

NASA SP-7039(20)  
Section 2  
Indexes



# NASA PATENT ABSTRACTS BIBLIOGRAPHY



A CONTINUING BIBLIOGRAPHY

Section 2 • Indexes

JANUARY 1982

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ABSTRACTS BIBLIOGRAPHY, A CONTINUING		
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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

## ACCESSION NUMBER RANGES

<i>Bibliography Number</i>	<i>STAR Accession Numbers</i>
NASA SP-7039(04)	N69-20701-N73-33931
NASA SP-7039(12)	N74-10001-N77-34042
NASA SP-7039(13)	N78-10001-N78-22018
NASA SP-7039(14)	N78-22019-N78-34034
NASA SP-7039(15)	N79-10001-N79-21993
NASA SP-7039(16)	N79-21994-N79-34158
NASA SP-7039(17)	N80-10001-N80-22254
NASA SP-7039(18)	N80-22255-N80-34339
NASA SP-7039(19)	N81-10001-N81-21997
NASA SP-7039(20)	N81-21998-N81-34139

**NASA SP-7039(20)**

**Section 2**

**Indexes**

**NASA**

**PATENT  
ABSTRACTS  
BIBLIOGRAPHY**

**A CONTINUING BIBLIOGRAPHY**

**Section 2 • Abstracts**

Indexes for the annotated references to NASA-owned inventions covered by U.S. patents and applications for patent that were announced in *Scientific and Technical Aerospace Reports (STAR)* between May 1969 and December 1981. This issue supersedes all previous Index Sections.



*Scientific and Technical Information Branch*

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION**

JANUARY 1982  
*Washington, D.C.*

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# 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 May 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 165 citations published in this issue of the Abstract Section cover the period July 1981 through December 1981. The Index Section references approximately 4000 citations covering the period May 1969 through December 1981.

## ABSTRACT SECTION (SECTION 1)

This *PAB* issue incorporates the 1975 *STAR* category revisions which include 10 major subdivisions divided into 74 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 new scheme was devised 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 a key illustration taken from the patent or application for patent drawing. Entries are arranged in subject category in order of the ascending NASA Accession Number originally assigned in *STAR* to the invention. The range of NASA Accession Numbers within each issue is printed on the inside front cover.

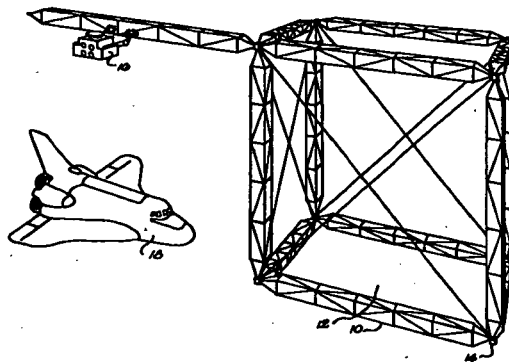
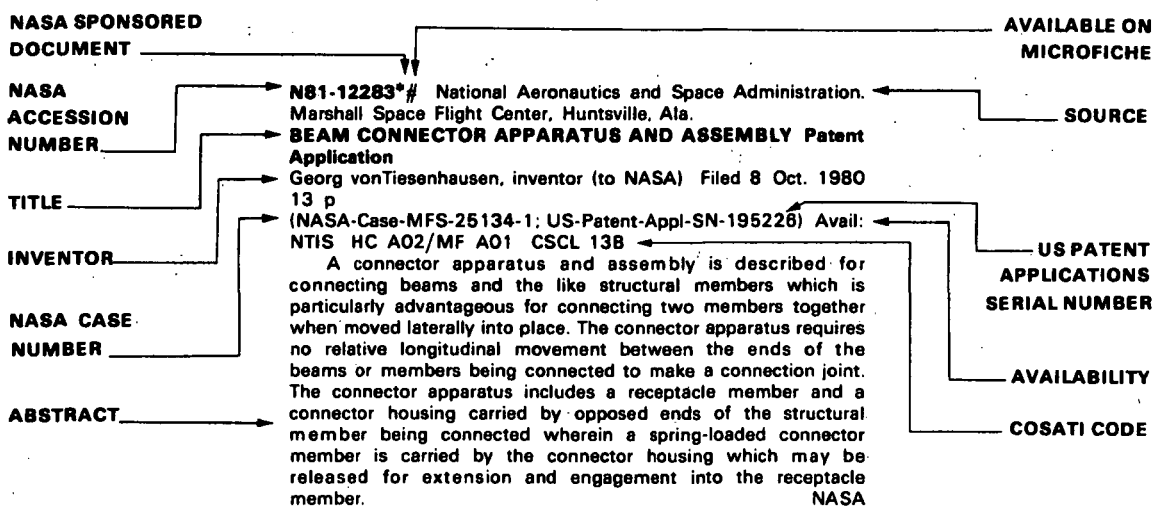
*Abstract Citation Data Elements:* Each of the abstract citations has several data elements useful for identification and indexing purposes, as follows:

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 in the citation of the abstract as depicted in the Typical Citation and Abstract reproduced below and are also used in the several indexes.

## TYPICAL CITATION AND ABSTRACT



KEY ILLUSTRATION

## **INDEX SECTION (SECTION 2)**

*The Index Section is divided into five indexes which are cross-indexed and are useful in locating a single invention or groups of inventions.*

Each of the five indexes utilizes basic data elements: (1) Subject Category Number, (2) NASA Accession Number, and (3) NASA Case Number, in addition to other specific index terms.

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

**Accession Number Index:** Lists all inventions in order of ascending NASA 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 when using 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, (i) use the Subject Category Number to locate the Subject Category and (ii) 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 (does not include 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 inventions(s), and (B) follow the instructions outlined in (2)(B), and (D) above.

### **PUBLIC AVAILABILITY OF COPIES OF PATENTS AND PATENT APPLICATIONS**

Copies of U.S. patents may be purchased directly from the U.S. Patent and Trademark Office, Washington, D.C. 20231, for fifty cents a copy. When ordering patents, the U.S. Patent Number should be used, and payment must be remitted in advance, preferably by money order or check payable to the Commissioner of Patents and Trademarks. Prepaid purchase coupons for ordering are also available from the Patent and Trademark Office.

NASA *patent application specifications* are sold in paper copy by the National Technical Information Service at price code A02 (\$6.00 domestic; \$12.00 foreign). Microfiche are sold at price code A01 (\$4.00 domestic; \$8.00 foreign). The US-Patent-AppI-SN-number should be used in ordering either paper copy or microfiche from NTIS.

### **LICENSES FOR COMMERCIAL USE: INQUIRIES AND APPLICATIONS FOR LICENSE**

NASA inventions, abstracted in *NASA PAB*, are available for nonexclusive or exclusive licensing in accordance with the NASA Patent Licensing Regulations. It is significant that all licenses for NASA inventions shall be by express written instruments and that no license will be granted or implied in a NASA invention except as provided in the NASA Patent Licensing Regulations.

Inquiries concerning the NASA Patent Licensing Program or the availability of licenses for the commercial use of NASA-owned inventions covered by U.S. patents or pending applications for patent should be forwarded to the NASA Patent Counsel of the NASA installation having cognizance of the specific invention, or the Assistant General Counsel for Patent Matters, Code GP-4, National Aeronautics and Space Administration, Washington, D.C. 20546. Inquiries should refer to the NASA Case Number, the Title of the Invention, and the U.S. Patent Number or the U.S. Application Serial Number assigned to the invention as shown in *NASA PAB*.

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. Formal application of license must be submitted on the NASA Form, Application for NASA Patent License, which is available upon request from any NASA Patent Counsel.



**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)965-5104

ERC-xxxxx  
XER-xxxxx  
HQN-xxxxx  
XHQ-xxxxx

NASA Headquarters  
Mail Code: GP-4  
Washington, D.C. 20546  
Telephone: (202)755-3954

GSC-xxxxx  
XGS-xxxxx

Goddard Space Flight Center  
Mail Code: 204  
Greenbelt, Maryland 20771  
Telephone: (301)344-7351

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)827-8725

LEW-xxxxx  
XLE-xxxxx

Lewis Research Center  
Mail Code: 500-318  
21000 Brookpark Road  
Cleveland, Ohio 44135  
Telephone: (216)433-6346

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)453-0020

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: (213)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 conditions 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.

(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

## PATENT LICENSING REGULATIONS

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;

(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

## PATENT LICENSING REGULATIONS

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.

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James M. Beggs,  
Administrator.

October 15, 1981.

[FR Doc. 81-31000 Filed 10-30-81; 8:45 am]

BILLING CODE 7510-01-M

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# 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 gages; 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 re-

search 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

## Section 1 • Abstracts

Subject Categories (1974 - )

### AERONAUTICS

Includes aeronautics (general); aerodynamics; air transportation and safety; aircraft communications and navigation; aircraft design, testing and performance; aircraft instrumentation; aircraft propulsion and power; aircraft stability and control; and research and support facilities (air).

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 Spacecraft Communications, Command and Tracking* and *32 Communications*.

#### 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*.

#### 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 on-board 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.

#### 09 RESEARCH AND SUPPORT FACILITIES (AIR)

Includes airports, hangars and runways; aircraft repair and overhaul facilities; wind tunnels; shock tube facilities; and engine test blocks.

For related information see also *14 Ground Support Systems and Facilities (Space)*.

### ASTRONAUTICS

Includes astronautics (general); astrodynamics; ground support systems and facilities (space); launch vehicles and space vehicles; space transportation; spacecraft communications, command and tracking; spacecraft design; testing and performance; spacecraft instrumentation; and spacecraft propulsion and power.

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 orbit 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; manned orbital laboratories; reusable vehicles; and space stations.

#### 16 SPACE TRANSPORTATION

Includes passenger and cargo space transportation, e.g., shuttle operations; and rescue techniques.

For related information see also *03 Air Transportation and Safety* and *85 Urban Technology and Transportation*.

#### 17 SPACECRAFT COMMUNICATION, COMMAND AND TRACKING

Includes telemetry; space communications networks; astronavigation; and radio blackout.

For related information see also *04 Aircraft Communications and Navigation* and *32 Communications*.

#### 18 SPACECRAFT DESIGN, TESTING AND PERFORMANCE

Includes spacecraft thermal and environmental control; and attitude control.

For life support systems see *54 Man/System Technology and Life Support*. For related information see also *05 Aircraft Design, Testing and Performance* and *39 Structural Mechanics*.

#### 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*, and *44 Energy Production and Conversion*.



## **CHEMISTRY AND MATERIALS**

Includes chemistry and materials (general); composite materials; inorganic and physical chemistry; metallic materials; nonmetallic materials; and propellants and fuels.

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

Includes biochemistry and organic chemistry.

### **24 COMPOSITE MATERIALS**

Includes laminates.

### **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.

### **28 PROPELLANTS AND FUELS**

Includes rocket propellants, igniters, and oxidizers; storage and handling; and aircraft fuels.

For related information see also *07 Aircraft Propulsion and Power*, *20 Spacecraft Propulsion and Power*, and *44 Energy Production and Conversion*.

## **ENGINEERING**

Includes engineering (general); communications; electronics and electrical engineering; fluid mechanics and heat transfer; instrumentation and photography; lasers and masers; mechanical engineering; quality assurance and reliability; and structural mechanics.

For related information see also *Physics*.

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

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

### **32 COMMUNICATIONS**

Includes land and global communications; communications theory; and optical communications.

For related information see also *04 Aircraft Communications and Navigation* and *17 Spacecraft Communications, Command and Tracking*.

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

Includes test equipment and maintainability; components, e.g., tunnel diodes and transistors; micro-miniaturization; 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 gages; detectors; cameras and photographic supplies; and holography.

For aerial photography see *43 Earth Resources*. For related information see also *06 Aircraft Instrumentation* and *19 Spacecraft Instrumentation*.

### **36 LASERS AND MASERS**

Includes parametric amplifiers.

### **37 MECHANICAL ENGINEERING**

Includes auxiliary systems (non-power); 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**

Includes geosciences (general); earth resources; energy production and conversion; environment pollution; geophysics; meteorology and climatology; and oceanography.

For related information see also *Space Sciences*.

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

### **43 EARTH RESOURCES**

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 and batteries; global sources of energy; fossil fuels; geophysical conversion; hydroelectric power; and wind power.

For related information see also *07 Aircraft Propulsion and Power*, *20 Spacecraft Propulsion and Power*, *28 Propellants and Fuels*, and *85 Urban Technology and Transportation*.

### **45 ENVIRONMENT POLLUTION**

Includes air, noise, thermal and water pollution; environment monitoring; and contamination control.

### **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.

## LIFE SCIENCES

Includes sciences (general); aerospace medicine; behavioral sciences; man/system technology and life support; and planetary biology.

### 51 LIFE SCIENCES (GENERAL)

Includes genetics.

### 52 AEROSPACE MEDICINE

Includes physiological factors; biological effects of radiation; and weightlessness.

### 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.

### 55 PLANETARY BIOLOGY

Includes exobiology; and extraterrestrial life.

## MATHEMATICAL AND COMPUTER SCIENCES

Includes mathematical and computer sciences (general); computer operations and hardware; computer programming and software; computer systems; cybernetics; numerical analysis; statistics and probability; systems analysis; and theoretical mathematics.

### 59 MATHEMATICAL AND COMPUTER SCIENCES (GENERAL)

### 60 COMPUTER OPERATIONS AND HARDWARE

Includes computer graphics and data processing. For components see *33 Electronics and Electrical Engineering*.

### 61 COMPUTER PROGRAMMING AND SOFTWARE

Includes computer programs, routines, and algorithms.

### 62 COMPUTER SYSTEMS

Includes computer networks.

### 63 CYBERNETICS

Includes feedback and control theory.

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

Includes physics (general); acoustics; atomic and molecular physics; nuclear and high-energy physics; optics; plasma physics; solid-state physics; and thermodynamics and statistical physics.

For related information see also *Engineering*.

### 70 PHYSICS (GENERAL)

For geophysics see *46 Geophysics*. For astrophysics see *90 Astrophysics*. For solar physics see *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 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.

### 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; and Bose and Fermi statistics.

For related information see also *25 Inorganic and Physical Chemistry* and *34 Fluid Mechanics and Heat Transfer*.

## SOCIAL SCIENCES

Includes social sciences (general); administration and management; documentation and information science; economics and cost analysis; law and political science; and urban technology and transportation.

### 80 SOCIAL SCIENCES (GENERAL)

Includes educational matters.

### 81 ADMINISTRATION AND MANAGEMENT

Includes management planning and research.

**82 DOCUMENTATION AND INFORMATION SCIENCE** N.A.

Includes information storage and retrieval technology; micrography; and library science.

For computer documentation see *61 Computer Programming and Software*.

**83 ECONOMICS AND COST ANALYSIS** N.A.

Includes cost effectiveness studies.

**84 LAW AND POLITICAL SCIENCE** N.A.

Includes space law; international law; international cooperation; and patent policy.

**85 URBAN TECHNOLOGY AND TRANSPORTATION** N.A.

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**

Includes space sciences (general); astronomy; astrophysics; lunar and planetary exploration; solar physics; and space radiation.

For related information see also *Geosciences*.

**88 SPACE SCIENCES (GENERAL)** N.A.

**89 ASTRONOMY** N.A.

Includes radio and gamma-ray astronomy; celestial mechanics; and astrometry.

**90 ASTROPHYSICS** N.A.

Includes cosmology; and interstellar and interplanetary gases and dust.

**91 LUNAR AND PLANETARY EXPLORATION** N.A.

Includes planetology; and manned and unmanned flights.

For spacecraft design see *18 Spacecraft Design, Testing and Performance*. For space stations see *15 Launch Vehicles and Space Vehicles*.

**92 SOLAR PHYSICS** N.A.

Includes solar activity, solar flares, solar radiation and sunspots.

**93 SPACE RADIATION** N.A.

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*.

**GENERAL**

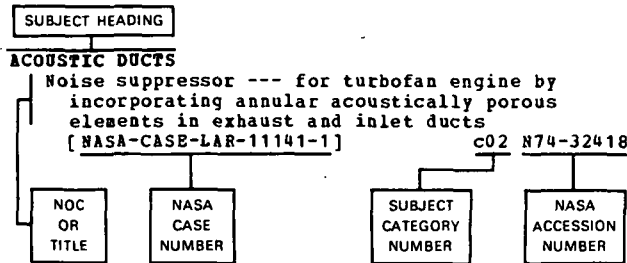
**99 GENERAL** N.A.

## Section 2 • Indexes

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Section 2

Typical Subject Index Listing



The subject heading is the 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 NASA 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 NASA accession number denotes the number by which the citation is identified within the subject

**A**

**ABILITIES**

Kinesimetric method and apparatus  
[NASA-CASE-HSC-18929-1] c54 N81-15699

**ABLATION**

Transpirationally cooled heat ablation system for interplanetary spacecraft reentry shielding  
[NASA-CASE-XMS-02677] c31 N70-42075

Hypersonic test facility for studying ablation in models under high pressure and high temperature  
[NASA-CASE-XLA-00378] c11 N71-15925

Design of hypersonic test facility for ablation tests and performance tests of vehicles under conditions of high temperature and pressure  
[NASA-CASE-XLA-05378] c11 N71-21475

Ablation sensor for measuring char layer recession rate using electric wires  
[NASA-CASE-XLA-01794] c33 N71-21586

Ablation sensor for measuring surface ablation rate of material on vehicles entering earths atmosphere on entry into planetary atmospheres  
[NASA-CASE-XLA-01791] c14 N71-22991

Ablative system with liquid carrying ablative material bodies and forming self-replacing ablative surface  
[NASA-CASE-LEW-10359] c33 N72-25911

**ABLATIVE MATERIALS**

Filling honeycomb matrix with deaerated paste filler  
[NASA-CASE-XMS-01108] c15 N69-24322

Sensor device with switches for measuring surface recession of charring and noncharring ablators  
[NASA-CASE-XLA-01781] c14 N69-39975

Vacuum method for molding thermosetting compounds used as ablative materials  
[NASA-CASE-XLA-01091] c15 N71-10672

Ablative resins used for retarding regression in ablative material  
[NASA-CASE-XLE-05913] c33 N71-14032

Design, development, and characteristics of ablation structures  
[NASA-CASE-XMS-01816] c33 N71-15623

Method and apparatus for fabrication of heat insulating and ablative reentry structure  
[NASA-CASE-XMS-02009] c33 N71-20834

Production and application of sprayable fiber reinforced ablation material  
[NASA-CASE-XLA-04251] c18 N71-26100

Ablative heat shield for protection from aerodynamic heating of reentry spacecraft

[NASA-CASE-HSC-12143-1] c33 N72-17947  
Ablative system with liquid carrying ablative material bodies and forming self-replacing ablative surface  
[NASA-CASE-LEW-10359] c33 N72-25911  
Carrier liquid system containing bodies of ablative material  
[NASA-CASE-LEW-10359-2] c33 N73-25952  
Ablation article and surface for analyzing flow transition on ablative surface  
[NASA-CASE-LAR-10439-1] c33 N73-27796  
Dual measurement ablation sensor  
[NASA-CASE-LAR-10105-1] c34 N74-15652  
Sprayable low density ablator and application process  
[NASA-CASE-HFS-23506-1] c24 N78-24290  
Intumescent-ablator coatings using endothermic fillers  
[NASA-CASE-ARC-11043-1] c24 N78-27180  
Cork-resin ablative insulation for complex surfaces and method for applying the same  
[NASA-CASE-HFS-23626-1] c24 N80-26388

**ABORT APPARATUS**  
Coupling device for linear shaped charge for space vehicle abort system  
[NASA-CASE-XLA-00189] c33 N70-36846

**ABRASION RESISTANCE**  
Zinc dust formulation for abrasion resistant steel coatings  
[NASA-CASE-GSC-10361-1] c18 N72-23581  
Abrasion resistant coatings for plastic surfaces  
[NASA-CASE-ARC-10915-3] c24 N77-24200  
Process for producing a well-adhered durable optical coating on an optical plastic substrate --- abrasion resistant polymethyl methacrylate lenses  
[NASA-CASE-ARC-11039-1] c74 N78-32854  
Heat sealable, flame and abrasion resistant coated fabric  
[NASA-CASE-HSC-18382-1] c27 N80-24440  
Sandblasting nozzle  
[NASA-CASE-NPO-13823-1] c37 N81-25371

**ABSORBENTS**  
Absorbent apparatus for separating gas from liquid-gas stream used in environmental control under zero gravity conditions  
[NASA-CASE-XMS-01492] c05 N70-41297  
Fluid flow control valve for regulating fluids in molecular quantities  
[NASA-CASE-XLE-00703] c15 N71-15967  
Noncontaminating swab with absorbent end covered with netted envelope to prevent egress of absorbent material  
[NASA-CASE-HFS-18100] c15 N72-11390  
Protein sterilization of firefly luciferase without denaturation  
[NASA-CASE-GSC-10225-1] c06 N73-27086  
Oil and fat absorbing polymers  
[NASA-CASE-NPO-11609-2] c27 N77-31308

**ABSORBERS (EQUIPMENT)**  
Absorbent product and articles made therefrom --- for collection of human wastes  
[NASA-CASE-HSC-18223-1] c24 N81-16127

**ABSORBERS (MATERIALS)**  
Broadband chokes and absorbers to reduce spurious radiation patterns of antenna array caused by support structures  
[NASA-CASE-XMS-05303] c07 N69-27462  
Analytical photoionization mass spectrometer with argon gas filter between light source and monochromator  
[NASA-CASE-LAR-10180-1] c06 N71-13461  
Development of filter system for control of outgas contamination in vacuum conditions using absorbent beds of molecular sieve

SUBJECT

- zeolite, silica gel, and charcoal  
[NASA-CASE-NFS-14711] c15 N71-26185
- Development and characteristics of calorimeter  
with integral heat sink for maintenance of  
constant temperature  
[NASA-CASE-XMP-04208] c33 N71-29051
- Aldehyde-containing urea-absorbing polysaccharides  
[NASA-CASE-NPO-13620-1] c27 N77-30236
- Electromagnetic power absorber  
[NASA-CASE-NPO-13830-1] c32 N80-14281
- ABSORPTION**
- Differential optoacoustic absorption detector  
[NASA-CASE-NPO-13759-1] c74 N78-17867
- ABSORPTION CROSS SECTIONS**
- Radiation source and detection system for  
measuring amount of liquid inside tanks  
independently of liquid configuration  
[NASA-CASE-MSC-12280] c27 N71-16348
- ABSORPTION SPECTRA**
- Stark effect spectrophone for continuous  
absorption spectra monitoring --- a technique  
for gas analysis  
[NASA-CASE-NPO-15102-1] c25 N81-25159
- ABSORPTIVITY**
- Detector absorptivity measuring method and  
apparatus  
[NASA-CASE-LAR-10907-1] c35 N76-29551
- AC GENERATORS**
- Alternating current signal generator providing  
plurality of amplitude modulated output signals  
[NASA-CASE-XMP-05612] c09 N69-21468
- Improved alternator with windings of  
superconducting materials acting as permanent  
magnet  
[NASA-CASE-XLE-02824] c03 N69-39890
- Superconducting alternator design with cryogenic  
fluid for cooling windings below critical  
temperature  
[NASA-CASE-XLE-02823] c09 N71-23443
- Solar cell system having alternating current  
output  
[NASA-CASE-LEW-12806-1] c44 N78-25553
- ACCELERATION**
- Single grid accelerator system for electron  
bombardment type ion thruster  
[NASA-CASE-XLE-10453-2] c28 N73-27699
- ACCELERATION (PHYSICS)**
- Centrifuge mounted motion simulator with  
elevator mechanism  
[NASA-CASE-XAC-00399] c11 N70-34815
- Gravity device for accurate and rapid indication  
of relative gravity conditions aboard  
accelerating carrier  
[NASA-CASE-XMP-00424] c11 N70-38196
- Development of method for producing artificial  
gravity in manned spacecraft  
[NASA-CASE-XNP-02595] c31 N71-21881
- Vibration control of flexible bodies in steady  
accelerating environment  
[NASA-CASE-LAR-10106-1] c15 N71-27169
- G-load measuring and indicator apparatus --- for  
aircraft  
[NASA-CASE-ARC-10806] c06 N74-27872
- Apparatus for applying simulator g-forces to an  
arm of an aircraft simulator pilot  
[NASA-CASE-LAR-10550-1] c09 N74-30597
- G-load measuring and indicator apparatus  
[NASA-CASE-ARC-10806-1] c35 N75-29381
- Method of forming frozen spheres in a force-free  
drop tower --- microballoons for inertial  
confinement fusion  
[NASA-CASE-NPO-14845-1] c31 N81-16328
- Helmet weight simulator  
[NASA-CASE-LAR-12320-1] c54 N81-27806
- ACCELERATION PROTECTION**
- Astronaut restraint suit for high acceleration  
protection  
[NASA-CASE-XAC-00405] c05 N70-41819
- Conditioning suit for normal function of  
astronaut cardiovascular system in gravity  
environment  
[NASA-CASE-XLA-02898] c05 N71-20268
- ACCELERATION STRESSES (PHYSIOLOGY)**
- Development of method for producing artificial  
gravity in manned spacecraft  
[NASA-CASE-XNP-02595] c31 N71-21881
- ACCELERATION TOLERANCE**
- Electronic detection system for peak  
acceleration limits in vibrational testing of  
spacecraft components  
[NASA-CASE-NPO-10556] c14 N71-27185
- ACCELERATORS**
- Annular arc accelerator shock tube  
[NASA-CASE-NPO-13528-1] c09 N77-10071
- Spring operated accelerator and constant force  
spring mechanism therefor  
[NASA-CASE-ARC-10898-1] c35 N77-18417
- ACCELEROMETERS**
- Superconductive accelerometer employing variable  
force principle to determine acceleration of  
bodies  
[NASA-CASE-XMP-01099] c14 N71-15969
- Describing device for velocity control of  
electromechanical drive mechanism of scanning  
mirror of interferometer  
[NASA-CASE-XGS-03532] c14 N71-17627
- Omnidirectional liquid filled accelerometer  
design with liquid and housing temperature  
compensation  
[NASA-CASE-HQN-10780] c14 N71-30265
- Development of combined velocimeter and  
accelerometer based on color changes in liquid  
crystalline material subjected to shear stresses  
[NASA-CASE-ERC-10292] c14 N72-25410
- Temperature compensated digital inertial sensor  
--- circuit for maintaining inertial element  
of gyroscope or accelerometer at constant  
position  
[NASA-CASE-NPO-13044-1] c35 N74-15094
- Accelerometer telemetry system  
[NASA-CASE-ARC-10849-1] c17 N76-29347
- ACCEPTABILITY**
- Cross correlation anomaly detection system  
[NASA-CASE-NPO-13283] c38 N78-17395
- ACCEPTOR MATERIALS**
- III-V photocathode with nitrogen doping for  
increased quantum efficiency  
[NASA-CASE-NPO-12134-1] c33 N76-31409
- ACCIDENT PREVENTION**
- CAT altitude avoidance system  
[NASA-CASE-NPO-15351-1] c47 N81-16677
- ACCUMULATORS**
- Direct radiation cooling of linear beam  
collector tubes  
[NASA-CASE-XNP-09227] c15 N69-24319
- Regenerative cooling system for small rocket  
engine having restart capability and using  
noncryogenic hypergolic propellants  
[NASA-CASE-XLE-00685] c28 N70-41992
- Small plasma probe using tungsten wire collector  
in tubular shield  
[NASA-CASE-XLE-02578] c25 N71-20747
- Electrostatic charged particle collector  
containing stacked electrodes for microwave tube  
[NASA-CASE-LEW-11192-1] c09 N73-13208
- Accumulator  
[NASA-CASE-NFS-19287-1] c34 N77-30399
- Method for fabricating solar cells having  
integrated collector grits  
[NASA-CASE-LEW-12819-2] c44 N79-18444
- Multistage depressed collector for dual node  
operation --- for travelling wave tubes  
[NASA-CASE-LEW-13282-1] c33 N79-32463
- Urine collection device  
[NASA-CASE-MSC-16433-1] c52 N81-24711
- Urine collection apparatus --- feminine hygiene  
[NASA-CASE-MSC-18381-1] c52 N81-28740
- Sweat collection capsule  
[NASA-CASE-ARC-11031-1] c52 N81-29763
- ACETALS**
- Synthesis of schiff bases for heat shields by  
acetal amine reactions  
[NASA-CASE-XMP-08652] c06 N71-11243
- ACETATES**
- Thermoplastic rubber comprising ethylene-vinyl  
acetate copolymer, asphalt and fluxing oil  
[NASA-CASE-NPO-08835-1] c27 N78-33228
- ACETYLENE**
- Preparation of dicyanoacetylene and vinylidene  
copolymers using organic compounds  
[NASA-CASE-XNP-03250] c06 N71-23500
- ACOUSTIC ATTENUATION**
- Ultrasonic calibration device --- for producing  
changes in acoustic attenuation and phase  
velocity  
[NASA-CASE-LAR-11435-1] c35 N76-15432
- ACOUSTIC DUCTS**
- Noise suppressor --- for turbofan engine by

- incorporating annular acoustically porous elements in exhaust and inlet ducts  
[NASA-CASE-LAR-11141-1] c07 N74-32418
- ACOUSTIC IMPEDANCE**  
Method and transducer device for detecting presence of hydrogen gas  
[NASA-CASE-XNF-03873] c06 N69-39733
- ACOUSTIC LEVITATION**  
Method and apparatus for shaping and enhancing acoustical levitation forces  
[NASA-CASE-MFS-25050-1] c71 N81-15767  
Acoustic suspension system  
[NASA-CASE-NPO-15435-1] c71 N81-27887
- ACOUSTIC MEASUREMENTS**  
Instrumentation for measuring aircraft noise and sonic boom  
[NASA-CASE-LAR-11476-1] c07 N76-27232  
Differential sound level meter  
[NASA-CASE-LAR-12106-1] c71 N78-14867  
Pseudo continuous wave instrument --- ultrasonics  
[NASA-CASE-LAR-12260-1] c35 N79-10390  
System for monitoring physical characteristics of fluids --- acoustic techniques  
[NASA-CASE-NPO-15400-1] c34 N81-24384
- ACOUSTIC PROPAGATION**  
Material suspension within an acoustically excited resonant chamber --- at near weightless conditions  
[NASA-CASE-NPO-13263-1] c12 N75-24774  
Resolution enhanced sound detecting apparatus  
[NASA-CASE-NPO-14134-1] c71 N79-23753
- ACOUSTIC PROPERTIES**  
Development of wind tunnel microphone structure to minimize effects of vibrations and eliminate unwanted signals in microphone output  
[NASA-CASE-XNP-00250] c11 N71-28779  
Acoustical transducer calibrating system including differential pressure activating device  
[NASA-CASE-FRC-10060-1] c14 N73-27379  
Pseudo continuous wave instrument --- ultrasonics  
[NASA-CASE-LAR-12260-1] c35 N79-10390
- ACOUSTIC RETROFITTING**  
Multiple pure tone elimination strut assembly  
[NASA-CASE-FRC-11062-1] c07 N80-32393
- ACOUSTIC HOLOGRAPHY**  
Hybrid holographic non-destructive test system  
[NASA-CASE-MFS-23114-1] c38 N78-32447
- ACOUSTO-OPTICS**  
Acoustic vibration test apparatus for wiring harnesses  
[NASA-CASE-MSC-15158-1] c14 N72-17325  
Method and apparatus for background signal reduction in opto-acoustic absorption measurement  
[NASA-CASE-NPO-13683-1] c35 N77-14411  
Differential optoacoustic absorption detector  
[NASA-CASE-NPO-13759-1] c74 N78-17867  
Coherently pulsed laser source  
[NASA-CASE-NPO-15111-1] c36 N80-24602  
Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c25 N81-14015  
Stark effect spectrophone for continuous absorption spectra monitoring --- a technique for gas analysis  
[NASA-CASE-NPO-15102-1] c25 N81-25159
- ABLATIVES**  
Ablative resins used for retarding regression in ablative material  
[NASA-CASE-XLE-05913] c33 N71-14032
- ACRYLIC RESINS**  
Abrasion resistant coatings for plastic surfaces  
[NASA-CASE-ARC-10915-3] c24 N77-24200  
Method of carbonizing polyacrylonitrile fibers and resulting product  
[NASA-CASE-ARC-11261-1] c24 N81-29164
- ACRYLONITRILES**  
Method of carbonizing polyacrylonitrile fibers and resulting product  
[NASA-CASE-ARC-11261-1] c24 N81-29164
- ACTIVATION ENERGY**  
Heat activated emf cells with aluminum anode  
[NASA-CASE-LEW-11359] c03 N71-28579  
Heat activated cell with aluminum anode  
[NASA-CASE-LEW-11359-2] c03 N72-20034
- ACTIVE CONTROL**  
Linear magnetic bearings --- active magnetic suspension of armatures  
[NASA-CASE-GSC-12582-1] c37 N81-16469
- ACTUATOR DISKS**  
Cryogenic gyroscope housing --- with annular disks for gas spin-up  
[NASA-CASE-MFS-21136-1] c35 N74-18323
- ACTUATORS**  
Electromechanical actuator and its use in rocket thrust control valve  
[NASA-CASE-XNP-05975] c15 N69-23185  
Power controlled bimetallic electromechanical actuator for accurate, timely, and reliable response to remote control signal  
[NASA-CASE-XNP-09776] c09 N69-39929  
Patent data on gas actuated bolt disconnect assembly  
[NASA-CASE-XLA-00326] c03 N70-34667  
Hermetically sealed explosive release mechanism for actuator device  
[NASA-CASE-XGS-00824] c15 N71-16078  
Burst diaphragm flow initiator for installation in short duration wind tunnels  
[NASA-CASE-MFS-12915] c11 N71-17600  
Hand controller operable about three respectively perpendicular axes and capable of actuating signal generators for attitude control devices  
[NASA-CASE-XMS-07487] c15 N71-23255  
Mechanical actuator wherein linear motion changes to rotational motion  
[NASA-CASE-XGS-04548] c15 N71-24045  
Hydraulic actuator design for space deployment of heat radiators  
[NASA-CASE-MSC-11817-1] c15 N71-26611  
Electromechanical control actuator system using double differential screws  
[NASA-CASE-BRC-10022] c15 N71-26635  
System to control speed of hydraulically movable members by limiting energy applied to actuators with hydraulic servo loop  
[NASA-CASE-ARC-10131-1] c15 N71-27754  
Zero power telemetry actuated switch for biomedical equipment  
[NASA-CASE-ARC-10105] c09 N72-17153  
Mechanically operated hand which can depress trigger using touch control device  
[NASA-CASE-MFS-20413] c15 N72-21463  
Hermetically sealed elbow actuator for use in severe environments  
[NASA-CASE-MFS-14710] c09 N72-22195  
Characteristics of lightweight actuator for imparting linear motion using elongated output shaft  
[NASA-CASE-NPO-11222] c15 N72-25456  
Rotary actuator for use in environments with no rolling and sliding friction  
[NASA-CASE-NPO-10244] c15 N72-26371  
Gas-operated actuator with cyclic motion of expansion chamber  
[NASA-CASE-NPO-11340] c15 N72-33477  
Redundant hydraulic control system for actuators with three main valve combination  
[NASA-CASE-MFS-20944] c15 N73-13466  
Actuator operated by electrolytic drive gas generator and evacuator  
[NASA-CASE-NPO-11369] c15 N73-13467  
Manual actuator --- for spacecraft exercising machines  
[NASA-CASE-MFS-21481-1] c37 N74-18127  
Optically actuated two position mechanical mover  
[NASA-CASE-NPO-13105-1] c37 N74-21060  
Dual output variable pitch turbofan actuation system  
[NASA-CASE-LEW-12419-1] c07 N77-14025  
Actuator device for artificial leg  
[NASA-CASE-MFS-23225-1] c52 N77-14735  
Cyclical bi-directional rotary actuator  
[NASA-CASE-GSC-11883-1] c37 N77-19458  
Actuator mechanism  
[NASA-CASE-GSC-11883-2] c37 N78-31426  
A hydraulic actuator mechanism to control aircraft spoiler movements through dual input commands  
[NASA-CASE-LAR-12412-1] c05 N80-11065  
Pressure limiting propellant actuating system  
[NASA-CASE-MSC-18179-1] c20 N80-18097  
Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c37 N81-17432  
Electrical servo actuator bracket --- fuel control valves on jet engines

[NASA-CASE-FRC-11044-1] c37 N81-33483

**ADAPTERS**  
 Camera adapter design for image magnification including lens and illuminator [NASA-CASE-XMF-03844-1] c14 N71-26474

**ADAPTIVE CONTROL**  
 Self testing and repairing computer comprising control and diagnostic unit and rollback points for error correction [NASA-CASE-NPO-10567] c08 N71-24633  
 Synchronous dc direct-drive system comprising multiple-loop hybrid control system controlling load directly connected to actuator [NASA-CASE-GSC-10065-1] c10 N71-27136  
 Versatile ergometer with work load control [NASA-CASE-MFS-21109-1] c05 N73-27941  
 Adaptive voting computer system [NASA-CASE-MSC-13932-1] c62 N74-14920  
 Apparatus for damping operator induced oscillations of a controlled system --- using adaptive filters to damp oscillations in a flight control system [NASA-CASE-FRC-11041-1] c33 N80-20488  
 Adaptive polarization separation [NASA-CASE-LAR-12196-1] c33 N81-26358  
 Adaptive control system for line-commutated inverters [NASA-CASE-MFS-25209-1] c33 N81-31480  
 Adaptive reference voltage generator for firing angle control of line-commutated inverters [NASA-CASE-MFS-25215-1] c33 N81-31481

**ADAPTIVE FILTERS**  
 Adaptive notch filter, using modulation techniques for reversed phase noise signal [NASA-CASE-XMF-01892] c10 N71-22986  
 Apparatus for damping operator induced oscillations of a controlled system --- using adaptive filters to damp oscillations in a flight control system [NASA-CASE-FRC-11041-1] c33 N80-20488

**ADAPTIVE OPTICS**  
 Fluorescent radiation converter [NASA-CASE-GSC-12528-1] c74 N81-24900

**ADDING CIRCUITS**  
 Circuit diagram and operation of full binary adder [NASA-CASE-XGS-00689] c08 N70-34787  
 Error correction circuitry for binary signal channels [NASA-CASE-XNP-03263] c09 N71-18843

**ADDITION RESINS**  
 Tackifier for addition polyimides containing monoethylphthalate [NASA-CASE-LAR-12642-1] c27 N81-29229

**ADDITIVES**  
 Ammonium perchlorate composite propellant with organic Cu/II/ chelate catalytic additive [NASA-CASE-LAR-10173-1] c27 N71-14090  
 Additive for zinc electrodes [NASA-CASE-LEW-13286-1] c44 N81-27597

**ADENOSINE TRIPHOSPHATE**  
 Use of enzyme hexokinase and glucose to reduce inherent light levels of ATP in luciferase compositions [NASA-CASE-XGS-05533] c04 N69-27487  
 Detection instrument for light emitted from ATP biochemical reaction [NASA-CASE-XGS-05534] c23 N71-16355  
 Describing method for lyophilization of luciferase containing mixtures for use in life detection reactions [NASA-CASE-XGS-05532] c06 N71-17705  
 Automatic device for assaying urine on bacterial adenosine triphosphate content [NASA-CASE-GSC-11169-2] c05 N73-32011  
 Application of luciferase assay for ATP to antimicrobial drug susceptibility [NASA-CASE-GSC-12039-1] c51 N77-22794

**ADHESION**  
 Tool for mounting and removing studs with adhesive coated head portion [NASA-CASE-MFS-20299] c15 N72-11392  
 Improved refractory coatings --- sputtered coatings on substrates that form stable nitrides [NASA-CASE-LEW-23169-2] c26 N81-16209

**ADHESION TESTS**  
 Apparatus for determining quality of bond between high density material and low density material [NASA-CASE-MFS-13686] c15 N71-18132

**ADHESIVE BONDING**

Fabrication of solar cell banks for attaching solar cells to base members or substrates [NASA-CASE-XNP-00826] c03 N71-20895  
 Method for honeycomb panel bonding by thermosetting film adhesive with electrical heat means [NASA-CASE-XMF-01402] c18 N71-21651  
 Etching aluminum alloys with aqueous solution containing sulfuric acid, hydrofluoric acid, and an alkali metal dischromate for adhesive bonding [NASA-CASE-XMF-02303] c17 N71-23828  
 Adhesive spray process for attaching biomedical skin electrodes [NASA-CASE-XFR-07658-1] c05 N71-26293  
 Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide [NASA-CASE-GSC-11577-1] c37 N75-15992  
 Weld-bonded titanium structures [NASA-CASE-LAR-11549-1] c37 N77-11397  
 Method of adhering bone to a rigid substrate using a graphite fiber reinforced bone cement [NASA-CASE-NPO-13764-1] c27 N78-17215  
 Thermal barrier coating system [NASA-CASE-LEW-12554-1] c34 N78-18355  
 Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles [NASA-CASE-MSC-12619-2] c27 N79-12221  
 Surface finishing [NASA-CASE-MSC-12631-3] c27 N81-14077  
 Method of bonding plasticized elastomer to metal and article produced thereby [NASA-CASE-MFS-25181-1] c27 N81-16238  
 Thermal barrier coating system having improved adhesion [NASA-CASE-LEW-13359-1] c27 N81-24265

**ADHESIVES**  
 Polyimide adhesives [NASA-CASE-LAR-11397-1] c27 N75-29263  
 Polyimide adhesives [NASA-CASE-LAR-12181-1] c27 N78-17205  
 Crystalline polyimides --- reinforcing fibers for high temperature composites and adhesives as well as flame retardation [NASA-CASE-LAR-12099-1] c27 N80-16158

**ADJUSTING**  
 Centering device with ultrafine adjustment for use with roundness measuring apparatus [NASA-CASE-XMF-00480] c14 N70-39898  
 Slotted fine-adjustment support for optical devices [NASA-CASE-MFS-20249] c15 N72-11386  
 Adjustable support device with jacket screw for altering distance between base and supported member [NASA-CASE-NPO-10721] c15 N72-27484  
 Clock setter [NASA-CASE-LAR-11458-1] c35 N76-16392

**AERIAL BUDDERS**  
 Thrust augmented spin recovery device [NASA-CASE-LAR-11970-2] c08 N81-19130

**AEROACOUSTICS**  
 Acoustically swept rotor --- helicopter noise reduction [NASA-CASE-ARC-11106-1] c05 N80-14107

**AERODYNAMIC BALANCE**  
 Apparatus for and method of compensating dynamic unbalance [NASA-CASE-GSC-12550-1] c37 N81-22358

**AERODYNAMIC BRAKES**  
 Bluff-shaped annular configuration for supersonic decelerator for reentry vehicles [NASA-CASE-XLB-00222] c02 N70-37939  
 Lightweight, variable solidity knitted parachute fabric --- for aerodynamic decelerators [NASA-CASE-LAR-10776-1] c02 N74-10034

**AERODYNAMIC CHARACTERISTICS**  
 Variable aspect ratio and variable sweep delta wing planforms for supersonic aircraft [NASA-CASE-XLA-00221] c02 N70-33266  
 Designing spacecraft for flight into space, atmospheric reentry, and landing at selected sites [NASA-CASE-XAC-02058] c02 N71-16087  
 Spacecraft configurations and aerodynamic characteristics of space shuttle systems with two reusable stages



[NASA-CASE-MSC-12433] c31 N73-14854  
 Airfoil shape for flight at subsonic speeds ---  
 design analysis and aerodynamic  
 characteristics of the GAW-1 airfoil  
 [NASA-CASE-LAR-10585-1] c02 N76-22154  
 Curved centerline air intake for a gas turbine  
 engine  
 [NASA-CASE-LEW-13201-1] c07 N81-14999

**AERODYNAMIC CONFIGURATIONS**  
 Supersonic aircraft configuration providing for  
 variable aspect ratio and variable sweep wings  
 [NASA-CASE-XLA-00166] c02 N70-34178  
 Aerodynamic configuration for aircraft capable  
 of high speed flight and low drag for low  
 speed takeoff or landing upon presently  
 existing airfields  
 [NASA-CASE-XLA-00806] c02 N70-34858  
 Manned space capsule configuration for orbital  
 flight and atmospheric reentry  
 [NASA-CASE-XLA-00149] c31 N70-37938  
 Aerodynamic configuration of reentry vehicle  
 heat shield to provide longitudinal and  
 directional stability at hypersonic velocities  
 [NASA-CASE-XMS-04142] c31 N70-41631  
 Development and characteristics of translating  
 horizontal tail assembly for supersonic aircraft  
 [NASA-CASE-XLA-08801-1] c02 N71-11043  
 Variable geometry manned orbital vehicle having  
 high aerodynamic efficiency over wide speed  
 range and incorporating auxiliary pivotal wings  
 [NASA-CASE-XLA-03691] c31 N71-15674  
 Afterburner-equipped jet engine nacelle with  
 slotted configuration afterbody  
 [NASA-CASE-XLA-10450] c28 N71-21493  
 Variable geometry rotor system for direct  
 control over wake vortex  
 [NASA-CASE-LAR-10557] c02 N72-11018  
 Development of auxiliary lifting system to  
 provide ferry capability for entry vehicles  
 [NASA-CASE-LAR-10574-1] c11 N73-13257  
 Multistage aerospace craft --- perspective  
 drawings of conceptual design  
 [NASA-CASE-XMF-02263] c05 N74-10907  
 Supersonic fan blading --- noise reduction in  
 turbofan engines  
 [NASA-CASE-LEW-11402-1] c07 N74-28226  
 Free wing assembly for an aircraft  
 [NASA-CASE-PRC-10092-1] c05 N79-12061

**AERODYNAMIC DRAG**  
 Skin friction measuring device for aircraft  
 [NASA-CASE-PRC-11029-1] c06 N81-17057

**AERODYNAMIC HEATING**  
 Development of thermal insulation system for  
 wing and control surfaces of hypersonic  
 aircraft and reentry vehicles  
 [NASA-CASE-XLA-00892] c33 N71-17897  
 Heat flux sensor adapted for mounting on  
 aircraft or spacecraft to measure aerodynamic  
 heat flux inflow to aircraft skin  
 [NASA-CASE-XFR-03802] c33 N71-23085  
 Ablative heat shield for protection from  
 aerodynamic heating of reentry spacecraft  
 [NASA-CASE-MSC-12143-1] c33 N72-17947

**AERODYNAMIC LOADS**  
 Directed fluid stream for propeller blade  
 loading control  
 [NASA-CASE-XAC-00139] c02 N70-34856  
 Means for controlling aerodynamically induced  
 twist --- equipment to control twisting of  
 slender wings due to aerodynamic loads  
 [NASA-CASE-LAR-12175-1] c05 N80-16055

**AERODYNAMIC NOISE**  
 Apparatus for reducing aerodynamic noise in a  
 wind tunnel  
 [NASA-CASE-MPS-23099-1] c09 N76-23273  
 Acoustically swept rotor --- helicopter noise  
 reduction  
 [NASA-CASE-ARC-11106-1] c05 N80-14107  
 Curved centerline air intake for a gas turbine  
 engine  
 [NASA-CASE-LEW-13201-1] c07 N81-14999

**AERODYNAMIC STABILITY**  
 Aerodynamically stable meteorological balloon  
 using surface roughness effect  
 [NASA-CASE-XMF-04163] c02 N71-23007  
 Pressure sensor network for measuring liquid  
 dynamic response in flight including fuel tank  
 acceleration, liquid slosh amplitude, and fuel  
 depth monitoring

[NASA-CASE-XLA-05541] c12 N71-26387  
 Spacecraft design with single point aerodynamic  
 and hydrodynamic stability for emergency  
 transport of men from space station to  
 splashdown  
 [NASA-CASE-MSC-13281] c31 N72-18859  
 High lift aircraft --- with improved stability,  
 control, performance, and noise characteristics  
 [NASA-CASE-LAR-11252-1] c05 N75-25914  
 Hingeless helicopter rotor with improved stability  
 [NASA-CASE-ARC-10807-1] c05 N77-17029  
 An annular wing  
 [NASA-CASE-PRC-11007-2] c02 N79-24959  
 Aeroelastic instability stoppers for wind-tunnel  
 models  
 [NASA-CASE-LAR-12720-1] c09 N81-31229

**AERODYNAMIC STALLING**  
 Aerodynamic side-force alleviator means  
 [NASA-CASE-LAR-12326-1] c02 N81-14968

**AEROELASTICITY**  
 Aeroelastic instability stoppers for wind-tunnel  
 models  
 [NASA-CASE-LAR-12720-1] c09 N81-31229  
 Aeroelastic instability stoppers for wind-tunnel  
 models  
 [NASA-CASE-LAR-12458-1] c09 N81-31230

**AERONAUTICAL ENGINEERING**  
 Differential pressure cell insensitive to  
 changes in ambient temperature and extreme  
 overload  
 [NASA-CASE-XAC-00042] c14 N70-34816

**AEROSOLS**  
 Liquid aerosol dispenser with explosively driven  
 piston to compress light gas to extremely high  
 pressure  
 [NASA-CASE-MFS-20829] c12 N72-21310  
 Particulate and aerosol detector  
 [NASA-CASE-LAR-11434-1] c35 N76-22509  
 Thermoluminescent aerosol analysis  
 [NASA-CASE-LAR-12046-1] c25 N78-15210

**AEROSPACE ENGINEERING**  
 Modifying existing solar cells for temperature  
 control  
 [NASA-CASE-NPO-10109] c03 N71-11049  
 Metallic film diffusion for boundary lubrication  
 in aerospace engineering  
 [NASA-CASE-XLE-10337] c15 N71-24046  
 Soldering device particularly suited to making  
 high quality wiring joints for aerospace  
 engineering utilizing capillary attraction to  
 regulate flow of solder  
 [NASA-CASE-XLA-08911] c15 N71-27214  
 Installing fiber insulation  
 [NASA-CASE-MSC-16973-1] c37 N81-14317

