  
Atomic hydrogen storage --- cryotrapping and magnetic field strength  
[NASA-CASE-LEW-12081-2] c 28 N80-20402  
Containerless high temperature calorimeter apparatus  
[NASA-CASE-MFS-23923-1] c 35 N81-19426  
Hermetic seal for a shaft  
[NASA-CASE-NPO-15115-1] c 37 N82-24493  
Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
[NASA-CASE-MFS-15670-1] c 33 N82-33634  
Sphere forming method and apparatus  
[NASA-CASE-NPO-15070-1] c 31 N83-35176  
Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
[NASA-CASE-MFS-256704-1] c 33 N84-22884  
Ion generator and ion application system  
[NASA-CASE-MFS-28122-1] c 72 N88-24253  
Water window imaging x ray microscope  
[NASA-CASE-MFS-28485-1] c 35 N91-15519
- VACUUM DEPOSITION**  
A method for the deposition of beta-silicon carbide by isoeptaxy  
[NASA-CASE-ERC-10120] c 26 N69-33482  
Vacuum deposition apparatus Patent  
[NASA-CASE-XMF-01667] c 15 N71-17647  
Evaporant source for vapor deposition Patent  
[NASA-CASE-XMF-06065] c 15 N71-20395  
Vacuum evaporator with electromagnetic ion steering Patent  
[NASA-CASE-NPO-10331] c 09 N71-26701  
Preparation of dielectric coating of variable dielectric constant by plasma polymerization  
[NASA-CASE-ARC-10892-2] c 27 N79-14214  
Refractory coatings and method of producing the same  
[NASA-CASE-LEW-13169-1] c 26 N82-29415  
Diamondlike flakes  
[NASA-CASE-LEW-13837-2] c 24 N85-21267
- VACUUM EFFECTS**  
High power RF coaxial switch  
[NASA-CASE-NPO-14229-1] c 33 N80-18285
- VACUUM FURNACES**  
Apparatus for inserting and removing specimens from high temperature vacuum furnaces  
[NASA-CASE-LAR-10841-1] c 31 N74-27900
- VACUUM GAGES**  
Thermopile vacuum gage tube simulator Patent  
[NASA-CASE-XLA-02758] c 14 N71-18481  
Gauge calibration by diffusion  
[NASA-CASE-XGS-07752] c 14 N73-30390  
Ultrahigh vacuum measuring ionization gauge  
[NASA-CASE-XLA-05087] c 14 N73-30391  
In situ transfer standard for ultrahigh vacuum gage calibration  
[NASA-CASE-LAR-10862-1] c 35 N74-15092
- VACUUM MELTING**  
High temperature furnace for melting materials in space  
[NASA-CASE-MFS-20710] c 11 N72-23215
- VACUUM PUMPS**  
Pressure control valve --- inflating flexible bladders  
[NASA-CASE-ARC-11251-1] c 37 N81-17433
- VACUUM SPECTROSCOPY**  
Optical multiple sample vacuum integrating sphere  
[NASA-CASE-GSC-12849-1] c 74 N86-26190
- VACUUM SYSTEMS**  
Shrink-fit gas valve Patent  
[NASA-CASE-XGS-00587] c 15 N70-35087  
Cryogenic connector for vacuum use Patent  
[NASA-CASE-XGS-02441] c 15 N70-41629  
Ionization vacuum gauge with all but the end of the ion collector shielded Patent  
[NASA-CASE-XLA-07424] c 14 N71-18482  
Sorption vacuum trap Patent  
[NASA-CASE-XER-09519] c 14 N71-18483  
Vacuum leak detector  
[NASA-CASE-LAR-11237-1] c 35 N75-19612  
Ampoule sealing apparatus and process --- for housing a semiconductor growth charge under vacuum  
[NASA-CASE-LAR-12847-1] c 33 N83-16633
- VACUUM TUBES**  
Integrated structure vacuum tube  
[NASA-CASE-ARC-10445-1] c 31 N76-31365  
Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c 26 N80-14229
- VALUE**  
High impact pressure regulator Patent  
[NASA-CASE-NPO-10175] c 14 N71-18625
- VALVES**  
Valve actuator Patent  
[NASA-CASE-XHQ-01208] c 15 N70-35409  
Fluid coupling Patent  
[NASA-CASE-XLE-00397] c 15 N70-36492  
High pressure four-way valve Patent  
[NASA-CASE-XNP-00214] c 15 N70-36908  
Reinforcing means for diaphragms Patent  
[NASA-CASE-XNP-01962] c 32 N70-41370  
Multiway vortex valve system Patent  
[NASA-CASE-XMF-04709] c 15 N71-15609  
Multiple orifice throttle valve Patent  
[NASA-CASE-XNP-09698] c 15 N71-18580  
High pressure air valve Patent  
[NASA-CASE-MSC-11010] c 15 N71-19485  
Valve seat with resilient support member Patent  
[NASA-CASE-XKS-02582] c 15 N71-21234  
Positive locking check valve Patent  
[NASA-CASE-XMS-09310] c 15 N71-22706  
Dual latching solenoid valve Patent  
[NASA-CASE-XMS-05890] c 09 N71-23191  
Valve seat  
[NASA-CASE-NPO-10606] c 15 N72-25451  
Evacuation valve  
[NASA-CASE-LAR-10061-1] c 15 N72-31483  
Flow control valve --- for high temperature fluids  
[NASA-CASE-NPO-11951-1] c 37 N74-21065  
Airlock  
[NASA-CASE-MFS-20922-1] c 18 N74-22136  
Reciprocating engines  
[NASA-CASE-MSC-16239-1] c 37 N81-32510  
Prosthetic occlusive device for an internal passageway  
[NASA-CASE-MFS-25740-1] c 52 N84-11744  
Moisture content and gas sampling device  
[NASA-CASE-MSC-18866-1] c 35 N85-29213  
Linear motion valve  
[NASA-CASE-MSC-20148-1] c 37 N85-29284  
Reactant pressure differential control for fuel cell gases  
[NASA-CASE-MSC-20127-2] c 37 N85-34403  
Apparatus for mixing solutions in low gravity environments  
[NASA-CASE-MFS-26047-1] c 29 N90-21209  
Valve for waste collection and storage  
[NASA-CASE-MSC-21025-4] c 54 N91-14723  
Method of injecting fluid propellants into a rocket combustion chamber  
[NASA-CASE-LEW-14846-2] c 20 N91-26200  
Method and apparatus for waste collection and storage  
[NASA-CASE-MSC-21025-3] c 54 N91-26747
- VANES**  
Solar vane actuator Patent  
[NASA-CASE-XNP-05535] c 14 N71-23040  
Rotary vane attenuator wherein rotor has orthogonally disposed resistive and dielectric cards  
[NASA-CASE-NPO-11418-1] c 14 N73-13420  
Amplified wind turbine apparatus  
[NASA-CASE-MFS-23830-1] c 44 N82-24639  
Method of protecting a surface with a silicon-slurry/aluminide coating --- coatings for gas turbine engine blades and vanes  
[NASA-CASE-LEW-13343-1] c 27 N82-28441
- VAPOR DEPOSITION**  
A method for the deposition of beta-silicon carbide by isoeptaxy  
[NASA-CASE-ERC-10120] c 26 N69-33482  
Apparatus for producing high purity silicon carbide crystals Patent  
[NASA-CASE-XLA-02057] c 26 N70-40015

- Method of changing the conductivity of vapor deposited gallium arsenide by the introduction of water into the vapor deposition atmosphere Patent  
[NASA-CASE-XNP-01961] c 26 N71-29156
- Tungsten contacts on silicon substrates  
[NASA-CASE-GSC-10695-1] c 09 N72-25259
- Deposition apparatus  
[NASA-CASE-LAR-10541-1] c 15 N72-32487
- Deposition of alloy films --- on irregularly shaped metal object  
[NASA-CASE-LEW-11262-1] c 27 N74-13270
- System for depositing thin films  
[NASA-CASE-MFS-20775-1] c 31 N75-12161
- Vapor deposition apparatus --- semiconductors and gallium arsenides  
[NASA-CASE-HQN-10462] c 25 N75-29192
- Chemical vapor deposition reactor --- providing uniform film thickness  
[NASA-CASE-NPO-13650-1] c 25 N79-28253
- Corrosion resistant coating  
[NASA-CASE-NPO-15928-1] c 26 N85-29005
- Ceramic honeycomb structures and the method thereof  
[NASA-CASE-ARC-11652-1] c 27 N87-23737
- Preparation of dilute magnetic semiconductor films by metalorganic chemical vapor deposition  
[NASA-CASE-NPO-17399-1-CU] c 76 N89-14120
- Method of fabricating germanium and gallium arsenide devices  
[NASA-CASE-GSC-13265-1] c 76 N91-14066
- VAPOR PHASES**
- Fluid dispensing apparatus and method Patent  
[NASA-CASE-XLE-01182] c 27 N71-15635
- Simple method of making photovoltaic junctions Patent  
[NASA-CASE-XNP-01960] c 09 N71-23027
- Fluid phase analyzer Patent  
[NASA-CASE-NPO-10691] c 14 N71-26199
- Propellant mass distribution metering apparatus Patent  
[NASA-CASE-NPO-10185] c 10 N71-26339
- Pumped two-phase heat transfer loop  
[NASA-CASE-MS-20841-1] c 34 N87-22950
- VAPOR PRESSURE**
- Venting vapor apparatus Patent  
[NASA-CASE-XLE-00288] c 15 N70-34247
- Vapor liquid separator Patent  
[NASA-CASE-XMF-04042] c 15 N71-23023
- Method and apparatus for convection control of metallic halide vapor density in a metallic halide laser  
[NASA-CASE-NPO-15021-1] c 36 N83-10417
- VAPOR TRAPS**
- Sorption vacuum trap Patent  
[NASA-CASE-XER-09519] c 14 N71-18483
- VAPORIZERS**
- Boiler for generating high quality vapor Patent  
[NASA-CASE-XLE-00785] c 33 N71-16104
- Particle analyzing method and apparatus  
[NASA-CASE-NPO-15292-1] c 35 N83-27184
- Continuous laminar smoke generator  
[NASA-CASE-LAR-13014-1] c 09 N85-21178
- VAPORIZING**
- Gas liquefaction and dispensing apparatus Patent  
[NASA-CASE-NPO-10070] c 15 N71-27372
- Method for controlling vapor content of a gas  
[NASA-CASE-NPO-10633] c 03 N72-28025
- Hypervelocity impact shield  
[NASA-CASE-MS-21420-1] c 18 N90-26858
- Vaporizing particle velocimeter  
[NASA-CASE-LAR-14685-1] c 02 N91-28135
- VAPORS**
- Method of evaporation  
[NASA-CASE-NPO-15609-2] c 25 N88-23846
- Drop deployment system for crystal growth apparatus  
[NASA-CASE-MFS-28422-1] c 29 N91-17250
- VARACTOR DIODE CIRCUITS**
- Phase modulator Patent  
[NASA-CASE-MS-13201-1] c 07 N71-28429
- VARACTOR DIODES**
- Varactor high level mixer  
[NASA-CASE-XGS-02171] c 09 N69-24324
- Multiple varactor frequency doubler Patent  
[NASA-CASE-XMF-04958-1] c 10 N71-26414
- Millimeter wave pumped parametric amplifier  
[NASA-CASE-GSC-11617-1] c 33 N74-32660
- Maser cavity servo-tuning system  
[NASA-CASE-NPO-15890-1-CU] c 33 N85-29143
- VARIABILITY**
- Variable speed drive  
[NASA-CASE-GSC-12643-1] c 37 N83-26078
- Slotted variable camber flap  
[NASA-CASE-LAR-12541-1] c 05 N84-22551
- VARIABLE CYCLE ENGINES**
- Dual cycle aircraft turbine engine  
[NASA-CASE-LAR-11310-1] c 07 N77-28118
- Variable cycle gas turbine engines  
[NASA-CASE-LEW-12916-1] c 37 N78-17384
- Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c 07 N78-18067
- VARIABLE GEOMETRY STRUCTURES**
- Landing arrangement for aerial vehicles Patent  
[NASA-CASE-XLA-00142] c 02 N70-33286
- Variable geometry wind tunnels  
[NASA-CASE-XLA-07430] c 11 N72-22246
- Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c 07 N80-32392
- VARIABLE PITCH PROPELLERS**
- Dual output variable pitch turbofan actuation system  
[NASA-CASE-LEW-12419-1] c 07 N77-14025
- Impact absorbing blade mounts for variable pitch blades  
[NASA-CASE-LEW-12313-1] c 37 N78-10468
- VARIABLE SWEEP WINGS**
- Variable sweep wing configuration Patent  
[NASA-CASE-XLA-00230] c 02 N70-33255
- Variable sweep wing aircraft Patent  
[NASA-CASE-XLA-00221] c 02 N70-33266
- Variable-span aircraft Patent  
[NASA-CASE-XLA-00166] c 02 N70-34178
- Variable sweep aircraft wing Patent  
[NASA-CASE-XLA-00350] c 02 N70-38011
- Variable sweep aircraft Patent  
[NASA-CASE-XLA-03659] c 02 N71-11041
- Dual-fuselage aircraft having yawable wing and horizontal stabilizer  
[NASA-CASE-ARC-10470-1] c 02 N73-26005
- VARIABLE THRUST**
- Variable thrust ion engine utilizing thermally decomposable solid fuel Patent  
[NASA-CASE-XMF-00923] c 28 N70-36802
- Method for continuous variation of propellant flow and thrust in propulsive devices Patent  
[NASA-CASE-XLE-00177] c 28 N70-40367
- Variable thrust nozzle for quiet turbofan engine and method of operating same  
[NASA-CASE-LEW-12317-1] c 07 N78-17055
- VARIATIONS**
- Bidirectional step torque filter with zero backlash characteristic Patent  
[NASA-CASE-XGS-04227] c 15 N71-21744
- VECTOR ANALYSIS**
- Two force component measuring device Patent  
[NASA-CASE-XAC-04886-1] c 14 N71-20439
- VECTOR CURRENTS**
- Preloadable vector sensitive latch  
[NASA-CASE-MS-20910-1] c 37 N87-25582
- VECTOR QUANTIZATION**
- Pipeline synthetic aperture radar data compression utilizing systolic binary tree-searched architecture for vector quantization  
[NASA-CASE-NPO-17941-1-CU] c 32 N91-13595
- VECTOCARDIOGRAPHY**
- Biomedical electrode arrangement Patent  
[NASA-CASE-XFR-10856] c 05 N71-11189
- VECTORS (MATHEMATICS)**
- Method and apparatus for second-rank tensor generation  
[NASA-CASE-NPO-17512-1-CU] c 74 N91-26918
- VEGETATION GROWTH**
- Rotary plant growth accelerating apparatus --- weightlessness  
[NASA-CASE-ARC-10722-1] c 51 N75-25503
- Remote sensing of vegetation and soil using microwave ellipsometry  
[NASA-CASE-GSC-11976-1] c 43 N78-10529
- Enhancement of in vitro guayule propagation  
[NASA-CASE-NPO-15213-1] c 51 N83-17045
- VEHICLE WHEELS**
- Deformable vehicle wheel Patent  
[NASA-CASE-MFS-20400] c 31 N71-18611
- Resilient wheel Patent  
[NASA-CASE-MFS-13929] c 15 N71-27091
- Omnidirectional wheel  
[NASA-CASE-MFS-21309-1] c 37 N74-18125
- Two speed drive system --- mechanical device for changing speed on rotating vehicle wheel  
[NASA-CASE-MFS-20645-1] c 37 N74-23070
- Fifth wheel  
[NASA-CASE-FRC-10081-1] c 37 N77-14477
- Tire/wheel concept  
[NASA-CASE-LAR-11695-2] c 37 N81-24443
- Suspension system for a wheel rolling on a flat track --- bearings for directional antennas  
[NASA-CASE-NPO-14395-1] c 37 N82-21587
- VEHICLES**
- Magnetic suspension and pointing system  
[NASA-CASE-LAR-11889-2] c 37 N78-27424
- VEHICULAR TRACKS**
- Suspension system for a wheel rolling on a flat track --- bearings for directional antennas  
[NASA-CASE-NPO-14395-1] c 37 N82-21587
- Tank tread assemblies with track-linking mechanism  
[NASA-CASE-NPO-16321-1CU] c 37 N87-17034
- VELOCITY**
- Velocity limiting safety system Patent  
[NASA-CASE-XLA-07473] c 15 N71-24895
- VELOCITY COUPLING**
- Coupled cavity traveling wave tube with velocity tapering  
[NASA-CASE-LEW-12296-1] c 33 N82-26568
- VELOCITY MEASUREMENT**
- Micrometeoroid velocity measuring device Patent  
[NASA-CASE-XLA-00495] c 14 N70-41332
- Superconductive accelerometer Patent  
[NASA-CASE-XMF-01099] c 14 N71-15969
- Gravimeter Patent  
[NASA-CASE-XMF-05844] c 14 N71-17587
- Laser Doppler system for measuring three dimensional vector velocity Patent  
[NASA-CASE-MFS-20386] c 21 N71-19212
- Particle detection apparatus including a ballistic pendulum Patent  
[NASA-CASE-XMS-04201] c 14 N71-22990
- Angular velocity and acceleration measuring apparatus  
[NASA-CASE-ERC-10292] c 14 N72-25410
- Flow velocity and directional instrument  
[NASA-CASE-LAR-10855-1] c 14 N73-13415
- Doppler shift system --- system for measuring velocities of radiating particles  
[NASA-CASE-HQN-10740-1] c 72 N74-19310
- Tachometer  
[NASA-CASE-MFS-23175-1] c 35 N77-30436
- Velocity measurement system  
[NASA-CASE-MFS-23363-1] c 35 N78-32396
- Fluid velocity measuring device  
[NASA-CASE-LAR-11729-1] c 34 N79-12359
- Air speed and altitude probe  
[NASA-CASE-FRC-11009-1] c 06 N80-18036
- Fluidic angular velocity sensor  
[NASA-CASE-NPO-16479-1CU] c 35 N86-32695
- Spinning disk calibration method and apparatus for laser Doppler velocimeter  
[NASA-CASE-ARC-11510-1] c 35 N86-32697
- Laser velocimeter for near-surface measurements  
[NASA-CASE-ARC-11917-1] c 35 N91-15520
- Vaporizing particle velocimeter  
[NASA-CASE-LAR-14685-1] c 02 N91-28135
- VELOCITY MODULATION**
- Molecular beam velocity selector Patent  
[NASA-CASE-XLE-01533] c 11 N71-10777
- Apparatus for controlling the velocity of an electromechanical drive for interferometers and the like Patent  
[NASA-CASE-XGS-03532] c 14 N71-17627
- VENTILATION**
- Protective garment ventilation system  
[NASA-CASE-XMS-04928] c 54 N78-17679
- Low-drag ground vehicle particularly suited for use in safely transporting livestock  
[NASA-CASE-FRC-11058-1] c 85 N82-33288
- Ballast system for maintaining constant pressure in a glove box  
[NASA-CASE-NPO-17786-1-CU] c 35 N90-17104
- VENTILATORS**
- Heat sterilizable patient ventilator  
[NASA-CASE-NPO-13313-1] c 54 N75-27761
- VENTING**
- Venting vapor apparatus Patent  
[NASA-CASE-XLE-00288] c 15 N70-34247
- Liquid storage tank venting device for zero gravity environment Patent  
[NASA-CASE-XLE-01449] c 15 N70-41646
- Valve seat with resilient support member Patent  
[NASA-CASE-XKS-02582] c 15 N71-21234
- Venting device for pressurized space suit helmet Patent  
[NASA-CASE-XMS-09652-1] c 05 N71-26333
- Solid propellant rocket motor  
[NASA-CASE-XNP-03282] c 28 N72-20758
- Passive venting technique for shallow cavities  
[NASA-CASE-LAR-14031-1] c 05 N90-20079
- System for venting gas from a liquid storage tank  
[NASA-CASE-MS-21253-1] c 31 N90-20254
- Passive venting technique for shallow cavities  
[NASA-CASE-LAR-13875-1] c 05 N91-27156
- VENTURI TUBES**
- Liquid seeding atomizer  
[NASA-CASE-ARC-11631-1] c 34 N87-21255
- VENUS (PLANET)**
- Space simulator Patent  
[NASA-CASE-XNP-00459] c 11 N70-38675
- VERTICAL FLIGHT**
- Aircraft instrument Patent  
[NASA-CASE-XLA-00487] c 14 N70-40157
- VERTICAL LANDING**
- Landing gear Patent  
[NASA-CASE-XMF-01174] c 02 N70-41589

**VERTICAL ORIENTATION**

Vertical shaft windmill  
[NASA-CASE-LAR-12923-1] c 37 N84-12493

**VERTICAL TAKEOFF AIRCRAFT**

Mechanical stability augmentation system Patent  
[NASA-CASE-XLA-06339] c 02 N71-13422  
Attitude controls for VTOL aircraft Patent  
[NASA-CASE-XAC-08972] c 02 N71-20570

**VERY HIGH FREQUENCIES**

VHF/UHF parasitic probe antenna Patent  
[NASA-CASE-XKS-09340] c 07 N71-24614

**VERY LARGE SCALE INTEGRATION**

Split-cross-bridge resistor for testing for proper fabrication of integrated circuits  
[NASA-CASE-NPO-16021-1] c 33 N85-30187  
Method of examining microcircuit patterns  
[NASA-CASE-NPO-16299-1] c 33 N87-14594  
Systolic VLSI array for implementing the Kalman filter algorithm  
[NASA-CASE-NPO-17108-1-CU] c 33 N89-28713  
Network of dedicated processors for finding lowest-cost map path  
[NASA-CASE-NPO-17716-1-CU] c 62 N90-10608  
VLSI single-chip (255,223) Reed-Solomon encoder with interleaver  
[NASA-CASE-NPO-17280-1-CU] c 17 N90-21061  
VLSI binary updown counter  
[NASA-CASE-NPO-17205-1-CU] c 60 N90-21525  
VLSI architecture for a Reed-Solomon decoder  
[NASA-CASE-NPO-17897-1-CU] c 33 N90-27040  
Neural network with dynamically adaptable neurons  
[NASA-CASE-NPO-17803-1-CU] c 62 N90-27385

**VERY LONG BASE INTERFEROMETRY**

System for real-time crustal deformation monitoring  
[NASA-CASE-NPO-14124-1] c 46 N80-14603

**VESTS**

Life preserver Patent  
[NASA-CASE-XMS-00864] c 05 N70-36493

**VIBRATION**

Passive caging mechanism Patent  
[NASA-CASE-GSC-10306-1] c 15 N71-24694  
Active vibration isolator for flexible bodies Patent  
[NASA-CASE-LAR-10106-1] c 15 N71-27169  
Apparatus for disintegrating kidney stones  
[NASA-CASE-GSC-12652-1] c 52 N84-34913  
Vibrating-chamber levitation systems  
[NASA-CASE-NPO-16142-1-CU] c 35 N86-20752  
Suspension mechanism and method  
[NASA-CASE-LAR-14142-1] c 37 N90-27116  
Dynamic tester for rotor seals and bearings  
[NASA-CASE-MFS-28493-1] c 09 N91-25155  
Noncircular rolling joints for vibrational reduction in slewing maneuvers  
[NASA-CASE-LAR-14515-1-CU] c 37 N91-28580

**VIBRATION DAMPING**

Viscous pendulum damper Patent  
[NASA-CASE-LAR-10274-1] c 14 N71-17626  
Digital filter for reducing sampling jitter in digital control systems Patent  
[NASA-CASE-NPO-11088] c 08 N71-29034  
Turbo-machine blade vibration damper Patent  
[NASA-CASE-XLE-00155] c 28 N71-29154  
Active notch filter network with variable notch depth, width and frequency  
[NASA-CASE-FRC-11055-1] c 33 N80-29583  
Variable force, eddy-current or magnetic damper  
[NASA-CASE-LEW-13717-1] c 37 N85-30333  
Variable friction secondary seal for face seals  
[NASA-CASE-LEW-14170-1] c 37 N86-25790  
Tensile film clamps and mounting block for the rheovibron and autovibron viscoelastometer  
[NASA-CASE-LAR-13696-1] c 37 N90-20409  
Dynamic tester for rotor seals and bearings  
[NASA-CASE-MFS-28493-1] c 09 N91-25155  
Linear mass actuator  
[NASA-CASE-LAR-14352-1] c 37 N91-32511

**VIBRATION EFFECTS**

Thermal detector of electromagnetic energy by means of a vibrating electrode Patent  
[NASA-CASE-XAC-10768] c 09 N71-18830  
Apparatus for recovering matter adhered to a host surface  
[NASA-CASE-NPO-11213] c 15 N73-20514  
Spherical bearing --- to reduce vibration effects  
[NASA-CASE-MFS-23447-1] c 37 N79-11404  
Self-locking double retention redundant full pin release  
[NASA-CASE-NPO-16233-1] c 37 N86-20801

**VIBRATION ISOLATORS**

Variable stiffness polymeric damper  
[NASA-CASE-XAC-11225] c 14 N69-27486  
Miniature vibration isolator Patent  
[NASA-CASE-XLA-01019] c 15 N70-40156  
Vibration damping system Patent  
[NASA-CASE-XMS-01620] c 23 N71-15673  
Hermetic sealed vibration damper Patent  
[NASA-CASE-MSC-10959] c 15 N71-26243

Dynamic vibration absorber Patent  
[NASA-CASE-LAR-10083-1] c 15 N71-27006  
Vibration isolation system using compression springs  
[NASA-CASE-NPO-11012] c 15 N72-11391  
Thrust-isolating mounting --- characteristics of support for loads mounted in spacecraft  
[NASA-CASE-MFS-21680-1] c 18 N74-27397  
Shock absorbing mount for electrical components  
[NASA-CASE-NPO-13253-1] c 37 N75-18573  
Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles  
[NASA-CASE-MSC-12619-2] c 27 N79-12221  
Shock isolator for operating a diode laser on a closed-cycle refrigerator  
[NASA-CASE-GSC-12297-1] c 37 N79-28549  
Decoupler pylon: wing/store flutter suppressor  
[NASA-CASE-LAR-12468-1] c 08 N82-32373  
Vibration isolation and pressure compensation apparatus for sensitive instrumentation  
[NASA-CASE-LAR-12728-1] c 35 N83-32026  
Aircraft rotor blade with passive tuned tab  
[NASA-CASE-ARC-11444-1] c 05 N85-29947  
Variable force, eddy-current or magnetic damper  
[NASA-CASE-LEW-13717-1] c 37 N85-30333  
Segmented tubular cushion springs and spring assembly  
[NASA-CASE-ARC-11349-1] c 37 N86-20797

**VIBRATION MEASUREMENT**

Method and apparatus for measuring the damping characteristics of a structure  
[NASA-CASE-ARC-10154-1] c 14 N72-22440  
Method and apparatus for vibration analysis utilizing the Mossbauer effect  
[NASA-CASE-XMF-05882] c 35 N75-27329  
Displacement probes with self-contained exciting medium  
[NASA-CASE-LAR-11690-1] c 35 N80-14371  
Emitted vibration measurement device and method  
[NASA-CASE-MFS-25981-1] c 35 N87-14670  
Vibration analyzer  
[NASA-CASE-MSC-21408-1] c 37 N91-14607

**VIBRATION METERS**

Fiber optic vibration transducer and analyzer Patent  
[NASA-CASE-XMF-02433] c 14 N71-10616  
Ride quality meter  
[NASA-CASE-LAR-12882-1] c 35 N84-12445

**VIBRATION MODE**

Function generator for synthesizing complex vibration mode patterns  
[NASA-CASE-LAR-10310-1] c 10 N73-20253

**VIBRATION SIMULATORS**

Apparatus for vibrational testing of articles  
[NASA-CASE-GSC-11302-1] c 14 N73-13416

**VIBRATION TESTS**

Peak acceleration limiter for vibrational tester Patent  
[NASA-CASE-NPO-10556] c 14 N71-27185  
Fixture for supporting articles during vibration tests  
[NASA-CASE-MFS-20523] c 14 N72-27412  
Apparatus for vibrational testing of articles  
[NASA-CASE-GSC-11302-1] c 14 N73-13416  
Multi axes vibration fixtures  
[NASA-CASE-MFS-20242] c 14 N73-19421  
Aeroelastic instability stoppers for wind tunnel models  
[NASA-CASE-LAR-12458-1] c 44 N83-21503

**VIBRATIONAL SPECTRA**

Dynamic vibration absorber Patent  
[NASA-CASE-LAR-10083-1] c 15 N71-27006

**VIDEO COMMUNICATION**

Means for generating a sync signal in an FM communication system Patent  
[NASA-CASE-XNP-10830] c 07 N71-11281  
Reduced bandwidth video communication system utilizing sampling techniques Patent  
[NASA-CASE-XNP-02791] c 07 N71-23026  
Video communication system and apparatus Patent  
[NASA-CASE-XNP-06611] c 07 N71-26102  
Sampling video compression system  
[NASA-CASE-ARC-10984-1] c 32 N77-24328

**VIDEO DATA**

Digital television camera control system Patent  
[NASA-CASE-XNP-01472] c 14 N70-41807  
Transient video signal recording with expanded playback Patent  
[NASA-CASE-ARC-10003-1] c 09 N71-25866  
Facsimile video remodulation network  
[NASA-CASE-GSC-10185-1] c 07 N72-12081  
Dual digital video switcher  
[NASA-CASE-KSC-10782-1] c 33 N75-30431  
Neighborhood comparison operator  
[NASA-CASE-NPO-16464-1CU] c 60 N86-24224

**VIDEO EQUIPMENT**

Television signal processing system Patent  
[NASA-CASE-NPO-10140] c 07 N71-24742  
Video sync processor Patent  
[NASA-CASE-KSC-10002] c 10 N71-25865

Video communication system and apparatus Patent  
[NASA-CASE-XNP-06611] c 07 N71-26102  
Video signal enhancement system with dynamic range compression and modulation index expansion Patent  
[NASA-CASE-NPO-10343] c 07 N71-27341  
Broadband video process with very high input impedance  
[NASA-CASE-NPO-10199] c 09 N72-17156  
Electronic video editor  
[NASA-CASE-KSC-10003] c 10 N73-13235  
Scan converting video tape recorder  
[NASA-CASE-NPO-10166-1] c 07 N73-22076  
Scan converting video tape recorder  
[NASA-CASE-NPO-10166-2] c 35 N76-16391  
Stack plume visualization system  
[NASA-CASE-LAR-11675-1] c 45 N76-17656  
Reconfigurable work station for a video display unit and keyboard  
[NASA-CASE-MFS-26009-1-SB] c 54 N88-24163  
Programmable pipelined image processor  
[NASA-CASE-NPO-16461-1CU] c 60 N89-26400

**VIDEO SIGNALS**

Programmable scan/read circuitry for charge coupled device imaging detectors --- spacecraft attitude control and star trackers  
[NASA-CASE-NPO-15345-1] c 74 N84-23247  
Television camera video level control system  
[NASA-CASE-MSC-18578-1] c 32 N85-21427  
Large TV display system  
[NASA-CASE-NPO-16932-1CU] c 33 N87-15413  
Method and apparatus for telemetry adaptive bandwidth compression  
[NASA-CASE-MSC-20821-1] c 17 N87-25348  
Real-time data compression of broadcast video signals  
[NASA-CASE-LEW-14945-1] c 32 N91-13598

**VIDEO TAPE RECORDERS**

Transient video signal recording with expanded playback Patent  
[NASA-CASE-ARC-10003-1] c 09 N71-25866  
Scan converting video tape recorder  
[NASA-CASE-NPO-10166-1] c 07 N73-22076  
Scan converting video tape recorder  
[NASA-CASE-NPO-10166-2] c 35 N76-16391

**VIDEO TAPES**

Generation of animation sequences of three dimensional models  
[NASA-CASE-MSC-21379-1-SB] c 61 N90-27340

**VIDICONS**

Method of erasing target material of a vidicon tube or the like Patent  
[NASA-CASE-XNP-06028] c 09 N71-23189  
Material handling device Patent  
[NASA-CASE-XNP-09770-3] c 11 N71-27036

**VIEWING**

Real-time 3-D X-ray and gamma-ray viewer  
[NASA-CASE-GSC-12640-1] c 74 N84-11920  
Double window viewing chamber assembly  
[NASA-CASE-MFS-28057-1] c 09 N87-14355  
Stereoscopic camera and viewing systems with undistorted depth presentation and reduced or eliminated erroneous acceleration and deceleration perceptions, or with perceptions produced or enhanced for special effects  
[NASA-CASE-NPO-18028-1-CU] c 74 N91-24878

**VINYL COPOLYMERS**

Copolymers of vinyl styrylpyridines or vinyl stilbazoles with bismaleimide  
[NASA-CASE-ARC-11429-1-CU] c 27 N86-20560  
Vinyl stilbazoles  
[NASA-CASE-ARC-11429-3CU] c 27 N87-16908  
Structural panels  
[NASA-CASE-ARC-11429-2-CU] c 27 N87-22845

**VINYL POLYMERS**

Method of using photovoltaic cell using poly-N-vinylcarbazole complex Patent  
[NASA-CASE-NPO-10373] c 03 N71-18698  
Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-1] c 27 N78-32256  
Compound oxidized styrylphosphine --- flame resistant vinyl polymers  
[NASA-CASE-MSC-14903-2] c 27 N80-10358  
Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-3] c 27 N80-24438

**VINYLDIENE**

Dicyanoacetylene polymers Patent  
[NASA-CASE-XNP-03250] c 06 N71-23500

**VIROSES**

Water system virus detection  
[NASA-CASE-MSC-16098-1] c 51 N79-10693

**VISCOELASTICITY**

Resilience testing device Patent  
[NASA-CASE-XLA-08254] c 14 N71-26161  
Parallel-plate viscometer with double diaphragm suspension  
[NASA-CASE-NPO-11387] c 14 N73-14429

Shock absorbing mount for electrical components  
 [NASA-CASE-NPO-13253-1] c 37 N75-18573  
 Viscoelastic cationic polymers containing the urethane linkage  
 [NASA-CASE-NPO-10830-1] c 27 N81-15104  
 Tensile film clamps and mounting block for the rheovibron and autovibron viscoelastometer  
 [NASA-CASE-LAR-13696-1] c 37 N90-20409  
 Composite passive damping struts for large precision structures  
 [NASA-CASE-NPO-17914-1-CU] c 39 N91-13767

**VISCOMETERS**

Parallel plate viscometer Patent  
 [NASA-CASE-XNP-09462] c 14 N71-17584  
 Parallel-plate viscometer with double diaphragm suspension  
 [NASA-CASE-NPO-11387] c 14 N73-14429

**VISCOSITY**

Low viscosity magnetic fluid obtained by the colloidal suspension of magnetic particles Patent  
 [NASA-CASE-XLE-01512] c 12 N70-40124  
 Viscosity measuring instrument  
 [NASA-CASE-NPO-14501-1] c 35 N80-18357  
 Process of end-capping a polyimide system  
 [NASA-CASE-LAR-13135-1] c 27 N86-19456  
 A tough performance simultaneous semi-interpenetrating polymer network  
 [NASA-CASE-LAR-14339-1] c 27 N90-26955

**VISCOUS DAMPING**

Variable stiffness polymeric damper  
 [NASA-CASE-XAC-11225] c 14 N69-27486  
 Viscous-pendulum-damper Patent  
 [NASA-CASE-XLA-02079] c 12 N71-16894  
 Viscous pendulum damper Patent  
 [NASA-CASE-LAR-10274-1] c 14 N71-17626  
 Multiple plate hydrostatic viscous damper  
 [NASA-CASE-LEW-12445-1] c 37 N81-22360

**VISIBILITY**

Controlled visibility device for an aircraft Patent  
 [NASA-CASE-XFR-04147] c 11 N71-10748  
 Reusable captive blind fastener  
 [NASA-CASE-MS-C-18742-1] c 37 N82-26673  
 EMU helmet mounted display  
 [NASA-CASE-MS-C-21460-1] c 54 N91-13879

**VISIBLE SPECTRUM**

Spectrally balanced chromatic landing approach lighting system  
 [NASA-CASE-ARC-10990-1] c 04 N82-16059

**VISION**

Retinally stabilized differential resolution television display  
 [NASA-CASE-NPO-15432-1] c 32 N85-29117

**VISORS**

Anti-fog composition --- for prevention of fogging on surfaces such as space helmet visors and windshields  
 [NASA-CASE-MS-C-13530-2] c 23 N75-14834

**VISUAL ACUITY**

Multiparameter vision testing apparatus  
 [NASA-CASE-MS-C-13601-2] c 54 N75-27759

**VISUAL AIDS**

Visual aid for the hearing impaired  
 [NASA-CASE-GSC-13027-1-CU] c 35 N91-27522

**VISUAL CONTROL**

Visual target for retrofire attitude control  
 [NASA-CASE-XMS-12158-1] c 31 N69-27499  
 Spectrally balanced chromatic landing approach lighting system  
 [NASA-CASE-ARC-10990-1] c 04 N82-16059

**VISUAL FIELDS**

Visual examination apparatus  
 [NASA-CASE-ARC-10329-1] c 05 N73-26072  
 Visual examination apparatus  
 [US-PATENT-RE-28,921] c 52 N76-30793  
 Binocular device for displaying numerical information in field of view  
 [NASA-CASE-LAR-11782-1] c 74 N77-20882  
 Visual accommodation trainer-tester  
 [NASA-CASE-ARC-11426-1] c 09 N84-12193

**VISUAL OBSERVATION**

Automatic visual inspection system for microelectronics  
 [NASA-CASE-NPO-13282] c 38 N78-17396

**VISUAL PERCEPTION**

Liquid flow sight assembly Patent  
 [NASA-CASE-XLE-02998] c 14 N70-42074  
 Aircraft control position indicator  
 [NASA-CASE-LAR-12984-1] c 06 N87-22678  
 Visual accommodation trainer-tester  
 [NASA-CASE-ARC-11426-2] c 52 N89-16256

**VISUAL STIMULI**

Reaction tester  
 [NASA-CASE-MS-C-13604-1] c 05 N73-13114

**VITERBI DECODERS**

Space communication system for compressed data with a concatenated Reed-Solomon-Viterbi coding channel  
 [NASA-CASE-NPO-13545-1] c 32 N77-12240

**VOICE COMMUNICATION**

Position location system and method Patent  
 [NASA-CASE-GSC-10087-2] c 21 N71-13958  
 Satellite communication system and method Patent  
 [NASA-CASE-GSC-10118-1] c 07 N71-24621  
 Protective suit having an audio transceiver Patent  
 [NASA-CASE-KSC-10164] c 07 N71-33108  
 Technique for recovery of voice data from heat damaged magnetic tape  
 [NASA-CASE-MS-C-14219-1] c 32 N74-27612  
 Filtering device --- removing electromagnetic noise from voice communication signals  
 [NASA-CASE-MFS-22729-1] c 32 N76-21366  
 Real time analysis of voiced sounds  
 [NASA-CASE-NPO-13465-1] c 32 N76-31372  
 Satellite personal communications system  
 [NASA-CASE-NPO-14480-1] c 32 N80-20448

**VOICE DATA PROCESSING**

Digital communication system  
 [NASA-CASE-MS-C-13912-1] c 32 N74-30524  
 Method and apparatus for operating on companded PCM voice data  
 [NASA-CASE-KSC-11285-1] c 32 N86-27513

**VOIDS**

Wet spinning of solid polyamic acid fibers  
 [NASA-CASE-LAR-14162-1] c 27 N90-15259  
 Thermal treatment of silicon integrated circuit chips to prevent and heal voids in aluminum metallization  
 [NASA-CASE-NPO-17678-1-CU] c 76 N91-28014

**VOLATILITY**

Apparatus for testing polymeric materials Patent  
 [NASA-CASE-XNP-09699] c 06 N71-24607

**VOLT-AMPERE CHARACTERISTICS**

Voltage-current characteristic simulator Patent  
 [NASA-CASE-XMS-01554] c 10 N71-10578  
 The dc-to-dc converters employing staggered-phase power switches with two-loop control  
 [NASA-CASE-NPO-13512-1] c 33 N77-10428  
 Apparatus including a plurality of spaced transformers for locating short circuits in cables  
 [NASA-CASE-KSC-10899-1] c 33 N79-18193

**VOLTAGE AMPLIFIERS**

Electronic amplifier with power supply switching Patent  
 [NASA-CASE-XMS-00945] c 09 N71-10798  
 Bootstrap unloader Patent  
 [NASA-CASE-XNP-09768] c 09 N71-12516  
 Active RC networks  
 [NASA-CASE-ARC-10020] c 10 N72-17172  
 Wide range analog-to-digital converter with a variable gain amplifier  
 [NASA-CASE-NPO-11018] c 08 N72-21200  
 Voltage feed through apparatus having reduced partial discharge  
 [NASA-CASE-GSC-12347-1] c 33 N80-18286  
 Arc lamp power supply using a voltage multiplier  
 [NASA-CASE-LAR-13202-1] c 33 N88-23942

**VOLTAGE CONTROLLED OSCILLATORS**

Pulsed phase locked loop strain monitor --- voltage controlled oscillators  
 [NASA-CASE-LAR-12772-1] c 33 N83-16626  
 Automatic oscillator frequency control system  
 [NASA-CASE-GSC-12804-1] c 33 N86-20668  
 Radio Frequency (RF) strain monitor  
 [NASA-CASE-LAR-13705-1] c 39 N88-25011  
 Dual physiological rate measurement instrument  
 [NASA-CASE-MS-C-20078-3] c 52 N91-14709

**VOLTAGE CONVERTERS (DC TO DC)**

Regulated dc-to-dc converter for voltage step-up or step-down with input-output isolation  
 [NASA-CASE-HQN-10792-1] c 33 N74-11049  
 The dc-to-dc converters employing staggered-phase power switches with two-loop control  
 [NASA-CASE-NPO-13512-1] c 33 N77-10428  
 Inrush current limiter  
 [NASA-CASE-GSC-11789-1] c 33 N77-14333  
 Phase substitution of spare converter for a failed one of parallel phase staggered converters  
 [NASA-CASE-NPO-13812-1] c 33 N77-30365  
 Regulated high efficiency, lightweight capacitor-diode multiplier dc to dc converter  
 [NASA-CASE-LEW-12791-1] c 33 N78-32341  
 Buck/boost regulator  
 [NASA-CASE-GSC-12360-1] c 33 N81-19392  
 Elimination of current spikes in buck power converters  
 [NASA-CASE-NPO-14505-1] c 33 N81-19393  
 Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
 [NASA-CASE-NPO-14316-1] c 33 N81-33404  
 Power converter  
 [NASA-CASE-FRC-11014-1] c 33 N82-18494  
 A dc to dc converter  
 [NASA-CASE-MFS-25430-1] c 33 N84-16453  
 Simplified dc to dc converter  
 [NASA-CASE-LEW-13495-1] c 33 N84-33663

**VOLTAGE GENERATORS**

Pulsed energy power system Patent  
 [NASA-CASE-MS-C-13112] c 03 N71-11057  
 Telemeter adaptable for implanting in an animal Patent  
 [NASA-CASE-XAC-05706] c 05 N71-12342  
 Multiple slope sweep generator Patent  
 [NASA-CASE-XMS-03542] c 09 N71-28926  
 Controllable load insensitive power converters  
 [NASA-CASE-ERC-10268] c 09 N72-25252  
 Driver for solar cell I-V characteristic plots  
 [NASA-CASE-NPO-14096-1] c 44 N80-18551  
 Adaptive reference voltage generator for firing angle control of line-commutated inverters  
 [NASA-CASE-MFS-25215-1] c 33 N83-31953

**VOLTAGE REGULATORS**

Regulated dc to dc converter  
 [NASA-CASE-XGS-03429] c 03 N69-21330  
 Power control circuit  
 [NASA-CASE-XNP-02713] c 10 N69-39888  
 Amplifier drift tester  
 [NASA-CASE-XMS-05562-1] c 09 N69-39986  
 Bus voltage compensation circuit for controlling direct current motor  
 [NASA-CASE-XMS-04215-1] c 09 N69-39987  
 Regulated power supply Patent  
 [NASA-CASE-XMS-01991] c 09 N71-21449  
 High voltage divider system Patent  
 [NASA-CASE-XLE-02008] c 09 N71-21583  
 Power supply circuit Patent  
 [NASA-CASE-XMS-00913] c 10 N71-23543  
 Voltage to frequency converter Patent  
 [NASA-CASE-GSC-10022-1] c 10 N71-25882  
 Buck boost voltage regulation circuit Patent  
 [NASA-CASE-GSC-10735-1] c 10 N71-26085  
 Automatic signal range selector for metering devices Patent  
 [NASA-CASE-XMS-06497] c 14 N71-26244  
 Voltage regulator with plural parallel power source sections Patent  
 [NASA-CASE-GSC-10891-1] c 10 N71-26626  
 Maximum power point tracker Patent  
 [NASA-CASE-GSC-10376-1] c 14 N71-27407  
 High power microwave power divider Patent  
 [NASA-CASE-NPO-11031] c 07 N71-33606  
 Reference voltage switching unit  
 [NASA-CASE-NPO-11253] c 09 N72-17157  
 Switching regulator  
 [NASA-CASE-LEW-11005-1] c 09 N72-21243  
 Controllable load insensitive power converters  
 [NASA-CASE-ERC-10268] c 09 N72-25252  
 Regulated dc-to-dc converter for voltage step-up or step-down with input-output isolation  
 [NASA-CASE-HQN-10792-1] c 33 N74-11049  
 Overvoltage protection network  
 [NASA-CASE-ARC-10197-1] c 33 N74-17929  
 Low distortion automatic phase control circuit --- voltage controlled phase shifter  
 [NASA-CASE-MFS-21671-1] c 33 N74-22885  
 Voltage monitoring system  
 [NASA-CASE-KSC-10736-1] c 33 N75-19521  
 Transformer regulated self-stabilizing chopper  
 [NASA-CASE-XGS-09186] c 33 N78-17295  
 Voltage regulator for battery power source --- using a bipolar transistor  
 [NASA-CASE-FRC-10116-1] c 33 N79-23345  
 Buck/boost regulator  
 [NASA-CASE-GSC-12360-1] c 33 N81-19392  
 Motor power factor controller with a reduced voltage starter  
 [NASA-CASE-MFS-25586-1] c 33 N82-11360  
 Pulse switching for high energy lasers  
 [NASA-CASE-NPO-14556-1] c 33 N82-24418  
 Three phase power factor controller  
 [NASA-CASE-MFS-25535-2] c 33 N84-22885  
 High voltage insulation transformer  
 [NASA-CASE-GSC-12817-1] c 33 N85-29146

**VOLTMETERS**

Voltage monitoring system  
 [NASA-CASE-KSC-10736-1] c 33 N75-19521

**VOLUME**

Mining volume measurement system  
 [NASA-CASE-LAR-13519-1] c 35 N88-23963  
 Volumetric measurement of tank volume  
 [NASA-CASE-MS-C-21500-1] c 35 N91-21493

**VOLUMETRIC ANALYSIS**

Volumetric direct nuclear pumped laser  
 [NASA-CASE-LAR-12183-1] c 36 N79-18307

**VOMITING**

Venting device for pressurized space suit helmet Patent  
 [NASA-CASE-XMS-09652-1] c 05 N71-26333

**VORTEX BREAKDOWN**

Wingtip vortex dissipator for aircraft  
 [NASA-CASE-LAR-11645-1] c 02 N77-10001



**VORTEX GENERATORS**

- Multiway vortex valve system Patent  
[NASA-CASE-XMF-04709] c 15 N71-15609
- Vortex generator for controlling the dispersion of effluents in a flowing liquid  
[NASA-CASE-LAR-12045-1] c 34 N77-24423
- Vortex generating flow passage design for increased film cooling effectiveness  
[NASA-CASE-LEW-14039-1] c 34 N85-33433
- Wingtip vortex propeller  
[NASA-CASE-LAR-13019-1] c 07 N85-35194

**VORTICES**

- Vortex-lift roll-control device  
[NASA-CASE-LAR-11868-2] c 08 N79-14108
- Vortex motion phase separator for zero gravity liquid transfer  
[NASA-CASE-KSC-11387-1] c 29 N90-20236
- Wingtip vortex turbine  
[NASA-CASE-LAR-14116-1] c 05 N91-14345

**VORTICITY**

- Crossflow vorticity sensor  
[NASA-CASE-LAR-13438-1-CU] c 02 N88-23759
- Passive laminar flow control of crossflow vorticity  
[NASA-CASE-LAR-13563-1] c 34 N91-23410

**VULCANIZING**

- Method for compression molding of thermosetting plastics utilizing a temperature gradient across the plastic to cure the article  
[NASA-CASE-LAR-10489-1] c 31 N74-18124

**VULNERABILITY**

- Pressure rig for repetitive casting  
[NASA-CASE-LAR-14050-1] c 31 N90-21216

**W****WAFERS**

- Apparatus and method for separating a semiconductor wafer Patent  
[NASA-CASE-ERC-10139] c 26 N71-14354
- Apparatus for use in examining the lattice of a semiconductor wafer by X-ray diffraction  
[NASA-CASE-MFS-23315-1] c 76 N78-24950
- System for slicing silicon wafers  
[NASA-CASE-NPO-14406-1] c 37 N80-29703
- Scriber for silicon wafers  
[NASA-CASE-NPO-15539-1] c 37 N82-11469
- Method of Fabricating Schottky Barrier solar cell  
[NASA-CASE-NPO-13689-4] c 44 N82-28780
- Method of making a high voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c 44 N82-29709
- High voltage planar multijunction solar cell  
[NASA-CASE-LEW-13400-1] c 44 N82-31764
- Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
[NASA-CASE-MFS-15670-1] c 33 N82-33634
- High voltage v-groove solar cell  
[NASA-CASE-LEW-13401-2] c 44 N83-32177
- Method of increasing minority carrier lifetime in silicon web or the like  
[NASA-CASE-NPO-15530-1] c 76 N83-35888
- Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
[NASA-CASE-MFS-256704-1] c 33 N84-22884
- Imaging X-ray spectrometer  
[NASA-CASE-GSC-12692-1] c 35 N84-33765
- Epitaxial thinning process  
[NASA-CASE-NPO-15786-1] c 76 N84-35112
- Process and apparatus for growing a crystal ribbon  
[NASA-CASE-NPO-15629-1] c 76 N84-35113
- Ingot slicing machine and method  
[NASA-CASE-NPO-15483-1] c 37 N85-21650
- Lithium counterdoped silicon solar cell  
[NASA-CASE-LEW-14177-1] c 44 N86-32875
- Cross-contact chain  
[NASA-CASE-NPO-16784-1] c 33 N87-10231
- Floating emitter solar cell  
[NASA-CASE-NPO-16467-1-CU] c 33 N87-23879
- Optical shutter switching matrix  
[NASA-CASE-KSC-11392-1] c 74 N90-22383
- Method of fabricating germanium and gallium arsenide devices  
[NASA-CASE-GSC-13265-1] c 76 N91-14066
- Process for the controlled growth of single-crystal films of silicon carbide polytypes on silicon carbide wafers  
[NASA-CASE-LEW-15222-1] c 76 N91-26966
- Process for the homoepitaxial growth of single-crystal silicon carbide films on silicon carbide wafers  
[NASA-CASE-LEW-15223-1] c 76 N91-26967
- Quantum well, beam deflecting surface emitting lasers  
[NASA-CASE-NPO-18243-1-CU] c 36 N91-32489
- WAKES**
- Space ultra-vacuum facility and method of operation  
[NASA-CASE-MFS-28139-1] c 29 N87-18679

**WALKING**

- Drop foot corrective device  
[NASA-CASE-LAR-12259-2] c 54 N86-22112
- Compliant walker  
[NASA-CASE-GSC-13348-2] c 52 N91-29714

**WALKING MACHINES**

- Space spider crane  
[NASA-CASE-LAR-13411-1-SB] c 18 N88-23828

**WALL TEMPERATURE**

- Method of making apparatus for sensing temperature  
[NASA-CASE-XLE-05230-2] c 14 N73-13417
- Structural heat pipe --- for spacecraft wall thermal insulation system  
[NASA-CASE-GSC-11619-1] c 34 N75-12222
- Thermal control canister  
[NASA-CASE-GSC-12253-1] c 34 N79-31523
- Curved film cooling admission tube  
[NASA-CASE-LEW-13174-1] c 34 N83-27144

**WALLS**

- Formed metal ribbon wrap Patent  
[NASA-CASE-XLE-00164] c 15 N70-36411
- Method and apparatus for mapping the distribution of chemical elements in an extended medium  
[NASA-CASE-GSC-12808-1] c 25 N85-21279
- Apparatus and method to keep the walls of a free-space reactor free from deposits of solid materials  
[NASA-CASE-NPO-15851-1] c 37 N85-21652
- Sound attenuation apparatus  
[NASA-CASE-LAR-13968-1] c 71 N91-27913

**WARNING SYSTEMS**

- Out of tolerance warning alarm system for plurality of monitored circuits Patent  
[NASA-CASE-XMS-10984-1] c 10 N71-19417
- Unsaturating saturable core transformer Patent  
[NASA-CASE-ERC-10125] c 09 N71-24893
- Electrical apparatus for detection of thermal decomposition of insulation Patent  
[NASA-CASE-XMF-03968] c 14 N71-27186
- Combustion products generating and metering device  
[NASA-CASE-GSC-11095-1] c 14 N72-10375
- Stacked array of omnidirectional antennas  
[NASA-CASE-LAR-10545-1] c 09 N72-21244
- Display research collision warning system  
[NASA-CASE-HQN-10703] c 21 N73-13643
- System for indicating direction of intruder aircraft  
[NASA-CASE-ERC-10226-1] c 14 N73-16483
- Silent emergency alarm system for schools and the like  
[NASA-CASE-NPO-11307-1] c 10 N73-30205
- Apparatus for aiding a pilot in avoiding a midair collision between aircraft  
[NASA-CASE-LAR-10717-1] c 21 N73-30641
- Inverter ratio failure detector  
[NASA-CASE-NPO-13160-1] c 35 N74-18090
- Hearing aid malfunction detection system  
[NASA-CASE-MSC-14916-1] c 33 N78-10375
- Automatic communication signal monitoring system  
[NASA-CASE-NPO-13941-1] c 32 N79-10262
- Passive intrusion detection system  
[NASA-CASE-NPO-13804-1] c 33 N80-23559
- Scanning seismic intrusion detection method and apparatus --- monitoring unwanted subterranean entry and departure  
[NASA-CASE-ARC-11317-1] c 35 N83-34272
- Rapidly quantifying the relative distention of a human bladder  
[NASA-CASE-LAR-13901-1-NP] c 52 N90-21519
- Computer access security code system  
[NASA-CASE-NPO-17525-1-CU] c 60 N90-25583
- Visual aid for the hearing impaired  
[NASA-CASE-GSC-13027-1-CU] c 35 N91-27522

**WASHING**

- Method of neutralizing the corrosive surface of amine-cured epoxy resins  
[NASA-CASE-GSC-12686-1] c 27 N83-34039
- Method and apparatus for cleaning rubber deposits from airport runways and roadways  
[NASA-CASE-LAR-14483-1] c 31 N91-28455

**WASTE DISPOSAL**

- Relief container  
[NASA-CASE-XMS-06761] c 05 N69-23192
- An airlock  
[NASA-CASE-MFS-20922] c 31 N72-20840
- Liquid waste feed system  
[NASA-CASE-LAR-10365-1] c 05 N72-27102
- Reduced gravity fecal collector seat and urinal  
[NASA-CASE-MFS-22102-1] c 54 N74-20725
- Airlock  
[NASA-CASE-MFS-20922-1] c 18 N74-22136
- Automatic liquid inventory collecting and dispensing unit  
[NASA-CASE-LAR-11071-1] c 35 N75-19611
- Automatic biowaste sampling  
[NASA-CASE-MSC-14640-1] c 54 N76-14804
- Absorbent product and articles made therefrom  
[NASA-CASE-MSC-18223-2] c 54 N84-11758

- Improved method and apparatus for waste collection and storage  
[NASA-CASE-MSC-21025-1] c 31 N87-25495
- Valve for waste collection and storage  
[NASA-CASE-MSC-21025-4] c 54 N91-14723
- Method for waste collection and storage  
[NASA-CASE-MSC-21025-2] c 54 N91-14724
- Method and apparatus for waste collection and storage  
[NASA-CASE-MSC-21025-3] c 54 N91-26747

**WASTE ENERGY UTILIZATION**

- Automotive absorption air conditioner utilizing solar and motor waste heat  
[NASA-CASE-NPO-15183-1] c 44 N82-26776
- Apparatus for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-1] c 07 N83-36029
- Method for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-2] c 07 N86-20389

**WASTE HEAT**

- Thermal control system --- removing waste heat from industrial process spacecraft  
[NASA-CASE-GSC-12771-1] c 34 N84-14461

**WASTE UTILIZATION**

- Simultaneous treatment of SO<sub>2</sub> containing stack gases and waste water  
[NASA-CASE-MSC-16258-1] c 45 N79-12584

**WASTE WATER**

- Water system virus detection  
[NASA-CASE-MSC-16098-1] c 51 N79-10693
- Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c 85 N79-17747
- Method for treating wastewater using microorganisms and vascular aquatic plants  
[NASA-CASE-NSTL-10] c 45 N84-12654
- Combined air and water pollution control system  
[NASA-CASE-NST-00007-1] c 45 N91-14662

**WATER**

- High power-high voltage waterload Patent  
[NASA-CASE-XNP-05381] c 09 N71-20842
- Procedure and apparatus for determination of water in nitrogen tetroxide  
[NASA-CASE-NPO-10234] c 06 N72-17094
- Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-1] c 37 N76-16446
- Solar hydrogen generator  
[NASA-CASE-LAR-11361-1] c 44 N77-22607
- Remote water monitoring system  
[NASA-CASE-LAR-11973-1] c 35 N78-27384
- Solar photolysis of water  
[NASA-CASE-NPO-14126-1] c 44 N79-11470
- Water window imaging x ray microscope  
[NASA-CASE-MFS-28485-1] c 35 N91-15519
- Purification system  
[NASA-CASE-MSC-21584-1] c 25 N91-24362
- Method and apparatus for cleaning rubber deposits from airport runways and roadways  
[NASA-CASE-LAR-14483-1] c 31 N91-28455
- Biofilm monitoring coupon system and method of use  
[NASA-CASE-MSC-21585-1] c 51 N91-31755

**WATER FLOW**

- Potable water dispenser  
[NASA-CASE-MFS-21115-1] c 54 N74-12779
- Self-contained, single-use hose and tubing cleaning module  
[NASA-CASE-MSC-20857-1] c 37 N87-17035

**WATER INJECTION**

- Reentry communication by material addition Patent  
[NASA-CASE-XLA-01552] c 07 N71-11284

**WATER LANDING**

- Vehicle parachute and equipment jettison system Patent  
[NASA-CASE-XLA-00195] c 02 N70-38009
- Emergency earth orbital escape device  
[NASA-CASE-MSC-13281] c 31 N72-18859

**WATER MANAGEMENT**

- Water management system and an electrolytic cell therefor Patent  
[NASA-CASE-MSC-10960-1] c 03 N71-24718
- Solar-powered pump  
[NASA-CASE-NPO-13567-1] c 44 N76-29701

**WATER POLLUTION**

- Compact solar still Patent  
[NASA-CASE-XMS-04533] c 15 N71-23086
- Bacterial contamination monitor  
[NASA-CASE-GSC-10879-1] c 14 N72-25413
- Method and automated apparatus for detecting coliform organisms  
[NASA-CASE-MSC-16777-1] c 51 N80-27067
- Combined air and water pollution control system  
[NASA-CASE-NST-00007-1] c 45 N91-14662

## WATER QUALITY

- Fluid sample collection and distribution system --- qualitative analysis of aqueous samples from several points  
[NASA-CASE-MSC-16841-1] c 34 N79-24285
- Rapid, quantitative determination of bacteria in water --- adenosine triphosphate  
[NASA-CASE-GSC-12158-1] c 51 N83-27569
- Method for detecting coliform organisms  
[NASA-CASE-ARC-11322-1] c 51 N83-28849
- WATER RECLAMATION**
- Recovery of potable water from human wastes in below-G conditions Patent  
[NASA-CASE-XLA-03213] c 05 N71-11207
- Water system virus detection  
[NASA-CASE-MSC-16098-1] c 51 N79-10693
- Water separator  
[NASA-CASE-XMS-01295-1] c 37 N79-21345
- Whole body cleansing agent  
[NASA-CASE-MSC-21589-1] c 54 N91-16566
- WATER RESOURCES**
- Radar target for remotely sensing hydrological phenomena  
[NASA-CASE-LAR-12344-1] c 43 N80-18498
- WATER SPLITTING**
- Static feed water electrolysis subsystem development  
[NASA-CASE-MSC-21577-1-SB] c 25 N91-23271
- WATER TEMPERATURE**
- Differential temperature transducer Patent  
[NASA-CASE-XAC-00812] c 14 N71-15598
- WATER TREATMENT**
- Water management system and an electrolytic cell therefor Patent  
[NASA-CASE-MSC-10960-1] c 03 N71-24718
- Method of preparing water purification membranes --- polymerization of allyl amine as thin films in plasma discharge  
[NASA-CASE-ARC-10643-1] c 25 N75-12087
- Iodine generator for reclaimed water purification  
[NASA-CASE-MSC-14632-1] c 54 N78-14784
- Water system virus detection  
[NASA-CASE-MSC-16098-1] c 51 N79-10693
- Simultaneous treatment of SO<sub>2</sub> containing stack gases and waste water  
[NASA-CASE-MSC-16258-1] c 45 N79-12584
- Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c 85 N79-17747
- Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c 45 N80-14579
- Reverse osmosis membrane of high urea rejection properties --- water purification  
[NASA-CASE-ARC-10980-1] c 27 N80-23452
- Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NPO-14001-1] c 27 N81-14076
- Sewage sludge additive  
[NASA-CASE-NPO-13877-1] c 45 N82-11634
- Method for treating wastewater using microorganisms and vascular aquatic plants  
[NASA-CASE-NSTL-10] c 45 N84-12654
- Combined air and water pollution control system  
[NASA-CASE-NST-00007-1] c 45 N91-14662
- Purification system  
[NASA-CASE-MSC-21584-1] c 25 N91-24362
- Regenerable biocide delivery unit  
[NASA-CASE-MSC-21763-1] c 51 N91-25570
- WATER VAPOR**
- Vapor pressure measuring system and method Patent  
[NASA-CASE-XMS-01618] c 14 N71-20741
- Cell and method for electrolysis of water and anode  
[NASA-CASE-MSC-16394-1] c 28 N81-24280
- Geodetic distance measuring apparatus  
[NASA-CASE-GSC-12609-2] c 36 N83-29681
- Wet atmospheric generation apparatus  
[NASA-CASE-MFS-28177-1] c 35 N91-21496
- WATER WAVES**
- Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
[NASA-CASE-NPO-13862-1] c 35 N79-10391
- Oceanic wave measurement system  
[NASA-CASE-MFS-23862-1] c 48 N80-18667
- WATERPROOFING**
- Glass-to-metal seals comprising relatively high expansion metals  
[NASA-CASE-LEW-10698-1] c 37 N74-21063
- Elevated waterproof access floor system and method of making the same  
[NASA-CASE-ARC-11363-1] c 31 N87-16918
- WATERWAVE ENERGY CONVERSION**
- Natural turbulence electrical power generator --- using wave action or random motion  
[NASA-CASE-LAR-11551-1] c 44 N80-29834

## WAVE AMPLIFICATION

- Distributed feedback acoustic surface wave oscillator  
[NASA-CASE-NPO-13673-1] c 71 N77-26919
- WAVE DIFFRACTION**
- Diffraction grating configuration for X-ray and ultraviolet focusing  
[NASA-CASE-GSC-12357-1] c 74 N80-21140
- WAVE FRONT RECONSTRUCTION**
- Recording and reconstructing focused image holograms Patent  
[NASA-CASE-ERC-10017] c 16 N71-15567
- WAVE FRONTS**
- Feedback controlled optics with wavefront compensation  
[NASA-CASE-NPO-18194-1-CU] c 74 N91-32924
- WAVE GENERATION**
- Wind tunnel airstream oscillating apparatus Patent  
[NASA-CASE-XLA-00112] c 11 N70-33287
- Linear sawtooth voltage-wave generator employing transistor timing circuit having capacitor-zener diode combination feedback Patent  
[NASA-CASE-XMS-01315] c 09 N70-41675
- Waveform simulator Patent  
[NASA-CASE-NPO-10251] c 10 N71-27365
- Wide band doubler and sine wave quadrature generator  
[NASA-CASE-NPO-11133] c 10 N72-20223
- Material suspension within an acoustically excited resonant chamber --- at near weightless conditions  
[NASA-CASE-NPO-13263-1] c 12 N75-24774
- Vibrating-chamber levitation systems  
[NASA-CASE-NPO-16142-1-CU] c 35 N86-20752
- WAVE INTERACTION**
- Coupled cavity traveling wave tube with velocity tapering  
[NASA-CASE-LEW-12296-1] c 33 N82-26568
- WAVE PROPAGATION**
- Double reference pulsed phase locked loop  
[NASA-CASE-LAR-13310-1] c 32 N87-14559
- WAVE REFLECTION**
- Microwave flaw detector Patent  
[NASA-CASE-ARC-10009-1] c 15 N71-17822
- Millimeter wave antenna system Patent Application  
[NASA-CASE-GSC-10949-1] c 07 N71-28965
- WAVE RESISTANCE**
- Reactanceless synthesized impedance bandpass amplifier  
[NASA-CASE-GSC-12788-1] c 33 N85-29145
- WAVE SCATTERING**
- Device and method for determining X ray reflection efficiency of optical surfaces  
[NASA-CASE-MFS-20243] c 23 N73-13662
- Method and apparatus for Delta Kappa synthetic aperture radar measurement of ocean current  
[NASA-CASE-NPO-15704-1] c 32 N85-34327
- Tissue simulating gel for medical research  
[NASA-CASE-LAR-14036-1] c 27 N91-13562
- WAVEFORMS**
- Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00131] c 09 N70-38995
- Single or joint amplitude distribution analyzer Patent  
[NASA-CASE-XNP-01383] c 09 N71-10659
- Peak polarity selector Patent  
[NASA-CASE-FRC-10010] c 10 N71-24862
- Family of frequency to amplitude converters  
[NASA-CASE-MSC-12395] c 09 N72-25257
- Apparatus for statistical time-series analysis of electrical signals  
[NASA-CASE-MSC-12428-1] c 10 N73-25240
- Low distortion receiver for bi-level baseband PCM waveforms  
[NASA-CASE-MSC-14557-1] c 32 N76-16249
- Speech analyzer  
[NASA-CASE-GSC-11898-1] c 32 N77-30309
- Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c 33 N79-10337
- Measurement of waves in flows across a surface  
[NASA-CASE-NPO-17479-1-CU] c 34 N91-13658
- WAVEGUIDE ANTENNAS**
- Virtual wall slot circularly polarized planar array antenna  
[NASA-CASE-NPO-10301] c 07 N72-11148
- WAVEGUIDE FILTERS**
- High power microwave power divider Patent  
[NASA-CASE-NPO-11031] c 07 N71-33606
- WAVEGUIDE WINDOWS**
- Broadband microwave waveguide window Patent  
[NASA-CASE-XNP-08880] c 09 N71-24808
- WAVEGUIDES**
- Dual waveguide mode source having control means for adjusting the relative amplitude of two modes Patent  
[NASA-CASE-XNP-03134] c 07 N71-10676
- Folded traveling wave maser structure Patent  
[NASA-CASE-XNP-05219] c 16 N71-15550
- Quasi-optical microwave component Patent  
[NASA-CASE-ERC-10011] c 07 N71-29065

- Waveguide mixer  
[NASA-CASE-ERC-10179] c 07 N72-20141
- Active microwave irises and windows  
[NASA-CASE-LAR-10513-1] c 07 N72-25170
- Thin film microwave iris  
[NASA-CASE-LAR-10511-1] c 09 N72-29172
- Resonant waveguide stark cell --- using microwave spectrometers  
[NASA-CASE-LAR-11352-1] c 33 N75-26245
- Diffused waveguiding capillary tube with distributed feedback for a gas laser  
[NASA-CASE-NPO-13544-1] c 36 N76-18428
- Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures  
[NASA-CASE-NPO-14254-1] c 36 N80-18372
- Support assembly for cryogenically coolable low-noise choke waveguide  
[NASA-CASE-NPO-14253-1] c 32 N80-32605
- Coaxial phased array antenna  
[NASA-CASE-MSC-16800-1] c 32 N81-14187
- Coupled cavity traveling wave tube with velocity tapering  
[NASA-CASE-LEW-12296-1] c 33 N82-26568
- Waveguide cooling system  
[NASA-CASE-NPO-15401-1] c 32 N83-27085
- Universal nondestructive mm-wave integrated circuit test fixture  
[NASA-CASE-LEW-14746-1] c 33 N91-14552
- WAVELENGTHS**
- Method and apparatus for wavelength tuning of liquid lasers  
[NASA-CASE-ERC-10187] c 16 N69-31343
- Instrument for the quantitative measurement of radiation at multiple wave lengths Patent  
[NASA-CASE-XLE-00011] c 14 N70-41946
- Optical systems having spatially invariant outputs  
[NASA-CASE-ERC-10248] c 14 N72-17323
- Two color horizon sensor  
[NASA-CASE-ERC-10174] c 14 N72-25409
- Monitoring deposition of films  
[NASA-CASE-MFS-20675] c 26 N73-26751
- Dual wavelength scanning Doppler velocimeter --- without perturbation of flow fields  
[NASA-CASE-ARC-10637-1] c 35 N75-16783
- Diatomic infrared gasdynamic laser --- for producing different wavelengths  
[NASA-CASE-ARC-10370-1] c 36 N75-31426
- Fluorescent radiation converter  
[NASA-CASE-GSC-12528-1] c 74 N81-24900
- Acoustic levitation methods and apparatus  
[NASA-CASE-NPO-15562-1] c 71 N82-27086
- Extended range X-ray telescope  
[NASA-CASE-MFS-25282-1] c 34 N83-19015
- Dual laser optical system and method for studying fluid flow  
[NASA-CASE-MFS-25315-1] c 36 N83-29680
- Acoustic suspension system  
[NASA-CASE-NPO-15435-1] c 71 N83-36846
- Dual wavelength holographic interferometry system  
[NASA-CASE-MFS-28242-1] c 35 N89-26202
- WAVES**
- Natural turbulence electrical power generator --- using wave action or random motion  
[NASA-CASE-LAR-11551-1] c 44 N80-29834
- WEAR**
- Refractory coatings  
[NASA-CASE-LEW-13169-2] c 26 N82-30371
- Spectroscopic wear detector  
[NASA-CASE-LEW-15200-1] c 20 N91-32167
- WEAR INHIBITORS**
- Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-3] c 37 N82-19540
- WEAR RESISTANCE**
- Pretreatment of lubricated surfaces with sputtered cadmium oxide  
[NASA-CASE-LEW-14474-1] c 27 N91-28423
- WEATHERPROOFING**
- Weatherproof helix antenna Patent  
[NASA-CASE-XKS-08485] c 07 N71-19493
- WEBS (SHEETS)**
- Method and apparatus for measuring web material wound on a reel  
[NASA-CASE-GSC-11902-1] c 38 N77-17495
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA-CASE-NPO-15494-1] c 35 N82-25484
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71:NPO-15494-2] c 35 N85-34373
- WEBS (SUPPORTS)**
- Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-2] c 07 N78-18066
- Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-3] c 07 N79-14096

- WEDGES**  
Two dimensional wedge/translating shroud nozzle  
[NASA-CASE-LAR-11919-1] c 07 N78-27121
- WEIGHT (MASS)**  
Suspended mass impact damper Patent  
[NASA-CASE-LAR-10193-1] c 15 N71-27146  
System for indicating fuel-efficient aircraft altitude  
[NASA-CASE-NPO-15351-2] c 06 N84-34443
- WEIGHT INDICATORS**  
Device for monitoring a change in mass in varying gravimetric environments  
[NASA-CASE-MFS-21556-1] c 35 N74-26945  
Miniature remote dead weight calibrator  
[NASA-CASE-LAR-13564-1] c 35 N87-25558
- WEIGHT MEASUREMENT**  
Automatic force measuring system Patent  
[NASA-CASE-XLA-02605] c 14 N71-10773  
Device for monitoring a change in mass in varying gravimetric environments  
[NASA-CASE-MFS-21556-1] c 35 N74-26945  
Portable pallet weighing apparatus  
[NASA-CASE-GSC-12789-1] c 35 N85-20294
- WEIGHT REDUCTION**  
Improved sprayable lightweight ablative coating  
[NASA-CASE-MFS-28372-1] c 27 N91-24426
- WEIGHTLESSNESS**  
Apparatus for transferring cryogenic liquids Patent  
[NASA-CASE-XLE-00345] c 15 N70-38020  
Liquid-gas separation system Patent  
[NASA-CASE-XMS-01624] c 15 N70-40062  
Measuring device Patent  
[NASA-CASE-XMS-01546] c 14 N70-40233  
Zero gravity starting means for liquid propellant motors Patent  
[NASA-CASE-XNP-01390] c 28 N70-41275  
Liquid-gas separator for zero gravity environment Patent  
[NASA-CASE-XMS-01492] c 05 N70-41297  
Recovery of potable water from human wastes in below-G conditions Patent  
[NASA-CASE-XLA-03213] c 05 N71-11207  
Zero gravity separator Patent  
[NASA-CASE-XLE-00586] c 15 N71-15968  
Reduced gravity simulator Patent  
[NASA-CASE-XLA-01787] c 11 N71-16028  
Method and apparatus of simulating zero gravity conditions Patent  
[NASA-CASE-MFS-12750] c 27 N71-16223  
Quick disconnect latch and handle combination Patent  
[NASA-CASE-MFS-11132] c 15 N71-17649  
Spherical tank gauge Patent  
[NASA-CASE-XMS-06236] c 14 N71-21007  
Zero gravity apparatus Patent  
[NASA-CASE-XMF-06515] c 14 N71-23227  
Skeletal stressing method and apparatus Patent  
[NASA-CASE-ARC-10100-1] c 05 N71-24738  
Material handling device Patent  
[NASA-CASE-XNP-09770-3] c 11 N71-27036  
Method of making foamed materials in zero gravity  
[NASA-CASE-XMF-09902] c 15 N72-11387  
Remote control manipulator for zero gravity environment  
[NASA-CASE-MFS-14405] c 15 N72-28495  
Zero gravity liquid mixer  
[NASA-CASE-LAR-10195-1] c 15 N73-19458  
Zero gravity liquid transfer screen  
[NASA-CASE-KSC-10626] c 14 N73-27378  
Reduced gravity fecal collector seat and urinal  
[NASA-CASE-MFS-22102-1] c 54 N74-20725  
Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-MFS-21394-1] c 34 N74-27744  
Rotary plant growth accelerating apparatus --- weightlessness  
[NASA-CASE-ARC-10722-1] c 51 N75-25503  
Fluid control apparatus and method  
[NASA-CASE-LAR-11110-1] c 34 N75-26282  
Method for manufacturing mirrors in zero gravity environment  
[NASA-CASE-MSC-12611-1] c 12 N76-15189  
Fluid mass sensor for a zero gravity environment  
[NASA-CASE-MSC-14653-1] c 35 N77-19385  
Method of crystallization --- in gravity-free environments  
[NASA-CASE-MFS-23001-1] c 76 N77-32919  
Passive propellant system  
[NASA-CASE-MFS-23642-1] c 20 N80-10278  
Method and apparatus for producing concentric hollow spheres --- inertial confinement fusion targets  
[NASA-CASE-NPO-14596-1] c 31 N81-33319  
Sample levitation and melt in microgravity  
[NASA-CASE-NPO-17022-1-CU] c 29 N87-25489  
Vortex motion phase separator for zero gravity liquid transfer  
[NASA-CASE-KSC-11387-1] c 29 N90-20236
- Zero-G phase detector and separator  
[NASA-CASE-LEW-14844-1] c 35 N90-22024  
Valve for waste collection and storage  
[NASA-CASE-MSC-21025-4] c 54 N91-14723  
Method for waste collection and storage  
[NASA-CASE-MSC-21025-2] c 54 N91-14724  
Acoustic positioning and orientation prediction  
[NASA-CASE-NPO-17511-1-CU] c 71 N91-14807  
Whole body cleansing agent  
[NASA-CASE-MSC-21589-1] c 54 N91-16566  
Volumetric measurement of tank volume  
[NASA-CASE-MSC-21500-1] c 35 N91-21493  
Tank gauging apparatus and method  
[NASA-CASE-MSC-21059-3] c 35 N91-21495  
Method and apparatus for waste collection and storage  
[NASA-CASE-MSC-21025-3] c 54 N91-26747
- WEIGHTLESSNESS SIMULATION**  
Reduced gravity liquid configuration simulator  
[NASA-CASE-XLE-02624] c 12 N69-39988  
Mass measuring system Patent  
[NASA-CASE-XMS-03371] c 05 N70-42000  
Harness assembly Patent  
[NASA-CASE-MFS-14671] c 05 N71-12341  
Whole body measurement systems --- for weightlessness simulation  
[NASA-CASE-MSC-13972-1] c 52 N74-10975  
Weightlessness simulation system and process  
[NASA-CASE-ARC-11646-1] c 14 N87-25344  
Hollow fiber clinostat: Technical abstract  
[NASA-CASE-MFS-28370-1] c 35 N89-28793
- WELD STRENGTH**  
Grain refinement control in TIG arc welding  
[NASA-CASE-MSC-19095-1] c 37 N75-19683
- WELD TESTS**  
Determination of spot weld quality Patent  
[NASA-CASE-XNP-02588] c 15 N71-18613  
Method and apparatus for swept-frequency impedance measurements of welds  
[NASA-CASE-ARC-10176-1] c 15 N72-21464
- WELDED JOINTS**  
Apparatus for welding blades to rotors  
[NASA-CASE-LEW-10533-2] c 37 N74-11300  
Ultrasonic scanning system for in-place inspection of brazed tube joints  
[NASA-CASE-MFS-20767-1] c 38 N74-15130  
Device for measuring the ferrite content in an austenitic stainless-steel weld  
[NASA-CASE-MFS-22907-1] c 26 N76-18257  
Capillary flow weld-bonding  
[NASA-CASE-LAR-11726-1] c 37 N76-27568  
Automated weld torch guidance control system  
[NASA-CASE-MFS-25807-2] c 37 N86-21850  
Apparatus and method for explosive bonding to edge of flyer plate  
[NASA-CASE-LAR-14096-1] c 31 N91-31476
- WELDED STRUCTURES**  
Grain refinement control in TIG arc welding  
[NASA-CASE-MSC-19095-1] c 37 N75-19683  
Flanged major modular assembly jig  
[NASA-CASE-MSC-19372-1] c 39 N76-31562  
Weld-bonded titanium structures  
[NASA-CASE-LAR-11549-1] c 37 N77-11397  
Bimetallic junctions  
[NASA-CASE-LEW-11573-1] c 26 N77-28265
- WELDING**  
Segmented back-up bar Patent  
[NASA-CASE-XMF-00640] c 15 N70-39924  
Flexible back-up bar Patent  
[NASA-CASE-XMF-00722] c 15 N70-40204  
Apparatus for welding sheet material --- butt joints  
[NASA-CASE-XMS-01330] c 37 N75-27376  
Weld-bonded titanium structures  
[NASA-CASE-LAR-11549-1] c 37 N77-11397  
Method and apparatus for holding two separate metal pieces together for welding  
[NASA-CASE-GSC-12318-1] c 37 N80-23655  
Automatic weld torch guidance control system  
[NASA-CASE-MFS-25807] c 37 N83-20154  
Joining lead wires to thin platinum alloy films  
[NASA-CASE-LEW-13934-1] c 35 N83-35338  
Method of repairing hidden leaks in tubes  
[NASA-CASE-MFS-19796-1] c 37 N86-32736  
Alignment and assembly tool for very large diameter cylinders  
[NASA-CASE-MFS-28001-2] c 37 N88-14360  
Optically controlled welding system  
[NASA-CASE-MFS-29291-1] c 37 N89-12868
- WELDING MACHINES**  
Apparatus for welding torch angle and seam tracking control Patent  
[NASA-CASE-XMF-03287] c 15 N71-15607  
Automatic welding speed controller Patent  
[NASA-CASE-XMF-01730] c 15 N71-23050  
Electric welding torch Patent  
[NASA-CASE-XMF-02330] c 15 N71-23798
- Welding skate with computerized control Patent  
[NASA-CASE-XMF-07069] c 15 N71-23815  
Computerized system for translating a torch head  
[NASA-CASE-MFS-23620-1] c 37 N79-10421  
Welding torch with arc light reflector  
[NASA-CASE-MFS-29134-1] c 74 N87-17493  
Welding monitoring system  
[NASA-CASE-MFS-29177-1] c 37 N88-14362  
High temperature solder device for flat cables  
[NASA-CASE-GSC-13344-1] c 26 N91-28363
- WET CELLS**  
Method and device for determining battery state of charge Patent  
[NASA-CASE-NPO-10194] c 03 N71-20407
- WET SPINNING**  
Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14489-1] c 37 N91-27562
- WETTING**  
Pre-treatment method for anti-wettable materials  
[NASA-CASE-XMS-03537] c 15 N69-21471  
Whole body cleansing agent  
[NASA-CASE-MSC-21589-1] c 54 N91-16566
- WHEATSTONE BRIDGES**  
Self-balancing strain gage transducer Patent  
[NASA-CASE-MFS-12827] c 14 N71-17656  
Method for improving the signal-to-noise ratio of the Wheatstone bridge type bolometer Patent  
[NASA-CASE-XLA-02810] c 14 N71-25901  
Temperature control system with a pulse width modulated bridge  
[NASA-CASE-NPO-11304] c 14 N73-26430  
Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71:NPO-15494-2] c 35 N85-34373  
Pressure transducer and system for cryogenic environments  
[NASA-CASE-LAR-14579-1] c 35 N91-28546
- WHEELS**  
Non-backdriveable free wheeling coupling  
[NASA-CASE-MSC-20475-1] c 37 N87-17037  
Device for applying constant pressure to a surface  
[NASA-CASE-GSC-13230-1] c 37 N91-13734
- WHISKER COMPOSITES**  
Reinforced metallic composites Patent  
[NASA-CASE-XLE-00228] c 17 N70-38490
- WHISKERS (CRYSTALS)**  
Catalyst for growth of boron carbide single crystal whiskers  
[NASA-CASE-XHQ-03903] c 15 N69-21922
- WICKS**  
Method of forming a wick for a heat pipe  
[NASA-CASE-NPO-13391-1] c 34 N76-27515  
Monogroove heat pipe design: Insulated liquid channel with bridging wick  
[NASA-CASE-MSC-20497-1] c 34 N85-29180  
Polymeric heat pipe wick  
[NASA-CASE-GSC-13019-1] c 34 N88-29133  
Ceramic heat pipe wick  
[NASA-CASE-GSC-13199-1] c 27 N90-23541
- WIDE ANGLE LENSES**  
Wide angle long eye relief eyepiece Patent  
[NASA-CASE-XMS-06056-1] c 23 N71-24857
- WIDEBAND COMMUNICATION**  
Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c 32 N77-28346  
Multiple band circularly polarized microstrip antenna  
[NASA-CASE-MSC-18334-1] c 32 N80-32604
- WINCHES**  
Winch having cable position and load indicators Patent  
[NASA-CASE-MSC-12052-1] c 15 N71-24599
- WIND DIRECTION**  
Radionuclide counting technique for measuring wind velocity and direction  
[NASA-CASE-LAR-12971-1] c 47 N84-28292  
Cable suspended windmill  
[NASA-CASE-LAR-13434-1] c 37 N90-23742
- WIND EFFECTS**  
Viscous pendulum damper Patent  
[NASA-CASE-LAR-10274-1] c 14 N71-17626  
Aircraft liftemeter  
[NASA-CASE-LAR-12518-1] c 06 N86-27280
- WIND MEASUREMENT**  
Passive optical wind and turbulence detection system Patent  
[NASA-CASE-XMF-14032] c 20 N71-16340  
Maxometers (peak wind speed anemometers)  
[NASA-CASE-MFS-20916] c 14 N73-25460  
Wind sensor  
[NASA-CASE-NPO-13462-1] c 35 N76-24524  
Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c 35 N77-10493  
Wind measurement system  
[NASA-CASE-MFS-23362-1] c 47 N77-10753

## WIND PROFILES

Wind velocity probing device and method Patent  
[NASA-CASE-XLA-02081] c 20 N71-16281

**WIND SHEAR**  
CAT altitude avoidance system  
[NASA-CASE-NPO-15351-1] c 06 N83-10040  
Aircraft liftmeter  
[NASA-CASE-LAR-12518-1] c 06 N86-27280

**WIND TUNNEL APPARATUS**  
Wind tunnel airstream oscillating apparatus Patent  
[NASA-CASE-XLA-00112] c 11 N70-33287  
Electric arc device for heating gases Patent  
[NASA-CASE-XAC-00319] c 25 N70-41628  
Test unit free-flight suspension system Patent  
[NASA-CASE-XLA-00939] c 11 N71-15926  
Burst diaphragm flow initiator Patent  
[NASA-CASE-MFS-12915] c 11 N71-17600  
Electric arc apparatus Patent  
[NASA-CASE-XAC-01677] c 09 N71-20816  
Model launcher for wind tunnels Patent  
[NASA-CASE-XNP-03578] c 11 N71-23030  
Wind tunnel microphone structure Patent  
[NASA-CASE-XNP-00250] c 11 N71-28779  
Wind tunnel  
[NASA-CASE-LAR-10135-1] c 09 N79-21083  
Metric half-span model support system  
[NASA-CASE-LAR-12441-1] c 09 N82-23254  
Airfoil flutter model suspension system  
[NASA-CASE-LAR-13522-1-SB] c 09 N87-25334  
Probe insertion apparatus with inflatable seal  
[NASA-CASE-LEW-14965-1] c 37 N91-13732  
Electro-optical spin measurement system  
[NASA-CASE-LAR-13629-1] c 09 N91-14356  
Wind tunnel balance  
[NASA-CASE-ARC-11877-1-SB] c 09 N91-14357  
Multiple axis reticle  
[NASA-CASE-ARC-11886-1-SB] c 35 N91-14591  
Nozzle diffuser for use with an open test section of a wind tunnel  
[NASA-CASE-LAR-14424-1-SB] c 09 N91-32149

**WIND TUNNEL CALIBRATION**  
Rotary target V-block  
[NASA-CASE-LAR-12007-3] c 35 N84-16523

**WIND TUNNEL DRIVES**  
Electric arc driven wind tunnel Patent  
[NASA-CASE-XMF-00411] c 11 N70-36913

**WIND TUNNEL MODELS**  
Flow field simulation Patent  
[NASA-CASE-LAR-11138] c 12 N71-20436  
Multilegged support system Patent  
[NASA-CASE-XLA-01326] c 11 N71-21481  
Model launcher for wind tunnels Patent  
[NASA-CASE-XNP-03578] c 11 N71-23030  
Wind tunnel model damper Patent  
[NASA-CASE-XLA-09480] c 11 N71-33612  
Wind tunnel model and method  
[NASA-CASE-LAR-10812-1] c 09 N74-17955  
Method for determining thermo-physical properties of specimens --- photographic recording of changes in thin film phase-change temperature indicating material in wind tunnel  
[NASA-CASE-LAR-11053-1] c 25 N74-18551  
Metric half-span model support system  
[NASA-CASE-LAR-12441-1] c 09 N82-23254  
Aeroelastic instability stoppers for wind tunnel models  
[NASA-CASE-LAR-12458-1] c 44 N83-21503  
Aeroelastic instability stoppers for wind tunnel models  
[NASA-CASE-LAR-12720-1] c 44 N83-21504  
Model mount system for testing flutter  
[NASA-CASE-LAR-12950-1] c 09 N84-34448  
Airfoil flutter model suspension system  
[NASA-CASE-LAR-13522-1-SB] c 09 N87-25334  
Wind tunnel balance  
[NASA-CASE-ARC-11877-1-SB] c 09 N91-14357  
Multiple axis reticle  
[NASA-CASE-ARC-11886-1-SB] c 35 N91-14591

**WIND TUNNEL NOZZLES**  
Multi-purpose wind tunnel reaction control model block  
[NASA-CASE-MSC-19706-1] c 09 N78-31129  
Wind tunnel supplementary Mach number minimum section insert  
[NASA-CASE-LAR-12532-1] c 09 N82-11088  
Improved method and apparatus for Mach number change in wind tunnel  
[NASA-CASE-LAR-13548-1] c 09 N91-28175

**WIND TUNNEL TESTS**  
Metallic hot wire anemometer --- for high speed wind tunnel tests  
[NASA-CASE-ARC-10911-1] c 35 N77-20400  
Multi-purpose wind tunnel reaction control model block  
[NASA-CASE-MSC-19706-1] c 09 N78-31129  
Metric half-span model support system  
[NASA-CASE-LAR-12441-1] c 09 N82-23254

Miniature remote dead weight calibrator  
[NASA-CASE-LAR-13564-1] c 35 N87-25558  
Device for quick changeover between wind tunnel force and pressure testing  
[NASA-CASE-LAR-13512-1] c 35 N87-28884  
Thermal remote anemometer system  
[NASA-CASE-LAR-13508-1] c 35 N88-23962

**WIND TUNNEL WALLS**  
Sound shield  
[NASA-CASE-LAR-12883-1] c 71 N83-17235

**WIND TUNNELS**  
Thin film gauge --- for measuring convective heat transfer rates along test surfaces in wind tunnels  
[NASA-CASE-NPO-10617-1] c 35 N74-22095  
Wind tunnel flow generation section  
[NASA-CASE-ARC-10710-1] c 09 N75-12969  
Apparatus for reducing aerodynamic noise in a wind tunnel  
[NASA-CASE-MFS-23099-1] c 09 N76-23273  
Static pressure orifice system testing method and apparatus  
[NASA-CASE-LAR-12269-1] c 35 N80-18358  
Wind tunnel balance  
[NASA-CASE-ARC-11877-1-SB] c 09 N91-14357  
Improved method and apparatus for Mach number change in wind tunnel  
[NASA-CASE-LAR-13548-1] c 09 N91-28175  
Nozzle diffuser for use with an open test section of a wind tunnel  
[NASA-CASE-LAR-14424-1-SB] c 09 N91-32149

**WIND TURBINES**  
Amplified wind turbine apparatus  
[NASA-CASE-MFS-23830-1] c 44 N82-24639  
Wind and solar powered turbine  
[NASA-CASE-NPO-15496-1] c 44 N84-23018

**WIND VELOCITY**  
Radionuclide counting technique for measuring wind velocity and direction  
[NASA-CASE-LAR-12971-1] c 47 N84-28292  
Aircraft liftmeter  
[NASA-CASE-LAR-12518-1] c 06 N86-27280

**WIND VELOCITY MEASUREMENT**  
Wind velocity probing device and method Patent  
[NASA-CASE-XLA-02081] c 20 N71-16281  
Aircraft liftmeter  
[NASA-CASE-LAR-12518-1] c 06 N86-27280

**WINDING**  
Conically shaped cavity radiometer with a dual purpose cone winding Patent  
[NASA-CASE-XNP-09701] c 14 N71-26475  
Pulse coupling circuit  
[NASA-CASE-LEW-10433-1] c 09 N72-22197

**WINDMILLS (WINDPOWERED MACHINES)**  
Electrical power generating system --- for windpowered generation  
[NASA-CASE-MFS-24368-3] c 33 N81-22280  
Vertical shaft windmill  
[NASA-CASE-LAR-12923-1] c 37 N84-12493  
Coupling an induction motor type generator to ac power lines --- making windmill generators compatible with public power lines  
[NASA-CASE-MFS-25302-2] c 33 N84-33660  
Cable suspended windmill  
[NASA-CASE-LAR-13434-1] c 37 N90-23742

**WINDOWS (APERTURES)**  
Active microwave irises and windows  
[NASA-CASE-LAR-10513-1] c 07 N72-25170  
Observation window for a gas confining chamber  
[NASA-CASE-NPO-10890] c 11 N73-12265  
Light transmitting window assembly  
[NASA-CASE-MSC-18417-1] c 74 N85-29750  
Double window viewing chamber assembly  
[NASA-CASE-MFS-28057-1] c 09 N87-14355

**WINDPOWER UTILIZATION**  
Amplified wind turbine apparatus  
[NASA-CASE-MFS-23830-1] c 44 N82-24639  
Wind and solar powered turbine  
[NASA-CASE-NPO-15496-1] c 44 N84-23018

**WINDPOWERED GENERATORS**  
Wind wheel electric power generator  
[NASA-CASE-MFS-23515-1] c 44 N80-21828  
Electrical power generating system --- for windpowered generation  
[NASA-CASE-MFS-24368-3] c 33 N81-22280

**WINDSHIELDS**  
Transparent fire resistant polymeric structures  
[NASA-CASE-ARC-10813-1] c 27 N76-16230

**WING CAMBER**  
Slotted variable camber flap  
[NASA-CASE-LAR-12541-1] c 05 N84-22551

**WING FLAPS**  
Jet aircraft configuration Patent  
[NASA-CASE-XLA-00087] c 02 N70-33332  
Slotted variable camber flap  
[NASA-CASE-LAR-12541-1] c 05 N84-22551

## WING PROFILES

Variable-span aircraft Patent  
[NASA-CASE-XLA-00166] c 02 N70-34178  
Annular wing  
[NASA-CASE-FRC-11007-2] c 05 N82-26277

**WING ROOTS**  
Solar powered aircraft  
[NASA-CASE-LAR-12615-1] c 05 N84-12154

**WING SLOTS**  
Slotted variable camber flap  
[NASA-CASE-LAR-12541-1] c 05 N84-22551

**WING TIP VORTICES**  
Wingtip vortex dissipator for aircraft  
[NASA-CASE-LAR-11645-1] c 02 N77-10001

**WING TIPS**  
Smoke generator  
[NASA-CASE-ARC-10905-1] c 37 N77-13418  
Wingtip vortex propeller  
[NASA-CASE-LAR-13019-1] c 07 N85-35194  
Wingtip vortex turbine  
[NASA-CASE-LAR-14116-1] c 05 N91-14345

**WINGS**  
Ferry system  
[NASA-CASE-LAR-10574-1] c 11 N73-13257  
Surface finishing --- for aircraft wings  
[NASA-CASE-MSC-12631-1] c 24 N77-28225  
Free wing assembly for an aircraft  
[NASA-CASE-FRC-10092-1] c 05 N79-12061  
Detection of the transitional layer between laminar and turbulent flow areas on a wing surface --- using an accelerometer to measure pressure levels during wind tunnel tests  
[NASA-CASE-LAR-12261-1] c 02 N80-20224  
System for use in conducting wake investigation for a wing in flight --- differential pressure measurements for drag investigations  
[NASA-CASE-FRC-11024-1] c 02 N80-28300  
Means for controlling aerodynamically induced twist  
[NASA-CASE-LAR-12175-1] c 05 N82-28279  
Decoupler pylon: wing/store flutter suppressor  
[NASA-CASE-LAR-12468-1] c 08 N82-32373  
Piezoelectric deicing device  
[NASA-CASE-LEW-13773-2] c 33 N86-20671  
Remote pivot decoupler pylon: Wing/store flutter suppressor  
[NASA-CASE-LAR-13173-1] c 05 N87-14314

**WIRE**  
Transpiration cooled turbine blade manufactured from wires Patent  
[NASA-CASE-XLE-00020] c 15 N70-33226  
Soldering device Patent  
[NASA-CASE-XLA-08911] c 15 N71-27214  
Forming tool for ribbon or wire  
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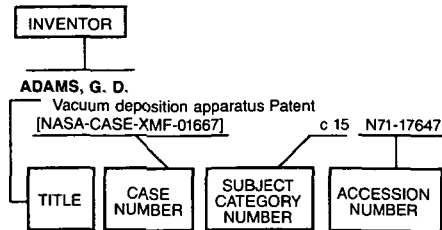
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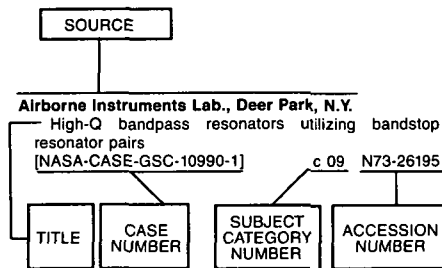
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**Duke Univ., Durham, NC.**  
Regulated dc-to-dc converter for voltage step-up or step-down with input-output isolation  
[NASA-CASE-HQN-10792-1] c 33 N74-11049

**Dumont Electron Tubes, Clifton, NJ.**  
High contrast cathode ray tube  
[NASA-CASE-ERC-10468] c 09 N72-20206

**Dynatherm Corp., Cockeysville, MD.**  
Heat pipe thermal switch  
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**Echo Science Corp., Mountain View, CA.**  
Dynamic capacitor having a peripherally driven element and system incorporating the same  
[NASA-CASE-XNP-02899-1] c 33 N79-21265

**Eitel-McCullough, Inc., San Carlos, CA.**  
Method of forming ceramic to metal seal Patent  
[NASA-CASE-XNP-01263-2] c 15 N71-26312

**Electrac, Inc., Anaheim, CA.**  
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[NASA-CASE-XGS-00740] c 07 N71-23098

**Electric Storage Battery Co., Raleigh, NC.**  
Electric battery and method for operating same Patent  
[NASA-CASE-XGS-01674] c 03 N71-29129

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[NASA-CASE-NPO-11806-1] c 44 N74-19693

**Electric Storage Battery Co., Yardley, PA.**  
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**Electro-Optical Systems, Inc., Pasadena, CA.**  
Focussing system for an ion source having apertured electrodes Patent  
[NASA-CASE-XNP-03332] c 09 N71-10618

Electrolytically regenerative hydrogen-oxygen fuel cell Patent  
[NASA-CASE-XLE-04526] c 03 N71-11052

Method of producing refractory bodies having controlled porosity Patent  
[NASA-CASE-LEW-10393-1] c 17 N71-15468

Soil particles separator, collector and viewer Patent  
[NASA-CASE-XNP-09770] c 15 N71-20440

Particle detection apparatus including a ballistic pendulum Patent  
[NASA-CASE-XMS-04201] c 14 N71-22990

Polarity sensitive circuit Patent  
[NASA-CASE-XNP-00952] c 10 N71-23271

Ion engine casing construction and method of making same Patent  
[NASA-CASE-XNP-06942] c 28 N71-23293

Material handling device Patent  
[NASA-CASE-XNP-09770-3] c 11 N71-27036

Screen particle separator  
[NASA-CASE-XNP-09770-2] c 15 N72-22483

**Electronic Image Systems Corp., Cambridge, MA.**  
Drying apparatus for photographic sheet material  
[NASA-CASE-GSC-11074-1] c 14 N73-28489

**Eloret Corp., Palo Alto, CA.**  
Composite flexible blanket insulation  
[NASA-CASE-NPO-11907-1-NP] c 24 N91-31236

**Essex Corp., Huntville, AL.**  
Satellite retrieval system  
[NASA-CASE-MFS-25403-1] c 18 N83-29303

**Ewen Knight Corp., East Natick, MA.**  
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[NASA-CASE-ERC-11020] c 14 N71-26774

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**Fairchild Hiller Corp., Germantown, MD.**  
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[NASA-CASE-GSC-10441-1] c 14 N71-27325

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[NASA-CASE-MFS-20096] c 14 N71-30026

Thermal control system for a spacecraft modular housing  
[NASA-CASE-GSC-11018-1] c 31 N73-30829

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[NASA-CASE-MS-C-18422-1] c 37 N82-16408

**Faraday Labs., Inc., La Jolla, CA.**  
Method for attaching a fused-quartz mirror to a conductive metal substrate  
[NASA-CASE-MFS-23405-1] c 26 N77-29260

**Federal-Mogul Corp., Los Alamitos, CA.**  
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[NASA-CASE-XNP-07659] c 06 N71-22975

**Florida Univ., Gainesville.**  
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[NASA-CASE-XMS-00583] c 28 N70-38504

**Foothill Coll., Los Altos Hills, CA.**  
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[NASA-CASE-ARC-10810-1] c 33 N76-19339

**Ford Motor Co., Dearborn, MI.**  
Omnidirectional acceleration device Patent  
[NASA-CASE-HQN-10780] c 14 N71-30265

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**Garrett Corp., Los Angeles, CA.**  
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[NASA-CASE-XMS-05894-1] c 15 N69-21924

Portable environmental control system Patent  
[NASA-CASE-XMS-09632-1] c 05 N71-11203

Dual latching solenoid valve Patent  
[NASA-CASE-XMS-05890] c 09 N71-23191

Water management system and an electrolytic cell therefor Patent  
[NASA-CASE-MS-C-10960-1] c 03 N71-24718

Low cycle fatigue testing machine  
[NASA-CASE-LAR-10270-1] c 32 N72-25877

Process for separation of dissolved hydrogen from water by use of palladium and process for coating palladium with palladium black  
[NASA-CASE-MS-C-13335-1] c 06 N72-31140

Flexible joint for pressurizable garment  
[NASA-CASE-MS-C-11072] c 54 N74-32546

Gas compression apparatus  
[NASA-CASE-MS-C-14757-1] c 35 N78-10428

Wind tunnel  
[NASA-CASE-LAR-10135-1] c 09 N79-21083

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[NASA-CASE-XMS-01295-1] c 37 N79-21345

**Garrett Corp., Torrance, CA.**  
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[NASA-CASE-MFS-25215-1] c 33 N83-31953

**GCA Corp., Bedford, MA.**  
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**General Dynamics/Astronautics, San Diego, CA.**  
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[NASA-CASE-XNP-02588] c 15 N71-18613

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[NASA-CASE-XNP-01660] c 14 N71-23036

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[NASA-CASE-XNP-04148] c 17 N71-24830

**General Dynamics/Convair, San Diego, CA.**  
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[NASA-CASE-XGS-01971] c 15 N71-15922

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[NASA-CASE-XLE-00586] c 15 N71-15968

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[NASA-CASE-LAR-10551-1] c 25 N74-12813

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[NASA-CASE-XNP-03930] c 14 N69-24331

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[NASA-CASE-MFS-21214-1] c 09 N73-30181

**General Electric Co., Cincinnati, OH.**  
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[NASA-CASE-LEW-12419-1] c 07 N77-14025

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[NASA-CASE-LEW-12760-1] c 07 N77-17059

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[NASA-CASE-LEW-12550-1] c 24 N77-19170

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[NASA-CASE-LEW-12830-1] c 07 N77-23106

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[NASA-CASE-LEW-12608-1] c 07 N77-27116

Platform for a swing root turbomachinery blade  
[NASA-CASE-LEW-12312-1] c 07 N77-32148

Deformable bearing seat  
[NASA-CASE-LEW-12527-1] c 37 N77-32500

Bearing seat usable in a gas turbine engine  
[NASA-CASE-LEW-12477-1] c 37 N77-32501

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[NASA-CASE-LEW-12321-1] c 37 N78-10467

Impact absorbing blade mounts for variable pitch blades  
[NASA-CASE-LEW-12313-1] c 37 N78-10468

Variable thrust nozzle for quiet turbofan engine and method of operating same  
[NASA-CASE-LEW-12317-1] c 07 N78-17055

Gas turbine engine with convertible accessories  
[NASA-CASE-LEW-12390-1] c 07 N78-17056

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[NASA-CASE-LEW-12916-1] c 37 N78-17384

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[NASA-CASE-LEW-12452-1] c 07 N78-25089

Redundant disc  
[NASA-CASE-LEW-12496-1] c 07 N78-33101

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- Fuel delivery system including heat exchanger means  
[NASA-CASE-LEW-12793-1] c 37 N79-11403
- Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-3] c 07 N79-14096
- Variable area exhaust nozzle  
[NASA-CASE-LEW-12378-1] c 07 N79-14097
- Sound-suppressing structure with thermal relief  
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- Method and apparatus for rapid thrust increases in a turbofan engine  
[NASA-CASE-LEW-12971-1] c 07 N80-18039
- Curved centerline air intake for a gas turbine engine  
[NASA-CASE-LEW-13201-1] c 07 N81-14999
- Apparatus for sensor failure detection and correction in a gas turbine engine control system  
[NASA-CASE-LEW-12907-2] c 07 N81-19115
- Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c 07 N81-19116
- Thrust reverser for a long duct fan engine  
[NASA-CASE-LEW-13199-1] c 07 N82-26293
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[NASA-CASE-LEW-14586-1] c 07 N83-31603
- Apparatus for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-1] c 07 N83-36029
- Tip cap for a rotor blade  
[NASA-CASE-LEW-13654-1] c 07 N84-22560
- Air modulation apparatus  
[NASA-CASE-LEW-13524-1] c 07 N84-33410
- Flow modifying device  
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[NASA-CASE-XGS-03505] c 03 N71-10608
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- Method for measuring cutaneous sensory perception  
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- Reaction tester  
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[NASA-CASE-LAR-10076-1] c 05 N73-20137
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- Inverter ratio failure detector  
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- Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
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- Multiparameter vision testing apparatus  
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[NASA-CASE-XLA-09371] c 10 N71-18724
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[NASA-CASE-NPO-10199] c 09 N72-17156
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- Giannini Scientific Corp., Santa Ana, CA.**  
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[NASA-CASE-LAR-12624-1] c 01 N83-35992

**Macon-Rust Co., Lexington, KY.**  
Stretcher Patent  
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**Marlin-Rockwell Corp., Jamestown, NY.**  
Drilled ball bearing with a one piece anti-tipping cage assembly  
[NASA-CASE-LEW-11925-1] c 37 N75-31446

**Marquardt Corp., Van Nuys, CA.**  
Fuel injection pump for internal combustion engines Patent  
[NASA-CASE-MSC-12139-1] c 28 N71-14058  
Multislit film cooled pyrolytic graphite rocket nozzle Patent  
[NASA-CASE-XNP-04389] c 28 N71-20942  
Tube sealing device Patent  
[NASA-CASE-NPO-10431] c 15 N71-29132

**Martin Marietta Aerospace, Denver, CO.**  
Method and apparatus for tensile testing of metal foil  
[NASA-CASE-LAR-10208-1] c 35 N76-18400  
Pulse transducer with artifact signal attenuator  
[NASA-CASE-FRC-11012-1] c 52 N80-23969  
Urine collection apparatus  
[NASA-CASE-MSC-18381-1] c 52 N81-28740

**Martin Marietta Corp., Baltimore, MD.**  
Landing gear Patent  
[NASA-CASE-XMF-01174] c 02 N70-41589  
Emergency escape system Patent  
[NASA-CASE-XKS-02342] c 05 N71-11199

**Martin Marietta Corp., Denver, CO.**  
Flexible/rigidifiable cable assembly  
[NASA-CASE-MSC-13512-1] c 15 N72-22485  
Derivation of a tangent function using an integrated circuit four-quadrant multiplier  
[NASA-CASE-MSC-13907-1] c 10 N73-26230  
Low distortion automatic phase control circuit  
[NASA-CASE-MFS-21671-1] c 33 N74-22885  
Variable ratio mixed-mode bilateral master-slave control system for shuttle remote manipulator system  
[NASA-CASE-MSC-14245-1] c 18 N75-27041  
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[NASA-CASE-MSC-14273-1] c 34 N75-33342  
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[NASA-CASE-LAR-10970-1] c 33 N76-14372  
Method and apparatus for fluffing, separating, and cleaning fibers  
[NASA-CASE-LAR-11224-1] c 37 N76-18456  
Hearing aid malfunction detection system  
[NASA-CASE-MSC-14916-1] c 33 N78-10375  
Positive isolation disconnect  
[NASA-CASE-MSC-16043-1] c 37 N79-11402  
Urine collection device  
[NASA-CASE-MSC-16433-1] c 52 N81-24711  
Amplifier for measuring low-level signals in the presence of high common mode voltage  
[NASA-CASE-MFS-25868-1] c 33 N86-20670

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Method and apparatus for optical modulating a light signal Patent  
[NASA-CASE-GSC-10216-1] c 23 N71-26722

**Massachusetts Inst. of Tech., Cambridge.**  
Pretreatment method for anti-wettable materials  
[NASA-CASE-XMS-03537] c 15 N69-21471  
Hydraulic drive mechanism Patent  
[NASA-CASE-XMS-03252] c 15 N71-10658  
Electronic amplifier with power supply switching Patent  
[NASA-CASE-XMS-00945] c 09 N71-10798  
Method and apparatus for stabilizing a gaseous optical maser Patent  
[NASA-CASE-XGS-03644] c 16 N71-18614  
Power supply Patent  
[NASA-CASE-XMS-02159] c 10 N71-22961  
Optical frequency waveguide Patent  
[NASA-CASE-HQN-10541-1] c 07 N71-26291  
Laser machining apparatus Patent  
[NASA-CASE-HQN-10541-2] c 15 N71-27135  
Optical frequency waveguide and transmission system Patent  
[NASA-CASE-HQN-10541-4] c 16 N71-27183  
Compact spectroradiometer  
[NASA-CASE-HQN-10683] c 14 N71-34389  
Optical frequency waveguide and transmission system  
[NASA-CASE-HQN-10541-3] c 23 N72-23695  
Display research collision warning system  
[NASA-CASE-HQN-10703] c 21 N73-13643  
Transparent switchboard  
[NASA-CASE-MSC-13746-1] c 10 N73-32143  
Vapor deposition apparatus  
[NASA-CASE-HQN-10462] c 25 N75-29192  
Fault tolerant clock apparatus utilizing a controlled minority of clock elements  
[NASA-CASE-MSC-12531-1] c 35 N75-30504

**MB Associates, San Ramon, CA.**  
Hypervelocity gun  
[NASA-CASE-XLE-03186-1] c 09 N79-21084

**McDonnell Aircraft Co., Saint Louis, MO.**  
Method for making a heat insulating and ablative structure  
[NASA-CASE-XMS-01108] c 15 N69-24322  
Heat flux sensor assembly  
[NASA-CASE-XMS-05909-1] c 14 N69-27459  
Apparatus for purging systems handling toxic, corrosive, noxious and other fluids Patent  
[NASA-CASE-XMS-01905] c 12 N71-21089  
Power supply circuit Patent  
[NASA-CASE-XMS-00913] c 10 N71-23543  
Multiple circuit protector device  
[NASA-CASE-XMS-02744] c 33 N75-27249  
Apparatus for welding sheet material  
[NASA-CASE-XMS-01330] c 37 N75-27376  
Fused switch  
[NASA-CASE-XMS-01244-1] c 33 N79-33393  
Cooling system for high speed aircraft  
[NASA-CASE-LAR-12406-1] c 05 N81-26114

**McDonnell-Douglas Astronautics Co., Huntington Beach, CA.**  
Heat transfer device  
[NASA-CASE-MFS-22938-1] c 34 N76-18374

**McDonnell-Douglas Astronautics Co., Santa Monica, CA.**  
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[NASA-CASE-NPO-10863] c 06 N70-11251  
Method of polymerizing perfluorobutadiene Patent application  
[NASA-CASE-NPO-10447] c 06 N70-11252

**McDonnell-Douglas Astronautics Co., Saint Louis, MO.**  
Passive propellant system  
[NASA-CASE-MFS-23642-2] c 20 N78-27176

**McDonnell-Douglas Corp., Huntington Beach, CA.**  
Variable direction force coupler  
[NASA-CASE-MFS-20317] c 15 N73-13463  
Potable water dispenser  
[NASA-CASE-MFS-21115-1] c 54 N74-12779  
Metering gun for dispensing precisely measured charges of fluid  
[NASA-CASE-MFS-21163-1] c 54 N74-17853  
Airlock  
[NASA-CASE-MFS-20922-1] c 18 N74-22136  
Device for monitoring a change in mass in varying gravimetric environments  
[NASA-CASE-MFS-21556-1] c 35 N74-26945  
Thrust-isolating mounting  
[NASA-CASE-MFS-21680-1] c 18 N74-27397  
Device for measuring tensile forces  
[NASA-CASE-MFS-21728-1] c 35 N74-27865  
Flame detector operable in presence of proton radiation  
[NASA-CASE-MFS-21577-1] c 19 N74-29410  
Phase-locked servo system  
[NASA-CASE-MFS-22073-1] c 33 N75-13139  
Vacuum leak detector  
[NASA-CASE-LAR-11237-1] c 35 N75-19612  
Meter for use in detecting tension in straps having predetermined elastic characteristics  
[NASA-CASE-MFS-22189-1] c 35 N75-19615  
Latching device  
[NASA-CASE-MFS-21606-1] c 37 N75-19685  
Device for use in loading tension members  
[NASA-CASE-MFS-21488-1] c 14 N75-24794

**McDonnell-Douglas Corp., Long Beach, CA.**  
Optimized bolted joint  
[NASA-CASE-LAR-13250-1] c 37 N86-27630

**McDonnell-Douglas Corp., Newport Beach, CA.**  
Method of making membranes  
[NASA-CASE-XNP-04264] c 03 N69-21337

**McDonnell-Douglas Corp., Santa Monica, CA.**  
Rocket nozzle test method Patent  
[NASA-CASE-NPO-10311] c 31 N71-15643  
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[NASA-CASE-NPO-10862] c 06 N72-22107  
Polymers of perfluorobutadiene and method of manufacture  
[NASA-CASE-NPO-10863-2] c 06 N72-25152  
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[NASA-CASE-LAR-11042-1] c 33 N75-27252  
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[NASA-CASE-NPO-12122-1] c 24 N76-14203  
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[NASA-CASE-NPO-12061-1] c 27 N76-16228

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[NASA-CASE-GSC-11304-1] c 06 N72-21105  
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[NASA-CASE-NPO-12119-1] c 52 N75-15270

**Mellon Inst., Pittsburgh, PA.**  
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[NASA-CASE-XLE-01481] c 14 N71-10781

**Melpar, Inc., Falls Church, VA.**  
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[NASA-CASE-XMS-04533] c 15 N71-23086

**Metcom, Inc., Salem, MA.**  
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[NASA-CASE-XNP-09771] c 09 N71-24841

**Methodist Hospital, Houston, TX.**  
Snap-in compressible biomedical electrode  
[NASA-CASE-MSC-14623-1] c 52 N77-28717

**Microwave Electronics Corp., Palo Alto, CA.**  
Folded traveling wave maser structure Patent  
[NASA-CASE-XNP-05219] c 16 N71-15550

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[NASA-CASE-XNP-06503] c 23 N71-29049

**Microwave Research Corp., North Andover, MA.**  
Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector  
[NASA-CASE-NPO-13568-1] c 32 N76-21365

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[NASA-CASE-NPO-14588-1] c 32 N81-25278

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Preparation of ordered poly /arylene siloxane/ polymers  
[NASA-CASE-XMF-10753] c 06 N71-11237

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[NASA-CASE-XMF-03988] c 15 N71-21403

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[NASA-CASE-MFS-21040-1] c 06 N73-30098

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[NASA-CASE-LAR-10686] c 14 N71-28935

**Minneapolis-Honeywell Regulator Co., MN.**  
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[NASA-CASE-XMS-02182] c 10 N71-28783

**Modern Machine and Tool Co., Newport News, VA.**  
Means for accommodating large overstrain in lead wires  
[NASA-CASE-LAR-10168-1] c 33 N74-22865

**Monsanto Co., Saint Louis, MO.**  
Method for the preparation of inorganic single crystal and polycrystalline electronic materials  
[NASA-CASE-XLE-02545-1] c 76 N79-21910

**Monsanto Research Corp., Dayton, OH.**  
Perfluoro alkylene dioxy-bis-(4-phthalic anhydrides and oxy-bis-(perfluoroalkyleneoxyphthalic anhydrides  
[NASA-CASE-MFS-22356-1] c 23 N75-30256

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[NASA-CASE-MFS-22355-1] c 23 N76-15268

**Motorola, Inc., Phoenix, AZ.**  
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[NASA-CASE-XMF-08665] c 10 N71-19467

Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c 26 N80-14229

Quartz ball valve  
[NASA-CASE-NPO-14473-1] c 37 N80-23654

Method and apparatus for quadruphase-shift-key and linear phase modulation  
[NASA-CASE-NPO-14444-1] c 33 N81-15192

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[NASA-CASE-MSC-12168-1] c 09 N71-18600

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[NASA-CASE-NPO-11948-1] c 33 N74-32712

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[NASA-CASE-GSC-12137-1] c 33 N78-32338

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[NASA-CASE-NPO-14311-1] c 33 N82-29539

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[NASA-CASE-MFS-21433] c 09 N73-20232

Suppression of flutter  
[NASA-CASE-LAR-10682-1] c 02 N73-26004

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[NASA-CASE-GSC-11296-1] c 23 N73-30666

Power supply for carbon dioxide lasers  
[NASA-CASE-GSC-11222-1] c 16 N73-32391

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[NASA-CASE-LAR-11027-1] c 35 N74-18088

Holography utilizing surface plasmon resonances  
[NASA-CASE-MFS-22040-1] c 35 N74-26946

Stagnation pressure probe  
[NASA-CASE-LAR-11139-1] c 35 N74-32878

Integrated P-channel MOS gyator  
[NASA-CASE-MFS-22343-1] c 33 N74-34638

Automated analysis of oxidative metabolites  
[NASA-CASE-ARC-10469-1] c 25 N75-12086

Method of preparing water purification membranes  
[NASA-CASE-ARC-10643-1] c 25 N75-12087

Method of forming aperture plate for electron microscope  
[NASA-CASE-ARC-10448-2] c 74 N75-12732

Dually mode locked Nd:YAG laser  
[NASA-CASE-GSC-11746-1] c 36 N75-19654

Anti-gravity device  
[NASA-CASE-MFS-22758-1] c 70 N75-26789

Impact position detector for outer space particles  
[NASA-CASE-GSC-11829-1] c 35 N75-27331

Integrable power gyator  
[NASA-CASE-MFS-22342-1] c 33 N75-30428

Two stage light gas-plasma projectile accelerator  
[NASA-CASE-MFS-22287-1] c 75 N76-14931

Micrometeoroid velocity and trajectory analyzer  
[NASA-CASE-GSC-11892-1] c 35 N76-15433

Moving particle composition analyzer  
[NASA-CASE-GSC-11889-1] c 35 N76-16393

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[NASA-CASE-MFS-22145-2] c 75 N76-17951

Readout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c 35 N76-24525

Electron microscope aperture system  
[NASA-CASE-ARC-10448-3] c 35 N77-14408

Method for making a hot wire anemometer and product thereof  
[NASA-CASE-ARC-10900-1] c 35 N77-24454

Length controlled stabilized mode-lock ND:YAG laser  
[NASA-CASE-GSC-11571-1] c 36 N77-25499

Method of growing composites of the type exhibiting the Soret effect  
[NASA-CASE-MFS-22926-1] c 24 N77-27187

Method and apparatus for splitting a beam of energy  
[NASA-CASE-GSC-12083-1] c 73 N78-32848

Cantilever mounted resilient pad gas bearing  
[NASA-CASE-LEW-12569-1] c 37 N79-10418

Shock isolator for operating a diode laser on a closed-cycle refrigerator  
[NASA-CASE-GSC-12297-1] c 37 N79-28549

Pocket ECG electrode  
[NASA-CASE-ARC-11258-1] c 52 N80-33081

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[NASA-CASE-ARC-11117-1] c 52 N81-14612

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[NASA-CASE-MFS-23845-1] c 33 N81-17348

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[NASA-CASE-ARC-11257-1] c 04 N81-21047

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[NASA-CASE-ARC-11321-1] c 27 N81-27272

Synthesis of polyformals  
[NASA-CASE-ARC-11244-1] c 23 N82-16174

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[NASA-CASE-LEW-13339-1] c 26 N82-31505

Massively parallel processor computer  
[NASA-CASE-GSC-12223-1] c 60 N83-25378

Non-invasive method and apparatus for measuring pressure within a pliable vessel  
[NASA-CASE-ARC-11264-2] c 52 N83-29991

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[NASA-CASE-ARC-11400-1] c 27 N84-14322

Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-3] c 27 N84-22745

Method for the preparation of thin-skinned asymmetric reverse osmosis membranes and products thereof  
[NASA-CASE-ARC-11359-1] c 51 N84-28361

Synthesis of 2,4,8,10-tetroxaspiro5,5undecane  
[NASA-CASE-ARC-11243-2] c 23 N85-33187

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[NASA-CASE-ARC-11522-2] c 27 N85-34280

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[NASA-CASE-ARC-11424-1] c 27 N85-34281

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[NASA-CASE-ARC-11427-1] c 24 N86-19380

Metal phthalocyanine intermediates for the preparation of polymers  
[NASA-CASE-ARC-11405-2] c 27 N86-19455

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[NASA-CASE-XGS-02401] c 14 N69-27485

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[NASA-CASE-ERC-10179] c 07 N72-20141

Semiconductor-ferroelectric memory device  
[NASA-CASE-ERC-10307] c 08 N72-21198

Shielded cathode mode bulk effect devices  
[NASA-CASE-ERC-10119] c 26 N72-21701

Fabrication of single crystal film semiconductor devices  
[NASA-CASE-ERC-10222] c 09 N72-22199

Two color horizon sensor  
[NASA-CASE-ERC-10174] c 14 N72-25409

Ultraviolet atomic emission detector  
[NASA-CASE-HQN-10756-1] c 14 N72-25428

Optical pump and driver system for lasers  
[NASA-CASE-ERC-10283] c 16 N72-25485

Clear air turbulence detector  
[NASA-CASE-ERC-10081] c 14 N72-28437

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[NASA-CASE-ERC-10392] c 21 N73-14692

System for indicating direction of intruder aircraft  
[NASA-CASE-ERC-10226-1] c 14 N73-16483

Aircraft control system  
[NASA-CASE-ERC-10439] c 02 N73-19004

Display system  
[NASA-CASE-ERC-10350] c 14 N73-20474

Method and apparatus for measuring solar activity and atmospheric radiation effects  
[NASA-CASE-ERC-10276] c 14 N73-26432

Doppler shift system  
[NASA-CASE-HQN-10740-1] c 72 N74-19310

Auditory display for the blind  
[NASA-CASE-HQN-10832-1] c 71 N74-21014

Laser system with an antiresonant optical ring  
[NASA-CASE-HQN-10844-1] c 36 N75-19653

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[NASA-CASE-HQN-10542-1] c 74 N75-25706

Folding structure fabricated of rigid panels  
[NASA-CASE-XHQ-02146] c 18 N75-27040

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[NASA-CASE-HQN-10069] c 33 N75-27251

Vapor deposition apparatus  
[NASA-CASE-HQN-10462] c 25 N75-29192

Resistive anode image converter  
[NASA-CASE-HQN-10876-1] c 33 N76-27473

Rechargeable battery which combats shape change of the zinc anode  
[NASA-CASE-HQN-10862-1] c 44 N76-29699

System and method for tracking a signal source  
[NASA-CASE-HQN-10880-1] c 17 N78-17140

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[NASA-CASE-HQN-10841-1] c 73 N78-19920

Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c 54 N78-32721

Safety flywheel  
[NASA-CASE-HQN-10888-1] c 44 N79-14527

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[NASA-CASE-HQN-00573-1] c 37 N79-33468

Glass compositions with a high modulus of elasticity  
[NASA-CASE-HQN-10274-1] c 27 N82-29451

High modulus invert analog glass compositions containing beryllia  
[NASA-CASE-HQN-10931-2] c 27 N82-29452

Non-toxic invert analog glass compositions of high modulus  
[NASA-CASE-HQN-10328-2] c 27 N82-29454

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[NASA-CASE-HQN-10595-1] c 27 N82-29455

High resistance and raised modulus carbon fibers  
[NASA-TM-76884] c 24 N85-25436

**National Aeronautics and Space Administration, Ames Research Center, Moffett Field, CA.**  
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[NASA-CASE-XAR-03786] c 09 N69-21313

Balanced bellows spirometer  
[NASA-CASE-XAR-01547] c 05 N69-21473

- Cryogenic apparatus for measuring the intensity of magnetic fields  
[NASA-CASE-XAC-02407] c 14 N69-27423
- Variable stiffness polymeric damper  
[NASA-CASE-XAC-11225] c 14 N69-27486
- Shock-layer radiation measurement  
[NASA-CASE-XAC-02970] c 14 N69-39896
- Protective circuit of the spark gap type  
[NASA-CASE-XAC-08981] c 09 N69-39897
- Apparatus for coupling a plurality of ungrounded circuits to a grounded circuit Patent  
[NASA-CASE-XAC-00086] c 09 N70-33182
- Two-plane balance Patent  
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- Centrifuge mounted motion simulator Patent  
[NASA-CASE-XAC-00399] c 11 N70-34815
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[NASA-CASE-XAC-03777] c 10 N71-15909
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- High efficiency multivibrator Patent  
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[NASA-CASE-XAC-05506-1] c 24 N71-16095
- Inertial reference apparatus Patent  
[NASA-CASE-XAC-03107] c 23 N71-16098
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[NASA-CASE-XAC-04031] c 08 N71-18594
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[NASA-CASE-XAC-04030] c 10 N71-19472
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[NASA-CASE-XAC-08972] c 02 N71-20570
- Electric arc apparatus Patent  
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- Inertia diaphragm pressure transducer Patent  
[NASA-CASE-XAC-02981] c 14 N71-21072
- Stirring apparatus for plural test tubes Patent  
[NASA-CASE-XAC-06956] c 15 N71-21177
- Exposure system for animals Patent  
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- Vibrating element electrometer with output signal magnified over input signal by a function of the mechanical Q of the vibrating element Patent  
[NASA-CASE-XAC-02807] c 09 N71-23021
- Hall current measuring apparatus having a series resistor for temperature compensation Patent  
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- Transfer valve Patent  
[NASA-CASE-XAC-01158] c 15 N71-23051
- Hard space suit Patent  
[NASA-CASE-XAC-07043] c 05 N71-23161
- Method and apparatus for continuously monitoring blood oxygenation, blood pressure, pulse rate and the pressure pulse curve utilizing an ear oximeter as transducer Patent  
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- Feedback integrator with grounded capacitor Patent  
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- Floating two force component measuring device Patent  
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- Control device Patent  
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- Means for suppressing or attenuating bending motion of elastic bodies Patent  
[NASA-CASE-XAC-05632] c 32 N71-23971
- Device for measuring pressure Patent  
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- Transducer circuit and catheter transducer Patent  
[NASA-CASE-ARC-10132-1] c 09 N71-24597
- Skeletal stressing method and apparatus Patent  
[NASA-CASE-ARC-10100-1] c 05 N71-24738
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[NASA-CASE-ARC-10098-1] c 06 N71-24739
- Deep space monitor communication satellite system Patent  
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- Laser fluid velocity detector Patent  
[NASA-CASE-XAC-10770-1] c 16 N71-24828
- Transient video signal recording with expanded playback Patent  
[NASA-CASE-ARC-10003-1] c 09 N71-25866
- Thermally cycled magnetometer Patent  
[NASA-CASE-XAC-03740] c 14 N71-26135
- Optical machine tool alignment indicator Patent  
[NASA-CASE-XAC-09489-1] c 15 N71-26673
- Energy limiter for hydraulic actuators Patent  
[NASA-CASE-ARC-10131-1] c 15 N71-27754
- Multivibrator circuit with means to prevent false triggering from supply voltage fluctuations Patent  
[NASA-CASE-ARC-10137-1] c 09 N71-28468
- Locomotion and restraint aid Patent  
[NASA-CASE-ARC-10153] c 05 N71-28619
- Line following servosystem Patent  
[NASA-CASE-XAC-00001] c 15 N71-28952
- Mechanically limited, electrically operated hydraulic valve system for aircraft controls Patent  
[NASA-CASE-XAC-00048] c 02 N71-29128
- Precision rectifier with FET switching means Patent  
[NASA-CASE-ARC-10101-1] c 09 N71-33109
- Solar cell Patent  
[NASA-CASE-ARC-10050] c 03 N71-33409
- Phase shift circuit apparatus  
[NASA-CASE-ARC-10269-1] c 10 N72-16172
- High intensity radiant energy pulse source having means for opening shutter when light flux has reached a desired level  
[NASA-CASE-ARC-10178-1] c 09 N72-17152
- Telemetry actuated switch  
[NASA-CASE-ARC-10105] c 09 N72-17153
- Active RC networks  
[NASA-CASE-ARC-10020] c 10 N72-17172
- Apparatus for automatically stabilizing the attitude of a nonguided vehicle  
[NASA-CASE-ARC-10134] c 30 N72-17873
- Method and apparatus for swept-frequency impedance measurements of welds  
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- Space suit having improved waist and torso movement  
[NASA-CASE-ARC-10275-1] c 05 N72-22092
- RF controlled solid state switch  
[NASA-CASE-ARC-10136-1] c 09 N72-22202
- Wide range dynamic pressure sensor  
[NASA-CASE-ARC-10263-1] c 14 N72-22438
- Method and apparatus for measuring the damping characteristics of a structure  
[NASA-CASE-ARC-10154-1] c 14 N72-22440
- Magnetic position detection method and apparatus  
[NASA-CASE-ARC-10179-1] c 21 N72-22619
- Fluidic proportional thruster system  
[NASA-CASE-ARC-10106-1] c 28 N72-22769
- Thermoelectric radiometer utilizing polymer film  
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- Polymeric vehicles as carriers for sulfonic acid salt of nitrosubstituted aromatic amines  
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- Stereoscopic television system and apparatus  
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[NASA-CASE-ARC-10265-1] c 10 N72-28240
- Apparatus for ionization analysis  
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- Nondispersive gas analyzing method and apparatus wherein radiation is serially passed through a reference and unknown gas  
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- Two degree inverted flexure  
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- Intumescent paint containing nitrile rubber  
[NASA-CASE-ARC-10196-1] c 18 N73-13562
- Temperature compensated light source using a light emitting diode  
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- Self-tuning bandpass filter  
[NASA-CASE-ARC-10264-1] c 09 N73-20231
- Micrometeoroid analyzer  
[NASA-CASE-ARC-10443-1] c 14 N73-20477
- Multiple pass reimaging optical system  
[NASA-CASE-ARC-10194-1] c 23 N73-20741
- Intruder detection system  
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- Interferometric rotation sensor  
[NASA-CASE-ARC-10278-1] c 14 N73-25463
- Dual-fuselage aircraft having yawable wing and horizontal stabilizer  
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- Temperature controller for a fluid cooled garment  
[NASA-CASE-ARC-10599-1] c 05 N73-26071
- Visual examination apparatus  
[NASA-CASE-ARC-10329-1] c 05 N73-26072
- Intumescent composition, foamed product prepared therewith, and process for making same  
[NASA-CASE-ARC-10304-1] c 18 N73-26572
- Infrared tunable laser  
[NASA-CASE-ARC-10463-1] c 09 N73-32111
- Low power electromagnetic flowmeter providing accurate zero set  
[NASA-CASE-ARC-10362-1] c 14 N73-32326
- Hand-held photomicroscope  
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- Alignment apparatus using a laser having a gravitationally sensitive cavity reflector  
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- Flexible fire retardant polyisocyanate modified neoprene foam  
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- Heater-mixer for stored fluids  
[NASA-CASE-ARC-10442-1] c 35 N74-15093
- Bimetallic fluid displacement apparatus  
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- Overvoltage protection network  
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- Ultrasonic biomedical measuring and recording apparatus  
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- Ultraviolet and thermally stable polymer compositions  
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- High speed shutter  
[NASA-CASE-ARC-10516-1] c 70 N74-21300
- Bio-isolated dc operational amplifier  
[NASA-CASE-ARC-10596-1] c 33 N74-21851
- Programmable physiological infusion  
[NASA-CASE-ARC-10447-1] c 52 N74-22771
- Chromato-fluorographic drug detector  
[NASA-CASE-ARC-10633-1] c 25 N74-26947
- Intumescent composition, foamed product prepared therewith and process for making same  
[NASA-CASE-ARC-10304-2] c 27 N74-27037
- Photomultiplier circuit including means for rapidly reducing the sensitivity thereof  
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- National Aeronautics and Space Administration,  
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- Method and apparatus for wavelength tuning of liquid lasers  
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- A method for the deposition of beta-silicon carbide by isoeptaxy  
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- Method and means for an improved electron beam scanning system Patent  
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- Method and apparatus for detecting gross leaks Patent  
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- Field ionization electrodes Patent  
[NASA-CASE-ERC-10013] c 09 N71-26678
- Voltage regulator Patent  
[NASA-CASE-ERC-10113] c 09 N71-27053
- A multichannel photoionization chamber for absorption analysis Patent  
[NASA-CASE-ERC-10044-1] c 14 N71-27090
- Pressure sensitive transducers Patent  
[NASA-CASE-ERC-10087] c 14 N71-27334
- Constant frequency output two stage induction machine systems Patent  
[NASA-CASE-ERC-10065] c 09 N71-27364
- Fluid power transmitting gas bearing Patent  
[NASA-CASE-ERC-10097] c 15 N71-28465
- Color television systems using a single gun color cathode ray tube Patent  
[NASA-CASE-ERC-10098] c 09 N71-28618
- Ion microprobe mass spectrometer for analyzing fluid materials Patent  
[NASA-CASE-ERC-10014] c 14 N71-28863
- Orifice gross leak tester Patent  
[NASA-CASE-ERC-10150] c 14 N71-28992
- Device for measuring light scattering wherein the measuring beam is successively reflected between a pair of parallel reflectors Patent  
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- Quasi-optical microwave component Patent  
[NASA-CASE-ERC-10011] c 07 N71-29065
- Multiple hologram recording and readout system Patent  
[NASA-CASE-ERC-10151] c 16 N71-29131
- Plasma fluidic hybrid display Patent  
[NASA-CASE-ERC-10100] c 09 N71-33519
- Optical systems having spatially invariant outputs  
[NASA-CASE-ERC-10248] c 14 N72-17323
- Method of detecting impending saturation of magnetic cores  
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- Logarithmic function generator utilizing an exponentially varying signal in an inverse manner  
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- Method and apparatus for limiting field emission current  
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- National Aeronautics and Space Administration, Flight  
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Variable duration pulse integrator Patent [NASA-CASE-XLA-01219] c 10 N71-23084	Antenna design for surface wave suppression Patent [NASA-CASE-XLA-10772] c 07 N71-28980	Screened circuit capacitors [NASA-CASE-LAR-10294-1] c 26 N72-28762
Impact energy absorber Patent [NASA-CASE-XLA-01530] c 14 N71-23092	Analogue to digital converter tester Patent [NASA-CASE-XLA-06713] c 14 N71-28991	Deposition apparatus [NASA-CASE-LAR-10541-1] c 15 N72-32487
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Automatic fatigue test temperature programmer Patent [NASA-CASE-XLA-02059] c 33 N71-24276	Flared tube strainer [NASA-CASE-XLA-05056] c 15 N72-11389	Method of detecting oxygen in a gas [NASA-CASE-LAR-10668-1] c 06 N73-16106
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Resilience testing device Patent [NASA-CASE-XLA-08254] c 14 N71-26161	Pressure operated electrical switch responsive to a pressure decrease after a pressure increase [NASA-CASE-LAR-10137-1] c 09 N72-22204	Ablation article and method [NASA-CASE-LAR-10439-1] c 33 N73-27796
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High speed flight vehicle control Patent [NASA-CASE-XLA-08967] c 02 N71-27088	Method and apparatus for mapping the sensitivity of the face of a photodetector specifically a PMT [NASA-CASE-LAR-10320-1] c 09 N72-23172	Fluid pressure amplifier and system [NASA-CASE-LAR-10868-1] c 33 N74-11050
Suspended mass impact damper Patent [NASA-CASE-LAR-10193-1] c 15 N71-27146	Omnidirectional slot antenna for mounting on cylindrical space vehicle [NASA-CASE-LAR-10163-1] c 09 N72-25247	Method of making pressure tight seal for super alloy [NASA-CASE-LAR-10170-1] c 37 N74-11301
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	Low mass truss structure [NASA-CASE-LAR-10546-1] c 11 N72-25287	Evacuated displacement compression molding [NASA-CASE-LAR-10782-1] c 31 N74-14133
	Liquid waste feed system [NASA-CASE-LAR-10365-1] c 05 N72-27102	Modification of one man life raft [NASA-CASE-LAR-10241-1] c 54 N74-14845
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Mossbauer spectrometer radiation detector  
[NASA-CASE-LAR-11155-1] c 35 N74-15091  
In situ transfer standard for ultrahigh vacuum gage calibration  
[NASA-CASE-LAR-10862-1] c 35 N74-15092  
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[NASA-CASE-LAR-10105-1] c 34 N74-15652  
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[NASA-CASE-LAR-10595-1] c 35 N74-16135  
Wind tunnel model and method  
[NASA-CASE-LAR-10812-1] c 09 N74-17955  
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Apparatus for remote handling of materials  
[NASA-CASE-LAR-10634-1] c 37 N74-18123  
Method for compression molding of thermosetting plastics utilizing a temperature gradient across the plastic to cure the article  
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[NASA-CASE-LAR-10941-1] c 37 N74-21057  
Method of fabricating an object with a thin wall having a precisely shaped slit  
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[NASA-CASE-LAR-10295-1] c 35 N74-21062  
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[NASA-CASE-LAR-10168-1] c 33 N74-22865  
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[NASA-CASE-LAR-10089-1] c 34 N74-23066  
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[NASA-CASE-LAR-10841-1] c 31 N74-27900  
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[NASA-CASE-LAR-10753-1] c 08 N74-30421  
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Measuring probe position recorder  
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Stagnation pressure probe  
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Automatic inoculating apparatus  
[NASA-CASE-LAR-11074-1] c 51 N75-13502  
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[NASA-CASE-MFS-22129-1] c 33 N75-18477  
Automatic liquid inventory collecting and dispensing unit  
[NASA-CASE-LAR-11071-1] c 35 N75-19611  
Vacuum leak detector  
[NASA-CASE-LAR-11237-1] c 35 N75-19612  
Spectrometer integrated with a facsimile camera  
[NASA-CASE-LAR-11207-1] c 35 N75-19613  
Instrumentation for measurement of aircraft noise and sonic boom  
[NASA-CASE-LAR-11173-1] c 35 N75-19614  
Laser head for simultaneous optical pumping of several dye lasers  
[NASA-CASE-LAR-11341-1] c 36 N75-19655  
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[NASA-CASE-LAR-11110-1] c 34 N75-26282  
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Automatic microbial transfer device  
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[NASA-CASE-LAR-10970-1] c 33 N76-14372  
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[NASA-CASE-LAR-11552-1] c 35 N76-14429  
Horn antenna having V-shaped corrugated slots  
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Ultrasonic calibration device  
[NASA-CASE-LAR-11435-1] c 35 N76-15432  
Deploy/release system  
[NASA-CASE-LAR-11575-1] c 02 N76-16014  
Clock setter  
[NASA-CASE-LAR-11458-1] c 35 N76-16392  
Heat exchanger system and method  
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Stack plume visualization system  
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Exhaust flow deflector  
[NASA-CASE-LAR-11570-1] c 34 N76-18364  
Method and apparatus for tensile testing of metal foil  
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- Ion beam sputter etching  
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[NASA-CASE-LEW-14392-1] c 27 N87-28656
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[NASA-CASE-LEW-14345-1] c 23 N88-26404
- Arcjet power supply and start circuit  
[NASA-CASE-LEW-14374-1] c 09 N88-28939
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[NASA-CASE-LEW-13609-1] c 25 N90-11824
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[NASA-CASE-LEW-14520-1] c 33 N90-22724
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[NASA-CASE-LEW-14719-1] c 24 N90-23493
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[NASA-CASE-LEW-14345-2] c 25 N90-23497
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[NASA-CASE-LEW-14862-1] c 37 N91-14617
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[NASA-CASE-LEW-14472-1] c 24 N91-15320
- Ladder polymers for use as high temperature stable resins or coatings  
[NASA-CASE-LEW-14203-1] c 27 N91-15402
- Metallic seal for thermal barrier coating systems  
[NASA-CASE-LEW-15020-1] c 27 N91-15412
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[NASA-CASE-LEW-14295-1] c 31 N91-15424
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[NASA-CASE-LEW-14984-1] c 27 N91-16152
- Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-3] c 23 N91-17141
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- Heat transfer device  
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- Method of applying a thermal barrier coating system to a substrate  
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- Arc-textured high emittance radiator surfaces  
[NASA-CASE-LEW-14679-1] c 27 N91-25296
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- Plasma gun with coaxial powder feed and adjustable cathode  
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- Method of injecting fluid propellants into a rocket combustion chamber  
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- Oxidation resistant coatings for titanium alloys and titanium alloy matrix composites  
[NASA-CASE-LEW-15155-1] c 27 N91-26375
- Method of preparing a thermal barrier coating  
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- High-temperature, flexible, thermal barrier seal  
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[NASA-CASE-LEW-14959-1] c 44 N91-27614
- Apparatus for intercalating large quantities of fibrous structures  
[NASA-CASE-LEW-15077-2] c 24 N91-28289
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[NASA-CASE-LEW-14474-1] c 27 N91-28423
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[NASA-CASE-LEW-14676-1] c 33 N91-31529
- Plug-type heat flux gauge  
[NASA-CASE-LEW-14967-1] c 35 N91-31608
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[NASA-CASE-LEW-15200-1] c 20 N91-32167
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[NASA-CASE-LEW-15164-2] c 27 N91-32229
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- Method for detecting hydrogen gas  
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[NASA-CASE-MFS-14741] c 09 N70-20737
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[NASA-CASE-XMF-00447] c 14 N70-33179
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[NASA-CASE-XMF-00341] c 15 N70-33323
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[NASA-CASE-XMF-03856] c 31 N70-34159
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[NASA-CASE-XMF-00389] c 31 N70-34176
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[NASA-CASE-XMF-00375] c 15 N70-34249
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[NASA-CASE-XMF-00462] c 14 N70-34298
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[NASA-CASE-XMF-00185] c 21 N70-34539
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[NASA-CASE-XMF-00515] c 15 N70-34664
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- Assembly for recovering a capsule Patent  
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[NASA-CASE-XMF-00908] c 14 N70-40238
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[NASA-CASE-XMF-01371] c 15 N70-41829
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[NASA-CASE-XMF-02822] c 14 N70-41994
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[NASA-CASE-XMF-03248] c 11 N71-10604
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[NASA-CASE-XMF-01160] c 07 N71-11298
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[NASA-CASE-MFS-14671] c 05 N71-12341
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[NASA-CASE-XMF-03169] c 31 N71-15675
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- Method of making a molded connector Patent  
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- Burst diaphragm flow initiator Patent  
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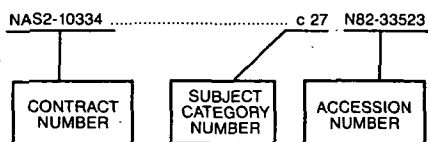
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NAS 1.71:NPO-17800-1-CU	c 37	N91-13724 *	#	NASA-CASE-ARC-10441-1	c 35	N74-15126 *		NASA-CASE-ARC-11039-1	c 74	N78-32854 *	
NAS 1.71:NPO-17803-1-CU	c 62	N90-27385 *	#	NASA-CASE-ARC-10442-1	c 35	N74-15093 *		NASA-CASE-ARC-11040-1	c 24	N79-16915 *	
NAS 1.71:NPO-17812-1-CU	c 76	N90-17456 *	#	NASA-CASE-ARC-10443-1	c 14	N73-20477 *		NASA-CASE-ARC-11040-2	c 24	N78-27184 *	#
NAS 1.71:NPO-17826-1-CU	c 27	N90-26952 *	#	NASA-CASE-ARC-10444-1	c 16	N73-33397 *		NASA-CASE-ARC-11042-1	c 24	N78-14096 *	
NAS 1.71:NPO-17835-1-CU	c 76	N90-27518 *	#	NASA-CASE-ARC-10445-1	c 31	N76-31365 *		NASA-CASE-ARC-11043-1	c 24	N78-27180 *	
NAS 1.71:NPO-17845-1-CU	c 61	N90-27341 *	#	NASA-CASE-ARC-10447-1	c 52	N74-22771 *		NASA-CASE-ARC-11045-1	c 05	N79-17447 *	
NAS 1.71:NPO-17852-1-CU	c 63	N91-23783 *	#	NASA-CASE-ARC-10448-2	c 74	N75-12732 *		NASA-CASE-ARC-11046-1	c 35	N78-14364 *	
NAS 1.71:NPO-17858-1-CU	c 24	N90-26880 *	#	NASA-CASE-ARC-10448-3	c 35	N77-14408 *		NASA-CASE-ARC-11051-1	c 27	N78-32260 *	
NAS 1.71:NPO-17897-1-CU	c 33	N90-27040 *	#	NASA-CASE-ARC-10456-1	c 05	N75-12930 *		NASA-CASE-ARC-11052-1	c 37	N79-28551 *	
NAS 1.71:NPO-17904-1-CU	c 32	N91-13594 *	#	NASA-CASE-ARC-10461-1	c 44	N74-33379 *		NASA-CASE-ARC-11053-1	c 25	N79-10162 *	
NAS 1.71:NPO-17911-1-CU	c 32	N90-27016 *	#	NASA-CASE-ARC-10462-1	c 37	N74-27901 *		NASA-CASE-ARC-11057-1	c 27	N78-31233 *	
NAS 1.71:NPO-17913-1-CU	c 74	N90-27488 *	#	NASA-CASE-ARC-10463-1	c 09	N73-32111 *		NASA-CASE-ARC-11058-1	c 54	N78-31735 *	
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NAS 1.71:NPO-17917-1-CU	c 37	N90-26339 *	#	NASA-CASE-ARC-10466-1	c 60	N75-13539 *		NASA-CASE-ARC-11059-1	c 54	N78-32721 *	
NAS 1.71:NPO-17922-1-CU	c 33	N91-13621 *	#	NASA-CASE-ARC-10467-1	c 09	N73-14214 *		NASA-CASE-ARC-11060-1	c 27	N79-22300 *	
NAS 1.71:NPO-17939-1-CU	c 60	N90-26518 *	#	NASA-CASE-ARC-10468-1	c 14	N73-33361 *		NASA-CASE-ARC-11061-1	c 25	N82-24312 *	
NAS 1.71:NPO-17941-1-CU	c 32	N91-13595 *	#	NASA-CASE-ARC-10469-1	c 25	N75-12086 *		NASA-CASE-ARC-11100-1	c 54	N78-31736 *	
NAS 1.71:NPO-17954-1-CU	c 60	N90-26519 *	#	NASA-CASE-ARC-10470-1	c 02	N73-26005 *		NASA-CASE-ARC-11101-1	c 54	N78-17675 *	
NAS 1.71:NPO-17970-1-CU	c 43	N90-26384 *	#	NASA-CASE-ARC-10470-3	c 05	N76-29217 *		NASA-CASE-ARC-11104-1	c 15	N79-26100 *	
NAS 1.71:NPO-17997-1-CU	c 60	N91-13888 *	#	NASA-CASE-ARC-10516-1	c 70	N74-21300 *		NASA-CASE-ARC-11106-1	c 05	N80-14107 *	
NAS 1.71:NPO-18028-1-CU	c 74	N91-24878 *	#	NASA-CASE-ARC-10519-2	c 05	N75-25915 *		NASA-CASE-ARC-11107-1	c 25	N80-16116 *	
NAS 1.71:NPO-18034-1-CU	c 44	N91-13796 *	#	NASA-CASE-ARC-10583-1	c 52	N76-29894 *		NASA-CASE-ARC-11110-1	c 37	N82-24492 *	
NAS 1.71:NPO-18075-1-CU	c 33	N91-13622 *	#	NASA-CASE-ARC-10592-1	c 27	N74-21156 *		NASA-CASE-ARC-11114-1	c 51	N81-14605 *	
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NAS 1.71:NPO-18115-1-CU	c 47	N91-23662 *	#	NASA-CASE-ARC-10596-1	c 33	N74-21851 *		NASA-CASE-ARC-11118-1	c 52	N81-29764 *	
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NASA-CASE-ARC-10009-1	c 15	N71-17822 *		NASA-CASE-ARC-10716-1	c 35	N77-20399 *		NASA-CASE-ARC-11241-1	c 25	N81-14016 *	
NASA-CASE-ARC-10017-1	c 14	N72-29464 *		NASA-CASE-ARC-10721-1	c 27	N76-22376 *		NASA-CASE-ARC-11243-2	c 23	N85-33187 *	
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NASA-CASE-ARC-11428-3	c 23	N88-24692 *		NASA-CASE-ERC-10178	c 16	N71-24832 *	NASA-CASE-GSC-10087-2	c 21	N71-13958 *
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NASA-CASE-ARC-11429-3CU	c 27	N87-16908 *		NASA-CASE-ERC-10187	c 16	N69-31343 *	NASA-CASE-GSC-10097-1	c 08	N71-27210 *
NASA-CASE-ARC-11429-4CU	c 27	N87-15304 *		NASA-CASE-ERC-10208	c 15	N70-10867 *	NASA-CASE-GSC-10114-1	c 10	N71-27366 *
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NASA-CASE-ARC-11504-1	c 09	N86-32447 *		NASA-CASE-ERC-10224	c 09	N72-18261 *	NASA-CASE-GSC-10185-1	c 07	N72-12081 *
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NASA-CASE-ARC-11510-1	c 35	N86-32697 *		NASA-CASE-ERC-10268	c 09	N72-25252 *	NASA-CASE-GSC-10218-1	c 15	N72-21465 *
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NASA-CASE-ARC-11525-1	c 37	N86-27629 *		NASA-CASE-ERC-10285	c 10	N73-16206 *	NASA-CASE-GSC-10299-1	c 09	N71-24804 *
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NASA-CASE-ARC-11538-1SB	c 24	N86-21590 *		NASA-CASE-ERC-10339-1	c 18	N73-30532 *	NASA-CASE-GSC-10361-1	c 18	N72-23581 *
NASA-CASE-ARC-11543-1	c 54	N86-28620 *		NASA-CASE-ERC-10350	c 14	N73-20474 *	NASA-CASE-GSC-10366-1	c 10	N71-18772 *
NASA-CASE-ARC-11547-1	c 36	N87-17026 *		NASA-CASE-ERC-10363	c 18	N72-25541 *	NASA-CASE-GSC-10373-1	c 07	N71-19773 *
NASA-CASE-ARC-11548-1	c 27	N87-25469 *		NASA-CASE-ERC-10364	c 18	N72-25540 *	NASA-CASE-GSC-10376-1	c 14	N71-27407 *
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NASA-CASE-ARC-11620-1	c 37	N87-25573 *		NASA-CASE-ERC-10439	c 02	N73-19004 *	NASA-CASE-GSC-10503-1	c 14	N72-20381 *
NASA-CASE-ARC-11622-1	c 44	N88-14492 *		NASA-CASE-ERC-10468	c 09	N72-20206 *	NASA-CASE-GSC-10514-1	c 14	N72-20379 *
NASA-CASE-ARC-11631-1	c 34	N87-21255 *		NASA-CASE-ERC-10552	c 09	N71-12539 *	NASA-CASE-GSC-10518-1	c 15	N72-22489 *
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NASA-CASE-ARC-11634-1	c 36	N88-14350 *					NASA-CASE-GSC-10554-1	c 08	N71-29033 *
NASA-CASE-ARC-11635-1	c 18	N90-16860 *		NASA-CASE-FRC-10005	c 15	N71-26145 *	NASA-CASE-GSC-10555-1	c 21	N71-27324 *
NASA-CASE-ARC-11636-1	c 05	N88-28914 *		NASA-CASE-FRC-10010	c 10	N71-24862 *	NASA-CASE-GSC-10556-1	c 31	N71-26537 *
NASA-CASE-ARC-11641-1	c 24	N88-18628 *		NASA-CASE-FRC-10012	c 14	N72-17329 *	NASA-CASE-GSC-10557-1	c 31	N71-26537 *
NASA-CASE-ARC-11643-1SB	c 23	N87-23698 *		NASA-CASE-FRC-10019	c 15	N73-12487 *	NASA-CASE-GSC-10564	c 10	N71-29135 *
NASA-CASE-ARC-11646-1	c 14	N87-25344 *		NASA-CASE-FRC-10022	c 12	N71-26546 *	NASA-CASE-GSC-10565-1	c 06	N72-25149 *
NASA-CASE-ARC-11649-1SB	c 27	N88-29040 *		NASA-CASE-FRC-10029-2	c 05	N72-25121 *	NASA-CASE-GSC-10566-1	c 15	N72-18477 *
NASA-CASE-ARC-11649-2SB	c 27	N90-21177 *		NASA-CASE-FRC-10029	c 09	N71-24618 *	NASA-CASE-GSC-10590-1	c 31	N73-14853 *
NASA-CASE-ARC-11652-1	c 27	N87-23737 *	#	NASA-CASE-FRC-10036	c 09	N72-22200 *	NASA-CASE-GSC-10607-1	c 15	N72-20442 *
NASA-CASE-ARC-11873-2	c 25	N91-31258 *		NASA-CASE-FRC-10038	c 15	N72-20444 *	NASA-CASE-GSC-10614-1	c 09	N72-11224 *
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NASA-CASE-ARC-11886-1SB	c 35	N91-14591 *		NASA-CASE-FRC-10053	c 14	N70-35587 *	NASA-CASE-GSC-10667-1	c 10	N71-33129 *
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NASA-CASE-ARC-11916-1SB	c 74	N91-14002 *	#	NASA-CASE-FRC-10063	c 01	N71-12217 *	NASA-CASE-GSC-10669-1	c 03	N72-20031 *
NASA-CASE-ARC-11917-1	c 35	N91-15520 *	#	NASA-CASE-FRC-10071-1	c 32	N74-20813 *	NASA-CASE-GSC-10695-1	c 09	N72-25259 *
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NASA-CASE-ERC-10001	c 23	N71-24868 *		NASA-CASE-FRC-10090-1	c 33	N78-18308 *	NASA-CASE-GSC-10710-1	c 28	N71-27094 *
NASA-CASE-ERC-10011	c 07	N71-29065 *		NASA-CASE-FRC-10092-1	c 05	N79-12061 *	NASA-CASE-GSC-10735-1	c 10	N71-26085 *
NASA-CASE-ERC-10013	c 09	N71-26678 *		NASA-CASE-FRC-10093-1	c 35	N80-20560 *	NASA-CASE-GSC-10780-1	c 14	N72-16283 *
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NASA-CASE-GSC-10990-1	c 09	N73-26195 *	NASA-CASE-GSC-11924-1	c 33	N76-27472 *	NASA-CASE-GSC-12565-1	c 36	N84-14509 *
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NASA-CASE-GSC-11513-1	c 33	N74-20862 *	NASA-CASE-GSC-12194-2	c 20	N82-18314 *	NASA-CASE-GSC-12883-1	c 27	N85-29044 *
NASA-CASE-GSC-11514-1	c 03	N72-24037 *	NASA-CASE-GSC-12207-1	c 24	N79-14156 *	NASA-CASE-GSC-12892-1	c 32	N89-14374 *
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NASA-CASE-GSC-11571-1	c 36	N77-25499 *	NASA-CASE-GSC-12263-1	c 74	N79-20857 *	NASA-CASE-GSC-12958-1	c 33	N86-32624 *
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NASA-CASE-GSC-11744-1	c 33	N75-26243 *	NASA-CASE-GSC-12331-1	c 18	N80-14183 *	NASA-CASE-GSC-13173-1	c 33	N90-23635 *
NASA-CASE-GSC-11746-1	c 36	N75-19654 *	NASA-CASE-GSC-12334-1	c 36	N79-14362 *	NASA-CASE-GSC-13175-1	c 74	N91-14001 * #
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NASA-CASE-GSC-11760-1	c 33	N75-19516 *	NASA-CASE-GSC-12348-1	c 74	N80-24149 *	NASA-CASE-GSC-13197-1	c 18	N91-27201 *
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NASA-CASE-GSC-11783-1	c 33	N75-19516 *	NASA-CASE-GSC-12357-1	c 74	N80-21440 *	NASA-CASE-GSC-13212-1	c 43	N91-32546 *
NASA-CASE-GSC-11786-1	c 24	N76-24363 *	NASA-CASE-GSC-12360-1	c 33	N81-19392 *	NASA-CASE-GSC-13220-1	c 37	N91-21525 * #
NASA-CASE-GSC-11789-1	c 33	N77-14333 *	NASA-CASE-GSC-12365-1	c 32	N80-28578 *	NASA-CASE-GSC-13230-1	c 37	N91-13734 * #
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NASA-CASE-GSC-11839-1	c 60	N77-14751 *	NASA-CASE-GSC-12415-1	c 33	N82-24419 *	NASA-CASE-GSC-13251-1	c 37	N91-28582 * #
NASA-CASE-GSC-11839-2	c 60	N78-10709 *	NASA-CASE-GSC-12420-1	c 33	N82-16340 *	NASA-CASE-GSC-13261-1	c 37	N91-17401 * #
NASA-CASE-GSC-11839-3	c 60	N77-32731 *	NASA-CASE-GSC-12429-1	c 37	N81-14320 *	NASA-CASE-GSC-13265-1	c 76	N91-14066 * #
NASA-CASE-GSC-11844-1	c 33	N75-19522 *	NASA-CASE-GSC-12430-1	c 60	N82-16747 *	NASA-CASE-GSC-13280-1	c 33	N91-27479 *
NASA-CASE-GSC-11849-1	c 33	N76-16332 *	NASA-CASE-GSC-12442-2	c 33	N90-20282 *	NASA-CASE-GSC-13306-1	c 52	N91-28727 * #
NASA-CASE-GSC-11862-1	c 32	N76-18295 *	NASA-CASE-GSC-12447-2	c 60	N84-28491 *	NASA-CASE-GSC-13343-1	c 36	N91-28557 * #
NASA-CASE-GSC-11868-1	c 17	N76-22245 *	NASA-CASE-GSC-12508-1	c 04	N84-22546 *	NASA-CASE-GSC-13344-1	c 26	N91-28363 * #
NASA-CASE-GSC-11877-1	c 74	N76-18913 *	NASA-CASE-GSC-12513-1	c 31	N81-19343 *	NASA-CASE-GSC-13346-1	c 37	N91-28578 * #
NASA-CASE-GSC-11883-1	c 37	N77-19458 *	NASA-CASE-GSC-12515-1	c 33	N81-26360 *	NASA-CASE-GSC-13348-2	c 52	N91-29714 * #
NASA-CASE-GSC-11883-2	c 37	N78-31426 *	NASA-CASE-GSC-12517-1	c 37	N83-32067 *	NASA-CASE-GSC-13369-1	c 33	N91-23380 * #

NASA-CASE-GSC-13376-1	c 37	N91-28579 * #	NASA-CASE-KSC-11057-1	c 33	N79-14305 *	NASA-CASE-LAR-10511-1	c 09	N72-29172 *
NASA-CASE-GSC-13377-1	c 63	N91-28785 * #	NASA-CASE-KSC-11064-1	c 31	N81-14137 *	NASA-CASE-LAR-10513-1	c 07	N72-25170 *
NASA-CASE-GSC-13378-1	c 37	N91-28581 * #	NASA-CASE-KSC-11065-1	c 33	N81-26359 *	NASA-CASE-LAR-10523-1	c 14	N72-22444 *
NASA-CASE-HQN-00573-1	c 37	N79-33468 *	NASA-CASE-KSC-11069-1	c 52	N79-26772 *	NASA-CASE-LAR-10539-1	c 17	N73-12547 *
NASA-CASE-HQN-00936	c 31	N71-29050 *	NASA-CASE-KSC-11076-1	c 34	N81-26402 *	NASA-CASE-LAR-10541-1	c 15	N72-32487 *
NASA-CASE-HQN-00937	c 07	N71-28979 *	NASA-CASE-KSC-11085-1	c 54	N81-24724 *	NASA-CASE-LAR-10544-1	c 37	N74-13178 *
NASA-CASE-HQN-00938	c 33	N71-29053 *	NASA-CASE-KSC-11097-1	c 27	N82-33520 *	NASA-CASE-LAR-10545-1	c 09	N72-21244 *
NASA-CASE-HQN-10037-1	c 14	N73-27376 * #	NASA-CASE-KSC-11099-1	c 47	N82-24779 *	NASA-CASE-LAR-10546-1	c 11	N72-25287 *
NASA-CASE-HQN-10069	c 33	N75-27251 *	NASA-CASE-KSC-11104-1	c 74	N83-29032 *	NASA-CASE-LAR-10547-1	c 31	N74-13177 *
NASA-CASE-HQN-10274-1	c 27	N82-29451 *	NASA-CASE-KSC-11155-1	c 04	N86-19304 *	NASA-CASE-LAR-10549-1	c 31	N73-13898 *
NASA-CASE-HQN-10328-2	c 27	N82-29454 *	NASA-CASE-KSC-11170-1	c 33	N83-36356 *	NASA-CASE-LAR-10550-1	c 09	N74-30597 *
NASA-CASE-HQN-10364	c 06	N71-27363 *	NASA-CASE-KSC-11218-1	c 09	N85-19990 *	NASA-CASE-LAR-10551-1	c 25	N74-12813 *
NASA-CASE-HQN-10439	c 21	N72-21624 *	NASA-CASE-KSC-11282-1	c 85	N87-21755 *	NASA-CASE-LAR-10557	c 02	N72-11018 *
NASA-CASE-HQN-10462	c 25	N75-29192 *	NASA-CASE-KSC-11285-1	c 32	N86-27513 *	NASA-CASE-LAR-10574-1	c 11	N73-13257 *
NASA-CASE-HQN-10537-1	c 06	N72-10138 * #	NASA-CASE-KSC-11304-2	c 28	N91-14495 *	NASA-CASE-LAR-10578-1	c 12	N73-25262 *
NASA-CASE-HQN-10541-1	c 07	N71-26291 *	NASA-CASE-KSC-11322-1	c 54	N89-29953 *	NASA-CASE-LAR-10585-1	c 02	N76-22154 *
NASA-CASE-HQN-10541-2	c 15	N71-27135 *	NASA-CASE-KSC-11368-1	c 37	N89-13786 *	NASA-CASE-LAR-10586-1	c 19	N74-15089 *
NASA-CASE-HQN-10541-3	c 23	N72-23695 *	NASA-CASE-KSC-11386-1	c 35	N90-22023 *	NASA-CASE-LAR-10590-1	c 15	N70-26819 * #
NASA-CASE-HQN-10541-4	c 16	N71-27183 *	NASA-CASE-KSC-11387-1	c 29	N90-20236 *	NASA-CASE-LAR-10595-1	c 35	N74-16135 *
NASA-CASE-HQN-10542-1	c 74	N75-25706 *	NASA-CASE-KSC-11392-1	c 74	N90-22383 *	NASA-CASE-LAR-10612-1	c 12	N73-28144 *
NASA-CASE-HQN-10595-1	c 27	N82-29455 *	NASA-CASE-KSC-11395-1-CU	c 34	N91-21473 *	NASA-CASE-LAR-10620-1	c 09	N72-25255 *
NASA-CASE-HQN-10638-1	c 15	N73-30460 *	NASA-CASE-LAR-02743	c 14	N73-32324 *	NASA-CASE-LAR-10623-1	c 14	N73-30395 *
NASA-CASE-HQN-10654-1	c 16	N73-13489 *	NASA-CASE-LAR-10000	c 14	N73-30394 *	NASA-CASE-LAR-10626-1	c 19	N74-21015 *
NASA-CASE-HQN-10683	c 14	N71-34389 * #	NASA-CASE-LAR-10007-1	c 05	N71-11195 *	NASA-CASE-LAR-10629-1	c 35	N75-33367 *
NASA-CASE-HQN-10703	c 21	N73-13643 *	NASA-CASE-LAR-10031	c 15	N72-22484 *	NASA-CASE-LAR-10634-1	c 37	N74-18123 *
NASA-CASE-HQN-10740-1	c 72	N74-19310 *	NASA-CASE-LAR-10056	c 05	N71-12351 *	NASA-CASE-LAR-10642-1	c 07	N74-31270 *
NASA-CASE-HQN-10756-1	c 14	N72-25428 * #	NASA-CASE-LAR-10061-1	c 15	N72-31483 *	NASA-CASE-LAR-10668-1	c 06	N73-16106 *
NASA-CASE-HQN-10780	c 14	N71-30265 *	NASA-CASE-LAR-10073-1	c 37	N76-24575 *	NASA-CASE-LAR-10670-1	c 06	N73-30097 *
NASA-CASE-HQN-10781	c 23	N71-30292 *	NASA-CASE-LAR-10076-1	c 05	N73-20137 *	NASA-CASE-LAR-10670-2	c 15	N74-27360 *
NASA-CASE-HQN-10790-1	c 36	N74-11313 *	NASA-CASE-LAR-10083-1	c 15	N71-27006 *	NASA-CASE-LAR-10682-1	c 02	N73-26004 *
NASA-CASE-HQN-10792-1	c 33	N74-11049 *	NASA-CASE-LAR-10089-1	c 34	N74-23066 *	NASA-CASE-LAR-10686-1	c 14	N71-28935 *
NASA-CASE-HQN-10832-1	c 71	N74-21014 *	NASA-CASE-LAR-10098	c 32	N71-26681 *	NASA-CASE-LAR-10688-1	c 37	N74-21056 *
NASA-CASE-HQN-10841-1	c 73	N78-19920 *	NASA-CASE-LAR-10102-1	c 05	N72-30085 *	NASA-CASE-LAR-10717-1	c 21	N73-30641 *
NASA-CASE-HQN-10844-1	c 36	N75-19653 *	NASA-CASE-LAR-10103-1	c 15	N73-14468 *	NASA-CASE-LAR-10726-1	c 14	N73-20475 *
NASA-CASE-HQN-10862-1	c 44	N76-29699 *	NASA-CASE-LAR-10105-1	c 34	N74-15652 *	NASA-CASE-LAR-10728-1	c 14	N73-12445 *
NASA-CASE-HQN-10876-1	c 33	N76-27473 *	NASA-CASE-LAR-10106-1	c 15	N71-27169 *	NASA-CASE-LAR-10730-1	c 33	N74-10223 *
NASA-CASE-HQN-10880-1	c 17	N78-17140 *	NASA-CASE-LAR-10121-1	c 15	N71-26721 *	NASA-CASE-LAR-10739-1	c 14	N73-16484 *
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NASA-CASE-HQN-10931-2	c 27	N82-29452 *	NASA-CASE-LAR-10129-1	c 15	N73-25512 *	NASA-CASE-LAR-10756-1	c 32	N73-26910 *
NASA-CASE-KSC-10002	c 10	N71-25865 *	NASA-CASE-LAR-10129-2	c 37	N74-20063 *	NASA-CASE-LAR-10765-1	c 32	N73-20740 *
NASA-CASE-KSC-10003	c 10	N73-13235 *	NASA-CASE-LAR-10135-1	c 09	N79-21083 *	NASA-CASE-LAR-10773-3	c 51	N77-25769 *
NASA-CASE-KSC-10020	c 10	N71-27338 *	NASA-CASE-LAR-10137-1	c 09	N72-22204 *	NASA-CASE-LAR-10774	c 10	N71-13545 *
NASA-CASE-KSC-10031	c 15	N72-22486 *	NASA-CASE-LAR-10163-1	c 09	N72-25247 *	NASA-CASE-LAR-10776-1	c 02	N74-10034 *
NASA-CASE-KSC-10108	c 14	N73-25461 *	NASA-CASE-LAR-10168-1	c 33	N74-22865 *	NASA-CASE-LAR-10782-1	c 31	N74-14133 *
NASA-CASE-KSC-10126	c 11	N71-24985 *	NASA-CASE-LAR-10170-1	c 37	N74-11301 *	NASA-CASE-LAR-10782-2	c 31	N75-13111 *
NASA-CASE-KSC-10162	c 09	N72-11225 *	NASA-CASE-LAR-10173-1	c 27	N71-14090 *	NASA-CASE-LAR-10792-2	c 34	N76-17317 *
NASA-CASE-KSC-10164	c 07	N71-33108 *	NASA-CASE-LAR-10176-1	c 14	N72-20380 *	NASA-CASE-LAR-10800-1	c 33	N72-27959 *
NASA-CASE-KSC-10198	c 11	N71-28629 *	NASA-CASE-LAR-10180-1	c 06	N71-13461 *	NASA-CASE-LAR-10805-2	c 34	N77-18382 *
NASA-CASE-KSC-10242	c 15	N72-23497 *	NASA-CASE-LAR-10184	c 14	N72-22445 *	NASA-CASE-LAR-10806-1	c 35	N74-32877 *
NASA-CASE-KSC-10278	c 05	N72-18015 *	NASA-CASE-LAR-10193-1	c 15	N71-27146 *	NASA-CASE-LAR-10812-1	c 09	N74-17955 *
NASA-CASE-KSC-10294	c 14	N72-18411 *	NASA-CASE-LAR-10194-1	c 34	N74-30608 *	NASA-CASE-LAR-10815-1	c 16	N72-22520 * #
NASA-CASE-KSC-10326	c 08	N72-21197 *	NASA-CASE-LAR-10195-1	c 15	N73-19458 *	NASA-CASE-LAR-10836-1	c 26	N72-27784 *
NASA-CASE-KSC-10392	c 07	N73-26117 *	NASA-CASE-LAR-10203-1	c 15	N72-16330 *	NASA-CASE-LAR-10841-1	c 31	N74-27900 *
NASA-CASE-KSC-10393	c 09	N72-21247 *	NASA-CASE-LAR-10204	c 14	N71-27215 *	NASA-CASE-LAR-10855-1	c 14	N73-13415 *
NASA-CASE-KSC-10397	c 08	N72-25206 *	NASA-CASE-LAR-10208-1	c 35	N76-18400 *	NASA-CASE-LAR-10862-1	c 35	N74-15092 *
NASA-CASE-KSC-10513	c 15	N72-25453 *	NASA-CASE-LAR-10218-1	c 09	N70-34559 * #	NASA-CASE-LAR-10868-1	c 33	N74-11050 *
NASA-CASE-KSC-10521	c 07	N73-20176 *	NASA-CASE-LAR-10226-1	c 14	N73-19419 *	NASA-CASE-LAR-10894-1	c 18	N73-14584 *
NASA-CASE-KSC-10565	c 09	N72-25250 *	NASA-CASE-LAR-10241-1	c 54	N74-14845 *	NASA-CASE-LAR-10900-1	c 37	N74-23064 *
NASA-CASE-KSC-10595	c 08	N73-12176 *	NASA-CASE-LAR-10249-1	c 02	N71-26110 *	NASA-CASE-LAR-10907-1	c 35	N76-29551 *
NASA-CASE-KSC-10615	c 15	N73-12486 *	NASA-CASE-LAR-10253-1	c 09	N72-25258 *	NASA-CASE-LAR-10910-1	c 35	N74-13132 *
NASA-CASE-KSC-10622-1	c 31	N72-21893 * #	NASA-CASE-LAR-10256-1	c 85	N74-34672 *	NASA-CASE-LAR-10913	c 14	N72-16282 *
NASA-CASE-KSC-10626	c 14	N73-27378 *	NASA-CASE-LAR-10270-1	c 32	N72-25877 *	NASA-CASE-LAR-10941-1	c 37	N74-21057 *
NASA-CASE-KSC-10639	c 15	N73-26472 *	NASA-CASE-LAR-10274-1	c 14	N71-17626 *	NASA-CASE-LAR-10942-2	c 37	N79-13364 *
NASA-CASE-KSC-10644	c 09	N72-27227 *	NASA-CASE-LAR-10276-1	c 09	N75-15662 *	NASA-CASE-LAR-10953-1	c 17	N73-27446 *
NASA-CASE-KSC-10647-1	c 10	N72-31273 *	NASA-CASE-LAR-10294-1	c 26	N72-28762 *	NASA-CASE-LAR-10970-1	c 33	N76-14372 *
NASA-CASE-KSC-10654-1	c 07	N73-30115 *	NASA-CASE-LAR-10295-1	c 35	N74-21062 *	NASA-CASE-LAR-10994-1	c 24	N75-13032 *
NASA-CASE-KSC-10698	c 07	N73-20175 *	NASA-CASE-LAR-10305	c 14	N71-26137 *	NASA-CASE-LAR-11021-1	c 32	N76-14321 *
NASA-CASE-KSC-10723-1	c 37	N75-13265 *	NASA-CASE-LAR-10310-1	c 10	N73-20253 *	NASA-CASE-LAR-11027-1	c 35	N74-18088 *
NASA-CASE-KSC-10728-1	c 14	N73-32319 *	NASA-CASE-LAR-10311-1	c 16	N73-16536 *	NASA-CASE-LAR-11042-1	c 33	N75-27252 *
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NASA-CASE-KSC-10736-1	c 33	N75-19521 *	NASA-CASE-LAR-10320-1	c 09	N72-23172 *	NASA-CASE-LAR-11069-1	c 35	N75-12272 *
NASA-CASE-KSC-10750-1	c 35	N75-12270 *	NASA-CASE-LAR-10323-1	c 12	N71-17573 *	NASA-CASE-LAR-11071-1	c 35	N75-19611 *
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NASA-CASE-KSC-10849-1	c 52	N77-14738 *	NASA-CASE-LAR-10373-1	c 18	N71-26155 *	NASA-CASE-LAR-11139-1	c 35	N74-32878 *
NASA-CASE-KSC-10899-1	c 33	N79-18193 *	NASA-CASE-LAR-10385-2	c 70	N74-13436 *	NASA-CASE-LAR-11141-1	c 07	N74-32418 *
NASA-CASE-KSC-11004-1	c 54	N77-30749 *	NASA-CASE-LAR-10385-3	c 74	N78-15879 *	NASA-CASE-LAR-11144-1	c 25	N75-26043 *
NASA-CASE-KSC-11008-1	c 33	N79-22373 *	NASA-CASE-LAR-10403	c 21	N71-11766 *	NASA-CASE-LAR-11155-1	c 35	N74-15091 *
NASA-CASE-KSC-11010-1	c 74	N79-12890 *	NASA-CASE-LAR-10409-1	c 31	N74-21059 *	NASA-CASE-LAR-11173-1	c 35	N75-19614 *
NASA-CASE-KSC-11018-1	c 33	N79-10337 *	NASA-CASE-LAR-10416-1	c 23	N74-30001 *	NASA-CASE-LAR-11201-1	c 35	N78-24515 *
NASA-CASE-KSC-11023-1	c 32	N79-23310 *	NASA-CASE-LAR-10423-1	c 24	N74-30001 *	NASA-CASE-LAR-11207-1	c 35	N75-19613 *
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NASA-CASE-LAR-11354-1	c 35	N75-27330 *	NASA-CASE-LAR-12250-1	c 14	N81-26161 *	NASA-CASE-LAR-12893-1	c 76	N85-30923 *
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NASA-CASE-LAR-11387-1	c 04	N76-20114 *	NASA-CASE-LAR-12260-1	c 55	N79-10390 *	NASA-CASE-LAR-12931-1	c 27	N84-22747 *
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NASA-CASE-LAR-11389-1	c 33	N77-26387 *	NASA-CASE-LAR-12264-1	c 15	N78-32168 #	NASA-CASE-LAR-12950-1	c 09	N84-34448 *
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NASA-CASE-LAR-11434-1	c 35	N76-22509 *	NASA-CASE-LAR-12304-1	c 35	N80-20559 *	NASA-CASE-LAR-12971-1	c 47	N84-28292 *
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NASA-CASE-LAR-11490-1	c 39	N78-16387 *	NASA-CASE-LAR-12326-1	c 02	N81-14968 *	NASA-CASE-LAR-13006-1	c 17	N87-16863 *
NASA-CASE-LAR-11500-1	c 35	N76-24523 *	NASA-CASE-LAR-12328-1	c 36	N82-32712 *	NASA-CASE-LAR-13009-1	c 37	N85-29285 *
NASA-CASE-LAR-11549-1	c 37	N77-11397 *	NASA-CASE-LAR-12344-1	c 43	N80-18498 *	NASA-CASE-LAR-13009-2	c 37	N87-22976 *
NASA-CASE-LAR-11551-1	c 44	N80-29834 *	NASA-CASE-LAR-12361-1	c 37	N83-19091 *	NASA-CASE-LAR-13014-1	c 09	N85-21178 *
NASA-CASE-LAR-11552-1	c 35	N76-14429 *	NASA-CASE-LAR-12363-1	c 35	N82-31659 *	NASA-CASE-LAR-13019-1	c 07	N85-35194 *
NASA-CASE-LAR-11563-1	c 37	N77-23482 *	NASA-CASE-LAR-12363-2	c 33	N83-24763 *	NASA-CASE-LAR-13028-1	c 52	N85-30618 *
NASA-CASE-LAR-11570-1	c 34	N76-18364 *	NASA-CASE-LAR-12372-1	c 37	N82-18601 *	NASA-CASE-LAR-13040-1	c 37	N85-29286 *
NASA-CASE-LAR-11575-1	c 02	N76-16014 *	NASA-CASE-LAR-12375-1	c 32	N79-24203 *	NASA-CASE-LAR-13053-1	c 43	N83-29783 #
NASA-CASE-LAR-11607-1	c 32	N77-14292 *	NASA-CASE-LAR-12393-1	c 34	N83-34221 *	NASA-CASE-LAR-13065-1	c 35	N85-20295 *
NASA-CASE-LAR-11617-2	c 35	N78-32397 *	NASA-CASE-LAR-12396-1	c 02	N84-28732 *	NASA-CASE-LAR-13076-1	c 08	N85-35200 *
NASA-CASE-LAR-11645-1	c 02	N77-10001 *	NASA-CASE-LAR-12406-1	c 05	N81-26114 *	NASA-CASE-LAR-13081-1	c 37	N86-32737 *
NASA-CASE-LAR-11648-1	c 35	N77-14407 *	NASA-CASE-LAR-12412-1	c 08	N82-24205 *	NASA-CASE-LAR-13098-1	c 31	N86-19479 *
NASA-CASE-LAR-11649-1	c 51	N77-27677 *	NASA-CASE-LAR-12441-1	c 09	N82-23254 *	NASA-CASE-LAR-13100-1	c 37	N87-23982 *
NASA-CASE-LAR-11658-1	c 37	N77-14478 *	NASA-CASE-LAR-12458-1	c 44	N83-21503 *	NASA-CASE-LAR-13111-CU	c 71	N87-21652 *
NASA-CASE-LAR-11667-1	c 52	N76-19785 *	NASA-CASE-LAR-12465-1	c 33	N82-26572 *	NASA-CASE-LAR-13113-1	c 31	N87-25492 *
NASA-CASE-LAR-11674-1	c 07	N76-18117 *	NASA-CASE-LAR-12468-1	c 08	N82-32373 *	NASA-CASE-LAR-13117-1	c 37	N86-25789 *
NASA-CASE-LAR-11675-1	c 45	N76-17656 *	NASA-CASE-LAR-12469-1	c 35	N83-21311 *	NASA-CASE-LAR-13118-2	c 27	N87-16907 *
NASA-CASE-LAR-11688-1	c 24	N82-26384 *	NASA-CASE-LAR-12471-1	c 52	N82-29862 *	NASA-CASE-LAR-13134-2	c 07	N87-16828 *
NASA-CASE-LAR-11690-1	c 35	N80-14371 *	NASA-CASE-LAR-12474-1	c 35	N82-26628 *	NASA-CASE-LAR-13135-1	c 27	N86-19456 *
NASA-CASE-LAR-11690-2	c 37	N81-24443 *	NASA-CASE-LAR-12482-1	c 37	N82-32732 *	NASA-CASE-LAR-13150-1	c 24	N87-27742 #
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NASA-CASE-LAR-11711-1	c 74	N78-17866 *	NASA-CASE-LAR-12513-1	c 44	N82-32841 *	NASA-CASE-LAR-13153-1	c 71	N86-21276 *
NASA-CASE-LAR-11726-1	c 37	N76-27568 *	NASA-CASE-LAR-12518-1	c 06	N86-27280 *	NASA-CASE-LAR-13155-1	c 05	N86-19310 *
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NASA-CASE-LAR-11745-1	c 32	N80-29539 *	NASA-CASE-LAR-12531-1	c 35	N83-29651 *	NASA-CASE-LAR-13173-1	c 05	N87-14314 *
NASA-CASE-LAR-11782-1	c 74	N77-20882 *	NASA-CASE-LAR-12532-1	c 09	N82-11088 *	NASA-CASE-LAR-13181-1	c 31	N85-29083 *
NASA-CASE-LAR-11797-1	c 05	N81-19087 *	NASA-CASE-LAR-12541-1	c 05	N84-22551 *	NASA-CASE-LAR-13198-1	c 37	N87-23983 *
NASA-CASE-LAR-11821-1	c 26	N80-28492 *	NASA-CASE-LAR-12552-1	c 35	N82-11431 *	NASA-CASE-LAR-13202-1	c 33	N88-23942 *
NASA-CASE-LAR-11825-1	c 35	N77-22449 *	NASA-CASE-LAR-12562-1	c 08	N81-26152 *	NASA-CASE-LAR-13215-1	c 02	N89-14224 *
NASA-CASE-LAR-11827-1	c 32	N77-10392 *	NASA-CASE-LAR-12588-1	c 34	N85-21568 *	NASA-CASE-LAR-13220-1	c 34	N86-12547 *
NASA-CASE-LAR-11828-1	c 27	N78-32261 *	NASA-CASE-LAR-12592-1	c 36	N82-13415 *	NASA-CASE-LAR-13225-1	c 24	N90-25197 *
NASA-CASE-LAR-11855-1	c 37	N81-14319 *	NASA-CASE-LAR-12595-1	c 33	N82-26571 *	NASA-CASE-LAR-13226-1	c 27	N85-34282 *
NASA-CASE-LAR-11859-1	c 35	N79-14349 *	NASA-CASE-LAR-12602-1	c 39	N83-32081 *	NASA-CASE-LAR-13230-1	c 24	N84-34571 *
NASA-CASE-LAR-11868-2	c 08	N79-14108 *	NASA-CASE-LAR-12615-1	c 05	N84-12154 *	NASA-CASE-LAR-13233-1	c 05	N84-33400 #
NASA-CASE-LAR-11869-1	c 74	N78-27904 *	NASA-CASE-LAR-12620-1	c 24	N82-32417 *	NASA-CASE-LAR-13243-1	c 35	N85-34375 *
NASA-CASE-LAR-11883-1	c 09	N77-27131 *	NASA-CASE-LAR-12624-1	c 01	N83-35992 *	NASA-CASE-LAR-13250-1	c 37	N86-27630 *
NASA-CASE-LAR-11889-1	c 35	N79-26372 *	NASA-CASE-LAR-12630-1	c 06	N84-27733 *	NASA-CASE-LAR-13254-CU	c 35	N86-29174 *
NASA-CASE-LAR-11889-2	c 37	N78-27424 *	NASA-CASE-LAR-12633-1	c 33	N82-24416 *	NASA-CASE-LAR-13255-1	c 02	N87-16793 *
NASA-CASE-LAR-11898-1	c 24	N78-10214 *	NASA-CASE-LAR-12638-1	c 04	N84-14132 *	NASA-CASE-LAR-13256-1	c 36	N86-29204 *
NASA-CASE-LAR-11898-2	c 24	N78-17149 *	NASA-CASE-LAR-12640-1	c 27	N82-11206 *	NASA-CASE-LAR-13257-1	c 25	N84-32447 #
NASA-CASE-LAR-11900-1	c 37	N79-14382 *	NASA-CASE-LAR-12642-1	c 27	N81-29229 *	NASA-CASE-LAR-13262-1	c 23	N85-28973 *
NASA-CASE-LAR-11902-1	c 27	N78-17206 *	NASA-CASE-LAR-12644-1	c 37	N84-28084 *	NASA-CASE-LAR-13268-1	c 35	N87-14669 *
NASA-CASE-LAR-11903-2	c 71	N84-14873 *	NASA-CASE-LAR-12650-1	c 52	N84-28388 *	NASA-CASE-LAR-13273-2	c 33	N90-20320 *
NASA-CASE-LAR-11919-1	c 07	N78-27121 *	NASA-CASE-LAR-12650-2	c 52	N84-28389 *	NASA-CASE-LAR-13280-1	c 08	N87-20999 *
NASA-CASE-LAR-11922-1	c 25	N79-24073 *	NASA-CASE-LAR-12654-1	c 33	N83-36357 *	NASA-CASE-LAR-13286-1	c 02	N88-14071 *
NASA-CASE-LAR-11932-1	c 05	N78-32086 *	NASA-CASE-LAR-12659-1	c 33	N82-26570 *	NASA-CASE-LAR-13292-1	c 27	N86-24841 #
NASA-CASE-LAR-11970-2	c 08	N81-19130 *	NASA-CASE-LAR-12686-1	c 35	N84-14491 *	NASA-CASE-LAR-13294-1	c 35	N86-32696 *
NASA-CASE-LAR-11973-1	c 35	N78-27384 *	NASA-CASE-LAR-12705-1	c 25	N82-26396 *	NASA-CASE-LAR-13300-1-CU	c 35	N89-14407 *
NASA-CASE-LAR-11995-1	c 28	N77-10213 *	NASA-CASE-LAR-12706-1	c 35	N84-12444 *	NASA-CASE-LAR-13306-1	c 82	N87-29372 *
NASA-CASE-LAR-11999-1	c 44	N80-18552 *	NASA-CASE-LAR-12709-1	c 35	N82-28604 *	NASA-CASE-LAR-13310-1	c 32	N87-14559 *
NASA-CASE-LAR-12007-3	c 35	N84-16523 *	NASA-CASE-LAR-12719-1	c 44	N83-34449 *	NASA-CASE-LAR-13316-1	c 27	N86-27450 *
NASA-CASE-LAR-12009-1	c 44	N78-15560 *	NASA-CASE-LAR-12720-1	c 44	N83-21504 *	NASA-CASE-LAR-13316-2	c 27	N87-14515 *
NASA-CASE-LAR-12016-1	c 39	N78-15512 *	NASA-CASE-LAR-12723-2	c 27	N85-20123 *	NASA-CASE-LAR-13318-1	c 27	N87-14516 *
NASA-CASE-LAR-12018-1	c 20	N78-24275 *	NASA-CASE-LAR-12723-2	c 27	N84-22746 *	NASA-CASE-LAR-13351-1	c 27	N86-31727 *
NASA-CASE-LAR-12019-1	c 24	N78-17150 *	NASA-CASE-LAR-12728-1	c 35	N83-32026 *	NASA-CASE-LAR-13353-1	c 27	N86-29039 *
NASA-CASE-LAR-12027-1	c 39	N79-22537 *	NASA-CASE-LAR-12738-2	c 37	N85-30335 *	NASA-CASE-LAR-13384-1	c 27	N86-20561 *
NASA-CASE-LAR-12045-1	c 34	N77-24423 *	NASA-CASE-LAR-12743-1	c 35	N84-28019 *	NASA-CASE-LAR-13387-1	c 74	N88-25302 #
NASA-CASE-LAR-12046-1	c 25	N78-15210 *	NASA-CASE-LAR-12751-1	c 15	N84-16231 *	NASA-CASE-LAR-13388-1	c 25	N91-28321 #
NASA-CASE-LAR-12054-1	c 18	N81-29152 *	NASA-CASE-LAR-12772-1	c 33	N83-16626 *	NASA-CASE-LAR-13392-1-CU	c 19	N91-14412 *
NASA-CASE-LAR-12054-2	c 27	N79-33316 *	NASA-CASE-LAR-12775-1	c 27	N83-28240 *	NASA-CASE-LAR-13393-1	c 54	N87-29118 *
NASA-CASE-LAR-12054-3	c 27	N81-14078 *	NASA-CASE-LAR-12775-2	c 27	N85-21349 *	NASA-CASE-LAR-13407-1	c 33	N87-28831 *
NASA-CASE-LAR-12065-1	c 24	N81-14000 *	NASA-CASE-LAR-12785-1	c 37	N84-16561 *	NASA-CASE-LAR-13411-1-SB	c 18	N88-23828 *
NASA-CASE-LAR-12065-2	c 24	N81-33235 *	NASA-CASE-LAR-12786-1	c 37	N84-28085 *	NASA-CASE-LAR-13434-1	c 37	N90-23742 *
NASA-CASE-LAR-12077-1	c 31	N81-25259 *	NASA-CASE-LAR-12787-2	c 08	N85-19985 *	NASA-CASE-LAR-13435-1	c 37	N88-23981 *
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NASA-CASE-LAR-12099-1	c 27	N80-16158 *	NASA-CASE-LAR-12807-1	c 24	N84-11214 *	NASA-CASE-LAR-13438-1	c 31	N89-12786 *
NASA-CASE-LAR-12106-1	c 71	N78-14867 *	NASA-CASE-LAR-12808-1	c 27	N83-34040 *	NASA-CASE-LAR-13440-1	c 71	N87-21653 *
NASA-CASE-LAR-12147-1	c 31	N79-11246 *	NASA-CASE-LAR-12843-1	c 02	N84-11136 *	NASA-CASE-LAR-13444-1-CU	c 27	N87-22847 *
NASA-CASE-LAR-12148-1	c 44	N82-24640 *	NASA-CASE-LAR-12847-1	c 33	N83-16633 #	NASA-CASE-LAR-13444-2-CU	c 23	N89-12667 *
NASA-CASE-LAR-12149-2	c 09	N79-31228 *	NASA-CASE-LAR-12852-1	c 05	N89-11738 *	NASA-CASE-LAR-13447-1	c 27	N88-18725 *
NASA-CASE-LAR-12175-1	c 05	N82-28279 *	NASA-CASE-LAR-12858-1	c 27	N83-34041 *	NASA-CASE-LAR-13448-1	c 27	N90-21198 *
NASA-CASE-LAR-12176-1	c 36	N80-16321 *	NASA-CASE-LAR-12858-2	c 27	N85-20124 *	NASA-CASE-LAR-13450-1	c 27	N87-28657 *
NASA-CASE-LAR-12177-1	c 36	N81-24422 *	NASA-CASE-LAR-12862-1	c 27	N84-27886 *	NASA-CASE-LAR-13452-1	c 27	N87-22848 *
NASA-CASE-LAR-12178-1	c 74	N80-21138 *	NASA-CASE-LAR-12864-1	c 37	N85-30336 *	NASA-CASE-LAR-13453-1	c 37	N88-14361 *
NASA-CASE-LAR-12181-1	c 27	N78-17205 *	NASA-CASE-LAR-12868-1	c 37	N85-21651 *	NASA-CASE-LAR-13455-1	c 32	N87-21206 *
NASA-CASE-LAR-12183-1	c 36	N79-18307 *	NASA-CASE-LAR-12870-1	c 36	N84-16542 *	NASA-CASE-LAR-13458-1	c 35	N88-23967 *
NASA-CASE-LAR-12195-1	c 31	N81-27324 *	NASA-CASE-LAR-12881-1	c 27	N84-14323 *	NASA-CASE-LAR-13465-1	c 27	N90-23544 *
NASA-CASE-LAR-12196-1	c 33	N81-26358 *	NASA-CASE-LAR-12882-1	c 35	N84-12445 *	NASA-CASE-LAR-13470-1	c 03	N88-14083 *
NASA-CASE-LAR-12205-1	c 44	N80-20810 *	NASA-CASE-LAR-12883-1	c 71	N83-17235 *	NASA-CASE-LAR-13474-1-SB	c 26	N87-25455 *
NASA-CASE-LAR-12215-1	c 08	N79-23097 *	NASA-CASE-LAR-12884-1	c 18	N84-33450 *	NASA-CASE-LAR-13476-1-CU	c 76	N87-29360 *
NASA-CASE-LAR-12230-1	c 35	N79-14347 *	NASA-CASE-LAR-12887-3	c 24	N90-21822 *	NASA-CASE-LAR-13486-1	c 16	N90-22584 *

NASA-CASE-LAR-13489-1	c 18	N87-27713 *	NASA-CASE-LAR-14056-1	c 35	N90-23713 *	NASA-CASE-LEW-10920-1	c 17	N73-24569 *
NASA-CASE-LAR-13490-1	c 18	N91-27199 *	NASA-CASE-LAR-14062-1	c 37	N90-27114 *	NASA-CASE-LEW-10950-1	c 33	N74-27683 *
NASA-CASE-LAR-13506-1	c 27	N89-12741 *	NASA-CASE-LAR-14078-1	CU c 34	N90-27071 *	NASA-CASE-LEW-10965-1	c 15	N72-25452 *
NASA-CASE-LAR-13508-1	c 35	N88-23962 *	NASA-CASE-LAR-14088-1	c 35	N91-13686 *	NASA-CASE-LEW-10981-1	c 35	N74-21018 *
NASA-CASE-LAR-13511-1	c 05	N88-23765 *	NASA-CASE-LAR-14096-1	c 31	N91-31476 *	NASA-CASE-LEW-11005-1	c 09	N72-21243 *
NASA-CASE-LAR-13512-1	c 35	N87-28884 *	NASA-CASE-LAR-14101-1	c 27	N91-15403 *	NASA-CASE-LEW-11015	c 26	N73-32571 *
NASA-CASE-LAR-13519-1	c 35	N88-23963 *	NASA-CASE-LAR-14107-1	c 24	N91-25200 *	NASA-CASE-LEW-11026-1	c 15	N73-33383 *
NASA-CASE-LAR-13522-1	SB c 09	N87-25334 *	NASA-CASE-LAR-14116-1	c 05	N91-14345 *	NASA-CASE-LEW-11058-1	c 20	N74-13502 *
NASA-CASE-LAR-13528-1	c 25	N98-29002 *	NASA-CASE-LAR-14142-1	c 37	N90-27116 *	NASA-CASE-LEW-11065-2	c 44	N76-14600 *
NASA-CASE-LAR-13532-1	c 34	N91-14562 *	NASA-CASE-LAR-14145-1	c 27	N90-26954 *	NASA-CASE-LEW-11069-1	c 44	N74-14784 *
NASA-CASE-LAR-13542-2	SB c 25	N90-20154 *	NASA-CASE-LAR-14149-1	SB c 14	N91-21176 *	NASA-CASE-LEW-11072-1	c 14	N73-24472 *
NASA-CASE-LAR-13548-1	c 09	N91-28175 *	NASA-CASE-LAR-14155-1	SB c 25	N90-23517 *	NASA-CASE-LEW-11072-2	c 35	N76-15434 *
NASA-CASE-LAR-13552-1	CU c 33	N89-14385 *	NASA-CASE-LAR-14155-2	SB c 25	N91-21270 *	NASA-CASE-LEW-11076-1	c 37	N74-21061 *
NASA-CASE-LAR-13554-1	c 02	N89-12551 *	NASA-CASE-LAR-14156-1	c 16	N90-16781 *	NASA-CASE-LEW-11076-2	c 37	N74-32921 *
NASA-CASE-LAR-13555-1	c 23	N86-32526 *	NASA-CASE-LAR-14159-1	CU c 27	N90-26953 *	NASA-CASE-LEW-11076-3	c 37	N75-30562 *
NASA-CASE-LAR-13562-1	c 24	N90-25196 *	NASA-CASE-LAR-14162-1	c 27	N90-15259 *	NASA-CASE-LEW-11076-4	c 37	N76-15461 *
NASA-CASE-LAR-13562-2	c 24	N91-25199 *	NASA-CASE-LAR-14163-1	c 27	N91-13559 *	NASA-CASE-LEW-11087-1	c 15	N73-30458 *
NASA-CASE-LAR-13563-1	c 34	N91-23410 *	NASA-CASE-LAR-14181-1	c 76	N91-21911 *	NASA-CASE-LEW-11087-2	c 37	N74-15128 *
NASA-CASE-LAR-13564-1	c 35	N87-25558 *	NASA-CASE-LAR-14188-1	c 27	N90-23545 *	NASA-CASE-LEW-11087-3	c 37	N74-21064 *
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NASA-CASE-LAR-13580-1	c 37	N91-21541 *	NASA-CASE-LAR-14194-1	c 24	N90-15148 *	NASA-CASE-LEW-11118-1	c 20	N74-32919 *
NASA-CASE-LAR-13597-1	CU c 25	N87-23713 *	NASA-CASE-LAR-14198-1	c 27	N90-26956 *	NASA-CASE-LEW-11118-2	c 20	N76-14191 *
NASA-CASE-LAR-13601-1	CU c 27	N89-14337 *	NASA-CASE-LAR-14203-1	c 36	N89-28817 *	NASA-CASE-LEW-11152-1	c 15	N73-32359 *
NASA-CASE-LAR-13616-1	c 74	N91-31950 *	NASA-CASE-LAR-14206-1	c 27	N91-28425 *	NASA-CASE-LEW-11158-1	c 37	N77-28486 *
NASA-CASE-LAR-13628-1	c 35	N90-23707 *	NASA-CASE-LAR-14207-1	c 35	N91-14590 *	NASA-CASE-LEW-11159-1	c 14	N73-28488 *
NASA-CASE-LAR-13629-1	c 09	N91-14356 *	NASA-CASE-LAR-14212-1	CU c 05	N91-31140 *	NASA-CASE-LEW-11162-1	c 33	N74-12913 *
NASA-CASE-LAR-13630-1	c 08	N88-23809 *	NASA-CASE-LAR-14239-1	c 26	N91-13527 *	NASA-CASE-LEW-11169-1	c 37	N76-23570 *
NASA-CASE-LAR-13632-1	c 26	N87-29650 *	NASA-CASE-LAR-14250-1	SB c 72	N91-27936 *	NASA-CASE-LEW-11179-1	c 27	N76-16229 *
NASA-CASE-LAR-13633-1	c 27	N87-24575 *	NASA-CASE-LAR-14271-1	CU c 27	N91-13558 *	NASA-CASE-LEW-11180-1	c 25	N73-25760 *
NASA-CASE-LAR-13638-1	c 31	N90-19427 *	NASA-CASE-LAR-14272-1	CU c 14	N91-28184 *	NASA-CASE-LEW-11187-1	c 28	N73-19793 *
NASA-CASE-LAR-13645-1	c 27	N91-28424 *	NASA-CASE-LAR-14322-1	c 02	N91-27139 *	NASA-CASE-LEW-11188-1	c 02	N74-20646 *
NASA-CASE-LAR-13662-1	c 37	N88-14359 *	NASA-CASE-LAR-14330-1	CU c 27	N91-13560 *	NASA-CASE-LEW-11192-1	c 09	N73-13208 *
NASA-CASE-LAR-13678-1	c 76	N90-24168 *	NASA-CASE-LAR-14338-1	c 24	N90-26881 *	NASA-CASE-LEW-11227-1	c 73	N75-30876 *
NASA-CASE-LAR-13680-1	c 35	N87-25561 *	NASA-CASE-LAR-14339-1	c 27	N90-26955 *	NASA-CASE-LEW-11262-1	c 27	N74-13270 *
NASA-CASE-LAR-13689-1	NP c 35	N87-23941 *	NASA-CASE-LAR-14340-1	CU c 35	N91-13684 *	NASA-CASE-LEW-11267-1	c 17	N73-32414 *
NASA-CASE-LAR-13696-1	c 37	N90-20409 *	NASA-CASE-LAR-14351-1	c 27	N91-13561 *	NASA-CASE-LEW-11274-1	c 37	N75-21631 *
NASA-CASE-LAR-13705-1	c 39	N88-25011 *	NASA-CASE-LAR-14352-1	c 37	N91-32511 *	NASA-CASE-LEW-11286-1	c 07	N74-27490 *
NASA-CASE-LAR-13710-1	c 35	N90-17117 *	NASA-CASE-LAR-14361-1	c 71	N91-16707 *	NASA-CASE-LEW-11325-1	c 06	N73-27980 *
NASA-CASE-LAR-13719-1	c 37	N89-12867 *	NASA-CASE-LAR-14395-1	CU c 33	N91-28490 *	NASA-CASE-LEW-11326-1	c 23	N73-30665 *
NASA-CASE-LAR-13724-1	c 38	N90-23756 *	NASA-CASE-LAR-14402-1	CU c 74	N91-15874 *	NASA-CASE-LEW-11358	c 03	N71-26084 *
NASA-CASE-LAR-13732-1	c 27	N87-25474 *	NASA-CASE-LAR-14424-1	SB c 09	N91-32149 *	NASA-CASE-LEW-11359-2	c 03	N72-20034 *
NASA-CASE-LAR-13734-1	CU c 09	N90-20096 *	NASA-CASE-LAR-14427-1	c 23	N91-29237 *	NASA-CASE-LEW-11359	c 03	N71-28579 *
NASA-CASE-LAR-13738-1	c 18	N87-29586 *	NASA-CASE-LAR-14435-1	CU c 09	N91-26159 *	NASA-CASE-LEW-11387-1	c 37	N74-18128 *
NASA-CASE-LAR-13740-1	c 35	N90-22770 *	NASA-CASE-LAR-14446-1	c 31	N91-28454 *	NASA-CASE-LEW-11388-1	c 15	N73-32358 *
NASA-CASE-LAR-13741-1	SB c 25	N90-20180 *	NASA-CASE-LAR-14454-1	c 25	N91-32196 *	NASA-CASE-LEW-11388-2	c 37	N74-21055 *
NASA-CASE-LAR-13742-1	c 02	N91-16999 *	NASA-CASE-LAR-14459-1	c 24	N91-15334 *	NASA-CASE-LEW-11390-2	c 25	N76-27383 *
NASA-CASE-LAR-13747-1	CU c 32	N89-28672 *	NASA-CASE-LAR-14465-1	c 37	N91-14614 *	NASA-CASE-LEW-11390-3	c 25	N76-29379 *
NASA-CASE-LAR-13761-1	c 34	N90-20323 *	NASA-CASE-LAR-14483-1	c 31	N91-28455 *	NASA-CASE-LEW-11402-1	c 07	N74-28226 *
NASA-CASE-LAR-13772-1	c 36	N89-28816 *	NASA-CASE-LAR-14489-1	c 37	N91-27562 *	NASA-CASE-LEW-11484-1	c 24	N75-33181 *
NASA-CASE-LAR-13773-1	c 20	N90-19298 *	NASA-CASE-LAR-14515-1	CU c 37	N91-28580 *	NASA-CASE-LEW-11496-1	c 44	N77-14580 *
NASA-CASE-LAR-13775-1	c 35	N90-23706 *	NASA-CASE-LAR-14556-1	c 36	N91-25392 *	NASA-CASE-LEW-11531	c 15	N71-14932 *
NASA-CASE-LAR-13776-1	c 35	N88-29149 *	NASA-CASE-LAR-14579-1	c 35	N91-28546 *	NASA-CASE-LEW-11549-1	c 44	N77-19571 *
NASA-CASE-LAR-13777-1	c 05	N90-20078 *	NASA-CASE-LAR-14588-1	CU c 74	N91-23889 *	NASA-CASE-LEW-11569-1	c 07	N74-15453 *
NASA-CASE-LAR-13780-1	c 18	N91-13481 *	NASA-CASE-LAR-14685-1	c 02	N91-28135 *	NASA-CASE-LEW-11573-1	c 26	N77-28265 *
NASA-CASE-LAR-13785-1	c 70	N91-21824 *				NASA-CASE-LEW-11581-1	c 54	N75-13531 *
NASA-CASE-LAR-13797-1	c 35	N88-30108 *	NASA-CASE-LEW-10106-1	c 28	N71-26642 *	NASA-CASE-LEW-11583-1	c 35	N79-17192 *
NASA-CASE-LAR-13798-1	c 32	N89-25363 *	NASA-CASE-LEW-10155-1	c 09	N71-29035 *	NASA-CASE-LEW-11593-1	c 20	N76-14190 *
NASA-CASE-LAR-13816-1	c 35	N90-22025 *	NASA-CASE-LEW-10199-1	c 27	N74-23125 *	NASA-CASE-LEW-11617-1	c 33	N74-10195 *
NASA-CASE-LAR-13817-1	c 26	N90-21170 *	NASA-CASE-LEW-10210-1	c 28	N71-26781 *	NASA-CASE-LEW-11632-2	c 35	N75-13213 *
NASA-CASE-LAR-13821-1	c 27	N90-16950 *	NASA-CASE-LEW-10219-1	c 18	N71-28729 *	NASA-CASE-LEW-11646-1	c 20	N74-31269 *
NASA-CASE-LAR-13826-1	c 35	N88-29150 *	NASA-CASE-LEW-10233	c 10	N71-27126 *	NASA-CASE-LEW-11669-1	c 05	N73-27062 *
NASA-CASE-LAR-13832-1	c 28	N91-28444 *	NASA-CASE-LEW-10250-1	c 22	N71-28759 *	NASA-CASE-LEW-11672-1	c 37	N74-27904 *
NASA-CASE-LAR-13853-1	c 35	N89-14423 *	NASA-CASE-LEW-10278-1	c 15	N71-28582 *	NASA-CASE-LEW-11676-1	c 37	N76-22541 *
NASA-CASE-LAR-13854-1	CU c 04	N91-31120 *	NASA-CASE-LEW-10281-1	c 14	N72-17327 *	NASA-CASE-LEW-11694-1	c 20	N75-18310 *
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NASA-CASE-LAR-13870-1	c 05	N90-15094 *	NASA-CASE-LEW-10326-3	c 37	N74-10474 *	NASA-CASE-LEW-11696-1	c 37	N75-13261 *
NASA-CASE-LAR-13875-1	c 05	N91-27156 *	NASA-CASE-LEW-10327	c 17	N71-33408 *	NASA-CASE-LEW-11696-2	c 26	N75-19408 *
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NASA-CASE-LAR-13889-1	c 39	N88-30160 *	NASA-CASE-LEW-10345-1	c 10	N71-25899 *	NASA-CASE-LEW-11855-1	c 07	N78-25090 *
NASA-CASE-LAR-13898-1	c 37	N91-15544 *	NASA-CASE-LEW-10359-2	c 33	N73-25952 *	NASA-CASE-LEW-11860-1	c 37	N76-18458 *
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NASA-CASE-LAR-13902-1	c 27	N90-23546 *	NASA-CASE-LEW-10364-1	c 09	N71-13522 *	NASA-CASE-LEW-11873-1	c 37	N79-22475 *
NASA-CASE-LAR-13910-2	CU c 27	N91-31307 *	NASA-CASE-LEW-10374-1	c 28	N73-13773 *	NASA-CASE-LEW-11876-1	c 20	N76-21276 *
NASA-CASE-LAR-13924-1	CU c 26	N89-28621 *	NASA-CASE-LEW-10387	c 09	N72-22201 *	NASA-CASE-LEW-11877-1	c 34	N78-27357 *
NASA-CASE-LAR-13925-1	c 27	N89-25334 *	NASA-CASE-LEW-10393-1	c 17	N71-15468 *	NASA-CASE-LEW-11881-1	c 33	N77-17354 *
NASA-CASE-LAR-13926-1	c 37	N90-22042 *	NASA-CASE-LEW-10424-2-2	c 18	N72-25539 *	NASA-CASE-LEW-11890-1	c 05	N79-24976 *
NASA-CASE-LAR-13952-1	SB c 34	N90-19534 *	NASA-CASE-LEW-10433-1	c 09	N72-22197 *	NASA-CASE-LEW-11915-1	c 35	N76-14431 *
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NASA-CASE-LAR-13963-1	c 76	N90-24150 *	NASA-CASE-LEW-10450-1	c 15	N72-25448 *	NASA-CASE-LEW-11930-1	c 24	N76-22309 *
NASA-CASE-LAR-13965-1	CU c 23	N90-21118 *	NASA-CASE-LEW-10489-1	c 15	N72-25447 *	NASA-CASE-LEW-11930-3	c 24	N80-33482 *
NASA-CASE-LAR-13965-2	CU c 23	N91-14418 *	NASA-CASE-LEW-10518-1	c 24	N72-33681 *	NASA-CASE-LEW-11930-4	c 24	N79-17916 *
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NASA-CASE-LAR-13968-1	c 71	N91-27913 *	NASA-CASE-LEW-10533-1	c 15	N73-28515 *	NASA-CASE-LEW-11949-1	c 37	N76-29588 *
NASA-CASE-LAR-13981-1	c 37	N91-21539 *	NASA-CASE-LEW-10533-2	c 37	N74-11300 *	NASA-CASE-LEW-11978-1	c 33	N77-26385 *
NASA-CASE-LAR-13983-1	c 05	N90-23390 *	NASA-CASE-LEW-10689-1	c 28	N71-26173 *	NASA-CASE-LEW-11981-1	c 31	N78-17237 *
NASA-CASE-LAR-13985-1	c 24	N91-14430 *	NASA-CASE-LEW-10698-1	c 37	N74-21063 *	NASA-CASE-LEW-11981-2	c 34	N79-20336 *
NASA-CASE-LAR-13988-1	c 23	N89-11814 *	NASA-CASE-LEW-10770-1	c 28	N72-22770 *	NASA-CASE-LEW-12013-1	c 33	N79-10339 *
NASA-CASE-LAR-13989-1	c 35	N91-13694 *	NASA-CASE-LEW-10794-1	c 06	N72-17093 *	NASA-CASE-LEW-12039-1	c 44	N78-14625 *
NASA-CASE-LAR-13992-1	CU c 23	N91-27220 *	NASA-CASE-LEW-10805-1	c 15	N73-13465 *	NASA-CASE-LEW-12048-1	c 20	N77-20162 *
NASA-CASE-LAR-13996-1	SB c 25	N90-15161 *	NASA-CASE-LEW-10805-2	c 37	N74-13179 *	NASA-CASE-LEW-12050-1	c 35	N77-32454 *
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NASA-CASE-LEW-12081-3	c 28	N81-14103 *	NASA-CASE-LEW-12933-1	c 27	N81-19296 *	NASA-CASE-LEW-13899-1	c 31	N87-21160 *
NASA-CASE-LEW-12082-1	c 20	N77-10148 *	NASA-CASE-LEW-12938-1	c 07	N82-32366 *	NASA-CASE-LEW-13914-1	c 37	N85-33489 *
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NASA-CASE-LEW-12094-1	c 76	N76-25049 *	NASA-CASE-LEW-12941-1	c 26	N83-10170 *	NASA-CASE-LEW-13923-1	c 26	N84-35267 *
NASA-CASE-LEW-12095-1	c 26	N78-18182 *	NASA-CASE-LEW-12950-1	c 34	N82-11399 #	NASA-CASE-LEW-13934-1	c 35	N83-35338 *
NASA-CASE-LEW-12118-1	c 24	N77-27188 *	NASA-CASE-LEW-12950-2	c 34	N85-29179 *	NASA-CASE-LEW-13935-1	c 33	N87-21234 *
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NASA-CASE-LEW-12131-1	c 37	N79-18318 *	NASA-CASE-LEW-12972-1	c 44	N79-25481 *	NASA-CASE-LEW-14035-1	c 07	N84-25774 *
NASA-CASE-LEW-12131-2	c 37	N80-26658 *	NASA-CASE-LEW-12982-1	c 37	N81-19455 *	NASA-CASE-LEW-14037-1	c 30	N87-16875 *
NASA-CASE-LEW-12131-3	c 37	N82-19540 *	NASA-CASE-LEW-12989-1	c 37	N82-12442 *	NASA-CASE-LEW-14039-1	c 24	N85-33433 *
NASA-CASE-LEW-12137-1	c 25	N78-10224 *	NASA-CASE-LEW-12990-1	c 07	N81-29129 *	NASA-CASE-LEW-14057-1	c 24	N85-35233 *
NASA-CASE-LEW-12159-1	c 44	N78-19599 *	NASA-CASE-LEW-12991-1	c 37	N81-24442 *	NASA-CASE-LEW-14072-1	c 27	N86-19458 *
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NASA-CASE-LEW-12174-2	c 35	N79-14346 *	NASA-CASE-LEW-13027-1	c 27	N80-24437 *	NASA-CASE-LEW-14072-3	c 27	N87-23736 *
NASA-CASE-LEW-12185-1	c 44	N78-25528 *	NASA-CASE-LEW-13028-1	c 27	N82-33521 *	NASA-CASE-LEW-14077-1	c 44	N85-34441 *
NASA-CASE-LEW-12217-1	c 43	N78-14452 *	NASA-CASE-LEW-13050-1	c 07	N79-14095 *	NASA-CASE-LEW-14080-1	c 31	N85-20153 *
NASA-CASE-LEW-12220-1	c 44	N77-14581 *	NASA-CASE-LEW-13088-1	c 26	N81-25188 *	NASA-CASE-LEW-14104-2	c 26	N88-14179 *
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NASA-CASE-LEW-12236-2	c 44	N79-14528 *	NASA-CASE-LEW-13102-1	c 33	N85-29144 *	NASA-CASE-LEW-14124-1	c 35	N90-23172 *
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NASA-CASE-LEW-12252-1	c 34	N79-13288 *	NASA-CASE-LEW-13107-1	c 52	N83-21785 *	NASA-CASE-LEW-14130-1	c 31	N86-32587 *
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NASA-CASE-LEW-12258-1	c 52	N77-28716 *	NASA-CASE-LEW-13120-1	c 27	N82-28440 *	NASA-CASE-LEW-14162-1	c 34	N91-13668 #
NASA-CASE-LEW-12270-1	c 26	N77-32280 *	NASA-CASE-LEW-13131-1	c 44	N83-10494 *	NASA-CASE-LEW-14162-2	c 24	N91-25201 #
NASA-CASE-LEW-12274-1	c 37	N80-31790 *	NASA-CASE-LEW-13132-1	c 27	N83-29388 *	NASA-CASE-LEW-14170-1	c 37	N86-25790 *
NASA-CASE-LEW-12296-1	c 33	N82-26568 *	NASA-CASE-LEW-13135-2	c 27	N81-24257 *	NASA-CASE-LEW-14177-1	c 44	N86-32875 *
NASA-CASE-LEW-12312-1	c 07	N77-32148 *	NASA-CASE-LEW-13142-1	c 07	N83-36029 *	NASA-CASE-LEW-14196-2	c 37	N87-25585 #
NASA-CASE-LEW-12313-1	c 37	N78-10468 *	NASA-CASE-LEW-13142-2	c 07	N86-20389 *	NASA-CASE-LEW-14203-1	c 27	N91-15402 *
NASA-CASE-LEW-12317-1	c 07	N78-17055 *	NASA-CASE-LEW-13148-1	c 33	N80-20487 *	NASA-CASE-LEW-14212-1	c 37	N88-23978 *
NASA-CASE-LEW-12321-1	c 37	N78-10467 *	NASA-CASE-LEW-13148-2	c 44	N81-29524 *	NASA-CASE-LEW-14262-1	c 26	N87-28647 *
NASA-CASE-LEW-12358-1	c 44	N79-17313 *	NASA-CASE-LEW-13150-1	c 44	N79-26474 *	NASA-CASE-LEW-14295-1	c 31	N91-15424 *
NASA-CASE-LEW-12358-2	c 25	N82-21268 *	NASA-CASE-LEW-13169-1	c 26	N82-29415 *	NASA-CASE-LEW-14297-1	c 35	N89-12048 *
NASA-CASE-LEW-12364-1	c 44	N77-22606 *	NASA-CASE-LEW-13169-2	c 26	N82-30371 *	NASA-CASE-LEW-14345-1	c 23	N88-26404 *
NASA-CASE-LEW-12378-1	c 07	N79-14097 *	NASA-CASE-LEW-13171-1	c 44	N82-29708 *	NASA-CASE-LEW-14345-2	c 25	N90-23497 *
NASA-CASE-LEW-12389-2	c 07	N78-18066 *	NASA-CASE-LEW-13171-2	c 44	N83-32176 *	NASA-CASE-LEW-14345-3	c 23	N91-17141 *
NASA-CASE-LEW-12389-3	c 07	N79-14096 *	NASA-CASE-LEW-13174-1	c 34	N83-27144 *	NASA-CASE-LEW-14345-4	c 23	N91-25185 *
NASA-CASE-LEW-12390-1	c 07	N78-17056 *	NASA-CASE-LEW-13199-1	c 07	N82-26293 *	NASA-CASE-LEW-14346-1	c 23	N90-19300 *
NASA-CASE-LEW-12419-1	c 07	N77-14025 *	NASA-CASE-LEW-13201-1	c 07	N81-14999 *	NASA-CASE-LEW-14374-1	c 09	N88-28939 *
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NASA-CASE-LEW-12443-1	c 44	N83-32175 *	NASA-CASE-LEW-13268-2	c 37	N82-26674 #	NASA-CASE-LEW-14474-1	c 27	N91-28423 #
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NASA-CASE-LEW-12452-1	c 07	N78-25089 *	NASA-CASE-LEW-13282-1	c 33	N82-24415 *	NASA-CASE-LEW-14672-1	c 37	N91-27560 *
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NASA-CASE-LEW-12477-1	c 37	N77-32501 *	NASA-CASE-LEW-13324-2	c 24	N85-21266 *	NASA-CASE-LEW-14676-2	c 76	N90-17454 #
NASA-CASE-LEW-12493-1	c 24	N81-17170 *	NASA-CASE-LEW-13339-1	c 26	N82-31505 *	NASA-CASE-LEW-14679-1	c 27	N91-25296 *
NASA-CASE-LEW-12493-2	c 24	N81-26179 *	NASA-CASE-LEW-13343-1	c 27	N82-28441 *	NASA-CASE-LEW-14695-1	c 37	N90-23751 *
NASA-CASE-LEW-12496-1	c 07	N78-33101 *	NASA-CASE-LEW-13343	c 26	N83-31795 *	NASA-CASE-LEW-14719-1	c 24	N90-23493 *
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NASA-CASE-LEW-12527-1	c 37	N77-32500 *	NASA-CASE-LEW-13401-1	c 44	N82-29709 *	NASA-CASE-LEW-14776-1	c 37	N91-21540 *
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NASA-CASE-LEW-12542-2	c 26	N79-22271 *	NASA-CASE-LEW-13414-1	c 44	N85-20530 *	NASA-CASE-LEW-14844-1	c 35	N90-22024 *
NASA-CASE-LEW-12542-3	c 26	N80-32484 *	NASA-CASE-LEW-13426-1	c 25	N84-16276 *	NASA-CASE-LEW-14846-2	c 20	N91-26200 #
NASA-CASE-LEW-12550-1	c 24	N77-19170 *	NASA-CASE-LEW-13429-1	c 33	N83-31952 *	NASA-CASE-LEW-14848-1	c 14	N91-27175 *
NASA-CASE-LEW-12552-1	c 44	N78-25527 *	NASA-CASE-LEW-13450-1	c 31	N83-35177 *	NASA-CASE-LEW-14862-1	c 37	N91-14617 *
NASA-CASE-LEW-12552-2	c 44	N79-11472 *	NASA-CASE-LEW-13495-1	c 33	N84-33663 *	NASA-CASE-LEW-14878-1	c 74	N91-13996 #
NASA-CASE-LEW-12554-1	c 34	N78-18355 *	NASA-CASE-LEW-13504-1	c 25	N83-13188 *	NASA-CASE-LEW-14880-1	c 35	N90-10415 #
NASA-CASE-LEW-12569-1	c 37	N79-10418 *	NASA-CASE-LEW-13506-1	c 37	N85-33490 *	NASA-CASE-LEW-14887-1	c 37	N91-27561 *
NASA-CASE-LEW-12582-1	c 76	N83-34796 *	NASA-CASE-LEW-13524-1	c 07	N84-33410 *	NASA-CASE-LEW-14901-1	c 75	N91-25875 *
NASA-CASE-LEW-12586-1	c 44	N80-14472 *	NASA-CASE-LEW-13526-1	c 36	N84-22944 *	NASA-CASE-LEW-14902-1	c 24	N91-27244 *
NASA-CASE-LEW-12587-1	c 44	N77-31601 *	NASA-CASE-LEW-13556-1	c 44	N81-27615 #	NASA-CASE-LEW-14921-1	c 24	N91-13502 #
NASA-CASE-LEW-12590-1	c 37	N84-22958 *	NASA-CASE-LEW-13562-2	c 07	N85-35195 *	NASA-CASE-LEW-14945-1	c 32	N91-13598 #
NASA-CASE-LEW-12594-2	c 07	N81-19116 *	NASA-CASE-LEW-13570-1	c 33	N84-16452 *	NASA-CASE-LEW-14949-1	c 44	N91-23617 #
NASA-CASE-LEW-12608-1	c 07	N77-27116 *	NASA-CASE-LEW-13598-1	c 35	N84-22930 *	NASA-CASE-LEW-14959-1	c 44	N91-27614 *
NASA-CASE-LEW-12619-1	c 24	N77-19171 *	NASA-CASE-LEW-13609-1	c 25	N90-11824 *	NASA-CASE-LEW-14965-1	c 37	N91-13732 #
NASA-CASE-LEW-12649-1	c 44	N78-25530 *	NASA-CASE-LEW-13620-1	c 44	N83-13579 *	NASA-CASE-LEW-14967-1	c 35	N91-31608 *
NASA-CASE-LEW-12658-1	c 71	N79-14871 *	NASA-CASE-LEW-13622-1	c 07	N84-22559 *	NASA-CASE-LEW-14967-2	c 35	N91-23460 #
NASA-CASE-LEW-12661-1	c 35	N79-14345 *	NASA-CASE-LEW-13639-1	c 26	N84-33555 *	NASA-CASE-LEW-14984-1	c 27	N91-16152 #
NASA-CASE-LEW-12668-1	c 52	N78-14773 *	NASA-CASE-LEW-13639-2	c 26	N84-27855 *	NASA-CASE-LEW-14990-1-CU	c 24	N91-17145 *
NASA-CASE-LEW-12718-1	c 34	N78-25351 *	NASA-CASE-LEW-13653-1	c 44	N84-28205 *	NASA-CASE-LEW-14999-1	c 24	N91-13500 #
NASA-CASE-LEW-12723-1	c 52	N80-18690 *	NASA-CASE-LEW-13654-1	c 07	N84-22560 *	NASA-CASE-LEW-14999-2	c 27	N91-26376 #
NASA-CASE-LEW-12760-1	c 07	N77-17059 *	NASA-CASE-LEW-13670-1	c 37	N86-19606 *	NASA-CASE-LEW-15020-1	c 27	N91-15412 #
NASA-CASE-LEW-12775-1	c 44	N79-11468 *	NASA-CASE-LEW-13717-1	c 37	N85-30333 *	NASA-CASE-LEW-15020-2	c 24	N91-25202 #
NASA-CASE-LEW-12780-1	c 20	N79-20179 *	NASA-CASE-LEW-13736-1	c 33	N84-27974 *	NASA-CASE-LEW-15027-1	c 27	N91-13566 #
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NASA-CASE-LEW-12791-1	c 33	N78-32341 *	NASA-CASE-LEW-13770-1	c 27	N84-27885 *	NASA-CASE-LEW-15077-2	c 24	N91-28289 #
NASA-CASE-LEW-12793-1	c 37	N79-11403 *	NASA-CASE-LEW-13770-2	c 25	N85-28982 *	NASA-CASE-LEW-15094-1	c 07	N91-23180 #
NASA-CASE-LEW-12806-2	c 44	N81-12542 *	NASA-CASE-LEW-13770-3	c 27	N85-21350 *	NASA-CASE-LEW-15155-1	c 27	N91-26375 #
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NASA-CASE-LEW-12819-2	c 44	N79-18444 *	NASA-CASE-LEW-13770-5	c 27	N85-21352 *	NASA-CASE-LEW-15164-2	c 27	N91-32229 #
NASA-CASE-LEW-12830-1	c 07	N77-23106 *	NASA-CASE-LEW-13770-6	c 25	N85-30039 *	NASA-CASE-LEW-15196-1	c 37	N91-26543 #
NASA-CASE-LEW-12876-2	c 27	N83-29392 #	NASA-CASE-LEW-13773-2	c 33	N86-20671 *	NASA-CASE-LEW-15200-1	c 20	N91-32167 #
NASA-CASE-LEW-12892-1	c 44	N83-14692 *	NASA-CASE-LEW-13822-1	c 44	N86-25874 *	NASA-CASE-LEW-15222-1	c 76	N91-26966 #
NASA-CASE-LEW-12905-1	c 26	N78-18183 *	NASA-CASE-LEW-13827-1	c 44	N85-21768 *	NASA-CASE-LEW-15223-1	c 76	N91-26967 #
NASA-CASE-LEW-12906-1	c 26	N77-32279 *	NASA-CASE-LEW-13828-1	c 24	N85-30027 *	NASA-CASE-LEW-23169-2	c 26	

NASA-CASE-MFS-10506	c 06	N73-30100 *	NASA-CASE-MFS-20453	c 15	N71-29133 *	NASA-CASE-MFS-21680-1	c 18	N74-27397 *
NASA-CASE-MFS-10507	c 06	N73-30101 *	NASA-CASE-MFS-20482	c 15	N72-22492 *	NASA-CASE-MFS-21681-1	c 18	N74-27397 *
NASA-CASE-MFS-10509	c 06	N73-30103 *	NASA-CASE-MFS-20485	c 14	N72-11365 *	NASA-CASE-MFS-21698-1	c 33	N74-26732 *
NASA-CASE-MFS-10512	c 06	N73-30099 *	NASA-CASE-MFS-20486-2	c 27	N74-17283 *	NASA-CASE-MFS-21704-1	c 35	N75-25124 *
NASA-CASE-MFS-10555	c 11	N71-19494 *	NASA-CASE-MFS-20506-1	c 35	N75-12273 *	NASA-CASE-MFS-21728-1	c 35	N74-27865 *
NASA-CASE-MFS-10946-1	c 31	N79-21226 *	NASA-CASE-MFS-20509	c 11	N72-17183 *	NASA-CASE-MFS-21761-1	c 35	N75-15931 *
NASA-CASE-MFS-11132	c 15	N71-17649 *	NASA-CASE-MFS-20523	c 14	N72-27412 *	NASA-CASE-MFS-21846-1	c 37	N74-26976 *
NASA-CASE-MFS-11133	c 31	N71-16222 *	NASA-CASE-MFS-20546-2	c 14	N73-30389 *	NASA-CASE-MFS-21919-1	c 10	N73-25243 *
NASA-CASE-MFS-11204	c 14	N71-29134 *	NASA-CASE-MFS-20586	c 15	N71-17686 *	NASA-CASE-MFS-21931-1	c 37	N75-26372 *
NASA-CASE-MFS-11279	c 16	N71-20400 *	NASA-CASE-MFS-20589	c 25	N72-32688 *	NASA-CASE-MFS-22002-1	c 44	N76-16612 *
NASA-CASE-MFS-11492	c 06	N73-30102 *	NASA-CASE-MFS-20596	c 14	N72-17324 *	NASA-CASE-MFS-22022-1	c 37	N76-15460 *
NASA-CASE-MFS-11497	c 28	N71-16224 *	NASA-CASE-MFS-20607-1	c 37	N76-19436 *	NASA-CASE-MFS-22039-1	c 09	N75-12968 *
NASA-CASE-MFS-11537	c 14	N71-20442 *	NASA-CASE-MFS-20619	c 28	N72-11708 *	NASA-CASE-MFS-22040-1	c 35	N74-26946 *
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NASA-CASE-MFS-12805	c 15	N71-17805 *	NASA-CASE-MFS-20642	c 14	N72-21407 *	NASA-CASE-MFS-22073-1	c 33	N75-13139 *
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NASA-CASE-MFS-12827	c 14	N71-17656 *	NASA-CASE-MFS-20658-1	c 14	N73-30386 *	NASA-CASE-MFS-22102-1	c 54	N74-20725 *
NASA-CASE-MFS-12915	c 11	N71-17600 *	NASA-CASE-MFS-20673	c 14	N73-20476 *	NASA-CASE-MFS-22129-1	c 33	N75-18477 *
NASA-CASE-MFS-13046	c 07	N71-19433 *	NASA-CASE-MFS-20675	c 26	N73-26751 *	NASA-CASE-MFS-22133-1	c 33	N74-26977 *
NASA-CASE-MFS-13130	c 10	N72-17173 *	NASA-CASE-MFS-20698-2	c 15	N73-19457 *	NASA-CASE-MFS-22145-1	c 75	N75-13625 *
NASA-CASE-MFS-13532	c 18	N72-17532 *	NASA-CASE-MFS-20698	c 15	N72-20446 *	NASA-CASE-MFS-22145-2	c 75	N76-17951 *
NASA-CASE-MFS-13686	c 15	N71-18132 *	NASA-CASE-MFS-20710	c 11	N72-23215 *	NASA-CASE-MFS-22189-1	c 35	N75-19615 *
NASA-CASE-MFS-13687-2	c 09	N72-22198 *	NASA-CASE-MFS-20730-1	c 39	N74-13131 *	NASA-CASE-MFS-22208-1	c 33	N75-26244 *
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NASA-CASE-MFS-13929	c 15	N71-27091 *	NASA-CASE-MFS-20760	c 14	N72-33377 *	NASA-CASE-MFS-22283-1	c 37	N75-33395 *
NASA-CASE-MFS-13994-1	c 06	N71-11240 *	NASA-CASE-MFS-20761-1	c 44	N74-27519 *	NASA-CASE-MFS-22287-1	c 75	N76-14931 *
NASA-CASE-MFS-13994-2	c 06	N72-25148 *	NASA-CASE-MFS-20767-1	c 38	N74-15130 *	NASA-CASE-MFS-22323-1	c 37	N76-14463 *
NASA-CASE-MFS-14017	c 14	N71-26627 *	NASA-CASE-MFS-20774	c 14	N73-19420 *	NASA-CASE-MFS-22324-1	c 27	N75-27180 *
NASA-CASE-MFS-14023	c 33	N71-25351 *	NASA-CASE-MFS-20775-1	c 31	N75-12161 *	NASA-CASE-MFS-22342-1	c 33	N75-30428 *
NASA-CASE-MFS-14114-2	c 09	N71-24807 *	NASA-CASE-MFS-20809	c 23	N73-13660 *	NASA-CASE-MFS-22343-1	c 33	N74-34638 *
NASA-CASE-MFS-14114	c 33	N71-27862 *	NASA-CASE-MFS-20823-1	c 16	N73-30476 *	NASA-CASE-MFS-22355-1	c 23	N76-15268 *
NASA-CASE-MFS-14216	c 14	N73-13418 *	NASA-CASE-MFS-20829	c 12	N72-21310 *	NASA-CASE-MFS-22356-1	c 23	N75-30256 *
NASA-CASE-MFS-14253	c 33	N71-24858 *	NASA-CASE-MFS-20830	c 15	N71-30028 *	NASA-CASE-MFS-22409-2	c 74	N78-15880 *
NASA-CASE-MFS-14259	c 15	N71-19213 *	NASA-CASE-MFS-20831	c 28	N71-29153 *	NASA-CASE-MFS-22411-1	c 37	N74-21058 *
NASA-CASE-MFS-14322	c 08	N71-18692 *	NASA-CASE-MFS-20855-1	c 15	N77-10112 *	NASA-CASE-MFS-22458-1	c 44	N77-10635 *
NASA-CASE-MFS-14405	c 15	N72-28495 *	NASA-CASE-MFS-20855	c 15	N73-27405 *	NASA-CASE-MFS-22517-1	c 35	N76-18402 *
NASA-CASE-MFS-14610	c 09	N71-28886 *	NASA-CASE-MFS-20861-1	c 18	N73-32437 *	NASA-CASE-MFS-22537-1	c 35	N75-27328 *
NASA-CASE-MFS-14671	c 05	N71-12341 *	NASA-CASE-MFS-20863	c 31	N73-26876 *	NASA-CASE-MFS-22560-1	c 33	N77-14335 *
NASA-CASE-MFS-14685	c 31	N71-15689 *	NASA-CASE-MFS-20890	c 14	N72-22439 *	NASA-CASE-MFS-22562-1	c 44	N76-14595 *
NASA-CASE-MFS-14710	c 09	N72-22195 *	NASA-CASE-MFS-20916	c 14	N73-25460 *	NASA-CASE-MFS-22597	c 36	N78-17366 *
NASA-CASE-MFS-14711	c 15	N71-26185 *	NASA-CASE-MFS-20922-1	c 18	N74-22136 *	NASA-CASE-MFS-22631-1	c 66	N76-19888 *
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NASA-CASE-MFS-14772	c 15	N71-17692 #	NASA-CASE-MFS-20932-1	c 35	N75-19616 #	NASA-CASE-MFS-22649-1	c 37	N75-25186 *
NASA-CASE-MFS-14971	c 15	N71-24984 *	NASA-CASE-MFS-20935	c 09	N71-34212 #	NASA-CASE-MFS-22671-1	c 35	N75-21582 *
NASA-CASE-MFS-15063	c 14	N72-25412 *	NASA-CASE-MFS-20944	c 15	N73-13466 *	NASA-CASE-MFS-22671-2	c 35	N77-17426 *
NASA-CASE-MFS-15162	c 14	N72-32452 *	NASA-CASE-MFS-20979-2	c 06	N73-32030 *	NASA-CASE-MFS-22707-1	c 37	N76-15457 *
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NASA-CASE-MFS-15429-1	c 18	N84-22609 #	NASA-CASE-MFS-20994-1	c 35	N75-12271 *	NASA-CASE-MFS-22734-1	c 18	N75-19329 *
NASA-CASE-MFS-15670-1	c 33	N82-33634 #	NASA-CASE-MFS-21010-1	c 05	N73-30078 *	NASA-CASE-MFS-22743-1	c 44	N76-22657 *
NASA-CASE-MFS-16570-1	c 05	N73-32013 #	NASA-CASE-MFS-21040-1	c 06	N73-30098 *	NASA-CASE-MFS-22744-1	c 44	N76-24696 *
NASA-CASE-MFS-16609-3	c 03	N76-32140 *	NASA-CASE-MFS-21042	c 07	N72-25171 *	NASA-CASE-MFS-22749-1	c 44	N76-14601 *
NASA-CASE-MFS-18100	c 15	N72-11390 *	NASA-CASE-MFS-21045-1	c 35	N75-15932 *	NASA-CASE-MFS-22758-1	c 70	N75-26789 #
NASA-CASE-MFS-18495	c 15	N72-11385 *	NASA-CASE-MFS-21046-1	c 14	N73-27377 *	NASA-CASE-MFS-22787-1	c 15	N77-10113 *
NASA-CASE-MFS-19193-1	c 37	N75-19686 *	NASA-CASE-MFS-21049-1	c 52	N74-27864 *	NASA-CASE-MFS-22905-1	c 19	N76-22284 *
NASA-CASE-MFS-19194-1	c 37	N76-14460 *	NASA-CASE-MFS-21077-1	c 24	N75-28135 *	NASA-CASE-MFS-22906-1	c 75	N78-27913 *
NASA-CASE-MFS-19220-1	c 20	N76-22296 *	NASA-CASE-MFS-21087-1	c 35	N74-17153 *	NASA-CASE-MFS-22907-1	c 26	N76-18257 *
NASA-CASE-MFS-19259-1	c 36	N78-14380 *	NASA-CASE-MFS-21108-1	c 34	N74-27861 *	NASA-CASE-MFS-22926-1	c 24	N77-27187 *
NASA-CASE-MFS-19287-1	c 34	N77-30399 *	NASA-CASE-MFS-21109-1	c 05	N73-27941 *	NASA-CASE-MFS-22938-1	c 34	N76-18374 *
NASA-CASE-MFS-19796-1	c 37	N86-32736 #	NASA-CASE-MFS-21115-1	c 54	N74-12779 *	NASA-CASE-MFS-22991-1	c 34	N77-10463 *
NASA-CASE-MFS-20011	c 18	N72-22566 *	NASA-CASE-MFS-21136-1	c 35	N74-18323 *	NASA-CASE-MFS-23001-1	c 76	N77-32919 *
NASA-CASE-MFS-20044	c 14	N71-28993 *	NASA-CASE-MFS-21163-1	c 54	N74-17853 *	NASA-CASE-MFS-23008-1	c 35	N78-18390 *
NASA-CASE-MFS-20068	c 07	N71-27191 *	NASA-CASE-MFS-21214-1	c 09	N73-30181 *	NASA-CASE-MFS-23047-1	c 37	N76-18454 *
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NASA-CASE-MFS-20075	c 09	N71-26133 *	NASA-CASE-MFS-21244-1	c 36	N75-15028 *	NASA-CASE-MFS-23052-2	c 74	N79-13855 *
NASA-CASE-MFS-20095	c 24	N72-11595 *	NASA-CASE-MFS-21309-1	c 37	N74-18125 *	NASA-CASE-MFS-23059-1	c 44	N76-27684 *
NASA-CASE-MFS-20096	c 14	N71-30026 *	NASA-CASE-MFS-21311-1	c 20	N76-21275 *	NASA-CASE-MFS-23062-1	c 37	N77-12402 *
NASA-CASE-MFS-20125	c 16	N72-13437 *	NASA-CASE-MFS-21362	c 11	N73-20267 *	NASA-CASE-MFS-23074-1	c 54	N77-21844 *
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NASA-CASE-MFS-20180	c 16	N72-12440 *	NASA-CASE-MFS-21372-1	c 74	N74-27866 *	NASA-CASE-MFS-23099-1	c 09	N76-23277 *
NASA-CASE-MFS-20207-1	c 09	N73-32107 *	NASA-CASE-MFS-21374-1	c 33	N74-12951 *	NASA-CASE-MFS-23114-1	c 38	N78-32443 *
NASA-CASE-MFS-20240	c 14	N71-26788 *	NASA-CASE-MFS-21394-1	c 34	N74-27744 *	NASA-CASE-MFS-23118-1	c 35	N77-31465 *
NASA-CASE-MFS-20242	c 14	N73-19421 *	NASA-CASE-MFS-21395-1	c 25	N74-26948 *	NASA-CASE-MFS-23167-1	c 44	N76-31667 *
NASA-CASE-MFS-20243	c 23	N73-13662 *	NASA-CASE-MFS-21415-1	c 52	N74-20728 *	NASA-CASE-MFS-23175-1	c 35	N77-30436 *
NASA-CASE-MFS-20249	c 15	N72-11386 *	NASA-CASE-MFS-21424-1	c 34	N74-27730 *	NASA-CASE-MFS-23178-1	c 35	N77-10493 *
NASA-CASE-MFS-20261	c 14	N71-27005 *	NASA-CASE-MFS-21433	c 09	N73-20232 *	NASA-CASE-MFS-23181-1	c 33	N77-17351 *
NASA-CASE-MFS-20284-1	c 52	N74-12778 *	NASA-CASE-MFS-21441-1	c 14	N73-30392 *	NASA-CASE-MFS-23194-1	c 35	N78-17357 *
NASA-CASE-MFS-20299	c 15	N72-11392 *	NASA-CASE-MFS-21455-1	c 35	N74-15146 *	NASA-CASE-MFS-23225-1	c 52	N77-14735 *
NASA-CASE-MFS-20317	c 15	N73-13463 *	NASA-CASE-MFS-21462-1	c 33	N74-14935 *	NASA-CASE-MFS-23250-1	c 35	N82-11432 *
NASA-CASE-MFS-20325	c 28	N71-27095 *	NASA-CASE-MFS-21465-1	c 10	N73-32145 *	NASA-CASE-MFS-23267-1	c 35	N77-20401 *
NASA-CASE-MFS-20332-2	c 05	N73-25125 *	NASA-CASE-MFS-21470-1	c 44	N74-19870 *	NASA-CASE-MFS-23270-1	c 44	N78-25531 *
NASA-CASE-MFS-20332	c 05	N72-20097 *	NASA-CASE-MFS-21481-1	c 37	N74-18127 *	NASA-CASE-MFS-23274-1	c 33	N78-13320 *
NASA-CASE-MFS-20333	c 09	N71-13486 *	NASA-CASE-MFS-21485-1	c 37	N74-25968 *	NASA-CASE-MFS-23280-1	c 33	N78-10376 *
NASA-CASE-MFS-20335-1	c 35	N74-10415 *	NASA-CASE-MFS-21488-1	c 14	N75-24794 *	NASA-CASE-MFS-23281-1	c 35	N77-22450 *
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NASA-CASE-MFS-20385	c 09	N71-24904 *	NASA-CASE-MFS-21556-1	c 35	N74-26945 *	NASA-CASE-MFS-23299-1	c 39	N77-28511 *
NASA-CASE-MFS-20386	c 21	N71-19212 *	NASA-CASE-MFS-21577-1	c 19	N74-29410 *	NASA-CASE-MFS-23303-1	c 32	N77-18307 *
NASA-CASE-MFS-20395	c 15	N71-24903 *	NASA-CASE-MFS-21606-1	c 37	N75-19685 *	NASA-CASE-MFS-23311-1	c 54	N78-17676 *
NASA-CASE-MFS-20400	c 31	N71-18611 *	NASA-CASE-MFS-21611-1	c 54	N75-12616 *	NASA-CASE-MFS-23312-1	c 33	N78-27326 *
NASA-CASE-MFS-20407	c 09	N73-19235 *	NASA-CASE-MFS-21616-1	c 33	N75-30429 *	NASA-CASE-MFS-23315-1	c 76	N78-24950 *
NASA-CASE-MFS-20408	c 18	N73-12604 *	NASA-CASE-MFS-21628-1	c 44	N75-32581 *	NASA-CASE-MFS-23345-1	c 27	N77-30237 *
NASA-CASE-MFS-20410	c 15	N71-19214 *	NASA-CASE-MFS-21628-2	c 44	N76-23675 *	NASA-CASE-MFS-23349-1	c 44	N79-23481 *
NASA-CASE-MFS-20413	c 15	N72-21463 *	NASA-CASE-MFS-21629	c 14	N72-22442 *	NASA-CASE-MFS-23362-1	c 47	N77-10753 *
NASA-CASE-MFS-20418	c 14	N73-24473 *	NASA-CASE-MFS-21660-1	c 35	N74-21017 *	NASA-CASE-MFS-23363-1	c 35	N78-32396 *
NASA-CASE-MFS-20423	c 15	N72-11388 *	NASA-CASE-MFS-21671-1	c 33	N74-22885 *	NASA-CASE-MFS-23405-1	c 26	N77-29260 *
NASA-CASE-MFS-20433	c 15	N72-28496 *	NASA-CASE-MFS-21672-1	c 74	N76-19935 *	NASA-CASE-MFS-23447-1	c 37	N79-11404 *
NASA-CASE-MFS-20434	c 11	N72-25288 *	NASA-CASE-MFS-21675-1	c 25	N74-33378 *	NASA-CASE-MFS-23460-1	c 12	N79-26075 *



Table listing report numbers and their corresponding case identifiers. Includes columns for report number, case number, and case title. Entries range from NASA-CASE-MFS-23461-1 to NASA-CASE-MSC-12458-1.