**AEROSPACE ENVIRONMENTS**  
 High voltage insulators for direct current in  
 acceleration system of electrostatic thruster  
 [NASA-CASE-XLE-01902] c28 N71-10574  
 Metallic film diffusion into metal or ceramic  
 surfaces for boundary lubrication in aerospace  
 environments  
 [NASA-CASE-XLE-01765] c18 N71-10772  
 Preparation of inorganic solid film lubricants  
 with long wear life and stability in aerospace  
 environments  
 [NASA-CASE-XMF-03988] c15 N71-21403  
 Momentum-velocity analyzer for measuring minute  
 space particles  
 [NASA-CASE-XMS-04201] c14 N71-22990  
 Metal alloy bearing materials for space  
 applications  
 [NASA-CASE-XLE-05033] c15 N71-23810  
 Method and apparatus for adjusting thermal  
 conductance in electronic components for space  
 use  
 [NASA-CASE-XNP-05524] c33 N71-24876  
 Space environment simulator for testing  
 spacecraft components under aerospace conditions  
 [NASA-CASE-NFO-10141] c11 N71-24964  
 High dc switch for causing abrupt, cyclic,  
 decreases of current to operate under zero or  
 varying gravity conditions  
 [NASA-CASE-LEW-10155-1] c09 N71-29035  
 Automatic biowaste sampling  
 [NASA-CASE-MSC-14640-1] c54 N76-14804  
 Wabble gear drive mechanism --- for aerospace  
 environments  
 [NASA-CASE-WOO-00625] c37 N78-17385

- Plasma cleaning device --- designed for high vacuum environments  
[NASA-CASE-MFS-22906-1] c75 N78-27913
- Process for spinning flame retardant elastomeric compositions --- fabricating synthetic fibers for high oxygen environments  
[NASA-CASE-MSC-14331-3] c27 N78-32262
- General purpose rocket furnace  
[NASA-CASE-MFS-23460-1] c12 N79-26075
- AEROSPACE MEDICINE**
- Piston device for producing known constant positive pressure within lungs by using thoracic muscles  
[NASA-CASE-XMS-01615] c05 N70-41329
- Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c54 N78-32721
- AEROSPACE VEHICLES**
- Aerospace configuration with low and high aspect ratio variability for high and low speed flight  
[NASA-CASE-XLA-00142] c02 N70-33286
- Landing pad assembly for aerospace vehicles  
[NASA-CASE-IMP-02853] c31 N70-36654
- Aerospace vehicle with variable planform for hypersonic and subsonic flight  
[NASA-CASE-XLA-00805] c31 N70-38010
- Development of resilient fastener for attaching skin of aerospace vehicles to permit movement of skin relative to framework  
[NASA-CASE-XLA-01027] c31 N71-24035
- Chemical spot tests for identification of titanium and titanium alloys used in aerospace vehicles  
[NASA-CASE-LAR-10539-1] c17 N73-12547
- AEROSPACEPLANES**
- Multistage aerospace craft --- perspective drawings of conceptual design  
[NASA-CASE-IMP-02263] c05 N74-10907
- AFTERBODIES**
- Afterburner-equipped jet engine nacelle with slotted configuration afterbody  
[NASA-CASE-XLA-10450] c28 N71-21493
- AFTERBURNING**
- Exhaust nozzle with afterburning for generating thrust  
[NASA-CASE-XLA-00154] c28 N70-33374
- AGING (MATERIALS)**
- Method of heat treating age-hardenable alloys  
[NASA-CASE-IMP-01311] c26 N75-29236
- AGRICULTURE**
- Solar-powered pump  
[NASA-CASE-NPO-13567-1] c44 N76-29701
- AILERONS**
- Device for controlling rotary potentiometer mounted on aircraft steering wheel or aileron control  
[NASA-CASE-XAC-10019] c15 N71-23809
- AIR**
- Gas purged dry box glove reducing permeation of air or moisture into dry box or isolator by diffusion through glove  
[NASA-CASE-XLE-02531] c05 N71-23080
- Superconducting magnetic field trapping device for producing magnetic field in air  
[NASA-CASE-IMP-01185] c26 N73-28710
- AIR CONDITIONING**
- Automotive absorption air conditioner utilizing solar and motor waste heat  
[NASA-CASE-NPO-15183] c44 N80-29843
- Apparatus for supplying conditioned air at a substantially constant temperature and humidity  
[NASA-CASE-GSC-12191-1] c31 N80-32583
- AIR CONDITIONING EQUIPMENT**
- Portable apparatus producing high velocity annular air column surrounding low velocity, filtered, superclean air central core for industrial clean room environmental control  
[NASA-CASE-IMP-03212] c15 N71-22721
- Air conditioning system and component therefore distributing air flow from opposite directions  
[NASA-CASE-GSC-11445-1] c31 N74-27902
- AIR COOLING**
- Modification and improvement of turbine blades for maximum cooling efficiency  
[NASA-CASE-XLB-00092] c15 N70-33264
- AIR FILTERS**
- Development of filter apparatus for gas separation and characteristics of filter cell support frame for improved operation  
[NASA-CASE-MSC-12297] c14 N72-23457
- AIR FLOW**
- Wind tunnel air flow modulating device and apparatus for selectively generating wave motion in wind tunnel airstream  
[NASA-CASE-XLA-00112] c11 N70-33287
- Photographing surface flow patterns on wind tunnel test models  
[NASA-CASE-XLA-01353] c14 N70-41366
- Method for maintaining good performance in gas turbine during air flow distortion  
[NASA-CASE-LEW-10286-1] c28 N71-28915
- Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds  
[NASA-CASE-LAR-10612-1] c12 N73-28144
- Air conditioning system and component therefore distributing air flow from opposite directions  
[NASA-CASE-GSC-11445-1] c31 N74-27902
- Controlled separation combustor --- airflow distribution in gas turbine engines  
[NASA-CASE-LEW-11593-1] c20 N76-14190
- Method and apparatus for fluffing, separating, and cleaning fibers  
[NASA-CASE-LAR-11224-1] c37 N76-18456
- Smoke generator  
[NASA-CASE-ARC-10905-1] c37 N77-13418
- Variable cycle gas turbine engines  
[NASA-CASE-LEW-12916-1] c37 N78-17384
- Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c07 N78-25089
- AIR INTAKES**
- Aeroflexible wing structure with air scoop for inflating stiffeners with ram air  
[NASA-CASE-XLA-06095] c01 N69-39981
- Reversed cowl flap inlet thrust augmentor --- with adjustable airfoil  
[NASA-CASE-ARC-10754-1] c07 N75-24736
- Self stabilizing sonic inlet  
[NASA-CASE-LEW-11890-1] c05 N79-24976
- Curved centerline air intake for a gas turbine engine  
[NASA-CASE-LEW-13201-1] c07 N81-14999
- AIR LOCKS**
- Spacecraft air lock system to provide ingress and egress of astronaut without subjecting vehicular environment to vacuum of space  
[NASA-CASE-XLA-02050] c31 N71-22968
- System for removing and repairing spacecraft control thrusters by use of portable air locks  
[NASA-CASE-MFS-20325] c28 N71-27095
- Airlock for waste transferal from pressurized enclosure aboard space vehicle to waste receiver at negative pressure  
[NASA-CASE-MFS-20922] c31 N72-20840
- Airlock  
[NASA-CASE-MFS-20922-1] c18 N74-22136
- Apparatus for inserting and removing specimens from high temperature vacuum furnaces  
[NASA-CASE-LAR-10841-1] c31 N74-27900
- AIR NAVIGATION**
- Autonomous navigation system --- gyroscopic pendulum for air navigation  
[NASA-CASE-ARC-11257-1] c04 N81-21047
- AIR POLLUTION**
- Analytical photoionization mass spectrometer with argon gas filter between light source and monochromator  
[NASA-CASE-LAR-10180-1] c06 N71-13461
- Contamination free separation nut eliminating combustion products from ambient surroundings generated by squib firing  
[NASA-CASE-XGS-01971] c15 N71-15922
- Monitoring atmospheric pollutants with a heterodyne radiometer transmitter-receiver  
[NASA-CASE-NPO-11919-1] c35 N74-11284
- Fluorescence detector for monitoring atmospheric pollutants  
[NASA-CASE-NPO-13231-1] c45 N75-27585
- Stack plume visualization system  
[NASA-CASE-LAR-11675-1] c45 N76-17656
- Indicator providing continuous indication of the presence of a specific pollutant in air  
[NASA-CASE-NPO-13474-1] c45 N76-21742
- Method for detecting pollutants --- through chemical reactions and heat treatment  
[NASA-CASE-LAR-11405-1] c45 N76-31714
- Combustion engine --- for air pollution control  
[NASA-CASE-NPO-13671-1] c37 N77-31497

Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c44 N78-31527

**AIR PURIFICATION**  
Developing high pressure gas purification and filtration system for use in test operations of space vehicles  
[NASA-CASE-MFS-12806] c14 N71-17588  
Portable apparatus producing high velocity annular air column surrounding low velocity, filtered, superclean air central core for industrial clean room environmental control  
[NASA-CASE-XMF-03212] c15 N71-22721  
Cell and method for electrolysis of water and anode  
[NASA-CASE-MSC-16394-1] c28 N81-24280

**AIR SAMPLING**  
Pressure probe for sensing ambient static air pressures  
[NASA-CASE-XLA-00481] c14 N70-36824  
Sampler of gas borne particles  
[NASA-CASE-NPO-13396-1] c35 N76-18401  
Mobile sampler for use in acquiring samples of terrestrial atmospheric gasses  
[NASA-CASE-NPO-15220-1] c35 N81-24414  
Automated syringe sampler --- remote sampling of air and water  
[NASA-CASE-LAR-12308-1] c35 N81-29407

**AIR TRAFFIC CONTROL**  
Traffic control system for supersonic transports using synchronous satellite for data relay between vehicles and ground station  
[NASA-CASE-GSC-10087-1] c02 N71-19287  
Satellite aided aircraft collision avoidance system effective for large number of aircraft  
[NASA-CASE-ERC-10090] c21 N71-24948  
System and method for position locating for air traffic control involving supersonic transports  
[NASA-CASE-GSC-10087-3] c07 N72-12080

**AIRBORNE EQUIPMENT**  
Inflatable radar reflector unit - lightweight, highly reflective to electromagnetic radiation, and adaptable for erection and deployment with minimum effort and time  
[NASA-CASE-XMS-00893] c07 N70-40063

**AIRBORNE/SPACEBORNE COMPUTERS**  
Logic circuit to ripple add and subtract binary counters for spaceborne computers  
[NASA-CASE-XGS-04766] c08 N71-18602  
Shared memory for a fault-tolerant computer  
[NASA-CASE-NPO-13139-1] c60 N76-21914

**AIRCRAFT**  
Pilot warning indicator system of intruder aircraft  
[NASA-CASE-ERC-10226-1] c14 N73-16483  
Thin conformal antenna array for microwave power conversions  
[NASA-CASE-NPO-13886-1] c32 N78-24391

**AIRCRAFT ACCIDENTS**  
Satellite aided aircraft collision avoidance system effective for large number of aircraft  
[NASA-CASE-ERC-10090] c21 N71-24948

**AIRCRAFT COMPARTMENTS**  
Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety  
[NASA-CASE-ARC-11040-2] c24 N78-27184

**AIRCRAFT CONFIGURATIONS**  
Variable sweep wing configuration for supersonic aircraft  
[NASA-CASE-XLA-00230] c02 N70-33255  
Television simulation for aircraft and space flight  
[NASA-CASE-YFR-03107] c09 N71-19449  
Design of dual fuselage aircraft with pivoting wing and horizontal stabilizer to permit yawing of wing in flight for high speed operation  
[NASA-CASE-ARC-10470-1] c02 N73-26005

**AIRCRAFT CONTROL**  
Development and characteristics of control system for flexible wings  
[NASA-CASE-XLA-06958] c02 N71-11038  
Development of attitude control system for vertical takeoff aircraft using reaction nozzles displaced from various axes of aircraft  
[NASA-CASE-XAC-08972] c02 N71-20570  
Device for controlling rotary potentiometer mounted on aircraft steering wheel or aileron control  
[NASA-CASE-XAC-10019] c15 N71-23809  
Direct lift control system having flaps with slots adjacent to their leading edge and particularly adapted for lightweight aircraft  
[NASA-CASE-LAR-10249-1] c02 N71-26110  
Supersonic or hypersonic vehicle control system comprising elevons with hinge line sweep and free of adverse aerodynamic cross coupling  
[NASA-CASE-XLA-08967] c02 N71-27088  
Development of aircraft control system with high performance electrically controlled and mechanically operated hydraulic valves for precise flight operation  
[NASA-CASE-XAC-00048] c02 N71-29128  
Development of thrust control system for application to control of aircraft and spacecraft  
[NASA-CASE-MSC-13397-1] c21 N72-25595  
Aircraft control system for rotary wing aircraft  
[NASA-CASE-ERC-10439] c02 N73-19004  
Situational display system of cathode ray tubes to assist pilot in aircraft control  
[NASA-CASE-ERC-10350] c14 N73-20474  
Development of aerodynamic control system to control flutter over large range of oscillatory frequencies using stability augmentation techniques  
[NASA-CASE-LAR-10682-1] c02 N73-26004  
Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c05 N75-12930  
High lift aircraft --- with improved stability, control, performance, and noise characteristics  
[NASA-CASE-LAR-11252-1] c05 N75-25914  
Filtering technique based on high-frequency plant modeling for high-gain control  
[NASA-CASE-LAR-12215-1] c08 N79-23097  
Velocity vector control system augmented with direct lift control  
[NASA-CASE-LAR-12268-1] c08 N81-24106  
Pitch attitude stabilization system utilizing engine pressure ratio feedback signals  
[NASA-CASE-LAR-12562-1] c08 N81-26152  
Propulsive lateral control nozzle  
[NASA-CASE-LAR-12136-1] c08 N81-33210

**AIRCRAFT DESIGN**  
Design of supersonic aircraft with novel fixed, swept wing planform  
[NASA-CASE-XLA-04451] c02 N71-12243  
Design of dual fuselage aircraft with pivoting wing and horizontal stabilizer to permit yawing of wing in flight for high speed operation  
[NASA-CASE-ARC-10470-1] c02 N73-26005  
Multistage aerospace craft --- perspective drawings of conceptual design  
[NASA-CASE-XMF-02263] c05 N74-10907  
High lift aircraft --- with improved stability, control, performance, and noise characteristics  
[NASA-CASE-LAR-11252-1] c05 N75-25914  
Oblique-wing supersonic aircraft  
[NASA-CASE-ARC-10470-3] c05 N76-29217  
Supersonic transport --- using canard surfaces  
[NASA-CASE-LAR-11932-1] c05 N78-32086  
Helicopter rotor airfoil  
[NASA-CASE-LAR-12396-1] c02 N79-24958

**AIRCRAFT DETECTION**  
Surface based altitude measuring system for accurately measuring altitude of airborne vehicle  
[NASA-CASE-ERC-10412-1] c09 N73-12211  
Apparatus for measuring an aircraft's speed and height  
[NASA-CASE-LAR-12275-1] c35 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] c07 N74-32418  
Dual cycle aircraft turbine engine  
[NASA-CASE-LAR-11310-1] c07 N77-28118  
Portable device for use in starting air-start-units for aircraft and having cable lead testing capability  
[NASA-CASE-FRC-10113-1] c33 N80-26599  
Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c07 N80-32392

**AIRCRAFT EQUIPMENT**  
Development of radiometric sensor to warn aircraft pilots of region of clear air

- turbulence along flight path  
[NASA-CASE-ERC-10081] c14 N72-28437
- A** system for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-FRC-11005-1] c06 N79-24988
- Air speed and attitude probe  
[NASA-CASE-FRC-11009-1] c06 N80-18036
- Cooling system for high speed aircraft  
[NASA-CASE-LAR-12406-1] c05 N81-26114
- AIRCRAFT FUEL SYSTEMS**  
Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12321-1] c37 N78-10467
- AIRCRAFT GUIDANCE**  
Terminal guidance system --- for guiding aircraft into preselected altitude and/or heading at terminal point  
[NASA-CASE-FRC-10049-1] c04 N74-13420
- Improved Sun-sensing guidance system for high-altitude aircraft  
[NASA-CASE-FRC-11052-1] c04 N80-20249
- AIRCRAFT HAZARDS**  
Deflector for preventing objects from entering nacelle inlets of jet aircraft  
[NASA-CASE-XLE-00388] c28 N70-34788
- AIRCRAFT HYDRAULIC SYSTEMS**  
Variable-orifice hydraulic mechanism for aircraft gas turbine engine fuel control  
[NASA-CASE-LEW-11187-1] c28 N73-19793
- A hydraulic actuator mechanism to control aircraft spoiler movements through dual input commands  
[NASA-CASE-LAR-12412-1] c05 N80-11065
- AIRCRAFT INSTRUMENTS**  
Aircraft instrument for indicating malfunctions during takeoff  
[NASA-CASE-XLA-00100] c14 N70-36807
- Pressure probe for sensing ambient static air pressures  
[NASA-CASE-XLA-00481] c14 N70-36824
- Aircraft indicator for pilot control of takeoff roll, climbout path and verticle flight path in poor visibility conditions  
[NASA-CASE-XLA-00487] c14 N70-40157
- Optical projector system for establishing optimum arrangement of instrument displays in aircraft, spacecraft, other vehicles, and industrial instrument consoles  
[NASA-CASE-XNP-03853] c23 N71-21882
- Combined optical attitude and altitude indicating instrument for use in aircraft or spacecraft  
[NASA-CASE-XLA-01907] c14 N71-23268
- Aircraft horizon and vertical indicator  
[NASA-CASE-ERC-10392] c21 N73-14692
- G-load measuring and indicator apparatus  
[NASA-CASE-ARC-10806-1] c35 N75-29381
- Magnetic heading reference  
[NASA-CASE-LAR-11387-1] c04 N76-20114
- Aircraft-mounted crash-activated transmitter device  
[NASA-CASE-MFS-16609-3] c03 N76-32140
- AIRCRAFT LANDING**  
Aerodynamic configuration for aircraft capable of high speed flight and low drag for low speed takeoff or landing upon presently existing airfields  
[NASA-CASE-XLA-00806] c02 N70-34858
- Magnetic method for detection of aircraft position relative to runway  
[NASA-CASE-ARC-10179-1] c21 N72-22619
- Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c05 N75-12930
- Vehicle simulator binocular multiplanar visual display system  
[NASA-CASE-ARC-10808-1] c09 N76-24280
- Pull color hybrid display for aircraft simulators --- landing aids  
[NASA-CASE-ARC-10903-1] c09 N78-18083
- AIRCRAFT LAUNCHING DEVICES**  
Rotating launch device for a remotely piloted aircraft  
[NASA-CASE-ARC-10979-1] c09 N77-19076
- AIRCRAFT MANEUVERS**  
G-load measuring and indicator apparatus  
[NASA-CASE-ARC-10806-1] c35 N75-29381
- AIRCRAFT MODELS**  
Free flight suspension system for use with aircraft models in wind tunnel tests  
[NASA-CASE-XLA-00939] c11 N71-15926
- Variable geometry wind tunnel for testing aircraft models at subsopic speeds  
[NASA-CASE-XLA-07430] c11 N72-22246
- Deploy/release system --- model aircraft flight control  
[NASA-CASE-LAR-11575-1] c02 N76-16014
- AIRCRAFT NOISE**  
Instrumentation for measuring aircraft noise and sonic boom  
[NASA-CASE-LAR-11476-1] c07 N76-27232
- AIRCRAFT PERFORMANCE**  
Development of auxiliary lifting system to provide ferry capability for entry vehicles  
[NASA-CASE-LAR-10574-1] c11 N73-13257
- AIRCRAFT PILOTS**  
Apparatus for applying simulator g-forces to an arm of an aircraft simulator pilot  
[NASA-CASE-LAR-10550-1] c09 N74-30597
- AIRCRAFT SAFETY**  
Aircraft instrument for indicating malfunctions during takeoff  
[NASA-CASE-XLA-00100] c14 N70-36807
- Development and operating principles of collision warning system for aircraft accident prevention  
[NASA-CASE-HQN-10703] c21 N73-13643
- Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft  
[NASA-CASE-LAR-10753-1] c08 N74-30421
- AIRCRAFT STABILITY**  
Mechanical stabilization system for VTOL aircraft  
[NASA-CASE-XLA-06339] c02 N71-13422
- Development of aerodynamic control system to control flutter over large range of oscillatory frequencies using stability augmentation techniques  
[NASA-CASE-LAR-10682-1] c02 N73-26004
- AIRCRAFT STRUCTURES**  
Fatigue testing device applying random discrete load levels to test specimen and applicable to aircraft structures  
[NASA-CASE-XLA-02131] c32 N70-42003
- Heat flux sensor adapted for mounting on aircraft or spacecraft to measure aerodynamic heat flux inflow to aircraft skin  
[NASA-CASE-XFR-03802] c33 N71-23085
- Three-axis adjustable loading structure  
[NASA-CASE-FRC-10051-1] c35 N74-13129
- Transparent fire resistant polymeric structures  
[NASA-CASE-ARC-10813-1] c27 N76-16230
- Wingtip vortex dissipator for aircraft  
[NASA-CASE-LAR-11645-1] c02 N77-10001
- Aircraft canopy lock  
[NASA-CASE-FRC-11065-1] c05 N81-24047
- AIRCRAFT TIRES**  
Improved tire/wheel concept --- pneumatic aircraft tire  
[NASA-CASE-LAR-11695-2] c37 N80-18402
- Tire/wheel concept  
[NASA-CASE-LAR-11695-2] c37 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] c02 N80-28300
- AIRFOILS**  
Electric analog for measuring induced drag on nonplanar airfoils  
[NASA-CASE-XLA-00755] c01 N71-13410
- Electric analog for measuring induced drag on nonplanar airfoils  
[NASA-CASE-XLA-05828] c01 N71-13411
- Wind tunnel  
[NASA-CASE-LAR-10135-1] c09 N79-21083
- An annular wing  
[NASA-CASE-FRC-11007-2] c02 N79-24959
- Surface finishing  
[NASA-CASE-MSC-12631-3] c27 N81-14077
- AIRFRAMES**  
Design of dual fuselage aircraft with pivoting wing and horizontal stabilizer to permit yawing of wing in flight for high speed operation  
[NASA-CASE-ARC-10470-1] c02 N73-26005
- Cooling system for high speed aircraft  
[NASA-CASE-LAR-12406-1] c05 N81-26114

- Explosively activated egress area  
[NASA-CASE-LAR-12624-1] c03 N81-29107
- AIRSPERD**
- Aerodynamic configuration for aircraft capable of high speed flight and low drag for low speed takeoff or landing upon presently existing airfields  
[NASA-CASE-XLA-00806] c02 N70-34858
- Apparatus for measuring an aircraft's speed and height  
[NASA-CASE-LAR-12275-1] c35 N79-18296
- Air speed and attitude probe  
[NASA-CASE-PRC-11009-1] c06 N80-18036
- ALCOHOLS**
- New trifunctional alcohol derived from triber acid and novel method of preparation  
[NASA-CASE-NPO-10714] c06 N69-31244
- Cooling and radiation protection of ruby lasers using copper sulfate solution in alcohol  
[NASA-CASE-MPS-20180] c16 N72-12440
- ALDEHYDES**
- Direct synthesis of polymeric schiff bases from two amines and two aldehydes  
[NASA-CASE-IMP-08655] c06 N71-11239
- Synthesis of azine polymers for heat shields by azine-aromatic aldehyde reaction  
[NASA-CASE-IMP-08656] c06 N71-11242
- Synthesis of aromatic diamines and dialdehyde polymers using Schiff base  
[NASA-CASE-IMP-03074] c06 N71-24740
- Nuclear alkylated pyridine aldehyde polymers and conductive compositions thereof  
[NASA-CASE-NPO-10557] c27 N78-17214
- Cross-linked polyvinyl alcohol and method of making same  
[NASA-CASE-LEW-13504-1] c27 N81-27279
- ALIGNMENT**
- Centering device with ultrafine adjustment for use with roundness measuring apparatus  
[NASA-CASE-IMP-00480] c14 N70-39898
- Portable device for aligning surfaces of two adjacent wall or sheet sections for joining at point of junction  
[NASA-CASE-IMP-01452] c15 N70-41371
- Electro-optical/computer system for aligning large structural members and maintaining correct position  
[NASA-CASE-IMP-02029] c14 N70-41955
- Electrical and electromechanical trigonometric computation assembly and space vehicle guidance system for aligning perpendicular axes of two sets of three-axes coordinate references  
[NASA-CASE-IMP-00684] c21 N71-21688
- Description of device for aligning stacked sheets of paper for repetitive cutting  
[NASA-CASE-IMS-04178] c15 N71-22798
- Laser beam projector for continuous, precise alignment between target, laser generator, and astronomical telescope during tracking  
[NASA-CASE-NPO-11087] c23 N71-29125
- Measuring roll alignment of test body with respect to reference body  
[NASA-CASE-GSC-10514-1] c14 N72-20379
- Apparatus for aligning shadow shields and cryogenic storage tanks in outer space with the sun  
[NASA-CASE-KSC-10622-1] c31 N72-21893
- Design of precision vertical alignment system using laser with gravitationally sensitive cavity  
[NASA-CASE-ARC-10444-1] c16 N73-33397
- Spacecraft docking and alignment system --- using television camera system  
[NASA-CASE-MSC-12559-1] c18 N76-14186
- Method of constructing dished ion thruster grids to provide hole array spacing compensation  
[NASA-CASE-LEW-11876-1] c20 N76-21276
- Optical alignment device  
[NASA-CASE-ARC-10932-1] c74 N76-22993
- Precision alignment apparatus for cutting a workpiece  
[NASA-CASE-LAR-11658-1] c37 N77-14478
- Guide for a typewriter  
[NASA-CASE-MPS-15218-1] c37 N77-19457
- Rotary target V-block --- aligning wind tunnel apparatus for optical measurement  
[NASA-CASE-LAR-12007-2] c74 N79-25676
- Rhomboid prism pair for rotating the plane of parallel light beams --- laser velocimeters  
[NASA-CASE-ABC-11311-1] c74 N81-16882
- ALKALI METALS**
- Ultraviolet radiation resistant alkali-metal silicate coatings for temperature control of spacecraft  
[NASA-CASE-IGS-04119] c18 N69-39979
- Analytical test apparatus and method for determining oxygen content in alkali liquid metal  
[NASA-CASE-XLE-01997] c06 N71-23527
- Composition and production method of alkali metal silicate paint with ultraviolet reflection properties  
[NASA-CASE-IGS-04799] c18 N71-24183
- Design and characteristics of heat activated electric cell with anode made from one or more alkali metals and cathode made from oxidizing material  
[NASA-CASE-LEW-11358] c03 N71-26084
- Method for producing alkali metal dispersions of high purity  
[NASA-CASE-XNP-08876] c17 N73-28573
- Process for preparing higher oxides of the alkali and alkaline earth metals  
[NASA-CASE-ARC-10992-1] c26 N78-32229
- Alkali-metal silicate binders and methods of manufacture  
[NASA-CASE-GSC-12303-1] c24 N79-31347
- Heat pipes containing alkali metal working fluid  
[NASA-CASE-LEW-12253-1] c34 N81-22310
- ALKALINE BATTERIES**
- Method for determining state of charge of alkali batteries by using tritium as tracer  
[NASA-CASE-XNP-01464] c03 N71-10728
- Alkaline-type coulometer cell for primary charge control in secondary battery recharge circuits  
[NASA-CASE-IGS-05434] c03 N71-20491
- Electrocatalyst for oxygen reduction in low temperature alkaline fuel cell  
[NASA-CASE-HQN-10537-1] c06 N72-10138
- Inorganic-organic separators for alkaline batteries  
[NASA-CASE-LEW-12649-1] c44 N78-25530
- Flexible formulated plastic separators for alkaline batteries  
[NASA-CASE-LEW-12363-4] c44 N80-18555
- Advanced inorganic separators for alkaline batteries and method of making same --- a polymeric coating applied to a porous flexible substrate  
[NASA-CASE-LEW-13171-1] c44 N81-22466
- Additive for zinc electrodes  
[NASA-CASE-LEW-13286-1] c44 N81-27597
- Polyvinyl alcohol battery separator containing inert filler --- alkaline batteries  
[NASA-CASE-LEW-13556-1] c44 N81-27615
- Alkaline battery containing a separator of a cross-linked copolymer of vinyl alcohol and unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c44 N81-29531
- ALKALINE EARTH OXIDES**
- Process for preparing higher oxides of the alkali and alkaline earth metals  
[NASA-CASE-ARC-10992-1] c26 N78-32229
- ALKYL COMPOUNDS**
- Preparation of fluorohydroxy ethers by reacting fluoroalkylene oxides with alkali salt of polyfluoroalkylene diol  
[NASA-CASE-MPS-10507] c06 N73-30101
- ALLOYS**
- Brazing alloy adapted for brazing corrosion resistant steel to refractory metals, also for brazing refractory metals to other refractory metals  
[NASA-CASE-XNP-03063] c17 N71-23365
- Metal alloy bearing materials for space applications  
[NASA-CASE-XLE-05033] c15 N71-23810
- High thermal emittance black surface coatings and process for applying to metal and metal alloy surfaces used in radiative cooling of spacecraft  
[NASA-CASE-XLA-06199] c15 N71-24875
- Adjustable rigid mount for trihedral mirror formed of alloy with small coefficient of thermal expansion supporting screws and spring-biased plates

- [NASA-CASE-XNP-08907] c23 N71-29123  
Two-step diffusion welding process of unrecrystallized alloys
- [NASA-CASE-LEW-11388-1] c15 N73-32358  
Brazing alloy hinder
- [NASA-CASE-XNP-05868] c26 N75-27125  
Brazing alloy
- [NASA-CASE-XNP-03878] c26 N75-27127
- ALPHA PARTICLES**  
Method and means for helium/hydrogen ratio measurement by alpha scattering  
[NASA-CASE-NPO-14079-1] c25 N80-20334
- ALPHANUMERIC CHARACTERS**  
X-Y alphanumeric character generator for oscilloscopes  
[NASA-CASE-GSC-11582-1] c33 N75-19517
- ALTERNATING CURRENT**  
Characteristics of high power, low distortion, alternating current power amplifier  
[NASA-CASE-LAR-10218-1] c09 N70-34559  
Frequency control network for current feedback oscillators converting dc voltage to ac or higher dc voltages  
[NASA-CASE-XNP-10041-1] c10 N71-19418  
Blood pressure measuring system for separately recording dc and ac pressure signals of Korotkoff sounds  
[NASA-CASE-XNS-06061] c05 N71-23317  
Solid state circuit for switching alternating current input signal as function of direct current gating transistor  
[NASA-CASE-XNP-06505] c10 N71-24799  
Device for voltage conversion using controlled pulse widths and arrangements to generate ac output voltage  
[NASA-CASE-MPS-10068] c10 N71-25139  
Inverters for changing direct current to alternating current  
[NASA-CASE-IGS-06226] c10 N71-25950  
Dc to ac to dc converter with transistor driven synchronous rectifiers  
[NASA-CASE-GSC-11126-1] c09 N72-25253  
Phase protection system for ac power lines  
[NASA-CASE-MSC-17832-1] c33 N74-14956  
Non-contacting power transfer device  
[NASA-CASE-GSC-12595-1] c33 N81-12331  
Solar cell system having alternating current output  
[NASA-CASE-LEW-12806-2] c44 N81-12542  
Power factor control system for ac induction motors  
[NASA-CASE-MPS-23988-1] c33 N81-27395
- ALTIMETERS**  
Echo tracker/range finder for radars and sonars  
[NASA-CASE-NPO-14361-1] c32 N79-26253
- ALTITUDE**  
Combined optical attitude and altitude indicating instrument for use in aircraft or spacecraft  
[NASA-CASE-XLA-01907] c14 N71-23268  
A system for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-PRC-11005-1] c06 N79-24988
- ALTITUDE CONTROL**  
Ambient atmospheric pressure sensing device for determining altitude of flight vehicles  
[NASA-CASE-XLA-00128] c15 N70-37925
- ALUMINUM**  
Joining aluminum to stainless steel by bonding aluminum coatings onto titanium coated stainless steel and brazing aluminum to aluminum/titanium coated steel  
[NASA-CASE-MPS-07369] c15 N71-20443  
Low concentration alkaline solution treatment of aluminum with metal phosphate surface coatings to improve chemical bonding and reduce coating weight  
[NASA-CASE-XLA-01995] c18 N71-23047  
Etching aluminum alloys with aqueous solution containing sulfuric acid, hydrofluoric acid, and an alkali metal dichromate for adhesive bonding  
[NASA-CASE-XMP-02303] c17 N71-23828  
Process for producing dispersion strengthened nickel with aluminum comprising metallic matrices embedded with oxides or other hyperfine compounds
- [NASA-CASE-XLB-06969] c17 N71-24142  
Nickel plating onto etched aluminum castings
- [NASA-CASE-XNP-04148] c17 N71-24830  
Method of plating copper on aluminum to permit conventional soldering of structural aluminum bodies
- [NASA-CASE-XLA-08966-1] c17 N71-25903  
Heat activated emf cells with aluminum anode
- [NASA-CASE-LEW-11359] c03 N71-28579  
Heat activated cell with aluminum anode
- [NASA-CASE-LEW-11359-2] c03 N72-20034  
Method of preparing graphite reinforced aluminum composite
- [NASA-CASE-MPS-21077-1] c24 N75-28135  
Method of fluxless brazing and diffusion bonding of aluminum containing components
- [NASA-CASE-MSC-14435-1] c37 N76-18455  
Method for making an aluminum or copper substrate panel for selective absorption of solar energy
- [NASA-CASE-MPS-23518-1] c44 N79-11469  
Recovery of aluminum from composite propellants
- [NASA-CASE-NPO-14110-1] c28 N81-15119
- ALUMINUM ALLOYS**  
High strength aluminum casting alloy for cryogenic applications in aerospace engineering  
[NASA-CASE-XMP-02786] c17 N71-20743  
Etching aluminum alloys with aqueous solution containing sulfuric acid, hydrofluoric acid, and an alkali metal dichromate for adhesive bonding  
[NASA-CASE-XMP-02303] c17 N71-23828  
Method of producing complex aluminum alloy parts of high temper, and products thereof  
[NASA-CASE-MSC-19693-1] c26 N78-24333  
NiCrAl ternary alloy having improved cyclic oxidation resistance  
[NASA-CASE-LEW-13339-1] c26 N81-12211
- ALUMINUM COATINGS**  
Intermetallic chromium containing nickel aluminide for high temperature corrosion protection of stainless steels  
[NASA-CASE-LEW-11267-1] c17 N73-32414  
Preparing oxidizer coated metal fuel particles  
[NASA-CASE-NPO-11975-1] c28 N74-33209  
Method of protecting the surface of a substrate --- by applying aluminide coating  
[NASA-CASE-LEW-11696-1] c37 N75-13261  
Duplex aluminized coatings  
[NASA-CASE-LEW-11696-2] c26 N75-19408  
Meteoroid impact position locator aid for manned space station  
[NASA-CASE-LAR-10629-1] c35 N75-33367  
A silicon-slurry/aluminide coating --- protects aircraft and land-based gas turbine engines  
[NASA-CASE-LEW-13343-1] c24 N80-26389
- ALUMINUM OXIDES**  
Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-1] c37 N75-15992  
Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-3] c24 N79-25143
- ALUMINUM SILICATES**  
White paint production by heating impure aluminum silicate clay having low solar absorptance  
[NASA-CASE-XNP-02139] c18 N71-24184
- AMIDES**  
Preparation of heterocyclic block copolymer omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c27 N79-22300  
Preparation of perfluorinated imidoylamidoximes --- for eventual preparation of heat and chemical resistant polymers  
[NASA-CASE-ARC-11267-1] c23 N80-26386  
Preparation of perfluorinated 1,2,4-oxadiazoles --- heat and chemical resistant polymers  
[NASA-CASE-ARC-11267-2] c25 N80-26407  
Method for preparing addition type polyimide prepreps  
[NASA-CASE-LAR-12054-2] c27 N81-14078
- AMINES**  
Direct synthesis of polymeric schiff bases from two amines and two aldehydes  
[NASA-CASE-XNP-08655] c06 N71-11239  
Synthesis of schiff bases for heat shields by acetal anine reactions  
[NASA-CASE-XNP-08652] c06 N71-11243

- Polyimide foam for the thermal insulation and fire protection  
[NASA-CASE-ARC-10464-1] c27 N74-12812
- Automated analysis of oxidative metabolites  
[NASA-CASE-ARC-10469-1] c25 N75-12086
- AMINO ACIDS**
- Amino acid analysis  
[NASA-CASE-NPO-12130-1] c25 N75-14844
- AMMONIA**
- Solid state chemical source for ammonia beam masers  
[NASA-CASE-XGS-01504] c16 N70-41578
- AMMONIUM NITRATES**
- High performance ammonium nitrate propellant  
[NASA-CASE-NPO-14260-1] c28 N79-28342
- AMMONIUM PERCHLORATES**
- Ammonium perchlorate composite propellant with organic Cu/II/ chelate catalytic additive  
[NASA-CASE-LAR-10173-1] c27 N71-14C90
- Process for the leaching of AP from propellant  
[NASA-CASE-NPO-14109-1] c28 N80-23471
- AMPLIFICATION**
- Automatic measuring and recording of gain and zero drift characteristics of electronic amplifier  
[NASA-CASE-XMS-05562-1] c09 N69-39986
- Clamped amplifier circuit for horizon scanner enabling amplification and accurate measurement of specified parameters  
[NASA-CASE-XGS-01784] c10 N71-20782
- Diversity receiving system with diversity phase lock  
[NASA-CASE-XGS-01222] c10 N71-20841
- Design of active RC network capable of operating at high Q values with reduced sensitivity to gain amplification and number of passive components  
[NASA-CASE-ARC-10042-2] c10 N72-11256
- Amplifying circuit with constant current source for accumulator load and high gain voltage amplification  
[NASA-CASE-NPO-11023] c09 N72-17155
- Independent gain and bandwidth control of a traveling wave maser  
[NASA-CASE-NPO-13801-1] c36 N78-18410
- Pseudonoise code tracking loop  
[NASA-CASE-MSC-18035-1] c32 N81-15179
- AMPLIFIER DESIGN**
- Automatic gain control amplifier system  
[NASA-CASE-XMS-05307] c09 N69-24330
- Bio-isolated dc operational amplifier --- for bioelectric measurements  
[NASA-CASE-ARC-10596-1] c33 N74-21851
- High stability amplifier  
[NASA-CASE-GSC-12646-1] c33 N81-32391
- AMPLIFIERS**
- Development of stable electronic amplifier adaptable for monolithic and thin film construction  
[NASA-CASE-XGS-02812] c09 N71-19466
- Bar oximeter for monitoring blood oxygenation and pressure, pulse rate, and pressure pulse curve, using dc and ac amplifiers  
[NASA-CASE-XAC-05422] c04 N71-23185
- Comb type traveling wave maser amplifier for improved high gain broadband output  
[NASA-CASE-NPO-10548] c16 N71-24831
- Vibrophonocardiograph comprising low weight and small volume piezoelectric microphone with amplifier having high input impedance for high sensitivity and low frequency response  
[NASA-CASE-XPR-07172] c05 N71-27234
- Digital data handling circuits for pulse amplifiers  
[NASA-CASE-XNP-01068] c10 N71-28739
- Active RC filter networks and amplifiers for deep space magnetic field measurement  
[NASA-CASE-XAC-05462-2] c10 N72-17171
- Full wave modulator-demodulator amplifier apparatus --- for generating rectified output signal  
[NASA-CASE-FRC-10072-1] c33 N74-14939
- Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c35 N75-15014
- Reflected-wave maser --- low noise amplifier  
[NASA-CASE-NPO-13490-1] c36 N76-31512
- Inductorless narrow-band filter/amplifier  
[NASA-CASE-GSC-12410-1] c33 N79-24260
- AMPLITUDE DISTRIBUTION ANALYSIS**
- Monitoring system for signal amplitude ranges over predetermined time interval  
[NASA-CASE-XMS-04061-1] c09 N69-39885
- Cathode ray oscilloscope for analyzing electrical waveforms representing amplitude distribution of time function  
[NASA-CASE-XNP-01383] c09 N71-10659
- Analog to digital converter circuit for pulse height analysis  
[NASA-CASE-XNP-00477] c08 N73-28045
- AMPLITUDE MODULATION**
- Alternating current signal generator providing plurality of amplitude modulated output signals  
[NASA-CASE-XNP-05612] c09 N69-21468
- Development of demodulation system for removing amplitude modulation from two quadrature displaced data bearing signals  
[NASA-CASE-XAC-04030] c10 N71-19472
- Development of apparatus for amplitude modulation of diode laser by periodic discharge of direct current power supply  
[NASA-CASE-XMS-04269] c16 N71-22895
- Vibrating element electrometer producing high conversion gain by input current control of elements resonant frequency displacement amplitude  
[NASA-CASE-XAC-02807] c09 N71-23021
- Scanning signal phase and amplitude electronic control device with hybrid T waveguide junction  
[NASA-CASE-NEO-10302] c10 N71-26142
- High efficiency transformerless amplitude modulator coupled to HF power amplifier  
[NASA-CASE-GSC-10668-1] c07 N71-28430
- Gated compressor, distortionless signal limiter  
[NASA-CASE-NEO-11820-1] c32 N74-19788
- Amplitude steered array  
[NASA-CASE-GSC-11446-1] c33 N74-20860
- Stark-effect modulation of CO2 laser with NH2D  
[NASA-CASE-NEO-11945-1] c36 N76-18427
- Adaptive reference voltage generator for firing angle control of line-commutated inverters  
[NASA-CASE-MFS-25215-1] c33 N81-31481
- AMPLITUDES**
- Circuits for amplitude limiting of random noise inputs  
[NASA-CASE-NPO-10169] c10 N71-24844
- ANPOULES**
- Apparatus and method for heating a material in a transparent ampoule --- crystal growth  
[NASA-CASE-MFS-25436-1] c76 N81-30012
- ANALGESIA**
- Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-2] c52 N81-14613
- Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-1] c52 N81-29764
- ANALOG CIRCUITS**
- Electric network for monitoring temperatures, detecting critical temperatures, and indicating critical time duration  
[NASA-CASE-IMP-01097] c10 N71-16058
- Automatic closed circuit television arc guidance control for welding joints  
[NASA-CASE-MFS-13046] c07 N71-19433
- Electronic divider and multiplier for analog electric signals  
[NASA-CASE-XPR-05637] c09 N71-19480
- Continuous Fourier transform method and apparatus --- for the analysis of simultaneous analog signal components  
[NASA-CASE-ARC-10466-1] c60 N75-13539
- Electronic analog divider  
[NASA-CASE-LEW-11881-1] c33 N77-17354
- ANALOG COMPUTERS**
- Analog spatial maneuver computer with three output angles for obtaining desired spatial attitude  
[NASA-CASE-GSC-10880-1] c08 N72-11172
- ANALOG DATA**
- Data compression processor for monitoring analog signals by sampling procedure  
[NASA-CASE-NPO-10068] c08 N71-19288
- Wide range analog data compression system  
[NASA-CASE-XGS-02612] c08 N71-19435
- Analog signal to discrete time converter  
[NASA-CASE-ERC-10048] c09 N72-25251

- Digital plus analog output encoder  
[NASA-CASE-GSC-12115-1] c62 N76-31946
- Velocity measurement system  
[NASA-CASE-MFS-23363-1] c35 N78-32396
- ANALOG SIMULATION**
- Apparatus for simulating optical transmission links  
[NASA-CASE-GSC-11877-1] c74 N76-18913
- ANALOG TO DIGITAL CONVERTERS**
- Conversion system for increasing resolution of analog to digital converters  
[NASA-CASE-XAC-00404] c08 N70-40125
- Analog to digital converter for converting pulses to frequencies  
[NASA-CASE-XLA-00670] c08 N71-12501
- Describing continuous analog to digital converter with parallel digital output and nonlinear feedback  
[NASA-CASE-XAC-04031] c08 N71-18594
- Voltage drift compensation circuit for analog-to-digital converter  
[NASA-CASE-XNP-04780] c08 N71-19687
- Development and characteristics of fluid oscillator analog to digital converter with variable frequency controlled by signal passing through conditioning circuit  
[NASA-CASE-LEW-10345-1] c10 N71-25899
- Data acquisition system for converting displayed analog signal to digital values  
[NASA-CASE-NPO-10344] c10 N71-26544
- Apparatus for automatically testing analog to digital converters for open and short circuits  
[NASA-CASE-XLA-06713] c14 N71-28591
- Wide range analog to digital converter with variable gain amplifier  
[NASA-CASE-NPO-11018] c08 N72-21200
- Analog to digital converter using offset voltage to eliminate errors  
[NASA-CASE-MSC-13110-1] c08 N72-22163
- Analog to digital converter analyzing system  
[NASA-CASE-NPO-10560] c08 N72-22166
- Control and information system for digital telemetry data using analog converter to digitize sensed parameter values  
[NASA-CASE-NPO-11016] c08 N72-31226
- Nonrecursive counting digital filter containing shift register  
[NASA-CASE-NPO-11821-1] c08 N73-26175
- Analog to digital converter circuit for pulse height analysis  
[NASA-CASE-XNP-00477] c08 N73-28045
- Analog to digital converter  
[NASA-CASE-NPO-13385-1] c33 N76-18345
- Analog to digital converter for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-3] c60 N77-32731
- Electrochemical detection device --- for use in microbiology  
[NASA-CASE-LAR-11922-1] c25 N79-24073
- ANALYZERS**
- Mixed liquid and vapor phase analyzer design with thermocouples for relative heat transfer measurement  
[NASA-CASE-NPO-10691] c14 N71-26199
- Automated fluid chemical analyzer for microchemical analysis of small quantities of liquids by use of selected reagents and analyzer units  
[NASA-CASE-XNP-09451] c06 N71-26754
- Micrometeoroid analyzer using arrays of interconnected capacitors and ion detector  
[NASA-CASE-ARC-10443-1] c14 N73-20477
- NDIR gas analyzer based on absorption modulation ratios for known and unknown samples  
[NASA-CASE-ARC-10802-1] c35 N75-30502
- Cosmic dust analyzer  
[NASA-CASE-MSC-13802-2] c35 N76-15431
- Optically selective, acoustically resonant gas detecting transducer  
[NASA-CASE-ARC-10639-1] c35 N78-13400
- ANEMOMETERS**
- Anemometer with braking mechanism to prevent rotation of wind driven elements  
[NASA-CASE-XNP-05224] c14 N71-23726
- Maxometers for measuring peak wind speeds during severe environmental conditions  
[NASA-CASE-MFS-20916] c14 N73-25460
- ANGIOGRAPHY**
- Contour detector and data acquisition system for the left ventricular outline  
[NASA-CASE-ARC-10985-1] c52 N79-10724
- ANGLE OF ATTACK**
- Angle detector  
[NASA-CASE-ARC-11036-1] c35 N78-32395
- Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c02 N81-14968
- ANGLES (GEOMETRY)**
- Gage for measuring internal angle of flare on end of tube  
[NASA-CASE-XMF-04415] c14 N71-24693
- Optical device containing rotatable prism and reflecting mirror for generating precise angles  
[NASA-CASE-XGS-04173] c19 N71-26674
- Rotating raster generator  
[NASA-CASE-PRC-10071-1] c32 N74-20813
- ANGULAR ACCELERATION**
- Strain gage accelerometer for angular acceleration measurement  
[NASA-CASE-XMS-05936] c14 N70-41682
- ANGULAR CORRELATION**
- Device for determining relative angular position of spacecraft and radiating celestial body  
[NASA-CASE-GSC-11444-1] c14 N73-28490
- ANGULAR DISTRIBUTION**
- Noncontacting method for measuring angular deflection  
[NASA-CASE-LAR-12178-1] c74 N80-21138
- ANGULAR MOMENTUM**
- Stretch Yo-Yo mechanism for reducing initial spin rate of space vehicle  
[NASA-CASE-XGS-00619] c30 N70-40016
- Rim inertial measuring system  
[NASA-CASE-LAR-12052-1] c18 N81-29152
- ANGULAR RESOLUTION**
- Characteristics and performance of electrical system to determine angular rotation  
[NASA-CASE-XMF-00447] c14 N70-33179
- ANGULAR VELOCITY**
- Describing angular position and velocity sensing apparatus  
[NASA-CASE-XGS-05680] c14 N71-17585
- Interferometric angle monitor  
[NASA-CASE-GSC-12614-1] c35 N81-12386
- Speed control device for a heavy duty shaft --- solar sails for spacecraft propulsion  
[NASA-CASE-NPO-14170-1] c37 N81-15364
- ANHYDRIDES**
- Perfluoro alkylene dioxy-bis-(4-phthalic anhydrides and oxy-bis-(perfluoroalkyleneoxyphthalic anhydrides  
[NASA-CASE-MFS-22356-1] c23 N75-30256
- Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams  
[NASA-CASE-ARC-11107-1] c25 N80-16116
- Prepolymer dianhydrides  
[NASA-CASE-NPO-13899-1] c27 N80-32515
- ANILINE**
- Synthesis of high purity dianilinosilanes  
[NASA-CASE-XNP-06409] c06 N71-23230
- ANIMALS**
- Automatic real-time pair-feeding system for animals  
[NASA-CASE-ARC-10302-1] c51 N74-15778
- Tread drum for animals --- having an electrical shock station  
[NASA-CASE-ARC-10917-1] c51 N78-27733
- ANISOTROPIC MEDIA**
- Hybrid composite laminate structures  
[NASA-CASE-LEW-12118-1] c24 N77-27188
- ANNEALING**
- Recovering efficiency of solar cells damaged by environmental radiation through thermal annealing  
[NASA-CASE-XGS-04047-2] c03 N72-11062
- CDS solid state phase insensitive ultrasonic transducer --- annealing cadmium sulfide crystals  
[NASA-CASE-LAR-12304-1] c35 N80-20559
- ANNULAR NOZZLES**
- Large area-ratio nozzles for rocket motor thrust chambers  
[NASA-CASE-XLE-00145] c28 N70-36806
- Electrostatic microthrust propulsion system with annular slit colloid thruster  
[NASA-CASE-GSC-10709-1] c28 N71-25213



## ANNULAR PLATES

Bluff-shaped annular configuration for  
supersonic decelerator for reentry vehicles  
[NASA-CASE-XLE-00222] c02 N70-37939  
Multiple plate hydrostatic viscous damper  
[NASA-CASE-LEW-12445-1] c37 N81-22360

## ANODES

Design and characteristics of heat activated  
electric cell with anode made from one or more  
alkali metals and cathode made from oxidizing  
material  
[NASA-CASE-LEW-11358] c03 N71-26084  
Storage battery comprising negative plates of a  
wedge shaped configuration --- for preventing  
shape change induced malfunctions  
[NASA-CASE-NPO-11806-1] c44 N74-19693  
Resistive anode image converter  
[NASA-CASE-HQN-10876-1] c33 N76-27473  
Rechargeable battery which combats shape change  
of the zinc anode  
[NASA-CASE-HQN-10862-1] c44 N76-29699  
Arc control in compact arc lamps  
[NASA-CASE-NPO-10870-1] c33 N77-22386  
Multiple anode arc lamp system  
[NASA-CASE-NPO-10857-1] c33 N80-14330

## ANODIC COATINGS

Anodizing method for providing metal surfaces  
with temperature reducing coatings against  
flames  
[NASA-CASE-XLE-00035] c33 N71-29151  
Anode for ion thruster  
[NASA-CASE-LEW-12048-1] c20 N77-20162

## ANTENNA ARRAYS

Monopole antenna system for maximum  
omnidirectional efficiency for use on satellites  
[NASA-CASE-XLA-00414] c07 N70-38200  
Radio receiver with array of independently  
steerable antennas for deep space communication  
[NASA-CASE-XLA-00901] c07 N71-10775  
Characteristics of antenna horn feeds consisting  
of central horn with overlapping peripheral  
horns  
[NASA-CASE-GSC-10452] c07 N71-12396  
Tracking antenna system with array for  
synchronous satellite or ground based radar  
[NASA-CASE-GSC-10553-1] c07 N71-19854  
Interferometric tuning acquisition and tracking  
radar antenna system  
[NASA-CASE-XMS-09610] c07 N71-24625  
Development of electronic circuit for combining  
input signals on two separate antennas to form  
two processed signals  
[NASA-CASE-MS-C-12205-1] c07 N71-27056  
Antenna array at focal plane of reflector with  
coupling network for beam switching  
[NASA-CASE-GSC-10220-1] c07 N71-27233  
Pattern and impedance matching improvements in  
transversely polarized triaxial antenna  
[NASA-CASE-XGS-02290] c07 N71-28809  
Planar array circularly polarized antenna with  
wall slot excitation  
[NASA-CASE-NPO-10301] c07 N72-11148  
Vertically stacked collinear array of  
independently fed omnidirectional antennas for  
use in collision warning systems on commercial  
aircraft  
[NASA-CASE-LAR-10545-1] c09 N72-21204  
Circularly polarized antenna with linearly  
polarized pair of elements  
[NASA-CASE-ERC-10214] c09 N72-31235  
Development of phase control coupling for use  
with phased array antenna  
[NASA-CASE-ERC-10285] c10 N73-16206  
Plural beam antenna with parabolic reflectors  
[NASA-CASE-GSC-11013-1] c09 N73-19234  
Amplitude steered array  
[NASA-CASE-GSC-11446-1] c33 N74-20860  
Position determination systems --- using orbital  
antenna scan of celestial bodies  
[NASA-CASE-MS-C-12593-1] c17 N76-21250  
Thin conformal antenna array for microwave power  
conversions  
[NASA-CASE-NPO-13886-1] c32 N78-24391  
RF beam center location method and apparatus for  
power transmission system  
[NASA-CASE-NPO-13821-1] c44 N78-28594  
Phased array antenna control  
[NASA-CASE-MS-C-14939-1] c32 N79-11264

Phase conjugation method and apparatus for an  
active retrodirective antenna array  
[NASA-CASE-NPO-13641-1] c32 N79-24210  
Scannable beam forming interferometer antenna  
array system  
[NASA-CASE-GSC-12365-1] c32 N80-28578  
Frequency translating phase conjugation circuit  
for active retrodirective antenna array ---  
microwave transmission  
[NASA-CASE-NPO-14536-1] c32 N81-14185  
Coaxial phased array antenna  
[NASA-CASE-MS-C-16800-1] c32 N81-14187  
Baseband signal combiner for large aperture  
antenna array  
[NASA-CASE-NPO-14641-1] c32 N81-29308

## ANTENNA COMPONENTS

Digital servo controller --- for rotating  
antenna shaft  
[NASA-CASE-KSC-10769-1] c33 N74-29556  
Faraday rotation measurement method and apparatus  
--- to receive RF signals from spacecraft  
which exhibits polarization characteristics  
due to spin stabilization  
[NASA-CASE-NPO-14839-1] c35 N80-16313

## ANTENNA COUPLERS

Dual band combiner for horn antenna  
[NASA-CASE-NPO-14519-1] c32 N80-23524

## ANTENNA DESIGN

Development and characteristics of low-noise  
multinode nonopulse antenna feed system for  
use with microwave communication equipment  
[NASA-CASE-XNP-01735] c07 N71-22750  
Nose cone mounted heat resistant antenna  
comprising plurality of adjacent layers of  
silica not introducing paths of high thermal  
conductivity through ablative shield  
[NASA-CASE-XMS-04312] c07 N71-22984  
Development of electronic circuit for combining  
input signals on two separate antennas to form  
two processed signals  
[NASA-CASE-MS-C-12205-1] c07 N71-27056  
Development and characteristics of extensible  
dipole antenna using deformable tubular  
metallic strip element  
[NASA-CASE-HQN-00937] c07 N71-28979  
Development of method for suppressing excitation  
of electromagnetic surface waves on dielectric  
converter antenna  
[NASA-CASE-XLA-10772] c07 N71-28980  
Target acquisition antenna feed with reflector  
system  
[NASA-CASE-GSC-10064-1] c10 N72-22235  
Collapsible high gain antenna which can be  
automatically expanded to operating state  
[NASA-CASE-KSC-10392] c07 N73-26117  
Dish antenna having switchable beamwidth ---  
with truncated concave ellipsoid subreflector  
[NASA-CASE-GSC-11760-1] c33 N75-19516  
Horn antenna having V-shaped corrugated slots  
[NASA-CASE-LAR-11112-1] c32 N76-15330  
Highly efficient antenna system using a  
corrugated horn and scanning hyperbolic  
reflector  
[NASA-CASE-NPO-13568-1] c32 N76-21365  
Furlable antenna --- antenna design  
[NASA-CASE-NPO-13553-1] c33 N76-32457  
Collapsible corrugated horn antenna  
[NASA-CASE-LAR-11745-1] c32 N80-29539  
Complementary cross-slot phased array antenna  
[NASA-CASE-MS-C-18532-1] c32 N80-29543  
Multiple band circularly polarized microstrip  
antenna  
[NASA-CASE-MS-C-18334-1] c32 N80-32604

## ANTENNA FEEDS

Design and operation of multi-feed cone  
Cassegrain antenna  
[NASA-CASE-NPO-10539] c07 N71-11285  
Characteristics of antenna horn feeds consisting  
of central horn with overlapping peripheral  
horns  
[NASA-CASE-GSC-10452] c07 N71-12396  
Target acquisition antenna feed with reflector  
system  
[NASA-CASE-GSC-10064-1] c10 N72-22235  
Multinode antenna feed system for microwave and  
broadband communication  
[NASA-CASE-GSC-11046-1] c07 N73-28013  
Low loss dichroic plate  
[NASA-CASE-NPO-13171-1] c32 N74-11000

- High efficiency multifrequency feed  
[NASA-CASE-GSC-11909] c32 N74-20863
- Single frequency, two feed dish antenna having switchable beamwidth  
[NASA-CASE-GSC-11968-1] c32 N76-15329
- Reflex feed system for dual frequency antenna with frequency cutoff means  
[NASA-CASE-NPO-14022-1] c32 N78-31321
- Antenna feed system for receiving circular polarization and transmitting linear polarization  
[NASA-CASE-NPO-14362-1] c32 N80-16261
- Multifrequency broadband polarized horn antenna  
[NASA-CASE-NPO-14588-1] c32 N81-25278
- Unequal split microwave power divider  
[NASA-CASE-LAR-12889-1] c33 N81-31483
- ANTENNA RADIATION PATTERNS**
- Broadband chokes and absorbers to reduce spurious radiation patterns of antenna array caused by support structures  
[NASA-CASE-XMS-05303] c07 N69-27462
- Multiple mode horn antenna with radiation pattern of equal beamwidths and suppressed sidelobes  
[NASA-CASE-XNP-01057] c07 N71-15907
- Monopulse scanning network for scanning volumetric antenna pattern  
[NASA-CASE-GSC-10299-1] c09 N71-24804
- High impact antennas with high radiating efficiency  
[NASA-CASE-NPO-10231] c07 N71-26101
- Pattern and impedance matching improvements in transversely polarized triaxial antenna  
[NASA-CASE-XGS-02290] c07 N71-28809
- System for locating lightning strokes by coordination of directional antenna signals  
[NASA-CASE-KSC-10729-1] c09 N73-32110
- Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector  
[NASA-CASE-NPO-13568-1] c32 N76-21365
- Coaxial phased array antenna  
[NASA-CASE-MSC-16800-1] c32 N81-14187
- ANTENNAS**
- Antenna design with self erecting mesh reflector  
[NASA-CASE-XGS-09190] c31 N71-16102
- High impact antennas with high radiating efficiency  
[NASA-CASE-NPO-10231] c07 N71-26101
- Collapsible antenna boom and coaxial transmission line having inflatable inner tube  
[NASA-CASE-MFS-20068] c07 N71-27191
- Conical reflector antenna with feed approximating line source  
[NASA-CASE-NPO-10303] c07 N72-22127
- Antenna grout replacement system  
[NASA-CASE-NPO-15205-1] c37 N81-19457
- ANTIBIOTICS**
- Determination of antimicrobial susceptibilities on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c52 N79-14750
- ANTIFRICTION BEARINGS**
- Development of hybrid bearing lubrication system with combination of standard type lubrication and magnetic flux field for earth atmosphere and space environment operation  
[NASA-CASE-XNP-01641] c15 N71-22997
- Development of rolling element bearing for operation in ultrahigh vacuum environment  
[NASA-CASE-XLE-09527-2] c15 N71-26189
- Fatigue life of hybrid antifriction bearings at ultrahigh speeds  
[NASA-CASE-LEW-11152-1] c15 N73-32359
- Hollow high strength rolling elements for antifriction bearings fabricated from preformed components  
[NASA-CASE-LEW-11026-1] c15 N73-33383
- Method of making bearing materials --- self-lubricating, oxidation resistant composites for high temperature applications  
[NASA-CASE-LEW-11930-4] c24 N75-17516
- Method of making bearing material  
[NASA-CASE-LEW-11930-3] c24 N80-33482
- ANTIGRAVITY**
- Anti-gravity device  
[NASA-CASE-MFS-22758-1] c70 N75-26789
- ANTIHISTAMINICS**
- Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-2] c52 N81-14613
- Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-1] c52 N81-29764
- ANTIREFLECTION COATINGS**
- Silicon nitride coated, plastic covered solar cell  
[NASA-CASE-LEW-11496-1] c44 N77-14580
- ANVILS**
- Exponential horn, copper plate, magnetic hammer, and anvil in apparatus for making diamonds  
[NASA-CASE-MFS-20698] c15 N72-20446
- APERTURES**
- Apertured electrode focusing system for ion sources with nonuniform plasma density  
[NASA-CASE-XNP-03332] c09 N71-10618
- Threadless fastener apparatus comprising receiving apertures for plurality of articles, self-locked condition, and capable of using nonmalleable materials in both ends  
[NASA-CASE-XPR-05302] c15 N71-23254
- Apparatus for on-film optical recording of camera lens aperture and focus setting  
[NASA-CASE-MSC-12363-1] c14 N73-26431
- Method of forming aperture plate for electron microscope  
[NASA-CASE-ARC-10448-2] c74 N75-12732
- Method of making an apertured casting --- using duplicate mold  
[NASA-CASE-LEW-11169-1] c37 N76-23570
- Electron microscope aperture system  
[NASA-CASE-ARC-10448-3] c35 N77-14408
- Clutter free synthetic aperture radar correlator  
[NASA-CASE-NFO-14035-1] c32 N78-18266
- APOLLO PROJECT**
- Intra- and extravehicular life support space suite for Apollo astronauts  
[NASA-CASE-MSC-12609-1] c05 N73-32012
- APOLLO SPACECRAFT**
- Low onset rate energy absorber in form of strut assembly for crew couch of Apollo command module  
[NASA-CASE-MSC-12279-1] c15 N70-35679
- Energy absorbing crew couch strut for Apollo command module  
[NASA-CASE-MSC-12279] c15 N72-17450
- APPLICATIONS OF MATHEMATICS**
- Apparatus for computing square roots  
[NASA-CASE-XGS-04768] c08 N71-19437
- APPROACH INDICATORS**
- Spectrally balanced chromatic landing approach lighting system  
[NASA-CASE-ARC-10990-1] c04 N77-12031
- AQUEOUS SOLUTIONS**
- Anti-fog composition --- for prevention of fogging on surfaces such as space helmet visors and windshields  
[NASA-CASE-MSC-13530-2] c23 N75-14834
- Automated system for identifying traces of organic chemical compounds in aqueous solutions  
[NASA-CASE-NPO-13063-1] c25 N76-18245
- Electrophotolysis oxidation system for measurement of organic concentration in water  
[NASA-CASE-MSC-16497-1] c25 N79-23167
- Method for separating biological cells --- suspended in aqueous polymer systems  
[NASA-CASE-MFS-23883-1] c51 N80-16715
- Method of forming dynamic membrane on stainless steel support  
[NASA-CASE-MSC-18172-1] c26 N80-19237
- Method of cross-linking polyvinyl alcohol and other water soluble resins  
[NASA-CASE-LEW-13103-1] c27 N80-32516
- ARC DISCHARGES**
- Development of device to prevent high voltage arcing in electron beam welding  
[NASA-CASE-XMP-08522] c15 N71-19486
- Direct current powered self repeating plasma accelerator with interconnected annular and linear discharge channels  
[NASA-CASE-XLA-03103] c25 N71-21693
- Method and apparatus for nondestructive testing --- using high frequency arc discharges  
[NASA-CASE-MFS-21233-1] c38 N74-15395
- Sustained arc ignition system  
[NASA-CASE-LEW-12444-1] c33 N77-28385
- ARC HEATING**
- Magnetically diffused radial electric arc heater  
[NASA-CASE-XLA-00330] c33 N70-34540
- Electric arc device for minimizing electrode ablation and heating gases to supersonic or

- hypersonic wind tunnel temperatures  
[NASA-CASE-IAC-00319] c25 N70-41628
- Annular arc accelerator shock tube  
[NASA-CASE-NPO-13528-1] c09 N77-10071
- ARC JET ENGINES**  
Improving performance of magnetoplasmadynamic arc rocket engine  
[NASA-CASE-LEW-11180-1] c25 N73-25760
- ARC LAMPS**  
Starting circuit design for initiating and maintaining arcs in vapor lamps  
[NASA-CASE-XNP-01058] c09 N71-12540  
Compact, high intensity arc lamp with internal magnetic field producing means  
[NASA-CASE-NPO-11510-1] c33 N77-21315  
Depressurization of arc lamps  
[NASA-CASE-NPO-10790-1] c33 N77-21316  
Arc control in compact arc lamps  
[NASA-CASE-NPO-10870-1] c33 N77-22386  
Purging means and method for Xenon arc lamps  
[NASA-CASE-NPO-11978] c31 N78-17238  
Multiple anode arc lamp system  
[NASA-CASE-NPO-10857-1] c33 N80-14330
- ARC WELDING**  
Emission spectroscopy method for contamination monitoring of inert gas metal arc welding  
[NASA-CASE-XMP-02039] c15 N71-15671  
Automatic closed circuit television arc guidance control for welding joints  
[NASA-CASE-MPS-13046] c07 N71-19433  
Development of device to prevent high voltage arcing in electron beam welding  
[NASA-CASE-XMF-08522] c15 N71-19486  
Development of apparatus for automatically changing carriage speed of welding machine to obtain constant speed of torch along work surface  
[NASA-CASE-XMF-07069] c15 N71-23815  
Grain refinement control in TIG arc welding  
[NASA-CASE-MSC-19095-1] c37 N75-19683
- ARCHITECTURE**  
Development of construction block in form of container folded from flat sheet and filled with solid material for architectural purposes  
[NASA-CASE-MSC-12233-2] c32 N73-13921
- ARCHITECTURE (COMPUTERS)**  
Massively parallel processor computer  
[NASA-CASE-GSC-12223-1] c60 N79-27864
- ARM (ANATOMY)**  
Apparatus for applying simulator g-forces to an arm of an aircraft simulator pilot  
[NASA-CASE-LAR-10550-1] c09 N74-30597  
Orthotic arm joint --- for use in mechanical arms  
[NASA-CASE-MPS-21611-1] c54 N75-12616  
Controller arm for a remotely related slave arm  
[NASA-CASE-ARC-11052-1] c37 N79-28551
- ARMATURES**  
Design and development of electric motor with stationary field and armature windings which operates on direct current  
[NASA-CASE-XGS-05290] c09 N71-25999  
Solenoid valve including guide for armature and valve member  
[NASA-CASE-GSC-10607-1] c15 N72-20442  
Direct current motor including stationary field windings and stationary armature winding  
[NASA-CASE-XGS-07805] c15 N72-33476  
Natural turbulence electrical power generator --- using wave action or random motion  
[NASA-CASE-LAR-11551-1] c44 N80-29834  
Linear magnetic bearings --- active magnetic suspension of armatures  
[NASA-CASE-GSC-12582-1] c37 N81-16469
- AROMATIC COMPOUNDS**  
Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-1] c27 N74-21156  
Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c27 N76-32315  
Synthesis of multifunction triaryltrifluoroethanes  
[NASA-CASE-ARC-11097-1] c23 N78-22154  
Synthesis of multifunction triaryltrifluoroethanes  
[NASA-CASE-ARC-11097-2] c23 N78-22155  
Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c27 N78-31232  
Process for preparing thermoplastic aromatic polyimides  
[NASA-CASE-LAR-11828-1] c27 N78-32261  
Curing agent for polyepoxides and epoxy resins and composites cured therewith --- preventing carbon fiber release  
[NASA-CASE-LEW-13226-1] c27 N81-17260
- ARRAYS**  
Radio frequency arraying method for receivers  
[NASA-CASE-NPO-14328-1] c32 N80-18253  
Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c35 N81-12389
- ARTERIES**  
Arterial pulse wave pressure transducer  
[NASA-CASE-GSC-11531-1] c52 N74-27566
- ARTIFICIAL CLOUDS**  
Chemical system for releasing barium to create ion clouds in upper atmosphere and interplanetary space  
[NASA-CASE-LAR-10670-1] c06 N73-30097
- ARTIFICIAL GRAVITY**  
Artificial gravity system for simulating self-locomotion capability of astronauts in rotating environments  
[NASA-CASE-XLA-03127] c11 N71-10776  
Development of method for producing artificial gravity in manned spacecraft  
[NASA-CASE-XNP-02595] c31 N71-21881  
Spacecraft with artificial gravity and earthlike atmosphere  
[NASA-CASE-LEW-11101-1] c31 N73-32750
- ARTIFICIAL INTELLIGENCE**  
Tactile sensing system --- manipulator controllers  
[NASA-CASE-NPO-15094-1] c33 N81-16386
- ARTIFICIAL SATELLITES**  
Gravity gradient attitude control system with gravity gradiometer and reaction wheels for artificial satellite attitude control  
[NASA-CASE-GSC-10555-1] c21 N71-27324
- ASBESTOS**  
Reconstituted asbestos matrix --- for use in fuel or electrolysis cells  
[NASA-CASE-MSC-12568-1] c24 N76-14204
- ASPECT RATIO**  
Variable aspect ratio and variable sweep delta wing planforms for supersonic aircraft  
[NASA-CASE-XLA-00221] c02 N70-33266  
Supersonic aircraft configuration providing for variable aspect ratio and variable sweep wings  
[NASA-CASE-XLA-00166] c02 N70-34178  
Supersonic aircraft variable sweep wing planform for varying aspect ratio  
[NASA-CASE-XLA-00350] c02 N70-38011
- ASPHALT**  
Thermoplastic rubber comprising ethylene-vinyl acetate copolymer, asphalt and fluxing oil  
[NASA-CASE-NPO-08835-1] c27 N78-33228
- ASSAYING**  
Rapid, quantitative determination of bacteria in water  
[NASA-CASE-GSC-12158-1] c51 N78-22585
- ASSEMBLIES**  
Multiple Belleville spring assembly with even load distribution  
[NASA-CASE-XNP-00840] c15 N70-38225  
Bearing seat usable in a gas turbine engine  
[NASA-CASE-LEW-12477-1] c37 N77-32501  
Foldable beam  
[NASA-CASE-LAR-12077-1] c31 N81-25259
- ASTRONAUT LOCOMOTION**  
Artificial gravity system for simulating self-locomotion capability of astronauts in rotating environments  
[NASA-CASE-XLA-03127] c11 N71-10776  
Space suit with pressure-volume compensator system  
[NASA-CASE-XLA-05332] c05 N71-11194  
Equipotential space suits utilizing mechanical aids to minimize astronaut energy at bending joints  
[NASA-CASE-LAR-10007-1] c05 N71-11195  
Space suit using nonflexible material with low leakage and providing protection against thermal extremes, physical punctures, and radiation with high mobility articulation  
[NASA-CASE-XAC-07043] c05 N71-23161  
Development of improved convolute section for pressurized suits to provide high degree of mobility in response to minimum of applied torque  
[NASA-CASE-XMS-09637-1] c05 N71-24730

Gravity environment simulation by locomotion and restraint aid for studying manual operation performance of astronauts at zero gravity  
[NASA-CASE-ARC-10153] c05 N71-28619

Walking boot assembly  
[NASA-CASE-ARC-11101-1] c54 N78-17675

Spacesuit mobility knee joints  
[NASA-CASE-ARC-11058-2] c54 N79-24651

**ASTRONAUT MANEUVERING EQUIPMENT**

Hand-held maneuvering unit for propulsion and attitude control of astronauts in zero or reduced gravity environment  
[NASA-CASE-XMS-05304] c05 N71-12336

Space environmental work simulator with portions of space suit mounted to vacuum chamber wall  
[NASA-CASE-XMP-07488] c11 N71-18773

Lightweight propulsion unit for movement of personnel and equipment across lunar surface  
[NASA-CASE-MFS-20130] c28 N71-27585

**ASTRONAUT PERFORMANCE**

Gravity environment simulation by locomotion and restraint aid for studying manual operation performance of astronauts at zero gravity  
[NASA-CASE-ARC-10153] c05 N71-28619

Spacesuit mobility joints  
[NASA-CASE-ARC-11058-1] c54 N78-31735

**ASTRONAUT TRAINING**

Attitude control training device for astronauts permitting friction-free movement with five degrees of freedom  
[NASA-CASE-XMS-02977] c11 N71-10746

Low and zero gravity simulator for astronaut training  
[NASA-CASE-MFS-10555] c11 N71-19494

Apparatus for training astronaut crews to perform on simulated lunar surface under conditions of lunar gravity  
[NASA-CASE-XMS-04798] c11 N71-21474

**ASTRONAUTS**

Three transceiver lunar emergency system to relay voice communication of astronaut  
[NASA-CASE-MFS-21042] c07 N72-25171

Manual actuator --- for spacecraft exercising machines  
[NASA-CASE-MFS-21481-1] c37 N74-18127

**ASTRONAVIGATION**

Guidance analyzer having suspended spacecraft simulating sphere for astronavigation  
[NASA-CASE-XNP-09572] c14 N71-15621

**ASTRONOMICAL PHOTOGRAPHY**

Cameras for photographing meteors in selected sky area  
[NASA-CASE-LAR-10226-1] c14 N73-19419

**ASTRONOMICAL TELESCOPES**

Light sensitive control system for automatically opening and closing dome of solar optical telescope  
[NASA-CASE-MSC-10966] c14 N71-19568

Laser beam projector for continuous, precise alignment between target, laser generator, and astronomical telescope during tracking  
[NASA-CASE-NPO-11087] c23 N71-29125

Star image motion compensator using telescope for maintaining fixed images  
[NASA-CASE-LAR-10523-1] c14 N72-22444

Anastigmatic three-mirror telescope  
[NASA-CASE-MFS-23675-1] c89 N79-10969

**ASYMMETRY**

Asymmetric polyimide separation membrane and method  
[NASA-CASE-NPO-15431-1] c25 N81-29178

**ATMOSPHERIC COMPOSITION**

Design and development of two types of atmosphere sampling chambers  
[NASA-CASE-NPO-11373] c13 N72-25323

Development and operation of apparatus for sampling particulates in gases in upper atmosphere  
[NASA-CASE-HQN-10037-1] c14 N73-27376

Monitoring atmospheric pollutants with a heterodyne radiometer transmitter-receiver  
[NASA-CASE-NPO-11919-1] c35 N74-11284

Microwave limb sounder --- to measure trace gases in the upper atmosphere  
[NASA-CASE-NPO-14544-1] c74 N79-34014

Chelate-modified polymers for atmospheric gas chromatography  
[NASA-CASE-ARC-11154-1] c25 N80-23383

Mobile sampler for use in acquiring samples of terrestrial atmospheric gasses  
[NASA-CASE-NPO-15220-1] c35 N81-24414

**ATMOSPHERIC ENTRY**

Designing spacecraft for flight into space, atmospheric reentry, and landing at selected sites  
[NASA-CASE-XAC-02058] c02 N71-16087

Development of method for measuring electron density gradients of plasma sheath around space vehicle during atmospheric entry  
[NASA-CASE-XLA-06232] c25 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] c19 N74-21015

**ATMOSPHERIC ENTRY SIMULATION**

Crossed-field plasma accelerator for laboratory simulation of atmospheric reentry conditions  
[NASA-CASE-XLA-00675] c25 N70-33267

Wind tunnel method for simulating flow fields around blunt vehicles entering planetary atmospheres without involving high temperatures  
[NASA-CASE-LAR-11138] c12 N71-20436

**ATMOSPHERIC PHYSICS**

Development and characteristics of apparatus for measuring intensity of electric field in atmosphere  
[NASA-CASE-KSC-10730-1] c14 N73-32318

**ATMOSPHERIC PRESSURE**

Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c26 N80-14229

**ATMOSPHERIC RADIATION**

Radiometric measuring system for solar activity and atmospheric attenuation and emission  
[NASA-CASE-ERC-10276] c14 N73-26432

**ATMOSPHERIC REFRACTION**

Geodetic distance measuring apparatus  
[NASA-CASE-GSC-12609-1] c36 N81-22344

**ATMOSPHERIC SCATTERING**

Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c36 N75-15028

**ATMOSPHERIC TURBULENCE**

Passive optical wind and turbulence remote detection system  
[NASA-CASE-XMP-14032] c20 N71-16340

Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c35 N77-10493

**ATOMIZERS**

Portable cryogenic cooling system design including turbine pump, cooling chamber, and atomizer  
[NASA-CASE-NPO-10467] c23 N71-26654

**ATS**

Doppler frequency shift correction device for multiplex communication with Applications Technology Satellites  
[NASA-CASE-XGS-02749] c07 N69-39978

**ATTACHMENT**

Silicon carbide backward diode with coated lead attachment  
[NASA-CASE-ERC-10224-2] c09 N73-27150

**ATTENUATORS**

Rotary vane attenuator with two stators and intermediary rotor, using resistive and orthogonally disposed cards  
[NASA-CASE-NPO-11418-1] c14 N73-13420

Pulse transducer with artifact signal attenuator --- heart rate sensors  
[NASA-CASE-PRC-11012-1] c52 N80-23969

**ATTITUDE (INCLINATION)**

Analog spatial maneuver computer with three output angles for obtaining desired spatial attitude  
[NASA-CASE-GSC-10880-1] c08 N72-11172

Spacecraft attitude sensing system design with narrow field of view sensor rotating about spacecraft x-y axis  
[NASA-CASE-GSC-10890-1] c21 N73-30640

Interferometer mirror tilt correcting system  
[NASA-CASE-NPO-13687-1] c35 N78-18391

**ATTITUDE CONTROL**

Visual target luminaires for retrofire attitude control  
[NASA-CASE-XMS-12158-1] c31 N69-27499

Unitary three-axis controller for flight vehicles within or outside atmosphere  
[NASA-CASE-XPR-00181] c21 N70-33279

- Sensing method and device for determining orientation of space vehicle or satellite by using particle traps  
[NASA-CASE-XGS-00466] c21 N70-34297
- Attitude and propellant flow control system for liquid propellant rocket vehicles  
[NASA-CASE-XNP-00185] c21 N70-34539
- Spacecraft attitude control system using solar and earth sensors, gyroscopes, and jet actuators  
[NASA-CASE-XNP-00465] c21 N70-35395
- Attitude control device for space vehicles  
[NASA-CASE-XNP-00294] c21 N70-36938
- Attitude orientation control of spin stabilized final stage space vehicles, using horizon scanners  
[NASA-CASE-XLA-00281] c21 N70-36543
- Automatic ejection valve for attitude control and midcourse guidance of space vehicles  
[NASA-CASE-XNP-00676] c15 N70-38996
- Three-axis controller operated by hand-wrist motion for yaw, pitch, and roll control  
[NASA-CASE-XAC-01404] c05 N70-41581
- Attitude control training device for astronauts permitting friction-free movement with five degrees of freedom  
[NASA-CASE-XMS-02977] c11 N71-10746
- Photomultiplier detector of Canopus for spacecraft attitude control  
[NASA-CASE-XNP-03914] c21 N71-10771
- Automatic balancing device for use on frictionless supported attitude-controlled test platforms  
[NASA-CASE-LAR-10774] c10 N71-13545
- Development of spacecraft experiment pointing and attitude control system  
[NASA-CASE-XLA-05464] c21 N71-14132
- Development of attitude control system for spacecraft orientation  
[NASA-CASE-XGS-04393] c21 N71-14159
- System for aerodynamic control of rocket vehicles by secondary injection of fluid into nozzle exhaust stream  
[NASA-CASE-XLA-01163] c21 N71-15582
- Drive mechanism for operating reactance attitude control system for aerospace bodies  
[NASA-CASE-XNP-01598] c21 N71-15583
- Attitude detection system using stellar references for three-axis control and spin stabilized spacecraft  
[NASA-CASE-XGS-03431] c21 N71-15642
- Remote control device operated by movement of finger tips for manual control of spacecraft attitude  
[NASA-CASE-XAC-02405] c09 N71-16489
- Thrust and attitude control apparatus using jet nozzle in movable canard surface or fin configuration  
[NASA-CASE-XLE-03583] c31 N71-17629
- Attitude sensor with scanning mirrors for detecting orientation of space vehicle with respect to planet  
[NASA-CASE-XLA-00793] c21 N71-22880
- Development of attitude control system for sounding rocket stabilization during ballistic phase of flight  
[NASA-CASE-XGS-01654] c31 N71-24750
- Development of voice operated controller for controlling reaction jets of spacecraft  
[NASA-CASE-XLA-04063] c31 N71-33160
- Attitude sensor  
[NASA-CASE-LAR-10586-1] c19 N74-15089
- Temperature compensated digital inertial sensor --- circuit for maintaining inertial element of gyroscope or accelerometer at constant position  
[NASA-CASE-NPO-13044-1] c35 N74-15094
- Sun direction detection system  
[NASA-CASE-NPO-13722-1] c74 N77-22951
- Thrust augmented spin recovery device  
[NASA-CASE-LAR-11970-2] c08 N81-19130
- ATTITUDE GYRO**  
Spacecraft attitude control system using solar and earth sensors, gyroscopes, and jet actuators  
[NASA-CASE-XNP-00465] c21 N70-35395
- Attitude control system  
[NASA-CASE-MFS-22787-1] c15 N77-10113
- ATTITUDE INDICATORS**  
Photosensitive light source device for detecting unmanned spacecraft deviation from reference attitude  
[NASA-CASE-XNP-00438] c21 N70-35089
- Hand controller operable about three respectively perpendicular axes and capable of actuating signal generators for attitude control devices  
[NASA-CASE-XMS-07487] c15 N71-23255
- Combined optical attitude and altitude indicating instrument for use in aircraft or spacecraft  
[NASA-CASE-XLA-01907] c14 N71-23268
- Aircraft horizon and vertical indicator  
[NASA-CASE-ERC-10392] c21 N73-14692
- Attitude sensor  
[NASA-CASE-LAR-10586-1] c19 N74-15089
- Translatory shock absorber for attitude sensors  
[NASA-CASE-MFS-22905-1] c19 N76-22284
- Air speed and attitude probe  
[NASA-CASE-FRC-11009-1] c06 N80-18036
- Aircraft body-axis rotation measurement system  
[NASA-CASE-FRC-11043-1] c06 N81-22048
- ATTITUDE STABILITY**  
Dynamic precession damping of spin-stabilized vehicles by using rate gyroscope and angular accelerometer  
[NASA-CASE-XLA-01989] c21 N70-34295
- Attitude stabilizer for nonguided missile or vehicle with respect to trajectory  
[NASA-CASE-ARC-10134] c30 N72-17873
- Method of and apparatus for damping nutation motion with minimum spin axis attitude disturbance  
[NASA-CASE-GSC-12551-1] c18 N81-12156
- AUDIO EQUIPMENT**  
Audio equipment for removing impulse noise from audio signals  
[NASA-CASE-NPO-11631] c10 N73-12244
- AUDIO FREQUENCIES**  
High efficiency transformerless amplitude modulator coupled to RF power amplifier  
[NASA-CASE-GSC-10668-1] c07 N71-28430
- Audio frequency analysis circuit for determining, displaying, and recording frequency of sweeping audio frequency signal  
[NASA-CASE-NPO-11147] c14 N72-27408
- AUDITORY DEFECTS**  
Hearing aid malfunction detection system  
[NASA-CASE-MSC-14916-1] c33 N78-10375
- AUDITORY PERCEPTION**  
Auditory display for the blind  
[NASA-CASE-HQN-10832-1] c71 N74-21014
- AUDITORY SIGNALS**  
Audio signal processing system for noise surge elimination at low amplitude audio input  
[NASA-CASE-MSC-12223-1] c07 N71-26181
- Audio equipment for removing impulse noise from audio signals  
[NASA-CASE-NPO-11631] c10 N73-12244
- AUDITORY STIMULI**  
Auditory display for the blind  
[NASA-CASE-HQN-10832-1] c71 N74-21014
- AUGER EFFECT**  
Apparatus for accurately preloading auger attachment means for frangible protective material  
[NASA-CASE-MSC-18791-1] c37 N81-24446
- AUSTENITIC STAINLESS STEELS**  
Intermetallic chromium containing nickel aluminate for high temperature corrosion protection of stainless steels  
[NASA-CASE-LEW-11267-1] c17 N73-32414
- Device for measuring the ferrite content in an austenitic stainless-steel weld  
[NASA-CASE-MFS-22907-1] c26 N76-18257
- AUTOCALVES**  
System for sterilizing objects --- cleaning space vehicle systems  
[NASA-CASE-KSC-11085-1] c54 N81-24724
- AUTOCORRELATION**  
Linear three-tap feedback shift register  
[NASA-CASE-NPO-10351] c08 N71-12503
- Circuitry for developing autocorrelation function continuously within signal receiving period  
[NASA-CASE-XNP-00746] c07 N71-21476
- An electro-optical Doppler tracker means and method for optical correlation of synthetic aperture radar data  
[NASA-CASE-NPO-14998-1] c33 N81-15194

## AUTOMATIC CONTROL

Automatic control of voltage supply to direct current motor  
 [NASA-CASE-XMS-04215-1] c09 N69-39587

Electro-optical/computer system for aligning large structural members and maintaining correct position  
 [NASA-CASE-XNP-02029] c14 N70-41955

Pulsed energy power system for application of combustible gases to turbine controlling ac voltage generator  
 [NASA-CASE-MSC-13112] c03 N71-11057

Automatic balancing device for use on frictionless supported attitude-controlled test platforms  
 [NASA-CASE-LAR-10774] c10 N71-13545

Computer controlled apparatus for maintaining welding torch angle and velocity during seam tracking  
 [NASA-CASE-XMF-03287] c15 N71-15607

Fluid leakage detection system with automatic monitoring capability  
 [NASA-CASE-LAR-10323-1] c12 N71-17573

Light sensitive control system for automatically opening and closing dome of solar optical telescope  
 [NASA-CASE-MSC-10966] c14 N71-19568

Welding torch with automatic speed controller using speed sensing wheel and closed servo system  
 [NASA-CASE-XMF-01730] c15 N71-23050

Microwave waveguide switch with rotor position control  
 [NASA-CASE-XNP-06507] c09 N71-23548

Automatically reciprocating, high pressure pump for use in spacecraft cryogenic propellants  
 [NASA-CASE-XNP-04731] c15 N71-24042

Automatic controlled thermal fatigue testing apparatus  
 [NASA-CASE-XLA-02059] c33 N71-24276

Automatically charging battery of electric storage cells  
 [NASA-CASE-XNP-04758] c03 N71-24605

Electric motor control system with pulse width modulation for providing automatic null seeking servo  
 [NASA-CASE-XMF-05195] c10 N71-24861

Indexing mechanism for cathode array substitution in electron beam tube  
 [NASA-CASE-NPO-10625] c09 N71-26182

Voltage range selection apparatus for sensing and applying voltages to electronic instruments without loading signal source  
 [NASA-CASE-XMS-06497] c14 N71-26244

Automated fluid chemical analyzer for microchemical analysis of small quantities of liquids by use of selected reagents and analyzer units  
 [NASA-CASE-XNP-09451] c06 N71-26754

Automatic control device for regulating inlet water temperature of liquid cooled spacesuit  
 [NASA-CASE-MSC-13917-1] c05 N72-15098

Optimal control system for automatic speed regulation of electric driven motor vehicle  
 [NASA-CASE-NPO-11210] c11 N72-20244

Plotter device for automatically drawing equipotential lines on sheet of resistance paper  
 [NASA-CASE-NPO-11134] c09 N72-21246

Automatic shunting of ion thruster magnetic field when thruster is not operating  
 [NASA-CASE-LEW-10835-1] c26 N72-22771

Automatic temperature control for liquid cooled space suit  
 [NASA-CASE-ARC-10599-1] c05 N73-26071

Speed control system for dc motor equipped with brushless Hall effect device  
 [NASA-CASE-MFS-20207-1] c09 N73-32107

Programmable physiological infusion  
 [NASA-CASE-ARC-10447-1] c52 N74-22771

Automatically operable self-leveling load table  
 [NASA-CASE-MFS-22039-1] c09 N75-12968

Automatic focus control for facsimile cameras  
 [NASA-CASE-LAR-11213-1] c35 N75-15014

Traffic survey system --- using optical scanners  
 [NASA-CASE-MFS-22631-1] c66 N76-19888

Automatic visual inspection system for microelectronics  
 [NASA-CASE-NPO-13282] c38 N78-17396

Automatic fluid dispenser  
 [NASA-CASE-ARC-10820-1] c35 N78-19466

Method for producing solar energy panels by automation  
 [NASA-CASE-LEW-12541-1] c44 N78-25529

Circuit for automatic load sharing in parallel converter modules  
 [NASA-CASE-NFO-14056-1] c33 N79-24257

A hydraulic actuator mechanism to control aircraft spoiler movements through dual input commands  
 [NASA-CASE-LAR-12412-1] c05 N80-11065

Method for forming a solar array strip  
 [NASA-CASE-NFO-13652-3] c44 N80-14474

Solar energy control system  
 [NASA-CASE-MFS-25287-1] c44 N80-17544

Automatic thermal switch  
 [NASA-CASE-GSC-12553-1] c33 N80-21671

Method of growing a ribbon crystal particularly suited for facilitating automated control of ribbon width  
 [NASA-CASE-NFO-14295-1] c76 N80-32245

Integrated control system for a gas turbine engine  
 [NASA-CASE-LEW-12594-2] c07 N81-19116

Variable speed drive  
 [NASA-CASE-GSC-12643-1] c37 N81-24447

Programmable scan/read circuitry for charge coupled device imaging detectors --- for a startracker  
 [NASA-CASE-NPO-15345-1] c33 N81-27403

**AUTOMATIC CONTROL VALVES**

Ambient atmospheric pressure sensing device for determining altitude of flight vehicles  
 [NASA-CASE-XLA-00128] c15 N70-37925

Describing metal valve pintle with encapsulated elastomeric body  
 [NASA-CASE-MSC-12116-1] c15 N71-17648

Semitoroidal diaphragm cavitating flow control valve  
 [NASA-CASE-XNP-09704] c12 N71-18615

Reliability of automatic refilling valving device for cryogenic liquid systems  
 [NASA-CASE-NPO-11177] c15 N72-17453

Combined pressure regulator and shutoff valve  
 [NASA-CASE-NFO-13201-1] c37 N75-15050

Iodine generator for reclaimed water purification  
 [NASA-CASE-MSC-14632-1] c54 N78-14784

Automatic compression adjusting mechanism for internal combustion engines  
 [NASA-CASE-MSC-18807-1] c37 N81-29442

**AUTOMATIC FREQUENCY CONTROL**

System for phase locking opto carrier frequency signal located within receiver bandpass  
 [NASA-CASE-XGS-04994] c09 N69-21543

Audio signal processing system for noise surge elimination at low amplitude audio input  
 [NASA-CASE-MSC-12223-1] c07 N71-26181

Automatic frequency control device for providing frequency reference for voltage controlled oscillator  
 [NASA-CASE-KSC-10393] c09 N72-21247

Self-tuning electronic filter for maintaining constant bandwidth and center frequency gain  
 [NASA-CASE-ARC-10264-1] c09 N73-20231

**AUTOMATIC GAIN CONTROL**

Automatic gain control amplifier system  
 [NASA-CASE-XMS-05307] c09 N69-24330

Automatic measuring and recording of gain and zero drift characteristics of electronic amplifier  
 [NASA-CASE-XMS-05562-1] c09 N69-39986

Self-tuning electronic filter for maintaining constant bandwidth and center frequency gain  
 [NASA-CASE-ARC-10264-1] c09 N73-20231

Digital automatic gain amplifier  
 [NASA-CASE-KSC-11008-1] c33 N79-22373

Automatic level control circuit  
 [NASA-CASE-KSC-11170-1] c33 N81-29347

**AUTOMATIC TEST EQUIPMENT**

Automated visual sensitivity tester for determining visual field sensitivity and blind spot size  
 [NASA-CASE-ARC-10329-1] c05 N73-26072

Automatic microbial transfer device  
 [NASA-CASE-LAR-11354-1] c35 N75-27330

Visual examination apparatus  
 [US-PATENT-BE-28,921] c52 N76-30793

Automated clinical system for chromosome analysis  
 [NASA-CASE-NFO-13913-1] c52 N79-12694

- Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c34 N81-26402
- AUTOMATION**  
Automated multi-level vehicle parking system  
[NASA-CASE-NPO-13058-1] c37 N77-22480  
Spray coating apparatus having a rotatable  
workpiece holder  
[NASA-CASE-ARC-11110-1] c37 N78-32434
- AUTOMOBILE ENGINES**  
Automotive gas turbine fuel control  
[NASA-CASE-LEW-12785-1] c37 N78-24545  
Controller for computer control of brushless dc  
motors --- automobile engines  
[NASA-CASE-NPO-13970-1] c33 N81-20352
- AUTOMOBILE FUELS**  
Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-2] c44 N76-29700
- AUTOMOBILES**  
Fiberglass/epoxy composite automotive door  
structure including a glass-reinforced  
intrusion strip  
[NASA-CASE-NPO-15057-1] c24 N81-19230
- AUXILIARY POWER SOURCES**  
Independent power generator  
[NASA-CASE-LAR-11208-1] c44 N78-32539
- AXES (REFERENCE LINES)**  
Test fixture for measuring moment of inertia of  
irregularly shaped body with multiple axes  
[NASA-CASE-IGS-01023] c14 N71-22992  
Mechanism for restraining universal joints to  
prevent separation while allowing bending,  
ingulation, and lateral offset in any position  
about axis  
[NASA-CASE-XMP-02278] c15 N71-28951
- AXES OF ROTATION**  
Unitary three-axis controller for flight  
vehicles within or outside atmosphere  
[NASA-CASE-XPR-00181] c21 N70-33279  
Proportional controller for regulating aircraft  
or spacecraft motion about three axes  
[NASA-CASE-XAC-03392] c03 N70-41954  
Electrical and electromechanical trigonometric  
computation assembly and space vehicle  
guidance system for aligning perpendicular  
axes of two sets of three-axes coordinate  
references  
[NASA-CASE-XMP-00684] c21 N71-21688  
Hand controller operable about three  
respectively perpendicular axes and capable of  
actuating signal generators for attitude  
control devices  
[NASA-CASE-XMS-07487] c15 N71-23255
- AXIAL COMPRESSION LOADS**  
Development and characteristics of device for  
indicating and recording magnitude of force  
applied in axial direction  
[NASA-CASE-MSC-15626-1] c14 N72-25411  
Compression test fixture  
[NASA-CASE-MSC-18723-1] c39 N81-24470
- AXIAL FLOW TURBINES**  
Multistage multiple reentry axial flow reaction  
turbine with reverse flow reentry ducting  
[NASA-CASE-XLE-00170] c15 N70-36412  
Multistage, multiple reentry, single rotor,  
axial flow turbine  
[NASA-CASE-XLE-00085] c28 N70-39895  
Method and turbine for extracting kinetic energy  
from a stream of two-phase fluid  
[NASA-CASE-NPO-14130-1] c34 N79-20335
- AXIAL LOADS**  
Ball locking device which releases in response  
to small forces when subjected to high axial  
loads  
[NASA-CASE-XMP-01371] c15 N70-41829  
Method for measuring biaxial stress in a body  
subjected to stress inducing loads  
[NASA-CASE-MFS-23299-1] c39 N77-28511
- AXIAL STRESS**  
Axially and radially controllable magnetic bearing  
[NASA-CASE-GSC-11551-1] c37 N76-18459  
Method for measuring biaxial stress in a body  
subjected to stress inducing loads  
[NASA-CASE-MFS-23299-1] c39 N77-28511
- AZIMUTH**  
Tracking mount for laser telescope employed in  
tracking large rockets and space vehicles to  
give information regarding azimuth and elevation  
[NASA-CASE-MFS-14017] c14 N71-26627
- Long range laser traversing system  
[NASA-CASE-GSC-11262-1] c36 N74-21091  
Magnetic heading reference  
[NASA-CASE-LAR-11387-2] c04 N77-19056  
Multibeam single frequency synthetic aperture  
radar processor for imaging separate range  
swaths  
[NASA-CASE-NPO-14525-2] c32 N80-32607
- AZINES**  
Synthesis of azine polymers for heat shields by  
azine-aromatic aldehyde reaction  
[NASA-CASE-XMF-08656] c06 N71-11242  
Ultraviolet and thermally stable polymer  
compositions  
[NASA-CASE-ARC-10592-1] c27 N74-21156  
Ultraviolet and thermally stable polymer  
compositions  
[NASA-CASE-ARC-10592-2] c27 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] c27 N79-28307  
Perfluoroalkyl polytriazines containing pendent  
iododifluoromethyl groups  
[NASA-CASE-ARC-11241-1] c25 N81-14016  
Process for the preparation of fluorine  
containing crosslinked elastomeric  
polytriazine and product so produced  
[NASA-CASE-ARC-11248-1] c27 N81-17259
- ARO COMPOUNDS**  
Holding process for imidazopyrrolone polymers  
[NASA-CASE-LAR-10547-1] c31 N74-13177
- AROLES**  
Preparation of perfluorinated 1,2,4-oxadiazoles  
--- heat and chemical resistant polymers  
[NASA-CASE-ARC-11267-2] c25 N80-26407

## B

- BACK INJURIES**  
Spine immobilization apparatus  
[NASA-CASE-ARC-11167-1] c52 N81-25662
- BACKGROUND NOISE**  
Electronic background suppression field scanning  
sensor for detecting point source targets  
[NASA-CASE-IGS-05211] c07 N69-39980
- BACKGROUND RADIATION**  
Method and apparatus for background signal  
reduction in opto-acoustic absorption  
measurement  
[NASA-CASE-NPO-13683-1] c35 N77-14411
- BACKSCATTERING**  
Apparatus for measuring backscatter and  
transmission characteristics of sample segment  
of large spherical passive satellites  
[NASA-CASE-IGS-02608] c07 N70-41678  
Mossbauer spectrometer radiation detector  
[NASA-CASE-LAR-11155-1] c35 N74-15091
- BACKUPS**  
Flexible backup bar for welding awkwardly shaped  
structures  
[NASA-CASE-XMF-00722] c15 N70-40204  
Reliable electrical element heater using plural  
wire system and backup power sources  
[NASA-CASE-MFS-21462-1] c33 N74-14935
- BACKWARD WAVES**  
Ladder supported ring bar circuit  
[NASA-CASE-LEW-13570-1] c33 N81-24348
- BACTERIA**  
Decontamination of petroleum products with honey  
[NASA-CASE-XEP-03835] c06 N71-23499  
Portable tester for monitoring bacterial  
contamination by adenosine triphosphate light  
reaction  
[NASA-CASE-GSC-10879-1] c14 N72-25413  
Enzymatic luminescent bioassay method for  
determining bacterial levels in urine  
[NASA-CASE-GSC-11092-2] c04 N73-27052  
Lyophilized spore dispenser  
[NASA-CASE-LAR-10544-1] c37 N74-13178  
Method of detecting and counting bacteria  
[NASA-CASE-GSC-11917-2] c51 N76-29891  
Rapid, quantitative determination of bacteria in  
water  
[NASA-CASE-GSC-12158-1] c51 N78-22585  
Determination of antimicrobial susceptibilities  
on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c52 N79-14750