Table with 4 columns: Case ID, Case ID, Case ID, Case ID. Lists various NASA CASE-NPO and CASE-MSO identifiers with corresponding numbers and symbols.



















Table with multiple columns containing patent application numbers (e.g., US-PATENT-APPL-SN-100774) and corresponding report numbers (e.g., c 06, N72-25151). The table lists a large number of entries, including some with asterisks (\*).







Table with 4 columns: Patent Number, Page Count, Patent Number, Page Count. Lists patent numbers and their corresponding page counts in a grid format.







Table listing patent application numbers (US-PATENT-APPL-SN-431235 to US-PATENT-APPL-SN-448365) and their corresponding report numbers (c 15 to c 74). The table is organized in columns and includes asterisks for certain entries.









Table with 4 columns: Patent Number, Status, Year, and Report Number. It lists numerous patent entries such as US-PATENT-APPL-SN-656993, US-PATENT-APPL-SN-656994, etc., up to US-PATENT-APPL-SN-681692.



Table listing patent application numbers and their corresponding report indices. The table is organized into columns, with the first column containing the patent number (e.g., US-PATENT-APPL-SN-693420) and the second column containing the report index (e.g., c 31). The entries continue sequentially down to US-PATENT-APPL-SN-709255 (c 37) in the first column and US-PATENT-APPL-SN-723465 (c 15) in the last column.







Table with 4 columns: Patent Number, Page, Report Number, and Patent Title. The table lists numerous patent entries such as US-PATENT-APPL-SN-880398, US-PATENT-APPL-SN-880726, etc., with corresponding page numbers and report numbers.









Table with 4 columns: US-PATENT-CLASS, count, N71-XXXX, and US-PATENT-CLASS. Lists patent classes and their counts across various N71 numbers.



Table with 4 columns: US-PATENT-CLASS, c, and report number. The table lists patent classes from 156-905 to 165-105 and 165-105 to 177-147, with corresponding counts and report numbers.



Table listing patent classes and counts. Columns include class number, count, and asterisk status. Rows range from US-PATENT-CLASS-192-67R to US-PATENT-CLASS-200-61.45.

Table listing patent classes and report numbers. Columns include Class ID, Count, and Report Number. Includes various class identifiers like US-PATENT-CLASS-204-42, 204-430, 204-49, etc., and their corresponding counts and report numbers.



Table listing patent classes and their corresponding report numbers. Columns include class numbers (e.g., US-PATENT-CLASS-235-197) and report numbers (e.g., c 10, N73-26230). The table is organized into three columns for readability.





US-PATENT-CLASS-244-53 ..... c 28
US-PATENT-CLASS-244-54 ..... c 07
US-PATENT-CLASS-244-54 ..... c 05
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US-PATENT-CLASS-244-77B ..... c 04
US-PATENT-CLASS-244-77D ..... c 02
US-PATENT-CLASS-244-77F ..... c 02
US-PATENT-CLASS-244-77G ..... c 02
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US-PATENT-CLASS-244/161 ..... c 37
US-PATENT-CLASS-247-171 ..... c 35
US-PATENT-CLASS-248-DIG-1 ..... c 18
US-PATENT-CLASS-248-119 ..... c 11
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US-PATENT-CLASS-248-178 ..... c 15
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US-PATENT-CLASS-248-186 ..... c 37
US-PATENT-CLASS-248-188.4 ..... c 15
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US-PATENT-CLASS-248-317 ..... c 11
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Table listing patent classes from US-PATENT-CLASS-250-287 to US-PATENT-CLASS-250-363R, including counts for each class.







Table with 4 columns: US-PATENT-CLASS-29-572, US-PATENT-CLASS-29-572, US-PATENT-CLASS-292-110, US-PATENT-CLASS-305-51, US-PATENT-CLASS-307-252R, US-PATENT-CLASS-307-252R. Contains patent classification codes and counts.





Table with 4 columns: US-PATENT-CLASS-310-4, US-PATENT-CLASS-310-4, US-PATENT-CLASS-310-4, US-PATENT-CLASS-310-4. Each row contains a class number, a count, and a reference number. The table lists various patent classes and their associated counts and references, such as US-PATENT-CLASS-310-4 c 03 N69-39988 \* #.



US-PATENT-CLASS-321-2	c 03	N69-21330 * #	US-PATENT-CLASS-324-DIG.1	c 33	N75-19520 *	US-PATENT-CLASS-324-33	c 14	N71-27090 *
US-PATENT-CLASS-321-2	c 03	N69-25146 * #	US-PATENT-CLASS-324-DIG.1	c 33	N75-25041 *	US-PATENT-CLASS-324-34FL	c 35	N74-21018 *
US-PATENT-CLASS-321-2	c 03	N71-12255 *	US-PATENT-CLASS-324-0.5	c 14	N71-26137 *	US-PATENT-CLASS-324-34R	c 26	N76-18257 *
US-PATENT-CLASS-321-2	c 09	N71-23188 *	US-PATENT-CLASS-324-0.5	c 14	N71-26286 *	US-PATENT-CLASS-324-34	c 25	N71-16073 *
US-PATENT-CLASS-321-2	c 03	N71-23239 *	US-PATENT-CLASS-324-0.5	c 36	N79-14362 *	US-PATENT-CLASS-324-40A	c 44	N80-18551 *
US-PATENT-CLASS-321-2	c 10	N71-26085 *	US-PATENT-CLASS-324-102	c 09	N72-11225 *	US-PATENT-CLASS-324-40	c 38	N74-15395 *
US-PATENT-CLASS-321-2	c 09	N72-22196 *	US-PATENT-CLASS-324-102	c 33	N74-17930 *	US-PATENT-CLASS-324-41	c 10	N72-28240 *
US-PATENT-CLASS-321-2	c 09	N72-22203 *	US-PATENT-CLASS-324-102	c 33	N75-19521 *	US-PATENT-CLASS-324-427	c 35	N85-21596 *
US-PATENT-CLASS-321-2	c 03	N72-23048 *	US-PATENT-CLASS-324-102	c 33	N79-11315 *	US-PATENT-CLASS-324-43R	c 35	N76-16390 *
US-PATENT-CLASS-321-2	c 09	N72-25249 *	US-PATENT-CLASS-324-102	c 33	N79-14305 *	US-PATENT-CLASS-324-43	c 14	N69-27423 * #
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US-PATENT-CLASS-321-2	c 09	N72-25252 *	US-PATENT-CLASS-324-106	c 14	N70-38602 *	US-PATENT-CLASS-324-43	c 14	N71-15962 *
US-PATENT-CLASS-321-2	c 09	N72-25253 *	US-PATENT-CLASS-324-106	c 08	N71-29138 *	US-PATENT-CLASS-324-43	c 14	N71-26135 *
US-PATENT-CLASS-321-2	c 09	N72-25254 *	US-PATENT-CLASS-324-107	c 10	N71-27338 *	US-PATENT-CLASS-324-43	c 14	N71-27325 *
US-PATENT-CLASS-321-2	c 33	N74-11049 *	US-PATENT-CLASS-324-112	c 33	N79-14305 *	US-PATENT-CLASS-324-457	c 72	N84-28575 *
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US-PATENT-CLASS-321-45C	c 10	N73-26228 *	US-PATENT-CLASS-324-113	c 33	N75-19521 *	US-PATENT-CLASS-324-466	c 33	N80-26599 *
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US-PATENT-CLASS-321-47	c 09	N72-25253 *	US-PATENT-CLASS-324-119	c 09	N72-11225 *	US-PATENT-CLASS-324-57H	c 35	N77-32455 *
US-PATENT-CLASS-321-48	c 12	N71-20896 *	US-PATENT-CLASS-324-120	c 14	N71-19431 *	US-PATENT-CLASS-324-57SPS	c 35	N75-18252 *
US-PATENT-CLASS-321-5	c 08	N71-18752 *	US-PATENT-CLASS-324-120	c 09	N71-23021 *	US-PATENT-CLASS-324-57R	c 15	N72-21464 *
US-PATENT-CLASS-321-60	c 14	N71-23174 *	US-PATENT-CLASS-324-123C	c 33	N79-22373 *	US-PATENT-CLASS-324-57R	c 14	N73-30388 *
US-PATENT-CLASS-321-61	c 09	N71-27364 *	US-PATENT-CLASS-324-123R	c 09	N72-11225 *	US-PATENT-CLASS-324-57R	c 35	N74-18900 *
US-PATENT-CLASS-321-64	c 09	N71-27364 *	US-PATENT-CLASS-324-127	c 33	N79-18193 *	US-PATENT-CLASS-324-57R	c 33	N79-10338 *
US-PATENT-CLASS-321-69	c 10	N71-26414 *	US-PATENT-CLASS-324-127	c 33	N89-29681 *	US-PATENT-CLASS-324-57R	c 35	N79-14349 *
US-PATENT-CLASS-321-8R	c 35	N74-18090 *	US-PATENT-CLASS-324-130	c 35	N78-28411 *	US-PATENT-CLASS-324-57SS	c 33	N78-25319 *
US-PATENT-CLASS-321-9	c 10	N71-25139 *	US-PATENT-CLASS-324-132	c 09	N71-13530 *	US-PATENT-CLASS-324-57	c 10	N71-16057 *
US-PATENT-CLASS-322-2R	c 07	N83-20944 *	US-PATENT-CLASS-324-132	c 10	N72-20222 *	US-PATENT-CLASS-324-57	c 09	N71-20569 *
US-PATENT-CLASS-322-25	c 33	N84-33660 *	US-PATENT-CLASS-324-133	c 10	N71-27338 *	US-PATENT-CLASS-324-58.5A	c 33	N75-26245 *
US-PATENT-CLASS-322-29	c 33	N83-28319 *	US-PATENT-CLASS-324-133	c 33	N79-10337 *	US-PATENT-CLASS-324-58.5B	c 43	N78-10529 *
US-PATENT-CLASS-322-29	c 33	N84-33660 *	US-PATENT-CLASS-324-133	c 33	N79-11315 *	US-PATENT-CLASS-324-58.5C	c 33	N75-26245 *
US-PATENT-CLASS-322-2	c 03	N72-23048 *	US-PATENT-CLASS-324-133	c 33	N79-14305 *	US-PATENT-CLASS-324-58.5	c 15	N71-17822 *
US-PATENT-CLASS-322-32	c 09	N71-27364 *	US-PATENT-CLASS-324-133	c 33	N79-18193 *	US-PATENT-CLASS-324-58.5	c 25	N71-20563 *
US-PATENT-CLASS-322-35	c 33	N83-28319 *	US-PATENT-CLASS-324-158-D	c 33	N87-22894 *	US-PATENT-CLASS-324-58.5	c 14	N71-26137 *
US-PATENT-CLASS-322-47	c 33	N83-28319 *	US-PATENT-CLASS-324-158-R	c 33	N87-22894 *	US-PATENT-CLASS-324-58.5	c 18	N71-27397 *
US-PATENT-CLASS-322-47	c 33	N84-33660 *	US-PATENT-CLASS-324-158D	c 15	N72-25457 *	US-PATENT-CLASS-324-58A	c 33	N78-25319 *
US-PATENT-CLASS-322-95	c 33	N83-28319 *	US-PATENT-CLASS-324-158D	c 76	N76-20994 *	US-PATENT-CLASS-324-59	c 35	N77-32455 *
US-PATENT-CLASS-322-95	c 33	N84-33660 *	US-PATENT-CLASS-324-158D	c 44	N80-18551 *	US-PATENT-CLASS-324-59	c 35	N71-28991 *
US-PATENT-CLASS-322-96	c 33	N77-26387 *	US-PATENT-CLASS-324-158D	c 76	N84-35112 * #	US-PATENT-CLASS-324-60C	c 35	N75-12270 *
US-PATENT-CLASS-323-DIG.1	c 09	N72-21243 *	US-PATENT-CLASS-324-158D	c 76	N85-30923 *	US-PATENT-CLASS-324-60C	c 76	N76-20994 *
US-PATENT-CLASS-323-DIG.1	c 09	N72-25249 *	US-PATENT-CLASS-324-158F	c 33	N91-14552 *	US-PATENT-CLASS-324-601	c 33	N91-14552 *
US-PATENT-CLASS-323-DIG.1	c 33	N74-11049 *	US-PATENT-CLASS-324-158F	c 33	N91-14552 *	US-PATENT-CLASS-324-60	c 33	N77-31404 *
US-PATENT-CLASS-323-DIG.1	c 33	N77-10428 *	US-PATENT-CLASS-324-158R	c 76	N76-20994 *	US-PATENT-CLASS-324-61-R	c 35	N87-22953 *
US-PATENT-CLASS-323-106	c 33	N74-22885 *	US-PATENT-CLASS-324-158R	c 33	N85-30187 *	US-PATENT-CLASS-324-61-R	c 35	N88-29149 *
US-PATENT-CLASS-323-122	c 33	N74-22885 *	US-PATENT-CLASS-324-158T	c 15	N72-25457 *	US-PATENT-CLASS-324-61R	c 14	N72-24477 *
US-PATENT-CLASS-323-128	c 33	N74-22885 *	US-PATENT-CLASS-324-158T	c 35	N75-12270 *	US-PATENT-CLASS-324-61R	c 35	N76-22509 *
US-PATENT-CLASS-323-15	c 20	N79-20179 *	US-PATENT-CLASS-324-158T	c 76	N76-20994 *	US-PATENT-CLASS-324-61	c 14	N69-39785 * #
US-PATENT-CLASS-323-15	c 44	N80-14472 *	US-PATENT-CLASS-324-158T	c 33	N80-14332 *	US-PATENT-CLASS-324-61	c 14	N70-36618 *
US-PATENT-CLASS-323-17	c 09	N72-25249 *	US-PATENT-CLASS-324-158T	c 76	N84-35112 * #	US-PATENT-CLASS-324-61	c 14	N71-10797 *
US-PATENT-CLASS-323-17	c 33	N77-10428 *	US-PATENT-CLASS-324-158	c 09	N69-21926 * #	US-PATENT-CLASS-324-61	c 18	N71-27397 *
US-PATENT-CLASS-323-18	c 33	N78-17295 *	US-PATENT-CLASS-324-163	c 35	N77-30436 *	US-PATENT-CLASS-324-61	c 14	N72-22442 *
US-PATENT-CLASS-323-19	c 08	N72-31226 *	US-PATENT-CLASS-324-165	c 35	N77-30436 *	US-PATENT-CLASS-324-62R	c 14	N73-30388 *
US-PATENT-CLASS-323-19	c 33	N78-17296 *	US-PATENT-CLASS-324-173	c 35	N78-32396 *	US-PATENT-CLASS-324-62	c 33	N80-32650 *
US-PATENT-CLASS-323-19	c 44	N80-14472 *	US-PATENT-CLASS-324-174	c 35	N77-30436 *	US-PATENT-CLASS-324-62	c 33	N90-19425 *
US-PATENT-CLASS-323-20	c 14	N71-27407 *	US-PATENT-CLASS-324-181	c 09	N71-24717 *	US-PATENT-CLASS-324-64	c 15	N72-21464 *
US-PATENT-CLASS-323-20	c 20	N79-20179 *	US-PATENT-CLASS-324-186	c 09	N72-25257 *	US-PATENT-CLASS-324-64	c 33	N80-32660 *
US-PATENT-CLASS-323-22T	c 09	N72-21243 *	US-PATENT-CLASS-324-186	c 52	N74-12778 *	US-PATENT-CLASS-324-65-P	c 35	N85-34373 *
US-PATENT-CLASS-323-22T	c 09	N72-25249 *	US-PATENT-CLASS-324-20R	c 09	N72-23172 *	US-PATENT-CLASS-324-65P	c 14	N73-20478 *
US-PATENT-CLASS-323-22T	c 33	N77-10428 *	US-PATENT-CLASS-324-20R	c 44	N79-12541 *	US-PATENT-CLASS-324-65R	c 15	N72-23497 *
US-PATENT-CLASS-323-22T	c 33	N79-23345 *	US-PATENT-CLASS-324-207	c 35	N78-32396 *	US-PATENT-CLASS-324-65R	c 33	N85-30187 *
US-PATENT-CLASS-323-22	c 09	N71-21449 *	US-PATENT-CLASS-324-209	c 26	N90-21170 *	US-PATENT-CLASS-324-65	c 14	N73-32318 *
US-PATENT-CLASS-323-22	c 09	N71-23316 *	US-PATENT-CLASS-324-226	c 35	N86-32698 *	US-PATENT-CLASS-324-66	c 05	N72-16015 *
US-PATENT-CLASS-323-23	c 33	N77-10428 *	US-PATENT-CLASS-324-226	c 26	N90-21170 *	US-PATENT-CLASS-324-70	c 14	N70-41332 *
US-PATENT-CLASS-323-243	c 33	N84-16455 *	US-PATENT-CLASS-324-227	c 26	N90-21170 *	US-PATENT-CLASS-324-70	c 14	N71-22990 *
US-PATENT-CLASS-323-246	c 33	N84-16455 *	US-PATENT-CLASS-324-22	c 44	N79-12541 *	US-PATENT-CLASS-324-70	c 10	N71-24863 *
US-PATENT-CLASS-323-269	c 33	N83-27126 *	US-PATENT-CLASS-324-234	c 27	N90-23544 *	US-PATENT-CLASS-324-71.3	c 72	N84-28575 *
US-PATENT-CLASS-323-300	c 33	N84-27975 *	US-PATENT-CLASS-324-235	c 26	N90-21170 *	US-PATENT-CLASS-324-71.5	c 76	N85-30923 *
US-PATENT-CLASS-323-303	c 33	N83-27126 *	US-PATENT-CLASS-324-236	c 27	N90-23544 *	US-PATENT-CLASS-324-71CP	c 35	N76-22509 *
US-PATENT-CLASS-323-311	c 33	N91-27479 *	US-PATENT-CLASS-324-238	c 35	N86-32698 *	US-PATENT-CLASS-324-71CP	c 35	N82-11431 *
US-PATENT-CLASS-323-312	c 33	N91-27479 *	US-PATENT-CLASS-324-239	c 26	N90-21170 *	US-PATENT-CLASS-324-71R	c 09	N72-21246 *
US-PATENT-CLASS-323-350	c 33	N83-27126 *	US-PATENT-CLASS-324-240	c 35	N86-32698 *	US-PATENT-CLASS-324-71R	c 15	N72-21464 *
US-PATENT-CLASS-323-354	c 33	N90-19492 *	US-PATENT-CLASS-324-249	c 35	N78-32397 *	US-PATENT-CLASS-324-71	c 09	N71-24843 *
US-PATENT-CLASS-323-38	c 09	N72-21243 *	US-PATENT-CLASS-324-250	c 35	N84-12444 *	US-PATENT-CLASS-324-72.5	c 44	N74-27519 *
US-PATENT-CLASS-323-44F	c 33	N79-17133 *	US-PATENT-CLASS-324-262	c 35	N84-22928 *	US-PATENT-CLASS-324-72.5	c 72	N84-28575 *
US-PATENT-CLASS-323-48	c 09	N71-27053 *	US-PATENT-CLASS-324-262	c 35	N86-32698 *	US-PATENT-CLASS-324-72	c 10	N71-19421 *
US-PATENT-CLASS-323-48	c 09	N72-25262 *	US-PATENT-CLASS-324-29.5	c 03	N72-25020 *	US-PATENT-CLASS-324-72	c 14	N71-23699 *
US-PATENT-CLASS-323-4	c 33	N78-17294 *	US-PATENT-CLASS-324-29.5	c 14	N73-30388 *	US-PATENT-CLASS-324-72	c 07	N73-20175 *
US-PATENT-CLASS-323-56	c 10	N71-22961 *	US-PATENT-CLASS-324-29.5	c 44	N74-27519 *	US-PATENT-CLASS-324-72	c 14	N73-32318 *
US-PATENT-CLASS-323-56	c 09	N71-24893 *	US-PATENT-CLASS-324-30R	c 33	N76-19339 *	US-PATENT-CLASS-324-72	c 33	N74-27862 *
US-PATENT-CLASS-323-56	c 09	N72-22196 *	US-PATENT-CLASS-324-30R	c 14	N73-20478 *	US-PATENT-CLASS-324-72	c 33	N75-26246 *
US-PATENT-CLASS-323-60	c 09	N71-27053 *	US-PATENT-CLASS-324-329	c 35	N90-22023 *	US-PATENT-CLASS-324-72	c 33	N77-10429 *
US-PATENT-CLASS-323-82	c 09	N72-25262 *	US-PATENT-CLASS-324-32	c 14	N71-16014 *	US-PATENT-CLASS-324-72	c 33	N79-10337 *
US-PATENT-CLASS-323-89C	c 09	N72-22196 *	US-PATENT-CLASS-324-32	c 33	N75-18477 *	US-PATENT-CLASS-324-72	c 33	N79-14305 *
US-PATENT-CLASS-323-8	c 10	N71-10578 *	US-PATENT-CLASS-324-32	c 33	N75-19521 *	US-PATENT-CLASS-324-72	c 47	N82-24779 *
US-PATENT-CLASS-323-901	c 33	N84-33663 *	US-PATENT-CLASS-324-32	c 35	N78-28411 *	US-PATENT-CLASS-324-73AT	c 08	N72-21666 *
US-PATENT-CLASS-323-903	c 33	N90-20320 *	US-PATENT-CLASS-324-33	c 25	N69-39884 * #	US-PATENT-CLASS-324-73AT	c 33	N81-26359 *
US-PATENT-CLASS-323-93	c 33	N77-31404 *	US-PATENT-CLASS-324-33	c 14	N70-35666 *	US-PATENT-CLASS-324-73R	c 33	N83-18996 *
US-PATENT-CLASS-324-.5R	c 16	N73-13489 *	US-PATENT-CLASS-324-33	c 24	N71-20518 *	US-PATENT-CLASS-324-73	c 14	N71-28991 *
US-PATENT-CLASS-324-.5	c 14	N71-20428 *	US-PATENT-CLASS-324-33	c 14	N71-21090 *	US-PATENT-CLASS-324-74	c 35	N78-28411 *

US-PATENT-CLASS-324-77-E ..... c 33 N89-14385 \*
US-PATENT-CLASS-324-77-R ..... c 33 N89-14385 \*
US-PATENT-CLASS-324-77B ..... c 60 N75-13539 \*
US-PATENT-CLASS-324-77B ..... c 32 N79-10262 \*
US-PATENT-CLASS-324-77C ..... c 32 N79-10262 \*
US-PATENT-CLASS-324-77G ..... c 08 N72-20177 \*
US-PATENT-CLASS-324-77H ..... c 35 N75-21582 \*
US-PATENT-CLASS-324-77K ..... c 35 N79-10391 \*
US-PATENT-CLASS-324-77R ..... c 10 N73-25240 \*
US-PATENT-CLASS-324-77R ..... c 47 N82-24779 \*
US-PATENT-CLASS-324-77 ..... c 09 N71-10659 \*
US-PATENT-CLASS-324-77 ..... c 07 N71-24622 \*
US-PATENT-CLASS-324-78-D ..... c 33 N89-14385 \*
US-PATENT-CLASS-324-78-F ..... c 33 N89-14385 \*
US-PATENT-CLASS-324-78D ..... c 09 N72-25257 \*
US-PATENT-CLASS-324-78D ..... c 52 N74-12778 \*
US-PATENT-CLASS-324-78D ..... c 32 N90-17005 \*
US-PATENT-CLASS-324-78E ..... c 14 N73-24473 \*
US-PATENT-CLASS-324-78J ..... c 10 N73-25240 \*
US-PATENT-CLASS-324-78J ..... c 33 N75-19515 \*
US-PATENT-CLASS-324-78Z ..... c 32 N90-17005 \*
US-PATENT-CLASS-324-79D ..... c 14 N73-30386 \*
US-PATENT-CLASS-324-79D ..... c 33 N76-16331 \*
US-PATENT-CLASS-324-79R ..... c 14 N72-27408 \*
US-PATENT-CLASS-324-79R ..... c 33 N84-16454 \*
US-PATENT-CLASS-324-83A ..... c 10 N72-20224 \*
US-PATENT-CLASS-324-83A ..... c 33 N84-16454 \*
US-PATENT-CLASS-324-83D ..... c 33 N79-10338 \*
US-PATENT-CLASS-324-83Q ..... c 35 N74-21017 \*
US-PATENT-CLASS-324-83Q ..... c 33 N75-26243 \*
US-PATENT-CLASS-324-83R ..... c 33 N84-16454 \*
US-PATENT-CLASS-324-85 ..... c 10 N72-20224 \*
US-PATENT-CLASS-324-85 ..... c 33 N79-10338 \*
US-PATENT-CLASS-324-92 ..... c 26 N72-25680 \*
US-PATENT-CLASS-324-95 ..... c 10 N71-12554 \*
US-PATENT-CLASS-324-95 ..... c 14 N73-30388 \*
US-PATENT-CLASS-324-96 ..... c 26 N72-25680 \*
US-PATENT-CLASS-324-96 ..... c 33 N79-10337 \*
US-PATENT-CLASS-324-99D ..... c 33 N79-22373 \*
US-PATENT-CLASS-325-10 ..... c 07 N72-12081 \*
US-PATENT-CLASS-325-113 ..... c 07 N71-24840 \*
US-PATENT-CLASS-325-113 ..... c 07 N73-25160 \*
US-PATENT-CLASS-325-113 ..... c 52 N74-26625 \*
US-PATENT-CLASS-325-114 ..... c 07 N72-25171 \*
US-PATENT-CLASS-325-114 ..... c 03 N76-32140 \*
US-PATENT-CLASS-325-115 ..... c 03 N76-32140 \*
US-PATENT-CLASS-325-118 ..... c 17 N78-17140 \*
US-PATENT-CLASS-325-12 ..... c 07 N73-20174 \*
US-PATENT-CLASS-325-139 ..... c 07 N73-25160 \*
US-PATENT-CLASS-325-13 ..... c 07 N72-12081 \*
US-PATENT-CLASS-325-141 ..... c 07 N72-25173 \*
US-PATENT-CLASS-325-141 ..... c 52 N74-26625 \*
US-PATENT-CLASS-325-143 ..... c 05 N71-12342 \*
US-PATENT-CLASS-325-145 ..... c 32 N77-14292 \*
US-PATENT-CLASS-325-148 ..... c 32 N74-19790 \*
US-PATENT-CLASS-325-14 ..... c 17 N76-21250 \*
US-PATENT-CLASS-325-14 ..... c 32 N80-20448 \*
US-PATENT-CLASS-325-151.11 ..... c 08 N71-27057 \*
US-PATENT-CLASS-325-159 ..... c 33 N78-32340 \*
US-PATENT-CLASS-325-163 ..... c 07 N71-23405 \*
US-PATENT-CLASS-325-16 ..... c 07 N71-27056 \*
US-PATENT-CLASS-325-17 ..... c 07 N73-20174 \*
US-PATENT-CLASS-325-185 ..... c 07 N71-28430 \*
US-PATENT-CLASS-325-186 ..... c 03 N76-32140 \*
US-PATENT-CLASS-325-187 ..... c 33 N78-32340 \*
US-PATENT-CLASS-325-23 ..... c 07 N71-27056 \*
US-PATENT-CLASS-325-29 ..... c 09 N72-22202 \*
US-PATENT-CLASS-325-302 ..... c 07 N72-25173 \*
US-PATENT-CLASS-325-304 ..... c 32 N76-14321 \*
US-PATENT-CLASS-325-305 ..... c 07 N71-10775 \*
US-PATENT-CLASS-325-305 ..... c 10 N71-20841 \*
US-PATENT-CLASS-325-305 ..... c 07 N71-23098 \*
US-PATENT-CLASS-325-305 ..... c 32 N80-18253 \*
US-PATENT-CLASS-325-306 ..... c 32 N76-14321 \*
US-PATENT-CLASS-325-307 ..... c 32 N80-18253 \*
US-PATENT-CLASS-325-30 ..... c 32 N74-26654 \*
US-PATENT-CLASS-325-30 ..... c 32 N75-24981 \*
US-PATENT-CLASS-325-30 ..... c 32 N77-30308 \*
US-PATENT-CLASS-325-31 ..... c 07 N71-20791 \*
US-PATENT-CLASS-325-320 ..... c 33 N74-12887 \*
US-PATENT-CLASS-325-320 ..... c 32 N74-20809 \*
US-PATENT-CLASS-325-320 ..... c 32 N74-20811 \*
US-PATENT-CLASS-325-320 ..... c 33 N74-27705 \*
US-PATENT-CLASS-325-321 ..... c 07 N72-20140 \*
US-PATENT-CLASS-325-321 ..... c 32 N74-20810 \*
US-PATENT-CLASS-325-321 ..... c 32 N76-16249 \*
US-PATENT-CLASS-325-323 ..... c 32 N77-10392 \*
US-PATENT-CLASS-325-325 ..... c 07 N71-24613 \*
US-PATENT-CLASS-325-325 ..... c 07 N72-25173 \*
US-PATENT-CLASS-325-325 ..... c 07 N73-13149 \*
US-PATENT-CLASS-325-346 ..... c 10 N73-16205 \*
US-PATENT-CLASS-325-346 ..... c 32 N74-30523 \*
US-PATENT-CLASS-325-346 ..... c 32 N77-24331 \*
US-PATENT-CLASS-325-347 ..... c 07 N71-33696 \*
US-PATENT-CLASS-325-348 ..... c 07 N71-33696 \*
US-PATENT-CLASS-325-349 ..... c 32 N77-10392 \*

US-PATENT-CLASS-325-363 ..... c 07 N71-11267 \*
US-PATENT-CLASS-325-363 ..... c 14 N71-26774 \*
US-PATENT-CLASS-325-363 ..... c 14 N72-28437 \*
US-PATENT-CLASS-325-363 ..... c 10 N73-25241 \*
US-PATENT-CLASS-325-363 ..... c 35 N80-18359 \*
US-PATENT-CLASS-325-369 ..... c 07 N71-27056 \*
US-PATENT-CLASS-325-372 ..... c 32 N76-14321 \*
US-PATENT-CLASS-325-373 ..... c 07 N72-33146 \*
US-PATENT-CLASS-325-38B ..... c 35 N74-17885 \*
US-PATENT-CLASS-325-38 ..... c 07 N72-20140 \*
US-PATENT-CLASS-325-38 ..... c 07 N72-25173 \*
US-PATENT-CLASS-325-39 ..... c 07 N72-11149 \*
US-PATENT-CLASS-325-40 ..... c 07 N73-26118 \*
US-PATENT-CLASS-325-419 ..... c 10 N73-16205 \*
US-PATENT-CLASS-325-419 ..... c 07 N73-28012 \*
US-PATENT-CLASS-325-419 ..... c 32 N74-20810 \*
US-PATENT-CLASS-325-419 ..... c 32 N74-20811 \*
US-PATENT-CLASS-325-419 ..... c 32 N80-18253 \*
US-PATENT-CLASS-325-41 ..... c 10 N71-26577 \*
US-PATENT-CLASS-325-41 ..... c 32 N77-12240 \*
US-PATENT-CLASS-325-41 ..... c 32 N79-10263 \*
US-PATENT-CLASS-325-420 ..... c 07 N73-30113 \*
US-PATENT-CLASS-325-422 ..... c 07 N73-30113 \*
US-PATENT-CLASS-325-423 ..... c 32 N74-20809 \*
US-PATENT-CLASS-325-42 ..... c 07 N71-11266 \*
US-PATENT-CLASS-325-42 ..... c 32 N76-21366 \*
US-PATENT-CLASS-325-42 ..... c 32 N77-30308 \*
US-PATENT-CLASS-325-445 ..... c 07 N72-20141 \*
US-PATENT-CLASS-325-446 ..... c 09 N69-24324 #
US-PATENT-CLASS-325-45 ..... c 07 N73-25160 \*
US-PATENT-CLASS-325-473 ..... c 07 N71-33696 \*
US-PATENT-CLASS-325-473 ..... c 10 N73-12244 \*
US-PATENT-CLASS-325-473 ..... c 32 N77-30308 \*
US-PATENT-CLASS-325-476 ..... c 32 N77-10392 \*
US-PATENT-CLASS-325-478 ..... c 07 N71-33696 \*
US-PATENT-CLASS-325-480 ..... c 07 N71-33696 \*
US-PATENT-CLASS-325-480 ..... c 10 N73-12244 \*
US-PATENT-CLASS-325-482 ..... c 07 N71-33696 \*
US-PATENT-CLASS-325-492 ..... c 09 N72-17153 \*
US-PATENT-CLASS-325-492 ..... c 09 N72-22202 \*
US-PATENT-CLASS-325-4 ..... c 07 N71-16088 \*
US-PATENT-CLASS-325-4 ..... c 07 N71-19773 \*
US-PATENT-CLASS-325-4 ..... c 07 N71-24621 \*
US-PATENT-CLASS-325-4 ..... c 07 N72-11149 \*
US-PATENT-CLASS-325-4 ..... c 07 N72-12080 \*
US-PATENT-CLASS-325-4 ..... c 07 N72-20140 \*
US-PATENT-CLASS-325-4 ..... c 07 N72-25171 \*
US-PATENT-CLASS-325-4 ..... c 07 N73-20174 \*
US-PATENT-CLASS-325-4 ..... c 15 N75-13007 \*
US-PATENT-CLASS-325-4 ..... c 32 N75-26195 \*
US-PATENT-CLASS-325-4 ..... c 32 N77-20289 \*
US-PATENT-CLASS-325-4 ..... c 32 N79-11265 \*
US-PATENT-CLASS-325-4 ..... c 32 N80-20448 \*
US-PATENT-CLASS-325-51 ..... c 07 N72-25173 \*
US-PATENT-CLASS-325-55 ..... c 07 N72-25173 \*
US-PATENT-CLASS-325-58 ..... c 07 N72-11149 \*
US-PATENT-CLASS-325-58 ..... c 07 N72-20140 \*
US-PATENT-CLASS-325-58 ..... c 07 N72-25173 \*
US-PATENT-CLASS-325-58 ..... c 32 N78-15323 \*
US-PATENT-CLASS-325-58 ..... c 32 N79-20296 \*
US-PATENT-CLASS-325-5 ..... c 07 N73-20174 \*
US-PATENT-CLASS-325-60 ..... c 08 N71-19763 \*
US-PATENT-CLASS-325-60 ..... c 07 N73-16121 \*
US-PATENT-CLASS-325-60 ..... c 32 N75-24981 \*
US-PATENT-CLASS-325-61 ..... c 07 N73-25160 \*
US-PATENT-CLASS-325-62 ..... c 08 N72-25208 \*
US-PATENT-CLASS-325-62 ..... c 44 N74-19870 \*
US-PATENT-CLASS-325-63 ..... c 10 N71-19467 \*
US-PATENT-CLASS-325-63 ..... c 07 N73-20174 \*
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US-PATENT-CLASS-325-63 ..... c 32 N79-20296 \*
US-PATENT-CLASS-325-64 ..... c 07 N72-25173 \*
US-PATENT-CLASS-325-65 ..... c 07 N70-41331 \*
US-PATENT-CLASS-325-65 ..... c 07 N70-41372 \*
US-PATENT-CLASS-325-65 ..... c 07 N71-11284 \*
US-PATENT-CLASS-325-65 ..... c 32 N77-30308 \*
US-PATENT-CLASS-325-66 ..... c 17 N78-17140 \*
US-PATENT-CLASS-325-67 ..... c 07 N71-26292 \*
US-PATENT-CLASS-325-67 ..... c 10 N73-25241 \*
US-PATENT-CLASS-325-67 ..... c 35 N75-21582 \*
US-PATENT-CLASS-325-67 ..... c 32 N79-11265 \*
US-PATENT-CLASS-325-7 ..... c 07 N73-20174 \*
US-PATENT-CLASS-325-8 ..... c 07 N73-20174 \*
US-PATENT-CLASS-325-8 ..... c 32 N80-20448 \*
US-PATENT-CLASS-325-9 ..... c 07 N73-20174 \*
US-PATENT-CLASS-325-9 ..... c 32 N80-20448 \*
US-PATENT-CLASS-328-104 ..... c 08 N72-22162 \*
US-PATENT-CLASS-328-104 ..... c 10 N73-13235 \*
US-PATENT-CLASS-328-106 ..... c 09 N72-22201 \*
US-PATENT-CLASS-328-110 ..... c 09 N71-12519 \*
US-PATENT-CLASS-328-111 ..... c 60 N77-12721 \*
US-PATENT-CLASS-328-115 ..... c 33 N75-18479 \*
US-PATENT-CLASS-328-116 ..... c 09 N69-39885 #
US-PATENT-CLASS-328-120 ..... c 09 N71-27016 \*
US-PATENT-CLASS-328-123 ..... c 60 N74-12888 \*
US-PATENT-CLASS-328-129 ..... c 14 N73-30386 \*

US-PATENT-CLASS-328-133 ..... c 09 N71-24596 \*
US-PATENT-CLASS-328-133 ..... c 10 N72-20224 \*
US-PATENT-CLASS-328-133 ..... c 33 N75-26243 \*
US-PATENT-CLASS-328-133 ..... c 33 N77-13315 \*
US-PATENT-CLASS-328-133 ..... c 33 N79-11313 \*
US-PATENT-CLASS-328-133 ..... c 33 N84-16454 \*
US-PATENT-CLASS-328-134 ..... c 08 N71-18692 \*
US-PATENT-CLASS-328-134 ..... c 14 N73-30386 \*
US-PATENT-CLASS-328-134 ..... c 33 N76-16331 \*
US-PATENT-CLASS-328-134 ..... c 33 N81-17349 \*
US-PATENT-CLASS-328-136 ..... c 09 N72-25257 \*
US-PATENT-CLASS-328-140 ..... c 09 N72-25257 \*
US-PATENT-CLASS-328-142 ..... c 09 N72-21245 \*
US-PATENT-CLASS-328-145 ..... c 32 N76-14321 \*
US-PATENT-CLASS-328-145 ..... c 09 N72-23173 \*
US-PATENT-CLASS-328-145 ..... c 33 N78-32339 \*
US-PATENT-CLASS-328-147 ..... c 33 N87-21235 \*
US-PATENT-CLASS-328-150 ..... c 33 N78-18308 \*
US-PATENT-CLASS-328-151 ..... c 09 N72-22200 \*
US-PATENT-CLASS-328-151 ..... c 33 N75-18479 \*
US-PATENT-CLASS-328-151 ..... c 33 N81-27396 \*
US-PATENT-CLASS-328-151 ..... c 33 N91-14550 \*
US-PATENT-CLASS-328-154 ..... c 08 N72-22162 \*
US-PATENT-CLASS-328-154 ..... c 10 N73-13235 \*
US-PATENT-CLASS-328-154 ..... c 33 N74-22814 \*
US-PATENT-CLASS-328-155 ..... c 10 N72-16172 \*
US-PATENT-CLASS-328-155 ..... c 09 N72-33204 \*
US-PATENT-CLASS-328-155 ..... c 33 N74-17927 \*
US-PATENT-CLASS-328-155 ..... c 17 N76-22245 \*
US-PATENT-CLASS-328-155 ..... c 32 N88-29076 \*
US-PATENT-CLASS-328-160 ..... c 32 N74-19788 \*
US-PATENT-CLASS-328-161 ..... c 33 N77-17354 \*
US-PATENT-CLASS-328-163 ..... c 33 N79-10338 \*
US-PATENT-CLASS-328-164 ..... c 07 N71-33696 \*
US-PATENT-CLASS-328-164 ..... c 33 N87-21235 \*
US-PATENT-CLASS-328-165 ..... c 09 N71-24806 \*
US-PATENT-CLASS-328-165 ..... c 07 N71-33696 \*
US-PATENT-CLASS-328-166 ..... c 10 N72-20223 \*
US-PATENT-CLASS-328-166 ..... c 33 N82-29539 \*
US-PATENT-CLASS-328-167 ..... c 10 N71-22986 \*
US-PATENT-CLASS-328-167 ..... c 08 N71-29034 \*
US-PATENT-CLASS-328-167 ..... c 10 N72-17171 \*
US-PATENT-CLASS-328-167 ..... c 09 N72-21245 \*
US-PATENT-CLASS-328-167 ..... c 09 N73-20231 \*
US-PATENT-CLASS-328-167 ..... c 08 N73-26175 \*
US-PATENT-CLASS-328-167 ..... c 33 N82-24417 \*
US-PATENT-CLASS-328-167 ..... c 33 N85-29145 \*
US-PATENT-CLASS-328-168 ..... c 32 N74-19788 \*
US-PATENT-CLASS-328-16 ..... c 10 N72-20223 \*
US-PATENT-CLASS-328-171 ..... c 10 N71-24844 \*
US-PATENT-CLASS-328-172 ..... c 32 N74-19788 \*
US-PATENT-CLASS-328-172 ..... c 33 N78-17294 \*
US-PATENT-CLASS-328-186 ..... c 09 N72-17157 \*
US-PATENT-CLASS-328-187 ..... c 10 N73-20254 \*
US-PATENT-CLASS-328-189 ..... c 14 N72-27408 \*
US-PATENT-CLASS-328-190 ..... c 33 N76-14371 \*
US-PATENT-CLASS-328-192 ..... c 60 N81-15706 \*
US-PATENT-CLASS-328-1 ..... c 23 N71-16099 \*
US-PATENT-CLASS-328-1 ..... c 10 N71-19472 \*
US-PATENT-CLASS-328-1 ..... c 09 N72-22200 \*
US-PATENT-CLASS-328-207 ..... c 09 N71-28468 \*
US-PATENT-CLASS-328-207 ..... c 10 N71-28860 \*
US-PATENT-CLASS-328-207 ..... c 09 N71-29139 \*
US-PATENT-CLASS-328-207 ..... c 10 N72-20221 \*
US-PATENT-CLASS-328-20 ..... c 10 N72-20223 \*
US-PATENT-CLASS-328-230 ..... c 35 N84-12444 \*
US-PATENT-CLASS-328-233 ..... c 10 N71-22962 \*
US-PATENT-CLASS-328-233 ..... c 75 N75-13625 \*
US-PATENT-CLASS-328-233 ..... c 37 N78-17386 \*
US-PATENT-CLASS-328-24 ..... c 09 N72-33204 \*
US-PATENT-CLASS-328-28 ..... c 33 N87-21235 \*
US-PATENT-CLASS-328-37 ..... c 08 N71-12503 \*
US-PATENT-CLASS-328-37 ..... c 10 N73-20254 \*
US-PATENT-CLASS-328-37 ..... c 33 N76-14373 \*
US-PATENT-CLASS-328-37 ..... c 33 N81-17349 \*
US-PATENT-CLASS-328-38 ..... c 10 N72-20223 \*
US-PATENT-CLASS-328-38 ..... c 33 N77-24375 \*
US-PATENT-CLASS-328-39 ..... c 33 N77-24375 \*
US-PATENT-CLASS-328-48 ..... c 33 N77-24375 \*
US-PATENT-CLASS-328-41 ..... c 33 N75-31330 \*
US-PATENT-CLASS-328-42 ..... c 08 N71-19432 \*
US-PATENT-CLASS-328-44 ..... c 08 N71-29034 \*
US-PATENT-CLASS-328-48 ..... c 14 N73-30386 \*
US-PATENT-CLASS-328-48 ..... c 33 N74-10223 \*
US-PATENT-CLASS-328-48 ..... c 60 N81-15706 \*
US-PATENT-CLASS-328-49 ..... c 10 N71-27137 \*
US-PATENT-CLASS-328-55 ..... c 33 N81-17349 \*
US-PATENT-CLASS-328-58 ..... c 08 N71-29138 \*
US-PATENT-CLASS-328-58 ..... c 33 N74-32711 \*
US-PATENT-CLASS-328-58 ..... c 33 N75-18479 \*
US-PATENT-CLASS-328-59 ..... c 33 N75-19515 \*
US-PATENT-CLASS-328-61 ..... c 09 N71-23525 \*
US-PATENT-CLASS-328-61 ..... c 10 N73-20254 \*
US-PATENT-CLASS-328-61 ..... c 35 N75-30504 \*
US-PATENT-CLASS-328-62 ..... c 35 N75-30504 \*
US-PATENT-CLASS-328-63 ..... c 33 N76-14371 \*



Table with 4 columns: Patent Class, Patent Class, Patent Class, Patent Class. Contains a list of patent classes and their corresponding report numbers, such as US-PATENT-CLASS-331-36C c 33 N77-14334 and US-PATENT-CLASS-333-98R c 14 N73-13420.

Table with multiple columns listing patent classes such as US-PATENT-CLASS-339-242 and US-PATENT-CLASS-340-173, along with associated codes like 'c 33' and 'c 10'. The table is organized into four main sections.





US-PATENT-CLASS-343-830	c 32	N80-32604 *	US-PATENT-CLASS-35-12E	c 09	N74-30597 *	US-PATENT-CLASS-350-285	c 14	N71-15605 *
US-PATENT-CLASS-343-833	c 31	N70-34135 *	US-PATENT-CLASS-35-12E	c 09	N79-31228 *	US-PATENT-CLASS-350-285	c 14	N71-17662 *
US-PATENT-CLASS-343-837	c 07	N72-32169 *	US-PATENT-CLASS-35-12H	c 09	N79-31228 *	US-PATENT-CLASS-350-285	c 19	N71-26674 *
US-PATENT-CLASS-343-837	c 07	N73-14130 *	US-PATENT-CLASS-35-12N	c 09	N76-24280 *	US-PATENT-CLASS-350-285	c 15	N72-11386 *
US-PATENT-CLASS-343-837	c 33	N75-19516 *	US-PATENT-CLASS-35-12N	c 09	N78-18083 *	US-PATENT-CLASS-350-285	c 16	N73-33397 *
US-PATENT-CLASS-343-837	c 32	N76-15329 *	US-PATENT-CLASS-35-12N	c 74	N79-13855 *	US-PATENT-CLASS-350-285	c 74	N74-15093 *
US-PATENT-CLASS-343-837	c 32	N76-18295 *	US-PATENT-CLASS-35-12	c 11	N70-34815 *	US-PATENT-CLASS-350-285	c 74	N80-21138 *
US-PATENT-CLASS-343-837	c 32	N78-31321 *	US-PATENT-CLASS-35-12	c 31	N70-34966 *	US-PATENT-CLASS-350-286	c 07	N71-29065 *
US-PATENT-CLASS-343-839	c 09	N73-19234 *	US-PATENT-CLASS-35-12	c 11	N71-10746 *	US-PATENT-CLASS-350-286	c 73	N78-32848 *
US-PATENT-CLASS-343-840	c 07	N71-27233 *	US-PATENT-CLASS-35-12	c 11	N71-10748 *	US-PATENT-CLASS-350-286	c 74	N83-10900 *
US-PATENT-CLASS-343-840	c 09	N72-12136 *	US-PATENT-CLASS-35-12	c 11	N71-10776 *	US-PATENT-CLASS-350-287	c 15	N72-11386 *
US-PATENT-CLASS-343-840	c 07	N72-32169 *	US-PATENT-CLASS-35-12	c 11	N71-18773 *	US-PATENT-CLASS-350-287	c 74	N83-13978 *
US-PATENT-CLASS-343-840	c 32	N76-18295 *	US-PATENT-CLASS-35-12	c 11	N71-19494 *	US-PATENT-CLASS-350-287	c 35	N91-14590 *
US-PATENT-CLASS-343-840	c 33	N83-36355 *	US-PATENT-CLASS-35-12	c 11	N71-21474 *	US-PATENT-CLASS-350-288	c 23	N71-29123 *
US-PATENT-CLASS-343-844	c 32	N79-11264 *	US-PATENT-CLASS-35-12	c 18	N76-14186 *	US-PATENT-CLASS-350-288	c 12	N76-15189 *
US-PATENT-CLASS-343-844	c 32	N80-28578 *	US-PATENT-CLASS-35-17	c 05	N71-24606 *	US-PATENT-CLASS-350-288	c 74	N77-28933 *
US-PATENT-CLASS-343-846	c 33	N76-14072 *	US-PATENT-CLASS-35-19	c 10	N71-27365 *	US-PATENT-CLASS-350-288	c 44	N79-11471 *
US-PATENT-CLASS-343-846	c 32	N82-11336 *	US-PATENT-CLASS-35-22R	c 05	N73-13114 *	US-PATENT-CLASS-350-288	c 44	N79-24433 *
US-PATENT-CLASS-343-853	c 07	N72-11148 *	US-PATENT-CLASS-35-29	c 11	N71-16028 *	US-PATENT-CLASS-350-292	c 35	N75-12273 *
US-PATENT-CLASS-343-853	c 07	N72-22127 *	US-PATENT-CLASS-35-29	c 05	N71-28619 *	US-PATENT-CLASS-350-292	c 44	N79-14529 *
US-PATENT-CLASS-343-853	c 07	N72-25174 *	US-PATENT-CLASS-35-35A	c 71	N74-21014 *	US-PATENT-CLASS-350-292	c 44	N79-24432 *
US-PATENT-CLASS-343-853	c 09	N72-31235 *	US-PATENT-CLASS-35-45	c 14	N70-35394 *	US-PATENT-CLASS-350-293	c 16	N73-16536 *
US-PATENT-CLASS-343-853	c 10	N73-16206 *	US-PATENT-CLASS-35-49	c 12	N69-39988 *	US-PATENT-CLASS-350-293	c 12	N76-15189 *
US-PATENT-CLASS-343-853	c 32	N74-20863 *	US-PATENT-CLASS-35-8	c 05	N72-16015 *	US-PATENT-CLASS-350-293	c 44	N76-24696 *
US-PATENT-CLASS-343-853	c 32	N74-20864 *	US-PATENT-CLASS-350-100	c 36	N77-25501 *	US-PATENT-CLASS-350-293	c 44	N78-10554 *
US-PATENT-CLASS-343-854	c 07	N69-27460 #	US-PATENT-CLASS-350-102	c 23	N71-29123 *	US-PATENT-CLASS-350-293	c 44	N79-14529 *
US-PATENT-CLASS-343-854	c 07	N71-27233 *	US-PATENT-CLASS-350-102	c 36	N77-25501 *	US-PATENT-CLASS-350-294	c 89	N79-10969 *
US-PATENT-CLASS-343-854	c 09	N73-19234 *	US-PATENT-CLASS-350-102	c 18	N91-27200 *	US-PATENT-CLASS-350-294	c 44	N79-24432 *
US-PATENT-CLASS-343-854	c 33	N74-20860 *	US-PATENT-CLASS-350-107	c 18	N91-27200 *	US-PATENT-CLASS-350-294	c 32	N80-24510 *
US-PATENT-CLASS-343-854	c 33	N76-27472 *	US-PATENT-CLASS-350-138	c 23	N72-27228 *	US-PATENT-CLASS-350-295	c 44	N77-32583 *
US-PATENT-CLASS-343-854	c 32	N79-11264 *	US-PATENT-CLASS-350-145	c 74	N77-20882 *	US-PATENT-CLASS-350-295	c 44	N80-14473 *
US-PATENT-CLASS-343-854	c 32	N80-28578 *	US-PATENT-CLASS-350-147	c 14	N72-27409 *	US-PATENT-CLASS-350-296	c 44	N79-24432 *
US-PATENT-CLASS-343-872	c 07	N71-28980 *	US-PATENT-CLASS-350-150	c 26	N72-25680 *	US-PATENT-CLASS-350-296	c 44	N80-14473 *
US-PATENT-CLASS-343-873	c 07	N71-19493 *	US-PATENT-CLASS-350-150	c 36	N76-18427 *	US-PATENT-CLASS-350-299	c 74	N74-21304 *
US-PATENT-CLASS-343-873	c 09	N72-25247 *	US-PATENT-CLASS-350-151	c 36	N74-13205 *	US-PATENT-CLASS-350-299	c 44	N76-24696 *
US-PATENT-CLASS-343-876	c 32	N76-15329 *	US-PATENT-CLASS-350-151	c 35	N78-29421 *	US-PATENT-CLASS-350-299	c 74	N77-28932 *
US-PATENT-CLASS-343-876	c 32	N85-29118 *	US-PATENT-CLASS-350-157	c 74	N79-14891 *	US-PATENT-CLASS-350-299	c 44	N78-10554 *
US-PATENT-CLASS-343-880	c 07	N73-26117 *	US-PATENT-CLASS-350-159	c 74	N78-17865 *	US-PATENT-CLASS-350-299	c 44	N78-31526 *
US-PATENT-CLASS-343-880	c 18	N80-14183 *	US-PATENT-CLASS-350-160R	c 14	N72-25410 *	US-PATENT-CLASS-350-299	c 44	N79-11471 *
US-PATENT-CLASS-343-880	c 32	N89-25363 *	US-PATENT-CLASS-350-160R	c 26	N72-25680 *	US-PATENT-CLASS-350-299	c 44	N79-24433 *
US-PATENT-CLASS-343-881	c 37	N86-25789 *	US-PATENT-CLASS-350-160	c 36	N76-18427 *	US-PATENT-CLASS-350-299	c 36	N84-14509 *
US-PATENT-CLASS-343-882	c 33	N76-32457 *	US-PATENT-CLASS-350-161	c 26	N72-27784 *	US-PATENT-CLASS-350-2	c 23	N71-30027 *
US-PATENT-CLASS-343-882	c 37	N86-25789 *	US-PATENT-CLASS-350-161	c 36	N75-31427 *	US-PATENT-CLASS-350-3.5	c 16	N71-15551 *
US-PATENT-CLASS-343-883	c 07	N73-26117 *	US-PATENT-CLASS-350-162.13	c 74	N89-14078 *	US-PATENT-CLASS-350-3.5	c 16	N71-15565 *
US-PATENT-CLASS-343-883	c 18	N80-14183 *	US-PATENT-CLASS-350-162.13	c 74	N91-25840 *	US-PATENT-CLASS-350-3.5	c 16	N71-15567 *
US-PATENT-CLASS-343-883	c 37	N86-25791 *	US-PATENT-CLASS-350-162R	c 74	N80-21140 *	US-PATENT-CLASS-350-3.5	c 16	N71-26154 *
US-PATENT-CLASS-343-884	c 07	N71-27191 *	US-PATENT-CLASS-350-162SF	c 23	N73-30666 *	US-PATENT-CLASS-350-3.5	c 16	N71-29131 *
US-PATENT-CLASS-343-889	c 07	N73-26117 *	US-PATENT-CLASS-350-162SF	c 74	N76-31998 *	US-PATENT-CLASS-350-3.5	c 14	N72-17324 *
US-PATENT-CLASS-343-893	c 09	N72-21244 *	US-PATENT-CLASS-350-162SF	c 74	N77-28932 *	US-PATENT-CLASS-350-3.5	c 16	N73-30476 *
US-PATENT-CLASS-343-893	c 07	N73-28013 *	US-PATENT-CLASS-350-162SF	c 36	N77-32478 *	US-PATENT-CLASS-350-3.5	c 35	N74-15146 *
US-PATENT-CLASS-343-895	c 09	N73-19234 *	US-PATENT-CLASS-350-162	c 14	N72-17323 *	US-PATENT-CLASS-350-3.5	c 35	N74-17153 *
US-PATENT-CLASS-343-895	c 07	N73-26117 *	US-PATENT-CLASS-350-163	c 36	N88-14350 *	US-PATENT-CLASS-350-3.5	c 35	N74-26946 *
US-PATENT-CLASS-343-895	c 32	N80-23524 *	US-PATENT-CLASS-350-165	c 27	N78-31233 *	US-PATENT-CLASS-350-3.5	c 35	N75-25124 *
US-PATENT-CLASS-343-895	c 32	N82-27558 *	US-PATENT-CLASS-350-166	c 44	N83-34448 *	US-PATENT-CLASS-350-3.5	c 35	N75-27328 *
US-PATENT-CLASS-343-9PS	c 32	N83-19968 *	US-PATENT-CLASS-350-168	c 74	N85-23396 *	US-PATENT-CLASS-350-3.5	c 35	N76-18402 *
US-PATENT-CLASS-343-9PS	c 32	N83-31918 *	US-PATENT-CLASS-350-16	c 14	N72-22444 *	US-PATENT-CLASS-350-3.5	c 35	N78-17357 *
US-PATENT-CLASS-343-9R	c 32	N84-22820 *	US-PATENT-CLASS-350-170	c 73	N78-32848 *	US-PATENT-CLASS-350-3.5	c 38	N78-32447 *
US-PATENT-CLASS-343-909	c 32	N74-11000 *	US-PATENT-CLASS-350-170	c 74	N83-10900 *	US-PATENT-CLASS-350-3.64	c 35	N91-13694 *
US-PATENT-CLASS-343-909	c 35	N76-15435 *	US-PATENT-CLASS-350-171	c 23	N72-23695 *	US-PATENT-CLASS-350-3.68	c 74	N91-25840 *
US-PATENT-CLASS-343-909	c 33	N79-28416 *	US-PATENT-CLASS-350-172	c 74	N83-17305 *	US-PATENT-CLASS-350-3.73	c 36	N67-23960 *
US-PATENT-CLASS-343-909	c 32	N80-14281 *	US-PATENT-CLASS-350-172	c 74	N84-23248 *	US-PATENT-CLASS-350-3.81	c 36	N67-23960 *
US-PATENT-CLASS-343-912	c 07	N72-21117 *	US-PATENT-CLASS-350-173	c 73	N78-32848 *	US-PATENT-CLASS-350-301	c 74	N81-17886 *
US-PATENT-CLASS-343-912	c 07	N72-22127 *	US-PATENT-CLASS-350-173	c 74	N83-36898 *	US-PATENT-CLASS-350-310	c 11	N69-24321 #
US-PATENT-CLASS-343-912	c 32	N76-18295 *	US-PATENT-CLASS-350-173	c 74	N84-23248 *	US-PATENT-CLASS-350-310	c 23	N71-24868 *
US-PATENT-CLASS-343-915	c 31	N71-16102 *	US-PATENT-CLASS-350-174	c 74	N77-20882 *	US-PATENT-CLASS-350-310	c 23	N71-29123 *
US-PATENT-CLASS-343-915	c 09	N71-20658 *	US-PATENT-CLASS-350-174	c 73	N78-32848 *	US-PATENT-CLASS-350-310	c 23	N71-33229 *
US-PATENT-CLASS-343-915	c 07	N72-32169 *	US-PATENT-CLASS-350-174	c 36	N88-14350 *	US-PATENT-CLASS-350-310	c 23	N72-22673 *
US-PATENT-CLASS-343-915	c 07	N73-14130 *	US-PATENT-CLASS-350-175E	c 74	N80-27185 *	US-PATENT-CLASS-350-310	c 74	N77-28933 *
US-PATENT-CLASS-343-915	c 07	N73-24176 *	US-PATENT-CLASS-350-175FS	c 14	N72-25410 *	US-PATENT-CLASS-350-311	c 74	N75-25706 *
US-PATENT-CLASS-343-915	c 32	N76-18295 *	US-PATENT-CLASS-350-175NG	c 27	N78-31233 *	US-PATENT-CLASS-350-312	c 16	N72-12440 *
US-PATENT-CLASS-343-915	c 33	N76-32457 *	US-PATENT-CLASS-350-189	c 23	N71-24857 *	US-PATENT-CLASS-350-312	c 74	N85-29750 *
US-PATENT-CLASS-343-915	c 32	N89-25363 *	US-PATENT-CLASS-350-199	c 14	N73-30393 *	US-PATENT-CLASS-350-315	c 74	N86-29650 #
US-PATENT-CLASS-343-9	c 32	N75-15854 *	US-PATENT-CLASS-350-19	c 14	N72-22441 *	US-PATENT-CLASS-350-316	c 27	N83-36220 *
US-PATENT-CLASS-343-9	c 32	N79-10264 *	US-PATENT-CLASS-350-1	c 23	N69-24332 #	US-PATENT-CLASS-350-318	c 74	N86-29650 #
US-PATENT-CLASS-346-107A	c 14	N72-18411 *	US-PATENT-CLASS-350-1	c 07	N71-29065 *	US-PATENT-CLASS-350-319	c 74	N85-29750 *
US-PATENT-CLASS-346-107	c 23	N71-23976 *	US-PATENT-CLASS-350-1	c 16	N72-12440 *	US-PATENT-CLASS-350-319	c 74	N86-20125 *
US-PATENT-CLASS-346-108	c 35	N74-15831 *	US-PATENT-CLASS-350-1	c 24	N76-24363 *	US-PATENT-CLASS-350-319	c 09	N87-14355 *
US-PATENT-CLASS-346-110	c 14	N73-32322 *	US-PATENT-CLASS-350-1	c 74	N78-15879 *	US-PATENT-CLASS-350-320	c 74	N77-28933 *
US-PATENT-CLASS-346-138	c 21	N73-13644 *	US-PATENT-CLASS-350-202	c 23	N73-20741 *	US-PATENT-CLASS-350-320	c 44	N77-32583 *
US-PATENT-CLASS-346-138	c 35	N74-15831 *	US-PATENT-CLASS-350-202	c 74	N77-28932 *	US-PATENT-CLASS-350-320	c 73	N78-32848 *
US-PATENT-CLASS-346-1	c 12	N71-20815 *	US-PATENT-CLASS-350-203	c 14	N72-25409 *	US-PATENT-CLASS-350-320	c 44	N79-14529 *
US-PATENT-CLASS-346-1	c 09	N72-21246 *	US-PATENT-CLASS-350-204	c 14	N73-30393 *	US-PATENT-CLASS-350-320	c 74	N85-29749 *
US-PATENT-CLASS-346-23	c 14	N72-18411 *	US-PATENT-CLASS-350-204	c 74	N78-17866 *	US-PATENT-CLASS-350-320	c 35	N91-13694 *
US-PATENT-CLASS-346-24	c 35	N74-15831 *	US-PATENT-CLASS-350-211	c 44	N76-14602 *	US-PATENT-CLASS-350-321	c 74	N85-29750 *
US-PATENT-CLASS-346-29	c 09	N72-21246 *	US-PATENT-CLASS-350-213	c 14	N71-15622 *	US-PATENT-CLASS-350-331-R	c 74	N89-14078 *
US-PATENT-CLASS-346-33R	c 35	N74-32877 *	US-PATENT-CLASS-350-226	c 74	N80-27185 *	US-PATENT-CLASS-350-335	c 74	N86-21348 *
US-PATENT-CLASS-346-44	c 09	N69-21467 #	US-PATENT-CLASS-350-236	c 74	N74-15095 *	US-PATENT-CLASS-350-337	c 74	N89-14078 *
US-PATENT-CLASS-346-50	c 14	N71-21006 *	US-PATENT-CLASS-350-23	c 14	N72-22441 *	US-PATENT-CLASS-350-342	c 76	N85-33826 *
US-PATENT-CLASS-346-74MD	c 21	N73-13644 *	US-PATENT-CLASS-350-253	c 35	N77-27366 *	US-PATENT-CLASS-350-342	c 74	N89-14078 *
US-PATENT-CLASS-346-74MT	c 35	N79-16246 *	US-PATENT-CLASS-350-25	c 74	N80-21138 *	US-PATENT-CLASS-350-353	c 74	N83-19597 *
US-PATENT-CLASS-346R	c 73	N77-18891 *	US-PATENT-CLASS-350-269	c 33				

US-PATENT-CLASS-350-358	c 36	N82-29589 *	US-PATENT-CLASS-356-106	c 14	N71-17655 *	US-PATENT-CLASS-356-216	c 35	N80-18359 *
US-PATENT-CLASS-350-358	c 74	N91-26918 *	US-PATENT-CLASS-356-106	c 14	N71-27215 *	US-PATENT-CLASS-356-216	c 39	N81-25400 *
US-PATENT-CLASS-350-359	c 36	N80-16321 *	US-PATENT-CLASS-356-106	c 14	N71-12446 *	US-PATENT-CLASS-356-216	c 35	N84-22931 *
US-PATENT-CLASS-350-35	c 14	N72-22441 *	US-PATENT-CLASS-356-106	c 35	N74-15146 *	US-PATENT-CLASS-356-222	c 03	N72-20033 *
US-PATENT-CLASS-350-36	c 14	N72-22441 *	US-PATENT-CLASS-356-107	c 16	N71-24170 *	US-PATENT-CLASS-356-222	c 47	N83-32232 *
US-PATENT-CLASS-350-370	c 35	N81-33448 *	US-PATENT-CLASS-356-108	c 26	N73-26751 *	US-PATENT-CLASS-356-234	c 39	N81-25400 *
US-PATENT-CLASS-350-443	c 74	N84-23248 *	US-PATENT-CLASS-356-108	c 16	N73-30476 *	US-PATENT-CLASS-356-234	c 35	N84-22931 *
US-PATENT-CLASS-350-445	c 74	N83-36898 *	US-PATENT-CLASS-356-109	c 16	N73-30476 *	US-PATENT-CLASS-356-236	c 74	N77-21941 *
US-PATENT-CLASS-350-448	c 74	N86-20125 *	US-PATENT-CLASS-356-110	c 14	N73-25463 *	US-PATENT-CLASS-356-236	c 74	N86-26190 *
US-PATENT-CLASS-350-453	c 36	N82-32712 *	US-PATENT-CLASS-356-110	c 35	N78-18391 *	US-PATENT-CLASS-356-237	c 74	N77-10899 *
US-PATENT-CLASS-350-486	c 74	N83-13978 *	US-PATENT-CLASS-356-112	c 72	N74-19310 *	US-PATENT-CLASS-356-237	c 38	N78-17395 *
US-PATENT-CLASS-350-49	c 14	N72-22441 *	US-PATENT-CLASS-356-113	c 14	N72-17323 *	US-PATENT-CLASS-356-237	c 38	N78-17396 *
US-PATENT-CLASS-350-500	c 35	N91-14590 *	US-PATENT-CLASS-356-113	c 35	N74-23040 *	US-PATENT-CLASS-356-237	c 35	N79-28527 *
US-PATENT-CLASS-350-505	c 74	N85-23396 *	US-PATENT-CLASS-356-114	c 14	N73-12446 *	US-PATENT-CLASS-356-239	c 74	N77-10899 *
US-PATENT-CLASS-350-505	c 74	N86-28732 *	US-PATENT-CLASS-356-114	c 35	N76-31490 *	US-PATENT-CLASS-356-241	c 14	N72-32452 *
US-PATENT-CLASS-350-529	c 37	N91-21545 *	US-PATENT-CLASS-356-117	c 23	N71-16101 *	US-PATENT-CLASS-356-243	c 36	N80-16321 *
US-PATENT-CLASS-350-52	c 14	N72-22441 *	US-PATENT-CLASS-356-120	c 74	N78-27904 *	US-PATENT-CLASS-356-244	c 14	N72-17123 *
US-PATENT-CLASS-350-52	c 14	N72-22444 *	US-PATENT-CLASS-356-123	c 74	N76-19935 *	US-PATENT-CLASS-356-244	c 35	N76-31490 *
US-PATENT-CLASS-350-537	c 74	N86-20125 *	US-PATENT-CLASS-356-124	c 74	N76-19935 *	US-PATENT-CLASS-356-244	c 35	N80-28687 *
US-PATENT-CLASS-350-55	c 23	N71-33229 *	US-PATENT-CLASS-356-124	c 74	N79-11865 *	US-PATENT-CLASS-356-244	c 74	N86-26190 *
US-PATENT-CLASS-350-55	c 14	N73-30393 *	US-PATENT-CLASS-356-128	c 76	N87-25862 *	US-PATENT-CLASS-356-246	c 35	N74-27860 *
US-PATENT-CLASS-350-55	c 23	N73-30666 *	US-PATENT-CLASS-356-129	c 74	N79-20856 *	US-PATENT-CLASS-356-246	c 74	N78-17867 *
US-PATENT-CLASS-350-55	c 89	N79-10969 *	US-PATENT-CLASS-356-129	c 76	N87-25862 *	US-PATENT-CLASS-356-246	c 74	N87-14971 *
US-PATENT-CLASS-350-55	c 74	N80-33210 *	US-PATENT-CLASS-356-138	c 14	N72-20379 *	US-PATENT-CLASS-356-248	c 14	N72-22444 *
US-PATENT-CLASS-350-572	c 36	N88-14350 *	US-PATENT-CLASS-356-138	c 16	N73-33397 *	US-PATENT-CLASS-356-256	c 36	N87-28006 *
US-PATENT-CLASS-350-573	c 36	N88-14350 *	US-PATENT-CLASS-356-141	c 14	N72-27409 *	US-PATENT-CLASS-356-28.5	c 32	N80-24510 *
US-PATENT-CLASS-350-576	c 35	N91-14591 *	US-PATENT-CLASS-356-141	c 14	N73-28490 *	US-PATENT-CLASS-356-28.5	c 36	N81-24422 *
US-PATENT-CLASS-350-580	c 74	N86-20125 *	US-PATENT-CLASS-356-141	c 36	N74-21091 *	US-PATENT-CLASS-356-28.5	c 36	N82-32712 *
US-PATENT-CLASS-350-58	c 14	N71-15604 *	US-PATENT-CLASS-356-141	c 89	N74-30886 *	US-PATENT-CLASS-356-28.5	c 35	N86-32697 *
US-PATENT-CLASS-350-6.5	c 32	N80-24510 *	US-PATENT-CLASS-356-141	c 74	N77-22951 *	US-PATENT-CLASS-356-28.5	c 35	N87-14669 *
US-PATENT-CLASS-350-6.5	c 74	N87-21679 *	US-PATENT-CLASS-356-141	c 09	N91-14356 *	US-PATENT-CLASS-356-28.5	c 36	N87-17026 *
US-PATENT-CLASS-350-6.6	c 32	N80-24510 *	US-PATENT-CLASS-356-141	c 35	N91-15512 *	US-PATENT-CLASS-356-28.5	c 36	N88-14350 *
US-PATENT-CLASS-350-619	c 74	N85-23396 *	US-PATENT-CLASS-356-147	c 89	N74-30886 *	US-PATENT-CLASS-356-28.5	c 33	N89-14384 *
US-PATENT-CLASS-350-6	c 14	N69-27461 #	US-PATENT-CLASS-356-148	c 16	N73-33397 *	US-PATENT-CLASS-356-28.5	c 33	N89-14385 *
US-PATENT-CLASS-350-6	c 36	N74-15145 *	US-PATENT-CLASS-356-150	c 15	N71-28740 *	US-PATENT-CLASS-356-28.5	c 36	N90-25340 *
US-PATENT-CLASS-350-79	c 14	N72-32452 *	US-PATENT-CLASS-356-150	c 74	N80-21138 *	US-PATENT-CLASS-356-28	c 21	N71-19212 *
US-PATENT-CLASS-350-7	c 74	N74-15095 *	US-PATENT-CLASS-356-152	c 15	N71-28740 *	US-PATENT-CLASS-356-28	c 16	N71-24828 *
US-PATENT-CLASS-350-86	c 14	N72-22445 *	US-PATENT-CLASS-356-152	c 16	N72-13437 *	US-PATENT-CLASS-356-28	c 72	N74-19310 *
US-PATENT-CLASS-350-96.10	c 74	N84-11921 *	US-PATENT-CLASS-356-152	c 14	N72-20379 *	US-PATENT-CLASS-356-28	c 36	N75-15028 *
US-PATENT-CLASS-350-96.15	c 74	N84-11921 *	US-PATENT-CLASS-356-152	c 14	N72-27409 *	US-PATENT-CLASS-356-28	c 35	N75-16783 *
US-PATENT-CLASS-350-96.15	c 74	N85-29749 *	US-PATENT-CLASS-356-152	c 14	N73-25462 *	US-PATENT-CLASS-356-28	c 36	N76-14447 *
US-PATENT-CLASS-350-96.16	c 74	N83-29032 *	US-PATENT-CLASS-356-152	c 36	N74-15145 *	US-PATENT-CLASS-356-28	c 36	N77-25501 *
US-PATENT-CLASS-350-96.21	c 74	N89-25689 *	US-PATENT-CLASS-356-152	c 36	N74-21091 *	US-PATENT-CLASS-356-28	c 74	N78-17866 *
US-PATENT-CLASS-350-96.25	c 33	N81-29342 *	US-PATENT-CLASS-356-152	c 74	N74-21304 *	US-PATENT-CLASS-356-28	c 35	N79-18296 *
US-PATENT-CLASS-350-96.25	c 74	N89-25689 *	US-PATENT-CLASS-356-152	c 74	N77-22951 *	US-PATENT-CLASS-356-28	c 36	N80-16321 *
US-PATENT-CLASS-350-96.29	c 74	N91-21871 *	US-PATENT-CLASS-356-152	c 74	N80-21138 *	US-PATENT-CLASS-356-28	c 36	N87-17026 *
US-PATENT-CLASS-350-96R	c 60	N77-14751 *	US-PATENT-CLASS-356-152	c 37	N81-27519 *	US-PATENT-CLASS-356-28	c 36	N90-25340 *
US-PATENT-CLASS-350-96R	c 60	N77-32731 *	US-PATENT-CLASS-356-152	c 09	N91-14356 *	US-PATENT-CLASS-356-300	c 43	N79-17288 *
US-PATENT-CLASS-350-96R	c 60	N78-10709 *	US-PATENT-CLASS-356-152	c 35	N91-15512 *	US-PATENT-CLASS-356-301	c 35	N87-14669 *
US-PATENT-CLASS-350-96WG	c 36	N75-31427 *	US-PATENT-CLASS-356-153	c 15	N71-28740 *	US-PATENT-CLASS-356-311	c 35	N86-25753 *
US-PATENT-CLASS-350-96WG	c 36	N76-18428 *	US-PATENT-CLASS-356-153	c 23	N71-29125 *	US-PATENT-CLASS-356-318	c 35	N86-25753 *
US-PATENT-CLASS-350-96WG	c 36	N76-24553 *	US-PATENT-CLASS-356-153	c 16	N73-33397 *	US-PATENT-CLASS-356-323	c 74	N85-23396 *
US-PATENT-CLASS-350-96	c 07	N71-26291 *	US-PATENT-CLASS-356-153	c 18	N76-14186 *	US-PATENT-CLASS-356-328	c 35	N80-26635 *
US-PATENT-CLASS-350-97	c 18	N91-27200 *	US-PATENT-CLASS-356-154	c 15	N71-26673 *	US-PATENT-CLASS-356-32	c 14	N72-11364 *
US-PATENT-CLASS-351-166	c 74	N78-32854 *	US-PATENT-CLASS-356-159	c 36	N78-14380 *	US-PATENT-CLASS-356-32	c 32	N73-20740 *
US-PATENT-CLASS-351-203	c 52	N89-16256 *	US-PATENT-CLASS-356-160	c 36	N78-14380 *	US-PATENT-CLASS-356-32	c 39	N81-25400 *
US-PATENT-CLASS-351-206	c 52	N87-24874 *	US-PATENT-CLASS-356-161	c 26	N73-26751 *	US-PATENT-CLASS-356-330	c 74	N85-23396 *
US-PATENT-CLASS-351-208	c 52	N87-24874 *	US-PATENT-CLASS-356-162	c 66	N76-19888 *	US-PATENT-CLASS-356-331	c 74	N85-23396 *
US-PATENT-CLASS-351-237	c 52	N89-16256 *	US-PATENT-CLASS-356-165	c 38	N78-17396 *	US-PATENT-CLASS-356-334	c 74	N80-21138 *
US-PATENT-CLASS-351-23	c 05	N73-26072 *	US-PATENT-CLASS-356-166	c 14	N71-23175 *	US-PATENT-CLASS-356-345	c 74	N81-17888 *
US-PATENT-CLASS-351-23	c 52	N76-30793 *	US-PATENT-CLASS-356-167	c 14	N72-11364 *	US-PATENT-CLASS-356-345	c 74	N81-29963 *
US-PATENT-CLASS-351-30	c 05	N73-26072 *	US-PATENT-CLASS-356-167	c 66	N76-19888 *	US-PATENT-CLASS-356-345	c 36	N84-14509 *
US-PATENT-CLASS-351-30	c 52	N76-30793 *	US-PATENT-CLASS-356-167	c 74	N78-27904 *	US-PATENT-CLASS-356-345	c 74	N86-21348 *
US-PATENT-CLASS-351-36	c 05	N73-26072 *	US-PATENT-CLASS-356-169	c 60	N78-10709 *	US-PATENT-CLASS-356-345	c 74	N91-21871 *
US-PATENT-CLASS-351-36	c 52	N76-30793 *	US-PATENT-CLASS-356-171	c 74	N77-22950 *	US-PATENT-CLASS-356-346	c 35	N80-20563 *
US-PATENT-CLASS-351-38	c 54	N75-27759 *	US-PATENT-CLASS-356-172	c 16	N73-33397 *	US-PATENT-CLASS-356-346	c 74	N81-29963 *
US-PATENT-CLASS-352-169	c 14	N73-14427 *	US-PATENT-CLASS-356-172	c 36	N74-21091 *	US-PATENT-CLASS-356-347	c 35	N84-22929 *
US-PATENT-CLASS-352-171	c 35	N82-26628 *	US-PATENT-CLASS-356-172	c 74	N77-22951 *	US-PATENT-CLASS-356-347	c 35	N89-26202 *
US-PATENT-CLASS-352-84	c 16	N71-33410 *	US-PATENT-CLASS-356-17	c 14	N72-21409 *	US-PATENT-CLASS-356-349	c 36	N82-16396 *
US-PATENT-CLASS-352-84	c 14	N72-18411 *	US-PATENT-CLASS-356-180	c 35	N74-27860 *	US-PATENT-CLASS-356-350	c 35	N81-33448 *
US-PATENT-CLASS-353-54	c 34	N74-23066 *	US-PATENT-CLASS-356-186	c 35	N75-19613 *	US-PATENT-CLASS-356-350	c 74	N87-23259 *
US-PATENT-CLASS-353-61	c 34	N74-23066 *	US-PATENT-CLASS-356-188	c 35	N84-33766 *	US-PATENT-CLASS-356-351	c 35	N81-33448 *
US-PATENT-CLASS-354-118	c 74	N81-17886 *	US-PATENT-CLASS-356-189	c 35	N75-19613 *	US-PATENT-CLASS-356-351	c 35	N85-30282 *
US-PATENT-CLASS-354-217	c 35	N82-26628 *	US-PATENT-CLASS-356-189	c 35	N84-33766 *	US-PATENT-CLASS-356-352	c 74	N81-17888 *
US-PATENT-CLASS-354-234	c 33	N74-20861 *	US-PATENT-CLASS-356-189	c 14	N72-21409 *	US-PATENT-CLASS-356-353	c 74	N83-32577 *
US-PATENT-CLASS-354-234	c 70	N74-21300 *	US-PATENT-CLASS-356-197	c 37	N74-18123 *	US-PATENT-CLASS-356-356	c 36	N81-24422 *
US-PATENT-CLASS-354-289	c 35	N82-26628 *	US-PATENT-CLASS-356-199	c 36	N78-14380 *	US-PATENT-CLASS-356-357	c 74	N83-21949 *
US-PATENT-CLASS-354-479	c 74	N86-28732 *	US-PATENT-CLASS-356-1	c 36	N83-34304 *	US-PATENT-CLASS-356-358	c 74	N81-17888 *
US-PATENT-CLASS-354-62	c 52	N87-24874 *	US-PATENT-CLASS-356-1	c 36	N88-24958 *	US-PATENT-CLASS-356-358	c 36	N81-24422 *
US-PATENT-CLASS-354-77	c 74	N79-20856 *	US-PATENT-CLASS-356-1	c 09	N91-14356 *	US-PATENT-CLASS-356-358	c 35	N85-30282 *
US-PATENT-CLASS-355-18	c 14	N73-33361 *	US-PATENT-CLASS-356-201	c 75	N74-30156 *	US-PATENT-CLASS-356-361	c 35	N89-26202 *
US-PATENT-CLASS-356-103	c 14	N71-28994 *	US-PATENT-CLASS-356-201	c 35	N77-14411 *	US-PATENT-CLASS-356-363	c 74	N83-32577 *
US-PATENT-CLASS-356-103	c 36	N75-15028 *	US-PATENT-CLASS-356-202	c 26	N73-26751 *	US-PATENT-CLASS-356-369	c 35	N80-28687 *
US-PATENT-CLASS-356-103	c 74	N78-13874 *	US-PATENT-CLASS-356-203	c 14	N71-26788 *	US-PATENT-CLASS-356-36	c 23	N71-16365 *
US-PATENT-CLASS-356-104	c 16	N71-24074 *	US-PATENT-CLASS-356-204	c 35	N77-14411 *	US-PATENT-CLASS-356-375	c 74	N91-32922 *
US-PATENT-CLASS-356-104	c 74	N78-13874 *	US-PATENT-CLASS-356-204	c 74	N78-17867 *	US-PATENT-CLASS-356-376	c 36	N88-24958 *
US-PATENT-CLASS-356-106LR	c 36	N75-19653 *	US-PATENT-CLASS-356-207	c 45	N76-17656 *	US-PATENT-CLASS-356-37	c 45	N76-21742 *
US-PATENT-CLASS-356-106R	c 72	N74-19310 *	US-PATENT-CLASS-356-208	c 74	N78-33913 *	US-PATENT-CLASS-356-386	c 36	N82-16396 *
US-PATENT-CLASS-356-106R	c 36	N76-14447 *	US-PATENT-CLASS-356-209	c 23	N71-16341 *	US-PATENT-CLASS-356-389	c 33	N87-14594 *
US-PATENT-CLASS-356-106R	c 35	N77-10493 *	US-PATENT-CLASS-356-209	c 14	N71-28993 *	US-PATENT-CLASS-356-394	c 33	N83-18996 *
US-PATENT-CLASS-356-106R	c 47	N77-10753 *	US-PATENT-CLASS-356-209	c 14	N72-17323 *	US-PATENT-CLASS-356-399	c 74	N91-32922 *
US-PATENT-CLASS-356-106S	c 23	N73-13661 *	US-PATENT-CLASS-356-209	c 35	N76-31490 *	US-PATENT-CLASS-356-4.5	c 74	N86-21348 *
US-PATENT-CLASS-356-106S	c 35	N76-31490 *	US-PATENT-CLASS-356-210	c 74	N79-11865 *	US-PATENT-CLASS-356-4.5	c 74	N86-32666 *
US-PATENT-CLASS-356-106S	c 35	N78-18391 *	US-PATENT-CLASS-356-212	c 35	N77-31465 *	US-PATENT-CLASS-356-402	c 74	N86-29650 #
US-PATENT-CLASS-356-106S	c 35	N74-23040 *	US-PATENT-CLASS-356-213	c 39	N81-25400 *	US-PATENT-CLASS-356-404	c 35	N79-28527 *
US-PATENT-CLASS-356-106	c 14	N71-17627 *	US-PATENT-CLASS-356-216	c 74	N74-15095 *	US-PATENT-CLASS-356-406	c 52	N81-27783 *

US-PATENT-CLASS-356-407	c 43	N79-17288 *	US-PATENT-CLASS-357-30	c 44	N79-31752 *	US-PATENT-CLASS-358-101	c 37	N86-21850 *
US-PATENT-CLASS-356-407	c 52	N81-27783 *	US-PATENT-CLASS-357-30	c 44	N80-29835 *	US-PATENT-CLASS-358-104	c 09	N78-18083 *
US-PATENT-CLASS-356-409	c 36	N87-28006 *	US-PATENT-CLASS-357-30	c 44	N81-19558 *	US-PATENT-CLASS-358-104	c 74	N79-13855 *
US-PATENT-CLASS-356-416	c 43	N79-17288 *	US-PATENT-CLASS-357-30	c 44	N81-29525 *	US-PATENT-CLASS-358-104	c 36	N83-34304 *
US-PATENT-CLASS-356-416	c 52	N81-27783 *	US-PATENT-CLASS-357-30	c 44	N82-26777 *	US-PATENT-CLASS-358-105	c 39	N83-20280 *
US-PATENT-CLASS-356-419	c 74	N86-29650 *	US-PATENT-CLASS-357-30	c 44	N82-29709 *	US-PATENT-CLASS-358-105	c 74	N86-21348 *
US-PATENT-CLASS-356-432	c 74	N81-17887 *	US-PATENT-CLASS-357-30	c 44	N82-31764 *	US-PATENT-CLASS-358-105	c 17	N87-25348 *
US-PATENT-CLASS-356-432	c 25	N81-25159 *	US-PATENT-CLASS-357-30	c 44	N83-13579 *	US-PATENT-CLASS-358-106	c 39	N78-16387 *
US-PATENT-CLASS-356-434	c 35	N84-34705 *	US-PATENT-CLASS-357-30	c 44	N83-32177 *	US-PATENT-CLASS-358-107	c 35	N79-18296 *
US-PATENT-CLASS-356-437	c 25	N81-14015 *	US-PATENT-CLASS-357-30	c 35	N84-33765 *	US-PATENT-CLASS-358-107	c 36	N88-24958 *
US-PATENT-CLASS-356-43	c 74	N74-15095 *	US-PATENT-CLASS-357-30	c 33	N85-21492 *	US-PATENT-CLASS-358-109	c 32	N79-20297 *
US-PATENT-CLASS-356-43	c 75	N74-30156 *	US-PATENT-CLASS-357-30	c 44	N85-21768 *	US-PATENT-CLASS-358-109	c 33	N81-33403 *
US-PATENT-CLASS-356-43	c 36	N85-21639 *	US-PATENT-CLASS-357-30	c 44	N85-30475 *	US-PATENT-CLASS-358-109	c 43	N82-13465 *
US-PATENT-CLASS-356-43	c 36	N90-17132 *	US-PATENT-CLASS-357-30	c 33	N86-19516 *	US-PATENT-CLASS-358-109	c 36	N83-34304 *
US-PATENT-CLASS-356-446	c 74	N86-26190 *	US-PATENT-CLASS-357-30	c 76	N86-20150 *	US-PATENT-CLASS-358-109	c 32	N85-29117 *
US-PATENT-CLASS-356-45	c 36	N85-21639 *	US-PATENT-CLASS-357-30	c 44	N86-32875 *	US-PATENT-CLASS-358-109	c 35	N90-22769 *
US-PATENT-CLASS-356-4	c 14	N72-17326 *	US-PATENT-CLASS-357-30	c 76	N87-13313 *	US-PATENT-CLASS-358-111	c 52	N79-10724 *
US-PATENT-CLASS-356-4	c 07	N73-26119 *	US-PATENT-CLASS-357-30	c 33	N87-23879 *	US-PATENT-CLASS-358-113	c 35	N90-22770 *
US-PATENT-CLASS-356-4	c 36	N74-15145 *	US-PATENT-CLASS-357-30	c 33	N88-14271 *	US-PATENT-CLASS-358-125	c 74	N84-23247 *
US-PATENT-CLASS-356-4	c 35	N75-15014 *	US-PATENT-CLASS-357-30	c 33	N88-14271 *	US-PATENT-CLASS-358-125	c 74	N86-21348 *
US-PATENT-CLASS-356-4	c 36	N83-34304 *	US-PATENT-CLASS-357-30	c 76	N88-14836 *	US-PATENT-CLASS-358-133	c 32	N77-24328 *
US-PATENT-CLASS-356-4	c 36	N88-24958 *	US-PATENT-CLASS-357-30	c 35	N90-17118 *	US-PATENT-CLASS-358-133	c 32	N85-29117 *
US-PATENT-CLASS-356-51	c 06	N72-31141 *	US-PATENT-CLASS-357-30	c 35	N90-21358 *	US-PATENT-CLASS-358-133	c 17	N87-25348 *
US-PATENT-CLASS-356-51	c 35	N75-30502 *	US-PATENT-CLASS-357-30	c 33	N91-14551 *	US-PATENT-CLASS-358-138	c 32	N77-24328 *
US-PATENT-CLASS-356-51	c 35	N83-21311 *	US-PATENT-CLASS-357-30	c 35	N91-14588 *	US-PATENT-CLASS-358-138	c 17	N87-25348 *
US-PATENT-CLASS-356-51	c 35	N84-34705 *	US-PATENT-CLASS-357-30	c 33	N91-21434 *	US-PATENT-CLASS-358-142	c 74	N78-14889 *
US-PATENT-CLASS-356-51	c 36	N87-28006 *	US-PATENT-CLASS-357-30	c 74	N91-25841 *	US-PATENT-CLASS-358-161	c 32	N85-21427 *
US-PATENT-CLASS-356-5	c 07	N73-26119 *	US-PATENT-CLASS-357-30	c 44	N91-27614 *	US-PATENT-CLASS-358-168	c 32	N86-20647 *
US-PATENT-CLASS-356-5	c 36	N74-15145 *	US-PATENT-CLASS-357-32	c 35	N84-33765 *	US-PATENT-CLASS-358-174	c 32	N85-21427 *
US-PATENT-CLASS-356-5	c 36	N75-15028 *	US-PATENT-CLASS-357-32	c 33	N91-14551 *	US-PATENT-CLASS-358-213	c 33	N81-33403 *
US-PATENT-CLASS-356-5	c 32	N82-23376 *	US-PATENT-CLASS-357-34	c 74	N91-25841 *	US-PATENT-CLASS-358-213	c 33	N82-24416 *
US-PATENT-CLASS-356-5	c 74	N85-34629 *	US-PATENT-CLASS-357-35	c 33	N87-23879 *	US-PATENT-CLASS-358-213	c 74	N84-23247 *
US-PATENT-CLASS-356-5	c 74	N86-32266 *	US-PATENT-CLASS-357-40	c 36	N85-30305 *	US-PATENT-CLASS-358-217	c 32	N85-21427 *
US-PATENT-CLASS-356-5	c 32	N87-14559 *	US-PATENT-CLASS-357-41	c 33	N79-12321 *	US-PATENT-CLASS-358-219	c 32	N85-21427 *
US-PATENT-CLASS-356-5	c 35	N91-15512 *	US-PATENT-CLASS-357-42	c 76	N75-25730 *	US-PATENT-CLASS-358-222	c 74	N86-28732 *
US-PATENT-CLASS-356-5	c 74	N91-27957 *	US-PATENT-CLASS-357-45	c 33	N79-12321 *	US-PATENT-CLASS-358-225	c 74	N78-17865 *
US-PATENT-CLASS-356-71	c 66	N76-19888 *	US-PATENT-CLASS-357-45	c 44	N79-26475 *	US-PATENT-CLASS-358-36	c 32	N75-21485 *
US-PATENT-CLASS-356-72	c 14	N71-23268 *	US-PATENT-CLASS-357-46	c 36	N85-30305 *	US-PATENT-CLASS-358-41	c 74	N78-17865 *
US-PATENT-CLASS-356-72	c 33	N73-27796 *	US-PATENT-CLASS-357-46	c 74	N91-25841 *	US-PATENT-CLASS-358-44	c 74	N77-18893 *
US-PATENT-CLASS-356-72	c 38	N78-32447 *	US-PATENT-CLASS-357-4	c 33	N78-13320 *	US-PATENT-CLASS-358-55	c 74	N78-17865 *
US-PATENT-CLASS-356-72	c 74	N80-33210 *	US-PATENT-CLASS-357-4	c 76	N85-30922 *	US-PATENT-CLASS-358-81	c 32	N79-20297 *
US-PATENT-CLASS-356-72	c 35	N86-32697 *	US-PATENT-CLASS-357-4	c 35	N90-17118 *	US-PATENT-CLASS-358-88	c 74	N86-21348 *
US-PATENT-CLASS-356-73.1	c 76	N90-24150 *	US-PATENT-CLASS-357-4	c 35	N90-21358 *	US-PATENT-CLASS-358-88	c 32	N89-28676 *
US-PATENT-CLASS-356-73	c 75	N74-30156 *	US-PATENT-CLASS-357-50	c 76	N85-30922 *	US-PATENT-CLASS-358-91	c 32	N89-28676 *
US-PATENT-CLASS-356-73	c 38	N78-32447 *	US-PATENT-CLASS-357-52	c 76	N75-25730 *	US-PATENT-CLASS-358-92	c 32	N89-28676 *
US-PATENT-CLASS-356-73	c 35	N84-33766 *	US-PATENT-CLASS-357-52	c 44	N80-29835 *	US-PATENT-CLASS-358-93	c 35	N90-22770 *
US-PATENT-CLASS-356-73	c 09	N86-32447 *	US-PATENT-CLASS-357-52	c 76	N87-13313 *	US-PATENT-CLASS-358-96	c 52	N79-10724 *
US-PATENT-CLASS-356-73	c 35	N86-32697 *	US-PATENT-CLASS-357-54	c 76	N75-25730 *	US-PATENT-CLASS-36-119	c 54	N78-17865 *
US-PATENT-CLASS-356-73	c 76	N90-24150 *	US-PATENT-CLASS-357-55	c 33	N79-12321 *	US-PATENT-CLASS-36-92	c 54	N78-17865 *
US-PATENT-CLASS-356-74	c 30	N71-15990 *	US-PATENT-CLASS-357-55	c 33	N81-26360 *	US-PATENT-CLASS-360-101	c 35	N76-16391 *
US-PATENT-CLASS-356-74	c 35	N84-33766 *	US-PATENT-CLASS-357-55	c 33	N90-20282 *	US-PATENT-CLASS-360-10	c 35	N76-16391 *
US-PATENT-CLASS-356-76	c 23	N71-26206 *	US-PATENT-CLASS-357-56	c 33	N88-14271 *	US-PATENT-CLASS-360-25	c 35	N77-17426 *
US-PATENT-CLASS-356-76	c 14	N71-29041 *	US-PATENT-CLASS-357-58	c 33	N86-19516 *	US-PATENT-CLASS-360-26	c 33	N76-18353 *
US-PATENT-CLASS-356-83	c 35	N75-19613 *	US-PATENT-CLASS-357-58	c 35	N90-21358 *	US-PATENT-CLASS-360-31	c 35	N77-17426 *
US-PATENT-CLASS-356-85	c 37	N74-18123 *	US-PATENT-CLASS-357-58	c 33	N91-14551 *	US-PATENT-CLASS-360-35	c 35	N76-16391 *
US-PATENT-CLASS-356-85	c 75	N74-30156 *	US-PATENT-CLASS-357-59	c 44	N78-28635 *	US-PATENT-CLASS-360-51	c 33	N76-18353 *
US-PATENT-CLASS-356-87	c 75	N74-30156 *	US-PATENT-CLASS-357-59	c 44	N78-24609 *	US-PATENT-CLASS-360-9	c 35	N76-16391 *
US-PATENT-CLASS-356-96	c 35	N75-19613 *	US-PATENT-CLASS-357-59	c 44	N81-19558 *	US-PATENT-CLASS-361-100	c 33	N83-34190 *
US-PATENT-CLASS-356-97	c 35	N77-14411 *	US-PATENT-CLASS-357-59	c 33	N86-19516 *	US-PATENT-CLASS-361-141	c 33	N82-11357 *
US-PATENT-CLASS-357-12	c 33	N85-21492 *	US-PATENT-CLASS-357-5	c 33	N75-31332 *	US-PATENT-CLASS-361-170	c 33	N79-28415 *
US-PATENT-CLASS-357-13	c 35	N90-17118 *	US-PATENT-CLASS-357-5	c 33	N78-13320 *	US-PATENT-CLASS-361-218	c 03	N88-14083 *
US-PATENT-CLASS-357-15	c 44	N78-13526 *	US-PATENT-CLASS-357-60	c 33	N81-26360 *	US-PATENT-CLASS-361-222	c 03	N88-14083 *
US-PATENT-CLASS-357-15	c 44	N79-11467 *	US-PATENT-CLASS-357-61	c 33	N88-14271 *	US-PATENT-CLASS-361-226	c 28	N82-18401 *
US-PATENT-CLASS-357-15	c 44	N81-29525 *	US-PATENT-CLASS-357-61	c 35	N90-17118 *	US-PATENT-CLASS-361-230	c 28	N82-18401 *
US-PATENT-CLASS-357-15	c 76	N86-20150 *	US-PATENT-CLASS-357-63	c 33	N76-31409 *	US-PATENT-CLASS-361-283	c 33	N82-26572 *
US-PATENT-CLASS-357-15	c 33	N91-14551 *	US-PATENT-CLASS-357-63	c 44	N81-19558 *	US-PATENT-CLASS-361-334	c 35	N81-26431 *
US-PATENT-CLASS-357-15	c 33	N91-21434 *	US-PATENT-CLASS-357-65	c 44	N82-26777 *	US-PATENT-CLASS-361-383	c 31	N90-21215 *
US-PATENT-CLASS-357-16	c 44	N78-13526 *	US-PATENT-CLASS-357-65	c 44	N78-25527 *	US-PATENT-CLASS-361-384	c 31	N90-21215 *
US-PATENT-CLASS-357-16	c 44	N79-11467 *	US-PATENT-CLASS-357-65	c 44	N79-11467 *	US-PATENT-CLASS-361-385	c 31	N90-21215 *
US-PATENT-CLASS-357-16	c 74	N91-25841 *	US-PATENT-CLASS-357-65	c 44	N79-31752 *	US-PATENT-CLASS-361-395	c 32	N78-24391 *
US-PATENT-CLASS-357-17	c 36	N85-30305 *	US-PATENT-CLASS-357-67S	c 33	N88-14271 *	US-PATENT-CLASS-361-56	c 33	N81-27397 *
US-PATENT-CLASS-357-17	c 74	N91-25841 *	US-PATENT-CLASS-357-67S	c 33	N91-21434 *	US-PATENT-CLASS-361-65	c 33	N90-20320 *
US-PATENT-CLASS-357-22	c 33	N79-11314 *	US-PATENT-CLASS-357-67	c 44	N78-25527 *	US-PATENT-CLASS-361-79	c 33	N90-20320 *
US-PATENT-CLASS-357-22	c 33	N79-12321 *	US-PATENT-CLASS-357-67	c 44	N79-11467 *	US-PATENT-CLASS-361-91	c 33	N81-27397 *
US-PATENT-CLASS-357-22	c 33	N90-20282 *	US-PATENT-CLASS-357-67	c 44	N79-31752 *	US-PATENT-CLASS-362-11	c 74	N81-17886 *
US-PATENT-CLASS-357-23.12	c 76	N87-13313 *	US-PATENT-CLASS-357-68	c 33	N90-20282 *	US-PATENT-CLASS-362-241	c 74	N81-17886 *
US-PATENT-CLASS-357-23.1	c 76	N87-13313 *	US-PATENT-CLASS-357-71S	c 33	N91-21434 *	US-PATENT-CLASS-362-269	c 17	N78-17140 *
US-PATENT-CLASS-357-23.6	c 33	N86-19516 *	US-PATENT-CLASS-357-72	c 33	N88-23941 *	US-PATENT-CLASS-363-100	c 33	N85-29147 *
US-PATENT-CLASS-357-231	c 33	N88-14271 *	US-PATENT-CLASS-357-73	c 33	N78-13320 *	US-PATENT-CLASS-363-101	c 33	N78-32341 *
US-PATENT-CLASS-357-23	c 36	N75-25730 *	US-PATENT-CLASS-357-74	c 37	N79-28549 *	US-PATENT-CLASS-363-101	c 33	N81-19392 *
US-PATENT-CLASS-357-23	c 33	N79-12321 *	US-PATENT-CLASS-357-74	c 33	N88-23941 *	US-PATENT-CLASS-363-132	c 33	N82-18494 *
US-PATENT-CLASS-357-23	c 33	N81-26360 *	US-PATENT-CLASS-357-76	c 33	N90-20282 *	US-PATENT-CLASS-363-134	c 33	N79-24257 *
US-PATENT-CLASS-357-24	c 33	N75-31331 *	US-PATENT-CLASS-357-79	c 37	N79-28549 *	US-PATENT-CLASS-363-147	c 44	N81-12542 *
US-PATENT-CLASS-357-24	c 33	N88-14271 *	US-PATENT-CLASS-357-7	c 33	N75-31331 *	US-PATENT-CLASS-363-16	c 33	N78-32341 *
US-PATENT-CLASS-357-27	c 35	N91-14588 *	US-PATENT-CLASS-357-81	c 37	N79-28549 *	US-PATENT-CLASS-363-17	c 33	N82-18494 *
US-PATENT-CLASS-357-29	c 76	N75-25730 *	US-PATENT-CLASS-357-81	c 33	N88-23941 *	US-PATENT-CLASS-363-19	c 33	N85-29147 *
US-PATENT-CLASS-357-29	c 35	N84-33765 *	US-PATENT-CLASS-357-81	c 33	N90-20282 *	US-PATENT-CLASS-363-21	c 33	N81-19392 *
US-PATENT-CLASS-357-29	c 76	N87-13313 *	US-PATENT-CLASS-357-82	c 37	N79-28549 *	US-PATENT-CLASS-363-21	c 33	N81-19393 *
US-PATENT-CLASS-357-29	c 35	N90-21358 *	US-PATENT-CLASS-357-82	c 76	N91-28014 *	US-PATENT-CLASS-363-22	c 33	N84-33663 *
US-PATENT-CLASS-357-29	c 33	N91-14551 *	US-PATENT-CLASS-357-83	c 37	N79-28549 *	US-PATENT-CLASS-363-23	c 33	N85-29147 *
US-PATENT-CLASS-357-30	c 44	N76-28635 *	US-PATENT-CLASS-357-90	c 35	N90-21358 *	US-PATENT-CLASS-363-24	c 33	N81-33404 *
US-PATENT-CLASS-357-30	c 44	N78-13526 *	US-PATENT-CLASS-357-91	c 76	N75-25730 *	US-PATENT-CLASS-363-25	c 33	N84-16453 *
US-PATENT-CLASS-357-30	c 44	N78-24609 *	US-PATENT-CLASS-357-91	c 33	N78-27326 *	US-PATENT-CLASS-363-27	c 44	N81-12542 *
US-PATENT-CLASS-357-30	c 44	N78-25527 *	US-PATENT-CLASS-357-91	c 44	N80-29835 *	US-PATENT-CLASS-363-36	c 33	N81-19393 *
US-PATENT-CLASS-357-30	c 44	N79-11467 *	US-PATENT-CLASS-357-91	c 33	N81-26360 *	US-PATENT-CLASS-363-40	c 33	N81-19393 *
US-PATENT-CLASS-357-30	c 44	N79-14528 *	US-PATENT-CLASS-357-91	c 44	N86-32875 *	US-PATENT-CLASS-363-47	c 33	N81-19393 *

US-PATENT-CLASS-363-49	c 33	N84-33663 *	US-PATENT-CLASS-364-578	c 35	N90-23713 *	US-PATENT-CLASS-372-103	c 36	N87-23960 *
US-PATENT-CLASS-363-53	c 33	N77-30365 *	US-PATENT-CLASS-364-578	c 61	N91-14741 *	US-PATENT-CLASS-372-108	c 36	N84-14509 *
US-PATENT-CLASS-363-54	c 33	N83-34190 *	US-PATENT-CLASS-364-578	c 32	N91-25317 *	US-PATENT-CLASS-372-18	c 36	N87-23960 *
US-PATENT-CLASS-363-56	c 33	N79-24254 *	US-PATENT-CLASS-364-604	c 32	N79-14267 *	US-PATENT-CLASS-372-19	c 36	N91-17360 #
US-PATENT-CLASS-363-56	c 33	N81-14220 *	US-PATENT-CLASS-364-713	c 32	N79-20297 *	US-PATENT-CLASS-372-20	c 36	N84-22943 *
US-PATENT-CLASS-363-56	c 33	N81-33404 *	US-PATENT-CLASS-364-713	c 74	N91-26918 *	US-PATENT-CLASS-372-20	c 36	N87-25567 *
US-PATENT-CLASS-363-57	c 33	N78-10377 *	US-PATENT-CLASS-364-717	c 32	N82-31583 *	US-PATENT-CLASS-372-25	c 33	N83-34189 *
US-PATENT-CLASS-363-60	c 33	N78-32341 *	US-PATENT-CLASS-364-717	c 33	N90-23636 *	US-PATENT-CLASS-372-28	c 36	N84-22943 *
US-PATENT-CLASS-363-60	c 44	N81-12542 *	US-PATENT-CLASS-364-723	c 60	N85-33701 *	US-PATENT-CLASS-372-32	c 36	N84-22943 *
US-PATENT-CLASS-363-61	c 33	N82-18494 *	US-PATENT-CLASS-364-724.01	c 33	N89-28713 *	US-PATENT-CLASS-372-32	c 33	N85-34333 *
US-PATENT-CLASS-363-61	c 33	N85-29147 *	US-PATENT-CLASS-364-724.05	c 33	N89-28713 *	US-PATENT-CLASS-372-38	c 36	N85-30305 *
US-PATENT-CLASS-363-65	c 33	N84-16453 *	US-PATENT-CLASS-364-728	c 32	N79-14267 *	US-PATENT-CLASS-372-39	c 36	N91-17360 #
US-PATENT-CLASS-363-67	c 33	N84-16453 *	US-PATENT-CLASS-364-728	c 60	N86-21154 *	US-PATENT-CLASS-372-41	c 36	N91-15528 *
US-PATENT-CLASS-363-70	c 33	N77-30365 *	US-PATENT-CLASS-364-728	c 60	N88-24169 *	US-PATENT-CLASS-372-43	c 36	N87-23960 *
US-PATENT-CLASS-363-71	c 33	N79-24254 *	US-PATENT-CLASS-364-735	c 33	N89-28713 *	US-PATENT-CLASS-372-46	c 36	N85-30305 *
US-PATENT-CLASS-363-71	c 33	N79-24257 *	US-PATENT-CLASS-364-746.1	c 33	N90-23636 *	US-PATENT-CLASS-372-4	c 36	N84-28065 *
US-PATENT-CLASS-363-71	c 33	N81-14220 *	US-PATENT-CLASS-364-754	c 33	N89-28713 *	US-PATENT-CLASS-372-4	c 36	N87-25567 *
US-PATENT-CLASS-363-71	c 33	N84-16453 *	US-PATENT-CLASS-364-757	c 60	N88-24169 *	US-PATENT-CLASS-372-50	c 36	N85-30305 *
US-PATENT-CLASS-363-71	c 33	N85-29147 *	US-PATENT-CLASS-364-807	c 62	N91-32852 *	US-PATENT-CLASS-372-55	c 36	N84-16542 *
US-PATENT-CLASS-363-78	c 33	N81-14220 *	US-PATENT-CLASS-364-822	c 32	N83-18975 *	US-PATENT-CLASS-372-56	c 36	N82-28616 *
US-PATENT-CLASS-363-87	c 33	N83-10345 *	US-PATENT-CLASS-364-822	c 74	N86-21348 *	US-PATENT-CLASS-372-56	c 36	N83-10417 *
US-PATENT-CLASS-363-89	c 33	N78-10377 *	US-PATENT-CLASS-364-822	c 74	N91-26918 *	US-PATENT-CLASS-372-58	c 36	N82-28616 *
US-PATENT-CLASS-363-95	c 33	N79-24257 *	US-PATENT-CLASS-364-825	c 33	N82-24417 *	US-PATENT-CLASS-372-59	c 36	N83-10417 *
US-PATENT-CLASS-363-97	c 33	N79-24254 *	US-PATENT-CLASS-364-837	c 74	N91-26918 *	US-PATENT-CLASS-372-59	c 25	N90-20154 *
US-PATENT-CLASS-363-97	c 09	N88-28939 *	US-PATENT-CLASS-364-841	c 74	N91-26918 *	US-PATENT-CLASS-372-59	c 25	N91-21270 *
US-PATENT-CLASS-364-106	c 07	N81-19115 *	US-PATENT-CLASS-364-853	c 60	N85-33701 *	US-PATENT-CLASS-372-60	c 36	N83-10417 *
US-PATENT-CLASS-364-120	c 52	N79-12694 *	US-PATENT-CLASS-364-861	c 32	N83-18975 *	US-PATENT-CLASS-372-61	c 74	N87-14971 *
US-PATENT-CLASS-364-131	c 60	N89-26400 *	US-PATENT-CLASS-364-900	c 52	N79-12694 *	US-PATENT-CLASS-372-66	c 36	N91-17360 #
US-PATENT-CLASS-364-200	c 62	N81-24779 *	US-PATENT-CLASS-364-900	c 60	N79-20751 *	US-PATENT-CLASS-372-68	c 36	N87-23961 *
US-PATENT-CLASS-364-200	c 60	N81-27814 *	US-PATENT-CLASS-364-900	c 60	N81-27814 *	US-PATENT-CLASS-372-69	c 36	N87-25567 *
US-PATENT-CLASS-364-200	c 60	N83-25378 *	US-PATENT-CLASS-364-900	c 60	N83-32342 *	US-PATENT-CLASS-372-70	c 36	N91-17360 #
US-PATENT-CLASS-364-200	c 60	N83-32342 *	US-PATENT-CLASS-364-900	c 60	N84-28491 *	US-PATENT-CLASS-372-71	c 36	N84-28065 *
US-PATENT-CLASS-364-200	c 32	N85-21428 *	US-PATENT-CLASS-364-900	c 60	N84-28492 *	US-PATENT-CLASS-372-71	c 36	N91-15528 *
US-PATENT-CLASS-364-200	c 60	N85-21992 *	US-PATENT-CLASS-364-900	c 33	N89-14384 *	US-PATENT-CLASS-372-74	c 35	N84-12444 *
US-PATENT-CLASS-364-200	c 60	N88-29310 *	US-PATENT-CLASS-364-900	c 35	N90-23713 *	US-PATENT-CLASS-372-75	c 36	N91-15528 *
US-PATENT-CLASS-364-200	c 62	N91-25693 #	US-PATENT-CLASS-364-924.4	c 35	N90-23713 *	US-PATENT-CLASS-372-79	c 36	N84-16542 *
US-PATENT-CLASS-364-228.3	c 62	N91-14769 #	US-PATENT-CLASS-364-925.1	c 35	N90-23713 *	US-PATENT-CLASS-372-79	c 36	N86-29204 *
US-PATENT-CLASS-364-229.4	c 60	N90-21527 *	US-PATENT-CLASS-364-933.8	c 35	N90-23713 *	US-PATENT-CLASS-372-81	c 36	N87-23961 *
US-PATENT-CLASS-364-231.9	c 62	N91-14769 #	US-PATENT-CLASS-364-934	c 35	N90-23713 *	US-PATENT-CLASS-372-82	c 36	N82-28616 *
US-PATENT-CLASS-364-267.9	c 60	N90-21527 *	US-PATENT-CLASS-364-940.67	c 60	N90-21527 *	US-PATENT-CLASS-372-93	c 36	N84-14509 *
US-PATENT-CLASS-364-280	c 62	N91-14769 #	US-PATENT-CLASS-364-942.51	c 60	N90-21527 *	US-PATENT-CLASS-372-93	c 36	N84-28065 *
US-PATENT-CLASS-364-281.3	c 62	N91-25693 #	US-PATENT-CLASS-364-944	c 60	N90-21527 *	US-PATENT-CLASS-372-94	c 36	N84-14509 *
US-PATENT-CLASS-364-281.6	c 62	N91-25693 #	US-PATENT-CLASS-364-975.5	c 60	N90-21527 *	US-PATENT-CLASS-372-95	c 36	N84-28065 *
US-PATENT-CLASS-364-281.8	c 62	N91-25693 #	US-PATENT-CLASS-365-120	c 33	N81-29342 *	US-PATENT-CLASS-372-98	c 36	N84-14509 *
US-PATENT-CLASS-364-281	c 62	N91-14769 #	US-PATENT-CLASS-365-156	c 60	N91-31810 *	US-PATENT-CLASS-372-99	c 36	N87-25567 *
US-PATENT-CLASS-364-281	c 62	N91-25693 #	US-PATENT-CLASS-365-200	c 60	N91-31810 *	US-PATENT-CLASS-373-10	c 35	N87-23944 *
US-PATENT-CLASS-364-300	c 52	N79-12694 *	US-PATENT-CLASS-365-768	c 32	N86-27513 *	US-PATENT-CLASS-373-15	c 35	N87-23944 *
US-PATENT-CLASS-364-300	c 62	N91-14769 #	US-PATENT-CLASS-366-106	c 71	N84-28568 *	US-PATENT-CLASS-374-115	c 35	N86-19580 *
US-PATENT-CLASS-364-400	c 33	N85-29142 *	US-PATENT-CLASS-366-114	c 71	N83-35781 *	US-PATENT-CLASS-374-117	c 52	N85-30618 *
US-PATENT-CLASS-364-413	c 39	N83-20280 *	US-PATENT-CLASS-367-100	c 32	N82-18443 *	US-PATENT-CLASS-374-120	c 35	N86-19580 *
US-PATENT-CLASS-364-415	c 52	N79-12694 *	US-PATENT-CLASS-367-102	c 32	N82-18443 *	US-PATENT-CLASS-374-122	c 06	N83-10040 *
US-PATENT-CLASS-364-415	c 35	N84-12445 *	US-PATENT-CLASS-367-181	c 33	N82-26572 *	US-PATENT-CLASS-374-122	c 43	N85-21723 *
US-PATENT-CLASS-364-417	c 52	N79-10724 *	US-PATENT-CLASS-367-189	c 35	N84-22933 *	US-PATENT-CLASS-374-122	c 32	N87-21206 *
US-PATENT-CLASS-364-427	c 09	N90-20096 *	US-PATENT-CLASS-367-191	c 71	N88-24241 *	US-PATENT-CLASS-374-123	c 06	N83-10040 *
US-PATENT-CLASS-364-427	c 04	N91-31120 *	US-PATENT-CLASS-367-26	c 39	N80-10507 *	US-PATENT-CLASS-374-124	c 36	N90-17132 *
US-PATENT-CLASS-364-428	c 04	N91-31120 *	US-PATENT-CLASS-367-27	c 31	N80-32584 *	US-PATENT-CLASS-374-126	c 36	N90-17132 *
US-PATENT-CLASS-364-431	c 07	N81-19115 *	US-PATENT-CLASS-367-36	c 31	N80-32584 *	US-PATENT-CLASS-374-130	c 36	N90-17132 *
US-PATENT-CLASS-364-433	c 06	N86-27280 *	US-PATENT-CLASS-367-57	c 31	N80-32584 *	US-PATENT-CLASS-374-137	c 36	N85-21639 *
US-PATENT-CLASS-364-433	c 09	N91-14356 *	US-PATENT-CLASS-367-88	c 32	N82-18443 *	US-PATENT-CLASS-374-160	c 52	N85-30618 *
US-PATENT-CLASS-364-434	c 08	N79-23097 *	US-PATENT-CLASS-367-88	c 32	N83-31918 *	US-PATENT-CLASS-374-162R	c 74	N82-30071 *
US-PATENT-CLASS-364-434	c 08	N81-24106 *	US-PATENT-CLASS-367-88	c 43	N86-19711 *	US-PATENT-CLASS-374-162	c 35	N90-22770 *
US-PATENT-CLASS-364-435	c 06	N86-27280 *	US-PATENT-CLASS-367-908	c 35	N89-14407 *	US-PATENT-CLASS-374-163	c 35	N86-19580 *
US-PATENT-CLASS-364-452	c 04	N84-27713 *	US-PATENT-CLASS-367-95	c 32	N82-23776 *	US-PATENT-CLASS-374-17	c 35	N83-29650 *
US-PATENT-CLASS-364-453	c 18	N81-29152 *	US-PATENT-CLASS-367-99	c 32	N87-14559 *	US-PATENT-CLASS-374-180	c 35	N91-31608 *
US-PATENT-CLASS-364-453	c 33	N85-29142 *	US-PATENT-CLASS-368-184	c 33	N83-36357 *	US-PATENT-CLASS-374-183	c 33	N86-32624 *
US-PATENT-CLASS-364-458	c 32	N79-14267 *	US-PATENT-CLASS-368-200	c 33	N83-36357 *	US-PATENT-CLASS-374-1	c 35	N84-28019 *
US-PATENT-CLASS-364-478	c 37	N91-21544 *	US-PATENT-CLASS-368-201	c 33	N83-36357 *	US-PATENT-CLASS-374-208	c 37	N85-21651 *
US-PATENT-CLASS-364-481	c 33	N90-19492 *	US-PATENT-CLASS-368-47	c 33	N81-14221 *	US-PATENT-CLASS-374-208	c 35	N91-31608 *
US-PATENT-CLASS-364-482	c 33	N90-19492 *	US-PATENT-CLASS-37N	c 27	N81-15104 *	US-PATENT-CLASS-374-210	c 37	N85-21651 *
US-PATENT-CLASS-364-484	c 33	N89-14385 *	US-PATENT-CLASS-370-100	c 60	N82-16747 *	US-PATENT-CLASS-374-29	c 35	N91-31608 *
US-PATENT-CLASS-364-487	c 17	N91-14371 *	US-PATENT-CLASS-370-16	c 62	N90-19776 *	US-PATENT-CLASS-374-36	c 25	N88-29002 *
US-PATENT-CLASS-364-500	c 25	N88-29002 *	US-PATENT-CLASS-370-58	c 60	N81-27814 *	US-PATENT-CLASS-374-46	c 34	N83-34221 *
US-PATENT-CLASS-364-510	c 34	N81-26402 *	US-PATENT-CLASS-370-67	c 33	N82-29538 *	US-PATENT-CLASS-374-46	c 25	N86-19413 *
US-PATENT-CLASS-364-513	c 61	N91-14741 *	US-PATENT-CLASS-370-85.4	c 62	N91-14772 *	US-PATENT-CLASS-374-49	c 14	N91-27175 *
US-PATENT-CLASS-364-513	c 37	N91-21542 *	US-PATENT-CLASS-370-85.6	c 62	N91-14772 *	US-PATENT-CLASS-374-50	c 14	N91-27175 *
US-PATENT-CLASS-364-513	c 37	N91-21544 *	US-PATENT-CLASS-370-85.9	c 62	N91-14772 *	US-PATENT-CLASS-374-51	c 39	N83-32081 *
US-PATENT-CLASS-364-513	c 33	N91-31528 *	US-PATENT-CLASS-370-85	c 33	N81-14221 *	US-PATENT-CLASS-374-8	c 25	N86-19413 *
US-PATENT-CLASS-364-513	c 63	N91-31885 *	US-PATENT-CLASS-370-94.3	c 62	N91-14772 *	US-PATENT-CLASS-374-8	c 09	N91-21157 *
US-PATENT-CLASS-364-513	c 62	N91-32852 *	US-PATENT-CLASS-371-041	c 17	N90-21061 *	US-PATENT-CLASS-374-8	c 25	N91-32196 *
US-PATENT-CLASS-364-514	c 33	N81-33405 *	US-PATENT-CLASS-371-043	c 17	N90-21061 *	US-PATENT-CLASS-374-9	c 32	N87-21206 *
US-PATENT-CLASS-364-522	c 39	N83-20280 *	US-PATENT-CLASS-371-11.3	c 60	N90-21527 *	US-PATENT-CLASS-375-101	c 32	N87-25511 *
US-PATENT-CLASS-364-550	c 17	N91-14371 *	US-PATENT-CLASS-371-20	c 33	N81-26359 *	US-PATENT-CLASS-375-102	c 32	N87-25511 *
US-PATENT-CLASS-364-556	c 36	N85-29264 *	US-PATENT-CLASS-371-25	c 33	N81-26359 *	US-PATENT-CLASS-375-104	c 35	N81-19427 *
US-PATENT-CLASS-364-557	c 35	N84-14491 *	US-PATENT-CLASS-371-37.4	c 17	N90-21061 *	US-PATENT-CLASS-375-106	c 60	N82-16747 *
US-PATENT-CLASS-364-557	c 25	N88-29002 *	US-PATENT-CLASS-371-37	c 60	N87-21591 *	US-PATENT-CLASS-375-106	c 32	N82-31583 *
US-PATENT-CLASS-364-558	c 35	N84-14491 *	US-PATENT-CLASS-371-38.1	c 17	N90-21061 *	US-PATENT-CLASS-375-106	c 32	N81-14186 *
US-PATENT-CLASS-364-558	c 07	N84-22559 *	US-PATENT-CLASS-371-40.1	c 60	N90-21061 *	US-PATENT-CLASS-375-110	c 32	N87-21207 *
US-PATENT-CLASS-364-559	c 39	N83-20280 *	US-PATENT-CLASS-371-40	c 60	N87-21591 *	US-PATENT-CLASS-375-114	c 60	N82-16747 *
US-PATENT-CLASS-364-560	c 43	N79-26439 *	US-PATENT-CLASS-371-43	c 33	N87-25531 *	US-PATENT-CLASS-375-115	c 32	N81-15179 *
US-PATENT-CLASS-364-561	c 36	N88-24958 *	US-PATENT-CLASS-371-43	c 32	N91-14523 *	US-PATENT-CLASS-375-116	c 60	N82-16747 *
US-PATENT-CLASS-364-566	c 18	N81-29152 *	US-PATENT-CLASS-371-63	c 17	N87-16863 *	US-PATENT-CLASS-375-120	c 32	N84-27952 *
US-PATENT-CLASS-364-571	c 34	N81-26402 *	US-PATENT-CLASS-371-68	c 60	N82-29013 *	US-PATENT-CLASS-375-120	c 32	N87-21207 *
US-PATENT-CLASS-364-571	c 35	N84-14491 *	US-PATENT-CLASS-371-6	c 32	N83-13323 *	US-PATENT-CLASS-375-120	c 33	N87-25531 *
US-PATENT-CLASS-364-571	c 33	N85-34333 *	US-PATENT-CLASS-371-8	c 62	N90-19776 *	US-PATENT-CLASS-375-1	c 32	N81-15179 *
US-PATENT-CLASS-364-571	c 25	N88-29002 *	US-PATENT-CLASS-372-100	c 36	N84-14509 *	US-PATENT-CLASS-375-1	c 35	N81-19427 *
US-PATENT-CLASS-364-578	c 33	N85-34333 *	US-PATENT-CLASS-372-103	c 36	N84-28065 *	US-PATENT-CLASS-375-1	c 33	N81-33405 *

US-PATENT-CLASS-375-23	c 32	N87-21207 *	US-PATENT-CLASS-403-113	c 37	N91-17387 *	US-PATENT-CLASS-411-368	c 37	N87-22976 *
US-PATENT-CLASS-375-34	c 35	N81-19427 *	US-PATENT-CLASS-403-119	c 18	N87-14373 *	US-PATENT-CLASS-411-378	c 37	N85-29285 *
US-PATENT-CLASS-375-39	c 32	N87-25511 *	US-PATENT-CLASS-403-120	c 37	N86-19605 *	US-PATENT-CLASS-411-424	c 37	N87-22976 *
US-PATENT-CLASS-375-53	c 32	N91-14523 *	US-PATENT-CLASS-403-131	c 37	N91-15544 *	US-PATENT-CLASS-411-426	c 37	N85-29285 *
US-PATENT-CLASS-375-53	c 32	N91-25316 *	US-PATENT-CLASS-403-143	c 18	N85-29991 *	US-PATENT-CLASS-411-427	c 37	N87-22976 *
US-PATENT-CLASS-375-53	c 32	N91-25318 *	US-PATENT-CLASS-403-146	c 18	N87-14373 *	US-PATENT-CLASS-411-501	c 37	N85-29285 *
US-PATENT-CLASS-375-53	c 32	N91-27439 *	US-PATENT-CLASS-403-146	c 37	N91-15544 *	US-PATENT-CLASS-411-517	c 37	N83-19091 *
US-PATENT-CLASS-375-54	c 33	N81-15192 *	US-PATENT-CLASS-403-147	c 37	N91-15544 *	US-PATENT-CLASS-411-531	c 37	N85-29285 *
US-PATENT-CLASS-375-54	c 32	N87-25511 *	US-PATENT-CLASS-403-156	c 37	N91-15544 *	US-PATENT-CLASS-411-531	c 37	N87-22976 *
US-PATENT-CLASS-375-54	c 33	N87-25531 *	US-PATENT-CLASS-403-15	c 37	N85-30334 *	US-PATENT-CLASS-414-1	c 37	N80-14398 *
US-PATENT-CLASS-375-56	c 32	N91-25316 *	US-PATENT-CLASS-403-163	c 18	N87-14373 *	US-PATENT-CLASS-414-1	c 37	N81-14320 *
US-PATENT-CLASS-375-56	c 32	N91-27439 *	US-PATENT-CLASS-403-164	c 54	N86-29507 *	US-PATENT-CLASS-414-1	c 54	N86-28618 *
US-PATENT-CLASS-375-57	c 32	N91-14523 *	US-PATENT-CLASS-403-16	c 37	N85-30334 *	US-PATENT-CLASS-414-217	c 37	N85-29286 *
US-PATENT-CLASS-375-58	c 32	N81-15179 *	US-PATENT-CLASS-403-171	c 31	N81-25258 *	US-PATENT-CLASS-414-217	c 31	N91-15423 *
US-PATENT-CLASS-375-59	c 33	N87-25531 *	US-PATENT-CLASS-403-171	c 31	N86-19479 *	US-PATENT-CLASS-414-220	c 31	N91-15423 *
US-PATENT-CLASS-375-67	c 33	N81-15192 *	US-PATENT-CLASS-403-171	c 37	N88-29180 *	US-PATENT-CLASS-414-222	c 37	N82-32731 *
US-PATENT-CLASS-375-76	c 33	N87-25531 *	US-PATENT-CLASS-403-171	c 37	N91-14614 *	US-PATENT-CLASS-414-226	c 37	N82-32731 *
US-PATENT-CLASS-375-77	c 32	N84-27952 *	US-PATENT-CLASS-403-171	c 18	N91-21221 *	US-PATENT-CLASS-414-288	c 85	N85-34722 *
US-PATENT-CLASS-375-80	c 04	N91-14321 *	US-PATENT-CLASS-403-176	c 18	N91-21221 *	US-PATENT-CLASS-414-328	c 85	N85-34722 *
US-PATENT-CLASS-375-81	c 32	N84-27952 *	US-PATENT-CLASS-403-179	c 27	N76-14264 *	US-PATENT-CLASS-414-373	c 85	N85-34722 *
US-PATENT-CLASS-375-85	c 32	N91-25316 *	US-PATENT-CLASS-403-217	c 37	N82-32732 *	US-PATENT-CLASS-414-4	c 37	N79-28551 *
US-PATENT-CLASS-375-85	c 32	N91-27439 *	US-PATENT-CLASS-403-217	c 37	N88-29180 *	US-PATENT-CLASS-414-4	c 54	N81-26718 *
US-PATENT-CLASS-375-86	c 32	N91-25318 *	US-PATENT-CLASS-403-252	c 18	N91-21221 *	US-PATENT-CLASS-414-4	c 37	N86-20789 *
US-PATENT-CLASS-375-86	c 32	N91-27439 *	US-PATENT-CLASS-403-273	c 37	N77-23482 *	US-PATENT-CLASS-414-5	c 54	N86-28618 *
US-PATENT-CLASS-375-88	c 17	N87-16863 *	US-PATENT-CLASS-403-282	c 26	N83-10170 *	US-PATENT-CLASS-414-689	c 18	N89-12621 *
US-PATENT-CLASS-375-94	c 04	N91-14321 *	US-PATENT-CLASS-403-28	c 27	N76-14264 *	US-PATENT-CLASS-414-6	c 54	N79-28652 *
US-PATENT-CLASS-375-97	c 32	N91-25316 *	US-PATENT-CLASS-403-28	c 37	N85-29285 *	US-PATENT-CLASS-414-718	c 37	N86-20789 *
US-PATENT-CLASS-375-99	c 35	N81-19427 *	US-PATENT-CLASS-403-291	c 37	N89-12621 *	US-PATENT-CLASS-414-718	c 18	N89-12621 *
US-PATENT-CLASS-376-127	c 72	N87-21661 *	US-PATENT-CLASS-403-30	c 18	N89-28554 *	US-PATENT-CLASS-414-729	c 37	N91-14616 *
US-PATENT-CLASS-376-159	c 25	N85-21279 *	US-PATENT-CLASS-403-312	c 37	N86-27630 *	US-PATENT-CLASS-414-730	c 37	N81-27519 *
US-PATENT-CLASS-377-111	c 60	N90-21525 *	US-PATENT-CLASS-403-315	c 37	N82-24494 *	US-PATENT-CLASS-414-730	c 37	N86-19603 *
US-PATENT-CLASS-377-114	c 60	N90-21525 *	US-PATENT-CLASS-403-317	c 37	N82-32732 *	US-PATENT-CLASS-414-735	c 54	N81-26718 *
US-PATENT-CLASS-377-116	c 60	N90-21525 *	US-PATENT-CLASS-403-317	c 37	N85-21649 *	US-PATENT-CLASS-414-735	c 18	N88-23828 *
US-PATENT-CLASS-377-123	c 60	N90-21525 *	US-PATENT-CLASS-403-317	c 37	N91-14610 *	US-PATENT-CLASS-414-735	c 18	N89-12621 *
US-PATENT-CLASS-377-126	c 60	N90-21525 *	US-PATENT-CLASS-403-322	c 18	N84-22605 *	US-PATENT-CLASS-414-739	c 37	N82-32731 *
US-PATENT-CLASS-377-39	c 33	N89-14385 *	US-PATENT-CLASS-403-322	c 37	N85-30334 *	US-PATENT-CLASS-414-744A	c 54	N81-26718 *
US-PATENT-CLASS-377-69	c 60	N90-21525 *	US-PATENT-CLASS-403-322	c 37	N85-30336 *	US-PATENT-CLASS-414-750	c 18	N88-23828 *
US-PATENT-CLASS-377-79	c 60	N90-21525 *	US-PATENT-CLASS-403-322	c 37	N90-17154 *	US-PATENT-CLASS-414-753	c 37	N86-20789 *
US-PATENT-CLASS-378-104	c 33	N85-29147 *	US-PATENT-CLASS-403-322	c 37	N91-14614 *	US-PATENT-CLASS-414-786	c 85	N85-34722 *
US-PATENT-CLASS-378-112	c 33	N85-29147 *	US-PATENT-CLASS-403-325	c 37	N90-17154 *	US-PATENT-CLASS-414-7	c 54	N86-28618 *
US-PATENT-CLASS-378-2	c 34	N83-19015 *	US-PATENT-CLASS-403-327	c 37	N91-14610 *	US-PATENT-CLASS-414-7	c 54	N86-28620 *
US-PATENT-CLASS-378-2	c 74	N84-11920 *	US-PATENT-CLASS-403-327	c 37	N91-14614 *	US-PATENT-CLASS-414-7	c 37	N91-14616 *
US-PATENT-CLASS-378-43	c 34	N83-19015 *	US-PATENT-CLASS-403-328	c 18	N86-20469 *	US-PATENT-CLASS-414-8	c 54	N86-28618 *
US-PATENT-CLASS-378-43	c 74	N86-20124 *	US-PATENT-CLASS-403-328	c 37	N90-17154 *	US-PATENT-CLASS-415-DIG.8	c 44	N82-24639 *
US-PATENT-CLASS-378-51	c 38	N90-23756 *	US-PATENT-CLASS-403-331	c 37	N82-32732 *	US-PATENT-CLASS-415-DIG.8	c 44	N84-23018 *
US-PATENT-CLASS-378-58	c 74	N86-20126 *	US-PATENT-CLASS-403-331	c 37	N91-14610 *	US-PATENT-CLASS-415-101	c 44	N80-21828 *
US-PATENT-CLASS-378-58	c 38	N90-23756 *	US-PATENT-CLASS-403-331	c 37	N91-14614 *	US-PATENT-CLASS-415-115	c 07	N79-10057 *
US-PATENT-CLASS-378-59	c 74	N86-20126 *	US-PATENT-CLASS-403-334	c 37	N91-15544 *	US-PATENT-CLASS-415-115	c 34	N83-27144 *
US-PATENT-CLASS-378-85	c 74	N86-20124 *	US-PATENT-CLASS-403-340	c 37	N82-32732 *	US-PATENT-CLASS-415-115	c 07	N84-33410 *
US-PATENT-CLASS-380-25	c 60	N90-25583 *	US-PATENT-CLASS-403-341	c 18	N87-27713 *	US-PATENT-CLASS-415-115	c 34	N83-33433 *
US-PATENT-CLASS-380-45	c 60	N90-25583 *	US-PATENT-CLASS-403-348	c 37	N85-30336 *	US-PATENT-CLASS-415-116	c 07	N79-10057 *
US-PATENT-CLASS-380-49	c 60	N90-25583 *	US-PATENT-CLASS-403-381	c 37	N91-14610 *	US-PATENT-CLASS-415-118	c 35	N83-35338 *
US-PATENT-CLASS-381-183	c 54	N89-29953 *	US-PATENT-CLASS-403-385	c 37	N91-14617 *	US-PATENT-CLASS-415-136	c 37	N88-23978 *
US-PATENT-CLASS-381-187	c 54	N89-29953 *	US-PATENT-CLASS-403-388	c 37	N86-27630 *	US-PATENT-CLASS-415-143	c 34	N79-20335 *
US-PATENT-CLASS-381-26	c 35	N91-27522 *	US-PATENT-CLASS-403-391	c 37	N91-14617 *	US-PATENT-CLASS-415-145	c 07	N77-28118 *
US-PATENT-CLASS-381-68.1	c 35	N91-27522 *	US-PATENT-CLASS-403-408.1	c 37	N86-27630 *	US-PATENT-CLASS-415-145	c 07	N82-32366 *
US-PATENT-CLASS-381-71	c 71	N91-27913 *	US-PATENT-CLASS-403-408	c 37	N85-29285 *	US-PATENT-CLASS-415-170.1	c 37	N91-14608 *
US-PATENT-CLASS-381-92	c 35	N91-27522 *	US-PATENT-CLASS-403-4	c 18	N89-28554 *	US-PATENT-CLASS-415-170-R	c 37	N88-23978 *
US-PATENT-CLASS-381-94	c 71	N91-27913 *	US-PATENT-CLASS-403-51	c 18	N89-28553 *	US-PATENT-CLASS-415-174.5	c 37	N91-14608 *
US-PATENT-CLASS-382-31	c 74	N89-14078 *	US-PATENT-CLASS-403-56	c 18	N85-29991 *	US-PATENT-CLASS-415-174	c 37	N79-18318 *
US-PATENT-CLASS-382-31	c 74	N91-25840 *	US-PATENT-CLASS-403-57	c 37	N91-17387 *	US-PATENT-CLASS-415-174	c 37	N80-26658 *
US-PATENT-CLASS-382-32	c 74	N91-25840 *	US-PATENT-CLASS-403-64	c 31	N86-19479 *	US-PATENT-CLASS-415-174	c 37	N82-19540 *
US-PATENT-CLASS-382-41	c 60	N89-26400 *	US-PATENT-CLASS-403-72	c 18	N91-27199 *	US-PATENT-CLASS-415-174	c 27	N82-29453 *
US-PATENT-CLASS-382-42	c 74	N86-21348 *	US-PATENT-CLASS-403-76	c 18	N85-29991 *	US-PATENT-CLASS-415-174	c 18	N83-20996 *
US-PATENT-CLASS-382-42	c 60	N88-24169 *	US-PATENT-CLASS-403-85	c 18	N87-14373 *	US-PATENT-CLASS-415-174	c 37	N84-22957 *
US-PATENT-CLASS-382-42	c 60	N89-26400 *	US-PATENT-CLASS-403-90	c 18	N85-29991 *	US-PATENT-CLASS-415-174	c 37	N86-20788 *
US-PATENT-CLASS-382-43	c 74	N91-25840 *	US-PATENT-CLASS-405-188	c 18	N90-20126 *	US-PATENT-CLASS-415-175	c 07	N83-31603 *
US-PATENT-CLASS-382-49	c 60	N89-26400 *	US-PATENT-CLASS-405-188	c 18	N91-14374 *	US-PATENT-CLASS-415-178	c 07	N82-32366 *
US-PATENT-CLASS-382-49	c 74	N91-25840 *	US-PATENT-CLASS-405-229	c 44	N79-24432 *	US-PATENT-CLASS-415-178	c 07	N83-31603 *
US-PATENT-CLASS-382-6	c 74	N91-25840 *	US-PATENT-CLASS-405-263	c 44	N79-24432 *	US-PATENT-CLASS-415-180	c 07	N77-23106 *
US-PATENT-CLASS-384-101	c 37	N85-33490 *	US-PATENT-CLASS-406-155	c 37	N84-16561 *	US-PATENT-CLASS-415-180	c 37	N78-10467 *
US-PATENT-CLASS-384-103	c 37	N86-19606 *	US-PATENT-CLASS-407-117	c 37	N81-14319 *	US-PATENT-CLASS-415-181	c 07	N74-28226 *
US-PATENT-CLASS-384-106	c 37	N86-19606 *	US-PATENT-CLASS-407-85	c 37	N81-14319 *	US-PATENT-CLASS-415-181	c 07	N74-31270 *
US-PATENT-CLASS-384-124	c 27	N83-34043 *	US-PATENT-CLASS-408-1-R	c 31	N87-25491 *	US-PATENT-CLASS-415-196	c 37	N80-26658 *
US-PATENT-CLASS-384-99	c 37	N85-33490 *	US-PATENT-CLASS-408-1R	c 37	N81-14319 *	US-PATENT-CLASS-415-196	c 37	N82-19540 *
US-PATENT-CLASS-388-821	c 33	N90-21951 *	US-PATENT-CLASS-408-1R	c 31	N83-27058 *	US-PATENT-CLASS-415-197	c 18	N83-20996 *
US-PATENT-CLASS-39-25.35	c 33	N86-20671 *	US-PATENT-CLASS-408-111	c 37	N74-25968 *	US-PATENT-CLASS-415-199	c 05	N80-14107 *
US-PATENT-CLASS-4-DIG.9	c 54	N91-14724 *	US-PATENT-CLASS-408-112	c 37	N75-25186 *	US-PATENT-CLASS-415-1	c 34	N79-20335 *
US-PATENT-CLASS-4-10	c 54	N74-20725 *	US-PATENT-CLASS-408-137	c 15	N71-33518 *	US-PATENT-CLASS-415-1	c 07	N83-31603 *
US-PATENT-CLASS-4-110	c 05	N72-22093 *	US-PATENT-CLASS-408-186	c 37	N75-25186 *	US-PATENT-CLASS-415-1	c 37	N85-29282 *
US-PATENT-CLASS-4-120	c 54	N74-20725 *	US-PATENT-CLASS-408-193	c 37	N75-25186 *	US-PATENT-CLASS-415-2R	c 44	N82-24639 *
US-PATENT-CLASS-4-144.3	c 52	N81-24711 *	US-PATENT-CLASS-408-195	c 37	N75-25186 *	US-PATENT-CLASS-415-2R	c 44	N84-23018 *
US-PATENT-CLASS-4-144.3	c 52	N81-28740 *	US-PATENT-CLASS-408-61	c 31	N83-27058 *	US-PATENT-CLASS-415-200	c 07	N79-14096 *
US-PATENT-CLASS-4-209R	c 54	N91-14723 *	US-PATENT-CLASS-408-80	c 37	N74-25968 *	US-PATENT-CLASS-415-200	c 37	N79-18318 *
US-PATENT-CLASS-4-316	c 54	N91-14723 *	US-PATENT-CLASS-409-131	c 31	N83-27058 *	US-PATENT-CLASS-415-201	c 07	N79-14096 *
US-PATENT-CLASS-4-316	c 54	N91-14724 *	US-PATENT-CLASS-41R	c 27	N81-15104 *	US-PATENT-CLASS-415-229	c 37	N91-14608 *
US-PATENT-CLASS-4-482	c 54	N91-14723 *	US-PATENT-CLASS-410-156	c 37	N85-34401 *	US-PATENT-CLASS-415-2	c 44	N80-21828 *
US-PATENT-CLASS-4-482	c 54	N91-14724 *	US-PATENT-CLASS-410-79	c 18	N85-29991 *	US-PATENT-CLASS-415-47	c 07	N83-31603 *
US-PATENT-CLASS-4-498	c 44	N84-34792 *	US-PATENT-CLASS-410-80	c 37	N91-27561 *	US-PATENT-CLASS-415-68	c 37	N85-29282 *
US-PATENT-CLASS-4-661	c 54	N91-14724 *	US-PATENT-CLASS-410-84	c 37	N91-27561 *	US-PATENT-CLASS-415-9	c 44	N77-14527 *
US-PATENT-CLASS-4-99	c 05	N72-22093 *	US-PATENT-CLASS-410-90	c 18	N85-29991 *	US-PATENT-CLASS-416-104	c 05	N79-17029 *
US-PATENT-CLASS-40-28	c 12	N71-18603 *	US-PATENT-CLASS-411-103	c 37	N85-30335 *	US-PATENT-CLASS-416-114	c 05	N81-19087 *
US-PATENT-CLASS-403-102	c 37	N85-30336 *	US-PATENT-CLASS-411-108	c 37	N85-30335 *	US-PATENT-CLASS-416-114	c 08	N87-23631 *
US-PATENT-CLASS-403-102	c 18	N87-14373 *	US-PATENT-CLASS-411-166	c 37	N87-22976 *	US-PATENT-CLASS-416-115	c 02	N72-11018 *
US-PATENT-CLASS-403-105	c 37	N79-14382 *	US-PATENT-CLASS-411-353	c 37	N83-19091 *	US-PATENT-CLASS-416-117	c 37	N84-12493 *
US-PATENT-CLASS-403-113	c 37	N86-19605 *	US-PATENT-CLASS-411-368	c 37	N85-29285 *	US-PATENT-CLASS-416-121	c 02	N72-11018 *

US-PATENT-CLASS-416-127	c 02	N72-11018 *	US-PATENT-CLASS-419-24	c 24	N90-23493 *	US-PATENT-CLASS-423-242	c 45	N79-12584 *
US-PATENT-CLASS-416-130	c 02	N72-11018 *	US-PATENT-CLASS-419-24	c 24	N91-17145 *	US-PATENT-CLASS-423-247	c 25	N91-21270 *
US-PATENT-CLASS-416-132B	c 37	N84-12493 *	US-PATENT-CLASS-419-30	c 24	N91-27244 *	US-PATENT-CLASS-423-249	c 25	N76-27383 *
US-PATENT-CLASS-416-132R	c 05	N79-17847 *	US-PATENT-CLASS-419-32	c 24	N91-27244 *	US-PATENT-CLASS-423-276	c 23	N87-23698 *
US-PATENT-CLASS-416-135	c 07	N77-32148 *	US-PATENT-CLASS-419-36	c 24	N90-23493 *	US-PATENT-CLASS-423-284	c 23	N87-23698 *
US-PATENT-CLASS-416-135	c 37	N78-10468 *	US-PATENT-CLASS-419-36	c 24	N91-17145 *	US-PATENT-CLASS-423-293	c 26	N80-14229 *
US-PATENT-CLASS-416-138	c 05	N77-17029 *	US-PATENT-CLASS-419-36	c 24	N91-27244 *	US-PATENT-CLASS-423-303	c 44	N84-23019 *
US-PATENT-CLASS-416-138	c 05	N79-17847 *	US-PATENT-CLASS-419-37	c 24	N90-23493 *	US-PATENT-CLASS-423-33-5	c 25	N79-28253 *
US-PATENT-CLASS-416-141	c 05	N77-17029 *	US-PATENT-CLASS-419-37	c 24	N91-17145 *	US-PATENT-CLASS-423-338	c 76	N87-29360 *
US-PATENT-CLASS-416-141	c 37	N78-10468 *	US-PATENT-CLASS-419-38	c 24	N91-27244 *	US-PATENT-CLASS-423-339	c 76	N87-29360 *
US-PATENT-CLASS-416-144	c 35	N78-24515 *	US-PATENT-CLASS-419-39	c 24	N91-27244 *	US-PATENT-CLASS-423-345	c 76	N76-25049 *
US-PATENT-CLASS-416-145	c 05	N85-29947 *	US-PATENT-CLASS-419-48	c 24	N91-17145 *	US-PATENT-CLASS-423-345	c 76	N79-23798 *
US-PATENT-CLASS-416-149	c 02	N72-11018 *	US-PATENT-CLASS-419-49	c 24	N91-17145 *	US-PATENT-CLASS-423-346	c 76	N76-25049 *
US-PATENT-CLASS-416-153	c 07	N77-14025 *	US-PATENT-CLASS-419-49	c 24	N91-27244 *	US-PATENT-CLASS-423-348	c 26	N80-14229 *
US-PATENT-CLASS-416-157B	c 07	N79-14095 *	US-PATENT-CLASS-419-8	c 24	N90-23493 *	US-PATENT-CLASS-423-350	c 37	N80-10494 *
US-PATENT-CLASS-416-158	c 08	N87-23631 *	US-PATENT-CLASS-419-8	c 24	N91-17145 *	US-PATENT-CLASS-423-350	c 31	N80-18231 *
US-PATENT-CLASS-416-160	c 07	N77-14025 *	US-PATENT-CLASS-419-8	c 24	N91-17145 *	US-PATENT-CLASS-423-352	c 36	N76-18427 *
US-PATENT-CLASS-416-160	c 07	N79-14095 *	US-PATENT-CLASS-42-1.13	c 03	N91-15142 *	US-PATENT-CLASS-423-352	c 31	N76-18427 *
US-PATENT-CLASS-416-162	c 07	N77-14025 *	US-PATENT-CLASS-42-1F	c 11	N72-22247 *	US-PATENT-CLASS-423-407	c 24	N76-14203 *
US-PATENT-CLASS-416-162	c 07	N79-14095 *	US-PATENT-CLASS-42-101	c 44	N86-25874 *	US-PATENT-CLASS-423-414	c 24	N84-22695 *
US-PATENT-CLASS-416-162	c 07	N77-14025 *	US-PATENT-CLASS-42-215	c 44	N76-29704 *	US-PATENT-CLASS-423-414	c 31	N85-20153 *
US-PATENT-CLASS-416-165	c 07	N77-14025 *	US-PATENT-CLASS-420-445	c 26	N82-31505 *	US-PATENT-CLASS-423-417	c 26	N80-14229 *
US-PATENT-CLASS-416-167	c 07	N77-14025 *	US-PATENT-CLASS-420-460	c 26	N87-14482 *	US-PATENT-CLASS-423-419P	c 25	N83-33977 *
US-PATENT-CLASS-416-167	c 07	N79-14095 *	US-PATENT-CLASS-420-529	c 26	N89-28621 *	US-PATENT-CLASS-423-439	c 24	N91-15320 *
US-PATENT-CLASS-416-190	c 07	N77-32148 *	US-PATENT-CLASS-420-533	c 26	N89-28621 *	US-PATENT-CLASS-423-445	c 24	N84-22695 *
US-PATENT-CLASS-416-193A	c 07	N77-32148 *	US-PATENT-CLASS-420-54	c 26	N89-14303 *	US-PATENT-CLASS-423-445	c 31	N85-20153 *
US-PATENT-CLASS-416-1	c 34	N83-27144 *	US-PATENT-CLASS-420-551	c 26	N82-31505 *	US-PATENT-CLASS-423-445	c 24	N85-21267 *
US-PATENT-CLASS-416-200	c 02	N72-11018 *	US-PATENT-CLASS-420-588	c 26	N82-31505 *	US-PATENT-CLASS-423-446	c 15	N73-19457 *
US-PATENT-CLASS-416-214A	c 07	N78-33101 *	US-PATENT-CLASS-420-62	c 26	N89-14303 *	US-PATENT-CLASS-423-446	c 24	N84-22695 *
US-PATENT-CLASS-416-220R	c 07	N77-27116 *	US-PATENT-CLASS-420-79	c 26	N89-14303 *	US-PATENT-CLASS-423-446	c 31	N85-20153 *
US-PATENT-CLASS-416-220R	c 37	N78-10468 *	US-PATENT-CLASS-420-80	c 26	N89-14303 *	US-PATENT-CLASS-423-446	c 24	N85-21267 *
US-PATENT-CLASS-416-221	c 07	N77-27116 *	US-PATENT-CLASS-420-81	c 26	N89-14303 *	US-PATENT-CLASS-423-447.2	c 24	N83-25789 *
US-PATENT-CLASS-416-223-R	c 02	N89-14224 *	US-PATENT-CLASS-421-209	c 33	N91-31529 *	US-PATENT-CLASS-423-447.6	c 24	N83-25789 *
US-PATENT-CLASS-416-223R	c 02	N84-11136 *	US-PATENT-CLASS-421-457	c 33	N91-31529 *	US-PATENT-CLASS-423-447.7	c 24	N83-25789 *
US-PATENT-CLASS-416-223R	c 02	N84-28732 *	US-PATENT-CLASS-422-101	c 51	N91-31755 *	US-PATENT-CLASS-423-448	c 24	N91-15320 *
US-PATENT-CLASS-416-223	c 07	N74-28226 *	US-PATENT-CLASS-422-103	c 35	N85-29213 *	US-PATENT-CLASS-423-449	c 24	N84-22695 *
US-PATENT-CLASS-416-224	c 24	N77-19170 *	US-PATENT-CLASS-422-104	c 09	N91-21157 *	US-PATENT-CLASS-423-449	c 31	N85-20153 *
US-PATENT-CLASS-416-224	c 07	N84-22560 *	US-PATENT-CLASS-422-109	c 54	N81-24724 *	US-PATENT-CLASS-423-449	c 24	N85-21267 *
US-PATENT-CLASS-416-228	c 05	N80-14107 *	US-PATENT-CLASS-422-111	c 35	N90-22025 *	US-PATENT-CLASS-423-460	c 24	N91-15320 *
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US-PATENT-CLASS-416-233	c 07	N84-22560 *	US-PATENT-CLASS-422-126	c 35	N90-22025 *	US-PATENT-CLASS-423-539	c 25	N82-28368 *
US-PATENT-CLASS-416-237	c 07	N74-28226 *	US-PATENT-CLASS-422-129	c 37	N85-21652 *	US-PATENT-CLASS-423-540	c 25	N82-28368 *
US-PATENT-CLASS-416-238	c 05	N80-14107 *	US-PATENT-CLASS-422-169	c 35	N84-17555 *	US-PATENT-CLASS-423-542	c 25	N82-28368 *
US-PATENT-CLASS-416-23	c 05	N85-29947 *	US-PATENT-CLASS-422-178	c 35	N84-17555 *	US-PATENT-CLASS-423-579	c 46	N74-13011 *
US-PATENT-CLASS-416-241A	c 07	N77-32148 *	US-PATENT-CLASS-422-186	c 25	N82-28368 *	US-PATENT-CLASS-423-579	c 25	N82-28368 *
US-PATENT-CLASS-416-241R	c 26	N84-33555 *	US-PATENT-CLASS-422-186	c 35	N84-17555 *	US-PATENT-CLASS-423-581	c 25	N79-10162 *
US-PATENT-CLASS-416-242	c 02	N84-11136 *	US-PATENT-CLASS-422-187	c 37	N80-10494 *	US-PATENT-CLASS-423-582	c 26	N78-32229 *
US-PATENT-CLASS-416-242	c 02	N84-28732 *	US-PATENT-CLASS-422-198	c 25	N82-28368 *	US-PATENT-CLASS-423-583	c 26	N78-32229 *
US-PATENT-CLASS-416-244A	c 07	N78-33101 *	US-PATENT-CLASS-422-199	c 37	N80-10494 *	US-PATENT-CLASS-423-600	c 25	N83-33977 *
US-PATENT-CLASS-416-248	c 37	N78-10468 *	US-PATENT-CLASS-422-199	c 37	N85-21652 *	US-PATENT-CLASS-423-625	c 15	N73-19457 *
US-PATENT-CLASS-416-25	c 05	N75-12930 *	US-PATENT-CLASS-422-200	c 44	N83-10501 *	US-PATENT-CLASS-423-625	c 26	N80-14229 *
US-PATENT-CLASS-416-2	c 44	N79-14527 *	US-PATENT-CLASS-422-202	c 44	N83-10501 *	US-PATENT-CLASS-423-644	c 36	N76-18427 *
US-PATENT-CLASS-416-500	c 05	N81-19087 *	US-PATENT-CLASS-422-208	c 37	N80-10494 *	US-PATENT-CLASS-423-648R	c 44	N77-22607 *
US-PATENT-CLASS-416-500	c 05	N85-29947 *	US-PATENT-CLASS-422-224	c 31	N80-18231 *	US-PATENT-CLASS-423-648R	c 28	N78-24365 *
US-PATENT-CLASS-416-51	c 05	N79-17847 *	US-PATENT-CLASS-422-224	c 44	N83-10501 *	US-PATENT-CLASS-423-648R	c 28	N80-20402 *
US-PATENT-CLASS-416-61	c 35	N78-24515 *	US-PATENT-CLASS-422-235	c 37	N80-10494 *	US-PATENT-CLASS-423-648R	c 28	N81-14103 *
US-PATENT-CLASS-416-61	c 37	N79-14382 *	US-PATENT-CLASS-422-242	c 37	N80-10494 *	US-PATENT-CLASS-423-648R	c 25	N82-28368 *
US-PATENT-CLASS-416-88	c 05	N79-17847 *	US-PATENT-CLASS-422-245	c 76	N90-23242 *	US-PATENT-CLASS-423-648R	c 25	N83-29324 *
US-PATENT-CLASS-416-89	c 05	N79-17847 *	US-PATENT-CLASS-422-245	c 76	N90-24169 *	US-PATENT-CLASS-423-649	c 25	N83-29324 *
US-PATENT-CLASS-416-92	c 07	N84-22560 *	US-PATENT-CLASS-422-246	c 76	N80-32244 *	US-PATENT-CLASS-423-650	c 44	N76-18642 *
US-PATENT-CLASS-416-97A	c 34	N85-33433 *	US-PATENT-CLASS-422-246	c 33	N81-19389 *	US-PATENT-CLASS-423-650	c 44	N76-29700 *
US-PATENT-CLASS-416-97R	c 34	N83-27144 *	US-PATENT-CLASS-422-246	c 76	N82-30105 *	US-PATENT-CLASS-423-650	c 44	N76-29704 *
US-PATENT-CLASS-416-97R	c 07	N84-22560 *	US-PATENT-CLASS-422-246	c 76	N84-35113 *	US-PATENT-CLASS-423-650	c 44	N77-10636 *
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US-PATENT-CLASS-417-138	c 35	N75-19611 *	US-PATENT-CLASS-422-249	c 33	N81-19389 *	US-PATENT-CLASS-423-655	c 28	N91-14495 *
US-PATENT-CLASS-417-141	c 44	N76-29701 *	US-PATENT-CLASS-422-249	c 76	N84-35113 *	US-PATENT-CLASS-423-658.5	c 28	N81-15119 *
US-PATENT-CLASS-417-152	c 15	N72-22489 *	US-PATENT-CLASS-422-249	c 76	N90-20896 *	US-PATENT-CLASS-424-12	c 25	N79-14169 *
US-PATENT-CLASS-417-159	c 09	N84-27749 *	US-PATENT-CLASS-422-251	c 76	N88-14835 *	US-PATENT-CLASS-424-12	c 51	N80-16715 *
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US-PATENT-CLASS-417-190	c 35	N91-21496 *	US-PATENT-CLASS-422-27	c 54	N81-24724 *	US-PATENT-CLASS-424-180	c 52	N75-15270 *
US-PATENT-CLASS-417-207	c 44	N76-29701 *	US-PATENT-CLASS-422-30	c 54	N81-24724 *	US-PATENT-CLASS-424-247	c 52	N81-29764 *
US-PATENT-CLASS-417-209	c 34	N76-17317 *	US-PATENT-CLASS-422-34	c 54	N81-24724 *	US-PATENT-CLASS-424-267	c 52	N81-29764 *
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US-PATENT-CLASS-417-36	c 35	N75-19611 *	US-PATENT-CLASS-422-48	c 52	N79-14749 *	US-PATENT-CLASS-425-DIG.43	c 31	N75-13111 *
US-PATENT-CLASS-417-379	c 44	N76-29701 *	US-PATENT-CLASS-422-50	c 76	N90-24169 *	US-PATENT-CLASS-425-10	c 31	N83-35176 *
US-PATENT-CLASS-417-383	c 37	N80-31790 *	US-PATENT-CLASS-422-52	c 51	N80-16714 *	US-PATENT-CLASS-425-113	c 15	N73-13464 *
US-PATENT-CLASS-417-391	c 15	N73-24513 *	US-PATENT-CLASS-422-52	c 51	N83-27569 *	US-PATENT-CLASS-425-128	c 31	N74-32920 *
US-PATENT-CLASS-417-392	c 37	N84-28081 *	US-PATENT-CLASS-422-62	c 35	N90-22025 *	US-PATENT-CLASS-425-133	c 15	N73-13464 *
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US-PATENT-CLASS-417-417	c 31	N85-21404 *	US-PATENT-CLASS-422-80	c 25	N82-12166 *	US-PATENT-CLASS-425-378R	c 31	N81-15154 *
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US-PATENT-CLASS-417-470	c 35	N74-15126 *	US-PATENT-CLASS-422-86	c 35	N85-29213 *	US-PATENT-CLASS-425-405R	c 31	N75-13111 *
US-PATENT-CLASS-417-471	c 35	N74-15126 *	US-PATENT-CLASS-422-88	c 35	N85-29213 *	US-PATENT-CLASS-425-415	c 31	N74-32920 *
US-PATENT-CLASS-417-475	c 37	N86-32738 *	US-PATENT-CLASS-422-98	c 35	N90-22025 *	US-PATENT-CLASS-425-425	c 31	N90-19425 *
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US-PATENT-CLASS-417-50	c 15	N71-27084 *	US-PATENT-CLASS-422-9	c 45	N80-14579 *	US-PATENT-CLASS-425-438	c 31	N75-13111 *
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US-PATENT-CLASS-425-73	c 31	N90-19425 *	US-PATENT-CLASS-427-343	c 44	N79-11472 *	US-PATENT-CLASS-427-436	c 33	N84-16456 *
US-PATENT-CLASS-425-75	c 31	N90-19425 *	US-PATENT-CLASS-427-346	c 71	N84-16940 *	US-PATENT-CLASS-427-437	c 33	N84-16456 *
US-PATENT-CLASS-425-77	c 15	N72-20446 *	US-PATENT-CLASS-427-34	c 34	N78-18355 *	US-PATENT-CLASS-427-443.2	c 25	N84-12262 *
US-PATENT-CLASS-425-7	c 31	N83-35176 *	US-PATENT-CLASS-427-34	c 24	N79-17916 *	US-PATENT-CLASS-427-443	c 74	N84-28205 *
US-PATENT-CLASS-425-804	c 34	N90-23700 *	US-PATENT-CLASS-427-34	c 27	N82-29453 *	US-PATENT-CLASS-427-44	c 44	N78-32854 *
US-PATENT-CLASS-427-113	c 44	N76-28635 *	US-PATENT-CLASS-427-34	c 27	N83-31855 *	US-PATENT-CLASS-427-44	c 27	N80-32516 *
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US-PATENT-CLASS-427-113	c 44	N84-28205 *	US-PATENT-CLASS-427-34	c 37	N84-22957 *	US-PATENT-CLASS-427-47	c 26	N85-29005 *
US-PATENT-CLASS-427-115	c 25	N82-21268 *	US-PATENT-CLASS-427-34	c 26	N84-27855 *	US-PATENT-CLASS-427-4	c 51	N77-27677 *
US-PATENT-CLASS-427-115	c 26	N84-22734 *	US-PATENT-CLASS-427-34	c 75	N91-25875 *	US-PATENT-CLASS-427-53.1	c 36	N84-22944 *
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US-PATENT-CLASS-427-123	c 44	N79-11472 *	US-PATENT-CLASS-427-352	c 27	N83-34039 *	US-PATENT-CLASS-427-531	c 44	N82-28780 *
US-PATENT-CLASS-427-124	c 37	N78-13436 *	US-PATENT-CLASS-427-355	c 24	N79-17916 *	US-PATENT-CLASS-427-57	c 71	N84-16940 *
US-PATENT-CLASS-427-125	c 26	N84-22734 *	US-PATENT-CLASS-427-372.2	c 27	N82-33520 *	US-PATENT-CLASS-427-58	c 33	N84-16940 *
US-PATENT-CLASS-427-125	c 44	N84-28205 *	US-PATENT-CLASS-427-372.2	c 44	N84-28205 *	US-PATENT-CLASS-427-6	c 71	N84-16456 *
US-PATENT-CLASS-427-126.6	c 26	N84-22734 *	US-PATENT-CLASS-427-372A	c 24	N79-25142 *	US-PATENT-CLASS-427-74	c 44	N82-28780 *
US-PATENT-CLASS-427-126	c 37	N78-13436 *	US-PATENT-CLASS-427-376.2	c 26	N85-35267 *	US-PATENT-CLASS-427-75	c 44	N82-25527 *
US-PATENT-CLASS-427-126	c 44	N79-11472 *	US-PATENT-CLASS-427-376.6	c 33	N84-16456 *	US-PATENT-CLASS-427-75	c 44	N79-11468 *
US-PATENT-CLASS-427-130	c 44	N77-32583 *	US-PATENT-CLASS-427-376.7	c 33	N84-16456 *	US-PATENT-CLASS-427-75	c 44	N79-11472 *
US-PATENT-CLASS-427-140	c 27	N82-33520 *	US-PATENT-CLASS-427-376A	c 27	N78-32260 *	US-PATENT-CLASS-427-75	c 33	N84-16456 *
US-PATENT-CLASS-427-140	c 24	N83-13172 *	US-PATENT-CLASS-427-376B	c 27	N78-32260 *	US-PATENT-CLASS-427-84	c 44	N79-11472 *
US-PATENT-CLASS-427-160	c 34	N77-18382 *	US-PATENT-CLASS-427-376B	c 24	N79-17916 *	US-PATENT-CLASS-427-85	c 44	N85-20530 *
US-PATENT-CLASS-427-160	c 44	N78-19599 *	US-PATENT-CLASS-427-376C	c 24	N79-17916 *	US-PATENT-CLASS-427-86	c 44	N76-28635 *
US-PATENT-CLASS-427-162	c 12	N76-15189 *	US-PATENT-CLASS-427-376	c 27	N76-22377 *	US-PATENT-CLASS-427-86	c 44	N78-24609 *
US-PATENT-CLASS-427-162	c 27	N86-31727 *	US-PATENT-CLASS-427-376	c 27	N76-23426 *	US-PATENT-CLASS-427-88	c 44	N79-31752 *
US-PATENT-CLASS-427-164	c 27	N78-14164 *	US-PATENT-CLASS-427-379	c 27	N76-22377 *	US-PATENT-CLASS-427-88	c 44	N83-13579 *
US-PATENT-CLASS-427-164	c 27	N78-31233 *	US-PATENT-CLASS-427-379	c 27	N76-23426 *	US-PATENT-CLASS-427-88	c 33	N84-16456 *
US-PATENT-CLASS-427-164	c 74	N78-32854 *	US-PATENT-CLASS-427-379	c 27	N78-32260 *	US-PATENT-CLASS-427-89	c 44	N83-13579 *
US-PATENT-CLASS-427-164	c 27	N80-24437 *	US-PATENT-CLASS-427-379	c 27	N81-19296 *	US-PATENT-CLASS-427-90	c 44	N83-13579 *
US-PATENT-CLASS-427-164	c 27	N86-31727 *	US-PATENT-CLASS-427-379	c 24	N83-13171 *	US-PATENT-CLASS-427-91	c 44	N83-13579 *
US-PATENT-CLASS-427-165	c 27	N86-31727 *	US-PATENT-CLASS-427-379	c 24	N83-13172 *	US-PATENT-CLASS-427-95	c 25	N79-28253 *
US-PATENT-CLASS-427-178	c 24	N85-30027 *	US-PATENT-CLASS-427-379	c 44	N84-28205 *	US-PATENT-CLASS-427-96	c 33	N84-16456 *
US-PATENT-CLASS-427-191	c 26	N85-35267 *	US-PATENT-CLASS-427-37	c 24	N85-30027 *	US-PATENT-CLASS-428-109	c 27	N76-14264 *
US-PATENT-CLASS-427-191	c 26	N86-32550 *	US-PATENT-CLASS-427-380	c 27	N76-22377 *	US-PATENT-CLASS-428-109	c 33	N79-12331 *
US-PATENT-CLASS-427-192	c 26	N86-32550 *	US-PATENT-CLASS-427-380	c 27	N76-23426 *	US-PATENT-CLASS-428-113	c 24	N81-14000 *
US-PATENT-CLASS-427-196	c 27	N76-15310 *	US-PATENT-CLASS-427-380	c 27	N78-32260 *	US-PATENT-CLASS-428-114	c 24	N81-13999 *
US-PATENT-CLASS-427-203	c 27	N76-16229 *	US-PATENT-CLASS-427-380C	c 44	N84-28205 *	US-PATENT-CLASS-428-114	c 24	N81-14000 *
US-PATENT-CLASS-427-204	c 27	N76-16229 *	US-PATENT-CLASS-427-380	c 26	N85-35267 *	US-PATENT-CLASS-428-116	c 24	N78-10214 *
US-PATENT-CLASS-427-205	c 27	N76-16229 *	US-PATENT-CLASS-427-384	c 24	N83-13171 *	US-PATENT-CLASS-428-116	c 24	N78-17149 *
US-PATENT-CLASS-427-205	c 27	N82-28441 *	US-PATENT-CLASS-427-384	c 24	N83-13172 *	US-PATENT-CLASS-428-116	c 24	N86-28131 *
US-PATENT-CLASS-427-215	c 27	N78-32260 *	US-PATENT-CLASS-427-385.5	c 27	N81-14078 *	US-PATENT-CLASS-428-117	c 37	N76-24575 *
US-PATENT-CLASS-427-215	c 24	N83-33950 *	US-PATENT-CLASS-427-385.5	c 27	N86-20561 *	US-PATENT-CLASS-428-117	c 24	N78-15180 *
US-PATENT-CLASS-427-216	c 33	N84-16456 *	US-PATENT-CLASS-427-385B	c 44	N78-25530 *	US-PATENT-CLASS-428-117	c 24	N79-16915 *
US-PATENT-CLASS-427-217	c 33	N84-16456 *	US-PATENT-CLASS-427-385C	c 44	N78-25530 *	US-PATENT-CLASS-428-119	c 24	N79-16915 *
US-PATENT-CLASS-427-219.2	c 27	N83-31855 *	US-PATENT-CLASS-427-386	c 24	N78-27180 *	US-PATENT-CLASS-428-133	c 37	N79-10422 *
US-PATENT-CLASS-427-221	c 27	N81-19296 *	US-PATENT-CLASS-427-387	c 74	N78-32854 *	US-PATENT-CLASS-428-137	c 24	N79-25142 *
US-PATENT-CLASS-427-226	c 33	N84-16456 *	US-PATENT-CLASS-427-387	c 24	N83-13171 *	US-PATENT-CLASS-428-138	c 24	N78-10214 *
US-PATENT-CLASS-427-226	c 44	N84-28205 *	US-PATENT-CLASS-427-387	c 24	N83-13172 *	US-PATENT-CLASS-428-139	c 23	N81-29160 *
US-PATENT-CLASS-427-228	c 26	N85-35267 *	US-PATENT-CLASS-427-388.1	c 27	N86-20561 *	US-PATENT-CLASS-428-140	c 24	N81-14000 *
US-PATENT-CLASS-427-229	c 25	N78-10225 *	US-PATENT-CLASS-427-388A	c 24	N78-27180 *	US-PATENT-CLASS-428-141	c 24	N77-28225 *
US-PATENT-CLASS-427-229	c 37	N87-21334 *	US-PATENT-CLASS-427-38	c 74	N78-32854 *	US-PATENT-CLASS-428-141	c 27	N82-28440 *
US-PATENT-CLASS-427-230	c 37	N76-31524 *	US-PATENT-CLASS-427-38	c 27	N80-24437 *	US-PATENT-CLASS-428-141	c 27	N82-33521 *
US-PATENT-CLASS-427-240	c 37	N81-33482 *	US-PATENT-CLASS-427-38	c 26	N85-29005 *	US-PATENT-CLASS-428-155	c 37	N84-22957 *
US-PATENT-CLASS-427-241	c 24	N83-33950 *	US-PATENT-CLASS-427-38	c 27	N86-19458 *	US-PATENT-CLASS-428-161	c 24	N77-28225 *
US-PATENT-CLASS-427-243	c 31	N83-35177 *	US-PATENT-CLASS-427-38	c 26	N88-14178 *	US-PATENT-CLASS-428-182	c 18	N84-33450 *
US-PATENT-CLASS-427-244	c 25	N82-21268 *	US-PATENT-CLASS-427-393.3	c 27	N82-16239 *	US-PATENT-CLASS-428-182	c 31	N89-12786 *
US-PATENT-CLASS-427-245	c 27	N80-23452 *	US-PATENT-CLASS-427-397.7	c 27	N82-33520 *	US-PATENT-CLASS-428-184	c 18	N84-33450 *
US-PATENT-CLASS-427-245	c 31	N88-29052 *	US-PATENT-CLASS-427-399	c 26	N85-35267 *	US-PATENT-CLASS-428-189	c 27	N79-12221 *
US-PATENT-CLASS-427-246	c 25	N82-21268 *	US-PATENT-CLASS-427-398A	c 44	N79-11472 *	US-PATENT-CLASS-428-192	c 27	N82-24339 *
US-PATENT-CLASS-427-247	c 31	N83-35177 *	US-PATENT-CLASS-427-399	c 44	N79-11472 *	US-PATENT-CLASS-428-193	c 27	N82-24339 *
US-PATENT-CLASS-427-248.1	c 27	N86-19458 *	US-PATENT-CLASS-427-399	c 36	N84-22944 *	US-PATENT-CLASS-428-202	c 27	N84-14323 *
US-PATENT-CLASS-427-248E	c 37	N78-13436 *	US-PATENT-CLASS-427-39	c 24	N85-21267 *	US-PATENT-CLASS-428-212	c 27	N76-14264 *
US-PATENT-CLASS-427-248J	c 44	N78-24609 *	US-PATENT-CLASS-427-39	c 31	N86-32587 *	US-PATENT-CLASS-428-212	c 27	N79-12221 *
US-PATENT-CLASS-427-248	c 44	N76-28635 *	US-PATENT-CLASS-427-400	c 27	N83-34039 *	US-PATENT-CLASS-428-212	c 27	N82-29456 *
US-PATENT-CLASS-427-249	c 44	N76-28635 *	US-PATENT-CLASS-427-402	c 27	N76-22377 *	US-PATENT-CLASS-428-214	c 27	N76-14264 *
US-PATENT-CLASS-427-249	c 44	N78-24609 *	US-PATENT-CLASS-427-402	c 27	N76-23426 *	US-PATENT-CLASS-428-216	c 76	N90-24168 *
US-PATENT-CLASS-427-250	c 12	N76-15189 *	US-PATENT-CLASS-427-405	c 34	N78-18355 *	US-PATENT-CLASS-428-218	c 27	N82-29456 *
US-PATENT-CLASS-427-250	c 44	N76-28635 *	US-PATENT-CLASS-427-405	c 27	N82-28441 *	US-PATENT-CLASS-428-218	c 24	N83-13171 *
US-PATENT-CLASS-427-250	c 37	N78-13436 *	US-PATENT-CLASS-427-405	c 27	N83-31855 *	US-PATENT-CLASS-428-220	c 15	N79-26100 *
US-PATENT-CLASS-427-250	c 27	N82-28441 *	US-PATENT-CLASS-427-405	c 26	N84-27855 *	US-PATENT-CLASS-428-241	c 27	N82-24339 *
US-PATENT-CLASS-427-255	c 37	N78-13436 *	US-PATENT-CLASS-427-407.1	c 27	N83-34039 *	US-PATENT-CLASS-428-241	c 27	N83-18908 *
US-PATENT-CLASS-427-261	c 44	N78-25527 *	US-PATENT-CLASS-427-40	c 27	N78-31233 *	US-PATENT-CLASS-428-242	c 27	N82-24339 *
US-PATENT-CLASS-427-261	c 44	N79-11472 *	US-PATENT-CLASS-427-40	c 27	N79-18052 *	US-PATENT-CLASS-428-244	c 27	N83-18908 *
US-PATENT-CLASS-427-270	c 27	N76-16229 *	US-PATENT-CLASS-427-40	c 27	N80-24437 *	US-PATENT-CLASS-428-245	c 27	N82-24339 *
US-PATENT-CLASS-427-272	c 31	N90-19427 *	US-PATENT-CLASS-427-419.2	c 26	N85-31795 *	US-PATENT-CLASS-428-245	c 27	N83-18908 *
US-PATENT-CLASS-427-272	c 24	N90-25197 *	US-PATENT-CLASS-427-419.2	c 26	N84-27855 *	US-PATENT-CLASS-428-246	c 27	N84-14322 *
US-PATENT-CLASS-427-275	c 27	N76-16229 *	US-PATENT-CLASS-427-419A	c 34	N78-18355 *	US-PATENT-CLASS-428-246	c 03	N84-33394 *
US-PATENT-CLASS-427-282	c 24	N90-25197 *	US-PATENT-CLASS-427-41	c 27	N78-31233 *	US-PATENT-CLASS-428-247	c 33	N79-12331 *
US-PATENT-CLASS-427-287	c 27	N76-16229 *	US-PATENT-CLASS-427-41	c 74	N78-32854 *	US-PATENT-CLASS-428-247	c 33	N82-26571 *
US-PATENT-CLASS-427-290	c 24	N90-25197 *	US-PATENT-CLASS-427-41	c 27	N79-14214 *	US-PATENT-CLASS-428-251	c 27	N82-24339 *
US-PATENT-CLASS-427-292	c 24	N79-17916 *	US-PATENT-CLASS-427-41	c 27	N79-18052 *	US-PATENT-CLASS-428-252	c 54	N90-25498 *
US-PATENT-CLASS-427-292	c 24	N83-13172 *	US-PATENT-CLASS-427-41	c 27	N80-23452 *	US-PATENT-CLASS-428-257	c 27	N82-24339 *
US-PATENT-CLASS-427-294	c 27	N79-14214 *	US-PATENT-CLASS-427-421	c 71	N84-16940 *	US-PATENT-CLASS-428-258	c 33	N79-12331 *
US-PATENT-CLASS-427-294	c 26	N85-35267 *	US-PATENT-CLASS-427-421	c 26	N86-32550 *	US-PATENT-CLASS-428-259	c 33	N79-12331 *
US-PATENT-CLASS-427-296	c 26	N84-22734 *	US-PATENT-CLASS-427-422	c 24	N85-30027 *	US-PATENT-CLASS-428-260	c 27	N81-27272 *
US-PATENT-CLASS-427-2	c 52	N90-20616 *	US-PATENT-CLASS-427-423	c 34	N78-18355 *	US-PATENT-CLASS-428-260	c 27	N82-24339 *
US-PATENT-CLASS-427-302	c 74	N78-32854 *	US-PATENT-CLASS-427-423	c 27	N82-29453 *	US-PATENT-CLASS-428-260	c 27	N83-18908 *
US-PATENT-CLASS-427-302	c 24	N83-13172 *	US-PATENT-CLASS-427-423	c 27	N83-31855 *	US-PATENT-CLASS-428-260	c 27	N84-14322 *
US-PATENT-CLASS-427-306	c 26</							

US-PATENT-CLASS-428-267	c 27	N82-16238	*	US-PATENT-CLASS-428-416	c 27	N76-14264	*	US-PATENT-CLASS-428-539	c 27	N76-16229	*
US-PATENT-CLASS-428-272	c 27	N82-16238	*	US-PATENT-CLASS-428-417	c 27	N87-25469	*	US-PATENT-CLASS-428-541	c 24	N81-13999	*
US-PATENT-CLASS-428-280	c 27	N79-12221	*	US-PATENT-CLASS-428-418	c 24	N77-27188	*	US-PATENT-CLASS-428-551	c 24	N90-23493	*
US-PATENT-CLASS-428-280	c 03	N84-33394	*	US-PATENT-CLASS-428-418	c 15	N79-26100	*	US-PATENT-CLASS-428-552	c 24	N90-23493	*
US-PATENT-CLASS-428-282	c 24	N79-25142	*	US-PATENT-CLASS-428-421	c 34	N77-18382	*	US-PATENT-CLASS-428-564	c 26	N84-33555	*
US-PATENT-CLASS-428-283	c 24	N82-29362	*	US-PATENT-CLASS-428-421	c 15	N79-26100	*	US-PATENT-CLASS-428-58	c 27	N89-12741	*
US-PATENT-CLASS-428-283	c 27	N82-29456	*	US-PATENT-CLASS-428-421	c 27	N80-24437	*	US-PATENT-CLASS-428-593	c 24	N82-24296	*
US-PATENT-CLASS-428-284	c 24	N82-29362	*	US-PATENT-CLASS-428-421	c 76	N83-34796	*	US-PATENT-CLASS-428-593	c 24	N84-11214	*
US-PATENT-CLASS-428-285	c 27	N79-12221	*	US-PATENT-CLASS-428-421	c 27	N87-16909	*	US-PATENT-CLASS-428-594	c 24	N82-24296	*
US-PATENT-CLASS-428-285	c 24	N91-31236	*	US-PATENT-CLASS-428-421	c 27	N87-23736	*	US-PATENT-CLASS-428-594	c 24	N82-32417	*
US-PATENT-CLASS-428-286	c 27	N79-12221	*	US-PATENT-CLASS-428-422	c 27	N78-31233	*	US-PATENT-CLASS-428-595	c 18	N84-33450	*
US-PATENT-CLASS-428-286	c 24	N82-29362	*	US-PATENT-CLASS-428-422	c 76	N83-34796	*	US-PATENT-CLASS-428-604	c 24	N82-24296	*
US-PATENT-CLASS-428-287	c 24	N82-29362	*	US-PATENT-CLASS-428-422	c 27	N87-23736	*	US-PATENT-CLASS-428-604	c 24	N82-32417	*
US-PATENT-CLASS-428-287	c 03	N84-33394	*	US-PATENT-CLASS-428-422	c 54	N90-25498	*	US-PATENT-CLASS-428-607	c 24	N82-32417	*
US-PATENT-CLASS-428-288	c 24	N82-29362	*	US-PATENT-CLASS-428-423.5	c 03	N84-33394	*	US-PATENT-CLASS-428-607	c 26	N87-25455	*
US-PATENT-CLASS-428-288	c 27	N89-29538	*	US-PATENT-CLASS-428-425	c 24	N77-28225	*	US-PATENT-CLASS-428-607	c 24	N90-23480	*
US-PATENT-CLASS-428-289	c 27	N82-29456	*	US-PATENT-CLASS-428-426	c 74	N78-15879	*	US-PATENT-CLASS-428-608	c 24	N82-32417	*
US-PATENT-CLASS-428-290	c 24	N78-15180	*	US-PATENT-CLASS-428-427	c 27	N78-32260	*	US-PATENT-CLASS-428-623	c 27	N83-31855	*
US-PATENT-CLASS-428-290	c 24	N79-25142	*	US-PATENT-CLASS-428-427	c 44	N83-34448	*	US-PATENT-CLASS-428-623	c 24	N90-23480	*
US-PATENT-CLASS-428-290	c 27	N87-28657	*	US-PATENT-CLASS-428-428	c 27	N76-22377	*	US-PATENT-CLASS-428-627	c 24	N90-23480	*
US-PATENT-CLASS-428-290	c 54	N90-25498	*	US-PATENT-CLASS-428-428	c 27	N76-23426	*	US-PATENT-CLASS-428-629	c 44	N80-16452	*
US-PATENT-CLASS-428-294	c 24	N78-17150	*	US-PATENT-CLASS-428-428	c 74	N78-15879	*	US-PATENT-CLASS-428-632	c 26	N81-25188	*
US-PATENT-CLASS-428-294	c 76	N83-34796	*	US-PATENT-CLASS-428-428	c 27	N78-32260	*	US-PATENT-CLASS-428-632	c 26	N84-27855	*
US-PATENT-CLASS-428-301	c 24	N77-27188	*	US-PATENT-CLASS-428-428	c 44	N83-34448	*	US-PATENT-CLASS-428-632	c 26	N87-25455	*
US-PATENT-CLASS-428-302	c 24	N78-17150	*	US-PATENT-CLASS-428-432	c 27	N84-33589	*	US-PATENT-CLASS-428-632	c 24	N90-23480	*
US-PATENT-CLASS-428-303	c 27	N76-15310	*	US-PATENT-CLASS-428-432	c 76	N85-33826	*	US-PATENT-CLASS-428-633	c 34	N78-18355	*
US-PATENT-CLASS-428-304.4	c 03	N84-33394	*	US-PATENT-CLASS-428-446	c 27	N78-32260	*	US-PATENT-CLASS-428-633	c 27	N83-31855	*
US-PATENT-CLASS-428-307.7	c 27	N82-29456	*	US-PATENT-CLASS-428-446	c 27	N82-29456	*	US-PATENT-CLASS-428-633	c 24	N85-21266	*
US-PATENT-CLASS-428-311.5	c 27	N82-29456	*	US-PATENT-CLASS-428-446	c 27	N86-19458	*	US-PATENT-CLASS-428-633	c 24	N85-35233	*
US-PATENT-CLASS-428-312.6	c 27	N82-29456	*	US-PATENT-CLASS-428-447	c 27	N76-14264	*	US-PATENT-CLASS-428-639	c 26	N84-33555	*
US-PATENT-CLASS-428-312.6	c 44	N83-34448	*	US-PATENT-CLASS-428-447	c 27	N76-16230	*	US-PATENT-CLASS-428-63	c 24	N83-13172	*
US-PATENT-CLASS-428-312	c 27	N78-32260	*	US-PATENT-CLASS-428-447	c 27	N78-31233	*	US-PATENT-CLASS-428-641	c 26	N83-31795	*
US-PATENT-CLASS-428-313	c 24	N78-27180	*	US-PATENT-CLASS-428-447	c 74	N78-32854	*	US-PATENT-CLASS-428-641	c 76	N90-19894	*
US-PATENT-CLASS-428-317.9	c 27	N82-29456	*	US-PATENT-CLASS-428-447	c 27	N79-12221	*	US-PATENT-CLASS-428-650	c 44	N80-16452	*
US-PATENT-CLASS-428-319.1	c 03	N84-33394	*	US-PATENT-CLASS-428-447	c 27	N79-18052	*	US-PATENT-CLASS-428-650	c 26	N83-31795	*
US-PATENT-CLASS-428-325	c 27	N78-32260	*	US-PATENT-CLASS-428-447	c 24	N79-25142	*	US-PATENT-CLASS-428-651	c 26	N87-25455	*
US-PATENT-CLASS-428-325	c 27	N82-29456	*	US-PATENT-CLASS-428-447	c 27	N82-24339	*	US-PATENT-CLASS-428-652	c 34	N78-18355	*
US-PATENT-CLASS-428-325	c 44	N83-34448	*	US-PATENT-CLASS-428-447	c 27	N87-14516	*	US-PATENT-CLASS-428-652	c 44	N78-19599	*
US-PATENT-CLASS-428-328	c 24	N77-27188	*	US-PATENT-CLASS-428-447	c 27	N87-23736	*	US-PATENT-CLASS-428-656	c 24	N85-21266	*
US-PATENT-CLASS-428-328	c 54	N90-25498	*	US-PATENT-CLASS-428-447	c 54	N90-25498	*	US-PATENT-CLASS-428-656	c 24	N85-35233	*
US-PATENT-CLASS-428-331	c 27	N78-32260	*	US-PATENT-CLASS-428-448	c 27	N82-24339	*	US-PATENT-CLASS-428-658	c 44	N80-16452	*
US-PATENT-CLASS-428-331	c 27	N83-18908	*	US-PATENT-CLASS-428-448	c 24	N88-18628	*	US-PATENT-CLASS-428-660	c 26	N87-25455	*
US-PATENT-CLASS-428-332	c 27	N76-22377	*	US-PATENT-CLASS-428-44	c 27	N89-12741	*	US-PATENT-CLASS-428-666	c 24	N90-23480	*
US-PATENT-CLASS-428-332	c 27	N76-23426	*	US-PATENT-CLASS-428-450	c 27	N76-16229	*	US-PATENT-CLASS-428-667	c 34	N78-18355	*
US-PATENT-CLASS-428-332	c 24	N78-27180	*	US-PATENT-CLASS-428-450	c 27	N76-22377	*	US-PATENT-CLASS-428-667	c 44	N78-19599	*
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US-PATENT-CLASS-429-253	c 27	N81-24257 *	US-PATENT-CLASS-435-311	c 51	N91-14703 *	US-PATENT-CLASS-455-612	c 74	N82-19029 *
US-PATENT-CLASS-429-253	c 23	N81-29160 *	US-PATENT-CLASS-435-311	c 51	N91-21700 *	US-PATENT-CLASS-455-612	c 74	N83-29032 *
US-PATENT-CLASS-429-253	c 25	N83-13188 *	US-PATENT-CLASS-435-311	c 51	N91-21701 *	US-PATENT-CLASS-455-615	c 74	N82-19029 *
US-PATENT-CLASS-429-254	c 44	N78-25350 *	US-PATENT-CLASS-435-312	c 51	N91-21700 *	US-PATENT-CLASS-455-617	c 74	N82-19029 *
US-PATENT-CLASS-429-254	c 44	N82-29708 *	US-PATENT-CLASS-435-312	c 51	N91-30667 *	US-PATENT-CLASS-455-619	c 32	N81-14186 *
US-PATENT-CLASS-429-254	c 44	N83-32176 *	US-PATENT-CLASS-435-313	c 51	N91-30667 *	US-PATENT-CLASS-455-65	c 32	N87-25511 *
US-PATENT-CLASS-429-27	c 27	N81-24257 *	US-PATENT-CLASS-435-315	c 51	N91-21701 *	US-PATENT-CLASS-455-67	c 32	N89-14374 *
US-PATENT-CLASS-429-27	c 23	N81-29160 *	US-PATENT-CLASS-435-316	c 51	N80-27067 *	US-PATENT-CLASS-455-71	c 32	N81-14186 *
US-PATENT-CLASS-429-27	c 44	N86-25874 *	US-PATENT-CLASS-435-316	c 51	N91-14703 *	US-PATENT-CLASS-455-73	c 32	N85-29118 *
US-PATENT-CLASS-429-28	c 27	N81-24257 *	US-PATENT-CLASS-435-316	c 51	N91-21700 *	US-PATENT-CLASS-455-98	c 32	N89-14374 *
US-PATENT-CLASS-429-28	c 23	N81-29160 *	US-PATENT-CLASS-435-316	c 51	N91-21701 *	US-PATENT-CLASS-455-99	c 33	N91-31530 *
US-PATENT-CLASS-429-33	c 44	N79-17313 *	US-PATENT-CLASS-435-32	c 51	N80-27067 *	US-PATENT-CLASS-464-132	c 37	N91-17387 *
US-PATENT-CLASS-429-33	c 44	N82-29710 *	US-PATENT-CLASS-435-34	c 51	N80-16714 *	US-PATENT-CLASS-464-56	c 37	N91-17387 *
US-PATENT-CLASS-429-34	c 44	N77-14581 *	US-PATENT-CLASS-435-34	c 51	N80-27067 *	US-PATENT-CLASS-464-56	c 37	N91-17388 *
US-PATENT-CLASS-429-34	c 44	N83-27344 *	US-PATENT-CLASS-435-34	c 51	N81-28698 *	US-PATENT-CLASS-467-28	c 39	N80-10507 *
US-PATENT-CLASS-429-40	c 44	N82-29710 *	US-PATENT-CLASS-435-34	c 35	N82-28604 *	US-PATENT-CLASS-47-1.2	c 51	N75-25503 *

US-PATENT-CLASS-47-1.4 ..... c 31 N73-32750 \*  
US-PATENT-CLASS-47-1.4 ..... c 54 N91-31803 \* #  
US-PATENT-CLASS-47-17 ..... c 31 N73-32750 \*  
US-PATENT-CLASS-47-26 ..... c 37 N83-26078 \*  
US-PATENT-CLASS-47-39 ..... c 51 N75-25503 \*  
US-PATENT-CLASS-47-58 ..... c 51 N75-25503 \*  
US-PATENT-CLASS-47-58 ..... c 51 N83-17045 \*  
US-PATENT-CLASS-47-58 ..... c 45 N84-12654 \*  
US-PATENT-CLASS-47-62 ..... c 54 N91-31803 \* #  
US-PATENT-CLASS-474-205 ..... c 37 N80-32717 \*  
US-PATENT-CLASS-474-220 ..... c 37 N87-17034 \*  
US-PATENT-CLASS-48-DIG.8 ..... c 28 N80-10374 \*  
US-PATENT-CLASS-48-10-3 ..... c 28 N80-10374 \*  
US-PATENT-CLASS-48-102A ..... c 28 N80-10374 \*  
US-PATENT-CLASS-48-107A ..... c 28 N80-10374 \*  
US-PATENT-CLASS-48-116 ..... c 44 N76-18642 \*  
US-PATENT-CLASS-48-116 ..... c 44 N77-10636 \*  
US-PATENT-CLASS-48-117 ..... c 44 N76-18642 \*  
US-PATENT-CLASS-48-117 ..... c 44 N77-10636 \*  
US-PATENT-CLASS-48-117 ..... c 28 N80-10374 \*  
US-PATENT-CLASS-48-197-R ..... c 25 N86-25428 \*  
US-PATENT-CLASS-48-197R ..... c 44 N76-29704 \*  
US-PATENT-CLASS-48-197R ..... c 44 N77-10636 \*  
US-PATENT-CLASS-48-197R ..... c 28 N91-14495 \*  
US-PATENT-CLASS-48-203 ..... c 28 N91-14495 \*  
US-PATENT-CLASS-48-212 ..... c 44 N77-10636 \*  
US-PATENT-CLASS-48-215 ..... c 44 N76-29700 \*  
US-PATENT-CLASS-48-61 ..... c 44 N77-10636 \*  
US-PATENT-CLASS-48-61 ..... c 28 N80-10374 \*  
US-PATENT-CLASS-48-63 ..... c 44 N76-18642 \*  
US-PATENT-CLASS-48-75 ..... c 44 N76-18642 \*  
US-PATENT-CLASS-48-77 ..... c 28 N91-14495 \*  
US-PATENT-CLASS-48-89 ..... c 44 N82-16475 \*  
US-PATENT-CLASS-48-95 ..... c 44 N76-18642 \*  
US-PATENT-CLASS-48-95 ..... c 44 N76-29700 \*  
US-PATENT-CLASS-48-99 ..... c 44 N82-16475 \*  
US-PATENT-CLASS-49-DIG.1 ..... c 34 N78-25350 \*  
US-PATENT-CLASS-49-171 ..... c 31 N81-19343 \*  
US-PATENT-CLASS-49-253 ..... c 18 N90-19278 \*  
US-PATENT-CLASS-49-479 ..... c 34 N78-25350 \*  
US-PATENT-CLASS-49-485 ..... c 34 N78-25350 \*  
US-PATENT-CLASS-49-68 ..... c 18 N74-22136 \*  
US-PATENT-CLASS-5-345 ..... c 05 N70-33285 \*  
US-PATENT-CLASS-5-459 ..... c 03 N84-33394 \*  
US-PATENT-CLASS-5-69 ..... c 05 N72-11085 \*  
US-PATENT-CLASS-5-81-R ..... c 85 N87-21755 \*  
US-PATENT-CLASS-5-82 ..... c 05 N71-23159 \*  
US-PATENT-CLASS-501-88 ..... c 27 N88-29040 \*  
US-PATENT-CLASS-501-88 ..... c 27 N90-21177 \*  
US-PATENT-CLASS-501-91 ..... c 27 N88-29040 \*  
US-PATENT-CLASS-501-91 ..... c 27 N90-21177 \*  
US-PATENT-CLASS-501-92 ..... c 27 N88-29040 \*  
US-PATENT-CLASS-501-92 ..... c 27 N90-21177 \*  
US-PATENT-CLASS-501-93 ..... c 27 N88-29040 \*  
US-PATENT-CLASS-502-217 ..... c 25 N90-23517 \*  
US-PATENT-CLASS-502-218 ..... c 25 N90-23517 \*  
US-PATENT-CLASS-502-226 ..... c 25 N90-23517 \*  
US-PATENT-CLASS-502-239 ..... c 25 N90-23517 \*  
US-PATENT-CLASS-502-241 ..... c 25 N90-23517 \*  
US-PATENT-CLASS-502-245 ..... c 25 N90-23517 \*  
US-PATENT-CLASS-502-324 ..... c 25 N90-23517 \*  
US-PATENT-CLASS-502-324 ..... c 25 N91-21270 \*  
US-PATENT-CLASS-502-325 ..... c 25 N90-20180 \*  
US-PATENT-CLASS-502-339 ..... c 25 N90-20154 \*  
US-PATENT-CLASS-502-339 ..... c 25 N90-20180 \*  
US-PATENT-CLASS-502-344 ..... c 25 N90-20180 \*  
US-PATENT-CLASS-502-344 ..... c 25 N91-21270 \*  
US-PATENT-CLASS-502-352 ..... c 25 N90-20154 \*  
US-PATENT-CLASS-502-38 ..... c 25 N90-20154 \*  
US-PATENT-CLASS-502-53 ..... c 25 N90-20154 \*  
US-PATENT-CLASS-505-1 ..... c 33 N91-31529 \*  
US-PATENT-CLASS-505-701 ..... c 33 N91-31529 \*  
US-PATENT-CLASS-505-702 ..... c 33 N91-31529 \*  
US-PATENT-CLASS-505-703 ..... c 33 N91-31529 \*  
US-PATENT-CLASS-505-704 ..... c 33 N91-31529 \*  
US-PATENT-CLASS-51-170 ..... c 15 N71-26134 \*  
US-PATENT-CLASS-51-216 ..... c 15 N72-20444 \*  
US-PATENT-CLASS-51-225 ..... c 37 N74-27905 \*  
US-PATENT-CLASS-51-234 ..... c 37 N74-27905 \*  
US-PATENT-CLASS-51-235 ..... c 37 N78-17383 \*  
US-PATENT-CLASS-51-235 ..... c 76 N80-18951 \*  
US-PATENT-CLASS-51-277 ..... c 74 N80-24149 \*  
US-PATENT-CLASS-51-281-R ..... c 31 N87-25491 \*  
US-PATENT-CLASS-51-283R ..... c 74 N80-24149 \*  
US-PATENT-CLASS-51-283 ..... c 46 N74-23069 \*  
US-PATENT-CLASS-51-320 ..... c 15 N72-20444 \*  
US-PATENT-CLASS-51-323 ..... c 15 N72-20444 \*  
US-PATENT-CLASS-51-57 ..... c 15 N71-22705 \*  
US-PATENT-CLASS-51-73R ..... c 37 N85-21650 \*  
US-PATENT-CLASS-51-97R ..... c 37 N74-27905 \*  
US-PATENT-CLASS-52-DIG.10 ..... c 18 N72-25540 \*  
US-PATENT-CLASS-52-DIG.10 ..... c 18 N72-25541 \*  
US-PATENT-CLASS-52-108 ..... c 15 N72-18477 \*  
US-PATENT-CLASS-52-108 ..... c 31 N81-27323 \*  
US-PATENT-CLASS-52-108 ..... c 31 N87-25492 \*  
US-PATENT-CLASS-52-109 ..... c 31 N73-32749 \*

US-PATENT-CLASS-52-110 ..... c 37 N86-25791 \*  
US-PATENT-CLASS-52-111 ..... c 31 N81-27324 \*  
US-PATENT-CLASS-52-111 ..... c 37 N86-25789 \*  
US-PATENT-CLASS-52-111 ..... c 37 N86-32737 \*  
US-PATENT-CLASS-52-117 ..... c 44 N77-32582 \*  
US-PATENT-CLASS-52-126.5 ..... c 31 N87-16918 \*  
US-PATENT-CLASS-52-127.7 ..... c 37 N85-30335 \*  
US-PATENT-CLASS-52-127 ..... c 15 N71-21531 \*  
US-PATENT-CLASS-52-144 ..... c 71 N91-27913 \*  
US-PATENT-CLASS-52-169 ..... c 15 N72-25454 \*  
US-PATENT-CLASS-52-171 ..... c 11 N73-12265 \*  
US-PATENT-CLASS-52-171 ..... c 74 N85-29750 \*  
US-PATENT-CLASS-52-173R ..... c 44 N77-31601 \*  
US-PATENT-CLASS-52-173 ..... c 15 N72-25454 \*  
US-PATENT-CLASS-52-1 ..... c 15 N72-28496 \*  
US-PATENT-CLASS-52-232 ..... c 37 N81-14317 \*  
US-PATENT-CLASS-52-236 ..... c 39 N76-31562 \*  
US-PATENT-CLASS-52-249 ..... c 33 N71-25351 \*  
US-PATENT-CLASS-52-272 ..... c 31 N71-24035 \*  
US-PATENT-CLASS-52-284 ..... c 32 N73-13921 \*  
US-PATENT-CLASS-52-2 ..... c 32 N71-21045 \*  
US-PATENT-CLASS-52-2 ..... c 44 N77-32583 \*  
US-PATENT-CLASS-52-309.15 ..... c 31 N87-16918 \*  
US-PATENT-CLASS-52-309.1 ..... c 31 N81-25258 \*  
US-PATENT-CLASS-52-391 ..... c 31 N87-16918 \*  
US-PATENT-CLASS-52-3 ..... c 31 N71-16080 \*  
US-PATENT-CLASS-52-404 ..... c 33 N71-25351 \*  
US-PATENT-CLASS-52-404 ..... c 16 N84-22601 \*  
US-PATENT-CLASS-52-506 ..... c 16 N84-22601 \*  
US-PATENT-CLASS-52-506 ..... c 37 N85-30335 \*  
US-PATENT-CLASS-52-511 ..... c 31 N87-16918 \*  
US-PATENT-CLASS-52-51 ..... c 44 N77-31601 \*  
US-PATENT-CLASS-52-573 ..... c 15 N72-28496 \*  
US-PATENT-CLASS-52-573 ..... c 18 N89-28554 \*  
US-PATENT-CLASS-52-594 ..... c 15 N72-25454 \*  
US-PATENT-CLASS-52-594 ..... c 32 N73-13921 \*  
US-PATENT-CLASS-52-632 ..... c 31 N81-27324 \*  
US-PATENT-CLASS-52-632 ..... c 31 N86-19479 \*  
US-PATENT-CLASS-52-632 ..... c 37 N86-32737 \*  
US-PATENT-CLASS-52-632 ..... c 31 N87-25492 \*  
US-PATENT-CLASS-52-637 ..... c 39 N76-31562 \*  
US-PATENT-CLASS-52-637 ..... c 31 N86-19479 \*  
US-PATENT-CLASS-52-645 ..... c 31 N81-25259 \*  
US-PATENT-CLASS-52-645 ..... c 37 N86-25789 \*  
US-PATENT-CLASS-52-645 ..... c 37 N86-32737 \*  
US-PATENT-CLASS-52-646 ..... c 31 N73-32749 \*  
US-PATENT-CLASS-52-646 ..... c 31 N86-19479 \*  
US-PATENT-CLASS-52-646 ..... c 37 N86-32737 \*  
US-PATENT-CLASS-52-646 ..... c 31 N87-25492 \*  
US-PATENT-CLASS-52-646 ..... c 18 N88-28958 \*  
US-PATENT-CLASS-52-646 ..... c 37 N88-29180 \*  
US-PATENT-CLASS-52-646 ..... c 18 N91-21221 \*  
US-PATENT-CLASS-52-646 ..... c 18 N91-27199 \*  
US-PATENT-CLASS-52-648 ..... c 11 N72-25287 \*  
US-PATENT-CLASS-52-648 ..... c 39 N76-31562 \*  
US-PATENT-CLASS-52-648 ..... c 31 N81-25258 \*  
US-PATENT-CLASS-52-648 ..... c 31 N86-19479 \*  
US-PATENT-CLASS-52-648 ..... c 37 N86-25789 \*  
US-PATENT-CLASS-52-648 ..... c 18 N88-28958 \*  
US-PATENT-CLASS-52-648 ..... c 37 N88-29180 \*  
US-PATENT-CLASS-52-648 ..... c 18 N89-28554 \*  
US-PATENT-CLASS-52-64 ..... c 31 N73-32749 \*  
US-PATENT-CLASS-52-651 ..... c 39 N76-31562 \*  
US-PATENT-CLASS-52-655 ..... c 11 N72-25287 \*  
US-PATENT-CLASS-52-705 ..... c 37 N76-19437 \*  
US-PATENT-CLASS-52-71 ..... c 18 N75-27040 \*  
US-PATENT-CLASS-52-726 ..... c 39 N76-31562 \*  
US-PATENT-CLASS-52-726 ..... c 31 N81-25258 \*  
US-PATENT-CLASS-52-743 ..... c 37 N81-14317 \*  
US-PATENT-CLASS-52-745 ..... c 39 N76-31562 \*  
US-PATENT-CLASS-52-745 ..... c 31 N81-27323 \*  
US-PATENT-CLASS-52-745 ..... c 37 N85-30335 \*  
US-PATENT-CLASS-52-749 ..... c 39 N76-31562 \*  
US-PATENT-CLASS-52-758F ..... c 37 N76-19437 \*  
US-PATENT-CLASS-52-806 ..... c 24 N84-11214 \*  
US-PATENT-CLASS-52-808 ..... c 24 N84-11214 \*  
US-PATENT-CLASS-52-80 ..... c 18 N72-25540 \*  
US-PATENT-CLASS-52-80 ..... c 18 N72-25541 \*  
US-PATENT-CLASS-52-80 ..... c 31 N73-32749 \*  
US-PATENT-CLASS-52-814 ..... c 18 N84-33450 \*  
US-PATENT-CLASS-52-814 ..... c 31 N87-16918 \*  
US-PATENT-CLASS-52-814 ..... c 31 N89-12786 \*  
US-PATENT-CLASS-52-814 ..... c 37 N82-32732 \*  
US-PATENT-CLASS-52-821 ..... c 31 N89-12786 \*  
US-PATENT-CLASS-521-124 ..... c 25 N80-16116 \*  
US-PATENT-CLASS-521-125 ..... c 25 N80-16116 \*  
US-PATENT-CLASS-521-127 ..... c 25 N80-16116 \*  
US-PATENT-CLASS-521-141 ..... c 51 N84-28361 \*  
US-PATENT-CLASS-521-142 ..... c 51 N84-28361 \*  
US-PATENT-CLASS-521-145 ..... c 27 N90-16949 \*  
US-PATENT-CLASS-521-146 ..... c 25 N80-23383 \*  
US-PATENT-CLASS-521-149 ..... c 51 N84-28361 \*  
US-PATENT-CLASS-521-157 ..... c 25 N80-16116 \*  
US-PATENT-CLASS-521-178 ..... c 27 N90-16949 \*  
US-PATENT-CLASS-521-189 ..... c 27 N90-16949 \*  
US-PATENT-CLASS-521-27 ..... c 27 N81-14076 \*

US-PATENT-CLASS-521-32 ..... c 27 N81-14076 \*  
US-PATENT-CLASS-521-55 ..... c 25 N80-23383 \*  
US-PATENT-CLASS-521-62 ..... c 27 N81-14076 \*  
US-PATENT-CLASS-521-82 ..... c 27 N90-16949 \*  
US-PATENT-CLASS-521-918 ..... c 25 N80-23383 \*  
US-PATENT-CLASS-521-97 ..... c 27 N90-16949 \*  
US-PATENT-CLASS-521-98 ..... c 27 N90-16949 \*  
US-PATENT-CLASS-522-162 ..... c 27 N90-21198 \*  
US-PATENT-CLASS-522-165 ..... c 27 N90-21198 \*  
US-PATENT-CLASS-523-135 ..... c 27 N85-29044 \*  
US-PATENT-CLASS-523-205 ..... c 27 N83-19900 \*  
US-PATENT-CLASS-523-433 ..... c 24 N86-19380 \*  
US-PATENT-CLASS-523-434 ..... c 27 N86-27451 \*  
US-PATENT-CLASS-523-435 ..... c 24 N84-11213 \*  
US-PATENT-CLASS-523-440 ..... c 27 N83-34043 \*  
US-PATENT-CLASS-523-443 ..... c 27 N83-34043 \*  
US-PATENT-CLASS-523-445 ..... c 24 N86-19380 \*  
US-PATENT-CLASS-523-445 ..... c 27 N86-27451 \*  
US-PATENT-CLASS-523-454 ..... c 24 N84-34571 \*  
US-PATENT-CLASS-523-454 ..... c 27 N85-34282 \*  
US-PATENT-CLASS-523-456 ..... c 24 N84-11213 \*  
US-PATENT-CLASS-523-458 ..... c 24 N84-34571 \*  
US-PATENT-CLASS-523-458 ..... c 27 N85-34282 \*  
US-PATENT-CLASS-523-461 ..... c 27 N86-27451 \*  
US-PATENT-CLASS-523-66468 ..... c 24 N86-19380 \*  
US-PATENT-CLASS-524-104 ..... c 27 N83-28240 \*  
US-PATENT-CLASS-524-171 ..... c 27 N84-22747 \*  
US-PATENT-CLASS-524-173 ..... c 27 N83-28240 \*  
US-PATENT-CLASS-524-233 ..... c 27 N83-28240 \*  
US-PATENT-CLASS-524-233 ..... c 27 N90-16950 \*  
US-PATENT-CLASS-524-366 ..... c 27 N90-16950 \*  
US-PATENT-CLASS-524-371 ..... c 27 N84-14322 \*  
US-PATENT-CLASS-524-378 ..... c 27 N90-16950 \*  
US-PATENT-CLASS-524-388 ..... c 27 N85-29044 \*  
US-PATENT-CLASS-524-404 ..... c 27 N87-22845 \*  
US-PATENT-CLASS-524-436 ..... c 27 N83-19900 \*  
US-PATENT-CLASS-524-437 ..... c 27 N83-19900 \*  
US-PATENT-CLASS-524-494 ..... c 27 N84-14322 \*  
US-PATENT-CLASS-524-496 ..... c 27 N84-14322 \*  
US-PATENT-CLASS-524-500 ..... c 27 N84-14322 \*  
US-PATENT-CLASS-524-503 ..... c 27 N83-19900 \*  
US-PATENT-CLASS-524-530 ..... c 27 N84-14322 \*  
US-PATENT-CLASS-524-548 ..... c 27 N86-20560 \*  
US-PATENT-CLASS-524-548 ..... c 27 N87-22845 \*  
US-PATENT-CLASS-524-564 ..... c 27 N83-19900 \*  
US-PATENT-CLASS-524-564 ..... c 27 N85-29044 \*  
US-PATENT-CLASS-524-600 ..... c 27 N90-16950 \*  
US-PATENT-CLASS-524-600 ..... c 27 N91-15402 \*  
US-PATENT-CLASS-524-607 ..... c 27 N90-16950 \*  
US-PATENT-CLASS-524-726 ..... c 27 N83-28240 \*  
US-PATENT-CLASS-524-786 ..... c 27 N83-19900 \*  
US-PATENT-CLASS-525-107 ..... c 27 N85-34281 \*  
US-PATENT-CLASS-525-108 ..... c 27 N86-27451 \*  
US-PATENT-CLASS-525-113 ..... c 27 N85-34281 \*  
US-PATENT-CLASS-525-115 ..... c 27 N86-27451 \*  
US-PATENT-CLASS-525-119 ..... c 27 N85-34281 \*  
US-PATENT-CLASS-525-119 ..... c 27 N86-27451 \*  
US-PATENT-CLASS-525-122 ..... c 27 N86-27451 \*  
US-PATENT-CLASS-525-181 ..... c 27 N83-28240 \*  
US-PATENT-CLASS-525-181 ..... c 27 N85-21349 \*  
US-PATENT-CLASS-525-182 ..... c 27 N85-21349 \*  
US-PATENT-CLASS-525-182 ..... c 27 N87-22845 \*  
US-PATENT-CLASS-525-183 ..... c 27 N83-28240 \*  
US-PATENT-CLASS-525-183 ..... c 27 N85-21349 \*  
US-PATENT-CLASS-525-184 ..... c 27 N83-28240 \*  
US-PATENT-CLASS-525-184 ..... c 27 N85-21349 \*  
US-PATENT-CLASS-525-186 ..... c 27 N85-34281 \*  
US-PATENT-CLASS-525-186 ..... c 27 N86-20560 \*  
US-PATENT-CLASS-525-229 ..... c 27 N85-34281 \*  
US-PATENT-CLASS-525-26 ..... c 27 N85-29043 \*  
US-PATENT-CLASS-525-282 ..... c 27 N84-14322 \*  
US-PATENT-CLASS-525-282 ..... c 27 N87-15304 \*  
US-PATENT-CLASS-525-287 ..... c 27 N84-14322 \*  
US-PATENT-CLASS-525-326 ..... c 27 N80-24438 \*  
US-PATENT-CLASS-525-336 ..... c 27 N80-24438 \*  
US-PATENT-CLASS-525-340 ..... c 27 N80-24438 \*  
US-PATENT-CLASS-525-36 ..... c 27 N87-22848 \*  
US-PATENT-CLASS-525-374 ..... c 27 N80-24438 \*  
US-PATENT-CLASS-525-375 ..... c 27 N80-24438 \*  
US-PATENT-CLASS-525-384 ..... c 28 N81-15119 \*  
US-PATENT-CLASS-525-389 ..... c 27 N84-22750 \*  
US-PATENT-CLASS-525-397 ..... c 27 N88-18725 \*  
US-PATENT-CLASS-525-417 ..... c 27 N84-22745 \*  
US-PATENT-CLASS-525-420 ..... c 27 N85-20123 \*  
US-PATENT-CLASS-525-422 ..... c 27 N91-31307 \*  
US-PATENT-CLASS-525-423 ..... c 24 N86-19380 \*  
US-PATENT-CLASS-525-425 ..... c 33 N88-23941 \*  
US-PATENT-CLASS-525-426 ..... c 27 N90-26446 \*  
US-PATENT-CLASS-525-426 ..... c 27 N84-22746 \*  
US-PATENT-CLASS-525-426 ..... c 27 N87-28657 \*  
US-PATENT-CLASS-525-432 ..... c 27 N86-19456 \*  
US-PATENT-CLASS-525-432 ..... c 27 N87-28657 \*  
US-PATENT-CLASS-525-432 ..... c 24 N91-25200 \*  
US-PATENT-CLASS-525-436 ..... c 27 N86-19456 \*  
US-PATENT-CLASS-525-436 ..... c 27 N87-28657 \*  
US-PATENT-CLASS-525-436 ..... c 27 N91-15402 \*



US-PATENT-CLASS-528-353	c 27	N89-16042 *	US-PATENT-CLASS-549-241	c 23	N88-26404 *	US-PATENT-CLASS-55-68	c 25	N80-23383 *
US-PATENT-CLASS-528-353	c 27	N90-16950 *	US-PATENT-CLASS-549-241	c 25	N90-23497 *	US-PATENT-CLASS-55-68	c 45	N91-14662 *
US-PATENT-CLASS-528-353	c 23	N90-19300 *	US-PATENT-CLASS-549-335	c 25	N85-33187 *	US-PATENT-CLASS-55-6	c 35	N84-17555 *
US-PATENT-CLASS-528-353	c 27	N90-23546 *	US-PATENT-CLASS-55-DIG.25	c 35	N84-17555 *	US-PATENT-CLASS-55-72	c 25	N80-23383 *
US-PATENT-CLASS-528-353	c 27	N91-15402 *	US-PATENT-CLASS-55-DIG.30	c 35	N84-17555 *	US-PATENT-CLASS-55-73	c 45	N79-12584 *
US-PATENT-CLASS-528-353	c 27	N91-15403 *	US-PATENT-CLASS-55-DIG.35	c 54	N75-27761 *	US-PATENT-CLASS-55-74	c 23	N77-17161 *
US-PATENT-CLASS-528-361	c 24	N84-11213 *	US-PATENT-CLASS-55-DIG.42	c 37	N85-29283 *	US-PATENT-CLASS-55-74	c 45	N91-14662 *
US-PATENT-CLASS-528-362	c 25	N81-14016 *	US-PATENT-CLASS-55-100	c 35	N78-12390 *	US-PATENT-CLASS-55-75	c 15	N71-26185 *
US-PATENT-CLASS-528-362	c 27	N81-17259 *	US-PATENT-CLASS-55-100	c 25	N78-25148 *	US-PATENT-CLASS-55-75	c 54	N91-31803 *
US-PATENT-CLASS-528-362	c 27	N81-17262 *	US-PATENT-CLASS-55-101	c 25	N78-25148 *	US-PATENT-CLASS-55-84	c 45	N91-14662 *
US-PATENT-CLASS-528-362	c 27	N82-24338 *	US-PATENT-CLASS-55-105	c 35	N84-17555 *	US-PATENT-CLASS-55-89	c 45	N91-14662 *
US-PATENT-CLASS-528-362	c 27	N84-22744 *	US-PATENT-CLASS-55-105	c 33	N90-20320 *	US-PATENT-CLASS-55-96	c 35	N84-17555 *
US-PATENT-CLASS-528-362	c 27	N84-27884 *	US-PATENT-CLASS-55-118	c 35	N79-17192 *	US-PATENT-CLASS-552-101	c 23	N91-17141 *
US-PATENT-CLASS-528-362	c 27	N87-21112 *	US-PATENT-CLASS-55-122	c 35	N79-17192 *	US-PATENT-CLASS-552-101	c 23	N91-25185 *
US-PATENT-CLASS-528-38	c 27	N83-34040 *	US-PATENT-CLASS-55-126	c 35	N84-17555 *	US-PATENT-CLASS-552-108	c 23	N91-25185 *
US-PATENT-CLASS-528-394	c 27	N84-22750 *	US-PATENT-CLASS-55-127	c 35	N79-17192 *	US-PATENT-CLASS-552-110	c 23	N91-25185 *
US-PATENT-CLASS-528-399	c 27	N81-27271 *	US-PATENT-CLASS-55-127	c 35	N84-17555 *	US-PATENT-CLASS-552-113	c 23	N91-25185 *
US-PATENT-CLASS-528-399	c 27	N82-18389 *	US-PATENT-CLASS-55-131	c 35	N84-17555 *	US-PATENT-CLASS-552-115	c 23	N91-25185 *
US-PATENT-CLASS-528-399	c 27	N84-22750 *	US-PATENT-CLASS-55-138	c 35	N84-17555 *	US-PATENT-CLASS-556-402	c 27	N90-21177 *
US-PATENT-CLASS-528-399	c 23	N86-32525 *	US-PATENT-CLASS-55-139	c 35	N84-17555 *	US-PATENT-CLASS-556-410	c 25	N85-21280 *
US-PATENT-CLASS-528-401	c 27	N79-22300 *	US-PATENT-CLASS-55-139	c 33	N90-20320 *	US-PATENT-CLASS-556-436	c 27	N86-21675 *
US-PATENT-CLASS-528-401	c 25	N81-14016 *	US-PATENT-CLASS-55-145	c 35	N84-17555 *	US-PATENT-CLASS-558-145	c 23	N87-28605 *
US-PATENT-CLASS-528-401	c 27	N81-17259 *	US-PATENT-CLASS-55-158	c 52	N79-14749 *	US-PATENT-CLASS-558-190	c 23	N87-28605 *
US-PATENT-CLASS-528-401	c 27	N81-17262 *	US-PATENT-CLASS-55-155	c 35	N79-17192 *	US-PATENT-CLASS-558-190	c 23	N90-20333 *
US-PATENT-CLASS-528-401	c 27	N82-24338 *	US-PATENT-CLASS-55-158	c 18	N71-20742 *	US-PATENT-CLASS-558-193	c 23	N91-25185 *
US-PATENT-CLASS-528-401	c 23	N82-28353 *	US-PATENT-CLASS-55-158	c 44	N77-22607 *	US-PATENT-CLASS-558-193	c 23	N90-23475 *
US-PATENT-CLASS-528-401	c 27	N84-22744 *	US-PATENT-CLASS-55-158	c 25	N82-21269 *	US-PATENT-CLASS-558-80	c 23	N88-24692 *
US-PATENT-CLASS-528-402	c 25	N82-24312 *	US-PATENT-CLASS-55-159	c 34	N74-30608 *	US-PATENT-CLASS-56-73	c 74	N86-26190 *
US-PATENT-CLASS-528-406	c 23	N86-32525 *	US-PATENT-CLASS-55-159	c 37	N79-21345 *	US-PATENT-CLASS-560-104	c 27	N87-16907 *
US-PATENT-CLASS-528-407	c 24	N84-34571 *	US-PATENT-CLASS-55-159	c 31	N90-20254 *	US-PATENT-CLASS-562-413	c 25	N90-23497 *
US-PATENT-CLASS-528-407	c 27	N85-34281 *	US-PATENT-CLASS-55-15	c 71	N83-35781 *	US-PATENT-CLASS-562-415	c 25	N90-23497 *
US-PATENT-CLASS-528-407	c 27	N85-34282 *	US-PATENT-CLASS-55-15	c 71	N85-22104 *	US-PATENT-CLASS-562-417	c 25	N90-23497 *
US-PATENT-CLASS-528-407	c 23	N86-32525 *	US-PATENT-CLASS-55-160	c 15	N71-15968 *	US-PATENT-CLASS-564-113	c 23	N86-19376 *
US-PATENT-CLASS-528-413	c 27	N87-24564 *	US-PATENT-CLASS-55-160	c 29	N90-20236 *	US-PATENT-CLASS-564-113	c 23	N88-24692 *
US-PATENT-CLASS-528-422	c 27	N79-22300 *	US-PATENT-CLASS-55-160	c 35	N90-22024 *	US-PATENT-CLASS-564-15	c 27	N86-32568 *
US-PATENT-CLASS-528-422	c 25	N81-14016 *	US-PATENT-CLASS-55-16	c 06	N72-31140 *	US-PATENT-CLASS-564-229	c 27	N81-24256 *
US-PATENT-CLASS-528-422	c 27	N81-17259 *	US-PATENT-CLASS-55-179	c 14	N71-17588 *	US-PATENT-CLASS-564-229	c 23	N82-28353 *
US-PATENT-CLASS-528-422	c 27	N81-17262 *	US-PATENT-CLASS-55-179	c 54	N77-32722 *	US-PATENT-CLASS-564-243	c 27	N84-22744 *
US-PATENT-CLASS-528-422	c 27	N82-24338 *	US-PATENT-CLASS-55-182	c 29	N90-20236 *	US-PATENT-CLASS-564-243	c 23	N86-21582 *
US-PATENT-CLASS-528-422	c 23	N82-28353 *	US-PATENT-CLASS-55-194	c 35	N83-29652 *	US-PATENT-CLASS-564-315	c 23	N89-12667 *
US-PATENT-CLASS-528-422	c 27	N84-22744 *	US-PATENT-CLASS-55-197	c 23	N77-17161 *	US-PATENT-CLASS-564-323	c 23	N89-12667 *
US-PATENT-CLASS-528-423	c 27	N81-17259 *	US-PATENT-CLASS-55-199	c 34	N74-30608 *	US-PATENT-CLASS-564-330	c 27	N87-22847 *
US-PATENT-CLASS-528-423	c 27	N84-22744 *	US-PATENT-CLASS-55-202	c 35	N83-29652 *	US-PATENT-CLASS-564-330	c 23	N89-12667 *
US-PATENT-CLASS-528-481	c 27	N80-24438 *	US-PATENT-CLASS-55-203	c 35	N90-22024 *	US-PATENT-CLASS-564-342	c 23	N89-12667 *
US-PATENT-CLASS-528-4	c 27	N81-27271 *	US-PATENT-CLASS-55-204	c 15	N71-23023 *	US-PATENT-CLASS-564-344	c 23	N89-12667 *
US-PATENT-CLASS-528-4	c 27	N82-18389 *	US-PATENT-CLASS-55-204	c 44	N83-10501 *	US-PATENT-CLASS-564-396	c 27	N87-22847 *
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US-PATENT-CLASS-528-6	c 27	N84-22750 *	US-PATENT-CLASS-55-241	c 35	N79-17192 *	US-PATENT-CLASS-568-2	c 27	N82-18389 *
US-PATENT-CLASS-528-6	c 27	N89-16042 *	US-PATENT-CLASS-55-242	c 35	N79-17192 *	US-PATENT-CLASS-568-445	c 23	N82-16174 *
US-PATENT-CLASS-528-72	c 25	N80-16116 *	US-PATENT-CLASS-55-242	c 45	N91-14662 *	US-PATENT-CLASS-568-497	c 23	N82-16174 *
US-PATENT-CLASS-528-73	c 27	N89-16042 *	US-PATENT-CLASS-55-255	c 35	N86-29174 *	US-PATENT-CLASS-568-4	c 27	N82-18389 *
US-PATENT-CLASS-528-7	c 27	N82-18389 *	US-PATENT-CLASS-55-259	c 35	N86-29174 *	US-PATENT-CLASS-568-4	c 27	N84-22750 *
US-PATENT-CLASS-528-7	c 27	N84-22750 *	US-PATENT-CLASS-55-269	c 35	N78-12390 *	US-PATENT-CLASS-568-5	c 27	N82-18389 *
US-PATENT-CLASS-528-86	c 23	N85-28973 *	US-PATENT-CLASS-55-261	c 35	N76-18401 *	US-PATENT-CLASS-568-5	c 27	N84-22750 *
US-PATENT-CLASS-528-92	c 24	N84-34571 *	US-PATENT-CLASS-55-269	c 54	N77-32722 *	US-PATENT-CLASS-568-852	c 27	N80-32514 *
US-PATENT-CLASS-528-92	c 27	N85-34282 *	US-PATENT-CLASS-55-270	c 35	N84-17555 *	US-PATENT-CLASS-568-861	c 27	N80-32514 *
US-PATENT-CLASS-528-94	c 27	N85-34281 *	US-PATENT-CLASS-55-277	c 71	N83-35781 *	US-PATENT-CLASS-57-906	c 37	N82-18601 *
US-PATENT-CLASS-53-102	c 15	N71-21528 *	US-PATENT-CLASS-55-277	c 71	N85-22104 *	US-PATENT-CLASS-570-123	c 25	N82-24312 *
US-PATENT-CLASS-53-112A	c 15	N73-27405 *	US-PATENT-CLASS-55-283	c 35	N84-17555 *	US-PATENT-CLASS-570-129	c 25	N82-24312 *
US-PATENT-CLASS-53-22A	c 15	N73-27405 *	US-PATENT-CLASS-55-291	c 35	N84-17555 *	US-PATENT-CLASS-58-24	c 10	N71-26326 *
US-PATENT-CLASS-53-22	c 15	N71-23256 *	US-PATENT-CLASS-55-2	c 25	N78-25148 *	US-PATENT-CLASS-585-24	c 27	N86-21675 *
US-PATENT-CLASS-53-429	c 09	N82-29330 *	US-PATENT-CLASS-55-2	c 28	N81-14103 *	US-PATENT-CLASS-60.39.08	c 37	N79-11403 *
US-PATENT-CLASS-53-9	c 37	N77-23482 *	US-PATENT-CLASS-55-2	c 35	N84-17555 *	US-PATENT-CLASS-60-108	c 33	N71-16104 *
US-PATENT-CLASS-530-362	c 52	N90-20616 *	US-PATENT-CLASS-55-306	c 28	N70-34788 *	US-PATENT-CLASS-60-1	c 15	N72-33477 *
US-PATENT-CLASS-530-363	c 52	N90-20616 *	US-PATENT-CLASS-55-35	c 05	N70-41297 *	US-PATENT-CLASS-60-1	c 15	N73-13467 *
US-PATENT-CLASS-530-364	c 52	N90-20616 *	US-PATENT-CLASS-55-360	c 35	N79-17192 *	US-PATENT-CLASS-60-200A	c 33	N72-25911 *
US-PATENT-CLASS-530-387	c 52	N90-20616 *	US-PATENT-CLASS-55-386	c 35	N75-26334 *	US-PATENT-CLASS-60-200A	c 33	N73-25952 *
US-PATENT-CLASS-530-422	c 52	N90-20616 *	US-PATENT-CLASS-55-38	c 71	N83-35781 *	US-PATENT-CLASS-60-200A	c 27	N78-17206 *
US-PATENT-CLASS-536-105	c 27	N77-30236 *	US-PATENT-CLASS-55-3	c 35	N78-12390 *	US-PATENT-CLASS-60-200R	c 20	N82-18314 *
US-PATENT-CLASS-536-536-85	c 27	N77-30236 *	US-PATENT-CLASS-55-400	c 11	N71-10777 *	US-PATENT-CLASS-60-200	c 28	N71-14044 *
US-PATENT-CLASS-536-56	c 27	N77-30236 *	US-PATENT-CLASS-55-407	c 35	N79-17192 *	US-PATENT-CLASS-60-202	c 28	N70-41922 *
US-PATENT-CLASS-536-58	c 27	N77-30236 *	US-PATENT-CLASS-55-408	c 15	N70-40062 *	US-PATENT-CLASS-60-202	c 28	N71-10574 *
US-PATENT-CLASS-536-84	c 27	N77-30236 *	US-PATENT-CLASS-55-418	c 15	N71-22721 *	US-PATENT-CLASS-60-202	c 25	N71-21694 *
US-PATENT-CLASS-538-117	c 27	N81-17260 *	US-PATENT-CLASS-55-43	c 34	N74-30608 *	US-PATENT-CLASS-60-202	c 28	N71-21822 *
US-PATENT-CLASS-544-193	c 27	N78-15276 *	US-PATENT-CLASS-55-446	c 15	N72-22489 *	US-PATENT-CLASS-60-202	c 28	N71-23081 *
US-PATENT-CLASS-544-193	c 27	N79-28307 *	US-PATENT-CLASS-55-464	c 15	N72-22489 *	US-PATENT-CLASS-60-202	c 28	N71-23293 *
US-PATENT-CLASS-544-195	c 27	N78-32256 *	US-PATENT-CLASS-55-466	c 35	N84-17555 *	US-PATENT-CLASS-60-202	c 28	N71-25213 *
US-PATENT-CLASS-544-215	c 27	N84-22744 *	US-PATENT-CLASS-55-46	c 31	N90-20254 *	US-PATENT-CLASS-60-202	c 28	N71-26173 *
US-PATENT-CLASS-546-262	c 27	N87-22847 *	US-PATENT-CLASS-55-493	c 14	N72-23457 *	US-PATENT-CLASS-60-202	c 28	N71-26642 *
US-PATENT-CLASS-546-264	c 27	N87-22847 *	US-PATENT-CLASS-55-498	c 14	N72-23457 *	US-PATENT-CLASS-60-202	c 28	N71-26781 *
US-PATENT-CLASS-546-339	c 27	N87-16908 *	US-PATENT-CLASS-55-502	c 14	N72-23457 *	US-PATENT-CLASS-60-202	c 28	N72-11709 *
US-PATENT-CLASS-546-346	c 27	N87-16908 *	US-PATENT-CLASS-55-510	c 25	N74-12813 *	US-PATENT-CLASS-60-202	c 28	N72-22770 *
US-PATENT-CLASS-546-350	c 27	N87-16908 *	US-PATENT-CLASS-55-518	c 25	N74-12813 *	US-PATENT-CLASS-60-202	c 28	N72-22771 *
US-PATENT-CLASS-547-131	c 23	N82-28353 *	US-PATENT-CLASS-55-521	c 14	N72-23457 *	US-PATENT-CLASS-60-202	c 28	N73-24783 *
US-PATENT-CLASS-548-400	c 23	N90-21118 *	US-PATENT-CLASS-55-521	c 35	N86-29174 *	US-PATENT-CLASS-60-202	c 25	N73-25760 *
US-PATENT-CLASS-548-413	c 27	N83-31854 *	US-PATENT-CLASS-55-523	c 34	N76-27515 *	US-PATENT-CLASS-60-202	c 28	N73-27699 *
US-PATENT-CLASS-548-413	c 23	N86-19376 *	US-PATENT-CLASS-55-526	c 34	N76-27515 *	US-PATENT-CLASS-60-202	c 20	N77-10148 *
US-PATENT-CLASS-548-413	c 27	N87-23751 *	US-PATENT-CLASS-55-528	c 35	N86-29174 *	US-PATENT-CLASS-60-202	c 20	N77-20162 *
US-PATENT-CLASS-548-415	c 27	N83-31854 *	US-PATENT-CLASS-55-52	c 71	N83-35781 *	US-PATENT-CLASS-60-202	c 20	N85-21256 *
US-PATENT-CLASS-548-415	c 27	N84-22745 *	US-PATENT-CLASS-55-55	c 06	N72-31140 *	US-PATENT-CLASS-60-202	c 20	N89-25279 *
US-PATENT-CLASS-548-520	c 27	N90-23545 *	US-PATENT-CLASS-55-66	c 25	N80-23383 *	US-PATENT-CLASS-60-203.1	c 20	N86-26368 *
US-PATENT-CLASS-548-524	c 23	N90-21118 *	US-PATENT-CLASS-55-67	c 23	N77-17161 *	US-PATENT-CLASS-60-203.1	c 20	N87-16875 *
US-PATENT-CLASS-548-549	c 23	N91-14419 *	US-PATENT-CLASS-55-67	c 25	N80-23383 *	US-PATENT-CLASS-60-203.1	c 09	N88-28939 *

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US-PATENT-CLASS-62-207	c 05	N73-26071 *	US-PATENT-CLASS-62-6	c 44	N83-28574 *	US-PATENT-CLASS-72-750	c 35	N88-24927 *
US-PATENT-CLASS-62-209	c 05	N73-26071 *	US-PATENT-CLASS-62-6	c 31	N85-21404 *	US-PATENT-CLASS-72-83	c 15	N71-22723 *
US-PATENT-CLASS-62-217	c 03	N77-10229 *	US-PATENT-CLASS-62-78	c 51	N79-10694 *	US-PATENT-CLASS-73-DIG.11	c 35	N78-18390 *
US-PATENT-CLASS-62-235.1	c 44	N82-26776 *	US-PATENT-CLASS-62-7	c 15	N73-12486 *	US-PATENT-CLASS-73-1-DV	c 71	N86-21276 *
US-PATENT-CLASS-62-238.3	c 44	N82-26776 *	US-PATENT-CLASS-62-80	c 23	N72-25619 *	US-PATENT-CLASS-73-1-DV	c 71	N87-21653 *
US-PATENT-CLASS-62-239	c 44	N82-26776 *	US-PATENT-CLASS-62-85	c 23	N72-25619 *	US-PATENT-CLASS-73-1B	c 35	N76-24523 *
US-PATENT-CLASS-62-244	c 44	N82-26776 *	US-PATENT-CLASS-62-89	c 05	N73-26071 *	US-PATENT-CLASS-73-1B	c 35	N84-28019 *
US-PATENT-CLASS-62-259	c 05	N73-20137 *	US-PATENT-CLASS-62-90	c 34	N91-21473 *	US-PATENT-CLASS-73-1DV	c 14	N73-27379 *
US-PATENT-CLASS-62-259	c 05	N73-26071 *	US-PATENT-CLASS-62-93	c 15	N69-21465 * #	US-PATENT-CLASS-73-1F	c 35	N74-21019 *
US-PATENT-CLASS-62-259	c 54	N78-32721 *	US-PATENT-CLASS-62-93	c 03	N72-28025 *	US-PATENT-CLASS-73-1R	c 14	N71-29134 *
US-PATENT-CLASS-62-264	c 34	N84-22903 *	US-PATENT-CLASS-62-93	c 77	N75-20139 *	US-PATENT-CLASS-73-1R	c 35	N75-15932 *
US-PATENT-CLASS-62-268	c 14	N71-20427 *	US-PATENT-CLASS-62-93	c 77	N75-20139 *	US-PATENT-CLASS-73-1R	c 35	N76-15432 *
US-PATENT-CLASS-62-268	c 34	N79-20336 *	US-PATENT-CLASS-62-96	c 54	N91-32795 *	US-PATENT-CLASS-73-1R	c 35	N76-15432 *
US-PATENT-CLASS-62-269	c 34	N77-19353 *	US-PATENT-CLASS-64-18	c 15	N71-28467 *	US-PATENT-CLASS-73-100	c 15	N70-41993 *
US-PATENT-CLASS-62-285	c 77	N75-20139 *	US-PATENT-CLASS-64-27	c 15	N71-28959 *	US-PATENT-CLASS-73-100	c 32	N72-25877 *
US-PATENT-CLASS-62-288	c 77	N75-20139 *	US-PATENT-CLASS-64-28	c 15	N71-28959 *	US-PATENT-CLASS-73-103	c 15	N71-17696 *
US-PATENT-CLASS-62-289	c 77	N75-20139 *	US-PATENT-CLASS-65-DIG.11	c 37	N74-21063 *	US-PATENT-CLASS-73-103	c 14	N72-27412 *
US-PATENT-CLASS-62-290	c 77	N75-20139 *	US-PATENT-CLASS-65-DIG.4	c 71	N78-10837 *	US-PATENT-CLASS-73-103	c 35	N76-18400 *
US-PATENT-CLASS-62-295	c 35	N83-32026 *	US-PATENT-CLASS-65-DIG.7	c 71	N78-10837 *	US-PATENT-CLASS-73-104	c 35	N74-32879 *
US-PATENT-CLASS-62-2	c 15	N71-15906 *	US-PATENT-CLASS-65-102	c 71	N78-10837 *	US-PATENT-CLASS-73-105	c 14	N70-34161 *
US-PATENT-CLASS-62-315	c 34	N77-19353 *	US-PATENT-CLASS-65-108	c 35	N77-24455 *	US-PATENT-CLASS-73-105	c 14	N71-17586 *
US-PATENT-CLASS-62-317	c 77	N75-20139 *	US-PATENT-CLASS-65-11.1	c 31	N86-21718 *	US-PATENT-CLASS-73-105	c 35	N79-14345 *
US-PATENT-CLASS-62-333	c 34	N91-21473 *	US-PATENT-CLASS-65-12	c 31	N86-21718 *	US-PATENT-CLASS-73-115	c 07	N84-22559 *
US-PATENT-CLASS-62-376	c 31	N78-17237 *	US-PATENT-CLASS-65-134	c 71	N83-35781 *	US-PATENT-CLASS-73-116	c 11	N70-33278 *
US-PATENT-CLASS-62-376	c 34	N79-20336 *	US-PATENT-CLASS-65-134	c 27	N87-21111 *	US-PATENT-CLASS-73-116	c 11	N70-34844 *
US-PATENT-CLASS-62-383	c 33	N82-24419 *	US-PATENT-CLASS-65-136	c 27	N87-21111 *	US-PATENT-CLASS-73-116	c 14	N70-40203 *
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US-PATENT-CLASS-62-384	c 34	N91-21473 *	US-PATENT-CLASS-65-142	c 27	N82-28442 *	US-PATENT-CLASS-73-116	c 31	N71-15643 *
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US-PATENT-CLASS-74-83	c 37	N78-16369 *	US-PATENT-CLASS-8-94.12	c 18	N71-15545 *	US-PATENT-CLASS-9-8	c 03	N70-36778 *
US-PATENT-CLASS-74-89.15	c 15	N71-26635 *	US-PATENT-CLASS-81-119	c 37	N79-14383 *	US-PATENT-CLASS-9-9	c 15	N71-24600 *
US-PATENT-CLASS-74-89.15	c 15	N72-21462 *	US-PATENT-CLASS-81-177G	c 37	N85-21649 *	US-PATENT-CLASS-90-11	c 15	N71-33518 *
US-PATENT-CLASS-74-89.15	c 35	N87-21304 *	US-PATENT-CLASS-81-180B	c 37	N79-14383 *	US-PATENT-CLASS-90-12.5	c 37	N74-25968 *
US-PATENT-CLASS-74-89.18	c 15	N71-23809 *	US-PATENT-CLASS-81-3R	c 15	N71-29133 *	US-PATENT-CLASS-90-12	c 15	N71-22789 *
US-PATENT-CLASS-74-89	c 37	N81-33483 *	US-PATENT-CLASS-81-55	c 37	N83-36482 *	US-PATENT-CLASS-901-19	c 33	N91-31528 *
US-PATENT-CLASS-74-96	c 37	N77-22482 *	US-PATENT-CLASS-81-56	c 37	N76-20480 *	US-PATENT-CLASS-901-1	c 18	N88-23828 *
US-PATENT-CLASS-75-58	c 17	N72-22530 *	US-PATENT-CLASS-81-57.31	c 37	N76-20480 *	US-PATENT-CLASS-901-25	c 37	N86-20789 *
US-PATENT-CLASS-75-DIG.1	c 18	N72-25539 *	US-PATENT-CLASS-81-57.38	c 15	N73-30457 *	US-PATENT-CLASS-901-28	c 37	N91-17388 *
US-PATENT-CLASS-75-DIG.1	c 37	N75-26371 *	US-PATENT-CLASS-81-57.38	c 37	N83-36482 *	US-PATENT-CLASS-901-30	c 37	N91-31656 *
US-PATENT-CLASS-75-0.5BB	c 15	N72-25448 *	US-PATENT-CLASS-81-63.1	c 15	N71-17805 *	US-PATENT-CLASS-901-31	c 37	N86-19603 *
US-PATENT-CLASS-75-122.7	c 37	N77-19458 *	US-PATENT-CLASS-81-9.5R	c 37	N79-10419 *	US-PATENT-CLASS-901-31	c 37	N86-20789 *
US-PATENT-CLASS-75-124	c 26	N78-18182 *	US-PATENT-CLASS-81-90B	c 37	N79-14383 *	US-PATENT-CLASS-901-33	c 18	N88-23828 *
US-PATENT-CLASS-75-124	c 26	N80-32484 *	US-PATENT-CLASS-82-1.2	c 37	N81-14319 *	US-PATENT-CLASS-901-33	c 37	N91-21542 *
US-PATENT-CLASS-75-126F	c 26	N78-18182 *	US-PATENT-CLASS-82-1C	c 37	N81-14319 *	US-PATENT-CLASS-901-37	c 37	N91-21542 *
US-PATENT-CLASS-75-126D	c 26	N78-18182 *	US-PATENT-CLASS-82-14	c 15	N71-22722 *	US-PATENT-CLASS-901-38	c 37	N90-20408 *
US-PATENT-CLASS-75-128G	c 26	N78-18182 *	US-PATENT-CLASS-82-24R	c 14	N72-16283 *	US-PATENT-CLASS-901-38	c 37	N91-14616 *
US-PATENT-CLASS-75-128T	c 26	N78-18182 *	US-PATENT-CLASS-82-36R	c 37	N81-14319 *	US-PATENT-CLASS-901-39	c 37	N90-20408 *
US-PATENT-CLASS-75-134D	c 76	N79-16678 *	US-PATENT-CLASS-82-90	c 37	N85-21650 *	US-PATENT-CLASS-901-39	c 37	N91-14616 *
US-PATENT-CLASS-75-135	c 18	N73-32437 *	US-PATENT-CLASS-83-152	c 76	N80-18951 *	US-PATENT-CLASS-901-42	c 37	N86-21850 *
US-PATENT-CLASS-75-135	c 24	N77-27187 *	US-PATENT-CLASS-83-203	c 54	N91-26747 *	US-PATENT-CLASS-901-47	c 37	N86-21850 *
US-PATENT-CLASS-75-135	c 26	N80-23419 *	US-PATENT-CLASS-83-206	c 54	N91-26747 *	US-PATENT-CLASS-901-47	c 37	N91-21542 *
US-PATENT-CLASS-75-138	c 26	N80-23419 *	US-PATENT-CLASS-83-277	c 54	N91-26747 *	US-PATENT-CLASS-901-50	c 37	N86-19603 *
US-PATENT-CLASS-75-139	c 24	N77-27187 *	US-PATENT-CLASS-83-282	c 54	N91-26747 *	US-PATENT-CLASS-901-9	c 37	N91-21544 *
US-PATENT-CLASS-75-142	c 17	N71-20743 *	US-PATENT-CLASS-83-451	c 37	N77-14478 *	US-PATENT-CLASS-91-186	c 05	N73-32014 *
US-PATENT-CLASS-75-170	c 17	N71-15644 *	US-PATENT-CLASS-83-452	c 39	N74-13131 *	US-PATENT-CLASS-91-325	c 37	N81-32510 *
US-PATENT-CLASS-75-170	c 17	N71-16025 *	US-PATENT-CLASS-83-467R	c 37	N77-14478 *	US-PATENT-CLASS-91-341R	c 37	N81-32510 *
US-PATENT-CLASS-75-170	c 17	N71-23248 *	US-PATENT-CLASS-83-467	c 15	N71-22798 *	US-PATENT-CLASS-91-361	c 15	N71-27754 *
US-PATENT-CLASS-75-170	c 17	N72-22535 *	US-PATENT-CLASS-83-522	c 15	N72-27485 *	US-PATENT-CLASS-91-363A	c 15	N73-13466 *
US-PATENT-CLASS-75-170	c 37	N77-19458 *	US-PATENT-CLASS-83-562	c 15	N72-27485 *	US-PATENT-CLASS-91-390	c 15	N71-27147 *
US-PATENT-CLASS-75-170	c 26	N77-20201 *	US-PATENT-CLASS-83-563	c 15	N72-27485 *	US-PATENT-CLASS-91-390	c 15	N71-27754 *
US-PATENT-CLASS-75-170	c 26	N77-32279 *	US-PATENT-CLASS-83-588	c 15	N72-27485 *	US-PATENT-CLASS-91-410	c 37	N81-32510 *
US-PATENT-CLASS-75-170	c 26	N77-32280 *	US-PATENT-CLASS-83-602	c 39	N74-13131 *	US-PATENT-CLASS-91-448	c 15	N71-27754 *
US-PATENT-CLASS-75-170	c 26	N78-18183 *	US-PATENT-CLASS-83-614	c 54	N91-26747 *	US-PATENT-CLASS-91-448	c 15	N73-13466 *
US-PATENT-CLASS-75-171	c 17	N70-33283 *	US-PATENT-CLASS-83-649	c 54	N91-26747 *	US-PATENT-CLASS-91-461	c 15	N71-27147 *
US-PATENT-CLASS-75-171	c 17	N70-36616 *	US-PATENT-CLASS-83-664	c 37	N85-21650 *	US-PATENT-CLASS-92-103F	c 35	N91-21494 *
US-PATENT-CLASS-75-171	c 17	N71-16026 *	US-PATENT-CLASS-83-676	c 37	N85-21650 *	US-PATENT-CLASS-92-103SD	c 35	N91-21494 *
US-PATENT-CLASS-75-171	c 17	N73-32415 *	US-PATENT-CLASS-83-820	c 37	N80-29703 *	US-PATENT-CLASS-92-130R	c 37	N81-33483 *
US-PATENT-CLASS-75-172	c 17	N71-23365 *	US-PATENT-CLASS-83-870	c 76	N80-18951 *	US-PATENT-CLASS-92-176	c 37	N88-23981 *
US-PATENT-CLASS-75-173	c 26							

US-PATENT-CLASS-92-213	c 37	N90-22042	US-PATENT-3,063,291	c 11	N70-33278	US-PATENT-3,170,286	c 15	N70-36535
US-PATENT-CLASS-92-214	c 37	N88-23981	US-PATENT-3,064,928	c 02	N70-33266	US-PATENT-3,170,290	c 28	N70-36910
US-PATENT-CLASS-92-222	c 37	N88-23981	US-PATENT-3,067,573	c 28	N70-39899	US-PATENT-3,170,295	c 27	N71-28929
US-PATENT-CLASS-92-222	c 37	N90-22042	US-PATENT-3,068,658	c 15	N70-34247	US-PATENT-3,170,324	c 14	N70-36824
US-PATENT-CLASS-92-224	c 37	N88-23981	US-PATENT-3,069,123	c 14	N70-39898	US-PATENT-3,170,371	c 32	N70-36536
US-PATENT-CLASS-92-248	c 37	N90-22042	US-PATENT-3,070,330	c 21	N70-34539	US-PATENT-3,170,486	c 15	N70-36492
US-PATENT-CLASS-92-37	c 37	N82-24493	US-PATENT-3,070,349	c 28	N70-39895	US-PATENT-3,170,605	c 15	N70-38996
US-PATENT-CLASS-92-49	c 14	N73-13418	US-PATENT-3,070,407	c 15	N70-39896	US-PATENT-3,170,657	c 02	N70-34858
US-PATENT-CLASS-92-94	c 32	N70-41370	US-PATENT-3,072,574	c 18	N70-39897	US-PATENT-3,170,660	c 02	N70-36804
US-PATENT-CLASS-92-98R	c 31	N85-21404	US-PATENT-3,076,065	c 09	N70-39915	US-PATENT-3,170,773	c 17	N70-33288
US-PATENT-CLASS-93-1	c 15	N70-33180	US-PATENT-3,077,599	c 07	N70-40202	US-PATENT-3,171,060	c 15	N70-33267
US-PATENT-CLASS-94.9N	c 27	N81-15104	US-PATENT-3,079,113	c 02	N70-38009	US-PATENT-3,171,081	c 24	N70-35666
US-PATENT-CLASS-95-1.1	c 14	N72-18411	US-PATENT-3,080,711	c 28	N70-38711	US-PATENT-3,172,097	c 08	N70-35423
US-PATENT-CLASS-95-1.1	c 14	N73-26431	US-PATENT-3,083,611	c 21	N70-35427	US-PATENT-3,173,246	c 28	N70-33265
US-PATENT-CLASS-95-11.5R	c 14	N73-19419	US-PATENT-3,084,421	c 17	N70-38490	US-PATENT-3,173,251	c 28	N70-33375
US-PATENT-CLASS-95-11.5	c 14	N73-32319	US-PATENT-3,085,165	c 09	N70-34819	US-PATENT-3,173,801	c 32	N79-19186
US-PATENT-CLASS-95-11R	c 14	N73-19419	US-PATENT-3,087,692	c 02	N70-34178	US-PATENT-3,174,278	c 25	N70-36946
US-PATENT-CLASS-95-11	c 14	N71-18465	US-PATENT-3,088,441	c 15	N70-35409	US-PATENT-3,174,279	c 28	N70-36806
US-PATENT-CLASS-95-11	c 16	N71-33410	US-PATENT-3,090,212	c 33	N70-37979	US-PATENT-3,174,827	c 26	N70-36805
US-PATENT-CLASS-95-11	c 14	N73-32319	US-PATENT-3,090,580	c 31	N70-37924	US-PATENT-3,175,789	c 31	N70-36654
US-PATENT-CLASS-95-12.5	c 31	N72-25842	US-PATENT-3,093,000	c 15	N70-37925	US-PATENT-3,176,222	c 14	N70-36618
US-PATENT-CLASS-95-12.5	c 14	N73-14427	US-PATENT-3,093,346	c 31	N70-37938	US-PATENT-3,176,499	c 14	N70-35368
US-PATENT-CLASS-95-12	c 14	N73-33361	US-PATENT-3,098,630	c 02	N70-37939	US-PATENT-3,176,933	c 33	N70-36617
US-PATENT-CLASS-95-18	c 14	N72-20380	US-PATENT-3,100,294	c 09	N70-38998	US-PATENT-3,177,933	c 33	N70-36847
US-PATENT-CLASS-95-42	c 14	N73-32322	US-PATENT-3,100,990	c 14	N70-34813	US-PATENT-3,178,883	c 21	N70-36938
US-PATENT-CLASS-95-44	c 14	N71-26474	US-PATENT-3,102,948	c 15	N70-34814	US-PATENT-3,180,264	c 33	N70-36846
US-PATENT-CLASS-95-53EA	c 33	N74-20861	US-PATENT-3,104,079	c 31	N70-37986	US-PATENT-3,180,587	c 21	N70-36943
US-PATENT-CLASS-95-53	c 15	N71-21060	US-PATENT-3,104,082	c 02	N70-38011	US-PATENT-3,181,821	c 31	N70-36845
US-PATENT-CLASS-95-58	c 14	N70-40273	US-PATENT-3,105,515	c 15	N70-38603	US-PATENT-3,182,496	c 11	N70-36913
US-PATENT-CLASS-95-59	c 14	N73-14427	US-PATENT-3,106,603	c 09	N70-38201	US-PATENT-3,183,506	c 07	N70-36911
US-PATENT-CLASS-95-89R	c 35	N74-15831	US-PATENT-3,108,171	c 33	N70-34812	US-PATENT-3,183,023	c 14	N70-34298
US-PATENT-CLASS-96-27R	c 35	N79-10389	US-PATENT-3,110,318	c 12	N70-38997	US-PATENT-3,187,583	c 11	N70-38675
US-PATENT-CLASS-96-36.2	c 06	N72-21094	US-PATENT-3,112,672	c 11	N70-38202	US-PATENT-3,188,472	c 21	N70-34229
US-PATENT-CLASS-96-36.2	c 15	N72-25452	US-PATENT-3,115,630	c 31	N70-37981	US-PATENT-3,188,844	c 15	N70-34249
US-PATENT-CLASS-96-38.3	c 35	N74-26946	US-PATENT-3,118,100	c 03	N71-29129	US-PATENT-3,189,299	c 21	N70-34295
US-PATENT-CLASS-96-49	c 14	N71-17574	US-PATENT-3,119,086	c 35	N79-33449	US-PATENT-3,189,535	c 15	N70-34967
US-PATENT-CLASS-96-60R	c 35	N79-10389	US-PATENT-3,119,232	c 28	N70-37980	US-PATENT-3,189,726	c 33	N70-34545
US-PATENT-CLASS-96-79	c 35	N74-26946	US-PATENT-3,120,101	c 28	N70-34860	US-PATENT-3,189,784	c 33	N75-27250
US-PATENT-CLASS-96-87A	c 27	N78-14164	US-PATENT-3,120,361	c 31	N70-38010	US-PATENT-3,189,794	c 09	N70-34502
US-PATENT-CLASS-96-90PC	c 14	N72-22443	US-PATENT-3,120,738	c 28	N70-38249	US-PATENT-3,189,864	c 09	N70-34596
US-PATENT-CLASS-98-1.5	c 44	N78-32539	US-PATENT-3,121,309	c 28	N70-35361	US-PATENT-3,190,124	c 35	N79-33450
US-PATENT-CLASS-98-1	c 54	N78-17679	US-PATENT-3,122,000	c 15	N70-38020	US-PATENT-3,191,316	c 31	N70-34966
US-PATENT-CLASS-98-39	c 31	N74-27902	US-PATENT-3,122,098	c 28	N70-38181	US-PATENT-3,191,379	c 27	N70-35534
US-PATENT-CLASS-99-80PS	c 05	N72-33096	US-PATENT-3,122,885	c 28	N70-38710	US-PATENT-3,191,907	c 15	N70-34859
			US-PATENT-3,123,248	c 11	N70-38182	US-PATENT-3,192,730	c 06	N70-34946
US-PATENT-DES-228,688	c 05	N74-10907	US-PATENT-3,123,418	c 37	N79-33467	US-PATENT-3,193,883	c 27	N70-34783
			US-PATENT-3,123,692	c 33	N79-33393	US-PATENT-3,194,060	c 14	N70-34794
US-PATENT-RE-26,548	c 07	N71-12389	US-PATENT-3,127,157	c 15	N70-38225	US-PATENT-3,194,525	c 11	N70-35383
US-PATENT-RE-28,921	c 52	N76-30793	US-PATENT-3,128,389	c 09	N70-38604	US-PATENT-3,194,951	c 08	N70-34778
			US-PATENT-3,128,845	c 15	N70-38601	US-PATENT-3,196,261	c 08	N70-34787
US-PATENT-2,837,706	c 15	N71-28952	US-PATENT-3,130,940	c 33	N70-33344	US-PATENT-3,196,362	c 09	N70-35440
US-PATENT-2,898,889	c 02	N71-29128	US-PATENT-3,131,040	c 37	N79-21345	US-PATENT-3,196,557	c 11	N70-34815
US-PATENT-2,903,307	c 15	N71-29136	US-PATENT-3,132,342	c 07	N70-38200	US-PATENT-3,196,558	c 14	N70-35394
US-PATENT-2,926,123	c 33	N71-29151	US-PATENT-3,132,476	c 28	N70-34294	US-PATENT-3,196,598	c 28	N70-34788
US-PATENT-2,934,331	c 15	N70-33382	US-PATENT-3,132,479	c 15	N71-28951	US-PATENT-3,196,675	c 14	N70-34818
US-PATENT-2,940,259	c 28	N70-33241	US-PATENT-3,132,903	c 15	N70-38620	US-PATENT-3,196,690	c 11	N70-34786
US-PATENT-2,944,316	c 15	N71-16076	US-PATENT-3,134,389	c 37	N79-33468	US-PATENT-3,197,616	c 14	N71-28958
US-PATENT-2,945,667	c 15	N70-33376	US-PATENT-3,135,089	c 28	N70-38504	US-PATENT-3,198,955	c 08	N70-34743
US-PATENT-2,956,772	c 33	N71-29152	US-PATENT-3,135,090	c 28	N70-38505	US-PATENT-3,198,994	c 26	N73-28710
US-PATENT-2,960,002	c 14	N70-41946	US-PATENT-3,136,123	c 28	N70-38199	US-PATENT-3,199,340	c 14	N70-34799
US-PATENT-2,971,837	c 17	N70-33283	US-PATENT-3,138,837	c 17	N70-38198	US-PATENT-3,199,343	c 11	N70-34844
US-PATENT-2,974,925	c 28	N70-33372	US-PATENT-3,139,725	c 28	N70-38645	US-PATENT-3,199,931	c 15	N70-34664
US-PATENT-2,984,735	c 11	N70-33329	US-PATENT-3,140,728	c 15	N70-36908	US-PATENT-3,200,706	c 03	N70-34667
US-PATENT-2,991,671	c 15	N70-33330	US-PATENT-3,141,340	c 11	N70-38196	US-PATENT-3,201,660	c 33	N70-34540
US-PATENT-2,991,961	c 02	N70-33332	US-PATENT-3,141,769	c 28	N70-38197	US-PATENT-3,201,635	c 25	N70-34661
US-PATENT-2,996,212	c 31	N71-17680	US-PATENT-3,141,932	c 03	N70-38713	US-PATENT-3,201,980	c 14	N70-40203
US-PATENT-2,997,274	c 28	N71-29154	US-PATENT-3,143,321	c 15	N70-34850	US-PATENT-3,202,381	c 31	N70-34176
US-PATENT-3,001,363	c 28	N70-33331	US-PATENT-3,143,651	c 14	N70-40240	US-PATENT-3,202,398	c 28	N71-28928
US-PATENT-3,001,395	c 14	N70-33386	US-PATENT-3,144,219	c 31	N70-38676	US-PATENT-3,202,844	c 03	N70-34134
US-PATENT-3,001,739	c 03	N70-33343	US-PATENT-3,144,999	c 02	N70-34856	US-PATENT-3,202,915	c 14	N70-38602
US-PATENT-3,004,189	c 37	N75-29426	US-PATENT-3,145,874	c 11	N71-15960	US-PATENT-3,202,998	c 31	N70-34135
US-PATENT-3,004,735	c 14	N70-33322	US-PATENT-3,147,422	c 09	N70-38712	US-PATENT-3,204,447	c 14	N70-34156
US-PATENT-3,005,081	c 09	N70-33312	US-PATENT-3,149,897	c 09	N70-36494	US-PATENT-3,204,889	c 03	N70-34157
US-PATENT-3,005,339	c 11	N70-33287	US-PATENT-3,150,329	c 09	N70-38995	US-PATENT-3,205,361	c 14	N70-34158
US-PATENT-3,008,229	c 15	N70-33311	US-PATENT-3,150,387	c 03	N70-36778	US-PATENT-3,205,362	c 21	N70-35089
US-PATENT-3,010,372	c 15	N70-33180	US-PATENT-3,152,344	c 05	N70-36493	US-PATENT-3,205,381	c 03	N70-35408
US-PATENT-3,011,760	c 15	N70-33226	US-PATENT-3,155,992	c 05	N70-34857	US-PATENT-3,206,141	c 21	N70-35395
US-PATENT-3,012,400	c 28	N70-33374	US-PATENT-3,156,090	c 28	N70-37245	US-PATENT-3,206,897	c 18	N75-27040
US-PATENT-3,012,407	c 15	N70-33323	US-PATENT-3,157,529	c 18	N70-36400	US-PATENT-3,208,215	c 28	N70-34162
US-PATENT-3,016,693	c 28	N70-33356	US-PATENT-3,158,172	c 15	N70-34817	US-PATENT-3,208,272	c 14	N70-34161
US-PATENT-3,016,863	c 12	N70-33305	US-PATENT-3,158,336	c 31	N70-36410	US-PATENT-3,208,694	c 02	N70-34160
US-PATENT-3,022,672	c 14	N70-34816	US-PATENT-3,158,764	c 03	N70-36803	US-PATENT-3,208,707	c 31	N70-34159
US-PATENT-3,024,659	c 14	N70-34820	US-PATENT-3,159,967	c 28	N70-36802	US-PATENT-3,209,360	c 09	N70-35219
US-PATENT-3,028,122	c 02	N70-33286	US-PATENT-3,160,825	c 14	N70-35220	US-PATENT-3,209,361	c 09	N70-35425
US-PATENT-3,028,126	c 21	N70-33279	US-PATENT-3,160,950	c 15	N70-36409	US-PATENT-3,210,927	c 28	N70-34175
US-PATENT-3,028,128	c 31	N70-33242	US-PATENT-3,162,012	c 15	N70-36411	US-PATENT-3,211,169	c 15	N70-35087
US-PATENT-3,035,333	c 28	N70-41818	US-PATENT-3,163,935	c 14	N70-36907	US-PATENT-3,211,414	c 15	N70-35407
US-PATENT-3,038,077	c 21	N70-33181	US-PATENT-3,164,222	c 15	N70-34861	US-PATENT-3,212,096	c 09	N70-35382
US-PATENT-3,038,175	c 05	N70-33285	US-PATENT-3,164,369	c 15	N70-36412	US-PATENT-3,212,259	c 28	N71-29153
US-PATENT-3,041,587	c 14	N70-33179	US-PATENT-3,165,356	c 05	N70-35152	US-PATENT-3,212,325	c 14	N70-34705
US-PATENT-3,041,924	c 14	N70-33254	US-PATENT-3,166,834	c 15	N70-36901	US-PATENT-3,212,564	c 33	N71-29052
US-PATENT-3,045,424	c 28	N70-40367	US-PATENT-3,167,426	c 17	N70-36616	US-PATENT-3,215,313	c 31	N79-21225
US-PATENT-3,049,876	c 28	N70-33284	US-PATENT-3,168,827	c 14	N70-36807	US-PATENT-3,215,572	c 12	N70-40124
US-PATENT-3,053,484	c 02	N70-33255	US-PATENT-3,169,001	c 02	N70-36825	US-PATENT-3,216,007	c 08	N70-40125
US-PATENT-3,057,597	c 15	N70-33264	US-PATENT-3,169,613	c 15	N70-36947	US-PATENT-3,217,624	c 14	N70-40273
US-PATENT-3,059,220	c 09	N70-33182	US-PATENT-3,169,725	c 31	N70-34296	US-PATENT-3,218,479	c 09	N70-40272

Table with multiple columns listing patent numbers and their corresponding report indices. The table is organized into several vertical sections, each starting with a common patent number prefix (e.g., US-PATENT-3,218,547) and listing subsequent numbers and their indices.

Table with multiple columns listing patent numbers (e.g., US-PATENT-3,334,225, US-PATENT-3,336,725), their corresponding report numbers (e.g., c 14, c 15), and a secondary set of report numbers (e.g., N73-32325, N71-21528). The table is organized into several vertical columns.

Table with multiple columns listing patent numbers (e.g., US-PATENT-3,421,541), their corresponding report numbers (e.g., c 15), and a central index column containing various patent numbers (e.g., N69-21924, N71-23046, N71-19431, etc.).

US-PATENT-3,490,238	c 15	N70-22192 *	#	US-PATENT-3,508,779	c 15	N71-24897 *	US-PATENT-3,534,367	c 02	N71-19287 *
US-PATENT-3,490,405	c 15	N71-15597 *		US-PATENT-3,508,940	c 18	N71-16124 *	US-PATENT-3,534,375	c 07	N71-11285 *
US-PATENT-3,490,440	c 05	N71-12346 *		US-PATENT-3,508,955	c 18	N71-16105 *	US-PATENT-3,534,376	c 07	N71-26101 *
US-PATENT-3,490,718	c 23	N71-14035 *		US-PATENT-3,508,999	c 15	N71-17687 *	US-PATENT-3,534,406	c 05	N71-11195 *
US-PATENT-3,490,719	c 31	N71-14159 *		US-PATENT-3,509,034	c 14	N71-17575 *	US-PATENT-3,534,407	c 05	N71-11194 *
US-PATENT-3,490,721	c 02	N71-11039 *		US-PATENT-3,509,386	c 03	N71-11055 *	US-PATENT-3,534,479	c 14	N71-17657 *
US-PATENT-3,490,939	c 33	N71-14032 *		US-PATENT-3,509,419	c 24	N71-16213 *	US-PATENT-3,534,480	c 14	N71-17658 *
US-PATENT-3,490,965	c 09	N71-12513 *		US-PATENT-3,509,469	c 23	N71-16099 *	US-PATENT-3,534,485	c 11	N71-18773 *
US-PATENT-3,491,202	c 07	N71-12392 *		US-PATENT-3,509,475	c 09	N71-24596 *	US-PATENT-3,534,555	c 12	N71-17631 *
US-PATENT-3,491,255	c 09	N71-12514 *		US-PATENT-3,509,491	c 09	N71-18721 *	US-PATENT-3,534,584	c 10	N71-13545 *
US-PATENT-3,491,335	c 14	N71-15620 *		US-PATENT-3,509,551	c 08	N71-18694 *	US-PATENT-3,534,585	c 14	N71-17701 *
US-PATENT-3,491,857	c 14	N71-17626 *		US-PATENT-3,509,558	c 08	N71-19435 *	US-PATENT-3,534,592	c 14	N71-17656 *
US-PATENT-3,492,176	c 27	N71-14090 *		US-PATENT-3,509,570	c 09	N71-18720 *	US-PATENT-3,534,596	c 14	N71-17586 *
US-PATENT-3,492,672	c 05	N71-12344 *		US-PATENT-3,509,578	c 07	N71-19493 *	US-PATENT-3,534,597	c 31	N71-15643 *
US-PATENT-3,492,739	c 15	N71-15571 *		US-PATENT-3,511,680	c 31	N79-21227 *	US-PATENT-3,534,650	c 15	N71-17653 *
US-PATENT-3,492,858	c 35	N78-17358 *		US-PATENT-3,512,009	c 08	N71-18751 *	US-PATENT-3,534,686	c 31	N71-15687 *
US-PATENT-3,492,862	c 14	N71-15600 *		US-PATENT-3,514,785	c 54	N78-18761 *	US-PATENT-3,534,727	c 05	N71-11189 *
US-PATENT-3,492,947	c 28	N71-14058 *		US-PATENT-3,516,091	c 05	N71-24623 *	US-PATENT-3,534,765	c 12	N71-17661 *
US-PATENT-3,493,003	c 15	N71-15609 *		US-PATENT-3,516,179	c 11	N71-19494 *	US-PATENT-3,534,826	c 31	N71-15689 *
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US-PATENT-3,493,012	c 15	N71-15608 *		US-PATENT-3,516,284	c 12	N71-17573 *	US-PATENT-3,534,909	c 15	N71-17654 *
US-PATENT-3,493,027	c 31	N71-18611 *		US-PATENT-3,516,404	c 05	N71-17599 *	US-PATENT-3,534,924	c 31	N71-15674 *
US-PATENT-3,493,153	c 05	N71-12351 *		US-PATENT-3,516,711	c 05	N71-12341 *	US-PATENT-3,534,925	c 31	N71-15676 *
US-PATENT-3,493,155	c 26	N71-14354 *		US-PATENT-3,516,879	c 23	N71-16212 *	US-PATENT-3,534,926	c 15	N71-19214 *
US-PATENT-3,493,194	c 21	N71-14132 *		US-PATENT-3,516,964	c 06	N71-11240 *	US-PATENT-3,534,930	c 02	N71-13422 *
US-PATENT-3,493,197	c 02	N71-11043 *		US-PATENT-3,516,970	c 06	N71-11239 *	US-PATENT-3,535,012	c 16	N71-15567 *
US-PATENT-3,493,291	c 14	N71-15622 *		US-PATENT-3,516,971	c 06	N71-24740 *	US-PATENT-3,535,013	c 16	N71-15551 *
US-PATENT-3,493,294	c 14	N71-15605 *		US-PATENT-3,517,109	c 07	N71-19436 *	US-PATENT-3,535,014	c 16	N71-15565 *
US-PATENT-3,493,401	c 18	N71-14014 *		US-PATENT-3,517,162	c 33	N71-16278 *	US-PATENT-3,535,024	c 14	N71-17662 *
US-PATENT-3,493,415	c 15	N71-15610 *		US-PATENT-3,517,171	c 08	N71-24633 *	US-PATENT-3,535,041	c 14	N71-17655 *
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US-PATENT-3,493,522	c 06	N71-11243 *		US-PATENT-3,517,268	c 10	N71-19469 *	US-PATENT-3,535,130	c 18	N71-15469 *
US-PATENT-3,493,524	c 06	N71-11242 *		US-PATENT-3,517,302	c 25	N71-16073 *	US-PATENT-3,535,165	c 33	N71-15568 *
US-PATENT-3,493,665	c 14	N71-15621 *		US-PATENT-3,517,318	c 08	N71-19432 *	US-PATENT-3,535,179	c 15	N71-17651 *
US-PATENT-3,493,677	c 07	N71-11300 *		US-PATENT-3,517,328	c 16	N71-18614 *	US-PATENT-3,535,352	c 18	N71-15688 *
US-PATENT-3,493,711	c 15	N71-14932 *		US-PATENT-3,518,232	c 06	N71-11235 *	US-PATENT-3,535,446	c 09	N71-12539 *
US-PATENT-3,493,746	c 15	N71-15606 *		US-PATENT-3,519,483	c 44	N82-24644 *	US-PATENT-3,535,451	c 07	N71-11281 *
US-PATENT-3,493,797	c 15	N71-17652 *		US-PATENT-3,519,484	c 44	N82-24643 *	US-PATENT-3,535,497	c 08	N71-24890 *
US-PATENT-3,493,805	c 09	N71-12521 *		US-PATENT-3,520,190	c 10	N71-13537 *	US-PATENT-3,535,543	c 09	N71-13486 *
US-PATENT-3,493,901	c 09	N71-12517 *		US-PATENT-3,520,238	c 14	N71-18465 *	US-PATENT-3,535,547	c 09	N71-12520 *
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US-PATENT-3,493,942	c 08	N71-12504 *		US-PATENT-3,520,496	c 31	N71-16345 *	US-PATENT-3,535,560	c 08	N71-12494 *
US-PATENT-3,495,260	c 21	N71-13958 *		US-PATENT-3,520,503	c 31	N71-16085 *	US-PATENT-3,535,562	c 33	N71-27862 *
US-PATENT-3,495,262	c 07	N71-12396 *		US-PATENT-3,520,617	c 23	N71-16101 *	US-PATENT-3,535,570	c 15	N71-24696 *
US-PATENT-3,498,840	c 44	N82-24642 *		US-PATENT-3,520,660	c 23	N71-16355 *	US-PATENT-3,535,586	c 25	N71-15562 *
US-PATENT-3,498,841	c 44	N82-24641 *		US-PATENT-3,521,054	c 06	N71-13461 *	US-PATENT-3,535,602	c 09	N71-13522 *
US-PATENT-3,500,020	c 01	N71-13411 *		US-PATENT-3,521,143	c 08	N71-18752 *	US-PATENT-3,535,642	c 08	N71-12503 *
US-PATENT-3,500,525	c 15	N71-17688 *		US-PATENT-3,521,290	c 31	N71-16102 *	US-PATENT-3,535,644	c 09	N71-12519 *
US-PATENT-3,500,677	c 14	N71-17584 *		US-PATENT-3,523,228	c 10	N71-24861 *	US-PATENT-3,535,657	c 07	N71-12390 *
US-PATENT-3,500,686	c 12	N71-17569 *		US-PATENT-3,526,030	c 15	N71-17686 *	US-PATENT-3,535,658	c 08	N71-12500 *
US-PATENT-3,500,688	c 14	N71-17587 *		US-PATENT-3,526,134	c 33	N71-16356 *	US-PATENT-3,535,683	c 31	N71-15566 *
US-PATENT-3,500,747	c 09	N71-18599 *		US-PATENT-3,526,139	c 31	N71-16221 *	US-PATENT-3,535,696	c 09	N71-12506 *
US-PATENT-3,500,827	c 05	N71-11203 *		US-PATENT-3,526,140	c 27	N71-16223 *	US-PATENT-3,535,702	c 08	N71-12515 *
US-PATENT-3,501,112	c 15	N71-17693 *		US-PATENT-3,526,359	c 33	N71-16357 *	US-PATENT-3,536,103	c 15	N71-19213 *
US-PATENT-3,501,632	c 27	N71-16348 *		US-PATENT-3,526,365	c 28	N71-16224 *	US-PATENT-3,537,096	c 08	N71-12507 *
US-PATENT-3,501,641	c 20	N71-16340 *		US-PATENT-3,526,372	c 31	N71-16346 *	US-PATENT-3,537,103	c 08	N71-24650 *
US-PATENT-3,501,648	c 10	N71-24799 *		US-PATENT-3,526,382	c 15	N71-17649 *	US-PATENT-3,537,107	c 05	N71-24730 *
US-PATENT-3,501,649	c 10	N71-18723 *		US-PATENT-3,526,460	c 23	N71-16365 *	US-PATENT-3,537,305	c 26	N71-25490 *
US-PATENT-3,501,664	c 14	N71-17585 *		US-PATENT-3,526,473	c 18	N71-15545 *	US-PATENT-3,537,515	c 09	N71-24807 *
US-PATENT-3,501,683	c 15	N71-17694 *		US-PATENT-3,526,580	c 18	N71-16210 *	US-PATENT-3,537,668	c 05	N71-24728 *
US-PATENT-3,501,684	c 09	N71-26092 *		US-PATENT-3,526,611	c 06	N71-11236 *	US-PATENT-3,537,672	c 15	N71-24694 *
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US-PATENT-3,501,704	c 07	N71-11282 *		US-PATENT-3,526,897	c 09	N71-13521 *	US-PATENT-3,539,905	c 09	N71-24800 *
US-PATENT-3,501,712	c 09	N71-19516 *		US-PATENT-3,527,724	c 27	N78-33228 *	US-PATENT-3,540,045	c 09	N71-24595 *
US-PATENT-3,501,743	c 09	N71-18843 *		US-PATENT-3,529,480	c 15	N71-17692 *	US-PATENT-3,540,048	c 31	N71-24813 *
US-PATENT-3,501,750	c 08	N71-19288 *		US-PATENT-3,529,928	c 17	N71-16393 *	US-PATENT-3,540,050	c 09	N71-24804 *
US-PATENT-3,501,752	c 08	N71-18595 *		US-PATENT-3,530,336	c 09	N71-13518 *	US-PATENT-3,540,054	c 07	N71-24625 *
US-PATENT-3,501,764	c 10	N71-18722 *		US-PATENT-3,531,964	c 15	N71-18616 *	US-PATENT-3,540,056	c 07	N71-24614 *
US-PATENT-3,502,051	c 15	N71-17647 *		US-PATENT-3,531,978	c 14	N71-18481 *	US-PATENT-3,540,250	c 15	N71-24865 *
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US-PATENT-3,502,141	c 33	N71-16277 *		US-PATENT-3,531,989	c 33	N71-15641 *	US-PATENT-3,540,615	c 33	N71-25351 *
US-PATENT-3,503,251	c 32	N71-16428 *		US-PATENT-3,532,118	c 12	N71-18615 *	US-PATENT-3,540,676	c 15	N71-24600 *
US-PATENT-3,504,258	c 10	N71-18724 *		US-PATENT-3,532,128	c 15	N71-18580 *	US-PATENT-3,540,790	c 16	N71-26154 *
US-PATENT-3,504,983	c 23	N71-16341 *		US-PATENT-3,532,427	c 21	N71-19212 *	US-PATENT-3,540,802	c 23	N71-24868 *
US-PATENT-3,506,496	c 44	N82-24645 *		US-PATENT-3,532,428	c 30	N71-15990 *	US-PATENT-3,540,942	c 15	N71-24875 *
US-PATENT-3,507,034	c 15	N71-17650 *		US-PATENT-3,532,538	c 18	N71-16046 *	US-PATENT-3,540,989	c 24	N71-25555 *
US-PATENT-3,507,114	c 27	N71-16392 *		US-PATENT-3,532,551	c 03	N71-11049 *	US-PATENT-3,541,250	c 07	N71-24742 *
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US-PATENT-3,507,150	c 20	N71-16281 *		US-PATENT-3,532,673	c 06	N71-11238 *	US-PATENT-3,541,314	c 07	N71-24741 *
US-PATENT-3,507,425	c 15	N71-17628 *		US-PATENT-3,532,807	c 07	N71-19433 *	US-PATENT-3,541,346	c 09	N71-24803 *
US-PATENT-3,507,436	c 08	N71-19420 *		US-PATENT-3,532,819	c 10	N71-19468 *	US-PATENT-3,541,361	c 09	N71-24904 *
US-PATENT-3,507,704	c 03	N71-11052 *		US-PATENT-3,532,866	c 08	N71-18602 *	US-PATENT-3,541,422	c 03	N71-24719 *
US-PATENT-3,507,706	c 03	N71-18698 *		US-PATENT-3,532,880	c 24	N71-16095 *	US-PATENT-3,541,428	c 09	N71-24893 *
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US-PATENT-3,508,039	c 08	N71-19437 *		US-PATENT-3,532,948	c 10	N71-18772 *	US-PATENT-3,541,450	c 07	N71-24840 *
US-PATENT-3,508,053	c 09	N71-18830 *		US-PATENT-3,532,960	c 03	N71-12255 *	US-PATENT-3,541,459	c 10	N71-24844 *
US-PATENT-3,508,070	c 03	N71-11057 *		US-PATENT-3,532,973	c 15	N71-17822 *	US-PATENT-3,541,479	c 09	N71-24841 *
US-PATENT-3,508,152	c 07	N71-11266 *		US-PATENT-3,532,975	c 10	N71-19421 *	US-PATENT-3,541,676	c 16	N71-28554 *
US-PATENT-3,508,156	c 07	N71-11267 *		US-PATENT-3,532,979	c 10	N71-12554 *	US-PATENT-3,541,689	c 03	N71-24681 *
US-PATENT-3,508,347	c 05	N71-24606 *		US-PATENT-3,532,985	c 07	N71-19773 *	US-PATENT-3,541,825	c 15	N71-24836 *
US-PATENT-3,508,402	c 33	N71-16104 *		US-PATENT-3,533,001	c 07	N71-24583 *	US-PATENT-3,541,875	c 15	N71-24984 *
US-PATENT-3,508,541	c 05	N71-11193 *		US-PATENT-3,533,006	c 10	N72-28241 *	US-PATENT-3,543,050	c 10	N71-24862 *
US-PATENT-3,508,578	c 32	N71-16103 *		US-PATENT-3,533,074	c 08	N71-12502 *	US-PATENT-3,543,159	c 09	N71-24717 *
US-PATENT-3,508,723	c 31	N71-16222 *		US-PATENT-3,533,093	c 10	N71-19417 *	US-PATENT-3,543,839	c 34	N78-17337 *
US-PATENT-3,508,724	c 02	N71-11037 *		US-PATENT-3,533,098	c 08	N71-18594 *	US-PATENT-3,545,208	c 28	N71-25213 *
US-PATENT-3,508,739	c 15	N71-17648 *		US-PATENT-3,534,365	c 07	N71-19854 *	US-PATENT-3,545,226	c 23	N71

Table listing patent numbers and their corresponding report indices, arranged in three columns. The first column contains patent numbers from 3,545,252 to 3,567,339. The second column contains patent numbers from 3,567,651 to 3,579,390. The third column contains patent numbers from 3,579,412 to 3,607,338. Each entry is accompanied by a small letter indicating its report index.

US-PATENT-3.607.401	c 03	N72-15986 *	US-PATENT-3.625.766	c 03	N72-20032 *	US-PATENT-3.660.851	c 05	N72-25119 *
US-PATENT-3.607.495	c 15	N72-16330	US-PATENT-3.626.114	c 35	N79-16246 *	US-PATENT-3.662.337	c 08	N72-25210 *
US-PATENT-3.608.046	c 15	N72-16329	US-PATENT-3.626.189	c 14	N72-20381 *	US-PATENT-3.662.441	c 05	N72-25121 *
US-PATENT-3.608.365	c 15	N72-17452 *	US-PATENT-3.626.218	c 14	N72-22439	US-PATENT-3.662.547	c 15	N72-25455 *
US-PATENT-3.608.409	c 14	N72-16283	US-PATENT-3.626.298	c 07	N72-20140 *	US-PATENT-3.662.604	c 13	N72-25323 *
US-PATENT-3.608.844	c 15	N72-18477 *	US-PATENT-3.626.308	c 10	N72-20223 *	US-PATENT-3.662.661	c 31	N72-25842 *
US-PATENT-3.609.230	c 09	N72-17156 *	US-PATENT-3.626.828	c 14	N72-20380 *	US-PATENT-3.662.744	c 05	N72-25122 *
US-PATENT-3.609.271	c 09	N72-22204 *	US-PATENT-3.628.113	c 37	N77-27400 *	US-PATENT-3.662.973	c 21	N72-25595 *
US-PATENT-3.609.327	c 08	N72-22167 *	US-PATENT-3.629.068	c 22	N72-20597 *	US-PATENT-3.663.346	c 18	N72-25541 *
US-PATENT-3.609.353	c 14	N72-17328 *	US-PATENT-3.629.161	c 18	N72-22567 *	US-PATENT-3.663.347	c 18	N72-25540 *
US-PATENT-3.609.364	c 10	N72-17173 *	US-PATENT-3.630.276	c 33	N72-20915 *	US-PATENT-3.663.464	c 06	N72-25147 *
US-PATENT-3.609.387	c 09	N72-17157 *	US-PATENT-3.630.304	c 11	N72-20244 *	US-PATENT-3.663.521	c 06	N72-25152 *
US-PATENT-3.609.535	c 14	N72-17325 *	US-PATENT-3.630.627	c 03	N72-20033 *	US-PATENT-3.663.753	c 14	N72-25414 *
US-PATENT-3.609.567	c 10	N72-17171 *	US-PATENT-3.631.339	c 08	N72-20177 *	US-PATENT-3.663.828	c 09	N72-25262 *
US-PATENT-3.609.740	c 05	N72-16015 *	US-PATENT-3.631.351	c 10	N72-20224 *	US-PATENT-3.663.839	c 09	N72-25280 *
US-PATENT-3.610.365	c 15	N72-17451 *	US-PATENT-3.631.382	c 09	N72-20200 *	US-PATENT-3.663.843	c 09	N72-25255 *
US-PATENT-3.611.274	c 15	N72-17455 *	US-PATENT-3.631.737	c 15	N72-28495 *	US-PATENT-3.663.885	c 09	N72-25257 *
US-PATENT-3.611.330	c 23	N72-17747 *	US-PATENT-3.632.081	c 15	N72-20442 *	US-PATENT-3.663.886	c 09	N72-25258 *
US-PATENT-3.611.798	c 14	N72-22437 *	US-PATENT-3.632.140	c 15	N72-20445 *	US-PATENT-3.663.929	c 09	N72-25256 *
US-PATENT-3.611.801	c 14	N72-17329 *	US-PATENT-3.632.242	c 15	N72-20446 *	US-PATENT-3.663.938	c 03	N72-25020 *
US-PATENT-3.612.030	c 46	N74-23069 *	US-PATENT-3.632.923	c 09	N72-20199 *	US-PATENT-3.663.940	c 09	N72-25252 *
US-PATENT-3.612.391	c 11	N72-22245 *	US-PATENT-3.632.996	c 08	N72-20176 *	US-PATENT-3.663.941	c 09	N72-25253 *
US-PATENT-3.612.442	c 28	N72-22769 *	US-PATENT-3.633.048	c 10	N72-20221 *	US-PATENT-3.663.944	c 09	N72-25254 *
US-PATENT-3.612.645	c 14	N72-22441 *	US-PATENT-3.633.110	c 07	N72-20141 *	US-PATENT-3.664.185	c 15	N72-26371 *
US-PATENT-3.612.743	c 09	N72-22198 *	US-PATENT-3.634.383	c 27	N73-22710 *	US-PATENT-3.664.874	c 09	N72-25259 *
US-PATENT-3.612.895	c 09	N72-22197 *	US-PATENT-3.635.216	c 05	N72-20096 *	US-PATENT-3.665.064	c 05	N72-25120 *
US-PATENT-3.613.110	c 08	N72-21199 *	US-PATENT-3.635.537	c 33	N80-14330 *	US-PATENT-3.665.307	c 15	N72-25457 *
US-PATENT-3.613.111	c 08	N72-21200 *	US-PATENT-3.635.765	c 03	N72-20034 *	US-PATENT-3.665.313	c 07	N72-25173 *
US-PATENT-3.613.370	c 28	N72-22770 *	US-PATENT-3.636.539	c 03	N72-20031 *	US-PATENT-3.665.417	c 07	N72-25172 *
US-PATENT-3.613.454	c 35	N77-27368 *	US-PATENT-3.636.564	c 05	N72-22092 *	US-PATENT-3.665.467	c 14	N72-28437 *
US-PATENT-3.613.457	c 15	N72-22482 *	US-PATENT-3.636.623	c 15	N72-20444 *	US-PATENT-3.665.481	c 07	N72-25174 *
US-PATENT-3.613.794	c 12	N72-21310 *	US-PATENT-3.636.711	c 28	N72-20758 *	US-PATENT-3.665.589	c 09	N72-25261 *
US-PATENT-3.614.228	c 14	N72-21409 *	US-PATENT-3.636.966	c 05	N72-20097 *	US-PATENT-3.665.669	c 15	N72-25454 *
US-PATENT-3.614.327	c 08	N72-22162 *	US-PATENT-3.637.051	c 15	N72-20443 *	US-PATENT-3.665.670	c 11	N72-25287 *
US-PATENT-3.614.343	c 07	N72-21119 *	US-PATENT-3.637.170	c 21	N72-21624 *	US-PATENT-3.665.750	c 33	N72-25913 *
US-PATENT-3.614.431	c 14	N72-21408 *	US-PATENT-3.637.312	c 14	N72-20379 *	US-PATENT-3.665.751	c 32	N72-25877 *
US-PATENT-3.614.475	c 10	N72-16172 *	US-PATENT-3.637.842	c 06	N72-20121 *	US-PATENT-3.665.758	c 11	N72-25288 *
US-PATENT-3.614.557	c 26	N72-21701 *	US-PATENT-3.638.002	c 08	N72-21197 *	US-PATENT-3.666.051	c 15	N72-25453 *
US-PATENT-3.614.587	c 09	N72-22196 *	US-PATENT-3.638.066	c 10	N72-20225 *	US-PATENT-3.666.120	c 03	N72-25021 *
US-PATENT-3.614.648	c 09	N72-21247 *	US-PATENT-3.638.103	c 09	N72-21243 *	US-PATENT-3.666.566	c 03	N72-26031 *
US-PATENT-3.614.772	c 08	N72-22163 *	US-PATENT-3.638.114	c 10	N72-20222 *	US-PATENT-3.666.631	c 14	N72-25413 *
US-PATENT-3.614.898	c 15	N72-21462 *	US-PATENT-3.638.224	c 09	N72-21244 *	US-PATENT-3.666.718	c 06	N72-25151 *
US-PATENT-3.614.899	c 09	N72-22195 *	US-PATENT-3.639.250	c 14	N72-22443 *	US-PATENT-3.666.741	c 06	N72-25150 *
US-PATENT-3.615.021	c 15	N72-22483 *	US-PATENT-3.639.510	c 06	N72-22107 *	US-PATENT-3.666.942	c 06	N72-25146 *
US-PATENT-3.615.241	c 15	N72-21465 *	US-PATENT-3.639.809	c 15	N72-22486 *	US-PATENT-3.667.010	c 26	N72-25679 *
US-PATENT-3.615.465	c 06	N72-21094 *	US-PATENT-3.639.835	c 14	N72-22442 *	US-PATENT-3.667.039	c 26	N72-25680 *
US-PATENT-3.615.853	c 03	N72-22042 *	US-PATENT-3.640.256	c 28	N72-22772 *	US-PATENT-3.667.044	c 07	N72-25171 *
US-PATENT-3.616.338	c 15	N72-21466 *	US-PATENT-3.641.470	c 35	N78-17359 *	US-PATENT-3.668.956	c 15	N72-27485 *
US-PATENT-3.616.528	c 03	N72-22041 *	US-PATENT-3.642.276	c 14	N72-22444 *	US-PATENT-3.669.110	c 05	N72-27103 *
US-PATENT-3.617.804	c 25	N72-24753 *	US-PATENT-3.647.529	c 27	N74-23125 *	US-PATENT-3.669.393	c 15	N72-27484 *
US-PATENT-3.619.896	c 15	N72-22487 *	US-PATENT-3.647.924	c 11	N72-23215 *	US-PATENT-3.670.097	c 23	N72-27728 *
US-PATENT-3.619.924	c 11	N72-22247 *	US-PATENT-3.648.043	c 09	N72-23173 *	US-PATENT-3.670.168	c 14	N72-27409 *
US-PATENT-3.620.018	c 28	N72-22771 *	US-PATENT-3.648.083	c 12	N72-25292 *	US-PATENT-3.670.202	c 14	N72-27411 *
US-PATENT-3.620.069	c 14	N72-22440 *	US-PATENT-3.648.152	c 03	N72-23048 *	US-PATENT-3.670.241	c 14	N72-27408 *
US-PATENT-3.620.076	c 11	N72-22246 *	US-PATENT-3.648.209	c 09	N72-27226 *	US-PATENT-3.670.290	c 09	N72-28225 *
US-PATENT-3.620.083	c 14	N72-22438 *	US-PATENT-3.648.250	c 09	N72-25248 *	US-PATENT-3.670.559	c 33	N72-27959 *
US-PATENT-3.620.095	c 15	N72-21463 *	US-PATENT-3.648.256	c 08	N72-25207 *	US-PATENT-3.670.563	c 14	N72-27412 *
US-PATENT-3.620.585	c 15	N72-22490 *	US-PATENT-3.648.275	c 08	N72-25206 *	US-PATENT-3.670.564	c 11	N72-27262 *
US-PATENT-3.620.595	c 14	N72-22445 *	US-PATENT-3.648.461	c 28	N72-23810 *	US-PATENT-3.670.890	c 05	N72-27102 *
US-PATENT-3.620.606	c 23	N72-22673 *	US-PATENT-3.648.516	c 35	N74-22095 *	US-PATENT-3.671.105	c 26	N72-27784 *
US-PATENT-3.620.718	c 17	N72-22535 *	US-PATENT-3.649.242	c 15	N72-25448 *	US-PATENT-3.671.329	c 14	N72-27410 *
US-PATENT-3.620.784	c 18	N72-23581 *	US-PATENT-3.649.353	c 26	N72-28762 *	US-PATENT-3.671.497	c 06	N72-27144 *
US-PATENT-3.620.791	c 18	N72-22566 *	US-PATENT-3.649.356	c 15	N72-25447 *	US-PATENT-3.671.798	c 10	N72-27246 *
US-PATENT-3.620.846	c 31	N72-22874 *	US-PATENT-3.649.462	c 11	N72-25284 *	US-PATENT-3.672.999	c 03	N72-27053 *
US-PATENT-3.621.130	c 08	N72-22164 *	US-PATENT-3.649.907	c 09	N72-23172 *	US-PATENT-3.673.424	c 09	N72-27227 *
US-PATENT-3.621.193	c 15	N72-23497 *	US-PATENT-3.649.921	c 05	N72-23085 *	US-PATENT-3.673.440	c 09	N72-27228 *
US-PATENT-3.621.194	c 15	N72-22491 *	US-PATENT-3.649.935	c 07	N72-25170 *	US-PATENT-3.675.332	c 14	N72-28436 *
US-PATENT-3.621.228	c 08	N72-22165 *	US-PATENT-3.650.095	c 14	N72-23457 *	US-PATENT-3.675.376	c 15	N72-28496 *
US-PATENT-3.621.277	c 10	N72-22236 *	US-PATENT-3.650.474	c 28	N72-23809 *	US-PATENT-3.675.712	c 03	N72-28025 *
US-PATENT-3.621.285	c 09	N72-22200 *	US-PATENT-3.651.008	c 27	N81-24258 *	US-PATENT-3.675.910	c 17	N72-28535 *
US-PATENT-3.621.287	c 09	N72-22201 *	US-PATENT-3.653.052	c 09	N72-25247 *	US-PATENT-3.675.935	c 15	N72-29488 *
US-PATENT-3.621.290	c 09	N72-22202 *	US-PATENT-3.653.882	c 18	N72-25539 *	US-PATENT-3.676.084	c 17	N72-28536 *
US-PATENT-3.621.294	c 09	N72-23171 *	US-PATENT-3.653.970	c 03	N72-24037 *	US-PATENT-3.676.674	c 14	N72-29464 *
US-PATENT-3.621.330	c 33	N77-21316 *	US-PATENT-3.654.036	c 03	N72-25019 *	US-PATENT-3.676.754	c 26	N72-28761 *
US-PATENT-3.621.362	c 09	N72-22203 *	US-PATENT-3.655.814	c 27	N81-15104 *	US-PATENT-3.676.772	c 10	N72-28240 *
US-PATENT-3.621.372	c 09	N72-25249 *	US-PATENT-3.656.313	c 23	N72-25619 *	US-PATENT-3.676.787	c 16	N72-28521 *
US-PATENT-3.621.406	c 09	N72-33204 *	US-PATENT-3.656.317	c 33	N72-25911 *	US-PATENT-3.676.809	c 09	N72-29172 *
US-PATENT-3.621.407	c 09	N72-21245 *	US-PATENT-3.656.352	c 14	N72-25411 *	US-PATENT-3.678.191	c 10	N72-31273 *
US-PATENT-3.621.565	c 09	N72-22199 *	US-PATENT-3.656.781	c 15	N72-25450 *	US-PATENT-3.678.654	c 06	N72-31140 *
US-PATENT-3.623.030	c 08	N72-21198 *	US-PATENT-3.657.190	c 23	N82-29358 *	US-PATENT-3.678.685	c 21	N72-31637 *
US-PATENT-3.623.094	c 10	N72-22235 *	US-PATENT-3.657.549	c 14	N72-25409 *	US-PATENT-3.678.771	c 37	N74-23070 *
US-PATENT-3.623.107	c 07	N72-21117 *	US-PATENT-3.657.644	c 14	N72-24477 *	US-PATENT-3.679.360	c 04	N72-33072 *
US-PATENT-3.623.114	c 07	N72-22127 *	US-PATENT-3.657.928	c 14	N72-25410 *	US-PATENT-3.679.899	c 06	N72-31141 *
US-PATENT-3.623.359	c 35	N77-27367 *	US-PATENT-3.658.295	c 15	N72-25451 *	US-PATENT-3.680.142	c 09	N72-31235 *
US-PATENT-3.623.360	c 14	N72-21405 *	US-PATENT-3.658.569	c 15	N72-25452 *	US-PATENT-3.680.144	c 07	N72-32169 *
US-PATENT-3.623.361	c 14	N72-21407 *	US-PATENT-3.658.608	c 27	N72-25699 *	US-PATENT-3.680.830	c 15	N72-31483 *
US-PATENT-3.623.394	c 15	N72-22488 *	US-PATENT-3.658.974	c 15	N72-24522 *	US-PATENT-3.681.581	c 08	N72-31226 *
US-PATENT-3.623.828	c 15	N72-22489 *	US-PATENT-3.659.043	c 14	N72-25412 *	US-PATENT-3.686.542	c 14	N72-31446 *
US-PATENT-3.623.861	c 17	N72-22530 *	US-PATENT-3.659.053	c 08	N72-25208 *	US-PATENT-3.690.291	c 15	N72-32487 *
US-PATENT-3.624.496	c 15	N72-21464 *	US-PATENT-3.659.148	c 09	N72-25250 *	US-PATENT-3.692.533	c 05	N72-33096 *
US-PATENT-3.624.598	c							



US-PATENT-3,694,313	c 24	N72-33681 *	US-PATENT-3,714,821	c 14	N73-20476 *	US-PATENT-3,747,111	c 07	N73-28013 *
US-PATENT-3,694,581	c 08	N72-33172 *	US-PATENT-3,714,833	c 11	N73-20267 *	US-PATENT-3,748,722	c 15	N73-33383 *
US-PATENT-3,694,655	c 25	N72-33696 *	US-PATENT-3,715,092	c 03	N73-20039 *	US-PATENT-3,748,853	c 23	N73-30665 *
US-PATENT-3,694,700	c 09	N72-33205 *	US-PATENT-3,715,152	c 23	N73-20741 *	US-PATENT-3,748,905	c 14	N73-30395 *
US-PATENT-3,694,753	c 07	N72-33146 *	US-PATENT-3,715,590	c 14	N73-20477 *	US-PATENT-3,749,123	c 15	N73-30459 *
US-PATENT-3,694,771	c 09	N73-15235 *	US-PATENT-3,715,600	c 03	N73-20040 *	US-PATENT-3,749,156	c 31	N73-30829 *
US-PATENT-3,695,101	c 11	N73-12264 *	US-PATENT-3,715,660	c 07	N73-20175 *	US-PATENT-3,749,205	c 15	N73-30460 *
US-PATENT-3,696,418	c 09	N73-12211 *	US-PATENT-3,715,663	c 07	N73-20174 *	US-PATENT-3,749,332	c 31	N73-32750 *
US-PATENT-3,696,833	c 11	N73-12265 *	US-PATENT-3,715,693	c 09	N73-20232 *	US-PATENT-3,749,362	c 15	N73-30457 *
US-PATENT-3,697,021	c 15	N73-12486 *	US-PATENT-3,715,723	c 07	N73-20176 *	US-PATENT-3,749,831	c 07	N73-30115 *
US-PATENT-3,697,630	c 15	N73-12489 *	US-PATENT-3,715,915	c 32	N73-20740 *	US-PATENT-3,749,911	c 14	N73-30389 *
US-PATENT-3,697,705	c 35	N77-21392 *	US-PATENT-3,718,863	c 10	N73-20254 *	US-PATENT-3,750,016	c 14	N73-30388 *
US-PATENT-3,697,733	c 08	N73-12176 *	US-PATENT-3,719,891	c 07	N73-25160 *	US-PATENT-3,750,035	c 33	N77-13315 *
US-PATENT-3,697,950	c 08	N73-12177 *	US-PATENT-3,720,075	c 33	N73-25952 *	US-PATENT-3,750,067	c 09	N73-30185 *
US-PATENT-3,697,968	c 21	N73-13644 *	US-PATENT-3,720,208	c 05	N73-25125 *	US-PATENT-3,750,131	c 10	N73-30205 *
US-PATENT-3,698,385	c 05	N73-13114 *	US-PATENT-3,723,745	c 14	N73-25462 *	US-PATENT-3,750,168	c 21	N73-30641 *
US-PATENT-3,698,412	c 14	N73-13418 *	US-PATENT-3,728,861	c 28	N73-24783 *	US-PATENT-3,750,479	c 05	N73-30078 *
US-PATENT-3,698,659	c 11	N73-13257 *	US-PATENT-3,729,069	c 15	N73-25512 *	US-PATENT-3,751,123	c 15	N73-30458 *
US-PATENT-3,698,667	c 02	N73-13008 *	US-PATENT-3,729,128	c 08	N73-25206 *	US-PATENT-3,751,727	c 05	N73-32012 *
US-PATENT-3,698,848	c 15	N73-13464 *	US-PATENT-3,729,260	c 14	N73-25463 *	US-PATENT-3,751,733	c 05	N73-32013 *
US-PATENT-3,699,511	c 21	N73-13643 *	US-PATENT-3,729,343	c 14	N73-24472 *	US-PATENT-3,751,913	c 06	N73-30097 *
US-PATENT-3,699,645	c 14	N73-13417 *	US-PATENT-3,729,676	c 14	N73-24473 *	US-PATENT-3,751,980	c 14	N73-32326 *
US-PATENT-3,699,799	c 15	N73-13463 *	US-PATENT-3,729,736	c 07	N73-25161 *	US-PATENT-3,752,556	c 35	N74-17153 *
US-PATENT-3,699,807	c 14	N73-13416 *	US-PATENT-3,729,743	c 07	N73-24176 *	US-PATENT-3,752,559	c 14	N73-30387 *
US-PATENT-3,699,811	c 14	N73-13415 *	US-PATENT-3,729,935	c 28	N73-24784 *	US-PATENT-3,752,564	c 23	N73-30666 *
US-PATENT-3,700,005	c 15	N73-13462 *	US-PATENT-3,730,287	c 11	N73-26238 *	US-PATENT-3,752,665	c 18	N73-32437 *
US-PATENT-3,700,192	c 31	N73-13898 *	US-PATENT-3,730,891	c 18	N73-26572 *	US-PATENT-3,752,847	c 06	N73-30098 *
US-PATENT-3,700,193	c 30	N73-12884 *	US-PATENT-3,731,528	c 12	N73-25262 *	US-PATENT-3,752,886	c 14	N73-30392 *
US-PATENT-3,700,291	c 15	N73-12488 *	US-PATENT-3,731,531	c 14	N73-25460 *	US-PATENT-3,752,993	c 21	N73-30640 *
US-PATENT-3,700,334	c 14	N73-12446 *	US-PATENT-3,732,040	c 15	N73-24513 *	US-PATENT-3,752,996	c 91	N74-13130 *
US-PATENT-3,700,503	c 14	N73-12447 *	US-PATENT-3,732,158	c 17	N73-24569 *	US-PATENT-3,753,148	c 09	N73-32111 *
US-PATENT-3,700,538	c 18	N73-12604 *	US-PATENT-3,732,397	c 33	N74-14935 *	US-PATENT-3,754,236	c 08	N73-32081 *
US-PATENT-3,700,575	c 15	N73-12487 *	US-PATENT-3,732,405	c 10	N73-25240 *	US-PATENT-3,754,263	c 09	N73-32110 *
US-PATENT-3,700,603	c 14	N73-14428 *	US-PATENT-3,732,409	c 08	N73-26175 *	US-PATENT-3,754,976	c 15	N73-32360 *
US-PATENT-3,700,812	c 10	N73-12244 *	US-PATENT-3,732,567	c 14	N73-25461 *	US-PATENT-3,755,265	c 06	N73-33076 *
US-PATENT-3,700,868	c 09	N73-13209 *	US-PATENT-3,733,350	c 06	N73-26100 *	US-PATENT-3,755,283	c 06	N73-32029 *
US-PATENT-3,700,869	c 08	N73-12175 *	US-PATENT-3,733,424	c 32	N73-26910 *	US-PATENT-3,755,686	c 03	N73-31988 *
US-PATENT-3,700,893	c 14	N73-12444 *	US-PATENT-3,733,463	c 14	N73-26430 *	US-PATENT-3,756,920	c 05	N73-32011 *
US-PATENT-3,700,897	c 14	N73-12445 *	US-PATENT-3,734,432	c 02	N73-26004 *	US-PATENT-3,757,183	c 09	N73-32107 *
US-PATENT-3,700,961	c 23	N73-13660 *	US-PATENT-3,735,206	c 10	N73-25243 *	US-PATENT-3,757,476	c 31	N73-32749 *
US-PATENT-3,701,631	c 17	N73-12547 *	US-PATENT-3,735,591	c 25	N73-25760 *	US-PATENT-3,757,568	c 14	N73-32323 *
US-PATENT-3,701,894	c 07	N73-13149 *	US-PATENT-3,736,453	c 33	N77-22386 *	US-PATENT-3,757,659	c 14	N73-32322 *
US-PATENT-3,702,463	c 08	N73-13187 *	US-PATENT-3,736,607	c 02	N73-26006 *	US-PATENT-3,758,112	c 05	N73-32014 *
US-PATENT-3,702,520	c 32	N73-13921 *	US-PATENT-3,736,764	c 05	N73-26071 *	US-PATENT-3,758,718	c 10	N73-32143 *
US-PATENT-3,702,532	c 15	N73-13467 *	US-PATENT-3,736,849	c 14	N73-26431 *	US-PATENT-3,758,741	c 15	N73-32358 *
US-PATENT-3,702,536	c 28	N73-13773 *	US-PATENT-3,736,938	c 05	N73-27062 *	US-PATENT-3,758,781	c 14	N73-32317 *
US-PATENT-3,702,575	c 15	N73-13466 *	US-PATENT-3,736,956	c 15	N73-26472 *	US-PATENT-3,758,877	c 16	N73-32391 *
US-PATENT-3,702,688	c 31	N73-14854 *	US-PATENT-3,737,117	c 31	N73-26876 *	US-PATENT-3,759,152	c 14	N73-32319 *
US-PATENT-3,702,735	c 23	N73-13661 *	US-PATENT-3,737,118	c 15	N73-25513 *	US-PATENT-3,759,249	c 05	N73-32015 *
US-PATENT-3,702,762	c 06	N73-13129 *	US-PATENT-3,737,121	c 02	N73-26005 *	US-PATENT-3,759,443	c 28	N73-32606 *
US-PATENT-3,702,775	c 06	N73-13128 *	US-PATENT-3,737,181	c 33	N73-26958 *	US-PATENT-3,759,588	c 15	N73-32359 *
US-PATENT-3,702,791	c 15	N73-13465 *	US-PATENT-3,737,217	c 05	N73-26072 *	US-PATENT-3,759,672	c 14	N73-32320 *
US-PATENT-3,702,841	c 18	N73-13562 *	US-PATENT-3,737,231	c 07	N73-26119 *	US-PATENT-3,759,746	c 09	N73-32108 *
US-PATENT-3,702,898	c 10	N73-13235 *	US-PATENT-3,737,237	c 26	N73-26751 *	US-PATENT-3,759,747	c 44	N74-19692 *
US-PATENT-3,702,933	c 23	N73-13662 *	US-PATENT-3,737,639	c 10	N73-26230 *	US-PATENT-3,759,787	c 22	N73-32528 *
US-PATENT-3,702,951	c 09	N73-13208 *	US-PATENT-3,737,676	c 10	N73-26229 *	US-PATENT-3,760,239	c 09	N73-32112 *
US-PATENT-3,702,972	c 16	N73-13489 *	US-PATENT-3,737,677	c 10	N73-26228 *	US-PATENT-3,760,248	c 10	N73-32145 *
US-PATENT-3,702,979	c 14	N73-13420 *	US-PATENT-3,737,762	c 14	N73-28486 *	US-PATENT-3,760,257	c 09	N73-32109 *
US-PATENT-3,704,284	c 74	N81-19898 *	US-PATENT-3,737,776	c 07	N73-26118 *	US-PATENT-3,760,268	c 14	N73-32318 *
US-PATENT-3,704,659	c 14	N73-14427 *	US-PATENT-3,737,871	c 10	N73-25241 *	US-PATENT-3,760,394	c 10	N73-32144 *
US-PATENT-3,705,255	c 15	N73-14469 *	US-PATENT-3,737,815	c 09	N73-26195 *	US-PATENT-3,762,884	c 17	N73-32414 *
US-PATENT-3,705,288	c 15	N73-14468 *	US-PATENT-3,737,824	c 26	N73-26752 *	US-PATENT-3,762,918	c 17	N73-32415 *
US-PATENT-3,705,316	c 09	N73-14214 *	US-PATENT-3,737,905	c 14	N73-26432 *	US-PATENT-3,763,204	c 06	N73-32030 *
US-PATENT-3,705,406	c 07	N73-14130 *	US-PATENT-3,737,912	c 07	N73-26117 *	US-PATENT-3,763,552	c 26	N73-32571 *
US-PATENT-3,706,221	c 14	N73-14429 *	US-PATENT-3,739,646	c 04	N76-26175 *	US-PATENT-3,763,691	c 14	N73-32327 *
US-PATENT-3,706,230	c 31	N73-14855 *	US-PATENT-3,740,671	c 10	N73-27171 *	US-PATENT-3,763,708	c 35	N74-18323 *
US-PATENT-3,706,281	c 31	N73-14853 *	US-PATENT-3,740,725	c 08	N73-26176 *	US-PATENT-3,763,740	c 11	N73-32152 *
US-PATENT-3,706,583	c 18	N73-14584 *	US-PATENT-3,741,001	c 14	N73-27376 *	US-PATENT-3,763,928	c 33	N73-32818 *
US-PATENT-3,706,970	c 21	N73-14692 *	US-PATENT-3,742,316	c 09	N73-27150 #	US-PATENT-3,764,097	c 02	N74-10034 *
US-PATENT-3,708,359	c 27	N73-16764 *	US-PATENT-3,744,128	c 09	N73-28083 *	US-PATENT-3,764,209	c 14	N73-30361 *
US-PATENT-3,708,419	c 33	N73-16918 *	US-PATENT-3,744,148	c 14	N73-28489 *	US-PATENT-3,764,220	c 16	N73-33397 *
US-PATENT-3,708,671	c 14	N73-16483 *	US-PATENT-3,744,247	c 28	N73-27699 *	US-PATENT-3,764,790	c 33	N74-10223 *
US-PATENT-3,708,674	c 14	N73-16484 *	US-PATENT-3,744,294	c 14	N73-27379 *	US-PATENT-3,764,850	c 33	N74-10195 *
US-PATENT-3,709,663	c 06	N73-16106 *	US-PATENT-3,744,305	c 12	N73-28144 *	US-PATENT-3,764,933	c 33	N74-10194 *
US-PATENT-3,710,122	c 16	N73-16536 *	US-PATENT-3,744,320	c 14	N73-28487 *	US-PATENT-3,765,229	c 35	N74-10415 *
US-PATENT-3,710,257	c 07	N73-16121 *	US-PATENT-3,744,480	c 05	N73-27941 *	US-PATENT-3,765,958	c 26	N74-10521 *
US-PATENT-3,710,261	c 10	N73-16205 *	US-PATENT-3,744,510	c 15	N73-27406 *	US-PATENT-3,766,315	c 32	N74-10132 *
US-PATENT-3,710,329	c 10	N73-16206 *	US-PATENT-3,744,738	c 14	N73-27378 *	US-PATENT-3,766,380	c 35	N74-11284 *
US-PATENT-3,711,042	c 02	N73-19004 *	US-PATENT-3,744,739	c 15	N77-10112 *	US-PATENT-3,767,212	c 37	N74-10474 *
US-PATENT-3,711,701	c 74	N77-21941 *	US-PATENT-3,744,794	c 14	N73-27377 *	US-PATENT-3,769,544	c 31	N78-17238 *
US-PATENT-3,712,120	c 14	N73-19421 *	US-PATENT-3,744,912	c 16	N73-30476 *	US-PATENT-3,769,623	c 32	N74-11000 *
US-PATENT-3,712,121	c 14	N73-19420 *	US-PATENT-3,744,913	c 14	N73-28490 *	US-PATENT-3,769,689	c 37	N74-11301 *
US-PATENT-3,712,132	c 14	N73-20478 *	US-PATENT-3,744,972	c 17	N73-27446 *	US-PATENT-3,769,834	c 52	N74-10975 *
US-PATENT-3,712,195	c 14	N73-19419 *	US-PATENT-3,745,082	c 18	N73-30532 *	US-PATENT-3,770,021	c 33	N74-11050 *
US-PATENT-3,712,591	c 15	N73-19458 *	US-PATENT-3,745,089	c 06	N73-27086 *	US-PATENT-3,770,903	c 35	N74-11283 *
US-PATENT-3,713,163	c 09	N73-19234 *	US-PATENT-3,745,090	c 04	N73-27052 *	US-PATENT-3,770,933	c 37	N74-11300 *
US-PATENT-3,713,290	c 28	N73-19793 *	US-PATENT-3,745,149	c 06	N73-27980 *	US-PATENT-3,771,037	c 08	N74-10942 *
US-PATENT-3,713,480	c 05	N73-20137 *	US-PATENT-3,745,255	c 07	N73-28012 *	US-PATENT-3,771,040	c 33	N74-11049 *
US-PATENT-3,713,987	c 15	N73-20514 *	US-PATENT-3,745,300	c 15	N73-28515 *	US-PATENT-3,771,074	c 36	N74-11313 *
US-PATENT-3,714,332	c 15	N73-19457 *	US-PATENT-3,745,352	c 08	N73-30135 *	US-PATENT-3,771,959	c 25	N74-12813 *
US-PATENT-3,714								

US-PATENT-3,773,038	c 52	N74-12778 *	US-PATENT-3,804,472	c 37	N74-21061 *	US-PATENT-3,832,735	c 54	N74-32546 *
US-PATENT-3,773,913	c 46	N74-13011 *	US-PATENT-3,804,506	c 33	N74-20861 *	US-PATENT-3,832,764	c 37	N74-32918 *
US-PATENT-3,775,101	c 37	N74-13179 *	US-PATENT-3,804,525	c 36	N74-21091 *	US-PATENT-3,832,781	c 35	N74-32877 *
US-PATENT-3,775,570	c 35	N78-29421 *	US-PATENT-3,804,703	c 37	N74-21063 *	US-PATENT-3,832,903	c 35	N74-32678 *
US-PATENT-3,776,028	c 35	N74-13129 *	US-PATENT-3,805,266	c 32	N74-20864 *	US-PATENT-3,833,322	c 31	N74-32917 *
US-PATENT-3,776,432	c 37	N74-13178 *	US-PATENT-3,805,303	c 54	N74-20725 *	US-PATENT-3,833,336	c 25	N74-33378 *
US-PATENT-3,776,455	c 04	N74-13420 *	US-PATENT-3,805,622	c 35	N74-21062 *	US-PATENT-3,833,857	c 33	N74-32660 *
US-PATENT-3,777,200	c 33	N74-12913 *	US-PATENT-3,806,756	c 33	N74-21850 *	US-PATENT-3,835,318	c 35	N74-34857 *
US-PATENT-3,777,490	c 20	N74-13502 *	US-PATENT-3,806,802	c 35	N74-21017 *	US-PATENT-3,837,285	c 85	N74-34672 *
US-PATENT-3,777,546	c 35	N74-13132 *	US-PATENT-3,806,815	c 32	N74-20811 *	US-PATENT-3,837,908	c 76	N79-16678 *
US-PATENT-3,777,552	c 38	N74-15130 *	US-PATENT-3,806,816	c 32	N74-20810 *	US-PATENT-3,840,829	c 33	N74-34638 *
US-PATENT-3,777,605	c 39	N74-13131 *	US-PATENT-3,806,831	c 33	N74-20862 *	US-PATENT-3,841,973	c 35	N75-12272 *
US-PATENT-3,777,811	c 34	N78-17336 *	US-PATENT-3,806,834	c 36	N76-18427 *	US-PATENT-3,842,485	c 37	N75-12326 *
US-PATENT-3,777,942	c 54	N74-12779 *	US-PATENT-3,806,835	c 33	N74-20859 *	US-PATENT-3,842,509	c 35	N75-12273 *
US-PATENT-3,778,685	c 33	N74-12951 *	US-PATENT-3,806,932	c 33	N74-20860 *	US-PATENT-3,842,656	c 76	N75-12810 *
US-PATENT-3,778,786	c 60	N74-12888 *	US-PATENT-3,807,384	c 34	N74-23039 *	US-PATENT-3,845,466	c 74	N81-19896 *
US-PATENT-3,778,791	c 36	N74-13205 *	US-PATENT-3,807,656	c 18	N74-22136 *	US-PATENT-3,846,243	c 25	N75-12086 *
US-PATENT-3,779,788	c 70	N74-13436 *	US-PATENT-3,808,464	c 33	N74-22814 *	US-PATENT-3,847,115	c 31	N75-12161 *
US-PATENT-3,780,151	c 31	N74-14133 *	US-PATENT-3,808,511	c 33	N74-22864 *	US-PATENT-3,847,141	c 35	N75-12271 *
US-PATENT-3,780,424	c 44	N74-14784 *	US-PATENT-3,808,517	c 33	N74-22885 *	US-PATENT-3,847,208	c 34	N75-12222 *
US-PATENT-3,780,563	c 35	N74-15092 *	US-PATENT-3,809,481	c 35	N74-23040 *	US-PATENT-3,847,652	c 25	N75-12087 *
US-PATENT-3,780,827	c 07	N74-15453 *	US-PATENT-3,809,601	c 37	N74-23064 *	US-PATENT-3,847,689	c 74	N75-12732 *
US-PATENT-3,780,966	c 19	N74-15089 *	US-PATENT-3,809,800	c 33	N74-22865 *	US-PATENT-3,848,190	c 35	N75-12270 *
US-PATENT-3,781,111	c 36	N74-15145 *	US-PATENT-3,809,871	c 52	N74-22771 *	US-PATENT-3,849,554	c 52	N75-15270 *
US-PATENT-3,781,549	c 35	N74-15090 *	US-PATENT-3,810,829	c 31	N74-23065 *	US-PATENT-3,849,668	c 54	N75-12616 *
US-PATENT-3,781,562	c 35	N74-15091 *	US-PATENT-3,811,044	c 34	N74-23066 *	US-PATENT-3,849,720	c 33	N77-26387 *
US-PATENT-3,781,902	c 35	N74-15831 *	US-PATENT-3,811,094	c 33	N74-21851 *	US-PATENT-3,849,865	c 37	N75-13261 *
US-PATENT-3,781,933	c 54	N74-14845 *	US-PATENT-3,811,429	c 52	N74-27566 *	US-PATENT-3,849,875	c 35	N75-13213 *
US-PATENT-3,781,958	c 37	N74-15128 *	US-PATENT-3,811,901	c 27	N82-29454 *	US-PATENT-3,849,877	c 24	N75-13032 *
US-PATENT-3,782,177	c 38	N74-15395 *	US-PATENT-3,812,358	c 35	N74-26949 *	US-PATENT-3,850,169	c 54	N75-13531 *
US-PATENT-3,782,181	c 34	N74-15652 *	US-PATENT-3,812,783	c 28	N74-27425 *	US-PATENT-3,850,388	c 05	N75-12930 *
US-PATENT-3,782,205	c 35	N74-15094 *	US-PATENT-3,812,924	c 35	N74-26945 *	US-PATENT-3,850,567	c 31	N75-13111 *
US-PATENT-3,782,334	c 51	N74-15778 *	US-PATENT-3,812,936	c 37	N74-26976 *	US-PATENT-3,850,754	c 51	N75-13502 *
US-PATENT-3,782,698	c 35	N74-15093 *	US-PATENT-3,813,133	c 37	N74-25968 *	US-PATENT-3,851,162	c 60	N75-13539 *
US-PATENT-3,782,699	c 35	N74-15126 *	US-PATENT-3,813,875	c 15	N74-27360 *	US-PATENT-3,851,238	c 33	N75-13139 *
US-PATENT-3,782,737	c 37	N74-15125 *	US-PATENT-3,813,937	c 34	N74-27859 *	US-PATENT-3,851,250	c 15	N75-13007 *
US-PATENT-3,782,825	c 35	N74-15146 *	US-PATENT-3,814,083	c 52	N74-26626 *	US-PATENT-3,853,003	c 09	N75-12969 *
US-PATENT-3,782,835	c 74	N74-15095 *	US-PATENT-3,814,350	c 18	N74-27397 *	US-PATENT-3,853,075	c 09	N75-12968 *
US-PATENT-3,782,904	c 35	N74-15127 *	US-PATENT-3,814,645	c 24	N74-30001 *	US-PATENT-3,854,097	c 75	N75-13625 *
US-PATENT-3,783,250	c 62	N74-14920 *	US-PATENT-3,814,653	c 24	N74-27035 *	US-PATENT-3,854,113	c 37	N75-13265 *
US-PATENT-3,783,354	c 33	N74-14956 *	US-PATENT-3,814,678	c 25	N74-26948 *	US-PATENT-3,855,873	c 37	N75-13266 *
US-PATENT-3,783,399	c 33	N74-14939 *	US-PATENT-3,814,939	c 25	N74-26947 *	US-PATENT-3,856,042	c 37	N75-15050 *
US-PATENT-3,783,443	c 35	N74-16135 *	US-PATENT-3,815,048	c 33	N74-26732 *	US-PATENT-3,856,402	c 36	N75-15028 *
US-PATENT-3,784,499	c 27	N74-17283 *	US-PATENT-3,815,109	c 52	N74-26625 *	US-PATENT-3,856,471	c 25	N75-14844 *
US-PATENT-3,785,836	c 27	N82-29452 *	US-PATENT-3,815,205	c 33	N74-26977 *	US-PATENT-3,856,534	c 23	N75-14834 *
US-PATENT-3,787,959	c 37	N74-18128 *	US-PATENT-3,815,969	c 35	N74-26946 *	US-PATENT-3,857,031	c 35	N75-15014 *
US-PATENT-3,788,163	c 37	N74-18127 *	US-PATENT-3,816,657	c 32	N74-26654 *	US-PATENT-3,857,045	c 33	N75-14957 *
US-PATENT-3,789,654	c 25	N74-18551 *	US-PATENT-3,816,785	c 73	N74-26767 *	US-PATENT-3,859,119	c 36	N75-15029 *
US-PATENT-3,789,920	c 34	N74-18552 *	US-PATENT-3,817,082	c 34	N74-27730 *	US-PATENT-3,859,714	c 37	N75-15992 *
US-PATENT-3,789,947	c 37	N74-18125 *	US-PATENT-3,817,084	c 31	N74-27900 *	US-PATENT-3,859,714	c 24	N79-25143 *
US-PATENT-3,790,037	c 54	N74-17853 *	US-PATENT-3,817,622	c 75	N74-30156 *	US-PATENT-3,859,736	c 09	N75-15662 *
US-PATENT-3,790,347	c 37	N74-18123 *	US-PATENT-3,817,627	c 35	N74-27860 *	US-PATENT-3,859,840	c 35	N75-15932 *
US-PATENT-3,790,409	c 44	N74-19693 *	US-PATENT-3,818,325	c 44	N74-27519 *	US-PATENT-3,859,845	c 35	N75-15931 *
US-PATENT-3,790,432	c 37	N74-18126 *	US-PATENT-3,818,346	c 33	N74-27705 *	US-PATENT-3,860,342	c 35	N75-16783 *
US-PATENT-3,790,650	c 31	N74-18124 *	US-PATENT-3,818,767	c 35	N74-28097 *	US-PATENT-3,860,393	c 25	N76-18245 *
US-PATENT-3,790,795	c 35	N74-18088 *	US-PATENT-3,818,775	c 37	N74-27901 *	US-PATENT-3,860,858	c 33	N75-15874 *
US-PATENT-3,790,906	c 33	N74-17927 *	US-PATENT-3,818,814	c 31	N74-27902 *	US-PATENT-3,860,921	c 32	N75-15854 *
US-PATENT-3,791,207	c 09	N74-17955 *	US-PATENT-3,819,299	c 37	N74-27904 *	US-PATENT-3,860,946	c 33	N79-11314 *
US-PATENT-3,792,399	c 33	N74-17928 *	US-PATENT-3,819,419	c 34	N74-27861 *	US-PATENT-3,863,881	c 37	N75-18573 *
US-PATENT-3,793,109	c 31	N74-18089 *	US-PATENT-3,819,440	c 32	N74-27612 *	US-PATENT-3,864,060	c 35	N75-19611 *
US-PATENT-3,795,134	c 09	N74-19528 *	US-PATENT-3,819,550	c 27	N74-27037 *	US-PATENT-3,864,239	c 37	N75-19684 *
US-PATENT-3,795,448	c 72	N74-19310 *	US-PATENT-3,820,095	c 33	N74-27862 *	US-PATENT-3,864,542	c 37	N75-19683 *
US-PATENT-3,795,840	c 33	N74-17929 *	US-PATENT-3,820,286	c 37	N74-27905 *	US-PATENT-3,864,797	c 20	N75-18310 *
US-PATENT-3,795,858	c 35	N74-18090 *	US-PATENT-3,820,388	c 35	N74-27865 *	US-PATENT-3,864,953	c 35	N75-19615 *
US-PATENT-3,795,862	c 33	N74-17930 *	US-PATENT-3,820,529	c 52	N74-27864 *	US-PATENT-3,864,960	c 35	N75-19612 *
US-PATENT-3,795,900	c 35	N74-17885 *	US-PATENT-3,820,630	c 07	N74-27490 *	US-PATENT-3,865,442	c 37	N75-18574 *
US-PATENT-3,795,910	c 44	N74-19870 *	US-PATENT-3,820,741	c 37	N74-27903 *	US-PATENT-3,865,975	c 36	N75-19652 *
US-PATENT-3,796,473	c 37	N74-20063 *	US-PATENT-3,820,918	c 07	N74-28226 *	US-PATENT-3,866,022	c 33	N75-19519 *
US-PATENT-3,796,592	c 24	N74-19769 *	US-PATENT-3,821,102	c 34	N74-27744 *	US-PATENT-3,866,114	c 33	N75-18477 *
US-PATENT-3,797,098	c 37	N74-21057 *	US-PATENT-3,821,462	c 33	N74-27683 *	US-PATENT-3,866,128	c 33	N75-19515 *
US-PATENT-3,797,919	c 30	N74-21300 *	US-PATENT-3,821,546	c 33	N74-27682 *	US-PATENT-3,866,210	c 33	N75-19517 *
US-PATENT-3,798,741	c 71	N74-21059 *	US-PATENT-3,821,556	c 74	N74-27866 *	US-PATENT-3,866,233	c 33	N75-19516 *
US-PATENT-3,798,748	c 37	N74-21055 *	US-PATENT-3,824,707	c 09	N74-30597 *	US-PATENT-3,866,863	c 18	N75-19329 *
US-PATENT-3,798,778	c 19	N74-21015 *	US-PATENT-3,825,760	c 19	N74-29410 *	US-PATENT-3,867,677	c 33	N75-19524 *
US-PATENT-3,798,896	c 37	N74-21060 *	US-PATENT-3,826,448	c 08	N74-30421 *	US-PATENT-3,868,591	c 36	N75-19655 *
US-PATENT-3,799,149	c 52	N74-20728 *	US-PATENT-3,826,726	c 25	N74-30502 *	US-PATENT-3,868,830	c 77	N75-20139 *
US-PATENT-3,799,475	c 02	N74-20646 *	US-PATENT-3,826,729	c 20	N74-31269 *	US-PATENT-3,868,856	c 35	N75-19614 *
US-PATENT-3,799,793	c 74	N74-20008 *	US-PATENT-3,826,964	c 33	N74-29556 *	US-PATENT-3,869,151	c 37	N75-19686 *
US-PATENT-3,799,813	c 76	N74-20329 *	US-PATENT-3,827,288	c 71	N74-31148 *	US-PATENT-3,869,160	c 37	N75-19685 *
US-PATENT-3,800,074	c 36	N74-20009 *	US-PATENT-3,827,807	c 89	N74-30886 *	US-PATENT-3,869,210	c 36	N75-19653 *
US-PATENT-3,800,082	c 71	N74-21014 *	US-PATENT-3,828,137	c 32	N74-30524 *	US-PATENT-3,869,212	c 35	N75-19613 *
US-PATENT-3,800,224	c 32	N74-19790 *	US-PATENT-3,828,138	c 32	N74-30523 *	US-PATENT-3,869,597	c 77	N75-20140 *
US-PATENT-3,800,227	c 32	N74-20809 *	US-PATENT-3,828,524	c 34	N74-30608 *	US-PATENT-3,869,615	c 35	N75-19616 *
US-PATENT-3,800,237	c 32	N74-19788 *	US-PATENT-3,829,237	c 07	N74-31270 *	US-PATENT-3,869,624	c 33	N75-18479 *
US-PATENT-3,800,253	c 37	N74-21056 *	US-PATENT-3,829,839	c 60	N76-18800 *	US-PATENT-3,869,659	c 33	N75-19522 *
US-PATENT-3,801,617	c 37	N74-21058 *	US-PATENT-3,830,060	c 44	N74-33379 *	US-PATENT-3,869,667	c 33	N75-19521 *
US-PATENT-3,802,249	c 35	N74-21019 *	US-PATENT-3,830,094	c 35	N74-32879 *	US-PATENT-3,869,676	c 33	N75-19520 *
US-PATENT-3,802,253	c 52	N74-20726 *	US-PATENT-3,830,335	c 07	N74-32418 *	US-PATENT-3,869,680	c 36	N75-19654 *
US-PATENT-3,802,262	c 35	N74-21018 *	US-PATENT-3,830,331	c 07	N74-33218 *	US-PATENT-3,869,779	c 26	N75-19408 *
US-PATENT-3,802,660	c 37	N74-21065 *	US-PATENT-3,830,552	c 37	N74-32921 *	US-PATENT-3,872,395	c 33	N75-19518 *
US-PATENT-3,802,753	c 37	N74-21064 *	US-PATENT-3,830,609	c 31	N74-32920 *	US-PATENT-3,874,240	c 35	N75-25122 *
US-PATENT-3,802,779	c 74	N74-21304 *	US-PATENT-3,830,673	c 28	N74-33209 *	US-PATENT-3,874,635	c 37	N75-25185 *
US-PATENT-3,803,090	c 27	N74-21156 *	US-PATENT-3,831,098	c 33	N74-32711 *	US-PATENT-3,874,677	c 37	N75-21631 *
US-PATENT-3,803,393	c 60	N74-20836 *	US-PATENT-3,831,117	c 33	N74-32712 *	US-PATENT-3,875,332	c 32	N75-21486 *
US-PATENT-3,803,445	c 32	N74-20813 *	US-PATENT-3,831,142	c 32	N74-32598 *	US-PATENT-3,875,394	c 33	N75-26243 *
US-PATENT-3,803,617	c 32	N74-20863 *	US-PATENT-3,832,290	c 20	N74-32919 *	US-PATENT-3,875,404	c 35	N75-23910 *

US-PATENT-3,875,435	c 20	N75-24837 *	US-PATENT-3,915,012	c 54	N76-14804 *	US-PATENT-3,953,343	c 24	N76-22309 *
US-PATENT-3,875,500	c 35	N75-21582 *	US-PATENT-3,915,148	c 44	N76-14602 *	US-PATENT-3,953,646	c 27	N76-22377 *
US-PATENT-3,875,584	c 32	N75-21485 *	US-PATENT-3,915,416	c 15	N76-14158 *	US-PATENT-3,953,674	c 17	N76-22245 *
US-PATENT-3,877,833	c 37	N75-25186 *	US-PATENT-3,915,482	c 37	N76-14460 *	US-PATENT-3,953,734	c 25	N76-22323 *
US-PATENT-3,878,464	c 32	N75-24981 *	US-PATENT-3,915,572	c 36	N76-14447 *	US-PATENT-3,953,792	c 35	N76-22509 *
US-PATENT-3,881,132	c 33	N77-21315 *	US-PATENT-3,916,060	c 27	N76-15310 *	US-PATENT-3,955,034	c 27	N76-23426 *
US-PATENT-3,882,417	c 36	N78-17366 *	US-PATENT-3,916,084	c 33	N76-14371 *	US-PATENT-3,955,941	c 44	N76-29700 *
US-PATENT-3,882,530	c 76	N75-25730 *	US-PATENT-3,916,187	c 35	N76-15431 *	US-PATENT-3,956,032	c 76	N76-25049 *
US-PATENT-3,882,634	c 51	N75-25503 *	US-PATENT-3,916,316	c 32	N76-14321 *	US-PATENT-3,956,050	c 37	N76-24575 *
US-PATENT-3,882,719	c 14	N75-24794 *	US-PATENT-3,916,380	c 60	N76-14818 *	US-PATENT-3,956,233	c 27	N76-24405 *
US-PATENT-3,882,732	c 12	N75-24774 *	US-PATENT-3,916,761	c 75	N76-14931 *	US-PATENT-3,956,833	c 09	N76-24280 *
US-PATENT-3,882,846	c 05	N75-24716 *	US-PATENT-3,919,014	c 24	N76-14203 *	US-PATENT-3,956,919	c 35	N76-24523 *
US-PATENT-3,883,095	c 07	N75-24736 *	US-PATENT-3,919,710	c 33	N76-14372 *	US-PATENT-3,956,932	c 35	N76-24524 *
US-PATENT-3,883,215	c 35	N75-25124 *	US-PATENT-3,920,339	c 27	N76-14264 *	US-PATENT-3,957,030	c 44	N76-23675 *
US-PATENT-3,883,436	c 74	N75-25706 *	US-PATENT-3,920,413	c 44	N76-14595 *	US-PATENT-3,957,037	c 35	N76-24525 *
US-PATENT-3,883,689	c 35	N75-25123 *	US-PATENT-3,920,416	c 44	N76-18642 *	US-PATENT-3,957,044	c 54	N76-24900 *
US-PATENT-3,883,785	c 09	N75-24758 *	US-PATENT-3,922,930	c 37	N76-15457 *	US-PATENT-3,957,104	c 37	N76-23570 *
US-PATENT-3,883,812	c 33	N75-25041 *	US-PATENT-3,923,166	c 37	N76-15460 *	US-PATENT-3,957,675	c 24	N76-24363 *
US-PATENT-3,883,817	c 33	N75-25040 *	US-PATENT-3,924,068	c 32	N76-16249 *	US-PATENT-3,958,188	c 36	N76-24553 *
US-PATENT-3,883,872	c 32	N75-24982 *	US-PATENT-3,924,137	c 72	N76-15860 *	US-PATENT-3,958,238	c 60	N76-23850 *
US-PATENT-3,884,432	c 05	N75-25914 *	US-PATENT-3,924,164	c 33	N76-15373 *	US-PATENT-3,958,553	c 44	N76-24696 *
US-PATENT-3,884,765	c 35	N75-27330 *	US-PATENT-3,924,176	c 35	N76-16390 *	US-PATENT-3,961,997	c 44	N76-28635 *
US-PATENT-3,887,233	c 05	N75-25915 *	US-PATENT-3,924,183	c 33	N76-16331 *	US-PATENT-3,964,306	c 34	N76-27517 *
US-PATENT-3,887,345	c 35	N75-26334 *	US-PATENT-3,924,200	c 35	N76-15436 *	US-PATENT-3,964,319	c 07	N76-27232 *
US-PATENT-3,887,365	c 37	N75-26371 *	US-PATENT-3,924,237	c 32	N76-15330 *	US-PATENT-3,964,813	c 37	N76-27567 *
US-PATENT-3,888,362	c 54	N75-27758 *	US-PATENT-3,924,239	c 35	N76-15435 *	US-PATENT-3,964,902	c 34	N76-27515 *
US-PATENT-3,888,410	c 34	N75-26282 *	US-PATENT-3,924,267	c 35	N76-16391 *	US-PATENT-3,964,928	c 44	N76-27664 *
US-PATENT-3,888,561	c 35	N75-27328 *	US-PATENT-3,924,444	c 35	N76-15432 *	US-PATENT-3,966,096	c 27	N76-32151 *
US-PATENT-3,888,705	c 25	N75-26043 *	US-PATENT-3,925,104	c 35	N76-15434 *	US-PATENT-3,965,354	c 33	N76-27473 *
US-PATENT-3,889,064	c 32	N75-26195 *	US-PATENT-3,925,312	c 23	N76-15268 *	US-PATENT-3,965,475	c 33	N76-27472 *
US-PATENT-3,889,122	c 37	N75-26372 *	US-PATENT-3,926,482	c 37	N76-15461 *	US-PATENT-3,966,499	c 44	N76-31666 *
US-PATENT-3,889,155	c 33	N75-26244 *	US-PATENT-3,926,567	c 27	N76-15311 *	US-PATENT-3,966,547	c 25	N76-27383 *
US-PATENT-3,889,182	c 33	N75-26245 *	US-PATENT-3,927,227	c 12	N76-15189 *	US-PATENT-3,967,091	c 37	N76-27568 *
US-PATENT-3,889,185	c 33	N75-26246 *	US-PATENT-3,927,324	c 35	N76-15433 *	US-PATENT-3,971,230	c 37	N76-29590 *
US-PATENT-3,889,264	c 32	N75-26194 *	US-PATENT-3,927,408	c 32	N76-15329 *	US-PATENT-3,971,256	c 91	N76-30131 *
US-PATENT-3,891,311	c 54	N75-27759 *	US-PATENT-3,928,708	c 27	N76-16230 *	US-PATENT-3,971,362	c 52	N76-29894 *
US-PATENT-3,891,452	c 27	N75-27160 *	US-PATENT-3,929,119	c 75	N76-17951 *	US-PATENT-3,971,363	c 52	N76-29895 *
US-PATENT-3,891,533	c 33	N75-27252 *	US-PATENT-3,929,305	c 34	N76-17317 *	US-PATENT-3,971,364	c 52	N76-29896 *
US-PATENT-3,891,848	c 45	N75-27585 *	US-PATENT-3,929,306	c 18	N76-17185 *	US-PATENT-3,971,535	c 05	N76-29217 *
US-PATENT-3,891,851	c 35	N75-27331 *	US-PATENT-3,929,364	c 35	N76-16392 *	US-PATENT-3,971,602	c 37	N76-29588 *
US-PATENT-3,893,449	c 54	N75-27760 *	US-PATENT-3,930,628	c 02	N76-16014 *	US-PATENT-3,971,697	c 25	N76-29379 *
US-PATENT-3,893,458	c 54	N75-27761 *	US-PATENT-3,930,735	c 66	N76-19888 *	US-PATENT-3,971,703	c 51	N76-29891 *
US-PATENT-3,893,573	c 18	N75-27041 *	US-PATENT-3,931,132	c 27	N76-16228 *	US-PATENT-3,971,847	c 44	N76-29704 *
US-PATENT-3,894,289	c 36	N75-27364 *	US-PATENT-3,931,447	c 27	N76-16229 *	US-PATENT-3,971,915	c 35	N76-29552 *
US-PATENT-3,894,677	c 24	N75-28135 *	US-PATENT-3,931,456	c 33	N76-16332 *	US-PATENT-3,971,930	c 74	N76-30053 *
US-PATENT-3,894,887	c 44	N76-18641 *	US-PATENT-3,931,462	c 45	N76-17856 *	US-PATENT-3,971,940	c 35	N76-29551 *
US-PATENT-3,895,521	c 35	N75-29381 *	US-PATENT-3,931,516	c 35	N76-16393 *	US-PATENT-3,972,008	c 36	N76-29575 *
US-PATENT-3,895,912	c 35	N75-29380 *	US-PATENT-3,931,532	c 44	N76-16612 *	US-PATENT-3,972,038	c 17	N76-29347 *
US-PATENT-3,896,758	c 35	N75-33367 *	US-PATENT-3,932,262	c 25	N79-10163 *	US-PATENT-3,972,651	c 44	N76-29701 *
US-PATENT-3,896,955	c 37	N77-22480 *	US-PATENT-3,936,927	c 37	N76-19437 *	US-PATENT-3,972,727	c 44	N76-29699 *
US-PATENT-3,898,758	c 33	N75-30428 *	US-PATENT-3,937,055	c 37	N76-18454 *	US-PATENT-3,976,997	c 62	N76-31946 *
US-PATENT-3,898,730	c 24	N75-30260 *	US-PATENT-3,937,212	c 33	N76-19338 *	US-PATENT-3,977,147	c 39	N76-31562 *
US-PATENT-3,898,882	c 35	N75-30503 *	US-PATENT-3,937,215	c 52	N76-19785 *	US-PATENT-3,977,197	c 44	N76-31667 *
US-PATENT-3,899,224	c 37	N75-30562 *	US-PATENT-3,937,387	c 37	N76-18455 *	US-PATENT-3,977,231	c 35	N76-31489 *
US-PATENT-3,899,252	c 35	N75-30502 *	US-PATENT-3,937,533	c 37	N76-18459 *	US-PATENT-3,977,771	c 74	N76-31998 *
US-PATENT-3,899,517	c 23	N75-30256 *	US-PATENT-3,937,555	c 35	N76-18402 *	US-PATENT-3,977,787	c 35	N76-31490 *
US-PATENT-3,899,680	c 73	N75-30876 *	US-PATENT-3,937,661	c 37	N76-18456 *	US-PATENT-3,977,831	c 45	N76-31714 *
US-PATENT-3,899,696	c 36	N75-30524 *	US-PATENT-3,937,945	c 74	N76-18913 *	US-PATENT-3,978,187	c 37	N76-31524 *
US-PATENT-3,899,745	c 33	N75-30429 *	US-PATENT-3,938,035	c 33	N76-19339 *	US-PATENT-3,978,287	c 32	N76-31372 *
US-PATENT-3,900,705	c 33	N75-30431 *	US-PATENT-3,938,037	c 26	N76-18257 *	US-PATENT-3,978,360	c 33	N76-31409 *
US-PATENT-3,900,741	c 35	N75-30504 *	US-PATENT-3,938,162	c 32	N76-18295 *	US-PATENT-3,978,364	c 31	N76-31365 *
US-PATENT-3,900,847	c 03	N75-30132 *	US-PATENT-3,938,182	c 33	N76-18353 *	US-PATENT-3,978,410	c 03	N76-32140 *
US-PATENT-3,902,143	c 33	N75-30430 *	US-PATENT-3,938,188	c 33	N76-18345 *	US-PATENT-3,978,417	c 36	N76-31512 *
US-PATENT-3,903,699	c 44	N75-32581 *	US-PATENT-3,938,367	c 35	N76-18401 *	US-PATENT-3,978,490	c 33	N76-32457 *
US-PATENT-3,905,356	c 33	N75-31329 *	US-PATENT-3,938,373	c 35	N76-18400 *	US-PATENT-3,982,910	c 44	N77-10636 *
US-PATENT-3,905,660	c 37	N75-31446 *	US-PATENT-3,938,742	c 07	N76-18117 *	US-PATENT-3,983,695	c 20	N77-10148 *
US-PATENT-3,906,231	c 33	N75-31332 *	US-PATENT-3,938,892	c 74	N76-19935 *	US-PATENT-3,983,714	c 31	N77-10229 *
US-PATENT-3,906,296	c 33	N75-31331 *	US-PATENT-3,938,956	c 35	N76-18403 *	US-PATENT-3,983,749	c 09	N77-10071 *
US-PATENT-3,906,374	c 33	N75-31330 *	US-PATENT-3,939,048	c 37	N76-18458 *	US-PATENT-3,983,753	c 52	N77-10780 *
US-PATENT-3,906,393	c 36	N75-31427 *	US-PATENT-3,939,439	c 36	N76-18428 *	US-PATENT-3,983,780	c 28	N77-10213 *
US-PATENT-3,906,397	c 36	N75-31426 *	US-PATENT-3,940,097	c 34	N76-18364 *	US-PATENT-3,983,933	c 34	N77-10463 *
US-PATENT-3,906,398	c 36	N75-32441 *	US-PATENT-3,940,621	c 34	N76-18374 *	US-PATENT-3,984,070	c 02	N77-10001 *
US-PATENT-3,906,769	c 24	N75-33181 *	US-PATENT-3,941,355	c 37	N76-19436 *	US-PATENT-3,984,072	c 15	N77-10113 *
US-PATENT-3,906,788	c 35	N75-33369 *	US-PATENT-3,942,398	c 37	N76-20480 *	US-PATENT-3,984,256	c 44	N77-10635 *
US-PATENT-3,906,913	c 37	N76-18457 *	US-PATENT-3,943,368	c 74	N76-20958 *	US-PATENT-3,984,634	c 32	N77-10392 *
US-PATENT-3,906,954	c 52	N75-33640 *	US-PATENT-3,943,442	c 76	N76-20994 *	US-PATENT-3,984,671	c 43	N77-10584 *
US-PATENT-3,907,312	c 37	N75-33395 *	US-PATENT-3,943,763	c 04	N76-20114 *	US-PATENT-3,984,681	c 35	N77-10492 *
US-PATENT-3,907,646	c 35	N75-33368 *	US-PATENT-3,944,485	c 25	N81-19244 *	US-PATENT-3,984,685	c 47	N77-10753 *
US-PATENT-3,907,686	c 34	N75-33342 *	US-PATENT-3,945,801	c 45	N76-21742 *	US-PATENT-3,984,686	c 35	N77-10493 *
US-PATENT-3,908,118	c 38	N78-17395 *	US-PATENT-3,945,879	c 37	N76-21554 *	US-PATENT-3,984,730	c 33	N77-10429 *
US-PATENT-3,909,602	c 38	N78-17396 *	US-PATENT-3,947,281	c 27	N82-29455 *	US-PATENT-3,984,799	c 33	N77-10428 *
US-PATENT-3,910,035	c 20	N76-14190 *	US-PATENT-3,947,933	c 20	N76-21276 *	US-PATENT-3,985,454	c 74	N77-10899 *
US-PATENT-3,910,039	c 20	N76-14191 *	US-PATENT-3,948,102	c 33	N76-21390 *	US-PATENT-3,987,630	c 37	N77-12402 *
US-PATENT-3,910,257	c 52	N76-14757 *	US-PATENT-3,948,470	c 20	N76-21275 *	US-PATENT-3,988,561	c 37	N77-11397 *
US-PATENT-3,910,307	c 37	N76-14463 *	US-PATENT-3,949,206	c 32	N76-21366 *	US-PATENT-3,988,677	c 32	N77-12240 *
US-PATENT-3,910,533	c 18	N76-14186 *	US-PATENT-3,949,400	c 17	N76-21250 *	US-PATENT-3,988,716	c 60	N77-12721 *
US-PATENT-3,910,814	c 24	N76-14204 *	US-PATENT-3,949,404	c 32	N76-21365 *	US-PATENT-3,988,729	c 32	N77-12239 *
US-PATENT-3,911,260	c 35	N76-14431 *	US-PATENT-3,950,729	c 60	N76-21914 *	US-PATENT-3,988,933	c 35	N77-19385 *
US-PATENT-3,911,330	c 33	N76-14373 *	US-PATENT-3,951,129	c 44	N76-22657 *	US-PATENT-3,989,136	c 37	N77-19457 *
US-PATENT-3,912,540	c 44	N76-14600 *	US-PATENT-3,952,083	c 27	N76-22376 *	US-PATENT-3,989,206	c 09	N77-19076 *
US-PATENT-3,912,541	c 44	N76-14601 *	US-PATENT-3,952,590	c 09	N76-22373 *	US-PATENT-3,989,541	c 44	N77-19571 *
US-PATENT-3,912,999	c 44	N76-18643 *	US-PATENT-3,952,971	c 02	N76-22154 *	US-PATENT-3,989,602	c 24	N77-19171 *
US-PATENT-3,914,950	c 31	N76-14284 *	US-PATENT-3,952,976	c 37	N76-22540 *	US-PATENT-3,990,049	c 60	N77-19760 *
US-PATENT-3,914,969	c 37	N76-14461 *	US-PATENT-3,952,980	c 19	N76-22284 *	US-PATENT-3,990,860	c 27	N77-13217 *
US-PATENT-3,914,991	c 35	N76-14430 *	US-PATENT-3,952,998	c 20	N76-22296 *	US-PATENT-3,990,987	c 37	N77-13418 *
US-PATENT-3,914,997	c 35	N76-14429 *	US-PATENT-3,953,038	c 37	N76-22541 *	US-PATENT-3,994,128	c 07	N77-14025 *

US-PATENT-3,995,324	c 52	N77-14735 *	US-PATENT-4,033,349	c 52	N77-28716 *	US-PATENT-4,062,996	c 74	N78-15879 *
US-PATENT-3,995,476	c 35	N77-14407 *	US-PATENT-4,033,479	c 37	N77-28487 *	US-PATENT-4,063,088	c 74	N78-15880 *
US-PATENT-3,995,522	c 37	N77-14478 *	US-PATENT-4,033,503	c 26	N77-29260 *	US-PATENT-4,063,092	c 35	N78-15461 *
US-PATENT-3,995,621	c 52	N77-14736 *	US-PATENT-4,033,504	c 26	N77-28265 *	US-PATENT-4,063,282	c 39	N78-16387 *
US-PATENT-3,995,644	c 52	N77-14738 *	US-PATENT-4,033,705	c 07	N77-27116 *	US-PATENT-4,063,814	c 74	N78-17866 *
US-PATENT-3,995,789	c 37	N77-14479 *	US-PATENT-4,033,882	c 32	N77-28346 *	US-PATENT-4,063,981	c 24	N78-17149 *
US-PATENT-3,995,877	c 37	N77-14477 *	US-PATENT-4,035,037	c 37	N77-28486 *	US-PATENT-4,064,566	c 27	N78-17215 *
US-PATENT-3,995,960	c 35	N77-14411 *	US-PATENT-4,035,062	c 74	N77-28932 *	US-PATENT-4,064,642	c 54	N78-17675 *
US-PATENT-3,996,054	c 44	N77-14581 *	US-PATENT-4,035,065	c 74	N77-28933 *	US-PATENT-4,064,692	c 37	N78-17384 *
US-PATENT-3,996,067	c 44	N77-14580 *	US-PATENT-4,038,705	c 54	N77-30749 *	US-PATENT-4,065,053	c 44	N78-17460 *
US-PATENT-3,996,070	c 35	N77-14409 *	US-PATENT-4,039,489	c 27	N77-31308 *	US-PATENT-4,065,202	c 35	N78-17357 *
US-PATENT-3,996,455	c 60	N77-14751 *	US-PATENT-4,039,946	c 35	N77-30436 *	US-PATENT-4,065,340	c 24	N78-17150 *
US-PATENT-3,996,462	c 33	N77-14335 *	US-PATENT-4,039,000	c 34	N77-30399 *	US-PATENT-4,065,345	c 27	N78-17205 *
US-PATENT-3,996,464	c 35	N77-14406 *	US-PATENT-4,039,347	c 27	N77-30237 *	US-PATENT-4,066,039	c 37	N78-17383 *
US-PATENT-3,996,468	c 35	N77-14408 *	US-PATENT-4,039,754	c 32	N77-30309 *	US-PATENT-4,067,015	c 17	N78-17140 *
US-PATENT-3,996,471	c 52	N77-14737 *	US-PATENT-4,039,925	c 33	N77-30365 *	US-PATENT-4,067,043	c 74	N78-17865 *
US-PATENT-3,996,506	c 33	N77-14333 *	US-PATENT-4,040,041	c 33	N77-31404 *	US-PATENT-4,067,653	c 74	N78-17867 *
US-PATENT-3,996,532	c 32	N77-14292 *	US-PATENT-4,040,750	c 35	N77-31465 *	US-PATENT-4,067,742	c 27	N78-17206 *
US-PATENT-3,997,848	c 33	N77-14334 *	US-PATENT-4,040,867	c 44	N77-31601 *	US-PATENT-4,068,469	c 07	N78-17055 *
US-PATENT-3,999,886	c 05	N77-17029 *	US-PATENT-4,040,940	c 37	N80-14397 *	US-PATENT-4,068,470	c 07	N78-17056 *
US-PATENT-4,049,930	c 33	N78-10375 *	US-PATENT-4,041,233	c 27	N77-30236 *	US-PATENT-4,068,495	c 31	N78-17237 *
US-PATENT-4, 356,157	c 25	N83-33977 *	US-PATENT-4,041,391	c 32	N77-30308 *	US-PATENT-4,068,763	c 54	N78-17676 *
US-PATENT-4, 359,503	c 24	N83-33950 *	US-PATENT-4,041,697	c 37	N78-10467 *	US-PATENT-4,069,028	c 34	N78-17335 *
US-PATENT-4,000,682	c 20	N77-17143 *	US-PATENT-4,041,910	c 37	N77-31497 *	US-PATENT-4,069,212	c 27	N78-17213 *
US-PATENT-4,000,929	c 37	N77-17464 *	US-PATENT-4,042,926	c 32	N77-31350 *	US-PATENT-4,069,478	c 60	N78-17691 *
US-PATENT-4,001,552	c 38	N77-17495 *	US-PATENT-4,043,668	c 35	N84-33766 *	US-PATENT-4,069,661	c 07	N78-18067 *
US-PATENT-4,001,602	c 33	N77-17354 *	US-PATENT-4,043,674	c 36	N77-32478 *	US-PATENT-4,070,574	c 74	N78-18905 *
US-PATENT-4,003,004	c 33	N77-17351 *	US-PATENT-4,044,753	c 44	N77-32582 *	US-PATENT-4,072,532	c 27	N78-19302 *
US-PATENT-4,003,084	c 35	N77-17426 *	US-PATENT-4,044,821	c 44	N77-32581 *	US-PATENT-4,075,057	c 73	N78-19920 *
US-PATENT-4,003,257	c 23	N77-17161 *	US-PATENT-4,045,063	c 37	N77-32499 *	US-PATENT-4,077,231	c 31	N78-25256 *
US-PATENT-4,004,292	c 74	N77-18893 *	US-PATENT-4,045,149	c 07	N77-32148 *	US-PATENT-4,077,678	c 44	N78-24608 *
US-PATENT-4,005,574	c 07	N77-17059 *	US-PATENT-4,045,247	c 35	N77-32454 *	US-PATENT-4,077,788	c 28	N78-24365 *
US-PATENT-4,006,631	c 04	N77-19056 *	US-PATENT-4,045,255	c 26	N77-32279 *	US-PATENT-4,077,788	c 28	N81-14103 *
US-PATENT-4,006,999	c 24	N77-19170 *	US-PATENT-4,045,315	c 44	N77-32580 *	US-PATENT-4,077,813	c 26	N78-24333 *
US-PATENT-4,007,430	c 36	N77-19416 *	US-PATENT-4,045,359	c 25	N77-32255 *	US-PATENT-4,077,818	c 44	N78-24609 *
US-PATENT-4,007,434	c 32	N77-18307 *	US-PATENT-4,045,728	c 35	N77-32455 *	US-PATENT-4,077,921	c 24	N78-24290 *
US-PATENT-4,007,601	c 34	N77-19353 *	US-PATENT-4,045,792	c 60	N77-32731 *	US-PATENT-4,078,110	c 34	N78-25350 *
US-PATENT-4,007,623	c 35	N77-18417 *	US-PATENT-4,045,795	c 32	N77-32342 *	US-PATENT-4,078,175	c 76	N78-24950 *
US-PATENT-4,007,891	c 07	N77-18154 *	US-PATENT-4,046,012	c 35	N77-32456 *	US-PATENT-4,078,290	c 37	N78-24544 *
US-PATENT-4,008,348	c 34	N77-18382 *	US-PATENT-4,046,190	c 34	N77-32413 *	US-PATENT-4,078,378	c 37	N78-24545 *
US-PATENT-4,008,407	c 73	N77-18891 *	US-PATENT-4,046,262	c 54	N77-32721 *	US-PATENT-4,079,268	c 32	N78-24391 *
US-PATENT-4,010,455	c 37	N77-19458 *	US-PATENT-4,046,434	c 37	N77-32500 *	US-PATENT-4,080,901	c 20	N78-24275 *
US-PATENT-4,010,455	c 37	N78-31426 *	US-PATENT-4,046,435	c 37	N77-32501 *	US-PATENT-4,081,250	c 44	N78-31527 *
US-PATENT-4,011,719	c 20	N77-20162 *	US-PATENT-4,046,462	c 44	N77-32583 *	US-PATENT-4,082,001	c 35	N78-24515 *
US-PATENT-4,011,756	c 35	N77-20400 *	US-PATENT-4,046,529	c 54	N77-32722 *	US-PATENT-4,082,569	c 44	N78-25527 *
US-PATENT-4,011,854	c 35	N77-20401 *	US-PATENT-4,046,560	c 26	N77-32280 *	US-PATENT-4,083,097	c 44	N78-25528 *
US-PATENT-4,012,018	c 35	N77-20399 *	US-PATENT-4,046,617	c 76	N77-32919 *	US-PATENT-4,083,181	c 07	N78-25089 *
US-PATENT-4,012,123	c 74	N77-20882 *	US-PATENT-4,046,619	c 27	N77-32308 *	US-PATENT-4,083,380	c 37	N78-25426 *
US-PATENT-4,012,237	c 26	N77-20201 *	US-PATENT-4,047,840	c 37	N78-10468 *	US-PATENT-4,083,520	c 15	N78-25119 *
US-PATENT-4,012,696	c 32	N77-20289 *	US-PATENT-4,051,558	c 52	N78-10686 *	US-PATENT-4,083,765	c 35	N78-25391 *
US-PATENT-4,014,745	c 51	N77-22794 *	US-PATENT-4,051,834	c 44	N78-10554 *	US-PATENT-4,084,124	c 44	N78-25531 *
US-PATENT-4,014,798	c 25	N81-17187 *	US-PATENT-4,051,877	c 35	N78-10428 *	US-PATENT-4,084,132	c 33	N78-25319 *
US-PATENT-4,017,959	c 37	N77-23482 *	US-PATENT-4,052,144	c 25	N78-10224 *	US-PATENT-4,084,612	c 34	N78-25351 *
US-PATENT-4,018,080	c 35	N77-22450 *	US-PATENT-4,052,181	c 71	N78-10837 *	US-PATENT-4,084,825	c 07	N78-25090 *
US-PATENT-4,018,085	c 35	N77-22449 *	US-PATENT-4,052,302	c 25	N78-10225 *	US-PATENT-4,084,985	c 44	N78-25529 *
US-PATENT-4,018,092	c 37	N77-22482 *	US-PATENT-4,052,523	c 24	N78-10214 *	US-PATENT-4,085,004	c 73	N78-28913 *
US-PATENT-4,018,409	c 37	N77-23483 *	US-PATENT-4,052,614	c 35	N78-10429 *	US-PATENT-4,085,241	c 44	N78-25530 *
US-PATENT-4,018,423	c 54	N77-21844 *	US-PATENT-4,052,648	c 33	N78-10376 *	US-PATENT-4,085,332	c 25	N78-25148 *
US-PATENT-4,018,532	c 74	N77-22951 *	US-PATENT-4,052,659	c 33	N78-10377 *	US-PATENT-4,087,902	c 33	N78-27326 *
US-PATENT-4,018,533	c 74	N77-22950 *	US-PATENT-4,052,666	c 43	N78-10529 *	US-PATENT-4,087,962	c 34	N78-27357 *
US-PATENT-4,018,649	c 51	N77-25769 *	US-PATENT-4,052,705	c 60	N78-10709 *	US-PATENT-4,087,975	c 44	N78-32542 *
US-PATENT-4,018,971	c 44	N77-22606 *	US-PATENT-4,053,229	c 74	N78-13874 *	US-PATENT-4,088,018	c 37	N78-27424 *
US-PATENT-4,019,179	c 32	N77-21267 *	US-PATENT-4,053,231	c 35	N78-18391 *	US-PATENT-4,088,094	c 51	N78-27733 *
US-PATENT-4,019,868	c 44	N77-22607 *	US-PATENT-4,053,918	c 44	N78-13526 *	US-PATENT-4,088,270	c 07	N78-27121 *
US-PATENT-4,020,632	c 07	N77-23106 *	US-PATENT-4,055,004	c 09	N78-18083 *	US-PATENT-4,088,291	c 37	N78-27425 *
US-PATENT-4,023,266	c 33	N77-26385 *	US-PATENT-4,055,041	c 07	N78-18066 *	US-PATENT-4,088,312	c 37	N78-27423 *
US-PATENT-4,025,327	c 35	N77-24455 *	US-PATENT-4,055,072	c 35	N78-19465 *	US-PATENT-4,088,408	c 74	N78-27904 *
US-PATENT-4,025,783	c 74	N77-26942 *	US-PATENT-4,055,089	c 35	N78-18390 *	US-PATENT-4,088,532	c 25	N78-27226 *
US-PATENT-4,025,866	c 33	N77-24375 *	US-PATENT-4,055,147	c 35	N78-19466 *	US-PATENT-4,088,806	c 24	N78-27180 *
US-PATENT-4,025,875	c 36	N77-25499 *	US-PATENT-4,055,416	c 26	N78-18182 *	US-PATENT-4,088,926	c 75	N78-27913 *
US-PATENT-4,025,876	c 71	N77-26919 *	US-PATENT-4,055,447	c 26	N78-18183 *	US-PATENT-4,088,951	c 35	N78-28411 *
US-PATENT-4,025,891	c 35	N77-24454 *	US-PATENT-4,055,686	c 37	N78-13436 *	US-PATENT-4,088,954	c 35	N78-32397 *
US-PATENT-4,025,950	c 32	N77-24328 *	US-PATENT-4,055,705	c 34	N78-18355 *	US-PATENT-4,088,965	c 36	N78-27402 *
US-PATENT-4,025,964	c 52	N77-25772 *	US-PATENT-4,055,707	c 44	N78-19599 *	US-PATENT-4,088,999	c 44	N78-28594 *
US-PATENT-4,026,527	c 34	N77-24423 *	US-PATENT-4,055,764	c 35	N78-13400 *	US-PATENT-4,089,004	c 32	N80-29539 *
US-PATENT-4,026,655	c 36	N77-25501 *	US-PATENT-4,055,777	c 33	N78-18308 *	US-PATENT-4,089,209	c 35	N78-27384 *
US-PATENT-4,027,212	c 33	N77-26386 *	US-PATENT-4,055,810	c 36	N78-18410 *	US-PATENT-4,089,705	c 44	N78-27515 *
US-PATENT-4,027,265	c 32	N77-24331 *	US-PATENT-4,055,847	c 33	N78-13320 *	US-PATENT-4,090,213	c 44	N80-29835 *
US-PATENT-4,027,273	c 36	N77-25502 *	US-PATENT-4,061,029	c 35	N78-14364 *	US-PATENT-4,091,166	c 27	N78-31233 *
US-PATENT-4,027,494	c 35	N78-12390 *	US-PATENT-4,061,041	c 71	N78-14867 *	US-PATENT-4,091,329	c 33	N78-32339 *
US-PATENT-4,027,524	c 09	N77-27131 *	US-PATENT-4,061,146	c 52	N78-14773 *	US-PATENT-4,091,464	c 54	N78-31735 *
US-PATENT-4,028,939	c 34	N77-27345 *	US-PATENT-4,061,190	c 43	N78-14452 *	US-PATENT-4,091,464	c 54	N79-24651 *
US-PATENT-4,029,470	c 51	N77-27677 *	US-PATENT-4,061,427	c 36	N78-14380 *	US-PATENT-4,091,465	c 54	N78-31736 *
US-PATENT-4,029,500	c 24	N77-27187 *	US-PATENT-4,061,561	c 25	N78-14104 *	US-PATENT-4,091,613	c 44	N78-32539 *
US-PATENT-4,029,838	c 24	N77-27188 *	US-PATENT-4,061,570	c 54	N78-14784 *	US-PATENT-4,091,665	c 09	N78-31129 *
US-PATENT-4,030,047	c 35	N77-27366 *	US-PATENT-4,061,577	c 74	N78-14889 *	US-PATENT-4,091,798	c 44	N78-31526 *
US-PATENT-4,030,348	c 39	N78-10493 *	US-PATENT-4,061,579	c 24	N78-14096 *	US-PATENT-4,091,800	c 44	N78-31525 *
US-PATENT-4,031,389	c 36	N77-26477 *	US-PATENT-4,061,812	c 24	N78-15180 *	US-PATENT-4,092,188	c 28	N78-31525 *
US-PATENT-4,032,089	c 24	N77-28225 *	US-PATENT-4,061,834	c 27	N78-14164 *	US-PATENT-4,092,274	c 27	N78-31232 *
US-PATENT-4,032,089	c 27	N81-14077 *	US-PATENT-4,061,856	c 27	N78-15276 *	US-PATENT-4,092,466	c 27	N78-32256 *
US-PATENT-4,033,119	c 07	N77-28118 *	US-PATENT-4,061,955	c 44	N78-14625 *	US-PATENT-4,092,466	c 27	N80-10358 *
US-PATENT-4,033,133	c 28	N80-10374 *	US-PATENT-4,061,974	c 32	N78-15323 *	US-PATENT-4,092,606	c 33	N78-32338 *
US-PATENT-4,033,182	c 39	N77-28511 *	US-PATENT-4,062,227	c 39	N78-15512 *	US-PATENT-4,092,617	c 33	N78-32340 *
US-PATENT-4,033,266	c 25	N79-28253 *	US-PATENT-4,062,245	c 37	N78-16369 *	US-PATENT-4,092,633	c 54	N78-31232 *
US-PATENT-4,033,316	c 33	N77-28385 *	US-PATENT-4,062,347	c 44	N78-15560 *	US-PATENT-4,092,648	c 32	N78-32721 *
US-PATENT-4,033,334	c 52	N77-28717 *	US-PATENT-4,062,650	c 25	N78-15210 *	US-PATENT-4,092,712	c 33	N78-32341 *

US-PATENT-4,092,874	c 37	N78-31426 *	US-PATENT-4,130,112	c 52	N79-14751 *	US-PATENT-4,160,508	c 37	N79-28551 *
US-PATENT-4,093,156	c 05	N78-32086 *	US-PATENT-4,130,471	c 25	N79-14169 *	US-PATENT-4,160,601	c 35	N79-28527 *
US-PATENT-4,093,354	c 73	N78-32848 *	US-PATENT-4,130,490	c 33	N79-15245 *	US-PATENT-4,161,661	c 33	N79-28415 *
US-PATENT-4,093,382	c 38	N78-32447 *	US-PATENT-4,130,795	c 35	N79-14349 *	US-PATENT-4,161,731	c 31	N79-28370 *
US-PATENT-4,093,771	c 27	N78-32260 *	US-PATENT-4,131,336	c 44	N79-14529 *	US-PATENT-4,161,747	c 37	N79-28549 *
US-PATENT-4,093,917	c 35	N78-32396 *	US-PATENT-4,131,459	c 27	N79-14213 *	US-PATENT-4,162,169	c 24	N79-31347 *
US-PATENT-4,094,073	c 35	N78-32395 *	US-PATENT-4,131,486	c 44	N79-14528 *	US-PATENT-4,162,701	c 34	N79-31523 *
US-PATENT-4,094,758	c 26	N78-32229 *	US-PATENT-4,132,068	c 07	N79-14097 *	US-PATENT-4,162,928	c 44	N79-31753 *
US-PATENT-4,094,775	c 52	N80-14687 *	US-PATENT-4,132,069	c 07	N79-14096 *	US-PATENT-4,163,678	c 44	N79-31752 *
US-PATENT-4,094,862	c 27	N78-32261 *	US-PATENT-4,132,130	c 44	N79-14527 *	US-PATENT-4,164,079	c 09	N79-31228 *
US-PATENT-4,094,862	c 27	N78-32262 *	US-PATENT-4,132,375	c 08	N79-14108 *	US-PATENT-4,164,718	c 32	N80-14281 *
US-PATENT-4,094,943	c 27	N78-32262 *	US-PATENT-4,132,594	c 52	N79-14749 *	US-PATENT-4,165,460	c 43	N79-31706 *
US-PATENT-4,095,593	c 54	N78-32721 *	US-PATENT-4,132,599	c 52	N79-14750 *	US-PATENT-4,166,170	c 27	N79-33316 *
US-PATENT-4,096,315	c 74	N78-32854 *	US-PATENT-4,132,829	c 27	N79-14214 *	US-PATENT-4,166,170	c 27	N81-14078 *
US-PATENT-4,097,194	c 07	N78-33101 *	US-PATENT-4,132,940	c 35	N79-14348 *	US-PATENT-4,166,959	c 74	N79-34011 *
US-PATENT-4,098,142	c 37	N79-10422 *	US-PATENT-4,132,989	c 32	N79-14268 *	US-PATENT-4,167,111	c 46	N80-10709 *
US-PATENT-4,099,799	c 37	N79-10418 *	US-PATENT-4,133,697	c 44	N79-17314 *	US-PATENT-4,168,287	c 27	N80-10358 *
US-PATENT-4,100,331	c 44	N79-10513 *	US-PATENT-4,133,697	c 44	N80-14474 *	US-PATENT-4,168,483	c 39	N80-10507 *
US-PATENT-4,100,487	c 33	N79-10337 *	US-PATENT-4,133,941	c 44	N79-17313 *	US-PATENT-4,168,706	c 54	N80-10799 *
US-PATENT-4,100,531	c 32	N79-10263 *	US-PATENT-4,133,941	c 25	N82-21268 *	US-PATENT-4,168,718	c 20	N80-10278 *
US-PATENT-4,101,195	c 89	N79-10969 *	US-PATENT-4,134,447	c 31	N79-17029 *	US-PATENT-4,168,939	c 05	N80-14107 *
US-PATENT-4,101,644	c 25	N79-10162 *	US-PATENT-4,134,683	c 43	N79-17288 *	US-PATENT-4,169,129	c 37	N80-10494 *
US-PATENT-4,101,780	c 35	N79-10389 *	US-PATENT-4,134,744	c 35	N79-17192 *	US-PATENT-4,170,776	c 46	N80-14603 *
US-PATENT-4,101,891	c 35	N79-10391 *	US-PATENT-4,134,786	c 85	N79-17747 *	US-PATENT-4,170,987	c 52	N81-27763 *
US-PATENT-4,101,961	c 52	N79-10724 *	US-PATENT-4,135,019	c 24	N79-16915 *	US-PATENT-4,171,615	c 20	N80-14188 *
US-PATENT-4,102,580	c 74	N79-11865 *	US-PATENT-4,135,127	c 33	N79-17133 *	US-PATENT-4,171,645	c 35	N80-14371 *
US-PATENT-4,103,550	c 31	N79-11246 *	US-PATENT-4,135,290	c 44	N79-18444 *	US-PATENT-4,172,228	c 33	N80-14332 *
US-PATENT-4,103,619	c 28	N79-11231 *	US-PATENT-4,135,367	c 44	N79-18443 *	US-PATENT-4,172,786	c 45	N80-14579 *
US-PATENT-4,103,712	c 37	N79-11402 *	US-PATENT-4,135,817	c 35	N79-18296 *	US-PATENT-4,172,883	c 26	N80-14229 *
US-PATENT-4,104,018	c 25	N79-11151 *	US-PATENT-4,135,851	c 37	N79-18318 *	US-PATENT-4,173,001	c 36	N80-14384 *
US-PATENT-4,104,084	c 44	N79-11467 *	US-PATENT-4,135,851	c 37	N80-26658 *	US-PATENT-4,173,324	c 37	N80-14398 *
US-PATENT-4,104,091	c 44	N79-11468 *	US-PATENT-4,135,851	c 37	N82-19540 *	US-PATENT-4,173,397	c 44	N80-14473 *
US-PATENT-4,104,134	c 44	N79-11469 *	US-PATENT-4,136,211	c 24	N79-17916 *	US-PATENT-4,173,820	c 44	N80-14474 *
US-PATENT-4,104,134	c 44	N80-16452 *	US-PATENT-4,137,010	c 05	N79-17847 *	US-PATENT-4,175,249	c 44	N80-14472 *
US-PATENT-4,104,873	c 37	N79-11403 *	US-PATENT-4,137,365	c 27	N79-18052 *	US-PATENT-4,176,007	c 51	N80-16714 *
US-PATENT-4,105,261	c 37	N79-11404 *	US-PATENT-4,139,291	c 74	N79-20856 *	US-PATENT-4,176,360	c 18	N80-14183 *
US-PATENT-4,105,517	c 44	N79-11470 *	US-PATENT-4,139,806	c 71	N79-20827 *	US-PATENT-4,176,662	c 52	N80-16725 *
US-PATENT-4,105,966	c 33	N79-11315 *	US-PATENT-4,139,839	c 60	N79-20751 *	US-PATENT-4,176,950	c 36	N80-16321 *
US-PATENT-4,106,218	c 74	N79-13855 *	US-PATENT-4,139,862	c 32	N79-20297 *	US-PATENT-4,177,325	c 44	N80-16452 *
US-PATENT-4,106,587	c 71	N79-14871 *	US-PATENT-4,140,972	c 32	N79-20296 *	US-PATENT-4,177,333	c 25	N80-16116 *
US-PATENT-4,106,687	c 37	N79-13364 *	US-PATENT-4,141,219	c 34	N79-20335 *	US-PATENT-4,178,100	c 35	N80-18359 *
US-PATENT-4,107,363	c 33	N79-12331 *	US-PATENT-4,141,224	c 34	N79-20336 *	US-PATENT-4,180,648	c 27	N80-16158 *
US-PATENT-4,107,627	c 72	N79-13826 *	US-PATENT-4,141,259	c 37	N79-20377 *	US-PATENT-4,181,589	c 51	N80-16715 *
US-PATENT-4,107,919	c 34	N79-13288 *	US-PATENT-4,142,101	c 74	N79-20857 *	US-PATENT-4,182,158	c 35	N80-18358 *
US-PATENT-4,108,241	c 34	N79-13289 *	US-PATENT-4,142,119	c 33	N79-20314 *	US-PATENT-4,183,217	c 20	N80-18097 *
US-PATENT-4,109,213	c 33	N79-22373 *	US-PATENT-4,143,314	c 30	N79-20179 *	US-PATENT-4,184,072	c 44	N80-18552 *
US-PATENT-4,109,644	c 52	N79-18580 *	US-PATENT-4,145,058	c 27	N79-22475 *	US-PATENT-4,184,111	c 44	N80-18551 *
US-PATENT-4,110,683	c 33	N79-18193 *	US-PATENT-4,145,255	c 25	N79-22235 *	US-PATENT-4,184,149	c 06	N80-18036 *
US-PATENT-4,110,703	c 36	N79-18307 *	US-PATENT-4,145,524	c 27	N79-22300 *	US-PATENT-4,184,155	c 43	N80-18498 *
US-PATENT-4,111,041	c 35	N79-14345 *	US-PATENT-4,145,933	c 39	N79-22537 *	US-PATENT-4,184,327	c 07	N80-18039 *
US-PATENT-4,111,058	c 35	N79-14347 *	US-PATENT-4,146,180	c 37	N79-22474 *	US-PATENT-4,184,368	c 48	N80-18667 *
US-PATENT-4,111,068	c 37	N79-14382 *	US-PATENT-4,146,367	c 25	N81-33246 *	US-PATENT-4,184,472	c 76	N80-18951 *
US-PATENT-4,111,184	c 44	N79-14526 *	US-PATENT-4,146,409	c 26	N79-22271 *	US-PATENT-4,184,491	c 52	N80-18690 *
US-PATENT-4,111,718	c 35	N79-14346 *	US-PATENT-4,148,031	c 32	N79-24210 *	US-PATENT-4,184,609	c 37	N80-18393 *
US-PATENT-4,111,729	c 28	N79-14228 *	US-PATENT-4,148,295	c 44	N79-23481 *	US-PATENT-4,184,903	c 44	N80-18550 *
US-PATENT-4,111,775	c 76	N79-14906 *	US-PATENT-4,148,375	c 46	N79-22679 *	US-PATENT-4,185,164	c 33	N80-18286 *
US-PATENT-4,111,851	c 24	N79-14156 *	US-PATENT-4,148,452	c 08	N79-23097 *	US-PATENT-4,185,493	c 35	N80-18357 *
US-PATENT-4,112,357	c 33	N79-14305 *	US-PATENT-4,148,962	c 24	N79-24062 *	US-PATENT-4,186,347	c 32	N80-18253 *
US-PATENT-4,112,497	c 32	N79-14267 *	US-PATENT-4,149,034	c 71	N79-23753 *	US-PATENT-4,186,749	c 52	N80-18691 *
US-PATENT-4,112,857	c 44	N78-33526 *	US-PATENT-4,149,233	c 33	N79-24257 *	US-PATENT-4,187,394	c 32	N80-18252 *
US-PATENT-4,112,875	c 44	N78-32179 *	US-PATENT-4,149,278	c 54	N79-24652 *	US-PATENT-4,187,416	c 33	N80-18285 *
US-PATENT-4,116,131	c 20	N78-32179 *	US-PATENT-4,149,423	c 32	N79-24203 *	US-PATENT-4,187,470	c 36	N80-18372 *
US-PATENT-4,117,669	c 07	N79-10057 *	US-PATENT-4,149,521	c 44	N79-24433 *	US-PATENT-4,187,506	c 33	N80-18287 *
US-PATENT-4,117,731	c 35	N79-10390 *	US-PATENT-4,149,665	c 44	N79-24431 *	US-PATENT-4,188,368	c 31	N80-18231 *
US-PATENT-4,117,749	c 37	N79-10419 *	US-PATENT-4,149,817	c 44	N79-24432 *	US-PATENT-4,188,823	c 02	N80-20224 *
US-PATENT-4,117,881	c 51	N79-10694 *	US-PATENT-4,149,938	c 25	N79-24073 *	US-PATENT-4,189,234	c 74	N80-21138 *
US-PATENT-4,118,014	c 37	N79-10420 *	US-PATENT-4,150,425	c 33	N79-24254 *	US-PATENT-4,189,675	c 32	N80-20448 *
US-PATENT-4,118,315	c 51	N79-10693 *	US-PATENT-4,151,086	c 34	N79-24285 *	US-PATENT-4,189,914	c 07	N81-29129 *
US-PATENT-4,118,427	c 27	N80-32514 *	US-PATENT-4,151,456	c 33	N79-23345 *	US-PATENT-4,190,060	c 52	N81-29763 *
US-PATENT-4,118,620	c 37	N79-10421 *	US-PATENT-4,151,612	c 54	N79-24651 *	US-PATENT-4,190,626	c 24	N81-29163 *
US-PATENT-4,118,665	c 33	N79-10338 *	US-PATENT-4,151,800	c 24	N79-25142 *	US-PATENT-4,191,159	c 37	N80-29703 *
US-PATENT-4,118,666	c 32	N79-10262 *	US-PATENT-4,152,194	c 76	N79-23798 *	US-PATENT-4,191,505	c 44	N80-21828 *
US-PATENT-4,118,671	c 33	N79-10339 *	US-PATENT-4,153,134	c 46	N79-23555 *	US-PATENT-4,191,893	c 44	N80-29834 *
US-PATENT-4,118,701	c 32	N79-10264 *	US-PATENT-4,153,476	c 44	N79-25482 *	US-PATENT-4,192,290	c 44	N80-20810 *
US-PATENT-4,119,581	c 27	N81-14076 *	US-PATENT-4,153,818	c 32	N79-23310 *	US-PATENT-4,192,910	c 33	N80-20487 *
US-PATENT-4,119,926	c 33	N79-11313 *	US-PATENT-4,154,084	c 43	N79-25443 *	US-PATENT-4,192,910	c 44	N81-29524 *
US-PATENT-4,119,964	c 32	N79-11265 *	US-PATENT-4,154,228	c 52	N79-27836 *	US-PATENT-4,192,994	c 74	N80-21140 *
US-PATENT-4,119,972	c 32	N79-11264 *	US-PATENT-4,154,230	c 52	N79-26771 *	US-PATENT-4,193,388	c 44	N80-20808 *
US-PATENT-4,119,996	c 33	N79-12321 *	US-PATENT-4,154,256	c 05	N79-24976 *	US-PATENT-4,193,435	c 37	N80-23653 *
US-PATENT-4,121,965	c 76	N79-11920 *	US-PATENT-4,154,501	c 33	N81-29342 *	US-PATENT-4,193,570	c 35	N80-21719 *
US-PATENT-4,121,995	c 25	N79-11152 *	US-PATENT-4,154,912	c 44	N79-25481 *	US-PATENT-4,193,693	c 35	N80-20563 *
US-PATENT-4,122,214	c 44	N79-11472 *	US-PATENT-4,155,475	c 24	N79-25143 *	US-PATENT-4,193,827	c 28	N80-20402 *
US-PATENT-4,122,334	c 74	N79-12890 *	US-PATENT-4,156,309	c 44	N79-26475 *	US-PATENT-4,193,827	c 28	N81-14103 *
US-PATENT-4,122,383	c 44	N79-12541 *	US-PATENT-4,156,548	c 35	N79-26372 *	US-PATENT-4,194,115	c 25	N80-20334 *
US-PATENT-4,122,383	c 32	N79-13214 *	US-PATENT-4,156,752	c 15	N79-26100 *	US-PATENT-4,195,244	c 35	N80-20559 *
US-PATENT-4,122,454	c 52	N79-12694 *	US-PATENT-4,156,971	c 43	N79-26439 *	US-PATENT-4,195,279	c 35	N80-20560 *
US-PATENT-4,122,518	c 38	N79-12359 *	US-PATENT-4,157,655	c 43	N80-14423 *	US-PATENT-4,195,512	c 43	N80-23711 *
US-PATENT-4,122,712	c 34	N79-14398 *	US-PATENT-4,157,718	c 52	N80-14684 *	US-PATENT-4,195,666	c 37	N80-23654 *
US-PATENT-4,122,725	c 38	N79-14398 *	US-PATENT-4,158,583	c 28	N79-28342 *	US-PATENT-4,196,129	c 27	N80-32515 *
US-PATENT-4,122,816	c 37	N79-11405 *	US-PATENT-4,158,775	c 12	N79-26075 *	US-PATENT-4,196,619	c 46	N80-24906 *
US-PATENT-4,122,833	c 44	N79-11471 *	US-PATENT-4,158,775	c 72	N80-14877 *	US-PATENT-4,196,840	c 37	N80-23655 *
US-PATENT-4,122,833	c 18	N79-11108 *	US-PATENT-4,158,895	c 52	N79-26772 *	US-PATENT-4,197,530	c 33	N80-23559 *
US-PATENT-4,123,355	c 45	N79-12584 *	US-PATENT-4,159,262	c 27	N79-28307 *	US-PATENT-4,198,209	c 28	N80-23471 *
US-PATENT-4,124,180	c 05	N79-12061 *	US-PATENT-4,159,366	c 44	N79-26474 *	US-PATENT-4,198,232	c 26	N80-23419 *
US-PATENT-4,124,330	c 07	N79-1409						

US-PATENT-4,198,988	c 52	N80-23969 *	US-PATENT-4,242,553	c 33	N81-19389 *	US-PATENT-4,279,906	c 52	N81-29764 *
US-PATENT-4,199,448	c 27	N80-23452 *	US-PATENT-4,242,864	c 07	N81-19116 *	US-PATENT-4,280,141	c 33	N81-33403 *
US-PATENT-4,199,650	c 27	N80-24437 *	US-PATENT-4,243,323	c 74	N81-17888 *	US-PATENT-4,280,689	c 37	N81-33488 *
US-PATENT-4,199,764	c 32	N80-23524 *	US-PATENT-4,243,327	c 74	N81-17887 *	US-PATENT-4,280,766	c 35	N81-33448 *
US-PATENT-4,199,937	c 34	N80-24573 *	US-PATENT-4,244,215	c 04	N81-21047 *	US-PATENT-4,281,102	c 27	N81-29229 *
US-PATENT-4,199,937	c 44	N81-24519 *	US-PATENT-4,244,810	c 09	N82-29330 *	US-PATENT-4,281,384	c 18	N81-29152 *
US-PATENT-4,200,721	c 27	N80-24438 *	US-PATENT-4,244,853	c 27	N81-19296 *	US-PATENT-4,281,708	c 33	N82-24419 *
US-PATENT-4,201,468	c 32	N80-24510 *	US-PATENT-4,244,857	c 27	N81-17260 *	US-PATENT-4,282,479	c 33	N82-24420 *
US-PATENT-4,203,723	c 27	N80-26446 *	US-PATENT-4,245,085	c 27	N81-17262 *	US-PATENT-4,282,525	c 46	N82-12685 *
US-PATENT-4,204,037	c 51	N80-27067 *	US-PATENT-4,245,286	c 33	N81-19392 *	US-PATENT-4,282,752	c 44	N82-16474 *
US-PATENT-4,204,154	c 33	N80-26599 *	US-PATENT-4,245,288	c 33	N81-19393 *	US-PATENT-4,283,705	c 06	N82-16075 *
US-PATENT-4,204,402	c 07	N80-26298 *	US-PATENT-4,245,469	c 44	N81-24519 *	US-PATENT-4,283,995	c 37	N81-32510 *
US-PATENT-4,204,544	c 52	N80-27072 *	US-PATENT-4,245,566	c 31	N81-19343 *	US-PATENT-4,284,034	c 51	N81-32829 *
US-PATENT-4,204,899	c 24	N80-26388 *	US-PATENT-4,245,768	c 37	N81-19455 *	US-PATENT-4,284,461	c 27	N82-11206 *
US-PATENT-4,205,229	c 35	N80-26635 *	US-PATENT-4,245,956	c 05	N81-19087 *	US-PATENT-4,284,682	c 27	N82-16238 *
US-PATENT-4,206,383	c 72	N80-27163 *	US-PATENT-4,246,001	c 27	N81-17261 *	US-PATENT-4,286,209	c 35	N82-11431 *
US-PATENT-4,206,713	c 31	N81-15154 *	US-PATENT-4,246,901	c 52	N81-24711 *	US-PATENT-4,286,460	c 09	N82-11088 *
US-PATENT-4,206,970	c 74	N80-27185 *	US-PATENT-4,247,434	c 25	N81-19242 *	US-PATENT-4,286,542	c 37	N82-12441 *
US-PATENT-4,207,024	c 37	N80-26658 *	US-PATENT-4,248,083	c 35	N81-19426 *	US-PATENT-4,287,152	c 35	N82-11432 *
US-PATENT-4,207,024	c 37	N82-19540 *	US-PATENT-4,249,116	c 33	N81-20352 #	US-PATENT-4,287,518	c 32	N82-11336 *
US-PATENT-4,209,393	c 45	N82-11634 *	US-PATENT-4,249,238	c 07	N81-19115 *	US-PATENT-4,287,578	c 32	N82-18443 *
US-PATENT-4,209,561	c 24	N81-13999 *	US-PATENT-4,249,417	c 52	N81-20703 *	US-PATENT-4,287,606	c 74	N82-19029 *
US-PATENT-4,210,278	c 31	N80-32583 *	US-PATENT-4,249,957	c 44	N81-19558 *	US-PATENT-4,287,838	c 25	N82-11144 *
US-PATENT-4,210,401	c 35	N80-28687 *	US-PATENT-4,250,143	c 54	N81-24724 *	US-PATENT-4,288,585	c 27	N82-18389 *
US-PATENT-4,210,474	c 28	N80-28536 *	US-PATENT-4,252,007	c 33	N81-25299 *	US-PATENT-4,288,982	c 20	N82-18314 *
US-PATENT-4,210,622	c 44	N80-24741 *	US-PATENT-4,252,111	c 52	N81-25661 *	US-PATENT-4,290,612	c 37	N82-16408 *
US-PATENT-4,211,354	c 24	N81-17170 *	US-PATENT-4,252,440	c 39	N81-25400 *	US-PATENT-4,290,779	c 44	N82-16475 *
US-PATENT-4,211,354	c 24	N81-26179 *	US-PATENT-4,252,768	c 37	N81-25371 *	US-PATENT-4,291,294	c 04	N82-16059 *
US-PATENT-4,212,199	c 02	N80-28300 *	US-PATENT-4,253,156	c 34	N81-26402 *	US-PATENT-4,291,887	c 37	N82-12442 *
US-PATENT-4,212,297	c 51	N81-14605 *	US-PATENT-4,253,769	c 25	N81-25159 *	US-PATENT-4,292,375	c 24	N82-24296 *
US-PATENT-4,212,477	c 37	N80-28711 *	US-PATENT-4,254,464	c 62	N81-24779 *	US-PATENT-4,292,634	c 32	N82-12297 *
US-PATENT-4,212,477	c 37	N81-26447 *	US-PATENT-4,255,048	c 36	N81-24422 *	US-PATENT-4,293,522	c 25	N82-12166 *
US-PATENT-4,212,690	c 26	N80-28492 *	US-PATENT-4,255,495	c 26	N81-25188 *	US-PATENT-4,294,261	c 52	N82-11770 *
US-PATENT-4,213,051	c 35	N80-28686 *	US-PATENT-4,255,929	c 37	N81-25370 *	US-PATENT-4,294,264	c 52	N82-22875 *
US-PATENT-4,213,064	c 60	N81-15706 *	US-PATENT-4,256,093	c 52	N81-25660 *	US-PATENT-4,295,111	c 33	N82-11357 *
US-PATENT-4,213,131	c 32	N80-28578 *	US-PATENT-4,258,366	c 32	N81-25278 *	US-PATENT-4,295,140	c 35	N82-15381 *
US-PATENT-4,213,684	c 74	N81-17886 *	US-PATENT-4,259,821	c 31	N81-25258 *	US-PATENT-4,295,786	c 37	N82-19540 *
US-PATENT-4,214,226	c 31	N80-32584 *	US-PATENT-4,259,825	c 31	N81-25259 *	US-PATENT-4,298,833	c 33	N82-18493 *
US-PATENT-4,214,703	c 07	N80-32392 *	US-PATENT-4,260,166	c 37	N81-24442 *	US-PATENT-4,298,926	c 33	N82-18494 *
US-PATENT-4,214,902	c 26	N80-32484 *	US-PATENT-4,260,187	c 37	N81-27519 *	US-PATENT-4,298,987	c 60	N82-16747 *
US-PATENT-4,214,905	c 24	N80-33482 *	US-PATENT-4,261,349	c 52	N81-25662 *	US-PATENT-4,299,492	c 36	N82-16396 *
US-PATENT-4,215,273	c 74	N80-33210 *	US-PATENT-4,261,537	c 08	N81-24106 *	US-PATENT-4,300,106	c 36	N82-13415 *
US-PATENT-4,215,327	c 32	N80-32605 *	US-PATENT-4,262,064	c 44	N81-24521 *	US-PATENT-4,300,159	c 43	N82-13465 *
US-PATENT-4,215,345	c 04	N80-32359 *	US-PATENT-4,262,067	c 27	N81-24257 *	US-PATENT-4,300,656	c 71	N82-16800 *
US-PATENT-4,215,548	c 37	N80-31790 *	US-PATENT-4,262,080	c 27	N81-25209 *	US-PATENT-4,300,723	c 34	N82-13376 *
US-PATENT-4,215,590	c 37	N80-32717 *	US-PATENT-4,262,195	c 44	N81-24520 *	US-PATENT-4,301,740	c 37	N82-21587 *
US-PATENT-4,215,592	c 37	N80-32716 *	US-PATENT-4,262,198	c 74	N83-19597 *	US-PATENT-4,302,223	c 25	N82-21269 *
US-PATENT-4,216,186	c 76	N80-32244 *	US-PATENT-4,262,206	c 74	N81-24900 *	US-PATENT-4,302,734	c 33	N82-16340 *
US-PATENT-4,216,542	c 33	N81-15192 *	US-PATENT-4,262,258	c 33	N81-27396 *	US-PATENT-4,303,961	c 28	N82-18401 *
US-PATENT-4,217,165	c 76	N80-32245 *	US-PATENT-4,262,259	c 33	N81-24338 *	US-PATENT-4,304,219	c 44	N82-18686 *
US-PATENT-4,217,633	c 44	N81-12542 *	US-PATENT-4,263,112	c 28	N81-24280 *	US-PATENT-4,304,320	c 37	N82-18601 *
US-PATENT-4,218,280	c 27	N80-32516 *	US-PATENT-4,264,310	c 54	N81-27806 *	US-PATENT-4,305,205	c 37	N82-26672 *
US-PATENT-4,218,633	c 72	N80-33186 *	US-PATENT-4,264,728	c 51	N81-28698 *	US-PATENT-4,307,024	c 25	N82-24312 *
US-PATENT-4,218,650	c 33	N80-32650 *	US-PATENT-4,264,802	c 35	N81-26431 *	US-PATENT-4,307,510	c 60	N82-24839 *
US-PATENT-4,218,682	c 32	N80-32604 *	US-PATENT-4,264,908	c 33	N81-26358 *	US-PATENT-4,307,575	c 44	N82-26776 *
US-PATENT-4,218,685	c 32	N81-14187 *	US-PATENT-4,264,940	c 33	N81-27397 *	US-PATENT-4,307,856	c 05	N82-26277 *
US-PATENT-4,218,892	c 35	N81-14287 *	US-PATENT-4,264,984	c 60	N81-27814 *	US-PATENT-4,308,309	c 27	N82-24339 *
US-PATENT-4,218,921	c 71	N81-15767 *	US-PATENT-4,265,416	c 14	N81-26161 *	US-PATENT-4,308,868	c 52	N82-29863 *
US-PATENT-4,218,941	c 37	N81-14319 *	US-PATENT-4,266,177	c 33	N81-27395 *	US-PATENT-4,309,039	c 37	N82-24490 *
US-PATENT-4,219,027	c 52	N81-14612 *	US-PATENT-4,266,743	c 08	N81-26152 *	US-PATENT-4,309,146	c 44	N82-24639 *
US-PATENT-4,219,084	c 31	N81-14137 *	US-PATENT-4,266,788	c 37	N81-26447 *	US-PATENT-4,309,372	c 25	N82-21268 *
US-PATENT-4,219,107	c 37	N81-15364 *	US-PATENT-4,267,594	c 33	N81-26359 *	US-PATENT-4,310,049	c 25	N82-23282 *
US-PATENT-4,219,171	c 37	N81-14320 *	US-PATENT-4,267,953	c 24	N81-26179 *	US-PATENT-4,310,132	c 24	N82-26384 *
US-PATENT-4,219,203	c 37	N81-15363 *	US-PATENT-4,267,992	c 37	N81-24443 *	US-PATENT-4,310,574	c 27	N82-28441 *
US-PATENT-4,219,926	c 44	N81-14389 *	US-PATENT-4,269,640	c 37	N82-24491 *	US-PATENT-4,310,906	c 33	N82-26572 *
US-PATENT-4,220,171	c 07	N81-14999 *	US-PATENT-4,269,787	c 27	N81-24256 *	US-PATENT-4,311,055	c 54	N82-26987 *
US-PATENT-4,221,005	c 32	N81-15179 *	US-PATENT-4,270,539	c 52	N81-28740 *	US-PATENT-4,311,057	c 37	N82-24493 *
US-PATENT-4,222,098	c 33	N81-14220 *	US-PATENT-4,270,984	c 44	N81-29524 *	US-PATENT-4,311,378	c 35	N82-26628 *
US-PATENT-4,225,102	c 02	N81-14968 *	US-PATENT-4,271,761	c 15	N82-24272 *	US-PATENT-4,311,615	c 25	N82-26396 *
US-PATENT-4,225,372	c 27	N81-14077 *	US-PATENT-4,272,046	c 08	N82-24205 *	US-PATENT-4,311,870	c 44	N82-26777 *
US-PATENT-4,226,475	c 43	N81-26509 *	US-PATENT-4,272,302	c 33	N81-26360 *	US-PATENT-4,312,292	c 37	N82-24492 *
US-PATENT-4,227,096	c 33	N81-17348 *	US-PATENT-4,272,470	c 23	N81-29160 *	US-PATENT-4,313,077	c 33	N82-26569 *
US-PATENT-4,228,422	c 33	N81-14221 *	US-PATENT-4,272,720	c 47	N82-24779 *	US-PATENT-4,313,103	c 33	N82-26570 *
US-PATENT-4,228,656	c 37	N81-14318 *	US-PATENT-4,273,304	c 05	N81-26114 *	US-PATENT-4,313,291	c 09	N82-29330 *
US-PATENT-4,229,182	c 28	N81-15119 *	US-PATENT-4,273,505	c 54	N81-26718 *	US-PATENT-4,313,726	c 09	N82-24212 *
US-PATENT-4,229,196	c 28	N81-14103 *	US-PATENT-4,273,918	c 27	N82-24338 *	US-PATENT-4,313,745	c 27	N82-28442 *
US-PATENT-4,229,473	c 24	N81-14000 *	US-PATENT-4,274,038	c 37	N81-33483 *	US-PATENT-4,313,777	c 33	N82-26571 *
US-PATENT-4,229,473	c 24	N81-33235 *	US-PATENT-4,274,285	c 35	N81-29407 *	US-PATENT-4,314,984	c 25	N82-28368 *
US-PATENT-4,230,717	c 52	N81-14613 *	US-PATENT-4,274,901	c 24	N81-33235 *	US-PATENT-4,315,194	c 33	N82-26568 *
US-PATENT-4,233,258	c 27	N81-14078 *	US-PATENT-4,275,317	c 33	N82-24418 *	US-PATENT-4,315,197	c 33	N82-24421 *
US-PATENT-4,233,606	c 32	N81-14185 *	US-PATENT-4,275,453	c 33	N82-24417 *	US-PATENT-4,315,266	c 32	N82-27558 *
US-PATENT-4,234,258	c 25	N81-14015 *	US-PATENT-4,276,344	c 27	N81-27272 *	US-PATENT-4,316,035	c 23	N82-28353 *
US-PATENT-4,234,715	c 25	N81-14016 *	US-PATENT-4,276,344	c 27	N85-21347 *	US-PATENT-4,317,102	c 35	N82-24470 *
US-PATENT-4,234,971	c 32	N81-14186 *	US-PATENT-4,276,403	c 27	N81-27271 *	US-PATENT-4,319,133	c 33	N82-28545 *
US-PATENT-4,235,060	c 37	N81-14317 *	US-PATENT-4,276,553	c 32	N81-27341 *	US-PATENT-4,320,290	c 74	N82-24072 *
US-PATENT-4,236,383	c 44	N81-17518 *	US-PATENT-4,276,588	c 33	N81-33404 *	US-PATENT-4,320,397	c 32	N82-23376 *
US-PATENT-4,236,684	c 08	N81-19130 *	US-PATENT-4,277,402	c 23	N82-16174 *	US-PATENT-4,320,911	c 37	N82-24494 *
US-PATENT-4,237,662	c 31	N81-27323 *	US-PATENT-4,277,721	c 33	N82-24415 *	US-PATENT-4,321,099	c 44	N82-28780 *
US-PATENT-4,238,911	c 31	N81-27324 *	US-PATENT-4,278,220	c 07	N82-26293 *	US-PATENT-4,321,572	c 33	N82-24422 *
US-PATENT-4,239,057	c 37	N81-17433 *	US-PATENT-4,278,351	c 74	N81-29963 *	US-PATENT-4,325,001	c 35	N82-24471 *
US-PATENT-4,240								

US-PATENT-4,328,464	c 36	N82-28616 *	US-PATENT-4,377,371	c 18	N83-20996 *	US-PATENT-4,407,686	c 35	N84-12443 *
US-PATENT-4,329,114	c 07	N82-32366 *	US-PATENT-4,377,371	c 37	N84-22957 *	US-PATENT-4,408,597	c 52	N84-11744 *
US-PATENT-4,329,385	c 27	N82-28440 *	US-PATENT-4,377,949	c 45	N83-25217 *	US-PATENT-4,408,658	c 27	N83-36220 *
US-PATENT-4,330,100	c 05	N82-28279 *	US-PATENT-4,378,209	c 35	N83-24828 *	US-PATENT-4,410,189	c 37	N84-11497 *
US-PATENT-4,330,359	c 76	N82-30105 *	US-PATENT-4,378,813	c 52	N83-25346 *	US-PATENT-4,410,682	c 24	N84-11213 *
US-PATENT-4,330,572	c 27	N82-33520 *	US-PATENT-4,379,970	c 33	N83-24763 *	US-PATENT-4,411,380	c 24	N84-11214 *
US-PATENT-4,331,422	c 52	N82-29862 *	US-PATENT-4,380,046	c 60	N83-25378 *	US-PATENT-4,411,597	c 07	N84-22560 *
US-PATENT-4,331,742	c 44	N82-29710 *	US-PATENT-4,381,174	c 37	N83-26078 *	US-PATENT-4,411,660	c 54	N84-11758 *
US-PATENT-4,331,746	c 44	N82-29708 *	US-PATENT-4,381,333	c 44	N83-34448 *	US-PATENT-4,412,664	c 02	N84-11136 *
US-PATENT-4,331,873	c 44	N82-32841 *	US-PATENT-4,381,375	c 37	N83-34323 *	US-PATENT-4,413,522	c 35	N84-12445 *
US-PATENT-4,331,956	c 33	N82-29538 *	US-PATENT-4,381,583	c 31	N83-31895 *	US-PATENT-4,413,784	c 34	N84-12406 *
US-PATENT-4,332,441	c 36	N82-29589 *	US-PATENT-4,381,881	c 74	N83-29032 *	US-PATENT-4,414,080	c 25	N84-12262 *
US-PATENT-4,335,190	c 27	N83-31855 *	US-PATENT-4,382,116	c 44	N83-27344 *	US-PATENT-4,414,509	c 35	N84-12444 *
US-PATENT-4,335,196	c 44	N83-13579 *	US-PATENT-4,382,224	c 33	N83-27126 *	US-PATENT-4,414,816	c 07	N84-24577 *
US-PATENT-4,335,206	c 35	N82-28604 *	US-PATENT-4,382,239	c 32	N83-27085 *	US-PATENT-4,415,133	c 05	N84-12154 *
US-PATENT-4,335,503	c 44	N82-29709 *	US-PATENT-4,383,171	c 35	N83-27184 *	US-PATENT-4,415,311	c 37	N84-12493 *
US-PATENT-4,336,117	c 26	N82-29415 *	US-PATENT-4,383,533	c 52	N83-27578 *	US-PATENT-4,415,500	c 45	N84-12654 *
US-PATENT-4,336,276	c 27	N82-29453 *	US-PATENT-4,383,785	c 31	N83-27058 *	US-PATENT-4,416,111	c 07	N84-33410 *
US-PATENT-4,336,616	c 03	N82-29539 *	US-PATENT-4,384,578	c 52	N83-27577 *	US-PATENT-4,416,266	c 52	N84-28388 *
US-PATENT-4,338,061	c 37	N83-31603 *	US-PATENT-4,384,823	c 34	N83-27144 *	US-PATENT-4,417,175	c 70	N84-28565 *
US-PATENT-4,338,368	c 27	N82-29456 *	US-PATENT-4,385,043	c 24	N83-25789 *	US-PATENT-4,417,190	c 33	N84-14424 *
US-PATENT-4,338,371	c 24	N82-29362 *	US-PATENT-4,385,113	c 51	N83-27569 *	US-PATENT-4,417,215	c 33	N84-14421 *
US-PATENT-4,338,371	c 54	N84-11758 *	US-PATENT-4,385,949	c 31	N83-34073 *	US-PATENT-4,418,130	c 33	N84-14422 *
US-PATENT-4,338,516	c 74	N82-30071 *	US-PATENT-4,386,157	c 51	N83-28849 *	US-PATENT-4,418,480	c 04	N84-14132 *
US-PATENT-4,338,568	c 33	N83-31954 *	US-PATENT-4,386,750	c 18	N83-28064 *	US-PATENT-4,418,722	c 44	N84-14583 *
US-PATENT-4,340,318	c 37	N82-32732 *	US-PATENT-4,387,513	c 06	N83-33882 *	US-PATENT-4,420,035	c 34	N84-14461 *
US-PATENT-4,340,425	c 26	N82-31505 *	US-PATENT-4,387,935	c 37	N83-32067 *	US-PATENT-4,420,352	c 27	N84-22748 *
US-PATENT-4,341,012	c 35	N82-31659 *	US-PATENT-4,388,171	c 23	N84-16255 *	US-PATENT-4,420,518	c 27	N84-14323 *
US-PATENT-4,341,843	c 26	N82-30371 *	US-PATENT-4,388,346	c 33	N84-16456 *	US-PATENT-4,420,836	c 36	N84-14509 *
US-PATENT-4,341,918	c 44	N82-31764 *	US-PATENT-4,388,502	c 05	N83-27975 *	US-PATENT-4,420,977	c 71	N84-23233 *
US-PATENT-4,341,925	c 32	N82-31583 *	US-PATENT-4,388,542	c 44	N83-28573 *	US-PATENT-4,421,109	c 54	N84-18803 *
US-PATENT-4,343,287	c 37	N82-32730 *	US-PATENT-4,388,585	c 39	N83-28319 *	US-PATENT-4,421,371	c 33	N84-14423 *
US-PATENT-4,343,447	c 08	N82-32373 *	US-PATENT-4,388,585	c 33	N84-33660 *	US-PATENT-4,421,700	c 24	N84-16282 *
US-PATENT-4,343,506	c 85	N82-33288 *	US-PATENT-4,388,965	c 34	N83-28356 *	US-PATENT-4,421,820	c 27	N84-14322 *
US-PATENT-4,343,584	c 37	N82-32731 *	US-PATENT-4,389,504	c 27	N83-28240 *	US-PATENT-4,422,012	c 33	N84-16452 *
US-PATENT-4,343,772	c 44	N83-10501 *	US-PATENT-4,389,504	c 27	N85-21349 *	US-PATENT-4,422,609	c 37	N84-16560 *
US-PATENT-4,344,591	c 24	N82-32417 *	US-PATENT-4,389,849	c 44	N83-28574 *	US-PATENT-4,423,605	c 34	N84-22903 *
US-PATENT-4,344,787	c 31	N83-31896 *	US-PATENT-4,389,904	c 35	N83-29650 *	US-PATENT-4,424,592	c 36	N84-16542 *
US-PATENT-4,344,996	c 27	N82-33521 *	US-PATENT-4,391,129	c 34	N83-31993 *	US-PATENT-4,425,376	c 71	N84-16940 *
US-PATENT-4,345,153	c 35	N82-32659 *	US-PATENT-4,391,423	c 18	N83-29303 *	US-PATENT-4,425,543	c 33	N84-16454 *
US-PATENT-4,346,595	c 06	N83-10040 *	US-PATENT-4,391,514	c 36	N83-34304 *	US-PATENT-4,425,785	c 15	N84-16231 *
US-PATENT-4,346,595	c 06	N84-34443 *	US-PATENT-4,391,518	c 36	N83-29680 *	US-PATENT-4,425,808	c 35	N84-28015 *
US-PATENT-4,346,715	c 52	N82-33996 *	US-PATENT-4,391,609	c 25	N83-31743 *	US-PATENT-4,425,808	c 35	N85-21598 *
US-PATENT-4,346,754	c 34	N83-34221 *	US-PATENT-4,392,356	c 34	N83-29625 *	US-PATENT-4,425,854	c 25	N84-16276 *
US-PATENT-4,346,990	c 36	N82-32712 *	US-PATENT-4,392,749	c 35	N83-29651 *	US-PATENT-4,426,614	c 33	N84-16455 *
US-PATENT-4,347,613	c 36	N83-10417 *	US-PATENT-4,392,874	c 35	N83-29652 *	US-PATENT-4,426,678	c 33	N84-16453 *
US-PATENT-4,349,424	c 24	N83-10117 *	US-PATENT-4,392,920	c 27	N83-29388 *	US-PATENT-4,426,874	c 35	N84-28019 *
US-PATENT-4,349,424	c 70	N84-28565 *	US-PATENT-4,393,039	c 25	N83-29324 *	US-PATENT-4,428,122	c 35	N84-16523 *
US-PATENT-4,349,429	c 25	N83-10126 *	US-PATENT-4,393,706	c 71	N83-32516 *	US-PATENT-4,428,226	c 07	N84-22559 *
US-PATENT-4,349,954	c 26	N83-10170 *	US-PATENT-4,393,708	c 71	N83-32515 *	US-PATENT-4,428,675	c 35	N84-22929 *
US-PATENT-4,350,410	c 74	N83-10900 *	US-PATENT-4,393,716	c 39	N83-32081 *	US-PATENT-4,428,703	c 37	N84-16561 *
US-PATENT-4,350,574	c 44	N83-10494 *	US-PATENT-4,393,777	c 37	N84-12491 *	US-PATENT-4,429,537	c 37	N84-22958 *
US-PATENT-4,351,022	c 33	N83-10345 *	US-PATENT-4,394,610	c 33	N83-31953 *	US-PATENT-4,430,360	c 37	N84-22957 *
US-PATENT-4,355,311	c 32	N83-31918 *	US-PATENT-4,394,726	c 60	N83-32342 *	US-PATENT-4,430,673	c 74	N84-23247 *
US-PATENT-4,355,870	c 74	N83-13978 *	US-PATENT-4,394,819	c 35	N83-32026 *	US-PATENT-4,431,306	c 35	N84-22931 *
US-PATENT-4,355,896	c 47	N83-32232 *	US-PATENT-4,395,123	c 74	N83-32577 *	US-PATENT-4,431,333	c 18	N84-22605 *
US-PATENT-4,357,402	c 25	N83-13188 *	US-PATENT-4,395,503	c 27	N83-34043 *	US-PATENT-4,431,761	c 27	N84-22747 *
US-PATENT-4,358,358	c 25	N83-13187 *	US-PATENT-4,395,511	c 27	N84-14324 *	US-PATENT-4,431,792	c 27	N84-22746 *
US-PATENT-4,358,480	c 25	N83-13172 *	US-PATENT-4,395,540	c 27	N84-22746 *	US-PATENT-4,432,853	c 52	N84-23095 *
US-PATENT-4,358,486	c 24	N83-13171 *	US-PATENT-4,395,540	c 27	N85-20123 *	US-PATENT-4,433,115	c 27	N84-22745 *
US-PATENT-4,358,732	c 33	N83-18996 *	US-PATENT-4,395,557	c 27	N83-31854 *	US-PATENT-4,433,276	c 33	N84-22885 *
US-PATENT-4,358,846	c 32	N83-13323 *	US-PATENT-4,395,557	c 27	N84-22745 *	US-PATENT-4,433,439	c 54	N84-23113 *
US-PATENT-4,360,325	c 44	N83-14693 *	US-PATENT-4,395,557	c 27	N85-21347 *	US-PATENT-4,433,544	c 44	N84-23018 *
US-PATENT-4,360,701	c 44	N83-14692 *	US-PATENT-4,395,656	c 33	N83-31952 *	US-PATENT-4,433,672	c 44	N84-28203 *
US-PATENT-4,362,361	c 74	N83-17305 *	US-PATENT-4,396,918	c 04	N84-27713 *	US-PATENT-4,434,106	c 27	N84-22744 *
US-PATENT-4,362,769	c 27	N83-34039 *	US-PATENT-4,397,716	c 44	N83-34449 *	US-PATENT-4,434,189	c 36	N84-22944 *
US-PATENT-4,363,188	c 51	N83-17045 *	US-PATENT-4,398,021	c 27	N83-34041 *	US-PATENT-4,434,490	c 36	N84-22943 *
US-PATENT-4,363,237	c 71	N83-17235 *	US-PATENT-4,398,021	c 27	N85-20124 *	US-PATENT-4,434,659	c 35	N84-22928 *
US-PATENT-4,363,242	c 33	N83-16626 *	US-PATENT-4,398,129	c 33	N83-34189 *	US-PATENT-4,435,642	c 35	N84-28016 *
US-PATENT-4,366,680	c 31	N83-31897 *	US-PATENT-4,398,412	c 35	N84-28018 *	US-PATENT-4,435,781	c 60	N84-28491 *
US-PATENT-4,370,570	c 34	N83-19015 *	US-PATENT-4,398,667	c 71	N84-14873 *	US-PATENT-4,437,069	c 33	N84-22887 *
US-PATENT-4,371,301	c 37	N83-19091 *	US-PATENT-4,398,925	c 71	N83-35781 *	US-PATENT-4,437,923	c 35	N84-22930 *
US-PATENT-4,371,596	c 44	N83-32176 *	US-PATENT-4,399,415	c 36	N83-35350 *	US-PATENT-4,437,961	c 33	N84-22884 *
US-PATENT-4,371,873	c 32	N83-19968 *	US-PATENT-4,399,515	c 35	N84-14491 *	US-PATENT-4,437,962	c 24	N84-22695 *
US-PATENT-4,371,946	c 32	N83-18975 *	US-PATENT-4,400,191	c 31	N83-35176 *	US-PATENT-4,437,962	c 24	N85-21267 *
US-PATENT-4,372,110	c 07	N83-33884 *	US-PATENT-4,400,642	c 76	N83-34796 *	US-PATENT-4,439,301	c 44	N84-23019 *
US-PATENT-4,372,158	c 44	N83-21503 *	US-PATENT-4,400,657	c 33	N83-34190 *	US-PATENT-4,439,465	c 26	N84-22734 *
US-PATENT-4,372,159	c 44	N83-21504 *	US-PATENT-4,401,505	c 76	N83-35888 *	US-PATENT-4,439,718	c 33	N84-22886 *
US-PATENT-4,372,377	c 74	N83-19596 *	US-PATENT-4,401,934	c 33	N83-35227 *	US-PATENT-4,439,766	c 32	N84-22820 *
US-PATENT-4,372,680	c 35	N83-21311 *	US-PATENT-4,401,953	c 33	N83-34191 *	US-PATENT-4,439,968	c 16	N84-22601 *
US-PATENT-4,373,003	c 27	N83-18908 *	US-PATENT-4,402,221	c 71	N83-36846 *	US-PATENT-4,442,716	c 35	N84-22934 *
US-PATENT-4,373,039	c 27	N83-19900 *	US-PATENT-4,402,358	c 34	N83-35307 *	US-PATENT-4,443,321	c 25	N84-22709 *
US-PATENT-4,373,142	c 44	N83-32175 *	US-PATENT-4,402,447	c 35	N83-35338 *	US-PATENT-4,443,701	c 74	N84-28590 *
US-PATENT-4,373,989	c 76	N83-20789 *	US-PATENT-4,402,992	c 31	N83-35177 *	US-PATENT-4,443,724	c 35	N84-28017 *
US-PATENT-4,374,183	c 26	N83-31795 *	US-PATENT-4,404,469	c 74	N84-11920 *	US-PATENT-4,444,368	c 05	N84-22551 *
US-PATENT-4,374,378	c 35	N83-34272 *	US-PATENT-4,404,793	c 07	N83-36029 *	US-PATENT-4,444,464	c 74	N84-23248 *
US-PATENT-4,375,281	c 05	N83-19737 *	US-PATENT-4,405,184	c 37	N84-12492 *	US-PATENT-4,444,972	c 27	N84-22750 *
US-PATENT-4,375,396	c 31	N83-19947 *	US-PATENT-4,405,197	c 74	N84-11921 *	US-PATENT-4,444,979	c 27	N84-22749 *
US-PATENT-4,375,536	c 27	N83-34040 *	US-PATENT-4,406,256	c 37	N83-36483 *	US-PATENT-4,445,118	c 04	N84-22546 *
US-PATENT-4,375,674	c 39	N83-20280 *	US-PATENT-4,406,797	c 25	N83-36118 *	US-PATENT-4,445,378	c 35	N84-22933 *
US-PATENT-4,376,637	c 35	N84-17555 *	US-PATENT-4,406,989	c 33	N83-36356 *	US-PATENT-4,446,199	c 26	N84-33555 *
US-PATENT-4,376,872	c 44	N83-32177 *	US-PATENT-4,407,001	c 33	N83-36355 *	US-PATENT-4,446,396	c 35	N84-22932 *
US-PATENT-4,377,089	c 35	N83-21312 *	US-PATENT-4,407,165	c 37	N83-36482 *	US-PATENT-4,446,459	c 60	N84-28492 *
US-PATENT-4,377,169	c 52	N83-21785 *	US-PATENT-4,407,468	c 01	N83-35992 *	US-PATENT-4,446,556	c 36	N84-28065 *
US-PATENT-4,377,266	c 07	N83-20944 *	US-PATENT-4,407,563	c 74	N83-36898 *	US-PATENT-4,446,577	c 37	N84-28064 *
US-PATENT-4,377,343	c 74	N83-21949 *	US-PATENT-4,407,589	c 33	N83-36357 *	US-PATENT-4,447,251	c 71	N84-28566 *