- Method and apparatus for eliminating luminoi interference material  
[NASA-CASE-MSC-16260-1] c51 N80-16714
- BACTERIOLOGY**  
Detection of bacteria in biological fluids and foods  
[NASA-CASE-GSC-11533-1] c14 N73-13435  
Application of luciferase assay for ATP to antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c51 N77-22794  
Automated single-slide staining device  
[NASA-CASE-LAR-11649-1] c51 N77-27677
- BAFFLES**  
Light radiation direction indicator with baffle of two parallel grids  
[NASA-CASE-XNP-03930] c14 N69-24331  
Light baffle with oblate hemispheroid surface and shading flange  
[NASA-CASE-NPO-10337] c14 N71-15604  
Flexible ring slosh damping baffle for spacecraft fuel tank  
[NASA-CASE-LAR-10317-1] c32 N71-16103  
Submerged fuel tank baffles to prevent sloshing in liquid propellant rocket flight  
[NASA-CASE-XLA-04605] c32 N71-16106  
Floating baffle for tank drain  
[NASA-CASE-KSC-10639] c15 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] c74 N79-11865
- BAGS**  
Fecal waste disposal container  
[NASA-CASE-XMS-06761] c05 N69-23192  
Gas diffusion liquid storage bag and method of use for storing blood  
[NASA-CASE-NPO-13930-1] c52 N79-14749
- BAKING**  
Bakeable McLeod gauge  
[NASA-CASE-XGS-01293-1] c35 N79-33450
- BALANCE**  
Thermoprotective device for balances  
[NASA-CASE-XAC-00648] c14 N70-40400  
Device for monitoring a change in mass in varying gravimetric environments  
[NASA-CASE-MFS-21556-1] c35 N74-26945
- BALANCING**  
Automatic balancing device for use on frictionless supported attitude-controlled test platforms  
[NASA-CASE-LAR-10774] c10 N71-13545  
Force balanced throttle valve for fuel control in rocket engines  
[NASA-CASE-NPO-10808] c15 N71-27432  
Static force balancing system attached to lifting body  
[NASA-CASE-LAR-10348-1] c11 N73-12264
- BALL BEARINGS**  
Combination guide and rotary bearing for freely moving shaft  
[NASA-CASE-XLA-00013] c15 N71-29136  
Method for reducing mass of ball bearings for long life operation at high speed  
[NASA-CASE-LEW-10856-1] c15 N72-22490  
Low mass rolling element bearing assembly  
[NASA-CASE-LEW-11087-1] c15 N73-30458  
Hollow rolling element bearings  
[NASA-CASE-LEW-11087-3] c37 N74-21064  
Drilled ball bearing with a one piece anti-tipping cage assembly  
[NASA-CASE-LEW-11925-1] c37 N75-31446  
Spherical bearing --- to reduce vibration effects  
[NASA-CASE-MFS-23447-1] c37 N79-11404
- BALLAST (MASS)**  
Inflatable stabilizing system for use on life raft to reduce rocking and preclude capsizing  
[NASA-CASE-MSC-12393-1] c02 N73-26606
- BALLASTS (IMPEDANCES)**  
Apparatus for ballasting high frequency transistors  
[NASA-CASE-XGS-05003] c09 N69-24318
- BALLISTICS**  
Fiber modified polyurethane foam for ballistic protection  
[NASA-CASE-ARC-10714-1] c27 N76-15310
- BALLOON SOUNDING**  
Apparatus for controlling the temperature of balloon-borne equipment  
[NASA-CASE-GSC-11620-1] c34 N74-23039
- BALLOONS**  
Development and characteristics of hot air balloon deceleration and recovery system  
[NASA-CASE-XLA-06824-2] c02 N71-11037  
Inflation system for balloon type satellites.  
[NASA-CASE-XGS-03351] c31 N71-16081  
System for controlling torque buildup in suspension of gondola connected to balloon by parachute shroud lines  
[NASA-CASE-GSC-11077-1] c02 N73-13008
- BALLS**  
Two axis flight controller with potentiometer control shafts directly coupled to rotatable ball members  
[NASA-CASE-XFR-04104] c03 N70-42073  
Quartz ball valve  
[NASA-CASE-NFO-14473-1] c37 N80-23654
- BANDPASS FILTERS**  
Helical coaxial resonator RF filter  
[NASA-CASE-XGS-02816] c07 N69-24323  
Phase locked demodulator with bandwidth switching amplifier circuit  
[NASA-CASE-XNP-01107] c10 N71-28859  
Signal to noise ratio determination circuit using bandpass limiter  
[NASA-CASE-GSC-11239-1] c10 N73-25241  
Selective bandpass resonators using bandstop resonator pairs for microwave frequency operation  
[NASA-CASE-GSC-10990-1] c09 N73-26195  
Dichroic plate --- as bandpass filters  
[NASA-CASE-NFO-13506-1] c35 N76-15435  
Notch filter  
[NASA-CASE-MFS-23303-1] c32 N77-18307  
Smoothing filter for digital to analog conversion  
[NASA-CASE-FRC-11025-1] c60 N80-17723  
Adaptive polarization separation  
[NASA-CASE-LAR-12196-1] c33 N81-26358
- BANDWIDTH**  
Improvements in receiver of narrow bandwidth television system  
[NASA-CASE-XMS-06740-1] c07 N71-26579  
Self-tuning electronic filter for maintaining constant bandwidth and center frequency gain  
[NASA-CASE-ARC-10264-1] c09 N73-20231  
Turnstile and flared cone UHF antenna  
[NASA-CASE-LAR-10970-1] c33 N76-14372  
Independent gain and bandwidth control of a traveling wave maser  
[NASA-CASE-NPO-13801-1] c36 N78-18410  
Inductorless narrow-band filter/amplifier  
[NASA-CASE-GSC-12410-1] c33 N79-24260  
Dual hand combiner for horn antenna  
[NASA-CASE-NPO-14519-1] c32 N80-23524
- BARIUM**  
Chemical system for releasing barium to create ion clouds in upper atmosphere and interplanetary space  
[NASA-CASE-LAR-10670-1] c06 N73-30097
- BARIUM COMPOUNDS**  
Improved cathode containing barium carbonate block and heated tungsten screen for electron bombardment ion thruster  
[NASA-CASE-XLE-07087] c06 N69-39889
- BARIUM FLUORIDES**  
Production of barium fluoride-calcium fluoride composite lubricant for bearings or seals  
[NASA-CASE-XLE-08511-2] c18 N71-16105
- BARIUM ION CLOUDS**  
Rocket having barium release system to create ion clouds in the upper atmosphere  
[NASA-CASE-LAR-10670-2] c15 N74-27360
- BARIUM TITANATES**  
Memory device employing semiconductor and ferroelectric properties of single crystal barium titanate  
[NASA-CASE-EBC-10307] c08 N72-21198
- BARRIER LAYERS**  
Schottky barrier solar cell  
[NASA-CASE-NPO-13689-2] c44 N81-29525
- BARRIERS**  
Short range laser obstacle detector --- for surface vehicles using laser diode array  
[NASA-CASE-NPO-11856-1] c36 N74-15145
- BARS**  
Satellite retrieval system  
[NASA-CASE-MFS-25403-1] c18 N81-24164
- BASES (CHEMICAL)**  
Low concentration alkaline solution treatment of



- aluminum with metal phosphate surface coatings to improve chemical bonding and reduce coating weight  
[NASA-CASE-XLA-01995] c18 N71-23047
- BASKETS**  
Liquid immersion apparatus for minute articles  
[NASA-CASE-MFS-25363-1] c31 N80-32585
- BATTERY CHARGERS**  
Battery charging system with cell to cell voltage balance  
[NASA-CASE-XGS-05432] c03 N71-19438  
Alkaline-type coulometer cell for primary charge control in secondary battery recharge circuits  
[NASA-CASE-XGS-05434] c03 N71-20491  
Development and characteristics of battery charging circuits with coulometer for control of available current  
[NASA-CASE-GSC-10487-1] c03 N71-24719  
Method and apparatus for conditioning of nickel-cadmium batteries  
[NASA-CASE-MFS-23270-1] c44 N78-25531
- BAYARD-ALPERT IONIZATION GAGES**  
Describing hot filament type Bayard-Alpert ionization gage with ion collector buried or removed from grid structure  
[NASA-CASE-XLA-07424] c14 N71-18482
- BEADS**  
Rotary bead dropper and selector for testing micrometeorite transducers  
[NASA-CASE-XGS-03304] c09 N71-22588
- BEAM LEADS**  
Integrated circuit package with lead structure and method of preparing the same  
[NASA-CASE-MFS-21374-1] c33 N74-12951
- BEAM SPLITTERS**  
Optical range finder using reflective first surfaces mirror and transmitting beam splitter  
[NASA-CASE-MSC-12105-1] c14 N72-21409  
Laser extensometer  
[NASA-CASE-MFS-19259-1] c36 N78-14380  
Over-under double-pass interferometer  
[NASA-CASE-NPO-13999-1] c35 N78-18395  
Method and apparatus for splitting a beam of energy --- optical communication  
[NASA-CASE-GSC-12083-1] c73 N78-32848  
Interferometer  
[NASA-CASE-NPO-14502-1] c74 N81-17888  
Dual-beam skin friction interferometer --- portable equipment  
[NASA-CASE-ARC-11354-1] c36 N81-29415
- BEAM SWITCHING**  
Using electron beam switching for brushless motor commutation  
[NASA-CASE-XGS-01451] c09 N71-10677  
Antenna array at focal plane of reflector with coupling network for beam switching  
[NASA-CASE-GSC-10220-1] c07 N71-27233  
Dish antenna having switchable beamwidth --- with truncated concave ellipsoid subreflector  
[NASA-CASE-GSC-11760-1] c33 N75-19516  
Single frequency, two feed dish antenna having switchable beamwidth  
[NASA-CASE-GSC-11968-1] c32 N76-15329  
Switchable beamwidth monopulse method and system  
[NASA-CASE-GSC-11924-1] c33 N76-27472
- BEAM WAVEGUIDES**  
Laser machining device with dielectric functioning as beam waveguide for mechanical and medical applications  
[NASA-CASE-HQN-10541-2] c15 N71-27135  
Optical communication system with gas filled waveguide for laser beam transmission  
[NASA-CASE-HQN-10541-4] c16 N71-27183  
Laser beam projector for continuous, precise alignment between target, laser generator, and astronomical telescope during tracking  
[NASA-CASE-NPO-11087] c23 N71-29125  
Microwave power transmission beam safety system  
[NASA-CASE-NPO-14224-1] c33 N80-18287  
Multiprism collimator  
[NASA-CASE-GSC-12608-1] c35 N81-12387
- BEAMS (RADIATION)**  
Method and means for recording and reconstructing holograms without use of reference beam  
[NASA-CASE-BRC-10020] c16 N71-26154  
Method and system for transmitting and distributing optical frequency radiation  
[NASA-CASE-HQN-10541-3] c23 N72-23695
- Method for shaping and aiming narrow beams --- using a linear frequency chirp for sonar: reception  
[NASA-CASE-NFO-14632-1] c32 N80-12256  
Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NFO-14524-1] c32 N80-24510  
Scannable beam forming interferometer antenna array system  
[NASA-CASE-GSC-12365-1] c32 N80-28578  
Collimated beam manifold and method for using the same --- laser beams  
[NASA-CASE-MFS-25312-1] c74 N80-34251  
Off-axis coherently pumped laser  
[NASA-CASE-GSC-12592-1] c36 N81-12407  
Sidelooking laser altimeter for a flight simulator  
[NASA-CASE-ARC-11312-1] c36 N81-19439
- BEAMS (SUPPORTS)**  
Beam connector apparatus and assembly  
[NASA-CASE-MFS-25134-1] c31 N81-12283  
Foldable beam  
[NASA-CASE-LAR-12077-1] c31 N81-25259
- BEARING (DIRECTION)**  
Light radiation direction indicator with baffle of two parallel grids  
[NASA-CASE-XNP-03930] c14 N69-24331  
Solar radiation direction detector and device for compensating degradation of photocells  
[NASA-CASE-XLA-00183] c14 N70-40239  
Michelson interferometer with photodetector for optical direction sensing  
[NASA-CASE-NPO-10320] c14 N71-17655  
Omnidirectional liquid filled accelerometer design with liquid and housing temperature compensation  
[NASA-CASE-HQN-10780] c14 N71-30265  
Magnetic heading reference  
[NASA-CASE-LAR-11387-2] c04 N77-19056  
Direction sensitive laser velocimeter --- determining the direction of particles using a helium-neon laser  
[NASA-CASE-LAR-12177-1] c36 N81-24422
- BEARINGS**  
Metal alloy bearing materials for space applications  
[NASA-CASE-XLE-05033] c15 N71-23810  
Low friction bearing and lock mechanism for two-axis gimbal carrying satellite payload  
[NASA-CASE-GSC-10556-1] c31 N71-26537  
Measuring device for bearing preload using spring washers  
[NASA-CASE-MFS-20434] c11 N72-25288  
Magnetic bearing --- for supplying magnetic fluxes  
[NASA-CASE-GSC-11079-1] c37 N75-18574  
Magnetic bearing system  
[NASA-CASE-GSC-11978-1] c37 N77-17464  
Hydrostatic bearing support  
[NASA-CASE-LEW-11158-1] c37 N77-28486  
Deformable bearing seat  
[NASA-CASE-LEW-12527-1] c37 N77-32500  
Bearing seat usable in a gas turbine engine  
[NASA-CASE-LEW-12477-1] c37 N77-32501  
An improved suspension system for a wheel rolling on a flat track --- bearings for directional antennas  
[NASA-CASE-NFO-14395-1] c37 N79-12446  
Method of making bearing material  
[NASA-CASE-LEW-11930-3] c24 N80-33482  
Linear magnetic bearings --- active magnetic suspension of armatures  
[NASA-CASE-GSC-12582-1] c37 N81-16469  
Antenna grout replacement system  
[NASA-CASE-NFO-15205-1] c37 N81-19457  
Linear magnetic bearing  
[NASA-CASE-GSC-12517-1] c33 N81-22279  
Unidirectional flexural pivot  
[NASA-CASE-GSC-12622-1] c37 N81-22359
- BEDS (PROCESS ENGINEERING)**  
Catalyst bed element removing tool  
[NASA-CASE-XPR-00811] c15 N70-36901
- BREER LAW**  
Multichannel photoionization chamber for measuring absorption, photoionization yield, and coefficients of gases  
[NASA-CASE-BRC-10044-1] c14 N71-27090
- BERS**  
Decontamination of petroleum products with honey  
[NASA-CASE-XNP-03835] c06 N71-23499

## BELLOWS

Compact bellows spirometer for high speed and high altitude space travel  
[NASA-CASE-XAR-01547] c05 N69-21473

Electrical connection for printed circuits on common board, using bellows principle in rivet.  
[NASA-CASE-XNP-05082] c15 N70-41960

Flexible bellows joint shielding sleeve for propellant transfer pipelines  
[NASA-CASE-XNP-01855] c15 N71-28937

Internally supported flexible duct joint --- device for conducting fluids in high pressure systems  
[NASA-CASE-MFS-19193-1] c37 N75-19686

## BELTS

Apparatus for forming drive belts  
[NASA-CASE-NPO-13205-1] c31 N74-32917

## BENDING

Method and apparatus for bowing of instrument panels to improve radio frequency shielded enclosure  
[NASA-CASE-XMP-09422] c07 N71-19436

Development of systems for automatically and continually suppressing or attenuating bending motion in elastic bodies  
[NASA-CASE-XAC-05632] c32 N71-23971

Elbow forming in jacketed pipes while maintaining separation between core shape and jacket pipes  
[NASA-CASE-XNP-10475] c15 N71-24679

Device for bending metal ribbon or wire  
[NASA-CASE-XLA-05966] c15 N72-12408

## BENDING DIAGRAMS

Charged particle analyzer with periodically varying voltage applied across electrostatic deflection members  
[NASA-CASE-XAC-05506-1] c24 N71-16095

## BENDING FATIGUE

Apparatus for testing metallic and nonmetallic beams or rods by bending at high temperatures in vacuum or inert atmosphere  
[NASA-CASE-XLE-01300] c15 N70-41993

Cryostat for flexure fatigue testing of composite materials  
[NASA-CASE-XMP-02964] c14 N71-17659

## BENDING MOMENTS

Launch pad missile release system with bending moment change rate reduction in thrust distribution structure at liftoff  
[NASA-CASE-XMP-03198] c30 N70-40353

## BENDING VIBRATION

Mercury filled pendulum damper for controlling bending vibration induced by wind effects  
[NASA-CASE-LAR-10274-1] c14 N71-17626

## BENZENE

Para-benzoquinone dioxide and concentrated mineral acid processed to yield intumescent or fire resistant, heat insulating materials  
[NASA-CASE-ARC-10304-1] c18 N73-26572

## BERYLLIUM ALLOYS

Development of fluoride coating to prevent oxidation of beryllium surfaces at elevated temperatures  
[NASA-CASE-LEW-10327] c17 N71-33408

## BERYLLIUM HYDRIDES

Inhibited solid propellant composition containing beryllium hydride  
[NASA-CASE-NPO-10866-1] c28 N79-14228

## BERYLLIUM OXIDES

High temperature beryllium oxide capacitor  
[NASA-CASE-LEW-11938-1] c33 N76-15373

## BIAS

Electrical self-aligning connector  
[NASA-CASE-MFS-25211-1] c33 N80-32651

## BINETALS

Nonmagnetic thermal motor for magnetometer movement  
[NASA-CASE-XAR-03786] c09 N69-21313

Design and development of linear actuator based on bimetallic spring expansion  
[NASA-CASE-NPO-10637] c15 N72-12409

Application of spiral, bimetallic strip to create circular motion on mechanical shaft by changing strip temperature  
[NASA-CASE-NPO-11283] c09 N72-25260

Development of thermal compensating structure which maintains uniform length with changes in temperature  
[NASA-CASE-MFS-20433] c15 N72-28496

Bimetallic fluid displacement apparatus --- for stirring and heating stored gases and liquids  
[NASA-CASE-ARC-10441-1] c35 N74-15126

Thermocouples of tantalum and rhenium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12050-1] c35 N77-32454

## BINARY CODES

Time division relay synchronizer with master sync pulse for activating binary counter to produce signal identifying time slot for station  
[NASA-CASE-GSC-10373-1] c07 N71-19773

Logic circuit for generating multibit binary code word in parallel  
[NASA-CASE-XNP-04623] c10 N71-26103

Design and development of encoder/decoder system to generate binary code which is function of outputs of plurality of bistable elements  
[NASA-CASE-NPO-10342] c10 N71-33407

Binary coded sequential acquisition ranging system for distance measurements  
[NASA-CASE-NPO-11194] c08 N72-25209

Binary concatenated coding system  
[NASA-CASE-MSC-14082-1] c60 N76-23850

Multiple rate digital command detection system with range clean-up capability  
[NASA-CASE-NPO-13753-1] c32 N77-20289

Pseudo noise code and data transmission method and apparatus  
[NASA-CASE-GSC-12017-1] c32 N77-30308

Binary to binary coded decimal converter  
[NASA-CASE-GSC-12044-1] c60 N78-17691

Apparatus and method for stabilized phase detection for binary signal tracking loops  
[NASA-CASE-MSC-16461-1] c33 N79-11313

## BINARY DATA

Nondestructive interrogating and state changing circuit for binary magnetic storage elements  
[NASA-CASE-IGS-00174] c08 N70-34743

Logic circuit to ripple add and subtract binary counters for spaceborne computers  
[NASA-CASE-IGS-04766] c08 N71-18602

Describing circuit for obtaining sum of squares of numbers  
[NASA-CASE-IGS-04765] c08 N71-18693

Digital synchronizer for extracting binary data in receiver of PSK/PCM communication system  
[NASA-CASE-NPO-10851] c07 N71-24613

Differential phase shift keyed communication system  
[NASA-CASE-MSC-14065-1] c32 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] c32 N75-24981

Binary to binary coded decimal converter  
[NASA-CASE-GSC-12044-1] c60 N78-17691

## BINARY DIGITS

Logarithmic converter for compressing 19-digit binary input number to 8-digit output  
[NASA-CASE-XLA-00471] c08 N70-34778

Circuit diagram and operation of full binary adder  
[NASA-CASE-IGS-00689] c08 N70-34787

Binary number sorter for arranging numbers in order of magnitude  
[NASA-CASE-NPO-10112] c08 N71-12502

Binary sequence detector with few memory elements and minimized logic circuit complexity  
[NASA-CASE-XNP-05415] c08 N71-12505

Cathode ray tube system for displaying ones and zeros in binary wave train  
[NASA-CASE-IGS-04987] c08 N71-20571

Characteristics of comparator circuits for comparison of binary numbers in information processing system  
[NASA-CASE-XNP-04819] c08 N71-23295

Digital converter for scaling binary number to binary coded decimal number of higher multiple  
[NASA-CASE-KSC-10595] c08 N73-12176

Family of a-ary linear feedback shift register with binary logic  
[NASA-CASE-NPO-11868] c10 N73-20254

Binary concatenated coding system  
[NASA-CASE-MSC-14082-1] c60 N76-23850

## BINARY FLUIDS

Flow measuring apparatus  
[NASA-CASE-LEW-12078-1] c35 N75-30503

## BINARY TO DECIMAL CONVERTERS

Binary to binary-coded decimal converter using single set of logic circuits notwithstanding

- number of shift register decades  
[NASA-CASE-IMP-00432] c08 N70-35423
- Design and operation of high speed binary to decimal conversion system  
[NASA-CASE-XGS-01230] c08 N71-19544
- Binary to decimal decoder logic circuit design with feedback control and display device  
[NASA-CASE-IKS-06167] c08 N71-24E90
- High speed direct binary to binary coded decimal converter for use in PCM telemetry systems  
[NASA-CASE-KSC-10326] c08 N72-21197
- Binary to binary coded decimal converter  
[NASA-CASE-GSC-12044-1] c60 N78-17691
- BINDERS (MATERIALS)**
- Bonded solid lubricant coatings of calcium fluoride and binder for high temperature stability  
[NASA-CASE-IHS-00259] c18 N70-36400
- Brazing alloy binder  
[NASA-CASE-IMP-05868] c26 N75-27125
- Alkali-metal silicate binders and methods of manufacture  
[NASA-CASE-GSC-12303-1] c24 N79-31347
- BINOCULARS**
- Binocular device for displaying numerical information in field of view  
[NASA-CASE-LAR-11782-1] c74 N77-20882
- BIOASSAY**
- Spectrophotofluorometer with 3-dimensional display to identify fluorescence spectra of carcinogenic and noncarcinogenic hydrocarbons  
[NASA-CASE-IGS-01231] c14 N70-41676
- Bioassay of flavin coenzymes  
[NASA-CASE-GSC-10565-1] c06 N72-25149
- Enzymatic luminescent bioassay method for determining bacterial levels in urine  
[NASA-CASE-GSC-11092-2] c04 N73-27052
- Amino acid analysis  
[NASA-CASE-NPO-12130-1] c25 N75-14844
- Servo-controlled intravitral microscope system  
[NASA-CASE-NPO-13214-1] c35 N75-25123
- Method of detecting and counting bacteria  
[NASA-CASE-GSC-11917-2] c51 N76-29E91
- Automated clinical system for chromosome analysis  
[NASA-CASE-NPO-13913-1] c52 N79-12694
- Determination of antimicrobial susceptibilities on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c52 N79-14750
- Method and apparatus for eliminating luminol interference material  
[NASA-CASE-MSC-16260-1] c51 N80-16714
- BIODYNAMICS**
- Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c52 N79-26772
- Kinesimetric method and apparatus  
[NASA-CASE-MSC-18929-1] c54 N81-15699
- BIOELECTRIC POTENTIAL**
- Electrochemically reversible silver-silver chloride electrode for detecting bioelectric potential differences generated by human muscles and organs  
[NASA-CASE-IHS-02872] c05 N69-21925
- Manufacturing process for making perspiration resistant-stress resistant biopotential electrode  
[NASA-CASE-MSC-90153-2] c05 N72-25120
- Process for control of cell division  
[NASA-CASE-LAR-10773-3] c51 N77-25769
- BIOELECTRICITY**
- Development and characteristics of electrodes in which poisoning by organic molecules is prevented by ion selective electrolytic deposition of hydrophilic protein colloid  
[NASA-CASE-IHS-04213-1] c09 N71-26002
- Indirect microbial detection  
[NASA-CASE-LAR-12520-1] c51 N81-28698
- BIOENGINEERING**
- Bio-isolated dc operational amplifier --- for bioelectric measurements  
[NASA-CASE-ARC-10556-1] c33 N74-21851
- Actuator device for artificial leg  
[NASA-CASE-MPS-23225-1] c52 N77-14735
- Percutaneous connector device  
[NASA-CASE-KSC-10849-1] c52 N77-14738
- Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c52 N79-26772
- Subcutaneous electrode structure  
[NASA-CASE-ARC-11117-1] c52 N81-14612
- Urine collection device  
[NASA-CASE-MSC-16433-1] c52 N81-24711
- Biomedical flow sensor --- intravenous procedures  
[NASA-CASE-MSC-18761-1] c52 N81-24717
- Low X-ray absorption aneurism clips  
[NASA-CASE-LAB-12650-1] c52 N81-29768
- BIOINSTRUMENTATION**
- Temperature compensated solid state differential amplifier with application in bioinstrumentation circuits  
[NASA-CASE-IAC-00435] c09 N70-35440
- Electrode attached to helmets for detecting low level signals from skin of living creatures  
[NASA-CASE-ARC-10043-1] c05 N71-11193
- Characteristics of pressed disc electrode for biological measurements  
[NASA-CASE-IHS-04212-1] c05 N71-12346
- Development of apparatus and method for quantitatively measuring brain activity as automatic indication of sleep state and level of consciousness  
[NASA-CASE-MSC-13282-1] c05 N71-24729
- Development and characteristics of electrodes in which poisoning by organic molecules is prevented by ion selective electrolytic deposition of hydrophilic protein colloid  
[NASA-CASE-IHS-04213-1] c09 N71-26002
- Ultrasonic biomedical measuring and recording apparatus --- for recording motion of internal organs such as heart valves  
[NASA-CASE-ARC-10597-1] c52 N74-20726
- Subminiature insertable force transducer --- including a strain gage to measure forces in muscles  
[NASA-CASE-NPO-13423-1] c33 N75-31329
- Catheter tip force transducer for cardiovascular research  
[NASA-CASE-NPO-13643-1] c52 N76-29896
- Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-1] c52 N76-33835
- Thermistor holder for skin temperature measurements  
[NASA-CASE-ARC-10855-1] c52 N77-10780
- Magnetic electrical connectors for biomedical percutaneous implants  
[NASA-CASE-KSC-11030-1] c52 N77-25772
- Corneal seal device  
[NASA-CASE-LEW-12258-1] c52 N77-28716
- Snap-in compressible biomedical electrode  
[NASA-CASE-MSC-14623-1] c52 N77-28717
- Miniature implantable ultrasonic echosonometer  
[NASA-CASE-ARC-11035-1] c52 N79-18580
- Induction powered biological radiosonde  
[NASA-CASE-ARC-11120-1] c52 N80-18691
- Pulse transducer with artifact signal attenuator --- heart rate sensors  
[NASA-CASE-FRC-11012-1] c52 N80-23969
- Method and automated apparatus for detecting coliform organisms  
[NASA-CASE-MSC-16777-1] c51 N80-27067
- Simultaneous muscle force and displacement transducer  
[NASA-CASE-NPO-14212-1] c52 N80-27072
- An implantable electrical device  
[NASA-CASE-GSC-12560-1] c52 N80-27073
- Non-invasive method and apparatus for measuring pressure within a pliable vessel  
[NASA-CASE-ARC-11264-1] c52 N81-33804
- BIOLUMINESCENCE**
- Detection instrument for light emitted from ATP biochemical reaction  
[NASA-CASE-XGS-05534] c23 N71-16355
- Describing method for lyophilization of luciferase containing mixtures for use in life detection reactions  
[NASA-CASE-IGS-05532] c06 N71-17705
- Application of luciferase assay for ATP to antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c51 N77-22794
- Rapid, quantitative determination of bacteria in water  
[NASA-CASE-GSC-12158-1] c51 N78-22585
- BIOMEDICAL DATA**
- Silicon radiation detecting probe design for, in vivo biomedical use  
[NASA-CASE-IHS-01177] c05 N71-19440
- Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-2] c52 N79-26771

## BIOMETRICS

- Characteristics of pressed disc electrode for biological measurements  
[NASA-CASE-XMS-04212-1] c05 N71-12346
- Compressible electrolyte saturated sponge electrode for biomedical applications  
[NASA-CASE-MSC-13648] c05 N72-27103
- Ultrasonic biomedical measuring and recording apparatus --- for recording motion of internal organs such as heart valves  
[NASA-CASE-ARC-10597-1] c52 N74-20726
- Arterial pulse wave pressure transducer  
[NASA-CASE-GSC-11531-1] c52 N74-27566
- Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-1] c52 N76-33835
- Miniature implantable ultrasonic echosonometer  
[NASA-CASE-ARC-11035-1] c52 N79-18580
- Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-2] c52 N79-26771
- Simultaneous muscle force and displacement transducer  
[NASA-CASE-NPO-14212-1] c52 N80-27072
- Multifunctional transducer  
[NASA-CASE-NPO-14329-1] c52 N81-20703
- Sweat collection capsule  
[NASA-CASE-ARC-11031-1] c52 N81-29763
- Non-invasive method and apparatus for measuring pressure within a pliable vessel  
[NASA-CASE-ARC-11264-1] c52 N81-33804
- BIOTELEMETRY**
- Biotelemetry apparatus with dual voltage generators for implanting in animals  
[NASA-CASE-XAC-05706] c05 N71-12342
- Miniature multichannel biotelemetry system  
[NASA-CASE-NPO-13065-1] c52 N74-26625
- Medical subject monitoring systems --- multichannel monitoring systems  
[NASA-CASE-MSC-14180-1] c52 N76-14757
- Accelerometer telemetry system  
[NASA-CASE-ARC-10849-1] c17 N76-29347
- Miniature ingestible telemeter devices to measure deep-body temperature  
[NASA-CASE-ARC-10583-1] c52 N76-29894
- BIPOLAR TRANSISTORS**
- Voltage regulator for battery power source --- using a bipolar transistor  
[NASA-CASE-PRC-10116-1] c33 N79-23345
- BIREFRINGENCE**
- Automatic polarimeter capable of measuring transient birefringence changes in electro-optic materials  
[NASA-CASE-XNP-08883] c23 N71-16101
- BISMUTH**
- Manganese bismuth films with narrow transfer characteristics for Curie-point switching  
[NASA-CASE-NPO-11336-1] c76 N75-16678
- BISMUTH COMPOUNDS**
- Hall effect magnetometer  
[NASA-CASE-LEW-11632-2] c35 N75-13213
- BISTABLE CIRCUITS**
- Bistable multivibrator circuits operating at high speed and low power dissipation  
[NASA-CASE-XGS-00823] c10 N71-15910
- BIT SYNCHRONIZATION**
- Telemetry data unit to form multibit words for use between demodulator and computer  
[NASA-CASE-XNP-09225] c09 N69-24333
- Bit synchronization system using digital data transition tracking phased locked loop  
[NASA-CASE-NPO-10844] c07 N72-20140
- Bit synchronization of PCM communications signal, without separate synchronization channel by digital correlation  
[NASA-CASE-NPO-11302-1] c07 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] c32 N74-10132
- BITERNARY CODE**
- Encoders designed to generate comma free biorthogonal Reed-Muller type code comprising conversion of 64 6-bit words into 64 32-bit data for communication purposes  
[NASA-CASE-NPO-10595] c10 N71-25917
- BITS**
- Logic circuit for generating multibit binary code word in parallel  
[NASA-CASE-XNP-04623] c10 N71-26103
- MOD 2 sequential function generator for multibit sequence, with two-bit shift register for each pair of bits  
[NASA-CASE-NPO-10636] c08 N72-25210
- Bit error rate measurement above and below bit rate tracking threshold  
[NASA-CASE-MSC-12743-1] c32 N79-10263
- BLACK BODY RADIATION**
- Development of black-body source calibration furnace  
[NASA-CASE-XLE-01399] c33 N71-15625
- Black body cavity radiometer with thermal resistance wire bridge circuit  
[NASA-CASE-XNP-08961] c14 N71-24809
- Black body radiometer design with temperature sensing and cavity heat source cone winding  
[NASA-CASE-XNP-09701] c14 N71-26475
- Black body radiometer having isothermally surrounded cavity for ultraviolet, visible, and infrared radiation  
[NASA-CASE-NPO-10810] c14 N71-27323
- BLADDER**
- Prosthetic urinary sphincter  
[NASA-CASE-MFS-23717-1] c52 N81-25660
- BLADE TIPS**
- Modification and improvement of turbine blades for maximum cooling efficiency  
[NASA-CASE-XLE-00092] c15 N70-33264
- BLADES**
- Impact absorbing blade mounts for variable pitch blades  
[NASA-CASE-LEW-12313-1] c37 N78-10468
- BLADES (CUTTERS)**
- Piston in bore cutter for severing parachute control lines and sealing cable hole to prevent water leakage into load  
[NASA-CASE-XMS-04072] c15 N70-42017
- Tissue macerating instrument  
[NASA-CASE-LEW-12668-1] c52 N78-14773
- BLAST LOADS**
- Development of apparatus for detonating explosive devices in order to determine forces generated and detonation propagation rate  
[NASA-CASE-LAR-10800-1] c33 N72-27959
- BLOCKS**
- Rotary target V-block --- aligning wind tunnel apparatus for optical measurement  
[NASA-CASE-LAR-12007-2] c74 N79-25876
- BLOOD**
- Reduction of blood serum cholesterol  
[NASA-CASE-NPO-12119-1] c52 N75-15270
- Gas diffusion liquid storage bag and method of use for storing blood  
[NASA-CASE-NPO-13930-1] c52 N79-14749
- Dialysis system --- using ion exchange resin membranes permeable to urea molecules  
[NASA-CASE-NPO-14101-1] c52 N80-14687
- BLOOD PRESSURE**
- Blood pressure measuring system for separately recording dc and ac pressure signals of Korotkoff sounds  
[NASA-CASE-XMS-06061] c05 N71-23317
- Apparatus and method for processing Korotkoff sounds --- for blood pressure measurement  
[NASA-CASE-MSC-13999-1] c52 N74-26626
- Arterial pulse wave pressure transducer  
[NASA-CASE-GSC-11531-1] c52 N74-27566
- Circuit for detecting initial systole and diastolic notch --- for monitoring arterial pressure  
[NASA-CASE-LEW-11581-1] c54 N75-13531
- Non-invasive method and apparatus for measuring pressure within a pliable vessel  
[NASA-CASE-ARC-11264-1] c52 N81-33804
- BLOOD VESSELS**
- Non-invasive method and apparatus for measuring pressure within a pliable vessel  
[NASA-CASE-ARC-11264-1] c52 N81-33804
- BLOFF BODIES**
- Bluff-shaped annular configuration for supersonic decelerator for reentry vehicles  
[NASA-CASE-XLE-00222] c02 N70-37939
- BLUNT BODIES**
- Wind tunnel method for simulating flow fields around blunt vehicles entering planetary atmospheres without involving high temperatures  
[NASA-CASE-LAR-11138] c12 N71-20436
- BODIES OF REVOLUTION**
- Conforming polisher for aspheric surfaces of

- revolution with inflatable tube  
[NASA-CASE-XGS-02864] c15 N71-22705
- Test fixture for measuring moment of inertia of irregularly shaped body with multiple axes  
[NASA-CASE-XGS-01023] c14 N71-22992
- BODY FLUIDS**
- Programmable physiological infusion  
[NASA-CASE-ARC-10447-1] c52 N74-22771
- Method of detecting and counting bacteria  
[NASA-CASE-GSC-11917-2] c51 N76-29891
- Micro-fluid exchange coupling apparatus  
[NASA-CASE-ARC-11114-1] c51 N81-14605
- BODY KINEMATICS**
- Space suit with improved waist and torso movement  
[NASA-CASE-ARC-10275-1] c05 N72-22092
- Controller arm for a remotely related slave arm  
[NASA-CASE-ARC-11052-1] c37 N79-28551
- Kinesimetric method and apparatus  
[NASA-CASE-ASC-18929-1] c54 N81-15699
- BODY MEASUREMENT (BIOLOGY)**
- Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-1] c52 N76-33835
- Miniature implantable ultrasonic echosonometer  
[NASA-CASE-ARC-11035-1] c52 N79-18580
- Kinesimetric method and apparatus  
[NASA-CASE-ASC-18929-1] c54 N81-15699
- Apparatus for determining changes in limb volume  
[NASA-CASE-ASC-18759-1] c52 N81-24716
- BODY TEMPERATURE**
- Thermoregulating with cooling flow pipe network for humans  
[NASA-CASE-XNS-10269] c05 N71-24147
- Miniature ingestible telemeter devices to measure deep-body temperature  
[NASA-CASE-ARC-10583-1] c52 N76-29894
- BODY VOLUME (BIOLOGY)**
- Whole body measurement systems --- for weightlessness simulation  
[NASA-CASE-ASC-13972-1] c52 N74-10575
- Apparatus for determining changes in limb volume  
[NASA-CASE-ASC-18759-1] c52 N81-24716
- BODY-WING CONFIGURATIONS**
- Free wing assembly for an aircraft  
[NASA-CASE-PRC-10092-1] c05 N79-12061
- BOILERS**
- Vapor generating boiler system for turbine motor  
[NASA-CASE-XLE-00785] c33 N71-16104
- Shell-side liquid metal boiler employing tube and shell heat exchanger  
[NASA-CASE-NPO-10831] c33 N72-20915
- BOLOMETERS**
- High impedance alternating current sensing transformer device between two bolometers for measuring insertion loss of test component  
[NASA-CASE-XNP-01193] c10 N71-16057
- Thin film capacitive bolometer and capacitance temperature interchange sensor  
[NASA-CASE-NPO-10607] c09 N71-27232
- Wedge immersed thermistor bolometers  
[NASA-CASE-XGS-01245-1] c35 N79-33449
- BOLTS**
- Patent data on gas actuated bolt disconnect assembly  
[NASA-CASE-XLA-00326] c03 N70-34667
- Bolt-latch mechanism for releasing despin weights from space vehicle  
[NASA-CASE-XLA-00679] c15 N70-38601
- Gage for quality control of sealing surfaces of threaded boss  
[NASA-CASE-XMF-04966] c14 N71-17658
- Split nut and bolt separation device  
[NASA-CASE-XNP-06914] c15 N71-21489
- Device for securing together structural members with axially stretched bolt and nut  
[NASA-CASE-GSC-11149-1] c15 N73-30457
- BONDING**
- Silver chloride use in technique for fusion bonding of graphite to silver, glass, ceramics, and certain other metals  
[NASA-CASE-XGS-00963] c15 N69-39735
- Bonded joint and method --- for reducing peak shear stress in adhesive bonds  
[NASA-CASE-LAR-10900-1] c37 N74-23064
- Bonding method in the manufacture of continuous regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c24 N75-30260
- Strain arrestor plate for fused silica tile --- bonding of thermal insulation to metallic plates or structural parts  
[NASA-CASE-ASC-14182-1] c27 N76-14264
- Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c44 N79-24431
- Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-3] c24 N79-25143
- Improved attachment system for silica tiles --- thermal protection for space shuttle orbiter  
[NASA-CASE-ASC-18741-1] c16 N81-16110
- Method of making a partial interlaminar separation composite system  
[NASA-CASE-LAR-12065-2] c24 N81-33235
- BONES**
- Ultrasonic bone densitometer  
[NASA-CASE-MFS-20994-1] c35 N75-12271
- Method and system for in vivo measurement of bone tissue using a two level energy source  
[NASA-CASE-ASC-14276-1] c52 N77-14737
- Method of adhering bone to a rigid substrate using a graphite fiber reinforced bone cement  
[NASA-CASE-NPO-13764-1] c27 N78-17215
- BOOMS (EQUIPMENT)**
- Unfolding boom assembly with knuckle joints for positioning equipment for spacecraft  
[NASA-CASE-XGS-00938] c32 N70-41367
- Collapsible antenna boom and coaxial transmission line having inflatable inner tube  
[NASA-CASE-MPS-20068] c07 N71-27191
- Extendable, self-deploying boom apparatus  
[NASA-CASE-GSC-10566-1] c15 N72-18477
- Design and characteristics of mechanically extended and telescoping boom on crane assembly  
[NASA-CASE-NPO-11118] c03 N72-25021
- BOOSTER RECOVERY**
- Techniques for recovery of multistage rocket vehicles by providing lifting surfaces on individual sections  
[NASA-CASE-XMF-00389] c31 N70-34176
- Recoverable, reusable single stage booster capable of injecting large payloads into circular earth orbit  
[NASA-CASE-XMF-01973] c31 N70-41588
- Orbiter/launch system  
[NASA-CASE-LAR-12250-1] c14 N81-26161
- BOOSTER ROCKET ENGINES**
- Segmented back-up bar for butt welding large tubular structures such as rocket booster bodies or tanks  
[NASA-CASE-XMF-00640] c15 N70-39924
- Recoverable, reusable single stage booster capable of injecting large payloads into circular earth orbit  
[NASA-CASE-XMF-01973] c31 N70-41588
- BOOTS (FOOTWEAR)**
- Walking boot assembly  
[NASA-CASE-ARC-11101-1] c54 N78-17675
- BORIDES**
- Cesium thermionic converters having improved electrodes  
[NASA-CASE-LBW-12038-3] c44 N78-25555
- BORING MACHINES**
- Automatic controlled drive mechanism for portable boring bar  
[NASA-CASE-XLA-03661] c15 N71-33518
- Borehole geological assessment  
[NASA-CASE-NPO-14231-1] c46 N80-10709
- BORON**
- Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential of field effect device  
[NASA-CASE-GSC-11425-1] c76 N74-20329
- BORON CARBIDES**
- Catalyst for increased growth of boron carbide crystal whiskers  
[NASA-CASE-XHQ-03903] c15 N69-21922
- BORON FLUORIDES**
- Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
[NASA-CASE-ARC-11057-1] c27 N78-31233
- BOUNDARY LAYER CONTROL**
- Double hinged flap for boundary layer control over trailing edges of wings  
[NASA-CASE-XLA-01290] c02 N70-42016
- Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c02 N81-14968
- BOUNDARY LAYER SEPARATION**
- Tertiary flow injection system for thrust vectoring of propulsive nozzle flow

- [NASA-CASE-MFS-20831] c28 N71-29153  
Controlled separation combustor --- airflow  
distribution in gas turbine engines  
[NASA-CASE-LEW-11593-1] c20 N76-14190  
Self stabilizing sonic inlet  
[NASA-CASE-LEW-11890-1] c05 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] c02 N80-20224
- BOUNDARY LAYERS**  
Flow meter for measuring stagnation pressure in  
boundary layer around high speed flight vehicle  
[NASA-CASE-XP-02007] c12 N71-24692  
Development of thermocouple instrument for  
measuring temperature of wall heated by  
flowing fluid without disturbing boundary layer  
[NASA-CASE-XLE-05230] c14 N72-27410
- BOXES (CONTAINERS)**  
Sealed storage container for channel carriers  
with mounted miniature electronic components  
[NASA-CASE-MFS-20075] c09 N71-26133
- BRACKETS**  
Electrical servo actuator bracket --- fuel  
control valves on jet engines  
[NASA-CASE-PRC-11044-1] c37 N81-33483
- BRAKES (FOR ARRESTING MOTION)**  
Energy dissipating shock absorbing system for  
land payload recovery or vehicle braking  
[NASA-CASE-XLA-00754] c15 N70-34850  
Automatic braking device for rapidly  
transferring humans or materials from elevated  
location  
[NASA-CASE-XKS-07814] c15 N71-27067  
Sprag solenoid brake --- development and  
operations of electrically controlled brake  
[NASA-CASE-MFS-21846-1] c37 N74-26976  
Reel safety brake  
[NASA-CASE-GSC-11960-1] c37 N77-14479  
Motion restraining device  
[NASA-CASE-NPO-13619-1] c37 N78-16369  
Moving body velocity arresting line ---  
elongating steel cable  
[NASA-CASE-LAR-12372-1] c37 N80-18399
- BRAKING**  
Direct current electromotive system for  
regenerative braking of electric motor  
[NASA-CASE-XMP-01096] c10 N71-16030  
Linear magnetic braking system with nonuniformly  
wrapped primary coil producing constant  
braking force on secondary coil  
[NASA-CASE-XLE-05079] c15 N71-17652  
Anemometer with braking mechanism to prevent  
rotation of wind driven elements  
[NASA-CASE-XMP-05224] c14 N71-23726
- BRAZING**  
Anti-wettable materials brazing processes using  
titanium and zirconium for surface pretreatment  
[NASA-CASE-XMS-03537] c15 N69-21471  
Application techniques for protecting materials  
during salt bath brazing  
[NASA-CASE-XLE-00046] c15 N70-33311  
Joining aluminum to stainless steel by bonding  
aluminum coatings onto titanium coated  
stainless steel and brazing aluminum to  
aluminum/titanium coated steel  
[NASA-CASE-MFS-07369] c15 N71-20443  
Brazing alloy adapted for brazing corrosion  
resistant steel to refractory metals, also for  
brazing refractory metals to other refractory  
metals  
[NASA-CASE-XMP-03063] c17 N71-23365  
Brazing alloy binder  
[NASA-CASE-XMP-05868] c26 N75-27125  
Brazing alloy composition  
[NASA-CASE-XMP-06053] c26 N75-27126  
Brazing alloy  
[NASA-CASE-XMP-03878] c26 N75-27127  
Method of fluxless brazing and diffusion bonding  
of aluminum containing components  
[NASA-CASE-MSC-14435-1] c37 N76-18455
- BREATHING APPARATUS**  
Three-port transfer valve with one port open  
continuously suitable for manned space flight  
[NASA-CASE-IAC-01158] c15 N71-23051  
Self-contained breathing apparatus  
[NASA-CASE-MSC-14733-1] c54 N76-24900
- Portable breathing system --- a breathing  
apparatus using a rebreathing system of heat  
exchangers for carbon dioxide removal  
[NASA-CASE-MSC-16182-1] c54 N80-10799
- BRICKS**  
Development of construction block in form of  
container folded from flat sheet and filled  
with solid material for architectural purposes  
[NASA-CASE-MSC-12233-2] c32 N73-13921
- BRIGHTNESS**  
Modulating and controlling intensity of light  
beam from high temperature source by  
servocontrolled rotating cylinders  
[NASA-CASE-XMS-04300] c09 N71-19479
- BRIGHTNESS DISCRIMINATION**  
Video signal processing system for sampling  
video brightness levels  
[NASA-CASE-NPO-10140] c07 N71-24742  
Automated visual sensitivity tester for  
determining visual field sensitivity and blind  
spot size  
[NASA-CASE-ARC-10329-1] c05 N73-26072  
Illumination control apparatus for compensating  
solar light  
[NASA-CASE-KSC-11010-1] c74 N79-12890
- BRITTLENESS**  
Rock sampling --- apparatus for controlling  
particle size  
[NASA-CASE-XMP-10007-1] c46 N74-23068  
Rock sampling --- method for controlling  
particle size distribution  
[NASA-CASE-XMP-09755] c46 N74-23069
- BROADBAND**  
Broadband chokes and absorbers to reduce  
spurious radiation patterns of antenna array  
caused by support structures  
[NASA-CASE-XMS-05303] c07 N69-27462  
Flexible monopole antenna with broad bandwidth  
and low voltage standing wave ratio  
[NASA-CASE-MSC-12101] c09 N71-18720  
Broadband frequency discriminator with resistive  
captive inductive networks  
[NASA-CASE-NPO-10096] c07 N71-24583  
Broadband microwave waveguide window to  
compensate dielectric material filling  
[NASA-CASE-XMP-08880] c09 N71-24808  
Comb type traveling wave maser amplifier for  
improved high gain broadband output  
[NASA-CASE-NPO-10548] c16 N71-24831  
Wideband voltage controlled oscillator with high  
phase stability  
[NASA-CASE-XLA-03893] c10 N71-27271  
Multimode antenna feed system for microwave and  
broadband communication  
[NASA-CASE-GSC-11046-1] c07 N73-28013  
Multifrequency broadband polarized horn antenna  
[NASA-CASE-NPO-14588-1] c32 N81-25278
- BROADBAND AMPLIFIERS**  
Solid state broadband stable power amplifier  
[NASA-CASE-XMP-10854] c10 N71-26331  
Broadband distribution amplifier with  
complementary pair transistor output stages  
[NASA-CASE-NPO-10003] c10 N71-26415
- BROADCASTING**  
Vehicle locating system utilizing AM  
broadcasting station carriers  
[NASA-CASE-NPO-13217-1] c32 N75-26194
- BROMINE**  
Hydrogen-bromine secondary battery  
[NASA-CASE-NPO-13237-1] c44 N76-18641
- BRUSHES**  
Fabrication of sintered impurity semiconductor  
brushes for electrical energy transfer  
[NASA-CASE-XMP-01016] c26 N71-17818
- BRUSHES (ELECTRICAL CONTACTS)**  
Liquid metal slip ring  
[NASA-CASE-LEW-12277-2] c33 N78-25323
- BUCKLING**  
Miniature vibration isolator utilizing elastic  
tubing material  
[NASA-CASE-XLA-01019] c15 N70-40156  
Test equipment to prevent buckling of small  
diameter specimens during compression tests  
[NASA-CASE-LAR-10440-1] c14 N73-32323
- BUFFER STORAGE**  
Data handling based on source significance,  
storage availability, and data received from  
source  
[NASA-CASE-XMP-04162-1] c08 N70-34675

Data acquisition and processing system with buffer storage and timing device for magnetic tape recording of PCM data and timing information  
 [NASA-CASE-NPO-12107] c08 N71-27255

Digital to analog converter with parallel input/output memory device  
 [NASA-CASE-KSC-10397] c08 N72-25206

Common data buffer system --- communication with computational equipment utilized in spacecraft operations  
 [NASA-CASE-KSC-11048-1] c62 N81-24779

**BUILDINGS**  
 Apparatus and method of assembling building blocks by folding pre-cut flat sheets of material during on-site construction  
 [NASA-CASE-HSC-12233-1] c15 N72-25454

**BULBS**  
 External bulb variable volume maser  
 [NASA-CASE-GSC-12334-1] c36 N79-14362

**BULKHEADS**  
 Liquid propellant tank design with semitoroidal bulkhead  
 [NASA-CASE-XMF-01899] c31 N70-41948

**BUOYANCY**  
 Inflatable radar reflector unit - lightweight, highly reflective to electromagnetic radiation, and adaptable for erection and deployment with minimum effort and time  
 [NASA-CASE-XMS-00893] c07 N70-40063

High visibility air sea rescue panel  
 [NASA-CASE-HSC-12564-2] c03 N78-25070

**BURNING RATE**  
 Pressurized gas injection for burning rate control of solid propellants  
 [NASA-CASE-ILE-03494] c27 N71-21819

Development of apparatus for testing burning rate and flammability of materials  
 [NASA-CASE-XMS-09690] c33 N72-25913

Nitramine propellants --- gun propellant burning rate  
 [NASA-CASE-NPO-14103-1] c28 N78-31255

**BURNOUT**  
 Spherical solid propellant rocket engine having abrupt burnout  
 [NASA-CASE-IXQ-01897] c28 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] c52 N81-27783

**BUS CONDUCTORS**  
 Electrical short locator --- identifying shorts occurring while an electrical system is being wired  
 [NASA-CASE-ARC-11116-1] c33 N79-31498

**BUTT JOINTS**  
 Channel-type shell construction for rocket engines and related configurations  
 [NASA-CASE-ILE-00144] c28 N70-34860

Segmented back-up bar for butt welding large tubular structures such as rocket booster bodies or tanks  
 [NASA-CASE-XMF-00640] c15 N70-39524

Apparatus for welding sheet material --- butt joints  
 [NASA-CASE-XMS-01330] c37 N75-27376

**BUTTERFLY VALVES**  
 Flexible inflatable seal for butterfly valves  
 [NASA-CASE-XLE-00101] c15 N76-33376

**BYPASSES**  
 Low power drain transistor feedback circuit  
 [NASA-CASE-IGS-04999] c09 N69-24317

Helical coaxial resonator RF filter  
 [NASA-CASE-IGS-02816] c07 N69-24323

Current regulating voltage divider design with load current shunting  
 [NASA-CASE-HFS-20935] c09 N71-34212

Electrical interconnection of unilluminated solar cells in solar battery array  
 [NASA-CASE-GSC-10344-1] c03 N72-27053

Shunt regulation electric power system  
 [NASA-CASE-GSC-10135] c33 N78-17296

**C**

**CABLE FORCE RECORDERS**  
 Design and characteristics of device for showing amount of cable payed out from winch and load imposed  
 [NASA-CASE-MSC-12052-1] c15 N71-24599

**CABLES**  
 Cable guide and restraint device for reefing tubes in uniform manner  
 [NASA-CASE-LAR-10129-1] c15 N73-25512

Deployable flexible tunnel  
 [NASA-CASE-HFS-22636-1] c37 N76-22540

**CABLES (ROPES)**  
 High voltage cable for use in high intensity ionizing radiation fields  
 [NASA-CASE-XNP-00738] c09 N70-38201

Force separation rigid tethering device using cables  
 [NASA-CASE-XLA-02332] c32 N71-17609

Support for flexible conductor cable between drawers or racks holding electronic equipment and cabinet assembly housing drawers or racks  
 [NASA-CASE-XMF-07587] c15 N71-18701

Design and construction of satellite appendage tie-down cord  
 [NASA-CASE-XGS-02554] c31 N71-21064

Quick attach mechanism for moving or stationary wires, ropes, or cables  
 [NASA-CASE-XFB-05421] c15 N71-22994

Flexible cable that can be made rigid  
 [NASA-CASE-HSC-13512-1] c15 N72-22485

Guide member for stabilizing cable of open shaft elevator  
 [NASA-CASE-KSC-10513] c15 N72-25453

Reefing system  
 [NASA-CASE-LAR-10129-2] c37 N74-20063

Emergency descent device  
 [NASA-CASE-HFS-23074-1] c54 N77-21844

Moving body velocity arresting line --- elongating steel cable  
 [NASA-CASE-LAR-12372-1] c37 N80-18399

Belt for transmitting power from a cogged driving member to a cogged driven member  
 [NASA-CASE-GSC-12289-1] c37 N80-32717

**CADMIUM SULFIDES**  
 High field CdS detector for infrared radiation  
 [NASA-CASE-LAR-11027-1] c35 N74-18088

CdS solid state phase insensitive ultrasonic transducer --- annealing cadmium sulfide crystals  
 [NASA-CASE-LAR-12304-1] c35 N80-20559

**CALCIUM**  
 Ultrasonic bone densitometer  
 [NASA-CASE-HFS-20994-1] c35 N75-12271

**CALCIUM FLUORIDES**  
 Bonded solid lubricant coatings of calcium fluoride and binder for high temperature stability  
 [NASA-CASE-XMS-00259] c18 N70-36400

Production of barium fluoride-calcium fluoride composite lubricant for bearings or seals  
 [NASA-CASE-ILE-08511-2] c18 N71-16105

**CALCIUM OXIDES**  
 Process for the preparation of calcium superoxide  
 [NASA-CASE-AEC-11053-1] c25 N79-10162

**CALCIUM PHOSPHATES**  
 Process for preparing calcium phosphate salts for tooth repair  
 [NASA-CASE-BEC-10338] c04 N72-33072

**CALCULATORS**  
 Sun angle calculator  
 [NASA-CASE-HSC-12617-1] c35 N76-29552

**CALIBRATING**  
 Development and characteristics of self-calibrating displacement transducer for measuring magnitude and frequency of displacement of bodies  
 [NASA-CASE-XLA-00781] c09 N71-22999

Combination pressure transducer-calibrator assembly for measuring fluid  
 [NASA-CASE-XNP-01660] c14 N71-23036

Control system for pressure balance device used in calibrating pressure gages  
 [NASA-CASE-XMF-04134] c14 N71-23755

Phonocardiogram simulator producing electrical voltage waves to control amplitude and duration between simulated sounds  
 [NASA-CASE-XKS-10804] c05 N71-24606

Calibrator for measuring and modulating or demodulating laser outputs  
 [NASA-CASE-XLA-03410] c16 N71-25914

Plastic sphere for radar tracking and calibration  
 [NASA-CASE-XLA-11154] c07 N72-21117

- Calibration of vacuum gauges for measuring total and partial pressures in ultrahigh vacuum region  
[NASA-CASE-IGS-07752] c14 N73-30390
- System for calibrating pressure transducer  
[NASA-CASE-LAR-10910-1] c35 N74-13132
- In situ transfer standard for ultrahigh vacuum gage calibration  
[NASA-CASE-LAR-10862-1] c35 N74-15092
- Ergometer calibrator --- for any ergometer utilizing rotating shaft  
[NASA-CASE-MFS-21045-1] c35 N75-15932
- Ultrasonic calibration device --- for producing changes in acoustic attenuation and phase velocity  
[NASA-CASE-LAR-11435-1] c35 N76-15432
- High temperature strain gage calibration fixture  
[NASA-CASE-LAR-11500-1] c35 N76-24523
- Electronically scanned pressure sensor module with in SITU calibration capability  
[NASA-CASE-LAR-12230-1] c35 N79-14347
- Calibrating pressure switch  
[NASA-CASE-XMF-04494-1] c33 N79-33392
- Electromagnetic power absorber  
[NASA-CASE-NPO-13830-1] c32 N80-14281
- Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c34 N81-26402
- Method and apparatus for precision control of radiometer  
[NASA-CASE-NPO-15398-1] c35 N81-33449
- CALORIMETERS**
- Development and characteristics of calorimeter with integral heat sink for maintenance of constant temperature  
[NASA-CASE-XMF-04208] c33 N71-29051
- Heat flow calorimeter --- measures output of Ni-Cd batteries  
[NASA-CASE-GSC-11434-1] c34 N74-27859
- Containerless high temperature calorimeter apparatus  
[NASA-CASE-MFS-23923-1] c35 N81-19426
- CAMERA SHUTTERS**
- Electrically operated rotary shutter for television camera aboard spacecraft  
[NASA-CASE-XNP-00637] c14 N70-40273
- Magnetically opened diaphragm design with camera shutter and expansion tube applications  
[NASA-CASE-XLA-03660] c15 N71-21060
- Development and characteristics of cyclically operable, optical shutter for use as focal plane shutter for transmitting single radiation pulses  
[NASA-CASE-NPO-10758] c14 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] c33 N74-20861
- CAMERAS**
- Mechanism for measuring nanosecond time differences between luminous events using streak camera  
[NASA-CASE-XLA-01987] c23 N71-23576
- Camera adapter design for image magnification including lens and illuminator  
[NASA-CASE-XMF-03844-1] c14 N71-26474
- Longitudinal film gate and lock mechanism for securing film in motion picture cameras under vibration and high acceleration loads  
[NASA-CASE-LAR-10686] c14 N71-28935
- Design and characteristics of laser camera system with diffusion filter of small particles with average diameter larger than wavelength of laser light  
[NASA-CASE-NPO-10417] c16 N71-33410
- Optical scanner with linear housing and rotating camera  
[NASA-CASE-NPO-11002] c14 N72-22441
- Apparatus for on-film optical recording of camera lens aperture and focus setting  
[NASA-CASE-MSC-12363-1] c14 N73-26431
- Mechanical exposure interlock device for preventing film overexposure in oscilloscope camera  
[NASA-CASE-LAR-10319-1] c14 N73-32322
- Real time moving scene holographic camera system  
[NASA-CASE-MFS-21067-1] c35 N74-17153
- Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c35 N75-15014
- Spectrometer integrated with a facsimile camera  
[NASA-CASE-LAR-11207-1] c35 N75-19613
- Real time, large volume, moving scene holographic camera system  
[NASA-CASE-MFS-22537-1] c35 N75-27328
- Holographic motion picture camera with Doppler shift compensation  
[NASA-CASE-MFS-22517-1] c35 N76-18402
- Camera arrangement --- for satellite scanning of earth or sky  
[NASA-CASE-GSC-12032-2] c35 N76-19408
- Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c74 N80-24152
- CANS**
- Controlled caging and uncaging mechanism  
[NASA-CASE-GSC-11063-1] c37 N77-27400
- Cam-operated pitch-change apparatus  
[NASA-CASE-LEW-13050-1] c07 N79-14095
- CANARD CONFIGURATIONS**
- Thrust and attitude control apparatus using jet nozzle in movable canard surface or fin configuration  
[NASA-CASE-XLE-03583] c31 N71-17629
- Supersonic transport --- using canard surfaces  
[NASA-CASE-LAR-11932-1] c05 N78-32086
- CANCER**
- A cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c52 N77-26796
- Coupling apparatus for ultrasonic medical diagnostic system  
[NASA-CASE-NPO-13935-1] c52 N79-14751
- CANOPIES**
- Transparent fire resistant polymeric structures  
[NASA-CASE-ARC-10813-1] c27 N76-16230
- Aircraft canopy lock  
[NASA-CASE-PBC-11065-1] c05 N81-24047
- CANS**
- Design and characteristics of device for closing canisters under high vacuum conditions  
[NASA-CASE-XLA-01446] c15 N71-21528
- Extrusion can for extruding ceramics under heat and pressure  
[NASA-CASE-NPO-10812] c15 N73-13464
- CANTILEVER BEAMS**
- Pneumatic cantilever beams and platform for space erectable structure  
[NASA-CASE-XLA-01731] c32 N71-21045
- Cantilever mounted resilient pad gas bearing  
[NASA-CASE-LEW-12569-1] c37 N79-10418
- CANTILEVER MEMBERS**
- Deployable cantilever support for deploying solar cell arrays aboard spacecraft and reducing transient loading  
[NASA-CASE-NPO-10883] c31 N72-22874
- Miniature biaxial strain transducer  
[NASA-CASE-LAR-11648-1] c35 N77-14407
- CAPACITANCE**
- Capacitance measuring device for determining flare accuracy on tapered tubes  
[NASA-CASE-IKS-03495] c14 N69-39785
- Device for measuring two orthogonal components of force with gallium flotation of measuring target for use in vacuum environments  
[NASA-CASE-IAC-04885] c14 N71-23790
- Thin film capacitive bolometer and capacitance temperature interchange sensor  
[NASA-CASE-NPO-10607] c09 N71-27232
- Capacitive tank gaging device for monitoring one constituent of two phase fluid by sensing dielectric constant  
[NASA-CASE-MFS-21629] c14 N72-22442
- Capacitance multiplier and filter synthesizing network  
[NASA-CASE-NFO-11948-1] c33 N74-32712
- Direct reading inductance meter  
[NASA-CASE-NFO-13792-1] c35 N77-32455
- Dynamic capacitor having a peripherally driven element and system incorporating the same  
[NASA-CASE-XNP-02899-1] c33 N79-21265
- CAPACITANCE SWITCHES**
- Electric discharge apparatus for electrohydraulic explosive forming  
[NASA-CASE-XMF-00375] c15 N70-34249
- Extra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit  
[NASA-CASE-IGS-00381] c09 N70-34819
- Feedback integrating circuit with grounded capacitor for signal processing



- [NASA-CASE-IAC-10607] c10 N71-23669
- CAPACITORS**
- Temperature sensitive capacitor device for detecting very low intensity infrared radiation [NASA-CASE-XNP-C5750] c14 N69-39537
- Electrical power system for space flight vehicles operating over extended periods [NASA-CASE-XNP-00517] c03 N70-34157
- Capacitor for measuring density of compressible fluid in liquid, gas, or liquid and gas phases [NASA-CASE-XLE-00143] c14 N70-36618
- Capacitor sandwich structure containing metal sheets of known thickness for counting penetration rates of meteoroids [NASA-CASE-XLE-01246] c14 N71-10797
- Capacitor fabrication by solidifying mixture of ferromagnetic metal particles, nonferromagnetic particles, and dielectric material [NASA-CASE-LEW-10364-1] c09 N71-13522
- Mechanism for measuring nanosecond time differences between luminous events using streak camera [NASA-CASE-XLA-01987] c23 N71-23976
- Circuit for monitoring power supply by ripple current indication [NASA-CASE-KSC-10162] c09 N72-11225
- Thermodielectric radiometer using polymer film as capacitor [NASA-CASE-ARC-10138-1] c14 N72-24477
- Material compositions and processes for developing dielectric thick films used in microcircuit capacitors [NASA-CASE-LAR-10294-1] c26 N72-28762
- Micrometeoroid analyzer using arrays of interconnected capacitors and ion detector [NASA-CASE-ARC-10443-1] c14 N73-20477
- Insulated electrocardiographic electrodes --- without paste electrolyte [NASA-CASE-MSC-14339-1] c05 N75-24716
- High temperature beryllium oxide capacitor [NASA-CASE-LEW-11938-1] c33 N76-15373
- Energy storage apparatus [NASA-CASE-GSC-12030-1] c44 N78-24608
- Regulated high efficiency, lightweight capacitor-diode multiplier dc to dc converter [NASA-CASE-LEW-12791-1] c33 N78-32341
- Dynamic capacitor having a peripherally driven element and system incorporating the same [NASA-CASE-XNP-02899-1] c33 N79-21265
- CAPILLARY FLOW**
- Capillary radiator for carrying heat transfer liquid in planetary spacecraft structures [NASA-CASE-XLE-03307] c33 N71-14035
- Lubrication for bearings by capillary action from oil reservoir of porous material [NASA-CASE-XNP-03972] c15 N71-23048
- Soldering device particularly suited to making high quality wiring joints for aerospace engineering utilizing capillary attraction to regulate flow of solder [NASA-CASE-XLA-08911] c15 N71-27214
- Capillary flow weld-bonding [NASA-CASE-LAR-11726-1] c37 N76-27568
- Heat pipes containing alkali metal working fluid [NASA-CASE-LEW-12253-1] c34 N81-22310
- CAPILLARY TUBES**
- Tubular flow restrictor for gas flow control in pipeline [NASA-CASE-NPO-10117] c15 N71-15608
- Development of liquid separating system using capillary device connected to flexible bladder storage chamber [NASA-CASE-XMS-13052] c14 N71-20427
- Interrupter switching device utilizing electrodes and mercury filled capillary tubes in which current flow vaporizes mercury as circuit breaker [NASA-CASE-XNP-02251] c12 N71-20896
- Diffused waveguiding capillary tube with distributed feedback for a gas laser [NASA-CASE-NPO-13544-1] c36 N76-18428
- CARBAZOLES**
- Method of producing output voltage from photovoltaic cell using poly-N-vinyl carbazole complexed with iodine [NASA-CASE-NPO-10373] c03 N71-18698
- CARBOHYDRATES**
- Decantamination of petroleum products with honey [NASA-CASE-XNP-03835] c06 N71-23499
- CARBON**
- Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety [NASA-CASE-ARC-11040-2] c24 N78-27184
- Electrophotolysis oxidation system for measurement of organic concentration in water [NASA-CASE-MSC-16497-1] c25 N79-23167
- Improved synthesis of polyformals [NASA-CASE-ARC-11244-1] c27 N79-30376
- CARBON ARCS**
- Water cooled contactors for holding rotating carbon arc anode [NASA-CASE-XMS-03700] c15 N69-24266
- CARBON COMPOUNDS**
- Vapor deposited laminated nitride-silicon coating for corrosion prevention of carbonaceous surfaces [NASA-CASE-XLA-00284] c15 N71-16075
- Surfactant-assisted liquefaction of particulate carbonaceous substances [NASA-CASE-NPO-13904-1] c25 N79-11152
- CARBON DIOXIDE**
- Carbon dioxide purge systems to prevent condensation in spaces between cryogenic fuel tanks and hypersonic vehicle skin [NASA-CASE-XLA-01967] c31 N70-42015
- Fast response miniature carbon dioxide detector with no moving parts for measuring concentration in any atmosphere [NASA-CASE-MSC-13332-1] c14 N72-21408
- Metabolic rate meter and method [NASA-CASE-MSC-12239-1] c52 N79-21750
- CARBON DIOXIDE LASERS**
- Repetitively pulsed wavelength selective carbon dioxide laser [NASA-CASE-ERC-10178] c16 N71-24832
- Performance of ac power supply developed for CO2 laser system [NASA-CASE-GSC-11222-1] c16 N73-32391
- Stark-effect modulation of CO2 laser with NH2D [NASA-CASE-NFO-11945-1] c36 N76-18427
- Tunable injection-locked pulsed CO2 laser [NASA-CASE-NPO-14984-1] c36 N81-15350
- CARBON DIOXIDE REMOVAL**
- Catalyst cartridge for carbon dioxide reduction unit [NASA-CASE-LAR-10551-1] c25 N74-12813
- Regenerable device for scrubbing breathable air of CO2 and moisture without special heat exchanger equipment [NASA-CASE-MSC-14771-1] c54 N77-32722
- Portable breathing system --- a breathing apparatus using a rebreathing system of heat exchangers for carbon dioxide removal [NASA-CASE-MSC-16182-1] c54 N80-10799
- CARBON FIBER REINFORCED PLASTICS**
- Low density bismaleimide-carbon microballoon composites [NASA-CASE-ARC-11040-1] c24 N79-16915
- Circumferential shaft seal [NASA-CASE-LEW-12119-1] c37 N80-28711
- Curing agent for polyepoxides and epoxy resins and composites cured therewith --- preventing carbon fiber release [NASA-CASE-LEW-13226-1] c27 N81-17260
- CARBON MONOXIDE**
- Carbon monoxide monitor --- using real time operation [NASA-CASE-MPS-22060-1] c35 N75-29380
- CARBONATES**
- Chemical and physical properties of synthetic polyurethane polymer prepared by reacting hydroxy carbonate with organic diisocyanate [NASA-CASE-MPS-10512] c06 N73-30099
- Synthesis of dawsonites [NASA-CASE-ARC-113261-1] c25 N80-31490
- CARBONIZATION**
- Method of carbonizing polyacrylonitrile fibers and resulting product [NASA-CASE-ARC-11261-1] c24 N81-29164
- CARBONYL COMPOUNDS**
- Coal desulfurization --- using iron pentacarbonyl [NASA-CASE-NPO-14272-1] c25 N81-33246
- CARBORANE**
- Carboranylcyclotriphosphazenes and their polymers --- thermal insulation [NASA-CASE-ARC-11176-1] c27 N80-21533

- Process for the preparation of polycarboranylphosphazenes --- thermal insulation  
[NASA-CASE-ARC-11176-2] c27 N81-27271
- CARBOXYL GROUP**  
Carboxyl terminated polyester prepolymers and foams produced from prepolymers and materials  
[NASA-CASE-NPO-10596] c06 N71-25929
- CARBOXYLIC ACIDS**  
Stable polyimide synthesis from mixtures of monomeric diamines and polycarboxylic acid esters  
[NASA-CASE-LEW-11325-1] c06 N73-27980  
Fluorinated esters of polycarboxylic acid and lubricating compositions for use at extreme temperature  
[NASA-CASE-HFS-21040-1] c06 N73-30098
- CARCINOGENS**  
Spectrophotofluorometer with 3-dimensional display to identify fluorescence spectra of carcinogenic and noncarcinogenic hydrocarbons  
[NASA-CASE-XGS-01231] c14 N70-41676
- CARDIAC VENTRICLES**  
Contour detector and data acquisition system for the left ventricular outline  
[NASA-CASE-ARC-16985-1] c52 N79-10724
- CARDIOGRAPHY**  
Digital cardiometer incorporating circuit for measuring heartbeat rate of subject over predetermined portion of one minute also converting rate to beats per minute  
[NASA-CASE-XMS-02399] c05 N71-22896  
Reference apparatus for medical ultrasonic transducer  
[NASA-CASE-ARC-10753-1] c54 N75-27760
- CARDIOLOGY**  
Development of instantaneous reading tachometer for measuring electrocardiogram signal rate  
[NASA-CASE-HFS-20418] c14 N73-24473  
Myocardium wall thickness transducer and measuring method  
[NASA-CASE-NPO-13644-1] c52 N76-29695
- CARDIOTACHOMETERS**  
Digital computing cardiometer  
[NASA-CASE-HFS-20284-1] c52 N74-12778
- CARDIOVASCULAR SYSTEM**  
Conditioning suit for normal function of astronaut cardiovascular system in gravity environment  
[NASA-CASE-XLA-02898] c05 N71-20268  
Bar oximeter for monitoring blood oxygenation and pressure, pulse rate, and pressure pulse curve, using dc and ac amplifiers  
[NASA-CASE-IAC-05422] c04 N71-23185  
Catheter tip force transducer for cardiovascular research  
[NASA-CASE-NPO-13643-1] c52 N76-29896  
Low X-ray absorption aneurism clips  
[NASA-CASE-LAR-12650-1] c52 N81-29768
- CARRIER FREQUENCIES**  
Demodulator for simultaneous demodulation of two modulating ac signal carriers close in frequency  
[NASA-CASE-XMP-01160] c07 N71-11298  
Automatic carrier acquisition system for phase locked loop receiver  
[NASA-CASE-NPO-11628-1] c07 N73-30113  
Demodulator for carrier transducers  
[NASA-CASE-NUC-10107-1] c33 N74-17530  
Decision feedback loop for tracking a polyphase modulated carrier  
[NASA-CASE-NPO-13103-1] c32 N74-20811
- CARRIER WAVES**  
Variable frequency subcarrier oscillator with temperature compensation  
[NASA-CASE-XMP-03916] c09 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] c32 N75-24981
- CARRIERS**  
Sealed storage container for channel carriers with mounted miniature electronic components  
[NASA-CASE-HFS-20075] c09 N71-26133  
Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-HFS-21394-1] c34 N74-27744
- CARTESIAN COORDINATES**  
Design and development of random function tracer for obtaining coordinates of points on contour maps  
[NASA-CASE-XLA-01401] c15 N71-21179
- CARTRIDGES**  
Tape cartridge with high capacity storage of endless-loop magnetic tape  
[NASA-CASE-XGS-00769] c14 N70-41647  
Endless loop tape transport mechanism for driving and tensioning recording medium in magnetic tape recorder  
[NASA-CASE-XGS-01223] c07 N71-10609  
Catalyst cartridge for carbon dioxide reduction unit  
[NASA-CASE-LAR-10551-1] c25 N74-12813
- CASCADE CONTROL**  
Reversible ring counter using cascaded single silicon controlled rectifier stages  
[NASA-CASE-XGS-01473] c09 N71-10673  
Synchronous dc direct-drive system comprising multiple-loop hybrid control system controlling load directly connected to actuator  
[NASA-CASE-GSC-10065-1] c10 N71-27136  
Multiloop RC active filter network with low parameter sensitivity and low amplifier gain  
[NASA-CASE-ARC-10192] c09 N72-21245
- CASCADE FLOW**  
Cascade plug nozzle --- for jet noise reduction  
[NASA-CASE-LAR-11674-1] c07 N76-18117
- CASE BONDED PROPELLANTS**  
Solid propellant motor  
[NASA-CASE-NPO-11458A] c20 N78-32179
- CASES (CONTAINERS)**  
Nonmagnetic hermetically sealed battery case made of epoxy resin and woven glass tape for use with electrochemical cells in spacecraft  
[NASA-CASE-XGS-00886] c03 N71-11053  
Protected isotope heat source --- for atmospheric reentry protection and heat transmission to spacecraft  
[NASA-CASE-LEW-11227-1] c73 N75-30876  
Portable heatable container  
[NASA-CASE-NPO-14237-1] c44 N80-20808
- CASSEGRAIN ANTENNAS**  
Cassegrain antenna subreflector flange for suppressing ground noise and increasing antenna transmitting efficiency  
[NASA-CASE-XMP-00683] c09 N70-35425  
Design and operation of multi-feed cone Cassegrain antenna  
[NASA-CASE-NPO-10539] c07 N71-11285  
Synchronous detection system for detecting weak radio astronomical signals  
[NASA-CASE-XMP-09832] c30 N71-23723  
Dual frequency feed systems for Cassegrainian antennas  
[NASA-CASE-NPO-13091-1] c09 N73-12214  
Low loss dichroic plate  
[NASA-CASE-NPO-13171-1] c32 N74-11000
- CASTING**  
Hydraulic apparatus for casting and molding of liquid polymers  
[NASA-CASE-XMP-07659] c06 N71-22975  
Texturing polymer surfaces by transfer casting --- cardiovascular prosthesis  
[NASA-CASE-LEW-13120-1] c31 N81-16327  
Asymmetric polyimide separation membrane and method  
[NASA-CASE-NPO-15431-1] c25 N81-29178
- CASTINGS**  
Method of making an apertured casting --- using duplicate mold  
[NASA-CASE-LEW-11169-1] c37 N76-23570  
Castable high temperature refractory materials  
[NASA-CASE-LEW-13080-1] c27 N80-29496  
Method of bonding plasticized elastomer to metal and article produced thereby  
[NASA-CASE-HFS-25181-1] c27 N81-16238
- CATALYSIS**  
Unit for generating thrust from catalytic decomposition of hydrogen peroxide, for high altitude aircraft or spacecraft reaction control  
[NASA-CASE-XMS-00583] c28 N70-38504  
Apparatus for photon excited catalysis  
[NASA-CASE-NPO-13566-1] c25 N77-32255  
Start up system for hydrogen generator used with an internal combustion engine  
[NASA-CASE-NPO-13849-1] c28 N80-10374  
Diesel engine catalytic combustor system --- turbocharging  
[NASA-CASE-LEW-12995-1] c37 N80-26659

**CATALISTS**

Catalyst for increased growth of boron carbide crystal whiskers  
[NASA-CASE-XHQ-03903] c15 N69-21522

Catalyst bed element removing tool  
[NASA-CASE-XFR-00811] c15 N70-36501

Catalyst bed ignition system for hydrazine propellants  
[NASA-CASE-XNP-0C876] c28 N70-41311

Development of device for detecting hydrogen in ambient environments  
[NASA-CASE-MFS-11537] c14 N71-20442

Catalyst cartridge for carbon dioxide reduction unit  
[NASA-CASE-LAR-10551-1] c25 N74-12813

Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams  
[NASA-CASE-ARC-11107-1] c25 N80-16116

**CATHETERIZATION**

Transducer circuit design with single coaxial cable for input and output connections including incorporation into miniaturized catheter transducer  
[NASA-CASE-ARC-10132-1] c09 N71-24597

Catheter tip force transducer for cardiovascular research  
[NASA-CASE-NPO-13643-1] c52 N76-29896

Ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-1] c52 N81-27786

**CATHODE RAY TUBES**

Cathode ray oscilloscope for analyzing electrical waveforms representing amplitude distribution of time function  
[NASA-CASE-XNP-01383] c09 N71-10659

Cathode ray tube system for displaying ones and zeros in binary wave train  
[NASA-CASE-XGS-04987] c08 N71-20571

Indexing mechanism for cathode array substitution in electron beam tube  
[NASA-CASE-NPO-10625] c09 N71-26182

Color television system utilizing single gun current sensitive color cathode ray tube  
[NASA-CASE-ERC-10098] c09 N71-28618

Cathode ray tube with coating of phosphor and cobalt oxides  
[NASA-CASE-ERC-10468] c09 N72-20206

Digital video system for displaying image and alphanumeric data on cathode ray tube  
[NASA-CASE-NPO-11342] c09 N72-25248

Switching circuit for control of cathode ray tube beam with fast rise time for output signal  
[NASA-CASE-KSC-10647-1] c10 N72-31273

Situational display system of cathode ray tubes to assist pilot in aircraft control  
[NASA-CASE-ERC-10350] c14 N73-20474

Very high intensity light source using a cathode ray tube --- electron beams  
[NASA-CASE-XNP-01296] c33 N75-27250

**CATHODES**

Encapsulated heater forming hollow body for cathode used in ion thruster  
[NASA-CASE-LEW-10814-1] c28 N70-35422

Electronic cathodes for use in electron bombardment ion thrusters  
[NASA-CASE-XLE-04501] c09 N71-23190

Design and characteristics of heat activated electric cell with anode made from one or more alkali metals and cathode made from oxidizing material  
[NASA-CASE-LEW-11358] c03 N71-26684

Characteristics of ion rocket engine with combination keeper electrode and electron baffle  
[NASA-CASE-NPO-11880] c28 N73-24783

Storage battery comprising negative plates of a wedge shaped configuration --- for preventing shape change induced malfunctions  
[NASA-CASE-NPO-11806-1] c44 N74-19693

**CATIONES**

Water insoluble, cationic permselective membrane  
[NASA-CASE-NPO-11091] c18 N72-22567

Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c27 N81-15104

**CAVITATION FLOW**

Semitoroidal diaphragm cavitating flow control valve  
[NASA-CASE-XNP-05704] c12 N71-18615

**CAVITIES**

Black body radiometer having isothermally surrounded cavity for ultraviolet, visible, and infrared radiation  
[NASA-CASE-NPO-10810] c14 N71-27323

Method for coating through-holes in ceramic substrates used in fabricating miniaturized electronic circuits  
[NASA-CASE-XMP-05999] c15 N71-29032

Soil burrowing mole apparatus  
[NASA-CASE-XBP-07169] c15 N73-32362

Method of constructing dished ion thruster grids to provide hole array spacing compensation  
[NASA-CASE-LEW-11876-1] c20 N76-21276

Method of making hollow elastomeric bodies  
[NASA-CASE-NPO-13535-1] c37 N76-31524

Method and apparatus for producing concentric hollow spheres --- inertial confinement fusion targets  
[NASA-CASE-NPO-14596-1] c31 N81-33319

**CAVITY RESONATORS**

Helical coaxial resonator RF filter  
[NASA-CASE-XGS-02816] c07 N69-24323

Semiconductor in resonant cavity for improving signal to noise ratio of communication receiver  
[NASA-CASE-MSC-12259-1] c07 N70-12616

Thermally sensitive tuning probe for nullifying detuning effects in microwave cavity resonator of amplifier  
[NASA-CASE-XNP-00449] c14 N70-35220

Holder for high frequency crystal resonators  
[NASA-CASE-XNP-03637] c15 N71-21311

Superconductive resonant cavity for improved signal to noise ratio in communication signal  
[NASA-CASE-MSC-12259-2] c07 N72-33146

Infrared tunable dye laser with nonlinear wavelength mixing crystal in optical cavity  
[NASA-CASE-ARC-10463-1] c09 N73-32111

Tunable cavity resonator with ramp shaped supports  
[NASA-CASE-HQN-10790-1] c36 N74-11313

Laser apparatus  
[NASA-CASE-GSC-12237-1] c36 N80-14384

Off-axis coherently pumped laser  
[NASA-CASE-GSC-12592-1] c36 N81-12407

**CELESTIAL BODIES**

Device for determining relative angular position of spacecraft and radiating celestial body  
[NASA-CASE-GSC-11444-1] c14 N73-28490

Position determination systems --- using orbital antenna scan of celestial bodies  
[NASA-CASE-MSC-12593-1] c17 N76-21250

**CELESTIAL NAVIGATION**

Development of star intensity measuring system which minimizes effects of outside interference  
[NASA-CASE-XNP-06510] c14 N71-23797

**CELL ANODES**

Heat activated emf cells with aluminum anode  
[NASA-CASE-LEW-11359] c03 N71-28579

Heat activated cell with aluminum anode  
[NASA-CASE-LEW-11359-2] c03 N72-20034

Electrically rechargeable REDOX flow cell  
[NASA-CASE-LEW-12220-1] c44 N77-14581

**CELL DIVISION**

Process for control of cell division  
[NASA-CASE-LAR-10773-3] c51 N77-25769

**CELLS**

Separation cell with permeable membranes for fluid mixture component separation  
[NASA-CASE-XMS-02952] c18 N71-20742

**CELLS (BIOLOGY)**

System for and method of freezing biological tissue  
[NASA-CASE-GSC-12173-1] c51 N79-10694

Method for separating biological cells --- suspended in aqueous polymer systems  
[NASA-CASE-MFS-23883-1] c51 N80-16715

Electrophoresis device  
[NASA-CASE-MFS-25426-1] c25 N81-29179

**CENTRAL PROCESSING UNITS**

Massively parallel processor computer  
[NASA-CASE-GSC-12223-1] c60 N79-27864

**CENTRIFUGAL COMPRESSORS**

Centrifugal-reciprocating compressor  
[NASA-CASE-NPO-14597-1] c37 N79-23431

**CENTRIFUGAL FORCE**

Counter pumping debris excluder and separator --- gas turbine shaft seals  
[NASA-CASE-LEW-11855-1] c07 N78-25090

## CENTRIFUGES

- Centrifuge mounted motion simulator with elevator mechanism  
[NASA-CASE-XAC-00399] c11 N70-34815
- Liquid-gaseous centrifugal separator for weightlessness environment  
[NASA-CASE-XLA-00415] c15 N71-16079
- Centrifugal lyophobic separator  
[NASA-CASE-LAR-10194-1] c34 N74-30608
- Fluid control apparatus and method  
[NASA-CASE-LAR-11110-1] c34 N75-26282
- Biocentrifuge system capable of exchanging specimen cages while in operational mode  
[NASA-CASE-HFS-23825-1] c51 N81-32829
- CERAMIC BONDING**
- Plasma spraying gun for forming diffusion bonded metal or ceramic coatings on substrates  
[NASA-CASE-XLE-01604-2] c15 N71-15610
- Method of forming ceramic to metal seals impervious to gaseous and liquid mercury at high temperature  
[NASA-CASE-XNP-01263-2] c15 N71-26312
- CERAMIC COATINGS**
- Evaporating crucible of tantalum-tungsten foil, nickel alumina bonding agent, and ceramic coating  
[NASA-CASE-XLA-03105] c15 N69-27483
- Unfired-ceramic, highly reflective composite insulation for large launch vehicles  
[NASA-CASE-XMF-01030] c18 N70-41583
- Unfired ceramic insulation for protection from radiant heating environments  
[NASA-CASE-HFS-14253] c33 N71-24858
- Cermet for nuclear fuel constructed by pressing metal coated ceramic particles in die at temperature to cause bonding of metal coatings, and tested for thermal stability  
[NASA-CASE-LEW-10219-1] c18 N71-28729
- Two-component ceramic coating for silica insulation  
[NASA-CASE-MSC-14270-1] c27 N76-22377
- Three-component ceramic coating for silica insulation  
[NASA-CASE-MSC-14270-2] c27 N76-23426
- Spray coating apparatus having a rotatable workpiece holder  
[NASA-CASE-ARC-11110-1] c37 N78-32434
- Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c27 N81-22190
- Thermal barrier coating system having improved adhesion  
[NASA-CASE-LEW-13359-1] c27 N81-24265
- CERAMIC NUCLEAR FUELS**
- Cermet for nuclear fuel constructed by pressing metal coated ceramic particles in die at temperature to cause bonding of metal coatings, and tested for thermal stability  
[NASA-CASE-LEW-10219-1] c18 N71-28729
- CERAMICS**
- Transpiration cooled turbine blade made from metallic or ceramic wires  
[NASA-CASE-XLE-00020] c15 N70-33226
- Characteristics of foamed-in-place ceramic refractory insulating material and method of fabrication  
[NASA-CASE-XGS-02435] c18 N71-22998
- Process for fiberizing ceramic materials with high fusion temperatures and tensile strength  
[NASA-CASE-XNP-00597] c18 N71-23088
- Method for coating through-holes in ceramic substrates used in fabricating miniaturized electronic circuits  
[NASA-CASE-XMF-05999] c15 N71-29032
- Extrusion can for extruding ceramics under heat and pressure  
[NASA-CASE-NPO-10812] c15 N73-13464
- Thermal shock resistant hafnia ceramic materials  
[NASA-CASE-LAR-10894-1] c18 N73-14584
- Thermal shock and erosion resistant tantalum carbide ceramic material  
[NASA-CASE-LAR-11902-1] c27 N78-17206
- High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
[NASA-CASE-NPO-13690-1] c27 N78-19302
- Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles  
[NASA-CASE-MSC-12619-2] c27 N79-12221
- High temperature resistant cermet and ceramic compositions  
[NASA-CASE-NFO-13690-2] c27 N79-14213
- Inorganic spark chamber frame and method of making the same  
[NASA-CASE-GSC-12354-1] c35 N80-20565
- Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-1] c37 N80-24619
- Castable high temperature refractory materials  
[NASA-CASE-LEW-13080-1] c27 N80-29496
- Apparatus for accurately preloading auger attachment means for frangible protective material  
[NASA-CASE-MSC-18791-1] c37 N81-24446
- Sandblasting nozzle  
[NASA-CASE-NFO-13823-1] c37 N81-25371
- CEREBROSPINAL FLUID**
- Ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-1] c52 N81-27786
- CERMETS**
- Freeze casting of metal ceramic and refractory compound powders into plastic slips  
[NASA-CASE-XLE-00106] c15 N71-16076
- Cermet for nuclear fuel constructed by pressing metal coated ceramic particles in die at temperature to cause bonding of metal coatings, and tested for thermal stability  
[NASA-CASE-LEW-10219-1] c18 N71-28729
- Cermet composition and method of fabrication --- heat resistant alloys and powders  
[NASA-CASE-NPO-13120-1] c27 N76-15311
- High temperature oxidation resistant cermet compositions  
[NASA-CASE-NFO-13666-1] c27 N77-13217
- High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
[NASA-CASE-NFO-13690-1] c27 N78-19302
- High temperature resistant cermet and ceramic compositions  
[NASA-CASE-NPO-13690-2] c27 N79-14213
- CESIUM**
- Heated tungsten filter for removing oxygen impurities from cesium  
[NASA-CASE-XNE-04262-2] c17 N71-26773
- Method of producing I-123 --- by bombardment of cesium causing spallation  
[NASA-CASE-LEW-11390-2] c25 N76-27383
- CESIUM DIODES**
- Oxygen-doped tantalum emitter for thermionic devices such as cesium vapor diodes  
[NASA-CASE-NPO-11138] c03 N70-34646
- Thermionic cesium diode converter with cavity emitters  
[NASA-CASE-NFO-10412] c09 N71-28421
- Improved thermionic energy converters  
[NASA-CASE-LEW-12443-1] c44 N81-19561
- CESIUM ENGINES**
- Variable thrust ion engine using thermal decomposition of solid cesium compound to produce propulsive vapor  
[NASA-CASE-XMF-00923] c28 N70-36802
- Method for producing porous tungsten plates for ionizing cesium compounds for propulsion of ion engines  
[NASA-CASE-XLE-00455] c28 N70-38197
- CESIUM VAFOR**
- Electric power generation system directory from laser power  
[NASA-CASE-NFO-13308-1] c36 N75-30524
- Cesium thermionic converters having improved electrodes  
[NASA-CASE-LEW-12038-3] c44 N78-25555
- CHANNEL FLOW**
- Fabrication method for lightweight regeneratively cooled combustion chamber of channel construction  
[NASA-CASE-XLE-00150] c28 N70-41818
- Heated element sensor for fluid flow detection in thermal conductive conduit with adaptive means to determine flow rate and direction  
[NASA-CASE-MSC-12084-1] c12 N71-17569
- CHANNELS (DATA TRANSMISSION)**
- Error correction circuitry for binary signal channels  
[NASA-CASE-XNP-03263] c09 N71-18843

- Helical recorder for multiple channel recording  
[NASA-CASE-GSC-10614-1] c09 N72-11224
- Asynchronous, multiplexing, single line  
transmission and recovery data system --- for  
satellite use  
[NASA-CASE-NPO-13321-1] c32 N75-26195
- Massively parallel processor computer  
[NASA-CASE-GSC-12223-1] c60 N79-27864
- High-speed data link for moderate distances and  
noisy environments  
[NASA-CASE-NPO-14152-1] c32 N80-18252
- CHARACTER RECOGNITION**
- Automatic character skew and spacing checking  
network --- of digital tape drive systems  
[NASA-CASE-GSC-11925-1] c33 N76-18353
- System and method for character recognition  
[NASA-CASE-NPO-11337-1] c74 N81-19896
- CHARGE COUPLED DEVICES**
- CCD correlated quadruple sampling processor  
[NASA-CASE-NPO-14426-1] c33 N79-17134
- Multispectral imaging and analysis system ---  
using charge coupled devices and linear arrays  
[NASA-CASE-NPO-13691-1] c43 N79-17288
- CCD correlated quadruple sampling processor  
[NASA-CASE-NPO-14426-1] c33 N81-27396
- Programmable scan/read circuitry for charge  
coupled device imaging detectors --- for a  
startracker  
[NASA-CASE-NPO-15345-1] c33 N81-27403
- CHARGE DISTRIBUTION**
- Operation of vidicon tube for scanning spatial  
charge density pattern  
[NASA-CASE-XNP-06028] c09 N71-23189
- Charge storage diode modulators and demodulators  
[NASA-CASE-NPO-10189-1] c33 N77-21314
- Charge injection method and apparatus of  
producing large area electrets  
[NASA-CASE-MFS-23186-2] c24 N78-25137
- CHARGE EXCHANGE**
- Ion beam thruster shield  
[NASA-CASE-LEW-12082-1] c20 N77-10148
- CHARGE TRANSFER**
- Electronic counter circuit utilizing magnetic  
core and low power consumption  
[NASA-CASE-XNP-08836] c09 N71-12515
- Pressure transducer --- using a monomeric charge  
transfer complex sensor  
[NASA-CASE-NPO-11150] c35 N78-17359
- CHARGE TRANSFER DEVICES**
- Charge transfer reaction laser with  
preionization means  
[NASA-CASE-NPO-13945-1] c36 N78-27402
- An image readout device with electrically  
variable spatial resolution  
[NASA-CASE-LAR-12633-1] c35 N80-22661
- Time delay and integration detectors using  
charge transfer devices  
[NASA-CASE-GSC-12324-1] c33 N81-33403
- CHARGED PARTICLES**
- Method of forming thin window drifted silicon  
charged particle detector  
[NASA-CASE-XLE-00808] c24 N71-10560
- Charged particle analyzer with periodically  
varying voltage applied across electrostatic  
deflection members  
[NASA-CASE-XAC-05506-1] c24 N71-16095
- Electrostatic charged particle collector  
containing stacked electrodes for microwave tube  
[NASA-CASE-LEW-11192-1] c09 N73-13208
- Method and apparatus for neutralizing potentials  
induced on spacecraft surfaces  
[NASA-CASE-GSC-11963-1] c33 N77-10429
- CHARGING**
- Development of device for simulating charge and  
discharge cycle of battery in synchronous orbit  
[NASA-CASE-GSC-11211-1] c03 N72-25020
- CHARRING**
- Sensor device with switches for measuring  
surface recession of charring and noncharring  
ablaters  
[NASA-CASE-XLA-01781] c14 N69-39975
- Ablation sensor for measuring char layer  
recession rate using electric wires  
[NASA-CASE-XLA-01794] c33 N71-21586
- CHASSIS**
- Chassis unit insert tightening-extract device  
[NASA-CASE-XMS-01077-1] c37 N79-33467
- CHECKOUT**
- Digital computer system for automatic prelaunch  
checkout of spacecraft  
[NASA-CASE-XKS-08012-2] c31 N71-15566
- Rapid activation and checkout device for batteries  
[NASA-CASE-MFS-22749-1] c44 N76-14601
- Decommutator patchboard verifier  
[NASA-CASE-KSC-11065-1] c33 N81-26359
- CHELATES**
- Ammonium perchlorate composite propellant with  
organic Cu/II/ chelate catalytic additive  
[NASA-CASE-LAR-10173-1] c27 N71-14090
- Chelate-modified polymers for atmospheric gas  
chromatography  
[NASA-CASE-ABC-11154-1] c25 N80-23383
- CHEMICAL ANALYSIS**
- Analytical test apparatus and method for  
determining oxygen content in alkali liquid  
metal  
[NASA-CASE-XLE-01997] c06 N71-23527
- Automated fluid chemical analyzer for  
microchemical analysis of small quantities of  
liquids by use of selected reagents and  
analyzer units  
[NASA-CASE-XNP-09451] c06 N71-26754
- Method for determining presence and type of OH  
in MgO  
[NASA-CASE-NFO-10774] c06 N72-17095
- Micrometeoroid analyzer using arrays of  
interconnected capacitors and ion detector  
[NASA-CASE-ABC-10443-1] c14 N73-20477
- Chromato-fluorographic drug detector --- device  
for detecting and recording fluorescent  
properties of materials  
[NASA-CASE-ABC-10633-1] c25 N74-26947
- Amino acid analysis  
[NASA-CASE-NPO-12130-1] c25 N75-14844
- Gas chromatograph injection system  
[NASA-CASE-ABC-10344-2] c35 N75-26334
- System for monitoring physical characteristics  
of fluids --- acoustic techniques  
[NASA-CASE-NPO-15400-1] c34 N81-24384
- CHEMICAL AUXILIARY POWER UNITS**
- Development and characteristics of ion-exchange  
membrane and electrode assembly for fuel cells  
or electrolysis cells  
[NASA-CASE-XMS-02063] c03 N71-29044
- CHEMICAL BONDS**
- Fluorine-containing polyformals  
[NASA-CASE-XNP-06900-1] c27 N79-21191
- Preparation of perfluorinated 1,2,4-oxadiazoles  
--- heat and chemical resistant polymers  
[NASA-CASE-ABC-11267-2] c25 N80-26407
- Perfluoroalkyl polytriazines containing pendent  
iododifluoromethyl groups  
[NASA-CASE-ABC-11241-1] c25 N81-14016
- CHEMICAL COMPOSITION**
- Phototropic composition of matter with  
sensitivity to ultraviolet light and usable  
for producing positive photographic images  
[NASA-CASE-XGS-03736] c14 N72-22443
- Nitramine propellants --- gun propellant burning  
rate  
[NASA-CASE-NPO-14103-1] c28 N78-31255
- Composition and method for making polyimide  
resin-reinforced fabric  
[NASA-CASE-LEW-12933-1] c27 N81-19296
- CHEMICAL COMPOUNDS**
- Ultraviolet chromatographic detector for  
quantitative and qualitative analysis of  
compounds  
[NASA-CASE-HQN-10756-1] c14 N72-25428
- CHEMICAL ELEMENTS**
- Apparatus for remote handling of materials ---  
mixing or analyzing dangerous chemicals  
[NASA-CASE-LAR-10634-1] c37 N74-18123
- CHEMICAL ENGINEERING**
- Process for the preparation of calcium superoxide  
[NASA-CASE-ABC-11053-1] c25 N79-10162
- CHEMICAL EXPLOSIONS**
- Hypervelocity gun --- using both electric and  
chemical energy for projectile propulsion  
[NASA-CASE-XLE-03186-1] c09 N79-21084
- CHEMICAL MACHINING**
- Reusable masking boot for chemical machining  
operations  
[NASA-CASE-XNP-02092] c15 N70-42033
- CHEMICAL PROPERTIES**
- Method for producing alternating ether-siloxane  
copolymers with stable properties when exposed  
to elevated temperatures and UV radiation