US-PATENT-4,447,943	c 52	N84-28389 *	US-PATENT-4,499,424	c 35	N85-21596 *	US-PATENT-4,547,121	c 37	N86-20789 *
US-PATENT-4,448,408	c 37	N84-28083 *	US-PATENT-4,499,470	c 43	N85-21723 *	US-PATENT-4,547,686	c 33	N86-20672 *
US-PATENT-4,449,370	c 37	N84-33808 *	US-PATENT-4,500,265	c 31	N85-21404 *	US-PATENT-4,548,083	c 39	N86-20841 *
US-PATENT-4,449,400	c 47	N84-28292 *	US-PATENT-4,500,492	c 37	N85-21652 *	US-PATENT-4,549,435	c 35	N86-20752 *
US-PATENT-4,449,514	c 44	N84-28204 *	US-PATENT-4,503,436	c 32	N85-29118 *	US-PATENT-4,550,129	c 24	N86-19380 *
US-PATENT-4,449,894	c 37	N84-28081 *	US-PATENT-4,505,998	c 33	N85-29144 *	US-PATENT-4,550,177	c 23	N86-19376 *
US-PATENT-4,450,268	c 27	N84-27884 *	US-PATENT-4,506,183	c 34	N85-29179 *	US-PATENT-4,550,177	c 23	N88-24692 *
US-PATENT-4,450,447	c 32	N84-27951 *	US-PATENT-4,507,928	c 31	N85-29082 *	US-PATENT-4,550,292	c 33	N86-20668 *
US-PATENT-4,451,017	c 18	N84-27787 *	US-PATENT-4,508,296	c 18	N85-29991 *	US-PATENT-4,550,561	c 07	N86-20389 *
US-PATENT-4,451,496	c 26	N84-27855 *	US-PATENT-4,509,048	c 32	N85-34327 *	US-PATENT-4,551,677	c 35	N86-32698 *
US-PATENT-4,452,088	c 24	N84-27829 *	US-PATENT-4,509,130	c 36	N85-29264 *	US-PATENT-4,551,687	c 33	N86-20670 *
US-PATENT-4,452,412	c 16	N84-27784 *	US-PATENT-4,509,132	c 33	N85-34333 *	US-PATENT-4,551,724	c 43	N86-19711 *
US-PATENT-4,453,163	c 06	N84-27733 *	US-PATENT-4,509,548	c 37	N85-34403 *	US-PATENT-4,552,466	c 37	N86-19606 *
US-PATENT-4,454,611	c 54	N84-28484 *	US-PATENT-4,510,277	c 27	N85-34282 *	US-PATENT-4,552,784	c 26	N86-32550 *
US-PATENT-4,454,649	c 44	N84-28205 *	US-PATENT-4,510,296	c 23	N85-28973 *	US-PATENT-4,552,931	c 27	N86-19456 *
US-PATENT-4,454,753	c 09	N84-27749 *	US-PATENT-4,510,476	c 33	N85-29146 *	US-PATENT-4,553,110	c 33	N86-19515 *
US-PATENT-4,455,418	c 27	N84-27885 *	US-PATENT-4,511,362	c 25	N85-35253 *	US-PATENT-4,553,393	c 37	N86-19604 *
US-PATENT-4,455,418	c 25	N85-28982 *	US-PATENT-4,511,838	c 76	N85-30923 *	US-PATENT-4,553,917	c 26	N86-32551 *
US-PATENT-4,455,532	c 72	N84-28575 *	US-PATENT-4,512,332	c 44	N85-30474 *	US-PATENT-4,554,905	c 18	N86-20469 *
US-PATENT-4,455,680	c 32	N84-27952 *	US-PATENT-4,512,661	c 35	N85-30282 *	US-PATENT-4,556,327	c 35	N86-19580 *
US-PATENT-4,456,208	c 27	N84-27886 *	US-PATENT-4,512,678	c 37	N85-30334 *	US-PATENT-4,556,986	c 74	N86-21348 *
US-PATENT-4,456,708	c 51	N84-28361 *	US-PATENT-4,512,699	c 37	N85-29285 *	US-PATENT-4,557,097	c 31	N86-19479 *
US-PATENT-4,458,418	c 37	N84-28085 *	US-PATENT-4,512,846	c 76	N85-29800 *	US-PATENT-4,557,149	c 35	N86-19581 *
US-PATENT-4,458,554	c 37	N84-28082 *	US-PATENT-4,513,317	c 32	N85-29117 *	US-PATENT-4,557,444	c 05	N86-19310 *
US-PATENT-4,459,083	c 02	N84-28732 *	US-PATENT-4,513,423	c 36	N85-30305 *	US-PATENT-4,558,585	c 71	N86-21276 *
US-PATENT-4,459,470	c 27	N84-33589 *	US-PATENT-4,513,750	c 52	N85-30618 *	US-PATENT-4,558,967	c 37	N86-19605 *
US-PATENT-4,459,528	c 33	N84-27975 *	US-PATENT-4,513,810	c 35	N85-29214 *	US-PATENT-4,560,577	c 27	N86-19458 *
US-PATENT-4,459,562	c 33	N84-27974 *	US-PATENT-4,514,137	c 37	N85-29282 *	US-PATENT-4,560,742	c 27	N86-19457 *
US-PATENT-4,462,871	c 76	N84-35112 *	US-PATENT-4,514,143	c 05	N85-29947 *	US-PATENT-4,561,784	c 25	N86-19413 *
US-PATENT-4,463,357	c 46	N85-21846 *	US-PATENT-4,514,178	c 35	N85-29212 *	US-PATENT-4,562,583	c 74	N86-20124 *
US-PATENT-4,463,465	c 03	N84-33394 *	US-PATENT-4,514,557	c 25	N85-28982 *	US-PATENT-4,564,787	c 33	N86-21742 *
US-PATENT-4,463,606	c 71	N85-22105 *	US-PATENT-4,515,207	c 34	N85-29180 *	US-PATENT-4,565,557	c 31	N86-21718 *
US-PATENT-4,464,710	c 33	N84-33663 *	US-PATENT-4,515,751	c 25	N85-29213 *	US-PATENT-4,565,886	c 27	N86-21675 *
US-PATENT-4,466,242	c 20	N85-21256 *	US-PATENT-4,516,071	c 33	N85-30187 *	US-PATENT-4,566,447	c 54	N86-22112 *
US-PATENT-4,466,667	c 35	N84-33768 *	US-PATENT-4,516,435	c 37	N85-29286 *	US-PATENT-4,567,301	c 23	N86-21582 *
US-PATENT-4,469,552	c 76	N84-35113 *	US-PATENT-4,517,472	c 33	N85-29147 *	US-PATENT-4,567,348	c 37	N86-21850 *
US-PATENT-4,469,942	c 35	N84-33767 *	US-PATENT-4,517,505	c 37	N85-30333 *	US-PATENT-4,568,733	c 24	N86-21590 *
US-PATENT-4,469,998	c 33	N84-33661 *	US-PATENT-4,517,530	c 33	N85-29143 *	US-PATENT-4,572,004	c 35	N86-25752 *
US-PATENT-4,470,293	c 37	N84-33807 *	US-PATENT-4,518,277	c 37	N85-30336 *	US-PATENT-4,572,699	c 37	N87-22976 *
US-PATENT-4,470,403	c 44	N84-34792 *	US-PATENT-4,518,625	c 24	N85-30027 *	US-PATENT-4,573,356	c 71	N86-24241 *
US-PATENT-4,471,357	c 32	N84-34651 *	US-PATENT-4,518,722	c 27	N85-29044 *	US-PATENT-4,576,678	c 04	N86-27270 *
US-PATENT-4,472,473	c 18	N84-33450 *	US-PATENT-4,519,545	c 37	N85-29283 *	US-PATENT-4,578,920	c 37	N86-25789 *
US-PATENT-4,472,716	c 35	N84-33769 *	US-PATENT-4,520,601	c 37	N85-30335 *	US-PATENT-4,579,782	c 24	N86-25416 *
US-PATENT-4,472,728	c 35	N84-33765 *	US-PATENT-4,520,656	c 71	N85-29693 *	US-PATENT-4,579,302	c 18	N86-24729 *
US-PATENT-4,473,259	c 37	N85-20337 *	US-PATENT-4,521,077	c 74	N85-29750 *	US-PATENT-4,579,475	c 37	N86-27630 *
US-PATENT-4,473,674	c 24	N84-34571 *	US-PATENT-4,521,659	c 31	N85-29083 *	US-PATENT-4,580,791	c 37	N86-25790 *
US-PATENT-4,473,792	c 33	N84-33660 *	US-PATENT-4,521,688	c 35	N85-30281 *	US-PATENT-4,582,277	c 16	N86-26352 *
US-PATENT-4,474,062	c 06	N84-34443 *	US-PATENT-4,521,702	c 33	N85-29145 *	US-PATENT-4,582,289	c 37	N87-21333 *
US-PATENT-4,474,180	c 52	N84-34913 *	US-PATENT-4,521,854	c 33	N85-29142 *	US-PATENT-4,582,590	c 25	N86-25428 *
US-PATENT-4,474,471	c 35	N84-34705 *	US-PATENT-4,522,469	c 76	N85-33826 *	US-PATENT-4,583,587	c 34	N86-27593 *
US-PATENT-4,474,975	c 25	N85-21280 *	US-PATENT-4,522,661	c 76	N85-30922 *	US-PATENT-4,583,860	c 74	N86-26190 *
US-PATENT-4,475,063	c 33	N85-21491 *	US-PATENT-4,522,755	c 27	N86-19455 *	US-PATENT-4,584,249	c 44	N86-25874 *
US-PATENT-4,475,385	c 09	N84-34448 *	US-PATENT-4,522,844	c 26	N85-29005 *	US-PATENT-4,584,510	c 08	N86-27288 *
US-PATENT-4,475,527	c 37	N85-21650 *	US-PATENT-4,523,008	c 27	N85-29043 *	US-PATENT-4,584,887	c 35	N86-26595 *
US-PATENT-4,475,921	c 71	N85-22104 *	US-PATENT-4,523,682	c 71	N85-30765 *	US-PATENT-4,585,191	c 20	N86-26368 *
US-PATENT-4,478,879	c 44	N85-20530 *	US-PATENT-4,523,741	c 37	N85-29284 *	US-PATENT-4,585,344	c 35	N86-25753 *
US-PATENT-4,479,053	c 74	N85-22139 *	US-PATENT-4,523,810	c 74	N85-29749 *	US-PATENT-4,586,140	c 06	N86-27280 *
US-PATENT-4,479,386	c 27	N85-20126 *	US-PATENT-4,524,237	c 44	N85-30475 *	US-PATENT-4,586,394	c 35	N87-21304 *
US-PATENT-4,479,560	c 35	N85-20294 *	US-PATENT-4,526,925	c 27	N86-20560 *	US-PATENT-4,586,487	c 44	N86-27706 *
US-PATENT-4,481,570	c 60	N85-21992 *	US-PATENT-4,526,925	c 27	N87-22845 *	US-PATENT-4,587,312	c 27	N86-27450 *
US-PATENT-4,482,778	c 44	N85-21768 *	US-PATENT-4,527,092	c 37	N85-33489 *	US-PATENT-4,587,324	c 23	N86-32525 *
US-PATENT-4,482,779	c 33	N85-21492 *	US-PATENT-4,527,910	c 37	N85-33490 *	US-PATENT-4,587,526	c 37	N86-25791 *
US-PATENT-4,483,512	c 37	N85-20338 *	US-PATENT-4,528,386	c 23	N85-33187 *	US-PATENT-4,588,778	c 27	N86-27451 *
US-PATENT-4,483,639	c 37	N85-21649 *	US-PATENT-4,528,417	c 44	N85-34441 *	US-PATENT-4,588,986	c 32	N86-27513 *
US-PATENT-4,483,817	c 25	N85-21279 *	US-PATENT-4,528,639	c 60	N85-33701 *	US-PATENT-4,591,772	c 37	N86-27629 *
US-PATENT-4,485,151	c 24	N85-21266 *	US-PATENT-4,529,358	c 34	N85-33433 *	US-PATENT-4,591,838	c 25	N86-27431 *
US-PATENT-4,485,151	c 24	N85-35233 *	US-PATENT-4,531,143	c 33	N86-19516 *	US-PATENT-4,593,415	c 54	N86-28618 *
US-PATENT-4,485,670	c 34	N85-21568 *	US-PATENT-4,532,797	c 35	N85-34373 *	US-PATENT-4,594,540	c 31	N86-29055 *
US-PATENT-4,485,671	c 35	N85-20295 *	US-PATENT-4,533,101	c 07	N85-35194 *	US-PATENT-4,594,720	c 36	N86-29204 *
US-PATENT-4,485,992	c 08	N85-19985 *	US-PATENT-4,533,242	c 74	N85-34629 *	US-PATENT-4,594,734	c 54	N86-28620 *
US-PATENT-4,488,155	c 33	N85-21493 *	US-PATENT-4,534,166	c 07	N85-35195 *	US-PATENT-4,595,399	c 35	N86-29174 *
US-PATENT-4,488,335	c 27	N85-20125 *	US-PATENT-4,535,033	c 24	N85-35233 *	US-PATENT-4,595,548	c 27	N86-29039 *
US-PATENT-4,488,663	c 35	N85-21595 *	US-PATENT-4,535,035	c 26	N85-35267 *	US-PATENT-4,596,626	c 76	N86-28760 *
US-PATENT-4,488,827	c 27	N85-20124 *	US-PATENT-4,535,636	c 35	N85-34375 *	US-PATENT-4,598,007	c 24	N86-28131 *
US-PATENT-4,489,239	c 36	N85-21631 *	US-PATENT-4,536,114	c 37	N85-34401 *	US-PATENT-4,598,427	c 54	N86-28619 *
US-PATENT-4,489,243	c 44	N85-21769 *	US-PATENT-4,536,565	c 27	N85-34280 *	US-PATENT-4,598,428	c 54	N86-29507 *
US-PATENT-4,489,264	c 33	N85-22877 *	US-PATENT-4,537,554	c 85	N85-34722 *	US-PATENT-4,598,981	c 74	N86-28732 *
US-PATENT-4,490,117	c 09	N85-19990 *	US-PATENT-4,537,834	c 27	N85-34281 *	US-PATENT-4,599,001	c 74	N86-29650 *
US-PATENT-4,490,229	c 31	N85-20153 *	US-PATENT-4,538,066	c 35	N85-34374 *	US-PATENT-4,600,299	c 74	N86-32266 *
US-PATENT-4,491,427	c 37	N85-21651 *	US-PATENT-4,538,446	c 34	N86-12547 *	US-PATENT-4,600,301	c 35	N86-32697 *
US-PATENT-4,493,021	c 32	N85-21428 *	US-PATENT-4,538,778	c 08	N85-35200 *	US-PATENT-4,600,769	c 27	N86-31726 *
US-PATENT-4,493,211	c 09	N85-21178 *	US-PATENT-4,539,293	c 23	N85-35227 *	US-PATENT-4,600,840	c 72	N86-33127 *
US-PATENT-4,493,553	c 36	N85-21639 *	US-PATENT-4,540,986	c 04	N86-19304 *	US-PATENT-4,602,081	c 27	N86-32568 *
US-PATENT-4,495,044	c 24	N85-21267 *	US-PATENT-4,542,520	c 74	N86-20126 *	US-PATENT-4,602,509	c 35	N86-32695 *
US-PATENT-4,495,339	c 25	N85-30039 *	US-PATENT-4,542,858	c 33	N86-20669 *	US-PATENT-4,603,061	c 27	N86-31727 *
US-PATENT-4,495,520	c 32	N85-21427 *	US-PATENT-4,542,963	c 74	N86-20125 *	US-PATENT-4,603,306	c 33	N86-32624 *
US-PATENT-4,496,122	c 05	N85-21147 *	US-PATENT-4,543,295	c 27	N86-20561 *	US-PATENT-4,604,038	c 37	N86-32738 *
US-PATENT-4,496,701	c 27	N85-21347 *	US-PATENT-4,543,302	c 44	N86-19721 *	US-PATENT-4,604,181	c 27	N86-32569 *
US-PATENT-4,497,540	c 74	N85-23396 *	US-PATENT-4,543,442	c 76	N86-20150 *	US-PATENT-4,604,844	c 37	N86-32737 *
US-PATENT-4,497,935	c 27	N85-21349 *	US-PATENT-4,544,025	c 35	N86-20750 *	US-PATENT-4,604,903	c 35	N86-32696 *
US-PATENT-4,497,939	c 27	N85-21351 *	US-PATENT-4,544,068	c 35	N86-20751 *	US-PATENT-4,605,155	c 37	N86-32736 *
US-PATENT-4,497,940	c 27	N85-21352 *	US-PATENT-4,545,025	c 60	N86-21154 *	US-PATENT-4,605,303	c 09	N86-32447 *
US-PATENT-4,497,948	c 27	N85-21350 *	US-PATENT-4,545,553	c 33	N86-20671 *	US-PATENT-4,605,424	c 33	N90-20200 *
US-PATENT-4,498,231	c 35	N85-21598 *	US-PATENT-4,545,586	c 37	N86-20788 *	US-PATENT-4,605,946	c 76	N87-13313 *
US-PATENT-4,498,333	c 35	N85-21597 *	US-PATENT-4,545,723	c 37	N86-19603 *	US-PATENT-4,607,193	c 31	N86-32587 *
US-PATENT-4,499,260	c 27	N85-21348 *	US-PATENT-4,546,248	c 32	N86-20647 *	US-PATENT-4,608,452	c	



US-PATENT-4,608,821	c 20	N87-16675 *	US-PATENT-4,682,006	c 74	N87-25843 *	US-PATENT-4,772,101	c 74	N89-14078 *
US-PATENT-4,610,736	c 26	N87-14482 *	US-PATENT-4,682,053	c 36	N87-25567 *	US-PATENT-4,772,175	c 18	N89-12621 *
US-PATENT-4,612,072	c 76	N87-15882 *	US-PATENT-4,682,225	c 17	N87-25348 *	US-PATENT-4,772,785	c 74	N89-14077 *
US-PATENT-4,614,428	c 74	N87-14971 *	US-PATENT-4,682,343	c 33	N87-25531 *	US-PATENT-4,772,893	c 32	N89-11961 *
US-PATENT-4,615,637	c 18	N87-14373 *	US-PATENT-4,682,494	c 09	N87-25334 *	US-PATENT-4,773,266	c 71	N89-13236 *
US-PATENT-4,616,793	c 05	N87-14314 *	US-PATENT-4,682,745	c 37	N87-25582 *	US-PATENT-4,773,620	c 05	N89-11738 *
US-PATENT-4,618,215	c 09	N87-14355 *	US-PATENT-4,683,809	c 24	N87-27742 #	US-PATENT-4,774,118	c 27	N89-12741 *
US-PATENT-4,618,380	c 35	N87-14671 *	US-PATENT-4,684,156	c 18	N87-27713 *	US-PATENT-4,774,359	c 23	N89-12667 *
US-PATENT-4,618,652	c 27	N87-15304 *	US-PATENT-4,684,258	c 36	N87-28006 *	US-PATENT-4,774,835	c 02	N89-12551 *
US-PATENT-4,619,142	c 35	N87-14670 *	US-PATENT-4,684,424	c 74	N87-28416 *	US-PATENT-4,775,740	c 27	N89-16042 *
US-PATENT-4,619,423	c 02	N87-16793 *	US-PATENT-4,685,535	c 54	N87-29118 *	US-PATENT-4,776,531	c 02	N89-14224 *
US-PATENT-4,620,898	c 31	N87-21160 *	US-PATENT-4,687,048	c 34	N87-28867 *	US-PATENT-4,776,541	c 35	N89-15379 *
US-PATENT-4,621,492	c 20	N87-14420 *	US-PATENT-4,687,444	c 82	N87-29372 *	US-PATENT-4,777,656	c 32	N89-14374 *
US-PATENT-4,622,182	c 27	N87-14515 *	US-PATENT-4,687,964	c 33	N87-28832 *	US-PATENT-4,777,823	c 35	N89-14422 *
US-PATENT-4,623,255	c 33	N87-14594 *	US-PATENT-4,688,422	c 35	N87-28884 *	US-PATENT-4,778,268	c 52	N89-16256 *
US-PATENT-4,624,142	c 32	N87-14559 *	US-PATENT-4,689,188	c 27	N87-28656 *	US-PATENT-4,779,222	c 33	N89-14384 *
US-PATENT-4,624,561	c 35	N87-14669 *	US-PATENT-4,689,421	c 23	N87-28605 *	US-PATENT-4,779,428	c 31	N89-14351 *
US-PATENT-4,624,888	c 27	N87-14516 *	US-PATENT-4,689,522	c 33	N87-28831 *	US-PATENT-4,780,276	c 26	N89-14303 *
US-PATENT-4,626,046	c 37	N87-17034 *	US-PATENT-4,690,353	c 33	N87-28833 *	US-PATENT-4,781,326	c 09	N89-25242 *
US-PATENT-4,626,593	c 27	N87-16908 *	US-PATENT-4,695,610	c 27	N87-28657 *	US-PATENT-4,781,993	c 27	N89-29538 *
US-PATENT-4,629,147	c 07	N87-16828 *	US-PATENT-4,696,808	c 76	N87-29360 *	US-PATENT-4,783,822	c 54	N89-29953 *
US-PATENT-4,631,352	c 44	N87-17399 *	US-PATENT-4,697,425	c 31	N88-14223 *	US-PATENT-4,783,994	c 35	N89-14423 *
US-PATENT-4,631,538	c 17	N87-16863 *	US-PATENT-4,697,922	c 36	N88-14350 *	US-PATENT-4,786,168	c 33	N89-14385 *
US-PATENT-4,632,548	c 36	N87-17026 *	US-PATENT-4,698,028	c 33	N88-14270 *	US-PATENT-4,788,271	c 27	N89-14337 *
US-PATENT-4,633,060	c 74	N87-17493 *	US-PATENT-4,698,484	c 37	N88-14362 *	US-PATENT-4,790,026	c 60	N89-26400 *
US-PATENT-4,633,060	c 74	N87-25843 *	US-PATENT-4,698,518	c 33	N88-24862 *	US-PATENT-4,798,433	c 74	N89-25689 *
US-PATENT-4,634,191	c 37	N87-17038 *	US-PATENT-4,698,723	c 03	N88-14083 *	US-PATENT-4,800,756	c 71	N90-12289 *
US-PATENT-4,634,759	c 27	N87-16909 *	US-PATENT-4,704,168	c 26	N88-14179 *	US-PATENT-4,805,368	c 18	N89-28554 *
US-PATENT-4,634,759	c 23	N88-24692 *	US-PATENT-4,704,197	c 25	N88-24732 *	US-PATENT-4,807,834	c 18	N89-25266 *
US-PATENT-4,635,663	c 37	N87-17035 *	US-PATENT-4,706,387	c 37	N88-14361 *	US-PATENT-4,809,003	c 32	N89-28672 *
US-PATENT-4,635,773	c 37	N87-17037 *	US-PATENT-4,706,910	c 02	N88-14071 *	US-PATENT-4,809,441	c 37	N89-28831 *
US-PATENT-4,637,181	c 31	N87-16918 *	US-PATENT-4,708,280	c 37	N88-14359 *	US-PATENT-4,809,936	c 18	N89-28553 *
US-PATENT-4,637,447	c 37	N87-17036 *	US-PATENT-4,708,305	c 08	N88-23809 *	US-PATENT-4,810,094	c 35	N89-26202 *
US-PATENT-4,638,083	c 27	N87-16907 *	US-PATENT-4,708,330	c 37	N88-14360 *	US-PATENT-4,810,438	c 27	N89-29539 *
US-PATENT-4,641,499	c 31	N87-21159 *	US-PATENT-4,709,252	c 33	N88-14271 *	US-PATENT-4,811,033	c 32	N89-25363 *
US-PATENT-4,642,523	c 33	N87-21234 *	US-PATENT-4,710,618	c 44	N88-14492 *	US-PATENT-4,815,279	c 20	N89-25279 *
US-PATENT-4,644,234	c 33	N87-21233 *	US-PATENT-4,711,697	c 76	N88-14835 *	US-PATENT-4,818,868	c 72	N89-29169 *
US-PATENT-4,644,306	c 33	N87-22895 *	US-PATENT-4,711,857	c 76	N88-14836 *	US-PATENT-4,819,064	c 32	N89-28676 *
US-PATENT-4,644,794	c 71	N87-21652 *	US-PATENT-4,711,932	c 27	N88-18725 *	US-PATENT-4,819,438	c 25	N90-11824 *
US-PATENT-4,645,358	c 32	N87-21206 *	US-PATENT-4,713,275	c 24	N88-18628 *	US-PATENT-4,820,488	c 26	N89-28621 *
US-PATENT-4,646,860	c 85	N87-21755 *	US-PATENT-4,718,281	c 35	N88-23967 *	US-PATENT-4,821,907	c 31	N89-29578 *
US-PATENT-4,647,144	c 74	N87-21679 *	US-PATENT-4,720,139	c 37	N88-23982 *	US-PATENT-4,823,074	c 33	N89-29681 *
US-PATENT-4,647,615	c 27	N87-22845 *	US-PATENT-4,723,096	c 33	N88-23942 *	US-PATENT-4,823,299	c 33	N89-28713 *
US-PATENT-4,648,133	c 32	N87-21207 *	US-PATENT-4,723,800	c 37	N88-23979 *	US-PATENT-4,831,818	c 20	N90-19298 *
US-PATENT-4,648,267	c 34	N87-21255 *	US-PATENT-4,725,106	c 54	N88-24163 *	US-PATENT-4,833,233	c 52	N90-20616 *
US-PATENT-4,648,569	c 08	N87-20999 *	US-PATENT-4,726,890	c 76	N88-24543 *	US-PATENT-4,836,035	c 35	N90-17117 *
US-PATENT-4,649,189	c 27	N87-21112 *	US-PATENT-4,727,751	c 02	N88-23759 *	US-PATENT-4,836,707	c 37	N90-17154 *
US-PATENT-4,649,273	c 72	N87-21661 *	US-PATENT-4,728,257	c 37	N88-23978 *	US-PATENT-4,837,300	c 37	N90-16920 *
US-PATENT-4,649,278	c 72	N87-21660 *	US-PATENT-4,731,211	c 27	N88-23894 *	US-PATENT-4,838,346	c 24	N90-20323 *
US-PATENT-4,649,287	c 44	N87-21410 *	US-PATENT-4,732,353	c 08	N88-23808 *	US-PATENT-4,839,046	c 51	N91-14703 *
US-PATENT-4,649,541	c 60	N87-21591 *	US-PATENT-4,735,381	c 05	N88-23765 *	US-PATENT-4,839,121	c 31	N90-19425 *
US-PATENT-4,649,750	c 71	N87-21653 *	US-PATENT-4,736,247	c 36	N88-24958 *	US-PATENT-4,839,330	c 25	N90-20154 *
US-PATENT-4,650,108	c 37	N87-21334 *	US-PATENT-4,736,490	c 18	N88-23827 *	US-PATENT-4,839,489	c 37	N90-19602 *
US-PATENT-4,650,385	c 37	N87-22976 *	US-PATENT-4,736,676	c 37	N88-23981 *	US-PATENT-4,840,394	c 37	N90-17153 *
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US-PATENT-4,654,110	c 76	N87-23286 *	US-PATENT-4,738,137	c 35	N88-23966 *	US-PATENT-4,842,224	c 18	N90-16860 *
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US-PATENT-4,661,770	c 33	N87-22894 *	US-PATENT-4,748,263	c 23	N88-24692 *	US-PATENT-4,843,554	c 09	N90-20096 *
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US-PATENT-4,668,589	c 27	N87-25469 *	US-PATENT-4,763,459	c 37	N88-29180 *	US-PATENT-4,851,544	c 23	N90-21118 *
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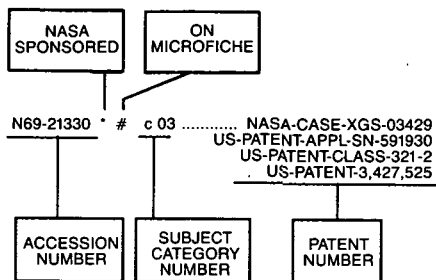
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N70-33284*	c 28	NASA-CASE-XLE-00078 US-PATENT-APPL-SN-18776 US-PATENT-CLASS-60-35.6 US-PATENT-3,049,876	N70-34135*	c 31	NASA-CASE-XLA-00686 US-PATENT-APPL-SN-195347 US-PATENT-CLASS-343-833 US-PATENT-3,202,998	N70-34646* #	c 03	NASA-CASE-NPO-11138 US-PATENT-APPL-SN-9251
N70-33285*	c 05	NASA-CASE-XLA-00118 US-PATENT-APPL-SN-840983 US-PATENT-CLASS-5-345 US-PATENT-3,038,175	N70-34156*	c 14	NASA-CASE-XLE-00266 US-PATENT-APPL-SN-202024 US-PATENT-CLASS-73-15 US-PATENT-3,204,447	N70-34661*	c 25	NASA-CASE-XLA-00147 US-PATENT-APPL-SN-178215 US-PATENT-CLASS-313-156 US-PATENT-3,201,635
N70-33286*	c 02	NASA-CASE-XLA-00142 US-PATENT-APPL-SN-26375 US-PATENT-CLASS-244-46 US-PATENT-3,028,122	N70-34157*	c 03	NASA-CASE-XMF-00326 US-PATENT-APPL-SN-216711 US-PATENT-CLASS-244-1 US-PATENT-3,204,889	N70-34664*	c 15	NASA-CASE-XMF-00515 US-PATENT-APPL-SN-278790 US-PATENT-CLASS-308-9 US-PATENT-3,199,931
N70-33287*	c 11	NASA-CASE-XLA-00112 US-PATENT-APPL-SN-843022 US-PATENT-CLASS-73-147 US-PATENT-3,005,339	N70-34158*	c 14	NASA-CASE-XGS-00359 US-PATENT-APPL-SN-94952 US-PATENT-CLASS-250-203 US-PATENT-3,205,361	N70-34667*	c 03	NASA-CASE-XLA-00326 US-PATENT-APPL-SN-318443 US-PATENT-CLASS-89-1 US-PATENT-3,200,706
N70-33288*	c 17	NASA-CASE-XLE-02428 US-PATENT-APPL-SN-339821 US-PATENT-CLASS-29-198 US-PATENT-3,170,773	N70-34159*	c 31	NASA-CASE-XMF-03856 US-PATENT-APPL-SN-418941 US-PATENT-CLASS-248-188.9 US-PATENT-3,208,707	N70-34675* #	c 08	NASA-CASE-XNP-04162-1 US-PATENT-APPL-SN-872664
N70-33305*	c 12	NASA-CASE-XLA-00229 US-PATENT-APPL-SN-18780 US-PATENT-CLASS-114-66.5 US-PATENT-3,016,863	N70-34160*	c 02	NASA-CASE-XLA-01804 US-PATENT-APPL-SN-353637 US-PATENT-CLASS-244-50 US-PATENT-3,208,694	N70-34697* #	c 14	NASA-CASE-NPO-11106 US-PATENT-APPL-SN-15020
N70-33311*	c 15	NASA-CASE-XLE-00046 US-PATENT-APPL-SN-686796 US-PATENT-CLASS-29-488 US-PATENT-3,008,229	N70-34161*	c 14	NASA-CASE-XLA-00203 US-PATENT-APPL-SN-227682 US-PATENT-CLASS-73-105 US-PATENT-3,208,272	N70-34699* #	c 15	NASA-CASE-NPO-10682 US-PATENT-APPL-SN-15023
N70-33312*	c 09	NASA-CASE-XLA-00141 US-PATENT-APPL-SN-19971 US-PATENT-CLASS-219-34 US-PATENT-3,005,081	N70-34162*	c 28	NASA-CASE-XMF-01544 US-PATENT-APPL-SN-394638 US-PATENT-CLASS-60-35.55 US-PATENT-3,208,215	N70-34705*	c 14	NASA-CASE-XMF-00458 US-PATENT-APPL-SN-298800 US-PATENT-CLASS-73-88.5 US-PATENT-3,212,325
N70-33322*	c 14	NASA-CASE-XLA-00135 US-PATENT-APPL-SN-861152 US-PATENT-CLASS-244-14 US-PATENT-3,004,735	N70-34175*	c 28	NASA-CASE-XLE-01783 US-PATENT-APPL-SN-313132 US-PATENT-CLASS-60-35.5 US-PATENT-3,210,927	N70-34743*	c 08	NASA-CASE-XGS-00174 US-PATENT-APPL-SN-120803 US-PATENT-CLASS-307-88 US-PATENT-3,198,955
N70-33323*	c 15	NASA-CASE-XMF-00341 US-PATENT-APPL-SN-77256 US-PATENT-CLASS-62-45 US-PATENT-3,012,407	N70-34176*	c 31	NASA-CASE-XMF-00389 US-PATENT-APPL-SN-151114 US-PATENT-CLASS-244-1 US-PATENT-3,202,381	N70-34778*	c 08	NASA-CASE-XLA-00471 US-PATENT-APPL-SN-197553 US-PATENT-CLASS-235-154 US-PATENT-3,194,951
N70-33329*	c 11	NASA-CASE-XLA-00119 US-PATENT-APPL-SN-842171 US-PATENT-CLASS-240-1.2 US-PATENT-2,984,735	N70-34178*	c 02	NASA-CASE-XLA-00166 US-PATENT-APPL-SN-84961 US-PATENT-CLASS-244-46 US-PATENT-3,087,692	N70-34783*	c 27	NASA-CASE-XLA-00304 US-PATENT-APPL-SN-54552 US-PATENT-CLASS-18-39 US-PATENT-3,193,883
N70-33330*	c 15	NASA-CASE-XLE-00023 US-PATENT-APPL-SN-612352 US-PATENT-CLASS-78-1 US-PATENT-2,991,671	N70-34247*	c 15	NASA-CASE-XLE-00288 US-PATENT-APPL-SN-118200 US-PATENT-CLASS-62-50 US-PATENT-3,068,658	N70-34786*	c 11	NASA-CASE-XLA-00493 US-PATENT-APPL-SN-202029 US-PATENT-CLASS-73-432 US-PATENT-3,196,690
N70-33331*	c 28	NASA-CASE-XLA-00105 US-PATENT-APPL-SN-719173 US-PATENT-CLASS-60-35.6 US-PATENT-3,001,363	N70-34249*	c 15	NASA-CASE-XMF-00375 US-PATENT-APPL-SN-166969 US-PATENT-CLASS-72-56 US-PATENT-3,188,844	N70-34787*	c 08	NASA-CASE-XGS-00689 US-PATENT-APPL-SN-250451 US-PATENT-CLASS-235-176 US-PATENT-3,196,261
N70-33332*	c 02	NASA-CASE-XLA-00087 US-PATENT-APPL-SN-811509 US-PATENT-CLASS-244-12 US-PATENT-2,991,961	N70-34294*	c 28	NASA-CASE-XLE-00208 US-PATENT-APPL-SN-106135 US-PATENT-CLASS-60-35.54 US-PATENT-3,132,476	N70-34788*	c 28	NASA-CASE-XLE-00388 US-PATENT-APPL-SN-234568 US-PATENT-CLASS-55-306 US-PATENT-3,196,598
N70-33343*	c 03	NASA-CASE-XLA-00115 US-PATENT-APPL-SN-847027 US-PATENT-CLASS-244-1 US-PATENT-3,001,739	N70-34295*	c 21	NASA-CASE-XLA-01989 US-PATENT-APPL-SN-305020 US-PATENT-CLASS-244-1 US-PATENT-3,189,299	N70-34794*	c 14	NASA-CASE-XMF-00479 US-PATENT-APPL-SN-169977 US-PATENT-CLASS-73-71.2 US-PATENT-3,194,006
N70-33344*	c 33	NASA-CASE-XMS-00486 US-PATENT-APPL-SN-300113 US-PATENT-CLASS-244-1 US-PATENT-3,130,940	N70-34296*	c 31	NASA-CASE-XLA-00678 US-PATENT-APPL-SN-197551 US-PATENT-CLASS-244-1 US-PATENT-3,169,725	N70-34799*	c 14	NASA-CASE-XLA-00492 US-PATENT-APPL-SN-284265 US-PATENT-CLASS-73-88.5 US-PATENT-3,199,340
N70-33356*	c 28	NASA-CASE-XLE-00267 US-PATENT-APPL-SN-58147 US-PATENT-CLASS-60-35.5 US-PATENT-3,016,693	N70-34297*	c 21	NASA-CASE-XGS-00466 US-PATENT-APPL-SN-123597 US-PATENT-CLASS-250-83.3 US-PATENT-3,188,472	N70-34812*	c 33	NASA-CASE-XLE-00387 US-PATENT-APPL-SN-203411 US-PATENT-CLASS-219-19 US-PATENT-3,108,171
N70-33372*	c 28	NASA-CASE-XLE-00037 US-PATENT-APPL-SN-639589 US-PATENT-CLASS-253-39.15 US-PATENT-2,974,925	N70-34298*	c 14	NASA-CASE-XMF-00462 US-PATENT-APPL-SN-148001 US-PATENT-CLASS-88-14 US-PATENT-3,185,023	N70-34813*	c 14	NASA-CASE-XAC-00042 US-PATENT-APPL-SN-734805 US-PATENT-CLASS-73-398 US-PATENT-3,022,672
N70-33374*	c 28	NASA-CASE-XLA-00154 US-PATENT-APPL-SN-31242 US-PATENT-CLASS-60-35.6 US-PATENT-3,012,400	N70-34502*	c 09	NASA-CASE-XMF-00421 US-PATENT-APPL-SN-197548 US-PATENT-CLASS-317-140 US-PATENT-3,189,794	N70-34817*	c 15	NASA-CASE-XAC-00074 US-PATENT-APPL-SN-47123 US-PATENT-CLASS-137-340 US-PATENT-3,158,172
N70-33375*	c 28	NASA-CASE-XLE-00207 US-PATENT-APPL-SN-180370 US-PATENT-CLASS-60-35.6 US-PATENT-3,173,251	N70-34539*	c 21	NASA-CASE-XMF-00185 US-PATENT-APPL-SN-97112 US-PATENT-CLASS-244-76 US-PATENT-3,070,330	N70-34818*	c 14	NASA-CASE-XLE-00503 US-PATENT-APPL-SN-261912 US-PATENT-CLASS-73-136 US-PATENT-3,196,675
N70-33376*	c 15	NASA-CASE-XLE-00101 US-PATENT-APPL-SN-551961 US-PATENT-CLASS-251-173 US-PATENT-2,945,667	N70-34540*	c 33	NASA-CASE-XLA-00330 US-PATENT-APPL-SN-264729 US-PATENT-CLASS-219-121 US-PATENT-3,201,560	N70-34819*	c 09	NASA-CASE-XGS-00381 US-PATENT-APPL-SN-104188 US-PATENT-CLASS-307-88.5 US-PATENT-3,085,165
N70-33382*	c 15	NASA-CASE-XLE-00010 US-PATENT-APPL-SN-554899 US-PATENT-CLASS-266-19 US-PATENT-2,934,331	N70-34545*	c 33	NASA-CASE-XLE-00490 US-PATENT-APPL-SN-252259 US-PATENT-CLASS-219-347 US-PATENT-3,189,726	N70-34820*	c 14	NASA-CASE-XAC-00030 US-PATENT-APPL-SN-760819



N70-37938*	c 31	US-PATENT-3,093,000 NASA-CASE-XLA-00149 US-PATENT-APPL-SN-847023 US-PATENT-CLASS-244-1 US-PATENT-3,093,346	N70-38601*	c 15	US-PATENT-3,135,090 NASA-CASE-XLA-00679 US-PATENT-APPL-SN-213836 US-PATENT-CLASS-188-1 US-PATENT-3,128,845	N70-39925*	c 28	US-PATENT-3,229,884 NASA-CASE-XLE-00660 US-PATENT-APPL-SN-231804 US-PATENT-CLASS-313-11.5 US-PATENT-3,229,139
N70-37939*	c 02	NASA-CASE-XLE-00222 US-PATENT-APPL-SN-77252 US-PATENT-CLASS-244-113 US-PATENT-3,098,630	N70-38602*	c 14	NASA-CASE-XLE-00243 US-PATENT-APPL-SN-118203 US-PATENT-CLASS-324-106 US-PATENT-3,202,915	N70-39930*	c 03	NASA-CASE-XLA-00791 US-PATENT-APPL-SN-347960 US-PATENT-CLASS-102-49 US-PATENT-3,229,636
N70-37979*	c 33	NASA-CASE-XLA-00349 US-PATENT-APPL-SN-141220 US-PATENT-CLASS-62-467 US-PATENT-3,090,212	N70-38603*	c 15	NASA-CASE-XNP-00450 US-PATENT-APPL-SN-180394 US-PATENT-CLASS-137-495 US-PATENT-3,105,515	N70-39931*	c 28	NASA-CASE-XNP-01104 US-PATENT-APPL-SN-290867 US-PATENT-CLASS-60-39.48 US-PATENT-3,229,463
N70-37980*	c 28	NASA-CASE-XLE-00342 US-PATENT-APPL-SN-60531 US-PATENT-CLASS-60-35.5 US-PATENT-3,119,232	N70-38604*	c 09	NASA-CASE-XGS-00458 US-PATENT-APPL-SN-139006 US-PATENT-CLASS-307-88 US-PATENT-3,128,389	N70-40003*	c 14	NASA-CASE-XGS-01036 US-PATENT-APPL-SN-227692 US-PATENT-CLASS-88-14 US-PATENT-3,229,568
N70-37981*	c 31	NASA-CASE-XLA-00138 US-PATENT-APPL-SN-8204 US-PATENT-CLASS-343-18 US-PATENT-3,115,630	N70-38620*	c 15	NASA-CASE-XNP-00476 US-PATENT-APPL-SN-182698 US-PATENT-CLASS-308-9 US-PATENT-3,132,903	N70-40015*	c 26	NASA-CASE-XLA-02057 US-PATENT-APPL-SN-320595 US-PATENT-CLASS-23-277 US-PATENT-3,230,053
N70-37986*	c 31	NASA-CASE-XLA-00241 US-PATENT-APPL-SN-61329 US-PATENT-CLASS-244-1 US-PATENT-3,104,799	N70-38645*	c 28	NASA-CASE-XNP-00234 US-PATENT-APPL-SN-180382 US-PATENT-CLASS-60-35.54 US-PATENT-3,139,725	N70-40016*	c 30	NASA-CASE-XGS-00619 US-PATENT-APPL-SN-264728 US-PATENT-CLASS-244-1 US-PATENT-3,229,930
N70-38009*	c 02	NASA-CASE-XLA-00195 US-PATENT-APPL-SN-60536 US-PATENT-CLASS-244-140 US-PATENT-3,079,113	N70-38675*	c 11	NASA-CASE-XNP-00459 US-PATENT-APPL-SN-180384 US-PATENT-CLASS-73-432 US-PATENT-3,187,583	N70-40062*	c 15	NASA-CASE-XMS-01624 US-PATENT-APPL-SN-422867 US-PATENT-CLASS-55-408 US-PATENT-3,224,173
N70-38010*	c 31	NASA-CASE-XLA-00805 US-PATENT-APPL-SN-181829 US-PATENT-CLASS-244-46 US-PATENT-3,120,361	N70-38676*	c 31	NASA-CASE-XLA-00258 US-PATENT-APPL-SN-101029 US-PATENT-CLASS-244-1 US-PATENT-3,144,219	N70-40063*	c 07	NASA-CASE-XMS-00893 US-PATENT-APPL-SN-251449 US-PATENT-CLASS-343-18 US-PATENT-3,224,001
N70-38011*	c 02	NASA-CASE-XLA-00350 US-PATENT-APPL-SN-153266 US-PATENT-CLASS-244-46 US-PATENT-3,104,882	N70-38710*	c 28	NASA-CASE-XMF-00148 US-PATENT-APPL-SN-118202 US-PATENT-CLASS-60-35.6 US-PATENT-3,122,885	N70-40123*	c 09	NASA-CASE-XGS-01881 US-PATENT-APPL-SN-155584 US-PATENT-CLASS-324-43 US-PATENT-3,218,547
N70-38020*	c 15	NASA-CASE-XLE-00345 US-PATENT-APPL-SN-183978 US-PATENT-CLASS-62-55 US-PATENT-3,122,000	N70-38711*	c 28	NASA-CASE-XLE-00057 US-PATENT-APPL-SN-0914 US-PATENT-CLASS-60-35.55 US-PATENT-3,080,711	N70-40124*	c 12	NASA-CASE-XLE-01512 US-PATENT-APPL-SN-315096 US-PATENT-CLASS-149-2 US-PATENT-3,215,572
N70-38181*	c 28	NASA-CASE-XNP-00217 US-PATENT-APPL-SN-180374 US-PATENT-CLASS-102-49 US-PATENT-3,122,098	N70-38712*	c 09	NASA-CASE-XMF-01129 US-PATENT-APPL-SN-273534 US-PATENT-CLASS-318-260 US-PATENT-3,147,422	N70-40125*	c 08	NASA-CASE-XAC-00404 US-PATENT-APPL-SN-209801 US-PATENT-CLASS-340-347 US-PATENT-3,216,007
N70-38182*	c 11	NASA-CASE-XNP-00612 US-PATENT-APPL-SN-228507 US-PATENT-CLASS-220-63 US-PATENT-3,123,248	N70-38713*	c 03	NASA-CASE-XGS-00473 US-PATENT-APPL-SN-139012 US-PATENT-CLASS-200-39 US-PATENT-3,141,932	N70-40156*	c 15	NASA-CASE-XLA-01019 US-PATENT-APPL-SN-282817 US-PATENT-CLASS-248-358 US-PATENT-3,223,374
N70-38196*	c 11	NASA-CASE-XMF-00424 US-PATENT-APPL-SN-159804 US-PATENT-CLASS-73-517 US-PATENT-3,141,340	N70-38995*	c 09	NASA-CASE-XGS-00131 US-PATENT-APPL-SN-14488 US-PATENT-CLASS-331-113 US-PATENT-3,150,329	N70-40157*	c 14	NASA-CASE-XLA-00487 US-PATENT-APPL-SN-236748 US-PATENT-CLASS-73-178 US-PATENT-3,221,549
N70-38197*	c 28	NASA-CASE-XLE-00455 US-PATENT-APPL-SN-203409 US-PATENT-CLASS-75-222 US-PATENT-3,141,769	N70-38996*	c 15	NASA-CASE-XNP-00676 US-PATENT-APPL-SN-290870 US-PATENT-CLASS-222-389 US-PATENT-3,170,605	N70-40180*	c 15	NASA-CASE-XAC-00472 US-PATENT-APPL-SN-236749 US-PATENT-CLASS-73-142 US-PATENT-3,224,263
N70-38198*	c 17	NASA-CASE-XLE-00231 US-PATENT-APPL-SN-64226 US-PATENT-CLASS-22-203 US-PATENT-3,138,837	N70-38997*	c 12	NASA-CASE-XMF-00658 US-PATENT-APPL-SN-216710 US-PATENT-CLASS-137-1 US-PATENT-3,110,318	N70-40201*	c 14	NASA-CASE-XLE-00720 US-PATENT-APPL-SN-302749 US-PATENT-CLASS-73-134 US-PATENT-3,221,547
N70-38199*	c 28	NASA-CASE-XLE-00111 US-PATENT-APPL-SN-835152 US-PATENT-CLASS-60-39.48 US-PATENT-3,136,123	N70-38998*	c 09	NASA-CASE-XNP-00431 US-PATENT-APPL-SN-180380 US-PATENT-CLASS-340-147 US-PATENT-3,100,294	N70-40202*	c 07	NASA-CASE-XMF-00437 US-PATENT-APPL-SN-120795 US-PATENT-CLASS-343-705 US-PATENT-3,077,599
N70-38200*	c 07	NASA-CASE-XLA-00414 US-PATENT-APPL-SN-209478 US-PATENT-CLASS-343-705 US-PATENT-3,132,342	N70-39895*	c 28	NASA-CASE-XLE-00085 US-PATENT-APPL-SN-25175 US-PATENT-CLASS-253-66 US-PATENT-3,070,349	N70-40203*	c 14	NASA-CASE-XLE-00702 US-PATENT-APPL-SN-258931 US-PATENT-CLASS-73-116 US-PATENT-3,201,980
N70-38201*	c 09	NASA-CASE-XNP-00738 US-PATENT-APPL-SN-204015 US-PATENT-CLASS-174-115 US-PATENT-3,106,603	N70-39896*	c 15	NASA-CASE-XMF-00339 US-PATENT-APPL-SN-110591 US-PATENT-CLASS-308-9 US-PATENT-3,070,407	N70-40204*	c 15	NASA-CASE-XMF-00722 US-PATENT-APPL-SN-347626 US-PATENT-CLASS-228-50 US-PATENT-3,219,250
N70-38202*	c 11	NASA-CASE-XNP-00425 US-PATENT-APPL-SN-180396 US-PATENT-CLASS-89-1.7 US-PATENT-3,112,672	N70-39897*	c 18	NASA-CASE-XLE-00353 US-PATENT-APPL-SN-65548 US-PATENT-CLASS-252-58 US-PATENT-3,072,574	N70-40233*	c 14	NASA-CASE-XMS-01546 US-PATENT-APPL-SN-386467 US-PATENT-CLASS-222-45 US-PATENT-3,228,558
N70-38225*	c 15	NASA-CASE-XNP-00840 US-PATENT-APPL-SN-269222 US-PATENT-CLASS-267-1 US-PATENT-3,127,157	N70-39898*	c 14	NASA-CASE-XMF-00480 US-PATENT-APPL-SN-144804 US-PATENT-CLASS-248-346 US-PATENT-3,069,123	N70-40234*	c 09	NASA-CASE-XLE-01716 US-PATENT-APPL-SN-349778 US-PATENT-CLASS-126-270 US-PATENT-3,229,682
N70-38249*	c 28	NASA-CASE-XNP-00249 US-PATENT-APPL-SN-180391 US-PATENT-CLASS-60-35.6 US-PATENT-3,120,738	N70-39899*	c 28	NASA-CASE-XLE-00005 US-PATENT-APPL-SN-718095 US-PATENT-CLASS-60-35.6 US-PATENT-3,067,573	N70-40238*	c 14	NASA-CASE-XMF-00908 US-PATENT-APPL-SN-241085 US-PATENT-CLASS-250-201 US-PATENT-3,229,099
N70-38490*	c 17	NASA-CASE-XLE-00228 US-PATENT-APPL-SN-64224 US-PATENT-CLASS-29-183.5 US-PATENT-3,084,421	N70-39915*	c 09	NASA-CASE-XAC-00060 US-PATENT-APPL-SN-47121 US-PATENT-CLASS-200-19 US-PATENT-3,076,065	N70-40239*	c 14	NASA-CASE-XLA-00183 US-PATENT-APPL-SN-199202 US-PATENT-CLASS-250-203 US-PATENT-3,229,102
N70-38504*	c 28	NASA-CASE-XMS-00583 US-PATENT-APPL-SN-182699 US-PATENT-CLASS-60-35.6 US-PATENT-3,135,089	N70-39922*	c 05	NASA-CASE-XMS-01115 US-PATENT-APPL-SN-277404 US-PATENT-CLASS-128-29 US-PATENT-3,229,689	N70-40240*	c 14	NASA-CASE-XHQ-04106 US-PATENT-APPL-SN-91180 US-PATENT-CLASS-250-105 US-PATENT-3,143,651
N70-38505*	c 28	NASA-CASE-XLE-00323 US-PATENT-APPL-SN-183977 US-PATENT-CLASS-60-35.6	N70-39924*	c 15	NASA-CASE-XMF-00640 US-PATENT-APPL-SN-341467 US-PATENT-CLASS-228-50	N70-40272*	c 09	NASA-CASE-XMF-00701 US-PATENT-APPL-SN-261917 US-PATENT-CLASS-307-88.5

N70-40273*	c 14	US-PATENT-3,218,479 NASA-CASE-XNP-00637 US-PATENT-APPL-SN-280776 US-PATENT-CLASS-95-58 US-PATENT-3,217,624	N70-41580*	c 03	US-PATENT-3,295,556 NASA-CASE-XLA-04622 US-PATENT-APPL-SN-277833 US-PATENT-CLASS-126-270 US-PATENT-3,295,512	N70-41811*	c 15	US-PATENT-3,287,031 NASA-CASE-XNP-01152 US-PATENT-APPL-SN-369337 US-PATENT-CLASS-137-539 US-PATENT-3,302,662
N70-40309*	c 30	NASA-CASE-XLA-00210 US-PATENT-APPL-SN-82658 US-PATENT-CLASS-343-18 US-PATENT-3,220,004	N70-41581*	c 05	NASA-CASE-XAC-01404 US-PATENT-APPL-SN-363348 US-PATENT-CLASS-74-471 US-PATENT-3,295,386	N70-41812*	c 14	NASA-CASE-XMS-03792 US-PATENT-APPL-SN-516159 US-PATENT-CLASS-200-61.45 US-PATENT-3,303,304
N70-40353*	c 30	NASA-CASE-XMF-03198 US-PATENT-APPL-SN-370134 US-PATENT-CLASS-89-1.7 US-PATENT-3,224,336	N70-41582*	c 28	NASA-CASE-XMF-01813 US-PATENT-APPL-SN-375674 US-PATENT-CLASS-181-52 US-PATENT-3,270,835	N70-41818*	c 28	NASA-CASE-XLE-00150 US-PATENT-APPL-SN-843032 US-PATENT-CLASS-29-157.3 US-PATENT-3,035,333
N70-40354*	c 15	NASA-CASE-XMF-01045 US-PATENT-APPL-SN-355130 US-PATENT-CLASS-188-1 US-PATENT-3,228,492	N70-41583*	c 18	NASA-CASE-XMF-01030 US-PATENT-APPL-SN-317389 US-PATENT-CLASS-161-115 US-PATENT-3,296,060	N70-41819*	c 05	NASA-CASE-XAC-00403 US-PATENT-APPL-SN-158916 US-PATENT-CLASS-128-1 US-PATENT-3,302,633
N70-40367*	c 28	NASA-CASE-XLE-00177 US-PATENT-APPL-SN-10812 US-PATENT-CLASS-60-35.3 US-PATENT-3,045,424	N70-41588*	c 31	NASA-CASE-XMF-01973 US-PATENT-APPL-SN-375682 US-PATENT-CLASS-244-1 US-PATENT-3,295,790	N70-41829*	c 15	NASA-CASE-XMF-01371 US-PATENT-APPL-SN-353634 US-PATENT-CLASS-287-119 US-PATENT-3,302,960
N70-40400*	c 14	NASA-CASE-XAC-00648 US-PATENT-APPL-SN-216939 US-PATENT-CLASS-73-147 US-PATENT-3,218,850	N70-41589*	c 02	NASA-CASE-XMF-01174 US-PATENT-APPL-SN-410331 US-PATENT-CLASS-244-100 US-PATENT-3,295,798	N70-41855*	c 31	NASA-CASE-XNP-02982 US-PATENT-APPL-SN-388966 US-PATENT-CLASS-244-1 US-PATENT-3,304,028
N70-41275*	c 28	NASA-CASE-XNP-01390 US-PATENT-APPL-SN-424157 US-PATENT-CLASS-60-259 US-PATENT-3,300,981	N70-41628*	c 25	NASA-CASE-XAC-00319 US-PATENT-APPL-SN-77251 US-PATENT-CLASS-315-111 US-PATENT-3,229,155	N70-41856*	c 21	NASA-CASE-XNP-01307 US-PATENT-APPL-SN-390250 US-PATENT-CLASS-244-1 US-PATENT-3,286,953
N70-41297*	c 05	NASA-CASE-XMS-01492 US-PATENT-APPL-SN-398131 US-PATENT-CLASS-55-35 US-PATENT-3,300,949	N70-41629*	c 15	NASA-CASE-XGS-02441 US-PATENT-APPL-SN-411944 US-PATENT-CLASS-285-331 US-PATENT-3,301,578	N70-41863*	c 02	NASA-CASE-XLA-01220 US-PATENT-APPL-SN-379417 US-PATENT-CLASS-244-16 US-PATENT-3,286,957
N70-41310*	c 15	NASA-CASE-XNP-01567 US-PATENT-APPL-SN-448898 US-PATENT-CLASS-248-138 US-PATENT-3,295,808	N70-41630*	c 02	NASA-CASE-XMS-00907 US-PATENT-APPL-SN-428890 US-PATENT-CLASS-244-138 US-PATENT-3,301,511	N70-41864*	c 03	NASA-CASE-XGS-01419 US-PATENT-APPL-SN-323182 US-PATENT-CLASS-136-179 US-PATENT-3,287,174
N70-41311*	c 28	NASA-CASE-XNP-00876 US-PATENT-APPL-SN-377784 US-PATENT-CLASS-60-251 US-PATENT-3,298,182	N70-41631*	c 31	NASA-CASE-XMS-04142 US-PATENT-APPL-SN-422865 US-PATENT-CLASS-244-1 US-PATENT-3,301,507	N70-41871*	c 31	NASA-CASE-XMS-04390 US-PATENT-APPL-SN-502729 US-PATENT-CLASS-62-45 US-PATENT-3,304,729
N70-41329*	c 05	NASA-CASE-XMS-01615 US-PATENT-APPL-SN-329595 US-PATENT-CLASS-128-2.05 US-PATENT-3,298,362	N70-41646*	c 14	NASA-CASE-XLE-01449 US-PATENT-APPL-SN-330209 US-PATENT-CLASS-137-197 US-PATENT-3,295,545	N70-41897*	c 27	NASA-CASE-XNP-01749 US-PATENT-APPL-SN-440033 US-PATENT-CLASS-149-109 US-PATENT-3,305,415
N70-41330*	c 14	NASA-CASE-XLE-00688 US-PATENT-APPL-SN-334672 US-PATENT-CLASS-73-32 US-PATENT-3,298,221	N70-41647*	c 14	NASA-CASE-XGS-00769 US-PATENT-APPL-SN-319893 US-PATENT-CLASS-242-55.19 US-PATENT-3,295,782	N70-41922*	c 28	NASA-CASE-XNP-02839 US-PATENT-APPL-SN-477333 US-PATENT-CLASS-60-202 US-PATENT-3,304,718
N70-41331*	c 07	NASA-CASE-XLA-01400 US-PATENT-APPL-SN-363653 US-PATENT-CLASS-325-65 US-PATENT-3,296,531	N70-41655*	c 09	NASA-CASE-XMF-00906 US-PATENT-APPL-SN-264731 US-PATENT-CLASS-324-113 US-PATENT-3,287,640	N70-41929*	c 09	NASA-CASE-XNP-01951 US-PATENT-APPL-SN-413662 US-PATENT-CLASS-335-300 US-PATENT-3,305,810
N70-41332*	c 14	NASA-CASE-XLA-00495 US-PATENT-APPL-SN-269215 US-PATENT-CLASS-324-70 US-PATENT-3,296,526	N70-41675*	c 09	NASA-CASE-XMS-01315 US-PATENT-APPL-SN-347101 US-PATENT-CLASS-307-88.5 US-PATENT-3,302,040	N70-41930*	c 21	NASA-CASE-XNP-01501 US-PATENT-APPL-SN-432027 US-PATENT-CLASS-343-12 US-PATENT-3,305,861
N70-41366*	c 14	NASA-CASE-XLA-01353 US-PATENT-APPL-SN-403960 US-PATENT-CLASS-73-147 US-PATENT-3,301,046	N70-41676*	c 14	NASA-CASE-XGS-01231 US-PATENT-APPL-SN-346356 US-PATENT-CLASS-250-71 US-PATENT-3,302,023	N70-41946*	c 14	NASA-CASE-XLE-00011 US-PATENT-APPL-SN-735911 US-PATENT-CLASS-88-14 US-PATENT-2,960,002
N70-41367*	c 32	NASA-CASE-XGS-00938 US-PATENT-APPL-SN-392970 US-PATENT-CLASS-214-1 US-PATENT-3,295,699	N70-41677*	c 11	NASA-CASE-XMF-01772 US-PATENT-APPL-SN-370135 US-PATENT-CLASS-73-116 US-PATENT-3,295,366	N70-41948*	c 31	NASA-CASE-XMF-01899 US-PATENT-APPL-SN-428882 US-PATENT-CLASS-60-257 US-PATENT-3,304,724
N70-41370*	c 32	NASA-CASE-XNP-01962 US-PATENT-APPL-SN-369640 US-PATENT-CLASS-92-94 US-PATENT-3,298,285	N70-41678*	c 07	NASA-CASE-XGS-02608 US-PATENT-APPL-SN-456578 US-PATENT-CLASS-343-18 US-PATENT-3,289,205	N70-41954*	c 03	NASA-CASE-XAC-03392 US-PATENT-APPL-SN-430776 US-PATENT-CLASS-74-519 US-PATENT-3,304,799
N70-41371*	c 15	NASA-CASE-XMF-01452 US-PATENT-APPL-SN-356692 US-PATENT-CLASS-29-271 US-PATENT-3,300,847	N70-41679*	c 15	NASA-CASE-XLA-01441 US-PATENT-APPL-SN-516151 US-PATENT-CLASS-102-49 US-PATENT-3,302,569	N70-41955*	c 14	NASA-CASE-XNP-02029 US-PATENT-APPL-SN-221276 US-PATENT-CLASS-88-14 US-PATENT-3,323,408
N70-41372*	c 07	NASA-CASE-XLA-01127 US-PATENT-APPL-SN-363654 US-PATENT-CLASS-325-65 US-PATENT-3,300,731	N70-41680*	c 07	NASA-CASE-XNP-02723 US-PATENT-APPL-SN-371857 US-PATENT-CLASS-343-14 US-PATENT-3,287,725	N70-41957*	c 14	NASA-CASE-XAC-01101 US-PATENT-APPL-SN-355129 US-PATENT-CLASS-73-141 US-PATENT-3,304,773
N70-41373*	c 31	NASA-CASE-XMS-01906 US-PATENT-APPL-SN-339040 US-PATENT-CLASS-244-1 US-PATENT-3,300,162	N70-41681*	c 14	NASA-CASE-XAC-02877 US-PATENT-APPL-SN-449902 US-PATENT-CLASS-73-30 US-PATENT-3,295,360	N70-41960*	c 15	NASA-CASE-XNP-05082 US-PATENT-APPL-SN-521753 US-PATENT-CLASS-174-68.5 US-PATENT-3,321,570
N70-41447*	c 28	NASA-CASE-XNP-00732 US-PATENT-APPL-SN-261918 US-PATENT-CLASS-210-314 US-PATENT-3,295,684	N70-41682*	c 14	NASA-CASE-XMS-05936 US-PATENT-APPL-SN-557868 US-PATENT-CLASS-73-517 US-PATENT-3,295,377	N70-41961*	c 08	NASA-CASE-XNP-00911 US-PATENT-APPL-SN-280777 US-PATENT-CLASS-178-67 US-PATENT-3,305,636
N70-41576*	c 28	NASA-CASE-XLE-00519 US-PATENT-APPL-SN-249542 US-PATENT-CLASS-313-63 US-PATENT-3,287,582	N70-41717*	c 09	NASA-CASE-XMS-02087 US-PATENT-APPL-SN-439489 US-PATENT-CLASS-165-1 US-PATENT-3,301,315	N70-41964*	c 10	NASA-CASE-XGS-01983 US-PATENT-APPL-SN-388023 US-PATENT-CLASS-333-79 US-PATENT-3,305,801
N70-41578*	c 16	NASA-CASE-XGS-01504 US-PATENT-APPL-SN-340113 US-PATENT-CLASS-331-94 US-PATENT-3,287,660	N70-41807*	c 14	NASA-CASE-XNP-01472 US-PATENT-APPL-SN-321656 US-PATENT-CLASS-178-7.2 US-PATENT-3,287,496	N70-41967*	c 28	NASA-CASE-XLA-02651 US-PATENT-APPL-SN-449901 US-PATENT-CLASS-102-49 US-PATENT-3,304,865
N70-41579*	c 32	NASA-CASE-XLE-00620 US-PATENT-APPL-SN-304698 US-PATENT-CLASS-138-119	N70-41808*	c 15	NASA-CASE-XMS-02532 US-PATENT-APPL-SN-398132 US-PATENT-CLASS-285-27	N70-41991*	c 10	NASA-CASE-XNP-03128 US-PATENT-APPL-SN-397665 US-PATENT-CLASS-250-83.6



N70-41992*	c 28	US-PATENT-3,321,628 NASA-CASE-XLE-00685 US-PATENT-APPL-SN-407595 US-PATENT-CLASS-60-260	N71-10616*	c 14	US-PATENT-3,311,315 NASA-CASE-XMF-02433 US-PATENT-APPL-SN-405630 US-PATENT-CLASS-73-70.2	N71-10781*	c 14	US-PATENT-3,316,716 NASA-CASE-XLE-01481 US-PATENT-APPL-SN-319905 US-PATENT-CLASS-73-99
N70-41993*	c 15	US-PATENT-3,321,922 NASA-CASE-XLE-01300 US-PATENT-APPL-SN-380960 US-PATENT-CLASS-73-100	N71-10617*	c 15	US-PATENT-3,310,978 NASA-CASE-XMF-01887 US-PATENT-APPL-SN-422868 US-PATENT-CLASS-308-5	N71-10782*	c 15	US-PATENT-3,282,091 NASA-CASE-XKS-01985 US-PATENT-APPL-SN-357337 US-PATENT-CLASS-285-24
N70-41994*	c 14	US-PATENT-3,323,356 NASA-CASE-XMF-02822 US-PATENT-APPL-SN-403959 US-PATENT-CLASS-73-194	N71-10618*	c 09	US-PATENT-3,325,229 NASA-CASE-XNP-03332 US-PATENT-APPL-SN-368123 US-PATENT-CLASS-313-63	N71-10797*	c 14	US-PATENT-3,319,979 NASA-CASE-XLE-01246 US-PATENT-APPL-SN-249537 US-PATENT-CLASS-324-61
N70-42000*	c 05	US-PATENT-3,323,362 NASA-CASE-XMS-03371 US-PATENT-APPL-SN-418931 US-PATENT-CLASS-73-432	N71-10658*	c 15	US-PATENT-3,311,772 NASA-CASE-XMS-03252 US-PATENT-APPL-SN-425362 US-PATENT-CLASS-60-54.5	N71-10798*	c 09	US-PATENT-3,319,175 NASA-CASE-XMS-00945 US-PATENT-APPL-SN-385530 US-PATENT-CLASS-330-22
N70-42003*	c 32	US-PATENT-3,323,370 NASA-CASE-XLA-02131 US-PATENT-APPL-SN-377777 US-PATENT-CLASS-73-90	N71-10659*	c 09	US-PATENT-3,318,093 NASA-CASE-XNP-01383 US-PATENT-APPL-SN-369336 US-PATENT-CLASS-324-77	N71-10799*	c 15	US-PATENT-3,318,622 NASA-CASE-XLA-01807 US-PATENT-APPL-SN-442558 US-PATENT-CLASS-287-189.36
N70-42015*	c 31	US-PATENT-3,304,768 NASA-CASE-XLA-01967 US-PATENT-APPL-SN-457875 US-PATENT-CLASS-244-135	N71-10672*	c 15	US-PATENT-3,317,641 NASA-CASE-XLA-01091 US-PATENT-APPL-SN-351259 US-PATENT-CLASS-264-102	N71-10809*	c 15	US-PATENT-3,318,243 NASA-CASE-XMF-02107 US-PATENT-APPL-SN-384811 US-PATENT-CLASS-140-124
N70-42016*	c 02	US-PATENT-3,321,159 NASA-CASE-XLA-01290 US-PATENT-APPL-SN-393451 US-PATENT-CLASS-244-42	N71-10673*	c 09	US-PATENT-3,317,751 NASA-CASE-XGS-01473 US-PATENT-APPL-SN-364867 US-PATENT-CLASS-307-88.5	N71-11037*	c 02	US-PATENT-3,318,343 NASA-CASE-XLA-06824-2 US-PATENT-APPL-SN-775966 US-PATENT-CLASS-244-31
N70-42017*	c 15	US-PATENT-3,321,157 NASA-CASE-XMS-04072 US-PATENT-APPL-SN-485960 US-PATENT-CLASS-30-228	N71-10676*	c 07	US-PATENT-3,317,751 NASA-CASE-XNP-03134 US-PATENT-APPL-SN-422095 US-PATENT-CLASS-333-21	N71-11038*	c 02	US-PATENT-3,310,261 NASA-CASE-XLA-06958 US-PATENT-APPL-SN-551815 US-PATENT-CLASS-244-44
N70-42032*	c 10	US-PATENT-3,320,669 NASA-CASE-XNP-02654 US-PATENT-APPL-SN-435387 US-PATENT-CLASS-307-88.5	N71-10677*	c 09	US-PATENT-3,324,423 NASA-CASE-XGS-01451 US-PATENT-APPL-SN-405629 US-PATENT-CLASS-318-138	N71-11039*	c 02	US-PATENT-3,310,261 NASA-CASE-MSC-12111-1 US-PATENT-APPL-SN-775877 US-PATENT-CLASS-244-23
N70-42033*	c 15	US-PATENT-3,321,645 NASA-CASE-XNP-02092 US-PATENT-APPL-SN-371856 US-PATENT-CLASS-156-345	N71-10678*	c 21	US-PATENT-3,311,748 NASA-CASE-XGS-01159 US-PATENT-APPL-SN-332313 US-PATENT-CLASS-250-203	N71-11041* #	c 02	US-PATENT-3,270,989 NASA-CASE-XLA-03659 US-PATENT-APPL-SN-444087 US-PATENT-CLASS-244-46
N70-42034*	c 15	US-PATENT-3,323,967 NASA-CASE-XNP-01412 US-PATENT-APPL-SN-426702 US-PATENT-CLASS-175-310	N71-10728*	c 03	US-PATENT-3,317,352 NASA-CASE-XNP-01464 US-PATENT-APPL-SN-430778 US-PATENT-CLASS-136-182	N71-11043*	c 02	US-PATENT-3,493,197 NASA-CASE-XLA-08801-1 US-PATENT-APPL-SN-170533 US-PATENT-CLASS-244-43
N70-42073*	c 03	US-PATENT-3,321,034 NASA-CASE-XFR-04104 US-PATENT-APPL-SN-476759 US-PATENT-CLASS-74-471	N71-10746*	c 11	US-PATENT-3,317,352 NASA-CASE-XMS-02977 US-PATENT-APPL-SN-416938 US-PATENT-CLASS-35-12	N71-11049*	c 03	US-PATENT-3,532,551 NASA-CASE-NPO-10109 US-PATENT-APPL-SN-701654 US-PATENT-CLASS-136-89
N70-42074*	c 14	US-PATENT-3,323,386 NASA-CASE-XLE-02998 US-PATENT-APPL-SN-516794 US-PATENT-CLASS-116-117	N71-10747*	c 31	US-PATENT-3,281,963 NASA-CASE-XMF-00442 US-PATENT-APPL-SN-202030 US-PATENT-CLASS-343-705	N71-11050*	c 03	US-PATENT-3,446,676 NASA-CASE-XNP-06506 US-PATENT-APPL-SN-577778 US-PATENT-CLASS-136-89
N70-42075*	c 31	US-PATENT-3,323,484 NASA-CASE-XMS-02677 US-PATENT-APPL-SN-472066 US-PATENT-CLASS-244-1	N71-10748*	c 11	US-PATENT-3,277,486 NASA-CASE-XFR-04147 US-PATENT-APPL-SN-476761 US-PATENT-CLASS-35-12	N71-11051*	c 03	US-PATENT-3,282,740 NASA-CASE-XNP-03378 US-PATENT-APPL-SN-360878 US-PATENT-CLASS-136-170
N71-10500*	c 14	US-PATENT-3,321,154 NASA-CASE-XLE-01609 US-PATENT-APPL-SN-438797 US-PATENT-CLASS-73-290	N71-10771*	c 21	US-PATENT-3,281,965 NASA-CASE-XNP-03914 US-PATENT-APPL-SN-468647 US-PATENT-CLASS-250-203	N71-11052*	c 03	US-PATENT-3,507,704 NASA-CASE-XLE-04526 US-PATENT-APPL-SN-640457 US-PATENT-CLASS-136-86
N71-10560*	c 24	US-PATENT-3,326,043 NASA-CASE-XLE-00808 US-PATENT-APPL-SN-307269 US-PATENT-CLASS-148-188	N71-10772*	c 18	US-PATENT-3,317,731 NASA-CASE-XLE-01765 US-PATENT-APPL-SN-316477 US-PATENT-CLASS-117-65.2	N71-11053*	c 03	US-PATENT-3,282,739 NASA-CASE-XGS-00886 US-PATENT-APPL-SN-319894 US-PATENT-CLASS-136-132
N71-10574*	c 28	US-PATENT-3,310,443 NASA-CASE-XLE-01902 US-PATENT-APPL-SN-485656 US-PATENT-CLASS-60-202	N71-10773*	c 14	US-PATENT-3,317,341 NASA-CASE-XLA-02605 US-PATENT-APPL-SN-459138 US-PATENT-CLASS-177-210	N71-11055*	c 03	US-PATENT-3,509,386 NASA-CASE-XMF-05843 US-PATENT-APPL-SN-666553 US-PATENT-CLASS-310-4
N71-10577*	c 15	US-PATENT-3,324,659 NASA-CASE-XLE-04677 US-PATENT-APPL-SN-447928 US-PATENT-CLASS-220-67	N71-10774*	c 14	US-PATENT-3,316,991 NASA-CASE-XLA-01131 US-PATENT-APPL-SN-322545 US-PATENT-CLASS-73-23	N71-11056*	c 03	US-PATENT-3,493,437 NASA-CASE-XNP-05821 US-PATENT-APPL-SN-545223 US-PATENT-CLASS-136-89
N71-10578*	c 10	US-PATENT-3,326,407 NASA-CASE-XMS-01554 US-PATENT-APPL-SN-414482 US-PATENT-CLASS-323-8	N71-10775*	c 07	US-PATENT-3,312,101 NASA-CASE-XLA-00901 US-PATENT-APPL-SN-269212 US-PATENT-CLASS-325-305	N71-11057*	c 03	US-PATENT-3,508,070 NASA-CASE-MSC-13112 US-PATENT-APPL-SN-765738 US-PATENT-CLASS-290-40
N71-10582*	c 31	US-PATENT-3,325,723 NASA-CASE-XLA-02132 US-PATENT-APPL-SN-453227 US-PATENT-CLASS-102-49	N71-10776*	c 11	US-PATENT-3,311,832 NASA-CASE-XLA-03127 US-PATENT-APPL-SN-447927 US-PATENT-CLASS-35-12	N71-11058*	c 03	US-PATENT-3,459,391 NASA-CASE-XGS-01475 US-PATENT-APPL-SN-344793 US-PATENT-CLASS-244-1
N71-10604*	c 11	US-PATENT-3,286,630 NASA-CASE-XMF-03248 US-PATENT-APPL-SN-377780 US-PATENT-CLASS-73-116	N71-10777*	c 11	US-PATENT-3,281,964 NASA-CASE-XLE-01533 US-PATENT-APPL-SN-334678 US-PATENT-CLASS-55-400	N71-11189*	c 05	US-PATENT-3,534,727 NASA-CASE-XFR-10856 US-PATENT-APPL-SN-626376 US-PATENT-CLASS-310-4
N71-10607*	c 26	US-PATENT-3,310,980 NASA-CASE-XLE-02792 US-PATENT-APPL-SN-352400 US-PATENT-CLASS-148-1.5	N71-10778*	c 15	US-PATENT-3,282,035 NASA-CASE-XNP-00710 US-PATENT-APPL-SN-271821 US-PATENT-CLASS-251-61	N71-11190*	c 05	US-PATENT-3,504,074 NASA-CASE-XMS-04935 US-PATENT-APPL-SN-518487 US-PATENT-CLASS-128-142.5
N71-10608*	c 03	US-PATENT-3,311,510 NASA-CASE-XGS-03505 US-PATENT-APPL-SN-498167 US-PATENT-CLASS-136-28	N71-10779*	c 14	US-PATENT-3,317,180 NASA-CASE-XLA-01125 US-PATENT-APPL-SN-422869 US-PATENT-CLASS-73-40.5	N71-11193*	c 05	US-PATENT-3,508,541 NASA-CASE-ARC-10043-1 US-PATENT-APPL-SN-676012 US-PATENT-CLASS-128-2.1
N71-10609*	c 07	US-PATENT-3,311,502 NASA-CASE-XGS-01223 US-PATENT-APPL-SN-319892 US-PATENT-CLASS-242-55.19	N71-10780*	c 28	US-PATENT-3,316,752 NASA-CASE-XLA-01043 US-PATENT-APPL-SN-379768 US-PATENT-CLASS-60-225	N71-11194*	c 05	US-PATENT-3,534,407 NASA-CASE-XLA-05332 US-PATENT-APPL-SN-757861 US-PATENT-CLASS-2-2.1

N71-11195*	c 05	NASA-CASE-LAR-10007-1 US-PATENT-APPL-SN-770203 US-PATENT-CLASS-2-2.1 US-PATENT-3,534,406	N71-12258*	c 03	NASA-CASE-XLA-00711 US-PATENT-APPL-SN-357334 US-PATENT-CLASS-89-1.7 US-PATENT-3,249,012	N71-12506*	c 08	NASA-CASE-XNP-08832 US-PATENT-APPL-SN-681692 US-PATENT-CLASS-340-172.5 US-PATENT-3,535,696
N71-11199*	c 05	NASA-CASE-XKS-02342 US-PATENT-APPL-SN-407603 US-PATENT-CLASS-182-191 US-PATENT-3,262,518	N71-12259*	c 03	NASA-CASE-XLA-01396 US-PATENT-APPL-SN-357336 US-PATENT-CLASS-89-1.7 US-PATENT-3,249,013	N71-12507*	c 08	NASA-CASE-XLA-01952 US-PATENT-APPL-SN-676386 US-PATENT-CLASS-340-324 US-PATENT-3,537,096
N71-11202*	c 05	NASA-CASE-XFR-08403 US-PATENT-APPL-SN-704420 US-PATENT-CLASS-73-23 US-PATENT-3,507,146	N71-12260*	c 03	NASA-CASE-XNP-01020 US-PATENT-APPL-SN-430780 US-PATENT-CLASS-60-97 US-PATENT-3,238,730	N71-12513*	c 09	NASA-CASE-XGS-07801 US-PATENT-APPL-SN-640452 US-PATENT-CLASS-148-188 US-PATENT-3,490,965
N71-11203*	c 05	NASA-CASE-XMS-09632-1 US-PATENT-APPL-SN-791693 US-PATENT-CLASS-128-142.5 US-PATENT-3,500,827	N71-12335*	c 05	NASA-CASE-XMS-00784 US-PATENT-APPL-SN-358127 US-PATENT-CLASS-2-2.1 US-PATENT-3,286,274	N71-12514*	c 09	NASA-CASE-XLA-07497 US-PATENT-APPL-SN-631848 US-PATENT-CLASS-307-252 US-PATENT-3,491,255
N71-11207*	c 05	NASA-CASE-XLA-03213 US-PATENT-APPL-SN-621715 US-PATENT-CLASS-202-182 US-PATENT-3,444,051	N71-12336*	c 05	NASA-CASE-XMS-05304 US-PATENT-APPL-SN-511567 US-PATENT-CLASS-244-4 US-PATENT-3,270,986	N71-12515*	c 09	NASA-CASE-XNP-08836 US-PATENT-APPL-SN-668968 US-PATENT-CLASS-340-174 US-PATENT-3,535,702
N71-11235*	c 06	NASA-CASE-XLA-03104 US-PATENT-APPL-SN-510155 US-PATENT-CLASS-260-78 US-PATENT-3,518,232	N71-12341*	c 05	NASA-CASE-MFS-14671 US-PATENT-APPL-SN-723476 US-PATENT-CLASS-297-385 US-PATENT-3,516,711	N71-12516*	c 09	NASA-CASE-XNP-09768 US-PATENT-APPL-SN-698629 US-PATENT-CLASS-307-243 US-PATENT-3,535,554
N71-11236*	c 06	NASA-CASE-XMF-08651 US-PATENT-APPL-SN-593594 US-PATENT-CLASS-260-72.5 US-PATENT-3,526,611	N71-12342*	c 05	NASA-CASE-XAC-05706 US-PATENT-APPL-SN-592694 US-PATENT-CLASS-325-143 US-PATENT-3,453,546	N71-12517*	c 09	NASA-CASE-XAC-10608-1 US-PATENT-APPL-SN-710561 US-PATENT-CLASS-333-80 US-PATENT-3,493,801
N71-11237*	c 06	NASA-CASE-XMF-10753 US-PATENT-APPL-SN-668751 US-PATENT-CLASS-260-46.5 US-PATENT-3,444,127	N71-12343*	c 05	NASA-CASE-MSC-11253 US-PATENT-APPL-SN-695973 US-PATENT-CLASS-297-68 US-PATENT-3,466,085	N71-12518*	c 09	NASA-CASE-XNP-09808 US-PATENT-APPL-SN-692471 US-PATENT-CLASS-200-61.42 US-PATENT-3,488,461
N71-11238*	c 06	NASA-CASE-XLA-08802 US-PATENT-APPL-SN-640454 US-PATENT-CLASS-260-78 US-PATENT-3,532,673	N71-12344**	c 05	NASA-CASE-XMS-09636 US-PATENT-APPL-SN-586330 US-PATENT-CLASS-2-2.1 US-PATENT-3,492,672	N71-12519*	c 09	NASA-CASE-XMF-06519 US-PATENT-APPL-SN-656952 US-PATENT-CLASS-328-110 US-PATENT-3,535,644
N71-11239*	c 06	NASA-CASE-XMF-08655 US-PATENT-APPL-SN-593593 US-PATENT-CLASS-260-72.5 US-PATENT-3,516,970	N71-12345*	c 05	NASA-CASE-MSC-12086-1 US-PATENT-APPL-SN-812999 US-PATENT-CLASS-29-400 US-PATENT-3,490,130	N71-12520*	c 09	NASA-CASE-NPO-10230 US-PATENT-APPL-SN-691735 US-PATENT-CLASS-307-229 US-PATENT-3,535,547
N71-11240*	c 06	NASA-CASE-MFS-13994-1 US-PATENT-APPL-SN-715975 US-PATENT-CLASS-260-46.5 US-PATENT-3,516,964	N71-12346*	c 05	NASA-CASE-XMS-04212-1 US-PATENT-APPL-SN-607461 US-PATENT-CLASS-128-2.1 US-PATENT-3,490,440	N71-12521*	c 09	NASA-CASE-ARC-10030 US-PATENT-APPL-SN-6798861 US-PATENT-CLASS-313-110 US-PATENT-3,493,805
N71-11242*	c 06	NASA-CASE-XMF-08656 US-PATENT-APPL-SN-593605 US-PATENT-CLASS-260-2.5 US-PATENT-3,493,524	N71-12351*	c 05	NASA-CASE-LAR-10056 US-PATENT-APPL-SN-674357 US-PATENT-CLASS-224-25 US-PATENT-3,493,153	N71-12526*	c 09	NASA-CASE-MSC-12135-1 US-PATENT-APPL-SN-761404 US-PATENT-CLASS-317-31 US-PATENT-3,448,341
N71-11243*	c 06	NASA-CASE-XMF-08652 US-PATENT-APPL-SN-593606 US-PATENT-CLASS-260-2 US-PATENT-3,493,522	N71-12389*	c 07	NASA-CASE-XLA-01090 US-PATENT-APPL-SN-741824 US-PATENT-CLASS-250-199 US-PATENT-RE-26,548	N71-12539*	c 09	NASA-CASE-ERC-10552 US-PATENT-APPL-SN-720125 US-PATENT-CLASS-178-7.7 US-PATENT-3,535,446
N71-11266*	c 07	NASA-CASE-XLA-03076 US-PATENT-APPL-SN-591004 US-PATENT-CLASS-325-42 US-PATENT-3,508,152	N71-12390*	c 07	NASA-CASE-XER-09213 US-PATENT-APPL-SN-668302 US-PATENT-CLASS-332-9 US-PATENT-3,535,657	N71-12540*	c 09	NASA-CASE-XNP-01058 US-PATENT-APPL-SN-313136 US-PATENT-CLASS-315-160 US-PATENT-3,271,620
N71-11267*	c 07	NASA-CASE-XNP-10843 US-PATENT-APPL-SN-649358 US-PATENT-CLASS-325-363 US-PATENT-3,508,156	N71-12391*	c 07	NASA-CASE-XMS-05454-1 US-PATENT-APPL-SN-771803 US-PATENT-CLASS-343-17.7 US-PATENT-3,471,858	N71-12554*	c 10	NASA-CASE-NPO-10348 US-PATENT-APPL-SN-704668 US-PATENT-CLASS-324-95 US-PATENT-3,532,979
N71-11281*	c 07	NASA-CASE-XNP-10830 US-PATENT-APPL-SN-692332 US-PATENT-CLASS-178-69.5 US-PATENT-3,535,451	N71-12392*	c 07	NASA-CASE-XGS-01590 US-PATENT-APPL-SN-584067 US-PATENT-CLASS-178-88 US-PATENT-3,491,202	N71-13410*	c 01	NASA-CASE-XLA-00755 US-PATENT-APPL-SN-247423 US-PATENT-CLASS-244-35 US-PATENT-3,270,988
N71-11282*	c 07	NASA-CASE-XGS-02889 US-PATENT-APPL-SN-685748 US-PATENT-CLASS-329-104 US-PATENT-3,501,704	N71-12396*	c 07	NASA-CASE-GSC-10452 US-PATENT-APPL-SN-797794 US-PATENT-CLASS-343-776 US-PATENT-3,495,262	N71-13411*	c 01	NASA-CASE-XLA-05828 US-PATENT-APPL-SN-509460 US-PATENT-CLASS-235-61.6 US-PATENT-3,500,020
N71-11284*	c 07	NASA-CASE-XLA-01552 US-PATENT-APPL-SN-332339 US-PATENT-CLASS-325-65 US-PATENT-3,277,375	N71-12494*	c 08	NASA-CASE-XGS-04767 US-PATENT-APPL-SN-645584 US-PATENT-CLASS-307-296 US-PATENT-3,535,560	N71-13421*	c 02	NASA-CASE-XFR-00756 US-PATENT-APPL-SN-212173 US-PATENT-CLASS-235-150.22 US-PATENT-3,258,582
N71-11285*	c 07	NASA-CASE-NPO-10539 US-PATENT-APPL-SN-743429 US-PATENT-CLASS-343-779 US-PATENT-3,534,375	N71-12500*	c 08	NASA-CASE-XNP-07040 US-PATENT-APPL-SN-649357 US-PATENT-CLASS-332-31 US-PATENT-3,535,658	N71-13422*	c 02	NASA-CASE-XLA-06339 US-PATENT-APPL-SN-801336 US-PATENT-CLASS-244-76 US-PATENT-3,534,930
N71-11298*	c 07	NASA-CASE-XMF-01160 US-PATENT-APPL-SN-310507 US-PATENT-CLASS-340-198 US-PATENT-3,243,791	N71-12501*	c 08	NASA-CASE-XLA-00670 US-PATENT-APPL-SN-235162 US-PATENT-CLASS-340-347 US-PATENT-3,251,053	N71-13461*	c 06	NASA-CASE-LAR-10180-1 US-PATENT-APPL-SN-709398 US-PATENT-CLASS-250-41.9 US-PATENT-3,521,054
N71-11300*	c 07	NASA-CASE-XMS-07168 US-PATENT-APPL-SN-769788 US-PATENT-CLASS-178-6.6 US-PATENT-3,493,677	N71-12502*	c 08	NASA-CASE-NPO-10112 US-PATENT-APPL-SN-673226 US-PATENT-CLASS-340-172.5 US-PATENT-3,533,074	N71-13486*	c 09	NASA-CASE-MFS-20333 US-PATENT-APPL-SN-820965 US-PATENT-CLASS-307-149 US-PATENT-3,535,543
N71-11766*	c 21	NASA-CASE-LAR-10403 US-PATENT-APPL-SN-676391 US-PATENT-CLASS-343-6.5 US-PATENT-3,447,154	N71-12503*	c 08	NASA-CASE-NPO-10351 US-PATENT-APPL-SN-712065 US-PATENT-CLASS-328-37 US-PATENT-3,535,642	N71-13518*	c 09	NASA-CASE-MSC-12178-1 US-PATENT-APPL-SN-845365 US-PATENT-CLASS-315-241 US-PATENT-3,530,336
N71-12217* #	c 01	NASA-CASE-FRC-10063 US-PATENT-APPL-SN-21263 US-PATENT-CLASS-340-198 US-PATENT-3,243,791	N71-12504*	c 08	NASA-CASE-XMF-05835 US-PATENT-APPL-SN-627257 US-PATENT-CLASS-340-174 US-PATENT-3,493,942	N71-13521*	c 09	NASA-CASE-XKS-09348 US-PATENT-APPL-SN-677505 US-PATENT-CLASS-343-703 US-PATENT-3,526,897
N71-12243*	c 02	NASA-CASE-XLA-04451 US-PATENT-APPL-SN-457876 US-PATENT-CLASS-244-45 US-PATENT-3,310,262	N71-12505*	c 08	NASA-CASE-XNP-05415 US-PATENT-APPL-SN-578932	N71-13522*	c 09	NASA-CASE-LEW-10364-1 US-PATENT-APPL-SN-822518
N71-12255*	c 03	NASA-CASE-NPO-10404 US-PATENT-APPL-SN-728234						

N71-13530*	c 09	US-PATENT-CLASS-317-258 US-PATENT-3,535,602 NASA-CASE-XNP-00384 US-PATENT-APPL-SN-180392 US-PATENT-CLASS-324-132 US-PATENT-3,263,171	N71-15562*	c 25	US-PATENT-CLASS-350-3.5 US-PATENT-3,535,013 NASA-CASE-XLA-03374 US-PATENT-APPL-SN-793770 US-PATENT-CLASS-315-111 US-PATENT-3,535,586	N71-15625*	c 33	US-PATENT-CLASS-60-35.6 US-PATENT-3,270,503 NASA-CASE-XLE-01399 US-PATENT-APPL-SN-320233 US-PATENT-CLASS-13-26 US-PATENT-3,263,016
N71-13531*	c 09	NASA-CASE-MSC-12033-1 US-PATENT-APPL-SN-602828 US-PATENT-CLASS-330-11 US-PATENT-3,526,845	N71-15563*	c 28	NASA-CASE-XLA-02865 US-PATENT-APPL-SN-416946 US-PATENT-CLASS-244-53 US-PATENT-3,270,990	N71-15634*	c 27	NASA-CASE-XLE-01988 US-PATENT-APPL-SN-308918 US-PATENT-CLASS-60-35.6 US-PATENT-3,258,912
N71-13537*	c 10	NASA-CASE-XNP-08274 US-PATENT-APPL-SN-730703 US-PATENT-CLASS-73-382 US-PATENT-3,520,190	N71-15565*	c 16	NASA-CASE-MFS-20074 US-PATENT-APPL-SN-801312 US-PATENT-CLASS-350-3.5 US-PATENT-3,535,014	N71-15635*	c 27	NASA-CASE-XLE-01182 US-PATENT-APPL-SN-411949 US-PATENT-CLASS-60-39.46 US-PATENT-3,258,918
N71-13545*	c 10	NASA-CASE-LAR-10774 US-PATENT-APPL-SN-802820 US-PATENT-CLASS-73-1 US-PATENT-3,534,584	N71-15566*	c 31	NASA-CASE-XKS-08012-2 US-PATENT-APPL-SN-874958 US-PATENT-CLASS-340-172.5 US-PATENT-3,535,683	N71-15637*	c 31	NASA-CASE-XLE-01640 US-PATENT-APPL-SN-473535 US-PATENT-CLASS-60-35.6 US-PATENT-3,270,504
N71-13789*	c 15	NASA-CASE-XLA-01141 US-PATENT-APPL-SN-353632 US-PATENT-CLASS-102-49 US-PATENT-3,263,610	N71-15567*	c 16	NASA-CASE-ERC-10017 US-PATENT-APPL-SN-677506 US-PATENT-CLASS-350-3.5 US-PATENT-3,535,012	N71-15641*	c 33	NASA-CASE-XNP-09802 US-PATENT-APPL-SN-673229 US-PATENT-CLASS-73-190 US-PATENT-3,531,989
N71-13958*	c 21	NASA-CASE-GSC-10087-2 US-PATENT-APPL-SN-701744 US-PATENT-CLASS-343-112 US-PATENT-3,495,260	N71-15568*	c 33	NASA-CASE-XLE-09475-1 US-PATENT-APPL-SN-710945 US-PATENT-CLASS-136-228 US-PATENT-3,535,165	N71-15642*	c 21	NASA-CASE-XGS-03431 US-PATENT-APPL-SN-588635 US-PATENT-CLASS-250-203 US-PATENT-3,488,504
N71-14014*	c 18	NASA-CASE-GSC-10072 US-PATENT-APPL-SN-686296 US-PATENT-CLASS-106-15 US-PATENT-3,493,401	N71-15571*	c 15	NASA-CASE-XLA-07911 US-PATENT-APPL-SN-660572 US-PATENT-CLASS-33-207 US-PATENT-3,492,739	N71-15643*	c 31	NASA-CASE-NPO-10311 US-PATENT-APPL-SN-725475 US-PATENT-CLASS-73-116 US-PATENT-3,534,597
N71-14032*	c 33	NASA-CASE-XLE-05913 US-PATENT-APPL-SN-551933 US-PATENT-CLASS-117-106 US-PATENT-3,490,939	N71-15582*	c 21	NASA-CASE-XLA-01163 US-PATENT-APPL-SN-405632 US-PATENT-CLASS-60-35.55 US-PATENT-3,270,505	N71-15644*	c 17	NASA-CASE-XLE-00726 US-PATENT-APPL-SN-355126 US-PATENT-CLASS-75-170 US-PATENT-3,271,140
N71-14035*	c 33	NASA-CASE-XLE-03307 US-PATENT-APPL-SN-613979 US-PATENT-CLASS-244-1 US-PATENT-3,490,718	N71-15583*	c 21	NASA-CASE-XMF-01598 US-PATENT-APPL-SN-333770 US-PATENT-CLASS-244-1 US-PATENT-3,270,985	N71-15647*	c 31	NASA-CASE-XGS-01143 US-PATENT-APPL-SN-349781 US-PATENT-CLASS-60-35.6 US-PATENT-3,270,501
N71-14043*	c 28	NASA-CASE-XLE-01124 US-PATENT-APPL-SN-312269 US-PATENT-CLASS-60-35.5 US-PATENT-3,238,715	N71-15597*	c 15	NASA-CASE-XLE-08917 US-PATENT-APPL-SN-662829 US-PATENT-CLASS-113-116 US-PATENT-3,490,405	N71-15658*	c 28	NASA-CASE-XLE-00409 US-PATENT-APPL-SN-249539 US-PATENT-CLASS-29-157 US-PATENT-3,254,395
N71-14044*	c 28	NASA-CASE-XGS-08729 US-PATENT-APPL-SN-667637 US-PATENT-CLASS-60-200 US-PATENT-3,490,235	N71-15598*	c 14	NASA-CASE-XAC-00812 US-PATENT-APPL-SN-255132 US-PATENT-CLASS-73-341 US-PATENT-3,238,777	N71-15659*	c 28	NASA-CASE-XLE-05689 US-PATENT-APPL-SN-491845 US-PATENT-CLASS-60-35.60 US-PATENT-3,254,487
N71-14058*	c 28	NASA-CASE-MSC-12139-1 US-PATENT-APPL-SN-797796 US-PATENT-CLASS-103-37 US-PATENT-3,492,947	N71-15599*	c 14	NASA-CASE-XNP-04161 US-PATENT-APPL-SN-568356 US-PATENT-CLASS-250-83.3 US-PATENT-3,444,375	N71-15660*	c 28	NASA-CASE-XMF-00968 US-PATENT-APPL-SN-339825 US-PATENT-CLASS-60-35.6 US-PATENT-3,270,499
N71-14090*	c 27	NASA-CASE-LAR-10173-1 US-PATENT-APPL-SN-758942 US-PATENT-CLASS-149-19 US-PATENT-3,492,176	N71-15600*	c 14	NASA-CASE-XKS-06250 US-PATENT-APPL-SN-649075 US-PATENT-CLASS-73-97 US-PATENT-3,492,862	N71-15661*	c 28	NASA-CASE-XLE-02066 US-PATENT-APPL-SN-426455 US-PATENT-CLASS-60-35.5 US-PATENT-3,262,262
N71-14132*	c 21	NASA-CASE-XLA-05464 US-PATENT-APPL-SN-656995 US-PATENT-CLASS-244-1 US-PATENT-3,493,194	N71-15604*	c 14	NASA-CASE-NPO-10337 US-PATENT-APPL-SN-714296 US-PATENT-CLASS-350-58 US-PATENT-3,488,103	N71-15663*	c 31	NASA-CASE-XLA-00256 US-PATENT-APPL-SN-333766 US-PATENT-CLASS-244-1 US-PATENT-3,262,655
N71-14159*	c 21	NASA-CASE-XGS-04393 US-PATENT-APPL-SN-700142 US-PATENT-CLASS-244-1 US-PATENT-3,490,719	N71-15605*	c 14	NASA-CASE-GSC-10062 US-PATENT-APPL-SN-658955 US-PATENT-CLASS-350-285 US-PATENT-3,493,294	N71-15664*	c 31	NASA-CASE-XLA-01332 US-PATENT-APPL-SN-250974 US-PATENT-CLASS-220-15 US-PATENT-3,270,908
N71-14354*	c 26	NASA-CASE-ERC-10138 US-PATENT-APPL-SN-821586 US-PATENT-CLASS-225-2 US-PATENT-3,493,155	N71-15606*	c 15	NASA-CASE-XNP-06031 US-PATENT-APPL-SN-590144 US-PATENT-CLASS-250-52 US-PATENT-3,493,746	N71-15673*	c 23	NASA-CASE-XMS-01620 US-PATENT-APPL-SN-357340 US-PATENT-CLASS-248-358 US-PATENT-3,243,154
N71-14932*	c 15	NASA-CASE-LEW-11531 US-PATENT-APPL-SN-643332 US-PATENT-CLASS-219-72 US-PATENT-3,493,711	N71-15607*	c 15	NASA-CASE-XMF-03287 US-PATENT-APPL-SN-658956 US-PATENT-CLASS-228-7 US-PATENT-3,443,732	N71-15674*	c 31	NASA-CASE-XLA-03691 US-PATENT-APPL-SN-667625 US-PATENT-CLASS-244-1 US-PATENT-3,534,924
N71-14996*	c 14	NASA-CASE-XLA-00936 US-PATENT-APPL-SN-282818 US-PATENT-CLASS-73-170 US-PATENT-3,238,774	N71-15608*	c 15	NASA-CASE-NPO-10117 US-PATENT-APPL-SN-668238 US-PATENT-CLASS-138-42 US-PATENT-3,493,012	N71-15675*	c 31	NASA-CASE-XMF-03169 US-PATENT-APPL-SN-375405 US-PATENT-CLASS-89-1.5 US-PATENT-3,262,365
N71-15467*	c 23	NASA-CASE-XNP-03796 US-PATENT-APPL-SN-453231 US-PATENT-CLASS-62-6 US-PATENT-3,260,055	N71-15609*	c 15	NASA-CASE-XMF-04709 US-PATENT-APPL-SN-683507 US-PATENT-CLASS-137-81.5 US-PATENT-3,493,003	N71-15676*	c 31	NASA-CASE-XGS-05579 US-PATENT-APPL-SN-719869 US-PATENT-CLASS-244-1 US-PATENT-3,534,925
N71-15468*	c 17	NASA-CASE-LEW-10393-1 US-PATENT-APPL-SN-644799 US-PATENT-CLASS-75-202 US-PATENT-3,535,110	N71-15610*	c 15	NASA-CASE-XLE-01604-2 US-PATENT-APPL-SN-683613 US-PATENT-CLASS-117-50 US-PATENT-3,493,415	N71-15687*	c 31	NASA-CASE-XLA-05369 US-PATENT-APPL-SN-765123 US-PATENT-CLASS-102-49.5 US-PATENT-3,534,686
N71-15469*	c 18	NASA-CASE-ARC-10099-1 US-PATENT-APPL-SN-704224 US-PATENT-CLASS-106-15 US-PATENT-3,535,130	N71-15620*	c 14	NASA-CASE-XLA-01926 US-PATENT-APPL-SN-784521 US-PATENT-CLASS-340-57 US-PATENT-3,491,335	N71-15688*	c 18	NASA-CASE-XNP-03459-2 US-PATENT-APPL-SN-681942 US-PATENT-CLASS-260-40.5 US-PATENT-3,535,352
N71-15545*	c 18	NASA-CASE-XMS-09691-1 US-PATENT-APPL-SN-738119 US-PATENT-CLASS-8-94.12 US-PATENT-3,526,473	N71-15621*	c 14	NASA-CASE-XNP-09572 US-PATENT-APPL-SN-660841 US-PATENT-CLASS-35-10.2 US-PATENT-3,493,665	N71-15689*	c 31	NASA-CASE-MFS-14685 US-PATENT-APPL-SN-752947 US-PATENT-CLASS-180-118 US-PATENT-CLASS-180-121
N71-15550*	c 16	NASA-CASE-XNP-05219 US-PATENT-APPL-SN-336103 US-PATENT-CLASS-330-4 US-PATENT-3,299,364	N71-15622*	c 14	NASA-CASE-XNP-04111 US-PATENT-APPL-SN-560969 US-PATENT-CLASS-350-213 US-PATENT-3,493,291	N71-15692*	c 31	NASA-CASE-XLA-01339 US-PATENT-APPL-SN-373591 US-PATENT-CLASS-102-49 US-PATENT-3,260,204
N71-15551*	c 16	NASA-CASE-ERC-10019 US-PATENT-APPL-SN-677508	N71-15623*	c 33	NASA-CASE-XMS-01816 US-PATENT-APPL-SN-425364	N71-15871*	c 15	NASA-CASE-XMF-02039

		US-PATENT-APPL-SN-434143			US-PATENT-APPL-SN-304749			US-PATENT-APPL-SN-701732
		US-PATENT-CLASS-219-131			US-PATENT-CLASS-35-29			US-PATENT-CLASS-250-41.9
		US-PATENT-3,271,558			US-PATENT-3,270,441			US-PATENT-3,532,880
N71-15906*	c 15	NASA-CASE-XNP-00920	N71-16030*	c 10	NASA-CASE-XMF-01096	N71-16098*	c 23	NASA-CASE-XAC-03107
		US-PATENT-APPL-SN-329331			US-PATENT-APPL-SN-307270			US-PATENT-APPL-SN-538168
		US-PATENT-CLASS-62-2			US-PATENT-CLASS-318-376			US-PATENT-CLASS-73-505
		US-PATENT-3,270,512			US-PATENT-3,271,649			US-PATENT-3,455,171
N71-15907*	c 07	NASA-CASE-XNP-01057	N71-16031*	c 12	NASA-CASE-XMS-01445	N71-16099*	c 23	NASA-CASE-XGS-07514
		US-PATENT-APPL-SN-301683			US-PATENT-APPL-SN-385526			US-PATENT-APPL-SN-640453
		US-PATENT-CLASS-343-786			US-PATENT-CLASS-137-615			US-PATENT-CLASS-328-1
		US-PATENT-3,305,870			US-PATENT-3,308,848			US-PATENT-3,509,469
N71-15908*	c 08	NASA-CASE-XLA-02705	N71-16037*	c 26	NASA-CASE-XGS-05718	N71-16100*	c 23	NASA-CASE-XGS-05715
		US-PATENT-APPL-SN-473537			US-PATENT-APPL-SN-584071			US-PATENT-APPL-SN-668257
		US-PATENT-CLASS-129-16.7			US-PATENT-CLASS-29-472.9			US-PATENT-CLASS-250-233
		US-PATENT-3,310,054			US-PATENT-3,452,423			US-PATENT-3,532,894
N71-15909*	c 10	NASA-CASE-XAC-03777	N71-16042*	c 10	NASA-CASE-XAC-00942	N71-16101*	c 23	NASA-CASE-XNP-08883
		US-PATENT-APPL-SN-484489			US-PATENT-APPL-SN-310506			US-PATENT-APPL-SN-617021
		US-PATENT-CLASS-200-6			US-PATENT-CLASS-307-88.5			US-PATENT-CLASS-356-117
		US-PATENT-3,283,088			US-PATENT-3,277,314			US-PATENT-3,520,617
N71-15910*	c 10	NASA-CASE-XGS-00823	N71-16044*	c 17	NASA-CASE-XGS-06306	N71-16102*	c 31	NASA-CASE-XGS-09190
		US-PATENT-APPL-SN-336607			US-PATENT-APPL-SN-685473			US-PATENT-APPL-SN-647298
		US-PATENT-CLASS-307-88.5			US-PATENT-CLASS-156-3			US-PATENT-CLASS-343-915
		US-PATENT-3,283,175			US-PATENT-3,532,568			US-PATENT-3,521,290
N71-15918*	c 15	NASA-CASE-XMS-02383	N71-16046*	c 18	NASA-CASE-GSC-10007	N71-16103*	c 32	NASA-CASE-LAR-10317-1
		US-PATENT-APPL-SN-299042			US-PATENT-APPL-SN-627599			US-PATENT-APPL-SN-739927
		US-PATENT-CLASS-140-123			US-PATENT-CLASS-117-201			US-PATENT-CLASS-137-582
		US-PATENT-3,299,913			US-PATENT-3,532,538			US-PATENT-3,508,578
N71-15922*	c 15	NASA-CASE-XGS-01971	N71-16052*	c 15	NASA-CASE-XLE-02999	N71-16104*	c 33	NASA-CASE-XLE-00785
		US-PATENT-APPL-SN-353645			US-PATENT-APPL-SN-431235			US-PATENT-APPL-SN-666554
		US-PATENT-CLASS-85-33			US-PATENT-CLASS-29-148.4			US-PATENT-CLASS-60-108
		US-PATENT-3,262,351			US-PATENT-3,262,186			US-PATENT-3,508,402
N71-15925*	c 11	NASA-CASE-XLA-00378	N71-16057*	c 10	NASA-CASE-XNP-01193	N71-16105*	c 18	NASA-CASE-XLE-08511-2
		US-PATENT-APPL-SN-266107			US-PATENT-APPL-SN-366226			US-PATENT-APPL-SN-711921
		US-PATENT-CLASS-219-10.49			US-PATENT-CLASS-324-57			US-PATENT-CLASS-117-119
		US-PATENT-3,238,345			US-PATENT-3,277,366			US-PATENT-3,508,955
N71-15926*	c 11	NASA-CASE-XLA-00939	N71-16058*	c 10	NASA-CASE-XMF-01097	N71-16106*	c 32	NASA-CASE-XLA-04605
		US-PATENT-APPL-SN-309354			US-PATENT-APPL-SN-290873			US-PATENT-APPL-SN-619519
		US-PATENT-CLASS-73-147			US-PATENT-CLASS-340-227			US-PATENT-CLASS-137-582
		US-PATENT-3,276,251			US-PATENT-3,277,458			US-PATENT-3,443,584
N71-15960*	c 11	NASA-CASE-XAC-00731	N71-16073*	c 25	NASA-CASE-XAC-05695	N71-16124*	c 18	NASA-CASE-XMF-05279
		US-PATENT-APPL-SN-232318			US-PATENT-APPL-SN-634038			US-PATENT-APPL-SN-617774
		US-PATENT-CLASS-220-89			US-PATENT-CLASS-324-34			US-PATENT-CLASS-106-88
		US-PATENT-3,145,874			US-PATENT-3,517,302			US-PATENT-3,508,940
N71-15962*	c 14	NASA-CASE-XGS-01587	N71-16075*	c 15	NASA-CASE-XLA-00284	N71-16210*	c 18	NASA-CASE-XNP-08837
		US-PATENT-APPL-SN-298799			US-PATENT-APPL-SN-240760			US-PATENT-APPL-SN-691736
		US-PATENT-CLASS-324-43			US-PATENT-CLASS-117-69			US-PATENT-CLASS-204-20
		US-PATENT-3,258,687			US-PATENT-3,264,135			US-PATENT-3,526,580
N71-15966*	c 15	NASA-CASE-XLE-00953	N71-16076*	c 15	NASA-CASE-XLE-00106	N71-16212*	c 23	NASA-CASE-NPO-10250
		US-PATENT-APPL-SN-336320			US-PATENT-APPL-SN-629759			US-PATENT-APPL-SN-736848
		US-PATENT-CLASS-22-200			US-PATENT-CLASS-25-156			US-PATENT-CLASS-149-1
		US-PATENT-3,237,253			US-PATENT-2,944,316			US-PATENT-3,516,879
N71-15967*	c 15	NASA-CASE-XLE-00703	N71-16077*	c 15	NASA-CASE-XLA-00302	N71-16213*	c 24	NASA-CASE-XGS-06628
		US-PATENT-APPL-SN-271822			US-PATENT-APPL-SN-284266			US-PATENT-APPL-SN-685680
		US-PATENT-CLASS-137-13			US-PATENT-CLASS-117-46			US-PATENT-CLASS-315-111
		US-PATENT-3,270,756			US-PATENT-3,271,181			US-PATENT-3,509,419
N71-15968*	c 15	NASA-CASE-XLE-00586	N71-16078*	c 15	NASA-CASE-XGS-00824	N71-16221*	c 31	NASA-CASE-XLA-05906
		US-PATENT-APPL-SN-317391			US-PATENT-APPL-SN-379072			US-PATENT-APPL-SN-777662
		US-PATENT-CLASS-55-160			US-PATENT-CLASS-89-1			US-PATENT-CLASS-73-432
		US-PATENT-3,257,780			US-PATENT-3,309,961			US-PATENT-3,526,139
N71-15969*	c 14	NASA-CASE-XMF-01099	N71-16079*	c 15	NASA-CASE-XLA-00415	N71-16222*	c 31	NASA-CASE-MFS-11133
		US-PATENT-APPL-SN-733667			US-PATENT-APPL-SN-314074			US-PATENT-APPL-SN-693419
		US-PATENT-CLASS-73-517			US-PATENT-CLASS-233-11			US-PATENT-CLASS-244-1
		US-PATENT-3,261,210			US-PATENT-3,276,679			US-PATENT-3,508,723
N71-15974*	c 32	NASA-CASE-XMS-06782	N71-16080*	c 31	NASA-CASE-MS-12049	N71-16223*	c 27	NASA-CASE-MFS-12750
		US-PATENT-APPL-SN-691739			US-PATENT-APPL-SN-693420			US-PATENT-APPL-SN-806149
		US-PATENT-CLASS-338-5			US-PATENT-CLASS-52-3			US-PATENT-CLASS-73-432
		US-PATENT-3,464,049			US-PATENT-3,465,482			US-PATENT-3,526,140
N71-15978*	c 23	NASA-CASE-XGS-00373	N71-16081*	c 31	NASA-CASE-XGS-03351	N71-16224*	c 28	NASA-CASE-MFS-11497
		US-PATENT-APPL-SN-105518			US-PATENT-APPL-SN-472747			US-PATENT-APPL-SN-730733
		US-PATENT-CLASS-161-189			US-PATENT-CLASS-244-31			US-PATENT-CLASS-239-265.43
		US-PATENT-3,276,946			US-PATENT-3,276,726			US-PATENT-3,526,365
N71-15986*	c 15	NASA-CASE-XMF-03498	N71-16085*	c 31	NASA-CASE-XLA-09881	N71-16277*	c 33	NASA-CASE-XMS-04268
		US-PATENT-APPL-SN-396443			US-PATENT-APPL-SN-710562			US-PATENT-APPL-SN-516160
		US-PATENT-CLASS-29-155.55			US-PATENT-CLASS-244-138			US-PATENT-CLASS-165-133
		US-PATENT-3,258,831			US-PATENT-3,520,503			US-PATENT-3,502,141
N71-15990*	c 30	NASA-CASE-XAC-08494	N71-16086*	c 09	NASA-CASE-XLE-02038	N71-16278*	c 33	NASA-CASE-XMF-04237
		US-PATENT-APPL-SN-690998			US-PATENT-APPL-SN-349782			US-PATENT-APPL-SN-539237
		US-PATENT-CLASS-356-74			US-PATENT-CLASS-73-147			US-PATENT-CLASS-219-364
		US-PATENT-3,532,428			US-PATENT-3,273,388			US-PATENT-3,517,162
N71-15992*	c 14	NASA-CASE-XGS-01052	N71-16087*	c 02	NASA-CASE-XAC-02058	N71-16281*	c 20	NASA-CASE-XLA-02081
		US-PATENT-APPL-SN-314572			US-PATENT-APPL-SN-342572			US-PATENT-APPL-SN-522795
		US-PATENT-CLASS-73-15			US-PATENT-CLASS-244-1			US-PATENT-CLASS-73-189
		US-PATENT-3,242,716			US-PATENT-3,276,722			US-PATENT-3,507,150
N71-16014*	c 14	NASA-CASE-XLE-00820	N71-16088*	c 07	NASA-CASE-XGS-01022	N71-16340*	c 20	NASA-CASE-XMF-14032
		US-PATENT-APPL-SN-228569			US-PATENT-APPL-SN-331323			US-PATENT-APPL-SN-679862
		US-PATENT-CLASS-324-32			US-PATENT-CLASS-325-4			US-PATENT-CLASS-250-209
		US-PATENT-3,283,241			US-PATENT-3,277,373			US-PATENT-3,501,641
N71-16025*	c 17	NASA-CASE-XLE-02991	N71-16089*	c 09	NASA-CASE-XAC-02405	N71-16341*	c 23	NASA-CASE-XGS-05291
		US-PATENT-APPL-SN-375401			US-PATENT-APPL-SN-433821			US-PATENT-APPL-SN-553891
		US-PATENT-CLASS-75-170			US-PATENT-CLASS-200-6			US-PATENT-CLASS-356-209
		US-PATENT-3,276,865			US-PATENT-3,271,532			US-PATENT-3,504,983
N71-16026*	c 17	NASA-CASE-XLE-02082	N71-16090*	c 30	NASA-CASE-GSC-10083-1	N71-16345*	c 31	NASA-CASE-XMF-05344
		US-PATENT-APPL-SN-360180			US-PATENT-APPL-SN-641431			US-PATENT-APPL-SN-702396
		US-PATENT-CLASS-75-171			US-PATENT-CLASS-343-6			US-PATENT-CLASS-244-1
		US-PATENT-3,276,866			US-PATENT-3,471,856			US-PATENT-3,520,496
N71-16028*	c 11	NASA-CASE-XLA-01787	N71-16095*	c 24	NASA-CASE-XAC-05506-1	N71-16346*	c 31	NASA-CASE-XMS-03613

		US-PATENT-APPL-SN-802816		US-PATENT-APPL-SN-270118	N71-17685*	c 15	NASA-CASE-NPO-10034
		US-PATENT-CLASS-244-1		US-PATENT-CLASS-230-162			US-PATENT-APPL-SN-666241
		US-PATENT-3,526,372		US-PATENT-3,309,012			US-PATENT-CLASS-339-17
N71-16348*	c 27	NASA-CASE-MSC-12280	N71-17626*	NASA-CASE-LAR-10274-1	N71-17686*	c 15	US-PATENT-3,464,051
		US-PATENT-APPL-SN-372648		US-PATENT-APPL-SN-717052			NASA-CASE-MFS-20586
		US-PATENT-CLASS-250-43.5		US-PATENT-CLASS-188-1			US-PATENT-APPL-SN-688868
		US-PATENT-3,501,632		US-PATENT-3,491,857			US-PATENT-CLASS-29-428
N71-16355*	c 23	NASA-CASE-XGS-05534	N71-17627*	NASA-CASE-XGS-03532	N71-17687*	c 15	US-PATENT-3,526,030
		US-PATENT-APPL-SN-578925		US-PATENT-APPL-SN-538913			NASA-CASE-XLA-04143
		US-PATENT-CLASS-23-253		US-PATENT-CLASS-356-106			US-PATENT-APPL-SN-628246
		US-PATENT-3,520,660		US-PATENT-3,488,123			US-PATENT-CLASS-156-510
N71-16356*	c 33	NASA-CASE-NPO-10158	N71-17628*	NASA-CASE-MFS-10340	N71-17688*	c 15	US-PATENT-3,508,999
		US-PATENT-APPL-SN-730702		US-PATENT-APPL-SN-716734			NASA-CASE-XLE-09527
		US-PATENT-CLASS-73-343		US-PATENT-CLASS-225-1			US-PATENT-APPL-SN-686344
		US-PATENT-3,526,134		US-PATENT-3,507,425			US-PATENT-CLASS-29-148.4
N71-16357*	c 33	NASA-CASE-NPO-10138	N71-17629*	NASA-CASE-XLE-03583	N71-17691*	c 31	US-PATENT-3,500,525
		US-PATENT-APPL-SN-759457		US-PATENT-APPL-SN-400617			NASA-CASE-XLA-00937
		US-PATENT-CLASS-236-1		US-PATENT-CLASS-244-3.22			US-PATENT-APPL-SN-393461
		US-PATENT-3,526,359		US-PATENT-3,276,376			US-PATENT-CLASS-244-3.14
N71-16365*	c 23	NASA-CASE-XNP-08840	N71-17631*	NASA-CASE-NPO-10122	N71-17692*	c 15	US-PATENT-3,310,258
		US-PATENT-APPL-SN-649360		US-PATENT-APPL-SN-710949			NASA-CASE-MFS-14772
		US-PATENT-CLASS-356-36		US-PATENT-CLASS-60-217			US-PATENT-APPL-SN-774151
		US-PATENT-3,526,460		US-PATENT-3,534,555			US-PATENT-CLASS-74-63
N71-16392*	c 27	NASA-CASE-XNP-09744	N71-17645*	NASA-CASE-XNP-01153	N71-17693*	c 15	US-PATENT-3,529,480
		US-PATENT-APPL-SN-685750		US-PATENT-APPL-SN-336608			NASA-CASE-NPO-10064
		US-PATENT-CLASS-60-39.47		US-PATENT-CLASS-73-88			US-PATENT-APPL-SN-668755
		US-PATENT-3,507,114		US-PATENT-3,273,381			US-PATENT-CLASS-244-1
N71-16393*	c 17	NASA-CASE-NPO-10271	N71-17647*	NASA-CASE-XMF-01667	N71-17694*	c 15	US-PATENT-3,501,112
		US-PATENT-APPL-SN-763869		US-PATENT-APPL-SN-577115			NASA-CASE-XNP-08889
		US-PATENT-CLASS-21-207		US-PATENT-CLASS-118-11			US-PATENT-APPL-SN-640450
		US-PATENT-3,529,928		US-PATENT-3,502,051			US-PATENT-CLASS-318-22
N71-16428*	c 32	NASA-CASE-XLA-03135	N71-17648*	NASA-CASE-MSC-12116-1	N71-17696*	c 15	US-PATENT-3,501,683
		US-PATENT-APPL-SN-582171		US-PATENT-APPL-SN-768336			NASA-CASE-XLA-05100
		US-PATENT-CLASS-73-71.4		US-PATENT-CLASS-251-358			US-PATENT-APPL-SN-724551
		US-PATENT-3,503,251		US-PATENT-3,508,739			US-PATENT-CLASS-73-103
N71-16894*	c 12	NASA-CASE-XLA-02079	N71-17649*	NASA-CASE-MFS-11132	N71-17701*	c 14	US-PATENT-3,487,680
		US-PATENT-APPL-SN-435756		US-PATENT-APPL-SN-744910			NASA-CASE-NPO-10144
		US-PATENT-CLASS-188-87		US-PATENT-CLASS-248-360			US-PATENT-APPL-SN-688805
		US-PATENT-3,310,138		US-PATENT-3,526,382			US-PATENT-CLASS-73-29
N71-17569*	c 12	NASA-CASE-MSC-12084-1	N71-17650*	NASA-CASE-XMF-05114	N71-17705*	c 06	US-PATENT-3,534,585
		US-PATENT-APPL-SN-762438		US-PATENT-APPL-SN-637882			NASA-CASE-XGS-05532
		US-PATENT-CLASS-73-204		US-PATENT-CLASS-29-517			US-PATENT-APPL-SN-570093
		US-PATENT-3,500,686		US-PATENT-3,507,034			US-PATENT-CLASS-195-99
N71-17573*	c 12	NASA-CASE-LAR-10323-1	N71-17651*	NASA-CASE-XLE-03803-2	N71-17729*	c 31	US-PATENT-3,423,290
		US-PATENT-APPL-SN-738314		US-PATENT-APPL-SN-669336			NASA-CASE-XAC-01591
		US-PATENT-CLASS-73-45.5		US-PATENT-CLASS-156-172			US-PATENT-APPL-SN-385527
		US-PATENT-3,516,284		US-PATENT-3,535,179			US-PATENT-CLASS-244-1
N71-17574*	c 14	NASA-CASE-XGS-04993	N71-17652*	NASA-CASE-XLE-05079	N71-17730*	c 31	US-PATENT-3,282,532
		US-PATENT-APPL-SN-577775		US-PATENT-APPL-SN-601228			NASA-CASE-XMF-01543
		US-PATENT-CLASS-96-49		US-PATENT-CLASS-310-93			US-PATENT-APPL-SN-402365
		US-PATENT-3,458,313		US-PATENT-3,493,797			US-PATENT-CLASS-102-49
N71-17575*	c 14	NASA-CASE-XMF-06531	N71-17653*	NASA-CASE-ARC-10140-1	N71-17788*	c 30	US-PATENT-3,286,629
		US-PATENT-APPL-SN-732917		US-PATENT-APPL-SN-783379			NASA-CASE-XGS-00783
		US-PATENT-CLASS-204-195		US-PATENT-CLASS-24-211			US-PATENT-APPL-SN-372438
		US-PATENT-3,509,034		US-PATENT-CLASS-85-3			US-PATENT-CLASS-73-432
N71-17578*	c 12	NASA-CASE-MFS-10412		US-PATENT-3,534,650	N71-17802*	c 23	US-PATENT-3,286,531
		US-PATENT-APPL-SN-701635	N71-17654*	NASA-CASE-XNP-09702			NASA-CASE-XLE-00454
		US-PATENT-CLASS-137-81.5		US-PATENT-APPL-SN-730734			US-PATENT-APPL-SN-295855
		US-PATENT-3,520,317		US-PATENT-CLASS-239-416			US-PATENT-CLASS-73-295
N71-17579*	c 12	NASA-CASE-XLA-07391		US-PATENT-3,534,909	N71-17803*	c 15	US-PATENT-3,273,392
		US-PATENT-APPL-SN-726898	N71-17655*	NASA-CASE-NPO-10320			NASA-CASE-XMS-05516
		US-PATENT-CLASS-137-81.5		US-PATENT-APPL-SN-718689			US-PATENT-APPL-SN-536348
		US-PATENT-3,493,004		US-PATENT-CLASS-356-106			US-PATENT-CLASS-264-92
N71-17584*	c 14	NASA-CASE-XNP-09462		US-PATENT-3,535,041	N71-17805*	c 15	US-PATENT-3,488,414
		US-PATENT-APPL-SN-658957	N71-17656*	NASA-CASE-MFS-12827			NASA-CASE-MFS-12805
		US-PATENT-CLASS-73-57		US-PATENT-APPL-SN-742816			US-PATENT-APPL-SN-758082
		US-PATENT-3,500,677		US-PATENT-CLASS-73-88.5			US-PATENT-CLASS-192-43.1
N71-17585*	c 14	NASA-CASE-XGS-05680		US-PATENT-3,534,592			US-PATENT-CLASS-81-63.1
		US-PATENT-APPL-SN-656953	N71-17657*	NASA-CASE-XNP-09205	N71-17818*	c 26	US-PATENT-3,534,836
		US-PATENT-CLASS-318-138		US-PATENT-APPL-SN-768473			NASA-CASE-XMF-01016
		US-PATENT-3,501,664		US-PATENT-CLASS-33-149			US-PATENT-APPL-SN-326299
N71-17586*	c 14	NASA-CASE-XLA-08646		US-PATENT-3,534,479			US-PATENT-CLASS-264-27
		US-PATENT-APPL-SN-677476	N71-17658*	NASA-CASE-XMF-04966	N71-17822*	c 15	US-PATENT-3,274,304
		US-PATENT-CLASS-73-105		US-PATENT-APPL-SN-727480			NASA-CASE-ARC-10009-1
		US-PATENT-3,534,596		US-PATENT-CLASS-33-174			US-PATENT-APPL-SN-714595
N71-17587*	c 14	NASA-CASE-XMF-05844		US-PATENT-3,534,480			US-PATENT-CLASS-324-58.5
		US-PATENT-APPL-SN-706564	N71-17659*	NASA-CASE-XMF-02964	N71-17897*	c 33	US-PATENT-3,532,973
		US-PATENT-CLASS-73-382		US-PATENT-APPL-SN-493942			NASA-CASE-XLA-00892
		US-PATENT-3,500,688		US-PATENT-CLASS-73-15.4			US-PATENT-APPL-SN-245941
N71-17588*	c 14	NASA-CASE-MFS-12806		US-PATENT-3,465,569			US-PATENT-CLASS-62-467
		US-PATENT-APPL-SN-686933	N71-17661*	NASA-CASE-NPO-10298			US-PATENT-3,273,355
		US-PATENT-CLASS-55-179		US-PATENT-APPL-SN-745852	N71-18064*	c 26	NASA-CASE-XNP-01328
		US-PATENT-3,490,205		US-PATENT-CLASS-137-341			US-PATENT-APPL-SN-296879
N71-17599*	c 05	NASA-CASE-MSC-12206-1		US-PATENT-3,534,765			US-PATENT-CLASS-317-234
		US-PATENT-APPL-SN-856258	N71-17662*	NASA-CASE-NPO-10300			US-PATENT-3,271,637
		US-PATENT-CLASS-128-142.5		US-PATENT-APPL-SN-718769	N71-18132*	c 15	NASA-CASE-MFS-13686
		US-PATENT-3,516,404		US-PATENT-CLASS-350-285			US-PATENT-APPL-SN-716183
N71-17600*	c 11	NASA-CASE-MFS-12915		US-PATENT-3,535,024			US-PATENT-CLASS-73-67.2
		US-PATENT-APPL-SN-694340	N71-17679*	NASA-CASE-XNP-02507			US-PATENT-3,531,982
		US-PATENT-CLASS-220-89		US-PATENT-APPL-SN-475299	N71-18465*	c 14	NASA-CASE-NPO-10174
		US-PATENT-3,469,734		US-PATENT-CLASS-244-1			US-PATENT-APPL-SN-690163
N71-17609*	c 32	NASA-CASE-XLA-02332		US-PATENT-3,310,256			US-PATENT-CLASS-95-11
		US-PATENT-APPL-SN-388024	N71-17680*	NASA-CASE-XLA-00117			US-PATENT-3,520,238
		US-PATENT-CLASS-212-11		US-PATENT-APPL-SN-835153	N71-18481*	c 14	NASA-CASE-XLA-02758
		US-PATENT-3,276,602		US-PATENT-CLASS-220-1			US-PATENT-APPL-SN-759665
N71-17610*	c 33	NASA-CASE-XLA-00377		US-PATENT-2,996,212			US-PATENT-CLASS-73-4

N71-18482*	c 14	US-PATENT-3,531,978 NASA-CASE-XLA-07424 US-PATENT-APPL-SN-635326 US-PATENT-CLASS-313-7 US-PATENT-3,466,484	N71-18699*	c 14	US-PATENT-3,507,706 NASA-CASE-XLA-03273 US-PATENT-APPL-SN-487352 US-PATENT-CLASS-250-83.3 US-PATENT-3,458,702	N71-19433*	c 07	US-PATENT-3,517,318 NASA-CASE-MFS-13046 US-PATENT-APPL-SN-673228 US-PATENT-CLASS-178-6 US-PATENT-3,532,807
N71-18483*	c 14	NASA-CASE-XER-09519 US-PATENT-APPL-SN-676375 US-PATENT-CLASS-55-208 US-PATENT-3,469,375	N71-18701*	c 15	NASA-CASE-XMF-07587 US-PATENT-APPL-SN-649359 US-PATENT-CLASS-317-122 US-PATENT-3,448,346	N71-19435*	c 08	NASA-CASE-XGS-02612 US-PATENT-APPL-SN-502743 US-PATENT-CLASS-340-347 US-PATENT-3,509,558
N71-18578*	c 11	NASA-CASE-XAC-05902 US-PATENT-APPL-SN-662828 US-PATENT-CLASS-89-8 US-PATENT-3,465,638	N71-18720*	c 09	NASA-CASE-MS-12101 US-PATENT-APPL-SN-763705 US-PATENT-CLASS-343-718 US-PATENT-3,509,570	N71-19436*	c 07	NASA-CASE-XMF-09422 US-PATENT-APPL-SN-783378 US-PATENT-CLASS-174-35 US-PATENT-3,517,109
N71-18579*	c 15	NASA-CASE-XGS-04175 US-PATENT-APPL-SN-606464 US-PATENT-CLASS-72-364 US-PATENT-3,465,567	N71-18721*	c 09	NASA-CASE-XER-07894 US-PATENT-APPL-SN-644444 US-PATENT-CLASS-331-107 US-PATENT-3,509,491	N71-19437*	c 08	NASA-CASE-XGS-04768 US-PATENT-APPL-SN-598119 US-PATENT-CLASS-235-158 US-PATENT-3,508,039
N71-18580*	c 15	NASA-CASE-XNP-09698 US-PATENT-APPL-SN-698592 US-PATENT-CLASS-138-4 US-PATENT-CLASS-138-45 US-PATENT-CLASS-251-118 US-PATENT-CLASS-251-121 US-PATENT-3,532,128	N71-18722*	c 10	NASA-CASE-ERC-10046 US-PATENT-APPL-SN-793772 US-PATENT-CLASS-343-100 US-PATENT-3,501,764	N71-19438*	c 03	NASA-CASE-XGS-05432 US-PATENT-APPL-SN-549860 US-PATENT-CLASS-320-23 US-PATENT-3,426,263
N71-18594*	c 08	NASA-CASE-XAC-04031 US-PATENT-APPL-SN-538905 US-PATENT-CLASS-340-347 US-PATENT-3,533,098	N71-18723*	c 10	NASA-CASE-XNP-09450 US-PATENT-APPL-SN-640459 US-PATENT-CLASS-307-273 US-PATENT-3,501,649	N71-19439*	c 05	NASA-CASE-XMS-09571 US-PATENT-APPL-SN-678700 US-PATENT-CLASS-165-46 US-PATENT-3,425,487
N71-18595*	c 08	NASA-CASE-XGS-03303 US-PATENT-APPL-SN-520838 US-PATENT-CLASS-340-174 US-PATENT-3,501,752	N71-18724*	c 10	NASA-CASE-XLA-09371 US-PATENT-APPL-SN-568160 US-PATENT-CLASS-318-257 US-PATENT-3,504,258	N71-19440*	c 05	NASA-CASE-XMS-01177 US-PATENT-APPL-SN-516150 US-PATENT-CLASS-250-83 US-PATENT-3,427,454
N71-18598*	c 09	NASA-CASE-NPO-10066 US-PATENT-APPL-SN-681693 US-PATENT-CLASS-343-13 US-PATENT-3,447,155	N71-18751*	c 08	NASA-CASE-XLA-07732 US-PATENT-APPL-SN-641441 US-PATENT-CLASS-307-216 US-PATENT-3,512,009	N71-19449*	c 09	NASA-CASE-XFR-03107 US-PATENT-APPL-SN-507257 US-PATENT-CLASS-178-6 US-PATENT-3,458,651
N71-18599*	c 09	NASA-CASE-LAR-10372 US-PATENT-APPL-SN-730162 US-PATENT-CLASS-102-70.2 US-PATENT-3,500,747	N71-18752*	c 08	NASA-CASE-XMF-00663 US-PATENT-APPL-SN-205470 US-PATENT-CLASS-321-5 US-PATENT-3,521,143	N71-19466*	c 09	NASA-CASE-XGS-02818 US-PATENT-APPL-SN-502750 US-PATENT-CLASS-330-30 US-PATENT-3,466,560
N71-18600*	c 09	NASA-CASE-MS-12168-1 US-PATENT-APPL-SN-640154 US-PATENT-CLASS-312-296 US-PATENT-3,447,850	N71-18772*	c 10	NASA-CASE-GSC-10366-1 US-PATENT-APPL-SN-771523 US-PATENT-CLASS-318-138 US-PATENT-3,532,948	N71-19467*	c 10	NASA-CASE-XMF-08665 US-PATENT-APPL-SN-582609 US-PATENT-CLASS-325-63 US-PATENT-3,470,475
N71-18602*	c 08	NASA-CASE-XGS-04766 US-PATENT-APPL-SN-598120 US-PATENT-CLASS-235-175 US-PATENT-3,532,866	N71-18773*	c 11	NASA-CASE-XMF-07488 US-PATENT-APPL-SN-707495 US-PATENT-CLASS-35-12 US-PATENT-3,534,485	N71-19468*	c 10	NASA-CASE-XMS-05605-1 US-PATENT-APPL-SN-764812 US-PATENT-CLASS-178-69.5 US-PATENT-3,532,819
N71-18603*	c 12	NASA-CASE-ERC-10031 US-PATENT-APPL-SN-741461 US-PATENT-CLASS-40-28 US-PATENT-3,516,185	N71-18830*	c 09	NASA-CASE-XAC-10768 US-PATENT-APPL-SN-711970 US-PATENT-CLASS-250-83 US-PATENT-3,508,053	N71-19469*	c 10	NASA-CASE-XNP-00777 US-PATENT-APPL-SN-486573 US-PATENT-CLASS-329-122 US-PATENT-3,517,268
N71-18611*	c 31	NASA-CASE-MFS-20400 US-PATENT-APPL-SN-551694 US-PATENT-CLASS-152-11 US-PATENT-3,493,027	N71-18843*	c 09	NASA-CASE-XNP-03263 US-PATENT-APPL-SN-506908 US-PATENT-CLASS-340-146.1 US-PATENT-3,501,743	N71-19470*	c 09	NASA-CASE-XGS-05289 US-PATENT-APPL-SN-632104 US-PATENT-CLASS-331-113 US-PATENT-3,470,496
N71-18613*	c 15	NASA-CASE-XNP-02588 US-PATENT-APPL-SN-563644 US-PATENT-CLASS-219-91 US-PATENT-3,466,418	N71-19212*	c 21	NASA-CASE-MFS-20386 US-PATENT-APPL-SN-818349 US-PATENT-CLASS-356-28 US-PATENT-3,532,427	N71-19471*	c 10	NASA-CASE-XLE-03804 US-PATENT-APPL-SN-526631 US-PATENT-CLASS-307-235 US-PATENT-3,463,939
N71-18614*	c 16	NASA-CASE-XGS-03644 US-PATENT-APPL-SN-505320 US-PATENT-CLASS-331-94.5 US-PATENT-3,517,328	N71-19213*	c 15	NASA-CASE-MFS-14259 US-PATENT-APPL-SN-787410 US-PATENT-CLASS-138-43 US-PATENT-3,536,103	N71-19472*	c 10	NASA-CASE-XAC-04030 US-PATENT-APPL-SN-520839 US-PATENT-CLASS-328-1 US-PATENT-3,464,016
N71-18615*	c 12	NASA-CASE-XNP-09704 US-PATENT-APPL-SN-730701 US-PATENT-CLASS-137-594 US-PATENT-CLASS-138-46 US-PATENT-CLASS-251-127 US-PATENT-CLASS-251-333 US-PATENT-CLASS-251-342 US-PATENT-CLASS-251-61.1 US-PATENT-3,532,118	N71-19214*	c 15	NASA-CASE-MFS-20410 US-PATENT-APPL-SN-819599 US-PATENT-CLASS-244-1 US-PATENT-3,534,926	N71-19479*	c 09	NASA-CASE-XMS-04300 US-PATENT-APPL-SN-516158 US-PATENT-CLASS-350-275 US-PATENT-3,427,093
N71-18616*	c 15	NASA-CASE-XLA-07390 US-PATENT-APPL-SN-665681 US-PATENT-CLASS-72-53 US-PATENT-3,531,964	N71-19287*	c 02	NASA-CASE-GSC-10087-1 US-PATENT-APPL-SN-701679 US-PATENT-CLASS-343-112 US-PATENT-3,534,367	N71-19480*	c 09	NASA-CASE-XFR-05637 US-PATENT-APPL-SN-484855 US-PATENT-CLASS-235-194 US-PATENT-3,423,579
N71-18625*	c 14	NASA-CASE-NPO-10175 US-PATENT-APPL-SN-685787 US-PATENT-CLASS-137-505.12 US-PATENT-3,443,583	N71-19288*	c 08	NASA-CASE-NPO-10068 US-PATENT-APPL-SN-668989 US-PATENT-CLASS-340-172.5 US-PATENT-3,501,750	N71-19485*	c 15	NASA-CASE-MS-11010 US-PATENT-APPL-SN-605090 US-PATENT-CLASS-251-31 US-PATENT-3,447,774
N71-18692*	c 08	NASA-CASE-MFS-14322 US-PATENT-APPL-SN-646934 US-PATENT-CLASS-328-134 US-PATENT-3,501,701	N71-19417*	c 10	NASA-CASE-XMS-10984-1 US-PATENT-APPL-SN-605095 US-PATENT-CLASS-340-213.1 US-PATENT-3,533,093	N71-19486*	c 15	NASA-CASE-XMF-08522 US-PATENT-APPL-SN-640447 US-PATENT-CLASS-219-121 US-PATENT-3,474,220
N71-18693*	c 08	NASA-CASE-XGS-04765 US-PATENT-APPL-SN-577545 US-PATENT-CLASS-235-156 US-PATENT-3,508,036	N71-19418*	c 10	NASA-CASE-GSC-10041-1 US-PATENT-APPL-SN-684209 US-PATENT-CLASS-331-113 US-PATENT-3,458,833	N71-19489*	c 15	NASA-CASE-XMF-04680 US-PATENT-APPL-SN-634040 US-PATENT-CLASS-33-147 US-PATENT-3,425,131
N71-18694*	c 08	NASA-CASE-NPO-10201 US-PATENT-APPL-SN-691738 US-PATENT-CLASS-340-174 US-PATENT-3,509,551	N71-19420*	c 08	NASA-CASE-XNP-09453 US-PATENT-APPL-SN-640448 US-PATENT-CLASS-226-190 US-PATENT-3,507,436	N71-19493*	c 07	NASA-CASE-XKS-08485 US-PATENT-APPL-SN-649078 US-PATENT-CLASS-343-873 US-PATENT-3,509,578
N71-18698*	c 03	NASA-CASE-NPO-10373 US-PATENT-APPL-SN-718752 US-PATENT-CLASS-136-89	N71-19421*	c 10	NASA-CASE-XLA-08493 US-PATENT-APPL-SN-749148 US-PATENT-CLASS-324-72 US-PATENT-3,532,975	N71-19494*	c 11	NASA-CASE-MFS-10555 US-PATENT-APPL-SN-700984 US-PATENT-CLASS-35-12 US-PATENT-3,516,179
			N71-19431*	c 14	NASA-CASE-XGS-02439 US-PATENT-APPL-SN-487341 US-PATENT-CLASS-324-120 US-PATENT-3,422,352	N71-19516*	c 09	NASA-CASE-XNP-06937 US-PATENT-APPL-SN-640449 US-PATENT-CLASS-330-30 US-PATENT-3,501,712
			N71-19432*	c 08	NASA-CASE-XGS-02440 US-PATENT-APPL-SN-655677 US-PATENT-CLASS-328-42	N71-19544*	c 08	NASA-CASE-XGS-01230 US-PATENT-APPL-SN-356488 US-PATENT-CLASS-340-347

N71-19545*	c 03	US-PATENT-3,474,441 NASA-CASE-NPO-10821 US-PATENT-APPL-SN-670814 US-PATENT-CLASS-136-89 US-PATENT-3,466,198	N71-20439*	c 14	US-PATENT-3,461,721 NASA-CASE-XAC-04886-1 US-PATENT-APPL-SN-574290 US-PATENT-CLASS-73-142 US-PATENT-3,425,272	N71-20742*	c 18	US-PATENT-3,360,980 NASA-CASE-XMS-02952 US-PATENT-APPL-SN-519160 US-PATENT-CLASS-55-158 US-PATENT-3,355,861
N71-19547*	c 10	NASA-CASE-XGS-03058 US-PATENT-APPL-SN-568987 US-PATENT-CLASS-307-289 US-PATENT-3,517,221	N71-20440*	c 15	NASA-CASE-XNP-09770 US-PATENT-APPL-SN-700120 US-PATENT-CLASS-209-10 US-PATENT-3,472,372	N71-20743*	c 17	NASA-CASE-XMF-02786 US-PATENT-APPL-SN-466873 US-PATENT-CLASS-75-142 US-PATENT-3,347,665
N71-19568*	c 14	NASA-CASE-MSG-10966 US-PATENT-APPL-SN-665676 US-PATENT-CLASS-250-203 US-PATENT-3,421,004	N71-20441*	c 15	NASA-CASE-XMS-06329-1 US-PATENT-APPL-SN-688742 US-PATENT-CLASS-73-141 US-PATENT-3,472,069	N71-20747*	c 25	NASA-CASE-XLE-02578 US-PATENT-APPL-SN-469012 US-PATENT-CLASS-313-271 US-PATENT-3,356,885
N71-19569*	c 15	NASA-CASE-XLA-05749 US-PATENT-APPL-SN-621714 US-PATENT-CLASS-137-582 US-PATENT-3,426,791	N71-20442*	c 14	NASA-CASE-MFS-11537 US-PATENT-APPL-SN-636878 US-PATENT-CLASS-23-254 US-PATENT-3,472,629	N71-20782*	c 10	NASA-CASE-XGS-01784 US-PATENT-APPL-SN-396444 US-PATENT-CLASS-250-206 US-PATENT-3,348,053
N71-19570*	c 15	NASA-CASE-XLE-05130-2 US-PATENT-APPL-SN-700586 US-PATENT-CLASS-277-25 US-PATENT-3,466,052	N71-20443*	c 15	NASA-CASE-MFS-07369 US-PATENT-APPL-SN-640462 US-PATENT-CLASS-29-492 US-PATENT-3,473,216	N71-20791*	c 07	NASA-CASE-XNP-05254 US-PATENT-APPL-SN-472372 US-PATENT-CLASS-325-31 US-PATENT-3,350,643
N71-19610*	c 09	NASA-CASE-NPO-10037 US-PATENT-APPL-SN-700987 US-PATENT-CLASS-200-152 US-PATENT-3,470,342	N71-20445*	c 09	NASA-CASE-XNP-09775 US-PATENT-APPL-SN-688247 US-PATENT-CLASS-333-96 US-PATENT-3,474,357	N71-20813*	c 15	NASA-CASE-XMS-02184 US-PATENT-APPL-SN-608247 US-PATENT-CLASS-248-27 US-PATENT-3,361,400
N71-19687*	c 08	NASA-CASE-XNP-04780 US-PATENT-APPL-SN-455477 US-PATENT-CLASS-340-347 US-PATENT-3,430,227	N71-20446*	c 09	NASA-CASE-XLE-04250 US-PATENT-APPL-SN-621098 US-PATENT-CLASS-310-54 US-PATENT-3,447,003	N71-20814*	c 07	NASA-CASE-XNP-01306 US-PATENT-APPL-SN-343426 US-PATENT-CLASS-179-15 US-PATENT-3,364,311
N71-19763*	c 08	NASA-CASE-XAC-06302 US-PATENT-APPL-SN-574284 US-PATENT-CLASS-325-60 US-PATENT-3,456,193	N71-20447*	c 09	NASA-CASE-XLA-02850 US-PATENT-APPL-SN-556784 US-PATENT-CLASS-307-267 US-PATENT-3,473,050	N71-20815*	c 12	NASA-CASE-XMF-01779 US-PATENT-APPL-SN-521999 US-PATENT-CLASS-346-1 US-PATENT-3,357,024
N71-19773*	c 07	NASA-CASE-GSC-10373-1 US-PATENT-APPL-SN-712658 US-PATENT-CLASS-325-4 US-PATENT-3,532,985	N71-20448*	c 10	NASA-CASE-XNP-03744 US-PATENT-APPL-SN-547677 US-PATENT-CLASS-318-314 US-PATENT-3,424,966	N71-20816*	c 09	NASA-CASE-XAC-01677 US-PATENT-APPL-SN-596338 US-PATENT-CLASS-73-147 US-PATENT-3,360,988
N71-19854*	c 07	NASA-CASE-GSC-10553-1 US-PATENT-APPL-SN-820963 US-PATENT-CLASS-343-100 US-PATENT-3,534,365	N71-20461*	c 14	NASA-CASE-XNP-09763 US-PATENT-APPL-SN-600682 US-PATENT-CLASS-117-6 US-PATENT-3,433,662	N71-20834*	c 33	NASA-CASE-XMS-02009 US-PATENT-APPL-SN-455352 US-PATENT-CLASS-141-5 US-PATENT-3,349,814
N71-20268*	c 05	NASA-CASE-XLA-02898 US-PATENT-APPL-SN-429932 US-PATENT-CLASS-128-1 US-PATENT-3,461,855	N71-20491*	c 03	NASA-CASE-XGS-05434 US-PATENT-APPL-SN-667636 US-PATENT-CLASS-136-182 US-PATENT-3,463,673	N71-20841*	c 10	NASA-CASE-XGS-01222 US-PATENT-APPL-SN-354182 US-PATENT-CLASS-325-305 US-PATENT-3,348,152
N71-20273*	c 03	NASA-CASE-NPO-10188 US-PATENT-APPL-SN-681687 US-PATENT-CLASS-244-1 US-PATENT-3,473,758	N71-20492*	c 03	NASA-CASE-XLE-04787 US-PATENT-APPL-SN-551846 US-PATENT-CLASS-136-89 US-PATENT-3,434,885	N71-20842*	c 09	NASA-CASE-XNP-05381 US-PATENT-APPL-SN-568352 US-PATENT-CLASS-338-82 US-PATENT-3,350,671
N71-20330*	c 28	NASA-CASE-XLE-103477-1 US-PATENT-APPL-SN-466390 US-PATENT-CLASS-60-39.36 US-PATENT-3,433,015	N71-20518*	c 24	NASA-CASE-XNP-02592 US-PATENT-APPL-SN-484490 US-PATENT-CLASS-324-33 US-PATENT-3,430,131	N71-20851*	c 09	NASA-CASE-XNP-04732 US-PATENT-APPL-SN-557584 US-PATENT-CLASS-339-177 US-PATENT-3,358,264
N71-20393*	c 15	NASA-CASE-MFS-06074 US-PATENT-APPL-SN-688743 US-PATENT-CLASS-228-9 US-PATENT-3,458,104	N71-20563*	c 25	NASA-CASE-XLA-06232- US-PATENT-APPL-SN-612740 US-PATENT-CLASS-324-58.5 US-PATENT-3,473,116	N71-20852*	c 10	NASA-CASE-XGS-03502 US-PATENT-APPL-SN-584066 US-PATENT-CLASS-331-17 US-PATENT-3,361,985
N71-20395*	c 15	NASA-CASE-XMF-06065 US-PATENT-APPL-SN-665679 US-PATENT-CLASS-219-275 US-PATENT-3,466,424	N71-20569*	c 09	NASA-CASE-XMS-08589-1 US-PATENT-APPL-SN-544899 US-PATENT-CLASS-324-57 US-PATENT-3,434,050	N71-20864*	c 09	NASA-CASE-XGS-03501 US-PATENT-APPL-SN-576521 US-PATENT-CLASS-343-18 US-PATENT-3,359,555
N71-20396*	c 31	NASA-CASE-XMF-08523 US-PATENT-APPL-SN-645563 US-PATENT-CLASS-244-1 US-PATENT-3,465,986	N71-20570*	c 02	NASA-CASE-XAC-08972 US-PATENT-APPL-SN-700174 US-PATENT-CLASS-244-76 US-PATENT-3,472,470	N71-20895*	c 03	NASA-CASE-XNP-00826 US-PATENT-APPL-SN-327163 US-PATENT-CLASS-136-89 US-PATENT-3,346,419
N71-20400*	c 16	NASA-CASE-MFS-11279 US-PATENT-APPL-SN-628094 US-PATENT-CLASS-219-121 US-PATENT-3,472,998	N71-20571*	c 08	NASA-CASE-XGS-04987 US-PATENT-APPL-SN-619908 US-PATENT-CLASS-315-24 US-PATENT-3,437,874	N71-20896*	c 12	NASA-CASE-XNP-02251 US-PATENT-APPL-SN-432030 US-PATENT-CLASS-321-48 US-PATENT-3,337,790
N71-20407*	c 03	NASA-CASE-NPO-10194 US-PATENT-APPL-SN-668249 US-PATENT-CLASS-136-182 US-PATENT-3,460,995	N71-20658*	c 09	NASA-CASE-XMS-03454 US-PATENT-APPL-SN-425363 US-PATENT-CLASS-343-915 US-PATENT-3,360,798	N71-20904*	c 03	NASA-CASE-XLE-01645 US-PATENT-APPL-SN-342574 US-PATENT-CLASS-136-86 US-PATENT-3,357,862
N71-20427*	c 14	NASA-CASE-XMS-13052 US-PATENT-APPL-SN-561223 US-PATENT-CLASS-62-268 US-PATENT-3,455,121	N71-20705*	c 09	NASA-CASE-XMF-01599 US-PATENT-APPL-SN-381940 US-PATENT-CLASS-117-212 US-PATENT-3,359,132	N71-20905*	c 06	NASA-CASE-XMF-02584 US-PATENT-APPL-SN-506135 US-PATENT-CLASS-260-2 US-PATENT-3,346,515
N71-20428*	c 14	NASA-CASE-XGS-04879 US-PATENT-APPL-SN-541399 US-PATENT-CLASS-324-5 US-PATENT-3,443,208	N71-20717*	c 06	NASA-CASE-XMF-04133 US-PATENT-APPL-SN-554949 US-PATENT-CLASS-260-2 US-PATENT-3,354,098	N71-20942*	c 28	NASA-CASE-XNP-04389 US-PATENT-APPL-SN-523511 US-PATENT-CLASS-60-265 US-PATENT-3,353,359
N71-20429*	c 14	NASA-CASE-XLE-05260 US-PATENT-APPL-SN-674355 US-PATENT-CLASS-73-117.4 US-PATENT-3,463,001	N71-20718*	c 05	NASA-CASE-XMS-04625 US-PATENT-APPL-SN-519161 US-PATENT-CLASS-244-122 US-PATENT-3,356,320	N71-21006*	c 14	NASA-CASE-XLA-01832 US-PATENT-APPL-SN-517858 US-PATENT-CLASS-346-50 US-PATENT-3,354,462
N71-20430*	c 14	NASA-CASE-XLA-03645 US-PATENT-APPL-SN-600266 US-PATENT-CLASS-250-83 US-PATENT-3,450,878	N71-20739*	c 15	NASA-CASE-XGS-02011 US-PATENT-APPL-SN-502693 US-PATENT-CLASS-308-9 US-PATENT-3,359,046	N71-21007*	c 14	NASA-CASE-XMS-06236 US-PATENT-APPL-SN-482670 US-PATENT-CLASS-73-290 US-PATENT-3,355,948
N71-20435*	c 14	NASA-CASE-XMS-06767-1 US-PATENT-APPL-SN-716795 US-PATENT-CLASS-73-422 US-PATENT-3,438,263	N71-20740*	c 15	NASA-CASE-XLA-01808 US-PATENT-APPL-SN-517158 US-PATENT-CLASS-74-471 US-PATENT-3,364,777	N71-21042*	c 08	NASA-CASE-XGS-01021 US-PATENT-APPL-SN-279646 US-PATENT-CLASS-340-174.1 US-PATENT-3,327,298
N71-20436*	c 12	NASA-CASE-LAR-11138 US-PATENT-APPL-SN-694317 US-PATENT-CLASS-73-147.	N71-20741*	c 14	NASA-CASE-XMS-01618 US-PATENT-APPL-SN-418362 US-PATENT-CLASS-73-29	N71-21045*	c 32	NASA-CASE-XLA-01731 US-PATENT-APPL-SN-425365 US-PATENT-CLASS-52-2

N71-21060*	c 15	US-PATENT-3,364,631 NASA-CASE-XLA-03660 US-PATENT-APPL-SN-482307 US-PATENT-CLASS-95-53 US-PATENT-3,361,045	N71-21483*	c 10	US-PATENT-3,345,866 NASA-CASE-XGS-01155 US-PATENT-APPL-SN-557871 US-PATENT-CLASS-343-16 US-PATENT-3,344,425	N71-22706*	c 15	US-PATENT-3,341,977 NASA-CASE-XMS-09310 US-PATENT-APPL-SN-655724 US-PATENT-CLASS-137-496 US-PATENT-3,384,111
N71-21064*	c 31	NASA-CASE-XGS-02554 US-PATENT-APPL-SN-504266 US-PATENT-CLASS-244-1 US-PATENT-3,350,034	N71-21489*	c 15	NASA-CASE-XNP-06914 US-PATENT-APPL-SN-590147 US-PATENT-CLASS-85-33 US-PATENT-3,352,192	N71-22707*	c 08	NASA-CASE-XNP-04067 US-PATENT-APPL-SN-466875 US-PATENT-CLASS-340-172.5 US-PATENT-3,369,222
N71-21068*	c 18	NASA-CASE-XNP-02888 US-PATENT-APPL-SN-409126 US-PATENT-CLASS-239-265.11 US-PATENT-3,347,465	N71-21493*	c 28	NASA-CASE-XLA-10450 US-PATENT-APPL-SN-594587 US-PATENT-CLASS-239-265.19 US-PATENT-3,347,466	N71-22710*	c 08	NASA-CASE-XNP-02778 US-PATENT-APPL-SN-508170 US-PATENT-CLASS-340-172.5 US-PATENT-3,369,223
N71-21072*	c 14	NASA-CASE-XAC-02981 US-PATENT-APPL-SN-464879 US-PATENT-CLASS-73-398 US-PATENT-3,352,157	N71-21507*	c 33	NASA-CASE-XLE-04603 US-PATENT-APPL-SN-638194 US-PATENT-CLASS-60-243 US-PATENT-3,347,046	N71-22713*	c 15	NASA-CASE-XLA-03492 US-PATENT-APPL-SN-395348 US-PATENT-CLASS-156-60 US-PATENT-3,342,653
N71-21076*	c 15	NASA-CASE-XMS-03745 US-PATENT-APPL-SN-534295 US-PATENT-CLASS-24-263 US-PATENT-3,346,929	N71-21528*	c 15	NASA-CASE-XLA-01446 US-PATENT-APPL-SN-400613 US-PATENT-CLASS-53-102 US-PATENT-3,336,725	N71-22721*	c 15	NASA-CASE-XMF-03212 US-PATENT-APPL-SN-577549 US-PATENT-CLASS-55-418 US-PATENT-3,385,036
N71-21078*	c 15	NASA-CASE-XNP-03459 US-PATENT-APPL-SN-457879 US-PATENT-CLASS-29-495 US-PATENT-3,357,093	N71-21529*	c 15	NASA-CASE-XGS-02422 US-PATENT-APPL-SN-493943 US-PATENT-CLASS-74-126 US-PATENT-3,331,255	N71-22722*	c 15	NASA-CASE-XMS-04292 US-PATENT-APPL-SN-517157 US-PATENT-CLASS-82-14 US-PATENT-3,373,640
N71-21079*	c 14	NASA-CASE-XLA-03102 US-PATENT-APPL-SN-576195 US-PATENT-CLASS-33-31 US-PATENT-3,364,578	N71-21530*	c 15	NASA-CASE-XMS-03722 US-PATENT-APPL-SN-487934 US-PATENT-CLASS-267-64 US-PATENT-3,330,549	N71-22723*	c 15	NASA-CASE-XMF-01083 US-PATENT-APPL-SN-432028 US-PATENT-CLASS-72-83 US-PATENT-3,340,713
N71-21082*	c 14	NASA-CASE-XGS-02629 US-PATENT-APPL-SN-500435 US-PATENT-CLASS-244-1 US-PATENT-3,350,033	N71-21531*	c 15	NASA-CASE-XNP-02341 US-PATENT-APPL-SN-432025 US-PATENT-CLASS-52-127 US-PATENT-3,330,082	N71-22748*	c 05	NASA-CASE-XMS-04170 US-PATENT-APPL-SN-482311 US-PATENT-CLASS-9-312 US-PATENT-3,343,189
N71-21088*	c 14	NASA-CASE-XNP-06957 US-PATENT-APPL-SN-406097 US-PATENT-CLASS-250-83.3 US-PATENT-3,348,048	N71-21536*	c 15	NASA-CASE-XMS-06876 US-PATENT-APPL-SN-605100 US-PATENT-CLASS-72-34 US-PATENT-3,345,840	N71-22749*	c 08	NASA-CASE-XNP-02748 US-PATENT-APPL-SN-420245 US-PATENT-CLASS-340-146.1 US-PATENT-3,373,404
N71-21089*	c 12	NASA-CASE-XMS-01905 US-PATENT-APPL-SN-280580 US-PATENT-CLASS-141-91 US-PATENT-3,331,404	N71-21583*	c 09	NASA-CASE-XLE-02008 US-PATENT-APPL-SN-487342 US-PATENT-CLASS-338-64 US-PATENT-3,329,918	N71-22750*	c 07	NASA-CASE-XNP-01735 US-PATENT-APPL-SN-408438 US-PATENT-CLASS-343-786 US-PATENT-3,373,431
N71-21090*	c 14	NASA-CASE-XLE-00787 US-PATENT-APPL-SN-330210 US-PATENT-CLASS-324-33 US-PATENT-3,346,806	N71-21586*	c 33	NASA-CASE-XLA-01794 US-PATENT-APPL-SN-464880 US-PATENT-CLASS-73-86 US-PATENT-3,357,237	N71-22752*	c 14	NASA-CASE-XMF-01974 US-PATENT-APPL-SN-568354 US-PATENT-CLASS-73-419 US-PATENT-3,383,922
N71-21091*	c 14	NASA-CASE-XNP-02983 US-PATENT-APPL-SN-407599 US-PATENT-CLASS-73-88.5 US-PATENT-3,350,926	N71-21651*	c 18	NASA-CASE-XMF-01402 US-PATENT-APPL-SN-328140 US-PATENT-CLASS-161-68 US-PATENT-3,346,442	N71-22765*	c 14	NASA-CASE-XLA-00934 US-PATENT-APPL-SN-326298 US-PATENT-CLASS-73-84 US-PATENT-3,339,404
N71-21177*	c 15	NASA-CASE-XAC-06956 US-PATENT-APPL-SN-538166 US-PATENT-CLASS-259-71 US-PATENT-3,347,531	N71-21688*	c 21	NASA-CASE-XMF-00684 US-PATENT-APPL-SN-260087 US-PATENT-CLASS-235-150.25 US-PATENT-3,331,951	N71-22792*	c 33	NASA-CASE-XLA-01243 US-PATENT-APPL-SN-538911 US-PATENT-CLASS-244-1 US-PATENT-3,384,324
N71-21179*	c 15	NASA-CASE-XLA-01401 US-PATENT-APPL-SN-382976 US-PATENT-CLASS-235-61.6 US-PATENT-3,346,724	N71-21693*	c 25	NASA-CASE-XLA-03103 US-PATENT-APPL-SN-531642 US-PATENT-CLASS-315-111 US-PATENT-3,333,152	N71-22796*	c 09	NASA-CASE-XKS-03381 US-PATENT-APPL-SN-437611 US-PATENT-CLASS-317-9 US-PATENT-3,340,430
N71-21234*	c 15	NASA-CASE-XKS-02582 US-PATENT-APPL-SN-424153 US-PATENT-CLASS-251-172 US-PATENT-3,327,991	N71-21694*	c 25	NASA-CASE-XLE-02902 US-PATENT-APPL-SN-485957 US-PATENT-CLASS-60-202 US-PATENT-3,336,748	N71-22797*	c 15	NASA-CASE-XLE-01092 US-PATENT-APPL-SN-422098 US-PATENT-CLASS-72-253 US-PATENT-3,342,055
N71-21311*	c 15	NASA-CASE-XNP-03637 US-PATENT-APPL-SN-453232 US-PATENT-CLASS-310-9.1 US-PATENT-3,359,435	N71-21708*	c 21	NASA-CASE-XLA-02551 US-PATENT-APPL-SN-416940 US-PATENT-CLASS-244-1 US-PATENT-3,329,375	N71-22798*	c 15	NASA-CASE-XMS-04178 US-PATENT-APPL-SN-511299 US-PATENT-CLASS-83-467 US-PATENT-3,367,224
N71-21403*	c 15	NASA-CASE-XMF-03988 US-PATENT-APPL-SN-578923 US-PATENT-CLASS-252-26 US-PATENT-3,361,666	N71-21744*	c 15	NASA-CASE-XGS-04227 US-PATENT-APPL-SN-545805 US-PATENT-CLASS-74-409 US-PATENT-3,359,819	N71-22799*	c 15	NASA-CASE-XMF-03511 US-PATENT-APPL-SN-540414 US-PATENT-CLASS-90-12 US-PATENT-3,386,337
N71-21404*	c 15	NASA-CASE-XLA-01262 US-PATENT-APPL-SN-386800 US-PATENT-CLASS-156-3 US-PATENT-3,356,549	N71-21819*	c 27	NASA-CASE-XLE-03494 US-PATENT-APPL-SN-529593 US-PATENT-CLASS-60-251 US-PATENT-3,345,822	N71-22874*	c 15	NASA-CASE-XLA-00188 US-PATENT-APPL-SN-254847 US-PATENT-CLASS-102-49.5 US-PATENT-3,368,486
N71-21449*	c 09	NASA-CASE-XMS-01991 US-PATENT-APPL-SN-410326 US-PATENT-CLASS-323-22 US-PATENT-3,344,340	N71-21821*	c 23	NASA-CASE-XNP-01059 US-PATENT-APPL-SN-393464 US-PATENT-CLASS-250-232 US-PATENT-3,354,320	N71-22875*	c 11	NASA-CASE-XAC-05333 US-PATENT-APPL-SN-546148 US-PATENT-CLASS-119-15 US-PATENT-3,367,308
N71-21473*	c 10	NASA-CASE-XGS-08679 US-PATENT-APPL-SN-312443 US-PATENT-CLASS-343-113 US-PATENT-3,340,532	N71-21822*	c 28	NASA-CASE-XNP-04124 US-PATENT-APPL-SN-498168 US-PATENT-CLASS-60-202 US-PATENT-3,345,820	N71-22877*	c 15	NASA-CASE-XMF-10040 US-PATENT-APPL-SN-592680 US-PATENT-CLASS-188-1 US-PATENT-3,381,778
N71-21474*	c 11	NASA-CASE-XMS-04798 US-PATENT-APPL-SN-480210 US-PATENT-CLASS-35-12 US-PATENT-3,330,052	N71-21824*	c 26	NASA-CASE-XNP-05429 US-PATENT-APPL-SN-578928 US-PATENT-CLASS-103-1 US-PATENT-3,361,067	N71-22878*	c 15	NASA-CASE-XMS-04545 US-PATENT-APPL-SN-508601 US-PATENT-CLASS-73-144 US-PATENT-3,381,527
N71-21475*	c 11	NASA-CASE-XLA-05378 US-PATENT-APPL-SN-484156 US-PATENT-CLASS-73-343 US-PATENT-3,331,246	N71-21881*	c 31	NASA-CASE-XNP-02595 US-PATENT-APPL-SN-502709 US-PATENT-CLASS-244-1 US-PATENT-3,333,788	N71-22880*	c 21	NASA-CASE-XLA-00793 US-PATENT-APPL-SN-369334 US-PATENT-CLASS-88-1 US-PATENT-3,381,569
N71-21476*	c 07	NASA-CASE-XNP-00746 US-PATENT-APPL-SN-271824 US-PATENT-CLASS-235-181 US-PATENT-3,359,409	N71-21882*	c 23	NASA-CASE-XNP-03853 US-PATENT-APPL-SN-578931 US-PATENT-CLASS-88-24 US-PATENT-3,359,855	N71-22881*	c 23	NASA-CASE-XLE-04222 US-PATENT-APPL-SN-512559 US-PATENT-CLASS-220-9 US-PATENT-3,379,330
N71-21481*	c 11	NASA-CASE-XLA-01326 US-PATENT-APPL-SN-422097 US-PATENT-CLASS-73-147	N71-22705*	c 15	NASA-CASE-XGS-02884 US-PATENT-APPL-SN-432433 US-PATENT-CLASS-51-57	N71-22888*	c 09	NASA-CASE-XLA-03114 US-PATENT-APPL-SN-440039 US-PATENT-CLASS-343-708



N71-22890*	c 33	US-PATENT-3,373,430 NASA-CASE-XLA-07728 US-PATENT-APPL-SN-538908 US-PATENT-CLASS-165-96 US-PATENT-3,374,830	N71-22993*	c 14	US-PATENT-3,377,845 NASA-CASE-XMS-05365 US-PATENT-APPL-SN-515484 US-PATENT-CLASS-310-8.5 US-PATENT-3,387,149	N71-23037*	c 14	US-PATENT-3,383,903 NASA-CASE-XAC-01662 US-PATENT-APPL-SN-385520 US-PATENT-CLASS-324-117 US-PATENT-3,365,665
N71-22894*	c 18	NASA-CASE-XLE-03925 US-PATENT-APPL-SN-514407 US-PATENT-CLASS-75-204 US-PATENT-3,337,337	N71-22994*	c 15	NASA-CASE-XFR-05421 US-PATENT-APPL-SN-567686 US-PATENT-CLASS-24-126 US-PATENT-3,378,892	N71-23039*	c 14	NASA-CASE-XNP-01659 US-PATENT-APPL-SN-410332 US-PATENT-CLASS-136-230 US-PATENT-3,377,200
N71-22895*	c 16	NASA-CASE-XMS-04269 US-PATENT-APPL-SN-516793 US-PATENT-CLASS-250-199 US-PATENT-3,341,708	N71-22995*	c 14	NASA-CASE-XNP-08680 US-PATENT-APPL-SN-562444 US-PATENT-CLASS-73-9 US-PATENT-3,376,730	N71-23040*	c 14	NASA-CASE-XNP-05535 US-PATENT-APPL-SN-487939 US-PATENT-CLASS-244-1 US-PATENT-3,339,863
N71-22896*	c 05	NASA-CASE-XMS-02399 US-PATENT-APPL-SN-492344 US-PATENT-CLASS-128-2.06 US-PATENT-3,384,075	N71-22996*	c 14	NASA-CASE-XGS-01331 US-PATENT-APPL-SN-445807 US-PATENT-CLASS-250-218 US-PATENT-3,388,258	N71-23041*	c 14	NASA-CASE-XNP-01056 US-PATENT-APPL-SN-377146 US-PATENT-CLASS-250-41.9 US-PATENT-3,340,395
N71-22897*	c 08	NASA-CASE-XNP-01753 US-PATENT-APPL-SN-423412 US-PATENT-CLASS-235-92 US-PATENT-3,374,339	N71-22997*	c 15	NASA-CASE-XNP-01641 US-PATENT-APPL-SN-464885 US-PATENT-CLASS-308-10 US-PATENT-3,378,315	N71-23042*	c 11	NASA-CASE-XMS-02930 US-PATENT-APPL-SN-417253 US-PATENT-CLASS-250-52 US-PATENT-3,340,397
N71-22961*	c 10	NASA-CASE-XMS-02159 US-PATENT-APPL-SN-534564 US-PATENT-CLASS-323-56 US-PATENT-3,365,657	N71-22998*	c 18	NASA-CASE-XGS-02435 US-PATENT-APPL-SN-392965 US-PATENT-CLASS-106-40 US-PATENT-3,382,082	N71-23043*	c 26	NASA-CASE-XNP-01959 US-PATENT-APPL-SN-410330 US-PATENT-CLASS-136-89 US-PATENT-3,396,057
N71-22962*	c 10	NASA-CASE-XGS-05441 US-PATENT-APPL-SN-505321 US-PATENT-CLASS-328-233 US-PATENT-3,366,886	N71-22999*	c 09	NASA-CASE-XLA-00781 US-PATENT-APPL-SN-307271 US-PATENT-CLASS-88-14 US-PATENT-3,364,813	N71-23046*	c 17	NASA-CASE-XNP-04338 US-PATENT-APPL-SN-461765 US-PATENT-CLASS-29-182.2 US-PATENT-3,421,864
N71-22964*	c 14	NASA-CASE-XLE-02024 US-PATENT-APPL-SN-422099 US-PATENT-CLASS-73-15 US-PATENT-3,365,930	N71-23001*	c 07	NASA-CASE-XGS-01812 US-PATENT-APPL-SN-392973 US-PATENT-CLASS-340-174.1 US-PATENT-3,380,042	N71-23047*	c 18	NASA-CASE-XLA-01995 US-PATENT-APPL-SN-411945 US-PATENT-CLASS-148-6.16 US-PATENT-3,395,053
N71-22965*	c 14	NASA-CASE-XGS-02319 US-PATENT-APPL-SN-496205 US-PATENT-CLASS-73-117 US-PATENT-3,365,941	N71-23006*	c 03	NASA-CASE-XGS-02631 US-PATENT-APPL-SN-425972 US-PATENT-CLASS-136-133 US-PATENT-3,340,099	N71-23048*	c 15	NASA-CASE-XNP-03972 US-PATENT-APPL-SN-502710 US-PATENT-CLASS-184-1 US-PATENT-3,367,445
N71-22968*	c 31	NASA-CASE-XLA-02050 US-PATENT-APPL-SN-568067 US-PATENT-CLASS-244-1 US-PATENT-3,386,685	N71-23007*	c 02	NASA-CASE-XMF-04169 US-PATENT-APPL-SN-424156 US-PATENT-CLASS-73-189 US-PATENT-3,340,732	N71-23049*	c 15	NASA-CASE-XMF-01049 US-PATENT-APPL-SN-506137 US-PATENT-CLASS-339-5 US-PATENT-3,375,479
N71-22969*	c 31	NASA-CASE-XLA-03132 US-PATENT-APPL-SN-610728 US-PATENT-CLASS-244-1 US-PATENT-3,386,686	N71-23008*	c 31	NASA-CASE-XLA-04804 US-PATENT-APPL-SN-577546 US-PATENT-CLASS-102-49.5 US-PATENT-3,384,016	N71-23050*	c 15	NASA-CASE-XMF-01730 US-PATENT-APPL-SN-517869 US-PATENT-CLASS-228-8 US-PATENT-3,373,914
N71-22974*	c 03	NASA-CASE-XGS-02630 US-PATENT-APPL-SN-494287 US-PATENT-CLASS-136-132 US-PATENT-3,382,107	N71-23009*	c 31	NASA-CASE-XGS-02607 US-PATENT-APPL-SN-474531 US-PATENT-CLASS-244-1 US-PATENT-3,341,151	N71-23051*	c 15	NASA-CASE-XAC-01158 US-PATENT-APPL-SN-420250 US-PATENT-CLASS-137-625.5 US-PATENT-3,369,564
N71-22975*	c 06	NASA-CASE-XNP-07659 US-PATENT-APPL-SN-567806 US-PATENT-CLASS-18-26 US-PATENT-3,381,339	N71-23015*	c 09	NASA-CASE-XGS-02751 US-PATENT-APPL-SN-491059 US-PATENT-CLASS-307-288 US-PATENT-3,374,366	N71-23052*	c 15	NASA-CASE-XLA-03497 US-PATENT-APPL-SN-392992 US-PATENT-CLASS-156-285 US-PATENT-3,373,069
N71-22982*	c 15	NASA-CASE-XLA-02809 US-PATENT-APPL-SN-554897 US-PATENT-CLASS-308-176 US-PATENT-3,397,932	N71-23021*	c 09	NASA-CASE-XAC-02807 US-PATENT-APPL-SN-456581 US-PATENT-CLASS-324-120 US-PATENT-3,384,820	N71-23080*	c 05	NASA-CASE-XLE-02531 US-PATENT-APPL-SN-425096 US-PATENT-CLASS-312-1 US-PATENT-3,337,279
N71-22983*	c 28	NASA-CASE-XMF-06926 US-PATENT-APPL-SN-537615 US-PATENT-CLASS-60-258 US-PATENT-3,336,754	N71-23022*	c 15	NASA-CASE-XMS-01625 US-PATENT-APPL-SN-418933 US-PATENT-CLASS-136-86 US-PATENT-3,389,017	N71-23081*	c 28	NASA-CASE-XNP-02923 US-PATENT-APPL-SN-494280 US-PATENT-CLASS-60-202 US-PATENT-3,367,114
N71-22984*	c 07	NASA-CASE-XMS-04312 US-PATENT-APPL-SN-521754 US-PATENT-CLASS-343-708 US-PATENT-3,384,895	N71-23023*	c 15	NASA-CASE-XMF-04042 US-PATENT-APPL-SN-605518 US-PATENT-CLASS-55-204 US-PATENT-3,397,512	N71-23084*	c 10	NASA-CASE-XLA-01219 US-PATENT-APPL-SN-402978 US-PATENT-CLASS-332-1 US-PATENT-3,366,894
N71-22985*	c 09	NASA-CASE-XMF-03934 US-PATENT-APPL-SN-530958 US-PATENT-CLASS-250-83.3 US-PATENT-3,379,885	N71-23024*	c 15	NASA-CASE-XNP-01747 US-PATENT-APPL-SN-413661 US-PATENT-CLASS-251-148 US-PATENT-3,341,169	N71-23085*	c 33	NASA-CASE-XFR-03802 US-PATENT-APPL-SN-460877 US-PATENT-CLASS-73-190 US-PATENT-3,367,182
N71-22986*	c 10	NASA-CASE-XMF-01892 US-PATENT-APPL-SN-464878 US-PATENT-CLASS-328-167 US-PATENT-3,375,451	N71-23025*	c 15	NASA-CASE-XNP-08877 US-PATENT-APPL-SN-574282 US-PATENT-CLASS-62-6 US-PATENT-3,367,121	N71-23086*	c 15	NASA-CASE-XMS-04533 US-PATENT-APPL-SN-557016 US-PATENT-CLASS-202-234 US-PATENT-3,397,117
N71-22987*	c 09	NASA-CASE-XLE-04788 US-PATENT-APPL-SN-537617 US-PATENT-CLASS-313-352 US-PATENT-3,396,303	N71-23026*	c 07	NASA-CASE-XNP-02791 US-PATENT-APPL-SN-390251 US-PATENT-CLASS-178-6 US-PATENT-3,383,461	N71-23087*	c 14	NASA-CASE-XNP-03918 US-PATENT-APPL-SN-510475 US-PATENT-CLASS-73-88.5 US-PATENT-3,388,590
N71-22988*	c 09	NASA-CASE-XGS-03304 US-PATENT-APPL-SN-483886 US-PATENT-CLASS-73-1 US-PATENT-3,381,517	N71-23027*	c 09	NASA-CASE-XNP-01960 US-PATENT-APPL-SN-438135 US-PATENT-CLASS-29-572 US-PATENT-3,340,599	N71-23088*	c 18	NASA-CASE-XNP-00597 US-PATENT-APPL-SN-410325 US-PATENT-CLASS-65-7 US-PATENT-3,337,315
N71-22989*	c 14	NASA-CASE-XLA-01551 US-PATENT-APPL-SN-422092 US-PATENT-CLASS-73-190 US-PATENT-3,382,714	N71-23029*	c 10	NASA-CASE-XGS-03427 US-PATENT-APPL-SN-500446 US-PATENT-CLASS-307-265 US-PATENT-3,383,524	N71-23092*	c 14	NASA-CASE-XLA-01530 US-PATENT-APPL-SN-420466 US-PATENT-CLASS-188-1 US-PATENT-3,337,004
N71-22990*	c 14	NASA-CASE-XMS-04201 US-PATENT-APPL-SN-507254 US-PATENT-CLASS-324-70 US-PATENT-3,379,974	N71-23030*	c 11	NASA-CASE-XNP-03578 US-PATENT-APPL-SN-445292 US-PATENT-CLASS-73-147 US-PATENT-3,342,066	N71-23093*	c 14	NASA-CASE-XLE-03280 US-PATENT-APPL-SN-517156 US-PATENT-CLASS-73-400 US-PATENT-3,379,064
N71-22991*	c 14	NASA-CASE-XLA-01791 US-PATENT-APPL-SN-462763 US-PATENT-CLASS-250-227 US-PATENT-3,397,318	N71-23033*	c 10	NASA-CASE-XNP-01318 US-PATENT-APPL-SN-380965 US-PATENT-CLASS-340-174 US-PATENT-3,388,387	N71-23096*	c 05	NASA-CASE-XMS-06064 US-PATENT-APPL-SN-563646 US-PATENT-CLASS-2-14 US-PATENT-3,378,851
N71-22992*	c 14	NASA-CASE-XGS-01023 US-PATENT-APPL-SN-446131 US-PATENT-CLASS-73-65	N71-23036*	c 14	NASA-CASE-XNP-01660 US-PATENT-APPL-SN-578916 US-PATENT-CLASS-73-4	N71-23097*	c 09	NASA-CASE-XNP-02140 US-PATENT-APPL-SN-440036 US-PATENT-CLASS-330-61

N71-23098*	c 07	US-PATENT-3,337,812 NASA-CASE-XGS-00740 US-PATENT-APPL-SN-353644 US-PATENT-CLASS-325-305 US-PATENT-3,341,778	N71-23269*	c 14	US-PATENT-3,419,329 NASA-CASE-XLA-01584 US-PATENT-APPL-SN-416943 US-PATENT-CLASS-250-203 US-PATENT-3,389,260	N71-23544*	c 10	US-PATENT-3,393,347 NASA-CASE-XNP-05382 US-PATENT-APPL-SN-536217 US-PATENT-CLASS-332-19 US-PATENT-3,393,380
N71-23099*	c 10	NASA-CASE-XNP-08875 US-PATENT-APPL-SN-640455 US-PATENT-CLASS-343-6.5 US-PATENT-3,380,049	N71-23270*	c 09	NASA-CASE-XMS-04919 US-PATENT-APPL-SN-516155 US-PATENT-CLASS-307-263 US-PATENT-3,417,266	N71-23545*	c 09	NASA-CASE-XMF-04367 US-PATENT-APPL-SN-457874 US-PATENT-CLASS-307-235 US-PATENT-3,404,289
N71-23159*	c 05	NASA-CASE-XMF-06589 US-PATENT-APPL-SN-543206 US-PATENT-CLASS-5-82 US-PATENT-3,343,180	N71-23271*	c 10	NASA-CASE-XNP-00952 US-PATENT-APPL-SN-388967 US-PATENT-CLASS-317-148.5 US-PATENT-3,417,298	N71-23548*	c 09	NASA-CASE-XNP-06507 US-PATENT-APPL-SN-605099 US-PATENT-CLASS-333-98 US-PATENT-3,419,827
N71-23161*	c 05	NASA-CASE-XAC-07043 US-PATENT-APPL-SN-566397 US-PATENT-CLASS-2-2.1 US-PATENT-3,405,406	N71-23289*	c 21	NASA-CASE-XMF-01669 US-PATENT-APPL-SN-399419 US-PATENT-CLASS-74-5.47 US-PATENT-3,415,126	N71-23573*	c 09	NASA-CASE-XGS-01418 US-PATENT-APPL-SN-392969 US-PATENT-CLASS-333-73 US-PATENT-3,393,384
N71-23174*	c 14	NASA-CASE-XGS-02610 US-PATENT-APPL-SN-491054 US-PATENT-CLASS-321-60 US-PATENT-3,417,316	N71-23292*	c 26	NASA-CASE-XLE-10715 US-PATENT-APPL-SN-603397 US-PATENT-CLASS-252-62.3 US-PATENT-3,409,554	N71-23598*	c 09	NASA-CASE-XER-11019 US-PATENT-APPL-SN-711971 US-PATENT-CLASS-331-78 US-PATENT-3,470,489
N71-23175*	c 14	NASA-CASE-XKS-03509 US-PATENT-APPL-SN-566392 US-PATENT-CLASS-356-166 US-PATENT-3,414,358	N71-23293*	c 28	NASA-CASE-XNP-06942 US-PATENT-APPL-SN-563651 US-PATENT-CLASS-60-202 US-PATENT-3,412,559	N71-23599*	c 22	NASA-CASE-XLE-01903 US-PATENT-APPL-SN-466868 US-PATENT-CLASS-310-4 US-PATENT-3,393,330
N71-23185*	c 04	NASA-CASE-XAC-05422 US-PATENT-APPL-SN-483885 US-PATENT-CLASS-128-2.05 US-PATENT-3,412,729	N71-23295*	c 08	NASA-CASE-XNP-04819 US-PATENT-APPL-SN-502701 US-PATENT-CLASS-340-146.2 US-PATENT-3,390,378	N71-23654*	c 26	NASA-CASE-XLE-02798 US-PATENT-APPL-SN-660571 US-PATENT-CLASS-148-1.5 US-PATENT-3,390,020
N71-23187*	c 03	NASA-CASE-XGS-03390 US-PATENT-APPL-SN-551182 US-PATENT-CLASS-136-89 US-PATENT-3,419,433	N71-23311*	c 09	NASA-CASE-XGS-03632 US-PATENT-APPL-SN-502739 US-PATENT-CLASS-307-260 US-PATENT-3,390,282	N71-23658*	c 18	NASA-CASE-XLE-02647 US-PATENT-APPL-SN-430226 US-PATENT-CLASS-220-9 US-PATENT-3,392,864
N71-23188*	c 09	NASA-CASE-XMF-14301 US-PATENT-APPL-SN-697341 US-PATENT-CLASS-321-2 US-PATENT-3,470,446	N71-23315*	c 10	NASA-CASE-XLA-03356 US-PATENT-APPL-SN-536216 US-PATENT-CLASS-307-234 US-PATENT-3,448,290	N71-23662*	c 10	NASA-CASE-XGS-01118 US-PATENT-APPL-SN-408442 US-PATENT-CLASS-235-154 US-PATENT-3,399,299
N71-23189*	c 09	NASA-CASE-XNP-06028 US-PATENT-APPL-SN-649356 US-PATENT-CLASS-315-26 US-PATENT-3,431,460	N71-23316*	c 09	NASA-CASE-XMS-09352 US-PATENT-APPL-SN-564919 US-PATENT-CLASS-323-22 US-PATENT-3,417,321	N71-23663*	c 10	NASA-CASE-XKS-04631 US-PATENT-APPL-SN-663180 US-PATENT-CLASS-200-82 US-PATENT-3,433,909
N71-23190*	c 09	NASA-CASE-XLE-04501 US-PATENT-APPL-SN-522794 US-PATENT-CLASS-313-231 US-PATENT-3,413,510	N71-23317*	c 05	NASA-CASE-XMS-06061 US-PATENT-APPL-SN-605092 US-PATENT-CLASS-307-260 US-PATENT-3,467,837	N71-23669*	c 10	NASA-CASE-XAC-10607 US-PATENT-APPL-SN-694345 US-PATENT-CLASS-331-111 US-PATENT-3,470,495
N71-23191*	c 09	NASA-CASE-XMS-05890 US-PATENT-APPL-SN-650166 US-PATENT-CLASS-137-554 US-PATENT-3,414,012	N71-23336*	c 03	NASA-CASE-XGS-01513 US-PATENT-APPL-SN-502756 US-PATENT-CLASS-136-166 US-PATENT-3,390,017	N71-23698*	c 14	NASA-CASE-XGS-08259 US-PATENT-APPL-SN-666551 US-PATENT-CLASS-242-192 US-PATENT-3,460,781
N71-23225*	c 14	NASA-CASE-XNP-04817 US-PATENT-APPL-SN-516152 US-PATENT-CLASS-73-12 US-PATENT-3,412,598	N71-23354*	c 03	NASA-CASE-XLE-04535 US-PATENT-APPL-SN-588671 US-PATENT-CLASS-250-212 US-PATENT-3,437,818	N71-23699*	c 14	NASA-CASE-XMF-10289 US-PATENT-APPL-SN-674356 US-PATENT-CLASS-324-72 US-PATENT-3,470,466
N71-23226*	c 14	NASA-CASE-XNP-06509 US-PATENT-APPL-SN-570095 US-PATENT-CLASS-73-194 US-PATENT-3,411,356	N71-23365*	c 17	NASA-CASE-XNP-03063 US-PATENT-APPL-SN-521994 US-PATENT-CLASS-75-172 US-PATENT-3,413,115	N71-23710*	c 18	NASA-CASE-XLE-08511 US-PATENT-APPL-SN-635972 US-PATENT-CLASS-29-182.1 US-PATENT-3,419,363
N71-23227*	c 14	NASA-CASE-XMF-06515 US-PATENT-APPL-SN-548808 US-PATENT-CLASS-73-432 US-PATENT-3,408,870	N71-23401*	c 14	NASA-CASE-XGS-03230 US-PATENT-APPL-SN-517158 US-PATENT-CLASS-250-83 US-PATENT-3,419,992	N71-23723*	c 30	NASA-CASE-XNP-09832 US-PATENT-APPL-SN-632163 US-PATENT-CLASS-343-100 US-PATENT-3,417,399
N71-23230*	c 06	NASA-CASE-XMF-06409 US-PATENT-APPL-SN-575930 US-PATENT-CLASS-260-448.2 US-PATENT-3,433,818	N71-23405*	c 07	NASA-CASE-XGS-01537 US-PATENT-APPL-SN-432026 US-PATENT-CLASS-325-163 US-PATENT-3,417,332	N71-23725*	c 14	NASA-CASE-XGS-01013 US-PATENT-APPL-SN-665209 US-PATENT-CLASS-73-133 US-PATENT-3,460,381
N71-23239*	c 03	NASA-CASE-XMF-08217 US-PATENT-APPL-SN-688807 US-PATENT-CLASS-321-2 US-PATENT-3,470,443	N71-23443*	c 09	NASA-CASE-XLE-02823 US-PATENT-APPL-SN-491058 US-PATENT-CLASS-310-10 US-PATENT-3,393,332	N71-23726*	c 14	NASA-CASE-XMF-05224 US-PATENT-APPL-SN-660842 US-PATENT-CLASS-73-189 US-PATENT-3,465,584
N71-23240*	c 14	NASA-CASE-XLA-00941 US-PATENT-APPL-SN-508873 US-PATENT-CLASS-250-227 US-PATENT-3,407,304	N71-23449*	c 03	NASA-CASE-XLE-08569 US-PATENT-APPL-SN-641420 US-PATENT-CLASS-136-89 US-PATENT-3,472,698	N71-23755*	c 14	NASA-CASE-XMF-04134 US-PATENT-APPL-SN-610723 US-PATENT-CLASS-73-4 US-PATENT-3,472,059
N71-23248*	c 17	NASA-CASE-XLE-03629 US-PATENT-APPL-SN-554950 US-PATENT-CLASS-75-170 US-PATENT-3,415,643	N71-23497*	c 01	NASA-CASE-XLA-01486 US-PATENT-APPL-SN-484485 US-PATENT-CLASS-244-13 US-PATENT-3,392,936	N71-23790*	c 14	NASA-CASE-XAC-04885 US-PATENT-APPL-SN-573432 US-PATENT-CLASS-73-141 US-PATENT-3,415,116
N71-23254*	c 15	NASA-CASE-XFR-05302 US-PATENT-APPL-SN-685463 US-PATENT-CLASS-85-7 US-PATENT-3,443,472	N71-23499*	c 06	NASA-CASE-XNP-03835 US-PATENT-APPL-SN-456874 US-PATENT-CLASS-44-77 US-PATENT-3,393,059	N71-23797*	c 14	NASA-CASE-XNP-06510 US-PATENT-APPL-SN-562445 US-PATENT-CLASS-250-203 US-PATENT-3,417,247
N71-23255*	c 15	NASA-CASE-XMS-07487 US-PATENT-APPL-SN-580365 US-PATENT-CLASS-244-83 US-PATENT-3,409,252	N71-23500*	c 06	NASA-CASE-XNP-03250 US-PATENT-APPL-SN-485058 US-PATENT-CLASS-260-85.5 US-PATENT-3,419,537	N71-23798*	c 15	NASA-CASE-XMF-02330 US-PATENT-APPL-SN-608944 US-PATENT-CLASS-219-130 US-PATENT-3,469,069
N71-23256*	c 15	NASA-CASE-XMF-03290 US-PATENT-APPL-SN-479353 US-PATENT-CLASS-53-22 US-PATENT-3,415,032	N71-23525*	c 09	NASA-CASE-XGS-02317 US-PATENT-APPL-SN-576183 US-PATENT-CLASS-328-61 US-PATENT-3,464,018	N71-23809*	c 15	NASA-CASE-XAC-10019 US-PATENT-APPL-SN-686209 US-PATENT-CLASS-74-89.18 US-PATENT-3,472,086
N71-23267*	c 14	NASA-CASE-XLE-04026 US-PATENT-APPL-SN-617770 US-PATENT-CLASS-13-26 US-PATENT-3,470,304	N71-23527*	c 06	NASA-CASE-XLE-01997 US-PATENT-APPL-SN-427990 US-PATENT-CLASS-23-230 US-PATENT-3,472,625	N71-23810*	c 15	NASA-CASE-XLE-05033 US-PATENT-APPL-SN-510474 US-PATENT-CLASS-252-12 US-PATENT-3,466,243
N71-23268*	c 14	NASA-CASE-XLA-01907 US-PATENT-APPL-SN-335441 US-PATENT-CLASS-356-72	N71-23543*	c 10	NASA-CASE-XMS-00913 US-PATENT-APPL-SN-416945 US-PATENT-CLASS-317-31	N71-23811*	c 15	NASA-CASE-XNP-05297 US-PATENT-APPL-SN-640458 US-PATENT-CLASS-72-354

N71-23812*	c 15	US-PATENT-3,443,412 NASA-CASE-XMF-07808 US-PATENT-APPL-SN-684178 US-PATENT-CLASS-308-2 US-PATENT-3,463,563	N71-24232*	c 14	US-PATENT-3,434,855 NASA-CASE-XAC-04458 US-PATENT-APPL-SN-534975 US-PATENT-CLASS-73-400	N71-24623*	c 05	US-PATENT-CLASS-324-77 US-PATENT-3,548,107 NASA-CASE-XMS-09635 US-PATENT-APPL-SN-586329 US-PATENT-CLASS-2-2.1 US-PATENT-3,516,091
N71-23815*	c 15	NASA-CASE-XMF-07069 US-PATENT-APPL-SN-672382 US-PATENT-CLASS-219-125 US-PATENT-3,469,068	N71-24233*	c 14	US-PATENT-3,392,586 NASA-CASE-XGS-04478 US-PATENT-APPL-SN-566717 US-PATENT-CLASS-73-88.5 US-PATENT-3,460,378	N71-24624*	c 07	NASA-CASE-GSC-10131-1 US-PATENT-APPL-SN-754055 US-PATENT-CLASS-340-172.5 US-PATENT-3,546,684
N71-23816*	c 15	NASA-CASE-XLE-03803 US-PATENT-APPL-SN-505765 US-PATENT-CLASS-220-9 US-PATENT-3,392,865	N71-24234*	c 14	NASA-CASE-XMF-10968 US-PATENT-APPL-SN-644447 US-PATENT-CLASS-73-15.6 US-PATENT-3,469,437	N71-24625*	c 07	NASA-CASE-XMS-09610 US-PATENT-APPL-SN-766170 US-PATENT-CLASS-343-113 US-PATENT-3,540,054
N71-23817*	c 15	NASA-CASE-XLE-06773 US-PATENT-APPL-SN-646124 US-PATENT-CLASS-72-467 US-PATENT-3,469,436	N71-24276*	c 33	NASA-CASE-XLA-02059 US-PATENT-APPL-SN-576182 US-PATENT-CLASS-165-12 US-PATENT-3,406,742	N71-24633*	c 08	NASA-CASE-NPO-10567 US-PATENT-APPL-SN-679055 US-PATENT-CLASS-235-153 US-PATENT-3,517,171
N71-23828*	c 17	NASA-CASE-XMF-02303 US-PATENT-APPL-SN-453229 US-PATENT-CLASS-148-6.20 US-PATENT-3,416,975	N71-24285*	c 32	NASA-CASE-XMF-02392 US-PATENT-APPL-SN-596735 US-PATENT-CLASS-73-49.2 US-PATENT-3,399,574	N71-24650*	c 08	NASA-CASE-NPO-10150 US-PATENT-APPL-SN-660843 US-PATENT-CLASS-340-347 US-PATENT-3,537,103
N71-23912*	c 31	NASA-CASE-XMF-05941 US-PATENT-APPL-SN-653277 US-PATENT-CLASS-244-1 US-PATENT-3,443,773	N71-24315*	c 31	NASA-CASE-XLA-04901 US-PATENT-APPL-SN-586325 US-PATENT-CLASS-244-1 US-PATENT-3,405,887	N71-24679*	c 15	NASA-CASE-XNP-10475 US-PATENT-APPL-SN-763868 US-PATENT-CLASS-72-369 US-PATENT-3,546,917
N71-23968*	c 28	NASA-CASE-XLE-04857 US-PATENT-APPL-SN-621742 US-PATENT-CLASS-239-127.1 US-PATENT-3,460,759	N71-24321*	c 28	NASA-CASE-XNP-03692 US-PATENT-APPL-SN-640787 US-PATENT-CLASS-60-263 US-PATENT-3,443,384	N71-24681*	c 03	NASA-CASE-XLE-08569-2 US-PATENT-APPL-SN-829825 US-PATENT-CLASS-29-572 US-PATENT-3,541,679
N71-23971*	c 32	NASA-CASE-XAC-05632 US-PATENT-APPL-SN-568355 US-PATENT-CLASS-244-77 US-PATENT-3,412,961	N71-24583*	c 07	NASA-CASE-NPO-10096 US-PATENT-APPL-SN-730700 US-PATENT-CLASS-329-140 US-PATENT-3,533,001	N71-24692*	c 12	NASA-CASE-XFR-02007 US-PATENT-APPL-SN-378080 US-PATENT-CLASS-73-389 US-PATENT-3,273,399
N71-23976*	c 23	NASA-CASE-XLA-01987 US-PATENT-APPL-SN-542713 US-PATENT-CLASS-346-107 US-PATENT-3,392,403	N71-24595*	c 09	NASA-CASE-GSC-10021-1 US-PATENT-APPL-SN-790420 US-PATENT-CLASS-343-7.5 US-PATENT-3,540,045	N71-24693*	c 14	NASA-CASE-XMF-04415 US-PATENT-APPL-SN-644446 US-PATENT-CLASS-33-174 US-PATENT-3,360,864
N71-24035*	c 31	NASA-CASE-XLA-01027 US-PATENT-APPL-SN-494283 US-PATENT-CLASS-52-272 US-PATENT-3,416,274	N71-24596*	c 09	NASA-CASE-XNP-01306-2 US-PATENT-APPL-SN-684083 US-PATENT-CLASS-328-133 US-PATENT-3,509,475	N71-24694*	c 15	NASA-CASE-GSC-10306-1 US-PATENT-APPL-SN-789278 US-PATENT-CLASS-248-358 US-PATENT-3,537,672
N71-24042*	c 15	NASA-CASE-XNP-04731 US-PATENT-APPL-SN-534966 US-PATENT-CLASS-103-48 US-PATENT-3,367,271	N71-24597*	c 09	NASA-CASE-ARC-10132-1 US-PATENT-APPL-SN-759460 US-PATENT-CLASS-73-398 US-PATENT-3,545,275	N71-24695*	c 15	NASA-CASE-XNP-06936 US-PATENT-APPL-SN-640786 US-PATENT-CLASS-318-382 US-PATENT-3,487,281
N71-24043*	c 15	NASA-CASE-XKS-03338 US-PATENT-APPL-SN-547072 US-PATENT-CLASS-89-1.806 US-PATENT-3,415,156	N71-24599*	c 15	NASA-CASE-MSC-12052-1 US-PATENT-APPL-SN-770371 US-PATENT-CLASS-254-150 US-PATENT-CLASS-254-173 US-PATENT-CLASS-254-186 US-PATENT-3,545,725	N71-24696*	c 15	NASA-CASE-NPO-10173 US-PATENT-APPL-SN-796360 US-PATENT-CLASS-310-101 US-PATENT-3,535,570
N71-24044*	c 15	NASA-CASE-XMF-06888 US-PATENT-APPL-SN-591000 US-PATENT-CLASS-62-40 US-PATENT-3,415,069	N71-24600*	c 15	NASA-CASE-XGS-08718 US-PATENT-APPL-SN-785611 US-PATENT-CLASS-244-1 US-PATENT-CLASS-244-150 US-PATENT-CLASS-74-2 US-PATENT-CLASS-89-1.5 US-PATENT-CLASS-9-9 US-PATENT-3,540,676	N71-24717*	c 09	NASA-CASE-XMF-08804 US-PATENT-APPL-SN-683606 US-PATENT-CLASS-324-181 US-PATENT-3,543,159
N71-24045*	c 15	NASA-CASE-XGS-04548 US-PATENT-APPL-SN-672383 US-PATENT-CLASS-74-100 US-PATENT-3,460,397	N71-24605*	c 03	NASA-CASE-XNP-04758 US-PATENT-APPL-SN-557861 US-PATENT-CLASS-320-17 US-PATENT-3,413,536	N71-24718*	c 03	NASA-CASE-MSC-10960-1 US-PATENT-APPL-SN-751198 US-PATENT-CLASS-204-305 US-PATENT-3,547,801
N71-24046*	c 15	NASA-CASE-XLE-10337 US-PATENT-APPL-SN-594633 US-PATENT-CLASS-252-26 US-PATENT-3,391,080	N71-24606*	c 05	NASA-CASE-XKS-10804 US-PATENT-APPL-SN-691909 US-PATENT-CLASS-35-17 US-PATENT-3,508,347	N71-24719*	c 03	NASA-CASE-GSC-10487-1 US-PATENT-APPL-SN-828983 US-PATENT-CLASS-320-39 US-PATENT-3,541,422
N71-24047*	c 15	NASA-CASE-XGS-03120 US-PATENT-APPL-SN-485958 US-PATENT-CLASS-156-3 US-PATENT-3,470,043	N71-24607*	c 06	NASA-CASE-XNP-09699 US-PATENT-APPL-SN-711972 US-PATENT-CLASS-73-17 US-PATENT-3,546,920	N71-24725*	c 23	NASA-CASE-GSC-10188-1 US-PATENT-APPL-SN-791888 US-PATENT-CLASS-62-384 US-PATENT-3,545,226
N71-24074*	c 16	NASA-CASE-XLA-03375 US-PATENT-APPL-SN-512562 US-PATENT-CLASS-356-104 US-PATENT-3,446,558	N71-24612*	c 07	NASA-CASE-XMF-06092 US-PATENT-APPL-SN-550088 US-PATENT-CLASS-178-7.1 US-PATENT-3,470,318	N71-24728*	c 05	NASA-CASE-MSC-12243-1 US-PATENT-APPL-SN-857445 US-PATENT-CLASS-244-1 US-PATENT-3,537,668
N71-24142*	c 17	NASA-CASE-XLE-06969 US-PATENT-APPL-SN-655675 US-PATENT-CLASS-148-126 US-PATENT-3,463,679	N71-24613*	c 07	NASA-CASE-NPO-10851 US-PATENT-APPL-SN-805406 US-PATENT-CLASS-325-325 US-PATENT-3,551,816	N71-24729*	c 05	NASA-CASE-MSC-13282-1 US-PATENT-APPL-SN-8498 US-PATENT-CLASS-128-2.1 US-PATENT-3,548,812
N71-24145*	c 33	NASA-CASE-XLE-03432 US-PATENT-APPL-SN-559349 US-PATENT-CLASS-13-35 US-PATENT-3,409,730	N71-24614*	c 07	NASA-CASE-XKS-09340 US-PATENT-APPL-SN-666555 US-PATENT-CLASS-343-703 US-PATENT-3,540,056	N71-24730*	c 05	NASA-CASE-XMS-09637-1 US-PATENT-APPL-SN-785710 US-PATENT-CLASS-2-2.1 US-PATENT-3,537,107
N71-24147*	c 05	NASA-CASE-XMS-10269 US-PATENT-APPL-SN-590158 US-PATENT-CLASS-165-46 US-PATENT-3,425,486	N71-24618*	c 09	NASA-CASE-FRC-10029 US-PATENT-APPL-SN-760389 US-PATENT-CLASS-128-2.06 US-PATENT-3,547,105	N71-24736*	c 28	NASA-CASE-XLE-03157 US-PATENT-APPL-SN-591014 US-PATENT-CLASS-60-240 US-PATENT-3,408,816
N71-24164*	c 15	NASA-CASE-XLA-01494 US-PATENT-APPL-SN-499122 US-PATENT-CLASS-156-545 US-PATENT-3,416,988	N71-24621*	c 07	NASA-CASE-GSC-10118-1 US-PATENT-APPL-SN-783375 US-PATENT-CLASS-179-15 US-PATENT-CLASS-325-4 US-PATENT-CLASS-343-100 US-PATENT-3,546,386	N71-24738*	c 05	NASA-CASE-ARC-10100-1 US-PATENT-APPL-SN-797058 US-PATENT-CLASS-128-24 US-PATENT-CLASS-128-25 US-PATENT-3,550,585
N71-24170*	c 16	NASA-CASE-XLA-04295 US-PATENT-APPL-SN-546149 US-PATENT-CLASS-356-107 US-PATENT-3,468,609	N71-24622*	c 07	NASA-CASE-NPO-10388 US-PATENT-APPL-SN-725432 US-PATENT-CLASS-179-15	N71-24739*	c 06	NASA-CASE-ARC-10098-1 US-PATENT-APPL-SN-702967 US-PATENT-CLASS-260-2.5 US-PATENT-3,549,564
N71-24183*	c 18	NASA-CASE-XGS-04799 US-PATENT-APPL-SN-452944 US-PATENT-CLASS-106-84 US-PATENT-3,416,939	N71-24740*	c 06	NASA-CASE-XMF-03074 US-PATENT-APPL-SN-593595 US-PATENT-CLASS-260-72.5 US-PATENT-3,516,971	N71-24741*	c 07	NASA-CASE-NPO-10118

N71-24742*	c 07	US-PATENT-APPL-SN-704465 US-PATENT-CLASS-235-152 US-PATENT-3,541,314 NASA-CASE-NPO-10140 US-PATENT-APPL-SN-691737 US-PATENT-CLASS-187-7.1 US-PATENT-3,541,250	N71-24842*	c 09	US-PATENT-APPL-SN-698630 US-PATENT-CLASS-333-83 US-PATENT-3,541,479 NASA-CASE-MSC-12209 US-PATENT-APPL-SN-881039 US-PATENT-CLASS-343-797 US-PATENT-3,546,705	N71-24910*	c 15	NASA-CASE-ERC-10045 US-PATENT-APPL-SN-763685 US-PATENT-CLASS-73-40.7 US-PATENT-3,548,636
N71-24750*	c 31	NASA-CASE-XGS-01654 US-PATENT-APPL-SN-434148 US-PATENT-CLASS-102-50 US-PATENT-3,282,541	N71-24843*	c 09	NASA-CASE-XMF-06617 US-PATENT-APPL-SN-656993 US-PATENT-CLASS-324-71 US-PATENT-3,541,439	N71-24911*	c 17	NASA-CASE-XLE-04946 US-PATENT-APPL-SN-605093 US-PATENT-CLASS-118-308 US-PATENT-3,472,202
N71-24798*	c 10	NASA-CASE-XLE-03061-1 US-PATENT-APPL-SN-632152 US-PATENT-CLASS-340-412 US-PATENT-3,546,694	N71-24844*	c 10	NASA-CASE-NPO-10169 US-PATENT-APPL-SN-701733 US-PATENT-CLASS-328-171 US-PATENT-3,541,459	N71-24934*	c 18	NASA-CASE-NPO-10051 US-PATENT-APPL-SN-711898 US-PATENT-CLASS-73-38 US-PATENT-3,548,633
N71-24799*	c 10	NASA-CASE-XNP-06505 US-PATENT-APPL-SN-562933 US-PATENT-CLASS-307-254 US-PATENT-3,501,648	N71-24857*	c 23	NASA-CASE-XMS-06056-1 US-PATENT-APPL-SN-532006 US-PATENT-CLASS-350-189 US-PATENT-3,472,577	N71-24948*	c 21	NASA-CASE-ERC-10090 US-PATENT-APPL-SN-811542 US-PATENT-CLASS-343-112 US-PATENT-3,550,129
N71-24800*	c 09	NASA-CASE-ERC-10075 US-PATENT-APPL-SN-775870 US-PATENT-CLASS-321-45 US-PATENT-3,539,905	N71-24858*	c 33	NASA-CASE-MFS-14253 US-PATENT-APPL-SN-709622 US-PATENT-CLASS-161-69 US-PATENT-3,551,266	N71-24964*	c 11	NASA-CASE-NPO-10141 US-PATENT-APPL-SN-673227 US-PATENT-CLASS-62-55.5 US-PATENT-3,443,390
N71-24803*	c 09	NASA-CASE-NPO-10242 US-PATENT-APPL-SN-749181 US-PATENT-CLASS-307-88 US-PATENT-3,541,346	N71-24861*	c 10	NASA-CASE-XMF-05195 US-PATENT-APPL-SN-785595 US-PATENT-CLASS-318-599 US-PATENT-3,523,228	N71-24984*	c 15	NASA-CASE-MFS-14971 US-PATENT-APPL-SN-827579 US-PATENT-CLASS-74-468 US-PATENT-3,541,875
N71-24804*	c 09	NASA-CASE-GSC-10299-1 US-PATENT-APPL-SN-836367 US-PATENT-CLASS-343-100 US-PATENT-3,540,050	N71-24862*	c 10	NASA-CASE-FRC-10010 US-PATENT-APPL-SN-771937 US-PATENT-CLASS-307-235 US-PATENT-3,543,030	N71-24985*	c 11	NASA-CASE-KSC-10126 US-PATENT-APPL-SN-845973 US-PATENT-CLASS-73-15 US-PATENT-3,545,252
N71-24805*	c 09	NASA-CASE-XMF-06892 US-PATENT-APPL-SN-757875 US-PATENT-CLASS-318-318 US-PATENT-3,546,553	N71-24863*	c 10	NASA-CASE-XMF-02966 US-PATENT-APPL-SN-560968 US-PATENT-CLASS-324-70 US-PATENT-3,406,336	N71-25139*	c 10	NASA-CASE-MFS-10068 US-PATENT-APPL-SN-700541 US-PATENT-CLASS-321-9 US-PATENT-3,487,288
N71-24806*	c 09	NASA-CASE-NPO-10198 US-PATENT-APPL-SN-723804 US-PATENT-CLASS-328-165 US-PATENT-3,550,023	N71-24864*	c 14	NASA-CASE-XLE-04503 US-PATENT-APPL-SN-606463 US-PATENT-CLASS-250-225 US-PATENT-3,546,471	N71-25213*	c 28	NASA-CASE-GSC-10709-1 US-PATENT-APPL-SN-791288 US-PATENT-CLASS-60-202 US-PATENT-3,545,208
N71-24807*	c 09	NASA-CASE-MFS-14114-2 US-PATENT-APPL-SN-854815 US-PATENT-CLASS-165-105 US-PATENT-CLASS-165-107 US-PATENT-CLASS-165-138 US-PATENT-CLASS-310-4 US-PATENT-3,537,515	N71-24865*	c 15	NASA-CASE-XMF-05114-3 US-PATENT-APPL-SN-837378 US-PATENT-CLASS-72-56 US-PATENT-3,540,200	N71-25351*	c 33	NASA-CASE-MFS-14023 US-PATENT-APPL-SN-795217 US-PATENT-CLASS-161-161 US-PATENT-CLASS-220-9 US-PATENT-CLASS-52-249 US-PATENT-CLASS-52-404 US-PATENT-CLASS-62-45 US-PATENT-3,540,615
N71-24808*	c 09	NASA-CASE-XNP-08880 US-PATENT-APPL-SN-605094 US-PATENT-CLASS-333-98 US-PATENT-3,416,106	N71-24868*	c 23	NASA-CASE-ERC-10001 US-PATENT-APPL-SN-712099 US-PATENT-CLASS-350-310 US-PATENT-3,540,802	N71-25353*	c 33	NASA-CASE-MFS-20355 US-PATENT-APPL-SN-845974 US-PATENT-CLASS-165-104 US-PATENT-CLASS-165-105 US-PATENT-CLASS-165-133 US-PATENT-CLASS-219-378 US-PATENT-CLASS-219-530 US-PATENT-CLASS-244-1 US-PATENT-3,548,930
N71-24809*	c 14	NASA-CASE-XNP-08961 US-PATENT-APPL-SN-661170 US-PATENT-CLASS-250-84 US-PATENT-3,487,216	N71-24875*	c 15	NASA-CASE-XLA-06199 US-PATENT-APPL-SN-702911 US-PATENT-CLASS-148-6.11 US-PATENT-3,540,942	N71-25360*	c 32	NASA-CASE-XLA-08530 US-PATENT-APPL-SN-808577 US-PATENT-CLASS-73-90 US-PATENT-3,546,931
N71-24813*	c 31	NASA-CASE-XAC-06029-1 US-PATENT-APPL-SN-588651 US-PATENT-CLASS-343-100 US-PATENT-3,540,048	N71-24876*	c 33	NASA-CASE-XNP-05524 US-PATENT-APPL-SN-250567 US-PATENT-CLASS-165-2 US-PATENT-3,270,802	N71-25434*	c 31	NASA-CASE-MSC-13047-1 US-PATENT-APPL-SN-850586 US-PATENT-CLASS-244-1 US-PATENT-CLASS-244-113 US-PATENT-CLASS-244-138 US-PATENT-3,547,376
N71-24828*	c 16	NASA-CASE-XAC-10770-1 US-PATENT-APPL-SN-690997 US-PATENT-CLASS-356-28 US-PATENT-3,547,540	N71-24878*	c 08	NASA-CASE-XKS-06167 US-PATENT-APPL-SN-649076 US-PATENT-CLASS-235-155 US-PATENT-3,535,497	N71-25490*	c 26	NASA-CASE-ERC-10088 US-PATENT-APPL-SN-760927 US-PATENT-CLASS-73-141 US-PATENT-3,537,305
N71-24830*	c 17	NASA-CASE-XNP-04148 US-PATENT-APPL-SN-536210 US-PATENT-CLASS-204-38 US-PATENT-3,472,742	N71-24889*	c 08	NASA-CASE-XNP-09759 US-PATENT-APPL-SN-606462 US-PATENT-CLASS-235-92 US-PATENT-3,541,312	N71-25555*	c 24	NASA-CASE-XNP-09469 US-PATENT-APPL-SN-645573 US-PATENT-CLASS-204-168 US-PATENT-3,540,989
N71-24831*	c 16	NASA-CASE-NPO-10548 US-PATENT-APPL-SN-775072 US-PATENT-CLASS-330-4 US-PATENT-3,486,123	N71-24892*	c 09	NASA-CASE-NPO-10716 US-PATENT-APPL-SN-851394 US-PATENT-CLASS-307-104 US-PATENT-CLASS-317-123 US-PATENT-CLASS-317-148.5 US-PATENT-3,549,955	N71-25865*	c 10	NASA-CASE-KSC-10002 US-PATENT-APPL-SN-782956 US-PATENT-CLASS-178-69.5 US-PATENT-3,567,861
N71-24832*	c 16	NASA-CASE-ERC-10178 US-PATENT-APPL-SN-800973 US-PATENT-CLASS-331-94.5 US-PATENT-3,550,034	N71-24893*	c 09	NASA-CASE-ERC-10125 US-PATENT-APPL-SN-773029 US-PATENT-CLASS-323-56 US-PATENT-3,541,428	N71-25866*	c 09	NASA-CASE-ARC-10003-1 US-PATENT-APPL-SN-717822 US-PATENT-CLASS-178-66 US-PATENT-CLASS-179-100.2 US-PATENT-3,549,799
N71-24833*	c 15	NASA-CASE-XMF-03793 US-PATENT-APPL-SN-453225 US-PATENT-CLASS-72-56 US-PATENT-3,360,972	N71-24895*	c 15	NASA-CASE-XLA-07473 US-PATENT-APPL-SN-839935 US-PATENT-CLASS-318-265 US-PATENT-3,546,552	N71-25881*	c 18	NASA-CASE-XGS-05180 US-PATENT-APPL-SN-721607 US-PATENT-CLASS-260-37 US-PATENT-3,567,677
N71-24834*	c 15	NASA-CASE-XNP-05634 US-PATENT-APPL-SN-605096 US-PATENT-CLASS-73-95 US-PATENT-3,460,379	N71-24896*	c 15	NASA-CASE-ERC-10034 US-PATENT-APPL-SN-763706 US-PATENT-CLASS-250-43.5 US-PATENT-3,549,882	N71-25882*	c 10	NASA-CASE-GSC-10022-1 US-PATENT-APPL-SN-785546 US-PATENT-CLASS-331-113 US-PATENT-3,559,096
N71-24835*	c 15	NASA-CASE-NPO-10123 US-PATENT-APPL-SN-731388 US-PATENT-CLASS-128-272 US-PATENT-CLASS-128-275 US-PATENT-3,540,449	N71-24897*	c 15	NASA-CASE-XLA-03538 US-PATENT-APPL-SN-749149 US-PATENT-CLASS-294-83 US-PATENT-3,508,779	N71-25892*	c 14	NASA-CASE-XLA-04555-1 US-PATENT-APPL-SN-594584 US-PATENT-CLASS-148-13 US-PATENT-3,468,727
N71-24836*	c 15	NASA-CASE-XLE-08917-2 US-PATENT-APPL-SN-852131 US-PATENT-CLASS-72-60 US-PATENT-3,541,825	N71-24903*	c 15	NASA-CASE-MFS-20395 US-PATENT-APPL-SN-830715 US-PATENT-CLASS-285-314 US-PATENT-CLASS-285-317 US-PATENT-CLASS-285-38 US-PATENT-CLASS-285-406 US-PATENT-3,545,792	N71-25899*	c 10	NASA-CASE-LEW-10345-1 US-PATENT-APPL-SN-805298 US-PATENT-CLASS-137-81.5 US-PATENT-CLASS-235-201
N71-24840*	c 07	NASA-CASE-NPO-10649 US-PATENT-APPL-SN-795182 US-PATENT-CLASS-325-113 US-PATENT-3,541,450	N71-24904*	c 09	NASA-CASE-MFS-20385 US-PATENT-APPL-SN-853716 US-PATENT-CLASS-310-10 US-PATENT-3,541,361			
N71-24841*	c 09	NASA-CASE-XNP-09771						

N71-25900*	c 10	US-PATENT-3,568,702 NASA-CASE-ERC-10032 US-PATENT-APPL-SN-757857 US-PATENT-CLASS-333-30 US-PATENT-CLASS-333-72	N71-26136*	c 14	US-PATENT-3,564,401 NASA-CASE-XLA-01782 US-PATENT-APPL-SN-576792 US-PATENT-CLASS-73-15.6	N71-26293*	c 05	US-PATENT-APPL-SN-719870 US-PATENT-CLASS-325-67 US-PATENT-3,553,586 NASA-CASE-XFR-07658-1 US-PATENT-APPL-SN-586324 US-PATENT-CLASS-128-2.06 US-PATENT-3,426,746
N71-25901*	c 14	US-PATENT-3,568,103 NASA-CASE-XLA-02810 US-PATENT-APPL-SN-764252 US-PATENT-CLASS-250-43.5 US-PATENT-CLASS-250-83.3 US-PATENT-CLASS-340-233 US-PATENT-CLASS-340-285 US-PATENT-3,569,710	N71-26137*	c 14	NASA-CASE-LAR-10305 US-PATENT-APPL-SN-811037 US-PATENT-CLASS-324-0.5 US-PATENT-CLASS-324-58.5 US-PATENT-3,562,631	N71-26294*	c 15	NASA-CASE-XNP-02862-1 US-PATENT-APPL-SN-556830 US-PATENT-CLASS-277-13 US-PATENT-3,468,548
N71-25903*	c 17	NASA-CASE-XLA-08966-1 US-PATENT-APPL-SN-570678 US-PATENT-CLASS-204-33 US-PATENT-3,468,765	N71-26142*	c 10	NASA-CASE-NPO-10302 US-PATENT-APPL-SN-848811 US-PATENT-CLASS-343-768 US-PATENT-3,553,704	N71-26312*	c 15	NASA-CASE-XNP-01263-2 US-PATENT-APPL-SN-718279 US-PATENT-CLASS-287-189.365 US-PATENT-3,481,638
N71-25914*	c 16	NASA-CASE-XLA-03410 US-PATENT-APPL-SN-512561 US-PATENT-CLASS-250-199 US-PATENT-3,469,087	N71-26145*	c 15	NASA-CASE-FRC-10005 US-PATENT-APPL-SN-756266 US-PATENT-CLASS-33-189 US-PATENT-3,562,919	N71-26326*	c 10	NASA-CASE-NPO-10143 US-PATENT-APPL-SN-692331 US-PATENT-CLASS-58-24 US-PATENT-3,472,019
N71-25917*	c 10	NASA-CASE-NPO-10595 US-PATENT-APPL-SN-771760 US-PATENT-CLASS-340-347 US-PATENT-3,569,956	N71-26148*	c 15	NASA-CASE-XMF-05114-2 US-PATENT-APPL-SN-837377 US-PATENT-CLASS-72-56 US-PATENT-3,555,867	N71-26331*	c 10	NASA-CASE-XNP-10854 US-PATENT-APPL-SN-668248 US-PATENT-CLASS-330-31 US-PATENT-3,482,179
N71-25929*	c 06	NASA-CASE-NPO-10596 US-PATENT-APPL-SN-756381 US-PATENT-CLASS-260-2.5 US-PATENT-3,557,027	N71-26153*	c 18	NASA-CASE-XLE-03940 US-PATENT-APPL-SN-539255 US-PATENT-CLASS-148-126 US-PATENT-3,472,709	N71-26333*	c 05	NASA-CASE-XMS-09652-1 US-PATENT-APPL-SN-618969 US-PATENT-CLASS-2-6 US-PATENT-3,473,165
N71-25950*	c 10	NASA-CASE-XGS-06226 US-PATENT-APPL-SN-676387 US-PATENT-CLASS-331-113 US-PATENT-3,466,570	N71-26154*	c 16	NASA-CASE-ERC-10020 US-PATENT-APPL-SN-709399 US-PATENT-CLASS-350-3.5 US-PATENT-3,540,790	N71-26334*	c 10	NASA-CASE-XLA-02619 US-PATENT-APPL-SN-796691 US-PATENT-CLASS-317-DIG.3 US-PATENT-CLASS-317-153 US-PATENT-CLASS-340-235 US-PATENT-3,575,641
N71-25975*	c 15	NASA-CASE-XMS-10660-1 US-PATENT-APPL-SN-797056 US-PATENT-CLASS-24-205.17 US-PATENT-3,469,289	N71-26155*	c 18	NASA-CASE-LAR-10373-1 US-PATENT-APPL-SN-761007 US-PATENT-CLASS-260-2.5 US-PATENT-3,481,887	N71-26339*	c 10	NASA-CASE-NPO-10185 US-PATENT-APPL-SN-723805 US-PATENT-CLASS-73-432 US-PATENT-3,472,080
N71-25999*	c 09	NASA-CASE-XGS-05290 US-PATENT-APPL-SN-754019 US-PATENT-CLASS-310-168 US-PATENT-CLASS-310-254 US-PATENT-CLASS-318-138 US-PATENT-CLASS-318-254 US-PATENT-3,569,804	N71-26161*	c 14	NASA-CASE-XLA-08254 US-PATENT-APPL-SN-867843 US-PATENT-CLASS-73-12 US-PATENT-CLASS-73-79 US-PATENT-3,576,127	N71-26346*	c 15	NASA-CASE-XLE-05641-1 US-PATENT-APPL-SN-605091 US-PATENT-CLASS-72-61 US-PATENT-3,461,700
N71-26000*	c 09	NASA-CASE-XNP-08567 US-PATENT-APPL-SN-640783 US-PATENT-CLASS-307-88 US-PATENT-3,466,459	N71-26162*	c 15	NASA-CASE-MSC-15474-1 US-PATENT-APPL-SN-878731 US-PATENT-CLASS-24-263 US-PATENT-3,564,564	N71-26374*	c 10	NASA-CASE-GSC-11367 US-PATENT-APPL-SN-675238 US-PATENT-CLASS-331-18 US-PATENT-3,484,712
N71-26002*	c 09	NASA-CASE-XMS-04213-1 US-PATENT-APPL-SN-607484 US-PATENT-CLASS-128-2.1 US-PATENT-3,468,303	N71-26173*	c 28	NASA-CASE-LEW-10689-1 US-PATENT-APPL-SN-830978 US-PATENT-CLASS-60-202 US-PATENT-3,552,125	N71-26387*	c 12	NASA-CASE-XLA-05541 US-PATENT-APPL-SN-700986 US-PATENT-CLASS-73-301 US-PATENT-3,473,379
N71-26084*	c 03	NASA-CASE-LEW-11358 US-PATENT-APPL-SN-787906 US-PATENT-CLASS-136-6 US-PATENT-3,554,806	N71-26181*	c 07	NASA-CASE-MSC-12223-1 US-PATENT-APPL-SN-839941 US-PATENT-CLASS-179-1 US-PATENT-3,555,192	N71-26414*	c 10	NASA-CASE-XMF-04958-1 US-PATENT-APPL-SN-448365 US-PATENT-CLASS-321-69 US-PATENT-3,434,037
N71-26085*	c 10	NASA-CASE-GSC-10735-1 US-PATENT-APPL-SN-863963 US-PATENT-CLASS-321-2 US-PATENT-3,559,031	N71-26182*	c 09	NASA-CASE-NPO-10625 US-PATENT-APPL-SN-856415 US-PATENT-CLASS-313-236 US-PATENT-CLASS-313-237 US-PATENT-CLASS-60-23 US-PATENT-3,562,575	N71-26415*	c 10	NASA-CASE-NPO-10003 US-PATENT-APPL-SN-638192 US-PATENT-CLASS-330-13 US-PATENT-3,461,393
N71-26092*	c 09	NASA-CASE-XNP-07477 US-PATENT-APPL-SN-605098 US-PATENT-CLASS-318-258 US-PATENT-3,501,684	N71-26185*	c 15	NASA-CASE-MFS-14711 US-PATENT-APPL-SN-742666 US-PATENT-CLASS-55-75 US-PATENT-3,557,534	N71-26418*	c 10	NASA-CASE-XGS-04224 US-PATENT-APPL-SN-568364 US-PATENT-CLASS-340-174 US-PATENT-3,483,535
N71-26100*	c 18	NASA-CASE-XLA-04251 US-PATENT-APPL-SN-657742 US-PATENT-CLASS-117-104 US-PATENT-3,553,002	N71-26189*	c 15	NASA-CASE-XLE-09527-2 US-PATENT-APPL-SN-840870 US-PATENT-CLASS-308-187 US-PATENT-3,561,828	N71-26434*	c 10	NASA-CASE-XNP-01466 US-PATENT-APPL-SN-487940 US-PATENT-CLASS-340-174 US-PATENT-3,461,437
N71-26101*	c 07	NASA-CASE-NPO-10231 US-PATENT-APPL-SN-701767 US-PATENT-CLASS-343-786 US-PATENT-3,534,376	N71-26199*	c 14	NASA-CASE-NPO-10691 US-PATENT-APPL-SN-816988 US-PATENT-CLASS-73-61 US-PATENT-3,566,676	N71-26474*	c 14	NASA-CASE-XMF-03844-1 US-PATENT-APPL-SN-601229 US-PATENT-CLASS-95-44 US-PATENT-3,472,140
N71-26102*	c 07	NASA-CASE-XNP-06611 US-PATENT-APPL-SN-593607 US-PATENT-CLASS-178-6.6 US-PATENT-3,474,192	N71-26206*	c 23	NASA-CASE-XGS-08269 US-PATENT-APPL-SN-787393 US-PATENT-CLASS-356-76 US-PATENT-3,554,647	N71-26475*	c 14	NASA-CASE-XNP-09701 US-PATENT-APPL-SN-584015 US-PATENT-CLASS-250-83.3 US-PATENT-3,461,290
N71-26103*	c 10	NASA-CASE-XNP-04623 US-PATENT-APPL-SN-510150 US-PATENT-CLASS-340-146.1 US-PATENT-3,474,413	N71-26243*	c 15	NASA-CASE-MSC-10959 US-PATENT-APPL-SN-725719 US-PATENT-CLASS-168-1 US-PATENT-3,420,338	N71-26531*	c 10	NASA-CASE-GSC-10413 US-PATENT-APPL-SN-789043 US-PATENT-CLASS-317-20 US-PATENT-CLASS-317-33 US-PATENT-3,555,361
N71-26110*	c 02	NASA-CASE-LAR-10249-1 US-PATENT-APPL-SN-835060 US-PATENT-CLASS-244-42 US-PATENT-3,576,301	N71-26244*	c 14	NASA-CASE-XMS-06497 US-PATENT-APPL-SN-617778 US-PATENT-CLASS-324-115 US-PATENT-3,464,012	N71-26537*	c 31	NASA-CASE-GSC-10556-1 NASA-CASE-GSC-10557-1 US-PATENT-APPL-SN-808193 US-PATENT-CLASS-244-1 US-PATENT-CLASS-308-1 US-PATENT-CLASS-74-5.12 US-PATENT-3,554,466
N71-26133*	c 09	NASA-CASE-MFS-20075 US-PATENT-APPL-SN-835059 US-PATENT-CLASS-317-101 US-PATENT-CLASS-339-17 US-PATENT-3,575,638	N71-26266*	c 14	NASA-CASE-XNP-09830 US-PATENT-APPL-SN-632165 US-PATENT-CLASS-324-0.5 US-PATENT-3,474,328	N71-26544*	c 10	NASA-CASE-NPO-10344 US-PATENT-APPL-SN-732921 US-PATENT-CLASS-340-347 US-PATENT-3,566,396
N71-26134*	c 15	NASA-CASE-XKS-07953 US-PATENT-APPL-SN-725405 US-PATENT-CLASS-51-170 US-PATENT-3,553,904	N71-26285*	c 18	NASA-CASE-MSC-12109 US-PATENT-APPL-SN-889376 US-PATENT-CLASS-112-402 US-PATENT-CLASS-2-275 US-PATENT-CLASS-2-81 US-PATENT-3,563,198	N71-26546*	c 12	NASA-CASE-FRC-10022 US-PATENT-APPL-SN-763729 US-PATENT-CLASS-73-194 US-PATENT-3,555,898
N71-26135*	c 14	NASA-CASE-XAC-03740 US-PATENT-APPL-SN-480211 US-PATENT-CLASS-324-43	N71-26291*	c 07	NASA-CASE-HQN-10541-1 US-PATENT-APPL-SN-494739 US-PATENT-CLASS-350-96 US-PATENT-3,556,634	N71-26577*	c 10	NASA-CASE-NPO-10214 US-PATENT-APPL-SN-704299 US-PATENT-CLASS-325-41
			N71-26292*	c 07	NASA-CASE-XKS-10543			