- [NASA-CASE-XMF-02584] c06 N71-20905  
Chemical and physical properties of synthetic polyurethane polymer prepared by reacting hydroxy carbonate with organic diisocyanate [NASA-CASE-MFS-10512] c06 N73-30103
- Chemical and elastic properties of fluorinated polyurethanes [NASA-CASE-NFO-10767-1] c06 N73-33076
- Thiophenyl ether disiloxanes and trisiloxanes useful as lubricant fluids [NASA-CASE-MFS-22411-1] c37 N74-21058
- CHEMICAL REACTIONS**
- Process for interfacial polymerization of pyromellitic dianhydride and tetraamin benzene [NASA-CASE-XLA-03104] c06 N71-11235
- Synthesis of polymeric schiff bases by schiff-base exchange reactions [NASA-CASE-XMF-08651] c06 N71-11236
- Preparation of ordered poly/arylenesiloxane/ polymers [NASA-CASE-XMF-10753] c06 N71-11237
- Synthesis and chemical properties of imidazopyrrolone/imide copolymers [NASA-CASE-XLA-08802] c06 N71-11238
- Composition and process for improving definition of resin masks used in chemical etching [NASA-CASE-XGS-04993] c14 N71-17574
- Preparation of inorganic solid film lubricants with long wear life and stability in aerospace environments [NASA-CASE-XMF-03988] c15 N71-21403
- Synthesis of high purity dianilinosilanes [NASA-CASE-XMF-06409] c06 N71-23230
- Synthesis of aromatic diamines and dialdehyde polymers using Schiff base [NASA-CASE-XMF-03074] c06 N71-24740
- Chemical synthesis of hydroxy terminated perfluoro ethers as intermediates for highly fluorinated polyurethane resins [NASA-CASE-NPO-10768] c06 N71-27254
- Chemical synthesis of thermally stable organometallic polymers with divalent metal ion and tetraphenylphosphonitrilic units [NASA-CASE-HQB-10364] c06 N71-27363
- Apparatus and process for volumetrically dispensing reagent quantities of volatile chemicals for small batch reactions [NASA-CASE-NPO-10070] c15 N71-27372
- Infusible polymer production from reaction of polyfunctional epoxy resins with polyfunctional aziridine compounds [NASA-CASE-NPO-10701] c06 N71-28620
- Process for preparing high molecular weight polyaryloxysilanes from lower molecular weight forms [NASA-CASE-XMF-08674] c06 N71-28807
- Organometallic compounds of niobium and tantalum useful for film deposition [NASA-CASE-XNP-04023] c06 N71-28808
- Description of method for making homogeneous foamed materials in weightless environment using materials having different physical properties [NASA-CASE-XMF-09902] c15 N72-11387
- Method to produce high purity copper fluoride by heating copper hydroxyfluoride powder and subjecting to flowing fluorine gas [NASA-CASE-LEW-10794-1] c06 N72-17093
- Pumping and metering dual piston system and monitor for reaction chamber constituents [NASA-CASE-GSC-10218-1] c15 N72-21465
- Development of apparatus for producing metal powder particles of controlled size [NASA-CASE-XLE-06461-2] c17 N72-28535
- Chemical spot tests for identification of titanium and titanium alloys used in aerospace vehicles [NASA-CASE-LAR-10539-1] c17 N73-12547
- Self-cycling fluid heater for heating continuous fluid stream to ultrahigh temperatures to facilitate chemical reactions [NASA-CASE-MS-15567-1] c33 N73-16518
- Chemical process for production of polyisobutylene compounds and application as solid rocket propellant binder [NASA-CASE-NPO-10893] c27 N73-22710
- Preparation of stable polyurethane polymer by reacting polymer with diisocyanate [NASA-CASE-MFS-10506] c06 N73-30100
- Preparation of polyurethane polymer by reacting hydroxy polyformal with organic diisocyanate [NASA-CASE-MFS-10509] c06 N73-30103
- Utilization of lithium p-lithiophenoxide to prepare star polymers [NASA-CASE-NPO-10998-1] c06 N73-32029
- Polyimide foam for the thermal insulation and fire protection [NASA-CASE-ARC-10464-1] c27 N74-12812
- Intumescent composition, foamed product prepared therewith and process for making same [NASA-CASE-ARC-10304-2] c27 N74-27037
- Vapor phase growth of groups 3-5 compounds by hydrogen chloride transport of the elements [NASA-CASE-LAB-11144-1] c25 N75-26043
- Utilization of oxygen difluoride for syntheses of fluoropolymers [NASA-CASE-NFO-12061-1] c27 N76-16228
- Method for detecting pollutants --- through chemical reactions and heat treatment [NASA-CASE-LAR-11405-1] c45 N76-31714
- Process for preparing higher oxides of the alkali and alkaline earth metals [NASA-CASE-ARC-10992-1] c26 N78-32229
- An improved synthesis of 2, 4, 8, 10-tetroxaspiro (5.5)undecane [NASA-CASE-ARC-11243-1] c27 N79-30375
- Improved synthesis of polyformals [NASA-CASE-ARC-11244-1] c27 N79-30376
- Preparation of perfluorinated imidoylamidoximes --- for eventual preparation of heat and chemical resistant polymers [NASA-CASE-ARC-11267-1] c23 N80-26386
- Preparation of perfluorinated 1,2,4-oxadiazoles --- heat and chemical resistant polymers [NASA-CASE-ARC-11267-2] c25 N80-26407
- Low temperature cross linking polyimides [NASA-CASE-LEW-12876-1] c27 N80-26447
- An improved synthesis of 2,4,8,10-tetroxaspiro (5.5) undecane [NASA-CASE-ARC-11243-2] c23 N80-31472
- Method for preparing addition type polyimide prepreps [NASA-CASE-LAR-12054-2] c27 N81-14078
- CHEMICAL REACTORS**
- Chemical vapor deposition reactor --- providing uniform film thickness [NASA-CASE-NPO-13650-1] c25 N79-28253
- Sodium storage and injection system [NASA-CASE-NPO-14384-1] c37 N80-10494
- Method of producing silicon --- gas phase reactor multiple injector liquid feed system [NASA-CASE-NPO-14382-1] c31 N80-18231
- Thermal reactor and process --- liquid silicon production from silane [NASA-CASE-NPO-14369-1] c25 N80-20338
- Solar-heated fluidized bed gasification system [NASA-CASE-NPO-15071-1] c44 N80-24747
- CHEMICAL TESTS**
- Chemical spot tests for identification of titanium and titanium alloys used in aerospace vehicles [NASA-CASE-LAR-10539-1] c17 N73-12547
- Chemical spot test for identifying magnesium or magnesium alloys used in aerospace applications [NASA-CASE-LAR-10953-1] c17 N73-27446
- CHEMILUMINESCENCE**
- Method and apparatus for eliminating luminol interference material [NASA-CASE-MS-16260-1] c51 N80-16714
- CHEMOTHERAPY**
- Indomethacin-antihistamine combination for gastric ulceration control [NASA-CASE-ARC-11118-2] c52 N81-14613
- CHIPS**
- Liquid immersion apparatus for minute articles [NASA-CASE-MFS-25363-1] c31 N80-32585
- CHIPS (ELECTRONICS)**
- Head for high speed spinner having a vacuum chuck --- holding silicon dioxide chips for etching [NASA-CASE-NPO-15227-1] c37 N81-33882
- CHIRP SIGNALS**
- Method for shaping and aiming narrow beams --- using a linear frequency chirp for sonar reception [NASA-CASE-NPO-14632-1] c32 N80-12256
- CHLORINATION**
- Chlorine generator for purifying water in life support systems of manned spacecraft

- [NASA-CASE-XLA-08913] c14 N71-28933
- CHLOROPRENE RESINS**
- Flexible fire retardant polyisocyanate modified neoprene foam --- for thermal protective devices [NASA-CASE-ARC-10180-1] c27 N74-12814
- CHOKES**
- Current dependent variable inductance for input filter chokes of ac or dc power supplies [NASA-CASE-ERC-10139] c09 N72-17154
- CHOKES (RESTRICTIONS)**
- Variably positioned guide vanes for aerodynamic choking [NASA-CASE-LAR-10642-1] c07 N74-31270
- CHOLESTEROL**
- Reduction of blood serum cholesterol [NASA-CASE-NPO-12119-1] c52 N75-15270
- CHROMATOGRAPHY**
- Chromato-fluorographic drug detector --- device for detecting and recording fluorescent properties of materials [NASA-CASE-ARC-10633-1] c25 N74-26547
- CHROMIUM**
- Selective coating for solar panels --- using black chrome and black nickel [NASA-CASE-LEW-12159-1] c44 N78-19599
- Improving the efficiency of silicon solar cells containing chromium [NASA-CASE-NPO-15179-1] c44 N80-32850
- CHROMIUM ALLOYS**
- Method of heat treating age-hardenable alloys [NASA-CASE-XNP-01311] c26 N75-29236
- NiCrAl ternary alloy having improved cyclic oxidation resistance [NASA-CASE-LEW-13339-1] c26 N81-12211
- CHROMOSOMES**
- Automated clinical system for chromosome analysis [NASA-CASE-NPO-13913-1] c52 N79-12694
- CINEMATOGRAPHY**
- High speed photo-optical time recorder for indicating time at exposure of each frame of high speed movie camera film [NASA-CASE-KSC-10294] c14 N72-18411
- Holographic motion picture camera with Doppler shift compensation [NASA-CASE-MFS-22517-1] c35 N76-18402
- CIRCUIT BOARDS**
- Electrical feedthrough connection for printed circuit boards [NASA-CASE-XNP-01483] c14 N69-27431
- Electric connector for printed cable to printed cable or to printed board [NASA-CASE-XNP-00369] c09 N70-36494
- Electrical connection for printed circuits on common board, using bellows principle in rivet [NASA-CASE-XNP-05082] c15 N70-41560
- Electrical spot terminal assembly for printed circuit boards [NASA-CASE-NPO-10034] c15 N71-17685
- Development and characteristics of polyimide impregnated laminates with fiberglass cloth backing for application as printed circuit boards [NASA-CASE-MFS-20408] c18 N73-12604
- Techniques for packaging and mounting printed circuit boards [NASA-CASE-MFS-21919-1] c10 N73-25243
- Tool for use in lifting pin supported objects [NASA-CASE-NPO-13157-1] c37 N74-32918
- Shock absorbing mount for electrical components [NASA-CASE-NPO-13253-1] c37 N75-18573
- Connector --- for connecting circuits on different layers of multilayer printed circuit boards [NASA-CASE-LAR-11769-1] c37 N76-27567
- Traveling wave tube circuit [NASA-CASE-LEW-12013-1] c33 N79-10339
- CIRCUIT BREAKERS**
- Interrupter switching device utilizing electrodes and mercury filled capillary tubes in which current flow vaporizes mercury as circuit breaker [NASA-CASE-XNP-02251] c12 N71-20896
- Single electrical circuit component combining diode, fuse, and blown indicator with elongated tube of heat resistant transparent material [NASA-CASE-XKS-03381] c09 N71-22796
- Electrical circuit selection device for simulating stage separation of flight vehicle [NASA-CASE-XKS-04631] c10 N71-23663
- Electromagnetic braking arrangement for controlling rotor rotation in electric motor [NASA-CASE-XNP-06936] c15 N71-24695
- Relay circuit breaker with magnetic latching to provide conductive and nonconductive paths for current devices [NASA-CASE-MSC-11277] c09 N71-29008
- Multiple circuit protector device [NASA-CASE-XMS-02744] c33 N75-27249
- CIRCUIT DIAGRAMS**
- Excitation and detection circuitry for flux responsive magnetic head [NASA-CASE-XNP-04183] c09 N69-24329
- Impedance transformation device for signal mixing [NASA-CASE-IGS-01110] c07 N69-24334
- Design of transistorized ring counter circuit with special steering and triggering circuits [NASA-CASE-IGS-03095] c09 N69-27463
- Solid state switching circuit design to increase current capacity of low rated relay contacts [NASA-CASE-XNP-09228] c09 N69-27500
- Extra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit [NASA-CASE-IGS-00381] c09 N70-34819
- Frequency shift keyed demodulator - circuit diagrams [NASA-CASE-IGS-02889] c07 N71-11282
- Difference indicating circuit used in conjunction with device measuring gravitational fields [NASA-CASE-XNP-08274] c10 N71-13537
- High voltage transistor circuit [NASA-CASE-XNP-06937] c09 N71-19516
- Control of fusion welding through use of thermocouple wire [NASA-CASE-MFS-06074] c15 N71-20393
- Circuitry for developing autocorrelation function continuously within signal receiving period [NASA-CASE-XNP-00746] c07 N71-21476
- Single electrical circuit component combining diode, fuse, and blown indicator with elongated tube of heat resistant transparent material [NASA-CASE-XKS-03381] c09 N71-22796
- Design and development of buck-boost voltage regulator circuit with additive or subtractive alternating current impressed on variable direct current source voltage [NASA-CASE-GSC-10735-1] c10 N71-26085
- Design of active RC network capable of operating at high Q values with reduced sensitivity to gain amplification and number of passive components [NASA-CASE-ARC-10042-2] c10 N72-11256
- Precision surface cutter for screen circuit negatives and other microcircuits [NASA-CASE-XLA-09843] c15 N72-27485
- Self-regulating proportionally controlled heating apparatus and technique [NASA-CASE-GSC-11752-1] c77 N75-20140
- Symmetrical odd-modulus frequency divider [NASA-CASE-NPO-13426-1] c33 N75-31330
- Trielectrode capacitive pressure transducer [NASA-CASE-ARC-10711-2] c33 N76-21390
- Frequency discriminator and phase detector circuit [NASA-CASE-NPO-11515-1] c33 N77-13315
- CIRCUIT PROTECTION**
- Use of silicon controlled rectifier shorting circuit to protect thermoelectric generator source from thermal destruction [NASA-CASE-IGS-04808] c03 N69-25146
- Spark gap type protective circuit for fast sensing and removal of overvoltage conditions [NASA-CASE-XAC-08981] c09 N69-39897
- Development of in-line fuse device for protection of electric circuits from excessive currents and voltages [NASA-CASE-MSC-12135-1] c09 N71-12526
- Overcurrent protecting circuit for push-pull transistor amplifiers [NASA-CASE-MSC-12033-1] c09 N71-13531
- Solder coating process for printed copper circuit protection [NASA-CASE-XNP-01599] c09 N71-20705
- Power supply with overload protection for series stage transistor

- [NASA-CASE-XMS-00913] c10 N71-23543  
 Selective plating of etched circuits without removing previous plating  
 [NASA-CASE-XGS-03120] c15 N71-24047  
 Circuit design for failure sensing and protecting low voltage electric generator and power transmission networks  
 [NASA-CASE-GSC-10114-1] c10 N71-27366  
 Sensing circuit for instantaneous reaction to power overloads  
 [NASA-CASE-GSC-10667-1] c10 N71-33129  
 Current protection equipment for saturable core transformers  
 [NASA-CASE-ERC-10075-2] c09 N72-22196  
 Development of process for forming insulating layer between two electrical conductor or semiconductor materials  
 [NASA-CASE-LEW-10489-1] c15 N72-25447  
 Phase protection system for ac power lines  
 [NASA-CASE-MS-C-17832-1] c33 N74-14956  
 Overvoltage protection network  
 [NASA-CASE-ARC-10197-1] c33 N74-17929  
 Shock absorbing mount for electrical components  
 [NASA-CASE-NPO-13253-1] c37 N75-18573  
 Multiple circuit protector device  
 [NASA-CASE-XMS-02744] c33 N75-27249  
 Multi-cell battery protection system  
 [NASA-CASE-LEW-12039-1] c44 N78-14625  
 Fused switch  
 [NASA-CASE-XMS-01244-1] c33 N79-33393  
 Base drive for paralleled inverter systems  
 [NASA-CASE-NPO-14163-1] c33 N81-14220  
 Shielded conductor cable system  
 [NASA-CASE-MS-C-12745-1] c33 N81-27397  
 Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
 [NASA-CASE-NPO-14316-1] c33 N81-33404
- CIRCUITS**  
 Distribution of currents to circuits using electrical adaptor  
 [NASA-CASE-XLA-01288] c09 N69-21470  
 Nondestructive interrogating and state changing circuit for binary magnetic storage elements  
 [NASA-CASE-XGS-00174] c08 N70-34743  
 Electronic circuit system for controlling electric motor speed  
 [NASA-CASE-XMF-01129] c09 N70-38712  
 Starting circuit design for initiating and maintaining arcs in vapor lamps  
 [NASA-CASE-XNP-01058] c09 N71-12540  
 Voltage drift compensation circuit for analog-to-digital converter  
 [NASA-CASE-XNP-04780] c08 N71-19687  
 High voltage divider system for attenuating high voltages to convenient levels suitable for introduction to measuring circuits  
 [NASA-CASE-XLE-02008] c09 N71-21583  
 Negation of magnetic fields produced by thin waferlike circuit elements in space vehicles  
 [NASA-CASE-XGS-03390] c03 N71-23187  
 Circuits for controlling reversible dc motor  
 [NASA-CASE-XNP-07477] c09 N71-26092  
 Device for rapid adjustment and maintenance of temperature in electronic components  
 [NASA-CASE-XNP-02792] c14 N71-28958  
 Pulse generating circuit for operation at very high duty cycles and repetition rates  
 [NASA-CASE-XNP-00745] c10 N71-28960  
 Development of electric circuit for production of different pulse width signals  
 [NASA-CASE-XLA-07788] c09 N71-29139  
 Sensing circuit for instantaneous reaction to power overloads  
 [NASA-CASE-GSC-10667-1] c10 N71-33129  
 Pulsed excitation voltage circuit for strain gage bridge transducers  
 [NASA-CASE-FRC-10036] c09 N72-22200  
 Development of thermal to electric power conversion system using solid state switches of electrical currents to load for Seebeck effect compensation  
 [NASA-CASE-NPO-11388] c03 N72-23048  
 Inductive-capacitive loops as load insensitive power converters  
 [NASA-CASE-ERC-10268] c09 N72-25252  
 Fail-safe multiple transformer circuit configuration  
 [NASA-CASE-NPO-11078] c09 N72-25262
- Precision surface cutter for screen circuit negatives and other microcircuits  
 [NASA-CASE-XLA-09843] c15 N72-27485  
 Bridge-type gain control circuit  
 [NASA-CASE-GSC-10786-1] c10 N72-28241  
 Active tuned circuits for microelectronic construction  
 [NASA-CASE-GSC-11340-1] c10 N72-33230  
 Thermochromic compositions for detecting heat levels in electronic circuits and devices  
 [NASA-CASE-NFO-10764-1] c14 N73-14428  
 Electrodeless lamp circuit driven by induction  
 [NASA-CASE-MFS-21214-1] c09 N73-30181  
 Circuit for detecting initial systole and diastolic notch --- for monitoring arterial pressure  
 [NASA-CASE-LEW-11581-1] c54 N75-13531  
 Peak holding circuit for extremely narrow pulses  
 [NASA-CASE-MS-C-14129-1] c33 N75-18479  
 High voltage distributor  
 [NASA-CASE-GSC-11849-1] c33 N76-16332  
 Circuit for automatic load sharing in parallel converter modules  
 [NASA-CASE-NPO-14056-1] c33 N79-24257  
 Process for preparing high temperature polyimide film laminates  
 [NASA-CASE-LAB-12742-1] c24 N81-12174  
 Method and apparatus for fabricating improved solar cell modules  
 [NASA-CASE-NPO-14416-1] c44 N81-14389  
 Ladder supported ring bar circuit  
 [NASA-CASE-LEW-13570-1] c33 N81-24348  
 Programmable scan/read circuitry for charge coupled device imaging detectors --- for a startracker  
 [NASA-CASE-NPO-15345-1] c33 N81-27403
- CIRCULAR CONES**  
 Optical apparatus for visual detection of roundness and regularity of cone surfaces  
 [NASA-CASE-XMF-00462] c14 N70-34298
- CIRCULAR CYLINDERS**  
 Modulating and controlling intensity of light beam from high temperature source by servocontrolled rotating cylinders  
 [NASA-CASE-XMS-04300] c09 N71-19479
- CIRCULAR POLARIZATION**  
 Left and right hand circular electromagnetic polarization excitation by phase shifter and hybrid networks  
 [NASA-CASE-GSC-10021-1] c09 N71-24595  
 Planar array circularly polarized antenna with wall slot excitation  
 [NASA-CASE-NPO-10301] c07 N72-11148  
 Circularly polarized antenna with linearly polarized pair of elements  
 [NASA-CASE-ERC-10214] c09 N72-31235
- CIRCULAR TUBES**  
 Evacuated displacement compression molding  
 [NASA-CASE-LAB-10782-1] c31 N74-14133
- CIRCULATORS (PHASE SHIFT CIRCUITS)**  
 Development of electromagnetic wave transmission line circulator and application to parametric amplifier circuits  
 [NASA-CASE-XNP-02140] c09 N71-23097  
 Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures  
 [NASA-CASE-NPO-14254-1] c36 N80-18372
- CLAMPING CIRCUITS**  
 Clamped amplifier circuit for horizon scanner enabling amplification and accurate measurement of specified parameters  
 [NASA-CASE-XGS-01784] c10 N71-20782
- CLAMPS**  
 Portable device for aligning surfaces of two adjacent wall or sheet sections for joining at point of junction  
 [NASA-CASE-XNF-01452] c15 N70-41371  
 Hydraulic clamping of sheet stock specimens  
 [NASA-CASE-XLA-05100] c15 N71-17696  
 Inertial component clamping assembly design for spacecraft guidance and control system mounting  
 [NASA-CASE-XMS-02184] c15 N71-20813  
 Design and development of module joint clamping device for application to solar array construction  
 [NASA-CASE-XNP-02341] c15 N71-21531  
 Quick attach mechanism for moving or stationary wires, ropes, or cables



- [NASA-CASE-IPR-05421] c15 N71-22994
- CLAYS**  
White paint production by heating impure aluminum silicate clay having low solar absorptance  
[NASA-CASE-XNP-02139] c18 N71-24184
- CLEAN ROOMS**  
Environmentally controlled suit for working in sterile chamber  
[NASA-CASE-LAR-10076-1] c05 N73-20137
- CLEANERS**  
Device for back purging thrust engines  
[NASA-CASE-XMS-04826] c28 N71-28849  
Noncontaminating swab with absorbent end covered with netted envelope to prevent egress of absorbent material  
[NASA-CASE-MFS-18100] c15 N72-11390
- CLEANING**  
Device for removing plastic dust cover from digital computer disk packs for inspection and cleaning  
[NASA-CASE-LAR-10590-1] c15 N70-26819  
System for sterilizing objects --- cleaning space vehicle systems  
[NASA-CASE-KSC-11085-1] c54 N81-24724
- CLEAR AIR TURBULENCE**  
Development of radiometric system to warn aircraft pilots of region of clear air turbulence along flight path  
[NASA-CASE-ERC-10081] c14 N72-28437  
Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c36 N75-15028  
CAT altitude avoidance system  
[NASA-CASE-NPO-15351-1] c47 N81-16677
- CLIMBING FLIGHT**  
Aircraft indicator for pilot control of takeoff roll, climbout path and verticle flight path in poor visibility conditions  
[NASA-CASE-XLA-00487] c14 N70-40157
- CLINICAL MEDICINE**  
Process for preparing calcium phosphate salts for tooth repair  
[NASA-CASE-ERC-10338] c04 N72-33072  
Measurement of gas production of microorganisms --- using pressure sensors  
[NASA-CASE-LAR-11326-1] c35 N75-33368  
Production of I-123  
[NASA-CASE-LEW-11390-3] c25 N76-29379  
A cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c52 N77-26796  
Automated clinical system for chromosome analysis  
[NASA-CASE-NPO-13913-1] c52 N79-12694  
Medical diagnosis system and method with multispectral imaging --- depth of burns and optical density of the skin  
[NASA-CASE-NPO-14402-1] c52 N81-27783
- CLIPS**  
Low X-ray absorption aneurism clips  
[NASA-CASE-LAR-12650-1] c52 N81-29768
- CLOCKS**  
Time synchronization system for synchronizing clocks at remote locations with master clock using moon reflected coded signals  
[NASA-CASE-NPO-10143] c10 N71-26326  
Circuit for measuring wide range of pulse rates by utilizing high capacity counter  
[NASA-CASE-XNP-06234] c10 N71-27137  
Fault tolerant clock apparatus utilizing a controlled minority of clock elements  
[NASA-CASE-MSC-12531-1] c35 N75-30504  
Clock setter  
[NASA-CASE-LAR-11458-1] c35 N76-16392
- CLOSED CIRCUIT TELEVISION**  
Spacecraft docking and alignment system --- using television camera system  
[NASA-CASE-MSC-12559-1] c18 N76-14186
- CLOSED CYCLES**  
Closed loop radio communication ranging system to determine distance between moving airborne vehicle and fixed ground station  
[NASA-CASE-XNP-01501] c21 N70-41930  
Digital phase-locked loop  
[NASA-CASE-GSC-11623-1] c33 N75-25040  
Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c44 N76-27664
- CLOSED ECOLOGICAL SYSTEMS**  
Potable water reclamation from human wastes in zero-G environment  
[NASA-CASE-XLA-03213] c05 N71-11207  
Spacecraft with artificial gravity and earthlike atmosphere  
[NASA-CASE-LEW-11101-1] c31 N73-32750  
Regenerable device for scrubbing breathable air of CO2 and moisture without special heat exchanger equipment  
[NASA-CASE-MSC-14771-1] c54 N77-32722  
Cell and method for electrolysis of water and anode  
[NASA-CASE-MSC-16394-1] c28 N81-24280
- CLOSURES**  
Design and characteristics of device for closing canisters under high vacuum conditions  
[NASA-CASE-XLA-01446] c15 N71-21528  
Spacesuit torso closure  
[NASA-CASE-ARC-11100-1] c54 N78-31736
- CLOUD CHAMBERS**  
Heat transfer device  
[NASA-CASE-MFS-22938-1] c34 N76-18374
- CLOUD COVER**  
Cloud cover sensor  
[NASA-CASE-NFO-14936-1] c47 N80-26992
- CLOUDS (METEOROLOGY)**  
Development and characteristics of apparatus for measuring intensity of electric field in atmosphere  
[NASA-CASE-KSC-10730-1] c14 N73-32318  
Electric field measuring and display system --- for cloud formations  
[NASA-CASE-KSC-10731-1] c33 N74-27862
- CLUTTER**  
Clutter free synthetic aperture radar correlator  
[NASA-CASE-NFO-14035-1] c32 N78-18266
- CMOS**  
Complementary DMOS-VMOS integrated circuit structure  
[NASA-CASE-GSC-12190-1] c33 N79-12321
- COAL**  
Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c31 N78-24387  
Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c43 N79-25443  
Thickness measurement system  
[NASA-CASE-MFS-23721-1] c31 N79-28370  
Coal-rock interface detector  
[NASA-CASE-MFS-23725-1] c43 N79-31706  
Coal-shale interface detection system  
[NASA-CASE-MFS-23720-2] c43 N80-14423  
Coal-shale interface detector  
[NASA-CASE-MFS-23720-1] c43 N80-23711  
Coal desulfurization --- using iron pentacarbonyl  
[NASA-CASE-NFO-14272-1] c25 N81-33246
- COAL GASIFICATION**  
Solar-heated fluidized bed gasification system  
[NASA-CASE-NPO-15071-1] c44 N80-24747  
Pressure letdown method and device for coal conversion systems  
[NASA-CASE-NPO-15100-1] c28 N81-33306
- COAL LIQUEFACTION**  
Surfactant-assisted liquefaction of particulate carbonaceous substances  
[NASA-CASE-NFO-13904-1] c25 N79-11152
- COAL UTILIZATION**  
Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c44 N78-31527  
Continuous coal processing method  
[NASA-CASE-NPO-13758-2] c31 N81-15154
- COATING**  
Solder coating process for printed copper circuit protection  
[NASA-CASE-XMF-01599] c09 N71-20705  
High thermal emittance black surface coatings and process for applying to metal and metal alloy surfaces used in radiative cooling of spacecraft  
[NASA-CASE-XLA-06199] c15 N71-24875  
Method of forming metal hydride films  
[NASA-CASE-LEW-12083-1] c37 N78-13436  
Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c44 N78-19599  
Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
[NASA-CASE-ARC-11057-1] c27 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] c74 N78-32854
- COATINGS**
- Bonded solid lubricant coatings of calcium fluoride and binder for high temperature stability  
[NASA-CASE-XMS-00259] c18 N70-36400
- Cathode ray tube with coating of phosphor and cobalt oxides  
[NASA-CASE-ERC-10468] c09 N72-20206
- Durable antistatic coating for polymethylmethacrylate  
[NASA-CASE-NPO-13867-1] c27 N78-14164
- Edge coating of flat wires  
[NASA-CASE-XMF-05757-1] c31 N79-21227
- COAXIAL CABLES**
- Design and development of device for cooling inner conductor of coaxial cable  
[NASA-CASE-XNP-09775] c09 N71-20445
- Design and development of electric connectors for rigid and semirigid coaxial cables  
[NASA-CASE-XNP-04732] c09 N71-20E51
- Transducer circuit design with single coaxial cable for input and output connections including incorporation into miniaturized catheter transducer  
[NASA-CASE-ARC-10132-1] c09 N71-24597
- Collapsible antenna boom and coaxial transmission line having inflatable inner tube  
[NASA-CASE-MFS-20068] c07 N71-27191
- Vibration isolation system, using coaxial helical compression springs  
[NASA-CASE-NPO-11012] c15 N72-11391
- Development and characteristics of hermetically sealed coaxial package for containing microwave semiconductor components  
[NASA-CASE-GSC-10791-1] c15 N73-14469
- System for stabilizing cable phase delay utilizing a coaxial cable under pressure  
[NASA-CASE-NPO-15138-1] c33 N74-17927
- Refrigerated coaxial coupling --- for microwave equipment  
[NASA-CASE-NPO-13504-1] c33 N75-30430
- High power RF coaxial switch  
[NASA-CASE-NPO-14229-1] c33 N80-18285
- COAXIAL PLASMA ACCESSORIES**
- Self-energized plasma compressor  
[NASA-CASE-MFS-22145-2] c75 N76-17951
- COBALT ALLOYS**
- High strength, corrosion resistant cobalt-based alloys for aerospace structures  
[NASA-CASE-XLE-00726] c17 N71-15644
- High temperature cobalt-base alloy resistant to corrosion by liquid metals and to sublimation in vacuum environment  
[NASA-CASE-XLE-02991] c17 N71-16025
- High temperature ferromagnetic cobalt-base alloy for electrical power generating equipment  
[NASA-CASE-XLE-03629] c17 N71-23248
- Cobalt-tungsten alloys with superior strength at elevated temperatures  
[NASA-CASE-LEW-10436-1] c17 N73-32415
- COBALT OXIDES**
- Cathode ray tube with coating of phosphor and cobalt oxides  
[NASA-CASE-ERC-10468] c09 N72-20206
- COCKPIT SIMULATORS**
- Controlled visibility device for simulating poor visibility conditions in training pilots in instrument landing and flight procedures  
[NASA-CASE-XFR-04147] c11 N71-10748
- COCKPITS**
- Aircraft canopy lock  
[NASA-CASE-PRC-11065-1] c05 N81-24047
- CODES**
- Design and development of encoder/decoder system to generate binary code which is function of outputs of plurality of bistable elements  
[NASA-CASE-NPO-10342] c10 N71-33407
- Biorthogonal encoder with modular design  
[NASA-CASE-NPO-10629] c08 N72-18184
- Method and apparatus for decoding compatible convolutional codes  
[NASA-CASE-MSC-14070-1] c32 N74-32598
- Digital plus analog output encoder  
[NASA-CASE-GSC-12115-1] c62 N76-31946
- Twin-capacitive shaft angle encoder with analog output signal  
[NASA-CASE-ARC-10897-1] c33 N77-31404
- CODING**
- Description of error correcting methods for use with digital data computers and apparatus for encoding and decoding digital data  
[NASA-CASE-XNP-02748] c08 N71-22749
- Apparatus and digital technique for coding rate data  
[NASA-CASE-LAR-10128-1] c08 N73-20217
- Binary concatenated coding system  
[NASA-CASE-MSC-14082-1] c60 N76-23850
- Differential pulse code modulation  
[NASA-CASE-MSC-12506-1] c32 N77-12239
- COEFFICIENT OF FRICTION**
- Static coefficient test method and apparatus  
[NASA-CASE-GSC-11893-1] c35 N76-31489
- Locking redundant link  
[NASA-CASE-LAR-11900-1] c37 N79-14382
- COENZYMES**
- Bioassay of flavin coenzymes  
[NASA-CASE-GSC-10565-1] c06 N72-25149
- COHERENT ELECTROMAGNETIC RADIATION**
- Design of folded traveling wave maser structure  
[NASA-CASE-XNP-05219] c16 N71-15550
- Development of focused image holography with extended sources  
[NASA-CASE-ERC-10019] c16 N71-15551
- Off-axis coherently pumped laser  
[NASA-CASE-GSC-12592-1] c36 N81-12407
- COHERENT LIGHT**
- Hybrid holographic system using reference, transmitted, and reflected beams simultaneously  
[NASA-CASE-MFS-20074] c16 N71-15565
- Development of apparatus for amplitude modulation of diode laser by periodic discharge of direct current power supply  
[NASA-CASE-XMS-04269] c16 N71-22895
- Coherent light beam device and method for measuring gas density in vacuum chambers  
[NASA-CASE-XER-11203] c14 N71-28994
- COHERENT RADIATION**
- Design and development of multichannel laser remote control system using modulated helium-neon laser as transmitter and light collector as receiving antenna  
[NASA-CASE-LAR-10311-1] c16 N73-16536
- Monitoring atmospheric pollutants with a heterodyne radiometer transmitter-receiver  
[NASA-CASE-NFO-11919-1] c35 N74-11284
- Apparatus for scanning the surface of a cylindrical body  
[NASA-CASE-NFO-11861-1] c36 N74-20009
- Optically detonated explosive device  
[NASA-CASE-NPO-11743-1] c28 N74-27425
- Method and apparatus for generating coherent radiation in the ultra-violet region and above by use of distributed feedback  
[NASA-CASE-NFO-13346-1] c36 N76-29575
- Coherently pulsed laser source  
[NASA-CASE-NPO-15111-1] c36 N80-24602
- COINCIDENCE CIRCUITS**
- Frequency measurement by coincidence detection with standard frequency  
[NASA-CASE-MSC-14649-1] c33 N76-16331
- COLD CATHODES**
- Cold cathode discharge tube with pressurized gas cell for meteoroid detection in space  
[NASA-CASE-LAR-10483-1] c14 N73-32327
- COLD GAS**
- Annular arc accelerator shock tube  
[NASA-CASE-NFO-13528-1] c09 N77-10071
- COLD WELDING**
- Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c37 N81-19455
- COLD WORKING**
- Cold metal hydroforming techniques using epoxy molds for counteracting creep or stretch  
[NASA-CASE-XLE-05641-1] c15 N71-26546
- COLLAPSE**
- Collapsible piston for hypervelocity gun  
[NASA-CASE-MSC-13789-1] c11 N73-32152
- COLLECTION**
- Automatic liquid inventory collecting and dispensing unit  
[NASA-CASE-LAR-11071-1] c35 N75-19611
- Urine collection device  
[NASA-CASE-MSC-16433-1] c52 N78-27750

- Absorbent product and articles made therefrom  
--- for collection of human wastes  
[NASA-CASE-MSC-18223-1] c24 N81-16127
- COLLIMATION**  
Long range laser traversing system  
[NASA-CASE-GSC-11262-1] c36 N74-21091  
Optical alignment device  
[NASA-CASE-ARC-10932-1] c74 N76-22993  
Spatial filter for Q-switched lasers  
[NASA-CASE-LEW-12164-1] c36 N77-32478  
Dual acting slit control mechanism  
[NASA-CASE-LAR-11370-1] c35 N80-28686  
Collimated beam manifold and method for using  
the same --- laser beams  
[NASA-CASE-MFS-25312-1] c74 N80-34251  
Dual laser optical system and method for  
studying fluid flow  
[NASA-CASE-MFS-25315-1] c36 N81-19440
- COLLIMATORS**  
X ray collimating structure for focusing  
radiation directly onto detector  
[NASA-CASE-XHQ-04106] c14 N70-40240  
Collimator for analyzing spatial location of  
near and distant sources of radiation  
[NASA-CASE-MFS-20546-2] c14 N73-30389  
Multiplate focusing collimator --- for scanning  
small near radiation sources  
[NASA-CASE-MFS-20932-1] c35 N75-19616  
Multiprism collimator  
[NASA-CASE-GSC-12608-1] c35 N81-12387
- COLLISION AVOIDANCE**  
Cooperative Doppler radar system for avoiding  
midair collisions  
[NASA-CASE-LAR-10403] c21 N71-11766  
Satellite aided aircraft collision avoidance  
system effective for large number of aircraft  
[NASA-CASE-ERC-10090] c21 N71-24548  
Vertically stacked collinear array of  
independently fed omnidirectional antennas for  
use in collision warning systems on commercial  
aircraft  
[NASA-CASE-LAR-10545-1] c09 N72-21244  
Development and operating principles of  
collision warning system for aircraft accident  
prevention  
[NASA-CASE-HQN-10703] c21 N73-13643  
Development and characteristics of electronic  
signalling system and data processing  
equipment for warning systems to avoid midair  
collisions between aircraft  
[NASA-CASE-LAR-10717-1] c21 N73-30641  
Satellite aided vehicle avoidance system  
[NASA-CASE-ERC-10419-1] c03 N75-30132
- COLLOIDAL GENERATORS**  
Colloidal particle generator for electrostatic  
engine for propelling space vehicles  
[NASA-CASE-XLE-00817] c28 N70-33265
- COLLOIDAL PROPELLANTS**  
Colloidal particle generator for electrostatic  
engine for propelling space vehicles  
[NASA-CASE-XLE-00817] c28 N70-33265  
Low density and low viscosity magnetic  
propellant for use under zero gravity conditions  
[NASA-CASE-XLE-01512] c12 N70-40124  
Electrostatic microthrust propulsion system with  
annular slit colloid thruster  
[NASA-CASE-GSC-10709-1] c28 N71-25213
- COLLOIDS**  
The 2 deg/90 deg laboratory scattering photometer  
--- particulate refractivity in hydrosols  
[NASA-CASE-GSC-12088-1] c74 N78-13674
- COLOR**  
Chemical spot test for identifying magnesium or  
magnesium alloys used in aerospace applications  
[NASA-CASE-LAR-10953-1] c17 N73-27446
- COLOR PHOTOGRAPHY**  
Color photointerpretation of interference colors  
reflected from thin film oil-coated components  
in moving gases for gas flow visualization  
[NASA-CASE-XMP-01779] c12 N71-20815
- COLOR TELEVISION**  
Color television system utilizing single gun  
current sensitive color cathode ray tube  
[NASA-CASE-ERC-10098] c09 N71-28618  
Color television system for allowing monochrome  
television camera to produce color pictures  
[NASA-CASE-MSC-12146-1] c07 N72-17109  
Video tape recorder with scan conversion  
playback for color television signals
- [NASA-CASE-NPO-10166-1] c07 N73-22076  
Scan converting video tape recorder  
[NASA-CASE-NPO-10166-2] c35 N76-16391  
System for producing chroma signals  
[NASA-CASE-MSC-14683-1] c74 N77-18893  
Full color hybrid display for aircraft simulators  
--- landing aids  
[NASA-CASE-ARC-10903-1] c09 N78-18083
- COLOR VISION**  
Color perception tester for testing color code  
perceptiveness of individuals  
[NASA-CASE-KSC-10278] c05 N72-16015
- COLUMNS**  
Lightweight structural columns --- space  
erectable trusses  
[NASA-CASE-LAR-12095-1] c31 N81-25258
- COLUMNS (PROCESS ENGINEERING)**  
Micropacked column for rapid chromatographic  
analysis using low gas flow rates  
[NASA-CASE-XNP-04816] c06 N69-39936
- COLUMNS (SUPPORTS)**  
Beam connector apparatus and assembly  
[NASA-CASE-MFS-25134-1] c31 N81-12283  
Telescoping columns --- parabolic antenna support  
[NASA-CASE-LAR-12195-1] c31 N81-27324
- COMBINATORIAL ANALYSIS**  
Apparatus for computing square roots  
[NASA-CASE-IGS-04768] c08 N71-19437  
Combinational logic for generating gate drive  
signals for phase control rectifiers  
[NASA-CASE-MFS-25208-1] c33 N81-27402
- COMBUSTION**  
Device for detection of combustion light  
preceding gaseous explosions  
[NASA-CASE-LAR-10739-1] c14 N73-16484
- COMBUSTION CHAMBERS**  
Rocket chamber leak test fixture using tubular  
plug  
[NASA-CASE-XPR-09479] c14 N69-27503  
Propellant injectors for rocket combustion  
chambers  
[NASA-CASE-XLE-00103] c28 N70-33241  
Metal ribbon wrapped outer wall for  
regeneratively cooled combustion chamber  
[NASA-CASE-XLE-00164] c15 N70-36411  
Apparatus for cooling and injecting hypergolic  
propellants into combustion chamber of small  
rocket engine  
[NASA-CASE-XLE-00303] c15 N70-36535  
Ignition system for monopropellant combustion  
devices  
[NASA-CASE-XNP-00249] c28 N70-38249  
Fabrication method for lightweight  
regeneratively cooled combustion chamber of  
channel construction  
[NASA-CASE-XLE-00150] c28 N70-41818  
Rocket combustion chamber stability by  
controlling transverse instability during  
propellant combustion  
[NASA-CASE-XLE-04603] c33 N71-21507  
Regenerative cooling system for rocket  
combustion chamber using coolant tubes in  
convergent-divergent nozzle  
[NASA-CASE-XLE-04857] c28 N71-23968  
Rocket engine injector orifice to accommodate  
changes in density, velocity, and pressure,  
thereby maintaining constant mass flow rate of  
propellant into rocket combustion chamber  
[NASA-CASE-XLE-03157] c28 N71-24736  
Coaxial injector for mixing liquid propellants  
within combustion chambers  
[NASA-CASE-NPO-11095] c15 N72-25455  
Swirl can, full-annulus combustion chambers for  
high performance gas turbine engines  
[NASA-CASE-LEW-11326-1] c23 N73-30665  
Method of electroforming a rocket chamber  
[NASA-CASE-LEW-11118-1] c20 N74-32919  
Controlled separation combustor --- airflow  
distribution in gas turbine engines  
[NASA-CASE-LEW-11593-1] c20 N76-14190  
Fuel combustor  
[NASA-CASE-LEW-12137-1] c25 N78-10224  
Direct heating surface combustor  
[NASA-CASE-LEW-11877-1] c34 N78-27357  
Combustor --- low nitrogen oxide formation  
[NASA-CASE-NPO-13958-1] c25 N79-11151  
A system for concurrently delivering a stream of  
powdered fuel and a stream of powdered  
oxidizer to a combustion chamber for a

- reaction motor  
[NASA-CASE-MFS-23904-1] c20 N79-13077
- Heat exchanger --- rocket combustion chambers  
and cooling systems  
[NASA-CASE-LBW-12252-1] c34 N79-13288
- General purpose rocket furnace  
[NASA-CASE-MFS-23460-1] c12 N79-26075
- Reduction of nitric oxide emissions from a  
combustor  
[NASA-CASE-ARC-10814-2] c07 N80-26298
- Diesel engine catalytic combustor system ---  
turbocharging  
[NASA-CASE-LBW-12995-1] c37 N80-26659
- Heat pipes to reduce engine exhaust emissions  
[NASA-CASE-LBW-12590-1] c25 N81-19245
- COMBUSTION CONTROL**  
Pressurized gas injection for burning rate  
control of solid propellants  
[NASA-CASE-XLE-03494] c27 N71-21619
- COMBUSTION EFFICIENCY**  
Fuel injection system for maximum combustion  
efficiency of rocket engines  
[NASA-CASE-XLE-00111] c28 N70-38199
- COMBUSTION PHYSICS**  
Characteristics of solid propellant rocket  
engine with controlled rate of thrust buildup  
operating in vacuum environment  
[NASA-CASE-NPO-11559] c28 N73-24784
- Plasma igniter for internal combustion engine  
[NASA-CASE-NPO-13828-1] c37 N79-11405
- COMBUSTION PRODUCTS**  
Contamination free separation nut eliminating  
combustion products from ambient surroundings  
generated by squib firing  
[NASA-CASE-IGS-01971] c15 N71-15922
- Device for generating and controlling combustion  
products for testing of fire detection system  
[NASA-CASE-GSC-11095-1] c14 N72-10375
- System for minimizing internal combustion engine  
pollution emission  
[NASA-CASE-NPO-13402-1] c37 N76-18457
- Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c44 N78-31527
- Combustor --- low nitrogen oxide formation  
[NASA-CASE-NPO-13958-1] c25 N79-11151
- COMBUSTION STABILITY**  
Rocket combustion chamber stability by  
controlling transverse instability during  
propellant combustion  
[NASA-CASE-XLE-04603] c33 N71-21507
- COMFORT**  
Ride quality meter  
[NASA-CASE-LAR-12882-1] c54 N81-31848
- COMMAND AND CONTROL**  
Multiple rate digital command detection system  
with range clean-up capability  
[NASA-CASE-NPO-13753-1] c32 N77-20289
- Common data buffer system --- communication with  
computational equipment utilized in spacecraft  
operations  
[NASA-CASE-KSC-11048-1] c62 N81-24779
- COMMAND MODULES**  
Energy absorbing crew couch strut for Apollo  
command module  
[NASA-CASE-MSC-12279] c15 N72-17450
- COMMUNICATING**  
Communication between computers using two  
identical communications links  
[NASA-CASE-NPO-11161] c08 N72-25207
- COMMUNICATION**  
Circuitry for developing autocorrelation  
function continuously within signal receiving  
period  
[NASA-CASE-INP-00746] c07 N71-21476
- Superconductive resonant cavity for improved  
signal to noise ratio in communication signal  
[NASA-CASE-MSC-12259-2] c07 N72-33146
- COMMUNICATION CABLES**  
Method of making molded electric connector for  
use with flat conductor cables  
[NASA-CASE-XMF-03498] c15 N71-15586
- Process for making RF shielded cable connector  
assemblies and resulting structures  
[NASA-CASE-GSC-11215-1] c09 N73-28083
- Fiber distributed feedback laser  
[NASA-CASE-NPO-13531-1] c36 N76-24553
- High acceleration cable deployment system  
[NASA-CASE-ARC-11256-1] c37 N79-23432
- High-speed data link for moderate distances and  
noisy environments  
[NASA-CASE-NPO-14152-1] c32 N80-18252
- COMMUNICATION EQUIPMENT**  
Multiplexed communication system design  
including automatic correction of transmission  
errors introduced by frequency spectrum shifts  
[NASA-CASE-INP-01306] c07 N71-20814
- Binary data decoding device for use at receiving  
end of communication channel  
[NASA-CASE-NPO-10118] c07 N71-24741
- Characteristics of data-aided carrier tracking  
loop used for tracking carrier in angle  
modulated communications system  
[NASA-CASE-NPO-11282] c10 N73-16205
- Doppler compensated communication system for  
locating supersonic transport position  
[NASA-CASE-GSC-10087-4] c07 N73-20174
- Differential phase shift keyed communication  
system  
[NASA-CASE-MSC-14065-1] c32 N74-26654
- COMMUNICATION SATELLITES**  
Rectable, inflatable, radio signal reflecting  
passive communication satellite  
[NASA-CASE-XLA-00210] c30 N70-40309
- Development of antenna system for spin  
stabilized communication satellite for  
simultaneous reception and transmission of data  
[NASA-CASE-IGS-02607] c31 N71-23009
- Elimination of tracking occultation problems  
occurring during continuous monitoring of  
interplanetary missions by using Earth  
orbiting communications satellite  
[NASA-CASE-XAC-06029-1] c31 N71-24813
- Satellite radio communication system with remote  
steerable antenna  
[NASA-CASE-INP-02389] c07 N71-28900
- Satellite aided vehicle avoidance system  
[NASA-CASE-ERC-10419-1] c03 N75-30132
- Ultra stable frequency distribution system  
[NASA-CASE-NPO-13836-1] c32 N78-15323
- COMMUTATION**  
High speed low level voltage commutating switch  
[NASA-CASE-XAC-00060] c09 N70-39915
- Elimination of current spikes in buck power  
converters  
[NASA-CASE-NPO-14505-1] c33 N81-19393
- COMPUTATORS**  
Rocket-borne aspect sensor consisting of  
radiation sensor, apertured disk, commutator,  
and counting circuits  
[NASA-CASE-IGS-08266] c14 N69-27432
- Commutator for steering precisely controlled  
bidirectional currents through numerous loads  
by use of magnetic core shift registers  
[NASA-CASE-NPO-10743] c08 N72-21199
- COMPARATOR CIRCUITS**  
Describing frequency discriminator using digital  
logic circuits and supplying single binary  
output signal  
[NASA-CASE-MFS-14322] c08 N71-18692
- Development of pulsed differential comparator  
circuit  
[NASA-CASE-XLE-03804] c10 N71-19471
- Multi-cell battery protection system  
[NASA-CASE-LBW-12039-1] c44 N78-14625
- Window comparator  
[NASA-CASE-PRC-10090-1] c33 N78-18308
- COMPARATORS**  
Photometric flow meter with comparator reference  
means  
[NASA-CASE-IGS-01331] c14 N71-22996
- Characteristics of comparator circuits for  
comparison of binary numbers in information  
processing system  
[NASA-CASE-INP-04819] c08 N71-23295
- High stability buffered phase comparator  
[NASA-CASE-GSC-12645-1] c33 N81-31482
- COMPENSATORS**  
Star image motion compensator using telescope  
for maintaining fixed images  
[NASA-CASE-LAR-10523-1] c14 N72-22444
- Thermal compensator for closed-cycle helium  
refrigerator --- assuring constant temperature  
for an infrared laser diode  
[NASA-CASE-GSC-12168-1] c31 N79-17029
- Apparatus for and method of compensating dynamic  
unbalance  
[NASA-CASE-GSC-12550-1] c37 N81-22358