N71-26579*	c 07	US-PATENT-3,566,268 NASA-CASE-XMS-06740-1 US-PATENT-APPL-SN-554277 US-PATENT-CLASS-178-6 US-PATENT-3,470,313	N71-26787*	c 09	US-PATENT-APPL-SN-804172 US-PATENT-CLASS-313-63 US-PATENT-CLASS-315-111 US-PATENT-CLASS-60-202 US-PATENT-3,576,107	N71-27094*	c 28	NASA-CASE-GSC-10710-1 US-PATENT-APPL-SN-828909 US-PATENT-CLASS-73-117.4 US-PATENT-3,572,104
N71-26611*	c 15	NASA-CASE-MSC-11817-1 US-PATENT-APPL-SN-7668 US-PATENT-CLASS-165-44 US-PATENT-CLASS-165-86 US-PATENT-CLASS-188-88 US-PATENT-CLASS-244-1 US-PATENT-CLASS-244-57 US-PATENT-3,563,307	N71-26788*	c 14	NASA-CASE-MFS-20240 US-PATENT-APPL-SN-825259 US-PATENT-CLASS-356-203 US-PATENT-3,563,668	N71-27095*	c 28	NASA-CASE-MFS-20325 US-PATENT-APPL-SN-840176 US-PATENT-CLASS-244-1 US-PATENT-3,572,610
N71-26626*	c 10	NASA-CASE-GSC-10891-1 US-PATENT-APPL-SN-568620 US-PATENT-CLASS-307-53 US-PATENT-3,480,789	N71-27001*	c 09	NASA-CASE-XGS-11177 US-PATENT-APPL-SN-828921 US-PATENT-CLASS-317-33 US-PATENT-CLASS-317-9 US-PATENT-3,571,656	N71-27126*	c 10	NASA-CASE-LEW-10233 US-PATENT-APPL-SN-750787 US-PATENT-CLASS-307-253 US-PATENT-CLASS-307-300 US-PATENT-3,566,158
N71-26627*	c 14	NASA-CASE-MFS-14017 US-PATENT-APPL-SN-762956 US-PATENT-CLASS-248-183 US-PATENT-CLASS-308-9 US-PATENT-3,559,937	N71-27005*	c 14	NASA-CASE-MFS-20261 US-PATENT-APPL-SN-845990 US-PATENT-CLASS-1 US-PATENT-CLASS-141-258 US-PATENT-CLASS-222-137 US-PATENT-CLASS-222-49 US-PATENT-3,568,885	N71-27135*	c 15	NASA-CASE-HQN-10541-2 US-PATENT-APPL-SN-822088 US-PATENT-CLASS-219-121 US-PATENT-CLASS-331-94.5 US-PATENT-3,571,555
N71-26635*	c 15	NASA-CASE-ERC-10022 US-PATENT-APPL-SN-874733 US-PATENT-CLASS-74-424.8 US-PATENT-CLASS-74-89.15 US-PATENT-3,576,135	N71-27006*	c 15	NASA-CASE-LAR-10083-1 US-PATENT-APPL-SN-837825 US-PATENT-CLASS-73-147 US-PATENT-3,572,112	N71-27136*	c 10	NASA-CASE-GSC-10065-1 US-PATENT-APPL-SN-808462 US-PATENT-CLASS-318-571 US-PATENT-CLASS-318-653 US-PATENT-3,568,028
N71-26642*	c 28	NASA-CASE-LEW-10106-1 US-PATENT-APPL-SN-758390 US-PATENT-CLASS-60-202 US-PATENT-3,552,124	N71-27016*	c 09	NASA-CASE-GSC-11139 US-PATENT-APPL-SN-756511 US-PATENT-CLASS-307-234 US-PATENT-CLASS-307-246 US-PATENT-CLASS-307-273 US-PATENT-CLASS-328-120 US-PATENT-CLASS-330-30 US-PATENT-3,569,744	N71-27137*	c 10	NASA-CASE-XNP-06234 US-PATENT-APPL-SN-723827 US-PATENT-CLASS-235-92 US-PATENT-CLASS-328-49 US-PATENT-3,567,913
N71-26654*	c 23	NASA-CASE-NPO-10467 US-PATENT-APPL-SN-798277 US-PATENT-CLASS-62-514 US-PATENT-3,564,866	N71-27036*	c 11	NASA-CASE-XNP-09770-3 US-PATENT-APPL-SN-863967 US-PATENT-CLASS-74-18.2 US-PATENT-3,574,286	N71-27146*	c 15	NASA-CASE-LAR-10193-1 US-PATENT-APPL-SN-794968 US-PATENT-CLASS-188-1 US-PATENT-CLASS-188-103 US-PATENT-3,568,805
N71-26672*	c 14	NASA-CASE-ERC-10033 US-PATENT-APPL-SN-801660 US-PATENT-CLASS-73-49.3 US-PATENT-3,559,460	N71-27053*	c 09	NASA-CASE-ERC-10113 US-PATENT-APPL-SN-865811 US-PATENT-CLASS-323-48 US-PATENT-CLASS-323-60 US-PATENT-3,571,699	N71-27147*	c 15	NASA-CASE-MSC-12121-1 US-PATENT-APPL-SN-783374 US-PATENT-CLASS-91-390 US-PATENT-CLASS-91-461 US-PATENT-3,563,135
N71-26673*	c 15	NASA-CASE-XAC-09489-1 US-PATENT-APPL-SN-694246 US-PATENT-CLASS-356-154 US-PATENT-3,565,530	N71-27055*	c 07	NASA-CASE-MSC-12205-1 US-PATENT-APPL-SN-882577 US-PATENT-CLASS-325-16 US-PATENT-CLASS-325-23 US-PATENT-CLASS-325-369 US-PATENT-CLASS-343-100 US-PATENT-CLASS-343-117 US-PATENT-CLASS-343-176 US-PATENT-3,568,197	N71-27169*	c 15	NASA-CASE-LAR-10106-1 US-PATENT-APPL-SN-810575 US-PATENT-CLASS-188-1 US-PATENT-CLASS-310-51 US-PATENT-3,566,993
N71-26674*	c 19	NASA-CASE-XGS-04173 US-PATENT-APPL-SN-658964 US-PATENT-CLASS-350-285 US-PATENT-3,560,081	N71-27057*	c 08	NASA-CASE-XLA-07828 US-PATENT-APPL-SN-770209 US-PATENT-CLASS-318-20.105 US-PATENT-CLASS-325-151.11 US-PATENT-CLASS-340-347DA US-PATENT-3,573,797	N71-27170*	c 18	NASA-CASE-XMF-02221 US-PATENT-APPL-SN-430192 US-PATENT-CLASS-252-301.2 US-PATENT-3,567,651
N71-26678*	c 09	NASA-CASE-ERC-10013 US-PATENT-APPL-SN-802972 US-PATENT-CLASS-29-25.18 US-PATENT-3,562,881	N71-27058*	c 14	NASA-CASE-MSC-13276-1 US-PATENT-APPL-SN-880272 US-PATENT-CLASS-219-505 US-PATENT-3,575,585	N71-27183*	c 16	NASA-CASE-HQN-10541-4 US-PATENT-APPL-SN-822090 US-PATENT-CLASS-250-199 US-PATENT-3,575,602
N71-26681*	c 32	NASA-CASE-LAR-10098 US-PATENT-APPL-SN-677475 US-PATENT-CLASS-73-71.4 US-PATENT-3,564,906	N71-27067*	c 15	NASA-CASE-KKS-07814 US-PATENT-APPL-SN-672384 US-PATENT-CLASS-182-10 US-PATENT-CLASS-188-65.5 US-PATENT-3,568,795	N71-27184*	c 15	NASA-CASE-XNP-08124 US-PATENT-APPL-SN-697075 US-PATENT-CLASS-75-63 US-PATENT-3,563,727
N71-26701*	c 09	NASA-CASE-NPO-10331 US-PATENT-APPL-SN-757625 US-PATENT-CLASS-118-49.5 US-PATENT-CLASS-204-298 US-PATENT-3,556,048	N71-27068*	c 15	NASA-CASE-NPO-10796 US-PATENT-APPL-SN-815760 US-PATENT-CLASS-220-46 US-PATENT-3,568,874	N71-27185*	c 14	NASA-CASE-NPO-10556 US-PATENT-APPL-SN-796405 US-PATENT-CLASS-73-71.6 US-PATENT-3,572,089
N71-26721*	c 15	NASA-CASE-LAR-10121-1 US-PATENT-APPL-SN-766244 US-PATENT-CLASS-18-6 US-PATENT-3,562,857	N71-27084*	c 15	NASA-CASE-NPO-10755 US-PATENT-APPL-SN-816733 US-PATENT-CLASS-417-50 US-PATENT-3,567,339	N71-27186*	c 14	NASA-CASE-XMF-03968 US-PATENT-APPL-SN-719029 US-PATENT-CLASS-174-110.3 US-PATENT-CLASS-324-65 US-PATENT-CLASS-340-227 US-PATENT-CLASS-60-35.6 US-PATENT-3,569,828
N71-26722*	c 23	NASA-CASE-GSC-10216-1 US-PATENT-APPL-SN-756260 US-PATENT-CLASS-331-94.5 US-PATENT-3,555,455	N71-27088*	c 02	NASA-CASE-XLA-08967 US-PATENT-APPL-SN-837830 US-PATENT-CLASS-244-90 US-PATENT-3,570,789	N71-27191*	c 07	NASA-CASE-MFS-20068 US-PATENT-APPL-SN-797795 US-PATENT-CLASS-174-28 US-PATENT-CLASS-333-95 US-PATENT-CLASS-333-96 US-PATENT-CLASS-343-884 US-PATENT-3,569,875
N71-26726*	c 03	NASA-CASE-XNP-03413 US-PATENT-APPL-SN-640456 US-PATENT-CLASS-156-212 US-PATENT-3,565,719	N71-27090*	c 14	NASA-CASE-ERC-10044-1 US-PATENT-APPL-SN-811892 US-PATENT-CLASS-250-43.5R US-PATENT-CLASS-250-83.6R US-PATENT-CLASS-324-33 US-PATENT-3,575,597	N71-27210*	c 08	NASA-CASE-GSC-10097-1 US-PATENT-APPL-SN-762957 US-PATENT-CLASS-179-100.2 US-PATENT-CLASS-29-603 US-PATENT-CLASS-340-174.1 US-PATENT-3,566,045
N71-26754*	c 06	NASA-CASE-XNP-09451 US-PATENT-APPL-SN-713162 US-PATENT-CLASS-23-253 US-PATENT-3,560,161	N71-27098*	c 15	NASA-CASE-XLA-08911 US-PATENT-APPL-SN-777764 US-PATENT-CLASS-219-229 US-PATENT-CLASS-228-53 US-PATENT-3,575,336	N71-27215*	c 14	NASA-CASE-LAR-10204 US-PATENT-APPL-SN-766245 US-PATENT-CLASS-235-92 US-PATENT-CLASS-356-106 US-PATENT-3,572,935
N71-26772*	c 18	NASA-CASE-XMF-07770-2 US-PATENT-APPL-SN-711903 US-PATENT-CLASS-106-296 US-PATENT-3,576,656	N71-27099*	c 15	NASA-CASE-MFS-13929 US-PATENT-APPL-SN-779847 US-PATENT-CLASS-152-225 US-PATENT-CLASS-152-250 US-PATENT-3,568,748	N71-27232*	c 09	NASA-CASE-NPO-10607 US-PATENT-APPL-SN-799353 US-PATENT-CLASS-250-83 US-PATENT-CLASS-317-230 US-PATENT-CLASS-317-231 US-PATENT-CLASS-317-238 US-PATENT-3,568,010
N71-26773*	c 17	NASA-CASE-XNP-04262-2 US-PATENT-APPL-SN-684894 US-PATENT-CLASS-75-66 US-PATENT-3,565,607						
N71-26774*	c 14	NASA-CASE-ERC-11020 US-PATENT-APPL-SN-686248 US-PATENT-CLASS-325-363 US-PATENT-3,564,420						
N71-26779*	c 28	NASA-CASE-XLA-04126 US-PATENT-APPL-SN-467820 US-PATENT-CLASS-102-101 US-PATENT-CLASS-264-3 US-PATENT-CLASS-86-1 US-PATENT-CLASS-86-20.2 US-PATENT-3,570,364						
N71-26781*	c 28	NASA-CASE-LEW-10210-1						

N71-27233\* c 07 ..... NASA-CASE-GSC-10220-1  
US-PATENT-APPL-SN-759256  
US-PATENT-CLASS-343-777  
US-PATENT-CLASS-343-786  
US-PATENT-CLASS-343-799  
US-PATENT-CLASS-343-840  
US-PATENT-CLASS-343-854  
US-PATENT-3,569,976

N71-27234\* c 05 ..... NASA-CASE-XFR-07172  
US-PATENT-APPL-SN-720041  
US-PATENT-CLASS-128-2.05  
US-PATENT-3,563,232

N71-27254\* c 06 ..... NASA-CASE-NPO-10768  
US-PATENT-APPL-SN-770398  
US-PATENT-CLASS-260-615  
US-PATENT-3,574,770

N71-27255\* c 08 ..... NASA-CASE-NPO-12107  
US-PATENT-APPL-SN-555189  
US-PATENT-CLASS-179-100.2  
US-PATENT-CLASS-340-146.1  
US-PATENT-CLASS-340-172.5  
US-PATENT-3,571,801

N71-27271\* c 10 ..... NASA-CASE-XLA-03893  
US-PATENT-APPL-SN-779024  
US-PATENT-CLASS-331-109  
US-PATENT-CLASS-331-117  
US-PATENT-CLASS-331-177  
US-PATENT-CLASS-332-30  
US-PATENT-3,569,866

N71-27272\* c 10 ..... NASA-CASE-XLA-08799  
US-PATENT-APPL-SN-668242  
US-PATENT-CLASS-340-150  
US-PATENT-CLASS-340-164  
US-PATENT-CLASS-340-166  
US-PATENT-CLASS-340-213  
US-PATENT-CLASS-340-403  
US-PATENT-3,571,800

N71-27323\* c 14 ..... NASA-CASE-NPO-10810  
US-PATENT-APPL-SN-805405  
US-PATENT-CLASS-250-83.3  
US-PATENT-CLASS-73-355  
US-PATENT-3,566,122

N71-27324\* c 21 ..... NASA-CASE-GSC-10555-1  
US-PATENT-APPL-SN-785620  
US-PATENT-CLASS-244-1  
US-PATENT-3,567,155

N71-27325\* c 14 ..... NASA-CASE-GSC-10441-1  
US-PATENT-APPL-SN-782544  
US-PATENT-CLASS-324-43  
US-PATENT-3,571,700

N71-27332\* c 12 ..... NASA-CASE-NPO-10416  
US-PATENT-APPL-SN-754020  
US-PATENT-CLASS-137-81.5  
US-PATENT-3,570,513

N71-27334\* c 14 ..... NASA-CASE-ERC-10087  
US-PATENT-APPL-SN-738315  
US-PATENT-CLASS-29-588  
US-PATENT-3,566,459

N71-27338\* c 10 ..... NASA-CASE-KSC-10020  
US-PATENT-APPL-SN-817482  
US-PATENT-CLASS-324-103  
US-PATENT-CLASS-324-107  
US-PATENT-CLASS-324-133  
US-PATENT-CLASS-340-248  
US-PATENT-3,571,707

N71-27341\* c 07 ..... NASA-CASE-NPO-10343  
US-PATENT-APPL-SN-750786  
US-PATENT-CLASS-178-7.1  
US-PATENT-CLASS-178-7.3  
US-PATENT-3,566,027

N71-27363\* c 06 ..... NASA-CASE-HQN-10364  
US-PATENT-APPL-SN-713616  
US-PATENT-CLASS-260-2  
US-PATENT-3,563,918

N71-27364\* c 09 ..... NASA-CASE-ERC-10065  
US-PATENT-APPL-SN-777818  
US-PATENT-CLASS-321-61  
US-PATENT-CLASS-321-64  
US-PATENT-CLASS-322-32  
US-PATENT-3,571,693

N71-27365\* c 10 ..... NASA-CASE-NPO-10251  
US-PATENT-APPL-SN-774265  
US-PATENT-CLASS-35-19  
US-PATENT-3,570,143

N71-27366\* c 10 ..... NASA-CASE-GSC-10114-1  
US-PATENT-APPL-SN-796370  
US-PATENT-CLASS-317-33  
US-PATENT-CLASS-321-12  
US-PATENT-3,571,662

N71-27372\* c 15 ..... NASA-CASE-NPO-10070  
US-PATENT-APPL-SN-780064  
US-PATENT-CLASS-23-259  
US-PATENT-3,565,584

N71-27397\* c 18 ..... NASA-CASE-XNP-02500  
US-PATENT-APPL-SN-508169  
US-PATENT-CLASS-324-58.5

N71-27407\* c 14 ..... NASA-CASE-GSC-10376-1  
US-PATENT-APPL-SN-806226  
US-PATENT-CLASS-307-126  
US-PATENT-CLASS-323-20  
US-PATENT-3,566,143

N71-27432\* c 15 ..... NASA-CASE-NPO-10808  
US-PATENT-APPL-SN-808192  
US-PATENT-CLASS-60-243  
US-PATENT-3,568,447

N71-27585\* c 28 ..... NASA-CASE-MFS-20130  
US-PATENT-APPL-SN-809822  
US-PATENT-CLASS-244-4  
US-PATENT-3,570,785

N71-27754\* c 15 ..... NASA-CASE-ARC-10131-1  
US-PATENT-APPL-SN-808576  
US-PATENT-CLASS-60-51  
US-PATENT-CLASS-91-361  
US-PATENT-CLASS-91-390  
US-PATENT-CLASS-91-448  
US-PATENT-3,568,572

N71-27862\* c 33 ..... NASA-CASE-MFS-14114  
US-PATENT-APPL-SN-706013  
US-PATENT-CLASS-310-4  
US-PATENT-3,535,562

N71-28421\* c 09 ..... NASA-CASE-NPO-10412  
US-PATENT-APPL-SN-768470  
US-PATENT-CLASS-310-4  
US-PATENT-3,578,992

N71-28429\* c 07 ..... NASA-CASE-MSC-13201-1  
US-PATENT-APPL-SN-789903  
US-PATENT-CLASS-332-29  
US-PATENT-CLASS-332-30  
US-PATENT-3,579,147

N71-28430\* c 07 ..... NASA-CASE-GSC-10668-1  
US-PATENT-APPL-SN-743525  
US-PATENT-CLASS-307-296  
US-PATENT-CLASS-325-185  
US-PATENT-CLASS-330-124  
US-PATENT-CLASS-330-200  
US-PATENT-CLASS-330-40  
US-PATENT-3,577,092

N71-28465\* c 15 ..... NASA-CASE-ERC-10097  
US-PATENT-APPL-SN-797059  
US-PATENT-CLASS-308-170  
US-PATENT-3,583,777

N71-28467\* c 15 ..... NASA-CASE-NPO-10646  
US-PATENT-APPL-SN-813488  
US-PATENT-CLASS-64-18  
US-PATENT-3,574,277

N71-28468\* c 09 ..... NASA-CASE-ARC-10137-1  
US-PATENT-APPL-SN-799013  
US-PATENT-CLASS-307-265  
US-PATENT-CLASS-307-273  
US-PATENT-CLASS-307-288  
US-PATENT-CLASS-328-207  
US-PATENT-3,584,311

N71-28554\* c 16 ..... NASA-CASE-XGS-10518  
US-PATENT-APPL-SN-372730  
US-PATENT-CLASS-335-216  
US-PATENT-3,541,486

N71-28579\* c 03 ..... NASA-CASE-LEW-11359  
US-PATENT-APPL-SN-787911  
US-PATENT-CLASS-136-83  
US-PATENT-3,573,986

N71-28582\* c 15 ..... NASA-CASE-LEW-10278-1  
US-PATENT-APPL-SN-760928  
US-PATENT-CLASS-117-224  
US-PATENT-3,573,977

N71-28618\* c 09 ..... NASA-CASE-ERC-10098  
US-PATENT-APPL-SN-779169  
US-PATENT-CLASS-178-5.2R  
US-PATENT-CLASS-178-54CF  
US-PATENT-CLASS-178-54PE  
US-PATENT-3,582,960

N71-28619\* c 05 ..... NASA-CASE-ARC-10153  
US-PATENT-APPL-SN-783377  
US-PATENT-CLASS-104-1  
US-PATENT-CLASS-104-139  
US-PATENT-CLASS-119-96  
US-PATENT-CLASS-238-1  
US-PATENT-CLASS-248-361  
US-PATENT-CLASS-272-70  
US-PATENT-CLASS-35-29  
US-PATENT-3,583,322

N71-28620\* c 06 ..... NASA-CASE-NPO-10701  
US-PATENT-APPL-SN-763355  
US-PATENT-CLASS-260-47  
US-PATENT-3,576,786

N71-28629\* c 11 ..... NASA-CASE-KSC-10198  
US-PATENT-APPL-SN-845971  
US-PATENT-CLASS-73-15  
US-PATENT-CLASS-73-432  
US-PATENT-3,578,756

N71-28691\* c 09 ..... NASA-CASE-MFS-13687

US-PATENT-APPL-SN-723488  
US-PATENT-CLASS-204-30  
US-PATENT-3,576,723

N71-28729\* c 18 ..... NASA-CASE-LEW-10219-1  
US-PATENT-APPL-SN-785780  
US-PATENT-CLASS-148-126  
US-PATENT-3,579,390

N71-28739\* c 10 ..... NASA-CASE-XNP-01068  
US-PATENT-APPL-SN-375680  
US-PATENT-CLASS-307-88.5  
US-PATENT-3,271,594

N71-28740\* c 15 ..... NASA-CASE-XLA-09346  
US-PATENT-APPL-SN-820964  
US-PATENT-CLASS-356-150  
US-PATENT-CLASS-356-152  
US-PATENT-CLASS-356-153  
US-PATENT-CLASS-73-147  
US-PATENT-3,583,815

N71-28741\* c 12 ..... NASA-CASE-XLE-09341  
US-PATENT-APPL-SN-780065  
US-PATENT-CLASS-137-81.5  
US-PATENT-3,583,419

N71-28747\* c 17 ..... NASA-CASE-XNP-08881  
US-PATENT-APPL-SN-732922  
US-PATENT-CLASS-161-89  
US-PATENT-3,579,412

N71-28759\* c 22 ..... NASA-CASE-LEW-10250-1  
US-PATENT-APPL-SN-732455  
US-PATENT-CLASS-176-45  
US-PATENT-3,574,057

N71-28779\* c 11 ..... NASA-CASE-XNP-00250  
US-PATENT-APPL-SN-212497  
US-PATENT-CLASS-181-5  
US-PATENT-3,260,326

N71-28783\* c 10 ..... NASA-CASE-XMS-02182  
US-PATENT-APPL-SN-516153  
US-PATENT-CLASS-317-100  
US-PATENT-3,317,797

N71-28807\* c 06 ..... NASA-CASE-XMF-08674  
US-PATENT-APPL-SN-617775  
US-PATENT-CLASS-260-47  
US-PATENT-3,370,039

N71-28808\* c 06 ..... NASA-CASE-XNP-04023  
US-PATENT-APPL-SN-470902  
US-PATENT-CLASS-260-429  
US-PATENT-3,396,184

N71-28809\* c 07 ..... NASA-CASE-XGS-02290  
US-PATENT-APPL-SN-544895  
US-PATENT-CLASS-343-771  
US-PATENT-3,417,400

N71-28810\* c 09 ..... NASA-CASE-XNP-03916  
US-PATENT-APPL-SN-535304  
US-PATENT-CLASS-331-113  
US-PATENT-3,325,749

N71-28849\* c 28 ..... NASA-CASE-XMS-04826  
US-PATENT-APPL-SN-521755  
US-PATENT-CLASS-60-266  
US-PATENT-3,318,096

N71-28850\* c 28 ..... NASA-CASE-XNP-01954  
US-PATENT-APPL-SN-372730  
US-PATENT-CLASS-313-230  
US-PATENT-3,328,624

N71-28851\* c 31 ..... NASA-CASE-XMS-06162  
US-PATENT-APPL-SN-610724  
US-PATENT-CLASS-244-138  
US-PATENT-3,330,510

N71-28852\* c 33 ..... NASA-CASE-XNP-01310  
US-PATENT-APPL-SN-379771  
US-PATENT-CLASS-60-266  
US-PATENT-3,279,193

N71-28859\* c 10 ..... NASA-CASE-XNP-01107  
US-PATENT-APPL-SN-384010  
US-PATENT-CLASS-330-51  
US-PATENT-3,389,346

N71-28860\* c 10 ..... NASA-CASE-MSC-13492-1  
US-PATENT-APPL-SN-53156  
US-PATENT-CLASS-307-215  
US-PATENT-CLASS-307-265  
US-PATENT-CLASS-307-273  
US-PATENT-CLASS-328-207  
US-PATENT-CLASS-328-92  
US-PATENT-3,577,014

N71-28863\* c 14 ..... NASA-CASE-ERC-10014  
US-PATENT-APPL-SN-815367  
US-PATENT-CLASS-250-41.9  
US-PATENT-CLASS-250-49.5  
US-PATENT-3,567,927

N71-28866\* c 09 ..... NASA-CASE-MFS-14610  
US-PATENT-APPL-SN-885571  
US-PATENT-CLASS-318-317  
US-PATENT-CLASS-318-331  
US-PATENT-CLASS-318-345  
US-PATENT-CLASS-318-504  
US-PATENT-3,573,583

N71-28892\* c 33 ..... NASA-CASE-XMF-05046  
US-PATENT-APPL-SN-559350

		US-PATENT-CLASS-62-45	N71-28994*	c 14	NASA-CASE-XER-11203	N71-29129*	c 03	NASA-CASE-XGS-01674
		US-PATENT-3,365,897			US-PATENT-APPL-SN-815366			US-PATENT-APPL-SN-248985
N71-28900*	c 07	NASA-CASE-XNP-02389			US-PATENT-CLASS-250-218			US-PATENT-CLASS-320-13
		US-PATENT-APPL-SN-516162			US-PATENT-CLASS-356-103			US-PATENT-3,118,100
		US-PATENT-CLASS-343-100			US-PATENT-3,578,867	N71-29131*	c 16	NASA-CASE-ERC-10151
		US-PATENT-3,331,071	N71-29008*	c 09	NASA-CASE-MS-11277			US-PATENT-APPL-SN-853856
N71-28903*	c 33	NASA-CASE-XLA-01745			US-PATENT-APPL-SN-771759			US-PATENT-CLASS-350-3.5
		US-PATENT-APPL-SN-538907			US-PATENT-CLASS-317-155.5			US-PATENT-3,578,838
		US-PATENT-CLASS-244-1			US-PATENT-CLASS-317-33	N71-29132*	c 15	NASA-CASE-NPO-10431
		US-PATENT-3,409,247			US-PATENT-CLASS-317-54			US-PATENT-APPL-SN-865329
N71-28915*	c 28	NASA-CASE-LEW-10286-1			US-PATENT-CLASS-317-60			US-PATENT-CLASS-73-49.8
		US-PATENT-APPL-SN-839994			US-PATENT-3,579,041			US-PATENT-3,583,239
		US-PATENT-CLASS-431-352	N71-29018*	c 15	NASA-CASE-XLA-08916	N71-29133*	c 15	NASA-CASE-MFS-20453
		US-PATENT-CLASS-60-39.36			US-PATENT-APPL-SN-777765			US-PATENT-APPL-SN-885594
		US-PATENT-CLASS-60-39.65			US-PATENT-CLASS-29-421			US-PATENT-CLASS-29-278R
		US-PATENT-3,581,492			US-PATENT-3,583,058			US-PATENT-CLASS-294-15
N71-28925*	c 08	NASA-CASE-XNP-01012	N71-29032*	c 15	NASA-CASE-XMF-05999			US-PATENT-CLASS-339-17R
		US-PATENT-APPL-SN-369338			US-PATENT-APPL-SN-752946			US-PATENT-CLASS-81-3R
		US-PATENT-CLASS-340-174			US-PATENT-CLASS-117-212			US-PATENT-3,583,744
		US-PATENT-3,394,359			US-PATENT-3,576,669	N71-29134*	c 14	NASA-CASE-MFS-11204
N71-28926*	c 09	NASA-CASE-XMS-03542	N71-29033*	c 08	NASA-CASE-GSC-10554-1			US-PATENT-APPL-SN-845991
		US-PATENT-APPL-SN-482952			US-PATENT-APPL-SN-828984			US-PATENT-CLASS-73-1R
		US-PATENT-CLASS-307-263			US-PATENT-CLASS-235-150.1			US-PATENT-CLASS-73-304C
		US-PATENT-3,364,366			US-PATENT-CLASS-235-150.2			US-PATENT-3,578,755
N71-28928*	c 28	NASA-CASE-XNP-00816			US-PATENT-CLASS-235-150.27	N71-29135*	c 10	NASA-CASE-GSC-10564
		US-PATENT-APPL-SN-235588			US-PATENT-CLASS-235-151.1			US-PATENT-APPL-SN-292596
		US-PATENT-CLASS-253-77			US-PATENT-3,578,957			US-PATENT-CLASS-340-174
		US-PATENT-3,202,398	N71-29034*	c 08	NASA-CASE-NPO-11088			US-PATENT-3,348,218
N71-28929*	c 27	NASA-CASE-XNP-00650			US-PATENT-APPL-SN-887701	N71-29136*	c 15	NASA-CASE-XLA-00013
		US-PATENT-APPL-SN-271823			US-PATENT-CLASS-307-207			US-PATENT-APPL-SN-579121
		US-PATENT-CLASS-60-39.48			US-PATENT-CLASS-307-222			US-PATENT-CLASS-308-177
		US-PATENT-3,170,295			US-PATENT-CLASS-328-167			US-PATENT-2,903,307
N71-28933*	c 14	NASA-CASE-XLA-08913			US-PATENT-CLASS-328-44	N71-29137*	c 17	NASA-CASE-XNP-04339
		US-PATENT-APPL-SN-865109			US-PATENT-3,579,122			US-PATENT-APPL-SN-451596
		US-PATENT-CLASS-204-263	N71-29035*	c 09	NASA-CASE-LEW-10155-1			US-PATENT-CLASS-264-111
		US-PATENT-3,574,084			US-PATENT-APPL-SN-889387			US-PATENT-3,413,393
N71-28935*	c 14	NASA-CASE-LAR-10686			US-PATENT-CLASS-337-114	N71-29138*	c 08	NASA-CASE-ERC-10041
		US-PATENT-APPL-SN-280362			US-PATENT-CLASS-337-121			US-PATENT-APPL-SN-889478
		US-PATENT-CLASS-226-58			US-PATENT-3,579,168			US-PATENT-CLASS-307-234
		US-PATENT-3,298,582	N71-29040*	c 18	NASA-CASE-XLE-10910			US-PATENT-CLASS-307-265
N71-28936*	c 15	NASA-CASE-XMS-10993			US-PATENT-APPL-SN-751061			US-PATENT-CLASS-324-106
		US-PATENT-APPL-SN-660573			US-PATENT-CLASS-148-6			US-PATENT-CLASS-328-58
		US-PATENT-CLASS-244-1			US-PATENT-3,573,996			US-PATENT-CLASS-332-10
		US-PATENT-3,389,877	N71-29041*	c 14	NASA-CASE-XLA-10402			US-PATENT-CLASS-332-9R
N71-28937*	c 15	NASA-CASE-XNP-01855			US-PATENT-APPL-SN-762935	N71-29139*	c 09	NASA-CASE-XLA-07788
		US-PATENT-APPL-SN-408435			US-PATENT-CLASS-356-76			US-PATENT-3,579,146
		US-PATENT-CLASS-285-45			US-PATENT-3,574,462			US-PATENT-APPL-SN-874732
		US-PATENT-3,219,365	N71-29044*	c 03	NASA-CASE-XMS-02063			US-PATENT-CLASS-307-215
N71-28951*	c 15	NASA-CASE-XNP-02278			US-PATENT-APPL-SN-422096			US-PATENT-CLASS-307-247
		US-PATENT-APPL-SN-11853			US-PATENT-CLASS-136-86			US-PATENT-CLASS-307-265
		US-PATENT-CLASS-60-35.55			US-PATENT-3,382,105			US-PATENT-CLASS-307-273
		US-PATENT-3,132,479	N71-29046*	c 33	NASA-CASE-XHQ-03673			US-PATENT-CLASS-307-294
N71-28952*	c 15	NASA-CASE-XAC-00001			US-PATENT-APPL-SN-559055			US-PATENT-CLASS-328-207
		US-PATENT-APPL-SN-612568			US-PATENT-CLASS-165-86			US-PATENT-3,578,988
		US-PATENT-CLASS-318-31			US-PATENT-3,347,309	N71-29151*	c 33	NASA-CASE-XLE-00035
		US-PATENT-2,837,706	N71-29049*	c 23	NASA-CASE-XNP-06503			US-PATENT-APPL-SN-575291
N71-28958*	c 14	NASA-CASE-XNP-02792			US-PATENT-APPL-SN-370989			US-PATENT-CLASS-204-37
		US-PATENT-APPL-SN-262596			US-PATENT-CLASS-335-216			US-PATENT-2,926,123
		US-PATENT-CLASS-219-413			US-PATENT-3,273,094	N71-29152*	c 33	NASA-CASE-XLE-00027
		US-PATENT-3,197,616	N71-29050*	c 31	NASA-CASE-HQN-00936			US-PATENT-APPL-SN-529594
N71-28959*	c 15	NASA-CASE-XNP-01848			US-PATENT-APPL-SN-862921			US-PATENT-CLASS-253-39.1
		US-PATENT-APPL-SN-359532			US-PATENT-CLASS-244-1			US-PATENT-2,956,772
		US-PATENT-CLASS-64-27			US-PATENT-3,396,920	N71-29153*	c 28	NASA-CASE-MFS-20831
		US-PATENT-3,236,066	N71-29051*	c 33	NASA-CASE-XMF-04208			US-PATENT-APPL-SN-238421
N71-28960*	c 10	NASA-CASE-XNP-00745			US-PATENT-APPL-SN-428887			US-PATENT-CLASS-60-35.54
		US-PATENT-APPL-SN-314570			US-PATENT-CLASS-73-190			US-PATENT-3,212,259
		US-PATENT-CLASS-328-67			US-PATENT-3,372,588	N71-29154*	c 28	NASA-CASE-XLE-00155
		US-PATENT-3,252,100	N71-29052*	c 33	NASA-CASE-MS-12389			US-PATENT-APPL-SN-348600
N71-28965* #	c 07	NASA-CASE-GSC-10949-1			US-PATENT-APPL-SN-229286			US-PATENT-CLASS-253-77
		US-PATENT-APPL-SN-94369			US-PATENT-CLASS-165-47			US-PATENT-2,997,274
N71-28979*	c 07	NASA-CASE-HQN-00937			US-PATENT-3,212,564	N71-29155*	c 27	NASA-CASE-MS-12390
		US-PATENT-APPL-SN-343760			NASA-CASE-HQN-00938			US-PATENT-APPL-SN-231520
		US-PATENT-CLASS-343-823	N71-29053*	c 33	NASA-CASE-HQN-00938			US-PATENT-CLASS-222-61
		US-PATENT-3,299,431			US-PATENT-APPL-SN-300957			US-PATENT-3,286,882
N71-28980*	c 07	NASA-CASE-XLA-10772			US-PATENT-CLASS-60-267	N71-29156*	c 26	NASA-CASE-XNP-01961
		US-PATENT-APPL-SN-887700			US-PATENT-3,298,175			US-PATENT-APPL-SN-442835
		US-PATENT-CLASS-343-708	N71-29065*	c 07	NASA-CASE-ERC-10011			US-PATENT-CLASS-148-174
		US-PATENT-CLASS-343-784			US-PATENT-APPL-SN-802818			US-PATENT-3,397,094
		US-PATENT-CLASS-343-872			US-PATENT-CLASS-333-81			
		US-PATENT-3,579,242			US-PATENT-CLASS-350-1	N71-29184*	c 25	NASA-CASE-XLA-00327
N71-28991*	c 14	NASA-CASE-XLA-06713			US-PATENT-CLASS-350-286			US-PATENT-APPL-SN-199199
		US-PATENT-APPL-SN-863913			US-PATENT-3,574,438			US-PATENT-CLASS-315-111
		US-PATENT-CLASS-324-5	N71-29123*	c 23	NASA-CASE-XNP-08907			US-PATENT-3,238,413
		US-PATENT-CLASS-324-73			US-PATENT-APPL-SN-824042			
		US-PATENT-CLASS-340-347AD			US-PATENT-CLASS-350-102	N71-30026*	c 14	NASA-CASE-MFS-20096
		US-PATENT-3,579,103			US-PATENT-CLASS-350-288			US-PATENT-APPL-SN-435433
N71-28992*	c 14	NASA-CASE-ERC-10150			US-PATENT-CLASS-350-310			US-PATENT-CLASS-73-432
		US-PATENT-APPL-SN-822519			US-PATENT-3,574,448	N71-30027*	c 23	NASA-CASE-GSC-10700
		US-PATENT-CLASS-250-41.95	N71-29125*	c 23	NASA-CASE-NPO-11087			US-PATENT-APPL-SN-311387
		US-PATENT-CLASS-73-40.7			US-PATENT-APPL-SN-840359			US-PATENT-CLASS-350-2
		US-PATENT-3,578,758			US-PATENT-CLASS-331-94.5			US-PATENT-3,394,975
N71-28993*	c 14	NASA-CASE-MFS-20044			US-PATENT-CLASS-356-153	N71-30028*	c 15	NASA-CASE-MFS-20830
		US-PATENT-APPL-SN-838630			US-PATENT-3,574,467			US-PATENT-APPL-SN-286620
		US-PATENT-CLASS-250-219	N71-29128*	c 02	NASA-CASE-XAC-00048			US-PATENT-3,262,395
		US-PATENT-CLASS-356-209			US-PATENT-APPL-SN-765264	N71-30265*	c 14	NASA-CASE-HQN-10780
		US-PATENT-3,574,470			US-PATENT-CLASS-121-38			US-PATENT-APPL-SN-247136
					US-PATENT-2,898,889			US-PATENT-CLASS-73-497



N71-30292*	c 23	US-PATENT-3,270,565 NASA-CASE-HQN-10781 US-PATENT-APPL-SN-86018 US-PATENT-3,239,660	N71-34044* #	c 03	US-PATENT-CLASS-329-145 US-PATENT-3,588,705 NASA-CASE-NPO-11190 US-PATENT-APPL-SN-115944	N72-11365*	c 14	US-PATENT-CLASS-73-95 US-PATENT-3,592,545 NASA-CASE-MFS-20485 US-PATENT-APPL-SN-22320 US-PATENT-CLASS-250-43.5FC US-PATENT-CLASS-73-194F US-PATENT-3,599,489
N71-33108*	c 07	NASA-CASE-KSC-10164 US-PATENT-APPL-SN-782955 US-PATENT-CLASS-179-1R US-PATENT-CLASS-179-1VC US-PATENT-3,588,359	N71-34212* #	c 09	NASA-CASE-MFS-20935 US-PATENT-APPL-SN-136007	N72-11385*	c 15	NASA-CASE-MFS-18495 US-PATENT-APPL-SN-38814 US-PATENT-CLASS-24-21 1N US-PATENT-CLASS-85-5B US-PATENT-3,596,554
N71-33109*	c 09	NASA-CASE-ARC-10101-1 US-PATENT-APPL-SN-793823 US-PATENT-CLASS-307-251 US-PATENT-CLASS-307-261 US-PATENT-CLASS-321-47 US-PATENT-3,588,671	N72-10138* #	c 06	NASA-CASE-HQN-10537-1 US-PATENT-APPL-SN-112366	N72-11386*	c 15	NASA-CASE-MFS-20249 US-PATENT-APPL-SN-794530 US-PATENT-CLASS-248-183 US-PATENT-CLASS-248-278 US-PATENT-CLASS-248-487 US-PATENT-CLASS-33-72 US-PATENT-CLASS-350-285 US-PATENT-CLASS-350-287 US-PATENT-3,596,863
N71-33110*	c 08	NASA-CASE-GSC-10186 US-PATENT-APPL-SN-713188 US-PATENT-CLASS-235-164 US-PATENT-CLASS-235-175 US-PATENT-3,588,483	N72-10375* #	c 14	NASA-CASE-GSC-11095-1 US-PATENT-APPL-SN-147940	N72-11387*	c 15	NASA-CASE-MFS-20249 US-PATENT-APPL-SN-794530 US-PATENT-CLASS-248-183 US-PATENT-CLASS-248-278 US-PATENT-CLASS-248-487 US-PATENT-CLASS-33-72 US-PATENT-CLASS-350-285 US-PATENT-CLASS-350-287 US-PATENT-3,596,863
N71-33129*	c 10	NASA-CASE-GSC-10667-1 US-PATENT-APPL-SN-749548 US-PATENT-CLASS-330-11 US-PATENT-CLASS-330-16 US-PATENT-CLASS-330-24 US-PATENT-3,585,514	N72-11062* #	c 03	NASA-CASE-LAR-10557 US-PATENT-APPL-SN-853746 US-PATENT-CLASS-416-115 US-PATENT-CLASS-416-121 US-PATENT-CLASS-416-127 US-PATENT-CLASS-416-130 US-PATENT-CLASS-416-149 US-PATENT-CLASS-416-200 US-PATENT-3,592,559	N72-11388*	c 15	NASA-CASE-MFS-20249 US-PATENT-APPL-SN-794530 US-PATENT-CLASS-248-183 US-PATENT-CLASS-248-278 US-PATENT-CLASS-248-487 US-PATENT-CLASS-33-72 US-PATENT-CLASS-350-285 US-PATENT-CLASS-350-287 US-PATENT-3,596,863
N71-33160*	c 31	NASA-CASE-XLA-04063 US-PATENT-APPL-SN-802948 US-PATENT-CLASS-179-1 US-PATENT-CLASS-244-1 US-PATENT-CLASS-244-83 US-PATENT-3,586,261	N72-11084* #	c 05	NASA-CASE-XGS-04047-2 US-PATENT-APPL-SN-843251 US-PATENT-CLASS-136-206 US-PATENT-3,597,281	N72-11389*	c 15	NASA-CASE-MFS-20249 US-PATENT-APPL-SN-865298 US-PATENT-CLASS-212-134 US-PATENT-CLASS-308-5 US-PATENT-3,600,046
N71-33229*	c 23	NASA-CASE-NPO-10468 US-PATENT-APPL-SN-787846 US-PATENT-CLASS-350-310 US-PATENT-CLASS-350-55 US-PATENT-3,588,220	N72-11085* #	c 05	NASA-CASE-NPO-10677 US-PATENT-APPL-SN-868530 US-PATENT-CLASS-62-467 US-PATENT-CLASS-62-56 US-PATENT-3,599,443	N72-11390*	c 15	NASA-CASE-MFS-20249 US-PATENT-APPL-SN-865298 US-PATENT-CLASS-212-134 US-PATENT-CLASS-308-5 US-PATENT-3,600,046
N71-33407*	c 10	NASA-CASE-NPO-10342 US-PATENT-APPL-SN-704446 US-PATENT-CLASS-178-69.5 US-PATENT-CLASS-179-15B5 US-PATENT-CLASS-340-347DD US-PATENT-3,588,883	N72-11148* #	c 07	NASA-CASE-MSC-13140 US-PATENT-APPL-SN-796358 US-PATENT-CLASS-285-410 US-PATENT-CLASS-297-232 US-PATENT-CLASS-297-68 US-PATENT-CLASS-5-69 US-PATENT-3,592,505	N72-11391*	c 15	NASA-CASE-MFS-20249 US-PATENT-APPL-SN-865298 US-PATENT-CLASS-212-134 US-PATENT-CLASS-308-5 US-PATENT-3,600,046
N71-33408*	c 17	NASA-CASE-LEV-10327 US-PATENT-APPL-SN-772006 US-PATENT-CLASS-148-6.3 US-PATENT-3,591,426	N72-11149* #	c 07	NASA-CASE-NPO-10301 US-PATENT-APPL-SN-848810 US-PATENT-CLASS-343-771 US-PATENT-CLASS-343-853 US-PATENT-3,599,216	N72-11392*	c 15	NASA-CASE-MFS-20249 US-PATENT-APPL-SN-865298 US-PATENT-CLASS-212-134 US-PATENT-CLASS-308-5 US-PATENT-3,600,046
N71-33409*	c 03	NASA-CASE-ARC-10050 US-PATENT-APPL-SN-797219 US-PATENT-CLASS-136-89 US-PATENT-3,591,420	N72-11150* #	c 07	NASA-CASE-NPO-10641 US-PATENT-APPL-SN-880248 US-PATENT-CLASS-331-10 US-PATENT-CLASS-331-34 US-PATENT-CLASS-331-66 US-PATENT-CLASS-331-7 US-PATENT-3,593,180	N72-11568* #	c 23	NASA-CASE-MFS-20249 US-PATENT-APPL-SN-865298 US-PATENT-CLASS-212-134 US-PATENT-CLASS-308-5 US-PATENT-3,600,046
N71-33410*	c 16	NASA-CASE-NPO-10417 US-PATENT-APPL-SN-753974 US-PATENT-CLASS-331-94.5 US-PATENT-CLASS-352-84 US-PATENT-CLASS-95-11 US-PATENT-3,587,424	N72-11171* #	c 08	NASA-CASE-NPO-10769 US-PATENT-APPL-SN-813494 US-PATENT-CLASS-179-15.55R US-PATENT-3,598,921	N72-11595* #	c 24	NASA-CASE-MFS-20249 US-PATENT-APPL-SN-865298 US-PATENT-CLASS-212-134 US-PATENT-CLASS-308-5 US-PATENT-3,600,046
N71-33518*	c 15	NASA-CASE-XLA-03661 US-PATENT-APPL-SN-751266 US-PATENT-CLASS-408-137 US-PATENT-CLASS-90-11 US-PATENT-3,585,882	N72-11172* #	c 08	NASA-CASE-NPO-10641 US-PATENT-APPL-SN-880248 US-PATENT-CLASS-331-10 US-PATENT-CLASS-331-34 US-PATENT-CLASS-331-66 US-PATENT-CLASS-331-7 US-PATENT-3,593,180	N72-11708*	c 28	NASA-CASE-MFS-20249 US-PATENT-APPL-SN-865298 US-PATENT-CLASS-212-134 US-PATENT-CLASS-308-5 US-PATENT-3,600,046
N71-33519*	c 09	NASA-CASE-ERC-10100 US-PATENT-APPL-SN-766697 US-PATENT-CLASS-313-109.5 US-PATENT-CLASS-313-231 US-PATENT-CLASS-315-108 US-PATENT-CLASS-315-111 US-PATENT-CLASS-340-324 US-PATENT-CLASS-340-336 US-PATENT-3,588,874	N72-11173* #	c 08	NASA-CASE-NPO-10769 US-PATENT-APPL-SN-813494 US-PATENT-CLASS-179-15.55R US-PATENT-3,598,921	N72-11709*	c 28	NASA-CASE-MFS-20249 US-PATENT-APPL-SN-865298 US-PATENT-CLASS-212-134 US-PATENT-CLASS-308-5 US-PATENT-3,600,046
N71-33606*	c 07	NASA-CASE-NPO-11031 US-PATENT-APPL-SN-864097 US-PATENT-CLASS-333-21A US-PATENT-CLASS-333-6 US-PATENT-CLASS-333-7 US-PATENT-3,588,751	N72-11224* #	c 09	NASA-CASE-NPO-10641 US-PATENT-APPL-SN-880248 US-PATENT-CLASS-331-10 US-PATENT-CLASS-331-34 US-PATENT-CLASS-331-66 US-PATENT-CLASS-331-7 US-PATENT-3,593,180	N72-12080*	c 07	NASA-CASE-MFS-20249 US-PATENT-APPL-SN-865298 US-PATENT-CLASS-212-134 US-PATENT-CLASS-308-5 US-PATENT-3,600,046
N71-33612*	c 11	NASA-CASE-XLA-09480 US-PATENT-APPL-SN-874435 US-PATENT-CLASS-73-147 US-PATENT-3,587,306	N72-11225* #	c 09	NASA-CASE-NPO-10769 US-PATENT-APPL-SN-813494 US-PATENT-CLASS-179-15.55R US-PATENT-3,598,921	N72-12081*	c 07	NASA-CASE-MFS-20249 US-PATENT-APPL-SN-865298 US-PATENT-CLASS-212-134 US-PATENT-CLASS-308-5 US-PATENT-3,600,046
N71-33613*	c 07	NASA-CASE-NPO-10700 US-PATENT-APPL-SN-840308 US-PATENT-CLASS-318-227 US-PATENT-CLASS-318-230 US-PATENT-3,588,648	N72-11256* #	c 10	NASA-CASE-NPO-10641 US-PATENT-APPL-SN-880248 US-PATENT-CLASS-331-10 US-PATENT-CLASS-331-34 US-PATENT-CLASS-331-66 US-PATENT-CLASS-331-7 US-PATENT-3,593,180	N72-12136*	c 09	NASA-CASE-MFS-20249 US-PATENT-APPL-SN-865298 US-PATENT-CLASS-212-134 US-PATENT-CLASS-308-5 US-PATENT-3,600,046
N71-33696*	c 07	NASA-CASE-MSC-12165-1 US-PATENT-APPL-SN-875849 US-PATENT-CLASS-325-347 US-PATENT-CLASS-325-348 US-PATENT-CLASS-325-473 US-PATENT-CLASS-325-478 US-PATENT-CLASS-325-480 US-PATENT-CLASS-325-482 US-PATENT-CLASS-328-164 US-PATENT-CLASS-328-165	N72-11363* #	c 14	NASA-CASE-ARC-10042-2 US-PATENT-APPL-SN-33159 US-PATENT-CLASS-330-107 US-PATENT-CLASS-330-109 US-PATENT-3,593,175	N72-12408*	c 15	NASA-CASE-MFS-20249 US-PATENT-APPL-SN-865298 US-PATENT-CLASS-212-134 US-PATENT-CLASS-308-5 US-PATENT-3,600,046
			N72-11364* #	c 14	NASA-CASE-MSC-11847-1 US-PATENT-APPL-SN-8497 US-PATENT-CLASS-73-149 US-PATENT-CLASS-73-290B US-PATENT-3,596,510 NASA-CASE-NPO-10778 US-PATENT-APPL-SN-865909 US-PATENT-CLASS-250-235 US-PATENT-CLASS-33-125 US-PATENT-CLASS-356-167 US-PATENT-CLASS-356-32			

		US-PATENT-APPL-SN-784544				US-PATENT-APPL-SN-887698	N72-17451*	c 15	NASA-CASE-WLP-10002
		US-PATENT-CLASS-140-105				US-PATENT-CLASS-128-2.1A			US-PATENT-APPL-SN-47062
		US-PATENT-CLASS-72-307				US-PATENT-CLASS-307-252F			US-PATENT-CLASS-180-125
		US-PATENT-CLASS-3,584,660				US-PATENT-CLASS-307-252J			US-PATENT-CLASS-180-127
N72-12409*	c 15	NASA-CASE-NPO-10637				US-PATENT-CLASS-325-492			US-PATENT-CLASS-308-DIG.1
		US-PATENT-APPL-SN-851298				US-PATENT-CLASS-340-177			US-PATENT-CLASS-308-5
		US-PATENT-CLASS-236-68				US-PATENT-3,603,946			US-PATENT-CLASS-308-9
		US-PATENT-CLASS-337-354	N72-17154*	c 09	NASA-CASE-ERC-10139				US-PATENT-3,610,365
		US-PATENT-CLASS-337-359			US-PATENT-APPL-SN-889555		N72-17452*	c 15	NASA-CASE-XLA-10322
		US-PATENT-CLASS-337-75			US-PATENT-CLASS-321-10				US-PATENT-APPL-SN-887699
		US-PATENT-CLASS-60-23			US-PATENT-CLASS-336-178				US-PATENT-CLASS-73-88.5F
		US-PATENT-3,591,960			US-PATENT-3,603,864				US-PATENT-3,608,365
N72-12440*	c 16	NASA-CASE-MFS-20180	N72-17155*	c 09	NASA-CASE-NPO-11023		N72-17453*	c 15	NASA-CASE-NPO-11177
		US-PATENT-APPL-SN-863276			US-PATENT-APPL-SN-865274				US-PATENT-APPL-SN-20960
		US-PATENT-CLASS-331-94.5			US-PATENT-CLASS-330-18				US-PATENT-CLASS-62-51
		US-PATENT-CLASS-350-1			US-PATENT-CLASS-330-40				US-PATENT-3,605,424
		US-PATENT-CLASS-350-312			US-PATENT-3,603,892		N72-17454*	c 15	NASA-CASE-NPO-11059
		US-PATENT-3,593,194	N72-17156*	c 09	NASA-CASE-NPO-10199				US-PATENT-APPL-SN-864020
N72-13437*	c 16	NASA-CASE-MFS-20125			US-PATENT-APPL-SN-793991				US-PATENT-CLASS-248-14
		US-PATENT-APPL-SN-830366			US-PATENT-CLASS-178-7.1				US-PATENT-3,606,979
		US-PATENT-CLASS-178-DIG.21			US-PATENT-CLASS-330-11		N72-17455*	c 15	NASA-CASE-NPO-11140
		US-PATENT-CLASS-178-6			US-PATENT-CLASS-330-35				US-PATENT-APPL-SN-15019
		US-PATENT-CLASS-250-203X			US-PATENT-3,609,230				US-PATENT-CLASS-174-84
		US-PATENT-CLASS-356-152	N72-17157*	c 09	NASA-CASE-NPO-11253				US-PATENT-CLASS-200-64
		US-PATENT-3,603,686			US-PATENT-APPL-SN-21906				US-PATENT-CLASS-339-176M
N72-15098* #	c 05	NASA-CASE-MSC-13917-1			US-PATENT-CLASS-307-223				US-PATENT-CLASS-339-278M
		US-PATENT-APPL-SN-198355			US-PATENT-CLASS-307-227				US-PATENT-CLASS-339-46
N72-15986*	c 03	NASA-CASE-XGS-10010			US-PATENT-CLASS-307-81				US-PATENT-CLASS-89-1.811
		US-PATENT-APPL-SN-729299			US-PATENT-CLASS-328-186				US-PATENT-3,611,274
		US-PATENT-CLASS-136-133			US-PATENT-3,609,387		N72-17532*	c 18	NASA-CASE-MFS-13532
		US-PATENT-CLASS-136-135			NASA-CASE-XAC-05462-2				US-PATENT-APPL-SN-720546
		US-PATENT-CLASS-136-6	N72-17171*	c 10	US-PATENT-APPL-SN-28235				US-PATENT-CLASS-106-292
		US-PATENT-3,607,401			US-PATENT-CLASS-307-295				US-PATENT-CLASS-106-299
N72-16015*	c 05	NASA-CASE-KSC-10278			US-PATENT-CLASS-328-167				US-PATENT-3,607,338
		US-PATENT-APPL-SN-856327			US-PATENT-CLASS-330-109		N72-17747*	c 23	NASA-CASE-ERC-10089
		US-PATENT-CLASS-324-66			US-PATENT-CLASS-330-176				US-PATENT-APPL-SN-791267
		US-PATENT-CLASS-340-279			US-PATENT-CLASS-333-70CR				US-PATENT-CLASS-340-174AG
		US-PATENT-CLASS-35-8			US-PATENT-3,609,567				US-PATENT-CLASS-340-174CT
		US-PATENT-3,609,740	N72-17172*	c 10	NASA-CASE-ARC-10020				US-PATENT-CLASS-340-174GA
N72-16172*	c 10	NASA-CASE-ARC-10269-1			US-PATENT-APPL-SN-31885				US-PATENT-CLASS-340-174SC
		US-PATENT-APPL-SN-56791			US-PATENT-CLASS-330-107				US-PATENT-3,611,330
		US-PATENT-CLASS-307-230			US-PATENT-CLASS-330-109		N72-17820*	c 26	NASA-CASE-XER-08476-1
		US-PATENT-CLASS-307-262			US-PATENT-CLASS-330-26				US-PATENT-APPL-SN-672388
		US-PATENT-CLASS-328-155			US-PATENT-CLASS-330-31				US-PATENT-CLASS-148-187
		US-PATENT-3,614,475			US-PATENT-CLASS-330-94				US-PATENT-CLASS-29-578
N72-16282*	c 14	NASA-CASE-LAR-10913			US-PATENT-3,605,032				US-PATENT-CLASS-29-589
		US-PATENT-APPL-SN-779160	N72-17173*	c 10	NASA-CASE-MFS-13130				US-PATENT-3,602,984
		US-PATENT-CLASS-73-12			US-PATENT-APPL-SN-7868		N72-17843*	c 28	NASA-CASE-NPO-10046
		US-PATENT-3,605,482			US-PATENT-CLASS-250-209				US-PATENT-APPL-SN-860635
N72-16283*	c 14	NASA-CASE-GSC-10780-1			US-PATENT-CLASS-250-83.3UV				US-PATENT-CLASS-60-258
		US-PATENT-APPL-SN-860493			US-PATENT-CLASS-340-228.2				US-PATENT-CLASS-60-39.74
		US-PATENT-CLASS-82-24R			US-PATENT-3,609,364				US-PATENT-3,603,092
		US-PATENT-3,608,409	N72-17183*	c 11	NASA-CASE-MFS-20509		N72-17873*	c 30	NASA-CASE-ARC-10134
N72-16329*	c 15	NASA-CASE-XLA-07829			US-PATENT-APPL-SN-899557				US-PATENT-APPL-SN-819898
		US-PATENT-APPL-SN-763684			US-PATENT-CLASS-73-147				US-PATENT-CLASS-244-3.21
		US-PATENT-CLASS-264-DIG.44			US-PATENT-3,602,920				US-PATENT-3,603,532
		US-PATENT-CLASS-264-221	N72-17323*	c 14	NASA-CASE-ERC-10248		N72-17947*	c 33	NASA-CASE-MSC-12143-1
		US-PATENT-CLASS-264-225			US-PATENT-APPL-SN-868445				US-PATENT-APPL-SN-791268
		US-PATENT-CLASS-264-227			US-PATENT-CLASS-350-162				US-PATENT-CLASS-102-105
		US-PATENT-3,608,046			US-PATENT-CLASS-356-113				US-PATENT-CLASS-161-67
N72-16330*	c 15	NASA-CASE-LAR-10203-1			US-PATENT-CLASS-356-209				US-PATENT-CLASS-244-117
		US-PATENT-APPL-SN-769592			US-PATENT-CLASS-356-244				US-PATENT-3,603,260
		US-PATENT-CLASS-156-84			US-PATENT-3,603,690		N72-17948*	c 33	NASA-CASE-NPO-10828
		US-PATENT-CLASS-156-86			NASA-CASE-MFS-20596				US-PATENT-APPL-SN-873260
		US-PATENT-3,607,495	N72-17324*	c 14	US-PATENT-APPL-SN-7867				US-PATENT-CLASS-165-105
N72-17093*	c 06	NASA-CASE-LEW-10794-1			US-PATENT-CLASS-350-3.5				US-PATENT-3,603,382
		US-PATENT-APPL-SN-33535			US-PATENT-3,605,519		N72-18184*	c 08	NASA-CASE-NPO-10629
		US-PATENT-CLASS-23-55	N72-17325*	c 14	NASA-CASE-MSC-15158-1				US-PATENT-APPL-SN-860751
		US-PATENT-CLASS-23-88			US-PATENT-APPL-SN-889479				US-PATENT-CLASS-178-50
		US-PATENT-CLASS-23-97			US-PATENT-CLASS-324-52				US-PATENT-CLASS-178-66
		US-PATENT-3,607,015			US-PATENT-3,609,535				US-PATENT-CLASS-179-15
N72-17094*	c 06	NASA-CASE-NPO-10234	N72-17326*	c 14	NASA-CASE-XMS-01994-1				US-PATENT-CLASS-235-154
		US-PATENT-APPL-SN-800204			US-PATENT-APPL-SN-814212				US-PATENT-CLASS-340-347DD
		US-PATENT-CLASS-23-230R			US-PATENT-CLASS-356-4				US-PATENT-3,603,976
		US-PATENT-CLASS-23-232C			US-PATENT-3,603,683		N72-18411*	c 14	NASA-CASE-KSC-10294
		US-PATENT-CLASS-23-253PC			NASA-CASE-LEW-10281-1				US-PATENT-APPL-SN-889556
		US-PATENT-CLASS-73-23.1	N72-17327*	c 14	US-PATENT-APPL-SN-861649				US-PATENT-CLASS-307-311
		US-PATENT-3,607,076			US-PATENT-CLASS-73-198				US-PATENT-CLASS-346-107A
N72-17095*	c 06	NASA-CASE-NPO-10774			US-PATENT-3,605,495				US-PATENT-CLASS-346-23
		US-PATENT-APPL-SN-848805	N72-17328*	c 14	NASA-CASE-XLA-07813				US-PATENT-CLASS-352-84
		US-PATENT-CLASS-23-201			US-PATENT-APPL-SN-791364				US-PATENT-CLASS-95-1.1
		US-PATENT-CLASS-23-230			US-PATENT-CLASS-250-207				US-PATENT-3,603,974
		US-PATENT-CLASS-23-253			US-PATENT-CLASS-250-41.9		N72-18477*	c 15	NASA-CASE-GSC-10566-1
		US-PATENT-CLASS-73-76			US-PATENT-CLASS-250-49.5				US-PATENT-APPL-SN-889438
		US-PATENT-3,607,080			US-PATENT-CLASS-250-71.5				US-PATENT-CLASS-242-54
N72-17109*	c 07	NASA-CASE-MSC-12146-1			US-PATENT-CLASS-250-83.3				US-PATENT-CLASS-52-108
		US-PATENT-APPL-SN-50206			US-PATENT-3,609,353				US-PATENT-3,608,844
		US-PATENT-CLASS-178-5.2R	N72-17329*	c 14	NASA-CASE-FRC-10012		N72-18766*	c 28	NASA-CASE-GSC-10640-1
		US-PATENT-CLASS-178-5.4			US-PATENT-APPL-SN-771216				US-PATENT-APPL-SN-17101
		US-PATENT-CLASS-178-6.7			US-PATENT-CLASS-73-194A				US-PATENT-CLASS-23-281
		US-PATENT-3,603,722			US-PATENT-3,611,801				US-PATENT-CLASS-23-288
N72-17152*	c 09	NASA-CASE-ARC-10178-1	N72-17450*	c 15	NASA-CASE-MSC-12279				US-PATENT-CLASS-60-260
		US-PATENT-APPL-SN-47443			US-PATENT-APPL-SN-24154				US-PATENT-3,603,093
		US-PATENT-CLASS-250-211J			US-PATENT-CLASS-188-1C		N72-18859*	c 31	NASA-CASE-MSC-13281
		US-PATENT-3,603,798			US-PATENT-CLASS-188-129				US-PATENT-APPL-SN-7669
N72-17153*	c 09	NASA-CASE-ARC-10105			US-PATENT-3,603,433				US-PATENT-CLASS-244-15.5

N72-20031*	c 03	US-PATENT-3,606,212 NASA-CASE-GSC-10669-1 US-PATENT-APPL-SN-90595 US-PATENT-CLASS-136-89 US-PATENT-CLASS-244-ISS US-PATENT-CLASS-340-210	N72-20222*	c 10	US-PATENT-CLASS-307-313 US-PATENT-CLASS-328-207 US-PATENT-CLASS-330-30D US-PATENT-3,633,048 NASA-CASE-XLA-11189 US-PATENT-APPL-SN-889375 US-PATENT-CLASS-324-115 US-PATENT-CLASS-324-132 US-PATENT-3,638,114	N72-21094*	c 06	US-PATENT-APPL-SN-10161 US-PATENT-CLASS-122-32 US-PATENT-CLASS-165-133 US-PATENT-CLASS-165-155 US-PATENT-CLASS-165-158 US-PATENT-CLASS-165-161 US-PATENT-CLASS-165-174 US-PATENT-3,630,276 NASA-CASE-ERC-10108 US-PATENT-APPL-SN-833049 US-PATENT-CLASS-156-3 US-PATENT-CLASS-96-36.2 US-PATENT-3,615,465
N72-20032*	c 03	NASA-CASE-NPO-11021 US-PATENT-APPL-SN-880250 US-PATENT-CLASS-136-166 US-PATENT-CLASS-136-79 US-PATENT-CLASS-136-81 US-PATENT-3,625,766	N72-20223*	c 10	NASA-CASE-NPO-11133 US-PATENT-APPL-SN-887685 US-PATENT-CLASS-307-295 US-PATENT-CLASS-328-16 US-PATENT-CLASS-328-166 US-PATENT-CLASS-328-20 US-PATENT-CLASS-328-38 US-PATENT-3,626,308	N72-21105* #	c 06	NASA-CASE-GSC-11304-1 US-PATENT-APPL-SN-137912 NASA-CASE-XLA-11154 US-PATENT-APPL-SN-23532 US-PATENT-CLASS-343-706 US-PATENT-CLASS-343-912 US-PATENT-3,623,107
N72-20033*	c 03	NASA-CASE-NPO-10401 US-PATENT-APPL-SN-15025 US-PATENT-CLASS-210-212 US-PATENT-CLASS-356-222 US-PATENT-3,630,627	N72-20224*	c 10	NASA-CASE-NPO-11203 US-PATENT-APPL-SN-3696 US-PATENT-CLASS-324-83A US-PATENT-CLASS-324-85 US-PATENT-CLASS-328-133 US-PATENT-CLASS-343-12 US-PATENT-3,631,351	N72-21117*	c 07	NASA-CASE-XLA-11154 US-PATENT-APPL-SN-23532 US-PATENT-CLASS-343-706 US-PATENT-CLASS-343-912 US-PATENT-3,623,107 NASA-CASE-NPO-11001 US-PATENT-APPL-SN-856279 US-PATENT-CLASS-343-100ST US-PATENT-CLASS-343-5CM US-PATENT-CLASS-343-6.5R US-PATENT-3,624,650
N72-20034*	c 03	NASA-CASE-LEW-11359-2 US-PATENT-APPL-SN-57399 US-PATENT-CLASS-136-100R US-PATENT-CLASS-136-175 US-PATENT-CLASS-136-83R US-PATENT-3,635,765	N72-20225*	c 10	NASA-CASE-MSC-13407-1 US-PATENT-APPL-SN-65840 US-PATENT-CLASS-315-22 US-PATENT-CLASS-315-25 US-PATENT-3,638,066	N72-21119*	c 07	NASA-CASE-ERC-10112 US-PATENT-APPL-SN-796690 US-PATENT-CLASS-179-100.2K US-PATENT-3,614,343 NASA-CASE-KSC-10326 US-PATENT-APPL-SN-25487 US-PATENT-CLASS-235-155 US-PATENT-CLASS-340-347DD US-PATENT-3,638,002
N72-20096*	c 05	NASA-CASE-MSC-12411-1 US-PATENT-APPL-SN-701244 US-PATENT-CLASS-128-142.5 US-PATENT-CLASS-128-402 US-PATENT-CLASS-2-2.1 US-PATENT-3,635,216	N72-20244*	c 11	NASA-CASE-NPO-11210 US-PATENT-APPL-SN-880831 US-PATENT-CLASS-123-102 US-PATENT-CLASS-180-105E US-PATENT-CLASS-318-308 US-PATENT-CLASS-318-327 US-PATENT-CLASS-318-376 US-PATENT-3,630,304	N72-21197*	c 08	NASA-CASE-KSC-10326 US-PATENT-APPL-SN-25487 US-PATENT-CLASS-235-155 US-PATENT-CLASS-340-347DD US-PATENT-3,638,002 NASA-CASE-ERC-10307 US-PATENT-APPL-SN-39755 US-PATENT-CLASS-307-299 US-PATENT-CLASS-307-303 US-PATENT-CLASS-307-311 US-PATENT-CLASS-340-173.2 US-PATENT-CLASS-340-173LS US-PATENT-3,623,030
N72-20097*	c 05	NASA-CASE-MFS-20332 US-PATENT-APPL-SN-869260 US-PATENT-CLASS-137-469 US-PATENT-CLASS-137-81 US-PATENT-3,636,966	N72-20379*	c 14	NASA-CASE-GSC-10514-1 US-PATENT-APPL-SN-873045 US-PATENT-CLASS-250-208 US-PATENT-CLASS-356-138 US-PATENT-CLASS-356-152 US-PATENT-3,637,312	N72-21198*	c 08	NASA-CASE-ERC-10307 US-PATENT-APPL-SN-39755 US-PATENT-CLASS-307-299 US-PATENT-CLASS-307-303 US-PATENT-CLASS-307-311 US-PATENT-CLASS-340-173.2 US-PATENT-CLASS-340-173LS US-PATENT-3,623,030 NASA-CASE-NPO-10743 US-PATENT-APPL-SN-850587 US-PATENT-CLASS-340-174CS US-PATENT-CLASS-340-174LC US-PATENT-CLASS-340-174M US-PATENT-CLASS-340-174SR US-PATENT-3,613,110
N72-20098*	c 05	NASA-CASE-MSC-12398 US-PATENT-APPL-SN-785615 US-PATENT-CLASS-2-2.1 US-PATENT-3,624,839	N72-20380*	c 14	NASA-CASE-LAR-10176-1 US-PATENT-APPL-SN-811038 US-PATENT-CLASS-95-18 US-PATENT-3,626,828	N72-21199*	c 08	NASA-CASE-NPO-10743 US-PATENT-APPL-SN-850587 US-PATENT-CLASS-340-174CS US-PATENT-CLASS-340-174LC US-PATENT-CLASS-340-174M US-PATENT-CLASS-340-174SR US-PATENT-3,613,110 NASA-CASE-NPO-11018 US-PATENT-APPL-SN-873259 US-PATENT-CLASS-340-347AD US-PATENT-3,613,111
N72-20121*	c 06	NASA-CASE-NPO-10765 US-PATENT-APPL-SN-770425 US-PATENT-CLASS-260-544F US-PATENT-3,637,842	N72-20381*	c 14	NASA-CASE-GSC-10503-1 US-PATENT-APPL-SN-789044 US-PATENT-CLASS-250-83.6R US-PATENT-3,626,189	N72-21200*	c 08	NASA-CASE-NPO-11018 US-PATENT-APPL-SN-873259 US-PATENT-CLASS-340-347AD US-PATENT-3,613,111 NASA-CASE-LEW-11005-1 US-PATENT-APPL-SN-86548 US-PATENT-CLASS-323-DIG.1 US-PATENT-CLASS-323-22T US-PATENT-CLASS-323-38 US-PATENT-3,638,103
N72-20140*	c 07	NASA-CASE-NPO-10844 US-PATENT-APPL-SN-839934 US-PATENT-CLASS-178-69.5R US-PATENT-CLASS-179-15BS US-PATENT-CLASS-325-321 US-PATENT-CLASS-325-38 US-PATENT-CLASS-325-4 US-PATENT-CLASS-325-58 US-PATENT-3,626,298	N72-20442*	c 15	NASA-CASE-GSC-10607-1 US-PATENT-APPL-SN-27340 US-PATENT-CLASS-251-129 US-PATENT-CLASS-251-333 US-PATENT-3,632,081	N72-21243*	c 09	NASA-CASE-LEW-11005-1 US-PATENT-APPL-SN-86548 US-PATENT-CLASS-323-DIG.1 US-PATENT-CLASS-323-22T US-PATENT-CLASS-323-38 US-PATENT-3,638,103 NASA-CASE-LAR-10545-1 US-PATENT-APPL-SN-31703 US-PATENT-CLASS-343-771 US-PATENT-CLASS-343-893 US-PATENT-3,638,224
N72-20141*	c 07	NASA-CASE-ERC-10179 US-PATENT-APPL-SN-50207 US-PATENT-CLASS-325-445 US-PATENT-CLASS-329-161 US-PATENT-CLASS-329-162 US-PATENT-CLASS-332-51W US-PATENT-CLASS-333-73W US-PATENT-CLASS-343-772 US-PATENT-CLASS-343-773 US-PATENT-CLASS-343-786 US-PATENT-3,633,110	N72-20443*	c 15	NASA-CASE-NPO-10671 US-PATENT-APPL-SN-857967 US-PATENT-CLASS-188-1B US-PATENT-CLASS-188-1C US-PATENT-CLASS-188-268 US-PATENT-3,637,051	N72-21244*	c 09	NASA-CASE-LAR-10545-1 US-PATENT-APPL-SN-31703 US-PATENT-CLASS-343-771 US-PATENT-CLASS-343-893 US-PATENT-3,638,224 NASA-CASE-ARC-10192 US-PATENT-APPL-SN-15024 US-PATENT-CLASS-307-230 US-PATENT-CLASS-307-295 US-PATENT-CLASS-328-142 US-PATENT-CLASS-328-167 US-PATENT-CLASS-330-70R US-PATENT-CLASS-330-85 US-PATENT-CLASS-333-80 US-PATENT-3,621,407
N72-20154* #	c 07	NASA-CASE-NPO-11243 US-PATENT-APPL-SN-177753	N72-20444*	c 15	NASA-CASE-FRC-10038 US-PATENT-APPL-SN-889554 US-PATENT-CLASS-29-412 US-PATENT-CLASS-29-426 US-PATENT-CLASS-29-527.2 US-PATENT-CLASS-29-624 US-PATENT-CLASS-51-216 US-PATENT-CLASS-51-320 US-PATENT-CLASS-51-323 US-PATENT-3,636,623	N72-21245*	c 09	NASA-CASE-ARC-10192 US-PATENT-APPL-SN-15024 US-PATENT-CLASS-307-230 US-PATENT-CLASS-307-295 US-PATENT-CLASS-328-142 US-PATENT-CLASS-328-167 US-PATENT-CLASS-330-70R US-PATENT-CLASS-330-85 US-PATENT-CLASS-333-80 US-PATENT-3,621,407 NASA-CASE-NPO-11134 US-PATENT-APPL-SN-883524 US-PATENT-CLASS-318-576 US-PATENT-CLASS-324-71R US-PATENT-CLASS-346-1 US-PATENT-CLASS-346-29 US-PATENT-3,624,659
N72-20176*	c 08	NASA-CASE-NPO-11130 US-PATENT-APPL-SN-21508 US-PATENT-CLASS-235-152 US-PATENT-CLASS-235-92CC US-PATENT-CLASS-235-92DE US-PATENT-CLASS-235-92DM US-PATENT-CLASS-235-92LG US-PATENT-CLASS-235-92R US-PATENT-CLASS-340-347DA US-PATENT-CLASS-340-347DD US-PATENT-3,632,996	N72-20445*	c 15	NASA-CASE-NPO-10704 US-PATENT-APPL-SN-59895 US-PATENT-CLASS-138-178 US-PATENT-CLASS-285-18 US-PATENT-CLASS-285-345 US-PATENT-3,632,140	N72-21246*	c 09	NASA-CASE-NPO-11134 US-PATENT-APPL-SN-883524 US-PATENT-CLASS-318-576 US-PATENT-CLASS-324-71R US-PATENT-CLASS-346-1 US-PATENT-CLASS-346-29 US-PATENT-3,624,659 NASA-CASE-KSC-10393 US-PATENT-APPL-SN-71047 US-PATENT-CLASS-307-257 US-PATENT-CLASS-307-259 US-PATENT-CLASS-331-111 US-PATENT-CLASS-331-14 US-PATENT-CLASS-331-23 US-PATENT-CLASS-331-30 US-PATENT-3,614,648
N72-20177*	c 08	NASA-CASE-NPO-10748 US-PATENT-APPL-SN-63383 US-PATENT-CLASS-324-77G US-PATENT-3,631,339	N72-20446*	c 15	NASA-CASE-MFS-20698 US-PATENT-APPL-SN-3418 US-PATENT-CLASS-100-299 US-PATENT-CLASS-23-209.1 US-PATENT-CLASS-264-22 US-PATENT-CLASS-425-77 US-PATENT-3,632,242	N72-21247*	c 09	NASA-CASE-KSC-10393 US-PATENT-APPL-SN-71047 US-PATENT-CLASS-307-257 US-PATENT-CLASS-307-259 US-PATENT-CLASS-331-111 US-PATENT-CLASS-331-14 US-PATENT-CLASS-331-23 US-PATENT-CLASS-331-30 US-PATENT-3,614,648 NASA-CASE-LAR-10503-1 US-PATENT-APPL-SN-229143 NASA-CASE-MFS-20829 US-PATENT-APPL-SN-61894 US-PATENT-CLASS-169-28
N72-20199*	c 09	NASA-CASE-NPO-10722 US-PATENT-APPL-SN-860492 US-PATENT-CLASS-200-81.9M US-PATENT-CLASS-335-205 US-PATENT-3,632,923	N72-20597*	c 22	NASA-CASE-XLE-04599 US-PATENT-APPL-SN-751215 US-PATENT-CLASS-176-86G US-PATENT-3,629,068	N72-21248* #	c 09	NASA-CASE-LAR-10503-1 US-PATENT-APPL-SN-229143 NASA-CASE-MFS-20829 US-PATENT-APPL-SN-61894 US-PATENT-CLASS-169-28
N72-20200*	c 09	NASA-CASE-NPO-10694 US-PATENT-APPL-SN-24224 US-PATENT-CLASS-339-275T US-PATENT-CLASS-339-276T US-PATENT-3,631,382	N72-20758*	c 28	NASA-CASE-XNP-03282 US-PATENT-APPL-SN-745337 US-PATENT-CLASS-60-254 US-PATENT-3,636,711	N72-21310*	c 12	NASA-CASE-MFS-20829 US-PATENT-APPL-SN-61894 US-PATENT-CLASS-169-28
N72-20206* #	c 09	NASA-CASE-ERC-10468 US-PATENT-APPL-SN-144958	N72-20840* #	c 31	NASA-CASE-MFS-20922 US-PATENT-APPL-SN-220274			
N72-20221*	c 10	NASA-CASE-GSC-10082-1 US-PATENT-APPL-SN-41430 US-PATENT-CLASS-307-273 US-PATENT-CLASS-307-288	N72-20915*	c 33	NASA-CASE-NPO-10831			

		US-PATENT-CLASS-169-36			US-PATENT-APPL-SN-78065			US-PATENT-CLASS-325-29
		US-PATENT-3,613,794			US-PATENT-CLASS-178-52			US-PATENT-CLASS-325-492
N72-21405*	c 14	NASA-CASE-NPO-10832			US-PATENT-CLASS-179-15A			US-PATENT-CLASS-340-171
		US-PATENT-APPL-SN-22265			US-PATENT-CLASS-179-15BL			US-PATENT-CLASS-340-203
		US-PATENT-CLASS-73-141A			US-PATENT-CLASS-307-243			US-PATENT-3,621,290
		US-PATENT-3,623,360			US-PATENT-CLASS-307-251	N72-22203*	c 09	NASA-CASE-XER-11046
N72-21407*	c 14	NASA-CASE-MFS-20642			US-PATENT-CLASS-328-104			US-PATENT-APPL-SN-810579
		US-PATENT-APPL-SN-873793			US-PATENT-CLASS-328-154			US-PATENT-CLASS-321-15
		US-PATENT-CLASS-73-147			US-PATENT-3,614,327			US-PATENT-CLASS-321-18
		US-PATENT-3,623,361	N72-22163*	c 08	NASA-CASE-MSC-13110-1			US-PATENT-CLASS-321-2
		NASA-CASE-MSC-13332-1			US-PATENT-APPL-SN-23132			US-PATENT-CLASS-321-45
		US-PATENT-APPL-SN-77169			US-PATENT-CLASS-340-347AD			US-PATENT-CLASS-331-117
		US-PATENT-CLASS-250-43.5R			US-PATENT-3,614,772			US-PATENT-3,621,362
		US-PATENT-CLASS-250-83.3H	N72-22164*	c 08	NASA-CASE-NPO-10745	N72-22204*	c 09	NASA-CASE-LAR-10137-1
		US-PATENT-3,614,431			US-PATENT-APPL-SN-878730			US-PATENT-APPL-SN-881041
N72-21409*	c 14	NASA-CASE-MSC-12105-1			US-PATENT-CLASS-178-DIG.28			US-PATENT-CLASS-200-81R
		US-PATENT-APPL-SN-763743			US-PATENT-CLASS-178-DIG.36			US-PATENT-CLASS-200-82C
		US-PATENT-CLASS-356-17			US-PATENT-CLASS-178-6.8			US-PATENT-3,609,271
		US-PATENT-CLASS-356-18			US-PATENT-CLASS-178-7.2R	N72-22235*	c 10	NASA-CASE-GSC-10064-1
		US-PATENT-3,614,228			US-PATENT-3,621,130			US-PATENT-APPL-SN-802812
N72-21462*	c 15	NASA-CASE-NPO-10679			NASA-CASE-NPO-11104			US-PATENT-CLASS-343-16M
		US-PATENT-APPL-SN-848282			US-PATENT-APPL-SN-860750			US-PATENT-CLASS-343-7.4
		US-PATENT-CLASS-74-89.15			US-PATENT-CLASS-235-150.52			US-PATENT-CLASS-343-779
		US-PATENT-3,614,898			US-PATENT-CLASS-235-150.53			US-PATENT-CLASS-343-786
N72-21463*	c 15	NASA-CASE-MFS-20413			US-PATENT-CLASS-235-183			US-PATENT-3,623,094
		US-PATENT-APPL-SN-69209			US-PATENT-CLASS-235-194	N72-22236*	c 10	NASA-CASE-GSC-10878-1
		US-PATENT-CLASS-74-469			US-PATENT-CLASS-235-197			US-PATENT-APPL-SN-889423
		US-PATENT-3,620,095			US-PATENT-CLASS-340-347R			US-PATENT-CLASS-307-206
N72-21464*	c 15	NASA-CASE-ARC-10176-1			US-PATENT-3,621,228			US-PATENT-CLASS-307-215
		US-PATENT-APPL-SN-889583	N72-22166*	c 08	NASA-CASE-NPO-10560			US-PATENT-CLASS-307-322
		US-PATENT-CLASS-324-57R			US-PATENT-APPL-SN-856282			US-PATENT-CLASS-307-323
		US-PATENT-CLASS-324-64			US-PATENT-CLASS-235-153			US-PATENT-3,621,277
		US-PATENT-CLASS-324-71R			US-PATENT-CLASS-324-73AT	N72-22245*	c 11	NASA-CASE-NPO-12109
		US-PATENT-3,624,496			US-PATENT-CLASS-340-347AD			US-PATENT-APPL-SN-690172
N72-21465*	c 15	NASA-CASE-GSC-10218-1			US-PATENT-3,603,772			US-PATENT-CLASS-230-221
		US-PATENT-APPL-SN-15022	N72-22167*	c 08	NASA-CASE-NPO-11082			US-PATENT-CLASS-230-52
		US-PATENT-CLASS-141-23			US-PATENT-APPL-SN-868529			US-PATENT-3,612,391
		US-PATENT-CLASS-195-127			US-PATENT-CLASS-235-152	N72-22246*	c 11	NASA-CASE-XLA-07430
		US-PATENT-CLASS-222-135			US-PATENT-CLASS-340-146.1			US-PATENT-APPL-SN-867841
		US-PATENT-CLASS-222-309			US-PATENT-CLASS-340-348			US-PATENT-CLASS-73-147
		US-PATENT-CLASS-222-71			US-PATENT-3,609,327			US-PATENT-3,620,076
		US-PATENT-CLASS-23-253R	N72-22195*	c 09	NASA-CASE-MFS-14710	N72-22247*	c 11	NASA-CASE-NPO-11013
		US-PATENT-CLASS-23-259			US-PATENT-APPL-SN-852843			US-PATENT-APPL-SN-858695
		US-PATENT-CLASS-73-425.6			US-PATENT-CLASS-74-105			US-PATENT-CLASS-42-1F
		US-PATENT-3,615,241			US-PATENT-3,614,899			US-PATENT-3,619,924
N72-21466*	c 15	NASA-CASE-NPO-10440	N72-22196*	c 09	NASA-CASE-ERC-10075-2	N72-22437*	c 14	NASA-CASE-LAR-10496-1
		US-PATENT-APPL-SN-756834			US-PATENT-APPL-SN-775870			US-PATENT-APPL-SN-12661
		US-PATENT-CLASS-204-130			US-PATENT-CLASS-321-14			US-PATENT-CLASS-73-141A
		US-PATENT-CLASS-204-59			US-PATENT-CLASS-321-19			US-PATENT-3,611,798
		US-PATENT-3,616,338			US-PATENT-CLASS-321-2	N72-22438*	c 14	NASA-CASE-ARC-10263-1
N72-21489* #	c 15	NASA-CASE-XLA-10470			US-PATENT-CLASS-321-25			US-PATENT-APPL-SN-882122
		US-PATENT-APPL-SN-219436			US-PATENT-CLASS-323-56			US-PATENT-CLASS-73-398C
N72-21624*	c 21	NASA-CASE-HGN-10439			US-PATENT-CLASS-323-89C	N72-22439*	c 14	US-PATENT-3,620,083
		US-PATENT-APPL-SN-889551			US-PATENT-3,614,587			NASA-CASE-MFS-20890
		US-PATENT-CLASS-244-1SA	N72-22197*	c 09	NASA-CASE-LEW-10433-1			US-PATENT-APPL-SN-103229
		US-PATENT-3,637,170			US-PATENT-APPL-SN-849106			US-PATENT-CLASS-264-22
N72-21701*	c 26	NASA-CASE-ERC-10119			US-PATENT-CLASS-307-262			US-PATENT-CLASS-29-42
		US-PATENT-APPL-SN-825258			US-PATENT-CLASS-307-88MP			US-PATENT-CLASS-310-11
		US-PATENT-CLASS-307-299			US-PATENT-3,612,895			US-PATENT-CLASS-310-42
		US-PATENT-CLASS-317-234V	N72-22198*	c 09	NASA-CASE-MFS-13687-2			US-PATENT-3,626,218
		US-PATENT-CLASS-317-235R			US-PATENT-APPL-SN-80369	N72-22440*	c 14	NASA-CASE-ARC-10154-1
		US-PATENT-CLASS-331-107			US-PATENT-CLASS-174-106R			US-PATENT-APPL-SN-793771
		US-PATENT-CLASS-332-31			US-PATENT-CLASS-174-117FF			US-PATENT-CLASS-73-67.2
		US-PATENT-3,614,557			US-PATENT-CLASS-174-36			US-PATENT-3,620,069
N72-21893* #	c 31	NASA-CASE-KSC-10622-1			US-PATENT-3,612,743	N72-22441*	c 14	NASA-CASE-NPO-11002
		US-PATENT-APPL-SN-149983	N72-22199*	c 09	NASA-CASE-ERC-10222			US-PATENT-APPL-SN-856328
		NASA-CASE-NPO-10591			US-PATENT-APPL-SN-832603			US-PATENT-CLASS-350-19
N72-22041*	c 03	US-PATENT-APPL-SN-776185			US-PATENT-CLASS-29-590			US-PATENT-CLASS-350-23
		US-PATENT-CLASS-29-572			US-PATENT-3,621,565			US-PATENT-CLASS-350-26
		US-PATENT-3,616,528	N72-22200*	c 09	NASA-CASE-FRC-10036			US-PATENT-CLASS-350-35
N72-22042*	c 03	NASA-CASE-NPO-10747			US-PATENT-APPL-SN-872602			US-PATENT-CLASS-350-36
		US-PATENT-APPL-SN-6616			US-PATENT-CLASS-307-237			US-PATENT-CLASS-350-49
		US-PATENT-CLASS-136-89			US-PATENT-CLASS-307-254			US-PATENT-CLASS-350-52
		US-PATENT-3,615,853			US-PATENT-CLASS-307-317			US-PATENT-3,612,645
N72-22092*	c 05	NASA-CASE-ARC-10275-1			US-PATENT-CLASS-328-1	N72-22442*	c 14	NASA-CASE-MFS-21629
		US-PATENT-APPL-SN-21644			US-PATENT-CLASS-328-151			US-PATENT-APPL-SN-612265
		US-PATENT-CLASS-2-2.1A			US-PATENT-CLASS-73-88.5			US-PATENT-CLASS-324-61
		US-PATENT-3,636,564			US-PATENT-3,621,285			US-PATENT-CLASS-73-304
N72-22093*	c 05	NASA-CASE-MSC-12324-1	N72-22201*	c 09	NASA-CASE-LEW-10387			US-PATENT-3,639,835
		US-PATENT-APPL-SN-63384			US-PATENT-APPL-SN-76899	N72-22443*	c 14	NASA-CASE-XGS-03736
		US-PATENT-CLASS-128-295			US-PATENT-CLASS-307-223B			US-PATENT-APPL-SN-749320
		US-PATENT-CLASS-4-110			US-PATENT-CLASS-307-241			US-PATENT-CLASS-252-300
		US-PATENT-CLASS-4-99			US-PATENT-CLASS-307-252J			US-PATENT-CLASS-96-90PC
		US-PATENT-3,602,923			US-PATENT-CLASS-307-252K			US-PATENT-3,639,250
N72-22107*	c 06	NASA-CASE-NPO-10862			US-PATENT-CLASS-307-284	N72-22444*	c 14	NASA-CASE-LAR-10523-1
		US-PATENT-APPL-SN-810815			US-PATENT-CLASS-307-304			US-PATENT-APPL-SN-32665
		US-PATENT-CLASS-260-877			US-PATENT-CLASS-307-317			US-PATENT-CLASS-250-203
		US-PATENT-3,639,510			US-PATENT-CLASS-328-106			US-PATENT-CLASS-350-16
N72-22127*	c 07	NASA-CASE-NPO-10303			US-PATENT-3,621,287			US-PATENT-CLASS-350-52
		US-PATENT-APPL-SN-848776	N72-22202*	c 09	NASA-CASE-ARC-10136-1			US-PATENT-CLASS-356-248
		US-PATENT-CLASS-343-771			US-PATENT-APPL-SN-865106			US-PATENT-3,647,276
		US-PATENT-CLASS-343-797			US-PATENT-CLASS-128-2.1A	N72-22445*	c 14	NASA-CASE-LAR-10184
		US-PATENT-CLASS-343-853			US-PATENT-CLASS-128-2R			US-PATENT-APPL-SN-16808
		US-PATENT-CLASS-343-912			US-PATENT-CLASS-307-231			US-PATENT-CLASS-33-174S
		US-PATENT-3,623,114			US-PATENT-CLASS-307-247			US-PATENT-CLASS-350-86
N72-22162*	c 08	NASA-CASE-NPO-11333			US-PATENT-CLASS-307-288			US-PATENT-3,620,595

N72-22482*	c 15	NASA-CASE-XLA-04897 US-PATENT-APPL-SN-880249 US-PATENT-CLASS-73-133 US-PATENT-3,613,457	N72-22772*	c 28	NASA-CASE-NPO-12072 US-PATENT-APPL-SN-82647 US-PATENT-CLASS-123-122AB US-PATENT-CLASS-137-81.5 US-PATENT-CLASS-261-145 US-PATENT-3,640,256	US-PATENT-CLASS-313-224 US-PATENT-CLASS-313-231 US-PATENT-CLASS-315-111 US-PATENT-CLASS-315-326 US-PATENT-CLASS-315-358 US-PATENT-CLASS-331-94.5 US-PATENT-3,617,804		
N72-22483*	c 15	NASA-CASE-XNP-09770-2 US-PATENT-APPL-SN-864039 US-PATENT-CLASS-209-349 US-PATENT-3,615,021	N72-22874*	c 31	NASA-CASE-NPO-10883 US-PATENT-APPL-SN-26573 US-PATENT-CLASS-136-89 US-PATENT-CLASS-312-257 US-PATENT-3,620,846	N72-25019*	c 03	NASA-CASE-NPO-10575 US-PATENT-APPL-SN-86615 US-PATENT-CLASS-156-250 US-PATENT-CLASS-156-510 US-PATENT-3,654,036
N72-22484*	c 15	NASA-CASE-LAR-10031 US-PATENT-APPL-SN-867851 US-PATENT-CLASS-62-55.5 US-PATENT-3,625,018	N72-23048*	c 03	NASA-CASE-NPO-11388 US-PATENT-APPL-SN-119282 US-PATENT-CLASS-310-2 US-PATENT-CLASS-321-2 US-PATENT-CLASS-322-2 US-PATENT-3,648,152	N72-25020*	c 03	NASA-CASE-GSC-11211-1 US-PATENT-APPL-SN-139528 US-PATENT-CLASS-235-92T US-PATENT-CLASS-307-141.8 US-PATENT-CLASS-320-48 US-PATENT-CLASS-324-29.5 US-PATENT-3,663,938
N72-22485*	c 15	NASA-CASE-MS-13512-1 US-PATENT-APPL-SN-73932 US-PATENT-CLASS-74-501R US-PATENT-3,625,084	N72-23085*	c 05	NASA-CASE-LAR-10102-1 US-PATENT-APPL-SN-13266 US-PATENT-CLASS-224-25A US-PATENT-3,649,921	N72-25021*	c 03	NASA-CASE-NPO-11118 US-PATENT-APPL-SN-86650 US-PATENT-CLASS-214-90R US-PATENT-3,666,120
N72-22486*	c 15	NASA-CASE-KSC-10031 US-PATENT-APPL-SN-98773 US-PATENT-CLASS-220-5R US-PATENT-CLASS-317-101DH US-PATENT-CLASS-317-117 US-PATENT-CLASS-317-120 US-PATENT-3,639,809	N72-23171*	c 09	NASA-CASE-GSC-10221-1 US-PATENT-APPL-SN-779025 US-PATENT-CLASS-307-252N US-PATENT-CLASS-307-252R US-PATENT-CLASS-307-259 US-PATENT-CLASS-307-305 US-PATENT-3,621,294	N72-25119*	c 05	NASA-CASE-MS-12397-1 US-PATENT-APPL-SN-785613 US-PATENT-CLASS-2-115 US-PATENT-CLASS-2-2.1 US-PATENT-3,660,851
N72-22487*	c 15	NASA-CASE-GSC-10303 US-PATENT-APPL-SN-802813 US-PATENT-CLASS-29-473.1 US-PATENT-3,619,896	N72-23172*	c 09	NASA-CASE-LAR-10320-1 US-PATENT-APPL-SN-18427 US-PATENT-CLASS-324-20R US-PATENT-3,649,907	N72-25120*	c 05	NASA-CASE-MS-90153-2 US-PATENT-APPL-SN-844225 US-PATENT-CLASS-106-209 US-PATENT-CLASS-128-2.1 US-PATENT-CLASS-128-417 US-PATENT-CLASS-252-514 US-PATENT-CLASS-264-104 US-PATENT-3,665,064
N72-22488*	c 15	NASA-CASE-MS-11849-1 US-PATENT-APPL-SN-6617 US-PATENT-CLASS-85-1 US-PATENT-3,623,394	N72-23173*	c 09	NASA-CASE-ERC-10267 US-PATENT-APPL-SN-41348 US-PATENT-CLASS-235-197 US-PATENT-CLASS-307-229 US-PATENT-CLASS-328-145 US-PATENT-3,648,043	N72-25121*	c 05	NASA-CASE-FRC-10029-2 US-PATENT-APPL-SN-78704 US-PATENT-CLASS-156-264 US-PATENT-CLASS-156-308 US-PATENT-CLASS-29-25.14 US-PATENT-CLASS-29-25.18 US-PATENT-CLASS-29-482 US-PATENT-CLASS-29-630A US-PATENT-3,662,441
N72-22489*	c 15	NASA-CASE-GSC-10518-1 US-PATENT-APPL-SN-789045 US-PATENT-CLASS-417-152 US-PATENT-CLASS-55-446 US-PATENT-CLASS-55-464 US-PATENT-3,623,828	N72-23215*	c 11	NASA-CASE-MFS-20710 US-PATENT-APPL-SN-114848 US-PATENT-CLASS-13-20 US-PATENT-CLASS-13-31 US-PATENT-3,647,924	N72-25146*	c 06	NASA-CASE-NPO-11322 US-PATENT-APPL-SN-87550 US-PATENT-CLASS-250-43.5R US-PATENT-CLASS-73-23.1 US-PATENT-3,666,942
N72-22490*	c 15	NASA-CASE-LEW-10856-1 US-PATENT-APPL-SN-3417 US-PATENT-CLASS-308-195 US-PATENT-3,620,585	N72-23457*	c 14	NASA-CASE-MS-12297 US-PATENT-APPL-SN-792623 US-PATENT-CLASS-55-493 US-PATENT-CLASS-55-498 US-PATENT-CLASS-55-502 US-PATENT-CLASS-55-521 US-PATENT-3,650,095	N72-25147*	c 06	NASA-CASE-ARC-10325 US-PATENT-APPL-SN-63610 US-PATENT-CLASS-260-2.5FP US-PATENT-3,663,464
N72-22491*	c 15	NASA-CASE-GSC-10913 US-PATENT-APPL-SN-889558 US-PATENT-CLASS-219-158 US-PATENT-CLASS-219-234 US-PATENT-CLASS-219-85 US-PATENT-CLASS-228-57 US-PATENT-CLASS-29-628 US-PATENT-3,621,194	N72-23497*	c 15	NASA-CASE-KSC-10242 US-PATENT-APPL-SN-73834 US-PATENT-CLASS-219-109 US-PATENT-CLASS-219-234 US-PATENT-CLASS-219-85 US-PATENT-CLASS-324-65R US-PATENT-3,621,193	N72-25148*	c 06	NASA-CASE-MFS-13994-1 US-PATENT-APPL-SN-870689 US-PATENT-CLASS-260-348SC US-PATENT-3,660,434
N72-22492*	c 15	NASA-CASE-MFS-20482 US-PATENT-APPL-SN-6610 US-PATENT-CLASS-29-472.9 US-PATENT-CLASS-29-473.1 US-PATENT-3,602,979	N72-23581*	c 18	NASA-CASE-GSC-10361-1 US-PATENT-APPL-SN-700040 US-PATENT-CLASS-106-84 US-PATENT-3,620,784	N72-25149*	c 06	NASA-CASE-GSC-10565-1 US-PATENT-APPL-SN-822039 US-PATENT-CLASS-195-103.5R US-PATENT-CLASS-195-28N US-PATENT-CLASS-260-211.5 US-PATENT-3,660,240
N72-22520* #	c 16	NASA-CASE-LAR-10815-1 US-PATENT-APPL-SN-233587	N72-23695*	c 23*	NASA-CASE-HQN-10541-3 US-PATENT-APPL-SN-822089 US-PATENT-CLASS-350-171 US-PATENT-3,606,522	N72-25150*	c 06	NASA-CASE-XLE-06774-2 US-PATENT-APPL-SN-5114 US-PATENT-CLASS-117-132 US-PATENT-CLASS-117-161 US-PATENT-CLASS-260-2.5 US-PATENT-CLASS-260-92.1 US-PATENT-3,666,741
N72-22530*	c 17	NASA-CASE-XLE-06461 US-PATENT-APPL-SN-853855 US-PATENT-CLASS-75-.5B US-PATENT-3,623,861	N72-23809*	c 28	NASA-CASE-XNP-09461 US-PATENT-APPL-SN-670829 US-PATENT-CLASS-239-418 US-PATENT-CLASS-239-433 US-PATENT-CLASS-239-543 US-PATENT-3,650,474	N72-25151*	c 06	NASA-CASE-MFS-20979 US-PATENT-APPL-SN-100774 US-PATENT-CLASS-260-18S US-PATENT-CLASS-260-448.2D US-PATENT-CLASS-260-46.5E US-PATENT-CLASS-260-46.5G US-PATENT-CLASS-260-46.5P US-PATENT-3,666,718
N72-22535*	c 17	NASA-CASE-LEW-10874-1 US-PATENT-APPL-SN-68024 US-PATENT-CLASS-148-32.5 US-PATENT-CLASS-75-170 US-PATENT-3,620,718	N72-23810*	c 28	NASA-CASE-NPO-11458 US-PATENT-APPL-SN-36926 US-PATENT-CLASS-60-266 US-PATENT-CLASS-60-271 US-PATENT-3,648,461	N72-25152*	c 06	NASA-CASE-NPO-10863-2 US-PATENT-APPL-SN-145026 US-PATENT-CLASS-260-92.1 US-PATENT-3,663,521
N72-22566*	c 18	NASA-CASE-MFS-20011 US-PATENT-APPL-SN-813338 US-PATENT-CLASS-106-286 US-PATENT-CLASS-106-288B US-PATENT-CLASS-106-84 US-PATENT-3,620,791	N72-24037*	c 03	NASA-CASE-GSC-11514-1 US-PATENT-APPL-SN-820453 US-PATENT-CLASS-117-201 US-PATENT-CLASS-136-89 US-PATENT-3,653,970	N72-25170*	c 07	NASA-CASE-LAR-10513-1 US-PATENT-APPL-SN-64723 US-PATENT-CLASS-333-7 US-PATENT-CLASS-333-81R US-PATENT-CLASS-333-98P US-PATENT-CLASS-333-98R US-PATENT-CLASS-333-98S US-PATENT-3,649,935
N72-22567*	c 18	NASA-CASE-NPO-11091 US-PATENT-APPL-SN-860781 US-PATENT-CLASS-260-2.1E US-PATENT-3,629,161	N72-24477*	c 14	NASA-CASE-ARC-10138-1 US-PATENT-APPL-SN-774733 US-PATENT-CLASS-250-83.3H US-PATENT-CLASS-317-247 US-PATENT-CLASS-324-61R US-PATENT-CLASS-73-355R US-PATENT-3,657,644	N72-25171*	c 07	NASA-CASE-MFS-21042
N72-22619*	c 21	NASA-CASE-ARC-10179-1 US-PATENT-APPL-SN-835058 US-PATENT-CLASS-244-114 US-PATENT-CLASS-340-26 US-PATENT-3,624,598	N72-24522*	c 15	NASA-CASE-NPO-11036 US-PATENT-APPL-SN-41346 US-PATENT-CLASS-264-92 US-PATENT-3,658,974			
N72-22673*	c 23	NASA-CASE-XER-07896-2 US-PATENT-APPL-SN-36819 US-PATENT-CLASS-350-310 US-PATENT-3,620,606	N72-24753*	c 25	NASA-CASE-XNP-04167-2 US-PATENT-APPL-SN-866442 US-PATENT-CLASS-313-186 US-PATENT-CLASS-313-212			
N72-22769*	c 28	NASA-CASE-ARC-10106-1 US-PATENT-APPL-SN-812998 US-PATENT-CLASS-244-3.22 US-PATENT-3,612,442						
N72-22770*	c 28	NASA-CASE-LEW-10770-1 US-PATENT-APPL-SN-880246 US-PATENT-CLASS-60-202 US-PATENT-3,613,370						
N72-22771*	c 28	NASA-CASE-LEW-10835-1 US-PATENT-APPL-SN-67815 US-PATENT-CLASS-60-202 US-PATENT-3,620,018						

		US-PATENT-APPL-SN-86417			US-PATENT-CLASS-321-18				US-PATENT-CLASS-250-209
		US-PATENT-CLASS-102-34.4			US-PATENT-CLASS-321-19				US-PATENT-CLASS-250-226
		US-PATENT-CLASS-325-114			US-PATENT-CLASS-321-2				US-PATENT-CLASS-250-83.3UV
		US-PATENT-CLASS-325-4			US-PATENT-CLASS-321-45ER				US-PATENT-CLASS-350-203
		US-PATENT-CLASS-343-6.5R			US-PATENT-CLASS-321-45R				US-PATENT-CLASS-3657.549
		US-PATENT-3,667,044			US-PATENT-3,663,940	N72-25410*	c 14		NASA-CASE-ERC-10292
N72-25172*	c 07	NASA-CASE-NPO-11358	N72-25253*	c 09	NASA-CASE-GSC-11126-1				US-PATENT-APPL-SN-45519
		US-PATENT-APPL-SN-116786			US-PATENT-APPL-SN-98640				US-PATENT-CLASS-350-160R
		US-PATENT-CLASS-179-15BV			US-PATENT-CLASS-321-2				US-PATENT-CLASS-73-515
		US-PATENT-CLASS-340-172.5			US-PATENT-CLASS-321-47				US-PATENT-CLASS-73-521
		US-PATENT-3,665,417			US-PATENT-CLASS-331-113A				US-PATENT-3,657,928
N72-25173*	c 07	NASA-CASE-ERC-10324	N72-25254*	c 09	US-PATENT-3,663,941	N72-25411*	c 14		NASA-CASE-MS-15626-1
		US-PATENT-APPL-SN-54270			NASA-CASE-NPO-10760				US-PATENT-APPL-SN-94374
		US-PATENT-CLASS-178-69.5			US-PATENT-APPL-SN-129071				US-PATENT-CLASS-116-114AH
		US-PATENT-CLASS-325-141			US-PATENT-CLASS-321-2				US-PATENT-CLASS-73-12
		US-PATENT-CLASS-325-302			US-PATENT-CLASS-321-45R				US-PATENT-CLASS-73-492
		US-PATENT-CLASS-325-325			US-PATENT-CLASS-331-113A				US-PATENT-3,656,352
		US-PATENT-CLASS-325-38			US-PATENT-3,663,944	N72-25412*	c 14		NASA-CASE-MFS-15063
		US-PATENT-CLASS-325-51	N72-25255*	c 09	NASA-CASE-LAR-10620-1				US-PATENT-APPL-SN-51477
		US-PATENT-CLASS-325-55			US-PATENT-APPL-SN-125979				US-PATENT-CLASS-178-DIG.8
		US-PATENT-CLASS-325-58			US-PATENT-CLASS-310-10				US-PATENT-CLASS-178-6.8
		US-PATENT-CLASS-325-64			US-PATENT-CLASS-310-15				US-PATENT-CLASS-340-227R
		US-PATENT-CLASS-340-167			US-PATENT-3,663,843				US-PATENT-3,659,043
		US-PATENT-3,665,313	N72-25256*	c 09	NASA-CASE-XLA-02609	N72-25413*	c 14		NASA-CASE-GSC-10879-1
N72-25174*	c 07	NASA-CASE-NPO-11264			US-PATENT-SN-41347				US-PATENT-APPL-SN-889420
		US-PATENT-APPL-SN-36531			US-PATENT-CLASS-333-79				US-PATENT-CLASS-195-127
		US-PATENT-CLASS-343-762			US-PATENT-CLASS-339-143R				US-PATENT-3,666,631
		US-PATENT-CLASS-343-777			US-PATENT-CLASS-339-147R	N72-25414*	c 14		NASA-CASE-NPO-11311
		US-PATENT-CLASS-343-779			US-PATENT-3,663,929				US-PATENT-APPL-SN-57252
		US-PATENT-CLASS-343-786	N72-25257*	c 09	NASA-CASE-MS-12395				US-PATENT-CLASS-178-7.92
		US-PATENT-CLASS-343-853			US-PATENT-APPL-SN-134573				US-PATENT-CLASS-350-175FS
		US-PATENT-3,665,481			US-PATENT-CLASS-307-233				US-PATENT-3,663,753
N72-25206*	c 08	NASA-CASE-KSC-10397			US-PATENT-CLASS-324-186	N72-25428* #	c 14		NASA-CASE-HQN-10756-1
		US-PATENT-APPL-SN-25488			US-PATENT-CLASS-324-78D				US-PATENT-APPL-SN-236052
		US-PATENT-CLASS-235-154			US-PATENT-CLASS-328-136	N72-25447*	c 15		NASA-CASE-LEW-10489-1
		US-PATENT-CLASS-340-347DA			US-PATENT-CLASS-328-140				US-PATENT-APPL-SN-889682
		US-PATENT-3,648,275	N72-25207*	c 08	US-PATENT-3,663,885				US-PATENT-CLASS-117-107
		NASA-CASE-NPO-11161			NASA-CASE-LAR-10253-1	N72-25258*	c 09		US-PATENT-CLASS-117-211
		US-PATENT-APPL-SN-889374			US-PATENT-APPL-SN-99175				US-PATENT-CLASS-117-217
		US-PATENT-CLASS-340-146.1			US-PATENT-CLASS-307-88.3				US-PATENT-CLASS-117-62
		US-PATENT-CLASS-340-172.5			US-PATENT-CLASS-330-4.5				US-PATENT-CLASS-117-93.16D
		US-PATENT-3,648,256	N72-25208*	c 08	US-PATENT-3,663,886				US-PATENT-CLASS-29-599
		NASA-CASE-NPO-11338			NASA-CASE-GSC-10695-1	N72-25259*	c 09		US-PATENT-3,649,356
		US-PATENT-APPL-SN-89212			US-PATENT-APPL-SN-889422				NASA-CASE-LEW-10450-1
		US-PATENT-CLASS-178-50			US-PATENT-CLASS-117-200	N72-25448*	c 15		US-PATENT-APPL-SN-880271
		US-PATENT-CLASS-179-15BC			US-PATENT-CLASS-136-89				US-PATENT-CLASS-75-0.5BB
		US-PATENT-CLASS-179-15FD			US-PATENT-CLASS-29-198				US-PATENT-CLASS-75-206
		US-PATENT-CLASS-325-62			US-PATENT-3,664,874				US-PATENT-CLASS-75-213
		US-PATENT-CLASS-332-21	N72-25260*	c 09	NASA-CASE-NPO-11283				US-PATENT-3,649,242
		US-PATENT-3,659,053			US-PATENT-APPL-SN-118270	N72-25450*	c 15		NASA-CASE-NPO-11202
N72-25209*	c 08	NASA-CASE-NPO-11194			US-PATENT-CLASS-310-4				US-PATENT-APPL-SN-66004
		US-PATENT-APPL-SN-63532			US-PATENT-3,663,839				US-PATENT-CLASS-285-DIG.21
		US-PATENT-CLASS-343-12R	N72-25261*	c 09	NASA-CASE-ERC-10224				US-PATENT-CLASS-285-3
		US-PATENT-CLASS-343-14			US-PATENT-APPL-SN-868775				US-PATENT-CLASS-285-316
		US-PATENT-CLASS-343-6.5R			US-PATENT-CLASS-29-492				US-PATENT-CLASS-285-33
		US-PATENT-3,659,292			US-PATENT-CLASS-29-497				US-PATENT-CLASS-339-45M
N72-25210*	c 08	NASA-CASE-NPO-10936			US-PATENT-CLASS-29-498				US-PATENT-CLASS-339-91B
		US-PATENT-APPL-SN-77221			US-PATENT-CLASS-29-502				US-PATENT-3,656,781
		US-PATENT-CLASS-235-152			US-PATENT-CLASS-29-589	N72-25451*	c 15		NASA-CASE-NPO-10606
		US-PATENT-CLASS-340-146.1AL			US-PATENT-CLASS-29-628				US-PATENT-APPL-SN-8636
		US-PATENT-3,662,337	N72-25262*	c 09	US-PATENT-3,665,589				US-PATENT-CLASS-251-360
		NASA-CASE-LAR-10163-1			NASA-CASE-NPO-11078				US-PATENT-3,658,295
		US-PATENT-APPL-SN-73310			US-PATENT-APPL-SN-82280	N72-25452*	c 15		NASA-CASE-LEW-10965-1
		US-PATENT-CLASS-343-708			US-PATENT-CLASS-307-103				US-PATENT-APPL-SN-876588
		US-PATENT-CLASS-343-771			US-PATENT-CLASS-307-83				US-PATENT-CLASS-117-124C
		US-PATENT-CLASS-343-873			US-PATENT-CLASS-323-48				US-PATENT-CLASS-117-152
		US-PATENT-3,653,052			US-PATENT-CLASS-323-82				US-PATENT-CLASS-117-16R
N72-25248*	c 09	NASA-CASE-NPO-11342			US-PATENT-3,663,828				US-PATENT-CLASS-117-37
		US-PATENT-APPL-SN-89209	N72-25284*	c 11	NASA-CASE-LAR-10507-1				US-PATENT-CLASS-117-47R
		US-PATENT-CLASS-340-172.5			US-PATENT-APPL-SN-874177				US-PATENT-CLASS-117-62
		US-PATENT-CLASS-340-324A			US-PATENT-CLASS-195-127				US-PATENT-CLASS-117-93.3
		US-PATENT-3,648,250			US-PATENT-3,649,462				US-PATENT-CLASS-204-157.18AG
N72-25249*	c 09	NASA-CASE-GSC-10656-1			NASA-CASE-LAR-10546-1				US-PATENT-CLASS-204-49
		US-PATENT-APPL-SN-59969	N72-25287*	c 11	US-PATENT-APPL-SN-32664				US-PATENT-CLASS-250-65F
		US-PATENT-CLASS-321-2			US-PATENT-CLASS-287-54A				US-PATENT-CLASS-96-36.2
		US-PATENT-CLASS-323-DIG.1			US-PATENT-CLASS-52-648				US-PATENT-3,658,569
		US-PATENT-CLASS-323-17			US-PATENT-CLASS-52-655	N72-25453*	c 15		NASA-CASE-KSC-10513
		US-PATENT-CLASS-323-22T			US-PATENT-3,665,670				US-PATENT-APPL-SN-61535
		US-PATENT-3,621,372	N72-25288*	c 11	NASA-CASE-MFS-20434				US-PATENT-CLASS-187-1
N72-25250*	c 09	NASA-CASE-KSC-10565			US-PATENT-APPL-SN-55534				US-PATENT-CLASS-187-20
		US-PATENT-APPL-SN-98517			US-PATENT-CLASS-73-140				US-PATENT-CLASS-187-95
		US-PATENT-CLASS-315-135			US-PATENT-CLASS-73-161				US-PATENT-CLASS-254-190
		US-PATENT-CLASS-315-349			US-PATENT-3,665,758				US-PATENT-3,666,051
		US-PATENT-CLASS-330-2	N72-25292*	c 12	NASA-CASE-NPO-11556	N72-25454*	c 15		NASA-CASE-MS-12233-1
		US-PATENT-CLASS-330-59			US-PATENT-APPL-SN-82648				US-PATENT-APPL-SN-73422
		US-PATENT-CLASS-340-332			US-PATENT-CLASS-210-188				US-PATENT-CLASS-52-169
		US-PATENT-3,659,148			US-PATENT-CLASS-310-11				US-PATENT-CLASS-52-173
N72-25251*	c 09	NASA-CASE-ERC-10048			US-PATENT-3,648,083				US-PATENT-CLASS-52-594
		US-PATENT-APPL-SN-10329	N72-25323*	c 13	NASA-CASE-NPO-11373				US-PATENT-3,665,669
		US-PATENT-CLASS-307-261			US-PATENT-APPL-SN-81095	N72-25455*	c 15		NASA-CASE-NPO-11095
		US-PATENT-CLASS-321-18			US-PATENT-CLASS-73-421.5R				US-PATENT-APPL-SN-19585
		US-PATENT-CLASS-321-2			US-PATENT-CLASS-73-422GC				US-PATENT-CLASS-239-424
		US-PATENT-3,659,184			US-PATENT-CLASS-73-422TC				US-PATENT-CLASS-60-258
N72-25252*	c 09	NASA-CASE-ERC-10268			US-PATENT-3,662,604				US-PATENT-CLASS-60-39.74A
		US-PATENT-APPL-SN-39342	N72-25409*	c 14	NASA-CASE-ERC-10174				US-PATENT-3,662,547
		US-PATENT-CLASS-321-11			US-PATENT-APPL-SN-39344	N72-25456*	c 15		NASA-CASE-NPO-11222

		US-PATENT-APPL-SN-59893		US-PATENT-CLASS-136-202		US-PATENT-APPL-SN-59968
		US-PATENT-CLASS-310-68		US-PATENT-3,666,566		US-PATENT-CLASS-248-188.4
		US-PATENT-CLASS-310-80	N72-26371*	NASA-CASE-NPO-10244	N72-27485*	US-PATENT-3,669,393
		US-PATENT-CLASS-310-83		US-PATENT-APPL-SN-43327		NASA-CASE-XLA-09843
N72-25457*	c 15	US-PATENT-3,660,704		US-PATENT-CLASS-308-2A		US-PATENT-APPL-SN-60876
		NASA-CASE-ERC-10325		US-PATENT-CLASS-73-136R		US-PATENT-CLASS-83-522
		US-PATENT-APPL-SN-43884	N72-27053*	US-PATENT-3,664,185		US-PATENT-CLASS-83-562
		US-PATENT-CLASS-324-158D		NASA-CASE-GSC-10344-1		US-PATENT-CLASS-83-563
		US-PATENT-CLASS-324-158T		US-PATENT-APPL-SN-785078		US-PATENT-CLASS-83-588
		US-PATENT-3,665,307		US-PATENT-CLASS-136-89		US-PATENT-CLASS-83-8
N72-25485*	c 16	NASA-CASE-ERC-10283		US-PATENT-3,672,999	N72-27728*	US-PATENT-3,668,956
		US-PATENT-APPL-SN-39185	N72-27102*	NASA-CASE-LAR-10365-1		NASA-CASE-ARC-10160-1
		US-PATENT-CLASS-331-94.5		US-PATENT-APPL-SN-3151		US-PATENT-APPL-SN-867842
		US-PATENT-CLASS-332-7.51		US-PATENT-CLASS-210-103		US-PATENT-CLASS-178-DIG.20
		US-PATENT-3,659,225		US-PATENT-CLASS-210-104		US-PATENT-CLASS-178-6.5
N72-25539*	c 18	NASA-CASE-LEW-10424-2.2		US-PATENT-CLASS-210-110		US-PATENT-CLASS-350-138
		US-PATENT-APPL-SN-15222		US-PATENT-CLASS-210-137		US-PATENT-3,670,097
		US-PATENT-CLASS-75-DIG.1		US-PATENT-3,670,890	N72-27784*	US-PATENT-3,670,890
		US-PATENT-CLASS-75-208	N72-27103*	NASA-CASE-MSC-13648		NASA-CASE-LAR-10836-1
		US-PATENT-CLASS-75-211		US-PATENT-APPL-SN-87222		US-PATENT-APPL-SN-138227
		US-PATENT-CLASS-75-226		US-PATENT-CLASS-128-DIG.4		US-PATENT-CLASS-350-161
		US-PATENT-3,653,882		US-PATENT-CLASS-128-2.1E	N72-27959*	US-PATENT-3,671,105
N72-25540*	c 18	NASA-CASE-ERC-10364		US-PATENT-CLASS-128-417		NASA-CASE-LAR-10800-1
		US-PATENT-APPL-SN-55537		US-PATENT-3,669,110		US-PATENT-APPL-SN-154094
		US-PATENT-CLASS-161-127	N72-27144*	US-PATENT-3,669,110		US-PATENT-CLASS-73-35
		US-PATENT-CLASS-161-68		NASA-CASE-NPO-10768-2		US-PATENT-3,670,559
		US-PATENT-CLASS-161-7		US-PATENT-APPL-SN-770398	N72-28025*	NASA-CASE-NPO-10633
		US-PATENT-CLASS-52-DIG.10		US-PATENT-APPL-SN-99524		US-PATENT-APPL-SN-885521
		US-PATENT-CLASS-52-80		US-PATENT-CLASS-260-535H		US-PATENT-CLASS-165-20
		US-PATENT-3,663,347		US-PATENT-CLASS-260-77.5AP		US-PATENT-CLASS-165-3
N72-25541*	c 18	NASA-CASE-ERC-10363	N72-27151* #	US-PATENT-3,671,497		US-PATENT-CLASS-62-93
		US-PATENT-APPL-SN-57253		NASA-CASE-NPO-10767-2	N72-28225*	US-PATENT-3,675,712
		US-PATENT-CLASS-161-127		US-PATENT-APPL-SN-241061		NASA-CASE-MFS-20757
		US-PATENT-CLASS-161-68	N72-27226*	NASA-CASE-LEW-10330-1		US-PATENT-APPL-SN-136006
		US-PATENT-CLASS-161-7		US-PATENT-APPL-SN-110402		US-PATENT-CLASS-339-176MF
		US-PATENT-CLASS-52-DIG.10		US-PATENT-CLASS-336-198		US-PATENT-CLASS-339-218M
		US-PATENT-CLASS-52-80		US-PATENT-CLASS-336-220		US-PATENT-CLASS-339-75MP
		US-PATENT-3,663,346		US-PATENT-CLASS-336-60		US-PATENT-CLASS-339-94M
N72-25595*	c 21	NASA-CASE-MSC-13397-1	N72-27227*	US-PATENT-3,648,209		US-PATENT-3,670,290
		US-PATENT-APPL-SN-59966		NASA-CASE-KSC-10644	N72-28240*	US-PATENT-ARC-10265-1
		US-PATENT-CLASS-244-1SA		US-PATENT-APPL-SN-114849		US-PATENT-APPL-SN-64709
		US-PATENT-CLASS-244-23A		US-PATENT-CLASS-307-118		US-PATENT-CLASS-324-41
		US-PATENT-3,662,973		US-PATENT-CLASS-307-172		US-PATENT-CLASS-340-258
N72-25619*	c 23	NASA-CASE-NPO-10634		US-PATENT-CLASS-340-240		US-PATENT-3,676,772
		US-PATENT-APPL-SN-112999	N72-27228*	US-PATENT-3,673,424	N72-28241*	NASA-CASE-GSC-10786-1
		US-PATENT-CLASS-62-475		NASA-CASE-NPO-10542		US-PATENT-APPL-SN-773072
		US-PATENT-CLASS-62-6		US-PATENT-APPL-SN-767741		US-PATENT-CLASS-330-29
		US-PATENT-CLASS-62-80		US-PATENT-CLASS-310-4		US-PATENT-3,533,006
		US-PATENT-CLASS-62-85	N72-27246*	US-PATENT-3,673,440	N72-28436*	NASA-CASE-XLA-06683
		US-PATENT-3,656,313		NASA-CASE-ERC-10015-2		US-PATENT-APPL-SN-10827
N72-25679*	c 26	NASA-CASE-XER-07895		US-PATENT-APPL-SN-763744		US-PATENT-CLASS-33-15A
		US-PATENT-APPL-SN-651627		US-PATENT-APPL-SN-97343		US-PATENT-CLASS-33-75R
		US-PATENT-CLASS-317-234J		US-PATENT-CLASS-313-309		US-PATENT-3,675,332
		US-PATENT-CLASS-317-235A		US-PATENT-CLASS-313-336	N72-28437*	NASA-CASE-ERC-10081
		US-PATENT-CLASS-317-235AJ		US-PATENT-CLASS-313-351		US-PATENT-APPL-SN-877990
		US-PATENT-CLASS-317-235R		US-PATENT-CLASS-315-36		US-PATENT-CLASS-325-363
		US-PATENT-CLASS-331-107G	N72-27262*	US-PATENT-3,671,798		US-PATENT-CLASS-343-100ME
		US-PATENT-3,667,010		NASA-CASE-MFS-20620		US-PATENT-CLASS-343-112D
N72-25680*	c 26	NASA-CASE-ERC-10275		US-PATENT-APPL-SN-154935		US-PATENT-CLASS-73-355
		US-PATENT-APPL-SN-47061		US-PATENT-CLASS-73-117.1	N72-28438*	US-PATENT-3,665,467
		US-PATENT-CLASS-324-92		US-PATENT-CLASS-73-432SD		NASA-CASE-XLA-04980-2
		US-PATENT-CLASS-324-96	N72-27408*	US-PATENT-3,670,564		US-PATENT-APPL-SN-577548
		US-PATENT-CLASS-340-324R		NASA-CASE-NPO-11147		US-PATENT-APPL-SN-763040
		US-PATENT-CLASS-350-150		US-PATENT-APPL-SN-63195		US-PATENT-CLASS-148-187
		US-PATENT-CLASS-350-160R		US-PATENT-CLASS-324-79R		US-PATENT-3,549,435
		US-PATENT-3,667,039		US-PATENT-CLASS-328-189	N72-28495*	NASA-CASE-MFS-14405
N72-25699*	c 27	NASA-CASE-NPO-12000		US-PATENT-CLASS-331-44		US-PATENT-APPL-SN-73283
		US-PATENT-APPL-SN-74861		US-PATENT-3,670,241		US-PATENT-CLASS-214-1CM
		US-PATENT-CLASS-149-19	N72-27409*	NASA-CASE-NPO-11201		US-PATENT-CLASS-74-469
		US-PATENT-CLASS-149-20		US-PATENT-APPL-SN-77220		US-PATENT-3,631,737
		US-PATENT-CLASS-149-36		US-PATENT-CLASS-250-203R	N72-28496*	NASA-CASE-MFS-20433
		US-PATENT-CLASS-149-92		US-PATENT-CLASS-250-225		US-PATENT-APPL-SN-114847
		US-PATENT-3,658,608		US-PATENT-CLASS-350-147		US-PATENT-CLASS-52-1
N72-25842*	c 31	NASA-CASE-MSC-12372-1		US-PATENT-CLASS-356-141		US-PATENT-CLASS-52-573
		US-PATENT-APPL-SN-64391		US-PATENT-CLASS-356-152		US-PATENT-3,675,376
		US-PATENT-CLASS-95-12.5	N72-27410*	US-PATENT-3,670,168	N72-28521*	NASA-CASE-NPO-11437
		US-PATENT-3,662,661		NASA-CASE-XLE-05230		US-PATENT-APPL-SN-63144
N72-25877*	c 32	NASA-CASE-LAR-10270-1		US-PATENT-APPL-SN-877717		US-PATENT-CLASS-330-4
		US-PATENT-APPL-SN-60881		US-PATENT-CLASS-136-233		US-PATENT-CLASS-331-94
		US-PATENT-CLASS-73-100		US-PATENT-3,671,329		US-PATENT-3,676,787
		US-PATENT-CLASS-73-15.6	N72-27411*	NASA-CASE-MSC-12293-1	N72-28535*	NASA-CASE-XLE-06461-2
		US-PATENT-3,665,751		US-PATENT-APPL-SN-59956		US-PATENT-APPL-SN-156778
N72-25911*	c 33	NASA-CASE-LEW-10359		US-PATENT-CLASS-250-205		US-PATENT-APPL-SN-853855
		US-PATENT-APPL-SN-47063		US-PATENT-CLASS-315-151		US-PATENT-CLASS-266-24
		US-PATENT-CLASS-102-105		US-PATENT-CLASS-315-156		US-PATENT-3,675,910
		US-PATENT-CLASS-60-200A		US-PATENT-CLASS-315-158	N72-28536*	NASA-CASE-XLE-03940-2
		US-PATENT-CLASS-60-265		US-PATENT-CLASS-315-297		US-PATENT-APPL-SN-539255
		US-PATENT-CLASS-60-267		US-PATENT-CLASS-315-307		US-PATENT-APPL-SN-793657
		US-PATENT-CLASS-62-467		US-PATENT-CLASS-315-310		US-PATENT-CLASS-29-182.5
		US-PATENT-3,656,317		US-PATENT-CLASS-315-311		US-PATENT-3,676,084
N72-25913*	c 33	NASA-CASE-XMS-09690	N72-27412*	US-PATENT-3,670,202	N72-28761*	NASA-CASE-NPO-11775
		US-PATENT-APPL-SN-853641		NASA-CASE-MFS-20523		US-PATENT-APPL-SN-162230
		US-PATENT-CLASS-73-15R		US-PATENT-APPL-SN-77786		US-PATENT-CLASS-29-570
		US-PATENT-3,665,750		US-PATENT-CLASS-73-103		US-PATENT-CLASS-317-230
N72-26031*	c 03	NASA-CASE-NPO-10753		US-PATENT-CLASS-73-71.6		US-PATENT-CLASS-317-261
		US-PATENT-APPL-SN-844355	N72-27484*	US-PATENT-3,670,563		US-PATENT-3,676,754
				NASA-CASE-NPO-10721	N72-28762*	NASA-CASE-LAR-10294-1

		US-PATENT-APPL-SN-796685		US-PATENT-3,690,291		US-PATENT-CLASS-325-480
		US-PATENT-CLASS-106-39	N72-32688*	c 25	NASA-CASE-MFS-20589	US-PATENT-3,700,812
		US-PATENT-CLASS-106-46			US-PATENT-APPL-SN-103077	NASA-CASE-LAR-10348-1
		US-PATENT-CLASS-117-212			US-PATENT-CLASS-313-231	US-PATENT-APPL-SN-70032
		US-PATENT-CLASS-117-217			US-PATENT-CLASS-315-111	US-PATENT-CLASS-73-147
		US-PATENT-CLASS-29-25.42			US-PATENT-3,693,002	US-PATENT-3,695,101
N72-29172*	c 09	US-PATENT-3,649,353	N72-33072*	c 04	NASA-CASE-ERC-10338	NASA-CASE-NPO-10890
		NASA-CASE-LAR-105111-1			US-PATENT-APPL-SN-50339	US-PATENT-APPL-SN-99903
		US-PATENT-APPL-SN-41345			US-PATENT-CLASS-23-109	US-PATENT-CLASS-137-559
		US-PATENT-CLASS-333-24R			US-PATENT-3,679,360	US-PATENT-CLASS-219-203
		US-PATENT-CLASS-333-98P	N72-33096*	c 05	NASA-CASE-MSC-13540-1	US-PATENT-CLASS-219-522
		US-PATENT-CLASS-333-98R			US-PATENT-APPL-SN-68023	US-PATENT-CLASS-52-171
		US-PATENT-3,676,809			US-PATENT-CLASS-99-80PS	US-PATENT-3,696,833
N72-29464*	c 14	NASA-CASE-ARC-10017-1	N72-33146*	c 07	US-PATENT-3,692,533	NASA-CASE-GSC-10903-1
		US-PATENT-APPL-SN-55536			NASA-CASE-MSC-12259-2	US-PATENT-APPL-SN-114846
		US-PATENT-CLASS-250-41.9D			US-PATENT-APPL-SN-61895	US-PATENT-CLASS-250-41.9G
		US-PATENT-CLASS-250-71.5R			US-PATENT-APPL-SN-853763	US-PATENT-CLASS-250-41.9S
		US-PATENT-CLASS-313-356			US-PATENT-CLASS-325-373	US-PATENT-CLASS-73-421.5
		US-PATENT-3,676,674			US-PATENT-3,694,753	US-PATENT-3,700,893
N72-29488*	c 15	NASA-CASE-XLE-10326-2	N72-33172*	c 08	NASA-CASE-NPO-11630	NASA-CASE-LAR-10728-1
		US-PATENT-APPL-SN-54540			US-PATENT-APPL-SN-143078	US-PATENT-APPL-SN-112998
		US-PATENT-APPL-SN-723465			US-PATENT-CLASS-179-15.55R	US-PATENT-CLASS-250-83.3H
		US-PATENT-CLASS-277-25			US-PATENT-3,694,581	US-PATENT-CLASS-250-83.3R
		US-PATENT-CLASS-277-27	N72-33204*	c 09	NASA-CASE-NPO-11129	US-PATENT-CLASS-250-83R
		US-PATENT-CLASS-277-74			US-PATENT-APPL-SN-883523	US-PATENT-3,700,897
		US-PATENT-3,675,935			US-PATENT-CLASS-307-262	NASA-CASE-NPO-11239
N72-31140*	c 06	NASA-CASE-MSC-13335-1			US-PATENT-CLASS-307-295	US-PATENT-APPL-SN-89211
		US-PATENT-APPL-SN-55806			US-PATENT-CLASS-328-155	US-PATENT-CLASS-356-106
		US-PATENT-CLASS-55-16			US-PATENT-CLASS-328-24	US-PATENT-CLASS-356-114
		US-PATENT-CLASS-55-55			US-PATENT-3,621,406	US-PATENT-3,700,334
		US-PATENT-3,678,654	N72-33205*	c 09	NASA-CASE-GSC-10835-1	NASA-CASE-NPO-11493
N72-31141*	c 06	NASA-CASE-ARC-10308-1			US-PATENT-APPL-SN-116778	US-PATENT-APPL-SN-151413
		US-PATENT-APPL-SN-134568			US-PATENT-CLASS-317-101A	US-PATENT-CLASS-136-224
		US-PATENT-CLASS-250-43.5R			US-PATENT-CLASS-317-235	US-PATENT-3,700,503
		US-PATENT-CLASS-356-51			US-PATENT-CLASS-317-235A	NASA-CASE-KSC-10615
		US-PATENT-3,679,899			US-PATENT-CLASS-317-235AJ	US-PATENT-APPL-SN-103078
N72-31226*	c 08	NASA-CASE-NPO-11016			US-PATENT-3,694,700	US-PATENT-CLASS-244-15B
		US-PATENT-APPL-SN-889584	N72-33230*	c 10	NASA-CASE-GSC-11340-1	US-PATENT-CLASS-244-135
		US-PATENT-CLASS-235-150.1			US-PATENT-APPL-SN-107379	US-PATENT-CLASS-62-45
		US-PATENT-CLASS-235-151.1			US-PATENT-CLASS-330-12	US-PATENT-CLASS-62-7
		US-PATENT-CLASS-235-92MT			US-PATENT-CLASS-331-115	US-PATENT-3,697,021
		US-PATENT-CLASS-323-19			US-PATENT-CLASS-331-116R	NASA-CASE-FRC-10019
		US-PATENT-CLASS-340-347AD			US-PATENT-CLASS-333-80T	US-PATENT-APPL-SN-880398
		US-PATENT-3,681,581			US-PATENT-3,693,105	US-PATENT-CLASS-204-192
N72-31235*	c 09	NASA-CASE-ERC-10214	N72-33377*	c 14	NASA-CASE-MFS-20760	US-PATENT-3,700,575
		US-PATENT-APPL-SN-863914			US-PATENT-APPL-SN-99174	NASA-CASE-ARC-10345-1
		US-PATENT-CLASS-343-770			US-PATENT-CLASS-73-141AB	US-PATENT-APPL-SN-193671
		US-PATENT-CLASS-343-771			US-PATENT-CLASS-73-85	US-PATENT-CLASS-287-85R
		US-PATENT-CLASS-343-786			US-PATENT-3,693,418	US-PATENT-CLASS-308-2A
		US-PATENT-CLASS-343-797	N72-33476*	c 15	NASA-CASE-XGS-07805	US-PATENT-CLASS-74-5F
		US-PATENT-CLASS-343-853			US-PATENT-APPL-SN-104884	US-PATENT-3,700,291
		US-PATENT-3,680,142			US-PATENT-CLASS-308-10	NASA-CASE-MSC-12357
N72-31273*	c 10	NASA-CASE-KSC-10647-1			US-PATENT-3,694,041	US-PATENT-APPL-SN-662763
		US-PATENT-APPL-SN-774691	N72-33477*	c 15	NASA-CASE-NPO-11340	US-PATENT-CLASS-264-102
		US-PATENT-CLASS-178-7.5E			US-PATENT-APPL-SN-147997	US-PATENT-CLASS-264-28
		US-PATENT-CLASS-315-22R			US-PATENT-CLASS-137-13	US-PATENT-CLASS-264-36
		US-PATENT-CLASS-315-30R			US-PATENT-CLASS-137-81.5	US-PATENT-CLASS-264-40
		US-PATENT-CLASS-330-27R			US-PATENT-CLASS-60-1	US-PATENT-3,697,630
		US-PATENT-3,678,191			US-PATENT-CLASS-60-36	NASA-CASE-XLA-08914
N72-31446*	c 14	NASA-CASE-ERC-10087-2			US-PATENT-3,693,346	US-PATENT-APPL-SN-810576
		US-PATENT-APPL-SN-738315	N72-33681*	c 24	NASA-CASE-LEW-10518-1	NASA-CASE-NPO-13086-1
		US-PATENT-APPL-SN-91642			US-PATENT-APPL-SN-863280	US-PATENT-APPL-SN-292477
		US-PATENT-CLASS-29-588			US-PATENT-CLASS-176-11	NASA-CASE-LAR-10539-1
		US-PATENT-CLASS-317-234D			US-PATENT-3,694,313	US-PATENT-APPL-SN-136085
		US-PATENT-CLASS-317-234G	N72-33696*	c 25	NASA-CASE-GSC-11291-1	US-PATENT-CLASS-23-230R
		US-PATENT-CLASS-317-235M			US-PATENT-APPL-SN-102412	US-PATENT-3,701,631
		US-PATENT-CLASS-317-235R			US-PATENT-CLASS-250-83.6R	NASA-CASE-MFS-20408
		US-PATENT-3,686,542			US-PATENT-3,694,655	US-PATENT-APPL-SN-71048
N72-31483*	c 15	NASA-CASE-LAR-10061-1	N73-12175*	c 08	NASA-CASE-NPO-11406	US-PATENT-CLASS-161-93
		US-PATENT-APPL-SN-104047			US-PATENT-APPL-SN-95183	US-PATENT-3,700,538
		US-PATENT-CLASS-251-331			US-PATENT-CLASS-235-152	NASA-CASE-MSC-12391
		US-PATENT-CLASS-251-86			US-PATENT-CLASS-331-78	US-PATENT-APPL-SN-106465
		US-PATENT-3,680,830			US-PATENT-CLASS-340-146.1AL	US-PATENT-CLASS-244-155
N72-31637*	c 21	NASA-CASE-GSC-10945-1			US-PATENT-3,700,869	US-PATENT-3,700,193
		US-PATENT-APPL-SN-75431	N73-12176*	c 08	NASA-CASE-KSC-10595	NASA-CASE-GSC-11077-1
		US-PATENT-CLASS-60-23			US-PATENT-APPL-SN-98772	US-PATENT-APPL-SN-127618
		US-PATENT-CLASS-60-26			US-PATENT-CLASS-235-155	US-PATENT-CLASS-244-32
		US-PATENT-3,678,685			US-PATENT-CLASS-340-347DD	US-PATENT-3,698,667
N72-32169*	c 07	NASA-CASE-NPO-11361			US-PATENT-3,697,733	NASA-CASE-MSC-13604-1
		US-PATENT-APPL-SN-112988	N73-12177*	c 08	NASA-CASE-NPO-11371	US-PATENT-APPL-SN-78717
		US-PATENT-CLASS-343-781			US-PATENT-APPL-SN-117575	US-PATENT-CLASS-128-2N
		US-PATENT-CLASS-343-837			US-PATENT-CLASS-340-146.1AQ	US-PATENT-CLASS-273-1E
		US-PATENT-CLASS-343-840			US-PATENT-CLASS-340-146.1AV	US-PATENT-CLASS-35-22R
		US-PATENT-CLASS-343-915			US-PATENT-3,697,950	US-PATENT-3,698,385
N72-32452*	c 14	US-PATENT-3,680,144	N73-12211*	c 09	NASA-CASE-ERC-10412-1	NASA-CASE-GSC-11214-1
		NASA-CASE-MFS-15162			US-PATENT-APPL-SN-72024	US-PATENT-APPL-SN-115134
		US-PATENT-APPL-SN-100639			US-PATENT-CLASS-343-11R	US-PATENT-CLASS-117-35R
		US-PATENT-CLASS-350-79			US-PATENT-CLASS-343-11VB	US-PATENT-3,702,775
		US-PATENT-CLASS-356-241			US-PATENT-CLASS-343-5DP	NASA-CASE-XNP-08124-2
		US-PATENT-3,694,094			US-PATENT-3,696,418	US-PATENT-APPL-SN-97829
N72-32487*	c 15	NASA-CASE-LAR-10541-1	N73-12214* #	c 09	NASA-CASE-NPO-13091-1	US-PATENT-CLASS-75-66
		US-PATENT-APPL-SN-138229			US-PATENT-APPL-SN-290022	US-PATENT-3,702,762
		US-PATENT-CLASS-118-49.1	N73-12244*	c 10	NASA-CASE-NPO-11631	NASA-CASE-NPO-11302-1
		US-PATENT-CLASS-204-298			US-PATENT-APPL-SN-123253	US-PATENT-APPL-SN-70967
		US-PATENT-CLASS-219-121P			US-PATENT-CLASS-179-1P	US-PATENT-CLASS-178-69.5
		US-PATENT-CLASS-219-273			US-PATENT-CLASS-325-473	US-PATENT-CLASS-235-150.53



			US-PATENT-CLASS-235-181		US-PATENT-CLASS-60-37		US-PATENT-CLASS-174-525
			US-PATENT-CLASS-325-325		US-PATENT-3,702,532		US-PATENT-CLASS-29-589
			US-PATENT-CLASS-340-146.1	N73-13489*	c 16	NASA-CASE-HQN-10654-1	US-PATENT-CLASS-29-591
N73-13187*	c 08		US-PATENT-3,701,894		US-PATENT-APPL-SN-182978	US-PATENT-CLASS-317-234A	US-PATENT-CLASS-317-234G
			NASA-CASE-GSC-10975-1		US-PATENT-CLASS-324-5R	US-PATENT-CLASS-317-234G	US-PATENT-CLASS-317-234G
			US-PATENT-APPL-SN-100996		US-PATENT-CLASS-331-94	US-PATENT-CLASS-317-234G	US-PATENT-CLASS-317-234G
			US-PATENT-CLASS-340-172.5		US-PATENT-3,702,972	N73-14584*	US-PATENT-CLASS-317-234G
			US-PATENT-3,702,463	N73-13562*	c 18	NASA-CASE-LAR-10894-1	US-PATENT-CLASS-317-234G
N73-13208*	c 09		NASA-CASE-LEW-11192-1		NASA-CASE-ARC-10196-1	US-PATENT-APPL-SN-189375	US-PATENT-CLASS-317-234G
			US-PATENT-APPL-SN-198285		US-PATENT-APPL-SN-115082	US-PATENT-CLASS-106-399R	US-PATENT-CLASS-106-558
			US-PATENT-CLASS-315-3.5		US-PATENT-CLASS-260-2.5F	US-PATENT-CLASS-106-558	US-PATENT-CLASS-106-558
			US-PATENT-CLASS-315-5.38	N73-13643*	c 21	US-PATENT-3,702,841	US-PATENT-CLASS-106-558
			US-PATENT-3,702,951		NASA-CASE-HQN-10703	US-PATENT-CLASS-106-633	US-PATENT-CLASS-106-633
N73-13209*	c 09		NASA-CASE-XLA-05099		US-PATENT-APPL-SN-156724	US-PATENT-CLASS-264-DIG.36	US-PATENT-CLASS-264-DIG.36
			US-PATENT-APPL-SN-98798		US-PATENT-CLASS-340-27NA	US-PATENT-CLASS-264-65	US-PATENT-CLASS-264-65
			US-PATENT-CLASS-235-152		US-PATENT-CLASS-340-33	US-PATENT-3,706,583	US-PATENT-3,706,583
			US-PATENT-CLASS-307-207		US-PATENT-CLASS-340-97	N73-14692*	US-PATENT-3,706,583
			US-PATENT-CLASS-307-215		US-PATENT-CLASS-343-112CA	US-PATENT-APPL-SN-36534	US-PATENT-APPL-SN-36534
			US-PATENT-3,700,868	N73-13644*	c 21	US-PATENT-CLASS-340-27AT	US-PATENT-CLASS-340-27AT
N73-13235*	c 10		NASA-CASE-KSC-10003		US-PATENT-3,699,511	US-PATENT-3,706,970	US-PATENT-3,706,970
			US-PATENT-APPL-SN-60883		NASA-CASE-NPO-11481	N73-14853*	NASA-CASE-GSC-10590-1
			US-PATENT-CLASS-178-DIG.6		US-PATENT-APPL-SN-134571	US-PATENT-APPL-SN-130353	US-PATENT-APPL-SN-130353
			US-PATENT-CLASS-178-6		US-PATENT-CLASS-179-100.2A	US-PATENT-CLASS-102-49.5	US-PATENT-CLASS-102-49.5
			US-PATENT-CLASS-307-242		US-PATENT-CLASS-340-174.1R	US-PATENT-3,706,281	US-PATENT-3,706,281
			US-PATENT-CLASS-307-259		US-PATENT-CLASS-346-138	N73-14854*	NASA-CASE-MSC-12433
			US-PATENT-CLASS-328-104		US-PATENT-CLASS-346-74MD	US-PATENT-APPL-SN-103551	US-PATENT-APPL-SN-103551
			US-PATENT-CLASS-328-154	N73-13660*	c 23	US-PATENT-CLASS-244-155	US-PATENT-CLASS-244-155
			US-PATENT-3,702,898		NASA-CASE-MFS-20809	US-PATENT-3,702,688	US-PATENT-3,702,688
N73-13257*	c 11		NASA-CASE-LAR-10574-1		US-PATENT-APPL-SN-173185	N73-14855*	NASA-CASE-NPO-10680
			US-PATENT-APPL-SN-66206		US-PATENT-CLASS-315-169R	US-PATENT-APPL-SN-104048	US-PATENT-APPL-SN-104048
			US-PATENT-CLASS-244-1SS		US-PATENT-CLASS-315-169TV	US-PATENT-CLASS-74-2	US-PATENT-CLASS-74-2
			US-PATENT-3,698,659		US-PATENT-CLASS-317-101A	US-PATENT-3,706,230	US-PATENT-3,706,230
N73-13415*	c 14		NASA-CASE-LAR-10855-1	N73-13661*	c 23	US-PATENT-3,700,961	NASA-CASE-NPO-12106
			US-PATENT-APPL-SN-166541		NASA-CASE-MSC-12404-1	US-PATENT-APPL-SN-175881	US-PATENT-APPL-SN-175881
			US-PATENT-CLASS-73-147		US-PATENT-APPL-SN-142662	US-PATENT-CLASS-317-234V	US-PATENT-CLASS-317-234V
			US-PATENT-CLASS-73-182		US-PATENT-CLASS-356-106S	US-PATENT-CLASS-317-235AG	US-PATENT-CLASS-317-235AG
			US-PATENT-CLASS-73-189	N73-13662*	c 23	US-PATENT-3,702,735	US-PATENT-CLASS-317-235K
			US-PATENT-CLASS-73-212		NASA-CASE-MFS-20243	US-PATENT-CLASS-331-107G	US-PATENT-CLASS-331-107G
			US-PATENT-3,699,811		US-PATENT-APPL-SN-59894	US-PATENT-CLASS-331-177R	US-PATENT-CLASS-331-177R
N73-13416*	c 14		NASA-CASE-GSC-11302-1		US-PATENT-CLASS-250-51.5	US-PATENT-CLASS-331-90	US-PATENT-CLASS-331-90
			US-PATENT-APPL-SN-168650		US-PATENT-CLASS-250-52	US-PATENT-3,694,771	US-PATENT-3,694,771
			US-PATENT-CLASS-73-71.6	N73-13773*	c 28	US-PATENT-3,702,933	NASA-CASE-LAR-10668-1
			US-PATENT-3,699,807		NASA-CASE-LEW-10374-1	US-PATENT-APPL-SN-172459	US-PATENT-APPL-SN-172459
N73-13417*	c 14		NASA-CASE-XLE-05230-2		US-PATENT-APPL-SN-107380	US-PATENT-CLASS-23-232E	US-PATENT-CLASS-23-232E
			US-PATENT-APPL-SN-147099		US-PATENT-CLASS-137-81.5	US-PATENT-CLASS-23-232R	US-PATENT-CLASS-23-232R
			US-PATENT-APPL-SN-877717		US-PATENT-CLASS-60-211	US-PATENT-CLASS-23-254E	US-PATENT-CLASS-23-254E
			US-PATENT-CLASS-136-233		US-PATENT-CLASS-60-240	US-PATENT-CLASS-23-254R	US-PATENT-CLASS-23-254R
			US-PATENT-CLASS-29-573		US-PATENT-CLASS-60-243	US-PATENT-CLASS-250-71R	US-PATENT-CLASS-250-71R
			US-PATENT-CLASS-29-624	N73-13898*	c 31	US-PATENT-3,702,536	US-PATENT-CLASS-250-83.3UV
			US-PATENT-3,699,645		NASA-CASE-LAR-10549-1	US-PATENT-3,709,663	US-PATENT-3,709,663
N73-13418*	c 14		NASA-CASE-MFS-14216		US-PATENT-APPL-SN-108824	N73-16121*	NASA-CASE-NPO-11572
			US-PATENT-APPL-SN-50208		US-PATENT-CLASS-244-139	US-PATENT-APPL-SN-125234	US-PATENT-APPL-SN-125234
			US-PATENT-CLASS-137-487.5		US-PATENT-CLASS-60-291	US-PATENT-CLASS-179-15AN	US-PATENT-CLASS-179-15AN
			US-PATENT-CLASS-137-81		US-PATENT-3,700,192	US-PATENT-CLASS-179-15BC	US-PATENT-CLASS-179-15BC
			US-PATENT-CLASS-92-49	N73-13921*	c 32	US-PATENT-CLASS-325-60	US-PATENT-CLASS-325-60
			US-PATENT-3,698,412		NASA-CASE-MSC-12233-2	US-PATENT-CLASS-343-200	US-PATENT-CLASS-343-200
N73-13420*	c 14		NASA-CASE-NPO-11418-1		US-PATENT-APPL-SN-107298	US-PATENT-3,710,257	US-PATENT-3,710,257
			US-PATENT-APPL-SN-193947		US-PATENT-CLASS-229-DIG.11	N73-16205*	NASA-CASE-NPO-11282
			US-PATENT-CLASS-333-81B		US-PATENT-CLASS-52-284	US-PATENT-APPL-SN-101354	US-PATENT-APPL-SN-101354
			US-PATENT-CLASS-333-98R		US-PATENT-CLASS-52-594	US-PATENT-CLASS-325-346	US-PATENT-CLASS-325-346
			US-PATENT-3,702,979	N73-14130*	c 07	US-PATENT-3,702,520	US-PATENT-CLASS-325-419
N73-13435* #	c 14		NASA-CASE-GSC-11533-1		NASA-CASE-NPO-11661	US-PATENT-3,710,261	US-PATENT-3,710,261
			US-PATENT-APPL-SN-305013		US-PATENT-APPL-SN-200682	N73-16206*	NASA-CASE-ERC-10285
			NASA-CASE-NPO-11479		US-PATENT-CLASS-343-782	US-PATENT-APPL-SN-55333	US-PATENT-APPL-SN-55333
N73-13462*	c 15		US-PATENT-APPL-SN-170440		US-PATENT-CLASS-343-837	US-PATENT-CLASS-331-45	US-PATENT-CLASS-331-45
			US-PATENT-CLASS-137-608		US-PATENT-CLASS-343-915	US-PATENT-CLASS-343-100R	US-PATENT-CLASS-343-100R
			US-PATENT-CLASS-137-81.5	N73-14214*	c 09	US-PATENT-3,705,406	US-PATENT-CLASS-343-100SA
			US-PATENT-CLASS-138-45		NASA-CASE-ARC-10467-1	US-PATENT-CLASS-343-853	US-PATENT-CLASS-343-853
			US-PATENT-CLASS-251-122		US-PATENT-APPL-SN-212028	US-PATENT-3,710,329	US-PATENT-3,710,329
			US-PATENT-3,700,005		US-PATENT-CLASS-250-205	N73-16483*	NASA-CASE-ERC-10226-1
N73-13463*	c 15		NASA-CASE-MFS-20317		US-PATENT-CLASS-250-211J	US-PATENT-APPL-SN-124909	US-PATENT-APPL-SN-124909
			US-PATENT-APPL-SN-67730		US-PATENT-CLASS-250-217SS	US-PATENT-APPL-SN-808822	US-PATENT-APPL-SN-808822
			US-PATENT-CLASS-173-131		US-PATENT-CLASS-307-310	US-PATENT-CLASS-250-209	US-PATENT-CLASS-250-209
			US-PATENT-CLASS-72-447	N73-14427*	c 14	US-PATENT-CLASS-250-215	US-PATENT-CLASS-250-215
			US-PATENT-CLASS-72-476		US-PATENT-3,705,316	US-PATENT-CLASS-250-217	US-PATENT-CLASS-250-217
			US-PATENT-3,699,799		NASA-CASE-NPO-10758	US-PATENT-CLASS-315-153	US-PATENT-CLASS-315-153
N73-13464*	c 15		NASA-CASE-NPO-10812		US-PATENT-APPL-SN-81096	US-PATENT-CLASS-340-25	US-PATENT-CLASS-340-25
			US-PATENT-APPL-SN-129073		US-PATENT-CLASS-352-169	US-PATENT-CLASS-340-27R	US-PATENT-CLASS-340-27R
			US-PATENT-CLASS-425-113		US-PATENT-CLASS-95-12.5	US-PATENT-3,708,671	US-PATENT-3,708,671
			US-PATENT-CLASS-425-133	N73-14428*	c 14	US-PATENT-CLASS-95-59	NASA-CASE-LAR-10739-1
			US-PATENT-CLASS-425-176		US-PATENT-3,704,659	US-PATENT-APPL-SN-134567	US-PATENT-APPL-SN-134567
			US-PATENT-CLASS-72-258		NASA-CASE-NPO-10764-1	US-PATENT-CLASS-250-217F	US-PATENT-CLASS-250-217F
			US-PATENT-3,698,848		US-PATENT-APPL-SN-836280	US-PATENT-CLASS-340-228S	US-PATENT-CLASS-340-228S
N73-13465*	c 15		NASA-CASE-LEW-10805-1		US-PATENT-CLASS-252-408	US-PATENT-CLASS-340-418	US-PATENT-CLASS-340-418
			US-PATENT-APPL-SN-29917	N73-14429*	c 14	US-PATENT-3,700,603	US-PATENT-3,708,674
			US-PATENT-CLASS-148-11.5R		NASA-CASE-NPO-11387	N73-16536*	NASA-CASE-LAR-10311-1
			US-PATENT-3,702,791		US-PATENT-APPL-SN-142719	US-PATENT-APPL-SN-31702	US-PATENT-APPL-SN-31702
N73-13466*	c 15		NASA-CASE-MFS-20944		US-PATENT-CLASS-73-57	US-PATENT-CLASS-250-199	US-PATENT-CLASS-250-199
			US-PATENT-APPL-SN-148756		US-PATENT-CLASS-73-60	US-PATENT-CLASS-340-171	US-PATENT-CLASS-340-171
			US-PATENT-CLASS-91-363A	N73-14468*	c 15	US-PATENT-3,706,221	US-PATENT-CLASS-350-293
			US-PATENT-CLASS-91-448		NASA-CASE-LAR-10103-1	US-PATENT-3,710,122	US-PATENT-3,710,122
			US-PATENT-3,702,575		US-PATENT-APPL-SN-103230	N73-16764*	NASA-CASE-NPO-12015
N73-13467*	c 15		NASA-CASE-NPO-11369		US-PATENT-CLASS-219-101	US-PATENT-APPL-SN-74862	US-PATENT-APPL-SN-74862
			US-PATENT-APPL-SN-129072		US-PATENT-CLASS-219-119	US-PATENT-CLASS-149-19	US-PATENT-CLASS-149-19
			US-PATENT-CLASS-60-1	N73-14469*	c 15	US-PATENT-CLASS-29-203V	US-PATENT-CLASS-149-36
			US-PATENT-CLASS-60-23		US-PATENT-3,705,288	US-PATENT-3,708,359	US-PATENT-3,708,359
					NASA-CASE-GSC-10791-1	N73-16918*	NASA-CASE-MSC-15567-1
					US-PATENT-APPL-SN-84289		

			US-PATENT-CLASS-204-324			US-PATENT-CLASS-340-163			US-PATENT-CLASS-128-206F
			US-PATENT-CLASS-204-325			US-PATENT-3,715,723			US-PATENT-CLASS-324-78E
		N73-20217*	US-PATENT-CLASS-204-328	c 08		NASA-CASE-LAR-10128-1			US-PATENT-3,729,676
			US-PATENT-3,708,419			US-PATENT-APPL-SN-84002	N73-24513*	c 15	NASA-CASE-NPO-11417
N73-19004*	c 02		NASA-CASE-ERC-10439			US-PATENT-CLASS-235-92FQ			US-PATENT-APPL-SN-120241
			US-PATENT-APPL-SN-54271			US-PATENT-CLASS-235-92R			US-PATENT-CLASS-417-391
			US-PATENT-CLASS-244-17.13			US-PATENT-CLASS-235-92T			US-PATENT-CLASS-60-25
			US-PATENT-CLASS-244-77D			US-PATENT-CLASS-340-347AD			US-PATENT-3,732,040
		N73-20231*	US-PATENT-CLASS-318-489	c 09		US-PATENT-3,714,645	N73-24569*	c 17	NASA-CASE-LEW-10920-1
			US-PATENT-3,711,042			NASA-CASE-ARC-10264-1			US-PATENT-APPL-SN-106424
N73-19234*	c 09		NASA-CASE-GSC-11013-1			US-PATENT-APPL-SN-80368			US-PATENT-CLASS-204-192
			US-PATENT-APPL-SN-200717			US-PATENT-CLASS-328-167			US-PATENT-3,732,158
			US-PATENT-CLASS-343-754			US-PATENT-CLASS-330-109	N73-24783*	c 28	NASA-CASE-NPO-11880
			US-PATENT-CLASS-343-839			US-PATENT-CLASS-330-86			US-PATENT-APPL-SN-209535
		N73-20232*	US-PATENT-CLASS-343-854	c 09		US-PATENT-3,714,588			US-PATENT-CLASS-313-DIG.8
			US-PATENT-CLASS-343-895			NASA-CASE-MFS-21433			US-PATENT-CLASS-313-231
			US-PATENT-3,713,163			US-PATENT-APPL-SN-236281			US-PATENT-CLASS-313-63
N73-19235*	c 09		NASA-CASE-MFS-20407			US-PATENT-CLASS-307-230			US-PATENT-CLASS-60-202
			US-PATENT-APPL-SN-116777			US-PATENT-CLASS-307-304			US-PATENT-3,313,204
			US-PATENT-CLASS-317-235AM			US-PATENT-CLASS-330-20			US-PATENT-3,728,861
			US-PATENT-CLASS-317-235N			US-PATENT-CLASS-330-22	N73-24784*	c 28	NASA-CASE-NPO-11559
			US-PATENT-CLASS-317-235R			US-PATENT-CLASS-330-30D			US-PATENT-APPL-SN-147996
			US-PATENT-CLASS-317-235T			US-PATENT-CLASS-330-35			US-PATENT-CLASS-102-49.7
			US-PATENT-CLASS-317-235UA			US-PATENT-CLASS-330-40			US-PATENT-CLASS-102-49.8
			US-PATENT-3,714,526			US-PATENT-CLASS-330-80T			US-PATENT-CLASS-60-254
N73-19419*	c 14		NASA-CASE-LAR-10226-1	N73-20253*	c 10	US-PATENT-3,715,693			US-PATENT-CLASS-60-256
			US-PATENT-APPL-SN-98774			NASA-CASE-LAR-10310-1			US-PATENT-3,729,935
			US-PATENT-CLASS-250-217R			US-PATENT-APPL-SN-147103	N73-25125*	c 05	NASA-CASE-MFS-20332-2
			US-PATENT-CLASS-95-11.5R			US-PATENT-CLASS-235-197			US-PATENT-APPL-SN-195061
		N73-20254*	US-PATENT-CLASS-95-11R	c 10		US-PATENT-3,714,405			US-PATENT-APPL-SN-869260
			US-PATENT-3,712,195			NASA-CASE-NPO-11868			US-PATENT-CLASS-128-142.5
N73-19420*	c 14		NASA-CASE-MFS-20774			US-PATENT-APPL-SN-192101			US-PATENT-CLASS-137-538
			US-PATENT-APPL-SN-161028			US-PATENT-CLASS-307-221R			US-PATENT-CLASS-2-2.1A
			US-PATENT-CLASS-73-84			US-PATENT-CLASS-328-187			US-PATENT-3,720,208
			US-PATENT-3,712,121			US-PATENT-CLASS-328-37	N73-25160*	c 07	NASA-CASE-ARC-10097-2
N73-19421*	c 14		NASA-CASE-MFS-20242			US-PATENT-CLASS-328-61			US-PATENT-APPL-SN-115083
			US-PATENT-APPL-SN-213004			US-PATENT-3,718,863			US-PATENT-APPL-SN-768662
			US-PATENT-CLASS-73-71.6			NASA-CASE-MFS-21362			US-PATENT-CLASS-325-113
			US-PATENT-3,712,120			US-PATENT-APPL-SN-211411			US-PATENT-CLASS-325-139
N73-19457*	c 15		NASA-CASE-MFS-20698-2			US-PATENT-CLASS-73-432SD			US-PATENT-CLASS-325-45
			US-PATENT-APPL-SN-136086			US-PATENT-3,714,833			US-PATENT-CLASS-325-61
			US-PATENT-APPL-SN-3418			NASA-CASE-ERC-10350			US-PATENT-CLASS-340-207
			US-PATENT-CLASS-423-446			US-PATENT-APPL-SN-55535			US-PATENT-CLASS-340-258R
			US-PATENT-CLASS-423-625			US-PATENT-CLASS-340-27R			US-PATENT-3,719,891
			US-PATENT-3,714,332			US-PATENT-3,714,624	N73-25161*	c 07	NASA-CASE-NPO-11707
N73-19458*	c 15		NASA-CASE-LAR-10195-1			NASA-CASE-LAR-10726-1			US-PATENT-APPL-SN-196399
			US-PATENT-APPL-SN-201782			US-PATENT-APPL-SN-146935			US-PATENT-CLASS-343-6.5R
			US-PATENT-CLASS-259-4			US-PATENT-CLASS-250-231			US-PATENT-CLASS-343-6.8R
			US-PATENT-3,712,591			US-PATENT-CLASS-250-83.3H			US-PATENT-3,729,736
N73-19630* #	c 21		NASA-CASE-GSC-11188-2			US-PATENT-3,714,432	N73-25206*	c 08	NASA-CASE-NPO-11497
			US-PATENT-APPL-SN-244440			NASA-CASE-MFS-20673			US-PATENT-APPL-SN-155565
N73-19793*	c 28		NASA-CASE-LEW-11187-1			US-PATENT-APPL-SN-94049			US-PATENT-CLASS-235-10.2
			US-PATENT-APPL-SN-147922			US-PATENT-CLASS-73-90			US-PATENT-CLASS-235-151.27
			US-PATENT-CLASS-60-39.28R			US-PATENT-CLASS-73-91			US-PATENT-CLASS-235-92CV
			US-PATENT-3,713,290			US-PATENT-3,714,821			US-PATENT-CLASS-235-92DN
N73-20039*	c 03		NASA-CASE-GSC-10814-1			NASA-CASE-ARC-10443-1			US-PATENT-CLASS-235-92EA
			US-PATENT-APPL-SN-41404			US-PATENT-APPL-SN-128419			US-PATENT-CLASS-235-92EB
			US-PATENT-CLASS-244-1SA			US-PATENT-CLASS-250-83.3R			US-PATENT-CLASS-235-92EA
			US-PATENT-CLASS-244-1SS			US-PATENT-CLASS-250-83R			US-PATENT-CLASS-235-92R
			US-PATENT-3,715,092			US-PATENT-3,715,590			US-PATENT-3,729,129
N73-20040*	c 03		NASA-CASE-NPO-11771			NASA-CASE-NPO-10985	N73-25240*	c 10	NASA-CASE-MS-12428-1
			US-PATENT-APPL-SN-200762			US-PATENT-APPL-SN-74759			US-PATENT-APPL-SN-170681
			US-PATENT-CLASS-244-1.55			US-PATENT-CLASS-324-30R			US-PATENT-CLASS-179-1SA
			US-PATENT-CLASS-250-212			US-PATENT-CLASS-324-65P			US-PATENT-CLASS-235-151.31
			US-PATENT-CLASS-250-234			US-PATENT-CLASS-73-194E			US-PATENT-CLASS-324-77R
			US-PATENT-CLASS-60-26			US-PATENT-3,712,132			US-PATENT-CLASS-324-78J
			US-PATENT-3,715,600			US-PATENT-3,714,821			US-PATENT-3,732,405
N73-20137*	c 05		NASA-CASE-LAR-10076-1			NASA-CASE-NPO-11213	N73-25241*	c 10	NASA-CASE-GSC-11239-1
			US-PATENT-APPL-SN-84290			US-PATENT-APPL-SN-78703			US-PATENT-APPL-SN-180683
			US-PATENT-CLASS-165-46			US-PATENT-CLASS-195-127			US-PATENT-CLASS-325-363
			US-PATENT-CLASS-312-1			US-PATENT-3,713,987			US-PATENT-CLASS-325-67
			US-PATENT-CLASS-62-259			NASA-CASE-LAR-10765-1	N73-20740*	c 32	US-PATENT-3,737,781
			US-PATENT-3,713,480			US-PATENT-APPL-SN-138230			US-PATENT-3,737,781
N73-20174*	c 07		NASA-CASE-GSC-10087-4			US-PATENT-CLASS-356-32			NASA-CASE-MFS-21919-1
			US-PATENT-APPL-SN-47440			US-PATENT-CLASS-73-88A			US-PATENT-APPL-SN-193456
			US-PATENT-APPL-SN-701679			US-PATENT-3,715,915			US-PATENT-CLASS-317-100
			US-PATENT-CLASS-325-12			NASA-CASE-ARC-10194-1			US-PATENT-CLASS-317-101DH
			US-PATENT-CLASS-325-17			US-PATENT-APPL-SN-107659			US-PATENT-3,735,206
			US-PATENT-CLASS-325-4			US-PATENT-CLASS-350-202	N73-25262*	c 12	NASA-CASE-LAR-10578-1
			US-PATENT-CLASS-325-5			US-PATENT-3,715,152			US-PATENT-APPL-SN-233098
			US-PATENT-CLASS-325-63			NASA-CASE-NPO-10166-1			US-PATENT-CLASS-73-147
			US-PATENT-CLASS-325-7			US-PATENT-APPL-SN-192803			US-PATENT-3,731,528
			US-PATENT-CLASS-325-8			NASA-CASE-NPO-10893	N73-22710*	c 27	NASA-CASE-MFS-20916
			US-PATENT-CLASS-325-9			US-PATENT-APPL-SN-845584			US-PATENT-APPL-SN-212165
			US-PATENT-CLASS-343-179			US-PATENT-CLASS-260-94.8			US-PATENT-CLASS-73-189
			US-PATENT-3,715,663			US-PATENT-3,634,383			US-PATENT-3,731,531
N73-20175*	c 07		NASA-CASE-KSC-10698			NASA-CASE-NPO-11751	N73-25461*	c 14	NASA-CASE-KSC-10108
			US-PATENT-APPL-SN-213949			US-PATENT-APPL-SN-192141			US-PATENT-APPL-SN-73922
			US-PATENT-CLASS-324-72			US-PATENT-CLASS-343-DIG.2			US-PATENT-CLASS-343-14
			US-PATENT-CLASS-73-170R			US-PATENT-CLASS-343-915			US-PATENT-CLASS-343-17.5
			US-PATENT-3,715,660			US-PATENT-3,729,743			US-PATENT-CLASS-343-6.8R
N73-20176*	c 07		NASA-CASE-KSC-10521			US-PATENT-3,729,743			US-PATENT-3,732,567
			US-PATENT-APPL-SN-212921			NASA-CASE-LEW-11072-1	N73-24472*	c 14	NASA-CASE-NPO-11686
			US-PATENT-CLASS-340-146.1C			US-PATENT-APPL-SN-104885			US-PATENT-APPL-SN-212900
			US-PATENT-CLASS-340-147R			US-PATENT-CLASS-136-225			US-PATENT-CLASS-250-203R
N73-24473*	c 14		NASA-CASE-MFS-20418			US-PATENT-3,729,343			US-PATENT-CLASS-250-214
			US-PATENT-APPL-SN-162101			NASA-CASE-MFS-20418			US-PATENT-CLASS-250-214
						US-PATENT-APPL-SN-162101			US-PATENT-CLASS-250-83.3H

		US-PATENT-CLASS-356-152			US-PATENT-3,737,231			US-PATENT-3,733,424
N73-25463*	c 14	US-PATENT-3,723,745	N73-26175*	c 08	NASA-CASE-NPO-11821-1	N73-26958*	c 33	NASA-CASE-NPO-11330
		NASA-CASE-ARC-10278-1			US-PATENT-APPL-SN-236285			US-PATENT-APPL-SN-118269
		US-PATENT-APPL-SN-154933			US-PATENT-CLASS-235-152			US-PATENT-CLASS-285-DIG.21
		US-PATENT-CLASS-356-110			US-PATENT-CLASS-235-164			US-PATENT-CLASS-285-31
		US-PATENT-3,729,260			US-PATENT-CLASS-328-167	N73-27052*	c 04	US-PATENT-3,737,181
N73-25512*	c 15	NASA-CASE-LAR-10129-1	N73-26176*	c 08	US-PATENT-3,732,409			NASA-CASE-GSC-11092-2
		US-PATENT-APPL-SN-99201			NASA-CASE-NPO-11456			US-PATENT-APPL-SN-139250
		US-PATENT-CLASS-182-5			US-PATENT-APPL-SN-153543			US-PATENT-APPL-SN-60950
		US-PATENT-CLASS-188-65.1			US-PATENT-CLASS-340-172.5			US-PATENT-CLASS-103.5R
		US-PATENT-CLASS-24-134R			US-PATENT-3,740,725	N73-27062*	c 05	US-PATENT-3,745,090
		US-PATENT-CLASS-254-156	N73-26195*	c 09	NASA-CASE-GSC-10990-1			NASA-CASE-LEW-11669-1
		US-PATENT-3,729,068			US-PATENT-APPL-SN-93329			US-PATENT-APPL-SN-198885
N73-25513*	c 15	NASA-CASE-GSC-11205-1			US-PATENT-CLASS-333-73R			US-PATENT-CLASS-128-2
		US-PATENT-APPL-SN-107376			US-PATENT-CLASS-333-73S			US-PATENT-CLASS-128-24A
		US-PATENT-CLASS-188-266			US-PATENT-CLASS-333-82A			US-PATENT-CLASS-128-305
		US-PATENT-CLASS-244-15A			US-PATENT-CLASS-333-84M			US-PATENT-CLASS-32-28
		US-PATENT-3,737,118			US-PATENT-3,737,815			US-PATENT-CLASS-32-58
N73-25760*	c 25	NASA-CASE-LEW-11180-1	N73-26228*	c 10	NASA-CASE-ERC-10403-1	N73-27086*	c 06	US-PATENT-3,736,938
		US-PATENT-APPL-SN-175852			US-PATENT-APPL-SN-253405			NASA-CASE-GSC-10225-1
		US-PATENT-CLASS-313-161			US-PATENT-CLASS-317-DIG.6			US-PATENT-APPL-SN-710621
		US-PATENT-CLASS-313-231			US-PATENT-CLASS-321-11			US-PATENT-CLASS-195-66R
		US-PATENT-CLASS-60-202			US-PATENT-CLASS-321-45C			US-PATENT-3,745,089
		US-PATENT-3,735,591	N73-26229*	c 10	US-PATENT-3,737,757	N73-27150* #	c 09	NASA-CASE-ERC-10224-2
N73-25952*	c 33	NASA-CASE-LEW-10359-2			NASA-CASE-NPO-11569			US-PATENT-APPL-SN-221833
		US-PATENT-APPL-SN-150215			US-PATENT-APPL-SN-199957			US-PATENT-APPL-SN-868775
		US-PATENT-APPL-SN-47063			US-PATENT-CLASS-307-220			US-PATENT-CLASS-29-580
		US-PATENT-CLASS-102-105			US-PATENT-CLASS-307-233			US-PATENT-CLASS-317-234G
		US-PATENT-CLASS-244-117A			US-PATENT-3,737,676			US-PATENT-CLASS-317-234L
		US-PATENT-CLASS-60-200A	N73-26230*	c 10	NASA-CASE-MSC-13907-1			US-PATENT-CLASS-317-234M
		US-PATENT-CLASS-60-265			US-PATENT-APPL-SN-254177			US-PATENT-CLASS-317-234N
		US-PATENT-CLASS-60-267			US-PATENT-CLASS-235-186			US-PATENT-CLASS-317-234R
		US-PATENT-CLASS-62-467			US-PATENT-CLASS-235-194			US-PATENT-3,742,316
		US-PATENT-3,720,075			US-PATENT-CLASS-235-197	N73-27171*	c 10	NASA-CASE-NPO-11941-1
N73-26004*	c 02	NASA-CASE-LAR-10682-1	N73-26238*	c 11	US-PATENT-3,737,639			US-PATENT-APPL-SN-241614
		US-PATENT-APPL-SN-127915			NASA-CASE-NPO-11366			US-PATENT-CLASS-330-70CR
		US-PATENT-CLASS-244-75A			US-PATENT-APPL-SN-144139			US-PATENT-CLASS-331-17
		US-PATENT-CLASS-244-76C			US-PATENT-CLASS-180-41			US-PATENT-CLASS-331-25
		US-PATENT-CLASS-244-77F			US-PATENT-CLASS-180-6.5			US-PATENT-3,740,671
		US-PATENT-CLASS-244-77G			US-PATENT-CLASS-180-7R	N73-27376* #	c 14	NASA-CASE-HQN-10037-1
		US-PATENT-3,734,432			US-PATENT-CLASS-180-8A			US-PATENT-APPL-SN-235957
N73-26005*	c 02	NASA-CASE-ARC-10470-1			US-PATENT-CLASS-180-9.2R			US-PATENT-CLASS-73-28
		US-PATENT-APPL-SN-206279			US-PATENT-CLASS-180-9.5			US-PATENT-3,741,001
		US-PATENT-CLASS-244-13			US-PATENT-CLASS-305-35EB	N73-27377*	c 14	NASA-CASE-MFS-21046-1
		US-PATENT-CLASS-244-46			US-PATENT-CLASS-305-39			US-PATENT-APPL-SN-156725
		US-PATENT-CLASS-244-55			US-PATENT-3,730,287			US-PATENT-CLASS-272-73
		US-PATENT-3,737,121	N73-26430*	c 14	NASA-CASE-NPO-11304			US-PATENT-CLASS-35-12C
N73-26006*	c 02	NASA-CASE-MSC-12393-1			US-PATENT-APPL-SN-101214			US-PATENT-3,744,794
		US-PATENT-APPL-SN-203405			US-PATENT-CLASS-219-499	N73-27378*	c 14	NASA-CASE-KSC-10626
		US-PATENT-CLASS-114-122			US-PATENT-CLASS-219-50			US-PATENT-APPL-SN-180963
		US-PATENT-CLASS-9-11A			US-PATENT-3,733,463			US-PATENT-CLASS-222-414
		US-PATENT-CLASS-9-2A	N73-26431*	c 14	NASA-CASE-MSC-12363-1			US-PATENT-CLASS-244-1SS
		US-PATENT-CLASS-9-3			US-PATENT-APPL-SN-125236			US-PATENT-CLASS-244-135
		US-PATENT-3,736,607			US-PATENT-CLASS-95-1.1			US-PATENT-3,744,738
N73-26071*	c 05	NASA-CASE-ARC-10599-1			US-PATENT-3,736,849	N73-27379*	c 14	NASA-CASE-FRC-10060-1
		US-PATENT-APPL-SN-247481			NASA-CASE-ERC-10276			US-PATENT-APPL-SN-189290
		US-PATENT-CLASS-165-46	N73-26432*	c 14	US-PATENT-APPL-SN-24155			US-PATENT-CLASS-179-175.1A
		US-PATENT-CLASS-2-2.1			US-PATENT-CLASS-250-209			US-PATENT-CLASS-340-5C
		US-PATENT-CLASS-62-176			US-PATENT-CLASS-340-15.5GC			US-PATENT-CLASS-73-1DV
		US-PATENT-CLASS-62-207			US-PATENT-CLASS-343-100ME			US-PATENT-3,744,294
		US-PATENT-CLASS-62-209			US-PATENT-3,737,905	N73-27405*	c 15	NASA-CASE-MFS-20855
		US-PATENT-CLASS-62-259			NASA-CASE-KSC-10639			US-PATENT-APPL-SN-127647
		US-PATENT-CLASS-62-89	N73-26472*	c 15	US-PATENT-APPL-SN-181023			US-PATENT-CLASS-219-348
		US-PATENT-3,736,764			US-PATENT-CLASS-137-397			US-PATENT-CLASS-53-112A
N73-26072*	c 05	NASA-CASE-ARC-10329-1			US-PATENT-CLASS-137-582			US-PATENT-CLASS-53-22A
		US-PATENT-APPL-SN-159857			US-PATENT-3,736,956			US-PATENT-3,745,739
		US-PATENT-CLASS-128-2.1R	N73-26572*	c 18	NASA-CASE-ARC-10304-1	N73-27406*	c 15	NASA-CASE-NPO-11377
		US-PATENT-CLASS-351-23			US-PATENT-APPL-SN-140946			US-PATENT-APPL-SN-187262
		US-PATENT-CLASS-351-30			US-PATENT-CLASS-252-8.1			US-PATENT-CLASS-137-1
		US-PATENT-CLASS-351-36			US-PATENT-3,730,891			US-PATENT-CLASS-137-154
		US-PATENT-3,737,217	N73-26751*	c 26	NASA-CASE-MFS-20675			US-PATENT-CLASS-137-604
N73-26100*	c 06	NASA-CASE-GSC-11358-1			US-PATENT-APPL-SN-200085			US-PATENT-3,744,510
		US-PATENT-APPL-SN-226551			US-PATENT-CLASS-250-219TH	N73-27446*	c 17	NASA-CASE-LAR-10953-1
		US-PATENT-CLASS-260-46.5R			US-PATENT-CLASS-356-108			US-PATENT-APPL-SN-163152
		US-PATENT-3,733,350			US-PATENT-CLASS-356-161			US-PATENT-CLASS-23-230R
N73-26117*	c 07	NASA-CASE-KSC-10392			US-PATENT-CLASS-356-202			US-PATENT-3,744,972
		US-PATENT-APPL-SN-181024			US-PATENT-3,737,237	N73-27699*	c 28	NASA-CASE-XLE-10453-2
		US-PATENT-CLASS-343-880	N73-26752*	c 26	NASA-CASE-LEW-11726-1			US-PATENT-APPL-SN-180473
		US-PATENT-CLASS-343-883			US-PATENT-APPL-SN-280031			US-PATENT-APPL-SN-758540
		US-PATENT-CLASS-343-889			US-PATENT-CLASS-156-18			US-PATENT-CLASS-313-217
		US-PATENT-CLASS-343-895			US-PATENT-CLASS-174-DIG.6			US-PATENT-CLASS-313-218
		US-PATENT-3,737,912			US-PATENT-CLASS-29-599			US-PATENT-CLASS-313-230
N73-26118*	c 07	NASA-CASE-NPO-11548			US-PATENT-CLASS-336-DIG.1			US-PATENT-CLASS-313-355
		US-PATENT-APPL-SN-151411			US-PATENT-CLASS-336-200			US-PATENT-CLASS-313-63
		US-PATENT-CLASS-179-15A			US-PATENT-3,737,824			US-PATENT-CLASS-60-202
		US-PATENT-CLASS-179-15BM	N73-26876*	c 31	NASA-CASE-MFS-20863			US-PATENT-3,744,247
		US-PATENT-CLASS-325-40			US-PATENT-APPL-SN-159966	N73-27796*	c 33	NASA-CASE-LAR-10439-1
		US-PATENT-CLASS-343-204			US-PATENT-CLASS-244-1SD			US-PATENT-APPL-SN-182033
		US-PATENT-3,737,776			US-PATENT-CLASS-244-137P			US-PATENT-CLASS-356-72
N73-26119*	c 07	NASA-CASE-NPO-11426			US-PATENT-3,737,117			US-PATENT-CLASS-73-339
		US-PATENT-APPL-SN-89210	N73-26910*	c 32	NASA-CASE-LAR-10756-1			US-PATENT-CLASS-73-432R
		US-PATENT-CLASS-250-199			US-PATENT-APPL-SN-160859			US-PATENT-CLASS-73-86
		US-PATENT-CLASS-331-94.5			US-PATENT-CLASS-235-92MT			US-PATENT-3,745,816
		US-PATENT-CLASS-332-7.51			US-PATENT-CLASS-73-67.3	N73-27941*	c 05	NASA-CASE-MFS-21109-1
		US-PATENT-CLASS-356-4			US-PATENT-CLASS-73-88.5R			US-PATENT-APPL-SN-202769
		US-PATENT-CLASS-356-5			US-PATENT-CLASS-73-91			US-PATENT-CLASS-128-2.05R

N73-27980*	c 06	US-PATENT-CLASS-128-2.06R US-PATENT-CLASS-272-73 US-PATENT-CLASS-73-379 US-PATENT-3,744,480 NASA-CASE-LEW-11325-1 US-PATENT-APPL-SN-184960 US-PATENT-CLASS-117-161P US-PATENT-CLASS-117-161UN US-PATENT-CLASS-117-228 US-PATENT-CLASS-161-214 US-PATENT-CLASS-161-227 US-PATENT-CLASS-260-30.2 US-PATENT-CLASS-260-30.8DS US-PATENT-CLASS-260-32.6N US-PATENT-CLASS-260-33.4R US-PATENT-CLASS-260-33.6R US-PATENT-CLASS-260-47CP US-PATENT-CLASS-260-65 US-PATENT-CLASS-260-78TF US-PATENT-CLASS-260-78UA US-PATENT-3,745,149	N73-28573*	c 17	US-PATENT-CLASS-317-158 US-PATENT-3,244,943 NASA-CASE-XNP-08876 US-PATENT-APPL-SN-527331 US-PATENT-CLASS-75-66 US-PATENT-3,419,384	N73-30390*	c 14	NASA-CASE-XGS-07752 US-PATENT-APPL-SN-533659 US-PATENT-CLASS-73-4 US-PATENT-3,395,565
N73-28012*	c 07	NASA-CASE-NPO-11593-1 US-PATENT-APPL-SN-172807 US-PATENT-CLASS-179-15FS US-PATENT-CLASS-325-419 US-PATENT-CLASS-329-122 US-PATENT-3,745,255	N73-28710*	c 26	NASA-CASE-XNP-01185 US-PATENT-APPL-SN-155595 US-PATENT-CLASS-317-158 US-PATENT-3,198,994	N73-30391*	c 14	NASA-CASE-XLA-05087 US-PATENT-APPL-SN-459407 US-PATENT-CLASS-315-111 US-PATENT-3,394,286
N73-28013*	c 07	NASA-CASE-GSC-11046-1 US-PATENT-APPL-SN-182399 US-PATENT-CLASS-343-725 US-PATENT-CLASS-343-729 US-PATENT-CLASS-343-797 US-PATENT-CLASS-343-803 US-PATENT-CLASS-343-893 US-PATENT-3,747,111	N73-30078*	c 05	NASA-CASE-MFS-21010-1 US-PATENT-APPL-SN-251609 US-PATENT-CLASS-73-379 US-PATENT-3,750,479	N73-30392*	c 14	NASA-CASE-MFS-21441-1 US-PATENT-APPL-SN-231662 US-PATENT-CLASS-250-394 US-PATENT-CLASS-250-518 US-PATENT-3,752,986
N73-28045*	c 08	NASA-CASE-XNP-00477 US-PATENT-APPL-SN-175497 US-PATENT-CLASS-340-347 US-PATENT-3,219,997	N73-30097*	c 06	NASA-CASE-LAR-10670-1 US-PATENT-APPL-SN-59892 US-PATENT-CLASS-149-1 US-PATENT-CLASS-149-36 US-PATENT-CLASS-252-301.4 US-PATENT-CLASS-252-305 US-PATENT-CLASS-60-215 US-PATENT-3,751,913	N73-30393*	c 14	NASA-CASE-GSC-11487-1 US-PATENT-APPL-SN-193814 US-PATENT-CLASS-250-203 US-PATENT-CLASS-350-199 US-PATENT-CLASS-350-204 US-PATENT-CLASS-350-55 US-PATENT-3,752,559
N73-28083*	c 09	NASA-CASE-GSC-11215-1 US-PATENT-APPL-SN-114873 US-PATENT-CLASS-29-628 US-PATENT-CLASS-29-629 US-PATENT-CLASS-29-630 US-PATENT-CLASS-29-630A US-PATENT-3,744,128	N73-30098*	c 06	NASA-CASE-MFS-21040-1 US-PATENT-APPL-SN-183240 US-PATENT-CLASS-260-485F US-PATENT-3,752,847	N73-30394*	c 14	NASA-CASE-LAR-10000 US-PATENT-APPL-SN-613235 US-PATENT-CLASS-73-398 US-PATENT-3,446,075
N73-28084*	c 09	NASA-CASE-XNP-03623 US-PATENT-APPL-SN-471154 US-PATENT-CLASS-178-69.5 US-PATENT-3,402,265	N73-30099*	c 06	NASA-CASE-MFS-10512 US-PATENT-APPL-SN-606027 US-PATENT-CLASS-260-77.5 US-PATENT-3,463,761	N73-30395*	c 14	NASA-CASE-LAR-10623-1 US-PATENT-APPL-SN-214086 US-PATENT-CLASS-15-415 US-PATENT-CLASS-73-28 US-PATENT-CLASS-73-421.5R US-PATENT-3,748,905
N73-28144*	c 12	NASA-CASE-LAR-10612-1 US-PATENT-APPL-SN-233173 US-PATENT-CLASS-73-147 US-PATENT-3,744,305	N73-30100*	c 06	NASA-CASE-MFS-10506 US-PATENT-APPL-SN-606036 US-PATENT-CLASS-260-77.5 US-PATENT-3,463,762	N73-30457*	c 15	NASA-CASE-GSC-11149-1 US-PATENT-APPL-SN-152849 US-PATENT-CLASS-254-29A US-PATENT-CLASS-29-452 US-PATENT-CLASS-81-57.38 US-PATENT-3,749,362
N73-28486*	c 14	NASA-CASE-NPO-11749 US-PATENT-APPL-SN-175267 US-PATENT-CLASS-324-52 US-PATENT-CLASS-73-15R US-PATENT-3,737,762	N73-30101*	c 06	NASA-CASE-MFS-10507 US-PATENT-APPL-SN-605994 US-PATENT-CLASS-260-615 US-PATENT-3,452,103	N73-30458*	c 15	NASA-CASE-LEW-11087-1 US-PATENT-APPL-SN-201904 US-PATENT-CLASS-308-188 US-PATENT-CLASS-308-193 US-PATENT-3,751,123
N73-28487*	c 14	NASA-CASE-XLA-08916-2 US-PATENT-APPL-SN-77765 US-PATENT-APPL-SN-97472 US-PATENT-CLASS-73-170R US-PATENT-CLASS-73-432R US-PATENT-3,744,320	N73-30102*	c 06	NASA-CASE-MFS-11492 US-PATENT-APPL-SN-707440 US-PATENT-CLASS-260-2 US-PATENT-3,577,356	N73-30459*	c 15	NASA-CASE-MSC-13587-1 US-PATENT-APPL-SN-206698 US-PATENT-CLASS-137-516.27 US-PATENT-CLASS-137-535 US-PATENT-3,749,123
N73-28488*	c 14	NASA-CASE-LEW-11159-1 US-PATENT-APPL-SN-104346 US-PATENT-CLASS-250-336 US-PATENT-CLASS-307-308 US-PATENT-3,745,357	N73-30103*	c 06	NASA-CASE-MFS-10509 US-PATENT-APPL-SN-605964 US-PATENT-CLASS-260-77.5 US-PATENT-3,475,384	N73-30460*	c 15	NASA-CASE-HQN-10638-1 US-PATENT-APPL-SN-212977 US-PATENT-CLASS-188-1C US-PATENT-CLASS-297-386 US-PATENT-3,749,205
N73-28489*	c 14	NASA-CASE-GSC-11074-1 US-PATENT-APPL-SN-198362 US-PATENT-CLASS-34-155 US-PATENT-CLASS-34-160 US-PATENT-CLASS-34-162 US-PATENT-3,744,148	N73-30104*	c 06	NASA-CASE-MFS-10509 US-PATENT-APPL-SN-605964 US-PATENT-CLASS-260-77.5 US-PATENT-3,475,384	N73-30476*	c 16	NASA-CASE-MFS-20823-1 US-PATENT-APPL-SN-175981 US-PATENT-CLASS-350-3.5 US-PATENT-CLASS-356-108 US-PATENT-CLASS-356-109 US-PATENT-3,744,912
N73-28490*	c 14	NASA-CASE-GSC-11444-1 US-PATENT-APPL-SN-229128 US-PATENT-CLASS-250-203R US-PATENT-CLASS-250-209 US-PATENT-CLASS-250-214R US-PATENT-CLASS-356-141 US-PATENT-3,744,913	N73-30105*	c 07	NASA-CASE-KSC-10654-1 US-PATENT-APPL-SN-250766 US-PATENT-CLASS-178-DIG.23 US-PATENT-CLASS-178-6.6DD US-PATENT-CLASS-178-6.8 US-PATENT-CLASS-179-158S US-PATENT-3,749,831	N73-30532*	c 18	NASA-CASE-ERC-10339-1 US-PATENT-APPL-SN-43883 US-PATENT-CLASS-156-285 US-PATENT-3,745,082
N73-28491*	c 14	NASA-CASE-XNP-05231 US-PATENT-APPL-SN-524746 US-PATENT-CLASS-250-51.5 US-PATENT-3,440,419	N73-30113*	c 07	NASA-CASE-NPO-11628-1 US-PATENT-APPL-SN-207211 US-PATENT-CLASS-325-420 US-PATENT-CLASS-325-422 US-PATENT-CLASS-329-120 US-PATENT-3,746,998	N73-30640*	c 21	NASA-CASE-GSC-10890-1 US-PATENT-APPL-SN-111998 US-PATENT-CLASS-244-15A US-PATENT-CLASS-250-203R US-PATENT-CLASS-250-209 US-PATENT-CLASS-250-236 US-PATENT-3,752,993
N73-28515*	c 15	NASA-CASE-LEW-10533-1 US-PATENT-APPL-SN-134658 US-PATENT-CLASS-219-107 US-PATENT-CLASS-219-62 US-PATENT-CLASS-27-498 US-PATENT-CLASS-29-497.5 US-PATENT-3,745,300	N73-30115*	c 07	NASA-CASE-KSC-10654-1 US-PATENT-APPL-SN-250766 US-PATENT-CLASS-178-DIG.23 US-PATENT-CLASS-178-6.6DD US-PATENT-CLASS-178-6.8 US-PATENT-CLASS-179-158S US-PATENT-3,749,831	N73-30641*	c 21	NASA-CASE-LAR-10717-1 US-PATENT-APPL-SN-242028 US-PATENT-CLASS-343-112CA US-PATENT-CLASS-343-6.5R US-PATENT-3,750,168
N73-28516*	c 15	NASA-CASE-XNP-01187 US-PATENT-APPL-SN-155598	N73-30205*	c 10	NASA-CASE-NPO-11307-1 US-PATENT-APPL-SN-169671 US-PATENT-CLASS-340-277 US-PATENT-CLASS-340-279 US-PATENT-3,750,131	N73-30665*	c 23	NASA-CASE-LEW-11326-1 US-PATENT-APPL-SN-192970 US-PATENT-CLASS-431-173 US-PATENT-CLASS-431-9 US-PATENT-CLASS-60-39.65 US-PATENT-CLASS-60-39.66 US-PATENT-CLASS-60-39.72 US-PATENT-CLASS-60-39.74R US-PATENT-3,748,853
			N73-30386*	c 14	NASA-CASE-MFS-20658-1 US-PATENT-APPL-SN-205675 US-PATENT-CLASS-324-79D US-PATENT-CLASS-328-129 US-PATENT-CLASS-328-134 US-PATENT-CLASS-328-48 US-PATENT-3,745,475	N73-30829*	c 31	NASA-CASE-GSC-11018-1 US-PATENT-APPL-SN-244523 US-PATENT-CLASS-165-105 US-PATENT-CLASS-165-32

		US-PATENT-CLASS-165-47			US-PATENT-3,760,239		US-PATENT-CLASS-117-151
		US-PATENT-CLASS-165-96	N73-32143*	c 10	NASA-CASE-MSC-13746-1		US-PATENT-CLASS-117-160R
		US-PATENT-CLASS-244-1SS			US-PATENT-APPL-SN-226476		US-PATENT-CLASS-117-66
		US-PATENT-3,749,156			US-PATENT-CLASS-178-18		US-PATENT-CLASS-29-527.2
N73-31988*	c 03	NASA-CASE-MSC-12396-1			US-PATENT-3,758,718		US-PATENT-CLASS-72-53
		US-PATENT-APPL-SN-258331	N73-32144*	c 10	NASA-CASE-NPO-11703-1		US-PATENT-3,754,976
		US-PATENT-CLASS-307-18			US-PATENT-APPL-SN-223560	N73-32361*	NASA-CASE-XNP-01188
		US-PATENT-CLASS-307-28			US-PATENT-CLASS-340-166		US-PATENT-APPL-SN-155596
		US-PATENT-CLASS-307-29			US-PATENT-CLASS-340-173		US-PATENT-CLASS-317-158
		US-PATENT-CLASS-307-38			US-PATENT-CLASS-340-223		US-PATENT-3,262,025
		US-PATENT-3,755,686			US-PATENT-CLASS-340-415	N73-32362*	NASA-CASE-XNP-07169
N73-32011*	c 05	NASA-CASE-GSC-11169-2			US-PATENT-3,760,394		US-PATENT-APPL-SN-486884
		US-PATENT-APPL-SN-139094	N73-32145*	c 10	NASA-CASE-MFS-21465-1		US-PATENT-CLASS-175-26
		US-PATENT-APPL-SN-60882			US-PATENT-APPL-SN-218965		US-PATENT-3,375,885
		US-PATENT-CLASS-195-127			US-PATENT-CLASS-307-271	N73-32391*	NASA-CASE-GSC-11222-1
		US-PATENT-3,756,920			US-PATENT-CLASS-318-230		US-PATENT-APPL-SN-251621
N73-32012*	c 05	NASA-CASE-MSC-12609-1			US-PATENT-CLASS-318-231		US-PATENT-CLASS-307-157
		US-PATENT-APPL-SN-750031			US-PATENT-CLASS-318-341		US-PATENT-CLASS-315-DIG.2
		US-PATENT-CLASS-128-1A			US-PATENT-CLASS-331-135		US-PATENT-CLASS-315-101
		US-PATENT-CLASS-2-2.1A			US-PATENT-3,760,248		US-PATENT-CLASS-315-258
		US-PATENT-CLASS-2-81	N73-32152*	c 11	NASA-CASE-MSC-13789-1		US-PATENT-CLASS-315-356
		US-PATENT-3,751,727			US-PATENT-APPL-SN-166487		US-PATENT-CLASS-330-4.3
N73-32013*	c 05	NASA-CASE-MFS-16570-1			US-PATENT-CLASS-102-95		US-PATENT-CLASS-331-94.5
		US-PATENT-APPL-SN-228150			US-PATENT-CLASS-188-1C		US-PATENT-3,758,877
		US-PATENT-CLASS-3-1.1			US-PATENT-CLASS-89-8	N73-32414*	NASA-CASE-LEW-11222-1
		US-PATENT-CLASS-3-12			US-PATENT-3,763,740		US-PATENT-APPL-SN-190316
		US-PATENT-CLASS-3-2	N73-32317*	c 14	NASA-CASE-NPO-12128-1		US-PATENT-CLASS-29-196.2
		US-PATENT-CLASS-3-6			US-PATENT-APPL-SN-841845		US-PATENT-CLASS-29-196.6
		US-PATENT-3,751,733			US-PATENT-CLASS-250-207		US-PATENT-CLASS-29-197
N73-32014*	c 05	NASA-CASE-MSC-11561-1			US-PATENT-CLASS-250-83.3R		US-PATENT-3,762,884
		US-PATENT-APPL-SN-146940			US-PATENT-CLASS-313-104	N73-32415*	NASA-CASE-LEW-10436-1
		US-PATENT-CLASS-137-535			US-PATENT-3,758,781		US-PATENT-APPL-SN-221093
		US-PATENT-CLASS-272-DIG.1	N73-32318*	c 14	NASA-CASE-KSC-10730-1		US-PATENT-CLASS-73-170
		US-PATENT-CLASS-272-DIG.4			US-PATENT-APPL-SN-248469		US-PATENT-CLASS-75-171
		US-PATENT-CLASS-272-DIG.5			US-PATENT-CLASS-324-72		US-PATENT-3,762,918
		US-PATENT-CLASS-272-79C			US-PATENT-3,760,268	N73-32437*	NASA-CASE-MFS-20861-1
		US-PATENT-CLASS-91-186	N73-32319*	c 14	NASA-CASE-KSC-10728-1		US-PATENT-APPL-SN-160860
		US-PATENT-3,758,112			US-PATENT-APPL-SN-292682		US-PATENT-CLASS-75-135
N73-32015*	c 05	NASA-CASE-MSC-13436-1			US-PATENT-CLASS-95-11		US-PATENT-3,752,665
		US-PATENT-APPL-SN-173190			US-PATENT-CLASS-95-11.5	N73-32528*	NASA-CASE-XLE-00209
		US-PATENT-CLASS-128-2.07			US-PATENT-3,759,152		US-PATENT-APPL-SN-60276
		US-PATENT-CLASS-128-2.08	N73-32320*	c 14	NASA-CASE-GSC-11188-1		US-PATENT-CLASS-176-169
		US-PATENT-CLASS-73-194E			US-PATENT-APPL-SN-244440		US-PATENT-3,759,787
		US-PATENT-CLASS-73-194M			US-PATENT-APPL-SN-80029	N73-32571*	NASA-CASE-LEW-11015
		US-PATENT-3,759,249			US-PATENT-CLASS-29-195Y		US-PATENT-APPL-SN-235266
N73-32029*	c 06	NASA-CASE-NPO-10998-1			US-PATENT-3,759,672		US-PATENT-CLASS-174-DIG.6
		NASA-CASE-NPO-10999-1	N73-32321*	c 14	NASA-CASE-XNP-05530		US-PATENT-CLASS-174-126CP
		US-PATENT-APPL-SN-145027			NASA-CASE-XNP-06933		US-PATENT-CLASS-29-599
		US-PATENT-CLASS-252-431N			US-PATENT-APPL-SN-488381		US-PATENT-CLASS-335-216
		US-PATENT-CLASS-252-431R			US-PATENT-CLASS-73-81		US-PATENT-3,763,552
		US-PATENT-CLASS-260-47UP			US-PATENT-3,379,052	N73-32606*	NASA-CASE-NPO-12070-1
		US-PATENT-CLASS-260-567.6M			NASA-CASE-LAR-10319-1		US-PATENT-APPL-SN-153542
		US-PATENT-CLASS-260-93.5A	N73-32322*	c 14	US-PATENT-APPL-SN-197870		US-PATENT-CLASS-165-105
		US-PATENT-CLASS-260-93.5S			US-PATENT-CLASS-346-110		US-PATENT-CLASS-165-141
		US-PATENT-CLASS-260-94.2M			US-PATENT-CLASS-95-42		US-PATENT-CLASS-165-185
		US-PATENT-CLASS-260-94.2R			US-PATENT-3,757,659		US-PATENT-CLASS-239-127.1
		US-PATENT-CLASS-260-94.7R	N73-32323*	c 14	NASA-CASE-LAR-10440-1		US-PATENT-CLASS-60-267
		US-PATENT-3,755,283			US-PATENT-APPL-SN-229413		US-PATENT-3,759,443
N73-32030*	c 06	NASA-CASE-MFS-20979-2			US-PATENT-CLASS-73-103	N73-32749*	NASA-CASE-ERC-10365-1
		US-PATENT-APPL-SN-100774			US-PATENT-CLASS-73-94		US-PATENT-APPL-SN-99198
		US-PATENT-APPL-SN-219590			US-PATENT-3,757,568		US-PATENT-CLASS-287-92
		US-PATENT-CLASS-260-448.2D	N73-32324*	c 14	NASA-CASE-LAR-02743		US-PATENT-CLASS-52-109
		US-PATENT-3,763,204			US-PATENT-APPL-SN-404212		US-PATENT-CLASS-52-642
N73-32081*	c 08	NASA-CASE-MSC-12458-1			US-PATENT-CLASS-313-7		US-PATENT-CLASS-52-646
		US-PATENT-APPL-SN-188927			US-PATENT-3,310,699		US-PATENT-CLASS-52-80
		US-PATENT-CLASS-235-152IE	N73-32325*	c 14	NASA-CASE-XNP-04231		US-PATENT-3,757,476
		US-PATENT-CLASS-340-347DA			US-PATENT-APPL-SN-362261	N73-32750*	NASA-CASE-LEW-11101-1
		US-PATENT-3,754,236			US-PATENT-CLASS-250-41.9		US-PATENT-APPL-SN-175983
N73-32107*	c 09	NASA-CASE-MFS-20207-1			US-PATENT-3,334,225		US-PATENT-CLASS-244-1SC
		US-PATENT-APPL-SN-239574	N73-32326*	c 14	NASA-CASE-ARC-10362-1		US-PATENT-CLASS-244-1SS
		US-PATENT-CLASS-318-254			US-PATENT-APPL-SN-198289		US-PATENT-CLASS-47-1.4
		US-PATENT-CLASS-318-328			US-PATENT-CLASS-128-2.05F		US-PATENT-CLASS-47-1.7
		US-PATENT-3,757,183			US-PATENT-CLASS-73-194EM		US-PATENT-3,749,332
N73-32108*	c 09	NASA-CASE-GSC-11368-1			US-PATENT-3,751,980	N73-32818*	NASA-CASE-NPO-11942-1
		US-PATENT-APPL-SN-237029	N73-32327*	c 14	NASA-CASE-LAR-10483-1		US-PATENT-APPL-SN-266866
		US-PATENT-CLASS-136-24			US-PATENT-APPL-SN-184090		US-PATENT-CLASS-165-106
		US-PATENT-3,759,746			US-PATENT-CLASS-73-12		US-PATENT-CLASS-165-32
N73-32109*	c 09	NASA-CASE-GSC-11394-1			US-PATENT-CLASS-73-170R		US-PATENT-CLASS-165-96
		US-PATENT-APPL-SN-292698			US-PATENT-3,763,691		US-PATENT-CLASS-244-1SS
		US-PATENT-CLASS-136-89	N73-32358*	c 15	NASA-CASE-LEW-11388-1		US-PATENT-3,763,928
		US-PATENT-CLASS-250-212			US-PATENT-APPL-SN-289033		NASA-CASE-NPO-10767-1
		US-PATENT-CLASS-321-1.5			US-PATENT-CLASS-219-117	N73-33076*	US-PATENT-APPL-SN-241061
		US-PATENT-3,760,257			US-PATENT-CLASS-219-91		US-PATENT-APPL-SN-770417
N73-32110*	c 09	NASA-CASE-KSC-10729-1			US-PATENT-CLASS-29-497		US-PATENT-CLASS-260-77.5AP
		US-PATENT-APPL-SN-221714			US-PATENT-3,758,741		US-PATENT-3,755,265
		US-PATENT-CLASS-343-112R	N73-32359*	c 15	NASA-CASE-LEW-11152-1		NASA-CASE-ARC-10468-1
		US-PATENT-CLASS-343-113R			US-PATENT-APPL-SN-198379	N73-33361*	US-PATENT-APPL-SN-288857
		US-PATENT-3,754,263			US-PATENT-CLASS-308-35		US-PATENT-CLASS-355-18
N73-32111*	c 09	NASA-CASE-ARC-10463-1			US-PATENT-CLASS-308-9		US-PATENT-CLASS-95-12
		US-PATENT-APPL-SN-241615			US-PATENT-3,759,588		US-PATENT-3,764,209
		US-PATENT-CLASS-331-94.5	N73-32360*	c 15	NASA-CASE-GSC-11163-1	N73-33383*	NASA-CASE-LEW-11026-1
		US-PATENT-3,753,148			US-PATENT-APPL-SN-205047		US-PATENT-APPL-SN-196970
N73-32112*	c 09	NASA-CASE-ARC-10330-1			US-PATENT-CLASS-117-105		US-PATENT-CLASS-29-487
		US-PATENT-APPL-SN-151412			US-PATENT-CLASS-117-105.5		US-PATENT-CLASS-29-494
		US-PATENT-CLASS-317-235R			US-PATENT-CLASS-117-130R		US-PATENT-CLASS-29-497.5
		US-PATENT-CLASS-317-235WW			US-PATENT-CLASS-117-138.8R		US-PATENT-CLASS-29-498

N73-33397*	c 16	US-PATENT-3,748,722 NASA-CASE-ARC-10444-1 US-PATENT-APPL-SN-167719 US-PATENT-CLASS-331-94.5A US-PATENT-CLASS-350-285 US-PATENT-CLASS-356-138 US-PATENT-CLASS-356-148 US-PATENT-CLASS-356-153 US-PATENT-CLASS-356-172 US-PATENT-3,764,220	N74-11284*	c 35	NASA-CASE-NPO-11919-1 US-PATENT-APPL-SN-237694 US-PATENT-CLASS-250-343 US-PATENT-3,766,380	N74-13011*	c 46	US-PATENT-CLASS-178-6.6DD US-PATENT-CLASS-179-100.2MD US-PATENT-CLASS-179-100.2T US-PATENT-CLASS-340-174.1L US-PATENT-3,770,903	N74-13129*	c 35	NASA-CASE-FRC-10051-1 US-PATENT-APPL-SN-253725 US-PATENT-CLASS-254-93R US-PATENT-CLASS-73-88R US-PATENT-3,776,028
N74-10034*	c 02	NASA-CASE-LAR-10776-1 US-PATENT-APPL-SN-211332 US-PATENT-CLASS-244-145 US-PATENT-3,764,097	N74-11300*	c 37	NASA-CASE-LEW-10533-2 US-PATENT-APPL-SN-247055 US-PATENT-CLASS-219-101 US-PATENT-CLASS-219-107 US-PATENT-CLASS-219-78 US-PATENT-CLASS-219-497.5 US-PATENT-3,770,933	N74-13130*	c 91	NASA-CASE-NPO-12127-1 US-PATENT-APPL-SN-106106 US-PATENT-CLASS-250-219DF US-PATENT-CLASS-250-83CD US-PATENT-3,752,996	N74-13130*	c 91	NASA-CASE-NPO-12127-1 US-PATENT-APPL-SN-106106 US-PATENT-CLASS-250-219DF US-PATENT-CLASS-250-83CD US-PATENT-3,752,996
N74-10132*	c 32	NASA-CASE-NPO-11302-2 US-PATENT-APPL-SN-266822 US-PATENT-APPL-SN-70967 US-PATENT-CLASS-178-69.4R US-PATENT-3,766,315	N74-11301*	c 37	NASA-CASE-LAR-10170-1 US-PATENT-APPL-SN-217213 US-PATENT-CLASS-117-105.2 US-PATENT-CLASS-29-460 US-PATENT-CLASS-29-498 US-PATENT-CLASS-29-503 US-PATENT-CLASS-29-527.2 US-PATENT-3,769,689	N74-13131*	c 39	NASA-CASE-MFS-20730-1 US-PATENT-APPL-SN-182977 US-PATENT-CLASS-269-48.1 US-PATENT-CLASS-83-452 US-PATENT-CLASS-83-602 US-PATENT-CLASS-83-917 US-PATENT-3,777,605	N74-13132*	c 35	NASA-CASE-LAR-10910-1 US-PATENT-APPL-SN-239577 US-PATENT-CLASS-73-4R US-PATENT-CLASS-73-420 US-PATENT-3,777,546
N74-10194*	c 33	NASA-CASE-NPO-11962-1 US-PATENT-APPL-SN-292681 US-PATENT-CLASS-331-1A US-PATENT-CLASS-331-14 US-PATENT-CLASS-331-17 US-PATENT-CLASS-331-178 US-PATENT-CLASS-331-18 US-PATENT-CLASS-331-4 US-PATENT-3,764,933	N74-11313*	c 36	NASA-CASE-HQN-10790-1 US-PATENT-APPL-SN-235962 US-PATENT-CLASS-333-83R US-PATENT-CLASS-333-97R US-PATENT-3,771,074	N74-13177*	c 31	NASA-CASE-LAR-10547-1 US-PATENT-APPL-SN-193980 US-PATENT-CLASS-264-294 US-PATENT-3,772,418	N74-13177*	c 31	NASA-CASE-LAR-10547-1 US-PATENT-APPL-SN-193980 US-PATENT-CLASS-264-294 US-PATENT-3,772,418
N74-10195*	c 33	NASA-CASE-LEW-11617-1 US-PATENT-APPL-SN-266832 US-PATENT-CLASS-315-5.35 US-PATENT-CLASS-315-5.38 US-PATENT-3,764,850	N74-12778*	c 52	NASA-CASE-MFS-20284-1 US-PATENT-APPL-SN-242027 US-PATENT-CLASS-128-2.05T US-PATENT-CLASS-128-2.06F US-PATENT-CLASS-324-186 US-PATENT-CLASS-324-78D US-PATENT-3,773,038	N74-13178*	c 37	NASA-CASE-LAR-10544-1 US-PATENT-APPL-SN-188928 US-PATENT-CLASS-222-193 US-PATENT-3,776,432	N74-13179*	c 37	NASA-CASE-LEW-10805-2 US-PATENT-APPL-SN-233743 US-PATENT-APPL-SN-29917 US-PATENT-CLASS-29-182 US-PATENT-CLASS-29-420.5 US-PATENT-CLASS-75-200 US-PATENT-CLASS-75-213 US-PATENT-CLASS-75-214 US-PATENT-CLASS-75-226 US-PATENT-3,775,101
N74-10223*	c 33	NASA-CASE-LAR-10730-1 US-PATENT-APPL-SN-239573 US-PATENT-CLASS-235-150.3 US-PATENT-CLASS-235-92CA US-PATENT-CLASS-235-92DM US-PATENT-CLASS-307-225R US-PATENT-CLASS-328-48 US-PATENT-3,764,790	N74-12779*	c 54	NASA-CASE-MFS-21115-1 US-PATENT-APPL-SN-266930 US-PATENT-CLASS-222-309 US-PATENT-CLASS-222-340 US-PATENT-CLASS-222-387 US-PATENT-CLASS-222-514 US-PATENT-3,777,942	N74-13179*	c 37	NASA-CASE-LEW-10805-2 US-PATENT-APPL-SN-233743 US-PATENT-APPL-SN-29917 US-PATENT-CLASS-29-182 US-PATENT-CLASS-29-420.5 US-PATENT-CLASS-75-200 US-PATENT-CLASS-75-213 US-PATENT-CLASS-75-214 US-PATENT-CLASS-75-226 US-PATENT-3,775,101	N74-13205*	c 36	NASA-CASE-NPO-11317-2 US-PATENT-APPL-SN-187143 US-PATENT-APPL-SN-34989 US-PATENT-CLASS-179-100.2CH US-PATENT-CLASS-250-205 US-PATENT-CLASS-250-217 US-PATENT-CLASS-340-174.1M US-PATENT-CLASS-340-174YC US-PATENT-CLASS-350-151 US-PATENT-3,778,791
N74-10415*	c 35	NASA-CASE-MFS-20335-1 US-PATENT-APPL-SN-238263 US-PATENT-CLASS-73-67.8S US-PATENT-3,765,229	N74-12812*	c 27	NASA-CASE-ARC-10464-1 US-PATENT-APPL-SN-198472 US-PATENT-CLASS-260-2.5AM US-PATENT-3,772,216	N74-13270*	c 27	NASA-CASE-LEW-11262-1 US-PATENT-APPL-SN-136008 US-PATENT-CLASS-204-192 US-PATENT-3,772,174	N74-13420*	c 04	NASA-CASE-FRC-10049-1 US-PATENT-APPL-SN-232021 US-PATENT-CLASS-235-150.27 US-PATENT-CLASS-235-150.22 US-PATENT-CLASS-235-150.26 US-PATENT-CLASS-244-77A US-PATENT-CLASS-244-77B US-PATENT-CLASS-343-108R US-PATENT-3,776,455
N74-10474*	c 37	NASA-CASE-LEW-10326-3 US-PATENT-APPL-SN-99901 US-PATENT-CLASS-277-25 US-PATENT-CLASS-277-27 US-PATENT-CLASS-277-96 US-PATENT-3,767,212	N74-12813*	c 25	NASA-CASE-LAR-10551-1 US-PATENT-APPL-SN-191301 US-PATENT-CLASS-128-191R US-PATENT-CLASS-23-252R US-PATENT-CLASS-23-281 US-PATENT-CLASS-23-288F US-PATENT-CLASS-23-288J US-PATENT-CLASS-423-231 US-PATENT-CLASS-55-510 US-PATENT-CLASS-55-518 US-PATENT-3,771,959	N74-13436*	c 70	NASA-CASE-LAR-10385-2 US-PATENT-APPL-SN-239803 US-PATENT-APPL-SN-38816 US-PATENT-CLASS-117-106A US-PATENT-CLASS-117-33.3 US-PATENT-3,779,788	N74-13436*	c 70	NASA-CASE-LAR-10385-2 US-PATENT-APPL-SN-239803 US-PATENT-APPL-SN-38816 US-PATENT-CLASS-117-106A US-PATENT-CLASS-117-33.3 US-PATENT-3,779,788
N74-10521*	c 26	NASA-CASE-LEW-10805-3 US-PATENT-APPL-SN-266928 US-PATENT-APPL-SN-29917 US-PATENT-CLASS-148-126 US-PATENT-CLASS-29-420.5 US-PATENT-CLASS-75-200 US-PATENT-CLASS-75-226 US-PATENT-3,765,958	N74-12814*	c 27	NASA-CASE-ARC-10180-1 US-PATENT-APPL-SN-136253 US-PATENT-CLASS-260-2.5L US-PATENT-3,772,220	N74-13502*	c 20	NASA-CASE-LEW-11058-1 US-PATENT-APPL-SN-233519 US-PATENT-CLASS-60-258 US-PATENT-CLASS-60-259 US-PATENT-3,777,490	N74-14133*	c 31	NASA-CASE-LAR-10782-1 US-PATENT-APPL-SN-197689 US-PATENT-CLASS-264-102 US-PATENT-3,780,151
N74-10907*	c 05	NASA-CASE-XMF-02263 US-PATENT-APPL-SN-78766 US-PATENT-CLASS-D71-1 US-PATENT-DES-228,688	N74-12887*	c 33	NASA-CASE-NPO-11905-1 US-PATENT-APPL-SN-290030 US-PATENT-CLASS-178-88 US-PATENT-CLASS-325-320 US-PATENT-CLASS-329-104 US-PATENT-CLASS-329-122 US-PATENT-CLASS-329-126 US-PATENT-3,772,272	N74-14784*	c 44	NASA-CASE-LEW-11069-1 US-PATENT-APPL-SN-83816 US-PATENT-CLASS-136-89 US-PATENT-CLASS-29-572 US-PATENT-CLASS-29-588 US-PATENT-3,780,424	N74-14845*	c 54	NASA-CASE-LAR-10241-1 US-PATENT-APPL-SN-193672 US-PATENT-CLASS-9-11A US-PATENT-3,781,933
N74-10942*	c 08	NASA-CASE-MSC-12394-1 US-PATENT-APPL-SN-341662 US-PATENT-CLASS-244-83 US-PATENT-CLASS-318-580 US-PATENT-CLASS-318-628 US-PATENT-3,771,037	N74-12888*	c 60	NASA-CASE-MSC-14053-1 US-PATENT-APPL-SN-266899 US-PATENT-CLASS-328-123 US-PATENT-CLASS-340-173CR US-PATENT-CLASS-340-173LM US-PATENT-3,778,786	N74-14920*	c 62	NASA-CASE-MSC-13932-1 US-PATENT-APPL-SN-229354	N74-14920*	c 62	NASA-CASE-MSC-13932-1 US-PATENT-APPL-SN-229354
N74-10975*	c 52	NASA-CASE-MSC-13972-1 US-PATENT-APPL-SN-200040 US-PATENT-CLASS-128-2S US-PATENT-CLASS-73-149 US-PATENT-3,769,834	N74-12912*	c 32	NASA-CASE-NPO-11850-1 US-PATENT-APPL-SN-186700 US-PATENT-CLASS-343-18B US-PATENT-CLASS-343-6.5R US-PATENT-CLASS-343-6.5SS US-PATENT-3,772,691						
N74-11000*	c 32	NASA-CASE-NPO-13171-1 US-PATENT-APPL-SN-290915 US-PATENT-CLASS-343-781 US-PATENT-CLASS-343-909 US-PATENT-3,769,623	N74-12913*	c 33	NASA-CASE-LEW-11162-1 US-PATENT-APPL-SN-143508 US-PATENT-CLASS-313-153 US-PATENT-CLASS-313-209 US-PATENT-CLASS-313-217 US-PATENT-CLASS-313-224 US-PATENT-CLASS-313-32 US-PATENT-3,777,200						
N74-11049*	c 33	NASA-CASE-HQN-10792-1 US-PATENT-APPL-SN-245063 US-PATENT-CLASS-321-18 US-PATENT-CLASS-321-2 US-PATENT-CLASS-321-45S US-PATENT-CLASS-323-DIG.1 US-PATENT-CLASS-331-113A US-PATENT-CLASS-331-62 US-PATENT-3,771,040	N74-12951*	c 33	NASA-CASE-MFS-21374-1 US-PATENT-APPL-SN-238047 US-PATENT-CLASS-317-234E US-PATENT-CLASS-317-234F US-PATENT-CLASS-317-234M US-PATENT-CLASS-317-234N						
N74-11050*	c 33	NASA-CASE-LAR-10868-1 US-PATENT-APPL-SN-253249 US-PATENT-CLASS-137-819 US-PATENT-CLASS-137-833 US-PATENT-CLASS-137-840 US-PATENT-3,770,021									
N74-11283*	c 35	NASA-CASE-NPO-11659-1 US-PATENT-APPL-SN-228189									

N74-14935*	c 33	US-PATENT-CLASS-235-153AK US-PATENT-3,783,250 NASA-CASE-MFS-21462-1 US-PATENT-APPL-SN-239576 US-PATENT-CLASS-219-477 US-PATENT-CLASS-219-539 US-PATENT-CLASS-338-320 US-PATENT-3,732,397	N74-15145*	c 36	US-PATENT-CLASS-73-67.8S US-PATENT-3,777,552 NASA-CASE-NPO-11856-1 US-PATENT-APPL-SN-235268 US-PATENT-CLASS-250-217SS US-PATENT-CLASS-331-94.5K US-PATENT-CLASS-331-94.5S US-PATENT-CLASS-350-6 US-PATENT-CLASS-356-152 US-PATENT-CLASS-356-4 US-PATENT-CLASS-356-5 US-PATENT-3,781,111	N74-17955*	c 09	US-PATENT-APPL-SN-201700 US-PATENT-CLASS-324-102 US-PATENT-CLASS-324-118 US-PATENT-CLASS-329-50 US-PATENT-3,795,862 NASA-CASE-LAR-10812-1 US-PATENT-APPL-SN-263815 US-PATENT-CLASS-73-147 US-PATENT-3,791,207
N74-14939*	c 33	NASA-CASE-FRC-10072-1 US-PATENT-APPL-SN-162100 US-PATENT-CLASS-330-10 US-PATENT-CLASS-330-35 US-PATENT-CLASS-330-9 US-PATENT-3,783,399	N74-15146*	c 35	NASA-CASE-MFS-21455-1 US-PATENT-APPL-SN-281877 US-PATENT-CLASS-350-3.5 US-PATENT-CLASS-356-106 US-PATENT-CLASS-73-71.3 US-PATENT-3,782,825	N74-18088*	c 35	NASA-CASE-LAR-11027-1 US-PATENT-APPL-SN-275118 US-PATENT-CLASS-250-338 US-PATENT-CLASS-250-370 US-PATENT-CLASS-250-371 US-PATENT-3,790,795
N74-14956*	c 33	NASA-CASE-MSC-17832-1 US-PATENT-APPL-SN-293727 US-PATENT-CLASS-307-127 US-PATENT-CLASS-317-33SC US-PATENT-CLASS-317-43 US-PATENT-CLASS-317-46 US-PATENT-CLASS-317-47 US-PATENT-CLASS-317-48 US-PATENT-3,783,354	N74-15147*	c 35	NASA-CASE-MFS-21455-1 US-PATENT-APPL-SN-281877 US-PATENT-CLASS-350-3.5 US-PATENT-CLASS-356-106 US-PATENT-CLASS-73-71.3 US-PATENT-3,782,825	N74-18089*	c 31	NASA-CASE-LAR-10318-1 US-PATENT-APPL-SN-224489 US-PATENT-CLASS-156-245 US-PATENT-CLASS-156-247 US-PATENT-CLASS-156-285 US-PATENT-CLASS-156-309 US-PATENT-3,793,109
N74-15089*	c 19	NASA-CASE-LAR-10586-1 US-PATENT-APPL-SN-289049 US-PATENT-CLASS-102-70.2R US-PATENT-CLASS-244-1SA US-PATENT-CLASS-244-3.16 US-PATENT-CLASS-250-203R US-PATENT-CLASS-250-237R US-PATENT-3,780,966	N74-15395*	c 38	NASA-CASE-MFS-21233-1 US-PATENT-APPL-SN-246056 US-PATENT-CLASS-324-40 US-PATENT-CLASS-73-67.5R US-PATENT-CLASS-73-71.5U US-PATENT-3,782,177	N74-18090*	c 35	NASA-CASE-NPO-13160-1 US-PATENT-APPL-SN-359157 US-PATENT-CLASS-321-8R US-PATENT-CLASS-324-57R US-PATENT-3,795,858
N74-15090*	c 35	NASA-CASE-NPO-11432-2 US-PATENT-APPL-SN-258152 US-PATENT-APPL-SN-88435 US-PATENT-CLASS-250-211J US-PATENT-CLASS-250-214 US-PATENT-CLASS-317-235N US-PATENT-3,781,549	N74-15453*	c 07	NASA-CASE-LEW-11569-1 US-PATENT-APPL-SN-316618 US-PATENT-CLASS-181-43 US-PATENT-3,780,827	N74-18123*	c 37	NASA-CASE-LAR-10634-1 US-PATENT-APPL-SN-214084 US-PATENT-CLASS-23-253PC US-PATENT-CLASS-23-259 US-PATENT-CLASS-259-72 US-PATENT-CLASS-312-209 US-PATENT-CLASS-356-197 US-PATENT-CLASS-356-85 US-PATENT-3,790,347
N74-15091*	c 35	NASA-CASE-LAR-11155-1 US-PATENT-APPL-SN-313381 US-PATENT-CLASS-250-360 US-PATENT-CLASS-250-361 US-PATENT-CLASS-250-369 US-PATENT-CLASS-250-492 US-PATENT-3,781,562	N74-15652*	c 34	NASA-CASE-LAR-10105-1 US-PATENT-APPL-SN-170680 US-PATENT-CLASS-73-86 US-PATENT-3,782,181	N74-18124*	c 31	NASA-CASE-LAR-10489-1 US-PATENT-APPL-SN-198763 US-PATENT-CLASS-264-102 US-PATENT-3,790,650
N74-15092*	c 35	NASA-CASE-LAR-10862-1 US-PATENT-APPL-SN-271951 US-PATENT-CLASS-73-4V US-PATENT-3,780,563	N74-15778*	c 51	NASA-CASE-ARC-10302-1 US-PATENT-APPL-SN-203271 US-PATENT-CLASS-119-51.13 US-PATENT-CLASS-119-51.5 US-PATENT-CLASS-119-51R US-PATENT-CLASS-119-52AF US-PATENT-CLASS-119-54 US-PATENT-CLASS-221-265 US-PATENT-3,782,334	N74-18125*	c 37	NASA-CASE-MFS-21309-1 US-PATENT-APPL-SN-244519 US-PATENT-CLASS-180-79.3 US-PATENT-CLASS-301-5P US-PATENT-3,789,947
N74-15093*	c 35	NASA-CASE-ARC-10442-1 US-PATENT-APPL-SN-280032 US-PATENT-CLASS-165-109 US-PATENT-CLASS-165-2 US-PATENT-CLASS-259-DIG.18 US-PATENT-CLASS-259-60 US-PATENT-CLASS-62-45 US-PATENT-3,782,698	N74-15831*	c 35	NASA-CASE-GSC-11553-1 US-PATENT-APPL-SN-177985 US-PATENT-CLASS-178-6.7R US-PATENT-CLASS-219-216 US-PATENT-CLASS-219-388 US-PATENT-CLASS-34-162 US-PATENT-CLASS-346-108 US-PATENT-CLASS-346-138 US-PATENT-CLASS-346-24 US-PATENT-CLASS-95-89R US-PATENT-3,781,902	N74-18126*	c 37	NASA-CASE-MFS-21364-1 US-PATENT-APPL-SN-214006 US-PATENT-CLASS-156-331 US-PATENT-CLASS-161-182 US-PATENT-CLASS-161-192 US-PATENT-CLASS-161-42 US-PATENT-CLASS-161-43 US-PATENT-CLASS-161-93 US-PATENT-CLASS-260-2R US-PATENT-CLASS-264-135 US-PATENT-CLASS-264-136 US-PATENT-CLASS-264-257 US-PATENT-3,790,432
N74-15094*	c 35	NASA-CASE-NPO-13044-1 US-PATENT-APPL-SN-305012 US-PATENT-CLASS-73-497 US-PATENT-CLASS-73-517B US-PATENT-CLASS-74-5.6 US-PATENT-3,782,205	N74-16135*	c 35	NASA-CASE-LAR-10595-1 US-PATENT-APPL-SN-273240 US-PATENT-CLASS-340-12R US-PATENT-CLASS-340-5R US-PATENT-CLASS-340-8R US-PATENT-CLASS-340-8R US-PATENT-3,783,443	N74-18127*	c 37	NASA-CASE-MFS-21481-1 US-PATENT-APPL-SN-266771 US-PATENT-CLASS-128-25R US-PATENT-CLASS-272-73 US-PATENT-CLASS-272-80 US-PATENT-CLASS-74-594.6 US-PATENT-CLASS-74-594.7 US-PATENT-3,788,163
N74-15095*	c 74	NASA-CASE-MSC-14096-1 US-PATENT-APPL-SN-242662 US-PATENT-CLASS-350-236 US-PATENT-CLASS-350-285 US-PATENT-CLASS-350-7 US-PATENT-CLASS-356-216 US-PATENT-CLASS-356-43 US-PATENT-3,782,835	N74-17153*	c 35	NASA-CASE-MFS-21087-1 US-PATENT-APPL-SN-149283 US-PATENT-CLASS-350-3.5 US-PATENT-3,752,556	N74-18128*	c 37	NASA-CASE-LEW-11387-1 US-PATENT-APPL-SN-247090 US-PATENT-CLASS-29-482 US-PATENT-CLASS-29-488 US-PATENT-CLASS-29-497 US-PATENT-CLASS-29-498 US-PATENT-3,787,959
N74-15125*	c 37	NASA-CASE-XLE-10326-4 US-PATENT-APPL-SN-220251 US-PATENT-APPL-SN-54540 US-PATENT-APPL-SN-723465 US-PATENT-CLASS-277-27 US-PATENT-CLASS-277-91 US-PATENT-3,782,737	N74-17283*	c 27	NASA-CASE-MFS-20486-2 US-PATENT-APPL-SN-292382 US-PATENT-APPL-SN-84212 US-PATENT-CLASS-260-29.6S US-PATENT-3,784,499	N74-18323*	c 35	NASA-CASE-MFS-21136-1 US-PATENT-APPL-SN-262430 US-PATENT-CLASS-308-10 US-PATENT-CLASS-74-5.7 US-PATENT-3,763,708
N74-15126*	c 35	NASA-CASE-ARC-10441-1 US-PATENT-APPL-SN-280029 US-PATENT-CLASS-259-98 US-PATENT-CLASS-417-470 US-PATENT-CLASS-417-471 US-PATENT-3,782,699	N74-17853*	c 54	NASA-CASE-MFS-21163-1 US-PATENT-APPL-SN-266925 US-PATENT-CLASS-222-324 US-PATENT-CLASS-224-444 US-PATENT-3,790,037	N74-18551*	c 25	NASA-CASE-LAR-11053-1 US-PATENT-APPL-SN-281875 US-PATENT-CLASS-73-15R US-PATENT-3,789,654
N74-15127*	c 35	NASA-CASE-NPO-11682-1 US-PATENT-APPL-SN-187365 US-PATENT-CLASS-23-284 US-PATENT-3,782,904	N74-17885*	c 35	NASA-CASE-MSC-13855-1 US-PATENT-APPL-SN-196931 US-PATENT-CLASS-325-38B US-PATENT-CLASS-332-11D US-PATENT-CLASS-340-347AD US-PATENT-3,795,900	N74-18552*	c 34	NASA-CASE-NPO-11120-1 US-PATENT-APPL-SN-39343 US-PATENT-CLASS-165-105 US-PATENT-CLASS-267-166 US-PATENT-CLASS-29-157.3R US-PATENT-3,789,920
N74-15128*	c 37	NASA-CASE-LEW-11087-2 US-PATENT-APPL-SN-201904 US-PATENT-APPL-SN-280390 US-PATENT-CLASS-29-148.4A US-PATENT-CLASS-29-148.4B US-PATENT-3,781,958	N74-17928*	c 33	NASA-CASE-NPO-13138-1 US-PATENT-APPL-SN-335201 US-PATENT-CLASS-328-155 US-PATENT-CLASS-333-16 US-PATENT-CLASS-333-18 US-PATENT-3,790,906	N74-19310*	c 72	NASA-CASE-HON-10740-1 US-PATENT-APPL-SN-266943 US-PATENT-CLASS-356-106R US-PATENT-CLASS-356-112 US-PATENT-CLASS-356-28 US-PATENT-3,795,448
N74-15130*	c 38	NASA-CASE-MFS-20767-1 US-PATENT-APPL-SN-196898	N74-17929*	c 33	NASA-CASE-ARC-10199-1 US-PATENT-APPL-SN-310624 US-PATENT-CLASS-317-16 US-PATENT-CLASS-317-31 US-PATENT-3,795,840	N74-19528*	c 09	NASA-CASE-LAR-10426-1 US-PATENT-APPL-SN-239575
			N74-17930*	c 33	NASA-CASE-NUC-10107-1			





			US-PATENT-CLASS-178-67				US-PATENT-APPL-SN-326327
			US-PATENT-CLASS-325-30				US-PATENT-CLASS-136-182
			US-PATENT-3,816,657				US-PATENT-CLASS-324-29.5
			NASA-CASE-MFS-21698-1	N74-26732*	c 33		US-PATENT-CLASS-324-72.5
			US-PATENT-APPL-SN-37050				US-PATENT-3,818,325
N74-22864*	c 33		US-PATENT-CLASS-331-109			N74-27566*	c 52
			US-PATENT-CLASS-331-117R				NASA-CASE-GSC-11531-1
			US-PATENT-CLASS-331-183				US-PATENT-APPL-SN-291845
			US-PATENT-3,815,048				US-PATENT-CLASS-128-2.05E
			NASA-CASE-NPO-13112-1	N74-26767*	c 73		US-PATENT-CLASS-73-398AR
			US-PATENT-APPL-SN-267572				US-PATENT-3,811,429
N74-22865*	c 33		US-PATENT-CLASS-250-499			N74-27612*	c 32
			US-PATENT-CLASS-313-61S				NASA-CASE-MS-C-14219-1
			US-PATENT-3,816,785				US-PATENT-APPL-SN-324029
			NASA-CASE-MFS-21556-1	N74-26945*	c 35		US-PATENT-CLASS-117-2R
			US-PATENT-APPL-SN-340791				US-PATENT-CLASS-156-94
			US-PATENT-CLASS-177-200				US-PATENT-CLASS-179-100.2A
			US-PATENT-CLASS-177-211				US-PATENT-CLASS-179-100.2B
N74-22885*	c 33		US-PATENT-CLASS-177-246				US-PATENT-CLASS-264-36
			US-PATENT-CLASS-73-141A				US-PATENT-3,819,440
			US-PATENT-3,812,924			N74-27682*	c 33
			NASA-CASE-MFS-22040-1	N74-26946*	c 35		NASA-CASE-ARC-10593-1
			US-PATENT-APPL-SN-365644				US-PATENT-APPL-SN-310193
			US-PATENT-CLASS-350-3.5				US-PATENT-CLASS-250-207
			US-PATENT-CLASS-96-38.3				US-PATENT-CLASS-307-252L
N74-23039*	c 34		US-PATENT-CLASS-96-79				US-PATENT-CLASS-307-252C
			US-PATENT-3,815,969				US-PATENT-3,821,546
			NASA-CASE-ARC-10633-1	N74-26947*	c 25		NASA-CASE-LEW-10950-1
			US-PATENT-APPL-SN-354611				US-PATENT-APPL-SN-273222
			US-PATENT-CLASS-250-304				US-PATENT-CLASS-174-111
			US-PATENT-CLASS-250-343				US-PATENT-CLASS-174-15C
			US-PATENT-CLASS-250-373				US-PATENT-CLASS-174-28
N74-23040*	c 35		US-PATENT-3,814,939				US-PATENT-CLASS-310-4R
			NASA-CASE-MFS-21395-1	N74-26948*	c 25		US-PATENT-3,821,462
			US-PATENT-APPL-SN-260093				NASA-CASE-MS-C-14066-1
			US-PATENT-CLASS-204-180R				US-PATENT-APPL-SN-297127
			US-PATENT-3,814,678				US-PATENT-CLASS-178-88
			NASA-CASE-GSC-11492-1	N74-26949*	c 35		US-PATENT-CLASS-325-320
			US-PATENT-APPL-SN-372148				US-PATENT-3,818,346
			US-PATENT-CLASS-250-374				NASA-CASE-MFS-21424-1
			US-PATENT-CLASS-250-385				US-PATENT-APPL-SN-315048
			US-PATENT-CLASS-313-93				US-PATENT-CLASS-73-147
			US-PATENT-3,812,358				US-PATENT-CLASS-73-3
N74-23066*	c 34		NASA-CASE-MFS-21846-1	N74-26976*	c 37		US-PATENT-3,817,082
			US-PATENT-APPL-SN-359958				NASA-CASE-MFS-21394-1
			US-PATENT-CLASS-188-163				US-PATENT-APPL-SN-258171
			US-PATENT-CLASS-188-171				US-PATENT-CLASS-204-180R
			US-PATENT-3,812,936				US-PATENT-CLASS-204-299
			NASA-CASE-MFS-22133-1	N74-26977*	c 33		US-PATENT-3,821,102
			US-PATENT-APPL-SN-337487				NASA-CASE-GSC-11434-1
			US-PATENT-CLASS-29-203MW				US-PATENT-APPL-SN-263498
			US-PATENT-3,815,205				US-PATENT-CLASS-73-190R
			NASA-CASE-XLA-11028-1	N74-27035*	c 24		US-PATENT-3,813,937
			US-PATENT-APPL-SN-219435				NASA-CASE-MS-C-14081-1
			US-PATENT-CLASS-156-285				US-PATENT-APPL-SN-331760
			US-PATENT-3,814,653				US-PATENT-CLASS-250-576
			NASA-CASE-ARC-10304-2	N74-27037*	c 27		US-PATENT-CLASS-356-180
			US-PATENT-APPL-SN-140946				US-PATENT-CLASS-356-246
			US-PATENT-APPL-SN-318358				US-PATENT-3,817,627
			US-PATENT-CLASS-102-105				NASA-CASE-MFS-21108-1
			US-PATENT-CLASS-106-15FP				US-PATENT-APPL-SN-307728
			US-PATENT-CLASS-252-62				US-PATENT-CLASS-136-213
			US-PATENT-CLASS-252-8.1				US-PATENT-CLASS-136-230
			US-PATENT-CLASS-260-DIG.24				US-PATENT-CLASS-136-233
			US-PATENT-CLASS-260-2.5FP				US-PATENT-3,819,419
			US-PATENT-CLASS-260-2.5R				NASA-CASE-KSC-10731-1
			US-PATENT-CLASS-260-2R				US-PATENT-APPL-SN-288847
			US-PATENT-CLASS-260-396N				US-PATENT-CLASS-324-72F
			US-PATENT-3,819,550				US-PATENT-CLASS-340-151
			NASA-CASE-LAR-10670-2	N74-27360*	c 15		US-PATENT-CLASS-340-182
			US-PATENT-APPL-SN-248761				US-PATENT-CLASS-340-200
			US-PATENT-APPL-SN-59892				US-PATENT-CLASS-73-170R
			US-PATENT-CLASS-102-90				US-PATENT-3,820,095
			US-PATENT-CLASS-60-214				NASA-CASE-MFS-21049-1
			US-PATENT-CLASS-60-215				US-PATENT-APPL-SN-304430
			US-PATENT-CLASS-60-39.46				US-PATENT-CLASS-128-25
			US-PATENT-3,813,875				US-PATENT-CLASS-338-114
			NASA-CASE-MFS-21680-1				US-PATENT-CLASS-338-5
			NASA-CASE-MFS-21681-1				US-PATENT-CLASS-73-88.5R
			US-PATENT-APPL-SN-343607				US-PATENT-3,820,529
			US-PATENT-CLASS-244-1SS				NASA-CASE-MFS-21728-1
			US-PATENT-CLASS-248-16				US-PATENT-APPL-SN-361907
			US-PATENT-CLASS-248-23				US-PATENT-CLASS-73-141A
			US-PATENT-3,814,350				US-PATENT-3,820,388
			NASA-CASE-NPO-11743-1	N74-27425*	c 28		NASA-CASE-MFS-21372-1
			US-PATENT-APPL-SN-277904				US-PATENT-APPL-SN-226477
			US-PATENT-CLASS-102-28EB				US-PATENT-CLASS-250-505
			US-PATENT-CLASS-102-70.2A				US-PATENT-CLASS-250-511
			US-PATENT-CLASS-102-70-2R				US-PATENT-3,821,556
			US-PATENT-3,812,783				NASA-CASE-LAR-10841-1
			NASA-CASE-LEW-11286-1	N74-27490*	c 07		US-PATENT-APPL-SN-307729
			US-PATENT-APPL-SN-339806				US-PATENT-CLASS-13-31
			US-PATENT-CLASS-181-33HB				US-PATENT-CLASS-73-15R
			US-PATENT-CLASS-239-265.17				US-PATENT-3,817,084
			US-PATENT-3,820,630				NASA-CASE-ARC-10462-1
			NASA-CASE-MFS-20761-1	N74-27519*	c 44		US-PATENT-APPL-SN-310615
							US-PATENT-CLASS-74-675
							US-PATENT-CLASS-74-710
							US-PATENT-3,818,775

N74-27902*	c 31	NASA-CASE-GSC-11445-1 US-PATENT-APPL-SN-248471 US-PATENT-CLASS-236-49 US-PATENT-CLASS-98-39 US-PATENT-3,818,814	N74-31269*	c 20	US-PATENT-3,827,288 NASA-CASE-LEW-11646-1 US-PATENT-APPL-SN-292686 US-PATENT-CLASS-204-192 US-PATENT-3,826,729	N74-33218*	c 07	NASA-CASE-ARC-10712-1 US-PATENT-APPL-SN-344410 US-PATENT-CLASS-181-33HC US-PATENT-CLASS-239-265.11 US-PATENT-3,830,431
N74-27903*	c 37	NASA-CASE-MSC-12549-1 US-PATENT-APPL-SN-301039 US-PATENT-CLASS-244-1SD US-PATENT-3,820,741	N74-31270*	c 07	NASA-CASE-LAR-10642-1 US-PATENT-APPL-SN-266820 US-PATENT-CLASS-137-15.1 US-PATENT-CLASS-415-181 US-PATENT-3,829,237	N74-33378*	c 25	NASA-CASE-MFS-21675-1 US-PATENT-APPL-SN-392823 US-PATENT-CLASS-23-277C US-PATENT-CLASS-431-202 US-PATENT-3,833,336
N74-27904*	c 37	NASA-CASE-LEW-11672-1 US-PATENT-APPL-SN-305639 US-PATENT-CLASS-417-52 US-PATENT-3,819,299	N74-32418*	c 07	NASA-CASE-LAR-11141-1 US-PATENT-APPL-SN-359957 US-PATENT-CLASS-181-33C US-PATENT-CLASS-181-33F US-PATENT-CLASS-181-33H US-PATENT-CLASS-181-33L US-PATENT-CLASS-181-42 US-PATENT-3,830,335	N74-33379*	c 44	NASA-CASE-ARC-10461-1 US-PATENT-APPL-SN-336319 US-PATENT-CLASS-60-527 US-PATENT-3,830,620
N74-27905*	c 37	NASA-CASE-LAR-10450-1 US-PATENT-APPL-SN-289017 US-PATENT-CLASS-51-225 US-PATENT-CLASS-51-234 US-PATENT-CLASS-51-97R US-PATENT-3,820,286	N74-32546*	c 54	NASA-CASE-MSC-11072 US-PATENT-APPL-SN-689455 US-PATENT-CLASS-156-218 US-PATENT-CLASS-2-2.1A US-PATENT-CLASS-2-2.2 US-PATENT-3,832,782	N74-34638*	c 33	NASA-CASE-MFS-22343-1 US-PATENT-APPL-SN-329337 US-PATENT-CLASS-307-18 US-PATENT-CLASS-307-295 US-PATENT-CLASS-307-304 US-PATENT-CLASS-307-35 US-PATENT-3,840,829
N74-28097*	c 35	NASA-CASE-GSC-11479-1 US-PATENT-APPL-SN-293739 US-PATENT-CLASS-244-1SA US-PATENT-CLASS-74-5.5 US-PATENT-3,818,767	N74-32598*	c 32	NASA-CASE-MSC-14070-1 US-PATENT-APPL-SN-266940 US-PATENT-CLASS-340-146.1AQ US-PATENT-3,831,142	N74-34672*	c 85	NASA-CASE-LAR-10256-1 US-PATENT-APPL-SN-220785 US-PATENT-CLASS-104-138R US-PATENT-CLASS-104-23FS US-PATENT-CLASS-238-134 US-PATENT-3,837,285
N74-28226*	c 07	NASA-CASE-LEW-11402-1 US-PATENT-APPL-SN-219806 US-PATENT-CLASS-415-181 US-PATENT-CLASS-416-223 US-PATENT-CLASS-416-237 US-PATENT-3,820,918	N74-32660*	c 33	NASA-CASE-GSC-11617-1 US-PATENT-APPL-SN-402865 US-PATENT-CLASS-330-4.9 US-PATENT-CLASS-330-53 US-PATENT-3,833,857	N74-34857*	c 35	NASA-CASE-LAR-11428-1 US-PATENT-APPL-SN-188836 US-PATENT-APPL-SN-357126 US-PATENT-CLASS-250-281 US-PATENT-CLASS-250-295 US-PATENT-3,835,318
N74-29410*	c 19	NASA-CASE-MFS-21577-1 US-PATENT-APPL-SN-343308 US-PATENT-CLASS-250-372 US-PATENT-CLASS-250-394 US-PATENT-3,825,760	N74-32711*	c 33	NASA-CASE-MSC-14130-1 US-PATENT-APPL-SN-373587 US-PATENT-CLASS-307-267 US-PATENT-CLASS-328-58 US-PATENT-3,831,098	N75-12086*	c 25	NASA-CASE-ARC-10469-1 US-PATENT-APPL-SN-281908 US-PATENT-CLASS-195-103.5R US-PATENT-3,846,243
N74-29556*	c 33	NASA-CASE-KSC-10769-1 US-PATENT-APPL-SN-374583 US-PATENT-CLASS-318-602 US-PATENT-CLASS-318-603 US-PATENT-CLASS-318-664 US-PATENT-3,826,964	N74-32712*	c 33	NASA-CASE-NPO-11948-1 US-PATENT-APPL-SN-306652 US-PATENT-CLASS-307-230 US-PATENT-CLASS-330-69 US-PATENT-CLASS-333-80R US-PATENT-3,831,117	N75-12087*	c 25	NASA-CASE-ARC-10643-1 US-PATENT-APPL-SN-513389 US-PATENT-CLASS-117-161UA US-PATENT-CLASS-117-161UN US-PATENT-CLASS-117-161UG US-PATENT-CLASS-204-177 US-PATENT-CLASS-210-500 US-PATENT-CLASS-264-217 US-PATENT-CLASS-264-222 US-PATENT-3,847,652
N74-30001*	c 24	NASA-CASE-LAR-10416-1 US-PATENT-APPL-SN-251752 US-PATENT-CLASS-156-94 US-PATENT-3,814,645	N74-32877*	c 35	NASA-CASE-LAR-10806-1 US-PATENT-APPL-SN-322998 US-PATENT-CLASS-33-1M US-PATENT-CLASS-33-23R US-PATENT-CLASS-338-89 US-PATENT-CLASS-340-347AD US-PATENT-CLASS-346-33R US-PATENT-3,832,781	N75-12161*	c 31	NASA-CASE-MFS-20775-1 US-PATENT-APPL-SN-356664 US-PATENT-CLASS-118-49.1 US-PATENT-3,847,115
N74-30156*	c 75	NASA-CASE-ARC-10598-1 US-PATENT-APPL-SN-318151 US-PATENT-CLASS-356-201 US-PATENT-CLASS-356-43 US-PATENT-CLASS-356-73 US-PATENT-CLASS-356-85 US-PATENT-CLASS-356-87 US-PATENT-3,817,622	N74-32878*	c 35	NASA-CASE-LAR-11139-1 US-PATENT-APPL-SN-287149 US-PATENT-CLASS-73-182 US-PATENT-CLASS-73-388 US-PATENT-3,832,903	N75-12222*	c 34	NASA-CASE-GSC-11619-1 US-PATENT-APPL-SN-397476 US-PATENT-CLASS-138-113 US-PATENT-CLASS-138-114 US-PATENT-CLASS-138-148 US-PATENT-CLASS-165-1 US-PATENT-CLASS-165-105 US-PATENT-CLASS-165-47 US-PATENT-CLASS-220-15 US-PATENT-CLASS-244-1SC US-PATENT-3,847,208
N74-30421*	c 08	NASA-CASE-LAR-10753-1 US-PATENT-APPL-SN-289018 US-PATENT-CLASS-244-327 US-PATENT-CLASS-244-90R US-PATENT-CLASS-244-91 US-PATENT-3,826,448	N74-32879*	c 35	NASA-CASE-MSC-14187-1 US-PATENT-APPL-SN-326326 US-PATENT-CLASS-23-230L US-PATENT-CLASS-73-104 US-PATENT-CLASS-73-15.4 US-PATENT-CLASS-73-40.7 US-PATENT-3,830,094	N75-12270*	c 35	NASA-CASE-KSC-10750-1 US-PATENT-APPL-SN-346372 US-PATENT-CLASS-324-158T US-PATENT-CLASS-324-60C US-PATENT-3,848,190
N74-30502*	c 25	NASA-CASE-LEW-10906-1 US-PATENT-APPL-SN-245279 US-PATENT-APPL-SN-876588 US-PATENT-CLASS-204-157.1H US-PATENT-3,826,726	N74-32917*	c 31	NASA-CASE-NPO-13205-1 US-PATENT-APPL-SN-393525 US-PATENT-CLASS-425-28B US-PATENT-CLASS-425-35 US-PATENT-3,833,322	N75-12271*	c 35	NASA-CASE-MFS-20994-1 US-PATENT-APPL-SN-386789 US-PATENT-CLASS-128-27 US-PATENT-CLASS-73-67.1 US-PATENT-3,847,141
N74-30523*	c 32	NASA-CASE-NPO-11921-1 US-PATENT-APPL-SN-359039 US-PATENT-CLASS-179-15BC US-PATENT-CLASS-325-346 US-PATENT-3,828,138	N74-32918*	c 37	NASA-CASE-NPO-13157-1 US-PATENT-APPL-SN-370872 US-PATENT-CLASS-29-203H US-PATENT-CLASS-29-268 US-PATENT-3,832,764	N75-12272*	c 35	NASA-CASE-LAR-11069-1 US-PATENT-APPL-SN-326198 US-PATENT-CLASS-195-127 US-PATENT-3,841,973
N74-30524*	c 32	NASA-CASE-MSC-13912-1 US-PATENT-APPL-SN-310034 US-PATENT-CLASS-179-15AT US-PATENT-CLASS-179-15BY US-PATENT-3,828,137	N74-32919*	c 20	NASA-CASE-LEW-11118-1 US-PATENT-APPL-SN-289050 US-PATENT-CLASS-204-9 US-PATENT-3,832,290	N75-12273*	c 35	NASA-CASE-MFS-20506-1 US-PATENT-APPL-SN-328792 US-PATENT-CLASS-33-DIG.13 US-PATENT-CLASS-33-180R US-PATENT-CLASS-350-292 US-PATENT-3,842,509
N74-30597*	c 09	NASA-CASE-LAR-10550-1 US-PATENT-APPL-SN-261183 US-PATENT-CLASS-35-12E US-PATENT-3,824,707	N74-32920*	c 31	NASA-CASE-LAR-10489-2 US-PATENT-APPL-SN-198763 US-PATENT-APPL-SN-350300 US-PATENT-CLASS-249-145 US-PATENT-CLASS-249-184 US-PATENT-CLASS-249-83 US-PATENT-CLASS-249-95 US-PATENT-CLASS-425-128 US-PATENT-CLASS-425-415 US-PATENT-3,830,609	N75-12326*	c 37	NASA-CASE-LAR-11211-1 US-PATENT-APPL-SN-302681 US-PATENT-CLASS-29-470.1 US-PATENT-CLASS-29-475 US-PATENT-3,842,485
N74-30608*	c 34	NASA-CASE-LAR-10194-1 US-PATENT-APPL-SN-169962 US-PATENT-CLASS-55-159 US-PATENT-CLASS-55-199 US-PATENT-CLASS-55-43 US-PATENT-3,828,524	N74-32921*	c 37	NASA-CASE-LEW-11076-2 US-PATENT-APPL-SN-238264 US-PATENT-APPL-SN-346483 US-PATENT-CLASS-308-121 US-PATENT-3,830,552	N75-12616*	c 54	NASA-CASE-MFS-21611-1 US-PATENT-APPL-SN-403694 US-PATENT-CLASS-214-1CM US-PATENT-CLASS-307-149 US-PATENT-CLASS-308-174
N74-30886*	c 89	NASA-CASE-GSC-11569-1 US-PATENT-APPL-SN-293725 US-PATENT-CLASS-250-203R US-PATENT-CLASS-33-268 US-PATENT-CLASS-356-141 US-PATENT-CLASS-356-147 US-PATENT-3,827,807	N74-33209*	c 28	NASA-CASE-NPO-11975-1 US-PATENT-APPL-SN-329243 US-PATENT-CLASS-149-17			
N74-31148*	c 71	NASA-CASE-NPO-11623-1 US-PATENT-APPL-SN-235338 US-PATENT-CLASS-181.5R US-PATENT-CLASS-73-69 US-PATENT-CLASS-73-71.5R						

N75-12732*	c 74	US-PATENT-3,849,668 NASA-CASE-ARC-10448-2 US-PATENT-APPL-SN-374424 US-PATENT-CLASS-156-16 US-PATENT-CLASS-156-18 US-PATENT-CLASS-156-7 US-PATENT-CLASS-250-495 US-PATENT-3,847,689	N75-13539*	c 60	US-PATENT-3,850,169 NASA-CASE-ARC-10466-1 US-PATENT-APPL-SN-352382 US-PATENT-CLASS-235-156 US-PATENT-CLASS-235-197 US-PATENT-CLASS-324-77B US-PATENT-3,851,162	N75-16783*	c 35	US-PATENT-CLASS-117-93.3 US-PATENT-CLASS-156-89 US-PATENT-CLASS-156-99 US-PATENT-CLASS-29-472.7 US-PATENT-CLASS-29-473.1 US-PATENT-CLASS-65-43 US-PATENT-3,859,714
N75-12810*	c 76	NASA-CASE-LAR-11059-1 US-PATENT-APPL-SN-367294 US-PATENT-CLASS-73-32R US-PATENT-CLASS-73-432PS US-PATENT-3,842,656	N75-13625*	c 75	NASA-CASE-MFS-22145-1 US-PATENT-APPL-SN-367606 US-PATENT-CLASS-176-3 US-PATENT-CLASS-313-63 US-PATENT-CLASS-315-111 US-PATENT-CLASS-328-233 US-PATENT-3,854,097	N75-18310*	c 20	NASA-CASE-ARC-10637-1 US-PATENT-APPL-SN-352383 US-PATENT-CLASS-356-28 US-PATENT-3,860,342
N75-12930*	c 05	NASA-CASE-ARC-10456-1 US-PATENT-APPL-SN-237491 US-PATENT-CLASS-244-75R US-PATENT-CLASS-244-83R US-PATENT-CLASS-416-25 US-PATENT-CLASS-74-480R US-PATENT-3,850,388	N75-14834*	c 23	NASA-CASE-MSC-13530-2 US-PATENT-APPL-SN-178771 US-PATENT-APPL-SN-69488 US-PATENT-CLASS-106-13 US-PATENT-CLASS-106-15R US-PATENT-CLASS-106-2875B US-PATENT-CLASS-117-124F US-PATENT-CLASS-117-135.5 US-PATENT-CLASS-252-549 US-PATENT-CLASS-252-70 US-PATENT-3,856,534	N75-18477*	c 33	NASA-CASE-MSC-14129-1 US-PATENT-APPL-SN-362146 US-PATENT-CLASS-307-229 US-PATENT-CLASS-307-235R US-PATENT-CLASS-307-267 US-PATENT-CLASS-328-115 US-PATENT-CLASS-328-151 US-PATENT-CLASS-328-58 US-PATENT-3,869,624
N75-12968*	c 09	NASA-CASE-MFS-22039-1 US-PATENT-APPL-SN-386790 US-PATENT-CLASS-108-136 US-PATENT-3,853,075	N75-14844*	c 25	NASA-CASE-NPO-12130-1 US-PATENT-APPL-SN-750235 US-PATENT-CLASS-23-230B US-PATENT-CLASS-23-253R US-PATENT-3,856,471	N75-18479*	c 33	NASA-CASE-MSC-14129-1 US-PATENT-APPL-SN-362146 US-PATENT-CLASS-307-229 US-PATENT-CLASS-307-235R US-PATENT-CLASS-307-267 US-PATENT-CLASS-328-115 US-PATENT-CLASS-328-151 US-PATENT-CLASS-328-58 US-PATENT-3,866,114
N75-12969*	c 09	NASA-CASE-ARC-10710-1 US-PATENT-APPL-SN-379019 US-PATENT-CLASS-73-147 US-PATENT-3,853,003	N75-14957*	c 33	NASA-CASE-MSC-14240-1 US-PATENT-APPL-SN-351929 US-PATENT-CLASS-307-205 US-PATENT-CLASS-307-208 US-PATENT-3,857,045	N75-18573*	c 37	NASA-CASE-NPO-13253-1 US-PATENT-APPL-SN-395687 US-PATENT-CLASS-248-358R US-PATENT-3,863,881
N75-13007*	c 15	NASA-CASE-GSC-11182-1 US-PATENT-APPL-SN-393527 US-PATENT-CLASS-325-4 US-PATENT-3,851,250	N75-15014*	c 35	NASA-CASE-LAR-11213-1 US-PATENT-APPL-SN-406715 US-PATENT-CLASS-250-201 US-PATENT-CLASS-356-4 US-PATENT-3,857,031	N75-18574*	c 37	NASA-CASE-GSC-11079-1 US-PATENT-APPL-SN-100637 US-PATENT-CLASS-308-10 US-PATENT-3,865,442
N75-13032*	c 24	NASA-CASE-LAR-10994-1 US-PATENT-APPL-SN-390466 US-PATENT-CLASS-29-420 US-PATENT-CLASS-29-604 US-PATENT-CLASS-340-174MA US-PATENT-CLASS-75-200 US-PATENT-3,849,877	N75-15028*	c 36	NASA-CASE-MFS-21244-1 US-PATENT-APPL-SN-350249 US-PATENT-CLASS-356-103 US-PATENT-CLASS-356-28 US-PATENT-CLASS-356-5 US-PATENT-3,856,402	N75-19329*	c 18	NASA-CASE-MSC-14131-1 US-PATENT-APPL-SN-453232 US-PATENT-CLASS-244-162 US-PATENT-3,866,863
N75-13111*	c 31	NASA-CASE-LAR-10782-2 US-PATENT-APPL-SN-197689 US-PATENT-APPL-SN-379049 US-PATENT-CLASS-249-144 US-PATENT-CLASS-249-145 US-PATENT-CLASS-249-59 US-PATENT-CLASS-425-DIG.43 US-PATENT-CLASS-425-405R US-PATENT-CLASS-425-438 US-PATENT-CLASS-425-468 US-PATENT-3,850,567	N75-15029*	c 36	NASA-CASE-NPO-13050-1 US-PATENT-APPL-SN-317567 US-PATENT-CLASS-117-95 US-PATENT-CLASS-117-97 US-PATENT-CLASS-330-4 US-PATENT-CLASS-332-7.5 US-PATENT-3,859,119	N75-19408*	c 26	NASA-CASE-LEW-11696-2 US-PATENT-APPL-SN-298156 US-PATENT-APPL-SN-436315 US-PATENT-CLASS-29-194 US-PATENT-CLASS-29-196.2 US-PATENT-CLASS-29-196.6 US-PATENT-CLASS-29-197 US-PATENT-3,869,779
N75-13139*	c 33	NASA-CASE-MFS-22073-1 US-PATENT-APPL-SN-409991 US-PATENT-CLASS-318-608 US-PATENT-CLASS-318-640 US-PATENT-CLASS-318-649 US-PATENT-CLASS-318-675 US-PATENT-3,851,238	N75-15050*	c 37	NASA-CASE-NPO-13201-1 US-PATENT-APPL-SN-372149 US-PATENT-CLASS-137-505.38 US-PATENT-CLASS-137-505.42 US-PATENT-CLASS-74-424.8VA US-PATENT-3,856,042	N75-19515*	c 33	NASA-CASE-MSC-14131-1 US-PATENT-APPL-SN-373588 US-PATENT-CLASS-307-260 US-PATENT-CLASS-324-78J US-PATENT-CLASS-328-59 US-PATENT-CLASS-331-78 US-PATENT-3,866,128
N75-13213*	c 35	NASA-CASE-LEW-11632-2 US-PATENT-APPL-SN-254173 US-PATENT-APPL-SN-327969 US-PATENT-CLASS-29-571 US-PATENT-CLASS-29-592 US-PATENT-CLASS-307-309 US-PATENT-CLASS-317-235H US-PATENT-CLASS-330-6 US-PATENT-3,849,875	N75-15270*	c 52	NASA-CASE-NPO-121119-1 US-PATENT-APPL-SN-847815 US-PATENT-CLASS-424-180 US-PATENT-3,849,554	N75-19516*	c 33	NASA-CASE-GSC-11760-1 NASA-CASE-GSC-11783-1 US-PATENT-APPL-SN-395688 US-PATENT-CLASS-343-761 US-PATENT-CLASS-343-781 US-PATENT-CLASS-343-837 US-PATENT-3,866,233
N75-13261*	c 37	NASA-CASE-LEW-11696-1 US-PATENT-APPL-SN-298156 US-PATENT-CLASS-29-196.6 US-PATENT-CLASS-29-197 US-PATENT-CLASS-29-460 US-PATENT-CLASS-29-494 US-PATENT-CLASS-29-497.5 US-PATENT-CLASS-29-504 US-PATENT-3,849,865	N75-15662*	c 09	NASA-CASE-LAR-10276-1 US-PATENT-APPL-SN-29979 US-PATENT-CLASS-272-1R US-PATENT-CLASS-272-57A US-PATENT-CLASS-35-12C US-PATENT-3,859,736	N75-19517*	c 33	NASA-CASE-GSC-11582-1 US-PATENT-APPL-SN-397477 US-PATENT-CLASS-178-15 US-PATENT-CLASS-315-18 US-PATENT-CLASS-340-324AD US-PATENT-3,866,210
N75-13265*	c 37	NASA-CASE-KSC-10723-1 US-PATENT-APPL-SN-347952 US-PATENT-CLASS-338-162 US-PATENT-CLASS-338-75 US-PATENT-CLASS-338-97 US-PATENT-3,854,113	N75-15854*	c 32	NASA-CASE-NPO-13292-1 US-PATENT-APPL-SN-416135 US-PATENT-CLASS-343-100ST US-PATENT-CLASS-343-17.5 US-PATENT-CLASS-343-6.5R US-PATENT-CLASS-343-9 US-PATENT-3,860,921	N75-19518*	c 33	NASA-CASE-ARC-10348-1 US-PATENT-APPL-SN-140439 US-PATENT-CLASS-330-69 US-PATENT-CLASS-330-86 US-PATENT-3,872,395
N75-13266*	c 37	NASA-CASE-NPO-13281-1 US-PATENT-APPL-SN-412079 US-PATENT-CLASS-74-436 US-PATENT-CLASS-74-820 US-PATENT-3,855,873	N75-15874*	c 33	NASA-CASE-MFS-22088-1 US-PATENT-APPL-SN-426155 US-PATENT-CLASS-318-227 US-PATENT-CLASS-318-230 US-PATENT-CLASS-318-231 US-PATENT-3,860,858	N75-19519*	c 33	NASA-CASE-NPO-13125-1 US-PATENT-APPL-SN-319150 US-PATENT-CLASS-235-92DM US-PATENT-CLASS-235-92L US-PATENT-CLASS-235-92R US-PATENT-CLASS-235-92T US-PATENT-CLASS-235-92VA US-PATENT-3,866,022
N75-13502*	c 51	NASA-CASE-LAR-11074-1 US-PATENT-APPL-SN-326364 US-PATENT-CLASS-115-103.5 US-PATENT-CLASS-195-120 US-PATENT-CLASS-195-127 US-PATENT-3,850,754	N75-15931*	c 35	NASA-CASE-MFS-21761-1 US-PATENT-APPL-SN-337816 US-PATENT-CLASS-200-83N US-PATENT-CLASS-73-40 US-PATENT-CLASS-73-49.2 US-PATENT-3,859,845	N75-19520*	c 33	NASA-CASE-ARC-10364-3 US-PATENT-APPL-SN-209618 US-PATENT-APPL-SN-462844 US-PATENT-CLASS-307-321 US-PATENT-CLASS-324-DIG.1 US-PATENT-CLASS-329-166 US-PATENT-CLASS-329-204 US-PATENT-CLASS-332-47 US-PATENT-3,869,676
N75-13531*	c 54	NASA-CASE-LEW-11581-1 US-PATENT-APPL-SN-327921 US-PATENT-CLASS-128-2.05A US-PATENT-CLASS-128-2.05P	N75-15932*	c 35	NASA-CASE-MFS-21045-1 US-PATENT-APPL-SN-411572 US-PATENT-CLASS-73-1R US-PATENT-CLASS-73-379 US-PATENT-3,859,849	N75-19521*	c 33	NASA-CASE-KSC-10736-1 US-PATENT-APPL-SN-348787 US-PATENT-CLASS-324-102 US-PATENT-CLASS-324-113
			N75-15992*	c 37	NASA-CASE-GSC-11577-1 US-PATENT-APPL-SN-322997 US-PATENT-CLASS-117-106A			

N75-19522*	c 33	US-PATENT-3,869,667 NASA-CASE-GSC-11844-1 US-PATENT-APPL-SN-452761 US-PATENT-CLASS-307-227 US-PATENT-CLASS-321-15 US-PATENT-CLASS-324-32 US-PATENT-3,869,659	US-PATENT-CLASS-165-111 US-PATENT-CLASS-62-285 US-PATENT-CLASS-62-288 US-PATENT-CLASS-62-289 US-PATENT-CLASS-62-290 US-PATENT-CLASS-62-317 US-PATENT-CLASS-62-93 US-PATENT-3,868,830	US-PATENT-CLASS-331-25 US-PATENT-3,883,817 NASA-CASE-ARC-10364-2 US-PATENT-APPL-SN-209618 US-PATENT-APPL-SN-433968 US-PATENT-CLASS-307-321 US-PATENT-CLASS-324-DIG.1 US-PATENT-CLASS-329-166 US-PATENT-CLASS-329-204 US-PATENT-3,883,812
N75-19524*	c 33	NASA-CASE-NPO-13374-1 US-PATENT-APPL-SN-449118 US-PATENT-CLASS-318-137 US-PATENT-CLASS-318-167 US-PATENT-CLASS-318-176 US-PATENT-CLASS-318-183 US-PATENT-3,867,677	N75-20140* c 77 NASA-CASE-GSC-11752-1 US-PATENT-APPL-SN-446569 US-PATENT-CLASS-219-497 US-PATENT-CLASS-219-501 US-PATENT-CLASS-219-505 US-PATENT-3,869,597	N75-25041* c 33 NASA-CASE-ARC-10364-2 US-PATENT-APPL-SN-209618 US-PATENT-APPL-SN-433968 US-PATENT-CLASS-307-321 US-PATENT-CLASS-324-DIG.1 US-PATENT-CLASS-329-166 US-PATENT-CLASS-329-204 US-PATENT-3,883,812
N75-19611*	c 35	NASA-CASE-LAR-11071-1 US-PATENT-APPL-SN-334349 US-PATENT-CLASS-417-138 US-PATENT-CLASS-417-36 US-PATENT-CLASS-417-395 US-PATENT-CLASS-73-221 US-PATENT-3,864,060	N75-21485* c 32 NASA-CASE-MSC-12607-1 US-PATENT-APPL-SN-407323 US-PATENT-CLASS-178-DIG.12 US-PATENT-CLASS-358-36 US-PATENT-3,875,584	N75-25122* c 35 NASA-CASE-NPO-10764-2 US-PATENT-APPL-SN-273519 US-PATENT-APPL-SN-836280 US-PATENT-CLASS-116-114.5 US-PATENT-CLASS-117-72 US-PATENT-CLASS-73-356 US-PATENT-3,874,240
N75-19612*	c 35	NASA-CASE-LAR-11237-1 US-PATENT-APPL-SN-402868 US-PATENT-CLASS-340-242 US-PATENT-CLASS-73-49.2 US-PATENT-3,864,960	N75-21486* c 32 NASA-CASE-MSC-14558-1 US-PATENT-APPL-SN-428994 US-PATENT-CLASS-178-58A US-PATENT-CLASS-178-79 US-PATENT-3,875,332	N75-25123* c 35 NASA-CASE-NPO-13214-1 NASA-CASE-NPO-13215-1 US-PATENT-APPL-SN-394149 US-PATENT-CLASS-178-DIG.29 US-PATENT-CLASS-178-7.2 US-PATENT-3,883,689
N75-19613*	c 35	NASA-CASE-LAR-11207-1 US-PATENT-APPL-SN-385013 US-PATENT-CLASS-178-DIG.20 US-PATENT-CLASS-250-332 US-PATENT-CLASS-356-186 US-PATENT-CLASS-356-189 US-PATENT-CLASS-356-83 US-PATENT-CLASS-356-96 US-PATENT-3,869,212	N75-21582* c 35 NASA-CASE-MFS-22671-1 US-PATENT-APPL-SN-419831 US-PATENT-CLASS-178-69A US-PATENT-CLASS-235-181 US-PATENT-CLASS-324-57PS US-PATENT-CLASS-324-77H US-PATENT-CLASS-325-67 US-PATENT-3,875,500	N75-25124* c 35 NASA-CASE-MFS-21704-1 US-PATENT-APPL-SN-386793 US-PATENT-CLASS-350-3.5 US-PATENT-3,883,215
N75-19614*	c 35	NASA-CASE-LAR-11173-1 US-PATENT-APPL-SN-354408 US-PATENT-CLASS-332-2 US-PATENT-CLASS-73-557 US-PATENT-3,868,856	N75-21631* c 37 NASA-CASE-LEW-11274-1 US-PATENT-APPL-SN-380630 US-PATENT-CLASS-277-134 US-PATENT-CLASS-277-27 US-PATENT-CLASS-277-40 US-PATENT-3,874,677	N75-25185* c 37 NASA-CASE-NPO-13360-1 US-PATENT-APPL-SN-401920 US-PATENT-CLASS-228-1 US-PATENT-CLASS-251-333 US-PATENT-3,874,635
N75-19615*	c 35	NASA-CASE-LAR-11173-1 US-PATENT-APPL-SN-354408 US-PATENT-CLASS-332-2 US-PATENT-CLASS-73-557 US-PATENT-3,868,856	N75-23910* c 35 NASA-CASE-NPO-13327-1 US-PATENT-APPL-SN-429437 US-PATENT-CLASS-247-171 US-PATENT-CLASS-250-203 US-PATENT-CLASS-250-211R US-PATENT-3,875,404	N75-25186* c 37 NASA-CASE-MFS-22649-3 US-PATENT-APPL-SN-398901 US-PATENT-CLASS-408-112 US-PATENT-CLASS-408-186 US-PATENT-CLASS-408-193 US-PATENT-CLASS-408-195 US-PATENT-3,877,833
N75-19616*	c 35	NASA-CASE-MFS-20932-1 US-PATENT-APPL-SN-374441 US-PATENT-CLASS-250-505 US-PATENT-CLASS-250-508 US-PATENT-CLASS-250-510 US-PATENT-3,869,615	N75-24716* c 05 NASA-CASE-MSC-14339-1 US-PATENT-APPL-SN-347953 US-PATENT-CLASS-128-2.06E US-PATENT-CLASS-128-DIG.4 US-PATENT-CLASS-128-2.06B US-PATENT-3,882,846	N75-25503* c 51 NASA-CASE-ARC-10722-1 US-PATENT-APPL-SN-428995 US-PATENT-CLASS-47-1.2 US-PATENT-CLASS-47-39 US-PATENT-CLASS-47-58 US-PATENT-3,882,634
N75-19652*	c 36	NASA-CASE-NPO-13131-1 US-PATENT-APPL-SN-390468 US-PATENT-CLASS-178-7.1 US-PATENT-CLASS-250-211R US-PATENT-CLASS-250-578 US-PATENT-CLASS-315-169R US-PATENT-CLASS-340-173LS US-PATENT-3,865,975	N75-24736* c 07 NASA-CASE-ARC-10754-1 US-PATENT-APPL-SN-398886 US-PATENT-CLASS-137-15.1 US-PATENT-CLASS-244-53B US-PATENT-3,883,095	N75-25706* c 74 NASA-CASE-HQN-10542-1 US-PATENT-APPL-SN-163151 US-PATENT-CLASS-178-DIG.25 US-PATENT-CLASS-250-566 US-PATENT-CLASS-350-311 US-PATENT-3,883,436
N75-19653*	c 36	NASA-CASE-HQN-10844-1 US-PATENT-APPL-SN-412080 US-PATENT-CLASS-356-106LR US-PATENT-3,869,210	N75-24758* c 09 NASA-CASE-GSC-11127-1 US-PATENT-APPL-SN-401466 US-PATENT-CLASS-318-314 US-PATENT-CLASS-318-318 US-PATENT-CLASS-318-341 US-PATENT-3,883,785	N75-25730* c 76 NASA-CASE-GSC-11425-2 US-PATENT-APPL-SN-206266 US-PATENT-APPL-SN-394206 US-PATENT-CLASS-357-23 US-PATENT-CLASS-357-29 US-PATENT-CLASS-357-42 US-PATENT-CLASS-357-52 US-PATENT-CLASS-357-54 US-PATENT-CLASS-357-91 US-PATENT-3,882,530
N75-19654*	c 36	NASA-CASE-HQN-10844-1 US-PATENT-APPL-SN-412080 US-PATENT-CLASS-356-106LR US-PATENT-3,869,210	N75-24774* c 12 NASA-CASE-NPO-13263-1 US-PATENT-APPL-SN-393523 US-PATENT-CLASS-73-503 US-PATENT-CLASS-335-216 US-PATENT-3,882,732	N75-25914* c 05 NASA-CASE-LAR-11252-1 US-PATENT-APPL-SN-367268 US-PATENT-CLASS-D12-76 US-PATENT-CLASS-244-13 US-PATENT-CLASS-244-15 US-PATENT-CLASS-244-42DA US-PATENT-CLASS-244-55 US-PATENT-3,884,432
N75-19655*	c 36	NASA-CASE-LAR-11341-1 US-PATENT-APPL-SN-367293 US-PATENT-CLASS-330-4.3 US-PATENT-CLASS-331-94.5P US-PATENT-3,868,591	N75-24794* c 14 NASA-CASE-MFS-21488-1 US-PATENT-APPL-SN-359156 US-PATENT-CLASS-73-143 US-PATENT-3,882,719	N75-25915* c 05 NASA-CASE-ARC-10519-2 US-PATENT-APPL-SN-452767 US-PATENT-CLASS-280-150SB US-PATENT-CLASS-297-385 US-PATENT-CLASS-297-388 US-PATENT-CLASS-297-389 US-PATENT-3,887,233
N75-19683*	c 37	NASA-CASE-MSC-19095-1 US-PATENT-APPL-SN-415486 US-PATENT-CLASS-219-137 US-PATENT-3,864,542	N75-24837* c 20 NASA-CASE-NPO-13303-1 US-PATENT-APPL-SN-457295 US-PATENT-CLASS-310-10 US-PATENT-CLASS-310-4 US-PATENT-CLASS-310-40 US-PATENT-CLASS-310-52 US-PATENT-CLASS-335-216 US-PATENT-CLASS-60-516 US-PATENT-CLASS-60-530 US-PATENT-CLASS-62-3 US-PATENT-CLASS-62-467 US-PATENT-3,875,435	N75-26043* c 25 NASA-CASE-LAR-11144-1 US-PATENT-APPL-SN-426405 US-PATENT-CLASS-117-106A US-PATENT-CLASS-117-107.2 US-PATENT-CLASS-117-201 US-PATENT-CLASS-118-48 US-PATENT-CLASS-118-49.1 US-PATENT-CLASS-148-175 US-PATENT-CLASS-252-62.3GA US-PATENT-3,888,705
N75-19684*	c 37	NASA-CASE-NPO-13345-1 US-PATENT-APPL-SN-462705 US-PATENT-CLASS-204-192 US-PATENT-CLASS-204-298 US-PATENT-3,864,239	N75-24981* c 32 NASA-CASE-GSC-11743-1 US-PATENT-APPL-SN-370271 US-PATENT-CLASS-178-66R US-PATENT-CLASS-325-30 US-PATENT-CLASS-325-60 US-PATENT-3,878,464	N75-26194* c 32 NASA-CASE-NPO-13217-1 US-PATENT-APPL-SN-362145 US-PATENT-CLASS-343-105R US-PATENT-CLASS-343-112D US-PATENT-3,889,264
N75-19685*	c 37	NASA-CASE-MFS-21606-1 US-PATENT-APPL-SN-356555 US-PATENT-CLASS-292-DIG.14 US-PATENT-CLASS-292-108 US-PATENT-CLASS-292-122 US-PATENT-3,869,160	N75-24982* c 32 NASA-CASE-NPO-13140-1 US-PATENT-APPL-SN-374422 US-PATENT-CLASS-343-100PE US-PATENT-CLASS-343-5GC US-PATENT-3,883,872	N75-26195* c 32 NASA-CASE-NPO-13321-1 US-PATENT-APPL-SN-455163 US-PATENT-CLASS-178-69.5R US-PATENT-CLASS-179-158S US-PATENT-CLASS-325-4
N75-20139*	c 77	NASA-CASE-MSC-14143-1 US-PATENT-APPL-SN-393526 US-PATENT-CLASS-165-110	N75-25040* c 33 NASA-CASE-GSC-11623-1 US-PATENT-APPL-SN-389929 US-PATENT-CLASS-331-1A US-PATENT-CLASS-331-1B	

N75-26243*	c 33	US-PATENT-3,889,064 NASA-CASE-GSC-11744-1 US-PATENT-APPL-SN-353162 US-PATENT-CLASS-179-158C US-PATENT-CLASS-235-150.53 US-PATENT-CLASS-235-181 US-PATENT-CLASS-324-830 US-PATENT-CLASS-328-133 US-PATENT-3,875,394	N75-27251*	c 33	US-PATENT-3,189,784 NASA-CASE-HQN-10069 US-PATENT-APPL-SN-739072 US-PATENT-CLASS-330-5 US-PATENT-3,551,831	N75-29381*	c 35	US-PATENT-CLASS-311-37 US-PATENT-CLASS-331-65 US-PATENT-CLASS-73-23 US-PATENT-3,895,912 NASA-CASE-ARC-10806-1 US-PATENT-APPL-SN-478802 US-PATENT-CLASS-73-178R US-PATENT-3,895,521
N75-26244*	c 33	NASA-CASE-MFS-22208-1 US-PATENT-APPL-SN-448325 US-PATENT-CLASS-315-10 US-PATENT-CLASS-315-367 US-PATENT-CLASS-315-369 US-PATENT-CLASS-315-387 US-PATENT-3,889,155	N75-27328*	c 35	NASA-CASE-LAR-11042-1 US-PATENT-APPL-SN-440916 US-PATENT-CLASS-204-242 US-PATENT-CLASS-204-267 US-PATENT-CLASS-204-279 US-PATENT-CLASS-204-286 US-PATENT-CLASS-204-290R US-PATENT-3,891,533	N75-29382*	c 35	NASA-CASE-XMS-05731 US-PATENT-APPL-SN-441279 US-PATENT-CLASS-73-117.4 US-PATENT-3,375,712
N75-26245*	c 33	NASA-CASE-LAR-11352-1 US-PATENT-APPL-SN-459736 US-PATENT-CLASS-23-254E US-PATENT-CLASS-324-58.5A US-PATENT-CLASS-324-58.5C US-PATENT-3,889,182	N75-27329*	c 35	NASA-CASE-XMF-05882 US-PATENT-APPL-SN-533650 US-PATENT-CLASS-250-83.3 US-PATENT-3,454,766	N75-29426*	c 37	NASA-CASE-XLE-10717 US-PATENT-APPL-SN-844243 US-PATENT-CLASS-315-111 US-PATENT-3,004,189
N75-26246*	c 33	NASA-CASE-KSC-10807-1 US-PATENT-APPL-SN-461073 US-PATENT-CLASS-324-72 US-PATENT-3,889,185	N75-27330*	c 35	NASA-CASE-LAR-11354-1 US-PATENT-APPL-SN-409990 US-PATENT-CLASS-195-103.5R US-PATENT-CLASS-195-120 US-PATENT-CLASS-195-127 US-PATENT-CLASS-195-141 US-PATENT-3,884,765	N75-30132*	c 03	NASA-CASE-ERC-10419-1 US-PATENT-APPL-SN-219722 US-PATENT-CLASS-343-112CA US-PATENT-CLASS-343-6.5R US-PATENT-3,900,847
N75-26282*	c 34	NASA-CASE-LAR-11110-1 US-PATENT-APPL-SN-420424 US-PATENT-CLASS-233-DIG.1 US-PATENT-CLASS-233-20RP US-PATENT-CLASS-233-25 US-PATENT-CLASS-233-46 US-PATENT-CLASS-233-6 US-PATENT-3,888,410	N75-27331*	c 35	NASA-CASE-LAR-11354-1 US-PATENT-APPL-SN-409990 US-PATENT-CLASS-195-103.5R US-PATENT-CLASS-195-120 US-PATENT-CLASS-195-127 US-PATENT-CLASS-195-141 US-PATENT-3,884,765	N75-30256*	c 23	NASA-CASE-MFS-22356-1 US-PATENT-APPL-SN-489008 US-PATENT-CLASS-260-346.3 US-PATENT-CLASS-260-520 US-PATENT-CLASS-260-78TF US-PATENT-3,899,517
N75-26334*	c 35	NASA-CASE-ARC-10344-2 US-PATENT-APPL-SN-446564 US-PATENT-CLASS-55-386 US-PATENT-3,887,345	N75-27364*	c 36	NASA-CASE-GSC-11829-1 US-PATENT-APPL-SN-502136 US-PATENT-CLASS-250-385 US-PATENT-3,891,851	N75-30260*	c 24	NASA-CASE-LAR-10337-1 US-PATENT-APPL-SN-424038 US-PATENT-CLASS-29-610 US-PATENT-CLASS-29-613 US-PATENT-CLASS-338-13 US-PATENT-CLASS-338-283 US-PATENT-3,898,730
N75-26371*	c 37	NASA-CASE-GSC-10984-1 US-PATENT-APPL-SN-127480 US-PATENT-CLASS-117-126GM US-PATENT-CLASS-117-126R US-PATENT-CLASS-161-92 US-PATENT-CLASS-161-93 US-PATENT-CLASS-29-182.2 US-PATENT-CLASS-29-182.5 US-PATENT-CLASS-29-420.5 US-PATENT-CLASS-65-3 US-PATENT-CLASS-75-DIG.1 US-PATENT-CLASS-75-200 US-PATENT-CLASS-75-208R US-PATENT-CLASS-75-212 US-PATENT-CLASS-75-214 US-PATENT-CLASS-75-222 US-PATENT-3,887,365	N75-27376*	c 37	NASA-CASE-XLE-2529-2 US-PATENT-APPL-SN-848403 US-PATENT-CLASS-240-41B US-PATENT-CLASS-330-4.3 US-PATENT-CLASS-331-94.5A US-PATENT-3,894,289	N75-30428*	c 33	NASA-CASE-MFS-22342-1 US-PATENT-APPL-SN-361666 US-PATENT-CLASS-330-13 US-PATENT-CLASS-330-18 US-PATENT-CLASS-330-40 US-PATENT-CLASS-330-63 US-PATENT-3,898,578
N75-26372*	c 37	NASA-CASE-MFS-21931-1 US-PATENT-APPL-SN-464721 US-PATENT-CLASS-250-359 US-PATENT-CLASS-250-460 US-PATENT-CLASS-250-492 US-PATENT-3,889,122	N75-27585*	c 45	NASA-CASE-XMS-01330 US-PATENT-APPL-SN-153624 US-PATENT-APPL-SN-322565 US-PATENT-CLASS-219-125 US-PATENT-3,275,794	N75-30429*	c 33	NASA-CASE-MFS-21616-1 US-PATENT-APPL-SN-464723 US-PATENT-CLASS-330-207A US-PATENT-CLASS-330-24 US-PATENT-3,899,745
N75-26789* #	c 70	NASA-CASE-MFS-22758-1 US-PATENT-APPL-SN-581514	N75-27758*	c 54	NASA-CASE-NPO-13231-1 US-PATENT-APPL-SN-428993 US-PATENT-CLASS-250-343 US-PATENT-CLASS-250-345 US-PATENT-CLASS-250-432 US-PATENT-3,891,848	N75-30430*	c 33	NASA-CASE-NPO-13504-1 US-PATENT-APPL-SN-483852 US-PATENT-CLASS-33-96 US-PATENT-CLASS-333-21R US-PATENT-CLASS-333-83BT US-PATENT-CLASS-333-98R US-PATENT-3,902,143
N75-27040*	c 18	NASA-CASE-XHQ-02146 US-PATENT-APPL-SN-290043 US-PATENT-CLASS-52-71 US-PATENT-3,206,897	N75-27759*	c 54	NASA-CASE-NPO-13386-1 US-PATENT-APPL-SN-475336 US-PATENT-CLASS-214-1B US-PATENT-CLASS-214-1CM US-PATENT-CLASS-318-640 US-PATENT-3,888,362	N75-30431*	c 33	NASA-CASE-MSC-13601-2 US-PATENT-APPL-SN-395495 US-PATENT-CLASS-351-38 US-PATENT-3,891,311
N75-27041*	c 18	NASA-CASE-MSC-14245-1 US-PATENT-APPL-SN-389916 US-PATENT-CLASS-214-1CM US-PATENT-3,893,573	N75-27760*	c 54	NASA-CASE-ARC-10753-1 US-PATENT-APPL-SN-427395 US-PATENT-CLASS-128-2.05Z US-PATENT-CLASS-128-2V US-PATENT-CLASS-128-24A US-PATENT-CLASS-74-471XY US-PATENT-3,893,449	N75-30502*	c 35	NASA-CASE-ARC-10802-1 US-PATENT-APPL-SN-484208 US-PATENT-CLASS-205-343 US-PATENT-CLASS-250-351 US-PATENT-CLASS-250-373 US-PATENT-CLASS-356-51 US-PATENT-3,899,252
N75-27125*	c 26	NASA-CASE-XMF-05868 US-PATENT-APPL-SN-512509 US-PATENT-CLASS-260-29.6 US-PATENT-3,475,442	N75-27761*	c 54	NASA-CASE-NPO-13313-1 US-PATENT-APPL-SN-449153 US-PATENT-CLASS-128-145.8 US-PATENT-CLASS-55-DIG.35 US-PATENT-3,893,458	N75-30503*	c 35	NASA-CASE-ARC-10802-1 US-PATENT-APPL-SN-484208 US-PATENT-CLASS-205-343 US-PATENT-CLASS-250-351 US-PATENT-CLASS-250-373 US-PATENT-CLASS-356-51 US-PATENT-3,899,252
N75-27126*	c 26	NASA-CASE-XMF-06053 US-PATENT-APPL-SN-542192 US-PATENT-CLASS-75-173 US-PATENT-3,411,900	N75-28135*	c 24	NASA-CASE-MSC-13601-2 US-PATENT-APPL-SN-395495 US-PATENT-CLASS-351-38 US-PATENT-3,891,311	N75-30504*	c 35	NASA-CASE-ARC-10802-1 US-PATENT-APPL-SN-484208 US-PATENT-CLASS-205-343 US-PATENT-CLASS-250-351 US-PATENT-CLASS-250-373 US-PATENT-CLASS-356-51 US-PATENT-3,899,252
N75-27127*	c 26	NASA-CASE-XNP-03878 US-PATENT-APPL-SN-488745 US-PATENT-CLASS-75-173 US-PATENT-3,373,016	N75-29192*	c 25	NASA-CASE-HQN-10462 US-PATENT-APPL-SN-773530 US-PATENT-CLASS-118-43 US-PATENT-3,603,285	N75-30524*	c 36	NASA-CASE-NPO-13308-1 US-PATENT-APPL-SN-455165 US-PATENT-CLASS-310-4 US-PATENT-CLASS-331-DIG.1 US-PATENT-3,899,696
N75-27160*	c 27	NASA-CASE-MFS-22324-1 US-PATENT-APPL-SN-350250 US-PATENT-CLASS-106-48 US-PATENT-CLASS-106-54 US-PATENT-CLASS-117-129 US-PATENT-3,891,452	N75-29236*	c 26	NASA-CASE-XNP-01311 US-PATENT-APPL-SN-430496 US-PATENT-CLASS-148-127 US-PATENT-3,390,023	N75-30562*	c 37	NASA-CASE-LEW-11076-3 US-PATENT-APPL-SN-405346 US-PATENT-CLASS-308-121 US-PATENT-CLASS-308-73 US-PATENT-3,899,224
N75-27249*	c 33	NASA-CASE-XMS-02744 US-PATENT-APPL-SN-351950 US-PATENT-CLASS-200-129 US-PATENT-3,281,558	N75-29318*	c 33	NASA-CASE-ARC-10266-1 US-PATENT-APPL-SN-453241 US-PATENT-APPL-SN-585988 US-PATENT-CLASS-315-111 US-PATENT-3,469,143	N75-30876*	c 73	NASA-CASE-LEW-11227-1 US-PATENT-APPL-SN-146939 US-PATENT-CLASS-244-1SS US-PATENT-CLASS-250-493 US-PATENT-CLASS-250-496 US-PATENT-3,899,680
N75-27250*	c 33	NASA-CASE-XNP-01296 US-PATENT-APPL-SN-127984 US-PATENT-CLASS-315-30	N75-29380*	c 35	NASA-CASE-MFS-22060-1 US-PATENT-APPL-SN-521603 US-PATENT-CLASS-23-25AE US-PATENT-CLASS-23-255E	N75-31329*	c 33	NASA-CASE-NPO-13423-1 US-PATENT-APPL-SN-470429

		US-PATENT-CLASS-128-25		US-PATENT-CLASS-279-1B	N76-14429*	c 35	NASA-CASE-LAR-11552-1
		US-PATENT-CLASS-338-2		US-PATENT-CLASS-279-107			US-PATENT-APPL-SN-518685
		US-PATENT-CLASS-73-88.5		US-PATENT-CLASS-279-89			US-PATENT-CLASS-73-182
		US-PATENT-3,905,356		US-PATENT-CLASS-29-26A			US-PATENT-CLASS-73-212
N75-31330*	c 33	NASA-CASE-NPO-13426-1		US-PATENT-CLASS-294-116	N76-14430*	c 35	US-PATENT-3,914,997
		US-PATENT-APPL-SN-45053		US-PATENT-CLASS-294-86.33			NASA-CASE-NPO-13170-1
		US-PATENT-CLASS-307-225R		US-PATENT-3,907,312			US-PATENT-APPL-SN-382261
		US-PATENT-CLASS-328-41	N75-33640*	NASA-CASE-LEW-12051-1	c 52		US-PATENT-CLASS-338-6
		US-PATENT-3,906,374		US-PATENT-APPL-SN-397478			US-PATENT-CLASS-73-88.5R
N75-31331*	c 33	NASA-CASE-NPO-11156-2		US-PATENT-CLASS-128-230			US-PATENT-3,914,991
		US-PATENT-APPL-SN-174684		US-PATENT-CLASS-128-305	N76-14431*	c 35	NASA-CASE-LEW-11915-1
		US-PATENT-CLASS-307-238		US-PATENT-3,906,954			US-PATENT-APPL-SN-474744
		US-PATENT-CLASS-340-173CA	N76-14158*	NASA-CASE-LAR-11051-1	c 15		US-PATENT-CLASS-137-15.2
		US-PATENT-CLASS-357-24		US-PATENT-APPL-SN-384773			US-PATENT-CLASS-235-151.34
		US-PATENT-CLASS-357-7		US-PATENT-CLASS-244-165			US-PATENT-CLASS-60-39.29
		US-PATENT-3,906,296		US-PATENT-CLASS-244-3.21			US-PATENT-3,911,260
N75-31332*	c 33	NASA-CASE-NPO-13348-1		US-PATENT-CLASS-74-5.7	N76-14447*	c 36	NASA-CASE-ARC-10642-1
		US-PATENT-APPL-SN-452770		US-PATENT-3,915,416			US-PATENT-APPL-SN-446562
		US-PATENT-CLASS-250-238	N76-14186*	NASA-CASE-MS-12559-1	c 18		US-PATENT-CLASS-356-106R
		US-PATENT-CLASS-250-370		US-PATENT-APPL-SN-370582			US-PATENT-CLASS-356-28
		US-PATENT-CLASS-357-5		US-PATENT-CLASS-178-DIG.20			US-PATENT-3,915,572
		US-PATENT-3,906,231		US-PATENT-CLASS-244-161	N76-14460*	c 37	NASA-CASE-MFS-19194-1
N75-31426*	c 36	NASA-CASE-ARC-10370-1		US-PATENT-CLASS-33-286			US-PATENT-APPL-SN-483850
		US-PATENT-APPL-SN-137391		US-PATENT-CLASS-35-12			US-PATENT-CLASS-285-226
		US-PATENT-CLASS-331-94.5G		US-PATENT-CLASS-356-153			US-PATENT-CLASS-285-265
		US-PATENT-CLASS-331-94.5P		US-PATENT-3,910,533			US-PATENT-3,915,482
		US-PATENT-3,906,397	N76-14190*	NASA-CASE-LEW-11593-1	c 20		NASA-CASE-LEW-11694-2
N75-31427*	c 36	NASA-CASE-NPO-13175-1		US-PATENT-APPL-SN-363691			US-PATENT-APPL-SN-352381
		US-PATENT-APPL-SN-374423		US-PATENT-CLASS-60-39.23			US-PATENT-APPL-SN-462903
		US-PATENT-CLASS-331-94.5C		US-PATENT-CLASS-60-39.29			US-PATENT-CLASS-29-421
		US-PATENT-CLASS-350-161		US-PATENT-CLASS-60-39.74R			US-PATENT-CLASS-72-363
		US-PATENT-CLASS-350-96WG		US-PATENT-3,910,035			US-PATENT-CLASS-72-54
		US-PATENT-3,906,393	N76-14191*	NASA-CASE-LEW-11118-2	c 20		US-PATENT-CLASS-72-63
N75-31446*	c 37	NASA-CASE-LEW-11925-1		US-PATENT-APPL-SN-436316			US-PATENT-3,914,969
		US-PATENT-APPL-SN-450505		US-PATENT-CLASS-239-127.3	N76-14463*	c 37	NASA-CASE-MFS-22323-1
		US-PATENT-CLASS-308-191		US-PATENT-CLASS-60-265			US-PATENT-APPL-SN-474745
		US-PATENT-CLASS-308-195		US-PATENT-CLASS-60-267			US-PATENT-CLASS-137-515.3
		US-PATENT-CLASS-308-201		US-PATENT-3,910,039			US-PATENT-CLASS-137-550
		US-PATENT-3,905,660	N76-14203*	NASA-CASE-NPO-12122-1	c 24		US-PATENT-CLASS-210-429
N75-32441*	c 36	NASA-CASE-NPO-13449-1		US-PATENT-APPL-SN-401921			US-PATENT-CLASS-251-149.6
		US-PATENT-APPL-SN-420813		US-PATENT-CLASS-149-36			US-PATENT-3,910,307
		US-PATENT-CLASS-310-11		US-PATENT-CLASS-423-407	N76-14595*	c 44	NASA-CASE-MFS-22562-1
		US-PATENT-CLASS-330-4.3		US-PATENT-3,919,014			US-PATENT-APPL-SN-458484
		US-PATENT-CLASS-331-94.5PE	N76-14204*	NASA-CASE-MS-12568-1	c 24		US-PATENT-CLASS-126-270
		US-PATENT-CLASS-331-94.5G		US-PATENT-APPL-SN-325784			US-PATENT-CLASS-136-206
		US-PATENT-3,906,398		US-PATENT-CLASS-136-146			US-PATENT-CLASS-204-32R
N75-32465* #	c 37	NASA-CASE-ARC-10907-1		US-PATENT-CLASS-136-148			US-PATENT-CLASS-204-343
		US-PATENT-APPL-SN-619986		US-PATENT-CLASS-162-102			US-PATENT-CLASS-204-38A
N75-32581*	c 44	NASA-CASE-MFS-21628-1		US-PATENT-CLASS-162-153			US-PATENT-CLASS-204-40
		US-PATENT-APPL-SN-421702		US-PATENT-CLASS-162-222			US-PATENT-CLASS-204-42
		US-PATENT-CLASS-126-271		US-PATENT-CLASS-162-228			US-PATENT-CLASS-204-49
		US-PATENT-CLASS-165-105		US-PATENT-3,910,814			US-PATENT-CLASS-29-194
		US-PATENT-CLASS-244-173	N76-14264*	NASA-CASE-MS-14182-1	c 27		US-PATENT-CLASS-29-195
		US-PATENT-CLASS-60-641		US-PATENT-APPL-SN-419748			US-PATENT-CLASS-29-197
		US-PATENT-CLASS-60-659		US-PATENT-CLASS-403-179			US-PATENT-3,920,413
		US-PATENT-3,903,699		US-PATENT-CLASS-403-28	N76-14600*	c 44	NASA-CASE-LEW-11065-2
N75-33181*	c 24	NASA-CASE-LEW-11484-1		US-PATENT-CLASS-428-109			US-PATENT-APPL-SN-154930
		US-PATENT-APPL-SN-356554		US-PATENT-CLASS-428-212			US-PATENT-APPL-SN-371322
		US-PATENT-CLASS-117-105.2		US-PATENT-CLASS-428-214			US-PATENT-CLASS-136-89
		US-PATENT-CLASS-117-38		US-PATENT-CLASS-428-416			US-PATENT-CLASS-29-572
		US-PATENT-CLASS-117-46FS		US-PATENT-CLASS-428-447			US-PATENT-3,912,540
		US-PATENT-CLASS-117-8.5		US-PATENT-CLASS-428-77	N76-14601*	c 44	NASA-CASE-MFS-22749-7
		US-PATENT-CLASS-29-DIG.24		US-PATENT-3,920,339			US-PATENT-APPL-SN-483857
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		US-PATENT-CLASS-29-527.2		US-PATENT-APPL-SN-478803			US-PATENT-CLASS-136-162
		US-PATENT-CLASS-72-46		US-PATENT-CLASS-62-129			US-PATENT-CLASS-136-182
		US-PATENT-3,906,769		US-PATENT-CLASS-62-49			US-PATENT-CLASS-136-90
N75-33342*	c 34	NASA-CASE-MS-14273-1		US-PATENT-CLASS-73-295			US-PATENT-3,912,541
		US-PATENT-APPL-SN-385522		US-PATENT-3,914,950	N76-14602*	c 44	NASA-CASE-NPO-13497-1
		US-PATENT-CLASS-210-234	N76-14321*	NASA-CASE-LAR-11021-1	c 32		US-PATENT-APPL-SN-526448
		US-PATENT-CLASS-210-259		US-PATENT-APPL-SN-453115			US-PATENT-CLASS-126-271
		US-PATENT-CLASS-210-304		US-PATENT-CLASS-325-304			US-PATENT-CLASS-237-1A
		US-PATENT-CLASS-210-333		US-PATENT-CLASS-325-306			US-PATENT-CLASS-350-211
		US-PATENT-CLASS-210-340		US-PATENT-CLASS-325-372			US-PATENT-3,915,148
		US-PATENT-CLASS-210-411		US-PATENT-CLASS-328-145	N76-14757*	c 52	NASA-CASE-MS-14180-1
		US-PATENT-CLASS-210-425		US-PATENT-CLASS-343-176			US-PATENT-APPL-SN-354406
		US-PATENT-CLASS-210-512		US-PATENT-3,916,316			US-PATENT-CLASS-128-2.06R
		US-PATENT-CLASS-210-82	N76-14371*	NASA-CASE-KSC-10834-1	c 33		US-PATENT-CLASS-128-2.1A
		US-PATENT-3,907,686		US-PATENT-APPL-SN-536535			US-PATENT-CLASS-128-2H
N75-33367*	c 35	NASA-CASE-LAR-10629-1		US-PATENT-CLASS-178-69.5R			US-PATENT-3,910,257
		US-PATENT-APPL-SN-402867		US-PATENT-CLASS-178-88	N76-14804*	c 54	NASA-CASE-MS-14640-1
		US-PATENT-CLASS-116-114AH		US-PATENT-CLASS-328-190			US-PATENT-APPL-SN-526449
		US-PATENT-CLASS-73-12		US-PATENT-CLASS-328-63			US-PATENT-CLASS-128-2F
		US-PATENT-CLASS-73-170R		US-PATENT-3,916,084			US-PATENT-CLASS-73-421R
		US-PATENT-CLASS-73-432PS	N76-14372*	NASA-CASE-LAR-10970-1	c 33		US-PATENT-3,915,012
		US-PATENT-3,896,758		US-PATENT-APPL-SN-527790			NASA-CASE-NPO-13422-1
N75-33368*	c 35	NASA-CASE-LAR-11326-1		US-PATENT-CLASS-343-770			US-PATENT-APPL-SN-521601
		US-PATENT-APPL-SN-491416		US-PATENT-CLASS-343-797	N76-14818*	c 60	US-PATENT-CLASS-340-147C
		US-PATENT-CLASS-195-103.5R		US-PATENT-CLASS-343-846			US-PATENT-CLASS-340-147R
		US-PATENT-3,907,646		US-PATENT-3,919,710			US-PATENT-3,916,380
N75-33369*	c 35	NASA-CASE-LAR-11263-1	N76-14373*	NASA-CASE-NPO-13451-1	c 33		NASA-CASE-MFS-22287-1
		US-PATENT-APPL-SN-472775		US-PATENT-APPL-SN-501012			US-PATENT-APPL-SN-438147
		US-PATENT-CLASS-73-141A		US-PATENT-CLASS-235-925H			US-PATENT-CLASS-315-111.6
		US-PATENT-3,906,788		US-PATENT-CLASS-307-221R			US-PATENT-CLASS-73-12
N75-33395*	c 37	NASA-CASE-MFS-22283-1		US-PATENT-CLASS-328-37	N76-14931*	c 75	US-PATENT-CLASS-89-8
		US-PATENT-APPL-SN-387095		US-PATENT-3,911,330			US-PATENT-3,916,761

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N76-15268*	c 23	NASA-CASE-MFS-22355-1 US-PATENT-APPL-SN-487852 US-PATENT-CLASS-260-32.6N US-PATENT-CLASS-260-32.8N US-PATENT-CLASS-260-346.3 US-PATENT-CLASS-260-47CP US-PATENT-CLASS-260-571 US-PATENT-CLASS-260-78TF US-PATENT-3,925,312	N76-18014* c 02 NASA-CASE-LAR-11575-1 US-PATENT-APPL-SN-527727 US-PATENT-CLASS-244-139 US-PATENT-3,930,628	N76-17317* c 34
N76-15310*	c 27	NASA-CASE-ARC-10714-1 US-PATENT-APPL-SN-398885 US-PATENT-CLASS-260-2.5AK US-PATENT-CLASS-427-196 US-PATENT-CLASS-427-426 US-PATENT-CLASS-428-303 US-PATENT-3,916,060	N76-16228* c 27 NASA-CASE-NPO-12061-1 US-PATENT-APPL-SN-45549 US-PATENT-CLASS-260-879 US-PATENT-CLASS-260-900 US-PATENT-CLASS-260-92.1 US-PATENT-3,931,132	N76-17656* c 45
N76-15311*	c 27	NASA-CASE-NPO-13120-1 US-PATENT-APPL-SN-348422 US-PATENT-CLASS-29-182.5 US-PATENT-3,926,567	N76-16229* c 27 NASA-CASE-LEW-11179-1 US-PATENT-APPL-SN-357312 US-PATENT-CLASS-29-195A US-PATENT-CLASS-427-203 US-PATENT-CLASS-427-204 US-PATENT-CLASS-427-205 US-PATENT-CLASS-427-270 US-PATENT-CLASS-427-275 US-PATENT-CLASS-427-287 US-PATENT-CLASS-428-450 US-PATENT-CLASS-428-457 US-PATENT-CLASS-428-469 US-PATENT-CLASS-428-539 US-PATENT-3,931,447	N76-17951* c 75
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N76-15330*	c 32	NASA-CASE-LAR-11112-1 US-PATENT-APPL-SN-491419 US-PATENT-CLASS-343-786 US-PATENT-3,924,237	N76-16249* c 32 NASA-CASE-MSC-14557-1 US-PATENT-APPL-SN-428994 US-PATENT-APPL-SN-464720 US-PATENT-CLASS-178-69C US-PATENT-CLASS-178-88 US-PATENT-CLASS-325-321 US-PATENT-3,924,068	N76-18245* c 25
N76-15373*	c 33	NASA-CASE-LEW-11938-1 US-PATENT-APPL-SN-544611 US-PATENT-CLASS-317-258 US-PATENT-CLASS-317-261 US-PATENT-3,924,164	N76-16331* c 33 NASA-CASE-MSC-14649-1 US-PATENT-APPL-SN-505819 US-PATENT-CLASS-324-79D US-PATENT-CLASS-328-134 US-PATENT-3,924,183	N76-18257* c 26
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N76-15432*	c 35	NASA-CASE-LAR-11435-1 US-PATENT-APPL-SN-522556 US-PATENT-CLASS-310-8.2 US-PATENT-CLASS-73-1R US-PATENT-3,924,444	N76-16390* c 35 NASA-CASE-NPO-13388-1 US-PATENT-APPL-SN-522552 US-PATENT-CLASS-324-43R US-PATENT-3,924,176	N76-18345* c 33
N76-15433*	c 35	NASA-CASE-GSC-11892-1 US-PATENT-APPL-SN-502135 US-PATENT-CLASS-250-336 US-PATENT-CLASS-250-385 US-PATENT-CLASS-250-489 US-PATENT-3,927,324	N76-16391* c 35 NASA-CASE-NPO-10166-2 US-PATENT-APPL-SN-192803 US-PATENT-APPL-SN-668116 US-PATENT-CLASS-360-10 US-PATENT-CLASS-360-101 US-PATENT-CLASS-360-35 US-PATENT-CLASS-360-9 US-PATENT-3,924,267	N76-18345* c 33
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N76-15457*	c 37	NASA-CASE-MFS-22707-1 US-PATENT-APPL-SN-535410 US-PATENT-CLASS-214-1R US-PATENT-CLASS-74-384 US-PATENT-CLASS-74-685B US-PATENT-3,922,930	N76-16461* c 37 NASA-CASE-MFS-22002-1 US-PATENT-APPL-SN-452769 US-PATENT-CLASS-136-202 US-PATENT-CLASS-136-210 US-PATENT-CLASS-165-105 US-PATENT-CLASS-310-4 US-PATENT-3,931,532	N76-18374* c 34
N76-15460*	c 37	NASA-CASE-MFS-22022-1 US-PATENT-APPL-SN-405341 US-PATENT-CLASS-214-1CM US-PATENT-3,923,166	N76-16612* c 44 NASA-CASE-MFS-22002-1 US-PATENT-APPL-SN-452769 US-PATENT-CLASS-136-202 US-PATENT-CLASS-136-210 US-PATENT-CLASS-165-105 US-PATENT-CLASS-310-4 US-PATENT-3,931,532	N76-18374* c 34
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		US-PATENT-CLASS-350-160			US-PATENT-CLASS-222-145	US-PATENT-3,945,879
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N76-18428*	c 36	NASA-CASE-NPO-13544-1			US-PATENT-APPL-SN-491417	US-PATENT-CLASS-23-254E
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		US-PATENT-CLASS-331-94.5C			US-PATENT-CLASS-244-163	US-PATENT-CLASS-358-37
		US-PATENT-CLASS-350-96WG			US-PATENT-CLASS-29-432	US-PATENT-3,945,801
		US-PATENT-3,939,439			US-PATENT-CLASS-29-433	N76-21914* c 60
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N76-18454*	c 37	US-PATENT-APPL-SN-521602			US-PATENT-CLASS-52-705	US-PATENT-APPL-SN-393524
		US-PATENT-CLASS-173-132			US-PATENT-CLASS-52-758F	US-PATENT-CLASS-235-153AE
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		US-PATENT-3,937,055			US-PATENT-CLASS-128-DIG.20	NASA-CASE-LAR-10585-1
N76-18455*	c 37	NASA-CASE-MSC-14435-1			US-PATENT-CLASS-128-26	US-PATENT-APPL-SN-197183
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N76-18456*	c 37	NASA-CASE-LAR-11224-1			US-PATENT-CLASS-356-167	US-PATENT-CLASS-178-69.5
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		US-PATENT-CLASS-134-37	N76-19935*	c 74	NASA-CASE-MFS-21672-1	US-PATENT-CLASS-340-207P
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		US-PATENT-3,937,661	N76-20114*	c 04	NASA-CASE-LAR-11387-1	US-PATENT-CLASS-188-1B
N76-18457*	c 37	NASA-CASE-NPO-13402-1			US-PATENT-APPL-SN-531647	US-PATENT-CLASS-248-358R
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		US-PATENT-CLASS-123-120	N76-20480*	c 37	NASA-CASE-NPO-13059-1	US-PATENT-APPL-SN-571821
		US-PATENT-CLASS-123-121			NASA-CASE-NPO-13436-1	US-PATENT-CLASS-254-124
		US-PATENT-CLASS-123-89A			US-PATENT-APPL-SN-513690	US-PATENT-CLASS-89-1.801
		US-PATENT-3,906,913			US-PATENT-CLASS-81-56	US-PATENT-3,952,998
N76-18458*	c 37	NASA-CASE-LEW-11860-1			US-PATENT-CLASS-81-57.31	N76-22309* c 24
		US-PATENT-APPL-SN-527728			US-PATENT-3,942,398	NASA-CASE-LEW-11930-1
		US-PATENT-CLASS-204-157.1H			N76-20958* c 74	US-PATENT-APPL-SN-513611
		US-PATENT-CLASS-250-527			NASA-CASE-ARC-10631-1	US-PATENT-CLASS-252-12
		US-PATENT-3,939,048			US-PATENT-APPL-SN-514546	US-PATENT-3,953,343
N76-18459*	c 37	NASA-CASE-GSC-11551-1			US-PATENT-CLASS-250-343	N76-22323* c 25
		US-PATENT-APPL-SN-440917			US-PATENT-CLASS-250-573	NASA-CASE-ARC-10760-1
		US-PATENT-CLASS-308-10	N76-20994*	c 76	US-PATENT-3,943,368	US-PATENT-APPL-SN-526438
		US-PATENT-3,937,533			NASA-CASE-NPO-13443-1	US-PATENT-CLASS-250-343
N76-18641*	c 44	NASA-CASE-NPO-13237-1			US-PATENT-APPL-SN-522551	US-PATENT-CLASS-250-344
		US-PATENT-APPL-SN-378127			US-PATENT-CLASS-324-158D	US-PATENT-CLASS-250-432R
		US-PATENT-CLASS-136-83R			US-PATENT-CLASS-324-158R	US-PATENT-3,953,734
		US-PATENT-CLASS-136-86S			US-PATENT-CLASS-324-158T	N76-22376* c 27
		US-PATENT-3,894,887			US-PATENT-CLASS-324-60C	NASA-CASE-ARC-10721-1
N76-18642*	c 44	NASA-CASE-NPO-13464-1			US-PATENT-3,943,442	US-PATENT-APPL-SN-427775
		US-PATENT-APPL-SN-428444	N76-21250*	c 17	NASA-CASE-MSC-12593-1	US-PATENT-CLASS-264-60
		US-PATENT-CLASS-123-3			US-PATENT-APPL-SN-419747	US-PATENT-CLASS-264-63
		US-PATENT-CLASS-23-281			US-PATENT-CLASS-325-14	US-PATENT-CLASS-264-66
		US-PATENT-CLASS-423-650			US-PATENT-CLASS-343-100SA	US-PATENT-3,952,083
		US-PATENT-CLASS-48-116			US-PATENT-CLASS-343-100ST	N76-22377* c 27
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		US-PATENT-CLASS-48-63			US-PATENT-3,949,400	US-PATENT-APPL-SN-482104
		US-PATENT-CLASS-48-75	N76-21275*	c 20	NASA-CASE-MFS-21311-1	US-PATENT-CLASS-106-54
		US-PATENT-CLASS-48-95			US-PATENT-APPL-SN-493359	US-PATENT-CLASS-427-376
		US-PATENT-3,920,416			US-PATENT-CLASS-244-3.22	US-PATENT-CLASS-427-379
N76-18643*	c 44	NASA-CASE-NPO-11961-1			US-PATENT-3,948,470	US-PATENT-CLASS-427-380
		US-PATENT-APPL-SN-378126			N76-21276* c 20	US-PATENT-CLASS-427-402
		US-PATENT-CLASS-136-30			NASA-CASE-LEW-11876-1	US-PATENT-CLASS-428-332
		US-PATENT-CLASS-136-6LF			US-PATENT-APPL-SN-542157	US-PATENT-CLASS-428-228
		US-PATENT-CLASS-320-21			US-PATENT-CLASS-29-25.18	US-PATENT-CLASS-428-450
		US-PATENT-CLASS-320-22			US-PATENT-3,947,933	US-PATENT-CLASS-428-538
		US-PATENT-3,912,999			N76-21365* c 32	US-PATENT-CLASS-428-920
N76-18800*	c 60	NASA-CASE-NPO-13067-1			NASA-CASE-NPO-13568-1	US-PATENT-3,953,646
		US-PATENT-APPL-SN-274348			US-PATENT-APPL-SN-534265	N76-22509* c 35
		US-PATENT-CLASS-340-172.5			US-PATENT-CLASS-343-761	NASA-CASE-LAR-11434-1
		US-PATENT-3,829,839			US-PATENT-CLASS-343-781	US-PATENT-APPL-SN-464722
N76-18913*	c 74	NASA-CASE-GSC-11877-1			US-PATENT-CLASS-343-786	US-PATENT-CLASS-209-127R
		US-PATENT-APPL-SN-482953			US-PATENT-3,949,404	US-PATENT-CLASS-317-246
		US-PATENT-CLASS-235-184			N76-21366* c 32	US-PATENT-CLASS-324-61R
		US-PATENT-CLASS-250-199			NASA-CASE-MFS-22729-1	US-PATENT-CLASS-324-71CP
		US-PATENT-3,937,945			US-PATENT-APPL-SN-533608	US-PATENT-3,953,792
N76-19338*	c 33	NASA-CASE-NPO-13519-1			US-PATENT-CLASS-235-156	N76-22540* c 37
		US-PATENT-APPL-SN-536761			US-PATENT-CLASS-325-42	NASA-CASE-MFS-22636-1
		US-PATENT-CLASS-128-2S			US-PATENT-CLASS-333-18	US-PATENT-APPL-SN-536762
		US-PATENT-CLASS-33-155R			US-PATENT-3,949,206	US-PATENT-CLASS-114-16.6
		US-PATENT-CLASS-33-174D			N76-21390* c 33	US-PATENT-CLASS-244-137P
		US-PATENT-CLASS-73-88.5SD			NASA-CASE-ARC-10711-2	US-PATENT-CLASS-244-158
		US-PATENT-3,937,212			US-PATENT-APPL-SN-493363	US-PATENT-CLASS-244-161
N76-19339*	c 33	NASA-CASE-ARC-10810-1			US-PATENT-APPL-SN-596788	US-PATENT-3,952,976
		US-PATENT-APPL-SN-489009			US-PATENT-CLASS-317-246	N76-22541* c 37
		US-PATENT-CLASS-204-195R			US-PATENT-CLASS-73-398C	NASA-CASE-LEW-11676-1
		US-PATENT-CLASS-215-247			US-PATENT-3,948,102	US-PATENT-APPL-SN-551184
		US-PATENT-CLASS-324-30B			N76-21554* c 37	US-PATENT-CLASS-277-4
		US-PATENT-3,938,035			NASA-CASE-LAR-11465-1	US-PATENT-CLASS-277-41
					US-PATENT-APPL-SN-502137	US-PATENT-CLASS-277-74
					US-PATENT-CLASS-156-286	US-PATENT-CLASS-277-93R
					US-PATENT-CLASS-156-382	US-PATENT-3,953,038
					US-PATENT-CLASS-156-556	N76-22657* c 44
					US-PATENT-CLASS-248-362	NASA-CASE-MFS-22743-1
					US-PATENT-CLASS-248-363	US-PATENT-APPL-SN-518684
					US-PATENT-CLASS-269-21	US-PATENT-CLASS-126-271
						US-PATENT-3,951,129
						N76-22914* c 54
						NASA-CASE-GSC-12082-1
						US-PATENT-APPL-SN-676958
						N76-22993* c.74
						NASA-CASE-ARC-10932-1
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N76-23273*	c 09	NASA-CASE-MFS-23099-1 US-PATENT-APPL-SN-607969 US-PATENT-CLASS-73-147 US-PATENT-3,952,590	US-PATENT-CLASS-128-203 US-PATENT-CLASS-137-DIG.9 US-PATENT-CLASS-137-110 US-PATENT-3,957,044	US-PATENT-APPL-SN-496779 US-PATENT-CLASS-244-46 US-PATENT-3,971,535
N76-23426*	c 27	NASA-CASE-MSC-14270-2 US-PATENT-APPL-SN-482105 US-PATENT-CLASS-106-54 US-PATENT-CLASS-427-376 US-PATENT-CLASS-427-379 US-PATENT-CLASS-427-380 US-PATENT-CLASS-427-402 US-PATENT-CLASS-428-332 US-PATENT-CLASS-428-428 US-PATENT-CLASS-428-450 US-PATENT-CLASS-428-538 US-PATENT-CLASS-428-920 US-PATENT-3,955,034	N76-25049* c 76 NASA-CASE-LEW-12094-1 US-PATENT-APPL-SN-508784 US-PATENT-CLASS-148-175 US-PATENT-CLASS-156-610 US-PATENT-CLASS-156-612 US-PATENT-CLASS-156-613 US-PATENT-CLASS-252-62.3 US-PATENT-CLASS-423-345 US-PATENT-CLASS-423-346 US-PATENT-3,956,032	N76-29347* c 17 NASA-CASE-ARC-10849-1 US-PATENT-APPL-SN-563049 US-PATENT-CLASS-340-189M US-PATENT-CLASS-340-206 US-PATENT-CLASS-73-493 US-PATENT-CLASS-73-517R US-PATENT-3,972,038
N76-23570*	c 37	NASA-CASE-LEW-11169-1 US-PATENT-APPL-SN-446568 US-PATENT-CLASS-164-132 US-PATENT-3,957,104	N76-26175* c 04 NASA-CASE-MFS-23551-1 US-PATENT-APPL-SN-114772 US-PATENT-CLASS-244-79 US-PATENT-CLASS-74-5.34 US-PATENT-3,739,646	N76-29379* c 25 NASA-CASE-LEW-11390-3 US-PATENT-APPL-SN-247434 US-PATENT-CLASS-250-400 US-PATENT-CLASS-250-429 US-PATENT-CLASS-250-492R US-PATENT-3,971,697
N76-23675*	c 44	NASA-CASE-MFS-21628-2 US-PATENT-APPL-SN-421702 US-PATENT-APPL-SN-561020 US-PATENT-CLASS-126-270 US-PATENT-CLASS-165-133 US-PATENT-3,957,030	N76-27232* c 07 NASA-CASE-LAR-11476-1 US-PATENT-APPL-SN-592159 US-PATENT-CLASS-73-557 US-PATENT-3,964,319	N76-29551* c 35 NASA-CASE-LAR-10907-1 US-PATENT-APPL-SN-559845 US-PATENT-CLASS-250-340 US-PATENT-CLASS-250-353 US-PATENT-3,971,940
N76-23850*	c 60	NASA-CASE-MSC-14082-1 US-PATENT-APPL-SN-315070 US-PATENT-CLASS-340-347DD US-PATENT-CLASS-340-347P US-PATENT-3,958,238	N76-27383* c 25 NASA-CASE-LEW-11390-2 US-PATENT-APPL-SN-247434 US-PATENT-APPL-SN-340863 US-PATENT-CLASS-176-11 US-PATENT-CLASS-176-16 US-PATENT-CLASS-423-249 US-PATENT-3,966,547	N76-29552* c 35 NASA-CASE-MSC-12617-1 US-PATENT-APPL-SN-513576 US-PATENT-CLASS-235-61NV US-PATENT-CLASS-235-78M US-PATENT-CLASS-235-88M US-PATENT-3,971,915
N76-24280*	c 09	NASA-CASE-ARC-10808-1 US-PATENT-APPL-SN-505881 US-PATENT-CLASS-178-DIG.35 US-PATENT-CLASS-178-7.89 US-PATENT-CLASS-35-12N US-PATENT-3,956,833	N76-27472* c 33 NASA-CASE-GSC-11924-1 US-PATENT-APPL-SN-582318 US-PATENT-CLASS-343-755 US-PATENT-CLASS-343-779 US-PATENT-CLASS-343-854 US-PATENT-3,965,475	N76-29575* c 36 NASA-CASE-NPO-13346-1 US-PATENT-APPL-SN-533556 US-PATENT-CLASS-330-4.3 US-PATENT-CLASS-331-94.5C US-PATENT-3,972,008
N76-24363*	c 24	NASA-CASE-GSC-11786-1 US-PATENT-APPL-SN-401919 US-PATENT-CLASS-106-306 US-PATENT-CLASS-250-372 US-PATENT-CLASS-252-300 US-PATENT-CLASS-350-1 US-PATENT-3,957,675	N76-27473* c 33 NASA-CASE-HQN-10876-1 US-PATENT-APPL-SN-555336 US-PATENT-CLASS-250-336 US-PATENT-CLASS-250-372 US-PATENT-3,965,354	N76-29588* c 37 NASA-CASE-LEW-11949-1 US-PATENT-APPL-SN-590182 US-PATENT-CLASS-308-160 US-PATENT-CLASS-308-163 US-PATENT-CLASS-308-170 US-PATENT-3,971,602
N76-24405*	c 27	NASA-CASE-MSC-14331-1 US-PATENT-APPL-SN-374421 US-PATENT-CLASS-106-15FP US-PATENT-CLASS-260-DIG.24 US-PATENT-CLASS-260-33.8F US-PATENT-CLASS-260-45.7 US-PATENT-CLASS-260-92.1 US-PATENT-CLASS-526-1 US-PATENT-CLASS-526-255 US-PATENT-3,956,233	N76-27515* c 34 NASA-CASE-NPO-13391-1 US-PATENT-APPL-SN-446567 US-PATENT-CLASS-165-105 US-PATENT-CLASS-29-182 US-PATENT-CLASS-29-193 US-PATENT-CLASS-55-523 US-PATENT-CLASS-55-526 US-PATENT-CLASS-75-225 US-PATENT-3,964,902	N76-29590* c 37 NASA-CASE-NPO-13613-1 US-PATENT-APPL-SN-574208 US-PATENT-CLASS-62-6 US-PATENT-3,971,230
N76-24523*	c 35	NASA-CASE-LAR-11500-1 US-PATENT-APPL-SN-534266 US-PATENT-CLASS-73-1B US-PATENT-CLASS-73-15.6 US-PATENT-3,956,919	N76-27517* c 34 NASA-CASE-ARC-10755-2 US-PATENT-APPL-SN-424013 US-PATENT-APPL-SN-545284 US-PATENT-CLASS-73-147 US-PATENT-CLASS-73-189 US-PATENT-CLASS-73-194R US-PATENT-3,964,306	N76-29699* c 44 NASA-CASE-HQN-10862-1 US-PATENT-APPL-SN-604374 US-PATENT-CLASS-136-143 US-PATENT-CLASS-136-30 US-PATENT-3,972,727
N76-24524*	c 35	NASA-CASE-NPO-13462-1 US-PATENT-APPL-SN-545282 US-PATENT-CLASS-73-189 US-PATENT-CLASS-73-204 US-PATENT-3,956,932	N76-27567* c 37 NASA-CASE-LAR-11709-1 US-PATENT-APPL-SN-548468 US-PATENT-CLASS-339-17M US-PATENT-CLASS-339-18C US-PATENT-3,964,813	N76-29700* c 44 NASA-CASE-NPO-13342-2 US-PATENT-APPL-SN-390049 US-PATENT-APPL-SN-548559 US-PATENT-CLASS-123-1A US-PATENT-CLASS-123-3 US-PATENT-CLASS-23-281 US-PATENT-CLASS-423-615 US-PATENT-CLASS-48-215 US-PATENT-CLASS-48-95 US-PATENT-3,955,941
N76-24525*	c 35	NASA-CASE-ARC-10816-1 US-PATENT-APPL-SN-552454 US-PATENT-CLASS-128-DIG.4 US-PATENT-CLASS-128-2.05V US-PATENT-CLASS-128-2.1E US-PATENT-CLASS-128-2.1Z US-PATENT-3,957,037	N76-27568* c 37 NASA-CASE-LAR-11726-1 US-PATENT-APPL-SN-538047 US-PATENT-CLASS-219-118 US-PATENT-CLASS-219-92 US-PATENT-3,967,091	N76-29701* c 44 NASA-CASE-NPO-13567-1 US-PATENT-APPL-SN-566493 US-PATENT-CLASS-417-141 US-PATENT-CLASS-417-207 US-PATENT-CLASS-417-209 US-PATENT-CLASS-417-379 US-PATENT-CLASS-60-517 US-PATENT-CLASS-62-6 US-PATENT-3,972,651
N76-24553*	c 36	NASA-CASE-NPO-13531-1 US-PATENT-APPL-SN-531565 US-PATENT-CLASS-331-94.5C US-PATENT-CLASS-350-96WG US-PATENT-3,958,188	N76-27664* c 44 NASA-CASE-MFS-23059-1 US-PATENT-APPL-SN-537024 US-PATENT-CLASS-136-86A US-PATENT-3,964,928	N76-29704* c 44 NASA-CASE-NPO-13464-2 US-PATENT-APPL-SN-428444 US-PATENT-APPL-SN-553687 US-PATENT-CLASS-252-373 US-PATENT-CLASS-42-215 US-PATENT-CLASS-423-650 US-PATENT-CLASS-431-163 US-PATENT-CLASS-431-210 US-PATENT-CLASS-431-4 US-PATENT-CLASS-48-197R US-PATENT-3,971,847
N76-24575*	c 37	NASA-CASE-LAR-10073-1 US-PATENT-APPL-SN-436317 US-PATENT-CLASS-156-242 US-PATENT-CLASS-156-286 US-PATENT-CLASS-264-102 US-PATENT-CLASS-264-267 US-PATENT-CLASS-428-117 US-PATENT-3,956,050	N76-28563* c 38 NASA-CASE-NPO-12142-1 US-PATENT-APPL-SN-637249 US-PATENT-CLASS-73-88.5 US-PATENT-3,545,262	N76-29891* c 51 NASA-CASE-GSC-11917-2 US-PATENT-APPL-SN-475337 US-PATENT-APPL-SN-555641 US-PATENT-CLASS-195-103.5R US-PATENT-3,971,703
N76-24696*	c 44	NASA-CASE-MFS-22744-1 US-PATENT-APPL-SN-518544 US-PATENT-CLASS-126-270 US-PATENT-CLASS-126-271 US-PATENT-CLASS-350-293 US-PATENT-CLASS-350-299 US-PATENT-3,958,553	N76-28635* c 44 NASA-CASE-GSC-12022-1 NASA-CASE-GSC-12023-1 US-PATENT-APPL-SN-576488 US-PATENT-CLASS-136-89 US-PATENT-CLASS-148-174 US-PATENT-CLASS-148-175 US-PATENT-CLASS-156-612 US-PATENT-CLASS-156-613 US-PATENT-CLASS-156-614 US-PATENT-CLASS-29-572 US-PATENT-CLASS-357-30 US-PATENT-CLASS-357-59 US-PATENT-CLASS-427-113 US-PATENT-CLASS-427-248 US-PATENT-CLASS-427-249 US-PATENT-CLASS-427-250 US-PATENT-CLASS-427-86 US-PATENT-3,961,997	N76-29894* c 52 NASA-CASE-ARC-10583-1 US-PATENT-APPL-SN-301418 US-PATENT-CLASS-128-2.1A US-PATENT-CLASS-128-2H US-PATENT-CLASS-128-2P US-PATENT-3,971,362
N76-24900*	c 54	NASA-CASE-MSC-14733-1 NASA-CASE-MSC-14735-1 US-PATENT-APPL-SN-522971 US-PATENT-CLASS-128-142.2	N76-29217* c 05 NASA-CASE-ARC-10470-3 US-PATENT-APPL-SN-206279 US-PATENT-APPL-SN-321180	N76-29895* c 52 NASA-CASE-NPO-13644-1 US-PATENT-APPL-SN-574218 US-PATENT-CLASS-128-2.05R US-PATENT-CLASS-128-2S

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		US-PATENT-3,971,363				US-PATENT-3,984,730			
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		US-PATENT-APPL-SN-578241				US-PATENT-APPL-SN-521006			
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		US-PATENT-CLASS-128-2S			US-PATENT-APPL-SN-262596	US-PATENT-3,983,933			
		US-PATENT-CLASS-128-418			US-PATENT-CLASS-340-347SY	NASA-CASE-NPO-13479-1	N77-10492*	c 35	
		US-PATENT-CLASS-128-419P			US-PATENT-3,976,997	US-PATENT-APPL-SN-500981			
		US-PATENT-CLASS-73-398AR	N76-31998*	c 74	NASA-CASE-MSC-12640-1	US-PATENT-CLASS-250-290			
		US-PATENT-3,971,364			US-PATENT-APPL-SN-591568	US-PATENT-CLASS-250-291			
N76-30053*	c 74	NASA-CASE-GSC-11782-1			US-PATENT-CLASS-350-162SF	US-PATENT-3,984,681			
		US-PATENT-APPL-SN-463925			US-PATENT-3,977,771	NASA-CASE-MFS-23178-1	N77-10493*	c 35	
		US-PATENT-CLASS-250-199	N76-32140*	c 03	NASA-CASE-MFS-16609-3	US-PATENT-APPL-SN-637247			
		US-PATENT-3,971,930			US-PATENT-APPL-SN-307714	US-PATENT-CLASS-250-338			
N76-30131*	c 91	NASA-CASE-MSC-12423-1			US-PATENT-APPL-SN-511894	US-PATENT-CLASS-250-339			
		US-PATENT-APPL-SN-448320			US-PATENT-APPL-SN-82279	US-PATENT-CLASS-250-347			
		US-PATENT-CLASS-73-170R			US-PATENT-CLASS-325-114	US-PATENT-CLASS-356-106R			
		US-PATENT-CLASS-73-425.2			US-PATENT-CLASS-325-115	US-PATENT-3,984,686			
		US-PATENT-CLASS-73-432R			US-PATENT-CLASS-325-186	NASA-CASE-MSC-14472-1	N77-10584*	c 43	
		US-PATENT-3,971,256			US-PATENT-CLASS-343-705	US-PATENT-APPL-SN-502138			
N76-30793*	c 52	US-PATENT-APPL-SN-452768			US-PATENT-3,978,410	US-PATENT-CLASS-235-181			
		US-PATENT-CLASS-351-23	N76-32315*	c 27	NASA-CASE-ARC-10592-2	US-PATENT-CLASS-340-146.3P			
		US-PATENT-CLASS-351-30			US-PATENT-APPL-SN-414043	US-PATENT-CLASS-340-146.3Q			
		US-PATENT-CLASS-351-36			US-PATENT-CLASS-260-240G	US-PATENT-CLASS-394,671			
		US-PATENT-RE-28,921			US-PATENT-CLASS-260-566B	NASA-CASE-MFS-22458-1	N77-10635*	c 44	
N76-31365*	c 31	NASA-CASE-ARC-10445-1			US-PATENT-3,965,096	US-PATENT-APPL-SN-571458			
		US-PATENT-APPL-SN-491418	N76-32457*	c 33	NASA-CASE-NPO-13553-1	US-PATENT-CLASS-136-89			
		US-PATENT-CLASS-313-250			US-PATENT-APPL-SN-616333	US-PATENT-CLASS-29-572			
		US-PATENT-CLASS-313-306			US-PATENT-CLASS-343-882	US-PATENT-3,984,256			
		US-PATENT-CLASS-313-309			US-PATENT-CLASS-343-915	NASA-CASE-NPO-13560-1	N77-10636*	c 44	
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		US-PATENT-3,978,364	N76-33835* #	c 52	NASA-CASE-ARC-10994-1	US-PATENT-APPL-SN-487156			
N76-31372*	c 32	NASA-CASE-NPO-13465-1			US-PATENT-APPL-SN-728369	US-PATENT-CLASS-123-3			
		US-PATENT-APPL-SN-531575	N77-10001*	c 02	NASA-CASE-LAR-11645-1	US-PATENT-CLASS-23-281			
		US-PATENT-CLASS-179-1SA			US-PATENT-APPL-SN-473973	US-PATENT-CLASS-252-373			
		US-PATENT-3,978,287			US-PATENT-CLASS-244-113	US-PATENT-CLASS-423-650			
N76-31409*	c 33	NASA-CASE-NPO-12134-1			US-PATENT-CLASS-244-130	US-PATENT-CLASS-431-11			
		US-PATENT-APPL-SN-536785			US-PATENT-3,984,070	US-PATENT-CLASS-431-116			
		US-PATENT-CLASS-313-94	N77-10071*	c 09	NASA-CASE-NPO-13528-1	US-PATENT-CLASS-431-162			
		US-PATENT-CLASS-357-63			US-PATENT-APPL-SN-521620	US-PATENT-CLASS-431-170			
		US-PATENT-3,978,360			US-PATENT-CLASS-73-147	US-PATENT-CLASS-431-141			
N76-31489*	c 35	NASA-CASE-GSC-11893-1			US-PATENT-3,983,749	US-PATENT-CLASS-48-116			
		US-PATENT-APPL-SN-585420	N77-10112*	c 15	NASA-CASE-MFS-20855-1	US-PATENT-CLASS-48-117			
		US-PATENT-CLASS-73-9			US-PATENT-APPL-SN-243374	US-PATENT-CLASS-48-197			
		US-PATENT-3,977,231			US-PATENT-CLASS-244-1SD	US-PATENT-CLASS-48-212			
N76-31490*	c 35	NASA-CASE-NPO-13604-1			US-PATENT-3,744,739	US-PATENT-CLASS-48-61			
		US-PATENT-APPL-SN-574219	N77-10113*	c 15	NASA-CASE-MFS-22787-1	US-PATENT-3,982,910			
		US-PATENT-CLASS-356-106S			US-PATENT-APPL-SN-511346	NASA-CASE-MFS-23362-1	N77-10753*	c 47	
		US-PATENT-CLASS-356-114			US-PATENT-CLASS-244-169	US-PATENT-APPL-SN-637268			
		US-PATENT-CLASS-356-209			US-PATENT-CLASS-244-171	US-PATENT-CLASS-250-338			
		US-PATENT-CLASS-356-244			US-PATENT-CLASS-244-3.21	US-PATENT-CLASS-250-339			
		US-PATENT-3,977,787			US-PATENT-3,984,072	US-PATENT-CLASS-250-347			
N76-31512*	c 36	NASA-CASE-NPO-13490-1	N77-10148*	c 20	NASA-CASE-LEW-12082-1	US-PATENT-CLASS-356-106R			
		US-PATENT-APPL-SN-549418			US-PATENT-APPL-SN-612964	US-PATENT-3,984,685			
		US-PATENT-CLASS-330-4			US-PATENT-CLASS-313-231.4	NASA-CASE-ARC-10855-1	N77-10780*	c 52	
		US-PATENT-CLASS-331-94			US-PATENT-CLASS-313-240	US-PATENT-APPL-SN-617612			
		US-PATENT-3,978,417			US-PATENT-CLASS-313-361	US-PATENT-CLASS-128-2H			
N76-31524*	c 37	NASA-CASE-NPO-13535-1			US-PATENT-CLASS-315-111.3	US-PATENT-CLASS-73-343R			
		US-PATENT-APPL-SN-563050			US-PATENT-CLASS-60-202	US-PATENT-3,983,753			
		US-PATENT-CLASS-264-129			US-PATENT-3,983,695	NASA-CASE-MSC-19442-1	N77-10899*	c 74	
		US-PATENT-CLASS-264-161	N77-10213*	c 28	NASA-CASE-LAR-11995-1	US-PATENT-APPL-SN-558600			
		US-PATENT-CLASS-264-219			US-PATENT-APPL-SN-238826	US-PATENT-CLASS-356-237			
		US-PATENT-CLASS-264-304			US-PATENT-CLASS-102-99	US-PATENT-CLASS-356-239			
		US-PATENT-CLASS-264-305			US-PATENT-CLASS-264-3R	US-PATENT-3,985,454			
		US-PATENT-CLASS-264-308			US-PATENT-CLASS-86-1R	NASA-CASE-LAR-11549-1	N77-11397*	c 37	
		US-PATENT-CLASS-264-310			US-PATENT-3,983,780	US-PATENT-APPL-SN-537979			
		US-PATENT-CLASS-264-318	N77-10229*	c 31	NASA-CASE-NPO-13459-1	US-PATENT-CLASS-219-118			
		US-PATENT-CLASS-264-334			US-PATENT-APPL-SN-598967	US-PATENT-CLASS-219-92			
		US-PATENT-CLASS-427-230			US-PATENT-CLASS-62-217	US-PATENT-3,988,561			
		US-PATENT-3,978,187			US-PATENT-CLASS-62.514JT	NASA-CASE-MSC-12506-1	N77-12239*	c 32	
N76-31562*	c 39	NASA-CASE-MSC-19372-1			US-PATENT-3,983,714	US-PATENT-APPL-SN-545283			
		US-PATENT-APPL-SN-517995	N77-10392*	c 32	NASA-CASE-LAR-11827-1	US-PATENT-CLASS-340-347DD			
		US-PATENT-CLASS-182-178			US-PATENT-APPL-SN-412379	US-PATENT-3,988,729			
		US-PATENT-CLASS-29-467			US-PATENT-APPL-SN-561764	NASA-CASE-NPO-13543-1	N77-12240*	c 32	
		US-PATENT-CLASS-29-526			US-PATENT-CLASS-178-88	US-PATENT-APPL-SN-589173			
		US-PATENT-CLASS-52-236			US-PATENT-CLASS-235-150.1	US-PATENT-CLASS-325-41			
		US-PATENT-CLASS-52-637			US-PATENT-CLASS-235-156	US-PATENT-CLASS-340-146.1AL			
		US-PATENT-CLASS-52-648			US-PATENT-CLASS-325-323	US-PATENT-CLASS-340-146.1AQ			
		US-PATENT-CLASS-52-651			US-PATENT-CLASS-325-349	US-PATENT-CLASS-340-146.1AV			
		US-PATENT-CLASS-52-726			US-PATENT-CLASS-325-476	US-PATENT-3,988,677			
		US-PATENT-CLASS-52-745			US-PATENT-3,984,634	NASA-CASE-MFS-23062-1	N77-12402*	c 37	
		US-PATENT-CLASS-52-749			NASA-CASE-NPO-13512-1	US-PATENT-APPL-SN-591569			
		US-PATENT-3,977,147	N77-10428*	c 33	US-PATENT-APPL-SN-533734	US-PATENT-CLASS-60-527			
N76-31666*	c 44	NASA-CASE-NPO-13087-2			US-PATENT-CLASS-321-19	US-PATENT-3,987,630			
		US-PATENT-APPL-SN-296622			US-PATENT-CLASS-321-2	NASA-CASE-NPO-13428-1	N77-12721*	c 60	
		US-PATENT-APPL-SN-462341			US-PATENT-CLASS-323-DIG.1	NASA-CASE-NPO-13447-1			
		US-PATENT-CLASS-136-206			US-PATENT-CLASS-323-17	US-PATENT-APPL-SN-495022			
		US-PATENT-CLASS-136-89			US-PATENT-CLASS-323-22T	US-PATENT-CLASS-179-15BA			
		US-PATENT-3,966,499			US-PATENT-CLASS-323-23	US-PATENT-CLASS-328-111			
N76-31667*	c 44	NASA-CASE-MFS-23167-1			US-PATENT-3,984,799	US-PATENT-CLASS-340-172.5			
		US-PATENT-APPL-SN-602618	N77-10429*	c 33	NASA-CASE-GSC-11963-1	US-PATENT-3,988,716			
		US-PATENT-CLASS-165-10			US-PATENT-APPL-SN-595197	NASA-CASE-NPO-13666-1	N77-13217*	c 27	
		US-PATENT-CLASS-60-659			US-PATENT-CLASS-244-1A	US-PATENT-APPL-SN-633877			
		US-PATENT-3,977,197			US-PATENT-CLASS-244-42CG	US-PATENT-CLASS-29-182.5			
N76-31714*	c 45	NASA-CASE-LAR-11405-1			US-PATENT-CLASS-317-2D				

N77-13315*	c 33	US-PATENT-3,990,860 NASA-CASE-NPO-11515-1 US-PATENT-APPL-SN-139596 US-PATENT-CLASS-307-233 US-PATENT-CLASS-307-295 US-PATENT-CLASS-328-133 US-PATENT-3,750,035	N77-14581*	c 44	US-PATENT-3,996,067 NASA-CASE-LEW-12220-1 US-PATENT-APPL-SN-606891 US-PATENT-CLASS-320-2 US-PATENT-CLASS-429-23 US-PATENT-CLASS-429-34 US-PATENT-3,996,064	N77-18154*	c 07	US-PATENT-APPL-SN-565289 US-PATENT-CLASS-235-92CA US-PATENT-CLASS-235-92CT US-PATENT-CLASS-235-92DN US-PATENT-CLASS-235-92R US-PATENT-4,001,552
N77-13418*	c 37	NASA-CASE-ARC-10905-1 US-PATENT-APPL-SN-618594 US-PATENT-CLASS-219-300 US-PATENT-CLASS-219-304 US-PATENT-CLASS-239-171 US-PATENT-CLASS-252-359A US-PATENT-3,990,987	N77-14735*	c 52	NASA-CASE-MFS-23225-1 US-PATENT-APPL-SN-612965 US-PATENT-CLASS-3-1.2 US-PATENT-CLASS-3-14 US-PATENT-3,995,324	N77-18307*	c 32	NASA-CASE-ARC-10761-1 US-PATENT-APPL-SN-612899 US-PATENT-CLASS-137-15.1 US-PATENT-CLASS-244-53B US-PATENT-4,007,891
N77-14025*	c 07	NASA-CASE-LEW-12419-1 US-PATENT-APPL-SN-579375 US-PATENT-CLASS-416-153 US-PATENT-CLASS-416-160 US-PATENT-CLASS-416-162 US-PATENT-CLASS-416-165 US-PATENT-CLASS-416-167 US-PATENT-CLASS-60-226R US-PATENT-3,994,128	N77-14736*	c 52	NASA-CASE-ARC-11007-1 US-PATENT-APPL-SN-652948 US-PATENT-CLASS-128-2H US-PATENT-CLASS-128-379 US-PATENT-CLASS-128-400 US-PATENT-CLASS-128-402 US-PATENT-3,995,621	N77-18382*	c 34	NASA-CASE-MFS-23303-1 US-PATENT-APPL-SN-676957 US-PATENT-CLASS-333-70R US-PATENT-CLASS-333-75 US-PATENT-CLASS-333-76 US-PATENT-CLASS-333-82B US-PATENT-4,007,434
N77-14292*	c 32	NASA-CASE-LAR-11607-1 US-PATENT-APPL-SN-617895 US-PATENT-CLASS-325-145 US-PATENT-CLASS-332-22 US-PATENT-CLASS-332-23R US-PATENT-3,996,532	N77-14737*	c 52	NASA-CASE-MS-14276-1 US-PATENT-APPL-SN-557430 US-PATENT-CLASS-250-363R US-PATENT-CLASS-250-444 US-PATENT-CLASS-250-498 US-PATENT-3,996,471	N77-18417*	c 35	NASA-CASE-LAR-10805-2 US-PATENT-APPL-SN-428992 US-PATENT-APPL-SN-578240 US-PATENT-CLASS-244-117A US-PATENT-CLASS-427-160 US-PATENT-CLASS-427-322 US-PATENT-CLASS-428-35 US-PATENT-CLASS-428-421 US-PATENT-CLASS-428-461 US-PATENT-CLASS-428-474 US-PATENT-4,008,348
N77-14333*	c 33	NASA-CASE-GSC-11789-1 US-PATENT-APPL-SN-538982 US-PATENT-CLASS-317-31 US-PATENT-CLASS-321-13 US-PATENT-3,996,506	N77-14738*	c 52	NASA-CASE-KSC-10849-1 US-PATENT-APPL-SN-613734 US-PATENT-CLASS-128-418 US-PATENT-CLASS-3-1.1 US-PATENT-CLASS-339-252R US-PATENT-3,995,644	N77-18471*	c 35	NASA-CASE-ARC-10898-1 US-PATENT-APPL-SN-625732 US-PATENT-CLASS-73-12 US-PATENT-CLASS-73-432SD US-PATENT-CLASS-73-71.6 US-PATENT-4,007,623
N77-14334*	c 33	NASA-CASE-GSC-12018-1 US-PATENT-APPL-SN-635531 US-PATENT-CLASS-329-122 US-PATENT-CLASS-329-124 US-PATENT-CLASS-331-23 US-PATENT-CLASS-331-36C US-PATENT-CLASS-332-30V US-PATENT-3,997,848	N77-14751*	c 60	NASA-CASE-GSC-11839-1 US-PATENT-APPL-SN-468614 US-PATENT-CLASS-235-152 US-PATENT-CLASS-250-227 US-PATENT-CLASS-340-172.5 US-PATENT-CLASS-350-96R US-PATENT-3,996,455	N77-18891*	c 73	NASA-CASE-NPO-13121-1 US-PATENT-APPL-SN-294727 US-PATENT-CLASS-310-4R US-PATENT-CLASS-313-311 US-PATENT-CLASS-346R US-PATENT-4,008,407
N77-14335*	c 33	NASA-CASE-MFS-22560-1 US-PATENT-APPL-SN-589233 US-PATENT-CLASS-250-214A US-PATENT-CLASS-330-14 US-PATENT-CLASS-330-28 US-PATENT-CLASS-330-59 US-PATENT-3,996,462	N77-17029*	c 05	NASA-CASE-ARC-10807-1 US-PATENT-APPL-SN-513612 US-PATENT-CLASS-416-104 US-PATENT-CLASS-416-138 US-PATENT-CLASS-416-141 US-PATENT-3,999,886	N77-18893*	c 74	NASA-CASE-MS-14683-1 US-PATENT-APPL-SN-612967 US-PATENT-CLASS-358-44 US-PATENT-4,004,292
N77-14406*	c 35	NASA-CASE-NPO-13663-1 US-PATENT-APPL-SN-634205 US-PATENT-CLASS-250-289 US-PATENT-CLASS-250-298 US-PATENT-3,996,464	N77-17059*	c 07	NASA-CASE-LEW-12760-1 US-PATENT-APPL-SN-569925 US-PATENT-CLASS-60-226A US-PATENT-CLASS-60-228 US-PATENT-4,005,574	N77-19056*	c 04	NASA-CASE-LAR-11387-2 US-PATENT-APPL-SN-531647 US-PATENT-APPL-SN-623156 US-PATENT-CLASS-33-356 US-PATENT-CLASS-73-178R US-PATENT-4,006,631
N77-14407*	c 35	NASA-CASE-LAR-11648-1 US-PATENT-APPL-SN-645571 US-PATENT-CLASS-73-133R US-PATENT-3,995,476	N77-17143*	c 20	NASA-CASE-XLA-01349 US-PATENT-APPL-SN-256493 US-PATENT-APPL-SN-54552 US-PATENT-CLASS-102-49.3 US-PATENT-CLASS-264-3R US-PATENT-CLASS-86-1R US-PATENT-CLASS-86-20R US-PATENT-4,000,682	N77-19076*	c 09	NASA-CASE-ARC-10979-1 US-PATENT-APPL-SN-608483 US-PATENT-CLASS-124-6 US-PATENT-CLASS-244-63 US-PATENT-3,989,206
N77-14408*	c 35	NASA-CASE-ARC-10448-3 US-PATENT-APPL-SN-221670 US-PATENT-APPL-SN-318848 US-PATENT-CLASS-250-396 US-PATENT-3,996,468	N77-17161*	c 23	NASA-CASE-MS-14428-1 US-PATENT-APPL-SN-450504 US-PATENT-CLASS-23-230B US-PATENT-CLASS-23-230M US-PATENT-CLASS-23-230R US-PATENT-CLASS-23-231 US-PATENT-CLASS-23-232C US-PATENT-CLASS-23-232F US-PATENT-CLASS-23-254R US-PATENT-CLASS-55-197 US-PATENT-CLASS-55-67 US-PATENT-CLASS-55-74 US-PATENT-CLASS-73-23.1 US-PATENT-CLASS-73-61.1C US-PATENT-4,003,257	N77-19170*	c 24	NASA-CASE-LEW-12550-1 US-PATENT-APPL-SN-596905 US-PATENT-CLASS-416-224 US-PATENT-CLASS-416-230 US-PATENT-4,006,999
N77-14409*	c 35	NASA-CASE-NPO-13540-1 US-PATENT-APPL-SN-526450 US-PATENT-CLASS-136-232 US-PATENT-CLASS-136-233 US-PATENT-3,996,070	N77-17351*	c 33	NASA-CASE-MFS-23181-1 US-PATENT-APPL-SN-566495 US-PATENT-CLASS-331-114 US-PATENT-CLASS-331-177V US-PATENT-CLASS-332-18 US-PATENT-CLASS-332-30V US-PATENT-4,003,004	N77-19171*	c 24	NASA-CASE-LEW-12619-1 US-PATENT-APPL-SN-462424 US-PATENT-CLASS-204-16 US-PATENT-CLASS-204-40 US-PATENT-CLASS-204-9 US-PATENT-CLASS-29-527.2 US-PATENT-3,989,602
N77-14411*	c 35	NASA-CASE-NPO-13683-1 US-PATENT-APPL-SN-599284 US-PATENT-CLASS-250-343 US-PATENT-CLASS-356-201 US-PATENT-CLASS-356-204 US-PATENT-CLASS-356-97 US-PATENT-3,995,960	N77-17354*	c 33	NASA-CASE-LEW-11881-1 US-PATENT-APPL-SN-598968 US-PATENT-CLASS-307-229 US-PATENT-CLASS-307-230 US-PATENT-CLASS-328-161 US-PATENT-4,001,602	N77-19353*	c 34	NASA-CASE-ARC-10912-1 US-PATENT-APPL-SN-623187 US-PATENT-CLASS-62-100 US-PATENT-CLASS-62-121 US-PATENT-CLASS-62-269 US-PATENT-CLASS-62-315 US-PATENT-4,007,601
N77-14477*	c 37	NASA-CASE-FRC-10081-1 US-PATENT-APPL-SN-598504 US-PATENT-CLASS-280-432 US-PATENT-3,995,877	N77-17426*	c 35	NASA-CASE-MFS-22671-2 US-PATENT-APPL-SN-419831 US-PATENT-APPL-SN-561956 US-PATENT-CLASS-360-25 US-PATENT-CLASS-360-31 US-PATENT-4,003,084	N77-19385*	c 35	NASA-CASE-MS-14653-1 US-PATENT-APPL-SN-521816 US-PATENT-CLASS-177-1 US-PATENT-CLASS-177-208 US-PATENT-CLASS-73-432R US-PATENT-3,988,933
N77-14478*	c 37	NASA-CASE-LAR-11658-1 US-PATENT-APPL-SN-625759 US-PATENT-CLASS-83-451 US-PATENT-CLASS-83-467R US-PATENT-3,995,522	N77-17464*	c 37	NASA-CASE-GSC-11978-1 US-PATENT-APPL-SN-593142 US-PATENT-CLASS-308-10 US-PATENT-4,000,929	N77-19416*	c 36	NASA-CASE-XNP-04167-3 US-PATENT-APPL-SN-170544 US-PATENT-APPL-SN-479357 US-PATENT-CLASS-331-94.5D US-PATENT-CLASS-331-94.5G US-PATENT-CLASS-331-94.5PE US-PATENT-4,007,430
N77-14479*	c 37	NASA-CASE-GSC-11960-1 US-PATENT-APPL-SN-629456 US-PATENT-CLASS-242-187 US-PATENT-CLASS-242-193 US-PATENT-CLASS-242-204 US-PATENT-CLASS-242-210 US-PATENT-CLASS-242-57 US-PATENT-3,995,789	N77-17495*	c 38	NASA-CASE-GSC-11902-1	N77-19457*	c 37	NASA-CASE-MFS-15218-1 US-PATENT-APPL-SN-387094 US-PATENT-CLASS-197-188 US-PATENT-CLASS-197-190 US-PATENT-3,989,136
N77-14580*	c 44	NASA-CASE-LEW-11496-1 US-PATENT-APPL-SN-645508 US-PATENT-CLASS-136-89 US-PATENT-CLASS-204-192				N77-19458*	c 37	NASA-CASE-GSC-11883-1 NASA-CASE-GSC-11974-1 NASA-CASE-GSC-11975-1

		US-PATENT-APPL-SN-596787			US-PATENT-APPL-SN-841278			US-PATENT-CLASS-60-39.28R
		US-PATENT-CLASS-310-4A			US-PATENT-CLASS-313-175			US-PATENT-CLASS-60-39.66
		US-PATENT-CLASS-337-334			US-PATENT-CLASS-313-180			US-PATENT-4,020,632
		US-PATENT-CLASS-340-224			US-PATENT-CLASS-313-184	N77-23482*	c 37	NASA-CASE-LAR-11563-1
		US-PATENT-CLASS-60-527			US-PATENT-CLASS-315-108			US-PATENT-APPL-SN-672815
		US-PATENT-CLASS-75-122.7			US-PATENT-CLASS-315-110			US-PATENT-CLASS-29-DIG.35
		US-PATENT-CLASS-75-170			US-PATENT-3,621,330			US-PATENT-CLASS-29-447
		US-PATENT-4,010,455	N77-21392*	c 35	NASA-CASE-NPO-10711-1			US-PATENT-CLASS-403-273
N77-19571*	c 44	NASA-CASE-LEW-11549-1			US-PATENT-APPL-SN-844315			US-PATENT-CLASS-53-9
		US-PATENT-APPL-SN-510677			US-PATENT-CLASS-179-100.2C			US-PATENT-4,017,959
		US-PATENT-CLASS-136-89			US-PATENT-3,697,705	N77-23483*	c 37	NASA-CASE-MFS-23088-1
		US-PATENT-3,989,541	N77-21393*	c 35	NASA-CASE-NPO-10619-1			US-PATENT-APPL-SN-602617
N77-19760*	c 60	NASA-CASE-ARC-10899-1			US-PATENT-APPL-SN-757017			US-PATENT-CLASS-213-81
		US-PATENT-APPL-SN-576774			US-PATENT-CLASS-338-25			US-PATENT-CLASS-214-1CM
		US-PATENT-CLASS-178-69.5R			US-PATENT-3,555,483			US-PATENT-CLASS-244-161
		US-PATENT-CLASS-179-158S	N77-21844*	c 54	NASA-CASE-MFS-23074-1			US-PATENT-4,018,409
		US-PATENT-CLASS-340-172.5			US-PATENT-APPL-SN-623188	N77-24328*	c 32	NASA-CASE-ARC-10984-1
		US-PATENT-3,990,049			US-PATENT-CLASS-188-291			US-PATENT-APPL-SN-690815
N77-20162*	c 20	NASA-CASE-LEW-12048-1			US-PATENT-CLASS-254-158			US-PATENT-CLASS-358-133
		US-PATENT-APPL-SN-665033			US-PATENT-4,018,423			US-PATENT-CLASS-358-138
		US-PATENT-CLASS-313-230	N77-21941*	c 74	NASA-CASE-NPO-11429-1			US-PATENT-4,025,950
		US-PATENT-CLASS-313-231.3			US-PATENT-APPL-SN-95189	N77-24331*	c 32	NASA-CASE-MSC-14840-1
		US-PATENT-CLASS-313-360			US-PATENT-CLASS-240-41.35R			US-PATENT-APPL-SN-692414
		US-PATENT-CLASS-315-111.3			US-PATENT-CLASS-240-41R			US-PATENT-CLASS-178-88
		US-PATENT-CLASS-315-111.6			US-PATENT-CLASS-240-46.13			US-PATENT-CLASS-325-346
		US-PATENT-CLASS-60-202			US-PATENT-CLASS-356-236			US-PATENT-CLASS-329-104
		US-PATENT-4,011,719	N77-22386*	c 33	US-PATENT-3,711,701			US-PATENT-CLASS-329-122
N77-20201*	c 26	NASA-CASE-LEW-12245-1			NASA-CASE-NPO-10870-1			US-PATENT-4,027,265
		US-PATENT-APPL-SN-584094			NASA-CASE-NPO-11191-1	N77-24375*	c 33	NASA-CASE-MSC-12709-1
		US-PATENT-CLASS-148-12.7N			NASA-CASE-NPO-11403-1			US-PATENT-APPL-SN-630583
		US-PATENT-CLASS-148-162			US-PATENT-APPL-SN-108810			US-PATENT-CLASS-307-225R
		US-PATENT-CLASS-148-2			US-PATENT-CLASS-313-146			US-PATENT-CLASS-328-38
		US-PATENT-CLASS-148-20.3			US-PATENT-CLASS-313-182			US-PATENT-CLASS-328-39
		US-PATENT-CLASS-148-32.5			US-PATENT-CLASS-313-60			US-PATENT-CLASS-328-4-8
		US-PATENT-CLASS-75-170			US-PATENT-3,736,453			US-PATENT-CLASS-328-63
		US-PATENT-4,012,237	N77-22449*	c 35	NASA-CASE-LAR-11825-1			US-PATENT-4,025,866
N77-20289*	c 32	NASA-CASE-NPO-13753-1			US-PATENT-APPL-SN-632112	N77-24423*	c 34	NASA-CASE-LAR-12045-1
		US-PATENT-APPL-SN-658449			US-PATENT-CLASS-73-88R			US-PATENT-APPL-SN-682416
		US-PATENT-CLASS-325-4			US-PATENT-4,018,085			US-PATENT-CLASS-259-74R
		US-PATENT-CLASS-343-100ST	N77-22450*	c 35	NASA-CASE-MFS-23281-1			US-PATENT-CLASS-261-DIG.75
		US-PATENT-CLASS-343-6.BR			US-PATENT-APPL-SN-657995			US-PATENT-CLASS-261-123
		US-PATENT-CLASS-343-6.5R			US-PATENT-CLASS-73-15.6			US-PATENT-4,026,527
		US-PATENT-4,012,696			US-PATENT-CLASS-73-95	N77-24454*	c 35	NASA-CASE-ARC-10900-1
N77-20399*	c 35	NASA-CASE-ARC-10716-1			US-PATENT-4,018,080			US-PATENT-APPL-SN-630579
		US-PATENT-APPL-SN-403695	N77-22479*	c 37	NASA-CASE-NPO-10316-1			US-PATENT-CLASS-338-229
		US-PATENT-CLASS-235-150.2			US-PATENT-APPL-SN-703107			US-PATENT-CLASS-338-28
		US-PATENT-CLASS-235-150.25			US-PATENT-CLASS-60-53			US-PATENT-4,025,891
		US-PATENT-CLASS-244-165			US-PATENT-3,478,514	N77-24455*	c 35	NASA-CASE-GSC-12077-1
		US-PATENT-CLASS-244-171	N77-22480*	c 37	NASA-CASE-NPO-13058-1			US-PATENT-APPL-SN-635519
		US-PATENT-CLASS-244-3.21			NASA-CASE-NPO-13096-1			US-PATENT-CLASS-65-108
		US-PATENT-4,012,018			US-PATENT-APPL-SN-403154			US-PATENT-CLASS-65-59A
N77-20400*	c 35	NASA-CASE-ARC-10911-1			US-PATENT-CLASS-214-16.1CB			US-PATENT-CLASS-6554
		US-PATENT-APPL-SN-610802			US-PATENT-3,896,955			US-PATENT-CLASS-6564
		US-PATENT-CLASS-338-28	N77-22482*	c 37	NASA-CASE-MSC-19536-1			US-PATENT-4,025,327
		US-PATENT-CLASS-73-204			US-PATENT-APPL-SN-658450	N77-25499*	c 36	NASA-CASE-GSC-11571-1
		US-PATENT-4,011,756			US-PATENT-CLASS-74-96			US-PATENT-APPL-SN-646704
N77-20401*	c 35	NASA-CASE-MFS-23267-1			US-PATENT-4,018,092			US-PATENT-CLASS-331-94.5S
		US-PATENT-APPL-SN-653422	N77-22606*	c 44	NASA-CASE-LEW-12364-1			US-PATENT-4,025,875
		US-PATENT-CLASS-126-270			US-PATENT-APPL-SN-707124	N77-25501*	c 36	NASA-CASE-ARC-10970-1
		US-PATENT-CLASS-126-271			US-PATENT-CLASS-253-317			US-PATENT-APPL-SN-691046
		US-PATENT-CLASS-250-203R			US-PATENT-CLASS-429-105			US-PATENT-CLASS-250-574
		US-PATENT-4,011,854			US-PATENT-CLASS-429-107			US-PATENT-CLASS-350-100
N77-20882*	c 74	NASA-CASE-LAR-11782-1			US-PATENT-CLASS-429-190			US-PATENT-CLASS-350-102
		US-PATENT-APPL-SN-608482			US-PATENT-4,018,971			US-PATENT-CLASS-356-28
		US-PATENT-CLASS-350-145	N77-22607*	c 44	NASA-CASE-LAR-11361-1			US-PATENT-4,026,655
		US-PATENT-CLASS-350-174			US-PATENT-APPL-SN-669928	N77-25502*	c 36	NASA-CASE-NPO-13147-1
		US-PATENT-4,012,123			US-PATENT-CLASS-23-277R			US-PATENT-APPL-SN-317310
N77-21267*	c 32	NASA-CASE-LAR-11390-1			US-PATENT-CLASS-23-281			US-PATENT-CLASS-330-4.3
		US-PATENT-APPL-SN-662176			US-PATENT-CLASS-423-648R			US-PATENT-CLASS-331-94.5D
		US-PATENT-CLASS-340-5H			US-PATENT-CLASS-55-158			US-PATENT-CLASS-331-94.5P
		US-PATENT-CLASS-343-18B			US-PATENT-4,019,868			US-PATENT-4,027,273
		US-PATENT-CLASS-343-5CM	N77-22794*	c 51	NASA-CASE-GSC-12039-1	N77-25769*	c 51	NASA-CASE-LAR-10773-3
		US-PATENT-CLASS-343-5MM			US-PATENT-APPL-SN-572991			US-PATENT-APPL-SN-125235
		US-PATENT-4,019,179			US-PATENT-CLASS-195-103.5K			US-PATENT-APPL-SN-314656
N77-21314*	c 33	NASA-CASE-NPO-10189-1			US-PATENT-CLASS-195-103.5R			US-PATENT-APPL-SN-623238
		NASA-CASE-NPO-10781-1			US-PATENT-4,014,745			US-PATENT-CLASS-195-1.8
		US-PATENT-APPL-SN-744522	N77-22950*	c 74	NASA-CASE-ARC-10976-1	N77-25772*	c 52	US-PATENT-4,018,649
		US-PATENT-CLASS-307-232			US-PATENT-APPL-SN-665032			NASA-CASE-KSC-11030-1
		US-PATENT-CLASS-307-238			US-PATENT-CLASS-356-171			US-PATENT-APPL-SN-709849
		US-PATENT-CLASS-307-280			US-PATENT-4,018,533			US-PATENT-CLASS-128-1R
		US-PATENT-CLASS-329-119	N77-22951*	c 74	NASA-CASE-NPO-13722-1			US-PATENT-CLASS-3
		US-PATENT-CLASS-329-205			US-PATENT-APPL-SN-616472			US-PATENT-CLASS-339,12-1
		US-PATENT-CLASS-332-16			US-PATENT-CLASS-250-203R			US-PATENT-4,025,964
		US-PATENT-CLASS-332-30			US-PATENT-CLASS-250-211K	N77-26385*	c 33	NASA-CASE-LEW-11978-1
		US-PATENT-CLASS-332-52			US-PATENT-CLASS-356-141			US-PATENT-APPL-SN-708658
		US-PATENT-3,582,828			US-PATENT-CLASS-356-152			US-PATENT-CLASS-204-32A
N77-21315*	c 33	NASA-CASE-NPO-11510-1			US-PATENT-CLASS-356-172			US-PATENT-CLASS-29-597
		US-PATENT-APPL-SN-173178			US-PATENT-4,018,532			US-PATENT-CLASS-29-622
		US-PATENT-APPL-SN-385059	N77-23106*	c 07	NASA-CASE-LEW-12830-1			US-PATENT-CLASS-29-628
		US-PATENT-CLASS-313-161			US-PATENT-APPL-SN-596641			US-PATENT-CLASS-29-630E
		US-PATENT-CLASS-313-184			US-PATENT-APPL-SN-655149			US-PATENT-4,023,266
		US-PATENT-CLASS-313-224			US-PATENT-CLASS-123-122E	N77-26386*	c 33	NASA-CASE-GSC-11824-1
		US-PATENT-CLASS-313-32			US-PATENT-CLASS-123-41.33			US-PATENT-APPL-SN-583486
		US-PATENT-CLASS-315-344			US-PATENT-CLASS-137-101			US-PATENT-CLASS-318-138
		US-PATENT-3,881,132			US-PATENT-CLASS-415-180			US-PATENT-CLASS-318-227
N77-21316*	c 33	NASA-CASE-NPO-10790-1			US-PATENT-CLASS-60-39.03			US-PATENT-CLASS-318-254

N77-26387*	c 33	US-PATENT-4,027,212 NASA-CASE-LAR-11389-1 US-PATENT-APPL-SN-229143 US-PATENT-APPL-SN-340862 US-PATENT-CLASS-310-111 US-PATENT-CLASS-310-168 US-PATENT-CLASS-322-96	N77-28225*	c 24	US-PATENT-4,033,119 NASA-CASE-MSC-12631-1 US-PATENT-APPL-SN-568541 US-PATENT-CLASS-156-229 US-PATENT-CLASS-244-123 US-PATENT-CLASS-428-141 US-PATENT-CLASS-428-161 US-PATENT-CLASS-428-425 US-PATENT-CLASS-428-457 US-PATENT-CLASS-428-458 US-PATENT-4,032,089	N77-30309*	c 32	NASA-CASE-GSC-11898-1 US-PATENT-APPL-SN-566494 US-PATENT-CLASS-179-15A US-PATENT-CLASS-179-15P US-PATENT-4,039,754
N77-26477*	c 36	US-PATENT-3,849,720 NASA-CASE-NPO-13550-1 US-PATENT-APPL-SN-483301 US-PATENT-CLASS-250-281 US-PATENT-CLASS-250-282 US-PATENT-CLASS-250-283 US-PATENT-CLASS-250-423P US-PATENT-4,031,389	N77-28265*	c 26	NASA-CASE-LEW-11573-1 US-PATENT-APPL-SN-625733 US-PATENT-CLASS-228-190 US-PATENT-CLASS-228-194 US-PATENT-CLASS-228-232	N77-30365*	c 33	NASA-CASE-NPO-13812-1 US-PATENT-APPL-SN-694855 US-PATENT-CLASS-307-64 US-PATENT-CLASS-363-53 US-PATENT-CLASS-363-70 US-PATENT-4,039,925
N77-26919*	c 71	NASA-CASE-NPO-13673-1 US-PATENT-APPL-SN-613004 US-PATENT-CLASS-330-5.5 US-PATENT-CLASS-331-107A US-PATENT-CLASS-333-72 US-PATENT-4,025,876	N77-28346*	c 32	NASA-CASE-GSC-12053-1 US-PATENT-APPL-SN-667930 US-PATENT-CLASS-250-199 US-PATENT-CLASS-250-238 US-PATENT-4,033,882	N77-30399*	c 34	NASA-CASE-MFS-19287-1 US-PATENT-APPL-SN-641802 US-PATENT-CLASS-137-207 US-PATENT-CLASS-137-209 US-PATENT-CLASS-60-259 US-PATENT-CLASS-62-55 US-PATENT-4,039,000
N77-26942*	c 74	NASA-CASE-GSC-12058-1 US-PATENT-APPL-SN-680938 US-PATENT-CLASS-250-199 US-PATENT-4,031,783	N77-28385*	c 33	NASA-CASE-LEW-12444-1 US-PATENT-APPL-SN-583485 US-PATENT-CLASS-123-148CB US-PATENT-CLASS-123-148E US-PATENT-CLASS-315-176 US-PATENT-4,033,316	N77-30436*	c 35	NASA-CASE-MFS-23175-1 US-PATENT-APPL-SN-667928 US-PATENT-CLASS-324-163 US-PATENT-CLASS-324-165 US-PATENT-CLASS-324-174 US-PATENT-CLASS-340-271 US-PATENT-CLASS-340-347P US-PATENT-CLASS-340-347SY US-PATENT-4,039,946
N77-27116*	c 07	NASA-CASE-LEW-12608-1 US-PATENT-APPL-SN-680067 US-PATENT-CLASS-416-220R US-PATENT-CLASS-416-221 US-PATENT-4,033,705	N77-28486*	c 37	NASA-CASE-LEW-11158-1 US-PATENT-APPL-SN-663008 US-PATENT-CLASS-308-5R US-PATENT-CLASS-308-73 US-PATENT-CLASS-308-9 US-PATENT-4,035,037	N77-30749*	c 54	NASA-CASE-KSC-11004-1 US-PATENT-APPL-SN-710032 US-PATENT-CLASS-3-2 US-PATENT-CLASS-3-21 US-PATENT-4,038,705
N77-27131*	c 09	NASA-CASE-LAR-11883-1 US-PATENT-APPL-SN-662175 US-PATENT-CLASS-73-15R US-PATENT-4,027,524	N77-28487*	c 37	NASA-CASE-MSC-14905-1 US-PATENT-APPL-SN-708795 US-PATENT-CLASS-128-DIG.12 US-PATENT-CLASS-128-214F US-PATENT-CLASS-222-61 US-PATENT-CLASS-222-95 US-PATENT-4,033,479	N77-31308*	c 27	NASA-CASE-NPO-11609-2 US-PATENT-APPL-SN-228229 US-PATENT-APPL-SN-674700 US-PATENT-CLASS-210-DIG.27 US-PATENT-CLASS-210-40 US-PATENT-CLASS-260-2.5A US-PATENT-CLASS-260-2.5AM US-PATENT-CLASS-260-2.5AY US-PATENT-CLASS-260-77.5AP US-PATENT-4,039,489
N77-27187*	c 24	NASA-CASE-MFS-22926-1 US-PATENT-APPL-SN-557565 US-PATENT-CLASS-164-60 US-PATENT-CLASS-75-135 US-PATENT-CLASS-75-139 US-PATENT-CLASS-75-65R US-PATENT-4,029,500	N77-28511*	c 39	NASA-CASE-MFS-23299-1 US-PATENT-APPL-SN-700673 US-PATENT-CLASS-73-67.7 US-PATENT-CLASS-73-88R US-PATENT-4,033,182	N77-31350*	c 32	NASA-CASE-GSC-12075-1 US-PATENT-APPL-SN-562499 US-PATENT-CLASS-343-17.7 US-PATENT-4,042,926
N77-27188*	c 24	NASA-CASE-LEW-12118-1 US-PATENT-APPL-SN-616332 US-PATENT-CLASS-428-301 US-PATENT-CLASS-428-328 US-PATENT-CLASS-428-368 US-PATENT-CLASS-428-418 US-PATENT-CLASS-428-457 US-PATENT-CLASS-428-902 US-PATENT-CLASS-428-911 US-PATENT-4,029,838	N77-28716*	c 52	NASA-CASE-LEW-12258-1 US-PATENT-APPL-SN-676433 US-PATENT-CLASS-128-1R US-PATENT-CLASS-128-303R US-PATENT-4,033,349	N77-31404*	c 33	NASA-CASE-ARC-10897-1 US-PATENT-APPL-SN-625781 US-PATENT-CLASS-323-93 US-PATENT-CLASS-324-60 US-PATENT-CLASS-340-200 US-PATENT-CLASS-340-347SH US-PATENT-4,040,041
N77-27345*	c 34	NASA-CASE-ARC-10974-1 US-PATENT-APPL-SN-667010 US-PATENT-CLASS-73-189 US-PATENT-CLASS-73-228 US-PATENT-4,028,939	N77-28717*	c 52	NASA-CASE-MSC-14623-1 US-PATENT-APPL-SN-637269 US-PATENT-CLASS-128-DIG.4 US-PATENT-CLASS-128-2.1E US-PATENT-CLASS-128-410 US-PATENT-4,033,334	N77-31465*	c 35	NASA-CASE-MFS-23118-1 US-PATENT-APPL-SN-691256 US-PATENT-CLASS-356-212 US-PATENT-4,040,750
N77-27366*	c 35	NASA-CASE-GSC-12059-1 US-PATENT-APPL-SN-680957 US-PATENT-CLASS-331-94.5D US-PATENT-CLASS-331-94.5T US-PATENT-CLASS-350-253 US-PATENT-4,030,047	N77-28932*	c 74	NASA-CASE-GSC-11989-1 US-PATENT-APPL-SN-645500 US-PATENT-CLASS-350-162SF US-PATENT-CLASS-350-202 US-PATENT-CLASS-350-299 US-PATENT-4,035,062	N77-31497*	c 37	NASA-CASE-NPO-13671-1 US-PATENT-APPL-SN-564622 US-PATENT-CLASS-123-DIG.8 US-PATENT-CLASS-123-119A US-PATENT-CLASS-123-122AB US-PATENT-CLASS-123-3 US-PATENT-CLASS-123-37 US-PATENT-CLASS-123-59E US-PATENT-4,041,910
N77-27367*	c 35	NASA-CASE-NPO-11103-1 US-PATENT-APPL-SN-3654 US-PATENT-CLASS-73-84 US-PATENT-3,623,359	N77-28933*	c 74	NASA-CASE-NPO-13707-1 US-PATENT-APPL-SN-617202 US-PATENT-CLASS-350-288 US-PATENT-CLASS-350-310 US-PATENT-CLASS-350-320 US-PATENT-4,035,065	N77-31601*	c 44	NASA-CASE-LEW-12587-1 US-PATENT-APPL-SN-717319 US-PATENT-CLASS-136-89AC US-PATENT-CLASS-136-89P US-PATENT-CLASS-52-173R US-PATENT-CLASS-52-51 US-PATENT-4,040,867
N77-27368*	c 35	NASA-CASE-MSC-12327-1 US-PATENT-APPL-SN-19572 US-PATENT-CLASS-73-362AR US-PATENT-3,613,454	N77-29260*	c 26	NASA-CASE-MFS-23405-1 US-PATENT-APPL-SN-718267 US-PATENT-CLASS-228-124 US-PATENT-CLASS-228-263 US-PATENT-4,033,503	N77-32148*	c 07	NASA-CASE-LEW-12312-1 US-PATENT-APPL-SN-654787 US-PATENT-CLASS-416-135 US-PATENT-CLASS-416-190 US-PATENT-CLASS-416-193A US-PATENT-CLASS-416-241A US-PATENT-4,045,149
N77-27400*	c 37	NASA-CASE-GSC-11063-1 US-PATENT-APPL-SN-41431 US-PATENT-CLASS-318-267 US-PATENT-CLASS-318-468 US-PATENT-CLASS-318-470 US-PATENT-CLASS-318-675 US-PATENT-3,628,113	N77-30236*	c 27	NASA-CASE-NPO-13620-1 US-PATENT-APPL-SN-666992 US-PATENT-CLASS-210-24 US-PATENT-CLASS-536-105 US-PATENT-CLASS-536-536-85 US-PATENT-CLASS-536-56 US-PATENT-CLASS-536-58 US-PATENT-CLASS-536-84 US-PATENT-4,041,233	N77-32255*	c 25	NASA-CASE-NPO-13566-1 US-PATENT-APPL-SN-653316 US-PATENT-CLASS-204-DIG.11 US-PATENT-CLASS-204-157.1R US-PATENT-CLASS-204-158R US-PATENT-CLASS-204-162R US-PATENT-CLASS-250-527 US-PATENT-4,045,359
N77-27677*	c 51	NASA-CASE-LAR-11649-1 US-PATENT-APPL-SN-626942 US-PATENT-CLASS-118-313 US-PATENT-CLASS-118-6 US-PATENT-CLASS-118-7 US-PATENT-CLASS-118-9 US-PATENT-CLASS-23-253A US-PATENT-CLASS-23-259 US-PATENT-CLASS-23-292 US-PATENT-CLASS-424-3 US-PATENT-CLASS-427-4 US-PATENT-CLASS-8-3 US-PATENT-CLASS-8-94.11 US-PATENT-4,029,470	N77-30237*	c 27	NASA-CASE-MFS-23345-1 US-PATENT-APPL-SN-696989 US-PATENT-CLASS-106-292 US-PATENT-CLASS-106-296 US-PATENT-CLASS-106-299 US-PATENT-4,039,347	N77-32279*	c 26	NASA-CASE-LEW-12906-1 US-PATENT-APPL-SN-691936 US-PATENT-CLASS-148-32 US-PATENT-CLASS-75-170 US-PATENT-4,045,255
N77-28118*	c 07	NASA-CASE-LAR-11310-1 US-PATENT-APPL-SN-394898 US-PATENT-CLASS-415-145 US-PATENT-CLASS-60-226R US-PATENT-CLASS-60-263	N77-30308*	c 32	NASA-CASE-GSC-12017-1 US-PATENT-APPL-SN-645510 US-PATENT-CLASS-325-30 US-PATENT-CLASS-325-42 US-PATENT-CLASS-325-473 US-PATENT-CLASS-325-65 US-PATENT-4,041,391	N77-32280*	c 26	NASA-CASE-LEW-12270-1 US-PATENT-APPL-SN-645507 US-PATENT-CLASS-148-32.5

		US-PATENT-CLASS-75-170			US-PATENT-CLASS-340-347AD			US-PATENT-CLASS-3-1.2
		US-PATENT-4,046,560			US-PATENT-CLASS-350-96R			US-PATENT-CLASS-3-15
N77-32308*	c 27	NASA-CASE-GSC-12110-1	N77-32919*	c 76	US-PATENT-4,045,792	N78-10709*	c 60	US-PATENT-CLASS-3-29
		US-PATENT-APPL-SN-682435			NASA-CASE-MFS-23001-1			US-PATENT-4,051,558
		US-PATENT-CLASS-156-645			US-PATENT-APPL-SN-610801			NASA-CASE-GSC-11839-2
		US-PATENT-CLASS-156-663			US-PATENT-CLASS-156-DIG.62			US-PATENT-APPL-SN-468614
		US-PATENT-4,046,619			US-PATENT-CLASS-156-601			US-PATENT-APPL-SN-657996
N77-32342*	c 32	NASA-CASE-NPO-13587-1			US-PATENT-CLASS-156-619			US-PATENT-CLASS-340-173LM
		US-PATENT-APPL-SN-589119			US-PATENT-CLASS-156-620			US-PATENT-CLASS-350-96R
		US-PATENT-CLASS-343-10	N78-10214*	c 24	US-PATENT-4,046,617			US-PATENT-CLASS-356-169
		US-PATENT-CLASS-343-100CL			NASA-CASE-LAR-11898-1	N78-10837*	c 71	US-PATENT-4,052,705
		US-PATENT-CLASS-343-5CM			US-PATENT-APPL-SN-723264			NASA-CASE-NPO-13802-1
		US-PATENT-CLASS-343-5DP			US-PATENT-CLASS-428-116			US-PATENT-APPL-SN-658133
		US-PATENT-4,045,795			US-PATENT-CLASS-428-138			US-PATENT-CLASS-264-23
N77-32413*	c 34	NASA-CASE-GSC-11998-1			US-PATENT-CLASS-428-73			US-PATENT-CLASS-264-345
		US-PATENT-APPL-SN-579989			US-PATENT-CLASS-428-902			US-PATENT-CLASS-65-DIG.4
		US-PATENT-CLASS-165-105	N78-10224*	c 25	US-PATENT-4,052,523			US-PATENT-CLASS-65-DIG.7
		US-PATENT-4,046,190			NASA-CASE-LEW-12137-1			US-PATENT-CLASS-65-102
N77-32454*	c 35	NASA-CASE-LEW-12050-1			US-PATENT-APPL-SN-672210			US-PATENT-CLASS-65-2
		US-PATENT-APPL-SN-629457			US-PATENT-CLASS-165-105			US-PATENT-CLASS-65-32
		US-PATENT-CLASS-136-202			US-PATENT-CLASS-431-158			US-PATENT-CLASS-65-48
		US-PATENT-CLASS-136-236R			US-PATENT-CLASS-431-352			US-PATENT-CLASS-65-87
		US-PATENT-CLASS-136-240			US-PATENT-CLASS-60-39.51R			US-PATENT-CLASS-73-505
		US-PATENT-4,045,247	N78-10225*	c 25	US-PATENT-4,052,144	N78-12390*	c 35	US-PATENT-4,052,181
N77-32455*	c 35	NASA-CASE-NPO-13792-1			NASA-CASE-MSC-14831-1			NASA-CASE-MSC-14773-1
		US-PATENT-APPL-SN-677351			US-PATENT-APPL-SN-685027			US-PATENT-APPL-SN-612966
		US-PATENT-CLASS-324-57H			US-PATENT-CLASS-204-292			US-PATENT-CLASS-137-197
		US-PATENT-CLASS-324-59			US-PATENT-CLASS-210-63R			US-PATENT-CLASS-210-222
		US-PATENT-4,045,728			US-PATENT-CLASS-210-71			US-PATENT-CLASS-55-100
N77-32456*	c 35	NASA-CASE-GSC-12143-1			US-PATENT-CLASS-552-472			US-PATENT-CLASS-55-26-9
		US-PATENT-APPL-SN-743249			US-PATENT-CLASS-427-229			US-PATENT-CLASS-55-3
		US-PATENT-CLASS-250-288			US-PATENT-4,052,302			US-PATENT-CLASS-62-50
		US-PATENT-CLASS-73-421.5R	N78-10375*	c 33	NASA-CASE-MSC-14916-1			US-PATENT-CLASS-62-514R
		US-PATENT-4,046,012			US-PATENT-APPL-SN-739914			US-PATENT-4,027,494
N77-32478*	c 36	NASA-CASE-LEW-12164-1			US-PATENT-CLASS-179-107R	N78-13320*	c 33	NASA-CASE-MFS-23274-1
		US-PATENT-APPL-SN-511334			US-PATENT-CLASS-179-175.1A			US-PATENT-APPL-SN-714158
		US-PATENT-CLASS-350-162SF			US-PATENT-CLASS-330-2			US-PATENT-CLASS-307-306
		US-PATENT-4,043,674			US-PATENT-4,049,930			US-PATENT-CLASS-338-32S
N77-32499*	c 37	NASA-CASE-MSC-19535-1	N78-10376*	c 33	NASA-CASE-MFS-23280-1			US-PATENT-CLASS-357-4
		US-PATENT-APPL-SN-641784			US-PATENT-APPL-SN-706425			US-PATENT-CLASS-357-5
		US-PATENT-CLASS-292-110			US-PATENT-CLASS-318-200			US-PATENT-CLASS-357-73
		US-PATENT-4,045,063			US-PATENT-CLASS-318-227			US-PATENT-4,055,847
N77-32500*	c 37	NASA-CASE-LEW-12527-1			US-PATENT-CLASS-318-230	N78-13400*	c 35	NASA-CASE-ARC-10639-1
		US-PATENT-APPL-SN-595747			US-PATENT-4,052,648			US-PATENT-APPL-SN-643043
		US-PATENT-CLASS-290-52	N78-10377*	c 33	NASA-CASE-NPO-13872-1			US-PATENT-CLASS-250-336
		US-PATENT-CLASS-308-195			US-PATENT-APPL-SN-742034			US-PATENT-CLASS-250-343
		US-PATENT-CLASS-308-72			US-PATENT-CLASS-363-57			US-PATENT-CLASS-250-351
		US-PATENT-4,046,434			US-PATENT-CLASS-363-89			US-PATENT-4,055,764
N77-32501*	c 37	NASA-CASE-LEW-12477-1			US-PATENT-4,052,659	N78-13436*	c 37	NASA-CASE-LEW-12083-1
		US-PATENT-APPL-SN-595745			NASA-CASE-MSC-14757-1			US-PATENT-APPL-SN-659882
		US-PATENT-CLASS-290-52	N78-10428*	c 35	US-PATENT-APPL-SN-625734			US-PATENT-CLASS-250-499
		US-PATENT-CLASS-308-195			US-PATENT-CLASS-141-197			US-PATENT-CLASS-313-61S
		US-PATENT-4,046,435			US-PATENT-CLASS-141-4			US-PATENT-CLASS-427-124
N77-32580*	c 44	NASA-CASE-NPO-13675-1			US-PATENT-CLASS-417-225			US-PATENT-CLASS-427-126
		US-PATENT-APPL-SN-658132			US-PATENT-CLASS-60-560			US-PATENT-CLASS-427-248E
		US-PATENT-CLASS-204-157.1R			US-PATENT-CLASS-60-574			US-PATENT-CLASS-427-250
		US-PATENT-CLASS-250-527			US-PATENT-4,051,877			US-PATENT-CLASS-427-255
		US-PATENT-4,045,315	N78-10429*	c 35	NASA-CASE-NPO-13772-1			US-PATENT-4,055,686
N77-32581*	c 44	NASA-CASE-NPO-13510-1			US-PATENT-APPL-SN-675351	N78-13526*	c 44	NASA-CASE-NPO-13482-1
		US-PATENT-APPL-SN-536786			US-PATENT-CLASS-250-310			US-PATENT-APPL-SN-495021
		US-PATENT-CLASS-126-263			US-PATENT-CLASS-250-398			US-PATENT-CLASS-136-89SJ
		US-PATENT-CLASS-165-107			US-PATENT-4,052,614			US-PATENT-CLASS-357-15
		US-PATENT-CLASS-165-2	N78-10467*	c 37	NASA-CASE-LEW-12321-1			US-PATENT-CLASS-357-16
		US-PATENT-CLASS-62-4			US-PATENT-APPL-SN-596641			US-PATENT-CLASS-357-30
		US-PATENT-4,044,821			US-PATENT-CLASS-123-122E			US-PATENT-4,053,918
N77-32582*	c 44	NASA-CASE-NPO-13810-1			US-PATENT-CLASS-123-41.33	N78-13874*	c 74	NASA-CASE-GSC-12088-1
		US-PATENT-APPL-SN-681096			US-PATENT-CLASS-137-104			US-PATENT-APPL-SN-648700
		US-PATENT-CLASS-126-270			US-PATENT-CLASS-415-180			US-PATENT-CLASS-356-103
		US-PATENT-CLASS-126-271			US-PATENT-CLASS-60-39.28R			US-PATENT-CLASS-356-104
		US-PATENT-CLASS-52-117			US-PATENT-CLASS-60-39.66			US-PATENT-4,053,229
		US-PATENT-CLASS-60-641			US-PATENT-4,041,697	N78-14096*	c 24	NASA-CASE-ARC-11042-1
		US-PATENT-4,044,753	N78-10468*	c 37	NASA-CASE-LEW-12313-1			US-PATENT-APPL-SN-734902
N77-32583*	c 44	NASA-CASE-NPO-13736-1			US-PATENT-APPL-SN-581751			US-PATENT-CLASS-252-8.1
		US-PATENT-APPL-SN-681017			US-PATENT-CLASS-416-135			US-PATENT-CLASS-60-836
		US-PATENT-CLASS-350-295			US-PATENT-CLASS-416-141			US-PATENT-4,061,579
		US-PATENT-CLASS-350-320			US-PATENT-CLASS-416-220R	N78-14104*	c 25	NASA-CASE-ARC-10991-1
		US-PATENT-CLASS-427-130			US-PATENT-CLASS-416-248			US-PATENT-APPL-SN-744574
		US-PATENT-CLASS-427-47			US-PATENT-4,047,840			US-PATENT-CLASS-204-180G
		US-PATENT-CLASS-52-2	N78-10493*	c 39	NASA-CASE-NPO-13731-1			US-PATENT-CLASS-204-299R
		US-PATENT-4,046,462			US-PATENT-APPL-SN-653682			US-PATENT-4,061,561
N77-32721*	c 54	NASA-CASE-ARC-10756-1			US-PATENT-CLASS-73-15.6	N78-14164*	c 27	NASA-CASE-NPO-13867-1
		US-PATENT-APPL-SN-436313			US-PATENT-CLASS-73-91			US-PATENT-APPL-SN-692284
		US-PATENT-CLASS-2-2.1A			US-PATENT-4,030,348			US-PATENT-CLASS-260-DIG.15
		US-PATENT-CLASS-214-1BC	N78-10529*	c 43	NASA-CASE-GSC-11976-1			US-PATENT-CLASS-427-164
		US-PATENT-CLASS-214-1CM			US-PATENT-APPL-SN-677352			US-PATENT-CLASS-428-411
		US-PATENT-4,046,262			US-PATENT-CLASS-324-58.5B			US-PATENT-CLASS-428-522
N77-32722*	c 54	NASA-CASE-MSC-14771-1			US-PATENT-4,052,666			US-PATENT-CLASS-428-922
		US-PATENT-APPL-SN-688854	N78-10554*	c 44	NASA-CASE-NPO-13734-1			US-PATENT-CLASS-96-87A
		US-PATENT-CLASS-165-166			US-PATENT-APPL-SN-680939			US-PATENT-4,061,834
		US-PATENT-CLASS-55-179			US-PATENT-CLASS-126-271	N78-14364*	c 35	NASA-CASE-ARC-11046-1
		US-PATENT-CLASS-55-269			US-PATENT-CLASS-237-1A			US-PATENT-APPL-SN-712419
		US-PATENT-4,046,529			US-PATENT-CLASS-350-293			US-PATENT-CLASS-340-27SS
N77-32731*	c 60	NASA-CASE-GSC-11839-3			US-PATENT-CLASS-350-299			US-PATENT-CLASS-73-180
		US-PATENT-APPL-SN-468614			US-PATENT-4,051,834			US-PATENT-4,061,029
		US-PATENT-APPL-SN-657997	N78-10686*	c 52	NASA-CASE-ARC-10916-1	N78-14380*	c 36	NASA-CASE-MFS-19259-1
		US-PATENT-CLASS-250-199			US-PATENT-APPL-SN-701448			US-PATENT-APPL-SN-732630

		US-PATENT-CLASS-250-571		US-PATENT-CLASS-428-428		US-PATENT-APPL-SN-759220
		US-PATENT-CLASS-356-159		US-PATENT-4,062,996		US-PATENT-CLASS-260-67
		US-PATENT-CLASS-356-160	N78-15880*	NASA-CASE-MFS-22409-2	c 74	US-PATENT-3,538,053
		US-PATENT-CLASS-356-199		US-PATENT-APPL-SN-445398		NASA-CASE-NPO-13764-1
		US-PATENT-4,061,427		US-PATENT-APPL-SN-636193		US-PATENT-APPL-SN-674194
N78-14452*	c 43	NASA-CASE-LEW-12217-1		US-PATENT-CLASS-250-272		US-PATENT-CLASS-128-92C
		US-PATENT-APPL-SN-763753		US-PATENT-CLASS-250-320		US-PATENT-CLASS-128-92G
		US-PATENT-CLASS-166-248		US-PATENT-4,063,088		US-PATENT-CLASS-260-42.17
		US-PATENT-CLASS-166-259	N78-16369*	NASA-CASE-NPO-13619-1	c 37	US-PATENT-CLASS-3-1.9
		US-PATENT-4,061,190		US-PATENT-APPL-SN-572990		US-PATENT-4,064,566
N78-14625*	c 44	NASA-CASE-LEW-12039-1		US-PATENT-CLASS-185-38		NASA-CASE-LEW-11981-1
		US-PATENT-APPL-SN-687822		US-PATENT-CLASS-74-81		US-PATENT-APPL-SN-672220
		US-PATENT-CLASS-320-15		US-PATENT-CLASS-74-83		US-PATENT-CLASS-313-22
		US-PATENT-CLASS-320-18		US-PATENT-4,062,245		US-PATENT-CLASS-62-376
		US-PATENT-CLASS-320-40	N78-16387*	NASA-CASE-LAR-11490-1	c 39	US-PATENT-CLASS-62-514R
		US-PATENT-CLASS-320-6		US-PATENT-APPL-SN-707125		US-PATENT-4,068,495
		US-PATENT-4,061,955		US-PATENT-CLASS-358-106		NASA-CASE-NPO-11978
N78-14773*	c 52	NASA-CASE-LEW-12668-1		US-PATENT-4,063,282		US-PATENT-APPL-SN-264288
		US-PATENT-APPL-SN-677353	N78-17031*	NASA-CASE-XNP-01458	c 04	US-PATENT-CLASS-313-175
		US-PATENT-CLASS-128-305		US-PATENT-APPL-SN-160093		US-PATENT-CLASS-313-176
		US-PATENT-4,061,146		US-PATENT-CLASS-235-70		US-PATENT-CLASS-313-180
N78-14784*	c 54	NASA-CASE-MSC-14632-1		US-PATENT-3,229,905		US-PATENT-CLASS-313-184
		US-PATENT-APPL-SN-571459	N78-17055*	NASA-CASE-LEW-12317-1	c 07	US-PATENT-CLASS-313-224
		US-PATENT-CLASS-204-180P		US-PATENT-APPL-SN-581750		US-PATENT-3,769,544
		US-PATENT-CLASS-204-301		US-PATENT-CLASS-60-204		NASA-CASE-XLE-06094
		US-PATENT-CLASS-210-192		US-PATENT-CLASS-60-226R		US-PATENT-APPL-SN-523632
		US-PATENT-CLASS-210-96M		US-PATENT-CLASS-60-271		US-PATENT-CLASS-315-22
		US-PATENT-CLASS-23-253A		US-PATENT-4,068,469		US-PATENT-3,423,627
		US-PATENT-4,061,570	N78-17056*	NASA-CASE-LEW-12390-1	c 07	NASA-CASE-MSC-11235
N78-14867*	c 71	NASA-CASE-LAR-12106-1		US-PATENT-APPL-SN-522109		US-PATENT-APPL-SN-698239
		US-PATENT-APPL-SN-740156		US-PATENT-CLASS-60-226R		US-PATENT-CLASS-307-270
		US-PATENT-CLASS-330-52		US-PATENT-CLASS-74-385		US-PATENT-CLASS-307-297
		US-PATENT-CLASS-73-646		US-PATENT-CLASS-74-417		US-PATENT-CLASS-323-4
		US-PATENT-4,061,041		US-PATENT-4,068,470		US-PATENT-CLASS-328-172
N78-14889*	c 74	NASA-CASE-KSC-11047-1	N78-17140*	NASA-CASE-HQN-10880-1	c 17	US-PATENT-3,573,504
		US-PATENT-APPL-SN-715485		US-PATENT-APPL-SN-595254		NASA-CASE-XGS-09186
		US-PATENT-CLASS-179-91R		US-PATENT-CLASS-325-118		US-PATENT-APPL-SN-669911
		US-PATENT-CLASS-250-199		US-PATENT-CLASS-325-66		US-PATENT-CLASS-323-18
		US-PATENT-CLASS-358-142		US-PATENT-CLASS-343-112R		US-PATENT-3,475,675
		US-PATENT-4,061,577		US-PATENT-CLASS-343-225		NASA-CASE-GSC-10135
N78-15180*	c 24	NASA-CASE-ARC-10913-1		US-PATENT-CLASS-362-269		US-PATENT-APPL-SN-764823
		US-PATENT-APPL-SN-698646		US-PATENT-4,067,015		US-PATENT-CLASS-307-53
		US-PATENT-CLASS-106-15FP	N78-17149*	NASA-CASE-LAR-11898-2	c 24	US-PATENT-CLASS-307-69
		US-PATENT-CLASS-260-2.5N		US-PATENT-APPL-SN-723264		US-PATENT-CLASS-320-53
		US-PATENT-CLASS-260-2.5R		US-PATENT-APPL-SN-799024		US-PATENT-CLASS-323-19
		US-PATENT-CLASS-428-117		US-PATENT-CLASS-156-245		US-PATENT-3,600,599
		US-PATENT-CLASS-428-290		US-PATENT-CLASS-156-285		NASA-CASE-LEW-12508-1
		US-PATENT-CLASS-428-71		US-PATENT-CLASS-156-289		US-PATENT-APPL-SN-746580
		US-PATENT-CLASS-428-73		US-PATENT-CLASS-428-116		US-PATENT-CLASS-62-3
		US-PATENT-CLASS-428-920		US-PATENT-CLASS-428-902		US-PATENT-4,069,028
		US-PATENT-4,061,812		US-PATENT-4,063,981		NASA-CASE-ARC-10198
N78-15210*	c 25	NASA-CASE-LAR-12046-1	N78-17150*	NASA-CASE-LAR-12019-1	c 24	US-PATENT-APPL-SN-42088
		US-PATENT-APPL-SN-755310		US-PATENT-APPL-SN-792067		US-PATENT-CLASS-165-105
		US-PATENT-CLASS-23-230PC		US-PATENT-CLASS-156-154		US-PATENT-CLASS-165-134
		US-PATENT-CLASS-23-232E		US-PATENT-CLASS-156-264		US-PATENT-3,777,811
		US-PATENT-CLASS-23-232R		US-PATENT-CLASS-156-285		NASA-CASE-ARC-10199
		US-PATENT-CLASS-73-23		US-PATENT-CLASS-156-286		US-PATENT-APPL-SN-824628
		US-PATENT-4,062,650		US-PATENT-CLASS-156-289		US-PATENT-CLASS-165-105
N78-15276*	c 27	NASA-CASE-LEW-12053-1		US-PATENT-CLASS-156-300		US-PATENT-CLASS-165-32
		US-PATENT-APPL-SN-513613		US-PATENT-CLASS-156-306		US-PATENT-CLASS-165-96
		US-PATENT-CLASS-260-2R		US-PATENT-CLASS-156-311		US-PATENT-CLASS-2-2.1
		US-PATENT-CLASS-526-193		US-PATENT-CLASS-264-157		US-PATENT-3,543,839
		US-PATENT-CLASS-526-225		US-PATENT-CLASS-264-90		NASA-CASE-MFS-23194-1
		US-PATENT-CLASS-544-193		US-PATENT-CLASS-428-294		US-PATENT-APPL-SN-629458
		US-PATENT-4,061,856		US-PATENT-CLASS-428-302		US-PATENT-CLASS-350-3.5
N78-15323*	c 32	NASA-CASE-NPO-13836-1		US-PATENT-4,065,340		US-PATENT-4,065,202
		US-PATENT-APPL-SN-699002	N78-17205*	NASA-CASE-LAR-12181-1	c 27	NASA-CASE-MSC-11242
		US-PATENT-CLASS-178-69.1		US-PATENT-APPL-SN-532784		US-PATENT-APPL-SN-636796
		US-PATENT-CLASS-325-58		US-PATENT-APPL-SN-734901		US-PATENT-CLASS-73-67.2
		US-PATENT-CLASS-325-63		US-PATENT-CLASS-156-309		US-PATENT-3,492,858
		US-PATENT-CLASS-343-179		US-PATENT-CLASS-156-331		NASA-CASE-NPO-11150
		US-PATENT-4,061,974		US-PATENT-CLASS-260-30.4N		US-PATENT-APPL-SN-858950
N78-15461*	c 35	NASA-CASE-NPO-13808-1		US-PATENT-CLASS-260-32.2R		US-PATENT-CLASS-338-100
		US-PATENT-APPL-SN-675328		US-PATENT-CLASS-260-32.6NT		US-PATENT-CLASS-338-36
		US-PATENT-CLASS-250-322		US-PATENT-CLASS-260-33.4R		US-PATENT-CLASS-338-99
		US-PATENT-CLASS-250-416TV		US-PATENT-4,065,345		US-PATENT-3,641,470
		US-PATENT-4,063,092	N78-17206*	NASA-CASE-LAR-11902-1	c 27	NASA-CASE-MFS-22597
N78-15512*	c 39	NASA-CASE-LAR-12016-1		US-PATENT-APPL-SN-672695		US-PATENT-APPL-SN-395895
		US-PATENT-APPL-SN-754066		US-PATENT-CLASS-106-43		US-PATENT-CLASS-315-108
		US-PATENT-CLASS-73-579		US-PATENT-CLASS-60-200A		US-PATENT-CLASS-331-94.5G
		US-PATENT-CLASS-73-630		US-PATENT-CLASS-75-229		US-PATENT-CLASS-331-94.5T
		US-PATENT-CLASS-73-88F		US-PATENT-CLASS-75-239		US-PATENT-3,882,417
		US-PATENT-4,062,227		US-PATENT-CLASS-75-241		NASA-CASE-MSC-19666-1
N78-15560*	c 44	NASA-CASE-LAR-12009-1		US-PATENT-4,067,742		US-PATENT-APPL-SN-721150
		US-PATENT-APPL-SN-717320	N78-17213*	NASA-CASE-MSC-14331-2	c 27	US-PATENT-CLASS-118-50
		US-PATENT-CLASS-126-270		US-PATENT-APPL-SN-657907		US-PATENT-CLASS-118-500
		US-PATENT-CLASS-126-400		US-PATENT-CLASS-260-75NH		US-PATENT-CLASS-248-36.3
		US-PATENT-CLASS-237-1A		US-PATENT-CLASS-260-75NK		US-PATENT-CLASS-269-21
		US-PATENT-4,062,347		US-PATENT-CLASS-260-75NT		US-PATENT-CLASS-279-3
N78-15879*	c 74	NASA-CASE-LAR-10385-3		US-PATENT-CLASS-260-77.5AM		US-PATENT-CLASS-51-235
		US-PATENT-APPL-SN-370999		US-PATENT-CLASS-260-77.5AN		US-PATENT-4,066,039
		US-PATENT-APPL-SN-38816		US-PATENT-CLASS-260-77.5AP		NASA-CASE-LEW-12916-1
		US-PATENT-CLASS-350-1		US-PATENT-CLASS-260-77.5AT		US-PATENT-APPL-SN-583056
		US-PATENT-CLASS-428-334		US-PATENT-CLASS-260-77.55P		US-PATENT-CLASS-60-261
		US-PATENT-CLASS-428-336		US-PATENT-4,069,212		US-PATENT-CLASS-60-262
		US-PATENT-CLASS-428-426	N78-17214*	NASA-CASE-NPO-10557	c 27	US-PATENT-CLASS-60-271

N78-17385*	c 37	US-PATENT-4,064,692 NASA-CASE-WOO-00625 US-PATENT-APPL-SN-362278 US-PATENT-CLASS-74-800 US-PATENT-3,306,134	N78-18083*	c 09	US-PATENT-CLASS-60-262 US-PATENT-4,069,661 NASA-CASE-ARC-10903-1 US-PATENT-APPL-SN-623536 US-PATENT-CLASS-35-12N US-PATENT-CLASS-358-104 US-PATENT-4,055,004	N78-24275*	c 20	NASA-CASE-LAR-12018-1 US-PATENT-APPL-SN-678520 US-PATENT-CLASS-102-39 US-PATENT-CLASS-102-49.7 US-PATENT-CLASS-102-70R US-PATENT-CLASS-285-192 US-PATENT-CLASS-60-39.82E US-PATENT-4,080,901
N78-17386*	c 37	NASA-CASE-NPO-10151 US-PATENT-APPL-SN-365244 US-PATENT-CLASS-328-233 US-PATENT-3,387,218	N78-18182*	c 26	NASA-CASE-LEW-12095-1 US-PATENT-APPL-SN-651009 US-PATENT-CLASS-75-124 US-PATENT-CLASS-75-126D US-PATENT-CLASS-75-126F US-PATENT-CLASS-75-128G US-PATENT-CLASS-75-128T US-PATENT-4,055,416	N78-24290*	c 24	NASA-CASE-MFS-23506-1 US-PATENT-APPL-SN-760809 US-PATENT-CLASS-260-2.5AK US-PATENT-CLASS-260-2.5AP US-PATENT-CLASS-260-2.5B US-PATENT-CLASS-260-2.5BE US-PATENT-CLASS-260-2.5EP US-PATENT-CLASS-260-2.5FP US-PATENT-CLASS-260-29.1R US-PATENT-CLASS-260-37EP US-PATENT-CLASS-427-427 US-PATENT-4,077,921
N78-17395*	c 38	NASA-CASE-NPO-13283 US-PATENT-APPL-SN-401225 US-PATENT-CLASS-235-151.3 US-PATENT-CLASS-235-156 US-PATENT-CLASS-235-181 US-PATENT-CLASS-250-572 US-PATENT-CLASS-356-237 US-PATENT-3,908,118	N78-18183*	c 26	NASA-CASE-LEW-12905-1 US-PATENT-APPL-SN-684171 US-PATENT-CLASS-148-32 US-PATENT-CLASS-148-32.5 US-PATENT-CLASS-75-170 US-PATENT-4,055,447	N78-24333*	c 26	NASA-CASE-MS-19693-1 US-PATENT-APPL-SN-708771 US-PATENT-CLASS-148-12.7A US-PATENT-CLASS-148-125 US-PATENT-4,077,813
N78-17396*	c 38	NASA-CASE-NPO-13282 US-PATENT-APPL-SN-401224 US-PATENT-CLASS-235-151.3 US-PATENT-CLASS-235-156 US-PATENT-CLASS-250-563 US-PATENT-CLASS-250-572 US-PATENT-CLASS-356-165 US-PATENT-CLASS-356-237 US-PATENT-3,909,602	N78-18308*	c 33	NASA-CASE-FRC-10090-1 US-PATENT-APPL-SN-737974 US-PATENT-CLASS-307-265 US-PATENT-CLASS-307-350 US-PATENT-CLASS-307-360 US-PATENT-CLASS-328-150 US-PATENT-4,055,777	N78-24365*	c 28	NASA-CASE-LEW-12081-1 US-PATENT-APPL-SN-676432 US-PATENT-CLASS-250-492R US-PATENT-CLASS-34-15 US-PATENT-CLASS-423-648R US-PATENT-CLASS-62-100 US-PATENT-CLASS-62-48 US-PATENT-4,077,788
N78-17460*	c 44	NASA-CASE-NPO-13579-1 US-PATENT-APPL-SN-598969 US-PATENT-CLASS-126-263 US-PATENT-CLASS-126-271 US-PATENT-CLASS-165-2 US-PATENT-CLASS-237-1A US-PATENT-CLASS-60-641 US-PATENT-CLASS-62-4 US-PATENT-4,065,053	N78-18355*	c 34	NASA-CASE-LEW-12554-1 US-PATENT-APPL-SN-686449 US-PATENT-CLASS-427-34 US-PATENT-CLASS-427-405 US-PATENT-CLASS-427-419A US-PATENT-CLASS-427-423 US-PATENT-CLASS-428-633 US-PATENT-CLASS-428-652 US-PATENT-CLASS-428-667 US-PATENT-4,055,705	N78-24391*	c 32	NASA-CASE-NPO-13886-1 US-PATENT-APPL-SN-730045 US-PATENT-CLASS-307-151 US-PATENT-CLASS-343-700MS US-PATENT-CLASS-361-395 US-PATENT-4,079,268
N78-17675*	c 54	NASA-CASE-ARC-11101-1 US-PATENT-APPL-SN-753976 US-PATENT-CLASS-2-2.1A US-PATENT-CLASS-36-119 US-PATENT-CLASS-36-92 US-PATENT-4,064,642	N78-18390*	c 35	NASA-CASE-MFS-23008-1 US-PATENT-APPL-SN-665734 US-PATENT-CLASS-73-DIG.11 US-PATENT-CLASS-73-28 US-PATENT-CLASS-73-432PS US-PATENT-CLASS-73-432R US-PATENT-4,055,089	N78-24515*	c 35	NASA-CASE-LAR-11201-1 US-PATENT-APPL-SN-788705 US-PATENT-CLASS-416-144 US-PATENT-CLASS-416-61 US-PATENT-CLASS-73-456 US-PATENT-CLASS-73-756 US-PATENT-4,082,001
N78-17676*	c 54	NASA-CASE-MFS-23311-1 US-PATENT-APPL-SN-708800 US-PATENT-CLASS-214-1CM US-PATENT-CLASS-9-12.5 US-PATENT-CLASS-74-515E US-PATENT-4,068,763	N78-18391*	c 35	NASA-CASE-NPO-13687-1 US-PATENT-APPL-SN-641803 US-PATENT-CLASS-356-106S US-PATENT-CLASS-356-110 US-PATENT-4,053,231	N78-24544*	c 37	NASA-CASE-MS-16000-1 US-PATENT-APPL-SN-739915 US-PATENT-CLASS-29-156.8R US-PATENT-CLASS-29-23.5 US-PATENT-CLASS-29-244 US-PATENT-CLASS-29-252 US-PATENT-4,078,290
N78-17677*	c 54	NASA-CASE-MS-13054 US-PATENT-APPL-SN-585217 US-PATENT-CLASS-2-161 US-PATENT-3,490,074	N78-18395* #	c 35	NASA-CASE-NPO-13999-1 US-PATENT-APPL-SN-858596 US-PATENT-CLASS-13801-1 US-PATENT-APPL-SN-708796 US-PATENT-CLASS-330-4 US-PATENT-CLASS-332-7.5 US-PATENT-4,055,810	N78-24545*	c 37	NASA-CASE-LEW-12785-1 US-PATENT-APPL-SN-739909 US-PATENT-CLASS-60-39.28R US-PATENT-4,078,378
N78-17678*	c 54	NASA-CASE-XMS-04670 US-PATENT-APPL-SN-535189 US-PATENT-CLASS-2-2.1 US-PATENT-3,488,771	N78-18410*	c 36	NASA-CASE-NPO-10954-1 US-PATENT-APPL-SN-529884 US-PATENT-CLASS-2-2.1 US-PATENT-3,514,785	N78-24608*	c 44	NASA-CASE-GSC-12030-1 US-PATENT-APPL-SN-710035 US-PATENT-CLASS-308-10 US-PATENT-CLASS-310-153 US-PATENT-CLASS-310-154 US-PATENT-CLASS-310-178 US-PATENT-CLASS-310-269 US-PATENT-4,077,678
N78-17679*	c 54	NASA-CASE-XMS-04928 US-PATENT-APPL-SN-584914 US-PATENT-CLASS-98-1 US-PATENT-3,487,765	N78-18761*	c 54	NASA-CASE-GSC-12044-1 US-PATENT-APPL-SN-631341 US-PATENT-CLASS-340-347DD US-PATENT-4,069,478	N78-24609*	c 44	NASA-CASE-GSC-12022-2 US-PATENT-APPL-SN-693074 US-PATENT-CLASS-136-895G US-PATENT-CLASS-148-174 US-PATENT-CLASS-250-572 US-PATENT-CLASS-357-30 US-PATENT-CLASS-357-59 US-PATENT-CLASS-427-113 US-PATENT-CLASS-427-248J US-PATENT-CLASS-427-249 US-PATENT-CLASS-427-86 US-PATENT-4,077,818
N78-17680*	c 54	NASA-CASE-XMS-09653 US-PATENT-APPL-SN-538863 US-PATENT-CLASS-2-6 US-PATENT-3,359,568	N78-18905*	c 74	NASA-CASE-NPO-13801-1 US-PATENT-APPL-SN-858596 US-PATENT-CLASS-313-442 US-PATENT-CLASS-313-94 US-PATENT-4,070,574	N78-24950*	c 76	NASA-CASE-MFS-23315-1 US-PATENT-APPL-SN-724874 US-PATENT-CLASS-250-277CH US-PATENT-CLASS-250-280 US-PATENT-4,078,175
N78-17691*	c 60	NASA-CASE-GSC-12044-1 US-PATENT-APPL-SN-631341 US-PATENT-CLASS-340-347DD US-PATENT-4,069,478	N78-19302*	c 27	NASA-CASE-NPO-13890-1 US-PATENT-APPL-SN-633876 US-PATENT-CLASS-106-39.5 US-PATENT-CLASS-106-65 US-PATENT-CLASS-106-73.5 US-PATENT-4,072,532	N78-25089*	c 07	NASA-CASE-LEW-12452-1 US-PATENT-APPL-SN-695513 US-PATENT-CLASS-60-226R US-PATENT-CLASS-60-39.52 US-PATENT-4,083,181
N78-17865*	c 74	NASA-CASE-MS-12618-1 US-PATENT-APPL-SN-651007 US-PATENT-CLASS-350-159 US-PATENT-CLASS-358-225 US-PATENT-CLASS-358-41 US-PATENT-CLASS-358-55 US-PATENT-4,067,043	N78-19465*	c 35	NASA-CASE-ARC-10896-1 US-PATENT-APPL-SN-615030 US-PATENT-CLASS-73-23 US-PATENT-4,055,072	N78-25090*	c 07	NASA-CASE-LEW-11855-1 US-PATENT-APPL-SN-672222 US-PATENT-CLASS-277-134 US-PATENT-CLASS-277-25 US-PATENT-4,084,825
N78-17866*	c 74	NASA-CASE-LAR-11711-1 US-PATENT-APPL-SN-674195 US-PATENT-CLASS-250-201 US-PATENT-CLASS-350-204 US-PATENT-CLASS-356-28 US-PATENT-4,063,814	N78-19466*	c 35	NASA-CASE-ARC-10820-1 US-PATENT-APPL-SN-820675 US-PATENT-CLASS-119-51.11 US-PATENT-CLASS-119-72.5 US-PATENT-CLASS-137-624.11 US-PATENT-4,055,147	N78-25119*	c 15	NASA-CASE-MFS-23564-1 US-PATENT-APPL-SN-739908 US-PATENT-CLASS-244-161 US-PATENT-CLASS-244-167
N78-17867*	c 74	NASA-CASE-NPO-13759-1 US-PATENT-APPL-SN-718266 US-PATENT-CLASS-250-344 US-PATENT-CLASS-356-204 US-PATENT-CLASS-356-246 US-PATENT-4,067,653	N78-19920*	c 73	NASA-CASE-HQN-10841-1 US-PATENT-APPL-SN-560891 US-PATENT-CLASS-176-39 US-PATENT-CLASS-330-4.3 US-PATENT-4,075,057			
N78-18066*	c 07	NASA-CASE-LEW-12389-2 US-PATENT-APPL-SN-628221 US-PATENT-CLASS-244-53A US-PATENT-CLASS-244-54 US-PATENT-CLASS-60-226R US-PATENT-CLASS-60-39.31 US-PATENT-4,055,041						
N78-18067*	c 07	NASA-CASE-LEW-12917-1 US-PATENT-APPL-SN-583055 US-PATENT-CLASS-60-204						



N78-25148*	c 25	US-PATENT-4,083,520 NASA-CASE-LEW-12465-1 US-PATENT-APPL-SN-692413 US-PATENT-CLASS-250-423P US-PATENT-CLASS-250-528 US-PATENT-CLASS-250-531 US-PATENT-CLASS-55-100 US-PATENT-CLASS-55-101 US-PATENT-CLASS-55-2 US-PATENT-4,085,332	N78-27176* #	c 20	NASA-CASE-MFS-23642-2 US-PATENT-APPL-SN-923758	N78-28594*	c 44	US-PATENT-4,088,951 NASA-CASE-NPO-13821-1 US-PATENT-APPL-SN-688852 US-PATENT-CLASS-343-113R US-PATENT-CLASS-343-119 US-PATENT-CLASS-343-16M US-PATENT-4,088,999
N78-25256*	c 31	NASA-CASE-NPO-13839-1 US-PATENT-APPL-SN-712981 US-PATENT-CLASS-250-332 US-PATENT-CLASS-313-22 US-PATENT-CLASS-62-514R US-PATENT-4,077,231	N78-27180*	c 24	NASA-CASE-ARC-11043-1 US-PATENT-APPL-SN-753964 US-PATENT-CLASS-260-33.6EP US-PATENT-CLASS-260-33.6P US-PATENT-CLASS-260-33.8EP US-PATENT-CLASS-260-33.8UA US-PATENT-CLASS-260-37EP US-PATENT-CLASS-260-42.43 US-PATENT-CLASS-260-45.7R US-PATENT-CLASS-260-45.75W US-PATENT-CLASS-260-45.85N US-PATENT-CLASS-260-45.9R US-PATENT-CLASS-427-386 US-PATENT-CLASS-427-388A US-PATENT-CLASS-428-313 US-PATENT-CLASS-428-332 US-PATENT-CLASS-428-921 US-PATENT-4,088,806	N78-28913*	c 73	NASA-CASE-NPO-13114-2 US-PATENT-APPL-SN-294738 US-PATENT-APPL-SN-634214 US-PATENT-CLASS-176-22 US-PATENT-CLASS-176-33 US-PATENT-CLASS-176-39 US-PATENT-4,085,004
N78-25319*	c 33	NASA-CASE-NPO-13909-1 US-PATENT-APPL-SN-744477 US-PATENT-CLASS-324-57DE US-PATENT-CLASS-324-57SS US-PATENT-CLASS-324-58A US-PATENT-4,084,132	N78-27184* #	c 24	NASA-CASE-ARC-11040-2 US-PATENT-APPL-SN-920878 US-PATENT-4,088,806	N78-29421*	c 35	NASA-CASE-NPO-11954-1 US-PATENT-APPL-SN-229287 US-PATENT-CLASS-179-100.2CH US-PATENT-CLASS-340-174.1M US-PATENT-CLASS-340-174YC US-PATENT-CLASS-350-151 US-PATENT-3,775,570
N78-25350*	c 34	NASA-CASE-MSC-19568-1 US-PATENT-APPL-SN-681000 US-PATENT-CLASS-428-913 US-PATENT-CLASS-428-93 US-PATENT-CLASS-428-94 US-PATENT-CLASS-428-95 US-PATENT-CLASS-428-96 US-PATENT-CLASS-428-97 US-PATENT-CLASS-49-DIG.1 US-PATENT-CLASS-49-479 US-PATENT-CLASS-49-485 US-PATENT-4,078,110	N78-27226*	c 25	NASA-CASE-LEW-10518-3 US-PATENT-APPL-SN-394207 US-PATENT-CLASS-176-11 US-PATENT-CLASS-176-16 US-PATENT-CLASS-250-400 US-PATENT-CLASS-250-429 US-PATENT-CLASS-250-492B US-PATENT-4,088,532	N78-31229*	c 09	NASA-CASE-MSC-19706-1 US-PATENT-APPL-SN-767911 US-PATENT-CLASS-239-265.25 US-PATENT-CLASS-73-147 US-PATENT-4,091,665
N78-25351*	c 34	NASA-CASE-LEW-12718-1 US-PATENT-APPL-SN-779428 US-PATENT-CLASS-137-484.2 US-PATENT-CLASS-137-501 US-PATENT-CLASS-137-505.16 US-PATENT-4,084,612	N78-27326*	c 33	NASA-CASE-MFS-23312-2 US-PATENT-APPL-SN-699012 US-PATENT-CLASS-29-571 US-PATENT-CLASS-29-578 US-PATENT-CLASS-357-91 US-PATENT-4,087,902	N78-31232*	c 27	NASA-CASE-ARC-11008-1 US-PATENT-APPL-SN-708951 US-PATENT-CLASS-260-2.5N US-PATENT-CLASS-260-47CP US-PATENT-CLASS-260-63N US-PATENT-CLASS-260-78.41 US-PATENT-4,092,274
N78-25391*	c 35	NASA-CASE-NPO-13948-1 US-PATENT-APPL-SN-752748 US-PATENT-CLASS-204-195W US-PATENT-CLASS-73-336.5 US-PATENT-4,083,765	N78-27357*	c 34	NASA-CASE-LEW-11877-1 US-PATENT-APPL-SN-708660 US-PATENT-CLASS-431-10 US-PATENT-CLASS-431-328 US-PATENT-CLASS-431-7 US-PATENT-CLASS-60-39.65 US-PATENT-CLASS-60-39.69R US-PATENT-4,087,962	N78-31233*	c 27	NASA-CASE-ARC-11057-1 US-PATENT-APPL-SN-807762 US-PATENT-CLASS-350-165 US-PATENT-CLASS-350-175NG US-PATENT-CLASS-427-164 US-PATENT-CLASS-427-40 US-PATENT-CLASS-427-41 US-PATENT-CLASS-428-411 US-PATENT-CLASS-428-412 US-PATENT-CLASS-428-422 US-PATENT-CLASS-428-447 US-PATENT-CLASS-428-515 US-PATENT-CLASS-428-523 US-PATENT-CLASS-428-538 US-PATENT-4,091,166
N78-25426*	c 37	NASA-CASE-MSC-12731-1 US-PATENT-APPL-SN-690816 US-PATENT-CLASS-137-505.25 US-PATENT-CLASS-137-625.3 US-PATENT-CLASS-137-625.38 US-PATENT-4,083,380	N78-27384*	c 35	NASA-CASE-LAR-11973-3 US-PATENT-APPL-SN-821681 US-PATENT-CLASS-73-170A US-PATENT-CLASS-73-425.4R US-PATENT-CLASS-73-61R US-PATENT-4,089,209	N78-31255*	c 28	NASA-CASE-NPO-14103-1 US-PATENT-APPL-SN-797210 US-PATENT-CLASS-149-105 US-PATENT-CLASS-149-111 US-PATENT-CLASS-149-19.4 US-PATENT-CLASS-149-19.8 US-PATENT-CLASS-149-88 US-PATENT-CLASS-149-92 US-PATENT-CLASS-149-93 US-PATENT-4,092,188
N78-25527*	c 44	NASA-CASE-LEW-12552-1 US-PATENT-APPL-SN-770869 US-PATENT-CLASS-136-89CC US-PATENT-CLASS-29-572 US-PATENT-CLASS-357-30 US-PATENT-CLASS-357-65 US-PATENT-CLASS-357-67 US-PATENT-CLASS-427-261 US-PATENT-CLASS-427-75 US-PATENT-4,082,569	N78-27402*	c 36	NASA-CASE-NPO-13945-1 US-PATENT-APPL-SN-704180 US-PATENT-CLASS-331-94.5G US-PATENT-CLASS-331-94.5P US-PATENT-CLASS-331-94.5PE US-PATENT-4,088,965	N78-31321*	c 32	NASA-CASE-NPO-14022-1 US-PATENT-APPL-SN-780728 US-PATENT-CLASS-343-781CA US-PATENT-CLASS-343-782 US-PATENT-CLASS-343-837 US-PATENT-4,092,648
N78-25528*	c 44	NASA-CASE-LEW-12185-1 US-PATENT-APPL-SN-746269 US-PATENT-CLASS-136-89H US-PATENT-CLASS-136-89P US-PATENT-CLASS-29-572 US-PATENT-CLASS-29-628 US-PATENT-4,083,097	N78-27423*	c 37	NASA-CASE-MSC-16270-1 US-PATENT-APPL-SN-837260 US-PATENT-CLASS-269-21 US-PATENT-CLASS-269-266 US-PATENT-4,088,312	N78-31426*	c 37	NASA-CASE-GSC-11883-2 US-PATENT-APPL-SN-596787 US-PATENT-APPL-SN-747675 US-PATENT-CLASS-60-527 US-PATENT-CLASS-74-100R US-PATENT-4,010,455 US-PATENT-4,092,874
N78-25529*	c 44	NASA-CASE-LEW-12541-1 US-PATENT-APPL-SN-790637 US-PATENT-CLASS-136-89CC US-PATENT-CLASS-136-89H US-PATENT-CLASS-136-89P US-PATENT-CLASS-156-633 US-PATENT-CLASS-29-572 US-PATENT-4,084,985	N78-27424*	c 37	NASA-CASE-LAR-11889-2 US-PATENT-APPL-SN-662182 US-PATENT-APPL-SN-807703 US-PATENT-CLASS-308-10 US-PATENT-CLASS-73-178R US-PATENT-4,088,018	N78-31525*	c 44	NASA-CASE-NPO-13581-2 US-PATENT-APPL-SN-590975 US-PATENT-APPL-SN-811815 US-PATENT-CLASS-126-271 US-PATENT-CLASS-237-1A US-PATENT-4,091,800
N78-25530*	c 44	NASA-CASE-LEW-12649-1 US-PATENT-APPL-SN-720521 US-PATENT-CLASS-427-385B US-PATENT-CLASS-427-385C US-PATENT-CLASS-429-254 US-PATENT-4,085,241	N78-27425*	c 37	NASA-CASE-ARC-10981-1 US-PATENT-APPL-SN-738218 US-PATENT-CLASS-248-178 US-PATENT-CLASS-248-186 US-PATENT-4,088,291	N78-31526*	c 44	NASA-CASE-NPO-13813-1 NASA-CASE-NPO-13914-1 US-PATENT-APPL-SN-765139 US-PATENT-CLASS-126-270 US-PATENT-CLASS-126-271 US-PATENT-CLASS-350-299 US-PATENT-4,091,798
N78-25531*	c 44	NASA-CASE-MFS-23270-1 US-PATENT-APPL-SN-744573 US-PATENT-CLASS-320-13 US-PATENT-CLASS-320-15 US-PATENT-CLASS-320-32 US-PATENT-CLASS-320-39 US-PATENT-CLASS-320-9 US-PATENT-4,084,124	N78-27515*	c 44	NASA-CASE-NPO-12148-1 US-PATENT-APPL-SN-709415 US-PATENT-CLASS-136-89P US-PATENT-4,089,705	N78-31527*	c 44	NASA-CASE-NPO-13937-1 US-PATENT-APPL-SN-718137 US-PATENT-CLASS-201-17 US-PATENT-CLASS-44-1R US-PATENT-CLASS-44-2 US-PATENT-4,081,250
N78-27121*	c 07	NASA-CASE-LAR-11919-1 US-PATENT-APPL-SN-672221 US-PATENT-CLASS-239-265.25 US-PATENT-CLASS-239-265.33 US-PATENT-CLASS-60-230 US-PATENT-4,088,270	N78-27733*	c 51	NASA-CASE-ARC-10917-1 US-PATENT-APPL-SN-672223 US-PATENT-CLASS-119-29 US-PATENT-4,088,094	N78-31735*	c 54	NASA-CASE-ARC-11058-1 US-PATENT-APPL-SN-753965 US-PATENT-CLASS-2.2.1A US-PATENT-CLASS-285-235 US-PATENT-4,091,464
			N78-27904*	c 74	NASA-CASE-LAR-11869-1 US-PATENT-APPL-SN-740155 US-PATENT-CLASS-356-120 US-PATENT-CLASS-356-167 US-PATENT-4,088,408	N78-31736*	c 54	NASA-CASE-ARC-11100-1
			N78-27913*	c 75	NASA-CASE-MFS-22906-1 US-PATENT-APPL-SN-684807 US-PATENT-CLASS-29-81C US-PATENT-CLASS-313-231.3 US-PATENT-CLASS-315-111.2 US-PATENT-4,088,926			

				US-PATENT-APPL-SN-780569	N78-32340*	c 33	NASA-CASE-GSC-12146-1		US-PATENT-CLASS-123-3
				US-PATENT-CLASS-2-2.1A			US-PATENT-APPL-SN-782480		US-PATENT-4,112,875
				US-PATENT-4,091,465			US-PATENT-CLASS-325-159	N78-33913*	c 74
N78-32086*	c 05			NASA-CASE-LAR-11932-1			US-PATENT-CLASS-325-187		NASA-CASE-NPO-10233-1
				US-PATENT-APPL-SN-718244			US-PATENT-CLASS-333-17R		US-PATENT-APPL-SN-716885
				US-PATENT-CLASS-244-218			US-PATENT-CLASS-333-81R		US-PATENT-CLASS-250-218
				US-PATENT-CLASS-244-45A			US-PATENT-4,092,617		US-PATENT-CLASS-250-227
				US-PATENT-CLASS-244-46	N78-32341*	c 33	NASA-CASE-LEW-12791-1		US-PATENT-CLASS-250-239
				US-PATENT-4,093,156			US-PATENT-APPL-SN-801432		US-PATENT-CLASS-356-208
N78-32168* #	c 15			NASA-CASE-LAR-12264-1			US-PATENT-CLASS-363-101	N78-10057*	c 07
				US-PATENT-APPL-SN-943087			US-PATENT-CLASS-363-16		NASA-CASE-LEW-12232-1
				NASA-CASE-NPO-11458A			US-PATENT-CLASS-363-60		US-PATENT-APPL-SN-776029
N78-32179*	c 20			US-PATENT-APPL-SN-48621			US-PATENT-4,092,712		US-PATENT-CLASS-415-115
				US-PATENT-CLASS-102-103	N78-32395*	c 35	NASA-CASE-ARC-11036-1		US-PATENT-CLASS-415-116
				US-PATENT-CLASS-149-19.4			US-PATENT-APPL-SN-740457		US-PATENT-CLASS-60-39.14
				US-PATENT-CLASS-149-42			US-PATENT-CLASS-33-366	N78-10162*	c 25
				US-PATENT-CLASS-149-43			US-PATENT-4,094,073		NASA-CASE-ARC-11053-1
				US-PATENT-CLASS-149-44	N78-32396*	c 35	NASA-CASE-MFS-23363-1		US-PATENT-APPL-SN-814378
				US-PATENT-CLASS-149-76			US-PATENT-APPL-SN-730046		US-PATENT-CLASS-23-252R
				US-PATENT-CLASS-149-83			US-PATENT-CLASS-324-173		US-PATENT-CLASS-423-581
				US-PATENT-CLASS-149-85			US-PATENT-CLASS-324-207		US-PATENT-4,101,644
				US-PATENT-4,116,131	N78-32397*	c 35	NASA-CASE-LAR-11617-2	N78-10163*	c 25
N78-32229*	c 26			NASA-CASE-ARC-10992-1			US-PATENT-APPL-SN-547072		NASA-CASE-NPO-13274-1
				US-PATENT-APPL-SN-760810			US-PATENT-APPL-SN-668771		US-PATENT-APPL-SN-406296
				US-PATENT-CLASS-204-164			US-PATENT-CLASS-324-249		US-PATENT-CLASS-204-180S
				US-PATENT-CLASS-204-175			US-PATENT-CLASS-324-249		US-PATENT-CLASS-204-299
				US-PATENT-CLASS-423-582			US-PATENT-4,088,954	N78-10262*	c 32
				US-PATENT-CLASS-423-583			US-PATENT-4,088,954		NASA-CASE-NPO-13941-1
				US-PATENT-4,094,758	N78-32447*	c 38	NASA-CASE-MFS-23114-1		US-PATENT-APPL-SN-774384
N78-32256*	c 27			NASA-CASE-MS-14903-1			US-PATENT-APPL-SN-686331		US-PATENT-CLASS-307-233R
				US-PATENT-APPL-SN-706424			US-PATENT-CLASS-350-3.5		US-PATENT-CLASS-324-77B
				US-PATENT-CLASS-260-2P			US-PATENT-CLASS-356-72		US-PATENT-CLASS-324-77C
				US-PATENT-CLASS-260-551P			US-PATENT-CLASS-356-73	N78-10263*	c 32
				US-PATENT-CLASS-260-606-5P			US-PATENT-CLASS-73-603		NASA-CASE-MS-12743-1
				US-PATENT-CLASS-260-959			US-PATENT-4,093,382		US-PATENT-APPL-SN-765167
				US-PATENT-CLASS-526-13	N78-32539*	c 44	NASA-CASE-LAR-11208-1		US-PATENT-CLASS-325-41
				US-PATENT-CLASS-526-23			US-PATENT-APPL-SN-710036		US-PATENT-CLASS-340-146.1AX
				US-PATENT-CLASS-526-27			US-PATENT-CLASS-417-88		US-PATENT-CLASS-340-146.1E
				US-PATENT-CLASS-526-275			US-PATENT-CLASS-60-39.07	N78-10264*	c 32
				US-PATENT-CLASS-526-276			US-PATENT-CLASS-60-39.14		NASA-CASE-MFS-22234-1
				US-PATENT-CLASS-526-278			US-PATENT-CLASS-60-39.33		US-PATENT-APPL-SN-730778
				US-PATENT-CLASS-526-49			US-PATENT-CLASS-98-1.5		US-PATENT-CLASS-343-6R
				US-PATENT-CLASS-526-50			US-PATENT-4,091,613		US-PATENT-CLASS-343-9
				US-PATENT-CLASS-544-195	N78-32542*	c 44	NASA-CASE-KSC-11034-1		US-PATENT-4,118,701
				US-PATENT-4,092,466			US-PATENT-APPL-SN-782481	N78-10337*	c 33
N78-32260*	c 27			NASA-CASE-ARC-11051-1			US-PATENT-CLASS-60-641		NASA-CASE-KSC-11018-1
				US-PATENT-APPL-SN-736910			US-PATENT-CLASS-60-671		US-PATENT-APPL-SN-782693
				US-PATENT-CLASS-106-48			US-PATENT-4,087,975		US-PATENT-CLASS-324-133
				US-PATENT-CLASS-106-54	N78-32720*	c 54	NASA-CASE-MS-14805-1		US-PATENT-CLASS-324-96
				US-PATENT-CLASS-427-215			US-PATENT-APPL-SN-688856	N78-10338*	c 33
				US-PATENT-CLASS-427-376A			US-PATENT-CLASS-340-213R		NASA-CASE-GSC-12228-1
				US-PATENT-CLASS-427-376B			US-PATENT-CLASS-340-262		US-PATENT-APPL-SN-858764
				US-PATENT-CLASS-427-379			US-PATENT-CLASS-340-279		US-PATENT-CLASS-324-57R
				US-PATENT-CLASS-427-380			US-PATENT-CLASS-340-285		US-PATENT-CLASS-324-83D
				US-PATENT-CLASS-428-312			US-PATENT-CLASS-340-309.1		US-PATENT-CLASS-324-85
				US-PATENT-CLASS-428-325			US-PATENT-4,092,633		US-PATENT-CLASS-328-163
				US-PATENT-CLASS-428-331	N78-32721*	c 54	NASA-CASE-ARC-11059-1		US-PATENT-4,118,665
				US-PATENT-CLASS-428-406			US-PATENT-APPL-SN-753978	N78-10339*	c 33
				US-PATENT-CLASS-428-427			US-PATENT-CLASS-128-142.7		NASA-CASE-LEW-12013-1
				US-PATENT-CLASS-428-428			US-PATENT-CLASS-62-259		US-PATENT-APPL-SN-768795
				US-PATENT-CLASS-428-446			US-PATENT-4,095,593		US-PATENT-CLASS-301-82
				US-PATENT-CLASS-428-920	N78-32848*	c 73	NASA-CASE-GSC-12083-1		US-PATENT-CLASS-315-3.5
				US-PATENT-CLASS-65-30R			US-PATENT-APPL-SN-643897		US-PATENT-CLASS-315-3.6
				US-PATENT-CLASS-65-60D			US-PATENT-CLASS-350-170	N78-10389*	c 35
				US-PATENT-4,093,771			US-PATENT-CLASS-350-173		NASA-CASE-MFS-23461-1
N78-32261*	c 27			NASA-CASE-LAR-11828-1			US-PATENT-CLASS-350-174		US-PATENT-APPL-SN-694406
				US-PATENT-APPL-SN-448321			US-PATENT-CLASS-350-286		US-PATENT-CLASS-250-47S
				US-PATENT-APPL-SN-562992			US-PATENT-CLASS-350-320		US-PATENT-CLASS-252-301.1R
				US-PATENT-CLASS-260-47CP	N78-32854*	c 74	NASA-CASE-ARC-11039-1		US-PATENT-CLASS-252-301.16
				US-PATENT-CLASS-260-49			US-PATENT-4,093,354		US-PATENT-CLASS-96-27R
				US-PATENT-CLASS-260-63N			US-PATENT-APPL-SN-750655		US-PATENT-CLASS-96-60R
				US-PATENT-CLASS-260-63R			US-PATENT-CLASS-351-166	N78-10390*	c 35
				US-PATENT-CLASS-260-65			US-PATENT-CLASS-427-164		NASA-CASE-LAR-12260-1
				US-PATENT-CLASS-260-78TF			US-PATENT-CLASS-427-302		US-PATENT-CLASS-73-579
				US-PATENT-4,094,862			US-PATENT-CLASS-427-322		US-PATENT-CLASS-73-589
N78-32262*	c 27			NASA-CASE-MS-14331-3			US-PATENT-CLASS-427-38	N78-10391*	c 35
				US-PATENT-APPL-SN-657998			US-PATENT-CLASS-427-387		NASA-CASE-NPO-13862-1
				US-PATENT-CLASS-264-130			US-PATENT-CLASS-427-41		US-PATENT-APPL-SN-744577
				US-PATENT-CLASS-264-184			US-PATENT-CLASS-427-44		US-PATENT-CLASS-324-77K
				US-PATENT-CLASS-264-211			US-PATENT-CLASS-428-412		US-PATENT-CLASS-343-17.27C
				US-PATENT-CLASS-264-236			US-PATENT-CLASS-428-447		US-PATENT-CLASS-343-5CM
				US-PATENT-4,094,943			US-PATENT-4,096,315		US-PATENT-CLASS-343-5W
N78-32338*	c 33			NASA-CASE-GSC-12137-1			NASA-CASE-LEW-12496-1	N78-10418*	c 37
				US-PATENT-APPL-SN-808510			US-PATENT-APPL-SN-668971		NASA-CASE-LEW-12569-1
				US-PATENT-CLASS-329-124			US-PATENT-CLASS-29-463		US-PATENT-APPL-SN-792069
				US-PATENT-CLASS-331-12			US-PATENT-CLASS-416-214A		US-PATENT-CLASS-308-DIG.1
				US-PATENT-CLASS-331-4			US-PATENT-CLASS-416-244A		US-PATENT-CLASS-308-121
				US-PATENT-CLASS-331-64			US-PATENT-CLASS-74-572		US-PATENT-CLASS-308-160
				US-PATENT-4,092,606	N78-33228*	c 27	NASA-CASE-NPO-08835-1		US-PATENT-CLASS-308-163
N78-32339*	c 33			NASA-CASE-GSC-12145-1			US-PATENT-APPL-SN-588721		US-PATENT-CLASS-308-172
				US-PATENT-APPL-SN-769149			US-PATENT-CLASS-260-28.5		US-PATENT-CLASS-308-5R
				US-PATENT-CLASS-307-229			US-PATENT-3,527,724		US-PATENT-4,099,799
				US-PATENT-CLASS-307-230	N78-33526*	c 44	NASA-CASE-NPO-13763-1	N78-10419*	c 37
				US-PATENT-CLASS-328-145			US-PATENT-APPL-SN-718268		NASA-CASE-FRC-10111-1
				US-PATENT-4,091,329			US-PATENT-CLASS-123-DIG.12		US-PATENT-APPL-SN-713027
							US-PATENT-CLASS-123-1A		US-PATENT-CLASS-30-90.6
									US-PATENT-CLASS-81-9.5R
									US-PATENT-4,117,749