## COMPONENT RELIABILITY

Reconfiguring redundancy management  
[NASA-CASE-MSC-18498-1] c60 N80-30050

## COMPOSITE MATERIALS

High strength reinforced metallic composites for applications over wide temperature range  
[NASA-CASE-XLE-02428] c17 N70-33288

Method for producing fiber reinforced metallic composites with high strength and elasticity over wide temperature range  
[NASA-CASE-XLE-00231] c17 N70-38198

Composites reinforced with short metal fibers or whiskers and having high tensile strength  
[NASA-CASE-XLE-00228] c17 N70-38490

Unfired-ceramic, highly reflective composite insulation for large launch vehicles  
[NASA-CASE-XMP-01030] c18 N70-41583

Freeze casting of metal ceramic and refractory compound powders into plastic slips  
[NASA-CASE-XLE-00106] c15 N71-16076

Preparation and characteristics of lightweight refractory insulation  
[NASA-CASE-XMP-05279] c18 N71-16124

Flexible composite membrane structure impervious to extremely reactive chemicals in rocket propellants  
[NASA-CASE-XNP-08837] c18 N71-16210

Cryostat for flexure fatigue testing of composite materials  
[NASA-CASE-XMP-02964] c14 N71-17659

Description of method for producing metallic composites reinforced with ceramic and refractory hard metals that are fibered in place  
[NASA-CASE-XLE-03925] c18 N71-22894

Electrically coupled individually encapsulated solar cell matrix  
[NASA-CASE-NPO-11190] c03 N71-34044

Heat treatment and tooling for forming shapes from thermosetting honeycomb core sheets  
[NASA-CASE-NPO-11036] c15 N72-24522

Method for making fiber composites with high strength at high temperatures  
[NASA-CASE-LEW-10424-2-2] c18 N72-25539

Development of thermal compensating structure which maintains uniform length with changes in temperature  
[NASA-CASE-MFS-20433] c15 N72-28496

Bearing material --- composite material with low friction surface for rolling or sliding contact  
[NASA-CASE-LEW-11930-1] c24 N76-22309

Fluid seal for rotating shafts  
[NASA-CASE-LEW-11676-1] c37 N76-22541

Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[NASA-CASE-MSC-14331-1] c27 N76-24405

Method of growing composites of the type exhibiting the Soret effect --- improved structure of eutectic alloy crystals  
[NASA-CASE-MFS-22926-1] c24 N77-27187

Hybrid composite laminate structures  
[NASA-CASE-LEW-12118-1] c24 N77-27188

Honeycomb-laminate composite structure  
[NASA-CASE-ARC-10913-1] c24 N78-15180

High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
[NASA-CASE-NPO-13690-1] c27 N78-19302

Holed composite pyrogen igniter for rocket motors --- solid propellant ignition  
[NASA-CASE-LAR-12018-1] c20 N78-24275

Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-1] c28 N78-24365

Method of making bearing materials --- self-lubricating, oxidation resistant composites for high temperature applications  
[NASA-CASE-LEW-11930-4] c24 N79-17916

Composite seal for turbomachinery --- backings for turbine engine shrouds  
[NASA-CASE-LEW-12131-1] c37 N79-18318

Crystalline polyimides --- reinforcing fibers for high temperature composites and adhesives as well as flame retardation  
[NASA-CASE-LAR-12099-1] c27 N80-16158

Cork-resin ablative insulation for complex surfaces and method for applying the same  
[NASA-CASE-MFS-23626-1] c24 N80-26388

Method of making bearing material  
[NASA-CASE-LEW-11930-3] c24 N80-33482

Tackifier for addition polyimides containing monoethylphthalate  
[NASA-CASE-LAR-12642-1] c27 N81-29229

Resin composition, process for producing the same, product produced therefrom and process for producing said product  
[NASA-CASE-ARC-11331-1] c27 N81-31363

## COMPOSITE PROPELLANTS

Ammonium perchlorate composite propellant with organic Cu/II/ chelate catalytic additive  
[NASA-CASE-LAR-10173-1] c27 N71-14090

Silicone containing solid propellant  
[NASA-CASE-NPO-14477-1] c28 N80-28536

Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c28 N81-15119

## COMPOSITE STRUCTURES

Inflatable honeycomb panel element for lightweight structures usable in space stations and other construction  
[NASA-CASE-XLA-00204] c32 N70-36536

Shrouded composite propulsion system configuration  
[NASA-CASE-XLA-01043] c28 N71-10780

Bonding method in the manufacture of continuous regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c24 N75-30260

Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c24 N77-19170

Composite sandwich lattice structure  
[NASA-CASE-LAR-11898-1] c24 N78-10214

Method of making a composite sandwich lattice structure  
[NASA-CASE-LAR-11898-2] c24 N78-17149

Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety  
[NASA-CASE-ARC-11040-2] c24 N78-27184

Aluminium or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-3] c44 N80-16452

Lightweight structural columns --- space erectable trusses  
[NASA-CASE-LAR-12095-1] c31 N81-25258

## COMPOSITION (PROPERTY)

Moving particle composition analyzer  
[NASA-CASE-GSC-11889-1] c35 N76-16393

## COMPRESSED AIR

Actuator using compressed gas as driving force to control valve handling large liquid flows  
[NASA-CASE-XHQ-01208] c15 N70-35409

## COMPRESSIBILITY

Nozzle extraction process and handlemeter for measuring handle  
[NASA-CASE-LAR-12147-1] c31 N79-11246

## COMPRESSIBLE FLUIDS

Capacitor for measuring density of compressible fluid in liquid, gas, or liquid and gas phases  
[NASA-CASE-XLE-00143] c14 N70-36618

Apparatus for tensile strength testing of specimen by pressurized fluid  
[NASA-CASE-XKS-06250] c14 N71-15600

## COMPRESSING

Method and apparatus for producing very low temperature refrigeration based on gas pressure balance  
[NASA-CASE-XNP-08877] c15 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] c31 N74-18124

Mechanical bonding of metal  
[NASA-CASE-LEW-12941-1] c31 N81-16329

## COMPRESSION LOADS

Pressure transducer for systems for measuring forces of compression  
[NASA-CASE-NPO-10832] c14 N72-21405

Solid medium thermal engine  
[NASA-CASE-ARC-10461-1] c44 N74-33379

Locking redundant link  
[NASA-CASE-LAR-11900-1] c37 N79-14382

Fixture for environmental exposure of structural materials under compression  
[NASA-CASE-LAR-12602-1] c35 N81-19429

## COMPRESSION RATIO

Automatic compression adjusting mechanism for internal combustion engines  
[NASA-CASE-MSC-18807-1] c37 N81-29442

## COMPRESSION TESTS

Test equipment to prevent buckling of small diameter specimens during compression tests

- [NASA-CASE-LAR-10440-1] c14 N73-32323  
Anti-buckling fatigue test assembly --- for  
subjecting metal specimen to tensile and  
compressive loads at constant temperature  
[NASA-CASE-LAR-10426-1] c09 N74-19528  
Compression test fixture  
[NASA-CASE-MSC-18723-1] c39 N81-24470
- COMPRESSOR BLADES**  
Process for welding compressor and turbine  
blades to rotors and discs of jet engines  
[NASA-CASE-LEW-10533-1] c15 N73-28515
- COMPRESSORS**  
Thermal pump-compressor for converting solar  
energy  
[NASA-CASE-XLA-00377] c33 N71-17610  
Self-energized plasma compressor  
[NASA-CASE-MFS-22145-2] c75 N76-17551  
Gas compression apparatus  
[NASA-CASE-MSC-14757-1] c35 N78-10428  
Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-2] c37 N80-26658  
A cycling Joule Thomson refrigerator  
[NASA-CASE-NPO-15251-1] c31 N81-19344
- COMPUTATION**  
Apparatus for computing square roots  
[NASA-CASE-XGS-04768] c08 N71-19437  
Ruler for making navigational computations  
[NASA-CASE-XNP-01458] c04 N78-17631
- COMPUTER COMPONENTS**  
Computer circuit performing both counting and  
shifting logic operations also capable of  
miniaturization and integration in basic  
circuits  
[NASA-CASE-XNP-01753] c08 N71-22897  
Binary to binary coded decimal converter  
[NASA-CASE-GSC-12044-1] c60 N78-17691  
Computer circuit card puller  
[NASA-CASE-FRC-11042-1] c37 N80-20589  
Memory-based parallel data output controller  
[NASA-CASE-GSC-12447-1] c60 N80-21987  
Control means for a solid state crossbar switch  
[NASA-CASE-NPO-15066-1] c33 N80-33679
- COMPUTER DESIGN**  
Two-dimensional radiant energy array computers  
and computing devices  
[NASA-CASE-GSC-11839-1] c60 N77-14751
- COMPUTER GRAPHICS**  
System for digitizing graphic displays  
[NASA-CASE-NPO-10745] c08 N72-22164
- COMPUTER NETWORKS**  
High-speed data link for moderate distances and  
noisy environments  
[NASA-CASE-NPO-14152-1] c32 N80-18252  
Common data buffer system --- communication with  
computational equipment utilized in spacecraft  
operations  
[NASA-CASE-KSC-11048-1] c62 N81-24779
- COMPUTER PROGRAMMING**  
Encoders designed to generate comma free  
biorthogonal Reed-Muller type code comprising  
conversion of 64 6-bit words into 64 32-bit  
data for communication purposes  
[NASA-CASE-NPO-10595] c10 N71-25917  
Priority interrupt system --- comprised of four  
registers  
[NASA-CASE-NPO-13067-1] c60 N76-18800
- COMPUTER PROGRAMS**  
Self testing and repairing computer comprising  
control and diagnostic unit and rollback  
points for error correction  
[NASA-CASE-NPO-10567] c08 N71-24633  
Development of computer program for estimating  
reliability of self-repair and fault-tolerant  
systems with respect to selected system and  
mission parameters  
[NASA-CASE-NPO-13086-1] c15 N73-12495  
Development of flight simulator system to show  
position of joystick displacement  
[NASA-CASE-NPO-11497] c08 N73-25206
- COMPUTER STORAGE DEVICES**  
Magnetic matrix memory system for nondestructive  
reading of information contained in matrix  
[NASA-CASE-XNP-05835] c08 N71-12504  
Binary sequence detector with few memory  
elements and minimized logic circuit complexity  
[NASA-CASE-XNP-05415] c08 N71-12505  
Pulsed magnetic core memory element with  
blocking oscillator feedback for interrogation  
without loss of digital information
- [NASA-CASE-XGS-03303] c08 N71-18595  
Reliable magnetic core circuit apparatus with  
application in selection matrices for digital  
memories  
[NASA-CASE-XNP-01318] c10 N71-23033  
Time division multiplexed telemetry transmitting  
system controlled by programmed memory  
[NASA-CASE-GSC-10131-1] c07 N71-24624  
Serial digital decoder design with square  
circuit matrix and serial memory storage units  
[NASA-CASE-NPO-10150] c08 N71-24650  
Digital memory system with multiple switch cores  
for driving each word location  
[NASA-CASE-XNP-01466] c10 N71-26434  
Redundant memory for enhanced reliability of  
digital data processing system  
[NASA-CASE-GSC-10564] c10 N71-29135  
Memory device employing semiconductor and  
ferroelectric properties of single crystal  
barium titanate  
[NASA-CASE-ERC-10307] c08 N72-21198  
Shared memory for a fault-tolerant computer  
[NASA-CASE-NPO-13139-1] c60 N76-21914
- COMPUTER SYSTEMS DESIGN**  
Adaptive voting computer system  
[NASA-CASE-MSC-13932-1] c62 N74-14920  
Computer interface system  
[NASA-CASE-NPO-13428-1] c60 N77-12721
- COMPUTER TECHNIQUES**  
Automated system for identifying traces of  
organic chemical compounds in aqueous solutions  
[NASA-CASE-NPO-13063-1] c25 N76-18245  
Apparatus for determining thermophysical  
properties of test specimens  
[NASA-CASE-LAR-11883-1] c09 N77-27131  
Computerized system for translating a torch head  
[NASA-CASE-MFS-23620-1] c37 N79-10421  
Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c34 N81-26402
- COMPUTERIZED SIMULATION**  
Integrated time shared instrumentation display  
for aerospace vehicle simulators  
[NASA-CASE-XLA-01952] c08 N71-12507  
Microcomputerized electric field meter  
diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c35 N78-28411  
Simulator method and apparatus for practicing  
the mating of an observer-controlled object  
with a target  
[NASA-CASE-MFS-23052-2] c74 N79-13855
- COMPUTERS**  
Telemetry data unit to form multibit words for  
use between demodulator and computer  
[NASA-CASE-XNP-09225] c09 N69-24333  
Data compression processor for monitoring analog  
signals by sampling procedure  
[NASA-CASE-NPO-10068] c08 N71-19288  
Communication between computers using two  
identical communications links  
[NASA-CASE-NPO-11161] c08 N72-25207
- CONCAVITY**  
Concave grating spectrometer for use in near and  
vacuum ultraviolet regions  
[NASA-CASE-XGS-01036] c14 N70-40003
- CONCENTRATORS**  
Concentrator device for controlling direction of  
solar energy onto energy converters  
[NASA-CASE-XLE-01716] c09 N70-40234  
Thermostatically controlled non-tracking type  
solar energy concentrator  
[NASA-CASE-NPO-13497-1] c44 N76-14602  
Three-dimensional tracking solar energy  
concentrator and method for making same  
[NASA-CASE-NPO-13736-1] c44 N77-32583  
Non-tracking solar energy collector system  
[NASA-CASE-NPO-13817-1] c44 N79-11471  
Solar cell module  
[NASA-CASE-NPO-14467-1] c44 N79-31753  
Solar concentrator  
[NASA-CASE-MFS-23727-1] c44 N80-14473  
Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c44 N81-17518
- CONCENTRIC SPHERES**  
Method and apparatus for producing concentric  
hollow spheres --- inertial confinement fusion  
targets  
[NASA-CASE-NPO-14596-1] c31 N81-33319
- CONDENSATES**  
Apparatus for determining volatile condensable

- material present in polymeric products  
[NASA-CASE-XNP-09699] c06 N71-24607
- Condensate removal device for heat exchanger  
[NASA-CASE-MSC-14143-1] c77 N75-26139
- CONDENSERS (LIQUIFIERS)**
- Condenser-separator for dehumidifying air  
utilizing sintered metal surface  
[NASA-CASE-XLA-08645] c15 N69-21465
- Condensate removal device for heat exchanger  
[NASA-CASE-MSC-14143-1] c77 N75-20139
- CONDENSING**
- Preparation of heterocyclic block copolymer  
omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c27 N79-22300
- CONDUCTING FLUIDS**
- Multiducted electromagnetic pump for conductive  
liquids  
[NASA-CASE-NPO-10755] c15 N71-27084
- Internally supported flexible duct joint ---  
device for conducting fluids in high pressure  
systems  
[NASA-CASE-MFS-19193-1] c37 N75-19686
- CONDUCTIVE HEAT TRANSFER**
- Measuring conductive heat flow and thermal  
conductivity of laminar gas stream in  
cylindrical plug to simulate atmospheric reentry  
[NASA-CASE-XLB-00266] c14 N70-34156
- Space suit body heat exchanger design composed  
of thermal conductance yarn and liquid coolant  
loops  
[NASA-CASE-XMS-09571] c05 N71-19439
- Compact pulsed laser having improved heat  
conductance  
[NASA-CASE-NPO-13147-1] c36 N77-25502
- Automatic thermal switch --- Space Shuttle  
equipment bay temperature control  
[NASA-CASE-GSC-12415-1] c34 N80-18338
- Automatic thermal switch  
[NASA-CASE-GSC-12553-1] c33 N80-21671
- CONDUCTORS**
- Support for flexible conductor cable between  
drawers or racks holding electronic equipment  
and cabinet assembly housing drawers or racks  
[NASA-CASE-XMP-07587] c15 N71-18701
- Method for making conductors for ferrite memory  
arrays --- from pre-formed metal conductors  
[NASA-CASE-LAR-10994-1] c24 N75-13032
- CONES**
- Black body radiometer design with temperature  
sensing and cavity heat source cone winding  
[NASA-CASE-XNP-05701] c14 N71-26475
- CONFINEMENT**
- Observation window for internal gas confining  
chamber  
[NASA-CASE-NPO-16890] c11 N73-12265
- CONICAL BODIES**
- Conical valve plug for use with reactive  
cryogenic fluids  
[NASA-CASE-XLB-00715] c15 N70-34859
- Conical reflector antenna with feed  
approximating line source  
[NASA-CASE-NPO-10303] c07 N72-22127
- Characteristics of microwave antenna with  
conical reflectors to generate plane wave front  
[NASA-CASE-NPO-11661] c07 N73-14130
- CONICAL SCANNING**
- Conical scan tracking system employing a large  
antenna  
[NASA-CASE-NPO-14009-1] c32 N79-13214
- CONICAL SHELLS**
- Capacitance measuring device for determining  
flare accuracy on tapered tubes  
[NASA-CASE-XKS-03495] c14 N69-39785
- Foldable, double concave and parabolic reflector  
system for solar ray concentration  
[NASA-CASE-XLA-04622] c03 N70-41580
- Rotary spindle lathe attachments for machining  
geometrical cones  
[NASA-CASE-XMS-04292] c15 N71-22722
- CONJUGATES**
- Phase conjugation method and apparatus for an  
active retrodirective antenna array  
[NASA-CASE-NPO-13641-1] c32 N79-24210
- CONNECTORS**
- Expanding and contracting connector strip for  
solar cell array of Nimbus satellite  
[NASA-CASE-XGS-01395] c03 N69-21539
- Design and development of quick release connector  
[NASA-CASE-XLA-01141] c15 N71-13789
- Development and characteristics of strainer for  
flared tube fitting  
[NASA-CASE-XLA-05056] c15 N72-11389
- Process for making RF shielded cable connector  
assemblies and resulting structures  
[NASA-CASE-GSC-11215-1] c09 N73-28083
- Low heat leak connector for cryogenic system  
[NASA-CASE-XLB-02367-1] c31 N79-21225
- CONSCIOUSNESS**
- Development of apparatus and method for  
quantitatively measuring brain activity as  
automatic indication of sleep state and level  
of consciousness  
[NASA-CASE-MSC-13282-1] c05 N71-24729
- CONSOLES**
- Telephone multiline signaling using common  
signal pair  
[NASA-CASE-KSC-11023-1] c32 N79-23310
- CONSTANTS**
- Spring operated accelerator and constant force  
spring mechanism therefor  
[NASA-CASE-ARC-10898-1] c35 N77-18417
- CONSTRAINTS**
- Three stage motion restraining mechanism for  
restraining and damping three dimensional  
vibrational movement of gimballed package  
during launch of spacecraft  
[NASA-CASE-GSC-10306-1] c15 N71-24694
- Cable guide and restraint device for reefing  
tubes in uniform manner  
[NASA-CASE-LAR-10129-1] c15 N73-25512
- Development of restraint system for securing  
personnel to ergometer while exercising under  
weightless conditions  
[NASA-CASE-MFS-21046-1] c14 N73-27377
- Reefing system  
[NASA-CASE-LAR-10129-2] c37 N74-20063
- Restraining mechanism  
[NASA-CASE-MSC-13054] c54 N78-17677
- Spine immobilization apparatus  
[NASA-CASE-ARC-11167-1] c52 N81-25662
- CONSTRUCTION**
- Beam connector apparatus and assembly  
[NASA-CASE-MFS-25134-1] c31 N81-12283
- CONSTRUCTION MATERIALS**
- Apparatus and method of assembling building  
blocks by folding pre-cut flat sheets of  
material during on-site construction  
[NASA-CASE-MSC-12233-1] c15 N72-25454
- Development of construction block in form of  
container folded from flat sheet and filled  
with solid material for architectural purposes  
[NASA-CASE-MSC-12233-2] c32 N73-13921
- CONTACT POTENTIALS**
- Lightweight, rugged, inexpensive satellite  
battery for producing electrical power from  
ionosphere using electrodes with different  
contact potentials  
[NASA-CASE-XGS-01593] c03 N70-35408
- CONTAINERLESS MELTS**
- Method of crystallization --- in gravity-free  
environments  
[NASA-CASE-MFS-23001-1] c76 N77-32919
- Containerless melting and rapid solidification  
apparatus and method  
[NASA-CASE-MFS-25305-1] c35 N81-16427
- Method and apparatus for supercooling and  
solidifying substances --- containerless melts  
and space processing  
[NASA-CASE-MFS-25242-1] c35 N81-24413
- CONTAINERS**
- Manufacture of fluid containers from fused  
coated polyester sheets having resealable septum  
[NASA-CASE-NPO-10123] c15 N71-24835
- Method for locating leaks in hermetically sealed  
containers  
[NASA-CASE-ERC-10045] c15 N71-24910
- Quantitative liquid measurements in container by  
resonant frequencies  
[NASA-CASE-XNP-02500] c18 N71-27397
- CONTAMINANTS**
- Fluid transferring system design for purging  
toxic, corrosive, or noxious fluids and fumes  
from materials handling equipment for  
cleaning and accident prevention  
[NASA-CASE-XMS-01905] c12 N71-21089
- CONTAMINATION**
- Emission spectroscopy method for contamination  
monitoring of inert gas metal arc welding

- [NASA-CASE-IXF-02039] c15 N71-15671  
Contamination free separation nut eliminating  
combustion products from ambient surroundings  
generated by squib firing
- [NASA-CASE-XGS-01971] c15 N71-15922  
Apparatus and process for volumetrically  
dispensing reagent quantities of volatile  
chemicals for small batch reactions
- [NASA-CASE-NPO-10070] c15 N71-27372  
Portable tester for monitoring bacterial  
contamination by adenosine triphosphate light  
reaction
- [NASA-CASE-GSC-10879-1] c14 N72-25413  
Biocontamination and particulate detection system
- [NASA-CASE-NPO-13953-1] c35 N79-28527
- CONTINUOUS RADIATION**
- CW ultrasonic bolt tensioning monitor
- [NASA-CASE-LAR-12016-1] c39 N78-15512  
Pseudo continuous wave instrument --- ultrasonics
- [NASA-CASE-LAR-12260-1] c35 N79-10390  
Low-frequency radio navigation system
- [NASA-CASE-NPO-15264-1] c04 N81-22036
- CONTINUOUS WAVE LASERS**
- High power laser apparatus and system
- [NASA-CASE-XLE-2529-2] c36 N75-27364  
Continuous plasma laser --- method and apparatus  
for producing intense, coherent, monochromatic  
light from low temperature plasma
- [NASA-CASE-XNP-04167-3] c36 N77-19416  
Coherently pulsed laser source
- [NASA-CASE-NPO-15111-1] c36 N80-24602  
Stark effect spectrophone for continuous  
absorption spectra monitoring --- a technique  
for gas analysis
- [NASA-CASE-NPO-15102-1] c25 N81-25159
- CONTINUOUS WAVE RADAR**
- Phase locked loop with sideband rejecting  
properties in continuous wave tracking radar
- [NASA-CASE-XNP-02723] c67 N70-41680  
FM/CW radar system
- [NASA-CASE-MFS-22234-1] c32 N79-10264
- CONTOURS**
- Describing device for surveying contour of  
surface using X-Y plctter and traveling  
transducer
- [NASA-CASE-XLA-08646] c14 N71-17586  
Processing system for semiperiodic electrical  
signals to produce real time contoured display
- [NASA-CASE-MSC-13407-1] c10 N72-20225  
Variable contour securing system
- [NASA-CASE-MSC-16270-1] c37 N78-27423  
Device for measuring the contour of a surface
- [NASA-CASE-LAR-11869-1] c74 N78-27904  
Contour detector and data acquisition system for  
the left ventricular outline
- [NASA-CASE-ARC-10985-1] c52 N79-10724  
Contour measurement system
- [NASA-CASE-MFS-23726-1] c43 N79-26439  
Cork-resin ablative insulatica for complex  
surfaces and method for applying the same
- [NASA-CASE-MFS-23626-1] c24 N80-26388
- CONTROL**
- Valve assembly for controlling simultaneously  
more than one fluid flow, and having stable  
qualities under loads
- [NASA-CASE-XMS-05890] c09 N71-23191  
Control system for pressure balance device used  
in calibrating pressure gages
- [NASA-CASE-IXF-04134] c14 N71-23755  
Failure detection and control means for improved  
drift performance of a gimballed platform system
- [NASA-CASE-MFS-23551-1] c04 N76-26175  
Control means for a solid state crossbar switch
- [NASA-CASE-NPO-15066-1] c33 N80-33679  
Power factor control system for ac induction  
motors
- [NASA-CASE-MFS-23988-1] c33 N81-27395
- CONTROL BOARDS**
- Ionization control system design for monitoring  
separately located ion gage pressures on  
vacuum chambers
- [NASA-CASE-XLE-00787] c14 N71-21090
- CONTROL DATA (COMPUTERS)**
- Computer interface system
- [NASA-CASE-NPO-13428-1] c60 N77-12721
- CONTROL EQUIPMENT**
- Stepping motor control apparatus exciting  
windings in proper time sequence to cause  
motor to rotate in either direction
- [NASA-CASE-GSC-10366-1] c10 N71-18772  
Voltage drift compensation circuit for  
analog-to-digital converter
- [NASA-CASE-XNP-04780] c08 N71-19687  
Development of attitude control system for  
vertical takeoff aircraft using reaction  
nozzles displaced from various axes of aircraft
- [NASA-CASE-XAC-08972] c02 N71-20570  
Device for controlling rotary potentiometer  
mounted on aircraft steering wheel or aileron  
control
- [NASA-CASE-XAC-10019] c15 N71-23809  
Controlled release device for use in launching  
rockets or missiles
- [NASA-CASE-XKS-03338] c15 N71-24043  
Circuits for controlling reversible dc motor
- [NASA-CASE-IXP-07477] c09 N71-26092  
Digital memory system with multiple switch cores  
for driving each word location
- [NASA-CASE-IXP-01466] c10 N71-26434  
Fluid control jet amplifiers
- [NASA-CASE-XLE-09341] c12 N71-28741  
System for control of variable signal generator
- [NASA-CASE-NFO-11064] c07 N72-11150  
Solid state remote circuit selector switching  
circuit
- [NASA-CASE-LEW-10387] c09 N72-22201  
Development of device for simulating charge and  
discharge cycle of battery in synchronous orbit
- [NASA-CASE-GSC-11211-1] c03 N72-25020  
Bridge-type gain control circuit
- [NASA-CASE-GSC-10786-1] c10 N72-28241  
Interferometer prism and control system for  
precisely determining direction to remote  
light source
- [NASA-CASE-ARC-10278-1] c14 N73-25463  
Digital controller for a Baum folding machine  
--- providing automatic counting and machine  
shutoff
- [NASA-CASE-LAR-10688-1] c37 N74-21056  
Flow control valve --- for high temperature fluids
- [NASA-CASE-NFO-11951-1] c37 N74-21065  
Variable ratio mixed-mode bilateral master-slave  
control system for shuttle remote manipulator  
system
- [NASA-CASE-MSC-14245-1] c18 N75-27041  
Anthropomorphic master/slave manipulator system
- [NASA-CASE-ARC-10756-1] c54 N77-32721  
Power factor control system for AC induction  
motors
- [NASA-CASE-MFS-23280-1] c33 N78-10376  
Variable cycle gas turbine engines
- [NASA-CASE-LEW-12916-1] c37 N78-17384  
Control for nuclear thermionic power source
- [NASA-CASE-NPO-13114-2] c73 N78-28913  
Illumination control apparatus for compensating  
solar light
- [NASA-CASE-KSC-11010-1] c74 N79-12890  
Means for controlling aerodynamically induced  
twist --- equipment to control twisting of  
slender wings due to aerodynamic loads
- [NASA-CASE-LAR-12175-1] c05 N80-16055  
Dual acting slit control mechanism
- [NASA-CASE-LAR-11370-1] c35 N80-28686  
Pneumatic inflatable end effector
- [NASA-CASE-MFS-23696-1] c54 N81-26718  
Method and apparatus for precision control of  
radiometer
- [NASA-CASE-NPO-15398-1] c35 N81-33449
- CONTROL ROCKETS**
- Unit for generating thrust from catalytic  
decomposition of hydrogen peroxide, for high  
altitude aircraft or spacecraft reaction control
- [NASA-CASE-XMS-00583] c28 N70-38504
- CONTROL RODS**
- Manual control mechanism for adjusting control  
rod to null position
- [NASA-CASE-XLA-01808] c15 N71-20740
- CONTROL SIMULATION**
- Helmet weight simulator
- [NASA-CASE-LAR-12320-1] c54 N81-27806
- CONTROL STABILITY**
- Apparatus for sensor failure detection and  
correction in a gas turbine engine control  
system
- [NASA-CASE-LEW-12907-2] c07 N81-19115
- CONTROL SURFACES**
- Conical valve plug for use with reactive  
cryogenic fluids



[NASA-CASE-XLE-00715] c15 N70-34859  
 Attitude control system for spacecraft based on conversion of incident solar radiation on movable control surfaces into mechanical torques  
 [NASA-CASE-INP-02982] c31 N70-41855  
 Vortex-lift roll-control device  
 [NASA-CASE-LAR-11868-2] c08 N79-14108  
 Aerodynamic side-force alleviator means  
 [NASA-CASE-LAR-12326-1] c02 N81-14568  
 Thermal barrier pressure seal --- shielding junctions between spacecraft control surfaces and structures  
 [NASA-CASE-MS-C-18134-1] c37 N81-15363

**CONTROL UNITS (COMPUTERS)**  
 Self testing and repairing computer comprising control and diagnostic unit and rollback points for error correction  
 [NASA-CASE-NPO-10567] c08 N71-24633

**CONTROL VALVES**  
 Electromechanical actuator and its use in rocket thrust control valve  
 [NASA-CASE-INP-05975] c15 N69-23185  
 Multiple orifice fluid flow control valve to provide different flow patterns  
 [NASA-CASE-BRC-10208] c15 N70-10867  
 Conical valve plug for use with reactive cryogenic fluids  
 [NASA-CASE-XLE-00715] c15 N70-34859  
 Control valve and coaxial variable injector for controlling bipropellant mixture ratio and flow  
 [NASA-CASE-INP-09702] c15 N71-17654  
 Control valve for switching main stream of fluid from one stable position to another by means of electrohydrodynamic forces  
 [NASA-CASE-NPO-10416] c12 N71-27332  
 Force balanced throttle valve for fuel control in rocket engines  
 [NASA-CASE-NPO-10808] c15 N71-27432  
 Dual stage check valve for cryogenic supply systems used in space flight environmental control system  
 [NASA-CASE-MS-C-13587-1] c15 N73-30459  
 Airflow control system for supersonic inlets  
 [NASA-CASE-LEW-11188-1] c02 N74-20646  
 Ultrasonically bonded valve assembly  
 [NASA-CASE-NPO-13360-1] c37 N75-25185  
 Pressure modulating valve  
 [NASA-CASE-MS-C-14905-1] c37 N77-28487  
 Fluid valve assembly  
 [NASA-CASE-MS-C-12731-1] c37 N78-25426  
 Flow diverter valve and flow diversion method  
 [NASA-CASE-HQN-00573-1] c37 N79-33468  
 Quartz ball valve  
 [NASA-CASE-NPO-14473-1] c37 N80-23654  
 Pressure control valve --- inflating flexible bladders  
 [NASA-CASE-ARC-11251-1] c37 N81-17433  
 Electrical servo actuator bracket --- fuel control valves on jet engines  
 [NASA-CASE-FRC-11044-1] c37 N81-33483

**CONTROLLED ATMOSPHERES**  
 Rectangular electric conductors for conductor cables to withstand spacecraft vibration and controlled atmosphere  
 [NASA-CASE-MFS-14741] c09 N70-20737  
 High voltage pulse generator for testing flash and ignition limits of nonmetallic materials in controlled atmospheres  
 [NASA-CASE-MS-C-12178-1] c09 N71-13518  
 System for continuous monitoring of exhalations, weighing, and cage cleaning for animal exposed to controlled atmosphere for toxic study  
 [NASA-CASE-XAC-05333] c11 N71-22875

**CONTROLLERS**  
 Unitary three-axis controller for flight vehicles within or outside atmosphere  
 [NASA-CASE-IFR-00181] c21 N70-33279  
 Two axis flight controller with potentiometer control shafts directly coupled to rotatable ball members  
 [NASA-CASE-IFR-04104] c03 N70-42073  
 Hand controller operable about three respectively perpendicular axes and capable of actuating signal generators for attitude control devices  
 [NASA-CASE-XMS-07487] c15 N71-23255  
 Solid state controller three axes controller  
 [NASA-CASE-MS-C-12394-1] c08 N74-10942

Wide power range microwave feedback controller  
 [NASA-CASE-GSC-12146-1] c33 N78-32340  
 Active nutation controller  
 [NASA-CASE-GSC-12273-1] c35 N80-21719  
 Phase-angle controller for Stirling engines  
 [NASA-CASE-NPO-14388-1] c37 N81-17432  
 Controller for computer control of brushless dc motors --- automobile engines  
 [NASA-CASE-NPO-13970-1] c33 N81-20352  
 Method and apparatus for precision control of radiometer  
 [NASA-CASE-NPO-15398-1] c35 N81-33449

**CONVECTIVE FLOW**  
 Design and development of device to prevent geysering during convective circulation of cryogenic fluids  
 [NASA-CASE-KSC-10615] c15 N73-12486

**CONVECTIVE HEAT TRANSFER**  
 Thin film gauge --- for measuring convective heat transfer rates along test surfaces in wind tunnels  
 [NASA-CASE-NPO-10617-1] c35 N74-22095

**CONVERGENCE**  
 Electrical device for developing converging spherical shock waves  
 [NASA-CASE-MFS-20890] c14 N72-22439

**CONVERGENT NOZZLES**  
 Nozzle extraction process and handmeter for measuring handle  
 [NASA-CASE-LAR-12147-1] c31 N79-11246

**CONVERGENT-DIVERGENT NOZZLES**  
 Gimbaled partially submerged nozzle for solid propellant rocket engines for providing directional control  
 [NASA-CASE-INP-01544] c28 N70-34162  
 Regenerative cooling system for rocket combustion chamber using coolant tubes in convergent-divergent nozzle  
 [NASA-CASE-XLE-04857] c28 N71-23968  
 Aircraft engine nozzle  
 [NASA-CASE-ARC-10977-1] c07 N80-32392

**CONVERTERS**  
 Scan converting video tape recorder  
 [NASA-CASE-NPO-10166-2] c35 N76-16391

**CONVEYORS**  
 System for refurbishing and processing parachutes  
 [NASA-CASE-KSC-11042-1] c02 N81-14967  
 System and method for refurbishing and processing parachutes --- monorial conveyor system  
 [NASA-CASE-KSC-11042-2] c02 N81-26073

**COOLING**  
 Microwave power receiving antenna solving heat dissipation problems by construction of elements as heat pipe devices  
 [NASA-CASE-MFS-20333] c09 N71-13486  
 Dissipative voltage regulator system for minimizing heat dissipation  
 [NASA-CASE-GSC-10891-1] c10 N71-26626  
 Cooling and radiation protection of ruby lasers using copper sulfate solution in alcohol  
 [NASA-CASE-MFS-20180] c16 N72-12440  
 Compact pulsed laser having improved heat conductance  
 [NASA-CASE-NPO-13147-1] c36 N77-25502  
 Heating and cooling system --- for fatigue test specimens  
 [NASA-CASE-LAR-12393-1] c39 N80-25693  
 Heat pipe cooled probe  
 [NASA-CASE-LAR-12588-1] c44 N81-24525

**COOLING SYSTEMS**  
 Automatic thermal switch for improving efficiency of cooling gases below 40 K  
 [NASA-CASE-INP-03796] c23 N71-15467  
 Differential thermopile for measuring cooling water temperature rise  
 [NASA-CASE-XAC-00812] c14 N71-15598  
 Electric power system with circulatory liquid coolant cooling system  
 [NASA-CASE-MFS-14114-2] c09 N71-24807  
 Portable cryogenic cooling system design including turbine pump, cooling chamber, and atomizer  
 [NASA-CASE-NPO-10467] c23 N71-26654  
 Development and characteristics of natural circulation radiator for use with nuclear power plants installed in lunar space stations  
 [NASA-CASE-XHQ-03673] c33 N71-29046

- Development and characteristics of cooling system to maintain temperature of rack mounted electronic modules  
[NASA-CASE-MSC-12389] c33 N71-29052
- Development of method for cooling high temperature wall members with cooling medium having high heat absorption capability  
[NASA-CASE-HQN-00938] c33 N71-29053
- Apparatus for liquid spray cooling of turbine blades  
[NASA-CASE-XLE-00027] c33 N71-29152
- Radial heat flux transformer for use in heating and cooling processes  
[NASA-CASE-NPO-10828] c33 N72-17948
- Light shield and cooling apparatus --- high intensity ultraviolet lamp  
[NASA-CASE-LAR-10089-1] c34 N74-23066
- Refrigerated coaxial coupling --- for microwave equipment  
[NASA-CASE-NPO-13504-1] c33 N75-30430
- Rocket chamber and method of making  
[NASA-CASE-LEW-11118-2] c20 N76-14191
- Tubular sublimatory evaporator heat sink  
[NASA-CASE-ARC-10912-1] c34 N77-19353
- Arc control in compact arc lamps  
[NASA-CASE-NPO-10870-1] c33 N77-22386
- Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12830-1] c07 N77-23106
- Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12321-1] c37 N78-10467
- Closed loop spray cooling apparatus --- for particle accelerator targets  
[NASA-CASE-LEW-11981-1] c31 N78-17237
- Multistation refrigeration system  
[NASA-CASE-NPO-13839-1] c31 N78-25256
- Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c54 N78-32721
- Heat exchanger --- rocket combustion chambers and cooling systems  
[NASA-CASE-LEW-12252-1] c34 N79-13288
- Closed loop spray cooling apparatus  
[NASA-CASE-LEW-11981-2] c34 N79-20336
- Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c45 N80-14579
- Heat exchanger and method of making  
[NASA-CASE-LEW-12441-3] c44 N81-24519
- Heat pipe cooled probe  
[NASA-CASE-LAR-12588-1] c44 N81-24525
- Cooling system for high speed aircraft  
[NASA-CASE-LAR-12406-1] c05 N81-26114
- Waveguide cooling system  
[NASA-CASE-NPO-15401-1] c33 N81-29344
- COORDINATES**
- Mechanical coordinate converter for use with spacecraft tracking antennas  
[NASA-CASE-XNP-00614] c14 N70-36907
- System for locating lightning strokes by coordination of directional antenna signals  
[NASA-CASE-KSC-10729-1] c09 N73-32110
- Magnetic heading reference  
[NASA-CASE-LAR-11387-2] c04 N77-19056
- COPOLYMERS**
- Method for producing alternating ether-siloxane copolymers with stable properties when exposed to elevated temperatures and UV radiation  
[NASA-CASE-XNP-02584] c06 N71-20905
- Preparation of dicyanoacetylene and vinylidene copolymers using organic compounds  
[NASA-CASE-XNP-03250] c06 N71-23500
- Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-3] c27 N80-24438
- Insoluble polyelectrolyte and ion-exchange hollow fiber impregnated therewith  
[NASA-CASE-NPO-13530-1] c25 N81-17187
- Alkaline battery containing a separator of a cross-linked copolymer of vinyl alcohol and unsaturated carboxylic acid  
[NASA-CASE-LEW-1102-1] c44 N81-29531
- COPPER**
- Development of method for etching copper  
[NASA-CASE-XGS-06306] c17 N71-16044
- Method of plating copper on aluminum to permit conventional soldering of structural aluminum bodies  
[NASA-CASE-XLA-08966-1] c17 N71-25903
- Brazing alloy composition  
[NASA-CASE-XNP-06053] c26 N75-27126
- Method for making an aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-1] c44 N79-11469
- COPPER ALLOYS**
- Zirconium modified nickel-copper alloy  
[NASA-CASE-LEW-12245-1] c26 N77-20201
- COPPER COMPOUNDS**
- Gallium arsenide solar cell preparation by surface deposition of cuprous iodide on thin n-type polycrystalline layers and heating in iodine vapor  
[NASA-CASE-XNP-01960] c09 N71-23027
- Cooling and radiation protection of ruby lasers using copper sulfate solution in alcohol  
[NASA-CASE-MFS-20180] c16 N72-12440
- Brazing alloy  
[NASA-CASE-XNP-03878] c26 N75-27127
- COPPER FLUORIDES**
- Method to produce high purity copper fluoride by heating copper hydroxyfluoride powder and subjecting to flowing fluorine gas  
[NASA-CASE-LEW-10794-1] c06 N72-17093
- CORDAGE**
- Fabrication of root cord restrained fabric suit sections from sheets of fabric  
[NASA-CASE-MSC-12398] c05 N72-20098
- CORE STORAGE**
- Memory device employing semiconductor and ferroelectric properties of single crystal barium titanate  
[NASA-CASE-REC-10307] c08 N72-21198
- CORES**
- Method of making rolling element bearings  
[NASA-CASE-LEW-11087-2] c37 N74-15128
- Electromagnetic transducer recording head having a laminated core section and tapered gap  
[NASA-CASE-NFO-10711-1] c35 N77-21392
- CORK (MATERIALS)**
- Cork-resin ablative insulation for complex surfaces and method for applying the same  
[NASA-CASE-MFS-23626-1] c24 N80-26388
- CORRECTION**
- Doppler frequency shift correction device for multiplex communication with Applications Technology Satellites  
[NASA-CASE-IGS-02749] c07 N69-39978
- CORRELATION DETECTION**
- Correlation type phase detector --- with time correlation integrator for frequency multiplexed signals  
[NASA-CASE-GSC-11744-1] c33 N75-26243
- Clutter free synthetic aperture radar correlator  
[NASA-CASE-NPO-14035-1] c32 N78-18266
- Interferometric locating system  
[NASA-CASE-NPO-14173-1] c04 N80-32359
- CORRELATORS**
- Synchronous detection system for detecting weak radio astronomical signals  
[NASA-CASE-XNP-09832] c30 N71-23723
- Digital demodulator-correlator  
[NASA-CASE-NFO-13982-1] c32 N79-14267
- Serial data correlator/code translator  
[NASA-CASE-KSC-11025-1] c32 N79-28383
- Baseband signal combiner for large aperture antenna array  
[NASA-CASE-NPO-14641-1] c32 N81-29308
- CORROSION PREVENTION**
- Vapor deposited laminated nitride-silicon coating for corrosion prevention of carbonaceous surfaces  
[NASA-CASE-XLA-00284] c15 N71-16075
- Method to prevent stress corrosion cracking in titanium alloys  
[NASA-CASE-NFO-10271] c17 N71-16393
- Method and apparatus for inducing compressive stresses in pressure vessel to prevent stress corrosion  
[NASA-CASE-XLA-07390] c15 N71-18616
- Development of fluoride coating to prevent oxidation of beryllium surfaces at elevated temperatures  
[NASA-CASE-LEW-10327] c17 N71-33408
- Prevention of hydrogen embrittlement of high strength steel by hydrazine compositions --- by adding potassium hydroxide to hydrazine  
[NASA-CASE-NFO-12122-1] c24 N76-14203
- Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c45 N80-14579

## CORROSION RESISTANCE

High strength, corrosion resistant cobalt-based alloys for aerospace structures  
[NASA-CASE-XLE-00726] c17 N71-15644

Hydrazine monoperfluoro alkanoate solder flux leaving corrosion resistant coating, for metals such as copper  
[NASA-CASE-INP-03459-2] c18 N71-15688

High temperature cobalt-base alloy resistant to corrosion by liquid metals and to sublimation in vacuum environment  
[NASA-CASE-XLE-02991] c17 N71-16025

Metal soldering with hydrazine monoperfluoro alkanoate for corrosion resistant coatings  
[NASA-CASE-INP-03459] c15 N71-21078

Method of making bearing material  
[NASA-CASE-LEW-11930-3] c24 N80-33482

Corrosion resistant thermal barrier coating --- protecting gas turbines and other engine parts  
[NASA-CASE-LEW-13088-1] c26 N81-25188

Sandblasting nozzle  
[NASA-CASE-NPO-13823-1] c37 N81-25371

## CORRUGATED PLATES

Superplastically formed diffusion bonded metallic structure  
[NASA-CASE-FRC-11026-1] c39 N79-25424

## CORRUGATING

Collapsible corrugated horn antenna  
[NASA-CASE-LAR-11745-1] c32 N80-29539

## COSINE SERIES

Service life of electromechanical device for generating sine/cosine functions  
[NASA-CASE-LAR-10503-1] c09 N72-21248

Function generators for producing complex vibration mode patterns used to identify vibration mode data  
[NASA-CASE-LAR-10310-1] c10 N73-20253

## COSMIC DUST

Sensor for detecting and measuring energy, velocity and direction of travel of a cosmic dust particle  
[NASA-CASE-GSC-10503-1] c14 N72-20381

System for detecting impact position of cosmic dust on detector surface  
[NASA-CASE-GSC-11291-1] c25 N72-33696

Impact position detector for outer space particles  
[NASA-CASE-GSC-11829-1] c35 N75-27331

Cosmic dust analyzer  
[NASA-CASE-MSC-13802-2] c35 N76-15431

## COST ANALYSIS

Low cost solar energy collection system  
[NASA-CASE-NPO-13579-1] c44 N78-17460

## COST REDUCTION

An improved synthesis of 2,4,8,10-tetroxaspiro (5.5) undecane  
[NASA-CASE-ARC-11243-2] c23 N80-31472

## COUCHES

Shock absorbing couch for body support under high acceleration or deceleration forces  
[NASA-CASE-XMS-01240] c05 N70-35152

Low onset rate energy absorber in form of strut assembly for crew couch of Apollo command module  
[NASA-CASE-MSC-12279-1] c15 N70-35679

Shock absorbing articulated multiple couch assembly  
[NASA-CASE-MSC-11253] c05 N71-12343

Collapsible couch system for manned space vehicles  
[NASA-CASE-MSC-13140] c05 N72-11085

## COULOMBETTES

Alkaline-type coulometer cell for primary charge control in secondary battery recharge circuits  
[NASA-CASE-XGS-05434] c03 N71-20491

Development and characteristics of battery charging circuits with coulometer for control of available current  
[NASA-CASE-GSC-10487-1] c03 N71-24719

## COUNTERS

Circuit for measuring wide range of pulse rates by utilizing high capacity counter  
[NASA-CASE-INP-06234] c10 N71-27137

Electronic strain level counter on in-flight aircraft  
[NASA-CASE-LAR-10756-1] c32 N73-26510

Electrochemical detection device --- for use in microbiology  
[NASA-CASE-LAR-11922-1] c25 N79-24073

Film advance indicator  
[NASA-CASE-LAR-12474-1] c35 N80-31774

Redundant operation of counter modules  
[NASA-CASE-NFO-14162-1] c60 N81-15706

Apparatus and process for microbial detection and enumeration  
[NASA-CASE-LAR-12709-1] c51 N81-29727

## COUNTING CIRCUITS

Rocket-borne aspect sensor consisting of radiation sensor, apertured disk, commutator, and counting circuits  
[NASA-CASE-XGS-08266] c14 N69-27432

Design of transistorized ring counter circuit with special steering and triggering circuits  
[NASA-CASE-XGS-03095] c09 N69-27463

Counter-divider circuit for accuracy and reliability in binary circuits  
[NASA-CASE-INP-00421] c09 N70-34502

Reversible ring counter using cascaded single silicon controlled rectifier stages  
[NASA-CASE-XGS-01473] c09 N71-10673

Capacitor sandwich structure containing metal sheets of known thickness for counting penetration rates of meteoroids  
[NASA-CASE-XLE-01246] c14 N71-10797

Electronic counter circuit utilizing magnetic core and low power consumption  
[NASA-CASE-INP-08836] c09 N71-12515

Synchronous counter design incorporating cascaded binary stages driven by previous stages and inputs through NAND gates  
[NASA-CASE-XGS-02440] c08 N71-19432

Digital cardiometer incorporating circuit for measuring heartbeat rate of subject over predetermined portion of one minute also converting rate to beats per minute  
[NASA-CASE-XMS-02399] c05 N71-22896

Computer circuit performing both counting and shifting logic operations also capable of miniaturization and integration in basic circuits  
[NASA-CASE-XNP-01753] c08 N71-22897

Noninterruptable digital counter circuit design with display device for pulse frequency modulation  
[NASA-CASE-XNP-09759] c08 N71-24891

Frequency measurement by coincidence detection with standard frequency  
[NASA-CASE-MSC-14649-1] c33 N76-16331

Redundant operation of counter modules  
[NASA-CASE-NPO-14162-1] c60 N81-15706

## COUPLING

Coupling device for linear shaped charge for space vehicle abort system  
[NASA-CASE-XLA-00189] c33 N70-36846

Base support for expandable and contractible coupling between two members  
[NASA-CASE-NPO-11059] c15 N72-17454

## COUPLING CIRCUITS

Interrogator and current driver circuit for combination with transistor flip-flop circuit  
[NASA-CASE-XGS-03058] c10 N71-19547