N79-10420*	c 37	NASA-CASE-NPO-14014-1 US-PATENT-APPL-SN-826204 US-PATENT-CLASS-188-10C US-PATENT-CLASS-256-1 US-PATENT-CLASS-256-13.1 US-PATENT-4,118,014	US-PATENT-CLASS-325-4 US-PATENT-CLASS-325-67 US-PATENT-CLASS-343-17.7 US-PATENT-4,119,964	US-PATENT-CLASS-427-84 US-PATENT-4,122,214
N79-10421*	c 37	NASA-CASE-MFS-23620-1 US-PATENT-APPL-SN-799023 US-PATENT-CLASS-219-124.2.2 US-PATENT-CLASS-219-124.3 US-PATENT-CLASS-219-125.1 US-PATENT-CLASS-228-8 US-PATENT-4,118,620	N79-11313* c 33 NASA-CASE-MSC-16461-1 US-PATENT-APPL-SN-858765 US-PATENT-CLASS-307-232 US-PATENT-CLASS-328-133 US-PATENT-CLASS-331-1A US-PATENT-CLASS-331-14 US-PATENT-CLASS-331-23 US-PATENT-CLASS-331-27 US-PATENT-4,119,926	N79-11865* c 74 NASA-CASE-MFS-23513-1 US-PATENT-APPL-SN-755323 US-PATENT-CLASS-356-124 US-PATENT-CLASS-356-210 US-PATENT-4,102,580
N79-10422*	c 37	NASA-CASE-MFS-23051-1 US-PATENT-APPL-SN-632111 US-PATENT-CLASS-15-230.16 US-PATENT-CLASS-15-230.17 US-PATENT-CLASS-29-125 US-PATENT-CLASS-428-133 US-PATENT-CLASS-74-572 US-PATENT-4,098,142	N79-11314* c 33 NASA-CASE-NPO-13064-1 US-PATENT-APPL-SN-297436 US-PATENT-CLASS-357-22 US-PATENT-3,860,946	N79-11920* c 76 NASA-CASE-NPO-13918-1 US-PATENT-APPL-SN-706073 US-PATENT-CLASS-156-DIG.64 US-PATENT-CLASS-156-DIG.65 US-PATENT-CLASS-156-DIG.88 US-PATENT-CLASS-156-608 US-PATENT-CLASS-156-6175P US-PATENT-4,121,965
N79-10513*	c 44	NASA-CASE-NPO-13732-1 US-PATENT-APPL-SN-765138 US-PATENT-CLASS-429-13 US-PATENT-CLASS-429-41 US-PATENT-CLASS-429-42 US-PATENT-4,100,331	N79-11315* c 33 NASA-CASE-KSC-11031-1 US-PATENT-APPL-SN-782482 US-PATENT-CLASS-324-102 US-PATENT-CLASS-324-113 US-PATENT-CLASS-324-133 US-PATENT-4,105,966	N79-12061* c 05 NASA-CASE-FRC-10092-1 US-PATENT-APPL-SN-831634 US-PATENT-CLASS-244-48 US-PATENT-CLASS-244-82 US-PATENT-CLASS-244-90R US-PATENT-4,124,180
N79-10693*	c 51	NASA-CASE-MSC-16098-1 US-PATENT-APPL-SN-792068 US-PATENT-CLASS-210-23F US-PATENT-CLASS-210-433M US-PATENT-CLASS-210-96M US-PATENT-4,118,315	N79-11402* c 37 NASA-CASE-MSC-16043-1 US-PATENT-APPL-SN-750792 US-PATENT-CLASS-137-614.06 US-PATENT-CLASS-137-637.05 US-PATENT-CLASS-251-149.9 US-PATENT-CLASS-285-326 US-PATENT-CLASS-285-359 US-PATENT-4,103,712	N79-12221* c 27 NASA-CASE-MSC-12619-2 US-PATENT-APPL-SN-555750 US-PATENT-APPL-SN-786913 US-PATENT-CLASS-244-121 US-PATENT-CLASS-244-158 US-PATENT-CLASS-244-160 US-PATENT-CLASS-428-189 US-PATENT-CLASS-428-212 US-PATENT-CLASS-428-280 US-PATENT-CLASS-428-285 US-PATENT-CLASS-428-286 US-PATENT-CLASS-428-332 US-PATENT-CLASS-428-447 US-PATENT-CLASS-428-450 US-PATENT-CLASS-428-77 US-PATENT-CLASS-428-920 US-PATENT-4,124,732
N79-10694*	c 51	NASA-CASE-GSC-12173-1 US-PATENT-APPL-SN-806440 US-PATENT-CLASS-165-2 US-PATENT-CLASS-165-30 US-PATENT-CLASS-195-1.8 US-PATENT-CLASS-219-299 US-PATENT-CLASS-219-302 US-PATENT-CLASS-62-514R US-PATENT-CLASS-62-78 US-PATENT-4,117,881	N79-11403* c 37 NASA-CASE-LEW-12793-1 US-PATENT-APPL-SN-745766 US-PATENT-CLASS-60-39.08 US-PATENT-CLASS-60-39.28R US-PATENT-CLASS-60-39.66 US-PATENT-4,104,873	N79-12321* c 33 NASA-CASE-GSC-12190-1 US-PATENT-APPL-SN-817413 US-PATENT-CLASS-357-22 US-PATENT-CLASS-357-23 US-PATENT-CLASS-357-41 US-PATENT-CLASS-357-45 US-PATENT-CLASS-357-55 US-PATENT-4,119,996
N79-10724*	c 52	NASA-CASE-ARC-10985-1 US-PATENT-APPL-SN-769148 US-PATENT-CLASS-128-2.05F US-PATENT-CLASS-358-111 US-PATENT-CLASS-358-96 US-PATENT-CLASS-364-417 US-PATENT-4,101,961	N79-11404* c 37 NASA-CASE-MFS-23447-1 US-PATENT-APPL-SN-736909 US-PATENT-CLASS-308-194 US-PATENT-CLASS-308-72 US-PATENT-4,105,261	N79-12331* c 33 NASA-CASE-MSC-12662-1 US-PATENT-APPL-SN-540779 US-PATENT-CLASS-428-109 US-PATENT-CLASS-428-247 US-PATENT-CLASS-428-258 US-PATENT-CLASS-428-259 US-PATENT-4,107,363
N79-10969*	c 89	NASA-CASE-MFS-23675-1 US-PATENT-APPL-SN-820498 US-PATENT-CLASS-350-294 US-PATENT-CLASS-350-55 US-PATENT-4,101,195	N79-11405* c 37 NASA-CASE-NPO-13828-1 US-PATENT-APPL-SN-672636 US-PATENT-CLASS-123-148CD US-PATENT-CLASS-123-148E US-PATENT-CLASS-315-209CD US-PATENT-CLASS-315-209SC US-PATENT-CLASS-315-241R US-PATENT-4,122,816	N79-12359* c 34 NASA-CASE-LAR-11729-1 US-PATENT-APPL-SN-856461 US-PATENT-CLASS-73-189 US-PATENT-CLASS-73-194VS US-PATENT-4,122,712
N79-11108*	c 18	NASA-CASE-MFS-23579-1 US-PATENT-APPL-SN-829316 US-PATENT-CLASS-228-13 US-PATENT-CLASS-228-15.1 US-PATENT-CLASS-228-173 US-PATENT-CLASS-244-159 US-PATENT-4,122,991	N79-11467* c 44 NASA-CASE-LEW-12819-1 US-PATENT-APPL-SN-803823 US-PATENT-CLASS-136-89CC US-PATENT-CLASS-136-89SJ US-PATENT-CLASS-357-15 US-PATENT-CLASS-357-16 US-PATENT-CLASS-357-30 US-PATENT-CLASS-357-65 US-PATENT-CLASS-357-67 US-PATENT-4,104,084	N79-12541* c 44 NASA-CASE-NPO-14100-1 US-PATENT-APPL-SN-861391 US-PATENT-CLASS-324-20R US-PATENT-CLASS-324-22 US-PATENT-4,122,383
N79-11151*	c 25	NASA-CASE-NPO-13958-1 US-PATENT-APPL-SN-745384 US-PATENT-CLASS-126-91A US-PATENT-CLASS-431-10 US-PATENT-CLASS-431-208 US-PATENT-CLASS-432-223 US-PATENT-CLASS-432-29 US-PATENT-4,104,018	N79-11468* c 44 NASA-CASE-LEW-12775-1 US-PATENT-APPL-SN-799026 US-PATENT-CLASS-136-89 US-PATENT-CLASS-148-188 US-PATENT-CLASS-29-572 US-PATENT-CLASS-427-75 US-PATENT-4,104,091	N79-12584* c 45 NASA-CASE-MSC-16258-1 US-PATENT-APPL-SN-853705 US-PATENT-CLASS-210-50 US-PATENT-CLASS-210-60 US-PATENT-CLASS-210-63R US-PATENT-CLASS-423-242 US-PATENT-CLASS-55-73 US-PATENT-4,123,355
N79-11152*	c 25	NASA-CASE-NPO-13904-1 US-PATENT-APPL-SN-730468 US-PATENT-CLASS-208-10 US-PATENT-CLASS-208-8 US-PATENT-CLASS-302-66 US-PATENT-CLASS-44-51 US-PATENT-4,121,995	N79-11469* c 44 NASA-CASE-MFS-23518-1 US-PATENT-APPL-SN-829390 US-PATENT-CLASS-204-32 US-PATENT-CLASS-204-33 US-PATENT-CLASS-204-37R US-PATENT-CLASS-204-38B US-PATENT-4,104,134	N79-12694* c 52 NASA-CASE-NPO-13913-1 US-PATENT-APPL-SN-687251 US-PATENT-CLASS-128-2R US-PATENT-CLASS-364-120 US-PATENT-CLASS-364-300 US-PATENT-CLASS-364-415 US-PATENT-CLASS-364-900 US-PATENT-4,122,518
N79-11215* #	c 27	NASA-CASE-ARC-11170-1 US-PATENT-APPL-SN-956161	N79-11470* c 44 NASA-CASE-NPO-14126-1 US-PATENT-APPL-SN-838336 US-PATENT-CLASS-204-157.1R US-PATENT-CLASS-250-527 US-PATENT-4,105,517	N79-12890* c 74 NASA-CASE-KSC-11010-1 US-PATENT-APPL-SN-753977 US-PATENT-CLASS-200-46 US-PATENT-CLASS-200-61 US-PATENT-CLASS-250-214AL US-PATENT-CLASS-250-214R US-PATENT-CLASS-315-153 US-PATENT-4,122,334
N79-11231*	c 28	NASA-CASE-NPO-13858-1 NASA-CASE-NPO-13859-1 US-PATENT-APPL-SN-740153 US-PATENT-CLASS-102-28R US-PATENT-4,103,619	N79-11471* c 44 NASA-CASE-NPO-13817-1 US-PATENT-APPL-SN-801452 US-PATENT-CLASS-126-270 US-PATENT-CLASS-126-271 US-PATENT-CLASS-350-288 US-PATENT-CLASS-350-299 US-PATENT-4,122,833	N79-13214* c 32 NASA-CASE-NPO-14009-1 US-PATENT-APPL-SN-818917 US-PATENT-CLASS-343-117R US-PATENT-CLASS-343-118 US-PATENT-CLASS-343-7.4 US-PATENT-4,122,454
N79-11246*	c 31	NASA-CASE-LAR-12147-1 US-PATENT-APPL-SN-733825 US-PATENT-CLASS-73-159 US-PATENT-CLASS-73-95 US-PATENT-4,103,550	N79-11472* c 44 NASA-CASE-LEW-12552-2 US-PATENT-APPL-SN-844346 US-PATENT-CLASS-29-572 US-PATENT-CLASS-427-123 US-PATENT-CLASS-427-126 US-PATENT-CLASS-427-261 US-PATENT-CLASS-427-343 US-PATENT-CLASS-427-398A US-PATENT-CLASS-427-399 US-PATENT-CLASS-427-75	N79-13288* c 34 NASA-CASE-LEW-12252-1 US-PATENT-APPL-SN-559847 US-PATENT-CLASS-165-169
N79-11264*	c 32	NASA-CASE-MSC-14939-1 US-PATENT-APPL-SN-765165 US-PATENT-CLASS-343-844 US-PATENT-CLASS-343-854 US-PATENT-4,119,972		
N79-11265*	c 32	NASA-CASE-GSC-12150-1 US-PATENT-APPL-SN-736286		

		US-PATENT-CLASS-239-127.1			US-PATENT-APPL-SN-782464			US-PATENT-CLASS-126-271
		US-PATENT-CLASS-60-267			US-PATENT-CLASS-329-122			US-PATENT-CLASS-350-292
		US-PATENT-4,107,919			US-PATENT-CLASS-343-14			US-PATENT-CLASS-350-293
N79-13289*	c 34	NASA-CASE-LEW-12441-1			US-PATENT-CLASS-364-458			US-PATENT-CLASS-350-320
		US-PATENT-APPL-SN-559846			US-PATENT-CLASS-364-604			US-PATENT-4,131,336
		US-PATENT-CLASS-165-146			US-PATENT-CLASS-364-728	N79-14749*	c 52	NASA-CASE-NPO-13930-1
		US-PATENT-CLASS-165-169			US-PATENT-4,112,497			US-PATENT-APPL-SN-700467
		US-PATENT-CLASS-239-127.1	N79-14268*	c 32	NASA-CASE-NPO-14019-1			US-PATENT-CLASS-128-214D
		US-PATENT-4,108,241			US-PATENT-APPL-SN-843308			US-PATENT-CLASS-128-272
N79-13364*	c 37	NASA-CASE-LAR-10941-2			US-PATENT-CLASS-343-100CL			US-PATENT-CLASS-150-1
		US-PATENT-APPL-SN-395493			US-PATENT-CLASS-343-5CM			US-PATENT-CLASS-195-1.8
		US-PATENT-CLASS-228-107	N79-14305*	c 33	US-PATENT-4,132,989			US-PATENT-CLASS-206-439
		US-PATENT-CLASS-228-2.5			NASA-CASE-KSC-11057-1			US-PATENT-CLASS-210-DIG.23
		US-PATENT-CLASS-29-421E			US-PATENT-APPL-SN-835544			US-PATENT-CLASS-422-41
		US-PATENT-4,106,687			US-PATENT-CLASS-324-102			US-PATENT-CLASS-422-48
N79-13826*	c 72	NASA-CASE-NPO-13993-1			US-PATENT-CLASS-324-113			US-PATENT-CLASS-55-15.8
		US-PATENT-APPL-SN-782463			US-PATENT-CLASS-324-133	N79-14750*	c 52	US-PATENT-4,132,594
		US-PATENT-CLASS-331-94.5L			US-PATENT-CLASS-324-72			NASA-CASE-GSC-12046-1
		US-PATENT-CLASS-331-94.5P			US-PATENT-4,112,357			US-PATENT-APPL-SN-680015
		US-PATENT-CLASS-331-94.5PE	N79-14345*	c 35	NASA-CASE-LEW-12681-1			US-PATENT-CLASS-195-103.5K
		US-PATENT-4,107,627			US-PATENT-APPL-SN-837796			US-PATENT-4,132,599
N79-13855*	c 74	NASA-CASE-MFS-23052-2			US-PATENT-CLASS-73-115	N79-14751*	c 52	NASA-CASE-NPO-13935-1
		US-PATENT-APPL-SN-590183			US-PATENT-4,111,041			NASA-CASE-NPO-13944-1
		US-PATENT-APPL-SN-772165	N79-14346*	c 35	NASA-CASE-LEW-12174-2			US-PATENT-APPL-SN-741749
		US-PATENT-CLASS-35-12C			US-PATENT-APPL-SN-667929			US-PATENT-CLASS-422-41
		US-PATENT-CLASS-35-12N			US-PATENT-APPL-SN-853679			US-PATENT-CLASS-73-633
		US-PATENT-CLASS-358-104			US-PATENT-CLASS-136-202			US-PATENT-CLASS-73-644
		US-PATENT-4,106,218			US-PATENT-CLASS-136-236			US-PATENT-4,130,112
N79-14095*	c 07	NASA-CASE-LEW-13050-1			US-PATENT-4,111,718	N79-14871*	c 71	NASA-CASE-LEW-12658-1
		US-PATENT-APPL-SN-513346	N79-14347*	c 35	NASA-CASE-LAR-12230-1			US-PATENT-APPL-SN-702115
		US-PATENT-CLASS-416-157B			US-PATENT-APPL-SN-835628			US-PATENT-CLASS-181-190
		US-PATENT-CLASS-416-160			US-PATENT-CLASS-73-147			US-PATENT-CLASS-181-213
		US-PATENT-CLASS-416-162			US-PATENT-CLASS-73-4R			US-PATENT-CLASS-181-222
		US-PATENT-CLASS-416-167			US-PATENT-CLASS-73-714			US-PATENT-CLASS-181-293
		US-PATENT-4,124,330			US-PATENT-CLASS-73-721			US-PATENT-4,106,587
N79-14096*	c 07	NASA-CASE-LEW-12389-3			US-PATENT-CLASS-73-756	N79-14891*	c 74	NASA-CASE-GSC-12225-1
		US-PATENT-APPL-SN-552108			US-PATENT-4,111,058			US-PATENT-APPL-SN-823566
		US-PATENT-APPL-SN-753452	N79-14348*	c 35	NASA-CASE-NPO-13569-2			US-PATENT-CLASS-350-157
		US-PATENT-CLASS-137-15.1			US-PATENT-APPL-SN-565162			US-PATENT-4,129,357
		US-PATENT-CLASS-244-54			US-PATENT-APPL-SN-804035	N79-14906*	c 76	NASA-CASE-MFS-23541-1
		US-PATENT-CLASS-415-200			US-PATENT-CLASS-318-573			US-PATENT-APPL-SN-814005
		US-PATENT-CLASS-415-201			US-PATENT-CLASS-318-594			US-PATENT-CLASS-204-192C
		US-PATENT-CLASS-60-226A			US-PATENT-CLASS-318-640			US-PATENT-4,111,775
		US-PATENT-CLASS-60-226R			US-PATENT-4,132,940	N79-15245*	c 33	NASA-CASE-ARC-10975-1
		US-PATENT-CLASS-60-39.31	N79-14349*	c 35	NASA-CASE-LAR-11859-1			US-PATENT-APPL-SN-799832
		US-PATENT-4,132,069			US-PATENT-APPL-SN-861396			US-PATENT-CLASS-250-531
N79-14097*	c 07	NASA-CASE-LEW-12378-1			US-PATENT-CLASS-324-57R			US-PATENT-CLASS-250-540
		US-PATENT-APPL-SN-573029			US-PATENT-4,130,795			US-PATENT-CLASS-250-541
		US-PATENT-CLASS-239-265.39	N79-14362*	c 36	NASA-CASE-GSC-12334-1			US-PATENT-4,130,490
		US-PATENT-CLASS-60-226A			US-PATENT-APPL-SN-856464	N79-16246*	c 35	NASA-CASE-NPO-10872-1
		US-PATENT-4,132,068			US-PATENT-CLASS-324-0.5			US-PATENT-APPL-SN-805549
N79-14108*	c 08	NASA-CASE-LAR-11868-2			US-PATENT-CLASS-331-94			US-PATENT-CLASS-179-100.2CH
		US-PATENT-APPL-SN-651002			US-PATENT-4,128,814			US-PATENT-CLASS-340-174.1M
		US-PATENT-APPL-SN-779429	N79-14382*	c 37	NASA-CASE-LAR-11900-1			US-PATENT-CLASS-346-74MT
		US-PATENT-CLASS-244-218			US-PATENT-APPL-SN-775239			US-PATENT-3,626,114
		US-PATENT-CLASS-244-46			US-PATENT-CLASS-403-105	N79-16678*	c 76	NASA-CASE-NPO-11336-1
		US-PATENT-CLASS-244-90R			US-PATENT-CLASS-416-61			NASA-CASE-NPO-13247-1
		US-PATENT-4,132,375			US-PATENT-CLASS-74-586			US-PATENT-APPL-SN-302913
N79-14156*	c 24	NASA-CASE-GSC-12207-1			US-PATENT-4,111,068			US-PATENT-CLASS-117-107
		US-PATENT-APPL-SN-844344	N79-14383*	c 37	NASA-CASE-NPO-13541-1			US-PATENT-CLASS-117-119
		US-PATENT-CLASS-106-296			US-PATENT-APPL-SN-828262			US-PATENT-CLASS-117-234
		US-PATENT-CLASS-106-84			US-PATENT-CLASS-81-119			US-PATENT-CLASS-117-235
		US-PATENT-CLASS-252-518			US-PATENT-CLASS-81-180B			US-PATENT-CLASS-117-237
		US-PATENT-4,111,851			US-PATENT-CLASS-81-90B			US-PATENT-CLASS-117-239
N79-14169*	c 25	NASA-CASE-ARC-11121-1			US-PATENT-4,130,032			US-PATENT-CLASS-117-240
		US-PATENT-APPL-SN-850507	N79-14398*	c 38	NASA-CASE-MS-19672-1			US-PATENT-CLASS-148-121
		US-PATENT-CLASS-204-180G			US-PATENT-APPL-SN-696679			US-PATENT-CLASS-148-6
		US-PATENT-CLASS-204-180S			US-PATENT-CLASS-310-326			US-PATENT-CLASS-148-6
		US-PATENT-CLASS-204-299R			US-PATENT-CLASS-310-336			US-PATENT-CLASS-75-134D
		US-PATENT-CLASS-23-230B			US-PATENT-CLASS-73-632			US-PATENT-3,837,908
		US-PATENT-CLASS-424-12			US-PATENT-CLASS-73-641	N79-16915*	c 24	NASA-CASE-ARC-11040-1
		US-PATENT-4,130,471			US-PATENT-CLASS-73-644			US-PATENT-APPL-SN-778195
N79-14213*	c 27	NASA-CASE-NPO-13690-2			US-PATENT-4,122,725			US-PATENT-CLASS-156-331
		US-PATENT-APPL-SN-858766	N79-14526*	c 44	NASA-CASE-NPO-13921-1			US-PATENT-CLASS-428-117
		US-PATENT-CLASS-264-60			US-PATENT-APPL-SN-785257			US-PATENT-CLASS-428-119
		US-PATENT-CLASS-75-203			US-PATENT-CLASS-126-270			US-PATENT-CLASS-428-375
		US-PATENT-CLASS-75-205			US-PATENT-CLASS-126-271			US-PATENT-CLASS-428-458
		US-PATENT-CLASS-75-206			US-PATENT-4,111,184			US-PATENT-CLASS-428-73
		US-PATENT-CLASS-75-212			NASA-CASE-HQN-10888-1	N79-17029*	c 31	NASA-CASE-GSC-12168-1
		US-PATENT-CLASS-75-226	N79-14527*	c 44	US-PATENT-APPL-SN-760057			US-PATENT-APPL-SN-838337
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		US-PATENT-APPL-SN-767912			US-PATENT-CLASS-415-9			US-PATENT-CLASS-62-514R
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N79-24210*	c 32	NASA-CASE-NPO-13641-1 US-PATENT-APPL-SN-777983 US-PATENT-CLASS-343-100TD US-PATENT-4,148,031	N79-26474*	c 44	NASA-CASE-LEW-13150-1 US-PATENT-APPL-SN-914260 US-PATENT-CLASS-429-101 US-PATENT-CLASS-429-15 US-PATENT-4,159,366	
N79-24254*	c 33	NASA-CASE-NPO-14000-1 US-PATENT-APPL-SN-876431 US-PATENT-CLASS-307-82 US-PATENT-CLASS-363-56 US-PATENT-CLASS-363-71 US-PATENT-CLASS-363-97 US-PATENT-4,150,425	N79-26475*	c 44	NASA-CASE-MFS-23540-1 US-PATENT-APPL-SN-863773 US-PATENT-CLASS-29-572 US-PATENT-CLASS-29-577 US-PATENT-CLASS-29-578 US-PATENT-CLASS-29-580 US-PATENT-CLASS-357-45 US-PATENT-4,156,309	
N79-24257*	c 33	NASA-CASE-NPO-14056-1 US-PATENT-APPL-SN-833637	N79-26771*	c 52	NASA-CASE-ARC-10994-2 US-PATENT-APPL-SN-759965 US-PATENT-CLASS-128-660 US-PATENT-CLASS-73-626 US-PATENT-4,154,230	
			N79-26772*	c 52	NASA-CASE-KSC-11069-1 US-PATENT-APPL-SN-876438 US-PATENT-CLASS-3-1.9 US-PATENT-CLASS-3-12 US-PATENT-CLASS-3-2A US-PATENT-4,158,895	
			N79-27836*	c 52	NASA-CASE-NPO-13910-1 US-PATENT-APPL-SN-712270 US-PATENT-CLASS-128-329R US-PATENT-CLASS-128-839 US-PATENT-4,154,228	
			N79-28253*	c 25	NASA-CASE-NPO-13650-1 US-PATENT-APPL-SN-704468 US-PATENT-CLASS-118-49 US-PATENT-CLASS-23-252R US-PATENT-CLASS-248 US-PATENT-CLASS-253 US-PATENT-CLASS-337 US-PATENT-CLASS-349 US-PATENT-CLASS-423-33.5 US-PATENT-CLASS-427-95 US-PATENT-4,033,286	
			N79-28307*	c 27	NASA-CASE-LEW-12053-2 US-PATENT-APPL-SN-796263 US-PATENT-CLASS-260-37N US-PATENT-CLASS-260-42 US-PATENT-CLASS-260-53 US-PATENT-CLASS-528-126 US-PATENT-CLASS-528-127 US-PATENT-CLASS-528-128 US-PATENT-CLASS-528-221 US-PATENT-CLASS-528-223	

		US-PATENT-CLASS-528-225	N79-33316*	c 27	NASA-CASE-LAR-12054-1	N80-10799*	c 54	NASA-CASE-MSC-16182-1
		US-PATENT-CLASS-528-227			US-PATENT-APPL-SN-839963			US-PATENT-APPL-SN-780938
		US-PATENT-CLASS-528-229			US-PATENT-CLASS-264-137			US-PATENT-CLASS-128-142R
		US-PATENT-CLASS-528-331			US-PATENT-CLASS-428-474			US-PATENT-CLASS-128-191R
		US-PATENT-CLASS-528-336			US-PATENT-CLASS-528-229			US-PATENT-CLASS-128-212
		US-PATENT-CLASS-528-337			US-PATENT-4,166,170			US-PATENT-4,168,706
		US-PATENT-CLASS-528-338	N79-33392*	c 33	NASA-CASE-XMF-04494-1	N80-14107*	c 05	NASA-CASE-ARC-11106-1
		US-PATENT-CLASS-528-342			US-PATENT-APPL-SN-547643			US-PATENT-APPL-SN-831633
		US-PATENT-CLASS-544-193			US-PATENT-CLASS-200-83			US-PATENT-CLASS-415-199
		US-PATENT-4,159,262			US-PATENT-3,378,657			US-PATENT-CLASS-416-228
N79-28342*	c 28	NASA-CASE-NPO-14260-1	N79-33393*	c 33	NASA-CASE-XMS-01244-1			US-PATENT-CLASS-416-238
		US-PATENT-APPL-SN-861390			US-PATENT-APPL-SN-20370			US-PATENT-4,168,939
		US-PATENT-CLASS-149-19.4			US-PATENT-CLASS-200-114	N80-14183*	c 18	NASA-CASE-GSC-12331-1
		US-PATENT-CLASS-149-19.9			US-PATENT-3,123,692			US-PATENT-APPL-SN-943088
		US-PATENT-CLASS-149-20	N79-33449*	c 35	NASA-CASE-XGS-01245-1			US-PATENT-CLASS-343-880
		US-PATENT-4,158,583			US-PATENT-APPL-SN-134619			US-PATENT-CLASS-343-883
N79-28370*	c 31	NASA-CASE-MFS-23721-1			US-PATENT-CLASS-338-18			US-PATENT-4,176,360
		US-PATENT-APPL-SN-847277			US-PATENT-3,119,086	N80-14188*	c 20	NASA-CASE-XLE-02062-1
		US-PATENT-CLASS-343-14	N79-33450*	c 35	NASA-CASE-XGS-01293-1			US-PATENT-APPL-SN-545793
		US-PATENT-CLASS-343-5NA			US-PATENT-APPL-SN-150690			US-PATENT-CLASS-60-203
		US-PATENT-4,161,731			US-PATENT-CLASS-73-400			US-PATENT-CLASS-60-259
N79-28415*	c 33	NASA-CASE-MSC-16697-1			US-PATENT-3,190,124			US-PATENT-4,171,615
		US-PATENT-APPL-SN-885067	N79-33467*	c 37	NASA-CASE-XMS-01077-1	N80-14229*	c 26	NASA-CASE-NPO-14474-1
		US-PATENT-CLASS-307-119			US-PATENT-APPL-SN-228049			US-PATENT-APPL-SN-918537
		US-PATENT-CLASS-307-98			US-PATENT-CLASS-312-319			US-PATENT-CLASS-423-149
		US-PATENT-CLASS-361-170			US-PATENT-3,123,418			US-PATENT-CLASS-423-293
		US-PATENT-4,161,661	N79-33468*	c 37	NASA-CASE-HQN-00573-1			US-PATENT-CLASS-423-348
N79-28416*	c 33	NASA-CASE-GSC-12171-1			US-PATENT-APPL-SN-129379			US-PATENT-CLASS-423-417
		US-PATENT-APPL-SN-878542			US-PATENT-CLASS-137-14			US-PATENT-CLASS-423-625
		US-PATENT-CLASS-343-909			US-PATENT-3,134,389			US-PATENT-4,172,883
		US-PATENT-4,160,254	N79-33469*	c 37	NASA-CASE-XGS-01286-1	N80-14281*	c 32	NASA-CASE-NPO-13830-1
N79-28527*	c 35	NASA-CASE-NPO-13953-1			US-PATENT-APPL-SN-142583			US-PATENT-APPL-SN-703905
		US-PATENT-APPL-SN-880727			US-PATENT-CLASS-251-172			US-PATENT-APPL-SN-834257
		US-PATENT-CLASS-356-237			US-PATENT-3,233,862			US-PATENT-CLASS-333-81R
		US-PATENT-CLASS-356-404	N79-34011*	c 74	NASA-CASE-NPO-14066-1			US-PATENT-CLASS-343-18A
		US-PATENT-4,160,601			US-PATENT-APPL-SN-827484			US-PATENT-CLASS-343-909
N79-28549*	c 37	NASA-CASE-GSC-12297-1			US-PATENT-CLASS-250-216			US-PATENT-4,164,718
		US-PATENT-APPL-SN-880838			US-PATENT-CLASS-250-551	N80-14330*	c 33	NASA-CASE-NPO-10857-1
		US-PATENT-CLASS-165-105			US-PATENT-4,166,959			US-PATENT-APPL-SN-888362
		US-PATENT-CLASS-357-74	N80-10278*	c 20	NASA-CASE-MFS-23642-1			US-PATENT-CLASS-315-145
		US-PATENT-CLASS-357-79			US-PATENT-APPL-SN-923758			US-PATENT-CLASS-315-260
		US-PATENT-CLASS-357-81			US-PATENT-CLASS-137-177			US-PATENT-CLASS-315-334
		US-PATENT-CLASS-357-82			US-PATENT-CLASS-137-209			US-PATENT-3,635,537
		US-PATENT-CLASS-357-83			US-PATENT-CLASS-137-574	N80-14332*	c 33	NASA-CASE-NPO-14350-1
		US-PATENT-4,161,747			US-PATENT-CLASS-137-576			US-PATENT-APPL-SN-921627
N79-28550*	c 37	NASA-CASE-GSC-12274-1			US-PATENT-CLASS-137-590			US-PATENT-CLASS-250-310
		US-PATENT-APPL-SN-909100			US-PATENT-CLASS-244-135R			US-PATENT-CLASS-250-492A
		US-PATENT-CLASS-251-7			US-PATENT-4,168,718			US-PATENT-CLASS-324-158T
		US-PATENT-CLASS-72-436	N80-10358*	c 27	NASA-CASE-MSC-14903-2			US-PATENT-4,172,228
		US-PATENT-CLASS-72-451			US-PATENT-APPL-SN-706424	N80-14371*	c 35	NASA-CASE-LAR-11690-1
		US-PATENT-CLASS-72-470			US-PATENT-APPL-SN-907435			US-PATENT-APPL-SN-928129
		US-PATENT-4,159,634			US-PATENT-CLASS-260-926			US-PATENT-CLASS-73-655
N79-28551*	c 37	NASA-CASE-ARC-11052-1			US-PATENT-4,092,466			US-PATENT-CLASS-73-661
		US-PATENT-APPL-SN-826202			US-PATENT-4,168,287	N80-14384*	c 36	NASA-CASE-GSC-12237-1
		US-PATENT-CLASS-414-4	N80-10374*	c 28	NASA-CASE-NPO-13849-1			US-PATENT-APPL-SN-837795
		US-PATENT-4,160,508			NASA-CASE-NPO-13907-1			US-PATENT-CLASS-331-94.5C
N79-31228*	c 09	NASA-CASE-LAR-12149-2			US-PATENT-APPL-SN-668783			US-PATENT-CLASS-331-94.5P
		US-PATENT-APPL-SN-829314			US-PATENT-CLASS-123-DIG.12			US-PATENT-4,173,001
		US-PATENT-APPL-SN-928131			US-PATENT-CLASS-123-179R	N80-14395*	c 37	NASA-CASE-XNP-08835-1
		US-PATENT-CLASS-35-12E			US-PATENT-CLASS-123-3			US-PATENT-APPL-SN-534931
		US-PATENT-CLASS-35-12H			US-PATENT-CLASS-23-288R			US-PATENT-CLASS-204-224
		US-PATENT-4,164,079			US-PATENT-CLASS-423-650			US-PATENT-3,352,774
N79-31347*	c 24	NASA-CASE-GSC-12303-1			US-PATENT-CLASS-48-DIG.8	N80-14397*	c 37	NASA-CASE-MFS-23284-1
		US-PATENT-APPL-SN-862880			US-PATENT-CLASS-48-10-3			US-PATENT-APPL-SN-753103
		US-PATENT-CLASS-106-74			US-PATENT-CLASS-48-102A			US-PATENT-CLASS-204-180G
		US-PATENT-CLASS-106-84			US-PATENT-CLASS-48-107			US-PATENT-CLASS-204-299R
		US-PATENT-4,162,169			US-PATENT-CLASS-48-117			US-PATENT-4,040,940
N79-31523*	c 34	NASA-CASE-GSC-12253-1			US-PATENT-CLASS-48-61	N80-14398*	c 37	NASA-CASE-GSC-12322-1
		US-PATENT-APPL-SN-853677			US-PATENT-CLASS-60-300			US-PATENT-APPL-SN-907436
		US-PATENT-CLASS-165-105			US-PATENT-CLASS-60-606			US-PATENT-CLASS-244-161
		US-PATENT-CLASS-165-32			US-PATENT-4,033,133			US-PATENT-CLASS-269-156
		US-PATENT-CLASS-244-1R	N80-10494*	c 37	NASA-CASE-NPO-14384-1			US-PATENT-CLASS-294-113
		US-PATENT-CLASS-244-163			US-PATENT-APPL-SN-880728			US-PATENT-CLASS-294-86R
		US-PATENT-4,162,701			US-PATENT-CLASS-210-186			US-PATENT-CLASS-414-1
N79-31706*	c 43	NASA-CASE-MFS-23725-1			US-PATENT-CLASS-210-340			US-PATENT-4,173,324
		US-PATENT-APPL-SN-848793			US-PATENT-CLASS-239-102	N80-14423*	c 43	NASA-CASE-MFS-23720-2
		US-PATENT-CLASS-250-253			US-PATENT-CLASS-239-302			US-PATENT-APPL-SN-848421
		US-PATENT-CLASS-250-272			US-PATENT-CLASS-422-187			US-PATENT-CLASS-73-12
		US-PATENT-4,165,460			US-PATENT-CLASS-422-199			US-PATENT-CLASS-73-82
N79-31752*	c 44	NASA-CASE-NPO-14205-1			US-PATENT-CLASS-422-208			US-PATENT-4,157,655
		US-PATENT-APPL-SN-920879			US-PATENT-CLASS-422-235	N80-14472*	c 44	NASA-CASE-LEW-12586-1
		US-PATENT-CLASS-106-1			US-PATENT-CLASS-422-242			US-PATENT-APPL-SN-916655
		US-PATENT-CLASS-106-1.2			US-PATENT-CLASS-423-350			US-PATENT-CLASS-307-63
		US-PATENT-CLASS-136-89CC			US-PATENT-4,169,129			US-PATENT-CLASS-307-66
		US-PATENT-CLASS-252-514	N80-10507*	c 39	NASA-CASE-NPO-14192-1			US-PATENT-CLASS-323-15
		US-PATENT-CLASS-29-572			US-PATENT-APPL-SN-830562			US-PATENT-CLASS-323-19
		US-PATENT-CLASS-29-589			US-PATENT-CLASS-181-102			US-PATENT-CLASS-323-19
		US-PATENT-CLASS-357-30			US-PATENT-CLASS-181-105			US-PATENT-4,175,249
		US-PATENT-CLASS-357-65			US-PATENT-CLASS-367-26	N80-14473*	c 44	NASA-CASE-MFS-23727-1
		US-PATENT-CLASS-357-67			US-PATENT-CLASS-467-28			US-PATENT-APPL-SN-856465
		US-PATENT-CLASS-427-88			US-PATENT-4,168,483			US-PATENT-CLASS-126-438
		US-PATENT-4,163,678	N80-10709*	c 46	NASA-CASE-NPO-14231-1			US-PATENT-CLASS-126-442
N79-31753*	c 44	NASA-CASE-NPO-14467-1			US-PATENT-APPL-SN-903019			US-PATENT-CLASS-350-295
		US-PATENT-APPL-SN-946994			US-PATENT-CLASS-175-78			US-PATENT-CLASS-350-296
		US-PATENT-CLASS-136-89PC			US-PATENT-CLASS-73-155			US-PATENT-4,173,397
		US-PATENT-4,162,928			US-PATENT-4,167,111	N80-14474*	c 44	NASA-CASE-NPO-13652-3

			US-PATENT-APPL-SN-809890				US-PATENT-CLASS-73-188				US-PATENT-CLASS-156-278
			US-PATENT-APPL-SN-891358				US-PATENT-CLASS-73-189				US-PATENT-CLASS-156-285
			US-PATENT-CLASS-136-89P				US-PATENT-CLASS-73-212				US-PATENT-CLASS-156-303
			US-PATENT-CLASS-29-572				US-PATENT-4,184,149				US-PATENT-CLASS-156-312
			US-PATENT-CLASS-29-588				NASA-CASE-LEW-12971-1				US-PATENT-4,184,903
			US-PATENT-CLASS-29-627				US-PATENT-APPL-SN-858936		N80-18551*	c 44	NASA-CASE-NPO-14096-1
			US-PATENT-4,133,697				US-PATENT-CLASS-60-240				US-PATENT-APPL-SN-928128
			US-PATENT-4,173,820				US-PATENT-CLASS-60-39.03				US-PATENT-CLASS-324-158D
N80-14579*	c 45		NASA-CASE-NPO-14340-1				US-PATENT-CLASS-60-39.27				US-PATENT-CLASS-324-404
			US-PATENT-APPL-SN-946992				US-PATENT-4,184,327				US-PATENT-4,184,111
			US-PATENT-CLASS-210-57				NASA-CASE-MSC-18179-1				NASA-CASE-LAR-11999-1
			US-PATENT-CLASS-210-63Z				US-PATENT-APPL-SN-931218				US-PATENT-APPL-SN-876299
			US-PATENT-CLASS-422-9				US-PATENT-CLASS-60-63Z				US-PATENT-CLASS-250-211K
			US-PATENT-4,172,786				US-PATENT-4,183,217				US-PATENT-CLASS-250-231SE
N80-14603*	c 46		NASA-CASE-NPO-14124-1				NASA-CASE-NPO-14382-1				US-PATENT-4,184,072
			US-PATENT-APPL-SN-863024				US-PATENT-APPL-SN-891373				NASA-CASE-MFS-23862-1
			US-PATENT-CLASS-343-100ME				US-PATENT-CLASS-261-118				US-PATENT-APPL-SN-951423
			US-PATENT-CLASS-343-112D				US-PATENT-CLASS-422-224				US-PATENT-CLASS-73-170A
			US-PATENT-4,170,776				US-PATENT-CLASS-423-350				US-PATENT-4,184,368
N80-14684*	c 52		NASA-CASE-LEW-12955-1				US-PATENT-4,188,368				NASA-CASE-LEW-12723-1
			US-PATENT-APPL-SN-829318				NASA-CASE-NPO-14152-1				US-PATENT-APPL-SN-829317
			US-PATENT-CLASS-128-276				US-PATENT-APPL-SN-899828				US-PATENT-CLASS-128-276
			US-PATENT-4,157,718				US-PATENT-CLASS-178-58R				US-PATENT-CLASS-128-760
N80-14687*	c 52		NASA-CASE-NPO-14101-1				US-PATENT-CLASS-179-15BA				US-PATENT-4,184,491
			US-PATENT-APPL-SN-772434				US-PATENT-4,187,394				NASA-CASE-ARC-11120-1
			US-PATENT-CLASS-210-22				NASA-CASE-NPO-14328-1				US-PATENT-APPL-SN-796256
			US-PATENT-CLASS-210-321B				NASA-CASE-NPO-14579-1				US-PATENT-CLASS-128-748
			US-PATENT-4,094,775				NASA-CASE-NPO-14590-1				US-PATENT-CLASS-128-903
N80-14877*	c 72		NASA-CASE-NPO-14078-1				US-PATENT-APPL-SN-956160				US-PATENT-CLASS-73-724
			US-PATENT-APPL-SN-856466				US-PATENT-CLASS-325-305				US-PATENT-4,186,749
			US-PATENT-CLASS-250-281				US-PATENT-CLASS-325-307				NASA-CASE-GSC-12291-1
			US-PATENT-CLASS-250-282				US-PATENT-CLASS-325-419				US-PATENT-APPL-SN-906298
			US-PATENT-CLASS-250-423P				US-PATENT-4,186,347				US-PATENT-CLASS-125-23R
			US-PATENT-4,158,775				NASA-CASE-NPO-14229-1				US-PATENT-CLASS-269-21
N80-16116*	c 25		NASA-CASE-ARC-11107-1				US-PATENT-APPL-SN-835419				US-PATENT-CLASS-51-235
			US-PATENT-APPL-SN-883961				US-PATENT-APPL-SN-949886				US-PATENT-CLASS-83-152
			US-PATENT-CLASS-521-124				US-PATENT-CLASS-200-153S				US-PATENT-CLASS-83-870
			US-PATENT-CLASS-521-125				US-PATENT-CLASS-200-304				US-PATENT-4,184,472
			US-PATENT-CLASS-521-127				US-PATENT-CLASS-333-262				NASA-CASE-LAR-12261-1
			US-PATENT-CLASS-521-157				US-PATENT-4,187,416				US-PATENT-APPL-SN-964009
			US-PATENT-CLASS-528-73				NASA-CASE-GSC-12347-1				US-PATENT-CLASS-73-147
			US-PATENT-4,177,333				US-PATENT-APPL-SN-868249				US-PATENT-CLASS-73-205L
N80-16158*	c 27		NASA-CASE-LAR-12099-1				US-PATENT-CLASS-174-142				US-PATENT-4,188,823
			US-PATENT-APPL-SN-906299				US-PATENT-CLASS-174-73R				NASA-CASE-NPO-14079-1
			US-PATENT-CLASS-528-207				US-PATENT-4,185,164				US-PATENT-APPL-SN-958573
			US-PATENT-CLASS-528-208				NASA-CASE-NPO-14224-1				US-PATENT-CLASS-250-307
			US-PATENT-4,180,648				US-PATENT-APPL-SN-951829				US-PATENT-CLASS-250-308
N80-16163* #	c 27		NASA-CASE-NPO-14021-2				US-PATENT-CLASS-310-306				US-PATENT-4,194,115
			US-PATENT-APPL-SN-106188				US-PATENT-CLASS-343-100R				NASA-CASE-LEW-12081-2
N80-16261* #	c 32		NASA-CASE-NPO-14362-1				US-PATENT-CLASS-343-100ST				US-PATENT-APPL-SN-676432
			US-PATENT-APPL-SN-106118				US-PATENT-4,187,506				US-PATENT-APPL-SN-837794
N80-16321*	c 36		NASA-CASE-LAR-12176-1				NASA-CASE-NPO-14501-1				US-PATENT-CLASS-149-1
			US-PATENT-APPL-SN-929083				US-PATENT-APPL-SN-918535				US-PATENT-CLASS-423-648R
			US-PATENT-CLASS-332-751				US-PATENT-CLASS-264-40.4				US-PATENT-4,193,827
			US-PATENT-CLASS-350-359				US-PATENT-CLASS-73-343R				NASA-CASE-NPO-14480-1
			US-PATENT-CLASS-356-243				US-PATENT-CLASS-73-56				US-PATENT-APPL-SN-910707
			US-PATENT-CLASS-356-28				US-PATENT-4,185,493				US-PATENT-CLASS-325-14
N80-16452*	c 44		US-PATENT-4,176,950				NASA-CASE-LAR-12269-1				US-PATENT-CLASS-325-4
			NASA-CASE-MFS-23518-3				US-PATENT-APPL-SN-934576				US-PATENT-CLASS-325-8
			US-PATENT-APPL-SN-829390				US-PATENT-CLASS-73-4R				US-PATENT-CLASS-325-9
			US-PATENT-APPL-SN-910793				US-PATENT-CLASS-73-40				US-PATENT-4,189,675
			US-PATENT-CLASS-126-417				US-PATENT-4,182,158				NASA-CASE-LEW-13148-1
			US-PATENT-CLASS-126-901				NASA-CASE-GSC-12219-1				US-PATENT-APPL-SN-964754
			US-PATENT-CLASS-428-629				US-PATENT-APPL-SN-891356				US-PATENT-CLASS-429-101
			US-PATENT-CLASS-428-650				US-PATENT-CLASS-325-363				US-PATENT-CLASS-429-105
			US-PATENT-CLASS-428-658				US-PATENT-CLASS-343-100ME				US-PATENT-CLASS-429-107
			US-PATENT-CLASS-428-675				US-PATENT-CLASS-356-216				US-PATENT-CLASS-429-109
			US-PATENT-CLASS-428-680				US-PATENT-CLASS-73-355R				US-PATENT-4,192,910
			US-PATENT-4,104,134				US-PATENT-4,178,100				NASA-CASE-LAR-12304-1
			US-PATENT-4,177,325				NASA-CASE-NPO-13606-2				US-PATENT-APPL-SN-928130
N80-16714*	c 51		NASA-CASE-MSC-16260-1				US-PATENT-APPL-SN-065676				US-PATENT-CLASS-29-25.35
			US-PATENT-APPL-SN-876440				NASA-CASE-NPO-14254-1				US-PATENT-CLASS-310-311
			US-PATENT-CLASS-23-927				US-PATENT-APPL-SN-876432				US-PATENT-CLASS-310-327
			US-PATENT-CLASS-422-52				US-PATENT-CLASS-330-4				US-PATENT-CLASS-310-334
			US-PATENT-CLASS-435-34				US-PATENT-CLASS-331-94				US-PATENT-CLASS-310-360
			US-PATENT-4,176,007				US-PATENT-CLASS-333-24R				US-PATENT-4,195,244
N80-16715*	c 51		NASA-CASE-MFS-23883-1				US-PATENT-4,187,470				NASA-CASE-FRC-10093-1
			US-PATENT-APPL-SN-017688				NASA-CASE-ARC-11157-1				US-PATENT-APPL-SN-878539
			US-PATENT-CLASS-204-180R				US-PATENT-APPL-SN-935827				US-PATENT-CLASS-219-85CA
			US-PATENT-CLASS-204-299R				US-PATENT-CLASS-220-423				US-PATENT-CLASS-219-85CM
			US-PATENT-CLASS-424-12				US-PATENT-CLASS-220-445				US-PATENT-CLASS-219-85R
			US-PATENT-4,181,589				US-PATENT-CLASS-220-901				US-PATENT-CLASS-338-2
N80-16725*	c 52		NASA-CASE-NPO-14092-1				US-PATENT-4,184,609				US-PATENT-4,195,279
			US-PATENT-APPL-SN-807597				NASA-CASE-NPO-12131-3				NASA-CASE-NPO-14093-1
			US-PATENT-CLASS-128-DIG.9				US-PATENT-APPL-SN-096255				US-PATENT-APPL-SN-880729
			US-PATENT-CLASS-128-348				NASA-CASE-LAR-12344-1				US-PATENT-CLASS-356-346
			US-PATENT-CLASS-138-103				US-PATENT-APPL-SN-945041				US-PATENT-4,193,693
			US-PATENT-CLASS-138-133				US-PATENT-CLASS-343-18B				NASA-CASE-NPO-14237-1
			US-PATENT-CLASS-138-33				US-PATENT-CLASS-343-18D				US-PATENT-APPL-SN-897831
			US-PATENT-CLASS-219-201				US-PATENT-CLASS-343-5CM				US-PATENT-CLASS-126-633
			US-PATENT-CLASS-219-522				US-PATENT-CLASS-343-5W				US-PATENT-CLASS-149-15
			US-PATENT-4,176,662				US-PATENT-4,184,155				US-PATENT-CLASS-149-37
N80-18036*	c 06		NASA-CASE-FRC-11009-1				NASA-CASE-NPO-14303-1				US-PATENT-CLASS-220-429
			US-PATENT-APPL-SN-910708				NASA-CASE-NPO-14305-1				US-PATENT-4,193,388
			US-PATENT-CLASS-340-177VA				US-PATENT-APPL-SN-928133				NASA-CASE-LAR-12205-1
							US-PATENT-CLASS-156-104				US-PATENT-APPL-SN-900843





		US-PATENT-4,089,004		US-PATENT-APPL-SN-938293		US-PATENT-CLASS-260-898
N80-29583*	# c 33	NASA-CASE-FRC-11055-1		US-PATENT-CLASS-333-12		US-PATENT-CLASS-260-901
		US-PATENT-APPL-SN-172098		US-PATENT-CLASS-333-252		US-PATENT-CLASS-521-27
N80-29703*	c 37	NASA-CASE-NPO-14406-1		US-PATENT-CLASS-333-995		US-PATENT-CLASS-521-32
		US-PATENT-APPL-SN-951828		US-PATENT-4,215,327		US-PATENT-CLASS-521-62
		US-PATENT-CLASS-125-21	N80-32650*	NASA-CASE-NPO-14424-1	c 33	US-PATENT-4,119,581
		US-PATENT-CLASS-83-820		NASA-CASE-NPO-14430-1		NASA-CASE-MS-C-12631-3
		US-PATENT-4,191,159		US-PATENT-APPL-SN-918534	N81-14077*	US-PATENT-APPL-SN-006952
N80-29834*	c 44	NASA-CASE-LAR-11551-1		US-PATENT-CLASS-324-62		US-PATENT-APPL-SN-568541
		US-PATENT-APPL-SN-883090		US-PATENT-CLASS-324-64		US-PATENT-APPL-SN-785279
		US-PATENT-CLASS-290-53		US-PATENT-4,218,650		US-PATENT-CLASS-156-154
		US-PATENT-CLASS-310-30	N80-32716*	NASA-CASE-MFS-23777-1	c 37	US-PATENT-CLASS-156-160
		US-PATENT-4,191,893		US-PATENT-APPL-SN-931217		US-PATENT-CLASS-156-163
N80-29835*	c 44	NASA-CASE-NPO-13786-1		US-PATENT-CLASS-318-15		US-PATENT-CLASS-156-212
		US-PATENT-APPL-SN-696374		US-PATENT-CLASS-74-425		US-PATENT-CLASS-156-267
		US-PATENT-CLASS-148-1.5		US-PATENT-CLASS-74-661		US-PATENT-CLASS-156-295
		US-PATENT-CLASS-357-30		US-PATENT-CLASS-74-665C		US-PATENT-CLASS-156-323
		US-PATENT-CLASS-357-52		US-PATENT-4,215,592		US-PATENT-CLASS-156-331
		US-PATENT-CLASS-357-91	N80-32717*	NASA-CASE-GSC-12289-1	c 37	US-PATENT-4,032,089
		US-PATENT-4,090,213		US-PATENT-APPL-SN-943086		US-PATENT-4,225,372
N80-31790*	c 37	NASA-CASE-LEW-12274-1		US-PATENT-CLASS-198-847		NASA-CASE-LAR-12054-2
		US-PATENT-APPL-SN-950876		US-PATENT-CLASS-198-848		US-PATENT-APPL-SN-011737
		US-PATENT-CLASS-417-383		US-PATENT-CLASS-474-205		US-PATENT-APPL-SN-839963
		US-PATENT-CLASS-60-520		US-PATENT-4,215,590		US-PATENT-CLASS-264-137
		US-PATENT-4,215,548	N80-33081* #	NASA-CASE-ARC-11258-1	c 52	US-PATENT-CLASS-427-385.5
N80-32244*	c 76	NASA-CASE-NPO-14298-1		US-PATENT-APPL-SN-185865		US-PATENT-CLASS-427-429
		US-PATENT-APPL-SN-938579		NASA-CASE-LEW-12940-1	N80-33186*	US-PATENT-CLASS-428-473.5
		US-PATENT-CLASS-156-DIG.96		US-PATENT-APPL-SN-953391	c 72	US-PATENT-4,166,170
		US-PATENT-CLASS-422-246		US-PATENT-CLASS-313-231.4		US-PATENT-4,233,258
		US-PATENT-4,216,186		US-PATENT-CLASS-313-362		N81-14103*
N80-32245*	c 76	NASA-CASE-NPO-14295-1		US-PATENT-4,218,633		c 28
		US-PATENT-APPL-SN-901055		NASA-CASE-MS-C-18255-1		NASA-CASE-LEW-12081-3
		US-PATENT-CLASS-156-DIG.64		US-PATENT-APPL-SN-025163		US-PATENT-APPL-SN-009887
		US-PATENT-CLASS-156-DIG.88		US-PATENT-CLASS-250-347		US-PATENT-APPL-SN-676432
		US-PATENT-CLASS-156-601		US-PATENT-CLASS-250-352		US-PATENT-APPL-SN-837794
		US-PATENT-CLASS-156-617SP		US-PATENT-CLASS-250-353		US-PATENT-CLASS-149-1
		US-PATENT-4,217,165		US-PATENT-CLASS-350-55		US-PATENT-CLASS-156-344
N80-32359*	c 04	NASA-CASE-NPO-14173-1		US-PATENT-CLASS-356-72		US-PATENT-CLASS-423-648R
		US-PATENT-APPL-SN-938581		US-PATENT-4,215,273		US-PATENT-CLASS-44-7R
		US-PATENT-CLASS-343-112R		US-PATENT-CLASS-356-72		US-PATENT-CLASS-55-2
		US-PATENT-4,215,345	N80-33482*	NASA-CASE-LEW-11930-3	c 24	US-PATENT-CLASS-62-12
N80-32392*	c 07	NASA-CASE-ARC-10977-1		US-PATENT-APPL-SN-513611		US-PATENT-CLASS-62-18
		US-PATENT-APPL-SN-023436		US-PATENT-APPL-SN-616528		US-PATENT-CLASS-62-40
		US-PATENT-CLASS-239-127.3		US-PATENT-APPL-SN-764245		US-PATENT-CLASS-62-47
		US-PATENT-CLASS-239-265.33		US-PATENT-CLASS-75-200		US-PATENT-4,077,788
		US-PATENT-CLASS-60-264		US-PATENT-CLASS-75-222		US-PATENT-4,193,827
		US-PATENT-4,214,703		US-PATENT-4,214,905		US-PATENT-4,229,196
N80-32484*	c 26	NASA-CASE-LEW-12542-3	N81-12330* #	NASA-CASE-MFS-25535-1	c 33	NASA-CASE-KSC-11064-1
		US-PATENT-APPL-SN-007083		US-PATENT-APPL-SN-199765		US-PATENT-APPL-SN-897840
		US-PATENT-APPL-SN-803822		NASA-CASE-LEW-12806-2		US-PATENT-CLASS-169-62
		US-PATENT-CLASS-75-124	N81-12542*	US-PATENT-APPL-SN-065676	c 44	US-PATENT-CLASS-169-70
		US-PATENT-4,214,902		US-PATENT-APPL-SN-915050		US-PATENT-4,219,084
N80-32514*	c 27	NASA-CASE-NPO-13137-1		US-PATENT-CLASS-136-249		N81-14185*
		US-PATENT-APPL-SN-332123		US-PATENT-CLASS-136-291	c 32	NASA-CASE-NPO-14536-1
		US-PATENT-APPL-SN-374810		US-PATENT-CLASS-363-147		US-PATENT-APPL-SN-974471
		US-PATENT-CLASS-568-852		US-PATENT-CLASS-363-27		US-PATENT-CLASS-343-100TD
		US-PATENT-CLASS-568-861		US-PATENT-CLASS-363-60		US-PATENT-4,233,606
		US-PATENT-4,118,427		US-PATENT-4,217,633		N81-14186*
N80-32515*	c 27	NASA-CASE-NPO-13899-1		NASA-CASE-ARC-11174-1	c 24	c 32
		US-PATENT-APPL-SN-761252		US-PATENT-APPL-SN-929086		NASA-CASE-NPO-14749-1
		US-PATENT-APPL-SN-933186		US-PATENT-CLASS-260-17.2		US-PATENT-APPL-SN-078521
		US-PATENT-CLASS-260-346.3		US-PATENT-CLASS-428-114		US-PATENT-CLASS-375-107
		US-PATENT-4,196,129		US-PATENT-CLASS-428-528		US-PATENT-CLASS-455-51
N80-32516*	c 27	NASA-CASE-LEW-13103-1		US-PATENT-CLASS-428-541		US-PATENT-CLASS-455-619
		US-PATENT-APPL-SN-971596		US-PATENT-CLASS-428-921		US-PATENT-CLASS-455-71
		US-PATENT-CLASS-156-272		US-PATENT-4,209,561		US-PATENT-4,234,971
		US-PATENT-CLASS-156-292		NASA-CASE-LAR-12065-1		N81-14187*
		US-PATENT-CLASS-204-159.11		US-PATENT-APPL-SN-689671		c 32
		US-PATENT-CLASS-204-159.14		US-PATENT-CLASS-156-330		NASA-CASE-NPO-14163-1
		US-PATENT-CLASS-264-212		US-PATENT-CLASS-428-113		US-PATENT-APPL-SN-878541
		US-PATENT-CLASS-264-22		US-PATENT-CLASS-428-114		US-PATENT-CLASS-363-56
		US-PATENT-CLASS-427-44		US-PATENT-CLASS-428-140		US-PATENT-CLASS-363-71
		US-PATENT-CLASS-428-500		US-PATENT-CLASS-428-413		US-PATENT-CLASS-363-78
		US-PATENT-CLASS-429-139		US-PATENT-CLASS-428-480		US-PATENT-4,222,098
		US-PATENT-4,218,280		US-PATENT-CLASS-428-902		N81-14221*
N80-32583*	c 31	NASA-CASE-GSC-12191-1		US-PATENT-4,229,473		c 33
		US-PATENT-APPL-SN-009886		NASA-CASE-NPO-14143-1		NASA-CASE-GSC-12411-1
		US-PATENT-CLASS-165-16		US-PATENT-APPL-SN-938297		US-PATENT-APPL-SN-965367
		US-PATENT-CLASS-236-13		US-PATENT-CLASS-250-343		US-PATENT-CLASS-340-309.4
		US-PATENT-CLASS-236-44C		US-PATENT-CLASS-356-437		US-PATENT-CLASS-340-310A
		US-PATENT-CLASS-236-49		US-PATENT-4,234,258		US-PATENT-CLASS-340-310R
		US-PATENT-4,210,278		NASA-CASE-ARC-11241-1		US-PATENT-CLASS-368-47
N80-32584*	c 31	NASA-CASE-NPO-14191-1		US-PATENT-APPL-SN-037066		US-PATENT-CLASS-370-85
		US-PATENT-APPL-SN-830846		US-PATENT-CLASS-260-33.8F		US-PATENT-4,228,422
		US-PATENT-CLASS-181-102		US-PATENT-CLASS-528-362		NASA-CASE-NPO-14513-1
		US-PATENT-CLASS-367-27		US-PATENT-CLASS-528-401		US-PATENT-APPL-SN-025162
		US-PATENT-CLASS-367-36		US-PATENT-CLASS-528-422		US-PATENT-CLASS-165-105
		US-PATENT-CLASS-367-57		US-PATENT-4,234,715		US-PATENT-CLASS-62-514R
		US-PATENT-4,214,226		NASA-CASE-NPO-14001-1		US-PATENT-4,218,892
N80-32604*	c 32	NASA-CASE-MS-C-18334-1		US-PATENT-APPL-SN-771245		N81-14317*
		US-PATENT-APPL-SN-051270		US-PATENT-CLASS-210-24R		c 37
		US-PATENT-CLASS-343-700MS		US-PATENT-CLASS-260-17A		NASA-CASE-MS-C-16973-1
		US-PATENT-CLASS-343-830		US-PATENT-CLASS-260-2.1E		US-PATENT-APPL-SN-969756
		US-PATENT-4,218,682		US-PATENT-CLASS-260-858		US-PATENT-CLASS-150-11
N80-32605*	c 32	NASA-CASE-NPO-14253-1		US-PATENT-CLASS-260-886		US-PATENT-CLASS-156-294
		NASA-CASE-NPO-14640-1		US-PATENT-CLASS-260-890		US-PATENT-CLASS-52-232
				US-PATENT-CLASS-260-895		US-PATENT-CLASS-52-743
						US-PATENT-4,235,060
						N81-14318*
						c 37
						NASA-CASE-NPO-14220-1
						US-PATENT-APPL-SN-907421

		US-PATENT-CLASS-60-518				US-PATENT-CLASS-375-1				US-PATENT-CLASS-333-204
		US-PATENT-CLASS-74-417				US-PATENT-CLASS-375-115				US-PATENT-4,227,096
		US-PATENT-4,228,856				US-PATENT-CLASS-375-58				NASA-CASE-MSC-16747-1
N81-14319*	c 37	NASA-CASE-LAR-11855-1				US-PATENT-4,221,005		N81-17349*	c 33	US-PATENT-APPL-SN-974475
		US-PATENT-APPL-SN-953314				NASA-CASE-NPO-14444-1				US-PATENT-CLASS-328-134
		US-PATENT-CLASS-407-117		N81-15192*	c 33	US-PATENT-APPL-SN-017890				US-PATENT-CLASS-328-37
		US-PATENT-CLASS-407-85				US-PATENT-CLASS-332-22				US-PATENT-CLASS-328-55
		US-PATENT-CLASS-408-1R				US-PATENT-CLASS-332-23R				US-PATENT-CLASS-331-48
		US-PATENT-CLASS-82-1.2				US-PATENT-CLASS-375-54				US-PATENT-4,241,308
		US-PATENT-CLASS-82-1C				US-PATENT-CLASS-375-67		N81-17432*	c 37	NASA-CASE-NPO-14388-1
		US-PATENT-CLASS-82-36R				US-PATENT-CLASS-455-102				US-PATENT-APPL-SN-008208
		US-PATENT-4,218,941				US-PATENT-4,216,542				US-PATENT-CLASS-60-518
N81-14320*	c 37	NASA-CASE-GSC-12429-1		N81-15363*	c 37	NASA-CASE-MSC-18134-1				US-PATENT-CLASS-74-417
		US-PATENT-APPL-SN-009888				US-PATENT-APPL-SN-974472				US-PATENT-4,240,256
		US-PATENT-CLASS-244-161				US-PATENT-CLASS-277-181		N81-17433*	c 37	NASA-CASE-ARC-11251-1
		US-PATENT-CLASS-294-106				US-PATENT-CLASS-277-229				US-PATENT-APPL-SN-057465
		US-PATENT-CLASS-414-1				US-PATENT-4,219,203				US-PATENT-CLASS-128-DIG.20
		US-PATENT-4,219,171		N81-15364*	c 37	NASA-CASE-NPO-14170-1				US-PATENT-CLASS-137-549
N81-14389*	c 44	NASA-CASE-NPO-14416-1				US-PATENT-APPL-SN-860404				US-PATENT-CLASS-137-886
		US-PATENT-APPL-SN-014664				US-PATENT-CLASS-188-134				US-PATENT-CLASS-137-887
		US-PATENT-CLASS-29-DIG.1				US-PATENT-CLASS-188-180				US-PATENT-CLASS-251-216
		US-PATENT-CLASS-29-832				US-PATENT-CLASS-188-184				US-PATENT-CLASS-251-339
		US-PATENT-4,219,926				US-PATENT-CLASS-244-173				US-PATENT-4,239,057
N81-14605*	c 51	NASA-CASE-ARC-11114-1				US-PATENT-4,219,107		N81-17499*	c 43	NASA-CASE-FRC-11013-1
		US-PATENT-APPL-SN-951422				NASA-CASE-NPO-14162-1				US-PATENT-APPL-SN-043912
		US-PATENT-CLASS-128-DIG.12				NASA-CASE-NPO-14167-1				US-PATENT-CLASS-244-160
		US-PATENT-CLASS-128-DIG.16				NASA-CASE-NPO-14169-1				US-PATENT-CLASS-244-49
		US-PATENT-CLASS-128-DIG.26				US-PATENT-APPL-SN-893903				US-PATENT-4,240,601
		US-PATENT-CLASS-128-DIG.9				US-PATENT-CLASS-307-219		N81-17518*	c 44	NASA-CASE-NPO-14619-1
		US-PATENT-CLASS-128-204.18				US-PATENT-CLASS-307-225R				US-PATENT-APPL-SN-027559
		US-PATENT-CLASS-128-207.14				US-PATENT-CLASS-307-269				US-PATENT-CLASS-126-419
		US-PATENT-CLASS-128-207.28				US-PATENT-CLASS-307-291				US-PATENT-CLASS-60-524
		US-PATENT-CLASS-128-236				US-PATENT-CLASS-328-192				US-PATENT-CLASS-60-641
		US-PATENT-4,212,297				US-PATENT-CLASS-328-48				US-PATENT-4,236,383
N81-14612*	c 52	NASA-CASE-ARC-11117-1				US-PATENT-CLASS-328-71		N81-17886*	c 74	NASA-CASE-NPO-14219-1
		US-PATENT-APPL-SN-003693				US-PATENT-4,213,064				US-PATENT-APPL-SN-888432
		US-PATENT-CLASS-128-642		N81-15767*	c 71	NASA-CASE-MFS-25050-1				US-PATENT-CLASS-350-301
		US-PATENT-4,219,027				US-PATENT-APPL-SN-057466				US-PATENT-CLASS-354-118
N81-14613*	c 52	NASA-CASE-ARC-11118-2				US-PATENT-CLASS-308-10				US-PATENT-CLASS-362-11
		US-PATENT-APPL-SN-850504				US-PATENT-CLASS-73-505				US-PATENT-CLASS-362-241
		US-PATENT-APPL-SN-974474				US-PATENT-4,218,921				US-PATENT-4,213,684
		US-PATENT-CLASS-424-274		N81-16209* #	c 26	NASA-CASE-LEW-23169-2		N81-17887*	c 74	NASA-CASE-NPO-14657-1
		US-PATENT-4,230,717				US-PATENT-APPL-SN-191746				US-PATENT-APPL-SN-008211
N81-14968*	c 02	NASA-CASE-LAR-12326-1				NASA-CASE-FRC-11029-1				US-PATENT-CLASS-356-432
		US-PATENT-APPL-SN-019541				US-PATENT-APPL-SN-164617				US-PATENT-CLASS-73-15R
		US-PATENT-CLASS-102-56R				US-PATENT-CLASS-73-147				US-PATENT-4,243,327
		US-PATENT-CLASS-102-92.1				US-PATENT-CLASS-73-178R				NASA-CASE-NPO-14502-1
		US-PATENT-CLASS-244-119				US-PATENT-4,240,290		N81-17888*	c 74	US-PATENT-APPL-SN-965368
		US-PATENT-CLASS-244-130				NASA-CASE-LEW-12493-1				US-PATENT-CLASS-356-345
		US-PATENT-4,225,102				US-PATENT-APPL-SN-893857				US-PATENT-CLASS-356-352
N81-14999*	c 07	NASA-CASE-LEW-13201-1				US-PATENT-CLASS-156-292				US-PATENT-CLASS-356-358
		US-PATENT-APPL-SN-038980				US-PATENT-CLASS-228-118				US-PATENT-4,243,323
		US-PATENT-CLASS-137-15.1				US-PATENT-CLASS-228-170		N81-19087*	c 05	NASA-CASE-LAR-11797-1
		US-PATENT-CLASS-181-214				US-PATENT-CLASS-228-174				US-PATENT-APPL-SN-969755
		US-PATENT-4,220,171				US-PATENT-CLASS-228-190				US-PATENT-CLASS-244-17.25
N81-15104*	c 27	NASA-CASE-NPO-10830-1				US-PATENT-4,211,354				US-PATENT-CLASS-416-114
		US-PATENT-APPL-SN-825489		N81-17187*	c 25	NASA-CASE-NPO-13530-1				US-PATENT-CLASS-416-500
		US-PATENT-CLASS-117-6				US-PATENT-CLASS-210-500M				US-PATENT-CLASS-74-519
		US-PATENT-CLASS-138.8R				US-PATENT-CLASS-260-2.1				US-PATENT-4,245,956
		US-PATENT-CLASS-260-33.6UB				US-PATENT-CLASS-260-2.2R		N81-19115*	c 07	NASA-CASE-LEW-12907-2
		US-PATENT-CLASS-33.8UB				US-PATENT-4,014,798				US-PATENT-APPL-SN-752050
		US-PATENT-CLASS-37N				NASA-CASE-ARC-11248-1				US-PATENT-APPL-SN-909235
		US-PATENT-CLASS-41R				US-PATENT-APPL-SN-028300				US-PATENT-CLASS-364-106
		US-PATENT-CLASS-77.5AQ				US-PATENT-CLASS-528-362				US-PATENT-CLASS-364-431
		US-PATENT-CLASS-77.5CH				US-PATENT-CLASS-528-401				US-PATENT-CLASS-60-39.24
		US-PATENT-CLASS-859R				US-PATENT-CLASS-528-422				US-PATENT-4,249,238
		US-PATENT-CLASS-94.9N				US-PATENT-CLASS-528-423				NASA-CASE-LEW-12594-2
		US-PATENT-3,655,814				US-PATENT-4,242,498		N81-19116*	c 07	US-PATENT-APPL-SN-741056
N81-15119*	c 28	NASA-CASE-NPO-14110-1				NASA-CASE-LEW-13226-1				US-PATENT-APPL-SN-909608
		US-PATENT-APPL-SN-947000				US-PATENT-APPL-SN-070771				US-PATENT-CLASS-60-226R
		US-PATENT-CLASS-149-108.4				US-PATENT-CLASS-260-326N				US-PATENT-CLASS-60-236
		US-PATENT-CLASS-23-293R				US-PATENT-CLASS-260-326S				US-PATENT-CLASS-60-238
		US-PATENT-CLASS-252-364				US-PATENT-CLASS-260-37EP				US-PATENT-CLASS-60-239
		US-PATENT-CLASS-260-96D				US-PATENT-CLASS-528-118				US-PATENT-4,242,864
		US-PATENT-CLASS-423-1				US-PATENT-CLASS-528-322				NASA-CASE-LAR-11970-2
		US-PATENT-CLASS-423-131				US-PATENT-CLASS-538-117				US-PATENT-APPL-SN-034104
		US-PATENT-CLASS-423-658.5				US-PATENT-4,244,857				US-PATENT-APPL-SN-727503
		US-PATENT-CLASS-525-384				NASA-CASE-NPO-14315-1				US-PATENT-CLASS-244-12.5
		US-PATENT-CLASS-526-914				US-PATENT-APPL-SN-900659				US-PATENT-CLASS-244-52
		US-PATENT-CLASS-75-25				US-PATENT-CLASS-201-10				US-PATENT-CLASS-244-87
		US-PATENT-4,229,182				US-PATENT-CLASS-201-25				US-PATENT-4,236,684
N81-15154*	c 31	NASA-CASE-NPO-13758-2				US-PATENT-CLASS-201-8		N81-19242*	c 25	NASA-CASE-MFS-25000-1
		US-PATENT-APPL-SN-623389				US-PATENT-CLASS-44-50				US-PATENT-APPL-SN-974474
		US-PATENT-APPL-SN-727444				US-PATENT-CLASS-44-62				US-PATENT-CLASS-260-29.6RB
		US-PATENT-CLASS-110-218				US-PATENT-4,246,001				US-PATENT-CLASS-526-201
		US-PATENT-CLASS-110-229				NASA-CASE-ARC-11253-1				US-PATENT-CLASS-526-88
		US-PATENT-CLASS-110-232				US-PATENT-APPL-SN-028301				US-PATENT-4,247,434
		US-PATENT-CLASS-110-343				US-PATENT-CLASS-528-310		N81-19244*	c 25	NASA-CASE-NPO-13309-1
		US-PATENT-CLASS-110-347				US-PATENT-CLASS-528-362				US-PATENT-APPL-SN-363130
		US-PATENT-CLASS-202-118				US-PATENT-CLASS-528-401				US-PATENT-CLASS-210-24
		US-PATENT-CLASS-264-23				US-PATENT-CLASS-528-422				US-PATENT-CLASS-260-2.1E
		US-PATENT-CLASS-425-378R				US-PATENT-CLASS-528-422				US-PATENT-CLASS-260-2.2R
		US-PATENT-4,206,713				US-PATENT-4,245,085				US-PATENT-CLASS-264-41
N81-15179*	c 32	NASA-CASE-MSC-18035-1		N81-17348*	c 33	NASA-CASE-MFS-23845-1				US-PATENT-3,944,485
		US-PATENT-APPL-SN-041142				US-PATENT-APPL-SN-938298		N81-19296*	c 27	NASA-CASE-LEW-12933-1
						US-PATENT-CLASS-307-233R				US-PATENT-APPL-SN-027557
						US-PATENT-CLASS-307-306				



			US-PATENT-CLASS-244-163				US-PATENT-CLASS-528-6				US-PATENT-APPL-SN-102002
			US-PATENT-CLASS-60-259				US-PATENT-4,276,403				US-PATENT-CLASS-364-453
		N81-27272*	US-PATENT-CLASS-60-267	c 27		NASA-CASE-ARC-11321-1	NASA-CASE-ARC-11321-1				US-PATENT-CLASS-364-566
			US-PATENT-CLASS-60-730			US-PATENT-APPL-SN-175452	US-PATENT-APPL-SN-175452				US-PATENT-CLASS-73-178R
			US-PATENT-CLASS-62-DIG.5			US-PATENT-CLASS-428-260	US-PATENT-CLASS-428-260				US-PATENT-CLASS-73-510
			US-PATENT-4,273,304			US-PATENT-CLASS-428-367	US-PATENT-CLASS-428-367				US-PATENT-4,281,384
N81-26152*	c 08		NASA-CASE-LAR-12562-1			US-PATENT-CLASS-428-408	US-PATENT-CLASS-428-408		N81-29160*	c 23	NASA-CASE-LEW-13101-2
			US-PATENT-APPL-SN-015995			US-PATENT-CLASS-428-902	US-PATENT-CLASS-428-902				US-PATENT-APPL-SN-145271
			US-PATENT-CLASS-244-181			US-PATENT-CLASS-428-920	US-PATENT-CLASS-428-920				US-PATENT-APPL-SN-971473
			US-PATENT-CLASS-244-182			US-PATENT-CLASS-526-262	US-PATENT-CLASS-526-262				US-PATENT-CLASS-260-17,4UC
			US-PATENT-4,266,743			US-PATENT-CLASS-528-228	US-PATENT-CLASS-528-228				US-PATENT-CLASS-264-104
N81-26161*	c 14		NASA-CASE-LAR-12250-1			US-PATENT-4,276,344	US-PATENT-4,276,344				US-PATENT-CLASS-428-139
			US-PATENT-APPL-SN-910794			NASA-CASE-MSC-16217-1	NASA-CASE-MSC-16217-1				US-PATENT-CLASS-429-249
			US-PATENT-CLASS-244-160			US-PATENT-APPL-SN-893383	US-PATENT-APPL-SN-893383				US-PATENT-CLASS-429-253
			US-PATENT-CLASS-244-242			US-PATENT-CLASS-52-108	US-PATENT-CLASS-52-108				US-PATENT-CLASS-429-27
			US-PATENT-CLASS-244-63			US-PATENT-CLASS-52-745	US-PATENT-CLASS-52-745				US-PATENT-CLASS-429-28
			US-PATENT-4,265,416			US-PATENT-4,237,662	US-PATENT-4,237,662				US-PATENT-CLASS-525-56
N81-26179*	c 24		NASA-CASE-LEW-12493-2			NASA-CASE-LAR-12195-1	NASA-CASE-LAR-12195-1				US-PATENT-CLASS-525-61
			US-PATENT-APPL-SN-122967			US-PATENT-APPL-SN-946991	US-PATENT-APPL-SN-946991				US-PATENT-4,272,470
			US-PATENT-APPL-SN-893857			US-PATENT-CLASS-182-62.5	US-PATENT-CLASS-182-62.5				NASA-CASE-MFS-23674-1
			US-PATENT-CLASS-228-118			US-PATENT-CLASS-212-267	US-PATENT-CLASS-212-267				US-PATENT-APPL-SN-912276
			US-PATENT-CLASS-228-190			US-PATENT-CLASS-52-111	US-PATENT-CLASS-52-111				US-PATENT-CLASS-156-161
			US-PATENT-4,211,354			US-PATENT-CLASS-52-632	US-PATENT-CLASS-52-632				US-PATENT-CLASS-156-165
			US-PATENT-4,267,953			US-PATENT-4,238,911	US-PATENT-4,238,911				US-PATENT-CLASS-156-285
N81-26358*	c 33		NASA-CASE-LAR-12196-1			NASA-CASE-GSC-12147-1	NASA-CASE-GSC-12147-1				US-PATENT-CLASS-156-294
			US-PATENT-APPL-SN-017887			US-PATENT-APPL-SN-780873	US-PATENT-APPL-SN-780873				US-PATENT-CLASS-156-74
			US-PATENT-CLASS-343-100PE			US-PATENT-CLASS-343-112R	US-PATENT-CLASS-343-112R				US-PATENT-CLASS-264-229
			US-PATENT-4,264,908			US-PATENT-4,276,553	US-PATENT-4,276,553				US-PATENT-CLASS-264-231
N81-26359*	c 33		NASA-CASE-KSC-11065-1			NASA-CASE-MFS-23998-1	NASA-CASE-MFS-23998-1				US-PATENT-CLASS-264-258
			US-PATENT-APPL-SN-051271			US-PATENT-APPL-SN-044431	US-PATENT-APPL-SN-044431				US-PATENT-CLASS-264-259
			US-PATENT-CLASS-324-51			US-PATENT-CLASS-307-252UA	US-PATENT-CLASS-307-252UA				US-PATENT-CLASS-264-311
			US-PATENT-CLASS-324-73AT			US-PATENT-CLASS-318-799	US-PATENT-CLASS-318-799				US-PATENT-CLASS-74-572
			US-PATENT-CLASS-371-20			US-PATENT-CLASS-318-810	US-PATENT-CLASS-318-810				US-PATENT-4,190,626
			US-PATENT-CLASS-371-25			US-PATENT-4,266,177	US-PATENT-4,266,177				NASA-CASE-LAR-12642-1
			US-PATENT-4,267,594			NASA-CASE-NPO-14426-1	NASA-CASE-NPO-14426-1				US-PATENT-APPL-SN-092141
N81-26360*	c 33		NASA-CASE-GSC-12515-1			US-PATENT-APPL-SN-009889	US-PATENT-APPL-SN-009889				US-PATENT-CLASS-264-137
			US-PATENT-APPL-SN-172727			US-PATENT-CLASS-428-375.2	US-PATENT-CLASS-428-375.2				US-PATENT-CLASS-428-473.5
			US-PATENT-CLASS-148-1.5			US-PATENT-CLASS-307-352	US-PATENT-CLASS-307-352				US-PATENT-CLASS-528-222
			US-PATENT-CLASS-148-187			US-PATENT-CLASS-307-353	US-PATENT-CLASS-307-353				US-PATENT-CLASS-528-229
			US-PATENT-CLASS-156-647			US-PATENT-CLASS-328-151	US-PATENT-CLASS-328-151				US-PATENT-CLASS-264-231
			US-PATENT-CLASS-156-648			US-PATENT-4,262,258	US-PATENT-4,262,258				US-PATENT-CLASS-264-258
			US-PATENT-CLASS-156-649			NASA-CASE-MSC-12745-1	NASA-CASE-MSC-12745-1				US-PATENT-CLASS-264-259
			US-PATENT-CLASS-29-571			US-PATENT-APPL-SN-746579	US-PATENT-APPL-SN-746579				US-PATENT-CLASS-264-311
			US-PATENT-CLASS-29-578			US-PATENT-CLASS-179-78	US-PATENT-CLASS-179-78				US-PATENT-CLASS-74-572
			US-PATENT-CLASS-29-580			US-PATENT-CLASS-333-12	US-PATENT-CLASS-333-12				US-PATENT-4,190,626
			US-PATENT-CLASS-357-23			US-PATENT-CLASS-361-56	US-PATENT-CLASS-361-56				NASA-CASE-LAR-12642-1
			US-PATENT-CLASS-357-55			US-PATENT-CLASS-361-91	US-PATENT-CLASS-361-91				US-PATENT-APPL-SN-092141
			US-PATENT-CLASS-357-60			US-PATENT-4,264,940	US-PATENT-4,264,940				US-PATENT-CLASS-264-137
			US-PATENT-CLASS-357-91			NASA-CASE-MSC-12745-1	NASA-CASE-MSC-12745-1				US-PATENT-CLASS-428-473.5
			US-PATENT-4,272,302			US-PATENT-APPL-SN-023439	US-PATENT-APPL-SN-023439				US-PATENT-CLASS-528-222
N81-26402*	c 34		NASA-CASE-KSC-11076-1			US-PATENT-CLASS-244-161	US-PATENT-CLASS-244-161				US-PATENT-CLASS-528-229
			US-PATENT-APPL-SN-051274			US-PATENT-CLASS-294-86R	US-PATENT-CLASS-294-86R				US-PATENT-4,281,102
			US-PATENT-CLASS-364-510			US-PATENT-CLASS-318-640	US-PATENT-CLASS-318-640				NASA-CASE-NPO-14641-1
			US-PATENT-CLASS-364-571			US-PATENT-CLASS-356-152	US-PATENT-CLASS-356-152				US-PATENT-APPL-SN-076643
			US-PATENT-CLASS-73-861			US-PATENT-CLASS-414-730	US-PATENT-CLASS-414-730				US-PATENT-CLASS-343-100CL
			US-PATENT-4,253,156			US-PATENT-4,260,187	US-PATENT-4,260,187				US-PATENT-CLASS-455-278
N81-26431*	c 35		NASA-CASE-FRC-10112-2			NASA-CASE-LEW-13556-1	NASA-CASE-LEW-13556-1				US-PATENT-4,278,978
			US-PATENT-APPL-SN-122965			US-PATENT-APPL-SN-272233	US-PATENT-APPL-SN-272233				NASA-CASE-GSC-12111-2
			US-PATENT-CLASS-219-209			US-PATENT-CLASS-244-161	US-PATENT-CLASS-244-161				US-PATENT-APPL-SN-678813
			US-PATENT-CLASS-219-210			US-PATENT-CLASS-294-86R	US-PATENT-CLASS-294-86R				US-PATENT-APPL-SN-830272
			US-PATENT-CLASS-219-510			US-PATENT-CLASS-318-640	US-PATENT-CLASS-318-640				US-PATENT-CLASS-350-96.25
			US-PATENT-CLASS-236-1F			US-PATENT-CLASS-356-152	US-PATENT-CLASS-356-152				US-PATENT-CLASS-365-120
			US-PATENT-CLASS-361-334			US-PATENT-CLASS-414-730	US-PATENT-CLASS-414-730				US-PATENT-4,154,501
			US-PATENT-CLASS-73-361			US-PATENT-4,260,187	US-PATENT-4,260,187				NASA-CASE-LAR-12308-1
			US-PATENT-4,264,802			NASA-CASE-LEW-13556-1	NASA-CASE-LEW-13556-1				US-PATENT-APPL-SN-111438
N81-26447*	c 37		NASA-CASE-LEW-12119-2			US-PATENT-APPL-SN-272233	US-PATENT-APPL-SN-272233				US-PATENT-CLASS-73-683.31
			US-PATENT-APPL-SN-102004			US-PATENT-CLASS-128-665	US-PATENT-CLASS-128-665				US-PATENT-CLASS-73-684.52
			US-PATENT-APPL-SN-672219			US-PATENT-CLASS-356-406	US-PATENT-CLASS-356-406				US-PATENT-4,274,285
			US-PATENT-CLASS-277-153			US-PATENT-CLASS-356-407	US-PATENT-CLASS-356-407				NASA-CASE-LEW-13148-2
			US-PATENT-CLASS-277-193			US-PATENT-CLASS-356-416	US-PATENT-CLASS-356-416				US-PATENT-APPL-SN-061555
			US-PATENT-4,212,477			US-PATENT-4,170,987	US-PATENT-4,170,987				US-PATENT-APPL-SN-964754
			US-PATENT-4,266,788			US-PATENT-4,170,987	US-PATENT-4,170,987				US-PATENT-CLASS-204-2.1
N81-26509*	c 43		NASA-CASE-NPO-14140-1			NASA-CASE-LAR-12320-1	NASA-CASE-LAR-12320-1				US-PATENT-4,192,910
			NASA-CASE-NPO-14387-1			US-PATENT-APPL-SN-043913	US-PATENT-APPL-SN-043913				US-PATENT-4,270,984
			US-PATENT-APPL-SN-897832			US-PATENT-CLASS-434-59	US-PATENT-CLASS-434-59				NASA-CASE-NPO-13689-1
			US-PATENT-CLASS-134-17			US-PATENT-4,264,310	US-PATENT-4,264,310				US-PATENT-APPL-SN-093714
			US-PATENT-CLASS-166-222			NASA-CASE-NPO-14554-1	NASA-CASE-NPO-14554-1				US-PATENT-APPL-SN-597430
			US-PATENT-CLASS-166-77			US-PATENT-APPL-SN-974473	US-PATENT-APPL-SN-974473				US-PATENT-APPL-SN-683073
			US-PATENT-CLASS-239-562			US-PATENT-CLASS-364-200	US-PATENT-CLASS-364-200				US-PATENT-APPL-SN-837513
			US-PATENT-CLASS-239-591			US-PATENT-CLASS-364-900	US-PATENT-CLASS-364-900				US-PATENT-CLASS-136-255
			US-PATENT-CLASS-299-13			US-PATENT-CLASS-370-58	US-PATENT-CLASS-370-58				US-PATENT-CLASS-136-258
			US-PATENT-CLASS-299-17			US-PATENT-4,264,984	US-PATENT-4,264,984				US-PATENT-CLASS-136-262
			US-PATENT-CLASS-299-20			NASA-CASE-LAR-12520-1	NASA-CASE-LAR-12520-1				US-PATENT-CLASS-357-15
			US-PATENT-4,226,475			US-PATENT-APPL-SN-067596	US-PATENT-APPL-SN-067596				US-PATENT-CLASS-357-30
N81-26718*	c 54		NASA-CASE-MFS-23696-1			US-PATENT-CLASS-204-1T	US-PATENT-CLASS-204-1T				US-PATENT-4,278,830
			US-PATENT-APPL-SN-945044			US-PATENT-CLASS-204-195B	US-PATENT-CLASS-204-195B				NASA-CASE-ARC-11031-1
			US-PATENT-CLASS-294-93			US-PATENT-CLASS-435-291	US-PATENT-CLASS-435-291				US-PATENT-APPL-SN-897828
			US-PATENT-CLASS-414-4			US-PATENT-CLASS-435-34	US-PATENT-CLASS-435-34				US-PATENT-CLASS-129-275
			US-PATENT-CLASS-414-735			US-PATENT-CLASS-435-5	US-PATENT-CLASS-435-5				US-PATENT-CLASS-128-760
			US-PATENT-CLASS-414-744A			US-PATENT-4,264,728	US-PATENT-4,264,728				US-PATENT-4,190,060
			US-PATENT-4,273,505			NASA-CASE-MSC-18381-1	NASA-CASE-MSC-18381-1				NASA-CASE-ARC-11118-1
N81-27271*	c 27		NASA-CASE-ARC-11176-2			US-PATENT-APPL-SN-034531	US-PATENT-APPL-SN-034531				US-PATENT-APPL-SN-850504
			US-PATENT-APPL-SN-129798			US-PATENT-CLASS-128-295	US-PATENT-CLASS-128-295				US-PATENT-CLASS-424-247
			US-PATENT-CLASS-528-168			US-PATENT-CLASS-144-3	US-PATENT-CLASS-144-3				US-PATENT-CLASS-424-267
			US-PATENT-CLASS-528-399			US-PATENT-4,270,539	US-PATENT-4,270,539				US-PATENT-CLASS-424-274
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		US-PATENT-APPL-SN-145273			US-PATENT-CLASS-528-351			US-PATENT-CLASS-250-235
		US-PATENT-CLASS-119-17			US-PATENT-CLASS-528-353			US-PATENT-CLASS-250-236
		US-PATENT-CLASS-119-18			US-PATENT-4,284,461			US-PATENT-CLASS-358-109
		US-PATENT-4,284,034	N82-11336*	c 32	NASA-CASE-MSC-18606-1			US-PATENT-4,300,159
N81-33235*	c 24	NASA-CASE-LAR-12065-2			US-PATENT-APPL-SN-145206	N82-15381*	c 35	NASA-CASE-NPO-14839-1
		US-PATENT-APPL-SN-119337			US-PATENT-CLASS-343-700MS			US-PATENT-APPL-SN-106119
		US-PATENT-APPL-SN-889671			US-PATENT-CLASS-343-708			US-PATENT-CLASS-343-100PE
		US-PATENT-CLASS-156-242			US-PATENT-CLASS-343-727			US-PATENT-CLASS-455-137
		US-PATENT-CLASS-156-245			US-PATENT-CLASS-343-795			US-PATENT-CLASS-455-139
		US-PATENT-CLASS-156-252			US-PATENT-CLASS-343-846			US-PATENT-CLASS-455-60
		US-PATENT-CLASS-156-264			US-PATENT-4,287,518			US-PATENT-4,295,140
		US-PATENT-CLASS-156-285	N82-11357*	c 33	NASA-CASE-MSC-18106-1	N82-16059*	c 04	NASA-CASE-ARC-10990-1
		US-PATENT-CLASS-156-290			US-PATENT-APPL-SN-098568			US-PATENT-APPL-SN-749420
		US-PATENT-4,229,473			US-PATENT-CLASS-335-256			US-PATENT-CLASS-244-114R
		US-PATENT-4,274,901			US-PATENT-CLASS-335-266			US-PATENT-CLASS-340-26
N81-33246*	c 25	NASA-CASE-NPO-14272-1			US-PATENT-CLASS-361-141			US-PATENT-4,291,294
		US-PATENT-APPL-SN-878253			US-PATENT-4,295,111	N82-16075*	c 06	NASA-CASE-FRC-11005-1
		US-PATENT-CLASS-201-17	N82-11360* #	c 33	NASA-CASE-MFS-25586-1			US-PATENT-APPL-SN-043942
		US-PATENT-CLASS-44-1R			US-PATENT-APPL-SN-310714			US-PATENT-CLASS-340-27NA
		US-PATENT-CLASS-44-2	N82-11399* #	c 34	NASA-CASE-LEW-12950-1			US-PATENT-CLASS-73-178R
		US-PATENT-4,146,367			US-PATENT-APPL-SN-202228			US-PATENT-4,283,705
N81-33319*	c 31	NASA-CASE-NPO-14596-1	N82-11431*	c 35	NASA-CASE-LAR-12552-1	N82-16174*	c 23	NASA-CASE-ARC-11244-1
		US-PATENT-APPL-SN-037072			US-PATENT-APPL-SN-070366			US-PATENT-APPL-SN-054501
		US-PATENT-CLASS-264-24			US-PATENT-CLASS-235-92PC			US-PATENT-CLASS-260-340.9R
		US-PATENT-CLASS-264-5			US-PATENT-CLASS-324-71CP			US-PATENT-CLASS-568-445
		US-PATENT-CLASS-264-9			US-PATENT-4,286,209			US-PATENT-CLASS-568-497
		US-PATENT-CLASS-425-6	N82-11432*	c 35	NASA-CASE-MFS-23250-1	N82-16238*	c 27	NASA-CASE-MSC-18382-1
		US-PATENT-CLASS-65-142			US-PATENT-APPL-SN-119340			US-PATENT-APPL-SN-145107
		US-PATENT-CLASS-65-21.4			US-PATENT-CLASS-422-40			US-PATENT-CLASS-106-18.16
		US-PATENT-CLASS-65-22			US-PATENT-CLASS-430-17			US-PATENT-CLASS-106-18.24
		US-PATENT-4,279,632			US-PATENT-CLASS-430-372			US-PATENT-CLASS-260-45.7R
N81-33403*	c 33	NASA-CASE-GSC-12324-1	N82-11469* #	c 37	NASA-CASE-NPO-15539-1			US-PATENT-CLASS-427-393.3
		US-PATENT-APPL-SN-945043			US-PATENT-APPL-SN-303670			US-PATENT-CLASS-428-263
		US-PATENT-CLASS-358-109	N82-11634*	c 45	NASA-CASE-NPO-13877-1			US-PATENT-CLASS-428-264
		US-PATENT-CLASS-358-213			US-PATENT-APPL-SN-652979			US-PATENT-CLASS-428-265
		US-PATENT-4,280,141			US-PATENT-CLASS-210-40			US-PATENT-CLASS-428-267
N81-33404*	c 33	NASA-CASE-NPO-14316-1			US-PATENT-CLASS-252-422			US-PATENT-CLASS-428-272
		US-PATENT-APPL-SN-051276			US-PATENT-4,209,393			US-PATENT-4,284,682
		US-PATENT-CLASS-363-24	N82-11770*	c 52	NASA-CASE-MSC-14836-1	N82-16340*	c 33	NASA-CASE-GSC-12420-1
		US-PATENT-CLASS-363-56			US-PATENT-APPL-SN-691647			US-PATENT-APPL-SN-129793
		US-PATENT-4,276,588			US-PATENT-CLASS-128-327			US-PATENT-CLASS-333-104
N81-33405*	c 33	NASA-CASE-NPO-14435-1			US-PATENT-CLASS-128-686			US-PATENT-CLASS-333-246
		US-PATENT-APPL-SN-017886			US-PATENT-CLASS-128-691			US-PATENT-4,302,734
		US-PATENT-CLASS-329-122			US-PATENT-4,294,261	N82-16396*	c 36	NASA-CASE-GSC-12321-1
		US-PATENT-CLASS-331-DIG.2			NASA-CASE-MSC-16497-1			US-PATENT-APPL-SN-102001
		US-PATENT-CLASS-364-514	N82-12166*	c 25	US-PATENT-APPL-SN-041145			US-PATENT-CLASS-356-349
		US-PATENT-CLASS-375-1			US-PATENT-CLASS-204-1T			US-PATENT-CLASS-356-386
		US-PATENT-4,279,018			US-PATENT-CLASS-204-195S			US-PATENT-4,299,492
N81-33448*	c 35	NASA-CASE-NPO-14258-1			US-PATENT-CLASS-204-263	N82-16408*	c 37	NASA-CASE-MSC-18422-1
		US-PATENT-APPL-SN-853349			US-PATENT-CLASS-204-264			US-PATENT-APPL-SN-102593
		US-PATENT-APPL-SN-972252			US-PATENT-CLASS-204-266			US-PATENT-CLASS-244-113
		US-PATENT-CLASS-350-370			US-PATENT-CLASS-204-275			US-PATENT-CLASS-244-163
		US-PATENT-CLASS-356-350			US-PATENT-CLASS-204-276			US-PATENT-CLASS-244-217
		US-PATENT-CLASS-356-351			US-PATENT-CLASS-204-278			US-PATENT-CLASS-277-189
		US-PATENT-4,280,766	N81-33482*	c 37	US-PATENT-CLASS-23-230CP			US-PATENT-CLASS-277-81R
		NASA-CASE-NPO-15227-1			US-PATENT-CLASS-23-232E			US-PATENT-CLASS-418-113
		US-PATENT-APPL-SN-163840			US-PATENT-CLASS-422-80			US-PATENT-CLASS-418-142
		US-PATENT-CLASS-118-50			US-PATENT-4,293,522			US-PATENT-4,290,612
		US-PATENT-CLASS-118-52	N82-12297*	c 32	NASA-CASE-NPO-14054-1	N82-16474*	c 44	NASA-CASE-MFS-23775-1
		US-PATENT-CLASS-269-21			US-PATENT-APPL-SN-969761			US-PATENT-APPL-SN-098569
		US-PATENT-CLASS-427-240			US-PATENT-CLASS-343-5CM			US-PATENT-CLASS-73-341
		US-PATENT-4,280,689			US-PATENT-4,292,634			US-PATENT-4,282,752
N81-33483*	c 37	NASA-CASE-FRC-11044-1	N82-12441*	c 37	NASA-CASE-MFS-25363-1	N82-16475*	c 44	NASA-CASE-NPO-15071-1
		US-PATENT-APPL-SN-135056			US-PATENT-APPL-SN-171933			US-PATENT-APPL-SN-150115
		US-PATENT-CLASS-318-663			US-PATENT-CLASS-118-423			US-PATENT-CLASS-126-438
		US-PATENT-CLASS-74-89			US-PATENT-CLASS-118-500			US-PATENT-CLASS-250-527
		US-PATENT-CLASS-92-130R			US-PATENT-CLASS-134-137			US-PATENT-CLASS-48-89
		US-PATENT-4,274,038			US-PATENT-4,286,542			US-PATENT-CLASS-48-99
N82-11088*	c 09	NASA-CASE-LAR-12532-1	N82-12442*	c 37	NASA-CASE-LEW-12989-1			US-PATENT-4,290,779
		US-PATENT-APPL-SN-135040			US-PATENT-APPL-SN-092145	N82-16747*	c 60	NASA-CASE-GSC-12430-1
		US-PATENT-CLASS-73-147			US-PATENT-CLASS-277-27			US-PATENT-APPL-SN-129779
		US-PATENT-4,286,460			US-PATENT-CLASS-277-40			US-PATENT-CLASS-370-100
N82-11144*	c 25	NASA-CASE-NPO-14273-1			US-PATENT-CLASS-277-93R			US-PATENT-CLASS-375-106
		US-PATENT-APPL-SN-969759			US-PATENT-4,291,887			US-PATENT-CLASS-375-114
		US-PATENT-CLASS-110-234	N82-12685*	c 46	NASA-CASE-NPO-14544-1			US-PATENT-CLASS-375-116
		US-PATENT-CLASS-110-245			US-PATENT-APPL-SN-078612			US-PATENT-4,298,987
		US-PATENT-CLASS-110-255			US-PATENT-CLASS-343-100ME	N82-16800*	c 71	NASA-CASE-FRC-11062-1
		US-PATENT-CLASS-110-266			US-PATENT-CLASS-343-100PE			US-PATENT-APPL-SN-185869
		US-PATENT-CLASS-122-4D			US-PATENT-CLASS-343-781P			US-PATENT-CLASS-181-214
		US-PATENT-4,287,838			US-PATENT-4,282,525			US-PATENT-4,300,656
N82-11206*	c 27	NASA-CASE-LAR-12640-1	N82-13376*	c 34	NASA-CASE-MFS-25139-1	N82-18314*	c 20	NASA-CASE-GSC-12194-2
		US-PATENT-APPL-SN-092142			US-PATENT-APPL-SN-126138			US-PATENT-APPL-SN-819029
		US-PATENT-CLASS-156-307.7			US-PATENT-CLASS-239-499			US-PATENT-APPL-SN-971474
		US-PATENT-CLASS-156-307.5			US-PATENT-CLASS-239-589			US-PATENT-CLASS-60-200R
		US-PATENT-CLASS-156-331.5			US-PATENT-CLASS-239-601			US-PATENT-CLASS-60-39.46M
		US-PATENT-CLASS-528-126			US-PATENT-4,300,723			US-PATENT-4,288,982
		US-PATENT-CLASS-528-172	N82-13415*	c 36	NASA-CASE-LAR-12592-1	N82-18389*	c 27	NASA-CASE-ARC-11176-1
		US-PATENT-CLASS-528-173			US-PATENT-APPL-SN-041141			US-PATENT-APPL-SN-129799
		US-PATENT-CLASS-528-180			US-PATENT-CLASS-331-94.5C			US-PATENT-CLASS-528-168
		US-PATENT-CLASS-528-207			US-PATENT-CLASS-331-94.5D			US-PATENT-CLASS-528-399
		US-PATENT-CLASS-528-208			US-PATENT-CLASS-331-94.5P			US-PATENT-CLASS-528-4
		US-PATENT-CLASS-528-210			US-PATENT-4,300,106			US-PATENT-CLASS-528-6
		US-PATENT-CLASS-528-211	N82-13465*	c 43	NASA-CASE-GSC-12032-2			US-PATENT-CLASS-528-7
		US-PATENT-CLASS-528-225			US-PATENT-APPL-SN-578700			US-PATENT-CLASS-568-2
		US-PATENT-CLASS-528-228			US-PATENT-APPL-SN-583219			US-PATENT-CLASS-568-4

		US-PATENT-CLASS-568-5			US-PATENT-CLASS-244-190			US-PATENT-CLASS-428-466
		US-PATENT-4,288,585			US-PATENT-CLASS-318-580			US-PATENT-CLASS-428-493
N82-18401*	c 28	NASA-CASE-ARC-11245-1	N82-23254*	c 09	NASA-CASE-LAR-12441-1	N82-24415*	c 33	NASA-CASE-LEW-13282-1
		US-PATENT-APPL-SN-088663			US-PATENT-4,326,685			US-PATENT-4,327,150
		US-PATENT-CLASS-239-690			US-PATENT-APPL-SN-145210			US-PATENT-APPL-SN-073579
		US-PATENT-CLASS-361-226			US-PATENT-CLASS-73-147			US-PATENT-CLASS-315-3,6
		US-PATENT-CLASS-361-230			US-PATENT-4,327,581			US-PATENT-CLASS-315-5,38
		US-PATENT-4,303,961	N82-23282*	c 25	NASA-CASE-NPO-14542-1	N82-24416*	c 33	US-PATENT-4,277,721
N82-18443*	c 32	NASA-CASE-NPO-14632-1			US-PATENT-APPL-SN-030831			NASA-CASE-LAR-12633-1
		US-PATENT-APPL-SN-092143			US-PATENT-CLASS-166-267			US-PATENT-APPL-SN-135039
		US-PATENT-CLASS-367-100			US-PATENT-CLASS-166-303			US-PATENT-CLASS-358-213
		US-PATENT-CLASS-367-102			US-PATENT-CLASS-208-241			US-PATENT-4,279,001
		US-PATENT-CLASS-367-88			US-PATENT-4,310,049	N82-24417*	c 33	NASA-CASE-FRC-11025-1
		US-PATENT-4,287,578	N82-23376*	c 32	NASA-CASE-NPO-14361-1			US-PATENT-APPL-SN-115536
N82-18493*	c 33	NASA-CASE-FRC-11041-1			US-PATENT-APPL-SN-053572			US-PATENT-CLASS-328-167
		US-PATENT-APPL-SN-126064			US-PATENT-CLASS-343-17,1PF			US-PATENT-CLASS-330-109
		US-PATENT-CLASS-318-561			US-PATENT-CLASS-343-5DP			US-PATENT-CLASS-330-290
		US-PATENT-CLASS-318-620			US-PATENT-CLASS-343-7,5			US-PATENT-CLASS-330-294
		US-PATENT-CLASS-318-621			US-PATENT-CLASS-356-5			US-PATENT-CLASS-330-306
		US-PATENT-CLASS-318-622			US-PATENT-CLASS-367-95			US-PATENT-CLASS-364-825
		US-PATENT-4,298,833	N82-24072*	c 74	US-PATENT-4,320,397	N82-24418*	c 33	US-PATENT-4,275,453
N82-18494*	c 33	NASA-CASE-FRC-11014-1			NASA-CASE-NPO-14813-1			NASA-CASE-NPO-14556-1
		US-PATENT-APPL-SN-053652			US-PATENT-APPL-SN-145282			US-PATENT-APPL-SN-023485
		US-PATENT-CLASS-331-113R			US-PATENT-CLASS-250-216			US-PATENT-CLASS-307-415
		US-PATENT-CLASS-363-132			US-PATENT-CLASS-250-235			US-PATENT-CLASS-328-67
		US-PATENT-CLASS-363-17			US-PATENT-4,320,290			US-PATENT-CLASS-331-94,5G
		US-PATENT-CLASS-363-61	N82-24205*	c 08	NASA-CASE-LAR-12412-1			US-PATENT-CLASS-331-94,5PE
		US-PATENT-4,298,926			US-PATENT-APPL-SN-067595			US-PATENT-CLASS-333-20
N82-18601*	c 37	NASA-CASE-LAR-12372-1			US-PATENT-CLASS-244-213	N82-24419*	c 33	US-PATENT-4,275,317
		US-PATENT-APPL-SN-108107			US-PATENT-CLASS-244-226			NASA-CASE-GSC-12415-1
		US-PATENT-CLASS-188-371			US-PATENT-CLASS-244-78			US-PATENT-APPL-SN-043943
		US-PATENT-CLASS-244-110C			US-PATENT-CLASS-74-479			US-PATENT-CLASS-165-32
		US-PATENT-CLASS-280-805			US-PATENT-CLASS-74-480R			US-PATENT-CLASS-62-383
		US-PATENT-CLASS-57-906			US-PATENT-4,272,046			US-PATENT-4,281,708
		US-PATENT-4,304,320	N82-24212*	c 09	NASA-CASE-ARC-11158-1	N82-24420*	c 33	NASA-CASE-ARC-11116-1
N82-18686*	c 44	NASA-CASE-MFS-25287-1			US-PATENT-APPL-SN-053566			US-PATENT-APPL-SN-069485
		US-PATENT-APPL-SN-098570			US-PATENT-CLASS-434-42			US-PATENT-CLASS-324-51
		US-PATENT-CLASS-126-422			US-PATENT-CLASS-434-43			US-PATENT-CLASS-324-52
		US-PATENT-CLASS-126-429			US-PATENT-4,313,726			US-PATENT-4,282,479
		US-PATENT-CLASS-126-430	N82-24272*	c 15	NASA-CASE-ARC-11256-1	N82-24421*	c 33	NASA-CASE-GSC-12518-1
		US-PATENT-4,304,219			US-PATENT-APPL-SN-032305			US-PATENT-APPL-SN-119336
N82-19029*	c 74	NASA-CASE-NPO-15036-1			US-PATENT-CLASS-102-504			US-PATENT-CLASS-310-12
		US-PATENT-APPL-SN-188160			US-PATENT-CLASS-242-128			US-PATENT-CLASS-318-135
		US-PATENT-CLASS-455-610			US-PATENT-4,271,761			US-PATENT-CLASS-335-229
		US-PATENT-CLASS-455-612	N82-24296*	c 24	NASA-CASE-FRC-11026-1			US-PATENT-CLASS-335-266
		US-PATENT-CLASS-455-615			US-PATENT-APPL-SN-043944			US-PATENT-4,315,197
		US-PATENT-CLASS-455-617			US-PATENT-CLASS-228-157	N82-24422*	c 33	NASA-CASE-GSC-12595-1
		US-PATENT-4,287,606			US-PATENT-CLASS-244-119			US-PATENT-APPL-SN-206506
N82-19540*	c 37	NASA-CASE-LEW-12131-3			US-PATENT-CLASS-244-123			US-PATENT-CLASS-336-120
		US-PATENT-APPL-SN-096255			US-PATENT-CLASS-428-593			US-PATENT-CLASS-336-83
		US-PATENT-APPL-SN-801290			US-PATENT-CLASS-428-594			US-PATENT-4,321,572
		US-PATENT-APPL-SN-931090			US-PATENT-CLASS-428-604	N82-24427* #	c 33	NASA-CASE-MS-18407-1
		US-PATENT-CLASS-415-174			US-PATENT-4,292,375			US-PATENT-APPL-SN-293419
		US-PATENT-CLASS-415-196	N82-24312*	c 25	NASA-CASE-ARC-11097-1	N82-24470*	c 35	NASA-CASE-LAR-12321-1
		US-PATENT-4,135,851			US-PATENT-APPL-SN-891872			US-PATENT-APPL-SN-178195
		US-PATENT-4,207,024			US-PATENT-CLASS-260-386			US-PATENT-CLASS-29-613
		US-PATENT-4,295,786			US-PATENT-CLASS-260-389			US-PATENT-CLASS-338-25
N82-21268*	c 25	NASA-CASE-LEW-12358-2			US-PATENT-CLASS-528-402			US-PATENT-CLASS-338-275
		US-PATENT-APPL-SN-776146			US-PATENT-CLASS-570-123			US-PATENT-CLASS-338-28
		US-PATENT-APPL-SN-848428			US-PATENT-CLASS-570-129			US-PATENT-4,317,102
		US-PATENT-CLASS-264-216			US-PATENT-4,307,024	N82-24471*	c 35	NASA-CASE-GSC-12354-1
		US-PATENT-CLASS-264-453	N82-24338*	c 27	NASA-CASE-ARC-11253-2			US-PATENT-APPL-SN-128229
		US-PATENT-CLASS-264-53			US-PATENT-APPL-SN-028301			US-PATENT-CLASS-250-385
		US-PATENT-CLASS-427-115			US-PATENT-APPL-SN-145284			US-PATENT-CLASS-250-386
		US-PATENT-CLASS-427-244			US-PATENT-CLASS-528-310			US-PATENT-CLASS-250-389
		US-PATENT-CLASS-427-246			US-PATENT-CLASS-528-328			US-PATENT-CLASS-29-25,14
		US-PATENT-4,133,941			US-PATENT-CLASS-528-362			US-PATENT-CLASS-313-348
		US-PATENT-4,309,372			US-PATENT-CLASS-528-401			US-PATENT-CLASS-313-93
N82-21269*	c 25	NASA-CASE-XLA-08914-2			US-PATENT-CLASS-528-422			US-PATENT-4,325,001
		US-PATENT-APPL-SN-662181			US-PATENT-4,273,918	N82-24490*	c 37	NASA-CASE-LAR-12315-1
		US-PATENT-APPL-SN-810576	N82-24339*	c 27	NASA-CASE-ARC-11310-1			US-PATENT-APPL-SN-096257
		US-PATENT-CLASS-210-321.1			US-PATENT-APPL-SN-147700			US-PATENT-CLASS-220-378
		US-PATENT-CLASS-55-158			US-PATENT-CLASS-102-289			US-PATENT-CLASS-277-1
		US-PATENT-4,302,223			US-PATENT-CLASS-244-121			US-PATENT-CLASS-277-105
N82-21587*	c 37	NASA-CASE-NPO-14395-1			US-PATENT-CLASS-244-158A			US-PATENT-CLASS-277-2
		US-PATENT-APPL-SN-961833			US-PATENT-CLASS-244-160			US-PATENT-CLASS-277-204
		US-PATENT-CLASS-104-83			US-PATENT-CLASS-428-192			US-PATENT-CLASS-277-4
		US-PATENT-CLASS-105-1A			US-PATENT-CLASS-428-193			US-PATENT-CLASS-277-59
		US-PATENT-CLASS-105-171			US-PATENT-CLASS-428-241			US-PATENT-CLASS-277-72R
		US-PATENT-CLASS-105-180			US-PATENT-CLASS-428-242			US-PATENT-CLASS-285-37
		US-PATENT-CLASS-105-218R			US-PATENT-CLASS-428-245			US-PATENT-4,309,039
		US-PATENT-CLASS-248-425			US-PATENT-CLASS-428-251	N82-24491*	c 37	NASA-CASE-MS-18430-1
		US-PATENT-4,301,740			US-PATENT-CLASS-428-257			US-PATENT-APPL-SN-113015
N82-22496* #	c 37	NASA-CASE-ARC-11325-1			US-PATENT-CLASS-428-260			US-PATENT-CLASS-156-84
		US-PATENT-APPL-SN-354126			US-PATENT-CLASS-428-266			US-PATENT-CLASS-156-85
N82-22875*	c 52	NASA-CASE-GSC-12081-2			US-PATENT-CLASS-428-447			US-PATENT-CLASS-156-86
		US-PATENT-APPL-SN-672209			US-PATENT-CLASS-428-448			US-PATENT-CLASS-264-230
		US-PATENT-APPL-SN-796258			US-PATENT-CLASS-428-49			US-PATENT-CLASS-264-342R
		US-PATENT-CLASS-128-1,2			US-PATENT-4,308,309			US-PATENT-4,269,640
		US-PATENT-CLASS-128-778	N82-24340*	c 27	NASA-CASE-MFS-25181-1	N82-24492*	c 37	NASA-CASE-ARC-11110-1
		US-PATENT-CLASS-33-143C			US-PATENT-APPL-SN-218585			US-PATENT-APPL-SN-945040
		US-PATENT-4,294,264			US-PATENT-CLASS-156-315			US-PATENT-CLASS-118-320
N82-23231*	c 04	NASA-CASE-FRC-11052-1			US-PATENT-CLASS-156-338			US-PATENT-CLASS-118-500
		US-PATENT-APPL-SN-129783			US-PATENT-CLASS-428-332			US-PATENT-CLASS-118-503
		US-PATENT-CLASS-244-168			US-PATENT-CLASS-428-339			US-PATENT-CLASS-118-505
		US-PATENT-CLASS-244-175			US-PATENT-CLASS-428-462			US-PATENT-CLASS-427-425

		US-PATENT-4,312,292			US-PATENT-CLASS-340-347DD			US-PATENT-APPL-SN-161254
N82-24493*	c 37	NASA-CASE-NPO-15115-1	N82-26571*	c 33	US-PATENT-4,313,103			US-PATENT-CLASS-427-205
		US-PATENT-APPL-SN-154725			NASA-CASE-LAR-12595-1			US-PATENT-CLASS-427-253
		US-PATENT-CLASS-74-18.1			US-PATENT-APPL-SN-070774			US-PATENT-CLASS-427-405
		US-PATENT-CLASS-74-18.2			US-PATENT-CLASS-156-157			US-PATENT-CLASS-428-938
		US-PATENT-CLASS-92-37			US-PATENT-CLASS-156-272			US-PATENT-CLASS-428-941
		US-PATENT-4,311,057			US-PATENT-CLASS-156-379.7			US-PATENT-4,310,574
N82-24494*	c 37	NASA-CASE-MSC-18526-1	N82-28442*	c 27	US-PATENT-CLASS-156-71			NASA-CASE-NPO-14845-1
		US-PATENT-APPL-SN-119335			US-PATENT-CLASS-219-10.41			US-PATENT-APPL-SN-219680
		US-PATENT-CLASS-285-159			US-PATENT-CLASS-219-10.53			US-PATENT-CLASS-264-5
		US-PATENT-CLASS-285-401			US-PATENT-CLASS-219-545			US-PATENT-CLASS-425-6
		US-PATENT-CLASS-285-89			US-PATENT-CLASS-428-247			US-PATENT-CLASS-65-142
		US-PATENT-CLASS-403-315			US-PATENT-4,313,777			US-PATENT-CLASS-65-21.4
		US-PATENT-4,320,911	N82-26572*	c 33	NASA-CASE-LAR-12465-1			US-PATENT-CLASS-65-22
N82-24639*	c 44	NASA-CASE-MFS-23830-1			US-PATENT-APPL-SN-106136			US-PATENT-4,313,745
		US-PATENT-APPL-SN-129780			US-PATENT-CLASS-361-283			NASA-CASE-MFS-23776-1
		US-PATENT-CLASS-415-DIG.8			US-PATENT-CLASS-367-181			US-PATENT-APPL-SN-145272
		US-PATENT-CLASS-415-2R			US-PATENT-CLASS-73-724			US-PATENT-CLASS-250-214
		US-PATENT-4,309,146			US-PATENT-4,310,906			US-PATENT-CLASS-250-221
N82-24640*	c 44	NASA-CASE-LAR-12148-1	N82-26628*	c 35	NASA-CASE-LAR-12474-1			US-PATENT-4,319,133
		US-PATENT-APPL-SN-051275			US-PATENT-APPL-SN-171934			NASA-CASE-LAR-12709-1
		US-PATENT-CLASS-60-516			US-PATENT-CLASS-352-171			US-PATENT-APPL-SN-235796
		US-PATENT-CLASS-60-641.14			US-PATENT-CLASS-354-217			US-PATENT-CLASS-204-195B
		US-PATENT-4,326,381			US-PATENT-CLASS-354-289			US-PATENT-CLASS-435-291
N82-24641*	c 44	NASA-CASE-GSC-10019-1	N82-26631* #	c 35	US-PATENT-4,311,378			US-PATENT-CLASS-435-34
		US-PATENT-APPL-SN-680048			NASA-CASE-MFS-25707-1			US-PATENT-CLASS-435-39
		US-PATENT-CLASS-136-6			US-PATENT-APPL-SN-359627			US-PATENT-4,335,206
		US-PATENT-3,498,841	N82-26672*	c 37	NASA-CASE-MSC-18538-1			NASA-CASE-NPO-14782-1
N82-24642*	c 44	NASA-CASE-GSC-10350-1			US-PATENT-APPL-SN-138944			US-PATENT-APPL-SN-119339
		US-PATENT-APPL-SN-679980			US-PATENT-CLASS-30-102			US-PATENT-CLASS-330-4.3
		US-PATENT-CLASS-136-6			US-PATENT-4,305,205			US-PATENT-CLASS-372-56
		US-PATENT-3,498,840	N82-26673* #	c 37	NASA-CASE-MSC-18742-1			US-PATENT-CLASS-372-58
N82-24643*	c 44	NASA-CASE-GSC-10017-1			US-PATENT-APPL-SN-293417			US-PATENT-CLASS-372-82
		US-PATENT-APPL-SN-679996	N82-26674* #	c 37	NASA-CASE-LEW-13268-2			US-PATENT-4,328,464
		US-PATENT-CLASS-136-6			US-PATENT-APPL-SN-325931			NASA-CASE-NPO-13689-4
		US-PATENT-3,519,484	N82-26776*	c 44	NASA-CASE-NPO-15183-1			US-PATENT-APPL-SN-225501
N82-24644*	c 44	NASA-CASE-GSC-10018-1			US-PATENT-APPL-SN-173519			US-PATENT-APPL-SN-597430
		US-PATENT-APPL-SN-679987			US-PATENT-CLASS-62-148			US-PATENT-APPL-SN-683073
		US-PATENT-CLASS-136-6			US-PATENT-CLASS-62-235.1			US-PATENT-APPL-SN-837513
		US-PATENT-3,519,483			US-PATENT-CLASS-62-238.3			US-PATENT-APPL-SN-93714
N82-24645*	c 44	NASA-CASE-GSC-10349-1			US-PATENT-CLASS-62-239			US-PATENT-CLASS-148-175
		US-PATENT-APPL-SN-658999			US-PATENT-CLASS-62-244			US-PATENT-CLASS-29-572
		US-PATENT-CLASS-136-148			US-PATENT-CLASS-62-476			US-PATENT-CLASS-427-531
		US-PATENT-3,506,496	N82-26777*	c 44	US-PATENT-4,307,575			US-PATENT-CLASS-427-74
N82-24779*	c 47	NASA-CASE-KSC-11099-1			NASA-CASE-NPO-15179-1			US-PATENT-4,278,830
		US-PATENT-APPL-SN-043945			US-PATENT-APPL-SN-185867			US-PATENT-4,321,099
		US-PATENT-CLASS-324-72			US-PATENT-CLASS-136-261			NASA-CASE-XMS-03694-1
		US-PATENT-CLASS-324-77R			US-PATENT-CLASS-136-290			US-PATENT-APPL-SN-394280
		US-PATENT-4,272,720			US-PATENT-CLASS-148-1.5			US-PATENT-CLASS-165-46
N82-24839*	c 60	NASA-CASE-FRC-11042-1			US-PATENT-CLASS-219-121LN			US-PATENT-3,295,594
		US-PATENT-APPL-SN-129778			US-PATENT-CLASS-357-30			NASA-CASE-MSC-18498-1
		US-PATENT-CLASS-254-131			US-PATENT-CLASS-357-63			US-PATENT-APPL-SN-173518
		US-PATENT-CLASS-29-267			US-PATENT-4,311,870			US-PATENT-CLASS-244-194
		US-PATENT-CLASS-29-764	N82-26987*	c 54	NASA-CASE-ARC-11314-1			US-PATENT-CLASS-318-564
		US-PATENT-4,307,510			US-PATENT-APPL-SN-168943			US-PATENT-CLASS-371-68
N82-25484* #	c 35	NASA-CASE-NPO-15494-1			US-PATENT-CLASS-73-882.08			US-PATENT-4,327,437
		US-PATENT-APPL-SN-325885			US-PATENT-4,311,055			NASA-CASE-KSC-11042-1
N82-26277*	c 05	NASA-CASE-FRC-11007-2	N82-27086* #	c 71	NASA-CASE-NPO-15562-1			US-PATENT-APPL-SN-154663
		US-PATENT-APPL-SN-043911			US-PATENT-APPL-SN-364097			US-PATENT-APPL-SN-862878
		US-PATENT-CLASS-244.12.2			NASA-CASE-MSC-18532-1			US-PATENT-CLASS-53-429
		US-PATENT-CLASS-244-23C	N82-27558*	c 32	US-PATENT-APPL-SN-172099			US-PATENT-CLASS-8-150
		US-PATENT-CLASS-244-34A			US-PATENT-CLASS-343-789			US-PATENT-4,244,810
		US-PATENT-CLASS-244-93			US-PATENT-CLASS-343-895			US-PATENT-4,313,291
		US-PATENT-4,307,856			US-PATENT-4,315,266			NASA-CASE-LAR-10423-1
N82-26293*	c 07	NASA-CASE-LEW-13199-1	N82-28279*	c 05	NASA-CASE-LAR-12175-1			US-PATENT-APPL-SN-877445
		US-PATENT-APPL-SN-025301			US-PATENT-APPL-SN-079913			US-PATENT-CLASS-260-65
		US-PATENT-CLASS-244-110B			US-PATENT-CLASS-244-48			US-PATENT-3,657,190
		US-PATENT-CLASS-60-226A			US-PATENT-4,330,100			NASA-CASE-MSC-18223-1
		US-PATENT-4,278,220	N82-28353*	c 23	NASA-CASE-ARC-11267-2			US-PATENT-APPL-SN-219681
N82-26384*	c 24	NASA-CASE-LAR-11688-1			US-PATENT-APPL-SN-163838			US-PATENT-CLASS-128-280
		US-PATENT-APPL-SN-878540			US-PATENT-CLASS-528-401			US-PATENT-CLASS-128-283
		US-PATENT-CLASS-244-119			US-PATENT-CLASS-528-422			US-PATENT-CLASS-128-284
		US-PATENT-CLASS-244-123			US-PATENT-CLASS-547-131			US-PATENT-CLASS-128-285
		US-PATENT-CLASS-244-132			US-PATENT-CLASS-564-229			US-PATENT-CLASS-128-288
		US-PATENT-4,310,132	N82-28368*	c 25	US-PATENT-4,316,035			US-PATENT-CLASS-128-291
N82-26387* #	c 24	NASA-CASE-MSC-18934-3			NASA-CASE-NPO-15015-1			US-PATENT-CLASS-128-296
		US-PATENT-APPL-SN-361711			US-PATENT-APPL-SN-145207			US-PATENT-CLASS-428-283
N82-26396*	c 25	NASA-CASE-LAR-12705-1			US-PATENT-CLASS-203-12			US-PATENT-CLASS-428-284
		US-PATENT-APPL-SN-135058			US-PATENT-CLASS-422-186			US-PATENT-CLASS-428-286
		US-PATENT-CLASS-252-514			US-PATENT-CLASS-422-198			US-PATENT-CLASS-428-287
		US-PATENT-4,311,615			US-PATENT-CLASS-423-235			US-PATENT-CLASS-428-288
N82-26568*	c 33	NASA-CASE-LEW-12296-1			US-PATENT-CLASS-423-539			US-PATENT-4,338,371
		US-PATENT-APPL-SN-122966			US-PATENT-CLASS-423-540			NASA-CASE-XGS-05584-1
		US-PATENT-CLASS-315-3.5			US-PATENT-CLASS-423-542			NASA-CASE-XGS-07375-1
		US-PATENT-CLASS-315-3.6			US-PATENT-CLASS-423-579			NASA-CASE-XGS-07397-1
		US-PATENT-CLASS-330-43			US-PATENT-CLASS-423-648R			US-PATENT-APPL-SN-446071
		US-PATENT-4,315,194	N82-28440*	c 27	US-PATENT-4,314,984			US-PATENT-CLASS-106-197
N82-26569*	c 33	NASA-CASE-MFS-23828-1			NASA-CASE-LEW-13120-1			US-PATENT-3,442,674
		US-PATENT-APPL-SN-111436			US-PATENT-APPL-SN-218587			NASA-CASE-NPO-14902-1
		US-PATENT-CLASS-318-254			US-PATENT-CLASS-204-192E			US-PATENT-APPL-SN-156790
		US-PATENT-CLASS-318-806			US-PATENT-CLASS-204-192C			US-PATENT-CLASS-201-17
		US-PATENT-CLASS-318-812			US-PATENT-CLASS-264-22			US-PATENT-CLASS-44-15R
		US-PATENT-CLASS-318-830			US-PATENT-CLASS-264-220			US-PATENT-4,325,707
		US-PATENT-4,313,077			US-PATENT-CLASS-428-141			NASA-CASE-LEW-13169-1
N82-26570*	c 33	NASA-CASE-LAR-12659-1			US-PATENT-4,329,385			US-PATENT-APPL-SN-102003
		US-PATENT-APPL-SN-171928	N82-28441*	c 27	NASA-CASE-LEW-13343-1			US-PATENT-CLASS-204-192C



N82-29451*	c 27	US-PATENT-4,336,117 NASA-CASE-HQN-10274-1 US-PATENT-APPL-SN-683465 US-PATENT-CLASS-106-52 US-PATENT-3,573,078	N82-29863*	c 52	NASA-CASE-GSC-12560-1 US-PATENT-APPL-SN-153246 US-PATENT-CLASS-128-421 US-PATENT-4,308,868	N82-32732*	c 37	NASA-CASE-LAR-12482-1 US-PATENT-APPL-SN-100611 US-PATENT-CLASS-403-217 US-PATENT-CLASS-403-317 US-PATENT-CLASS-403-331 US-PATENT-CLASS-403-340 US-PATENT-CLASS-52-81 US-PATENT-4,340,318
N82-29452*	c 27	NASA-CASE-HQN-10931-2 US-PATENT-APPL-SN-246295 US-PATENT-APPL-SN-874674 US-PATENT-CLASS-106-50 US-PATENT-CLASS-106-52 US-PATENT-CLASS-106-54 US-PATENT-3,785,836	N82-30071*	c 74	NASA-CASE-MS-18627-1 US-PATENT-APPL-SN-186881 US-PATENT-CLASS-250-226 US-PATENT-CLASS-250-231R US-PATENT-CLASS-374-162R US-PATENT-4,338,516	N82-32841*	c 44	NASA-CASE-LAR-12513-1 US-PATENT-APPL-SN-161256 US-PATENT-CLASS-250-330 US-PATENT-CLASS-250-370 US-PATENT-4,331,873
N82-29453*	c 27	NASA-CASE-LEW-13268-1 US-PATENT-APPL-SN-145209 US-PATENT-CLASS-415-174 US-PATENT-CLASS-427-34 US-PATENT-CLASS-427-423 US-PATENT-4,336,276	N82-30105*	c 76	NASA-CASE-NPO-14831-1 US-PATENT-APPL-SN-233269 US-PATENT-CLASS-156-602 US-PATENT-CLASS-156-608 US-PATENT-CLASS-422-246 US-PATENT-4,330,359	N82-33288*	c 85	NASA-CASE-FRC-11058-1 US-PATENT-APPL-SN-175453 US-PATENT-CLASS-105-29 US-PATENT-CLASS-244-53B US-PATENT-CLASS-296-15 US-PATENT-CLASS-296-24C US-PATENT-CLASS-296-91 US-PATENT-4,343,506
N82-29454*	c 27	NASA-CASE-HQN-10328-2 US-PATENT-APPL-SN-246294 US-PATENT-APPL-SN-874673 US-PATENT-CLASS-106-50 US-PATENT-CLASS-106-52 US-PATENT-CLASS-106-54 US-PATENT-3,811,901	N82-30371*	c 26	NASA-CASE-LEW-13169-2 US-PATENT-APPL-SN-102003 US-PATENT-APPL-SN-191746 US-PATENT-CLASS-204-192C US-PATENT-CLASS-428-457 US-PATENT-CLASS-428-472 US-PATENT-4,341,843	N82-33520*	c 27	NASA-CASE-KSC-11097-1 US-PATENT-APPL-SN-172100 US-PATENT-CLASS-427-140 US-PATENT-CLASS-427-372.2 US-PATENT-CLASS-427-397.7 US-PATENT-4,330,572
N82-29455*	c 27	NASA-CASE-HQN-10595-1 US-PATENT-APPL-SN-259056 US-PATENT-APPL-SN-874675 US-PATENT-CLASS-106-50 US-PATENT-CLASS-106-52 US-PATENT-3,947,281	N82-31505*	c 26	NASA-CASE-LEW-13339-1 US-PATENT-APPL-SN-199769 US-PATENT-CLASS-148-428 US-PATENT-CLASS-420-445 US-PATENT-CLASS-420-551 US-PATENT-CLASS-420-588 US-PATENT-4,340,425	N82-33521*	c 27	NASA-CASE-LEW-13028-1 US-PATENT-APPL-SN-218588 US-PATENT-CLASS-204-192E US-PATENT-CLASS-204-192C US-PATENT-CLASS-428-141 US-PATENT-4,344,996
N82-29456*	c 27	NASA-CASE-MS-18741-1 US-PATENT-APPL-SN-217336 US-PATENT-CLASS-156-329 US-PATENT-CLASS-244-121 US-PATENT-CLASS-244-158A US-PATENT-CLASS-244-160 US-PATENT-CLASS-244-163 US-PATENT-CLASS-428-212 US-PATENT-CLASS-428-218 US-PATENT-CLASS-428-283 US-PATENT-CLASS-428-289 US-PATENT-CLASS-428-307.7 US-PATENT-CLASS-428-311.5 US-PATENT-CLASS-428-312.6 US-PATENT-CLASS-428-317.9 US-PATENT-CLASS-428-325 US-PATENT-CLASS-428-446 US-PATENT-CLASS-428-49 US-PATENT-4,338,368	N82-31583*	c 32	NASA-CASE-MS-16462-1 US-PATENT-APPL-SN-900841 US-PATENT-CLASS-178-22.16 US-PATENT-CLASS-178-22.17 US-PATENT-CLASS-364-717 US-PATENT-CLASS-375-106 US-PATENT-4,341,925	N82-33523* #	c 27	NASA-CASE-ARC-14408-1 US-PATENT-APPL-SN-403371 US-PATENT-CLASS-156-701 US-PATENT-APPL-SN-409679
N82-29538*	c 33	NASA-CASE-NPO-15066-1 US-PATENT-APPL-SN-191744 US-PATENT-CLASS-179-186F US-PATENT-CLASS-340-825.89 US-PATENT-CLASS-370-67 US-PATENT-4,331,956	N82-31659*	c 35	NASA-CASE-LAR-12363-1 US-PATENT-APPL-SN-191748 US-PATENT-CLASS-250-332 US-PATENT-CLASS-250-370 US-PATENT-CLASS-29-576J US-PATENT-CLASS-29-576S US-PATENT-CLASS-29-620 US-PATENT-4,341,012	N82-33634* #	c 33	NASA-CASE-MFS-15670-1 US-PATENT-APPL-SN-149526 US-PATENT-APPL-SN-918705 US-PATENT-CLASS-128-422 US-PATENT-CLASS-128-784 US-PATENT-CLASS-128-804 US-PATENT-4,346,715
N82-29539*	c 33	NASA-CASE-NPO-14311-1 US-PATENT-APPL-SN-969762 US-PATENT-CLASS-328-166 US-PATENT-CLASS-455-202 US-PATENT-CLASS-455-208 US-PATENT-CLASS-455-234 US-PATENT-CLASS-455-306 US-PATENT-4,336,616	N82-31690* #	c 37	NASA-CASE-MS-20304-1 US-PATENT-APPL-SN-393585 US-PATENT-CLASS-13400-1 US-PATENT-APPL-SN-219677 US-PATENT-CLASS-136-249 US-PATENT-CLASS-357-30 US-PATENT-4,341,918	N82-33996*	c 52	NASA-CASE-NPO-14549-2 US-PATENT-APPL-SN-149526 US-PATENT-APPL-SN-918705 US-PATENT-CLASS-128-422 US-PATENT-CLASS-128-784 US-PATENT-CLASS-128-804 US-PATENT-4,346,715
N82-29589*	c 36	NASA-CASE-NPO-15111-1 US-PATENT-APPL-SN-150040 US-PATENT-CLASS-350-358 US-PATENT-4,332,441	N82-31764*	c 44	NASA-CASE-LEW-13400-1 US-PATENT-APPL-SN-219677 US-PATENT-CLASS-136-249 US-PATENT-CLASS-357-30 US-PATENT-4,341,918	N83-10040*	c 06	NASA-CASE-NPO-15351-1 US-PATENT-APPL-SN-224231 US-PATENT-CLASS-343-100ME US-PATENT-CLASS-374-122 US-PATENT-CLASS-374-123 US-PATENT-CLASS-73-170R US-PATENT-CLASS-73-178R US-PATENT-4,346,595
N82-29708*	c 44	NASA-CASE-LEW-13171-1 US-PATENT-APPL-SN-238790 US-PATENT-CLASS-429-144 US-PATENT-CLASS-429-251 US-PATENT-CLASS-429-254 US-PATENT-4,331,746	N82-32366*	c 07	NASA-CASE-LEW-12938-1 US-PATENT-APPL-SN-060449 US-PATENT-CLASS-415-145 US-PATENT-CLASS-415-178 US-PATENT-CLASS-60-39.07 US-PATENT-CLASS-60-39.29 US-PATENT-CLASS-60-726 US-PATENT-4,329,114	N83-10117*	c 24	NASA-CASE-LEW-12919-1 US-PATENT-APPL-SN-264378 US-PATENT-CLASS-204-192E US-PATENT-CLASS-313-106 US-PATENT-CLASS-313-107 US-PATENT-CLASS-315-538 US-PATENT-4,349,424
N82-29709*	c 44	NASA-CASE-LEW-13401-1 US-PATENT-APPL-SN-219678 US-PATENT-CLASS-136-249 US-PATENT-CLASS-148-1.5 US-PATENT-CLASS-29-572 US-PATENT-CLASS-357-30 US-PATENT-4,335,503	N82-32373*	c 08	NASA-CASE-LAR-12468-1 US-PATENT-APPL-SN-135057 US-PATENT-CLASS-244-118.1 US-PATENT-CLASS-244-137R US-PATENT-CLASS-89-1.5G US-PATENT-4,343,447	N83-10126*	c 25	NASA-CASE-MFS-25426-1 US-PATENT-APPL-SN-254575 US-PATENT-CLASS-204-299R US-PATENT-4,349,429
N82-29710*	c 44	NASA-CASE-NPO-15269-1 US-PATENT-APPL-SN-220214 US-PATENT-CLASS-204-290F US-PATENT-CLASS-204-290R US-PATENT-CLASS-429-193 US-PATENT-CLASS-429-33 US-PATENT-CLASS-429-40 US-PATENT-4,331,742	N82-32417*	c 24	NASA-CASE-LAR-12620-1 US-PATENT-APPL-SN-072857 US-PATENT-CLASS-244-132 US-PATENT-CLASS-244-158A US-PATENT-CLASS-428-594 US-PATENT-CLASS-428-604 US-PATENT-CLASS-428-607 US-PATENT-CLASS-428-608 US-PATENT-4,344,591	N83-10170*	c 26	NASA-CASE-LEW-12941-1 US-PATENT-APPL-SN-210632 US-PATENT-CLASS-29-458 US-PATENT-CLASS-29-521 US-PATENT-CLASS-403-282 US-PATENT-4,349,954
N82-29862*	c 52	NASA-CASE-LAR-12471-1 US-PATENT-APPL-SN-178193 US-PATENT-CLASS-128-62A US-PATENT-CLASS-433-118 US-PATENT-CLASS-433-125 US-PATENT-CLASS-433-86 US-PATENT-4,331,422	N82-32659*	c 35	NASA-CASE-GSC-12587-1 US-PATENT-APPL-SN-173524 US-PATENT-CLASS-250-369 US-PATENT-4,345,153	N83-10345*	c 33	NASA-CASE-MFS-25208-1 US-PATENT-APPL-SN-280154 US-PATENT-CLASS-318-803 US-PATENT-CLASS-363-87 US-PATENT-4,351,022
			N82-32712*	c 36	NASA-CASE-LAR-12328-1 US-PATENT-APPL-SN-073477 US-PATENT-CLASS-350-453 US-PATENT-CLASS-356-28.5 US-PATENT-4,346,990	N83-10417*	c 36	NASA-CASE-NPO-15021-1 US-PATENT-APPL-SN-130496 US-PATENT-CLASS-372-56 US-PATENT-CLASS-372-59 US-PATENT-CLASS-372-60 US-PATENT-4,347,613
			N82-32730*	c 37	NASA-CASE-GSC-12584-1 US-PATENT-APPL-SN-182879 US-PATENT-CLASS-125-23R US-PATENT-CLASS-225-103 US-PATENT-4,343,287	N83-10494*	c 44	NASA-CASE-LEW-13131-1 US-PATENT-APPL-SN-246772 US-PATENT-CLASS-204-56R US-PATENT-4,350,574
			N82-32731*	c 37	NASA-CASE-MFS-23846-1 US-PATENT-APPL-SN-168944 US-PATENT-CLASS-294-116 US-PATENT-CLASS-414-222 US-PATENT-CLASS-414-226 US-PATENT-CLASS-414-739 US-PATENT-4,343,584	N83-10501*	c 44	NASA-CASE-NPO-14369-1 US-PATENT-APPL-SN-126063 US-PATENT-CLASS-422-200 US-PATENT-CLASS-422-202 US-PATENT-CLASS-422-224 US-PATENT-CLASS-55-204 US-PATENT-4,343,772
						N83-10900*	c 74	NASA-CASE-GSC-12608-1 US-PATENT-APPL-SN-195228 US-PATENT-CLASS-350-170 US-PATENT-CLASS-350-286

N83-13171*	c 24	US-PATENT-4,350,410 NASA-CASE-MSC-18737-1 US-PATENT-APPL-SN-266256 US-PATENT-CLASS-427-379 US-PATENT-CLASS-427-384 US-PATENT-CLASS-427-387 US-PATENT-CLASS-428-218 US-PATENT-4,358,486	N83-18975*	c 32	US-PATENT-CLASS-428-920 US-PATENT-4,373,003 NASA-CASE-NPO-14998-1 US-PATENT-APPL-SN-195547 US-PATENT-CLASS-250-203R US-PATENT-CLASS-343-100CL US-PATENT-CLASS-343-5CM US-PATENT-CLASS-364-822 US-PATENT-CLASS-364-861 US-PATENT-4,371,946	N83-20996*	c 18	US-PATENT-CLASS-343-DIG2 US-PATENT-4,377,266 NASA-CASE-LEW-13269-1 US-PATENT-APPL-SN-242795 US-PATENT-CLASS-415-174 US-PATENT-CLASS-415-197 US-PATENT-4,377,371
N83-13172*	c 24	NASA-CASE-MSC-18736-1 US-PATENT-APPL-SN-266254 US-PATENT-CLASS-244-158A US-PATENT-CLASS-427-140 US-PATENT-CLASS-427-292 US-PATENT-CLASS-427-302 US-PATENT-CLASS-427-379 US-PATENT-CLASS-427-384 US-PATENT-CLASS-427-387 US-PATENT-CLASS-428-63 US-PATENT-4,358,480	N83-18996*	c 33	NASA-CASE-NPO-14567-1 US-PATENT-APPL-SN-038550 US-PATENT-APPL-SN-180230 US-PATENT-CLASS-250-311 US-PATENT-CLASS-324-73R US-PATENT-CLASS-356-394 US-PATENT-4,358,732	N83-21311*	c 35	NASA-CASE-LAR-12469-1 US-PATENT-APPL-SN-195223 US-PATENT-CLASS-250-338 US-PATENT-CLASS-250-372 US-PATENT-CLASS-250-474 US-PATENT-CLASS-356-51 US-PATENT-4,372,680
N83-13187*	c 25	NASA-CASE-MFS-25306-1 US-PATENT-APPL-SN-309293 US-PATENT-CLASS-204-280R US-PATENT-CLASS-204-299R US-PATENT-4,358,358	N83-19015*	c 34	NASA-CASE-MFS-25282-1 US-PATENT-APPL-SN-263828 US-PATENT-CLASS-378-2 US-PATENT-CLASS-378-43 US-PATENT-4,370,750	N83-21312*	c 35	NASA-CASE-MSC-18723-1 US-PATENT-APPL-SN-234223 US-PATENT-CLASS-73-818 US-PATENT-4,377,089
N83-13188*	c 25	NASA-CASE-LEW-13504-1 US-PATENT-APPL-SN-272234 US-PATENT-CLASS-264-104 US-PATENT-CLASS-429-206 US-PATENT-CLASS-429-253 US-PATENT-CLASS-525-61 US-PATENT-4,357,402	N83-19091*	c 37	NASA-CASE-LAR-12361-1 US-PATENT-APPL-SN-182880 US-PATENT-CLASS-411-353 US-PATENT-CLASS-411-517 US-PATENT-4,371,301	N83-21503*	c 44	NASA-CASE-LAR-12458-1 US-PATENT-APPL-SN-274705 US-PATENT-CLASS-73-147 US-PATENT-4,372,158
N83-13323*	c 32	NASA-CASE-KSC-11025-1 US-PATENT-APPL-SN-061327 US-PATENT-CLASS-371-6 US-PATENT-4,358,846	N83-19596*	c 74	NASA-CASE-LEW-12253-1 US-PATENT-APPL-SN-243682 US-PATENT-CLASS-165-104.26 US-PATENT-CLASS-165-134R US-PATENT-CLASS-29-157.3H US-PATENT-4,372,377	N83-21504*	c 44	NASA-CASE-LAR-12720-1 US-PATENT-APPL-SN-274706 US-PATENT-CLASS-73-147 US-PATENT-4,372,159
N83-13579*	c 44	NASA-CASE-LEW-13620-1 US-PATENT-APPL-SN-242796 US-PATENT-CLASS-136-256 US-PATENT-CLASS-136-259 US-PATENT-CLASS-29-572 US-PATENT-CLASS-357-30 US-PATENT-CLASS-427-88 US-PATENT-CLASS-427-89 US-PATENT-CLASS-427-90 US-PATENT-CLASS-427-91 US-PATENT-4,335,196	N83-19597*	c 74	NASA-CASE-NPO-14864-1 US-PATENT-APPL-SN-061822 US-PATENT-CLASS-250-227 US-PATENT-CLASS-250-332 US-PATENT-CLASS-250-340 US-PATENT-CLASS-250-350 US-PATENT-CLASS-250-351 US-PATENT-CLASS-350-353 US-PATENT-4,262,198	N83-21785*	c 52	NASA-CASE-LEW-13107-1 US-PATENT-APPL-SN-272407 US-PATENT-CLASS-604-280 US-PATENT-CLASS-604-8 US-PATENT-4,377,169
N83-13978*	c 74	NASA-CASE-ARC-11311-1 US-PATENT-APPL-SN-219640 US-PATENT-CLASS-350-287 US-PATENT-CLASS-350-486 US-PATENT-4,355,870	N83-19737*	c 05	NASA-CASE-FRC-11065-1 US-PATENT-APPL-SN-248744 US-PATENT-CASE-244-121 US-PATENT-CASE-244-129.4 US-PATENT-CASE-292-254 US-PATENT-4,375,281	N83-21949*	c 74	NASA-CASE-ARC-11354-1 US-PATENT-APPL-SN-282192 US-PATENT-CLASS-356-357 US-PATENT-CLASS-73-147 US-PATENT-4,377,343
N83-14692*	c 44	NASA-CASE-LEW-12892-1 US-PATENT-APPL-SN-264380 US-PATENT-CLASS-136-255 US-PATENT-CLASS-136-256 US-PATENT-CLASS-136-259 US-PATENT-4,360,701	N83-19900*	c 27	NASA-CASE-NPO-14857-1 US-PATENT-APPL-SN-158530 US-PATENT-CLASS-523-205 US-PATENT-CLASS-524-436 US-PATENT-CLASS-524-437 US-PATENT-CLASS-524-503 US-PATENT-CLASS-524-564 US-PATENT-CLASS-524-786 US-PATENT-4,373,039	N83-24572* #	c 25	NASA-CASE-NPO-16135-1 US-PATENT-APPL-SN-470114
N83-14693*	c 44	NASA-CASE-MSC-18794-1 US-PATENT-APPL-SN-238785 US-PATENT-CLASS-417-399 US-PATENT-CLASS-74-110 US-PATENT-4,360,325	N83-19968*	c 32	NASA-CASE-NPO-15789-1 US-PATENT-APPL-SN-322316 US-PATENT-CLASS-204-129.55 US-PATENT-CLASS-204-129.75 US-PATENT-4,375,396	N83-24763*	c 33	NASA-CASE-LAR-12363-2 US-PATENT-APPL-SN-377892 US-PATENT-CLASS-250-388 US-PATENT-4,379,970
N83-16626*	c 33	NASA-CASE-LAR-12772-1 US-PATENT-APPL-SN-199767 US-PATENT-CLASS-73-579 US-PATENT-CLASS-73-629 US-PATENT-CLASS-73-761 US-PATENT-4,363,242	N83-19947*	c 31	NASA-CASE-NPO-15789-1 US-PATENT-APPL-SN-322316 US-PATENT-CLASS-204-129.55 US-PATENT-CLASS-204-129.75 US-PATENT-4,375,396	N83-24828*	c 35	NASA-CASE-MFS-25509-1 US-PATENT-APPL-SN-297486 US-PATENT-CLASS-156-DIG.62 US-PATENT-CLASS-34-57A US-PATENT-CLASS-432-227 US-PATENT-CLASS-432-58 US-PATENT-4,378,209
N83-16633* #	c 33	NASA-CASE-LAR-12847-1 US-PATENT-APPL-SN-393456	N83-20154* #	c 37	NASA-CASE-MFS-25807 US-PATENT-APPL-SN-460733	N83-25217*	c 45	NASA-CASE-NPO-15220-1 US-PATENT-APPL-SN-267677 US-PATENT-CLASS-220-335 US-PATENT-CLASS-73-863.31 US-PATENT-CLASS-73-863.83 US-PATENT-CLASS-73-864.83 US-PATENT-4,377,949
N83-17045*	c 51	NASA-CASE-NPO-15213-1 US-PATENT-APPL-SN-280153 US-PATENT-CLASS-47-58 US-PATENT-CLASS-71-98 US-PATENT-4,363,188	N83-20280*	c 39	NASA-CASE-MSC-18929-1 US-PATENT-APPL-SN-198093 US-PATENT-CLASS-128-782 US-PATENT-CLASS-358-105 US-PATENT-CLASS-364-413 US-PATENT-CLASS-364-522 US-PATENT-CLASS-364-559 US-PATENT-CLASS-73-379 US-PATENT-4,375,674	N83-25346*	c 52	NASA-CASE-NPO-15197-1 US-PATENT-APPL-SN-263957 US-PATENT-CLASS-128-303B US-PATENT-CLASS-128-774 US-PATENT-CLASS-128-782 US-PATENT-4,378,813
N83-17235*	c 71	NASA-CASE-LAR-12883-1 US-PATENT-APPL-SN-267935 US-PATENT-CLASS-73-147 US-PATENT-4,363,237	N83-20789*	c 76	NASA-CASE-NPO-15625-1 US-PATENT-APPL-SN-325933 US-PATENT-CLASS-148-173 US-PATENT-CLASS-148-175 US-PATENT-CLASS-156-608 US-PATENT-CLASS-156-624 US-PATENT-CLASS-156-635 US-PATENT-CLASS-156-654 US-PATENT-CLASS-156-662 US-PATENT-4,373,989	N83-25378*	c 60	NASA-CASE-GSC-12223-1 US-PATENT-APPL-SN-041143 US-PATENT-CLASS-364-200 US-PATENT-4,380,046
N83-17305*	c 74	NASA-CASE-MFS-25312-1 US-PATENT-APPL-SN-187106 US-PATENT-CLASS-350-171 US-PATENT-4,362,361	N83-20944*	c 07	NASA-CASE-MFS-23981-1 US-PATENT-APPL-SN-231543 US-PATENT-CLASS-244-159 US-PATENT-CLASS-244-173 US-PATENT-CLASS-322-2R US-PATENT-CLASS-339-3R US-PATENT-CLASS-339-5R	N83-25789*	c 24	NASA-CASE-ARC-11261-1 US-PATENT-APPL-SN-282129 US-PATENT-CLASS-423-447.2 US-PATENT-CLASS-423-447.6 US-PATENT-CLASS-423-447.7 US-PATENT-4,385,043
N83-17588* #	c 20	NASA-CASE-MFS-25843-1 US-PATENT-APPL-SN-444125				N83-26078*	c 37	NASA-CASE-GSC-12643-1 US-PATENT-APPL-SN-238786 US-PATENT-CLASS-417-15 US-PATENT-CLASS-47-26 US-PATENT-4,381,174
N83-18908*	c 27	NASA-CASE-MSC-18832-1 US-PATENT-APPL-SN-365950 US-PATENT-CLASS-428-241 US-PATENT-CLASS-428-244 US-PATENT-CLASS-428-245 US-PATENT-CLASS-428-260 US-PATENT-CLASS-428-331 US-PATENT-CLASS-428-368 US-PATENT-CLASS-428-902 US-PATENT-CLASS-428-913				N83-27058*	c 31	NASA-CASE-GSC-12636-1 US-PATENT-APPL-SN-173520 US-PATENT-CLASS-125-20 US-PATENT-CLASS-408-1R US-PATENT-CLASS-408-61 US-PATENT-CLASS-409-131 US-PATENT-4,383,785
						N83-27085*	c 32	NASA-CASE-NPO-15401-1 US-PATENT-APPL-SN-259210 US-PATENT-CLASS-333-22F US-PATENT-CLASS-333-254 US-PATENT-4,382,239
						N83-27126*	c 33	NASA-CASE-NPO-15358-1 US-PATENT-APPL-SN-219968 US-PATENT-CLASS-323-269 US-PATENT-CLASS-323-303 US-PATENT-CLASS-323-350 US-PATENT-4,382,224
						N83-27144*	c 34	NASA-CASE-LEW-13174-1

			US-PATENT-APPL-SN-200634				US-PATENT-CLASS-428-678
			US-PATENT-CLASS-415-115				US-PATENT-4,335,190
			US-PATENT-CLASS-416-1				NASA-CASE-MFS-25134-1
			US-PATENT-CLASS-416-97R				US-PATENT-APPL-SN-195226
			US-PATENT-4,384,823				US-PATENT-CLASS-24-214
N83-27184*	c 35		NASA-CASE-NPO-15292-1				US-PATENT-CLASS-244-159
			US-PATENT-APPL-SN-207135				US-PATENT-4,381,583
			US-PATENT-CLASS-250-282				NASA-CASE-NPO-14596-3
			US-PATENT-CLASS-250-288				US-PATENT-APPL-SN-303671
			US-PATENT-CLASS-250-423				US-PATENT-CLASS-264-5
			US-PATENT-4,383,171				US-PATENT-CLASS-264-9
N83-27344*	c 44		NASA-CASE-LEW-13246-1				US-PATENT-CLASS-425-6
			US-PATENT-APPL-SN-266255				US-PATENT-CLASS-65-142
			US-PATENT-CLASS-429-105				US-PATENT-CLASS-65-214
			US-PATENT-CLASS-429-107				US-PATENT-CLASS-65-222
			US-PATENT-CLASS-429-109				US-PATENT-CLASS-65-222
			US-PATENT-CLASS-429-34				US-PATENT-CLASS-65-222
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N83-27569*	c 51		NASA-CASE-GSC-12158-1				US-PATENT-CLASS-65-222
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			US-PATENT-CLASS-422-52				US-PATENT-CLASS-65-222
			US-PATENT-CLASS-435-289				US-PATENT-CLASS-65-222
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			US-PATENT-CLASS-435-34				US-PATENT-CLASS-65-222
			US-PATENT-CLASS-435-38				US-PATENT-CLASS-65-222
			US-PATENT-CLASS-435-39				US-PATENT-CLASS-65-222
			US-PATENT-CLASS-435-8				US-PATENT-CLASS-65-222
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N83-27577*	c 52		NASA-CASE-MSC-18761-1				US-PATENT-CLASS-65-222
			US-PATENT-APPL-SN-254688				US-PATENT-CLASS-65-222
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			US-PATENT-CLASS-604-114				US-PATENT-CLASS-65-222
			US-PATENT-CLASS-604-151				US-PATENT-CLASS-65-222
			US-PATENT-CLASS-73-204				US-PATENT-CLASS-65-222
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N83-27578*	c 52		NASA-CASE-MSC-18759-1				US-PATENT-CLASS-65-222
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			US-PATENT-CLASS-128-660				US-PATENT-CLASS-65-222
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			US-PATENT-CLASS-73-597				US-PATENT-CLASS-65-222
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N83-27975*	c 05		NASA-CASE-FRC-11072-1				US-PATENT-CLASS-65-222
			US-PATENT-APPL-SN-230613				US-PATENT-CLASS-65-222
			US-PATENT-CLASS-179-146-R				US-PATENT-CLASS-65-222
			US-PATENT-CLASS-179-179				US-PATENT-CLASS-65-222
			US-PATENT-CLASS-367-906				US-PATENT-CLASS-65-222
			US-PATENT-4,388,502				US-PATENT-CLASS-65-222
N83-28064*	c 18		NASA-CASE-GSC-12551-1				US-PATENT-CLASS-65-222
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			US-PATENT-CLASS-244-169				US-PATENT-CLASS-65-222
			US-PATENT-CLASS-244-170				US-PATENT-CLASS-65-222
			US-PATENT-4,386,750				US-PATENT-CLASS-65-222
N83-28240*	c 27		NASA-CASE-LAR-12775-1				US-PATENT-CLASS-65-222
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			US-PATENT-CLASS-524-104				US-PATENT-CLASS-65-222
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			US-PATENT-CLASS-524-233				US-PATENT-CLASS-65-222
			US-PATENT-CLASS-524-726				US-PATENT-CLASS-65-222
			US-PATENT-CLASS-525-181				US-PATENT-CLASS-65-222
			US-PATENT-CLASS-525-183				US-PATENT-CLASS-65-222
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			US-PATENT-CLASS-525-474				US-PATENT-CLASS-65-222
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N83-28319*	c 33		NASA-CASE-MFS-25302-1				US-PATENT-CLASS-65-222
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			US-PATENT-CLASS-322-29				US-PATENT-CLASS-65-222
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			US-PATENT-CLASS-322-95				US-PATENT-CLASS-65-222
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N83-28356*	c 34		NASA-CASE-GSC-12553-1				US-PATENT-CLASS-65-222
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			US-PATENT-CLASS-165-185				US-PATENT-CLASS-65-222
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N83-28573*	c 44		NASA-CASE-LAR-12495-1				US-PATENT-CLASS-65-222
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			US-PATENT-CLASS-310-11				US-PATENT-CLASS-65-222
			US-PATENT-4,388,542				US-PATENT-CLASS-65-222
N83-28574*	c 44		NASA-CASE-GSC-12697-1				US-PATENT-CLASS-65-222
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			US-PATENT-CLASS-308-10				US-PATENT-CLASS-65-222
			US-PATENT-CLASS-310-15				US-PATENT-CLASS-65-222
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			US-PATENT-CLASS-62-6				US-PATENT-CLASS-65-222
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N83-28849*	c 51		NASA-CASE-ARC-11322-1				US-PATENT-CLASS-65-222
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			US-PATENT-CLASS-435-3				US-PATENT-CLASS-65-222
			US-PATENT-CLASS-435-34				US-PATENT-CLASS-65-222
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			US-PATENT-CLASS-435-807				US-PATENT-CLASS-65-222
			US-PATENT-4,386,157				US-PATENT-CLASS-65-222
N83-29032*	c 74		NASA-CASE-KSC-11104-1				US-PATENT-CLASS-65-222
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N83-29303*	c 18		NASA-CASE-MFS-25403-1				US-PATENT-CLASS-65-222
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N83-29324*	c 25		NASA-CASE-GSC-12770-1				US-PATENT-CLASS-65-222
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N83-29388*	c 27		NASA-CASE-LEW-13132-1				US-PATENT-CLASS-65-222
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			US-PATENT-CLASS-204-56R				US-PATENT-CLASS-65-222
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N83-29392* #	c 27		NASA-CASE-LEW-12876-2				US-PATENT-CLASS-65-222
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N83-29625*	c 34		NASA-CASE-LEW-12508-3				US-PATENT-CLASS-65-222
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N83-29650*	c 35		NASA-CASE-MFS-25242-1				US-PATENT-CLASS-65-222
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			US-PATENT-CLASS-73-863.11				US-PATENT-CLASS-65-222
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N83-29651*	c 35		NASA-CASE-LAR-12531-1				US-PATENT-CLASS-65-222
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			US-PATENT-CASE-368-10				US-PATENT-CLASS-65-222
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N83-29652*	c 35		NASA-CASE-MSC-18936-1				US-PATENT-CLASS-65-222
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N83-29680*	c 36		NASA-CASE-MFS-25315-1				US-PATENT-CLASS-65-222
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N83-29681* #	c 36		NASA-CASE-GSC-12609-2				US-PATENT-CLASS-65-222
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N83-29783* #	c 43		NASA-CASE-LAR-13053-1				US-PATENT-CLASS-65-222
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N83-29991* #	c 52		NASA-CASE-ARC-11264-2				US-PATENT-CLASS-65-222
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N83-31603*	c 07		NASA-CASE-LEW-14586-1	</			

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		US-PATENT-CLASS-364-200		US-PATENT-CLASS-315-208		US-PATENT-4,401,934
		US-PATENT-CLASS-364-900		US-PATENT-CLASS-315-224	N83-35307*	c 34
		US-PATENT-4,394,726		US-PATENT-CLASS-315-225		NASA-CASE-GSC-12812-1
N83-32515*	c 71	NASA-CASE-NPO-15453-1		US-PATENT-CLASS-315-237		US-PATENT-APPL-SN-434674
		US-PATENT-APPL-SN-314929		US-PATENT-CLASS-315-241R		US-PATENT-CLASS-165-104.26
		US-PATENT-CLASS-60-721		US-PATENT-CLASS-372-25		US-PATENT-CLASS-165-32
		US-PATENT-CLASS-73-505		US-PATENT-4,398,129		US-PATENT-4,402,358
		US-PATENT-4,393,708	N83-34190*	NASA-CASE-MFS-25607-1		NASA-CASE-LEW-13934-1
N83-32516*	c 71	NASA-CASE-NPO-15522-1		US-PATENT-APPL-SN-325886		US-PATENT-APPL-SN-212949
		US-PATENT-APPL-SN-303672		US-PATENT-CLASS-361-90		US-PATENT-CLASS-228-103
		US-PATENT-CLASS-60-721		US-PATENT-CLASS-318-729		US-PATENT-CLASS-228-193
		US-PATENT-CLASS-73-505		US-PATENT-CLASS-318-798		US-PATENT-CLASS-228-263.18
		US-PATENT-4,393,706		US-PATENT-CLASS-318-806		US-PATENT-CLASS-415-118
N83-32577*	c 74	NASA-CASE-GSC-12614-1		US-PATENT-CLASS-361-100	N83-35350*	c 36
		US-PATENT-APPL-SN-195227		US-PATENT-CLASS-363-54		NASA-CASE-NPO-15201-1
		US-PATENT-CLASS-356-353		US-PATENT-4,400,657		US-PATENT-APPL-SN-246778
		US-PATENT-CLASS-356-363	N83-34191*	NASA-CASE-GSC-12646-1		US-PATENT-CLASS-330-4
		US-PATENT-4,395,123		US-PATENT-APPL-SN-284290		US-PATENT-CLASS-332-7.5
N83-33882*	c 06	NASA-CASE-FRC-11043-1		US-PATENT-CLASS-330-289		US-PATENT-CLASS-333-24.2
		US-PATENT-APPL-SN-242790		US-PATENT-CLASS-330-310		US-PATENT-4,399,415
		US-PATENT-CLASS-33-322		US-PATENT-4,401,953	N83-35781*	c 71
		US-PATENT-CLASS-74-5.34	N83-34221*	NASA-CASE-LAR-12393-1		NASA-CASE-NPO-15334-1
		US-PATENT-4,387,513		US-PATENT-APPL-SN-145208		US-PATENT-APPL-SN-341406
N83-33884*	c 07	NASA-CASE-ARC-10812-1		US-PATENT-CLASS-165-27		US-PATENT-CLASS-210-748
		US-PATENT-APPL-SN-657903		US-PATENT-CLASS-165-12		US-PATENT-CLASS-252-361
		US-PATENT-CLASS-181-213		US-PATENT-CLASS-165-61		US-PATENT-CLASS-366-114
		US-PATENT-CLASS-239-265.17		US-PATENT-CLASS-165-80E		US-PATENT-CLASS-55-115
		US-PATENT-CLASS-60-262		US-PATENT-CLASS-374-46		US-PATENT-CLASS-55-38
		US-PATENT-CLASS-60-269		US-PATENT-CLASS-62-514R		US-PATENT-CLASS-55-52
		US-PATENT-CLASS-60-271		US-PATENT-CLASS-62-62		US-PATENT-CLASS-65-134
		US-PATENT-4,372,110		US-PATENT-4,346,754	N83-35888*	c 76
N83-33950*	c 24	NASA-CASE-NPO-14987-1	N83-34272*	NASA-CASE-ARC-11317-1		NASA-CASE-NPO-15530-1
		US-PATENT-APPL-SN-164-584		US-PATENT-APPL-SN-229231		US-PATENT-APPL-SN-364092
		US-PATENT-CLASS-427-215		US-PATENT-CLASS-340-518		US-PATENT-CLASS-156-DIG.6
		US-PATENT-CLASS-427-241		US-PATENT-CLASS-340-566		US-PATENT-CLASS-156-DIG.73
		US-PATENT-CLASS-428-367		US-PATENT-4,374,378		US-PATENT-CLASS-156-608
		US-PATENT-CLASS-428-375	N83-34304*	NASA-CASE-ARC-11312-1		US-PATENT-4,401,505
		US-PATENT-CLASS-428-392		US-PATENT-APPL-SN-234224	N83-35992*	c 01
		US-PATENT-CLASS-428-902		US-PATENT-CLASS-356-1		NASA-CASE-LAR-12624-1
		US-PATENT-CLASS-428-903		US-PATENT-CLASS-356-4		US-PATENT-APPL-SN-259209
		US-PATENT-4,359,503		US-PATENT-CLASS-358-104		US-PATENT-CLASS-102-378
N83-33977*	c 25	NASA-CASE-ARC-11326-1		US-PATENT-CLASS-358-109		US-PATENT-CLASS-244-137P
		US-PATENT-APPL-SN-178192		US-PATENT-CLASS-434-38		US-PATENT-CLASS-89-18
		US-PATENT-CLASS-252-5		US-PATENT-CLASS-434-4	N83-36029*	c 07
		US-PATENT-CLASS-423-419P		US-PATENT-4,391,514		NASA-CASE-LEW-13142-1
		US-PATENT-CLASS-423-600	N83-34323*	NASA-CASE-GSC-12726-1		US-PATENT-APPL-SN-132364
		US-PATENT-CLASS-424-156		US-PATENT-APPL-SN-364093		US-PATENT-CLASS-60-39.07
		US-PATENT-4,356,157		US-PATENT-CLASS-308-10		US-PATENT-4,404,793
N83-34039*	c 27	NASA-CASE-GSC-12886-1		US-PATENT-4,381,375	N83-36118*	c 25
		US-PATENT-APPL-SN-293412	N83-34448*	NASA-CASE-ARC-11164-1		NASA-CASE-ARC-11252-1
		US-PATENT-CLASS-427-322		US-PATENT-APPL-SN-308007		US-PATENT-APPL-SN-317977
		US-PATENT-CLASS-427-340		US-PATENT-CLASS-350-166		US-PATENT-CLASS-169-47
		US-PATENT-CLASS-427-352		US-PATENT-CLASS-428-312.6		US-PATENT-CLASS-252-2
		US-PATENT-CLASS-427-400		US-PATENT-CLASS-428-325		US-PATENT-CLASS-252-5
		US-PATENT-CLASS-427-407.1		US-PATENT-CLASS-428-427	N83-36220*	c 27
		US-PATENT-4,362,769		US-PATENT-CLASS-428-428		NASA-CASE-MFS-25436-1
N83-34040*	c 27	NASA-CASE-LAR-12838-1		US-PATENT-4,381,333		US-PATENT-APPL-SN-280151
		US-PATENT-APPL-SN-320621	N83-34449*	NASA-CASE-LAR-12719-1		US-PATENT-CLASS-156-DIG.73
		US-PATENT-CLASS-526-259		US-PATENT-APPL-SN-367134		US-PATENT-CLASS-156-DIG.89
		US-PATENT-CLASS-526-285		US-PATENT-CLASS-126-901		US-PATENT-CLASS-156-600
		US-PATENT-CLASS-528-12		US-PATENT-CLASS-204-33		US-PATENT-CLASS-156-158
		US-PATENT-CLASS-528-125		US-PATENT-CLASS-204-35N		US-PATENT-CLASS-219-343
		US-PATENT-CLASS-528-126		US-PATENT-4,397,716		US-PATENT-CLASS-219-354
		US-PATENT-CLASS-528-128	N83-34796*	NASA-CASE-LEW-12582-1		US-PATENT-CLASS-219-390
		US-PATENT-CLASS-528-220		US-PATENT-APPL-SN-397281		US-PATENT-CLASS-219-411
		US-PATENT-CLASS-528-222		US-PATENT-CLASS-310-332		US-PATENT-CLASS-350-316
		US-PATENT-CLASS-528-228		US-PATENT-CLASS-310-800	N83-36355*	c 33
		US-PATENT-CLASS-528-229		US-PATENT-CLASS-428-294		NASA-CASE-GSC-12630-1
		US-PATENT-CLASS-528-38		US-PATENT-CLASS-428-421		US-PATENT-APPL-SN-308009
		US-PATENT-4,375,536		US-PATENT-CLASS-428-422		US-PATENT-CLASS-343-100AP
N83-34041*	c 27	NASA-CASE-LAR-12858-1		US-PATENT-4,400,642		US-PATENT-CLASS-343-840
		US-PATENT-APPL-SN-407240	N83-35176*	NASA-CASE-NPO-15070-1	N83-36356*	c 33
		US-PATENT-CLASS-164-331.12		US-PATENT-APPL-SN-403847		US-PATENT-4,407,001
		US-PATENT-CLASS-264-137		US-PATENT-CLASS-264-12		NASA-CASE-KSC-11170-1
		US-PATENT-CLASS-264-258		US-PATENT-CLASS-264-24		US-PATENT-APPL-SN-284288
		US-PATENT-CLASS-264-331.46		US-PATENT-CLASS-264-5		US-PATENT-CLASS-330-110
		US-PATENT-CLASS-528-222		US-PATENT-CLASS-425-10		US-PATENT-CLASS-330-282
		US-PATENT-CLASS-528-226		US-PATENT-CLASS-425-6	N83-36357*	c 33
		US-PATENT-4,398,021		US-PATENT-CLASS-425-7		US-PATENT-4,406,989
N83-34043*	c 27	NASA-CASE-NPO-15202-1		US-PATENT-CLASS-65-142		NASA-CASE-LAR-12654-1
		US-PATENT-APPL-SN-233271		US-PATENT-CLASS-65-21.3		US-PATENT-APPL-SN-234225
		US-PATENT-CLASS-384-124		US-PATENT-CLASS-65-21.4		US-PATENT-CLASS-368-184
		US-PATENT-CLASS-523-440		US-PATENT-CLASS-65-142		US-PATENT-CLASS-368-200
		US-PATENT-CLASS-523-443		US-PATENT-CLASS-65-21.3		US-PATENT-CLASS-368-201
		US-PATENT-4,395,503	N83-35177*	US-PATENT-CLASS-65-22		US-PATENT-4,407,589
N83-34073*	c 31	NASA-CASE-ARC-11246-1		US-PATENT-4,400,191	N83-36482*	c 37
		US-PATENT-APPL-SN-136660		NASA-CASE-LEW-13450-1		NASA-CASE-MSC-18791-1
		US-PATENT-CLASS-156-264		US-PATENT-APPL-SN-328760		US-PATENT-APPL-SN-248746
		US-PATENT-CLASS-156-344		US-PATENT-CLASS-427-243		US-PATENT-CLASS-29-446
		US-PATENT-CLASS-156-59		US-PATENT-CLASS-427-247		US-PATENT-CLASS-73-862.54
		US-PATENT-CLASS-273-240		US-PATENT-CLASS-427-34		US-PATENT-CLASS-81-57.38
		US-PATENT-CLASS-434-403		US-PATENT-CLASS-427-34		US-PATENT-CLASS-81-57.38
		US-PATENT-CLASS-434-88		US-PATENT-CLASS-427-423	N83-36483*	c 37
		US-PATENT-4,385,949		US-PATENT-4,402,992		US-PATENT-4,407,165
N83-34189*	c 33	NASA-CASE-GSC-12566-1	N83-35227*	NASA-CASE-MFS-25209-1		NASA-CASE-MSC-18807-1
				US-PATENT-APPL-SN-291132		US-PATENT-APPL-SN-266688
				US-PATENT-CLASS-318-685		US-PATENT-CLASS-123-197R
				US-PATENT-CLASS-318-798	N83-36846*	c 71
						US-PATENT-CLASS-123-78E
						US-PATENT-4,406,256
						NASA-CASE-NPO-15435-1

		US-PATENT-APPL-SN-272837				US-PATENT-APPL-SN-322314				US-PATENT-CLASS-339-258RR
		US-PATENT-CLASS-308-10				US-PATENT-CLASS-156-215				US-PATENT-CLASS-339-262RR
		US-PATENT-CLASS-73-505				US-PATENT-CLASS-156-230				US-PATENT-CLASS-339-64M
		US-PATENT-4,402,221				US-PATENT-CLASS-156-235				US-PATENT-4,421,371
N83-36898*	c 74	NASA-CASE-GSC-12683-1				US-PATENT-CLASS-156-294	N84-14424*	c 33	NASA-CASE-MFS-25477-1	
		US-PATENT-APPL-SN-333535				US-PATENT-CLASS-156-391			US-PATENT-APPL-SN-243683	
		US-PATENT-CLASS-350-173				US-PATENT-CLASS-156-423			US-PATENT-APPL-SN-297524	
		US-PATENT-CLASS-350-445				US-PATENT-CLASS-156-540			US-PATENT-APPL-SN-350472	
		US-PATENT-4,407,563				US-PATENT-CLASS-156-71			US-PATENT-CLASS-318-729	
N84-11136*	c 02	NASA-CASE-LAR-12843-1				US-PATENT-CLASS-338-2			US-PATENT-CLASS-318-798	
		US-PATENT-APPL-SN-392096				US-PATENT-4,407,686			US-PATENT-CLASS-318-806	
		US-PATENT-CLASS-244-35A	N84-12444*	c 35	NASA-CASE-LAR-12706-1				US-PATENT-4,417,190	
		US-PATENT-CLASS-244-35R			US-PATENT-APPL-SN-210498				NASA-CASE-GSC-12771-1	
		US-PATENT-CLASS-416-223R			US-PATENT-CLASS-324-250				US-PATENT-APPL-SN-434672	
		US-PATENT-CLASS-416-242			US-PATENT-CLASS-328-230				US-PATENT-CLASS-165-32	
		US-PATENT-4,412,664			US-PATENT-CLASS-372-74				US-PATENT-CLASS-165-41	
N84-11213*	c 24	NASA-CASE-ARC-11418-1			US-PATENT-4,414,509				US-PATENT-CLASS-165-96	
		US-PATENT-APPL-SN-452464	N84-12445*	c 35	NASA-CASE-LAR-12882-1				US-PATENT-4,420,035	
		US-PATENT-CLASS-523-435			US-PATENT-APPL-SN-267179				NASA-CASE-LAR-12686-1	
		US-PATENT-CLASS-523-456			US-PATENT-CLASS-364-415				US-PATENT-APPL-SN-249304	
		US-PATENT-CLASS-528-110			US-PATENT-CLASS-73-646				US-PATENT-CLASS-364-557	
		US-PATENT-CLASS-528-361			US-PATENT-CLASS-73-658				US-PATENT-CLASS-364-558	
		US-PATENT-4,410,682			US-PATENT-4,413,522				US-PATENT-CLASS-364-571	
N84-11214*	c 24	NASA-CASE-LAR-12807-1	N84-12491*	c 37	NASA-CASE-GSC-12619-1				US-PATENT-CLASS-73-714	
		US-PATENT-APPL-SN-280155			US-PATENT-APPL-SN-225499				US-PATENT-4,399,515	
		US-PATENT-CLASS-228-157			US-PATENT-CLASS-101-407BP				NASA-CASE-GSC-12655-1	
		US-PATENT-CLASS-228-181			US-PATENT-CLASS-269-3				US-PATENT-APPL-SN-270763	
		US-PATENT-CLASS-228-212			US-PATENT-4,393,777				US-PATENT-CLASS-350-299	
		US-PATENT-CLASS-244-119	N84-12492*	c 37	NASA-CASE-GSC-12622-1				US-PATENT-CLASS-356-345	
		US-PATENT-CLASS-244-123			US-PATENT-APPL-SN-243684				US-PATENT-CLASS-372-100	
		US-PATENT-CLASS-428-593			US-PATENT-CLASS-308-2A				US-PATENT-CLASS-372-108	
		US-PATENT-CLASS-52-806			US-PATENT-4,405,184				US-PATENT-CLASS-372-93	
		US-PATENT-CLASS-52-808	N84-12493*	c 37	NASA-CASE-LAR-12923-1				US-PATENT-CLASS-372-94	
		US-PATENT-4,411,380			US-PATENT-APPL-SN-383063				US-PATENT-CLASS-372-98	
N84-11497*	c 37	NASA-CASE-MFS-25678-1			US-PATENT-CLASS-416-117				US-PATENT-4,420,836	
		US-PATENT-APPL-SN-378533			US-PATENT-CLASS-416-132B				NASA-CASE-NPO-15100-1	
		US-PATENT-CLASS-277-116.6			US-PATENT-4,415,311				US-PATENT-APPL-SN-259211	
		US-PATENT-CLASS-277-124	N84-12654*	c 45	NASA-CASE-NSTL-10				US-PATENT-CLASS-138-42	
		US-PATENT-CLASS-277-164			US-PATENT-APPL-SN-335036				US-PATENT-CLASS-251-127	
		US-PATENT-CLASS-277-177			US-PATENT-CLASS-210-151				US-PATENT-4,418,722	
		US-PATENT-CLASS-277-190			US-PATENT-CLASS-210-602				NASA-CASE-LAR-11903-2	
		US-PATENT-4,410,189			US-PATENT-CLASS-210-605				US-PATENT-APPL-SN-238791	
N84-11744*	c 52	NASA-CASE-MFS-25740-1			US-PATENT-CLASS-210-617				US-PATENT-APPL-SN-753971	
		US-PATENT-APPL-SN-371352			US-PATENT-CLASS-47-58				US-PATENT-CLASS-239-265.17	
		US-PATENT-CLASS-128-DIG.25			US-PATENT-4,415,450				US-PATENT-4,398,667	
		US-PATENT-CLASS-128-1R	N84-12968* #	c 76	NASA-CASE-NPO-15811-1				NASA-CASE-LAR-12751-1	
		US-PATENT-CLASS-128-346			US-PATENT-APPL-SN-347175				US-PATENT-APPL-SN-338386	
		US-PATENT-4,408,597	N84-14132*	c 04	NASA-CASE-LAR-12638-1				US-PATENT-CLASS-73-167	
N84-11758*	c 54	NASA-CASE-MSC-18223-2			US-PATENT-APPL-SN-367187				US-PATENT-CLASS-73-432R	
		US-PATENT-APPL-SN-219681			US-PATENT-CLASS-33-DIG.3				US-PATENT-CLASS-73-9	
		US-PATENT-APPL-SN-368187			US-PATENT-CLASS-33-348				US-PATENT-4,425,785	
		US-PATENT-CLASS-604-368			US-PATENT-CLASS-33-356				NASA-CASE-NPO-15767-1	
		US-PATENT-CLASS-604-378			US-PATENT-CLASS-33-361				US-PATENT-APPL-SN-315584	
		US-PATENT-CLASS-604-396			US-PATENT-4,418,480				US-PATENT-CLASS-208-10	
		US-PATENT-4,338,371	N84-14322*	c 27	NASA-CASE-ARC-11400-1				US-PATENT-CLASS-208-8LE	
		US-PATENT-4,411,660			US-PATENT-APPL-SN-441899				US-PATENT-4,388,171	
N84-11920*	c 74	NASA-CASE-GSC-12640-1			US-PATENT-CLASS-428-246				NASA-CASE-MSC-16934-3	
		US-PATENT-APPL-SN-267178			US-PATENT-CLASS-428-260				US-PATENT-APPL-SN-185868	
		US-PATENT-CLASS-250-363R			US-PATENT-CLASS-428-367				US-PATENT-APPL-SN-361711	
		US-PATENT-CLASS-250-363S			US-PATENT-CLASS-428-403				US-PATENT-APPL-SN-969757	
		US-PATENT-CLASS-250-368			US-PATENT-CLASS-428-473.5				US-PATENT-CLASS-164-119	
		US-PATENT-CLASS-378-2			US-PATENT-CLASS-428-902				US-PATENT-CLASS-264-118	
		US-PATENT-4,404,469			US-PATENT-CLASS-428-920				US-PATENT-CLASS-264-59	
N84-11921*	c 74	NASA-CASE-NPO-15375-1			US-PATENT-CLASS-524-494				US-PATENT-CLASS-264-60	
		US-PATENT-APPL-SN-210405			US-PATENT-CLASS-524-496				US-PATENT-4,421,700	
		US-PATENT-CLASS-250-227			US-PATENT-CLASS-524-500				NASA-CASE-LEW-13426-1	
		US-PATENT-CLASS-3-1.1			US-PATENT-CLASS-524-530				US-PATENT-APPL-SN-393588	
		US-PATENT-CLASS-350-96.10			US-PATENT-CLASS-525-282				US-PATENT-CLASS-110-186	
		US-PATENT-CLASS-350-96.15			US-PATENT-CLASS-525-287				US-PATENT-CLASS-110-262	
		US-PATENT-CLASS-73-432T			US-PATENT-4,421,820				US-PATENT-CLASS-110-263	
		US-PATENT-4,405,197	N84-14323*	c 27	NASA-CASE-LAR-12881-1				US-PATENT-CLASS-110-265	
N84-12154*	c 05	NASA-CASE-LAR-12615-1			US-PATENT-APPL-SN-361215				US-PATENT-CLASS-431-1	
		US-PATENT-APPL-SN-263829			US-PATENT-CLASS-206-447				US-PATENT-4,425,854	
		US-PATENT-CLASS-244-13			US-PATENT-CLASS-206-582				NASA-CASE-LEW-13570-1	
		US-PATENT-CLASS-244-45R			US-PATENT-CLASS-428-202				US-PATENT-APPL-SN-251009	
		US-PATENT-CLASS-244-53R			US-PATENT-CLASS-428-347				US-PATENT-CLASS-315-3.5	
		US-PATENT-CLASS-244-55			US-PATENT-CLASS-428-40				US-PATENT-CLASS-315-3.6	
		US-PATENT-CLASS-244-91			US-PATENT-CLASS-428-78				US-PATENT-CLASS-315-39.3	
		US-PATENT-4,415,133			US-PATENT-4,420,518				US-PATENT-CLASS-333-162	
N84-12193* #	c 09	NASA-CASE-ARC-11426-1	N84-14324*	c 27	NASA-CASE-MSC-18382-2				US-PATENT-4,422,012	
		US-PATENT-APPL-SN-526741			US-PATENT-APPL-SN-241155				NASA-CASE-MFS-25430-1	
N84-12262*	c 25	NASA-CASE-NPO-15458-1			US-PATENT-CLASS-524-371				US-PATENT-APPL-SN-383083	
		US-PATENT-APPL-SN-376306			US-PATENT-4,395,511				US-PATENT-CLASS-363-25	
		US-PATENT-CLASS-204-DIG.3	N84-14421*	c 33	NASA-CASE-GSC-12650-1				US-PATENT-CLASS-363-65	
		US-PATENT-CLASS-204-129			US-PATENT-APPL-SN-301077				US-PATENT-CLASS-363-67	
		US-PATENT-CLASS-204-242			US-PATENT-CLASS-330-107				US-PATENT-CLASS-363-71	
		US-PATENT-CLASS-204-278			US-PATENT-CLASS-330-109				US-PATENT-4,426,678	
		US-PATENT-CLASS-204-290R			US-PATENT-4,417,215				NASA-CASE-GSC-12645-1	
		US-PATENT-CLASS-427-443.2	N84-14422*	c 33	NASA-CASE-LEW-13286-1				US-PATENT-APPL-SN-284314	
		US-PATENT-CLASS-427-429.111			US-PATENT-APPL-SN-272406				US-PATENT-CLASS-324-79R	
		US-PATENT-4,414,080			US-PATENT-CLASS-252-182.1				US-PATENT-CLASS-324-83A	
N84-12406*	c 34	NASA-CASE-MFS-25631-1			US-PATENT-CLASS-429-206				US-PATENT-CLASS-324-83R	
		US-PATENT-APPL-SN-308203			US-PATENT-CLASS-429-229				US-PATENT-CLASS-328-133	
		US-PATENT-CLASS-239-426			US-PATENT-4,418,130				US-PATENT-CLASS-330-289	
		US-PATENT-4,413,784	N84-14423*	c 33	NASA-CASE-MFS-25211-3				US-PATENT-4,425,543	
N84-12443*	c 35	NASA-CASE-FRC-11068-1			US-PATENT-APPL-SN-432057				NASA-CASE-MFS-25616-1	

		US-PATENT-APPL-SN-325932			US-PATENT-CLASS-244-215			US-PATENT-APPL-SN-433598
		US-PATENT-CLASS-318-799			US-PATENT-CLASS-244-216			US-PATENT-CLASS-524-171
		US-PATENT-CLASS-323-243			US-PATENT-CLASS-244-219			US-PATENT-CLASS-525-534
		US-PATENT-CLASS-323-246			US-PATENT-4,444,368			US-PATENT-CLASS-525-535
		US-PATENT-4,426,614	N84-22559*	c 07	NASA-CASE-LEW-13622-1			US-PATENT-CLASS-525-536
N84-16456*	c 33	NASA-CASE-NPO-15161-1			US-PATENT-APPL-SN-350473			US-PATENT-CLASS-528-25
		US-PATENT-APPL-SN-325083			US-PATENT-CLASS-364-558			US-PATENT-CLASS-528-26
		US-PATENT-CLASS-427-216			US-PATENT-CLASS-73-115			US-PATENT-4,431,761
		US-PATENT-CLASS-427-217			US-PATENT-4,428,226	N84-22748*	c 27	NASA-CASE-NPO-15640-1
		US-PATENT-CLASS-427-226	N84-22560*	c 07	NASA-CASE-LEW-13654-1			US-PATENT-APPL-SN-465367
		US-PATENT-CLASS-427-376.6			US-PATENT-APPL-SN-245571			US-PATENT-CLASS-156-304.3
		US-PATENT-CLASS-427-376.7			US-PATENT-CLASS-416-224			US-PATENT-CLASS-156-304.6
		US-PATENT-CLASS-427-436			US-PATENT-CLASS-416-233			US-PATENT-CLASS-156-499
		US-PATENT-CLASS-427-437			US-PATENT-CLASS-416-92			US-PATENT-CLASS-156-881
		US-PATENT-CLASS-427-58			US-PATENT-CLASS-416-97R			US-PATENT-CLASS-156-89
		US-PATENT-CLASS-427-75			US-PATENT-4,411,597			US-PATENT-4,420,352
		US-PATENT-CLASS-427-88	N84-22601*	c 16	NASA-CASE-MSC-20254-1	N84-22749*	c 27	NASA-CASE-LAR-12980-1
		US-PATENT-CLASS-427-96			US-PATENT-APPL-SN-418137			US-PATENT-APPL-SN-469866
		US-PATENT-4,388,346			US-PATENT-CLASS-244-158A			US-PATENT-CLASS-528-125
N84-16523*	c 35	NASA-CASE-LAR-12007-3			US-PATENT-CLASS-52-404			US-PATENT-CLASS-528-128
		US-PATENT-APPL-SN-352831			US-PATENT-CLASS-52-506			US-PATENT-CLASS-528-172
		US-PATENT-CLASS-33-293			US-PATENT-4,439,968			US-PATENT-CLASS-528-185
		US-PATENT-4,428,122	N84-22605*	c 18	NASA-CASE-MSC-18969-1			US-PATENT-4,444,979
N84-16542*	c 36	NASA-CASE-LAR-12870-1			US-PATENT-APPL-SN-368189	N84-22750*	c 27	NASA-CASE-ARC-11370-1
		US-PATENT-APPL-SN-317658			US-PATENT-CLASS-244-161			US-PATENT-APPL-SN-491125
		US-PATENT-CLASS-372-55			US-PATENT-CLASS-403-322			US-PATENT-CLASS-525-389
		US-PATENT-CLASS-372-79			US-PATENT-4,431,333			US-PATENT-CLASS-528-394
		US-PATENT-4,424,592	N84-22609* #	c 18	NASA-CASE-MFS-15429-1			US-PATENT-CLASS-528-399
N84-16560*	c 37	NASA-CASE-MFS-25510-1			US-PATENT-APPL-SN-596959			US-PATENT-CLASS-528-6
		US-PATENT-APPL-SN-293414	N84-22610* #	c 18	NASA-CASE-MSC-20543-1			US-PATENT-CLASS-528-7
		US-PATENT-CLASS-248-228			US-PATENT-APPL-SN-580574			US-PATENT-CLASS-528-7
		US-PATENT-4,422,609	N84-22612* #	c 18	NASA-CASE-ARC-11505-1			US-PATENT-CLASS-568-4
N84-16561*	c 37	NASA-CASE-LAR-12785-1			US-PATENT-APPL-SN-588036			US-PATENT-CLASS-568-5
		US-PATENT-APPL-SN-297488	N84-22695*	c 24	NASA-CASE-LEW-13837-1	N84-22820*	c 32	US-PATENT-4,444,972
		US-PATENT-CLASS-239-568			US-PATENT-APPL-SN-495381			NASA-CASE-MSC-18675-1
		US-PATENT-CLASS-241-95			US-PATENT-CLASS-204-192C			US-PATENT-APPL-SN-266687
		US-PATENT-CLASS-406-155			US-PATENT-CLASS-204-192R			US-PATENT-CLASS-343-17.5
		US-PATENT-4,428,703			US-PATENT-CLASS-204-192SP			US-PATENT-CLASS-343-9R
N84-16803*	c 54	NASA-CASE-MSC-20202-1			US-PATENT-CLASS-423-DIG.10	N84-22884*	c 33	US-PATENT-4,439,766
		US-PATENT-APPL-SN-414106			US-PATENT-CLASS-423-414			NASA-CASE-MFS-256704-1
		US-PATENT-CLASS-128-1A			US-PATENT-CLASS-423-445			US-PATENT-APPL-SN-409679
		US-PATENT-CLASS-128-15R			US-PATENT-CLASS-423-446			US-PATENT-CLASS-204-192EC
		US-PATENT-CLASS-128-38			US-PATENT-CLASS-423-449			US-PATENT-4,437,961
		US-PATENT-4,421,109	N84-22709*	c 25	NASA-CASE-NPO-15210-1	N84-22885*	c 33	NASA-CASE-MFS-25535-2
N84-16940*	c 71	NASA-CASE-NPO-15592-1			US-PATENT-APPL-SN-322312			US-PATENT-APPL-SN-476244
		US-PATENT-APPL-SN-314702			US-PATENT-CLASS-208-10			US-PATENT-CLASS-318-438
		US-PATENT-CLASS-118-300			US-PATENT-CLASS-208-8LE			US-PATENT-CLASS-318-729
		US-PATENT-CLASS-118-50.1			US-PATENT-4,443,321			US-PATENT-CLASS-318-798
		US-PATENT-CLASS-118-500	N84-22734*	c 26	NASA-CASE-LEW-13349-1			US-PATENT-CLASS-318-805
		US-PATENT-CLASS-118-57			US-PATENT-APPL-SN-350476	N84-22886*	c 33	US-PATENT-CLASS-318-810
		US-PATENT-CLASS-118-62			US-PATENT-CLASS-29-623.5			US-PATENT-4,433,276
		US-PATENT-CLASS-427-346			US-PATENT-CLASS-427-115			NASA-CASE-MFS-25323-1
		US-PATENT-CLASS-427-421			US-PATENT-CLASS-427-125			US-PATENT-APPL-SN-297524
		US-PATENT-CLASS-427-426			US-PATENT-CLASS-427-126.6			US-PATENT-CLASS-318-729
		US-PATENT-CLASS-427-57			US-PATENT-CLASS-427-296	N84-22887*	c 33	US-PATENT-CLASS-318-812
		US-PATENT-CLASS-427-6			US-PATENT-CLASS-427-306			US-PATENT-4,439,718
		US-PATENT-CLASS-65-213			US-PATENT-CLASS-429-223			NASA-CASE-GSC-12567-1
		US-PATENT-4,425,376			US-PATENT-CLASS-429-234			US-PATENT-APPL-SN-373839
N84-16959* #	c 72	NASA-CASE-NPO-15547-1			US-PATENT-4,439,465			US-PATENT-CLASS-330-109
		US-PATENT-APPL-SN-276076	N84-22744*	c 27	NASA-CASE-ARC-11402-1			US-PATENT-CLASS-330-277
N84-17555*	c 35	NASA-CASE-NPO-15426-1			US-PATENT-APPL-SN-366025	N84-22903*	c 34	US-PATENT-CLASS-330-294
		US-PATENT-APPL-SN-196877			US-PATENT-CLASS-260-465.5R			US-PATENT-4,437,069
		US-PATENT-CLASS-210-748			US-PATENT-CLASS-260-465.6			NASA-CASE-NPO-15465-1
		US-PATENT-CLASS-422-121			US-PATENT-CLASS-528-362			US-PATENT-APPL-SN-284289
		US-PATENT-CLASS-422-169			US-PATENT-CLASS-528-401			US-PATENT-CLASS-126-417
		US-PATENT-CLASS-422-178			US-PATENT-CLASS-528-422			US-PATENT-CLASS-165-DIG.6
		US-PATENT-CLASS-422-186			US-PATENT-CLASS-528-423			US-PATENT-CLASS-165-135
		US-PATENT-CLASS-55-DIG.25			US-PATENT-CLASS-544-215			US-PATENT-CLASS-62-DIG.1
		US-PATENT-CLASS-55-DIG.30			US-PATENT-CLASS-564-243			US-PATENT-CLASS-62-264
		US-PATENT-CLASS-55-105			US-PATENT-4,434,106	N84-22928*	c 35	US-PATENT-CLASS-62-467R
		US-PATENT-CLASS-55-12	N84-22745*	c 27	NASA-CASE-ARC-11368-3			US-PATENT-4,423,605
		US-PATENT-CLASS-55-126			US-PATENT-APPL-SN-288267			NASA-CASE-MFS-25687-1
		US-PATENT-CLASS-55-131			US-PATENT-APPL-SN-512795			US-PATENT-APPL-SN-350474
		US-PATENT-CLASS-55-138			US-PATENT-CLASS-428-370			US-PATENT-CLASS-324-262
		US-PATENT-CLASS-55-139			US-PATENT-CLASS-428-408			US-PATENT-CLASS-73-620
		US-PATENT-CLASS-55-145			US-PATENT-CLASS-428-902			US-PATENT-CLASS-73-633
		US-PATENT-CLASS-55-2			US-PATENT-CLASS-429-920	N84-22929*	c 35	US-PATENT-CLASS-74-58
		US-PATENT-CLASS-55-270			US-PATENT-CLASS-525-417			US-PATENT-4,434,659
		US-PATENT-CLASS-55-283			US-PATENT-CLASS-526-262			NASA-CASE-MFS-25405-1
		US-PATENT-CLASS-55-291			US-PATENT-CLASS-528-228			US-PATENT-APPL-SN-274708
		US-PATENT-CLASS-55-466			US-PATENT-CLASS-528-322			US-PATENT-CLASS-356-347
		US-PATENT-CLASS-55-6			US-PATENT-CLASS-548-415			US-PATENT-4,428,675
		US-PATENT-CLASS-60-275			US-PATENT-4,395,557	N84-22930*	c 35	US-PATENT-4,428,675
		US-PATENT-CLASS-60-303	N84-22746*	c 27	NASA-CASE-LAR-12723-2			NASA-CASE-LEW-13598-1
		US-PATENT-CLASS-60-311			US-PATENT-APPL-SN-199768			US-PATENT-APPL-SN-452503
		US-PATENT-4,376,637			US-PATENT-APPL-SN-447371			US-PATENT-CLASS-101-395
N84-22546*	c 04	NASA-CASE-GSC-12508-1			US-PATENT-CLASS-525-426			US-PATENT-CLASS-156-630
		US-PATENT-APPL-SN-266253			US-PATENT-CLASS-528-183	N84-22931*	c 35	US-PATENT-CLASS-156-654
		US-PATENT-CLASS-343-356			US-PATENT-CLASS-528-220			US-PATENT-CLASS-156-905
		US-PATENT-CLASS-343-357			US-PATENT-CLASS-528-345			US-PATENT-CLASS-228-165
		US-PATENT-4,445,118			US-PATENT-CLASS-528-348			US-PATENT-4,437,923
N84-22551*	c 05	NASA-CASE-LAR-12541-1			US-PATENT-4,395,540			NASA-CASE-NPO-15398-1
		US-PATENT-APPL-SN-315588			US-PATENT-4,431,792	N84-22932*	c 35	US-PATENT-APPL-SN-259212
		US-PATENT-CLASS-244-212	N84-22747*	c 27	NASA-CASE-LAR-12931-1			US-PATENT-CLASS-356-216
								US-PATENT-CLASS-356-234
								US-PATENT-4,431,306
								NASA-CASE-LAR-12967-1
								US-PATENT-APPL-SN-414107

			US-PATENT-CLASS-310-317		US-PATENT-CLASS-350-443		US-PATENT-APPL-SN-450166
			US-PATENT-CLASS-310-334		US-PATENT-4,444,464		US-PATENT-CLASS-318-729
			US-PATENT-CLASS-310-366		NASA-CASE-LEW-140035-1		US-PATENT-CLASS-318-809
			US-PATENT-4,446,396	N84-24577*	US-PATENT-APPL-SN-136652		US-PATENT-CLASS-323-300
N84-22933*	c 35		NASA-CASE-LAR-12995-1		US-PATENT-CLASS-60-757		US-PATENT-4,459,528
			US-PATENT-APPL-SN-444150		US-PATENT-4,414,816	N84-28015*	c 35
			US-PATENT-CLASS-181-121		NASA-CASE-NPO-16030-1		NASA-CASE-WLP-10055-1
			US-PATENT-CLASS-367-189	N84-25037* #	US-PATENT-APPL-SN-582494		US-PATENT-APPL-SN-352827
			US-PATENT-CLASS-73-589		NASA-CASE-NPO-15264-1		US-PATENT-CLASS-73-862,65
			US-PATENT-CLASS-73-594	N84-27713*	US-PATENT-APPL-SN-241154		US-PATENT-4,425,808
			US-PATENT-4,445,378		US-PATENT-CLASS-343-105F	N84-28016*	c 35
N84-22934*	c 35		NASA-CASE-ARC-11361-1		US-PATENT-CLASS-364-452		NASA-CASE-NPO-15423-1
			US-PATENT-APPL-SN-373771		US-PATENT-4,396,918		US-PATENT-APPL-SN-361216
			US-PATENT-CLASS-340-870.13	N84-27733*	US-PATENT-4,396,918		US-PATENT-CLASS-250-296
			US-PATENT-CLASS-73-147		NASA-CASE-LAR-12630-1	N84-28017*	c 35
			US-PATENT-CLASS-73-721		US-PATENT-APPL-SN-383384		NASA-CASE-NPO-15706-1
			US-PATENT-CLASS-73-756		US-PATENT-CLASS-340-705		US-PATENT-APPL-SN-350475
			US-PATENT-4,442,716		US-PATENT-CLASS-340-971		US-PATENT-CLASS-310-154
N84-22943*	c 36		NASA-CASE-NPO-15516-1		US-PATENT-CLASS-340-975		US-PATENT-CLASS-310-171
			US-PATENT-APPL-SN-384126		US-PATENT-CLASS-340-978		US-PATENT-CLASS-310-68B
			US-PATENT-CLASS-372-20		US-PATENT-CLASS-340-980		US-PATENT-CLASS-335-222
			US-PATENT-CLASS-372-28		US-PATENT-CLASS-73-178R	N84-28018*	c 35
			US-PATENT-CLASS-372-32		US-PATENT-4,453,163		US-PATENT-4,443,724
			US-PATENT-4,434,490	N84-27749*	NASA-CASE-MFS-25791-1		NASA-CASE-MFS-25754-1
N84-22944*	c 36		NASA-CASE-LEW-13526-1		US-PATENT-APPL-SN-409678		US-PATENT-APPL-SN-359626
			US-PATENT-APPL-SN-358398		US-PATENT-CLASS-417-159		US-PATENT-CLASS-62-128
			US-PATENT-CLASS-118-50.1		US-PATENT-CLASS-73-117.1		US-PATENT-CLASS-73-150R
			US-PATENT-CLASS-118-624		US-PATENT-4,454,753		US-PATENT-CLASS-73-170R
			US-PATENT-CLASS-118-641	N84-27784*	NASA-CASE-MFS-25853-1		US-PATENT-CLASS-73-32R
			US-PATENT-CLASS-427-399		US-PATENT-APPL-SN-418138		US-PATENT-CLASS-73-864.41
			US-PATENT-CLASS-427-53.1		US-PATENT-CLASS-244-158R	N84-28019*	c 35
			US-PATENT-4,434,189		US-PATENT-CLASS-244-172		NASA-CASE-LAR-12743-1
N84-22957*	c 37		NASA-CASE-LEW-13269-2		US-PATENT-CLASS-244-63		US-PATENT-APPL-SN-372729
			US-PATENT-APPL-SN-242795		US-PATENT-4,452,412		US-PATENT-CLASS-374-1
			US-PATENT-CLASS-118-624	N84-27787*	NASA-CASE-MFS-25878-1		US-PATENT-CLASS-73-1B
			US-PATENT-CLASS-431448		US-PATENT-APPL-SN-431886		US-PATENT-4,426,874
			US-PATENT-CLASS-415-174		US-PATENT-CLASS-244-172	N84-28065*	c 36
			US-PATENT-CLASS-427-34		US-PATENT-CLASS-244-2		NASA-CASE-GSC-12592-1
			US-PATENT-CLASS-427-423		US-PATENT-CLASS-244-63		US-PATENT-APPL-SN-199766
			US-PATENT-CLASS-427-53.1		US-PATENT-4,451,017		US-PATENT-CLASS-372-103
			US-PATENT-CLASS-428-155	N84-27829*	NASA-CASE-LEW-13758-1		US-PATENT-CLASS-372-4
			US-PATENT-4,377,371		US-PATENT-APPL-SN-418139		US-PATENT-CLASS-372-71
			US-PATENT-4,430,360		US-PATENT-CLASS-73-833		US-PATENT-CLASS-372-93
N84-22958*	c 37		NASA-CASE-LEW-12590-1		US-PATENT-CLASS-73-856		US-PATENT-CLASS-372-95
			US-PATENT-APPL-SN-229693		US-PATENT-4,452,088	N84-28081*	c 37
			US-PATENT-CLASS-60-730	N84-27855*	NASA-CASE-LEW-13639-2		NASA-CASE-NPO-14597-2
			US-PATENT-CLASS-60-736		US-PATENT-APPL-SN-456460		US-PATENT-APPL-SN-037194
			US-PATENT-4,429,537		US-PATENT-CLASS-427-34		US-PATENT-APPL-SN-401288
N84-23012* #	c 43		NASA-CASE-NPO-15656-1		US-PATENT-CLASS-427-405		US-PATENT-CLASS-417-328
			US-PATENT-APPL-SN-569370		US-PATENT-CLASS-427-419.2		US-PATENT-CLASS-417-392
N84-23018*	c 44		NASA-CASE-NPO-15496-1		US-PATENT-CLASS-428-632		US-PATENT-CLASS-417-462
			US-PATENT-APPL-SN-379602		US-PATENT-4,451,496	N84-28082*	c 37
			US-PATENT-CLASS-290-55	N84-27884*	NASA-CASE-ARC-11405-1		US-PATENT-4,449,894
			US-PATENT-CLASS-415-DIG.8		US-PATENT-APPL-SN-415880		NASA-CASE-GSC-12550-1
			US-PATENT-CLASS-415-2R		US-PATENT-CLASS-528-271		US-PATENT-APPL-SN-238888
			US-PATENT-CLASS-60-641.12		US-PATENT-CLASS-528-310		US-PATENT-CLASS-73-468
			US-PATENT-CLASS-60-698		US-PATENT-CLASS-528-327		US-PATENT-CLASS-74-5.5
			US-PATENT-CLASS-60-716		US-PATENT-CLASS-528-331		US-PATENT-CLASS-74-573R
			US-PATENT-4,433,544		US-PATENT-CLASS-528-362		US-PATENT-4,458,554
N84-23019*	c 44		NASA-CASE-LAR-12958-1		US-PATENT-4,450,268	N84-28083*	c 37
			US-PATENT-APPL-SN-433196	N84-27885*	NASA-CASE-LEW-13770-1		NASA-CASE-GSC-12762-1
			US-PATENT-CLASS-104-DIG.4		US-PATENT-APPL-SN-404809		US-PATENT-APPL-SN-364094
			US-PATENT-CLASS-204-DIG.3		US-PATENT-CLASS-526-262		US-PATENT-CLASS-269-224
			US-PATENT-CLASS-204-129		US-PATENT-CLASS-528-322		US-PATENT-CLASS-269-242
			US-PATENT-CLASS-204-278		US-PATENT-CLASS-528-342		US-PATENT-CLASS-269-244
			US-PATENT-CLASS-204-280		US-PATENT-4,455,418	N84-28084*	c 37
			US-PATENT-CLASS-423-303		NASA-CASE-LAR-12862-1		NASA-CASE-LAR-12644-1
			US-PATENT-CLASS-429-111	N84-27886*	US-PATENT-APPL-SN-435511		US-PATENT-APPL-SN-387728
			US-PATENT-4,439,301		US-PATENT-CLASS-220-306		US-PATENT-CLASS-74-753
N84-23095*	c 52		NASA-CASE-LEW-13107-2		US-PATENT-CLASS-244-117A		US-PATENT-CLASS-74-758
			US-PATENT-APPL-SN-444124		US-PATENT-CLASS-244-158A		US-PATENT-CLASS-74-812
			US-PATENT-CLASS-156-643		US-PATENT-4,456,208	N84-28085*	c 37
			US-PATENT-CLASS-156-644		NASA-CASE-NPO-15024-1		NASA-CASE-LAR-12786-1
			US-PATENT-CLASS-156-668	N84-27951*	US-PATENT-APPL-SN-284287		US-PATENT-APPL-SN-309292
			US-PATENT-CLASS-204-192E		US-PATENT-CLASS-343-17.7		US-PATENT-CLASS-30-180
			US-PATENT-4,432,853		US-PATENT-CLASS-434-2		US-PATENT-CLASS-30-188
N84-23113*	c 54		NASA-CASE-MSC-20261-2		US-PATENT-4,450,447		US-PATENT-CLASS-30-228
			US-PATENT-APPL-SN-393581		NASA-CASE-MS-16170-2		US-PATENT-CLASS-30-249
			US-PATENT-CLASS-2-161R	N84-27952*	US-PATENT-APPL-SN-147695		US-PATENT-CLASS-30-272R
			US-PATENT-CLASS-2-167		US-PATENT-APPL-SN-737975		US-PATENT-4,458,418
			US-PATENT-4,433,439		US-PATENT-CLASS-329-124	N84-28203*	c 44
N84-23233*	c 71		NASA-CASE-NPO-15689-1		US-PATENT-CLASS-375-120		NASA-CASE-NPO-15388-1
			US-PATENT-APPL-SN-358089		US-PATENT-CLASS-375-77		US-PATENT-APPL-SN-284286
			US-PATENT-CLASS-310-300		US-PATENT-CLASS-375-81		US-PATENT-CLASS-126-419
			US-PATENT-CLASS-318-116		US-PATENT-CLASS-455-202		US-PATENT-CLASS-126-438
			US-PATENT-CLASS-60-721		US-PATENT-CLASS-455-208		US-PATENT-CLASS-126-451
			US-PATENT-CLASS-73-505		US-PATENT-CLASS-455-260		US-PATENT-4,433,672
			US-PATENT-4,420,977		US-PATENT-CLASS-455-265	N84-28204*	c 44
N84-23247*	c 74		NASA-CASE-NPO-15345-1		US-PATENT-4,455,680		NASA-CASE-NPO-15662-1
			US-PATENT-APPL-SN-276749		NASA-CASE-LEW-13736-1		US-PATENT-APPL-SN-392103
			US-PATENT-CLASS-358-125	N84-27974*	US-PATENT-APPL-SN-434084		US-PATENT-CLASS-126-418
			US-PATENT-CLASS-358-213		US-PATENT-CLASS-315-3.6		US-PATENT-CLASS-126-438
			US-PATENT-4,430,673		US-PATENT-CLASS-315-39.3		US-PATENT-CLASS-126-451
N84-23248*	c 74		NASA-CASE-GSC-12756-1		US-PATENT-CLASS-331-82		US-PATENT-4,433,672
			US-PATENT-APPL-SN-378535		US-PATENT-CLASS-333-162		NASA-CASE-NPO-15662-1
			US-PATENT-CLASS-350-172		US-PATENT-4,459,562		US-PATENT-APPL-SN-392103
			US-PATENT-CLASS-350-173	N84-27975*	NASA-CASE-MFS-25854-1		US-PATENT-CLASS-126-418
							US-PATENT-CLASS-204-290
							US-PATENT-CLASS-29-623.5
							US-PATENT-CLASS-29-825
							US-PATENT-CLASS-427-113
							US-PATENT-CLASS-427-115





		US-PATENT-APPL-SN-301078		US-PATENT-CLASS-251-265	N85-21349*	c 27	NAS 1.71:LAR-12775-2
		US-PATENT-APPL-SN-5226628		US-PATENT-CLASS-251-267			NASA-CASE-LAR-12775-2
		US-PATENT-CLASS-244-214		US-PATENT-CLASS-251-284			US-PATENT-APPL-SN-308201
		US-PATENT-CLASS-244-90R		US-PATENT-CLASS-251-297			US-PATENT-APPL-SN-461788
		US-PATENT-4,485,992		US-PATENT-CLASS-74-424.8B			US-PATENT-CLASS-525-181
N85-19990*	c 09	NAS 1.71:KSC-11218-1		US-PATENT-CLASS-74-424.8VA			US-PATENT-CLASS-525-182
		NASA-CASE-KSC-11218-1		US-PATENT-4,483,512			US-PATENT-CLASS-525-183
		US-PATENT-APPL-SN-387649	N85-20530*	NAS 1.71:LEW-13414-1	c 44		US-PATENT-CLASS-525-184
		US-PATENT-CLASS-434-242		NASA-CASE-LEW-13414-1			US-PATENT-CLASS-525-474
		US-PATENT-CLASS-434-243		US-PATENT-APPL-SN-465364			US-PATENT-4,389,504
		US-PATENT-CLASS-434-35		US-PATENT-CLASS-136-256			US-PATENT-4,497,935
		US-PATENT-CLASS-434-49		US-PATENT-CLASS-427-85	N85-21350*	c 27	NAS 1.71:LEW-13770-3
		US-PATENT-4,490,117		US-PATENT-4,478,879			NASA-CASE-LEW-13770-3
N85-20123*	c 27	NAS 1.71:LAR-12723-1	N85-21147*	NAS 1.71:LAR-12979-1	c 05		US-PATENT-APPL-SN-516217
		NASA-CASE-LAR-12723-1		NASA-CASE-LAR-12979-1			US-PATENT-APPL-SN-561431
		US-PATENT-APPL-SN-199768		US-PATENT-APPL-SN-508371			US-PATENT-CLASS-526-217
		US-PATENT-CLASS-525-420		US-PATENT-CLASS-244-139			US-PATENT-CLASS-526-262
		US-PATENT-CLASS-528-183		US-PATENT-CLASS-244-147			US-PATENT-CLASS-528-229
		US-PATENT-CLASS-528-192		US-PATENT-CLASS-244-75R			US-PATENT-CLASS-528-315
		US-PATENT-CLASS-528-220		US-PATENT-4,496,122			US-PATENT-CLASS-528-322
		US-PATENT-CLASS-528-336	N85-21178*	NAS 1.71:LAR-13014-1	c 09		US-PATENT-CLASS-528-336
		US-PATENT-CLASS-528-345		NASA-CASE-LAR-13014-1			US-PATENT-CLASS-528-342
		US-PATENT-4,395,540		US-PATENT-APPL-SN-527918			US-PATENT-4,497,948
N85-20124*	c 27	NAS 1.71:LAR-12858-2		US-PATENT-CLASS-73-147			NAS 1.71:LEW-13770-4
		NASA-CASE-LAR-12858-2		US-PATENT-4,493,211	N85-21351*	c 27	NASA-CASE-LEW-13770-4
		US-PATENT-APPL-SN-407240		NAS 1.71:LEW-13881-1			US-PATENT-APPL-SN-516217
		US-PATENT-APPL-SN-492282	N85-21256*	NASA-CASE-LEW-13881-1	c 20		US-PATENT-APPL-SN-561429
		US-PATENT-CLASS-264-DIG.65		US-PATENT-APPL-SN-473498			US-PATENT-CLASS-526-262
		US-PATENT-CLASS-264-112		US-PATENT-CLASS-60-202			US-PATENT-CLASS-528-229
		US-PATENT-CLASS-264-120		US-PATENT-4,466,242			US-PATENT-CLASS-528-322
		US-PATENT-CLASS-264-137	N85-21266*	NAS 1.71:LEW-13324-2	c 24		US-PATENT-CLASS-528-342
		US-PATENT-CLASS-264-152		NASA-CASE-LEW-13324-2			US-PATENT-4,497,939
		US-PATENT-CLASS-264-258		US-PATENT-APPL-SN-375784			NAS 1.71:LEW-13770-5
		US-PATENT-CLASS-264-331.12		US-PATENT-APPL-SN-523297	N85-21352*	c 27	NASA-CASE-LEW-13770-5
		US-PATENT-CLASS-264-331.19		US-PATENT-CLASS-428-633			US-PATENT-APPL-SN-516217
		US-PATENT-CLASS-528-226		US-PATENT-CLASS-428-656			US-PATENT-APPL-SN-561435
		US-PATENT-CLASS-528-239		US-PATENT-CLASS-428-678			US-PATENT-CLASS-526-262
		US-PATENT-CLASS-528-241		US-PATENT-CLASS-428-679			US-PATENT-CLASS-528-229
		US-PATENT-CLASS-528-258		US-PATENT-CLASS-428-680			US-PATENT-CLASS-528-322
		US-PATENT-CLASS-528-279		US-PATENT-CLASS-428-681			US-PATENT-CLASS-528-342
		US-PATENT-4,398,021		US-PATENT-CLASS-428-682			US-PATENT-4,497,940
N85-20125*	c 27	US-PATENT-4,489,027		US-PATENT-CLASS-428-683			NAS 1.71:GSC-12799-1
		NAS 1.71:LAR-12894-1		US-PATENT-CLASS-428-684	N85-21404*	c 31	NASA-CASE-GSC-12799-1
		NASA-CASE-LAR-12894-1		US-PATENT-4,485,151			US-PATENT-APPL-SN-461724
		US-PATENT-APPL-SN-516087	N85-21267*	NAS 1.71:LEW-13837-2	c 24		US-PATENT-CLASS-31-35
		US-PATENT-CLASS-156-273.7		NASA-CASE-LEW-13837-2			US-PATENT-CLASS-310-22
		US-PATENT-CLASS-24-304		US-PATENT-APPL-SN-495381			US-PATENT-CLASS-417-417
		US-PATENT-CLASS-24-447		US-PATENT-APPL-SN-591089			US-PATENT-CLASS-417-488
		US-PATENT-CLASS-24-450		US-PATENT-CLASS-204-192C			US-PATENT-CLASS-62-6
		US-PATENT-CLASS-24-693		US-PATENT-CLASS-204-192N			US-PATENT-CLASS-92-98R
		US-PATENT-4,488,335		US-PATENT-CLASS-204-192R			US-PATENT-4,500,265
N85-20126*	c 27	NAS 1.71:MFS-25862-1		US-PATENT-CLASS-423-445	N85-21427*	c 32	NAS 1.71:MSC-18578-1
		NASA-CASE-MFS-25862-1		US-PATENT-CLASS-423-446			NASA-CASE-MSC-18578-1
		US-PATENT-APPL-SN-465366		US-PATENT-CLASS-423-449			US-PATENT-APPL-SN-367132
		US-PATENT-CLASS-73-579		US-PATENT-CLASS-423-449			US-PATENT-CLASS-358-161
		US-PATENT-CLASS-73-582		US-PATENT-CLASS-427-39			US-PATENT-CLASS-358-174
		US-PATENT-CLASS-73-588		US-PATENT-4,437,962			US-PATENT-CLASS-358-217
		US-PATENT-4,479,386	N85-21279*	US-PATENT-4,495,044	c 25		US-PATENT-CLASS-358-219
N85-20153*	c 31	NAS 1.71:LEW-14080-1		NAS 1.71:GSC-12808-1			US-PATENT-4,495,520
		NASA-CASE-LEW-14080-1		NASA-CASE-GSC-12808-1			NAS 1.71:NPO-15433-1
		US-PATENT-APPL-SN-628866		US-PATENT-APPL-SN-462497	N85-21428*	c 32	NASA-CASE-NPO-15433-1
		US-PATENT-CLASS-204-192C		US-PATENT-CLASS-376-159			US-PATENT-APPL-SN-250585
		US-PATENT-CLASS-204-192R		US-PATENT-4,483,817			US-PATENT-CLASS-364-200
		US-PATENT-CLASS-204-192SP	N85-21280*	NAS 1.71:MFS-25721-1	c 25		US-PATENT-4,493,021
		US-PATENT-CLASS-423-DIG.10		NASA-CASE-MFS-25721-1			NAS 1.71:NPO-15560-1
		US-PATENT-CLASS-423-414		US-PATENT-APPL-SN-492964			NASA-CASE-NPO-15560-1
		US-PATENT-CLASS-423-445		US-PATENT-CLASS-556-410	N85-21491*	c 33	US-PATENT-APPL-SN-275909
		US-PATENT-CLASS-423-446		US-PATENT-4,474,975			US-PATENT-CLASS-250-426
		US-PATENT-CLASS-423-449	N85-21347*	NAS 1.71:ARC-11368-2	c 27		US-PATENT-CLASS-313-131A
		US-PATENT-4,490,229		NASA-CASE-ARC-11368-2			US-PATENT-CLASS-315-111.31
N85-20294*	c 35	NAS 1.71:GSC-12789-1		US-PATENT-APPL-SN-175452			US-PATENT-CLASS-315-111.81
		NASA-CASE-GSC-12789-1		US-PATENT-APPL-SN-288267			US-PATENT-4,475,063
		US-PATENT-APPL-SN-409680		US-PATENT-APPL-SN-502820	N85-21492*	c 33	NAS 1.71:LEW-13833-1
		US-PATENT-CLASS-177-147		US-PATENT-CLASS-526-262			NASA-CASE-LEW-13833-1
		US-PATENT-CLASS-177-260		US-PATENT-CLASS-526-274			US-PATENT-APPL-SN-486471
		US-PATENT-CLASS-73-862.54		US-PATENT-CLASS-528-167			US-PATENT-CLASS-136-255
		US-PATENT-4,479,560		US-PATENT-CLASS-528-168			US-PATENT-CLASS-357-12
N85-20295*	c 35	NAS 1.71:LAR-13065-1		US-PATENT-CLASS-528-170			US-PATENT-CLASS-357-30
		NASA-CASE-LAR-13065-1		US-PATENT-CLASS-528-321			US-PATENT-4,482,779
		US-PATENT-APPL-SN-484745		US-PATENT-CLASS-528-322	N85-21493*	c 33	NAS 1.71:NPO-15920-1
		US-PATENT-CLASS-73-187		US-PATENT-4,276,344			NASA-CASE-NPO-15920-1
		US-PATENT-4,485,671	N85-21348*	US-PATENT-4,395,557	c 27		US-PATENT-APPL-SN-403848
N85-20300* #	c 35	NAS 1.71:MFS-28008-1		US-PATENT-4,486,701			US-PATENT-CLASS-343-17.7
		NASA-CASE-MFS-28008-1		NASA-CASE-ARC-11413-1			US-PATENT-CLASS-343-376
		US-PATENT-APPL-SN-684194		US-PATENT-CLASS-528-125			US-PATENT-4,488,155
N85-20337*	c 37	NAS 1.71:GSC-12582-2		US-PATENT-CLASS-528-126	N85-21568*	c 34	NAS 1.71:LAR-12588-1
		NASA-CASE-GSC-12582-2		US-PATENT-CLASS-528-128			NASA-CASE-LAR-12588-1
		US-PATENT-APPL-SN-220213		US-PATENT-CLASS-528-166			US-PATENT-APPL-SN-234222
		US-PATENT-APPL-SN-415960		US-PATENT-CLASS-528-185			US-PATENT-CLASS-165-104.26
		US-PATENT-CLASS-104-281		US-PATENT-CLASS-528-186			US-PATENT-CLASS-73-179
		US-PATENT-CLASS-104-284		US-PATENT-CLASS-528-187			US-PATENT-CLASS-73-708
		US-PATENT-CLASS-308-10		US-PATENT-CLASS-528-226			US-PATENT-4,485,670
		US-PATENT-4,473,259		US-PATENT-CLASS-528-229	N85-21595*	c 35	NAS 1.71:MSC-20275-1
N85-20338*	c 37	NAS 1.71:MSC-20112-1		US-PATENT-CLASS-528-352			NASA-CASE-MSC-20275-1
		NASA-CASE-MSC-20112-1		US-PATENT-CLASS-528-353			US-PATENT-APPL-SN-425205
		US-PATENT-APPL-SN-392104		US-PATENT-4,499,260			US-PATENT-CLASS-222-309

				US-PATENT-CLASS-222-340					US-PATENT-CLASS-343-5W					US-PATENT-CLASS-358-109
				US-PATENT-CLASS-222-43					US-PATENT-4,463,357					US-PATENT-CLASS-358-133
				US-PATENT-CLASS-222-48	N85-21992*	c 60			NAS 1.71:NPO-15295-1	N85-29118*	c 32			US-PATENT-4,513,317
				US-PATENT-4,488,663				NASA-CASE-NPO-15295-1						NASA-CASE-NPO-15743-1
N85-21596*	c 35			NAS 1.71:NPO-15759-1				US-PATENT-APPL-SN-291645						US-PATENT-APPL-SN-448881
				NASA-CASE-NPO-15759-1				US-PATENT-CLASS-364-200						US-PATENT-CLASS-343-876
				US-PATENT-APPL-SN-367136				US-PATENT-4,481,570						US-PATENT-CLASS-455-73
				US-PATENT-CLASS-324-427	N85-22104*	c 71			NAS 1.71:NPO-15466-1	N85-29142*	c 33			US-PATENT-4,503,436
				US-PATENT-CLASS-429-58				NASA-CASE-NPO-15466-1						NASA-CASE-NPO-15553-1
				US-PATENT-4,499,424				US-PATENT-APPL-SN-361217						US-PATENT-APPL-SN-437912
N85-21597*	c 35			NAS 1.71:NPO-16027-1				US-PATENT-CLASS-23-313R						US-PATENT-CLASS-156-DIG.62
				NASA-CASE-NPO-16027-1				US-PATENT-CLASS-55-15						US-PATENT-CLASS-364-400
				US-PATENT-APPL-SN-500044				US-PATENT-CLASS-55-277						US-PATENT-CLASS-364-453
				US-PATENT-CLASS-73-40.5A				US-PATENT-4,475,921						US-PATENT-CLASS-74-5.6D
				US-PATENT-CLASS-73-753	N85-22105*	c 71			NAS 1.71:NPO-16022-1					US-PATENT-4,521,854
				US-PATENT-4,498,333				NASA-CASE-NPO-16022-1						NASA-CASE-NPO-15890-1-CU
N85-21598*	c 35			NAS 1.71:WLP-10055-2				US-PATENT-APPL-SN-526750						US-PATENT-APPL-SN-556513
				NASA-CASE-WLP-10055-2				US-PATENT-CLASS-73-505						US-PATENT-CLASS-331-3
				US-PATENT-APPL-SN-352827				US-PATENT-4,483,606						US-PATENT-CLASS-331-31
				US-PATENT-APPL-SN-526770	N85-22139*	c 74			NAS 1.71:NPO-15155-1					US-PATENT-CLASS-331-36C
				US-PATENT-CLASS-29-610SG				NASA-CASE-NPO-15155-1						US-PATENT-CLASS-331-94.1
				US-PATENT-4,425,808				US-PATENT-APPL-SN-242797						US-PATENT-CLASS-331-96
				US-PATENT-4,498,231				US-PATENT-CLASS-250-221						US-PATENT-CLASS-333-231
N85-21631*	c 36			NAS 1.71:NPO-15790-1				US-PATENT-CLASS-340-555						US-PATENT-4,517,530
				NASA-CASE-NPO-15790-1				US-PATENT-4,479,053						NASA-CASE-LEW-13102-1
				US-PATENT-APPL-SN-423016	N85-22877*	c 33			NAS 1.71:MFS-25861-1	N85-29144*	c 33			US-PATENT-APPL-SN-282298
				US-PATENT-CLASS-250-339				NASA-CASE-MFS-25861-1						US-PATENT-CLASS-429-206
				US-PATENT-CLASS-250-343				US-PATENT-APPL-SN-504345						US-PATENT-CLASS-429-249
				US-PATENT-4,489,239				US-PATENT-CLASS-318-729						US-PATENT-4,505,998
N85-21639*	c 36			NAS 1.71:GSC-12558-1				US-PATENT-CLASS-318-812						NASA-CASE-GSC-12788-1
				NASA-CASE-GSC-12558-1				US-PATENT-4,489,264						US-PATENT-APPL-SN-434085
				US-PATENT-APPL-SN-383086				NAS 1.71:NPO-15801-1						US-PATENT-CLASS-307-271
				US-PATENT-CLASS-356-43	N85-23396*	c 74			NASA-CASE-NPO-15801-1					US-PATENT-CLASS-307-520
				US-PATENT-CLASS-356-45				US-PATENT-APPL-SN-478130						US-PATENT-CLASS-307-521
				US-PATENT-CLASS-374-137				US-PATENT-CLASS-350-168						US-PATENT-CLASS-307-529
				US-PATENT-CLASS-73-705				US-PATENT-CLASS-350-505						US-PATENT-CLASS-328-167
				US-PATENT-4,493,553				US-PATENT-CLASS-350-619						US-PATENT-CLASS-330-302
N85-21649*	c 37			NAS 1.71:MSC-20319-1				US-PATENT-CLASS-356-323						US-PATENT-CLASS-330-306
				NASA-CASE-MSC-20319-1				US-PATENT-CLASS-356-330						US-PATENT-4,521,702
				US-PATENT-APPL-SN-393582				US-PATENT-CLASS-356-331						NASA-CASE-GSC-12817-1
				US-PATENT-CLASS-292-252				US-PATENT-4,497,540						US-PATENT-APPL-SN-506477
				US-PATENT-CLASS-403-317	N85-25436* #	c 24			NAS 1.15:76884					US-PATENT-CLASS-336-198
				US-PATENT-CLASS-81-177G				NASA-TM-76884						US-PATENT-CLASS-336-84C
				US-PATENT-4,483,639										US-PATENT-4,510,476
N85-21650*	c 37			NAS 1.71:NPO-15483-1	N85-28973*	c 23			NASA-CASE-LAR-13262-1					NASA-CASE-GSC-12818-1
				NASA-CASE-NPO-15483-1				US-PATENT-APPL-SN-608741						US-PATENT-APPL-SN-511362
				US-PATENT-APPL-SN-387648				US-PATENT-CLASS-525-532						US-PATENT-CLASS-307-82
				US-PATENT-CLASS-125-13R				US-PATENT-CLASS-525-534						US-PATENT-CLASS-363-100
				US-PATENT-CLASS-125-15				US-PATENT-CLASS-528-86						US-PATENT-CLASS-363-109
				US-PATENT-CLASS-51-73R				US-PATENT-4,510,296						US-PATENT-CLASS-363-123
				US-PATENT-CLASS-82-90	N85-28982*	c 25			NASA-CASE-LEW-13770-2					US-PATENT-CLASS-363-61
				US-PATENT-CLASS-83-664				US-PATENT-APPL-SN-404809						US-PATENT-CLASS-363-71
				US-PATENT-CLASS-83-676				US-PATENT-APPL-SN-516217						US-PATENT-CLASS-378-104
				US-PATENT-4,475,527				US-PATENT-CLASS-526-262						US-PATENT-CLASS-378-112
N85-21651*	c 37			NAS 1.71:LAR-12868-1				US-PATENT-CLASS-528-322						US-PATENT-4,517,472
				NASA-CASE-LAR-12868-1				US-PATENT-CLASS-528-342						NASA-CASE-LEW-12950-2
				US-PATENT-APPL-SN-322321				US-PATENT-4,455,418						US-PATENT-APPL-SN-202228
				US-PATENT-CLASS-374-208				US-PATENT-4,514,557						US-PATENT-APPL-SN-507626
				US-PATENT-CLASS-374-210	N85-29005*	c 26			NASA-CASE-NPO-15928-1					US-PATENT-CLASS-165-104.14
				US-PATENT-4,491,427				US-PATENT-APPL-SN-537616						US-PATENT-CLASS-165-32
N85-21652*	c 37			NAS 1.71:NPO-15851-1				US-PATENT-CLASS-204-192N						US-PATENT-CLASS-310-306
				NASA-CASE-NPO-15851-1				US-PATENT-CLASS-427-38						US-PATENT-CLASS-310-306
				US-PATENT-APPL-SN-415879				US-PATENT-CLASS-427-47						US-PATENT-4,506,183
				US-PATENT-CLASS-134-37				US-PATENT-4,522,844						NASA-CASE-MSC-20497-1
				US-PATENT-CLASS-15-406	N85-29043*	c 27			NASA-CASE-NPO-16103-1					US-PATENT-APPL-SN-615505
				US-PATENT-CLASS-422-129				US-PATENT-APPL-SN-617871						US-PATENT-CLASS-122-366
				US-PATENT-CLASS-422-199				US-PATENT-CLASS-525-26						US-PATENT-CLASS-165-1
				US-PATENT-4,500,492				US-PATENT-CLASS-525-47						US-PATENT-CLASS-165-104.26
N85-21723*	c 43			NAS 1.71:NPO-15651-1				US-PATENT-CLASS-526-328						US-PATENT-4,515,207
				NASA-CASE-NPO-15651-1				US-PATENT-CLASS-526-329.2						NAS 1.71:NPO-16494-1-CU
				US-PATENT-APPL-SN-375620				US-PATENT-CLASS-528-288						NASA-CASE-NPO-16494-1-CU
				US-PATENT-CLASS-343-352				US-PATENT-CLASS-528-289						US-PATENT-APPL-SN-739789
				US-PATENT-CLASS-374-122				US-PATENT-CLASS-528-303						NASA-CASE-NPO-15722-1
				US-PATENT-4,499,470				US-PATENT-CLASS-528-304						US-PATENT-APPL-SN-457992
N85-21768*	c 44			NAS 1.71:LEW-13827-1	N85-29044*	c 27			US-PATENT-4,523,008					US-PATENT-CLASS-204-1T
				NASA-CASE-LEW-13827-1				NASA-CASE-GSC-12883-1						US-PATENT-CLASS-204-43
				US-PATENT-APPL-SN-486470				US-PATENT-APPL-SN-604337						US-PATENT-CLASS-73-336.5
				US-PATENT-CLASS-136-225				US-PATENT-CLASS-523-135						US-PATENT-4,514,178
				US-PATENT-CLASS-136-246				US-PATENT-CLASS-524-388						NASA-CASE-MSC-18866-1
				US-PATENT-CLASS-357-30				US-PATENT-CLASS-524-567						US-PATENT-APPL-SN-350471
				US-PATENT-4,482,778				US-PATENT-4,518,722						US-PATENT-CLASS-422-103
N85-21769*	c 44			NAS 1.71:MFS-25637-1	N85-29082*	c 31			NASA-CASE-NPO-16257-1					US-PATENT-CLASS-422-86
				NASA-CASE-MFS-25637-1				US-PATENT-APPL-SN-588164						US-PATENT-CLASS-422-88
				US-PATENT-APPL-SN-375684				US-PATENT-CLASS-62-3						US-PATENT-CLASS-436-2
				US-PATENT-CLASS-290-1R				US-PATENT-4,507,928						US-PATENT-CLASS-73-40.7
				US-PATENT-CLASS-290-4R	N85-29083*	c 31			NASA-CASE-LAR-13181-1					US-PATENT-CLASS-73-863.86
				US-PATENT-CLASS-307-64				US-PATENT-APPL-SN-507623						US-PATENT-CLASS-73-864.52
				US-PATENT-CLASS-307-66				US-PATENT-CLASS-156-272.4						US-PATENT-4,515,751
				US-PATENT-CLASS-318-46				US-PATENT-CLASS-156-273.9						NASA-CASE-MSC-25707-1
				US-PATENT-CLASS-318-729				US-PATENT-CLASS-156-380.2						US-PATENT-APPL-SN-359627
				US-PATENT-4,489,243				US-PATENT-CLASS-219-10.43						US-PATENT-CLASS-126-263
N85-21846*	c 46			NAS 1.71:NPO-15430-1				US-PATENT-CLASS-219-10.49						US-PATENT-CLASS-165-48R
				NASA-CASE-NPO-15430-1				US-PATENT-CLASS-219-10.53						US-PATENT-CLASS-165-61

			US-PATENT-APPL-SN-384547				US-PATENT-CLASS-148-33.2
			US-PATENT-CLASS-250-339				US-PATENT-CLASS-156-DIG.65
			US-PATENT-CLASS-364-556				US-PATENT-CLASS-156-DIG.88
			US-PATENT-4,509,130				US-PATENT-CLASS-156-612
N85-29282*	c 37		NASA-CASE-NPO-15037-2				US-PATENT-CLASS-29-576E
			US-PATENT-APPL-SN-161257				US-PATENT-CLASS-29-576J
			US-PATENT-APPL-SN-431420				US-PATENT-CLASS-29-576W
			US-PATENT-CLASS-415-1				US-PATENT-CLASS-29-578
			US-PATENT-CLASS-415-68	N85-30187*	c 33	NASA-CASE-NPO-16021-1	US-PATENT-CLASS-357-4
			US-PATENT-4,514,137			US-PATENT-APPL-SN-402205	US-PATENT-CLASS-357-50
N85-29283*	c 37		NASA-CASE-MS-C-18852-1			US-PATENT-CLASS-324-158R	US-PATENT-4,522,661
			US-PATENT-APPL-SN-392094			US-PATENT-CLASS-324-65R	N85-30923*
			US-PATENT-CLASS-239-DIG.23			US-PATENT-4,516,071	c 76
			US-PATENT-CLASS-239-288			NASA-CASE-GSC-12851-1	NASA-CASE-LAR-12893-1
			US-PATENT-CLASS-239-322	N85-30281*	c 35	US-PATENT-APPL-SN-459842	US-PATENT-APPL-SN-364041
			US-PATENT-CLASS-239-327			US-PATENT-CLASS-250-363S	US-PATENT-CLASS-204-1T
			US-PATENT-CLASS-239-375			US-PATENT-CLASS-250-369	US-PATENT-CLASS-324-158D
			US-PATENT-CLASS-239-590			US-PATENT-4,521,688	US-PATENT-CLASS-324-71.5
			US-PATENT-CLASS-55-DIG.42	N85-30282*	c 35	NASA-CASE-LAR-12966-1	US-PATENT-4,511,838
			US-PATENT-4,519,545			US-PATENT-APPL-SN-414237	N85-33187*
N85-29284*	c 37		NASA-CASE-MS-C-20148-1			US-PATENT-CLASS-356-351	c 23
			US-PATENT-APPL-SN-636465			US-PATENT-CLASS-356-358	NASA-CASE-ARC-11243-2
			US-PATENT-CLASS-251-325			US-PATENT-CLASS-73-657	US-PATENT-APPL-SN-183707
			US-PATENT-CLASS-251-349			US-PATENT-4,512,661	US-PATENT-CLASS-549-335
			US-PATENT-CLASS-251-353	N85-30305*	c 36	NASA-CASE-NPO-15980-1	US-PATENT-4,528,386
			US-PATENT-CLASS-277-135			US-PATENT-APPL-SN-385220	N85-33433*
			US-PATENT-CLASS-277-80			US-PATENT-CLASS-357-17	c 34
			US-PATENT-4,523,741			US-PATENT-CLASS-357-40	NASA-CASE-LEW-14039-1
N85-29285*	c 37		NASA-CASE-LAR-13009-1			US-PATENT-CLASS-357-46	US-PATENT-APPL-SN-580419
			US-PATENT-APPL-SN-495380			US-PATENT-CLASS-372-38	US-PATENT-CLASS-415-115
			US-PATENT-CLASS-403-28			US-PATENT-CLASS-372-46	US-PATENT-CLASS-416-97A
			US-PATENT-CLASS-403-408			US-PATENT-CLASS-372-50	US-PATENT-4,529,358
			US-PATENT-CLASS-411-368			US-PATENT-4,513,423	N85-33489*
			US-PATENT-CLASS-411-378	N85-30333*	c 37	NASA-CASE-LEW-13717-1	c 37
			US-PATENT-CLASS-411-426			US-PATENT-APPL-SN-463456	NASA-CASE-LEW-13506-1
			US-PATENT-CLASS-411-501			US-PATENT-CLASS-310-77	US-PATENT-APPL-SN-596960
			US-PATENT-CLASS-411-531			US-PATENT-CLASS-310-93	US-PATENT-CLASS-384-101
			US-PATENT-4,512,699			US-PATENT-CLASS-318-611	US-PATENT-CLASS-384-99
N85-29286*	c 37		NASA-CASE-LAR-13040-1			US-PATENT-CLASS-335-100	US-PATENT-4,527,910
			US-PATENT-APPL-SN-547176			US-PATENT-4,517,505	NASA-CASE-MFS-25319-1
			US-PATENT-CLASS-219-201	N85-30334*	c 37	NASA-CASE-MS-C-20080-1	US-PATENT-APPL-SN-437917
			US-PATENT-CLASS-219-221			US-PATENT-APPL-SN-393584	US-PATENT-CLASS-364-723
			US-PATENT-CLASS-219-285			US-PATENT-CLASS-403-15	US-PATENT-CLASS-364-853
			US-PATENT-CLASS-414-217			US-PATENT-CLASS-403-16	US-PATENT-4,528,639
			US-PATENT-CLASS-73-863.11			US-PATENT-CLASS-403-322	N85-33826*
			US-PATENT-CLASS-73-864.81			US-PATENT-CLASS-89-1.57	c 76
			US-PATENT-4,516,435			US-PATENT-CLASS-89-1.57	NASA-CASE-MS-C-20036-1
N85-29693*	c 71		NASA-CASE-NPO-16147-1-CU	N85-30335*	c 37	NASA-CASE-LAR-12738-2	US-PATENT-APPL-SN-569372
			US-PATENT-APPL-SN-559988			US-PATENT-APPL-SN-539230	US-PATENT-CLASS-204-192C
			US-PATENT-CLASS-73-505			US-PATENT-CLASS-244-158-A	US-PATENT-CLASS-204-192P
			US-PATENT-4,520,856			US-PATENT-CLASS-411-103	US-PATENT-CLASS-350-342
N85-29749*	c 74		NASA-CASE-NPO-15464-1			US-PATENT-CLASS-411-108	US-PATENT-CLASS-428-432
			US-PATENT-APPL-SN-342828			US-PATENT-CLASS-52-127.7	US-PATENT-CLASS-428-698
			US-PATENT-CLASS-156-166			US-PATENT-CLASS-52-506	US-PATENT-CLASS-428-913
			US-PATENT-CLASS-350-320			US-PATENT-CLASS-52-745	US-PATENT-4,522,469
			US-PATENT-CLASS-350-96.15			US-PATENT-4,520,601	N85-34280*
			US-PATENT-4,523,810	N85-30336*	c 37	NASA-CASE-LAR-12864-1	c 27
N85-29750*	c 74		NASA-CASE-MS-C-18417-1			US-PATENT-APPL-SN-387646	NASA-CASE-ARC-11522-2
			US-PATENT-APPL-SN-523559			US-PATENT-CLASS-403-102	US-PATENT-APPL-SN-641143
			US-PATENT-CLASS-350-312			US-PATENT-CLASS-403-322	US-PATENT-CLASS-528-168
			US-PATENT-CLASS-350-319			US-PATENT-CLASS-403-348	US-PATENT-CLASS-528-229
			US-PATENT-CLASS-350-321			US-PATENT-4,518,277	US-PATENT-CLASS-528-352
			US-PATENT-CLASS-52-171	N85-30474*	c 44	NASA-CASE-NPO-15419-2	US-PATENT-CLASS-528-353
			US-PATENT-4,521,077			US-PATENT-APPL-SN-259208	US-PATENT-4,536,565
N85-29800*	c 76		NASA-CASE-NPO-15772-1			US-PATENT-APPL-SN-542557	N85-34281*
			US-PATENT-APPL-SN-392944			US-PATENT-CLASS-126-DIG.1	c 27
			US-PATENT-CLASS-156-623Q			US-PATENT-CLASS-126-400	NASA-CASE-ARC-11424-1
			US-PATENT-CLASS-23-295R			US-PATENT-CLASS-126-415	US-PATENT-APPL-SN-598777
			US-PATENT-4,512,846			US-PATENT-CLASS-126-419	US-PATENT-CLASS-428-260
N85-29947*	c 05		NASA-CASE-ARC-11444-1			US-PATENT-CLASS-126-900	US-PATENT-CLASS-428-408
			US-PATENT-APPL-SN-489675			US-PATENT-4,512,332	US-PATENT-CLASS-428-413
			US-PATENT-CLASS-416-145			NASA-CASE-NPO-16155-1	US-PATENT-CLASS-525-107
			US-PATENT-CLASS-416-23	N85-30475*	c 44	US-PATENT-APPL-SN-578390	US-PATENT-CLASS-525-113
			US-PATENT-CLASS-416-500			US-PATENT-CLASS-136-255	US-PATENT-CLASS-525-119
			US-PATENT-4,514,143			US-PATENT-CLASS-136-256	US-PATENT-CLASS-525-186
N85-29991*	c 18		NASA-CASE-MFS-25837-1			US-PATENT-CLASS-136-261	US-PATENT-CLASS-525-229
			US-PATENT-APPL-SN-401282			US-PATENT-CLASS-357-30	US-PATENT-CLASS-528-113
			US-PATENT-CLASS-244-118.1			US-PATENT-4,524,237	US-PATENT-CLASS-528-117
			US-PATENT-CLASS-244-158R	N85-30618*	c 52	NASA-CASE-LAR-13028-1	US-PATENT-CLASS-528-407
			US-PATENT-CLASS-248-503			US-PATENT-APPL-SN-582492	US-PATENT-CLASS-528-407
			US-PATENT-CLASS-248-555			US-PATENT-CLASS-128-660	US-PATENT-CLASS-528-92
			US-PATENT-CLASS-403-143			US-PATENT-CLASS-128-736	US-PATENT-4,510,277
			US-PATENT-CLASS-403-56			US-PATENT-CLASS-374-117	N85-34327*
			US-PATENT-CLASS-403-76			US-PATENT-CLASS-374-160	c 32
			US-PATENT-CLASS-403-90			US-PATENT-4,513,750	NASA-CASE-NPO-15704-1
			US-PATENT-CLASS-410-79			NASA-CASE-NPO-15559-1	US-PATENT-APPL-SN-359382
			US-PATENT-CLASS-410-90	N85-30765*	c 71	US-PATENT-APPL-SN-379601	US-PATENT-CLASS-343-17.2-PC
			US-PATENT-4,508,296			US-PATENT-CLASS-181-0.5	US-PATENT-CLASS-343-5-CM
N85-30027*	c 24		NASA-CASE-LEW-13828-1			US-PATENT-CLASS-209-422	US-PATENT-CLASS-343-5-W
			US-PATENT-APPL-SN-560035			US-PATENT-CLASS-209-638	US-PATENT-4,509,048
			US-PATENT-CLASS-219-76.14			US-PATENT-4,523,682	N85-34333*
			US-PATENT-CLASS-427-178			NASA-CASE-NPO-15813-1	c 33
			US-PATENT-CLASS-427-37	N85-30922*	c 76	US-PATENT-APPL-SN-507624	NASA-CASE-NPO-15696-1
			US-PATENT-CLASS-427-422			US-PATENT-CLASS-148-DIG.26	US-PATENT-APPL-SN-387647
			US-PATENT-4,518,625			US-PATENT-CLASS-148-174	US-PATENT-CLASS-364-571
N85-30039*	c 25		NASA-CASE-LEW-13770-6			US-PATENT-CLASS-148-175	US-PATENT-CLASS-364-578
							US-PATENT-CLASS-372-32
							US-PATENT-4,509,132
							N85-34373*
							c 35
							NAS 1.71:NPO-15493-2
							NAS 1.71:NPO-15494-2

		US-PATENT-APPL-SN-563890			US-PATENT-APPL-SN-633179			US-PATENT-CLASS-357-59
		US-PATENT-CLASS-324-65-P			US-PATENT-CLASS-73-3			US-PATENT-4,531,143
		US-PATENT-CLASS-73-75			US-PATENT-CLASS-73-861.07	N86-19580*	c 35	NASA-CASE-GSC-12795-1
N85-34374*	c 35	US-PATENT-4,532,797	N86-19304*	c 04	US-PATENT-4,538,446			US-PATENT-APPL-SN-462508
		NASA-CASE-ARC-11503-1			NASA-CASE-KSC-11155-1			US-PATENT-CLASS-374-115
		US-PATENT-APPL-SN-582643			US-PATENT-APPL-SN-425201			US-PATENT-CLASS-374-120
		US-PATENT-CLASS-250-374			US-PATENT-CLASS-343-6.8-R			US-PATENT-CLASS-374-163
		US-PATENT-CLASS-250-379			US-PATENT-4,540,986			US-PATENT-4,556,327
N85-34375*	c 35	US-PATENT-4,538,066	N86-19310*	c 05	NASA-CASE-LAR-13155-1	N86-19581*	c 35	NASA-CASE-MS-20250-1
		NASA-CASE-LAR-13243-1			US-PATENT-APPL-SN-469371			US-PATENT-APPL-SN-491113
		US-PATENT-APPL-SN-590923			US-PATENT-CLASS-244-158-A			US-PATENT-CLASS-73-862.01
		US-PATENT-CLASS-73-831			US-PATENT-CLASS-244-158-R			US-PATENT-CLASS-73-862.54
		US-PATENT-CLASS-73-856			US-PATENT-CLASS-244-172			US-PATENT-4,557,149
N85-34401*	c 37	US-PATENT-4,535,636	N86-19376*	c 23	US-PATENT-4,557,444	N86-19603*	c 37	NASA-CASE-MFS-25949-1
		NASA-CASE-MFS-25907-1			NASA-CASE-ARC-11428-1			US-PATENT-APPL-SN-538063
		US-PATENT-APPL-SN-510137			US-PATENT-APPL-SN-499126			US-PATENT-CLASS-414-730
		US-PATENT-CLASS-244-118.1			US-PATENT-CLASS-260-927-N			US-PATENT-CLASS-901-31
		US-PATENT-CLASS-244-158R			US-PATENT-CLASS-428-410			US-PATENT-CLASS-901-50
		US-PATENT-CLASS-248-550			US-PATENT-CLASS-528-310	N86-19604*	c 37	US-PATENT-4,545,723
		US-PATENT-CLASS-267-150			US-PATENT-CLASS-548-413			NASA-CASE-NPO-15960-1
		US-PATENT-CLASS-267-8R			US-PATENT-CLASS-564-113			US-PATENT-APPL-SN-527613
		US-PATENT-CLASS-410-156			US-PATENT-4,550,177			US-PATENT-CLASS-337-140
N85-34403*	c 37	US-PATENT-4,536,114	N86-19380*	c 24	NASA-CASE-ARC-11427-1			US-PATENT-CLASS-60-527
		NASA-CASE-MS-20127-2			US-PATENT-APPL-SN-493865			US-PATENT-CLASS-60-528
		US-PATENT-APPL-SN-646044			US-PATENT-CLASS-523-433			US-PATENT-4,553,393
		US-PATENT-CLASS-137-116.3			US-PATENT-CLASS-523-445	N86-19605*	c 37	NASA-CASE-NPO-16038-1
		US-PATENT-CLASS-137-99			US-PATENT-CLASS-523-66468			US-PATENT-APPL-SN-469864
		US-PATENT-4,509,548			US-PATENT-CLASS-525-423			US-PATENT-CLASS-16-294
N85-34441*	c 44	NASA-CASE-LEW-14077-1			US-PATENT-CLASS-525-527			US-PATENT-CLASS-403-113
		US-PATENT-APPL-SN-580573			US-PATENT-CLASS-528-102			US-PATENT-CLASS-403-120
		US-PATENT-CLASS-136-253			US-PATENT-CLASS-528-103			US-PATENT-4,558,967
		US-PATENT-4,528,417			US-PATENT-4,550,129	N86-19606*	c 37	NASA-CASE-LEW-13670-1
N85-34629*	c 74	NASA-CASE-NPO-15865-1	N86-19413*	c 25	NASA-CASE-MS-20622-1			US-PATENT-APPL-SN-603374
		US-PATENT-APPL-SN-425202			US-PATENT-APPL-SN-571616			US-PATENT-CLASS-384-103
		US-PATENT-CLASS-343-13-R			US-PATENT-CLASS-374-46			US-PATENT-CLASS-384-106
		US-PATENT-CLASS-356-5			US-PATENT-CLASS-374-8			US-PATENT-4,552,466
		US-PATENT-4,533,242			US-PATENT-CLASS-422-78	N86-19711*	c 43	NASA-CASE-NPO-15939-1
N85-34722*	c 85	NASA-CASE-NPO-15949-1			US-PATENT-CLASS-436-155			US-PATENT-APPL-SN-465365
		US-PATENT-APPL-SN-457990			US-PATENT-CLASS-73-7			US-PATENT-CLASS-343-5-CD
		US-PATENT-CLASS-414-288			US-PATENT-4,561,784			US-PATENT-CLASS-343-5-CM
		US-PATENT-CLASS-414-328	N86-19455*	c 27	NASA-CASE-ARC-11405-2			US-PATENT-CLASS-343-5-VQ
		US-PATENT-CLASS-414-373			US-PATENT-APPL-SN-514117			US-PATENT-CLASS-367-88
		US-PATENT-CLASS-414-786			US-PATENT-CLASS-260-245.75			US-PATENT-4,551,724
		US-PATENT-4,537,554			US-PATENT-CLASS-260-245.9	N86-19721*	c 44	NASA-CASE-LEW-14028-1
N85-35194*	c 07	NASA-CASE-LAR-13019-1			US-PATENT-CLASS-528-327			US-PATENT-APPL-SN-642310
		US-PATENT-APPL-SN-576308			US-PATENT-4,522,755			US-PATENT-CLASS-429-109
		US-PATENT-CLASS-244-199	N86-19456*	c 27	NASA-CASE-LAR-13135-1			US-PATENT-CLASS-429-15
		US-PATENT-CLASS-244-55			US-PATENT-APPL-SN-649328			US-PATENT-CLASS-429-19
		US-PATENT-4,533,101			US-PATENT-CLASS-525-432			US-PATENT-CLASS-429-51
N85-35195*	c 07	NASA-CASE-LEW-13562-2			US-PATENT-CLASS-525-436			US-PATENT-4,543,302
		US-PATENT-APPL-SN-500651			US-PATENT-CLASS-528-179	N86-19885* #	c 52	NAS 1.71;GSC-12944-1
		US-PATENT-CLASS-239-402.5			US-PATENT-CLASS-528-182			NASA-CASE-GSC-12944-1
		US-PATENT-CLASS-60-39.23			US-PATENT-CLASS-528-185			US-PATENT-APPL-SN-793006
		US-PATENT-CLASS-60-748			US-PATENT-CLASS-528-352	N86-20124*	c 74	NASA-CASE-MFS-25942-1
		US-PATENT-4,534,166			US-PATENT-CLASS-528-353			US-PATENT-APPL-SN-571613
N85-35200*	c 08	NASA-CASE-LAR-13076-1			US-PATENT-4,552,931			US-PATENT-CLASS-378-43
		US-PATENT-APPL-SN-532342	N86-19457*	c 27	NASA-CASE-LEW-13864-1			US-PATENT-CLASS-378-85
		US-PATENT-CLASS-244-113			US-PATENT-APPL-SN-434087			US-PATENT-4,562,583
		US-PATENT-CLASS-244-139			US-PATENT-CLASS-528-229	N86-20125*	c 74	NASA-CASE-ARC-11502-1
		US-PATENT-CLASS-244-75-R			US-PATENT-CLASS-528-322			US-PATENT-APPL-SN-594134
		US-PATENT-4,538,778			US-PATENT-CLASS-528-342			US-PATENT-CLASS-350-276-R
N85-35227*	c 23	NASA-CASE-NPO-16203-1			US-PATENT-CLASS-528-345			US-PATENT-CLASS-350-319
		US-PATENT-APPL-SN-493179			US-PATENT-4,560,742			US-PATENT-CLASS-350-448
		US-PATENT-CLASS-435-160	N86-19458*	c 27	NASA-CASE-LEW-14072-1			US-PATENT-CLASS-350-537
		US-PATENT-CLASS-435-842			US-PATENT-APPL-SN-649330			US-PATENT-CLASS-350-580
		US-PATENT-4,539,293			US-PATENT-CLASS-204-192-C	N86-20126*	c 74	US-PATENT-4,542,963
N85-35233*	c 24	NASA-CASE-LEW-14057-1			US-PATENT-CLASS-204-192-D			NASA-CASE-MS-20418-1
		US-PATENT-APPL-SN-375784			US-PATENT-CLASS-204-192-R			US-PATENT-APPL-SN-438446
		US-PATENT-APPL-SN-523297			US-PATENT-CLASS-204-298			US-PATENT-CLASS-378-58
		US-PATENT-APPL-SN-640712			US-PATENT-CLASS-427-248.1			US-PATENT-CLASS-378-59
		US-PATENT-CLASS-428-633			US-PATENT-CLASS-427-38			US-PATENT-4,542,520
		US-PATENT-CLASS-428-656			US-PATENT-CLASS-428-446	N86-20150*	c 76	NASA-CASE-GSC-12816-1
		US-PATENT-CLASS-428-678			US-PATENT-CLASS-428-473.5			US-PATENT-APPL-SN-507625
		US-PATENT-CLASS-428-679			US-PATENT-CLASS-428-702			US-PATENT-CLASS-136-255
		US-PATENT-CLASS-428-680			US-PATENT-4,560,577			US-PATENT-CLASS-136-262
		US-PATENT-CLASS-428-681	N86-19479*	c 31	NASA-CASE-LAR-13098-1			US-PATENT-CLASS-29-572
		US-PATENT-CLASS-428-682			US-PATENT-APPL-SN-530339			US-PATENT-CLASS-357-15
		US-PATENT-4,485,151			US-PATENT-CLASS-16-242			US-PATENT-CLASS-357-30
		US-PATENT-4,535,033			US-PATENT-CLASS-16-390			US-PATENT-4,543,442
N85-35253*	c 25	NASA-CASE-NPO-15924-1			US-PATENT-CLASS-403-171	N86-20389*	c 07	NASA-CASE-LEW-13142-2
		US-PATENT-APPL-SN-526768			US-PATENT-CLASS-403-64			US-PATENT-APPL-SN-413101
		US-PATENT-CLASS-201-17			US-PATENT-CLASS-52-632			US-PATENT-CLASS-60-39.02
		US-PATENT-CLASS-44-1-SR			US-PATENT-CLASS-52-637			US-PATENT-CLASS-60-39.07
		US-PATENT-4,511,362			US-PATENT-CLASS-52-646			US-PATENT-CLASS-60-736
N85-35267*	c 26	NASA-CASE-LEW-13923-1			US-PATENT-CLASS-52-648			US-PATENT-4,550,561
		US-PATENT-APPL-SN-571617			US-PATENT-4,557,097	N86-20469*	c 18	NASA-CASE-MFS-25429-1
		US-PATENT-CLASS-427-191	N86-19515*	c 33	NASA-CASE-GSC-12555-1			US-PATENT-APPL-SN-596959
		US-PATENT-CLASS-427-228			US-PATENT-APPL-SN-153240			US-PATENT-CLASS-124-56
		US-PATENT-CLASS-427-294			US-PATENT-CLASS-331-116-FE			US-PATENT-CLASS-244-158-R
		US-PATENT-CLASS-427-376.2			US-PATENT-CLASS-331-117-FE			US-PATENT-CLASS-403-328
		US-PATENT-CLASS-427-380			US-PATENT-4,553,110			US-PATENT-4,554,905
		US-PATENT-CLASS-427-397.7	N86-19516*	c 33	NASA-CASE-NPO-16112-1	N86-20560*	c 27	NASA-CASE-ARC-11429-1-CU
		US-PATENT-CLASS-428-698			US-PATENT-APPL-SN-542232			US-PATENT-APPL-SN-553339
		US-PATENT-CLASS-428-704			US-PATENT-CLASS-357-23.6			US-PATENT-CLASS-524-548
		US-PATENT-4,535,035			US-PATENT-CLASS-357-30			US-PATENT-CLASS-525-186
N86-12547*	c 34	NASA-CASE-LAR-13220-1			US-PATENT-CLASS-357-58			US-PATENT-CLASS-526-262



N86-27450*	c 27	NASA-CASE-LAR-13316-1 US-PATENT-APPL-SN-613139 US-PATENT-CLASS-260-544P US-PATENT-CLASS-525-534 US-PATENT-CLASS-525-535 US-PATENT-CLASS-526-285 US-PATENT-CLASS-528-171 US-PATENT-CLASS-528-174 US-PATENT-CLASS-528-176 US-PATENT-4,587,312	N86-29039*	c 27	NASA-CASE-LAR-13353-1 US-PATENT-APPL-SN-643524 US-PATENT-CLASS-264-204 US-PATENT-CLASS-264-216 US-PATENT-CLASS-264-236 US-PATENT-CLASS-264-347 US-PATENT-CLASS-528-183 US-PATENT-CLASS-528-222 US-PATENT-CLASS-528-341 US-PATENT-4,595,548	N86-32568* #	c 27	NASA-CASE-ARC-11512-2 US-PATENT-APPL-SN-641153 US-PATENT-CLASS-528-336 US-PATENT-CLASS-528-337 US-PATENT-CLASS-528-340 US-PATENT-CLASS-528-347 US-PATENT-CLASS-564-15 US-PATENT-CLASS-568-14 US-PATENT-4,602,081
N86-27451*	c 27	NASA-CASE-ARC-11427-2 US-PATENT-APPL-SN-765980 US-PATENT-CLASS-523-434 US-PATENT-CLASS-523-445 US-PATENT-CLASS-523-461 US-PATENT-CLASS-525-108 US-PATENT-CLASS-525-115 US-PATENT-CLASS-525-119 US-PATENT-CLASS-525-122 US-PATENT-4,588,778	N86-29055*	c 31	NASA-CASE-MFS-25825-1 US-PATENT-APPL-SN-657309 US-PATENT-CLASS-318-605 US-PATENT-CLASS-318-636 US-PATENT-CLASS-318-661 US-PATENT-CLASS-340-347CC US-PATENT-CLASS-340-347SY US-PATENT-4,594,540	N86-32569*	c 27	NASA-CASE-LEW-14072-2 US-PATENT-APPL-SN-761235 US-PATENT-CLASS-204-192C US-PATENT-CLASS-204-192D US-PATENT-CLASS-204-298 US-PATENT-4,604,181
N86-27513*	c 32	NASA-CASE-KSC-11285-1 US-PATENT-APPL-SN-655601 US-PATENT-CLASS-179-18BC US-PATENT-CLASS-340-347DD US-PATENT-CLASS-365-768 US-PATENT-4,588,986	N86-29174*	c 35	NASA-CASE-LAR-13254-1CU US-PATENT-APPL-SN-668432 US-PATENT-CLASS-261-78A US-PATENT-CLASS-55-255 US-PATENT-CLASS-55-259 US-PATENT-CLASS-55-521 US-PATENT-CLASS-55-528 US-PATENT-4,595,399	N86-32587*	c 31	NASA-CASE-LEW-14130-1 US-PATENT-APPL-SN-659475 US-PATENT-CLASS-204-192C US-PATENT-CLASS-204-192D US-PATENT-CLASS-204-298 US-PATENT-CLASS-313-106 US-PATENT-CLASS-313-107 US-PATENT-CLASS-315-5.38 US-PATENT-CLASS-427-39 US-PATENT-4,607,193
N86-27593*	c 34	NASA-CASE-MS-20812-1 US-PATENT-APPL-SN-616002 US-PATENT-CLASS-122-366 US-PATENT-CLASS-165-104.14 US-PATENT-CLASS-165-104.26 US-PATENT-CLASS-165-41 US-PATENT-4,583,587	N86-29204*	c 36	NAS 1.71:LAR-13256-1 NASA-CASE-LAR-13256-1 US-PATENT-APPL-SN-745973 US-PATENT-CLASS-372-79 US-PATENT-4,594,720	N86-32589* #	c 31	NAS 1.71:MFS-28153-1 NASA-CASE-MFS-28153-1 US-PATENT-APPL-SN-875891 US-PATENT-CLASS-12958-1 US-PATENT-APPL-SN-727035 US-PATENT-CLASS-331-108D US-PATENT-CLASS-331-116R US-PATENT-CLASS-331-66 US-PATENT-CLASS-374-183 US-PATENT-4,603,306
N86-27629*	c 37	NASA-CASE-ARC-11525-1 US-PATENT-APPL-SN-681041 US-PATENT-CLASS-318-48 US-PATENT-CLASS-318-632 US-PATENT-CLASS-318-663 US-PATENT-CLASS-318-8 US-PATENT-4,591,772	N86-29507* #	c 54	NASA-CASE-ARC-11534-1 US-PATENT-APPL-SN-642602 US-PATENT-CLASS-138-120 US-PATENT-CLASS-2-2.1A US-PATENT-CLASS-285-168 US-PATENT-CLASS-285-184 US-PATENT-CLASS-285-227 US-PATENT-CLASS-403-164 US-PATENT-4,598,428	N86-32624*	c 33	NASA-CASE-GSC-12958-1 US-PATENT-APPL-SN-727035 US-PATENT-CLASS-331-108D US-PATENT-CLASS-331-116R US-PATENT-CLASS-331-66 US-PATENT-CLASS-374-183 US-PATENT-4,603,306
N86-27630*	c 37	NASA-CASE-LAR-13250-1 US-PATENT-APPL-SN-573162 US-PATENT-CLASS-403-312 US-PATENT-CLASS-403-388 US-PATENT-CLASS-403-408.1 US-PATENT-4,579,475	N86-29650* #	c 74	NASA-CASE-GSC-12911-1 US-PATENT-APPL-SN-606426 US-PATENT-CLASS-350-315 US-PATENT-CLASS-350-318 US-PATENT-CLASS-356-402 US-PATENT-CLASS-356-419 US-PATENT-4,599,001	N86-32626*	c 33	NASA-CASE-GSC-12958-1 US-PATENT-APPL-SN-727035 US-PATENT-CLASS-331-108D US-PATENT-CLASS-331-116R US-PATENT-CLASS-331-66 US-PATENT-CLASS-374-183 US-PATENT-4,603,306
N86-27706*	c 44	NASA-CASE-NPO-16236-1 US-PATENT-APPL-SN-582495 US-PATENT-CLASS-126-418 US-PATENT-CLASS-126-419 US-PATENT-CLASS-126-438 US-PATENT-4,586,487	N86-31726* #	c 27	NASA-CASE-ARC-11421-2 US-PATENT-APPL-SN-739760 US-PATENT-CLASS-428-473.5 US-PATENT-CLASS-528-170 US-PATENT-CLASS-528-220 US-PATENT-CLASS-528-321 US-PATENT-CLASS-528-322 US-PATENT-4,600,769	N86-32695* #	c 35	NASA-CASE-NPO-16479-1CU US-PATENT-APPL-SN-719794 US-PATENT-CLASS-73-502 US-PATENT-CLASS-73-521 US-PATENT-4,602,509
N86-28131*	c 24	NASA-CASE-ARC-11615-1SB US-PATENT-APPL-SN-706682 US-PATENT-CLASS-428-116 US-PATENT-CLASS-428-408 US-PATENT-CLASS-428-921 US-PATENT-CLASS-526-265 US-PATENT-4,598,007	N86-31727*	c 27	NASA-CASE-LAR-13351-1 US-PATENT-APPL-SN-643589 US-PATENT-CLASS-264-212 US-PATENT-CLASS-264-236 US-PATENT-CLASS-427-162 US-PATENT-CLASS-427-164 US-PATENT-CLASS-427-165 US-PATENT-CLASS-428-336 US-PATENT-CLASS-428-473.5 US-PATENT-4,603,061	N86-32696*	c 35	NASA-CASE-LAR-13294-1 US-PATENT-APPL-SN-706681 US-PATENT-CLASS-73-147 US-PATENT-CLASS-73-862.04 US-PATENT-CLASS-73-862.61 US-PATENT-4,604,903
N86-28618*	c 54	NASA-CASE-ARC-11616-1 US-PATENT-APPL-SN-684193 US-PATENT-CLASS-128-202.11 US-PATENT-CLASS-2-2.1A US-PATENT-CLASS-2-2.1R US-PATENT-CLASS-414-1 US-PATENT-CLASS-414-5 US-PATENT-CLASS-414-7 US-PATENT-CLASS-414-8 US-PATENT-4,593,415	N86-32266*	c 74	NASA-CASE-GSC-12761-1 US-PATENT-APPL-SN-406820 US-PATENT-CLASS-356-4.5 US-PATENT-CLASS-356-5 US-PATENT-4,600,299	N86-32697*	c 35	NAS 1.71:ARC-11510-1 NASA-CASE-ARC-11510-1 US-PATENT-APPL-SN-602049 US-PATENT-CLASS-356-28.5 US-PATENT-CLASS-356-72 US-PATENT-CLASS-434-4 US-PATENT-4,600,301
N86-28619*	c 54	NASA-CASE-ARC-11610-1 US-PATENT-APPL-SN-684190 US-PATENT-CLASS-138-120 US-PATENT-CLASS-2-2.1A US-PATENT-CLASS-2-2.1R US-PATENT-CLASS-285-168 US-PATENT-4,598,427	N86-32447*	c 09	NASA-CASE-ARC-11504-1 US-PATENT-APPL-SN-565481 US-PATENT-CLASS-356-73 US-PATENT-4,605,303	N86-32698*	c 35	NASA-CASE-MFS-25833-1 US-PATENT-APPL-SN-473827 US-PATENT-CLASS-324-226 US-PATENT-CLASS-324-238 US-PATENT-CLASS-324-240 US-PATENT-CLASS-324-262 US-PATENT-CLASS-73-37.5 US-PATENT-4,551,677
N86-28620*	c 54	NASA-CASE-ARC-11543-1 US-PATENT-APPL-SN-684192 US-PATENT-CLASS-138-120 US-PATENT-CLASS-2-2.1A US-PATENT-CLASS-285-168 US-PATENT-CLASS-414-7 US-PATENT-4,594,734	N86-32525*	c 23	NASA-CASE-ARC-11506-2 US-PATENT-APPL-SN-641142 US-PATENT-CLASS-528-108 US-PATENT-CLASS-528-124 US-PATENT-CLASS-528-337 US-PATENT-CLASS-528-352 US-PATENT-CLASS-528-399 US-PATENT-CLASS-528-406 US-PATENT-CLASS-528-407 US-PATENT-4,587,324	N86-32736* #	c 37	NASA-CASE-MFS-19796-1 US-PATENT-APPL-SN-770920 US-PATENT-CLASS-138-97 US-PATENT-CLASS-165-76 US-PATENT-CLASS-228-119 US-PATENT-CLASS-29-402.16 US-PATENT-4,605,155
N86-28732*	c 74	NASA-CASE-GSC-12825-1 US-PATENT-APPL-SN-698641 US-PATENT-CLASS-350-276R US-PATENT-CLASS-350-505 US-PATENT-CLASS-354-479 US-PATENT-CLASS-358-222 US-PATENT-4,598,981	N86-32526* #	c 23	NAS 1.71:LAR-13555-1 NASA-CASE-LAR-13555-1 US-PATENT-APPL-SN-871207 US-PATENT-APPL-SN-590925 US-PATENT-CLASS-427-191 US-PATENT-CLASS-427-192 US-PATENT-CLASS-427-421 US-PATENT-CLASS-427-427 US-PATENT-4,552,784	N86-32737*	c 37	NASA-CASE-LAR-13081-1 US-PATENT-APPL-SN-760378 US-PATENT-CLASS-52-111 US-PATENT-CLASS-52-632 US-PATENT-CLASS-52-645 US-PATENT-CLASS-52-646 US-PATENT-4,604,844
N86-28760*	c 76	NASA-CASE-NPO-15904-1 US-PATENT-APPL-SN-465369 US-PATENT-CLASS-156-DIG.88 US-PATENT-CLASS-156-610 US-PATENT-CLASS-156-624 US-PATENT-4,596,626	N86-32550*	c 26	NASA-CASE-GSC-12880-1 US-PATENT-CLASS-427-191 US-PATENT-CLASS-427-192 US-PATENT-CLASS-427-421 US-PATENT-CLASS-427-427 US-PATENT-4,552,784	N86-32738*	c 37	NASA-CASE-MFS-28059-1 US-PATENT-APPL-SN-709255 US-PATENT-CLASS-417-475 US-PATENT-4,604,038
			N86-32551*	c 26	NASA-CASE-NPO-15658-1 US-PATENT-APPL-SN-451896	N86-32875*	c 44	NASA-CASE-LEW-14177-1 US-PATENT-APPL-SN-669140 US-PATENT-CLASS-136-261 US-PATENT-CLASS-148-1.5 US-PATENT-CLASS-29-572 US-PATENT-CLASS-29-576B US-PATENT-CLASS-357-30 US-PATENT-CLASS-357-91

N86-33127*	c 72	US-PATENT-4,608,452 NASA-CASE-NPO-16372-1 US-PATENT-APPL-SN-703847 US-PATENT-CLASS-250-336.1 US-PATENT-CLASS-250-338 US-PATENT-CLASS-250-340 US-PATENT-4,600,840	N87-14704* #	c 37	NAS 1.71:NPO-16892-1-CU NASA-CASE-NPO-16892-1-CU US-PATENT-APPL-SN-921573	N87-17035*	c 37	NASA-CASE-MSC-20964-1 NASA-CASE-MSC-20964-1 US-PATENT-APPL-SN-878916 US-PATENT-CLASS-134-166C US-PATENT-CLASS-134-93 US-PATENT-CLASS-210-282 US-PATENT-4,626,046
N86-33138* #	c 74	NAS 1.71:NPO-16869 NASA-CASE-NPO-16869-1CU US-PATENT-APPL-SN-867986	N87-14863* #	c 60	NAS 1.71:MSC-20964-1 NASA-CASE-MSC-20964-1 US-PATENT-APPL-SN-878916	N87-17036*	c 37	NASA-CASE-MSC-20162-1 US-PATENT-APPL-SN-764805 US-PATENT-CLASS-135-903 US-PATENT-CLASS-160-23R US-PATENT-CLASS-160-265 US-PATENT-CLASS-244-121 US-PATENT-CLASS-244-158R US-PATENT-CLASS-296-100 US-PATENT-4,637,447
N87-10231* #	c 33	NAS 1.71:NPO-16784-1 NASA-CASE-NPO-16784-1 US-PATENT-APPL-SN-879757	N87-14971* #	c 74	NASA-CASE-MFS-26000-1 US-PATENT-APPL-SN-571615 US-PATENT-CLASS-356-246 US-PATENT-CLASS-372-61	N87-17037*	c 37	NASA-CASE-MSC-20475-1 US-PATENT-APPL-SN-725689 US-PATENT-CLASS-192-46 US-PATENT-CLASS-192-67R US-PATENT-4,635,773
N87-13313*	c 76	NASA-CASE-NPO-16045-1 US-PATENT-APPL-SN-641146 US-PATENT-CLASS-250-338 US-PATENT-CLASS-250-370 US-PATENT-CLASS-357-23.1 US-PATENT-CLASS-357-23.12 US-PATENT-CLASS-357-29 US-PATENT-CLASS-357-30 US-PATENT-CLASS-357-52 US-PATENT-4,605,946	N87-15304* #	c 27	US-PATENT-4,614,428 NASA-CASE-ARC-11429-4CU US-PATENT-APPL-SN-725686 US-PATENT-CLASS-525-282 US-PATENT-4,618,652	N87-17038*	c 37	NASA-CASE-GSC-12957-1 US-PATENT-APPL-SN-800193 US-PATENT-CLASS-310-90.5 US-PATENT-4,634,191
N87-14314*	c 05	NASA-CASE-LAR-13173-1 US-PATENT-APPL-SN-690274 US-PATENT-CLASS-244-118.1 US-PATENT-CLASS-244-137-A US-PATENT-CLASS-244-17.27 US-PATENT-CLASS-248-638 US-PATENT-CLASS-89-1.54 US-PATENT-4,616,793	N87-15390* #	c 32	NAS 1.71:NPO-16632-1-CU NASA-CASE-NPO-16632-1-CU US-PATENT-APPL-SN-890586	N87-17399*	c 44	NASA-CASE-NPO-16526-1CU US-PATENT-APPL-SN-809975 US-PATENT-CLASS-136-249 US-PATENT-4,631,352
N87-14355*	c 09	NASA-CASE-MFS-28057-1 US-PATENT-APPL-SN-729766 US-PATENT-CLASS-350-319 US-PATENT-4,618,215	N87-15413* #	c 33	NAS 1.71:NPO-16932-1 NASA-CASE-NPO-16932-1CU US-PATENT-APPL-SN-913433	N87-17493*	c 74	NASA-CASE-NPO-16526-1CU US-PATENT-APPL-SN-809975 US-PATENT-CLASS-136-249 US-PATENT-4,631,352
N87-14373*	c 18	NASA-CASE-MSC-20635-1 US-PATENT-APPL-SN-588039 US-PATENT-CLASS-16-294 US-PATENT-CLASS-16-370 US-PATENT-CLASS-403-102 US-PATENT-CLASS-403-119 US-PATENT-CLASS-403-146 US-PATENT-CLASS-403-163 US-PATENT-CLASS-403-85 US-PATENT-4,615,637	N87-15465* #	c 37	NAS 1.71:MSC-20761-1 NASA-CASE-MSC-20761-1 US-PATENT-APPL-SN-913446	N87-17582*	c 76	NASA-CASE-NPO-15813-2 US-PATENT-APPL-SN-706564 US-PATENT-CLASS-148-174 US-PATENT-CLASS-148-175 US-PATENT-CLASS-29-575 US-PATENT-CLASS-29-576-E US-PATENT-CLASS-29-576-J US-PATENT-CLASS-29-576-W US-PATENT-CLASS-29-578 US-PATENT-4,612,072
N87-14420*	c 20	NASA-CASE-MFS-25989-1 US-PATENT-APPL-SN-690273 US-PATENT-CLASS-239-132.5 US-PATENT-CLASS-239-403 US-PATENT-CLASS-239-425 US-PATENT-CLASS-60-258 US-PATENT-CLASS-60-746 US-PATENT-4,621,492	N87-15882*	c 76	NASA-CASE-NPO-15813-2 US-PATENT-APPL-SN-706564 US-PATENT-CLASS-148-174 US-PATENT-CLASS-148-175 US-PATENT-CLASS-29-575 US-PATENT-CLASS-29-576-E US-PATENT-CLASS-29-576-J US-PATENT-CLASS-29-576-W US-PATENT-CLASS-29-578 US-PATENT-4,612,072	N87-16793* #	c 29	NAS 1.71:MFS-28139-1 NASA-CASE-MFS-28139-1 US-PATENT-APPL-SN-911851
N87-14482*	c 26	NASA-CASE-LEW-13834-1 US-PATENT-APPL-SN-478131 US-PATENT-CLASS-148-429 US-PATENT-CLASS-420-460 US-PATENT-4,610,736	N87-16828*	c 07	NASA-CASE-LAR-13134-2 US-PATENT-APPL-SN-846462 US-PATENT-CLASS-244-130 US-PATENT-CLASS-244-55 US-PATENT-4,629,147	N87-18679* #	c 29	NAS 1.71:MSC-20865-1 NASA-CASE-MSC-20865-1 US-PATENT-APPL-SN-924472
N87-14515*	c 27	NASA-CASE-LAR-13316-2 US-PATENT-APPL-SN-760791 US-PATENT-CLASS-260-544-P US-PATENT-4,622,182	N87-16863* #	c 17	NASA-CASE-LAR-13006-1 US-PATENT-APPL-SN-470113 US-PATENT-CLASS-340-825.5 US-PATENT-CLASS-340-870.18 US-PATENT-CLASS-371-63 US-PATENT-CLASS-375-88 US-PATENT-4,631,538	N87-18692* #	c 32	NAS 1.71:MSC-20865-1 NASA-CASE-MSC-20865-1 US-PATENT-APPL-SN-924472
N87-14516*	c 27	NASA-CASE-LAR-13318-1 US-PATENT-APPL-SN-781813 US-PATENT-CLASS-428-262 US-PATENT-CLASS-428-447 US-PATENT-CLASS-528-26 US-PATENT-4,624,888	N87-16875*	c 20	NASA-CASE-LEW-14037-1 US-PATENT-APPL-SN-636463 US-PATENT-CLASS-219-275 US-PATENT-CLASS-60-203.1 US-PATENT-4,608,821	N87-18817* #	c 37	NAS 1.71:MFS-28161-1 NASA-CASE-MFS-28161-1 US-PATENT-APPL-SN-942159
N87-14559*	c 32	NASA-CASE-LAR-13310-1 US-PATENT-APPL-SN-709257 US-PATENT-CLASS-356-5 US-PATENT-CLASS-367-99 US-PATENT-CLASS-73-597 US-PATENT-CLASS-73-615 US-PATENT-4,624,142	N87-16907*	c 27	NASA-CASE-LAR-13118-2 US-PATENT-APPL-SN-760797 US-PATENT-CLASS-560-104 US-PATENT-4,638,083	N87-18818* #	c 37	NAS 1.71:MSC-20907-1 NASA-CASE-MSC-20907-1 US-PATENT-APPL-SN-927992
N87-14594*	c 33	NASA-CASE-NPO-16299-1 US-PATENT-APPL-SN-541526 US-PATENT-CLASS-356-389 US-PATENT-4,623,255	N87-16908*	c 27	NASA-CASE-LAR-13118-2 US-PATENT-APPL-SN-760797 US-PATENT-CLASS-560-104 US-PATENT-4,638,083	N87-20999*	c 08	NASA-CASE-LAR-13280-1 US-PATENT-APPL-SN-790556 US-PATENT-CLASS-244-76-R US-PATENT-CLASS-340-967 US-PATENT-4,648,569
N87-14669*	c 35	NASA-CASE-LAR-13268-1 US-PATENT-APPL-SN-727034 US-PATENT-CLASS-356-28.5 US-PATENT-CLASS-356-301 US-PATENT-4,624,561	N87-16909*	c 27	NASA-CASE-ARC-11429-3CU US-PATENT-APPL-SN-725725 US-PATENT-CLASS-546-339 US-PATENT-CLASS-546-346 US-PATENT-CLASS-546-350 US-PATENT-4,626,593	N87-21111*	c 27	NASA-CASE-MFS-28090-1 US-PATENT-APPL-SN-805012 US-PATENT-CLASS-65-13 US-PATENT-CLASS-65-134 US-PATENT-CLASS-65-136 US-PATENT-CLASS-65-2 US-PATENT-4,654,065
N87-14670*	c 35	NASA-CASE-MFS-25981-1 US-PATENT-APPL-SN-657310 US-PATENT-CLASS-73-462 US-PATENT-CLASS-73-473 US-PATENT-CLASS-73-477 US-PATENT-4,619,142	N87-16918* #	c 31	NASA-CASE-ARC-11363-1 US-PATENT-APPL-SN-500046 US-PATENT-CLASS-52-126.5 US-PATENT-CLASS-52-309.15 US-PATENT-CLASS-52-391 US-PATENT-CLASS-52-511 US-PATENT-CLASS-52-814 US-PATENT-4,637,181	N87-21112*	c 27	NASA-CASE-ARC-11511-2 US-PATENT-APPL-SN-754362 US-PATENT-CLASS-528-220 US-PATENT-CLASS-528-229 US-PATENT-CLASS-528-322 US-PATENT-CLASS-528-327 US-PATENT-CLASS-528-331 US-PATENT-CLASS-528-362 US-PATENT-4,649,189
N87-14671*	c 35	NASA-CASE-GSC-12956-1 US-PATENT-APPL-SN-745877 US-PATENT-CLASS-148-187 US-PATENT-CLASS-148-188 US-PATENT-CLASS-148-189 US-PATENT-CLASS-148-190	N87-17026*	c 36	NASA-CASE-ARC-11547-1 US-PATENT-APPL-SN-692745 US-PATENT-CLASS-356-28 US-PATENT-CLASS-356-28.5 US-PATENT-4,632,548	N87-21159*	c 31	NASA-CASE-NPO-16393-1-CU US-PATENT-APPL-SN-701486 US-PATENT-CLASS-62-384 US-PATENT-CLASS-62-48 US-PATENT-CLASS-62-514-R US-PATENT-4,641,499
			N87-17034*	c 37	NASA-CASE-NPO-16321-1CU US-PATENT-APPL-SN-692802	N87-21160*	c 31	NASA-CASE-LEW-13899-1 US-PATENT-APPL-SN-775968 US-PATENT-CLASS-156-345 US-PATENT-CLASS-156-643 US-PATENT-CLASS-156-646 US-PATENT-CLASS-156-659.1 US-PATENT-CLASS-156-661.1 US-PATENT-CLASS-156-904 US-PATENT-CLASS-204-298 US-PATENT-4,620,898
						N87-21206*	c 32	NASA-CASE-LAR-13455-1 US-PATENT-APPL-SN-804040 US-PATENT-CLASS-250-341 US-PATENT-CLASS-374-122 US-PATENT-CLASS-374-9 US-PATENT-4,645,358
						N87-21207*	c 32	NASA-CASE-NPO-16256-1 US-PATENT-APPL-SN-638586

		US-PATENT-CLASS-329-107			US-PATENT-CLASS-313-361.1			US-PATENT-APPL-SN-853361
		US-PATENT-CLASS-375-110			US-PATENT-CLASS-313-362.1			US-PATENT-CLASS-285-305
		US-PATENT-CLASS-375-120			US-PATENT-4,649,278			US-PATENT-CLASS-285-81
		US-PATENT-CLASS-375-23	N87-21661*	c 72	NASA-CASE-NPO-16640-1-CU			US-PATENT-CLASS-285-85
		US-PATENT-CLASS-455-608			US-PATENT-APPL-SN-852468			US-PATENT-CLASS-285-91
		US-PATENT-4,648,133			US-PATENT-CLASS-250-251			US-PATENT-4,655,482
N87-21232*	c 33	NASA-CASE-GSC-13018-1			US-PATENT-CLASS-250-396-R	N87-22985*	c 37	NASA-CASE-MSC-20979-1
		US-PATENT-APPL-SN-862959			US-PATENT-CLASS-250-423-P			US-PATENT-APPL-SN-796053
		US-PATENT-CLASS-331-116-R			US-PATENT-CLASS-376-127			US-PATENT-CLASS-244/161
		US-PATENT-CLASS-331-117-R			US-PATENT-4,649,273			US-PATENT-4,664,344
		US-PATENT-CLASS-331-56	N87-21679*	c 74	NASA-CASE-GSC-12897-1	N87-23259*	c 74	NASA-CASE-NPO-16558-1-CU
		US-PATENT-4,660,000			US-PATENT-APPL-SN-606432			US-PATENT-APPL-SN-779744
N87-21233*	c 33	NASA-CASE-MFS-28080-1			US-PATENT-CLASS-350-6.5			US-PATENT-CLASS-250-231-GY
		US-PATENT-APPL-SN-775548			US-PATENT-4,647,144			US-PATENT-CLASS-356-350
		US-PATENT-CLASS-318-138	N87-21755*	c 85	NASA-CASE-KSC-11282-1			US-PATENT-4,662,751
		US-PATENT-CLASS-318-254			US-PATENT-APPL-SN-751644	N87-23286*	c 76	NASA-CASE-NPO-15800-2
		US-PATENT-CLASS-318-439			US-PATENT-CLASS-180-19.2			US-PATENT-APPL-SN-442815
		US-PATENT-4,644,234			US-PATENT-CLASS-180-305			US-PATENT-APPL-SN-674395
N87-21234*	c 33	NASA-CASE-LEW-13935-1			US-PATENT-CLASS-280-47.11			US-PATENT-CLASS-156-607
		US-PATENT-APPL-SN-700255			US-PATENT-CLASS-296-20			US-PATENT-CLASS-156-617-H
		US-PATENT-CLASS-250-423-R			US-PATENT-CLASS-5-81-R			US-PATENT-CLASS-156-617-SP
		US-PATENT-CLASS-315-111.81			US-PATENT-CLASS-60-415			US-PATENT-4,654,110
		US-PATENT-4,642,523			US-PATENT-4,646,860	N87-23631*	c 08	NASA-CASE-ARC-11633-1
N87-21235*	c 33	NASA-CASE-LAR-13151-1	N87-22678*	c 06	NASA-CASE-LAR-12984-1			US-PATENT-APPL-SN-846439
		US-PATENT-APPL-SN-683101			US-PATENT-APPL-SN-578387			US-PATENT-CLASS-416-114
		US-PATENT-CLASS-307-261			US-PATENT-CLASS-244-1-R			US-PATENT-CLASS-416-158
		US-PATENT-CLASS-307-354			US-PATENT-CLASS-340-945			US-PATENT-4,669,958
		US-PATENT-CLASS-328-147			US-PATENT-CLASS-340-971	N87-23698*	c 23	NASA-CASE-ARC-11643-1-5B
		US-PATENT-CLASS-328-164			US-PATENT-CLASS-340-975			US-PATENT-APPL-SN-901496
		US-PATENT-CLASS-328-28			US-PATENT-CLASS-73-178-R			US-PATENT-CLASS-423-276
		US-PATENT-4,652,833			US-PATENT-4,663,627			US-PATENT-CLASS-423-284
N87-21255*	c 34	NASA-CASE-ARC-11631-1	N87-22845*	c 27	NASA-CASE-ARC-11429-2-CU			US-PATENT-4,676,962
		US-PATENT-APPL-SN-846428			US-PATENT-APPL-SN-553339	N87-23713* #	c 25	NASA-CASE-LAR-13597-1-CU
		US-PATENT-CLASS-239-426			US-PATENT-APPL-SN-725727			US-PATENT-APPL-SN-008199
		US-PATENT-CLASS-239-434			US-PATENT-CLASS-524-404	N87-23736*	c 27	NASA-CASE-LEW-14072-3
		US-PATENT-CLASS-239-545			US-PATENT-CLASS-524-548			US-PATENT-APPL-SN-834977
		US-PATENT-CLASS-73-147			US-PATENT-CLASS-525-182			US-PATENT-CLASS-428-421
		US-PATENT-4,648,267			US-PATENT-CLASS-526-262			US-PATENT-CLASS-428-422
N87-21304*	c 35	NASA-CASE-NPO-15617-1			US-PATENT-4,526,925			US-PATENT-CLASS-428-447
		US-PATENT-APPL-SN-403849			US-PATENT-4,647,615			US-PATENT-CLASS-428-473.5
		US-PATENT-CLASS-74-424.8-R	N87-22847*	c 27	NASA-CASE-LAR-13444-1-CU			US-PATENT-CLASS-428-702
		US-PATENT-CLASS-74-441			US-PATENT-APPL-SN-734366			US-PATENT-4,664,980
		US-PATENT-CLASS-74-458			US-PATENT-CLASS-528-229	N87-23737* #	c 27	NAS 1.71-ARC-11652-1
		US-PATENT-CLASS-74-468			US-PATENT-CLASS-546-262			NASA-CASE-ARC-11652-1
		US-PATENT-CLASS-74-89.15			US-PATENT-CLASS-546-264			US-PATENT-APPL-SN-008242
		US-PATENT-4,586,394			US-PATENT-CLASS-564-330	N87-23751*	c 27	NASA-CASE-ARC-11533-1
N87-21332*	c 37	NASA-CASE-MFS-28058-1			US-PATENT-CLASS-564-396			US-PATENT-APPL-SN-641147
		US-PATENT-APPL-SN-751691			US-PATENT-CLASS-564-430			US-PATENT-CLASS-548-413
		US-PATENT-CLASS-137-606			US-PATENT-4,663,483			US-PATENT-4,670,565
		US-PATENT-CLASS-251-165	N87-22848*	c 27	NASA-CASE-LAR-13452-1	N87-23879*	c 33	NASA-CASE-NPO-16467-1-CU
		US-PATENT-4,657,044			US-PATENT-APPL-SN-838655			US-PATENT-APPL-SN-838648
N87-21333*	c 37	NASA-CASE-MFS-25956-1			US-PATENT-CLASS-525-36			US-PATENT-CLASS-136-249
		US-PATENT-APPL-SN-580397			US-PATENT-CLASS-528-176			US-PATENT-CLASS-136-255
		US-PATENT-CLASS-248-316.4			US-PATENT-CLASS-528-184			US-PATENT-CLASS-357-30
		US-PATENT-CLASS-248-550			US-PATENT-CLASS-528-192			US-PATENT-CLASS-357-35
		US-PATENT-4,582,289			US-PATENT-CLASS-528-193			US-PATENT-4,665,277
N87-21334*	c 37	NASA-CASE-NPO-16423-1-CU			US-PATENT-4,661,558	N87-23904*	c 33	NASA-CASE-GSC-12773-2
		US-PATENT-APPL-SN-765978	N87-22894*	c 33	NASA-CASE-NPO-16337-1-CU			US-PATENT-APPL-SN-809851
		US-PATENT-CLASS-228-124			US-PATENT-APPL-SN-683111			US-PATENT-CLASS-290-1-R
		US-PATENT-CLASS-228-208			US-PATENT-CLASS-324-158-D			US-PATENT-CLASS-310-15
		US-PATENT-CLASS-228-209			US-PATENT-CLASS-324-158-R			US-PATENT-CLASS-310-30
		US-PATENT-CLASS-427-229			US-PATENT-4,661,770			US-PATENT-4,675,563
		US-PATENT-4,650,108	N87-22895*	c 33	NASA-CASE-GSC-12961-1	N87-23941* #	c 35	NAS 1.71-LAR-13689-1
N87-21410*	c 44	NASA-CASE-MFS-25978-1			US-PATENT-APPL-SN-754707			NASA-CASE-LAR-13689-1-NP
		US-PATENT-APPL-SN-636459			US-PATENT-CLASS-307-490			US-PATENT-APPL-SN-929869
		US-PATENT-CLASS-307-131			US-PATENT-CLASS-330-107	N87-23944*	c 35	NASA-CASE-MFS-28087-1
		US-PATENT-CLASS-307-31			US-PATENT-CLASS-330-294			US-PATENT-APPL-SN-805010
		US-PATENT-CLASS-307-64			US-PATENT-CLASS-331-177-R			US-PATENT-CLASS-373-10
		US-PATENT-CLASS-307-66			US-PATENT-CLASS-333-214			US-PATENT-CLASS-373-15
		US-PATENT-CLASS-307-80			US-PATENT-CLASS-333-217			US-PATENT-4,677,642
		US-PATENT-CLASS-318-107			US-PATENT-4,644,306	N87-23960*	c 36	NASA-CASE-NPO-16542-1-CU
		US-PATENT-CLASS-318-161			US-PATENT-4,649,287			US-PATENT-APPL-SN-781812
		US-PATENT-4,649,287			US-PATENT-APPL-SN-755288			US-PATENT-CLASS-350-3.73
N87-21591*	c 60	NASA-CASE-NPO-15982-1			US-PATENT-CLASS-165-1			US-PATENT-CLASS-350-3.81
		US-PATENT-APPL-SN-673685			US-PATENT-CLASS-165-104.14			US-PATENT-CLASS-372-103
		US-PATENT-CLASS-371-37			US-PATENT-CLASS-165-104.25			US-PATENT-CLASS-372-18
		US-PATENT-CLASS-371-40			US-PATENT-CLASS-165-104.26			US-PATENT-CLASS-372-43
		US-PATENT-4,649,541			US-PATENT-CLASS-165-34			US-PATENT-4,677,629
N87-21652*	c 71	NASA-CASE-LAR-13111-1-CU			US-PATENT-4,664,177	N87-23961*	c 36	NASA-CASE-NPO-16433-1
		US-PATENT-APPL-SN-751695	N87-22953*	c 35	NASA-CASE-NPO-16544-1-CU			US-PATENT-APPL-SN-790594
		US-PATENT-CLASS-73-583			US-PATENT-APPL-SN-746809			US-PATENT-CLASS-372-68
		US-PATENT-CLASS-73-589			US-PATENT-CLASS-324-61-R			US-PATENT-CLASS-372-81
		US-PATENT-CLASS-73-599			US-PATENT-CLASS-73-336.5			US-PATENT-4,677,636
		US-PATENT-4,644,794			US-PATENT-4,662,220	N87-23970*	c 37	NASA-CASE-NPO-15482-1
N87-21653*	c 71	NASA-CASE-LAR-13440-1	N87-22976*	c 37	NASA-CASE-LAR-13009-2			US-PATENT-APPL-SN-526739
		US-PATENT-APPL-SN-775989			US-PATENT-APPL-SN-495380			US-PATENT-CLASS-310-306
		US-PATENT-CLASS-73-1-DV			US-PATENT-APPL-SN-698279			US-PATENT-CLASS-337-393
		US-PATENT-CLASS-73-599			US-PATENT-CLASS-411-166			US-PATENT-4,665,334
		US-PATENT-4,649,750			US-PATENT-CLASS-411-368	N87-23981*	c 37	NASA-CASE-MSC-20797-1
N87-21680*	c 72	NASA-CASE-NPO-16061-1-CU			US-PATENT-CLASS-411-424			US-PATENT-APPL-SN-771537
		US-PATENT-APPL-SN-729768			US-PATENT-CLASS-411-427			US-PATENT-CLASS-156-286
		US-PATENT-CLASS-250-288			US-PATENT-CLASS-411-531			US-PATENT-CLASS-156-289
		US-PATENT-CLASS-250-423-R			US-PATENT-4,572,699			US-PATENT-CLASS-156-298
		US-PATENT-CLASS-250-424			US-PATENT-4,650,385			US-PATENT-CLASS-156-307.1
		US-PATENT-CLASS-250-427	N87-22977*	c 37	NASA-CASE-MFS-25964-2			US-PATENT-CLASS-156-307.3
		US-PATENT-CLASS-313-359.1			US-PATENT-APPL-SN-692801			US-PATENT-CLASS-156-307.7



		US-PATENT-CLASS-156-87			US-PATENT-CLASS-375-54			US-PATENT-CLASS-148-162
		US-PATENT-4,676,853			US-PATENT-CLASS-375-59			US-PATENT-CLASS-148-410
N87-23982*	c 37	NASA-CASE-LAR-13100-1			US-PATENT-CLASS-375-76			US-PATENT-4,676,846
		US-PATENT-APPL-SN-831377			US-PATENT-4,682,343	N87-28656*	c 27	NASA-CASE-LEW-14392-1
		US-PATENT-CLASS-250-238	N87-25555* #	c 35	NASA-CASE-MSC-21166-1			US-PATENT-APPL-SN-886149
		US-PATENT-CLASS-250-352			US-PATENT-APPL-SN-032685			US-PATENT-CLASS-264-332
		US-PATENT-CLASS-62-514-R	N87-25558* #	c 35	NASA-CASE-LAR-13564-1			US-PATENT-CLASS-264-60
		US-PATENT-4,672,202			US-PATENT-APPL-SN-044180			US-PATENT-CLASS-264-63
N87-23983*	c 37	NASA-CASE-LAR-13198-1	N87-25561* #	c 35	NASA-CASE-LAR-13680-1			US-PATENT-CLASS-428-367
		US-PATENT-APPL-SN-729704			US-PATENT-APPL-SN-052941			US-PATENT-4,689,188
		US-PATENT-CLASS-60-634	N87-25567*	c 36	NASA-CASE-NPO-16497-1-CU	N87-28657*	c 27	NASA-CASE-LAR-13450-1
		US-PATENT-CLASS-60-638			US-PATENT-APPL-SN-783887			US-PATENT-APPL-SN-840816
		US-PATENT-CLASS-89-1.14			US-PATENT-CLASS-307-425			US-PATENT-CLASS-428-290
		US-PATENT-4,669,354			US-PATENT-CLASS-372-20			US-PATENT-CLASS-525-426
N87-24564*	c 27	NASA-CASE-ARC-11533-3			US-PATENT-CLASS-372-4			US-PATENT-CLASS-525-432
		US-PATENT-APPL-SN-852467			US-PATENT-CLASS-372-69			US-PATENT-CLASS-525-436
		US-PATENT-CLASS-528-413			US-PATENT-CLASS-372-99			US-PATENT-CLASS-525-903
		US-PATENT-4,675,379			US-PATENT-4,682,053			US-PATENT-4,695,610
N87-24575* #	c 27	NAS 1.71:LAR-13633-1	N87-25573*	c 37	NASA-CASE-ARC-11620-1	N87-28831*	c 33	NASA-CASE-LAR-13407-1
		NASA-CASE-LAR-13633-1			US-PATENT-APPL-SN-795945			US-PATENT-APPL-SN-804196
		US-PATENT-APPL-SN-011693			US-PATENT-CLASS-137-614.11			US-PATENT-CLASS-313-505
N87-24689*	c 37	NASA-CASE-MFS-28110-1			US-PATENT-CLASS-137-614.18			US-PATENT-CLASS-313-506
		US-PATENT-APPL-SN-852466			US-PATENT-CLASS-251-129.15			US-PATENT-CLASS-313-509
		US-PATENT-CLASS-239-433			US-PATENT-CLASS-251-175			US-PATENT-4,689,522
		US-PATENT-CLASS-239-596			US-PATENT-4,681,142	N87-28832*	c 33	NASA-CASE-LEW-14108-1
		US-PATENT-CLASS-239-600	N87-25582*	c 37	NASA-CASE-MSC-20910-1			US-PATENT-APPL-SN-732321
		US-PATENT-4,666,086			US-PATENT-APPL-SN-783888			US-PATENT-CLASS-313-237
N87-24874*	c 52	NASA-CASE-MFS-26011-1-SB			US-PATENT-CLASS-244-161			US-PATENT-CLASS-313-278
		US-PATENT-APPL-SN-655605			US-PATENT-CLASS-292-DIG.49			US-PATENT-4,687,964
		US-PATENT-CLASS-351-206			US-PATENT-CLASS-292-201	N87-28833*	c 33	NASA-CASE-ARC-11613-1
		US-PATENT-CLASS-351-208			US-PATENT-CLASS-292-64			US-PATENT-APPL-SN-739792
		US-PATENT-CLASS-354-62			US-PATENT-4,682,745			US-PATENT-CLASS-244-134-D
		US-PATENT-4,669,836	N87-25585* #	c 37	NASA-CASE-LEW-14196-2			US-PATENT-CLASS-318-116
N87-25334*	c 09	NASA-CASE-LAR-13522-1-SB			US-PATENT-APPL-SN-054983			US-PATENT-4,690,353
		US-PATENT-APPL-SN-890575	N87-25601*	c 39	NASA-CASE-MFS-28118-1	N87-28867*	c 34	NASA-CASE-MSC-20946-1
		US-PATENT-CLASS-73-147			US-PATENT-APPL-SN-886121			US-PATENT-APPL-SN-875799
		US-PATENT-CLASS-73-856			US-PATENT-CLASS-73-809			US-PATENT-CASE-165-1
		US-PATENT-4,682,494			US-PATENT-CLASS-73-810			US-PATENT-CASE-165-104.25
N87-25344*	c 14	NASA-CASE-ARC-11646-1			US-PATENT-4,676,110			US-PATENT-CASE-165-104.26
		US-PATENT-APPL-SN-924398	N87-25803* #	c 62	NASA-CASE-NPO-17058-1-CU			US-PATENT-CASE-165-13
		US-PATENT-CLASS-434-34			US-PATENT-APPL-SN-060201			US-PATENT-CASE-165-32
		US-PATENT-4,678,438	N87-25843*	c 74	NASA-CASE-MFS-29207-1			US-PATENT-CASE-165-41
N87-25348*	c 17	NASA-CASE-MSC-20821-1			US-PATENT-APPL-SN-713449			US-PATENT-4,687,048
		US-PATENT-APPL-SN-775990			US-PATENT-APPL-SN-783890	N87-28884*	c 35	NASA-CASE-LAR-13512-1
		US-PATENT-CLASS-358-105			US-PATENT-CLASS-219-124.34			US-PATENT-APPL-SN-901113
		US-PATENT-CLASS-358-133			US-PATENT-CLASS-219-130.01			US-PATENT-CLASS-285-137.1
		US-PATENT-CLASS-358-138			US-PATENT-CLASS-219-74			US-PATENT-CLASS-285-901
		US-PATENT-4,682,225			US-PATENT-4,633,060			US-PATENT-CLASS-73-147
N87-25455*	c 26	NASA-CASE-LAR-13474-1-SB			US-PATENT-4,682,006			US-PATENT-CLASS-73-756
		US-PATENT-APPL-SN-840900	N87-25862*	c 76	NASA-CASE-MFS-28060-1			US-PATENT-4,688,422
		US-PATENT-CLASS-148-6.3			US-PATENT-APPL-SN-706565	N87-29118*	c 54	NASA-CASE-LAR-13393-1
		US-PATENT-CLASS-204-192.15			US-PATENT-CLASS-356-128			US-PATENT-APPL-SN-760799
		US-PATENT-CLASS-204-192.23			US-PATENT-CLASS-356-129			US-PATENT-CLASS-182-223
		US-PATENT-CLASS-428-607			US-PATENT-4,681,437			US-PATENT-CLASS-182-63
		US-PATENT-CLASS-428-632	N87-25868* #	c 76	NASA-CASE-NPO-16808-1-CU			US-PATENT-CLASS-182-82
		US-PATENT-CLASS-428-651			US-PATENT-APPL-SN-027981			US-PATENT-4,685,535
		US-PATENT-CLASS-428-660	N87-27713*	c 18	NASA-CASE-LAR-13489-1	N87-29360*	c 76	NASA-CASE-LAR-13476-1-CU
		US-PATENT-4,681-818			US-PATENT-APPL-SN-890445			US-PATENT-APPL-SN-933961
N87-25469*	c 27	NASA-CASE-ARC-11548-1			US-PATENT-CLASS-285-27			US-PATENT-CLASS-423-338
		US-PATENT-APPL-SN-806572			US-PATENT-CLASS-285-31			US-PATENT-CLASS-423-339
		US-PATENT-CLASS-428-413			US-PATENT-CLASS-285-373			US-PATENT-4,696,808
		US-PATENT-CLASS-428-417			US-PATENT-CLASS-285-421	N87-29372*	c 82	NASA-CASE-LAR-13306-1
		US-PATENT-CLASS-528-108			US-PATENT-CLASS-285-86			US-PATENT-APPL-SN-846430
		US-PATENT-CLASS-528-168			US-PATENT-CLASS-403-341			US-PATENT-CLASS-340-407
		US-PATENT-4,668,589			US-PATENT-4,684,156			US-PATENT-CLASS-434-114
N87-25474* #	c 27	NASA-CASE-LAR-13732-1	N87-27742* #	c 24	NASA-CASE-LAR-13150-1			US-PATENT-4,687,444
		US-PATENT-APPL-SN-035430			US-PATENT-APPL-SN-729767	N87-29586* #	c 18	NAS 1.71:LAR-13738-1
N87-25489* #	c 29	NASA-CASE-NPO-17022-1-CU			US-PATENT-CLASS-29-156.5-R			NASA-CASE-LAR-13738-1
		US-PATENT-APPL-SN-066450			US-PATENT-CLASS-92-208			US-PATENT-APPL-SN-073539
N87-25491*	c 31	NASA-CASE-MFS-28044-1			US-PATENT-4,683,809	N87-29650* #	c 26	NAS 1.71:LAR-13632-1
		US-PATENT-APPL-SN-804039	N87-28006*	c 36	NASA-CASE-NPO-16567-1-CU			NASA-CASE-LAR-13632-1
		US-PATENT-CLASS-408-1-R			US-PATENT-APPL-SN-760790			US-PATENT-APPL-SN-079316
		US-PATENT-CLASS-51-281-R			US-PATENT-CLASS-250-339	N87-29672* #	c 27	NAS 1.71:MSC-21082-1
		US-PATENT-4,680,897			US-PATENT-CLASS-250-343			NASA-CASE-MSC-21082-1
N87-25492*	c 31	NASA-CASE-LAR-13113-1			US-PATENT-CLASS-250-373			US-PATENT-APPL-SN-079320
		US-PATENT-APPL-SN-831371			US-PATENT-CLASS-356-256	N88-14071*	c 02	NASA-CASE-LAR-13286-1
		US-PATENT-CLASS-182-152			US-PATENT-CLASS-356-409			US-PATENT-APPL-SN-688959
		US-PATENT-CLASS-52-108			US-PATENT-CLASS-356-51			US-PATENT-CLASS-114-67R
		US-PATENT-CLASS-52-632			US-PATENT-4,684,258			US-PATENT-CLASS-138-38
		US-PATENT-CLASS-52-646	N87-28416*	c 74	NASA-CASE-ARC-11611-1			US-PATENT-CLASS-244-130
		US-PATENT-4,677,803			US-PATENT-APPL-SN-765981			US-PATENT-CLASS-244-199
N87-25495* #	c 31	NASA-CASE-MSC-21025-1			US-PATENT-CLASS-156-163			US-PATENT-CLASS-244-200
		US-PATENT-APPL-SN-035401			US-PATENT-CLASS-156-229			US-PATENT-CLASS-296-1S
N87-25511*	c 32	NASA-CASE-NPO-16414-1-CU			US-PATENT-CLASS-156-286			US-PATENT-4,706,910
		US-PATENT-APPL-SN-729719			US-PATENT-CLASS-156-382	N88-14083*	c 03	NASA-CASE-LAR-13470-1
		US-PATENT-CLASS-332-23-A			US-PATENT-CLASS-156-494			US-PATENT-APPL-SN-855983
		US-PATENT-CLASS-375-101			US-PATENT-CLASS-264-291			US-PATENT-CLASS-361-218
		US-PATENT-CLASS-375-102			US-PATENT-4,684,424			US-PATENT-CLASS-361-222
		US-PATENT-CLASS-375-39	N87-28605*	c 23	NASA-CASE-ARC-11425-2			US-PATENT-4,698,723
		US-PATENT-CLASS-375-54			US-PATENT-APPL-SN-641152	N88-14179*	c 26	NASA-CASE-LEW-14104-2
		US-PATENT-CLASS-455-65			US-PATENT-CLASS-558-145			US-PATENT-APPL-SN-661481
		US-PATENT-4,675,880			US-PATENT-CLASS-558-190			US-PATENT-APPL-SN-823713
N87-25531*	c 33	NASA-CASE-MSC-20187-1			US-PATENT-CLASS-558-193			US-PATENT-CLASS-148-16.6
		US-PATENT-APPL-SN-649327			US-PATENT-4,689,421			US-PATENT-CLASS-204-192.31
		US-PATENT-CLASS-371-43	N87-28647*	c 26	NASA-CASE-LEW-14262-1			US-PATENT-CLASS-427-38
		US-PATENT-CLASS-375-120			US-PATENT-APPL-SN-832296			US-PATENT-4,704,168

N88-14223*	c 31	NASA-CASE-NPO-16734-1-CU US-PATENT-APPL-SN-855982 US-PATENT-CLASS-62-467 US-PATENT-CLASS-62-48 US-PATENT-CLASS-62-514R US-PATENT-4,697,425	US-PATENT-CLASS-73-178-R US-PATENT-4,727,751	NASA-CASE-LAR-13508-1 US-PATENT-APPL-SN-146939
N88-14270*	c 33	NASA-CASE-NPO-16764-1-CU US-PATENT-APPL-SN-904513 US-PATENT-CLASS-439-271 US-PATENT-CLASS-439-578 US-PATENT-4,698,028	N88-23765* c 05 NASA-CASE-LAR-13511-1 US-PATENT-APPL-SN-013801 US-PATENT-CLASS-244-119 US-PATENT-CLASS-244-120 US-PATENT-CLASS-244-130 US-PATENT-CLASS-244-15 US-PATENT-4,735,381	N88-23963* # c 35 NAS 1.71:LAR-13519-1 NASA-CASE-LAR-13519-1 US-PATENT-APPL-SN-146938 NASA-CASE-MS-20467-1 US-PATENT-APPL-SN-874319 US-PATENT-CLASS-73-587 US-PATENT-CLASS-73-801 US-PATENT-4,738,137
N88-14271*	c 33	NASA-CASE-GSC-12782-1 US-PATENT-APPL-SN-399074 US-PATENT-CLASS-357-231 US-PATENT-CLASS-357-24 US-PATENT-CLASS-357-30 US-PATENT-CLASS-357-30 US-PATENT-CLASS-357-56 US-PATENT-CLASS-357-61 US-PATENT-CLASS-357-65 US-PATENT-4,709,252	N88-23808* c 08 NASA-CASE-GSC-12970-1 US-PATENT-APPL-SN-795805 US-PATENT-CLASS-244-165 US-PATENT-4,732,353	N88-23966* c 35 NASA-CASE-LAR-13458-1 US-PATENT-APPL-SN-013802 US-PATENT-CLASS-73-794 US-PATENT-CLASS-73-810 US-PATENT-4,718,281
N88-14350*	c 36	NASA-CASE-ARC-11634-1 US-PATENT-APPL-SN-846427 US-PATENT-CLASS-350-163 US-PATENT-CLASS-350-174 US-PATENT-CLASS-350-572 US-PATENT-CLASS-350-573 US-PATENT-CLASS-356-28.5 US-PATENT-4,697,922	N88-23809* c 08 NASA-CASE-LAR-13630-1 US-PATENT-APPL-SN-008895 US-PATENT-CLASS-244-17.19 US-PATENT-CLASS-244-91 US-PATENT-4,708,305	N88-23973* # c 37 NAS 1.71:MSC-21171-1 NASA-CASE-MS-21171-1 US-PATENT-APPL-SN-135120 NAS 1.71:MFS-28273-1 NASA-CASE-MFS-28273-1 US-PATENT-APPL-SN-149830 NASA-CASE-LEW-14212-1 US-PATENT-APPL-SN-875798 US-PATENT-CLASS-415-136 US-PATENT-CLASS-415-170-R US-PATENT-4,728,257
N88-14359*	c 37	NASA-CASE-LAR-13662-1 US-PATENT-APPL-SN-790597 US-PATENT-APPL-SN-904812 US-PATENT-CLASS-228-107 US-PATENT-CLASS-228-109 US-PATENT-CLASS-228-2.5 US-PATENT-4,708,280	N88-23827* c 18 NASA-CASE-MS-21056-1 US-PATENT-APPL-SN-934397 US-PATENT-CLASS-16-292 US-PATENT-CLASS-16-297 US-PATENT-CLASS-16-326 US-PATENT-CLASS-16-332 US-PATENT-CLASS-16-345 US-PATENT-CLASS-16-347 US-PATENT-CLASS-16-349 US-PATENT-4,736,490	N88-23978* c 37 NASA-CASE-MFS-28185-1 US-PATENT-APPL-SN-056930 US-PATENT-CLASS-294-106 US-PATENT-CLASS-294-113 US-PATENT-CLASS-294-119.2 US-PATENT-CLASS-294-16 US-PATENT-4,723,800
N88-14360*	c 37	NASA-CASE-MFS-28001-2 US-PATENT-APPL-SN-025039 US-PATENT-APPL-SN-739788 US-PATENT-CLASS-269-43 US-PATENT-CLASS-269-71 US-PATENT-CLASS-269-73 US-PATENT-4,708,330	N88-23828* c 18 NASA-CASE-LAR-13411-1-SB US-PATENT-APPL-SN-913432 US-PATENT-CLASS-180-8.6 US-PATENT-CLASS-414-735 US-PATENT-CLASS-414-750 US-PATENT-CLASS-901-1 US-PATENT-CLASS-901-33 US-PATENT-4,738,583	N88-23980* c 37 NASA-CASE-MFS-29252-1 US-PATENT-APPL-SN-044181 US-PATENT-CLASS-219-137.42 US-PATENT-CLASS-219-75 US-PATENT-4,749,839
N88-14361*	c 37	NASA-CASE-LAR-13453-1 US-PATENT-APPL-SN-010950 US-PATENT-CLASS-33-147D US-PATENT-CLASS-73-834 US-PATENT-4,706,387	N88-23845* c 25 NASA-CASE-MFS-28142-1 US-PATENT-APPL-SN-904128 US-PATENT-CLASS-204-180.1 US-PATENT-CLASS-204-299-R US-PATENT-4,752,372	N88-23981* c 37 NASA-CASE-LAR-13435-1 US-PATENT-APPL-SN-890683 US-PATENT-CLASS-123-193-P US-PATENT-CLASS-92-176 US-PATENT-CLASS-92-212 US-PATENT-CLASS-92-214 US-PATENT-CLASS-92-222 US-PATENT-CLASS-92-224 US-PATENT-4,736,676
N88-14362*	c 37	NASA-CASE-MFS-29177-1 US-PATENT-APPL-SN-010942 US-PATENT-CLASS-219-124.34 US-PATENT-CLASS-219-130.01 US-PATENT-CLASS-219-136 US-PATENT-4,698,484	N88-23846* c 25 NASA-CASE-NPO-15609-2 US-PATENT-APPL-SN-511363 US-PATENT-APPL-SN-761310 US-PATENT-CLASS-159-3 US-PATENT-CLASS-159-48.2 US-PATENT-CLASS-159-900 US-PATENT-CLASS-203-90 US-PATENT-CLASS-203-91 US-PATENT-CLASS-203-98 US-PATENT-4,666,561	N88-23982* c 37 NASA-CASE-LAR-12801-1 US-PATENT-APPL-SN-309291 US-PATENT-CLASS-188-373 US-PATENT-CLASS-248-548 US-PATENT-CLASS-248-608 US-PATENT-CLASS-297-216 US-PATENT-4,720,139
N88-14492*	c 44	NASA-CASE-ARC-11622-1 US-PATENT-APPL-SN-823712 US-PATENT-CLASS-126-425 US-PATENT-CLASS-250-203R US-PATENT-4,710,618	N88-23894* c 27 NASA-CASE-GSC-13008-1 US-PATENT-APPL-SN-867987 US-PATENT-CLASS-264-DIG.64 US-PATENT-CLASS-264-50 US-PATENT-CLASS-425-4-R US-PATENT-4,731,211	N88-24163* c 54 NASA-CASE-MFS-26009-1-SB US-PATENT-APPL-SN-805011 US-PATENT-CLASS-108-3 US-PATENT-CLASS-108-7 US-PATENT-CLASS-312-196 US-PATENT-CLASS-312-208 US-PATENT-CLASS-312-300 US-PATENT-CLASS-312-7.2 US-PATENT-4,725,106
N88-14835*	c 76	NASA-CASE-MFS-26008-1-CU US-PATENT-APPL-SN-800194 US-PATENT-CLASS-156-621 US-PATENT-CLASS-156-622 US-PATENT-CLASS-156-624 US-PATENT-CLASS-422-251 US-PATENT-CLASS-422-260 US-PATENT-4,711,697	N88-23917* # c 31 NAS 1.71:NPO-17334-1-CU NASA-CASE-NPO-17334-1-CU US-PATENT-APPL-SN-149821	N88-24169* c 60 NASA-CASE-NPO-16462-1-CU US-PATENT-APPL-SN-815106 US-PATENT-CLASS-364-728 US-PATENT-CLASS-364-757 US-PATENT-CLASS-382-42 US-PATENT-4,750,144
N88-14836*	c 76	NASA-CASE-NPO-16607-1-CU US-PATENT-APPL-SN-901114 US-PATENT-CLASS-357-30 US-PATENT-CLASS-437-128 US-PATENT-CLASS-437-131 US-PATENT-CLASS-437-3 US-PATENT-CLASS-437-7 US-PATENT-CLASS-437-8 US-PATENT-CLASS-437-969 US-PATENT-4,711,857	N88-23941* c 33 NASA-CASE-MS-20181-1 US-PATENT-APPL-SN-392093 US-PATENT-CLASS-174-52-PE US-PATENT-CLASS-174-52-R US-PATENT-CLASS-174-52-S US-PATENT-CLASS-357-72 US-PATENT-CLASS-357-74 US-PATENT-CLASS-357-81 US-PATENT-CLASS-525-425 US-PATENT-4,750,031	N88-24241* c 71 NASA-CASE-NPO-16675-1-CU US-PATENT-APPL-SN-627537 US-PATENT-APPL-SN-789266 US-PATENT-CLASS-181-0.5 US-PATENT-CLASS-367-191 US-PATENT-CLASS-73-505 US-PATENT-4,573,356 US-PATENT-4,736,815
N88-18628*	c 24	NAS 1.71:ARC-11641-1 NASA-CASE-ARC-11641-1 US-PATENT-APPL-SN-862925 US-PATENT-CLASS-244-117-A US-PATENT-CLASS-244-158-A US-PATENT-CLASS-428-44 US-PATENT-CLASS-428-74 US-PATENT-CLASS-428-76 US-PATENT-CLASS-428-920 US-PATENT-4,713,275	N88-23942* c 33 NASA-CASE-LAR-13202-1 US-PATENT-APPL-SN-879758 US-PATENT-CLASS-315-200-R US-PATENT-CLASS-315-227-R US-PATENT-CLASS-315-241-R US-PATENT-CLASS-315-254 US-PATENT-CLASS-315-255 US-PATENT-CLASS-315-276 US-PATENT-CLASS-315-277 US-PATENT-4,723,096	N88-24253* c 72 NASA-CASE-MFS-28122-1 US-PATENT-APPL-SN-021100 US-PATENT-CLASS-250-251 US-PATENT-CLASS-250-423-R US-PATENT-CLASS-250-427 US-PATENT-CLASS-315-111.41 US-PATENT-CLASS-315-111.71 US-PATENT-CLASS-315-111.81 US-PATENT-4,742,232
N88-18725*	c 27	NAS 1.71:LAR-13447-1 NASA-CASE-LAR-13447-1 US-PATENT-APPL-SN-855879 US-PATENT-CLASS-525-397 US-PATENT-CLASS-525-905 US-PATENT-4,711,932	N88-23946* # c 34 NAS 1.71:NPO-17291-1-CU NASA-CASE-NPO-17291-1-CU NASA-CASE-MS-20841-2 US-PATENT-APPL-SN-032679 US-PATENT-APPL-SN-755288 US-PATENT-CLASS-126-423 US-PATENT-CLASS-165-1 US-PATENT-CLASS-165-104.14 US-PATENT-CLASS-165-13 US-PATENT-CLASS-165-41 US-PATENT-4,664,177 US-PATENT-4,750,543	N88-24543* c 76 NASA-CASE-NPO-16681-1-CU US-PATENT-APPL-SN-764812 US-PATENT-CLASS-204-192.15 US-PATENT-CLASS-204-192.24 US-PATENT-4,726,890
N88-23759*	c 02	NASA-CASE-LAR-13436-1-CU US-PATENT-APPL-SN-003676 US-PATENT-CLASS-73-147	N88-23959* # c 35 NAS 1.71:MFS-28287-1 NASA-CASE-MFS-28287-1 US-PATENT-APPL-SN-122740	N88-24544* c 76 NASA-CASE-MFS-28137-1 US-PATENT-APPL-SN-925189 US-PATENT-CLASS-156-DIG.70 US-PATENT-CLASS-156-DIG.72 US-PATENT-CLASS-156-DIG.82
N88-23962* #	c 35	NAS 1.71:LAR-13508-1	N88-23962* # c 35 NAS 1.71:LAR-13508-1	

		US-PATENT-CLASS-156-607			US-PATENT-CLASS-244-159			US-PATENT-CLASS-165-905
		US-PATENT-CLASS-156-621			US-PATENT-4,757,767			US-PATENT-4,765,396
		US-PATENT-CLASS-156-624	N88-26404*	c 23	NASA-CASE-LEW-14345-1	N88-29149*	c 35	NASA-CASE-LAR-13776-1
		US-PATENT-CLASS-422-246			US-PATENT-APPL-SN-924474			US-PATENT-APPL-SN-054980
		US-PATENT-4,738,831			US-PATENT-CLASS-260-386			US-PATENT-APPL-SN-846429
N88-24545*	c 76	NASA-CASE-MFS-28144-1			US-PATENT-CLASS-260-389			US-PATENT-CLASS-244-134-F
		US-PATENT-APPL-SN-924399			US-PATENT-CLASS-260-395			US-PATENT-CLASS-324-61-R
		US-PATENT-CLASS-156-DIG.70			US-PATENT-CLASS-549-241			US-PATENT-CLASS-340-580
		US-PATENT-CLASS-156-DIG.72	N88-26541* #	c 32	US-PATENT-4,758,380	N88-29150*	c 35	US-PATENT-4,766,369
		US-PATENT-CLASS-156-DIG.84			NAS 1.71:NPO-17184-1-CU			NASA-CASE-LAR-13826-1
		US-PATENT-CLASS-156-DIG.88			NASA-CASE-NPO-17184-1-CU			US-PATENT-APPL-SN-102705
		US-PATENT-CLASS-156-DIG.89			US-PATENT-APPL-SN-195225			US-PATENT-APPL-SN-684186
		US-PATENT-CLASS-156-DIG.92	N88-26568*	c 32	NASA-CASE-MSC-20912-1			US-PATENT-APPL-SN-890982
		US-PATENT-CLASS-156-620.76			US-PATENT-APPL-SN-831193			US-PATENT-CLASS-73-290-R
		US-PATENT-4,740,264			US-PATENT-CLASS-342-125			US-PATENT-CLASS-73-304-R
N88-24660* #	c 16	NAS 1.71:MSC-21330-1			US-PATENT-CLASS-342-127			US-PATENT-4,765,187
		NASA-CASE-MSC-21330-1			US-PATENT-CLASS-342-43	N88-29151*	c 35	NASA-CASE-NPO-17068-1-CU
		US-PATENT-APPL-SN-182000			US-PATENT-CLASS-342-51			US-PATENT-APPL-SN-076956
N88-24684* #	c 20	NAS 1.71:MSC-21299-1			US-PATENT-4,757,315			US-PATENT-CLASS-60-527
		NASA-CASE-MSC-21299-1	N88-26596*	c 33	NASA-CASE-NPO-17157-1-CU			US-PATENT-4,765,139
		US-PATENT-APPL-SN-176587			US-PATENT-APPL-SN-116810	N88-29180*	c 37	NASA-CASE-MSC-21207-1
N88-24692*	c 23	NASA-CASE-ARC-11428-3			US-PATENT-CLASS-331-162			US-PATENT-APPL-SN-032818
		US-PATENT-APPL-SN-599126			US-PATENT-CLASS-331-3			US-PATENT-CLASS-403-171
		US-PATENT-APPL-SN-760374			US-PATENT-CLASS-331-94.1			US-PATENT-CLASS-403-217
		US-PATENT-APPL-SN-924467			US-PATENT-4,757,278			US-PATENT-CLASS-52-646
		US-PATENT-CLASS-558-80	N88-28914*	c 05	NASA-CASE-ARC-11636-1			US-PATENT-CLASS-52-648
		US-PATENT-CLASS-564-13			US-PATENT-APPL-SN-933963			US-PATENT-4,763,459
		US-PATENT-4,550,177			US-PATENT-CLASS-244-12.3	N88-29181*	c 37	NASA-CASE-MSC-21132-1
		US-PATENT-4,634,759			US-PATENT-CLASS-244-12.4			US-PATENT-APPL-SN-118992
N88-24732*	c 25	US-PATENT-4,748,263			US-PATENT-CLASS-244-207			US-PATENT-CLASS-188-218-XL
		NASA-CASE-NPO-16907-1-CU			US-PATENT-CLASS-244-45-A			US-PATENT-CLASS-188-251-A
		US-PATENT-APPL-SN-930217			US-PATENT-CLASS-244-55			US-PATENT-4,763,762
		US-PATENT-CLASS-204-157.22	N88-28939*	c 09	US-PATENT-4,767,083	N88-29310*	c 60	NASA-CASE-NPO-16116-2
		US-PATENT-CLASS-250-423-P			NASA-CASE-LEW-14374-1			US-PATENT-APPL-SN-004282
		US-PATENT-CLASS-250-427			US-PATENT-APPL-SN-060200			US-PATENT-APPL-SN-587749
		US-PATENT-4,704,197			US-PATENT-CLASS-219-383			US-PATENT-CLASS-364-200
N88-24817* #	c 31	NAS 1.71:MFS-28248-1			US-PATENT-CLASS-363-97	N88-29602* #	c 76	US-PATENT-4,766,533
		NASA-CASE-MFS-28248-1			US-PATENT-CLASS-60-203.1			NAS 1.71:MFS-28282-1
		US-PATENT-APPL-SN-176545			US-PATENT-4,766,724			NASA-CASE-MFS-28282-1
N88-24862*	c 33	NASA-CASE-NPO-16402-2	N88-28946* #	c 17	NAS 1.71:NPO-17310-1-CU			US-PATENT-APPL-SN-217533
		US-PATENT-APPL-SN-013803			NASA-CASE-NPO-17310-1-CU	N88-30108*	c 35	NASA-CASE-LAR-13797-1
		US-PATENT-APPL-SN-727931			US-PATENT-APPL-SN-200874			US-PATENT-APPL-SN-074792
		US-PATENT-CLASS-307-106	N88-28958*	c 18	NASA-CASE-MSC-21117-1			US-PATENT-APPL-SN-831372
		US-PATENT-CLASS-315-172			US-PATENT-APPL-SN-929875			US-PATENT-CLASS-156-233
		US-PATENT-CLASS-315-173			US-PATENT-CLASS-52-646			US-PATENT-CLASS-156-247
		US-PATENT-CLASS-328-67			US-PATENT-CLASS-52-648			US-PATENT-CLASS-156-272.4
		US-PATENT-4,698,518			US-PATENT-4,765,114			US-PATENT-CLASS-156-274.8
N88-24863* #	c 33	NAS 1.71:NPO-16882-1-CU	N88-29002*	c 25	NASA-CASE-LAR-13528-1			US-PATENT-CLASS-156-275.5
		NASA-CASE-NPO-16882-1-CU			US-PATENT-APPL-SN-933962			US-PATENT-CLASS-156-307.7
		US-PATENT-APPL-SN-154711			US-PATENT-CLASS-236-15-E			US-PATENT-4,767,484
N88-24927*	c 35	NASA-CASE-MSC-20549-2			US-PATENT-CLASS-364-500	N88-30131*	c 37	NASA-CASE-MSC-20900-1
		US-PATENT-APPL-SN-045743			US-PATENT-CLASS-364-557			US-PATENT-APPL-SN-079317
		US-PATENT-APPL-SN-790596			US-PATENT-CLASS-364-571			US-PATENT-CLASS-219-121.54
		US-PATENT-CLASS-254-93-H			US-PATENT-CLASS-374-36			US-PATENT-CLASS-219-121.56
		US-PATENT-CLASS-254-93-R			US-PATENT-CLASS-431-13			US-PATENT-CLASS-219-121.57
		US-PATENT-CLASS-269-147			US-PATENT-CLASS-431-76			US-PATENT-CLASS-219-124.02
		US-PATENT-CLASS-269-246			US-PATENT-4,761,744			US-PATENT-CLASS-219-130.04
		US-PATENT-CLASS-72-750	N88-29040*	c 27	NASA-CASE-ARC-11649-1-SB			US-PATENT-4,766,286
		US-PATENT-4,736,927			US-PATENT-APPL-SN-890577	N88-30160* #	c 39	NAS 1.71:LAR-13889-1
N88-24941* #	c 35	NAS 1.71:MSC-21094-1			US-PATENT-CLASS-501-88			NASA-CASE-LAR-13889-1
		NASA-CASE-MSC-21094-1			US-PATENT-CLASS-501-91			US-PATENT-APPL-SN-210277
		US-PATENT-APPL-SN-156393			US-PATENT-CLASS-501-92	N89-11738*	c 05	NASA-CASE-LAR-12852-1
N88-24943* #	c 35	NAS 1.71:NPO-17024-1-CU			US-PATENT-CLASS-501-93			US-PATENT-APPL-SN-028832
		NASA-CASE-NPO-17024-1-CU			US-PATENT-CLASS-528-10			US-PATENT-CLASS-244-75-R
		US-PATENT-APPL-SN-159613			US-PATENT-CLASS-528-30			US-PATENT-CLASS-244-78
N88-24958*	c 36	NASA-CASE-MSC-20867-1			US-PATENT-CLASS-528-4			US-PATENT-4,773,620
		US-PATENT-APPL-SN-045984			US-PATENT-4,767,728	N89-11814* #	c 23	NAS 1.71:LAR-13988-1
		US-PATENT-CLASS-356-1	N88-29052*	c 31	NASA-CASE-MSC-18172-3			NASA-CASE-LAR-13988-1
		US-PATENT-CLASS-356-376			US-PATENT-APPL-SN-119334			US-PATENT-APPL-SN-250661
		US-PATENT-CLASS-356-4			US-PATENT-APPL-SN-755960	N89-11961*	c 32	NASA-CASE-MSC-20873-1-SB
		US-PATENT-CLASS-358-107			US-PATENT-APPL-SN-898449			US-PATENT-APPL-SN-060196
		US-PATENT-CLASS-364-561			US-PATENT-CLASS-210-500.25			US-PATENT-CLASS-342-374
		US-PATENT-4,736,247			US-PATENT-CLASS-210-500.35			US-PATENT-CLASS-342-375
N88-24969* #	c 37	NAS 1.71:MSC-21354-1			US-PATENT-CLASS-210-639			US-PATENT-CLASS-343-777
		NASA-CASE-MSC-21354-1			US-PATENT-CLASS-210-653			US-PATENT-CLASS-343-778
		US-PATENT-APPL-SN-154712			US-PATENT-CLASS-427-245			US-PATENT-CLASS-343-779
N88-25011* #	c 39	NAS 1.71:LAR-13705-1			US-PATENT-4,762,619			US-PATENT-4,772,893
		NASA-CASE-LAR-13705-1	N88-29076*	c 32	NASA-CASE-NPO-17196-1-CU	N89-12048*	c 35	NASA-CASE-LEW-14297-1
		US-PATENT-APPL-SN-203177			US-PATENT-APPL-SN-084770			US-PATENT-APPL-SN-917125
N88-25301* #	c 74	NAS 1.71:NPO-17139-1-CU			US-PATENT-CLASS-328-155			US-PATENT-CLASS-126-443
		NASA-CASE-NPO-17139-1-CU			US-PATENT-CLASS-331-17			US-PATENT-CLASS-126-901
		US-PATENT-APPL-SN-154718			US-PATENT-CLASS-331-25			US-PATENT-CLASS-165-41
N88-25302* #	c 74	NAS 1.71:LAR-13387-1			US-PATENT-4,771,250			US-PATENT-CLASS-165-904
		NASA-CASE-LAR-13387-1	N88-29095* #	c 33	NAS 1.71:NPO-17233-1-CU			US-PATENT-4,770,232
		US-PATENT-APPL-SN-154716			NASA-CASE-NPO-17233-1-CU	N89-12551*	c 02	NASA-CASE-LAR-13554-1
N88-25304* #	c 74	NAS 1.71:NPO-17207-1-CU			US-PATENT-APPL-SN-231025			US-PATENT-APPL-SN-929862
		NASA-CASE-NPO-17207-1-CU	N88-29132*	c 34	NASA-CASE-MSC-20840-1			US-PATENT-CLASS-116-DIG.43
		US-PATENT-APPL-SN-190185			US-PATENT-APPL-SN-943346			US-PATENT-CLASS-116-265
N88-25305* #	c 74	NAS 1.71:NPO-17144-1-CU			US-PATENT-CLASS-165-170			US-PATENT-CLASS-73-147
		NASA-CASE-NPO-17144-1-CU			US-PATENT-CLASS-165-81			US-PATENT-4,774,835
		US-PATENT-APPL-SN-187716			US-PATENT-4,762,173	N89-12621*	c 18	NASA-CASE-MSC-21096-1
N88-26398*	c 18	NASA-CASE-MSC-20985-1	N88-29133*	c 34	NASA-CASE-GSC-13019-1			US-PATENT-APPL-SN-929865
		US-PATENT-APPL-SN-904134			US-PATENT-APPL-SN-942158			US-PATENT-CLASS-182-103
		US-PATENT-CLASS-104-172.1			US-PATENT-CLASS-122-366			US-PATENT-CLASS-212-225
		US-PATENT-CLASS-104-35			US-PATENT-CLASS-138-38			US-PATENT-CLASS-212-257
		US-PATENT-CLASS-104-49			US-PATENT-CLASS-165-104.26			US-PATENT-CLASS-414-689

		US-PATENT-CLASS-414-718			US-PATENT-APPL-SN-904132			US-PATENT-CLASS-239-2.1
		US-PATENT-CLASS-414-735			US-PATENT-CLASS-244-35-R			US-PATENT-4,781,326
		US-PATENT-4,772,175			US-PATENT-CLASS-416-223-R			NASA-CASE-ARC-11505-2
N89-12667*	c 23	NASA-CASE-LAR-13444-2-CU	N89-14303*	c 26	US-PATENT-4,776,531	N89-25266*	c 18	US-PATENT-APPL-SN-159072
		US-PATENT-APPL-SN-000692			NASA-CASE-LEW-14134-2			US-PATENT-CLASS-244-159
		US-PATENT-CLASS-564-315			US-PATENT-APPL-SN-108331			US-PATENT-CLASS-244-161
		US-PATENT-CLASS-564-323			US-PATENT-CLASS-420-54			US-PATENT-CLASS-285-302
		US-PATENT-CLASS-564-330			US-PATENT-CLASS-420-62			US-PATENT-4,807,834
		US-PATENT-CLASS-564-342			US-PATENT-CLASS-420-79	N89-25279*	c 20	NASA-CASE-MSC-20476-2
		US-PATENT-CLASS-564-344			US-PATENT-CLASS-420-80			US-PATENT-APPL-SN-046341
		US-PATENT-CLASS-564-396			US-PATENT-CLASS-420-81			US-PATENT-CLASS-239-265.17
		US-PATENT-CLASS-564-430			US-PATENT-4,780,272			US-PATENT-CLASS-60-202
		US-PATENT-4,774,359	N89-14337*	c 27	NASA-CASE-LAR-13601-1-CU			US-PATENT-CLASS-60-264
N89-12741*	c 27	NASA-CASE-LAR-13506-1			US-PATENT-APPL-SN-028831			US-PATENT-4,815,279
		US-PATENT-APPL-SN-060182			US-PATENT-CLASS-528-125	N89-25334* #	c 27	NAS 1.71:LAR-13925-1
		US-PATENT-CLASS-156-297			US-PATENT-CLASS-528-128			NASA-CASE-LAR-13925-1
		US-PATENT-CLASS-156-299			US-PATENT-4,788,271			US-PATENT-APPL-SN-301925
		US-PATENT-CLASS-428-44	N89-14351*	c 31	NASA-CASE-NPO-17143-1-CU	N89-25363*	c 32	NASA-CASE-LAR-13798-1
		US-PATENT-CLASS-428-47			US-PATENT-APPL-SN-105847			US-PATENT-APPL-SN-118995
		US-PATENT-CLASS-428-58			US-PATENT-CLASS-62-467			US-PATENT-CLASS-343-DIG.2
		US-PATENT-CLASS-428-71			US-PATENT-CLASS-62-514-JT			US-PATENT-CLASS-343-880
		US-PATENT-CLASS-428-76			US-PATENT-4,779,428			US-PATENT-CLASS-343-915
		US-PATENT-4,774,118	N89-14374*	c 32	NASA-CASE-GSC-12892-1			US-PATENT-4,811,033
N89-12785*	c 31	NASA-CASE-NPO-17085-1-CU			US-PATENT-APPL-SN-655606	N89-25689*	c 74	NASA-CASE-MFS-29348-1
		US-PATENT-APPL-SN-087282			US-PATENT-CLASS-455-115			US-PATENT-APPL-SN-156518
		US-PATENT-CLASS-165-61			US-PATENT-CLASS-455-117			US-PATENT-CLASS-350-96.21
		US-PATENT-CLASS-165-96			US-PATENT-CLASS-455-67			US-PATENT-CLASS-350-96.25
		US-PATENT-CLASS-62-467			US-PATENT-CLASS-455-98			US-PATENT-4,798,433
		US-PATENT-CLASS-62-514-R			US-PATENT-4,777,656	N89-26202*	c 35	NASA-CASE-MFS-28242-1
		US-PATENT-4,771,823	N89-14384*	c 33	NASA-CASE-ARC-11536-1			US-PATENT-APPL-SN-149822
N89-12786*	c 31	NASA-CASE-LAR-13438-1			US-PATENT-APPL-SN-725714			US-PATENT-CLASS-356-347
		US-PATENT-APPL-SN-022298			US-PATENT-CLASS-342-195			US-PATENT-CLASS-356-361
		US-PATENT-CLASS-428-182			US-PATENT-CLASS-356-28.5			US-PATENT-4,810,094
		US-PATENT-CLASS-52-814			US-PATENT-4,779,222	N89-26400*	c 60	NASA-CASE-NPO-16461-1CU
		US-PATENT-CLASS-52-821			US-PATENT-4,779,222			US-PATENT-APPL-SN-815103
		US-PATENT-4,769,968	N89-14385*	c 33	NASA-CASE-LAR-13552-1-CU			US-PATENT-CLASS-364-131
N89-12841*	c 35	NASA-CASE-LAR-13569-1			US-PATENT-APPL-SN-933941			US-PATENT-CLASS-382-41
		US-PATENT-APPL-SN-010943			US-PATENT-CLASS-324-77-E			US-PATENT-CLASS-382-42
		US-PATENT-CLASS-73-147			US-PATENT-CLASS-324-77-R			US-PATENT-CLASS-382-49
		US-PATENT-CLASS-73-180			US-PATENT-CLASS-324-78-D			US-PATENT-4,791,026
		US-PATENT-4,770,032			US-PATENT-CLASS-324-78-F	N89-26553*	c 18	NASA-CASE-MSC-21211-1
N89-12842* #	c 35	NAS 1.71:MSC-21372-1			US-PATENT-CLASS-356-28.5			US-PATENT-APPL-SN-105841
		NASA-CASE-MSC-21372-1			US-PATENT-CLASS-364-484			US-PATENT-CLASS-244-159
		US-PATENT-APPL-SN-246595			US-PATENT-CLASS-377-39			US-PATENT-CLASS-244-161
N89-12866* #	c 37	NAS 1.71:MSC-21095-1			US-PATENT-4,786,168			US-PATENT-CLASS-285-226
		NASA-CASE-MSC-21095-1	N89-14392*	c 34	NASA-CASE-MFS-28217-1			US-PATENT-CLASS-403-51
		US-PATENT-APPL-SN-248010			US-PATENT-APPL-SN-067844			US-PATENT-4,809,936
N89-12867* #	c 37	NAS 1.71:LAR-13719-1			US-PATENT-CLASS-122-366	N89-28554*	c 18	NASA-CASE-MSC-21117-2
		NASA-CASE-LAR-13719-1			US-PATENT-CLASS-165-104.14			US-PATENT-APPL-SN-184233
		US-PATENT-APPL-SN-239260			US-PATENT-CLASS-165-104.26			US-PATENT-CLASS-244-159
N89-12868* #	c 37	NAS 1.71:MFS-29291-1			US-PATENT-4,770,238			US-PATENT-CLASS-244-161
		NASA-CASE-MFS-29291-1	N89-14407*	c 35	NASA-CASE-LAR-13300-1-CU			US-PATENT-CLASS-285-226
		US-PATENT-APPL-SN-250196			US-PATENT-APPL-SN-829042			US-PATENT-CLASS-403-51
N89-13236*	c 71	NASA-CASE-NPO-16896-1-CU			US-PATENT-CLASS-310-338			US-PATENT-4,809,936
		US-PATENT-APPL-SN-087283			US-PATENT-CLASS-367-908			US-PATENT-CLASS-403-4
		US-PATENT-CLASS-73-505			US-PATENT-CLASS-73-290-V			US-PATENT-CLASS-52-573
		US-PATENT-4,773,266			US-PATENT-4,770,038	N89-28555* #	c 18	US-PATENT-CLASS-52-648
N89-13253* #	c 74	NAS 1.71:MFS-28183-1	N89-14422*	c 35	NASA-CASE-NPO-17086-1-CU			NAS 1.71:MFS-28327-1
		NASA-CASE-MFS-28183-1			US-PATENT-APPL-SN-087359			NASA-CASE-MFS-28327-1
		US-PATENT-APPL-SN-244367			US-PATENT-CLASS-73-505			US-PATENT-APPL-SN-361200
N89-13785*	c 37	NASA-CASE-NPO-16766-1-CU			US-PATENT-4,777,823	N89-28603* #	c 25	NAS 1.71:MFS-26049-1-NP
		US-PATENT-APPL-SN-921577			US-PATENT-4,777,823			NASA-CASE-MFS-26049-1-NP
		US-PATENT-CLASS-194-902	N89-14423*	c 35	NASA-CASE-LAR-13853-1			US-PATENT-APPL-SN-376487
		US-PATENT-CLASS-269-267			US-PATENT-APPL-SN-143436	N89-28621*	c 26	NASA-CASE-LAR-13924-1-CU
		US-PATENT-CLASS-294-88			US-PATENT-CLASS-73-147			US-PATENT-APPL-SN-172102
		US-PATENT-4,770,455			US-PATENT-CLASS-73-861.65			US-PATENT-CLASS-148-159
N89-13786*	c 37	NASA-CASE-KSC-11368-1			US-PATENT-4,783,994			US-PATENT-CLASS-148-416
		US-PATENT-APPL-SN-052940	N89-15379*	c 35	NASA-CASE-MSC-20906-2			US-PATENT-CLASS-148-417
		US-PATENT-CLASS-285-107			US-PATENT-APPL-SN-021569			US-PATENT-CLASS-420-529
		US-PATENT-CLASS-285-108			US-PATENT-CLASS-244-164			US-PATENT-CLASS-420-533
		US-PATENT-CLASS-285-109			US-PATENT-CLASS-244-165			US-PATENT-4,820,488
		US-PATENT-CLASS-285-133.1			US-PATENT-CLASS-74-572	N89-28672*	c 32	NASA-CASE-LAR-13747-1-CU
		US-PATENT-CLASS-285-351			US-PATENT-4,776,541			US-PATENT-APPL-SN-197191
		US-PATENT-CLASS-285-39			NASA-CASE-ARC-11533-2			US-PATENT-CLASS-342-1
		US-PATENT-CLASS-285-97	N89-16042*	c 27	US-PATENT-APPL-SN-852461			US-PATENT-CLASS-342-165
		US-PATENT-4,772,050			US-PATENT-CLASS-528-220			US-PATENT-CLASS-342-5
N89-13889* #	c 54	NAS 1.71:MSC-21364-1			US-PATENT-CLASS-528-228	N89-28676*	c 32	US-PATENT-4,809,003
		NASA-CASE-MSC-21364-1			US-PATENT-CLASS-528-321			NASA-CASE-NPO-17249-1-CU
		US-PATENT-APPL-SN-221472			US-PATENT-CLASS-528-322			US-PATENT-APPL-SN-125666
N89-14077*	c 74	NASA-CASE-NPO-17140-1-CU			US-PATENT-CLASS-528-353			US-PATENT-CLASS-358-88
		US-PATENT-APPL-SN-125021			US-PATENT-CLASS-528-72			US-PATENT-CLASS-358-91
		US-PATENT-CLASS-250-216			US-PATENT-CLASS-528-73			US-PATENT-CLASS-358-92
		US-PATENT-CLASS-350-354			US-PATENT-4,775,740			US-PATENT-4,819,064
		US-PATENT-4,772,785	N89-16256*	c 52	NASA-CASE-ARC-11426-2	N89-28684* #	c 32	NAS 1.71:NPO-17628-1-CU
N89-14078*	c 74	NASA-CASE-NPO-16750-1-CU			US-PATENT-APPL-SN-827185			NASA-CASE-NPO-17628-1-CU
		US-PATENT-APPL-SN-927972			US-PATENT-CLASS-351-203			US-PATENT-APPL-SN-350813
		US-PATENT-CLASS-350-162.13			US-PATENT-CLASS-351-237	N89-28713*	c 33	NASA-CASE-NPO-17108-1-CU
		US-PATENT-CLASS-350-331-R			US-PATENT-4,778,268			US-PATENT-APPL-SN-032819
		US-PATENT-CLASS-350-337			NAS 1.71:LAR-14049-1			US-PATENT-CLASS-364-724.01
		US-PATENT-CLASS-350-342			NASA-CASE-LAR-14049-1			US-PATENT-CLASS-364-724.05
		US-PATENT-CLASS-382-31			US-PATENT-APPL-SN-270189			US-PATENT-CLASS-364-735
		US-PATENT-4,772,101	N89-23623* #	c 24	NAS 1.71:LEW-14734-1			US-PATENT-CLASS-364-754
N89-14120* #	c 76	NAS 1.71:NPO-17399-1-CU			NASA-CASE-LEW-14734-1			US-PATENT-4,823,299
		NASA-CASE-NPO-17399-1-CU			US-PATENT-APPL-SN-279624	N89-28793* #	c 35	NAS 1.71:MFS-28370-1
		US-PATENT-APPL-SN-248019	N89-25242*	c 09	NASA-CASE-MFS-25962-1			NASA-CASE-MFS-28370-1
N89-14224*	c 02	NASA-CASE-LAR-13215-1			US-PATENT-APPL-SN-633180			US-PATENT-APPL-SN-386175
					US-PATENT-CLASS-239-14.1	N89-28795* #	c 35	NAS 1.71:NPO-17596-1-CU

		NASA-CASE-NPO-17596-1-CU US-PATENT-APPL-SN-361531			US-PATENT-4,819,438		US-PATENT-APPL-SN-093417 US-PATENT-CLASS-24-635	
N89-28816*	c 36	NAS 1.71:LAR-13772-1 NASA-CASE-LAR-13772-1 US-PATENT-APPL-SN-359460	N90-12289*	c 71	NASA-CASE-NPO-16995-1-CU US-PATENT-APPL-SN-924297 US-PATENT-CLASS-73-505 US-PATENT-CLASS-73-571 US-PATENT-4,800,756		US-PATENT-CLASS-292-27 US-PATENT-CLASS-292-34 US-PATENT-CLASS-403-322 US-PATENT-CLASS-403-325 US-PATENT-CLASS-403-328	
N89-28817*	c 36	NAS 1.71:LAR-14203-1 NASA-CASE-LAR-14203-1 US-PATENT-APPL-SN-359459	N90-15094*	c 05	NAS 1.71:LAR-13870-1 NASA-CASE-LAR-13870-1 US-PATENT-APPL-SN-429516	N90-17454*	c 76	NAS 1.71:LEW-14676-2 NASA-CASE-LEW-14676-2 US-PATENT-APPL-SN-458467
N89-28831*	c 37	NASA-CASE-MFS-28253-1 US-PATENT-APPL-SN-165943 US-PATENT-CLASS-33-536 US-PATENT-4,809,441	N90-15148*	c 24	NAS 1.71:LAR-14194-1 NASA-CASE-LAR-14194-1 US-PATENT-APPL-SN-344877	N90-17455*	c 76	NAS 1.71:NPO-17736-1-CU NASA-CASE-NPO-17736-1-CU US-PATENT-APPL-SN-392166
N89-28842*	c 37	NAS 1.71:MFS-28345-2 NASA-CASE-MFS-28345-2 US-PATENT-APPL-SN-358028	N90-15161*	c 25	NAS 1.71:LAR-13996-1-SB NASA-CASE-LAR-13996-1-SB US-PATENT-APPL-SN-426345	N90-17456*	c 76	NAS 1.71:NPO-17812-1-CU NASA-CASE-NPO-17812-1-CU US-PATENT-APPL-SN-387928
N89-28846*	c 37	NAS 1.71:NPO-17785-1-CU NASA-CASE-NPO-17785-1-CU US-PATENT-APPL-SN-353411	N90-15259*	c 27	NAS 1.71:LAR-14162-1 NASA-CASE-LAR-14162-1 US-PATENT-APPL-SN-410572	N90-18852*	c 51	NAS 1.71:MSC-21560-1 NASA-CASE-MS-21560-1 US-PATENT-APPL-SN-317931
N89-29169*	c 72	NASA-CASE-NPO-16789-1-CU US-PATENT-APPL-SN-154713 US-PATENT-CLASS-250-252 US-PATENT-CLASS-250-397 US-PATENT-4,818,868	N90-15260*	c 27	NAS 1.71:LAR-14001-1 NASA-CASE-LAR-14001-1 US-PATENT-APPL-SN-433812	N90-19278*	c 18	NASA-CASE-MS-21356-1 US-PATENT-APPL-SN-165956 US-PATENT-CLASS-114-112 US-PATENT-CLASS-114-201R US-PATENT-CLASS-244-129.5 US-PATENT-CLASS-244-158R US-PATENT-CLASS-49-253 US-PATENT-4,842,223
N89-29538*	c 27	NASA-CASE-LEW-14392-2 US-PATENT-APPL-SN-038560 US-PATENT-APPL-SN-886149 US-PATENT-CLASS-428-288 US-PATENT-CLASS-428-367 US-PATENT-CLASS-428-375 US-PATENT-CLASS-428-390 US-PATENT-CLASS-428-408 US-PATENT-CLASS-428-698 US-PATENT-4,781,993	N90-16104*	c 32	NAS 1.71:NPO-17548-1-CU NASA-CASE-NPO-17548-1-CU US-PATENT-APPL-SN-404293	N90-19298*	c 20	NASA-CASE-LAR-13773-1 US-PATENT-APPL-SN-165946 US-PATENT-CLASS-60-204 US-PATENT-CLASS-60-259 US-PATENT-CLASS-60-280 US-PATENT-4,831,818
N89-29539*	c 27	NASA-CASE-MS-21169-1 US-PATENT-APPL-SN-044183 US-PATENT-CLASS-264-DIG-59 US-PATENT-CLASS-264-236 US-PATENT-CLASS-264-257 US-PATENT-CLASS-264-347 US-PATENT-CLASS-264-40.1 US-PATENT-CLASS-264-40.5 US-PATENT-CLASS-264-40.6 US-PATENT-4,810,438	N90-16411*	c 61	NAS 1.71:MSC-21387-1 NASA-CASE-MS-21387-1 US-PATENT-APPL-SN-323748	N90-19300*	c 23	NASA-CASE-LEW-14346-1 US-PATENT-APPL-SN-924470 US-PATENT-CLASS-528-188 US-PATENT-CLASS-528-229 US-PATENT-CLASS-528-352 US-PATENT-CLASS-528-353 US-PATENT-4,845,167
N89-29577*	c 31	NAS 1.71:NPO-17630-1-CU NASA-CASE-NPO-17630-1-CU US-PATENT-APPL-SN-304149	N90-16887*	c 25	US-PATENT-4,842,224 NAS 1.71:MSC-21487-1 NASA-CASE-MS-21487-1 US-PATENT-APPL-SN-429739	N90-19425*	c 31	NASA-CASE-NPO-16901-1-CU US-PATENT-APPL-SN-921574 US-PATENT-CLASS-264-114 US-PATENT-CLASS-264-311 US-PATENT-CLASS-425-425 US-PATENT-CLASS-425-435 US-PATENT-CLASS-425-73 US-PATENT-CLASS-425-75 US-PATENT-4,839,121
N89-29578*	c 31	NASA-CASE-GSC-13112-1 US-PATENT-APPL-SN-205771 US-PATENT-CLASS-206-0.7 US-PATENT-CLASS-220-5A US-PATENT-CLASS-220-901 US-PATENT-CLASS-62-45 US-PATENT-CLASS-62-48 US-PATENT-4,821,907	N90-16949*	c 27	NASA-CASE-GSC-13008-2 US-PATENT-APPL-SN-163928 US-PATENT-CLASS-521-145 US-PATENT-CLASS-521-178 US-PATENT-CLASS-521-189 US-PATENT-CLASS-521-82 US-PATENT-CLASS-521-97 US-PATENT-CLASS-521-98 US-PATENT-4,843,123	N90-19427*	c 31	NASA-CASE-LAR-13638-1 US-PATENT-APPL-SN-223124 US-PATENT-CLASS-156-344 US-PATENT-CLASS-244-133 US-PATENT-CLASS-427-272 US-PATENT-4,851,071
N89-29679*	c 33	NAS 1.71:NPO-17393-1-CU NASA-CASE-NPO-17393-1-CU US-PATENT-APPL-SN-279676	N90-16950*	c 27	US-PATENT-4,843,328 NASA-CASE-LAR-13821-1 US-PATENT-APPL-SN-071686 US-PATENT-CLASS-524-233 US-PATENT-CLASS-524-366 US-PATENT-CLASS-524-378 US-PATENT-CLASS-524-600 US-PATENT-CLASS-524-607 US-PATENT-CLASS-528-125 US-PATENT-CLASS-528-353 US-PATENT-4,837,300	N90-19492*	c 33	NASA-CASE-MFS-29149-1 US-PATENT-APPL-SN-073541 US-PATENT-CLASS-323-354 US-PATENT-CLASS-324-62 US-PATENT-CLASS-364-481 US-PATENT-CLASS-364-482 US-PATENT-4,849,903
N89-29681*	c 33	NASA-CASE-NPO-16888-1-CU US-PATENT-APPL-SN-133412 US-PATENT-CLASS-324-117 US-PATENT-CLASS-324-127 US-PATENT-CLASS-330-8 US-PATENT-4,823,074	N90-17005*	c 32	NAS 1.71:NPO-17564-1-CU NASA-CASE-NPO-17564-1-CU US-PATENT-APPL-SN-414811	N90-19534*	c 34	NASA-CASE-LAR-13952-1-SB US-PATENT-APPL-SN-203178 US-PATENT-CLASS-73-432.1 US-PATENT-4,848,153
N89-29750*	c 37	NAS 1.71:NPO-17275-1-CU NASA-CASE-NPO-17275-1-CU US-PATENT-APPL-SN-292047	N90-17010*	c 33	NAS 1.71:NPO-17621-1-CU NASA-CASE-NPO-17621-1-CU US-PATENT-APPL-SN-414820	N90-19602*	c 37	NASA-CASE-MFS-29260-1 US-PATENT-APPL-SN-156059 US-PATENT-CLASS-219-72 US-PATENT-CLASS-219-74 US-PATENT-4,839,489
N89-29953*	c 54	NASA-CASE-KSC-11322-1 US-PATENT-APPL-SN-894541 US-PATENT-CLASS-2-201 US-PATENT-CLASS-24-688 US-PATENT-CLASS-381-183 US-PATENT-CLASS-381-187 US-PATENT-4,783,822	N90-17104*	c 35	NAS 1.71:NPO-17786-1-CU NASA-CASE-NPO-17786-1-CU US-PATENT-APPL-SN-414812	N90-19776*	c 62	NASA-CASE-NPO-16949-1-CU US-PATENT-APPL-SN-927987 US-PATENT-CLASS-370-16 US-PATENT-CLASS-371-8 US-PATENT-4,847,837
N90-10261*	c 27	NAS 1.71:NPO-17524-1-CU NASA-CASE-NPO-17524-1-CU US-PATENT-APPL-SN-366957	N90-17117*	c 35	NASA-CASE-LAR-13710-1 US-PATENT-APPL-SN-210487 US-PATENT-CLASS-73-147 US-PATENT-CLASS-73-862.61 US-PATENT-4,836,035	N90-19884*	c 76	NASA-CASE-NPO-17259-1-CU US-PATENT-APPL-SN-184234 US-PATENT-CLASS-148-13 US-PATENT-CLASS-148-13.1 US-PATENT-CLASS-428-641 US-PATENT-CLASS-437-903 US-PATENT-4,849,033
N90-10415*	c 35	NAS 1.71:LEW-14880-1 NASA-CASE-LEW-14880-1 US-PATENT-APPL-SN-376738	N90-17118*	c 35	NASA-CASE-NPO-16617-2-CU US-PATENT-APPL-SN-125676 US-PATENT-CLASS-357-13 US-PATENT-CLASS-357-30 US-PATENT-CLASS-357-4 US-PATENT-CLASS-357-61 US-PATENT-4,843,439	N90-20078*	c 05	NASA-CASE-LAR-13777-1 US-PATENT-APPL-SN-210480 US-PATENT-CLASS-244-130 US-PATENT-CLASS-244-54 US-PATENT-CLASS-244-55 US-PATENT-4,867,394
N90-10608*	c 62	NAS 1.71:NPO-17716-1-CU NASA-CASE-NPO-17716-1-CU US-PATENT-APPL-SN-357759	N90-17132*	c 36	NASA-CASE-NPO-17824-1-CU US-PATENT-APPL-SN-159613 US-PATENT-CLASS-356-43 US-PATENT-CLASS-374-124 US-PATENT-CLASS-374-126 US-PATENT-CLASS-374-130 US-PATENT-4,840,496	N90-20079*	c 05	NASA-CASE-LAR-14031-1 US-PATENT-APPL-SN-252081 US-PATENT-CLASS-244-130 US-PATENT-CLASS-244-137.4 US-PATENT-4,863,118
N90-10717*	c 75	NAS 1.71:MFS-28368-1 NASA-CASE-MFS-28368-1 US-PATENT-APPL-SN-386174	N90-17153*	c 37	NASA-CASE-NPO-17354-1-CU US-PATENT-APPL-SN-184236 US-PATENT-CLASS-280-677 US-PATENT-CLASS-280-682 US-PATENT-4,840,394	N90-20096*	c 09	NASA-CASE-LAR-13734-1-CU
N90-11798*	c 18	NAS 1.71:MSC-21327-1 NASA-CASE-MS-21327-1 US-PATENT-APPL-SN-292121	N90-17154*	c 37	NASA-CASE-MFS-28192-1			
N90-11824*	c 25	NASA-CASE-LEW-13609-1 US-PATENT-APPL-SN-452465 US-PATENT-CLASS-165-156 US-PATENT-CLASS-165-81 US-PATENT-CLASS-165-83 US-PATENT-CLASS-431-352 US-PATENT-CLASS-60-730 US-PATENT-CLASS-60-732						

			US-PATENT-CLASS-73-831		US-PATENT-CLASS-102-378
			US-PATENT-CLASS-73-860		US-PATENT-CLASS-194-82.26
			US-PATENT-4,864,865		US-PATENT-CLASS-194-82.29
		N90-20616*	c 52 ..... NASA-CASE-MFS-28234-1		US-PATENT-CLASS-89-1.14
N90-20126*	c 18		US-PATENT-APPL-SN-087281		US-PATENT-CLASS-89-1.57
			US-PATENT-CLASS-427-2		US-PATENT-4,864,910
			US-PATENT-CLASS-428-408	N90-21519*	c 52 ..... NASA-CASE-LAR-13901-1-NP
			US-PATENT-CLASS-530-362		US-PATENT-APPL-SN-118993
			US-PATENT-CLASS-530-363		US-PATENT-APPL-SN-929869
			US-PATENT-CLASS-530-364		US-PATENT-CLASS-128-661.03
			US-PATENT-CLASS-530-387		US-PATENT-4,852,578
			US-PATENT-CLASS-530-422	N90-21525*	c 60 ..... NASA-CASE-NPO-17205-1-CU
N90-20133*	c 23		US-PATENT-4,833,233		US-PATENT-APPL-SN-143434
			NASA-CASE-MFS-25786-2		US-PATENT-CLASS-377-111
		N90-20896*	c 76 ..... US-PATENT-APPL-SN-441896		US-PATENT-CLASS-377-114
			US-PATENT-APPL-SN-811309		US-PATENT-CLASS-377-116
			US-PATENT-CLASS-156-616.4		US-PATENT-CLASS-377-123
			US-PATENT-CLASS-156-616.41		US-PATENT-CLASS-377-126
			US-PATENT-CLASS-422-249		US-PATENT-CLASS-377-69
			US-PATENT-4,863,553		US-PATENT-CLASS-377-79
N90-20154*	c 25		NASA-CASE-NPO-17280-1-CU		US-PATENT-4,845,728
			US-PATENT-APPL-SN-195226	N90-21527*	c 60 ..... NASA-CASE-NPO-16859-1-CU
			US-PATENT-CLASS-371-041		US-PATENT-APPL-SN-113956
			US-PATENT-CLASS-371-043		US-PATENT-CLASS-364-229.4
			US-PATENT-CLASS-371-37.4		US-PATENT-CLASS-364-267.9
			US-PATENT-CLASS-371-38.1		US-PATENT-CLASS-364-940.67
			US-PATENT-4,907,233		US-PATENT-CLASS-364-942.51
N90-20180*	c 25		NASA-CASE-LAR-13965-1-CU		US-PATENT-CLASS-364-944
			US-PATENT-APPL-SN-221386		US-PATENT-CLASS-364-975.5
			US-PATENT-CLASS-526-262		US-PATENT-CLASS-371-11.3
			US-PATENT-CLASS-528-322		US-PATENT-4,868,818
			US-PATENT-CLASS-548-400	N90-21822*	c 24 ..... NASA-CASE-LAR-12887-3
			US-PATENT-CLASS-548-524		US-PATENT-APPL-SN-323236
			US-PATENT-4,851,544		US-PATENT-CLASS-181-286
N90-20236*	c 29		NASA-CASE-LAR-13817-1		US-PATENT-CLASS-181-290
			US-PATENT-APPL-SN-232734		US-PATENT-CLASS-89-36.02
			US-PATENT-CLASS-141-45		US-PATENT-4,911,062
			US-PATENT-CLASS-55-160	N90-21951*	c 33 ..... NASA-CASE-NPO-17430-1-CU
			US-PATENT-CLASS-55-182		US-PATENT-APPL-SN-332677
			US-PATENT-CLASS-55-205		US-PATENT-CLASS-318-434
			US-PATENT-4,848,987		US-PATENT-CLASS-318-561
N90-20254*	c 31		NASA-CASE-MSC-21253-1		US-PATENT-CLASS-318-615
			US-PATENT-APPL-SN-251439		US-PATENT-CLASS-318-618
			US-PATENT-CLASS-137-154		US-PATENT-CLASS-388-821
			US-PATENT-CLASS-141-93		US-PATENT-4,912,386
			US-PATENT-CLASS-239-543	N90-21999*	c 34 ..... NASA-CASE-MSC-21271-1
			US-PATENT-CLASS-55-159		US-PATENT-APPL-SN-252077
			US-PATENT-CLASS-55-46		US-PATENT-CLASS-165-32
			US-PATENT-4,846,854		US-PATENT-CLASS-165-46
N90-20280*	c 32		NASA-CASE-MSC-18808-1		US-PATENT-CLASS-165-78
			US-PATENT-APPL-SN-125677		US-PATENT-CLASS-165-96
			US-PATENT-CLASS-342-105		US-PATENT-4,909,313
			US-PATENT-CLASS-342-114	N90-22023*	c 35 ..... NASA-CASE-KSC-11386-1
			US-PATENT-CLASS-342-195		US-PATENT-APPL-SN-264107
			US-PATENT-4,860,014		US-PATENT-CLASS-324-329
N90-20282*	c 33		NASA-CASE-GSC-12442-2		US-PATENT-4,912,414
			US-PATENT-APPL-SN-675471	N90-22024*	c 35 ..... NASA-CASE-LEW-14844-1
			US-PATENT-CLASS-357-22		US-PATENT-APPL-SN-326766
			US-PATENT-CLASS-357-55		US-PATENT-CLASS-210-512.1
			US-PATENT-CLASS-357-68		US-PATENT-CLASS-210-97
			US-PATENT-CLASS-357-76		US-PATENT-CLASS-55-160
			US-PATENT-CLASS-357-81		US-PATENT-CLASS-55-204
			US-PATENT-4,843,440		US-PATENT-4,911,738
N90-20320*	c 33		NASA-CASE-LAR-13273-2	N90-22025*	c 35 ..... NASA-CASE-LAR-13816-1
			US-PATENT-APPL-SN-625436		US-PATENT-APPL-SN-165945
			US-PATENT-APPL-SN-862942		US-PATENT-CLASS-422-111
			US-PATENT-CLASS-323-903		US-PATENT-CLASS-422-126
			US-PATENT-CLASS-361-65		US-PATENT-CLASS-422-62
			US-PATENT-CLASS-361-79		US-PATENT-CLASS-422-98
			US-PATENT-CLASS-55-105		US-PATENT-CLASS-436-137
			US-PATENT-CLASS-55-139		US-PATENT-CLASS-436-143
			US-PATENT-4,605,424		US-PATENT-CLASS-436-55
			US-PATENT-4,860,149		US-PATENT-4,911,890
N90-20323*	c 34		NASA-CASE-LAR-13761-1	N90-22042*	c 37 ..... NASA-CASE-LAR-13926-1
			US-PATENT-APPL-SN-237036		US-PATENT-APPL-SN-250469
			US-PATENT-CLASS-165-104		US-PATENT-CLASS-123-193P
			US-PATENT-CLASS-165-133		US-PATENT-CLASS-29-888.046
			US-PATENT-CLASS-165-180		US-PATENT-CLASS-92-212
			US-PATENT-CLASS-165-41		US-PATENT-CLASS-92-213
			US-PATENT-CLASS-165-905		US-PATENT-CLASS-92-222
			US-PATENT-4,838,346		US-PATENT-CLASS-92-248
N90-20351*	c 35		NASA-CASE-NPO-16878-1-CU		US-PATENT-4,909,133
			US-PATENT-APPL-SN-084062	N90-22383*	c 74 ..... NASA-CASE-KSC-11392-1
			US-PATENT-CLASS-219-121.28		US-PATENT-APPL-SN-262851
			US-PATENT-CLASS-250-310		US-PATENT-CLASS-250-229
			US-PATENT-CLASS-250-396-ML		US-PATENT-CLASS-350-356
			US-PATENT-CLASS-250-396-R		US-PATENT-4,910,396
			US-PATENT-4,847,502	N90-22584*	c 16 ..... INT-PATENT-CLASS-B64G-1/14
N90-20408*	c 37		NASA-CASE-MSC-21365-1		NASA-CASE-LAR-13486-1
			US-PATENT-APPL-SN-221388		US-Patent-4,884,770
			US-PATENT-CLASS-294-106		US-PATENT-APPL-SN-076955
			US-PATENT-CLASS-294-86.4		US-PATENT-CLASS-244-158R
			US-PATENT-CLASS-901-38		US-PATENT-CLASS-244-160
			US-PATENT-CLASS-901-39		US-PATENT-CLASS-244-161
			US-PATENT-4,858,979		US-PATENT-CLASS-244-172
N90-20409*	c 37		NASA-CASE-LAR-13696-1	N90-21390*	c 37 ..... NASA-CASE-MSC-21436-1
			US-PATENT-APPL-SN-267146		US-PATENT-APPL-SN-313839

N90-22724*	c 33	INT-PATENT-CLASS-H01J-25/34 NASA-CASE-LEW-14520-1 US-Patent-4,890,036 US-PATENT-APPL-SN-130058 US-PATENT-CLASS-315-3 US-PATENT-CLASS-315-3.5 US-PATENT-CLASS-331-82	US-PATENT-4,912,082	N90-23712*	c 35	INT-PATENT-CLASS-G01N-3/32 NASA-CASE-LEW-14124-1 US-PATENT-APPL-SN-396263 US-PATENT-CLASS-73-799 US-PATENT-CLASS-73-845 US-PATENT-4,916,954		
N90-22769*	c 35	INT-PATENT-CLASS-B64D-1/00 NASA-CASE-NPO-17390-1-CU US-Patent-4,886,222 US-PATENT-APPL-SN-205899 US-PATENT-CLASS-244-1R US-PATENT-CLASS-244-138A US-PATENT-CLASS-358-109	N90-23541*	c 27	INT-PATENT-CLASS-F28D-15/02 NASA-CASE-GSC-13199-1 US-PATENT-APPL-SN-304147 US-PATENT-CLASS-122-366 US-PATENT-CLASS-165-104.26 US-PATENT-CLASS-165-41 US-PATENT-CLASS-165-905 US-PATENT-4,883,116	N90-23713*	c 35	NASA-CASE-LAR-14056-1 US-PATENT-APPL-SN-010949 US-PATENT-APPL-SN-251073 US-PATENT-CLASS-364-578 US-PATENT-CLASS-364-900 US-PATENT-CLASS-364-924.4 US-PATENT-CLASS-364-925.1 US-PATENT-CLASS-364-933.8 US-PATENT-CLASS-364-934 US-PATENT-4,918,652
N90-22770*	c 35	INT-PATENT-CLASS-H04N-7/18 NASA-CASE-LAR-13740-1 US-Patent-4,885,633 US-PATENT-APPL-SN-205900 US-PATENT-CLASS-250-459.1 US-PATENT-CLASS-250-461.1 US-PATENT-CLASS-358-113 US-PATENT-CLASS-358-93 US-PATENT-CLASS-374-162	N90-23544*	c 27	INT-PATENT-CLASS-G01N-27/72 INT-PATENT-CLASS-G01R-27/00 INT-PATENT-CLASS-G01R-33/12 NASA-CASE-LAR-13465-1 US-PATENT-APPL-SN-133413 US-PATENT-CLASS-264-40.1 US-PATENT-CLASS-324-234 US-PATENT-CLASS-324-236 US-PATENT-CLASS-526-60 US-PATENT-4,891,591	N90-23742*	c 37	INT-PATENT-CLASS-F03D-9/00 NASA-CASE-LAR-13434-1 US-PATENT-APPL-SN-246594 US-PATENT-CLASS-290-44 US-PATENT-CLASS-290-55 US-PATENT-CLASS-416-9 US-PATENT-4,894,554
N90-23242*	c 76	INT-PATENT-CLASS-C30B-7/02 NASA-CASE-MFS-28206-1-SB US-Patent-4,886,646 US-PATENT-APPL-SN-172101 US-PATENT-CLASS-156-DIG.62 US-PATENT-CLASS-156-DIG.72 US-PATENT-CLASS-156-600 US-PATENT-CLASS-156-608 US-PATENT-CLASS-422-245	N90-23545*	c 27	NASA-CASE-LAR-14188-1 US-PATENT-APPL-SN-087375 US-PATENT-APPL-SN-328392 US-PATENT-CLASS-528-125 US-PATENT-CLASS-528-126 US-PATENT-CLASS-528-128 US-PATENT-CLASS-528-128 US-PATENT-CLASS-528-171-175 US-PATENT-CLASS-528-212 US-PATENT-CLASS-548-520 US-PATENT-4,889,912	N90-23751*	c 37	INT-PATENT-CLASS-B64D-33/04 INT-PATENT-CLASS-F16J-15/46 NASA-CASE-LEW-14695-1 US-PATENT-APPL-SN-292146 US-PATENT-CLASS-239-265.11 US-PATENT-CLASS-277-158 US-PATENT-CLASS-277-34 US-PATENT-4,917,302
N90-23390*	c 05	INT-PATENT-CLASS-B64C-9/02 INT-PATENT-CLASS-B64C-9/08 NASA-CASE-LAR-13983-1 US-PATENT-APPL-SN-192563 US-PATENT-CLASS-244-45A US-PATENT-CLASS-244-46 US-PATENT-CLASS-244-75F US-PATENT-CLASS-244-90R US-PATENT-4,917,333	N90-23546*	c 27	NASA-CASE-LAR-13902-1 US-PATENT-APPL-SN-239259 US-PATENT-CLASS-528-125 US-PATENT-CLASS-528-126 US-PATENT-CLASS-528-128 US-PATENT-CLASS-528-172 US-PATENT-CLASS-528-185 US-PATENT-CLASS-528-188 US-PATENT-CLASS-528-353 US-PATENT-4,895,972	N90-23756*	c 38	INT-PATENT-CLASS-G01B-15/06 NASA-CASE-LAR-13724-1 US-PATENT-APPL-SN-125678 US-PATENT-CLASS-378-51 US-PATENT-CLASS-378-58 US-PATENT-4,899,356
N90-23415*	c 09	INT-PATENT-CLASS-C21D-1/09 NASA-CASE-MFS-28281-1 US-PATENT-APPL-SN-205898 US-PATENT-CLASS-148-149 US-PATENT-CLASS-148-4 US-PATENT-CLASS-148-902 US-PATENT-CLASS-148-903 US-PATENT-4,902,354	N90-23566*	c 27	INT-PATENT-CLASS-B29B-33/02 NASA-CASE-MSC-20782-1 US-PATENT-APPL-SN-213392 US-PATENT-CLASS-264-11 US-PATENT-CLASS-264-28 US-PATENT-CLASS-264-43 US-PATENT-CLASS-264-6 US-PATENT-4,919,852	N90-24150*	c 76	INT-PATENT-CLASS-G01N-21/64 INT-PATENT-CLASS-G01N-21/84 NASA-CASE-LAR-13963-1 US-PATENT-APPL-SN-232735 US-PATENT-CLASS-356-73 US-PATENT-CLASS-356-73.1 US-PATENT-4,890,915
N90-23475*	c 23	INT-PATENT-CLASS-C07S-9/40 NASA-CASE-ARC-11425-3 US-PATENT-APPL-SN-054982 US-PATENT-APPL-SN-493864 US-PATENT-APPL-SN-522629 US-PATENT-APPL-SN-641152 US-PATENT-CLASS-558-193 US-PATENT-4,886,896	N90-23586*	c 31	INT-PATENT-CLASS-B23K-9/16 NASA-CASE-MFS-29489-1 US-PATENT-APPL-SN-279625 US-PATENT-CLASS-219-136 US-PATENT-CLASS-219-75 US-PATENT-4,879,446	N90-24168*	c 76	INT-PATENT-CLASS-B32B-15/08 INT-PATENT-CLASS-B32B-7/02 NASA-CASE-LAR-13678-1 US-PATENT-APPL-SN-176547 US-PATENT-CLASS-340-692 US-PATENT-CLASS-428-216 US-PATENT-CLASS-428-450 US-PATENT-CLASS-428-457 US-PATENT-CLASS-428-901 US-PATENT-4,917,940
N90-23480*	c 24	NASA-CASE-MFS-29241-1 US-PATENT-APPL-SN-252078 US-PATENT-CLASS-244-158A US-PATENT-CLASS-428-607 US-PATENT-CLASS-428-623 US-PATENT-CLASS-428-627 US-PATENT-CLASS-428-632 US-PATENT-CLASS-428-666 US-PATENT-CLASS-428-680 US-PATENT-4,877,689	N90-23587*	c 31	NASA-CASE-NPO-17301-1-CU US-PATENT-APPL-SN-337767 US-PATENT-CLASS-122-366 US-PATENT-CLASS-165-104.26 US-PATENT-CLASS-165-41 US-PATENT-CLASS-222-187 US-PATENT-CLASS-239-145 US-PATENT-CLASS-417-53 US-PATENT-CLASS-417-572 US-PATENT-4,877,082	N90-24169*	c 76	NASA-CASE-MFS-28182-1 US-PATENT-APPL-SN-161881 US-PATENT-CLASS-156-DIG.113 US-PATENT-CLASS-156-DIG.62 US-PATENT-CLASS-156-600 US-PATENT-CLASS-156-601 US-PATENT-CLASS-156-607 US-PATENT-CLASS-422-245 US-PATENT-CLASS-422-505 US-PATENT-4,919,899
N90-23493*	c 24	NASA-CASE-LEW-14719-1 US-PATENT-APPL-SN-326757 US-PATENT-CLASS-419-24 US-PATENT-CLASS-419-36 US-PATENT-CLASS-419-37 US-PATENT-CLASS-419-8 US-PATENT-CLASS-428-551 US-PATENT-CLASS-428-552 US-PATENT-CLASS-75-228 US-PATENT-4,904,538	N90-23635*	c 33	INT-PATENT-CLASS-H03B-5/12 NASA-CASE-GSC-13173-1 US-PATENT-APPL-SN-292037 US-PATENT-CLASS-331-116FE US-PATENT-CLASS-331-117FE US-PATENT-4,873,498	N90-25196*	c 24	NASA-CASE-LAR-13562-1 US-PATENT-APPL-SN-921572 US-PATENT-CLASS-138-141 US-PATENT-CLASS-138-149 US-PATENT-CLASS-138-153 US-PATENT-CLASS-428-35.9 US-PATENT-CLASS-428-367 US-PATENT-CLASS-428-376 US-PATENT-CLASS-428-379 US-PATENT-4,923,751
N90-23497*	c 25	NASA-CASE-LEW-14345-2 US-PATENT-APPL-SN-159071 US-PATENT-APPL-SN-924474 US-PATENT-CLASS-260-386 US-PATENT-CLASS-260-395 US-PATENT-CLASS-549-241 US-PATENT-CLASS-562-413 US-PATENT-CLASS-562-415 US-PATENT-CLASS-562-417 US-PATENT-4,885,116	N90-23636*	c 33	INT-PATENT-CLASS-G06F-1/02 NASA-CASE-NPO-17241-1-CU US-PATENT-APPL-SN-113954 US-PATENT-CLASS-364-717 US-PATENT-CLASS-364-746.1 US-PATENT-4,890,252	N90-25197*	c 24	NASA-CASE-LAR-13225-1 US-PATENT-APPL-SN-248018 US-PATENT-CLASS-156-153 US-PATENT-CLASS-156-249 US-PATENT-CLASS-156-289 US-PATENT-CLASS-156-344 US-PATENT-CLASS-427-272 US-PATENT-CLASS-427-282 US-PATENT-CLASS-427-290 US-PATENT-4,923,545
N90-23517*	c 25	NASA-CASE-LAR-14155-1-SB US-PATENT-APPL-SN-298150 US-PATENT-CLASS-502-217 US-PATENT-CLASS-502-218 US-PATENT-CLASS-502-226 US-PATENT-CLASS-502-239 US-PATENT-CLASS-502-241 US-PATENT-CLASS-502-245 US-PATENT-CLASS-502-324	N90-23700*	c 34	INT-PATENT-CLASS-B29B-9/10 NASA-CASE-NPO-17203-1-CU US-PATENT-APPL-SN-250195 US-PATENT-CLASS-264-4 US-PATENT-CLASS-425-5 US-PATENT-CLASS-425-6 US-PATENT-CLASS-425-804 US-PATENT-4,902,450	N90-25340*	c 36	INT-PATENT-CLASS-G01P-3/36 NASA-CASE-ARC-11876-1 US-PATENT-APPL-SN-257593 US-PATENT-CLASS-356-28 US-PATENT-CLASS-356-28.5 US-PATENT-4,925,297
			N90-23706*	c 35	INT-PATENT-CLASS-A61B-5/00 NASA-CASE-LAR-13775-1 US-PATENT-APPL-SN-248020 US-PATENT-CLASS-128-675 US-PATENT-CLASS-128-748 US-PATENT-CLASS-128-778 US-PATENT-4,873,990	N90-25498*	c 54	NASA-CASE-MSC-21366-1 US-PATENT-APPL-SN-213880 US-PATENT-CLASS-428-252 US-PATENT-CLASS-428-290 US-PATENT-CLASS-428-328 US-PATENT-CLASS-428-422
			N90-23707*	c 35	INT-PATENT-CLASS-G01M-9/00 NASA-CASE-LAR-13628-1 US-PATENT-APPL-SN-251438 US-PATENT-CLASS-340-825.69 US-PATENT-CLASS-73-147 US-PATENT-4,896,533			

N90-25583*	c 60	US-PATENT-CLASS-428-447 US-PATENT-CLASS-428-458 US-PATENT-CLASS-428-474.4 US-PATENT-4,923,741 INT-PATENT-CLASS-H02L-9/04 NASA-CASE-NPO-17525-1-CU US-PATENT-APPL-SN-279630 NASA-CASE-NPO-17569-1-CU US-PATENT-CLASS-380-25 US-PATENT-CLASS-380-45 US-PATENT-CLASS-380-49 US-PATENT-4,926,481	N90-27268* #	c 60	NASA-CASE-NPO-17653-1-CU US-PATENT-APPL-SN-501908 NAS 1.71:NPO-17629-1-CU NASA-CASE-NPO-17629-1-CU US-PATENT-APPL-SN-458280 NAS 1.71:MSC-21379-1-SB NASA-CASE-MSC-21379-1-SB US-PATENT-APPL-SN-545170 NAS 1.71:NPO-17845-1-CU NASA-CASE-NPO-17845-1-CU US-PATENT-APPL-SN-523692 NAS 1.71:NPO-17803-1-CU NASA-CASE-NPO-17803-1-CU US-PATENT-APPL-SN-473024 NAS 1.71:NPO-17612-1-CU NASA-CASE-NPO-17612-1-CU US-PATENT-APPL-SN-480385 NAS 1.71:NPO-17913-1-CU NASA-CASE-NPO-17913-1-CU US-PATENT-APPL-SN-527509 NAS 1.71:NPO-17724-1-CU NASA-CASE-NPO-17724-1-CU US-PATENT-APPL-SN-488578 NAS 1.71:NPO-17835-1-CU NASA-CASE-NPO-17835-1-CU US-PATENT-APPL-SN-524959 NAS 1.71:MFS-28013-3 NASA-CASE-MFS-28013-3 US-PATENT-APPL-SN-545089 NAS 1.71:MFS-28013-4 NASA-CASE-MFS-28013-4 US-PATENT-APPL-SN-545008 NAS 1.71:LAR-13780-1 NASA-CASE-LAR-13780-1 US-PATENT-APPL-SN-575737 NAS 1.71:MSC-21536-1 NASA-CASE-MSC-21536-1 US-PATENT-APPL-SN-458476 NAS 1.71:LEW-14999-1 NASA-CASE-LEW-14999-1 US-PATENT-APPL-SN-560926 NAS 1.71:LEW-14921-1 NASA-CASE-LEW-14921-1 US-PATENT-APPL-SN-571059 NAS 1.71:LAR-14239-1 NASA-CASE-LAR-14239-1 US-PATENT-APPL-SN-555864 NAS 1.71:LAR-14271-1-CU NASA-CASE-LAR-14271-1-CU US-PATENT-APPL-SN-567025 NAS 1.71:LAR-14163-1 NASA-CASE-LAR-14163-1 US-PATENT-APPL-SN-560717 NAS 1.71:LAR-14330-1-CU NASA-CASE-LAR-14330-1-CU US-PATENT-APPL-SN-568128 NAS 1.71:LAR-14351-1 NASA-CASE-LAR-14351-1 US-PATENT-APPL-SN-589571 NAS 1.71:LAR-14036-1 NASA-CASE-LAR-14036-1 US-PATENT-APPL-SN-418372 NAS 1.71:LEW-15027-1 NASA-CASE-LEW-15027-1 US-PATENT-APPL-SN-603055 NAS 1.71:NPO-17904-1-CU NASA-CASE-NPO-17904-1-CU US-PATENT-APPL-SN-544293 NAS 1.71:NPO-17941-1-CU NASA-CASE-NPO-17941-1-CU US-PATENT-APPL-SN-550775 NAS 1.71:LEW-14945-1 NASA-CASE-LEW-14945-1 US-PATENT-APPL-SN-540976 NAS 1.71:NPO-17922-1-CU NASA-CASE-NPO-17922-1-CU US-PATENT-APPL-SN-596139 NAS 1.71:NPO-18075-1-CU NASA-CASE-NPO-18075-1-CU US-PATENT-APPL-SN-555865 NAS 1.71:NPO-17479-1-CU NASA-CASE-NPO-17479-1-CU US-PATENT-APPL-SN-568127 NAS 1.71:LEW-14162-1 NASA-CASE-LEW-14162-1 US-PATENT-APPL-SN-501893 NAS 1.71:LAR-14340-1-CU NASA-CASE-LAR-14340-1-CU US-PATENT-APPL-SN-575695 NAS 1.71:LAR-14088-1 NASA-CASE-LAR-14088-1 US-PATENT-APPL-SN-552670 NAS 1.71:SSC-00006-1 NASA-CASE-SSC-00006-1 US-PATENT-APPL-SN-489997 INT-PATENT-CLASS-G03H1/02	N90-27340* #	c 61	NASA-CASE-LAR-13989-1 US-PATENT-APPL-SN-318217 NASA-CASE-NPO-17800-1-CU US-PATENT-CLASS-350-320 US-PATENT-CLASS-350-354 US-PATENT-4,913,534 NAS 1.71:NPO-17800-1-CU NASA-CASE-NPO-17800-1-CU US-PATENT-APPL-SN-522949 NAS 1.71:MFS-28406-1 NASA-CASE-MFS-28406-1 US-PATENT-APPL-SN-524110 NAS 1.71:MFS-28328-1 NASA-CASE-MFS-28328-1 US-PATENT-APPL-SN-458065 NAS 1.71:LEW-14965-1 NASA-CASE-LEW-14965-1 US-PATENT-APPL-SN-571062 NAS 1.71:SSC-00008-1 NASA-CASE-SSC-00008-1 US-PATENT-APPL-SN-545178 NAS 1.71:GSC-13230-1 NASA-CASE-GSC-13230-1 US-PATENT-APPL-SN-531374 NAS 1.71:NPO-17914-1-CU NASA-CASE-NPO-17914-1-CU US-PATENT-APPL-SN-575697 NAS 1.71:NPO-18034-1-CU NASA-CASE-NPO-18034-1-CU US-PATENT-APPL-SN-568130 NAS 1.71:LEW-14731-1 NASA-CASE-LEW-14731-1 US-PATENT-APPL-SN-503486 NAS 1.71:MSC-21559-1 NASA-CASE-MSC-21559-1 US-PATENT-APPL-SN-317776 NAS 1.71:MSC-21675-1 NASA-CASE-MSC-21675-1 US-PATENT-APPL-SN-562095 NAS 1.71:MSC-21460-1 NASA-CASE-MSC-21460-1 US-PATENT-APPL-SN-587919 NAS 1.71:NPO-17997-1-CU NASA-CASE-NPO-17997-1-CU US-PATENT-APPL-SN-481013 NAS 1.71:MSC-21481-1 NASA-CASE-MSC-21481-1 US-PATENT-APPL-SN-506136 NAS 1.71:MSC-21737-1 NASA-CASE-MSC-21737-1 US-PATENT-APPL-SN-587922 NAS 1.71:MSC-21381-1 NASA-CASE-MSC-21381-1 US-PATENT-APPL-SN-545235 NAS 1.71:LEW-14878-1 NASA-CASE-LEW-14878-1 US-PATENT-APPL-SN-587921 NAS 1.71:NPO-17784-1-CU NASA-CASE-NPO-17784-1-CU US-PATENT-APPL-SN-568129 NAS 1.71:MFS-28295-1 NASA-CASE-MFS-28295-1 US-PATENT-APPL-SN-503408 NAS 1.71:GSC-13175-1 NASA-CASE-GSC-13175-1 US-PATENT-APPL-SN-506636 NAS 1.71:ARC-11916-1-SB NASA-CASE-ARC-11916-1-SB US-PATENT-APPL-SN-531373 NAS 1.71:GSC-13265-1 NASA-CASE-GSC-13265-1 US-PATENT-APPL-SN-575694 NAS 1.71:MFS-28013-2 NASA-CASE-MFS-28013-2 US-PATENT-APPL-SN-545220 INT-PATENT-CLASS-G01S-5/02 NASA-CASE-NPO-17820-1-CU US-PATENT-APPL-SN-429734 US-PATENT-CLASS-329-306 US-PATENT-CLASS-342-352 US-PATENT-CLASS-342-357 US-PATENT-CLASS-342-418 US-PATENT-CLASS-375-80 US-PATENT-CLASS-375-94 US-PATENT-4,959,656	N91-13724* #	c 37	INT-PATENT-CLASS-B64D-33/00 NASA-CASE-LAR-14116-1 US-PATENT-APPL-SN-004304 US-PATENT-APPL-SN-243685 US-PATENT-APPL-SN-264993 US-PATENT-CLASS-244-199 US-PATENT-CLASS-244-58 US-PATENT-CLASS-290-44 US-PATENT-CLASS-290-55 US-PATENT-4,917,332 NASA-CASE-LAR-13629-1
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				US-PATENT-APPL-SN-343652				US-PATENT-CLASS-73-658
				US-PATENT-CLASS-320-51				US-PATENT-4,977,395
				US-PATENT-CLASS-338-221	N91-14608*	c 37	...	INT-PATENT-CLASS-F01D-11/08
				US-PATENT-CLASS-338-32				NASA-CASE-MFS-28345-1
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				US-PATENT-APPL-SN-405169				US-PATENT-CLASS-415-229
N91-14357*	c 09	...		US-PATENT-CLASS-429-103				US-PATENT-4,927,326
				US-PATENT-CLASS-429-120	N91-14609*	c 37	....	INT-PATENT-CLASS-F16K-1/22
				US-PATENT-4,945,012				NASA-CASE-SSC-00004-1
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				US-PATENT-APPL-SN-443297				US-PATENT-CLASS-251-163
N91-14371*	c 17	..		US-PATENT-CLASS-336-198				US-PATENT-4,921,212
				US-PATENT-CLASS-336-205	N91-14610*	c 37	...	INT-PATENT-CLASS-B25G-3/00
				US-PATENT-CLASS-336-229				INT-PATENT-CLASS-F16B-1/00
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				US-PATENT-APPL-SN-418612				US-PATENT-CLASS-403-317
N91-14374*	c 18	...		US-PATENT-CLASS-328-151				US-PATENT-CLASS-403-327
				US-PATENT-CLASS-329-363				US-PATENT-CLASS-403-331
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				INT-PATENT-CLASS-H01L-27/14	N91-14551*	c 33	..	US-PATENT-4,971,474
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				US-PATENT-CLASS-357-30				US-PATENT-CLASS-285-82
				US-PATENT-CLASS-357-32				US-PATENT-4,932,688
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				US-PATENT-4,954,864				NASA-CASE-LAR-14465-1
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				US-PATENT-CLASS-324-158P				US-PATENT-CLASS-403-322
				US-PATENT-CLASS-324-601				US-PATENT-CLASS-403-327
				US-PATENT-CLASS-333-247				US-PATENT-CLASS-403-331
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				US-PATENT-CLASS-114-67A				US-PATENT-CLASS-294-119.1
				US-PATENT-CLASS-244-130				US-PATENT-CLASS-901-38
				US-PATENT-CLASS-244-203				US-PATENT-CLASS-901-39
				US-PATENT-CLASS-244-204				US-PATENT-4,955,653
				US-PATENT-4,932,610	N91-14616*	c 37	.....	NASA-CASE-NPO-15959-2
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				INT-PATENT-CLASS-F16K-37/00				US-PATENT-CLASS-294-106
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				US-PATENT-APPL-SN-404290				US-PATENT-CLASS-414-7
				US-PATENT-CLASS-137-556				US-PATENT-CLASS-414-729
				US-PATENT-CLASS-251-212				US-PATENT-CLASS-74-479
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				US-PATENT-CLASS-250-287				US-PATENT-CLASS-248-230
				US-PATENT-CLASS-250-288				US-PATENT-CLASS-403-385
				US-PATENT-CLASS-250-305				US-PATENT-CLASS-403-391
				US-PATENT-CLASS-250-423				US-PATENT-4,946,122
				US-PATENT-4,973,840	N91-14642*	c 43	.....	INT-PATENT-CLASS-G01S-13/90
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				US-PATENT-CLASS-357-27				US-PATENT-CLASS-55-228
				US-PATENT-CLASS-357-30				US-PATENT-CLASS-55-242
				US-PATENT-4,952,811				US-PATENT-CLASS-55-68
				INT-PATENT-CLASS-G02B-27/64	N91-14590*	c 35	..	US-PATENT-CLASS-55-74
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				US-PATENT-CLASS-350-500				NASA-CASE-MSC-20929-1
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				INT-PATENT-CLASS-G02B-23/00				US-PATENT-CLASS-210-414
				NASA-CASE-ARC-11886-1-SB				US-PATENT-CLASS-435-311
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				NASA-CASE-MSC-21408-1				US-PATENT-APPL-SN-585627
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N91-14723*	c 54	INT-PATENT-CLASS-E03D-9/04 NASA-CASE-MSC-21025-4 US-PATENT-APPL-SN-035401 US-PATENT-APPL-SN-392228 US-PATENT-CLASS-4-209R US-PATENT-CLASS-4-316 US-PATENT-CLASS-4-482 US-PATENT-4,937,891	N91-15333* #	c 24	NAS 1.71:MFS-28390-1 NASA-CASE-MFS-28390-1 US-PATENT-APPL-SN-578043	N91-15334* #	c 24	NAS 1.71:LAR-14459-1 NASA-CASE-LAR-14459-1 US-PATENT-APPL-SN-613046	N91-15368* #	c 25	NAS 1.71:MFS-29576-1 NASA-CASE-MFS-29576-1 US-PATENT-APPL-SN-587890	N91-15402* #	c 27	INT-PATENT-CLASS-C08G-73/10 NASA-CASE-LEW-14203-1 US-PATENT-APPL-SN-231026 US-PATENT-CLASS-524-600 US-PATENT-CLASS-525-436 US-PATENT-CLASS-528-353 US-PATENT-4,946,890	N91-15403* #	c 27	INT-PATENT-CLASS-C08G-69/26 NASA-CASE-LAR-14101-1 US-PATENT-APPL-SN-266045 US-PATENT-CLASS-528-125 US-PATENT-CLASS-528-126 US-PATENT-CLASS-528-172 US-PATENT-CLASS-528-173 US-PATENT-CLASS-528-176 US-PATENT-CLASS-528-353 US-PATENT-4,937,317	N91-15412* #	c 27	NAS 1.71:LEW-15020-1 NASA-CASE-LEW-15020-1 US-PATENT-APPL-SN-601957	N91-15423* #	c 31	INT-PATENT-CLASS-F23J-1/00 NASA-CASE-NPO-16985-1-CU US-PATENT-APPL-SN-195222 US-PATENT-CLASS-110-165R US-PATENT-CLASS-110-171 US-PATENT-CLASS-110-259 US-PATENT-CLASS-414-217 US-PATENT-CLASS-414-220 US-PATENT-4,860,669	N91-15424* #	c 31	INT-PATENT-CLASS-FB-15/00 NASA-CASE-LEW-14295-1 US-PATENT-APPL-SN-244377 US-PATENT-CLASS-165-104.31 US-PATENT-CLASS-165-41 US-PATENT-CLASS-165-904 US-PATENT-CLASS-239-597 US-PATENT-CLASS-239-601 US-PATENT-CLASS-244-163 US-PATENT-4,913,225	N91-15511* #	c 35	INT-PATENT-CLASS-G01F-17/00 NASA-CASE-MSC-21059-2 US-PATENT-APPL-SN-217725 US-PATENT-APPL-SN-396726 US-PATENT-CLASS-73-149 US-PATENT-4,956,996	N91-15512* #	c 35	INT-PATENT-CLASS-G01B-11/26 INT-PATENT-CLASS-G01C-1/00 INT-PATENT-CLASS-G01C-3/08 NASA-CASE-NPO-17436-1-CU US-PATENT-APPL-SN-237035 US-PATENT-CLASS-356-141 US-PATENT-CLASS-356-152 US-PATENT-CLASS-356-5 US-PATENT-4,964,722	N91-15519* #	c 35	NAS 1.71:MFS-28485-1 NASA-CASE-MFS-28485-1 US-PATENT-APPL-SN-606988	N91-15520* #	c 35	NAS 1.71:ARC-11917-1 NASA-CASE-ARC-11917-1 US-PATENT-APPL-SN-596105	N91-15528* #	c 36	INT-PATENT-CLASS-H01S-3/16 NASA-CASE-NPO-17282-1-CU US-PATENT-APPL-SN-235150 US-PATENT-CLASS-372-41 US-PATENT-CLASS-372-71 US-PATENT-CLASS-372-75 US-PATENT-4,974,230	N91-15544* #	c 37	INT-PATENT-CLASS-F16C-11/00 NASA-CASE-LAR-13898-1 US-PATENT-APPL-SN-225427 US-PATENT-CLASS-403-146 US-PATENT-CLASS-403-147 US-PATENT-CLASS-403-156 US-PATENT-CLASS-403-334 US-PATENT-4,932,807	N91-15561* #	c 47	NAS 1.71:MFS-26102-1-CU NASA-CASE-MFS-26102-1-CU US-PATENT-APPL-SN-571687	N91-15574* #	c 74	NAS 1.71:LAR-14402-1-CU	N91-15589* #	c 76	NASA-CASE-LEW-14472-1 US-PATENT-APPL-SN-251499 US-PATENT-CLASS-252-510 US-PATENT-CLASS-423-439 US-PATENT-CLASS-423-448 US-PATENT-CLASS-423-460 US-PATENT-CLASS-423-489 US-PATENT-4,957,861	N91-15598* #	c 76	NASA-CASE-NPO-16306-1-CU US-PATENT-APPL-SN-718798 US-PATENT-CLASS-118-405 US-PATENT-CLASS-118-407 US-PATENT-CLASS-118-419 US-PATENT-CLASS-118-428 US-PATENT-CLASS-156-608 US-PATENT-CLASS-156-617.1 US-PATENT-CLASS-156-620.1 US-PATENT-4,861,416	N91-16152* #	c 27	NAS 1.71:LEW-14984-1 NASA-CASE-LEW-14984-1 US-PATENT-APPL-SN-610883	N91-16566* #	c 54	NAS 1.71:MSC-21589-1 NASA-CASE-MSC-21589-1 US-PATENT-APPL-SN-529427	N91-16707* #	c 71	NAS 1.71:LAR-14361-1 NASA-CASE-LAR-14361-1 US-PATENT-APPL-SN-587920	N91-16815* #	c 76	NAS 1.71:MFS-26061-1 NASA-CASE-MFS-26061-1 US-PATENT-APPL-SN-575708	N91-16999* #	c 02	NAS 1.71:LAR-13742-1 NASA-CASE-LAR-13742-1 US-PATENT-APPL-SN-621144	N91-17141* #	c 23	INT-PATENT-CLASS-C07C-15/16 NASA-CASE-LEW-14345-3 US-PATENT-APPL-SN-159071 US-PATENT-APPL-SN-292049 US-PATENT-APPL-SN-924474 US-PATENT-CLASS-552-101 US-PATENT-4,912,238	N91-17145* #	c 24	NASA-CASE-LEW-14990-1-CU US-PATENT-APPL-SN-326757 US-PATENT-APPL-SN-433863 US-PATENT-CLASS-419-24 US-PATENT-CLASS-419-36 US-PATENT-CLASS-419-37 US-PATENT-CLASS-419-48 US-PATENT-CLASS-419-49 US-PATENT-CLASS-419-8 US-PATENT-4,980,126	N91-17250* #	c 29	NAS 1.71:MFS-28422-1 NASA-CASE-MFS-28422-1 US-PATENT-APPL-SN-629740	N91-17340* #	c 34	NAS 1.71:MSC-21729-1 NASA-CASE-MSC-21729-1 US-PATENT-APPL-SN-625344	N91-17350* #	c 35	INT-PATENT-CLASS-G01L-3/00 NASA-CASE-NPO-17461-1-CU US-PATENT-APPL-SN-326820 US-PATENT-CLASS-73-862.33 US-PATENT-CLASS-73-862.36 US-PATENT-4,932,270	N91-17360* #	c 36	INT-PATENT-CLASS-H01S-3/098 NASA-CASE-NPO-17355-1-CU US-PATENT-APPL-SN-283431 US-PATENT-CLASS-372-19 US-PATENT-CLASS-372-39 US-PATENT-CLASS-372-66 US-PATENT-CLASS-372-70 US-PATENT-4,860,295	N91-17387* #	c 37	INT-PATENT-CLASS-F16D-3/02 NASA-CASE-GSC-13153-1 US-PATENT-APPL-SN-326863 US-PATENT-CLASS-403-113 US-PATENT-CLASS-403-291 US-PATENT-CLASS-403-57 US-PATENT-CLASS-464-132 US-PATENT-CLASS-464-56 US-PATENT-4,932,806	N91-17388* #	c 37	INT-PATENT-CLASS-F16D-3/50 NASA-CASE-GSC-13127-1 US-PATENT-APPL-SN-193612 US-PATENT-CLASS-464-56 US-PATENT-CLASS-901-28 US-PATENT-4,946,421	N91-17401* #	c 37	NAS 1.71:GSC-13261-1 NASA-CASE-GSC-13261-1 US-PATENT-APPL-SN-628529	N91-17531* #	c 51	NAS 1.71:MSC-21662-1 NASA-CASE-MSC-21662-1 US-PATENT-APPL-SN-625345	N91-21157* #	c 09	INT-PATENT-CLASS-G01N-31/12 NASA-CASE-MSC-21470-1 US-PATENT-APPL-SN-381239 US-PATENT-CLASS-374-8 US-PATENT-CLASS-422-104 US-PATENT-CLASS-422-78 US-PATENT-CLASS-422-80 US-PATENT-CLASS-73-865.6 US-PATENT-4,990,312	N91-21175* #	c 14	INT-PATENT-CLASS-G01M-3/28 NASA-CASE-MFS-28376-1
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N91-25200*	c 24	NASA-CASE-LAR-14107-1 US-PATENT-APPL-SN-105846 US-PATENT-APPL-SN-262268 US-PATENT-CLASS-264-136 US-PATENT-CLASS-264-257 US-PATENT-CLASS-264-331.12 US-PATENT-CLASS-525-432 US-PATENT-CLASS-528-350 US-PATENT-CLASS-528-352 US-PATENT-5,004,575	INT-PATENT-CLASS-H01L-29/161 NASA-CASE-NPO-18101-1-CU US-PATENT-APPL-SN-596133 US-PATENT-CLASS-357-16 US-PATENT-CLASS-357-17 US-PATENT-CLASS-357-30 US-PATENT-CLASS-357-34 US-PATENT-CLASS-357-46 US-PATENT-5,027,182	US-PATENT-CLASS-219-390 US-PATENT-CLASS-374-49 US-PATENT-CLASS-374-50 US-PATENT-CLASS-73-826 US-PATENT-5,015,825
N91-25201* #	c 24	NAS 1.71:LEW-14162-2 NASA-CASE-LEW-14162-2 US-PATENT-APPL-SN-657238	INT-PATENT-CLASS-B23K-9/00 NASA-CASE-LEW-14901-1 US-PATENT-APPL-SN-376488 US-PATENT-CLASS-219-121.47 US-PATENT-CLASS-219-121.48 US-PATENT-CLASS-219-121.52 US-PATENT-CLASS-219-75 US-PATENT-CLASS-219-78.16 US-PATENT-CLASS-427-34 US-PATENT-4,990,739	INT-PATENT-CLASS-E04H-12/18 NASA-CASE-LAR-13490-1 US-PATENT-APPL-SN-899683 US-PATENT-CLASS-403-72 US-PATENT-CLASS-52-646 US-PATENT-5,016,418
N91-25202* #	c 24	NAS 1.71:LEW-15020-2 NASA-CASE-LEW-15020-2 US-PATENT-APPL-SN-708255	INT-PATENT-CLASS-B23H-9/00 NASA-CASE-LEW-14679-1 US-PATENT-APPL-SN-381240 US-PATENT-CLASS-219-69.11 US-PATENT-5,012,062	INT-PATENT-CLASS-G02B-5/122 NASA-CASE-MFS-28419-1 US-PATENT-APPL-SN-431538 US-PATENT-CLASS-350-102 US-PATENT-CLASS-350-107 US-PATENT-CLASS-350-97 US-PATENT-5,020,876
N91-25296*	c 27	INT-PATENT-CLASS-B23H-9/00 NASA-CASE-LEW-14679-1 US-PATENT-APPL-SN-381240 US-PATENT-CLASS-219-69.11 US-PATENT-5,012,062	NAS 1.71:LEW-15164-1 NASA-CASE-LEW-15164-1 US-PATENT-APPL-SN-699130	INT-PATENT-CLASS-B64G-1/42 NASA-CASE-GSC-13197-1 US-PATENT-APPL-SN-344872 US-PATENT-CLASS-244-159 US-PATENT-5,020,743
N91-25298* #	c 27	NAS 1.71:LEW-15164-1 NASA-CASE-LEW-15164-1 US-PATENT-APPL-SN-699130	NAS 1.71:LEW-14846-2 NASA-CASE-LEW-14846-2 US-PATENT-APPL-SN-709907	INT-PATENT-CLASS-C08G-14/00 INT-PATENT-CLASS-C08G-8/02 NASA-CASE-LAR-13992-1-CU US-PATENT-APPL-SN-248009 US-PATENT-CLASS-528-125 US-PATENT-CLASS-528-126 US-PATENT-CLASS-528-128 US-PATENT-CLASS-528-219 US-PATENT-CLASS-528-220 US-PATENT-4,902,769
N91-25305*	c 31	INT-PATENT-CLASS-F16L-55/04 NASA-CASE-MSC-21703-1 US-PATENT-APPL-SN-603052 US-PATENT-CLASS-138-26 US-PATENT-CLASS-138-30 US-PATENT-5,027,860	NAS 1.71:LEW-15155-1 NASA-CASE-LEW-15155-1 US-PATENT-APPL-SN-682160	INT-PATENT-CLASS-C08G-8/02 NASA-CASE-LAR-13992-1-CU US-PATENT-APPL-SN-248009 US-PATENT-CLASS-528-125 US-PATENT-CLASS-528-126 US-PATENT-CLASS-528-128 US-PATENT-CLASS-528-219 US-PATENT-CLASS-528-220 US-PATENT-4,902,769
N91-25306* #	c 31	NAS 1.71:MFS-28545-1 NASA-CASE-MFS-28545-1 US-PATENT-APPL-SN-674636	NAS 1.71:LEW-14999-2 NASA-CASE-LEW-14999-2 US-PATENT-APPL-SN-662684	INT-PATENT-CLASS-C08G-14/00 INT-PATENT-CLASS-C08G-8/02 NASA-CASE-LAR-13992-1-CU US-PATENT-APPL-SN-248009 US-PATENT-CLASS-528-125 US-PATENT-CLASS-528-126 US-PATENT-CLASS-528-128 US-PATENT-CLASS-528-219 US-PATENT-CLASS-528-220 US-PATENT-4,902,769
N91-25316*	c 32	INT-PATENT-CLASS-H04B-1/10 NASA-CASE-NPO-16987-1-CU US-PATENT-APPL-SN-203374 US-PATENT-CLASS-375-53 US-PATENT-CLASS-375-56 US-PATENT-CLASS-375-85 US-PATENT-CLASS-375-97 US-PATENT-5,007,068	NAS 1.71:MFS-28458-1 NASA-CASE-MFS-28458-1 US-PATENT-APPL-SN-710192	NASA-CASE-LEW-14902-1 US-PATENT-APPL-SN-571058 US-PATENT-CLASS-419-14 US-PATENT-CLASS-419-30 US-PATENT-CLASS-419-32 US-PATENT-CLASS-419-36 US-PATENT-CLASS-419-38 US-PATENT-CLASS-419-39 US-PATENT-CLASS-419-49 US-PATENT-5,034,187
N91-25317*	c 32	INT-PATENT-CLASS-G06F-15/20 NASA-CASE-MSC-21334-1 US-PATENT-APPL-SN-292130 US-PATENT-CLASS-364-578 US-PATENT-5,005,147	NAS 1.71:MFS-28521-1 NASA-CASE-MFS-28521-1 US-PATENT-APPL-SN-657586	US-PATENT-CLASS-419-32 US-PATENT-CLASS-419-36 US-PATENT-CLASS-419-38 US-PATENT-CLASS-419-39 US-PATENT-CLASS-419-49 US-PATENT-5,034,187
N91-25318*	c 32	INT-PATENT-CLASS-H04L-27/18 NASA-CASE-NPO-17853-1-CU US-PATENT-APPL-SN-443539 US-PATENT-CLASS-329-304 US-PATENT-CLASS-375-53 US-PATENT-CLASS-375-85 US-PATENT-5,025,455	NAS 1.71:LEW-15196-1 NASA-CASE-LEW-15196-1 US-PATENT-APPL-SN-687606	NASA-CASE-NPO-17633-1-CU US-PATENT-APPL-SN-418611 US-PATENT-CLASS-528-220 US-PATENT-CLASS-528-222 US-PATENT-CLASS-528-225 US-PATENT-CLASS-528-227 US-PATENT-CLASS-528-228 US-PATENT-CLASS-528-230 US-PATENT-CLASS-528-233 US-PATENT-5,011,907
N91-25335* #	c 33	NAS 1.71:MFS-29766-1 NASA-CASE-MFS-29766-1 US-PATENT-APPL-SN-677182	NAS 1.71:MFS-28458-1 NASA-CASE-MFS-28458-1 US-PATENT-APPL-SN-710192	INT-PATENT-CLASS-F28F-7/00 NASA-CASE-NPO-17806-1-CU US-PATENT-APPL-SN-560908 US-PATENT-CLASS-136-204 US-PATENT-CLASS-165-1 US-PATENT-CLASS-165-185 US-PATENT-5,031,689
N91-25380*	c 34	INT-PATENT-CLASS-B64G-1/28 NASA-CASE-NPO-17204-1-CU US-PATENT-APPL-SN-473242 US-PATENT-CLASS-114-122 US-PATENT-CLASS-114-125 US-PATENT-CLASS-244-164 US-PATENT-CLASS-244-165 US-PATENT-5,026,008	NAS 1.71:LEW-15222-1 NASA-CASE-LEW-15222-1 US-PATENT-APPL-SN-718315	US-PATENT-CLASS-165-185 US-PATENT-5,031,689
N91-25388* #	c 35	NAS 1.71:MFS-28563-1 NASA-CASE-MFS-28563-1 US-PATENT-APPL-SN-710193	NAS 1.71:LEW-15223-1 NASA-CASE-LEW-15223-1 US-PATENT-APPL-SN-718315	INT-PATENT-CLASS-H04L-27/22 NASA-CASE-NPO-17896-1-CU US-PATENT-APPL-SN-560691 US-PATENT-CLASS-329-304 US-PATENT-CLASS-375-53 US-PATENT-CLASS-375-56 US-PATENT-CLASS-375-85 US-PATENT-CLASS-375-86 US-PATENT-5,017,883
N91-25392* #	c 36	NAS 1.71:LAR-14556-1 NASA-CASE-LAR-14556-1 US-PATENT-APPL-SN-699289	NAS 1.71:LEW-15222-1 NASA-CASE-LEW-15222-1 US-PATENT-APPL-SN-718315	INT-PATENT-CLASS-H01M-4/04 INT-PATENT-CLASS-H01M-4/58 NASA-CASE-NPO-17809-1-CU US-PATENT-APPL-SN-503409 US-PATENT-CLASS-29-623.5 US-PATENT-CLASS-429-223 US-PATENT-5,019,470
N91-25415* #	c 37	NAS 1.71:MSC-21748-1 NASA-CASE-MSC-21748-1 US-PATENT-APPL-SN-657598	NAS 1.71:MFS-28473-1 NASA-CASE-MFS-28473-1 US-PATENT-APPL-SN-717447	INT-PATENT-CLASS-H01M-4/04 INT-PATENT-CLASS-H01M-4/58 NASA-CASE-NPO-17809-1-CU US-PATENT-APPL-SN-503409 US-PATENT-CLASS-29-623.5 US-PATENT-CLASS-429-223 US-PATENT-5,019,470
N91-25570* #	c 51	NAS 1.71:MSC-21763-1 NASA-CASE-MSC-21763-1 US-PATENT-APPL-SN-671603	NAS 1.71:MFS-28473-1 NASA-CASE-MFS-28473-1 US-PATENT-APPL-SN-717447	INT-PATENT-CLASS-G05F-1/12 NASA-CASE-GSC-13280-1 US-PATENT-APPL-SN-418373 US-PATENT-CLASS-323-311 US-PATENT-CLASS-323-312 US-PATENT-5,021,729
N91-25693* #	c 62	INT-PATENT-CLASS-G06F-12/00 NASA-CASE-NPO-17197-1-CU US-PATENT-APPL-SN-292124 US-PATENT-CLASS-364-200 US-PATENT-CLASS-364-281 US-PATENT-CLASS-364-281.3 US-PATENT-CLASS-364-281.6 US-PATENT-CLASS-364-281.8 US-PATENT-5,031,089	INT-PATENT-CLASS-B64C-17/00 NASA-CASE-LAR-14322-1 US-PATENT-APPL-SN-603335 US-PATENT-CLASS-244-113 US-PATENT-CLASS-244-139 US-PATENT-CLASS-244-75R US-PATENT-5,020,739	INT-PATENT-CLASS-F16K-3/32 INT-PATENT-CLASS-F16K-31/06 NASA-CASE-MSC-21549-1 US-PATENT-APPL-SN-507553 US-PATENT-CLASS-251-129.15 US-PATENT-CLASS-251-148 US-PATENT-CLASS-251-205 US-PATENT-CLASS-251-326 US-PATENT-CLASS-251-363 US-PATENT-5,020,774
N91-25840*	c 74	NASA-CASE-MSC-21509-1 US-PATENT-APPL-SN-560924 US-PATENT-CLASS-350-162.13 US-PATENT-CLASS-350-3.68 US-PATENT-CLASS-382-31 US-PATENT-CLASS-382-32 US-PATENT-CLASS-382-43 US-PATENT-CLASS-382-49 US-PATENT-CLASS-382-6 US-PATENT-5,029,220	INT-PATENT-CLASS-B64C-7/00 INT-PATENT-CLASS-B64D-1/02 NASA-CASE-LAR-13875-1 US-PATENT-APPL-SN-250468 US-PATENT-CLASS-244-118.1 US-PATENT-CLASS-244-130 US-PATENT-CLASS-244-137.4 US-PATENT-5,018,688	INT-PATENT-CLASS-F16K-3/32 INT-PATENT-CLASS-F16K-31/06 NASA-CASE-MSC-21549-1 US-PATENT-APPL-SN-507553 US-PATENT-CLASS-251-129.15 US-PATENT-CLASS-251-148 US-PATENT-CLASS-251-205 US-PATENT-CLASS-251-326 US-PATENT-CLASS-251-363 US-PATENT-5,020,774
N91-25841*	c 74	INT-PATENT-CLASS-H01L-27/02	NAS 1.71:LEW-14848-1 US-PATENT-APPL-SN-382885	INT-PATENT-CLASS-H04F-25/00 NASA-CASE-GSC-13027-1-CU US-PATENT-APPL-SN-363807 US-PATENT-CLASS-381-26

N91-27560*	c 37	US-PATENT-CLASS-381-68.1 US-PATENT-CLASS-381-92 US-PATENT-5,029,216 INT-PATENT-CLASS-B64D-33/04 INT-PATENT-CLASS-F16J-15/46 NASA-CASE-LEW-14672-1 US-PATENT-APPL-SN-441672 US-PATENT-CLASS-239-265.11 US-PATENT-CLASS-277-157 US-PATENT-CLASS-277-226 US-PATENT-CLASS-277-229 US-PATENT-CLASS-277-34 US-PATENT-5,014,917	N91-28321* #	c 25	NAS 1.71:LAR-13388-1 NASA-CASE-LAR-13388-1 US-PATENT-APPL-SN-628062 NAS 1.71:GSC-13344-1 NASA-CASE-GSC-13344-1 US-PATENT-APPL-SN-718046	N91-31236*	c 24	INT-PATENT-CLASS-B32B-7/08 NASA-CASE-NPO-11907-1-NP US-PATENT-APPL-SN-410576 US-PATENT-CLASS-112-440 US-PATENT-CLASS-428-285 US-PATENT-5,038,693
N91-27561*	c 37	INT-PATENT-CLASS-B60P-7/15 INT-PATENT-CLASS-E05C-5/04 NASA-CASE-LEW-14887-1 US-PATENT-APPL-SN-503418 US-PATENT-CLASS-292-60 US-PATENT-CLASS-292-61 US-PATENT-CLASS-410-80 US-PATENT-CLASS-410-84 US-PATENT-5,032,045 NASA-CASE-LAR-14489-1 US-PATENT-APPL-SN-543926 US-PATENT-CLASS-264-184 US-PATENT-CLASS-264-211.15 US-PATENT-CLASS-264-211.16 US-PATENT-CLASS-264-211.17 US-PATENT-CLASS-264-234 US-PATENT-CLASS-264-236 US-PATENT-CLASS-264-345 US-PATENT-5,023,034	N91-28423* #	c 27	NAS 1.71:LEW-14474-1 NASA-CASE-LEW-14474-1 US-PATENT-APPL-SN-720133	N91-31258*	c 25	INT-PATENT-CLASS-H01L-21/306 NASA-CASE-ARC-11873-2 US-PATENT-APPL-SN-150169 US-PATENT-APPL-SN-347591 US-PATENT-CLASS-156-345 US-PATENT-CLASS-156-643 US-PATENT-CLASS-156-668 US-PATENT-CLASS-204-192.32 US-PATENT-CLASS-437-229 US-PATENT-5,007,983
N91-27562*	c 37	US-PATENT-APPL-SN-503418 US-PATENT-CLASS-292-60 US-PATENT-CLASS-292-61 US-PATENT-CLASS-410-80 US-PATENT-CLASS-410-84 US-PATENT-5,032,045 NASA-CASE-LAR-14489-1 US-PATENT-APPL-SN-543926 US-PATENT-CLASS-264-184 US-PATENT-CLASS-264-211.15 US-PATENT-CLASS-264-211.16 US-PATENT-CLASS-264-211.17 US-PATENT-CLASS-264-234 US-PATENT-CLASS-264-236 US-PATENT-CLASS-264-345 US-PATENT-5,023,034	N91-28444* #	c 28	NAS 1.71:LAR-13832-1 NASA-CASE-LAR-13832-1 US-PATENT-APPL-SN-682151 NAS 1.71:LAR-14206-1 NASA-CASE-LAR-14206-1 US-PATENT-APPL-SN-429574	N91-31307*	c 27	INT-PATENT-CLASS-C08F-283/00 INT-PATENT-CLASS-C08F-283/04 INT-PATENT-CLASS-C08G-16/00 INT-PATENT-CLASS-C08G-73/10 NASA-CASE-LAR-13910-2-CU US-PATENT-APPL-SN-218792 US-PATENT-APPL-SN-347558 US-PATENT-CLASS-525-422 US-PATENT-CLASS-525-471 US-PATENT-5,021,518
N91-27614*	c 44	INT-PATENT-CLASS-H01L-31/18 INT-PATENT-CLASS-H01L-31/42 NASA-CASE-LEW-14959-1 US-PATENT-APPL-SN-495969 US-PATENT-CLASS-136-244 US-PATENT-CLASS-136-249 US-PATENT-CLASS-136-256 US-PATENT-CLASS-357-30 US-PATENT-CLASS-437-2 US-PATENT-5,019,176	N91-28454* #	c 31	NAS 1.71:LAR-14446-1 NASA-CASE-LAR-14446-1 US-PATENT-APPL-SN-699288	N91-31476*	c 31	INT-PATENT-CLASS-B23K-20/08 NASA-CASE-LAR-14096-1 US-PATENT-APPL-SN-591644 US-PATENT-CLASS-228-107 US-PATENT-CLASS-228-2.5 US-PATENT-5,050,789
N91-27913*	c 71	NASA-CASE-LAR-13968-1 US-PATENT-APPL-SN-392165 US-PATENT-CLASS-181-206 US-PATENT-CLASS-181-286 US-PATENT-CLASS-181-290 US-PATENT-CLASS-181-295 US-PATENT-CLASS-381-71 US-PATENT-CLASS-381-94 US-PATENT-CLASS-52-144 US-PATENT-5,024,288	N91-28455* #	c 31	NAS 1.71:LAR-14483-1 NASA-CASE-LAR-14483-1 US-PATENT-APPL-SN-682153 NAS 1.71:LAR-14395-1-CU NASA-CASE-LAR-14395-1-CU US-PATENT-APPL-SN-666536	N91-31528*	c 33	INT-PATENT-CLASS-G05B-19/42 NASA-CASE-NPO-17134-1-CU US-PATENT-APPL-SN-172105 US-PATENT-CLASS-318-568.1 US-PATENT-CLASS-318-568.2 US-PATENT-CLASS-318-573 US-PATENT-CLASS-364-513 US-PATENT-CLASS-901-19 US-PATENT-5,047,700
N91-27914*	c 71	INT-PATENT-CLASS-A61B-8/00 NASA-CASE-LAR-13966-1 US-PATENT-APPL-SN-422726 US-PATENT-CLASS-128-660.06 US-PATENT-CLASS-73-631 US-PATENT-5,031,627	N91-28546* #	c 35	NAS 1.71:LAR-14579-1 NASA-CASE-LAR-14579-1 US-PATENT-APPL-SN-690198 NAS 1.71:GSC-13343-1 NASA-CASE-GSC-13343-1 US-PATENT-APPL-SN-702529	N91-31529*	c 33	NASA-CASE-LEW-14676-1 US-PATENT-APPL-SN-305675 US-PATENT-CLASS-421-209 US-PATENT-CLASS-421-457 US-PATENT-CLASS-505-1 US-PATENT-CLASS-505-701 US-PATENT-CLASS-505-702 US-PATENT-CLASS-505-703 US-PATENT-CLASS-505-704 US-PATENT-5,049,539
N91-27936*	c 72	INT-PATENT-CLASS-H01J-37/00 NASA-CASE-LAR-14250-1-SB US-PATENT-APPL-SN-531372 US-PATENT-CLASS-250-306 US-PATENT-CLASS-250-307 US-PATENT-CLASS-250-358.1 US-PATENT-5,015,851	N91-28557* #	c 36	NAS 1.71:GSC-13343-1 NASA-CASE-GSC-13343-1 US-PATENT-APPL-SN-702529 NAS 1.71:GSC-13251-1 NASA-CASE-GSC-13251-1 US-PATENT-APPL-SN-714814	N91-31530*	c 33	INT-PATENT-CLASS-H04K-3/00 NASA-CASE-GSC-12821-2 US-PATENT-APPL-SN-242254 US-PATENT-APPL-SN-921576 US-PATENT-CLASS-455-1 US-PATENT-CLASS-455-102 US-PATENT-CLASS-455-99 US-PATENT-5,014,340
N91-27957*	c 74	INT-PATENT-CLASS-H04B-10/00 NASA-CASE-NPO-17703-1-CU US-PATENT-APPL-SN-359801 US-PATENT-CLASS-356-5 US-PATENT-CLASS-455-605 US-PATENT-5,031,234	N91-28578* #	c 37	NAS 1.71:GSC-13378-1 NASA-CASE-GSC-13378-1 US-PATENT-APPL-SN-710633 NAS 1.71:GSC-13251-1 NASA-CASE-GSC-13251-1 US-PATENT-APPL-SN-714814	N91-31596*	c 34	INT-PATENT-CLASS-G01F-1/00 NASA-CASE-LAR-13952-2-SB US-PATENT-APPL-SN-203178 US-PATENT-APPL-SN-348223 US-PATENT-CLASS-73-432.1 US-PATENT-4,936,146
N91-28014*	c 76	INT-PATENT-CLASS-H01L-21/324 NASA-CASE-NPO-17678-1-CU US-PATENT-APPL-SN-357758 US-PATENT-CLASS-357-82 US-PATENT-CLASS-437-187 US-PATENT-CLASS-437-197 US-PATENT-CLASS-437-199 US-PATENT-CLASS-437-247 US-PATENT-CLASS-437-248 US-PATENT-5,019,533	N91-28579* #	c 37	NAS 1.71:GSC-13376-1 NASA-CASE-GSC-13376-1 US-PATENT-APPL-SN-677008 NAS 1.71:LAR-14515-1-CU NASA-CASE-LAR-14515-1-CU US-PATENT-APPL-SN-678551	N91-31608*	c 35	INT-PATENT-CLASS-G01K-17/06 INT-PATENT-CLASS-G01K-17/16 NASA-CASE-LEW-14967-1 US-PATENT-APPL-SN-531433 US-PATENT-CLASS-136-200 US-PATENT-CLASS-250-356.1 US-PATENT-CLASS-374-180 US-PATENT-CLASS-374-208 US-PATENT-CLASS-374-299 US-PATENT-5,048,973
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N91-32498*	c 37	INT-PATENT-CLASS-B64D-1/12			
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N91-32509* #	c 37	NAS 1.71:NPO-18116-1-CU			
		NASA-CASE-NPO-18116-1-CU			
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N91-32510* #	c 37	NAS 1.71:NPO-18134-1-CU			
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The NASA Patent Counsel having cognizance of the invention is determined by the first three letters or prefix of the NASA Case Number assigned to the invention. The addresses of NASA Patent Counsels are listed alongside the NASA Case Number prefix letters in the following table.

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**NASA Case  
Number  
Prefix Letters**

**Address of Cognizant  
NASA Patent Counsel**

ARC-xxxxx  
XAR-xxxxx

Ames Research Center  
Mail Code: 200-11A  
Moffett Field, California 94035  
Telephone: (415) 694-5104

ERC-xxxxx  
XER-xxxxx  
HQN-xxxxx  
XHQ-xxxxx

NASA Headquarters  
Mail Code: GP  
Washington, D.C. 20546  
Telephone: (202) 453-2417

GSC-xxxxx  
XGS-xxxxx

Goddard Space Flight Center  
Mail Code: 204  
Greenbelt, Maryland 20771  
Telephone: (301) 286-7351

KSC-xxxxx  
XKS-xxxxx

John F. Kennedy Space Center  
Mail Code: PT-PAT  
Kennedy Space Center, Florida 32899  
Telephone: (305) 867-2544

LAR-xxxxx  
XLA-xxxxx

Langley Research Center  
Mail Code: 279  
Hampton, Virginia 23365  
Telephone: (804) 865-3725

LEW-xxxxx  
XLE-xxxxx

Lewis Research Center  
Mail Code: 500-318  
21000 Brookpark Road  
Cleveland, Ohio 44135  
Telephone: (216) 433-5753

MSC-xxxxx  
XMS-xxxxx

Lyndon B. Johnson Space Center  
Mail Code: AL3  
Houston, Texas 77058  
Telephone: (713) 483-4871

MFS-xxxxx  
XMF-xxxxx

George C. Marshall Space Flight Center  
Mail Code: CC01  
Huntsville, Alabama 35812  
Telephone: (205) 544-0024

NPO-xxxxx  
XNP-xxxxx  
FRC-xxxxx  
XFR-xxxxx  
WOO-xxxxx

NASA Resident Legal Office  
Mail Code: 180-801  
4800 Oak Grove Drive  
Pasadena, California 91103  
Telephone: (818) 354-2700



# PATENT LICENSING REGULATIONS

## NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

### 14 CFR Part 1245

#### Licensing of NASA Inventions

**AGENCY:** National Aeronautics and Space Administration  
**ACTION:** Interim regulation with comments requested.

**SUMMARY:** The National Aeronautics and Space Administration (NASA) is revising its patent licensing regulations to conform with Pub. L. 96-517. This interim regulation provides policies and procedures applicable to the licensing of federally owned inventions in the custody of the National Aeronautics and Space Administration, and implements Pub. L. 96-517. The object of this subpart is to use the patent system to promote the utilization of inventions arising from NASA supported research and development.

**EFFECTIVE DATE:** July 1, 1981. Comments must be received in writing by December 2, 1981. Unless a notice is published in the **Federal Register** after the comment period indicating changes to be made, this interim regulation shall become a final regulation.

**ADDRESS:** Mr. John G. Mannix, Director of Patent Licensing, GP-4, NASA, Washington, D.C. 20546

**FOR FURTHER INFORMATION CONTACT:**  
Mr. John G. Mannix, (202) 755-3954.

#### SUPPLEMENTARY INFORMATION:

### PART 1245—PATENTS AND OTHER INTELLECTUAL PROPERTY RIGHTS

Subpart 2 of Part 1245 is revised to read as follows:

#### Subpart 2—Licensing of NASA Inventions

Sec.

- 1245.200 Scope of subpart.
- 1245.201 Policy and objective.
- 1245.202 Definitions.
- 1245.203 Authority to grant licenses.

#### Restrictions and Conditions

- 1245.204 All licenses granted under this subpart.

#### Types of Licenses

- 1245.205 Nonexclusive licenses.
- 1245.206 Exclusive and partially exclusive licenses.

#### Procedures

- 1245.207 Application for a license.
- 1245.208 Processing applications.
- 1245.209 Notice to Attorney General.
- 1245.210 Modification and termination of licenses.
- 1245.211 Appeals.
- 1245.212 Protection and administration of inventions.
- 1245.213 Transfer of custody.
- 1245.214 Confidentiality of information.

**Authority:** 35 U.S.C. Section 207 and 208.94 Stat 3023 and 3024.

#### Subpart 2—Licensing of NASA Inventions

##### § 1245.200 Scope of subpart.

This subpart prescribes the terms, conditions and procedures upon which a NASA invention may be licensed. It does not affect licenses which (a) were in effect prior to July 1, 1981; (b) may exist at the time of the Government's acquisition of title to the invention, including those resulting from the allocation of rights to inventions made under Government research and development contracts; (c) are the result of an authorized exchange of rights in the settlement of patent disputes; or (d) are otherwise authorized by law or treaty.

##### § 1245.201 Policy and objective.

It is the policy and objective of this subpart to use the patent system to promote the utilization of inventions arising from NASA supported research and development.

##### § 1245.202 Definitions

(a) "Federally owned invention" means an invention, plant, or design which is covered by a patent, or patent application in the United States, or a patent, patent application, plant variety protection, or other form of protection, in a foreign country, title to which has been assigned to or otherwise vested in the United States Government.

(b) "Federal agency" means an executive department, military department, Government corporation, or independent establishment, except the Tennessee Valley Authority, which has custody of a Federally owned invention.

(c) "NASA Invention" means a Federally owned invention with respect to which NASA maintains custody and administration, in whole or in part, of the right, title or interest in such invention on behalf of the United States Government.

(d) "Small business firm" means a small business concern as defined at section 2 of Pub. L. 85-536 (15 U.S.C. 632) and implementing regulations of the Administrator of the Small Business Administration. For the purpose of these regulations, the size standard for small business concerns involved in Government procurement, contained in 13 CFR 121.3-8, and in subcontracting, contained in 13 CFR 121.3-12, will be used.

(e) "Practical application" means to manufacture in the case of a composition or product, to practice in the case of a process or method, or to operate in the case of a machine or system; and, in each case, under such condition, as to establish that the invention is being utilized and that its benefits are to the extent permitted by law or Government regulations available to the public on reasonable terms.

(f) "United States" means the United States of America, its territories and possessions, the District of Columbia, and the Commonwealth of Puerto Rico.

##### § 1245.203 Authority to grant licenses.

NASA inventions shall be made available for licensing as deemed appropriate in the public interest. NASA may grant nonexclusive, partially exclusive, or exclusive licenses thereto under this subpart on inventions in its custody.

#### Restrictions and Conditions

##### § 1245.204 All licenses granted under this subpart.

(a) *Restrictions.* (1) A license may be granted only if the applicant has supplied NASA with a satisfactory plan for development or marketing of the invention, or both, and with information about the applicant's capability to fulfill the plan.

(2) A license granting rights to use or sell under a NASA invention in the United States shall normally be granted only to a licensee who agrees that any products embodying the invention or produced through the use of the invention will be manufactured substantially in the United States.

(b) *Conditions.* Licenses shall contain such terms and conditions as NASA determines are appropriate for the protection of the interests of the Federal Government and the public and are not in conflict with law or this subpart. The following terms and conditions apply to any license:

(1) The duration of the license shall be for a period specified in the license agreement, unless sooner terminated in accordance with this subpart.

(2) The license may be granted for all or less than all fields of use of the invention or in specified geographical areas, or both.

(3) The license may extend to subsidiaries of the licensee or other parties if provided for in the license but shall be nonassignable without approval of NASA, except to the successor of that part of the licensee's business to which the invention pertains.

(4) The license may provide the licensee the right to grant sublicenses under the license, subject to the approval of NASA. Each sublicense shall make reference to the license, including the rights retained by the Government, and a copy of such sublicense shall be furnished to NASA.

(5) The license shall require the licensee to carry out the plan for development or marketing of the invention, or both, to bring the invention to practical application within a period specified in the license, and to continue to make the benefits of the invention reasonably accessible to the public.

## PATENT LICENSING REGULATIONS

(6) The license shall require the licensee to report periodically on the utilization or efforts at obtaining utilization that are being made by the licensee, with particular reference to the plan submitted.

(7) All licenses shall normally require royalties or other consideration.

(8) Where an agreement is obtained pursuant to § 1245.204(a)(2) that any products embodying the invention or produced through use of the invention will be manufactured substantially in the United States, the license shall recite such agreement.

(9) The license shall provide for the right of NASA to terminate the license, in whole or in part, if:

(i) NASA determines that the licensee is not executing the plan submitted with its request for a license and the licensee cannot otherwise demonstrate to the satisfaction of NASA that it has taken or can be expected to take within a reasonable time effective steps to achieve practical application of the invention;

(ii) NASA determines that such action is necessary to meet requirements for public use specified by Federal regulations issued after the date of the license and such requirements are not reasonably satisfied by the licensee;

(iii) The licensee has willfully made a false statement of or willfully omitted a material fact in the license application or in any report required by the license agreement; or

(iv) The licensee commits a substantial breach of a covenant or agreement contained in the license.

(10) The license may be modified or terminated, consistent with this subpart, upon mutual agreement of NASA and the licensee.

(11) Nothing relating to the grant of a license, nor the grant itself, shall be construed to confer upon any person any immunity from or defenses under the antitrust laws or from a charge of patent misuse, and the acquisition and use of rights pursuant to this subpart shall not be immunized from the operation of state or Federal law by reason of the source of the grant.

### Types of Licenses

#### § 1245.205 Nonexclusive licenses.

(a) *Availability of licenses.* Nonexclusive licenses may be granted under NASA inventions without publication of availability or notice of a prospective license.

(b) *Conditions.* In addition to the provisions of § 1245.204, the nonexclusive license may also provide that, after termination of a period specified in the license agreement, NASA may restrict the license to the fields of use or geographic areas, or both, in which the licensee has brought the invention to practical application and continues to make the benefits of the invention reasonably accessible to the public. However, such restriction shall be made only in order to grant an exclusive or partially exclusive license in accordance with this subpart.

#### § 1245.206 Exclusive and partially exclusive licenses.

(a) Domestic licenses.

(1) *Availability of licenses.* Exclusive or partially exclusive licenses may be granted on NASA inventions: (i) 3 months after notice of the invention's availability has been announced in the **Federal Register**; or (ii) without such notice where NASA determines that expeditious granting of such a license will best serve the interests of the Federal Government and the public; and (iii) in either situation, specified in (a)(1)(i) or (ii) of this section only if:

(A) Notice of a prospective license, identifying the invention and the prospective licensee, has been published in the **Federal Register**, providing opportunity for filing written objections within a 60-day period;

(B) After expiration of the period in § 1245.206(a)(1)(iii)(A) and consideration of any written objections received during the period, NASA has determined that:

(1) The interests of the Federal Government and the public will best be served by the proposed license, in view of the applicant's intentions, plans, and ability to bring the invention to practical application or otherwise promote the invention's utilization by the public;

(2) The desired practical application has not been achieved, or is not likely expeditiously to be achieved, under any nonexclusive license which has been granted, or which may be granted, on the invention;

(3) Exclusive or partially exclusive licensing is a reasonable and necessary incentive to call forth the investment of risk capital and expenditures to bring the invention to practical application or otherwise promote the invention's utilization by the public; and

(4) The proposed terms and scope of exclusivity are not greater than reasonably necessary to provide the incentive for bringing the invention to practical application or otherwise promote the invention's utilization by the public;

(C) NASA has not determined that the grant of such license will tend substantially to lessen competition or result in undue concentration in any section of the country in any line of commerce to which the technology to be licensed relates, or to create or maintain other situations inconsistent with the antitrust laws; and

(D) NASA has given first preference to any small business firms submitting plans that are determined by the agency to be within the capabilities of the firms and as equally likely, if executed, to bring the invention to practical application as any plans submitted by applicants that are not small business firms.

(2) *Conditions.* In addition to the provisions of § 1245.204, the following terms and conditions apply to domestic exclusive and partially exclusive licenses:

(i) The license shall be subject to the irrevocable, royalty-free right of the Government of the United States to practice and have practiced the invention on behalf of the United States and on behalf of any foreign government or international organization pursuant to any existing or future treaty or agreement with the United States.

(ii) The license shall reserve to NASA the right to require the licensee to grant sublicenses to responsible applicants, on reasonable terms, when necessary to fulfill health or safety needs.

(iii) The license shall be subject to any licenses in force at the time of the grant of the exclusive or partially exclusive license.

(iv) The license may grant the licensee the right of enforcement of the licensed patent pursuant to the provisions of Chapter 29 of Title 35, United States Code, or other statutes, as determined appropriate in the public interest.

(b) Foreign licenses.

(1) *Availability of licenses.* Exclusive or partially exclusive licenses may be granted on a NASA invention covered by a foreign patent, patent application, or other form of protection, provided that:

(i) Notice of a prospective license, identifying the invention and prospective licensee, has been published in the **Federal Register**, providing opportunity for filing written objections within a 60-day period and following consideration of such objections;

(ii) NASA has considered whether the interests of the Federal Government or United States industry in foreign commerce will be enhanced; and

(iii) NASA has not determined that the grant of such license will tend substantially to lessen competition or result in undue concentration in any section of the United States in any line of commerce to which the technology to be licensed relates, or to create or maintain other situations inconsistent with antitrust laws.

(2) *Conditions.* In addition to the provisions of § 1245.204, the following terms and conditions apply to foreign exclusive and partially exclusive licenses:

(i) The license shall be subject to the irrevocable, royalty-free right of the Government of the United States to practice and have practiced the invention on behalf of the United States and on behalf of any foreign government or international organization pursuant to any existing or future treaty or agreement with the United States.

(ii) The license shall be subject to any licenses in force at the time of the grant of the exclusive or partially exclusive license.

(iii) The license may grant the licensee the right to take any suitable and necessary actions to protect the licensed property, on behalf of the Federal Government.

(c) *Record of determinations.* NASA shall maintain a record of determinations to grant exclusive or partially exclusive licenses.

### Procedures

#### § 1245.207 Application for a license.

An application for a license should be addressed to the Patent Counsel at the NASA installation having responsibility for the invention and shall normally include:

(a) Identification of the invention for which the license is desired, including the patent application serial number or patent number, title, and date, if known;

(b) Identification of the type of license for which the application is submitted;

(c) Name and address of the person, company, or organization applying for the license and the citizenship or place of incorporation of the applicant;

(d) Name, address, and telephone number of representative of applicant to whom correspondence should be sent;

## PATENT LICENSING REGULATIONS

(e) Nature and type of applicant's business, identifying products or services which the applicant has successfully commercialized, and approximate number of applicant's employees;

(f) Source of information concerning the availability of a license on the invention;

(g) A statement indicating whether applicant is a small business firm as defined in § 1245.202(c);

(h) A detailed description of applicant's plan for development or marketing of the invention, or both, which should include:

(1) A statement of the time, nature and amount of anticipated investment of capital and other resources which applicant believes will be required to bring the invention to practical application;

(2) A statement as to applicant's capability and intention to fulfill the plan, including information regarding manufacturing, marketing, financial, and technical resources;

(3) A statement of the fields of use for which applicant intends to practice the invention; and

(4) A statement of the geographic areas in which applicant intends to manufacture any products embodying the invention and geographic areas where applicant intends to use or sell the invention, or both;

(i) Identification of licenses previously granted to applicant under Federally owned inventions;

(j) A statement containing applicant's best knowledge of the extent to which the invention is being practiced by private industry or Government, or both, or is otherwise available commercially; and

(k) Any other information which applicant believes will support a determination to grant the license to applicant.

### § 1245.208 Processing applications.

(a) Applications for licenses will be initially reviewed by the Patent Counsel of the NASA installation having responsibility for the invention. The Patent Counsel shall make a preliminary recommendation to the Director of Licensing, NASA Headquarters, whether to: (1) grant the license as requested, (2) grant the license with modification after negotiation with the licensee, or (3) deny the license. The Director of Licensing shall review the preliminary recommendation of the Patent Counsel and make a final recommendation to the NASA Assistant General Counsel for Patent Matters. Such review and final recommendation may include, and be based on, any additional information obtained from applicant and other sources that the Patent Counsel and the Director of Licensing deem relevant to the license requested. The determination to grant or deny the license shall be made by the Assistant General Counsel for Patent Matters based on the final recommendation of the Director of Licensing.

(b) When notice of a prospective exclusive or partially exclusive license is published in the **Federal Register** in accordance with § 1245.206(a)(1)(iii)(A) or § 1245.206(b)(1)(i), any written objections received in response thereto will be considered by the Director of Licensing in making the final recommendation to the Assistant General Counsel for Patent Matters.

(c) If the requested license, including any negotiated modifications, is denied by the Assistant General Counsel for Patent Matters, the applicant may request reconsideration by filing a written request for reconsideration within 30 days after receiving notice of denial. This 30-day period may be extended for good cause.

(d) In addition to, or in lieu of requesting reconsideration, the applicant may also appeal the denial of the license in accordance with § 1245.211.

### § 1245.209 Notice to Attorney General.

A copy of the notice provided for in §§ 1245.206(a)(1)(iii)(A), and 1245.206(b)(1)(i) will be sent to the Attorney General.

### § 1245.210 Modification and termination of licenses.

Before modifying or terminating a license, other than by mutual agreement, NASA shall furnish the licensee and any sublicensee of record a written notice of intention to modify or terminate the license, and the licensee and any sublicensee shall be allowed 30 days after such notice to remedy any breach of the license or show cause why the license should not be modified or terminated.

### § 1245.211 Appeals.

(a) The following parties may appeal to the NASA Administrator or designee any decision or determination concerning the grant, denial, interpretation, modification, or termination of a license:

(1) A person whose application for a license has been denied;

(2) A licensee whose license has been modified or terminated, in whole or in part; or

(3) A person who timely filed a written objection in response to the notice required by §§ 1245.206(a)(1)(iii)(A) or 1245.206(b)(1)(i) and who can demonstrate to the satisfaction of NASA that such person may be damaged by the Agency action.

(b) Written notice of appeal must be filed within 30 days (or such other time as may be authorized for good cause shown) after receiving notice of the adverse decision or determination; including, an adverse decision following the request for reconsideration under § 1245.208(c). The notice of appeal, along with all supporting documentation should be addressed to the Administrator, National Aeronautics and Space Administration, Washington, DC 20546. Should the appeal raise a genuine dispute over material facts, fact-finding will be conducted by the NASA Inventions and Contributions Board. The person filing the appeal shall be afforded an opportunity to be heard and to offer evidence in support of the appeal. The Chairperson of the Inventions and Contributions Board shall prepare written findings of fact and transmit them to the Administrator or designee. The decision on the appeal shall be made by the NASA Administrator or designee. There is no further right of administrative appeal from the decision of the Administrator or designee.

### § 1245.212 Protection and administration of inventions.

NASA may take any suitable and necessary steps to protect and administer rights to NASA inventions, either directly or through contract.

### § 1245.213 Transfer of custody.

NASA having custody of certain Federally owned inventions may transfer custody and administration in whole or in part, to another Federal agency, of the right, title, or interest in any such invention.

### § 1245.214 Confidentiality of Information.

Title 35, United States Code, section 209, provides that any plan submitted pursuant to § 1245.207(h) and any report required by § 1245.204(b)(6) may be treated by NASA as commercial and financial information obtained from a person and privileged and confidential and not subject to disclosure under section 552 of Title 5 of the United States Code.

**James M. Beggs,**

*Administrator.*

October 15, 1981.

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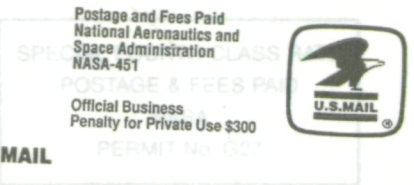
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