Antenna array at focal plane of reflector with coupling network for beam switching  
[NASA-CASE-GSC-10220-1] c07 N71-27233

Phase modulator with tuned variable length electrical lines including coupling and varactor diode circuits  
[NASA-CASE-MSC-13201-1] c07 N71-28429

High efficiency transformerless amplitude modulator coupled to RF power amplifier  
[NASA-CASE-GSC-10668-1] c07 N71-28430

Automatic quadrature control and measuring system --- using optical coupling circuitry  
[NASA-CASE-MPS-21660-1] c35 N74-21017

Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-3] c33 N75-19520

Non-contacting power transfer device  
[NASA-CASE-GSC-12595-1] c33 N81-12331

## COUPLINGS

Releasable coupling device designed to receive and retain matching ends of electrical connectors  
[NASA-CASE-XMS-07846-1] c09 N69-21927

Stage separation using remote control release of joint with explosive insert  
[NASA-CASE-XLA-02854] c15 N69-27490

Space vehicle stage coupling and quick release separation mechanism  
[NASA-CASE-XLA-01441] c15 N70-41679

- Standard coupling design for mass production  
[NASA-CASE-XMS-02532] c15 N70-41808
- Quick-release coupling for fueling rocket vehicles with cryogenic propellants  
[NASA-CASE-XKS-01985] c15 N71-10782
- Ratchet mechanism for high speed operation at reduced backlash  
[NASA-CASE-MFS-12805] c15 N71-17805
- Split nut and bolt separation device  
[NASA-CASE-XNP-06914] c15 N71-21489
- Quick disconnect duct coupling device for single-handed operation  
[NASA-CASE-MFS-20395] c15 N71-24903
- Coupling arrangement for isolating torque loads from axial, radial, and bending loads  
[NASA-CASE-XLA-04897] c15 N72-22482
- Refrigerated coaxial coupling --- for microwave equipment  
[NASA-CASE-NPO-13504-1] c33 N75-30430
- Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c35 N77-27366
- Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c52 N79-26772
- Coupling device for moving vehicles  
[NASA-CASE-GSC-12322-1] c37 N80-14398
- Device for coupling a first vehicle to a second vehicle  
[NASA-CASE-GSC-12429-1] c37 N81-14320
- Micro-fluid exchange coupling apparatus  
[NASA-CASE-ARC-11114-1] c51 N81-14605
- COVERINGS**
- Apparatus for ejecting covers of instrument packages using differential pressure principle  
[NASA-CASE-XNP-04132] c15 N69-27502
- CRACKING (FRACTURING)**
- Method to prevent stress corrosion cracking in titanium alloys  
[NASA-CASE-NPO-10271] c17 N71-16393
- TV fatigue crack monitoring system  
[NASA-CASE-LAR-11490-1] c39 N78-16387
- CRASH LANDING**
- Aircraft-mounted crash-activated transmitter device  
[NASA-CASE-MFS-16609-3] c03 N76-32140
- CREEP RUPTURE STRENGTH**
- Nickel base alloy with resistance to oxidation at high temperatures and superior stress-rupture properties  
[NASA-CASE-XLE-02082] c17 N71-16026
- CRITICAL EXPERIMENTS**
- Apparatus and process for volumetrically dispensing reagent quantities of volatile chemicals for small batch reactions  
[NASA-CASE-NPO-10070] c15 N71-27372
- CRITICAL TEMPERATURE**
- Stable superconducting magnet --- high current levels below critical temperature  
[NASA-CASE-XNP-05373-1] c33 N79-21264
- CROSS CORRELATION**
- Cross correlation anomaly detection system  
[NASA-CASE-NPO-13283] c38 N78-17395
- CROSS FLOW**
- Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c02 N81-14568
- CROSS POLARIZATION**
- Adaptive polarization separation  
[NASA-CASE-LAR-12196-1] c33 N81-26358
- CROSSED FIELDS**
- Crossed-field plasma accelerator for laboratory simulation of atmospheric reentry conditions  
[NASA-CASE-XLA-00675] c25 N70-33267
- Direct conversion of thermal energy into electrical energy using crossed electric and magnetic fields  
[NASA-CASE-XLE-00212] c03 N70-34134
- Crossed field MHD plasma generator-accelerator  
[NASA-CASE-XLA-03374] c25 N71-15562
- CROSSLINKING**
- New trifunctional alcohol derived from trimer acid and novel method of preparation  
[NASA-CASE-NPO-10714] c06 N69-31244
- Trimerization of aromatic nitriles  
[NASA-CASE-LEW-12053-1] c27 N78-15276
- Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c27 N78-31232
- In situ self cross-linking of polyvinyl alcohol battery separators  
[NASA-CASE-LEW-12972-1] c44 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] c27 N79-28307
- Method of cross-linking polyvinyl alcohol and other water soluble resins  
[NASA-CASE-LEW-13103-1] c27 N80-32516
- Thermoset-thermoplastic aromatic polyamides  
[NASA-CASE-LAR-12723-1] c27 N81-15107
- Process for the preparation of fluorine containing crosslinked elastomeric polytriazine and product so produced  
[NASA-CASE-ARC-11248-1] c27 N81-17259
- The 1,2,4-oxadiazole elastomers --- heat resistant polymers  
[NASA-CASE-ARC-11253-1] c27 N81-17262
- In-situ cross linking of polyvinyl alcohol --- application to battery separator films  
[NASA-CASE-LEW-13135-2] c27 N81-24257
- Cross-linked polyvinyl alcohol and method of making same  
[NASA-CASE-LEW-13504-1] c27 N81-27279
- Cross-linked polyvinyl alcohol and method of making same  
[NASA-CASE-LEW-13101-2] c23 N81-29160
- Alkaline battery containing a separator of a cross-linked copolymer of vinyl alcohol and unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c44 N81-29531
- CRUCIBLES**
- Evaporating crucible of tantalum-tungsten foil, nickel alumina bonding agent, and ceramic coating  
[NASA-CASE-XLA-03105] c15 N69-27483
- CRUCIFORM WINGS**
- Solar powered aircraft  
[NASA-CASE-LAR-12615-1] c05 N81-32138
- CRUDE OIL**
- Decontamination of petroleum products with honey  
[NASA-CASE-XNP-03835] c06 N71-23499
- CRUSTAL FRACTURES**
- System for real-time crustal deformation monitoring  
[NASA-CASE-NPO-14124-1] c46 N80-14603
- CRYOGENIC COOLING**
- Support assembly for cryogenically coolable low-noise choke waveguide  
[NASA-CASE-NFO-14253-1] c32 N80-32605
- Low cost cryostat  
[NASA-CASE-NFO-14513-1] c35 N81-14287
- Refrigerator module, system and process --- regenerative, cryogenic cooling of an infrared radiation detection system  
[NASA-CASE-ARC-11263-1] c31 N81-27328
- CRYOGENIC EQUIPMENT**
- Gas balancing, cryogenic refrigeration apparatus with Joule-Thomson valve assembly  
[NASA-CASE-NFO-10309] c15 N69-23190
- Low thermal loss piping arrangement for moving cryogenic media through double chamber structure  
[NASA-CASE-XNP-08882] c15 N69-39935
- Method and apparatus for removing plastic insulation from wire using cryogenic equipment  
[NASA-CASE-MFS-10340] c15 N71-17628
- Dual solid cryogenics for spacecraft refrigeration insuring low temperature cooling for extended periods  
[NASA-CASE-GSC-10188-1] c23 N71-24725
- Reliability of automatic refilling valving device for cryogenic liquid systems  
[NASA-CASE-NPO-11177] c15 N72-17453
- Dual stage check valve for cryogenic supply systems used in space flight environmental control system  
[NASA-CASE-MSC-13587-1] c15 N73-30459
- Heat operated cryogenic electrical generator  
[NASA-CASE-NFO-13303-1] c20 N75-24837
- Cryostat system for temperatures on the order of 2 deg K or less  
[NASA-CASE-NFO-13459-1] c31 N77-10229
- Device for tensioning test specimens within an hermetically sealed chamber  
[NASA-CASE-MFS-23281-1] c35 N77-22450
- Multistatic refrigeration system  
[NASA-CASE-NFO-13839-1] c31 N78-25256
- System for and method of freezing biological tissue

- Standard coupling design for mass production  
[NASA-CASE-XMS-02532] c15 N70-41808
- Quick-release coupling for fueling rocket vehicles with cryogenic propellants  
[NASA-CASE-XKS-01985] c15 N71-10782
- Ratchet mechanism for high speed operation at reduced backlash  
[NASA-CASE-MFS-12805] c15 N71-17805
- Split nut and bolt separation device  
[NASA-CASE-XNP-06914] c15 N71-21489
- Quick disconnect duct coupling device for single-handed operation  
[NASA-CASE-MFS-20395] c15 N71-24903
- Coupling arrangement for isolating torque loads from axial, radial, and bending loads  
[NASA-CASE-XLA-04897] c15 N72-22482
- Refrigerated coaxial coupling --- for microwave equipment  
[NASA-CASE-NPO-13504-1] c33 N75-30430
- Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c35 N77-27366
- Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c52 N79-26772
- Coupling device for moving vehicles  
[NASA-CASE-GSC-12322-1] c37 N80-14398
- Device for coupling a first vehicle to a second vehicle  
[NASA-CASE-GSC-12429-1] c37 N81-14320
- Micro-fluid exchange coupling apparatus  
[NASA-CASE-ARC-11114-1] c51 N81-14605
- COVERINGS**
- Apparatus for ejecting covers of instrument packages using differential pressure principle  
[NASA-CASE-XMF-04132] c15 N69-27502
- CRACKING (FRACTURING)**
- Method to prevent stress corrosion cracking in titanium alloys  
[NASA-CASE-NPO-10271] c17 N71-16393
- TV fatigue crack monitoring system  
[NASA-CASE-LAR-11490-1] c39 N78-16387
- CRASH LANDING**
- Aircraft-mounted crash-activated transmitter device  
[NASA-CASE-MFS-16609-3] c03 N76-32140
- CREEP RUPTURE STRENGTH**
- Nickel base alloy with resistance to oxidation at high temperatures and superior stress-rupture properties  
[NASA-CASE-XLE-02082] c17 N71-16026
- CRITICAL EXPERIMENTS**
- Apparatus and process for volumetrically dispensing reagent quantities of volatile chemicals for small batch reactions  
[NASA-CASE-NPO-10070] c15 N71-27372
- CRITICAL TEMPERATURE**
- Stable superconducting magnet --- high current levels below critical temperature  
[NASA-CASE-XMF-05373-1] c33 N79-21264
- CROSS CORRELATION**
- Cross correlation anomaly detection system  
[NASA-CASE-NPO-13283] c38 N78-17395
- CROSS FLOW**
- Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c02 N81-14568
- CROSS POLARIZATION**
- Adaptive polarization separation  
[NASA-CASE-LAR-12196-1] c33 N81-26358
- CROSSED FIELDS**
- Crossed-field plasma accelerator for laboratory simulation of atmospheric reentry conditions  
[NASA-CASE-XLA-00675] c25 N70-33267
- Direct conversion of thermal energy into electrical energy using crossed electric and magnetic fields  
[NASA-CASE-XLE-00212] c03 N70-34134
- Crossed field MHD plasma generator-accelerator  
[NASA-CASE-XLA-03374] c25 N71-15562
- CROSSLINKING**
- New trifunctional alcohol derived from trimer acid and novel method of preparation  
[NASA-CASE-NPO-10714] c06 N69-31244
- Trimerization of aromatic nitriles  
[NASA-CASE-LEW-12053-1] c27 N78-15276
- Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c27 N78-31232
- In situ self cross-linking of polyvinyl alcohol battery separators  
[NASA-CASE-LEW-12972-1] c44 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] c27 N79-28307
- Method of cross-linking polyvinyl alcohol and other water soluble resins  
[NASA-CASE-LEW-13103-1] c27 N80-32516
- Thermoset-thermoplastic aromatic polyamides  
[NASA-CASE-LAR-12723-1] c27 N81-15107
- Process for the preparation of fluorine containing crosslinked elastomeric polytriazine and product so produced  
[NASA-CASE-ARC-11248-1] c27 N81-17259
- The 1,2,4-oxadiazole elastomers --- heat resistant polymers  
[NASA-CASE-ARC-11253-1] c27 N81-17262
- In-situ cross linking of polyvinyl alcohol --- application to battery separator films  
[NASA-CASE-LEW-13135-2] c27 N81-24257
- Cross-linked polyvinyl alcohol and method of making same  
[NASA-CASE-LEW-13504-1] c27 N81-27279
- Cross-linked polyvinyl alcohol and method of making same  
[NASA-CASE-LEW-13101-2] c23 N81-29160
- Alkaline battery containing a separator of a cross-linked copolymer of vinyl alcohol and unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c44 N81-29531
- CRUCIBLES**
- Evaporating crucible of tantalum-tungsten foil, nickel alumina bonding agent, and ceramic coating  
[NASA-CASE-XLA-03105] c15 N69-27483
- CRUCIFORM WINGS**
- Solar powered aircraft  
[NASA-CASE-LAR-12615-1] c05 N81-32138
- CRUDE OIL**
- Decantation of petroleum products with honey  
[NASA-CASE-XNP-03835] c06 N71-23499
- CRUSTAL FRACTURES**
- System for real-time crustal deformation monitoring  
[NASA-CASE-NPO-14124-1] c46 N80-14603
- CRYOGENIC COOLING**
- Support assembly for cryogenically coolable low-noise choke waveguide  
[NASA-CASE-NEO-14253-1] c32 N80-32605
- Low cost cryostat  
[NASA-CASE-NEO-14513-1] c35 N81-14287
- Refrigerator module, system and process --- regenerative, cryogenic cooling of an infrared radiation detection system  
[NASA-CASE-ARC-11263-1] c31 N81-27328
- CRYOGENIC EQUIPMENT**
- Gas balancing, cryogenic refrigeration apparatus with Joule-Thomson valve assembly  
[NASA-CASE-NPO-10309] c15 N69-23190
- Low thermal loss piping arrangement for moving cryogenic media through double chamber structure  
[NASA-CASE-XNP-08882] c15 N69-39935
- Method and apparatus for removing plastic insulation from wire using cryogenic equipment  
[NASA-CASE-MFS-10340] c15 N71-17628
- Dual solid cryogenics for spacecraft refrigeration insuring low temperature cooling for extended periods  
[NASA-CASE-GSC-10188-1] c23 N71-24725
- Reliability of automatic refilling valving device for cryogenic liquid systems  
[NASA-CASE-NPO-11177] c15 N72-17453
- Dual stage check valve for cryogenic supply systems used in space flight environmental control system  
[NASA-CASE-MSC-13587-1] c15 N73-30459
- Heat operated cryogenic electrical generator  
[NASA-CASE-NPO-13303-1] c20 N75-24837
- Cryostat system for temperatures on the order of 2 deg K or less  
[NASA-CASE-NEO-13459-1] c31 N77-10229
- Device for tensioning test specimens within an hermetically sealed chamber  
[NASA-CASE-MFS-23281-1] c35 N77-22450
- Multistatic refrigeration system  
[NASA-CASE-NPO-13839-1] c31 N78-25256
- System for and method of freezing biological tissue

[NASA-CASE-GSC-12173-1] c51 N79-10694  
Shock isolator for operating a diode laser on a closed-cycle refrigerator  
[NASA-CASE-GSC-12297-1] c37 N79-28549

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[NASA-CASE-XLE-00345] c15 N70-38020  
Cryogenic storage system for gases onboard spacecraft  
[NASA-CASE-XMS-04390] c31 N70-41671  
Carbon dioxide purge systems to prevent condensation in spaces between cryogenic fuel tanks and hypersonic vehicle skin  
[NASA-CASE-XLA-01967] c31 N70-42015  
Fabrication of filament wound propellant tank for cryogenic storage  
[NASA-CASE-XLE-03803-2] c15 N71-17651  
Prefabricated, multilayered self-evacuating insulation panels using gas with low vapor pressure at cryogenic temperatures for application to storage of cryogenics  
[NASA-CASE-XLE-04222] c23 N71-22881  
Multilayer insulation panels for cryogenic liquid containers  
[NASA-CASE-MFS-14023] c33 N71-25351  
Development of thermal insulation material for insulating liquid hydrogen tanks in spacecraft  
[NASA-CASE-XMF-05046] c33 N71-28892  
Apparatus for aligning shadow shields and cryogenic storage tanks in outer space with the sun  
[NASA-CASE-KSC-10622-1] c31 N72-21893  
Heater-mixer for stored fluids  
[NASA-CASE-ARC-10442-1] c35 N74-15093  
Low heat leak connector for cryogenic system  
[NASA-CASE-XLE-02367-1] c31 N79-21225  
Cryogenic container compound suspension strap  
[NASA-CASE-ARC-11157-1] c37 N80-18393

**CRYOGENIC FLUIDS**  
Cryogenic flux-gated magnetometer using superconductors  
[NASA-CASE-KAC-02407] c14 N69-27423  
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[NASA-CASE-XLE-00288] c15 N70-34247  
Conical valve plug for use with reactive cryogenic fluids  
[NASA-CASE-XLE-00715] c15 N70-34859  
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[NASA-CASE-XLE-00397] c15 N70-36492  
Measuring density of single and two-phase cryogenic fluids in rocket fuel tanks  
[NASA-CASE-XLE-00688] c14 N70-41330  
Leakproof soft metal seal for use in very high vacuum systems operating at cryogenic temperatures  
[NASA-CASE-XGS-02441] c15 N70-41629  
High pressure liquid flow sight assembly for wide temperature range applications including cryogenic fluids  
[NASA-CASE-XLE-02998] c14 N70-42074  
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[NASA-CASE-XMF-03796] c23 N71-15467  
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[NASA-CASE-XLE-00586] c15 N71-15968  
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[NASA-CASE-XGS-01052] c14 N71-15992  
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[NASA-CASE-NFO-10250] c23 N71-16212  
Superconducting alternator design with cryogenic fluid for cooling windings below critical temperature  
[NASA-CASE-XLE-02823] c09 N71-23443  
Flow angle sensor and remote readout system for use with cryogenic fluids  
[NASA-CASE-XLE-04503] c14 N71-24664  
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[NASA-CASE-NFO-10619-1] c35 N77-21393

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[NASA-CASE-XLE-02824] c03 N69-39890

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[NASA-CASE-XKS-01985] c15 N71-10782  
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[NASA-CASE-XLE-00454] c23 N71-17802  
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[NASA-CASE-XMF-02340] c23 N69-24332

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[NASA-CASE-XMF-02964] c14 N71-17659  
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- 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] c44 N80-24741
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[NASA-CASE-NPO-14298-1] c76 N80-32244
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[NASA-CASE-NPO-14295-1] c76 N80-32245
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- Electromigration process for the purification of molten silicon during crystal growth  
[NASA-CASE-NPO-14831-1] c76 N81-19944
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- Turn on current transient limiter for controlling peak current flow in high capacity load  
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[NASA-CASE-MFS-20385] c09 N71-24904
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- Automatic microbial transfer device  
[NASA-CASE-LAR-11354-1] c35 N75-27330
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[NASA-CASE-ARC-11051-1] c27 N78-32260
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[NASA-CASE-ARC-11170-1] c27 N79-11215
- Low temperature cross linking polyimides  
[NASA-CASE-LBW-12876-1] c27 N80-26447
- Curing agent for polyepoxides and epoxy resins and composites cured therewith --- preventing carbon fiber release  
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- Resin composition, process for producing the same, product produced therefrom and process for producing said product  
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[NASA-CASE-XNP-09228] c09 N69-27500
- Technique and equipment for sputtering using apertured electrode and pulsed substrate bias  
[NASA-CASE-LBW-10920-1] c17 N73-24569
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[NASA-CASE-LBW-13148-2] c44 N81-29524
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[NASA-CASE-XLA-01288] c09 N69-21470
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[NASA-CASE-XLB-02066] c28 N71-15661
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[NASA-CASE-XER-11046-2] c33 N74-22864
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[NASA-CASE-XGS-05003] c09 N69-24318
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[NASA-CASE-IMP-03128] c10 N70-41991
- Describing magnetic core current switching device for steering bipolar current pulses to memory units  
[NASA-CASE-NPO-10201] c08 N71-18694
- Switching series regulator with gating control network  
[NASA-CASE-XMS-09352] c09 N71-23316
- Magnetic current regulator for saturable core transformer  
[NASA-CASE-EBC-10075] c09 N71-24800
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[NASA-CASE-NPO-10716] c09 N71-24892

- Turn on current transient limiter for controlling peak current flow in high capacity load  
[NASA-CASE-GSC-10413] c10 N71-26531
- Current regulating voltage divider design with load current shunting  
[NASA-CASE-MFS-20935] c09 N71-34212
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[NASA-CASE-XMS-01554] c10 N71-10578
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[NASA-CASE-XLE-08917] c15 N71-15597
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 Digital data handling circuits for pulse amplifiers  
 [NASA-CASE-XNP-01068] c10 N71-28739  
 Synchronized digital communication system  
 [NASA-CASE-XNP-03623] c09 N73-28084  
 Image data rate converter having a drum with a fixed head and a rotatable head  
 [NASA-CASE-NPO-11659-1] c35 N74-11283  
 Charge-coupled device data processor for an airborne imaging radar system  
 [NASA-CASE-NPO-13587-1] c32 N77-32342  
 Interactive color display for multispectral imagery using correlation clustering  
 [NASA-CASE-NSC-16253-1] c32 N79-20297  
 High-speed multiplexing of keyboard data inputs  
 [NASA-CASE-NPO-14554-1] c60 N81-27814  
**DATA PROCESSING EQUIPMENT**  
 Data processor having multiple sections activated at different times by selective power coupling to sections  
 [NASA-CASE-XGS-04767] c08 N71-12494  
 Development of demodulation system for removing amplitude modulation from two quadrature displaced data bearing signals  
 [NASA-CASE-XAC-04030] c10 N71-19472  
 Development and characteristics of rate augmented digital to analog converter for computed time-dependent data  
 [NASA-CASE-XLA-07828] c08 N71-27057  
 Data processor with plural register stages for selectively interconnecting with each other to effect multiplicity of operations  
 [NASA-CASE-GSC-10186] c08 N71-33110  
 Development and characteristics of telemetry system using computer-accessed circuits and remotely controlled from ground station  
 [NASA-CASE-NPO-11358] c07 N72-25172  
 Development and characteristics of data decoder to process convolution encoded information  
 [NASA-CASE-NPO-11371] c08 N73-12177  
 Characteristics of digital data processor using pulse from clock source to derive binary singles to show state of various indicators in processor  
 [NASA-CASE-GSC-10975-1] c08 N73-13187  
 Automatic accounting system for transfer of data from terminals to computer  
 [NASA-CASE-NPO-11456] c08 N73-26176  
 Space communication system for compressed data with a concatenated Reed-Solomon-Viterbi coding channel  
 [NASA-CASE-NPO-13545-1] c32 N77-12240  
 High-speed multiplexing of keyboard data inputs  
 [NASA-CASE-NPO-14554-1] c60 N81-27814  
**DATA RECORDERS**  
 Description of system for recording and reading out data related to distribution of occurrence of plurality of events  
 [NASA-CASE-XNP-04067] c08 N71-22707  
 Design and characteristics of recording system for selective reprocessing and filtering of data to obtain optimum signal to noise ratios  
 [NASA-CASE-ERC-10112] c07 N72-21119  
 Recorder/processor apparatus --- for optical data processing  
 [NASA-CASE-GSC-11553-1] c35 N74-15831  
**DATA RECORDING**  
 System for recording and reproducing PCM data from data stored on magnetic tape  
 [NASA-CASE-XGS-01021] c08 N71-21042  
 Description of system for recording and reading out data related to distribution of occurrence of plurality of events

- [NASA-CASE-XNP-04067] c08 N71-22707  
Development of data storage system for storing digital data in high density format on magnetic tape
- [NASA-CASE-XNP-02778] c08 N71-22710  
Transient video signal tape recorder with expanded playback
- [NASA-CASE-ARC-10003-1] c09 N71-25866  
Apparatus for on-film optical recording of camera lens aperture and focus setting
- [NASA-CASE-MS-C-12363-1] c14 N73-26431  
Image data rate converter having a drum with a fixed head and a rotatable head
- [NASA-CASE-NPO-11659-1] c35 N74-11283  
Holography utilizing surface plasmon resonances
- [NASA-CASE-MPS-22040-1] c35 N74-26946
- DATA REDUCTION**
- System for storing histogram data in optimum number of elements  
[NASA-CASE-XNP-05785] c08 N69-21928
- Respiration analyzing method and apparatus for determining subjects oxygen consumption in aerospace environments  
[NASA-CASE-XPR-08403] c05 N71-11202
- Minimum time delay unit for conventional time multiplexed data compression channels  
[NASA-CASE-XNP-08832] c08 N71-12506
- Data compression processor for monitoring analog signals by sampling procedure  
[NASA-CASE-NPO-10068] c08 N71-19288
- Wide range analog data compression system  
[NASA-CASE-XGS-02612] c08 N71-19435
- Description of system for recording and reading out data related to distribution of occurrence of plurality of events  
[NASA-CASE-XNP-04067] c08 N71-22707
- Apparatus with summing network for compression of analog data by decreasing slope threshold sampling  
[NASA-CASE-NPO-10769] c08 N72-11171
- Data reduction and transmission system for TV PCM data  
[NASA-CASE-NPO-11243] c07 N72-20154
- Data compression using decreasing slope threshold test and digital techniques  
[NASA-CASE-NPO-11630] c08 N72-33172
- DATA RETRIEVAL**
- Magnetic matrix memory system for nondestructive reading of information contained in matrix  
[NASA-CASE-XMF-05835] c08 N71-12504
- Asynchronous, multiplexing, single line transmission and recovery data system --- for satellite use  
[NASA-CASE-NPO-13321-1] c32 N75-26195
- DATA SAMPLING**
- Monitoring circuit design for sampling circuit control and reduction of time-bandwidth in video communication systems  
[NASA-CASE-XNP-02791] c07 N71-23026
- Sampling circuit for signal processing in multiplex transmission by Fourier analysis  
[NASA-CASE-NPO-10388] c07 N71-24622
- Video signal processing system for sampling video brightness levels  
[NASA-CASE-NPO-10140] c07 N71-24742
- Apparatus with summing network for compression of analog data by decreasing slope threshold sampling  
[NASA-CASE-NPO-10769] c08 N72-11171
- Sampling video compression system  
[NASA-CASE-ARC-10984-1] c32 N77-24328
- CCD correlated quadruple sampling processor  
[NASA-CASE-NPO-14426-1] c33 N81-27396
- DATA SMOOTHING**
- Variable time constant, wide frequency range smoothing network for noise removal from pulse chains  
[NASA-CASE-XGS-01983] c10 N70-41964
- Smoothing filter for digital to analog conversion  
[NASA-CASE-FRC-11025-1] c60 N80-17723
- DATA STORAGE**
- Data handling based on source significance, storage availability, and data received from source  
[NASA-CASE-XNP-04162-1] c08 N70-34675
- Magnetic matrix memory system for nondestructive reading of information contained in matrix  
[NASA-CASE-XMF-05835] c08 N71-12504
- Tape guidance system for multichannel digital recording system  
[NASA-CASE-XNP-09453] c08 N71-19420
- Event recorder with constant speed motor which rotates recording disk  
[NASA-CASE-XLA-01832] c14 N71-21006
- System for recording and reproducing PCM data from data stored on magnetic tape  
[NASA-CASE-XGS-01021] c08 N71-21042
- Development of data storage system for storing digital data in high density format on magnetic tape  
[NASA-CASE-XNP-02778] c08 N71-22710
- Multiple pattern holographic information storage and readout system  
[NASA-CASE-ERC-10151] c16 N71-29131
- Momentum wheel design for spacecraft attitude control and magnetic drum and head system for data storage  
[NASA-CASE-NFO-11481] c21 N73-13644
- Data storage, image tube type  
[NASA-CASE-MS-C-14053-1] c60 N74-12888
- Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c33 N79-10337
- DATA SYSTEMS**
- Data handling based on source significance, storage availability, and data received from source  
[NASA-CASE-XNP-04162-1] c08 N70-34675
- Development and characteristics of rate augmented digital to analog converter for computed time-dependent data  
[NASA-CASE-XLA-07828] c08 N71-27057
- Method and apparatus for decoding compatible convolutional codes  
[NASA-CASE-MS-C-14070-1] c32 N74-32598
- DATA TRANSMISSION**
- Telemetry data unit to form multibit words for use between demodulator and computer  
[NASA-CASE-XNP-09225] c09 N69-24333
- Phase shift data transmission system with pseudo-noise synchronization code modulated with digital data into single channel for spacecraft communication  
[NASA-CASE-XNP-00911] c08 N70-41961
- Minimum time delay unit for conventional time multiplexed data compression channels  
[NASA-CASE-XNP-08832] c08 N71-12506
- Data compression processor for monitoring analog signals by sampling procedure  
[NASA-CASE-NPO-10068] c08 N71-19288
- Wide range analog data compression system  
[NASA-CASE-XGS-02612] c08 N71-19435
- Plural channel data transmission system with quadrature modulation and complementary demodulation  
[NASA-CASE-XAC-06302] c08 N71-19763
- Monitoring circuit design for sampling circuit control and reduction of time-bandwidth in video communication systems  
[NASA-CASE-XNP-02791] c07 N71-23026
- Frequency shift keying apparatus for use with pulse code modulation data transmission system  
[NASA-CASE-XGS-01537] c07 N71-23405
- Binary data decoding device for use at receiving end of communication channel  
[NASA-CASE-NPO-10118] c07 N71-24741
- Data reduction and transmission system for TV PCM data  
[NASA-CASE-NFO-11243] c07 N72-20154
- Characteristics of two channel telemetry system with two data rate channels for high and low data rate communication  
[NASA-CASE-NFO-11572] c07 N73-16121
- Automatic accounting system for transfer of data from terminals to computer  
[NASA-CASE-NFO-11456] c08 N73-26176
- System for generating timing and control signals  
[NASA-CASE-NPO-13125-1] c33 N75-19519
- Sampling video compression system  
[NASA-CASE-ARC-10984-1] c32 N77-24328
- Pseudo noise code and data transmission method and apparatus  
[NASA-CASE-GSC-12017-1] c32 N77-30308
- Multi-channel rotating optical interface for data transmission  
[NASA-CASE-NPO-14066-1] c74 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] c33 N81-14221
- DAWSONITE**  
Synthesis of dawsonites  
[NASA-CASE-ARC-113261-1] c25 N80-31490
- DEBRIS**  
Counter pumping debris excluder and separator  
--- gas turbine shaft seals  
[NASA-CASE-LEW-11855-1] c07 N78-25690
- DECAY RATES**  
Solar sensor with coarse and fine sensing elements for matching preirradiated cells on degradation rates  
[NASA-CASE-XLA-01584] c14 N71-23269
- DECELERATION**  
Assembly for opening flight capsule stabilizing and decelerating flaps with reference to capsule recovery  
[NASA-CASE-XMP-00641] c31 N70-36410  
Device for use in descending spacecraft as altitude sensor for actuating deceleration retrorockets  
[NASA-CASE-XMS-03792] c14 N70-41812  
Development and characteristics of hot air balloon deceleration and recovery system  
[NASA-CASE-XLA-06824-2] c02 N71-11037  
Zero gravity apparatus utilizing pneumatic decelerating means to create payload subjected to zero gravity conditions by dropping its height  
[NASA-CASE-XMP-06515] c14 N71-23227
- DECIMALS**  
Digital converter for scaling binary number to binary coded decimal number of higher multiple  
[NASA-CASE-KSC-10595] c08 N73-12176
- DECISION MAKING**  
Method and apparatus for decoding compatible convolutional codes.  
[NASA-CASE-MSC-14070-1] c32 N74-32598
- DECODERS**  
Serial digital decoder design with square circuit matrix and serial memory storage units  
[NASA-CASE-NPO-10150] c08 N71-24650  
Binary to decimal decoder logic circuit design with feedback control and display device  
[NASA-CASE-XKS-06167] c08 N71-24890  
Design and development of encoder/decoder system to generate binary code which is function of outputs of plurality of bistable elements  
[NASA-CASE-NPO-10342] c10 N71-33407  
Compact-bi-phase pulse coded modulation decoder  
[NASA-CASE-KSC-10834-1] c33 N76-14371  
Low distortion receiver for bi-level baseband PCM waveforms  
[NASA-CASE-MSC-14557-1] c32 N76-16249  
Three phase full wave dc motor decoder  
[NASA-CASE-GSC-11824-1] c33 N77-26386  
Serial data correlator/code translator  
[NASA-CASE-KSC-11025-1] c32 N79-28383  
Decommutator patchboard verifier  
[NASA-CASE-KSC-11065-1] c33 N81-26359
- DECODING**  
Binary data decoding device for use at receiving end of communication channel  
[NASA-CASE-NPO-10118] c07 N71-24741  
Development and characteristics of data decoder to process convolution encoded information  
[NASA-CASE-NPO-11371] c08 N73-12177  
Method and apparatus for decoding compatible convolutional codes  
[NASA-CASE-MSC-14070-1] c32 N74-32598  
Differential pulse code modulation  
[NASA-CASE-MSC-12506-1] c32 N77-12239
- DECOMPUTATORS**  
Memory-based parallel data output controller  
[NASA-CASE-GSC-12447-1] c60 N80-21587  
Decommutator patchboard verifier  
[NASA-CASE-KSC-11065-1] c33 N81-26359
- DECONTAMINATION**  
Decontamination of petroleum products with honey  
[NASA-CASE-XMP-03835] c06 N71-23499  
Heat exchanger and decontamination system for multistage refrigeration unit  
[NASA-CASE-NPO-10634] c23 N72-25619  
Plasma cleaning device --- designed for high vacuum environments  
[NASA-CASE-NFS-22906-1] c75 N78-27913
- DEEP SPACE NETWORK**  
Low phase noise frequency divider for use with deep space network communication system  
[NASA-CASE-NPO-11569] c10 N73-26229
- DEFECTS**  
Hybrid holographic non-destructive test system  
[NASA-CASE-NFS-23114-1] c38 N78-32447
- DEFLECTION**  
Bipropellant injector with pair of concave deflector plates  
[NASA-CASE-XNP-09461] c28 N72-23809  
Noncontacting method for measuring angular deflection  
[NASA-CASE-LAR-12178-1] c74 N80-21138
- DEFLECTORS**  
Deflector for preventing objects from entering nacelle inlets of jet aircraft  
[NASA-CASE-XLE-00388] c28 N70-34788  
Aircraft wheel spray drag alleviator for dual tandem landing gear  
[NASA-CASE-XLA-01583] c02 N70-36825  
Ion beam deflector system for electronic thrust vector control for ion propulsion yaw, pitch, and roll forces  
[NASA-CASE-LEW-10689-1] c28 N71-26173  
Exhaust flow deflector --- for ducted gas flow  
[NASA-CASE-LAR-11570-1] c34 N76-18364  
Safety shield for vacuum/pressure chamber viewing port  
[NASA-CASE-GSC-12513-1] c31 N81-19343
- DEFOCUSING**  
Optical retrodirective modulator with focus spooling reflector driven by modulation signal  
[NASA-CASE-GSC-10062] c14 N71-15605
- DEFORMATION**  
Deformation measuring apparatus with feedback control for arbitrarily shaped structures  
[NASA-CASE-LAR-10098] c32 N71-26681  
Development of device for simulating cyclic thermal loading of flexible materials by application of mechanical stresses and deformations  
[NASA-CASE-LAR-10270-1] c32 N72-25877  
Deformable bearing seat  
[NASA-CASE-LEW-12527-1] c37 N77-32500
- DEGREES OF FREEDOM**  
Attitude control training device for astronauts permitting friction-free movement with five degrees of freedom  
[NASA-CASE-XMS-02977] c11 N71-10746  
Tuned damped vibration absorber for mass vibrating in more than one degree of freedom for use with wind tunnel models  
[NASA-CASE-LAR-10083-1] c15 N71-27006  
Kinesthetic control simulator --- for pilot training  
[NASA-CASE-LAR-10276-1] c09 N75-15662
- DEHUMIDIFICATION**  
Condenser-separator for dehumidifying air utilizing sintered metal surface  
[NASA-CASE-XLA-08645] c15 N69-21465
- DEHYDRATED FOOD**  
Rice preparation process consisting of cooking, two freezing-thawing cycles, and then freeze drying  
[NASA-CASE-MSC-13540-1] c05 N72-33096
- DELAY CIRCUITS**  
Development of pulsed differential comparator circuit  
[NASA-CASE-XLE-03804] c10 N71-19471  
Pulse duration control device for driving slow response time loads in selected sequence including switching and delay circuits and magnetic storage  
[NASA-CASE-XGS-04224] c10 N71-26418  
Telemetry synchronizer  
[NASA-CASE-GSC-11868-1] c17 N76-22245  
Swept group delay measurement  
[NASA-CASE-NFO-13909-1] c33 N78-25319  
Pseudonoise code tracking loop  
[NASA-CASE-MSC-18035-1] c32 N81-15179  
Combinational logic for generating gate drive signals for phase control rectifiers  
[NASA-CASE-NFS-25208-1] c33 N81-27402
- DELAY LINES**  
Development and characteristics of solid state acoustic variable time delay line using direct current voltage and radio frequency pulses  
[NASA-CASE-ERC-10032] c10 N71-25900

**DELTA MODULATION**  
 Multifunction audio digitizer --- producing direct delta and pulse code modulation [NASA-CASE-MSC-13855-1] c35 N74-17885

**DELTA WINGS**  
 Delta winged, manned reentry vehicle capable of horizontal glide landing at low speeds [NASA-CASE-XLA-00241] c31 N70-37586

**DEMAGNETIZATION**  
 Tumbling motion system for object demagnetization [NASA-CASE-IGS-02437] c15 N69-21472

**DEMODULATION**  
 Plural channel data transmission system with quadrature modulation and complementary demodulation [NASA-CASE-XAC-06302] c08 N71-19763  
 Restoration and improvement of demodulated facsimile video signals [NASA-CASE-GSC-10185-1] c07 N72-12081  
 Quadrature demodulation [NASA-CASE-GSC-12137-1] c33 N78-32338

**DEMODULATORS**  
 Telemetry data unit to form multibit words for use between demodulator and computer [NASA-CASE-XNP-09225] c09 N69-24333  
 Frequency shift keyed demodulator - circuit diagrams [NASA-CASE-IGS-02889] c07 N71-11282  
 Demodulator for simultaneous demodulation of two modulating ac signal carriers close in frequency [NASA-CASE-XMF-01160] c07 N71-11298  
 Development of demodulation system for removing amplitude modulation from two quadrature displaced data bearing signals [NASA-CASE-XAC-04030] c10 N71-19472  
 Calibrator for measuring and modulating or demodulating laser outputs [NASA-CASE-XLA-03410] c16 N71-25914  
 Threshold extension device for improving operating performance of frequency modulation demodulators by eliminating click-type noise impulses [NASA-CASE-MSC-12165-1] c07 N71-33696  
 Full wave modulator-demodulator amplifier apparatus --- for generating rectified output signal [NASA-CASE-PRC-10072-1] c33 N74-14939  
 Unbalanced quadrature demodulator [NASA-CASE-MSC-14840-1] c32 N77-24331  
 Digital demodulator-correlator [NASA-CASE-NPO-13982-1] c32 N79-14267  
 Digital demodulator [NASA-CASE-LAR-12659-1] c33 N80-31731  
 Self-calibrating threshold detector [NASA-CASE-MSC-16370-1] c35 N81-19427

**DENSIFICATION**  
 Densification of porous refractory substrates --- space shuttle orbiter tiles [NASA-CASE-MSC-18737-1] c25 N81-29180

**DENSITOMETERS**  
 Capacitor for measuring density of compressible fluid in liquid, gas, or liquid and gas phases [NASA-CASE-XLE-00143] c14 N70-36618  
 Measuring density of single and two-phase cryogenic fluids in rocket fuel tanks [NASA-CASE-XLE-00688] c14 N70-41330  
 Ultrasonic bone densitometer [NASA-CASE-MFS-20994-1] c35 N75-12271

**DENSITY (MASS/VOLUME)**  
 A stable density-stratification scalar pond [NASA-CASE-NPO-15419-1] c44 N81-27599

**DENSITY DISTRIBUTION**  
 Increasing available power per unit area in ion rocket engine by increasing beam density [NASA-CASE-XLE-00519] c28 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-ABC-10631-1] c74 N76-20958

**DENSITY MEASUREMENT**  
 Capacitor for measuring density of compressible fluid in liquid, gas, or liquid and gas phases [NASA-CASE-XLE-00143] c14 N70-36618  
 Measuring density of single and two-phase cryogenic fluids in rocket fuel tanks [NASA-CASE-XLE-00688] c14 N70-41330  
 Determining particle density using known material Hugoniot curves [NASA-CASE-LAR-11059-1] c76 N75-12810  
 Selective image area control of X-ray film exposure density [NASA-CASE-NFO-13808-1] c35 N78-15461

**DENTISTRY**  
 Process for preparing calcium phosphate salts for tooth repair [NASA-CASE-EBC-10338] c04 N72-33072  
 Acoustic tooth cleaner [NASA-CASE-LAR-12471-1] c52 N81-12724

**DEOXYGENATION**  
 Electrolysis catalyst for oxygen reduction in low temperature alkaline fuel cell [NASA-CASE-HQN-10537-1] c06 N72-10138

**DEPLOYMENT**  
 Extendable, self-deploying boom apparatus [NASA-CASE-GSC-10566-1] c15 N72-18477  
 Deployable cantilever support for deploying solar cell arrays aboard spacecraft and reducing transient loading [NASA-CASE-NFO-10883] c31 N72-22874  
 High acceleration cable deployment system [NASA-CASE-ABC-11256-1] c37 N79-23432  
 Antenna deployment mechanism for use with a spacecraft --- extensible and retractable telescopic antenna mast [NASA-CASE-GSC-12331-1] c18 N80-14183

**DEPOSITION**  
 Means and methods of depositing thin films on substrates [NASA-CASE-XNP-00595] c15 N70-34967  
 Dual wavelength system for monitoring film deposition [NASA-CASE-MFS-20675] c26 N73-26751  
 Production of pure metals [NASA-CASE-LEW-10906-1] c25 N74-30502

**DESCENT**  
 Emergency descent device [NASA-CASE-MFS-23074-1] c54 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] c02 N76-22154  
 Snap-in compressible biomedical electrode [NASA-CASE-MSC-14623-1] c52 N77-28717

**DESTABILIZATION**  
 Aircraft body-axis rotation measurement system [NASA-CASE-PRC-11043-1] c06 N81-22048

**DESTRUCTIVE TESTS**  
 Aeroelastic instability stoppers for wind-tunnel models [NASA-CASE-LAR-12458-1] c09 N81-31230

**DESULFURIZING**  
 Coal desulfurization process [NASA-CASE-NPO-13937-1] c44 N78-31527  
 Continuous coal processing method [NASA-CASE-NFO-13758-2] c31 N81-15154  
 Coal desulfurization --- using iron pentacarbonyl [NASA-CASE-NPO-14272-1] c25 N81-33246

**DETECTION**  
 Heated element sensor for fluid flow detection in thermal conductive conduit with adaptive means to determine flow rate and direction [NASA-CASE-MSC-12084-1] c12 N71-17569  
 Fluid leakage detection system with automatic monitoring capability [NASA-CASE-LAR-10323-1] c12 N71-17573  
 Metal detection system with electromagnetic transmitter with single coil and receiver with single coil [NASA-CASE-ABC-10265-1] c10 N72-28240  
 System for detecting impact position of cosmic dust on detector surface [NASA-CASE-GSC-11291-1] c25 N72-33696  
 Detection of bacteria in biological fluids and foods [NASA-CASE-GSC-11533-1] c14 N73-13435  
 Short range laser obstacle detector --- for surface vehicles using laser diode array [NASA-CASE-NFO-11856-1] c36 N74-15145  
 Vacuum leak detector [NASA-CASE-LAR-11237-1] c35 N75-19612  
 Method and device for destructive detection of a substance --- useful in determining the concentration of carbon fibers or pollutant particles [NASA-CASE-NPO-14940-1] c35 N80-21723

- Photoelectric detection system  
[NASA-CASE-MFS-23776-1] c74 N80-25134
- Apparatus and process for microbial detection and enumeration  
[NASA-CASE-LAR-12709-1] c51 N81-29727
- DETECTORS**
- Pressurized cell micrometeoroid detector  
[NASA-CASE-XLA-00936] c14 N71-14996
- Development of large area micrometeoroid impact detector panels  
[NASA-CASE-XLA-05906] c31 N71-16221
- Development of pulse-activated polarographic hydrogen detector  
[NASA-CASE-XMP-06531] c14 N71-17575
- Electro-optical detector for determining position of light source  
[NASA-CASE-XNP-01059] c23 N71-21821
- Method for locating leaks in hermetically sealed containers  
[NASA-CASE-ERC-10045] c15 N71-24910
- Precipitation detector and mechanism for stopping and restarting machinery at initiation and cessation of rain  
[NASA-CASE-XLA-02619] c10 N71-26334
- Hydrogen fire blink detector for high altitude rocket or ground installation  
[NASA-CASE-MFS-15063] c14 N72-25412
- Device for detection of combustion light preceding gaseous explosions  
[NASA-CASE-LAR-10739-1] c14 N73-16484
- Optical imaging system for increasing light absorption efficiency of imaging detector  
[NASA-CASE-ARC-10194-1] c23 N73-20741
- Cold cathode discharge tube with pressurized gas cell for meteoroid detection in space  
[NASA-CASE-LAR-10483-1] c14 N73-32327
- Deployable pressurized cell structure for a micrometeoroid detector  
[NASA-CASE-LAR-10295-1] c35 N74-21062
- Modulated hydrogen ion flame detector  
[NASA-CASE-ARC-10322-1] c35 N76-18403
- Coal-rock interface detector  
[NASA-CASE-MFS-23725-1] c43 N79-31706
- DETERGENTS**
- Anti-fog composition --- for prevention of fogging on surfaces such as space helmet visors and windshields  
[NASA-CASE-MSC-13530-2] c23 N75-14834
- DETONATION**
- Optically detonated explosive device  
[NASA-CASE-NPO-11743-1] c28 N74-27425
- DETONATION WAVES**
- Detonation reaction engine comprising outer housing enclosing pair of inner walls for continuous flow  
[NASA-CASE-XMP-06926] c28 N71-22583
- DEUTERIUM**
- Gas chromatographic method for analyzing hydrogen deuterium mixtures  
[NASA-CASE-NPO-11322] c06 N72-25146
- Deuterium pass through target --- neutron emitting target  
[NASA-CASE-LEW-11866-1] c72 N76-15860
- DIAGNOSIS**
- Coupling apparatus for ultrasonic medical diagnostic system  
[NASA-CASE-NPO-13935-1] c52 N79-14751
- Medical diagnosis system and method with multispectral imaging --- depth of burns and optical density of the skin  
[NASA-CASE-NPO-14402-1] c52 N81-27783
- DIAGRAMS**
- Phototransistor with base collector junction diode for integration into photo sensor arrays  
[NASA-CASE-MFS-20407] c09 N73-19235
- DIALYSIS**
- Dialysis system --- using ion exchange resin membranes permeable to urea molecules  
[NASA-CASE-NPO-14101-1] c52 N80-14687
- DIAMINES**
- Preparation of elastomeric diamine silazane polymers  
[NASA-CASE-XMP-04133] c06 N71-20717
- Synthesis of aromatic diamines and dialdehyde polymers using Schiff base  
[NASA-CASE-XMP-03074] c06 N71-24740
- Synthesis of siloxane containing epoxide and diamine polymers  
[NASA-CASE-MFS-13994-2] c06 N72-25148
- Stable polyimide synthesis from mixtures of monomeric diamines and polycarboxylic acid esters  
[NASA-CASE-LEW-11325-1] c06 N73-27980
- Mixed diamines for lower melting addition polyimide preparation and utilization  
[NASA-CASE-LAR-12054-1] c27 N79-33316
- Method for preparing addition type polyimide prepreqs  
[NASA-CASE-LAR-12054-2] c27 N81-14078
- DIAMONDS**
- Exponential horn, copper plate, magnetic hammer, and anvil in apparatus for making diamonds  
[NASA-CASE-MFS-20698] c15 N72-20446
- Simplified technique and device for producing industrial grade synthetic diamonds  
[NASA-CASE-MFS-20698-2] c15 N73-19457
- DIAPHRAGMS (MECHANICS)**
- Expulsion and measuring device for determining quantity of liquid in tank under conditions of weightlessness  
[NASA-CASE-XMS-01546] c14 N70-40233
- Reinforcing beam system for highly flexible diaphragms in valves or pressure switches  
[NASA-CASE-XNP-01962] c32 N70-41370
- Flexible rocket motor nozzle closure device to aid ignition and protect rocket chamber from foreign objects  
[NASA-CASE-XLA-02651] c28 N70-41967
- Knife structure for controlling rupture of shock tube diaphragms  
[NASA-CASE-XAC-00731] c11 N71-15960
- Magnetically opened diaphragm design with camera shutter and expansion tube applications  
[NASA-CASE-XLA-03660] c15 N71-21060
- Design and development of inertia diaphragm pressure transducer  
[NASA-CASE-XAC-02981] c14 N71-21072
- Punch and die device for forming convolution series in thin gage metal hemispheres  
[NASA-CASE-XNP-05297] c15 N71-23811
- Development of differential pressure control system using motion of mechanical diaphragms to operate electric switch  
[NASA-CASE-MFS-14216] c14 N73-13418
- DIATOMIC GASES**
- Diatomic infrared gasdynamic laser --- for producing different wavelengths  
[NASA-CASE-ARC-10370-1] c36 N75-31426
- DICHROISM**
- Dichroic plate --- as bandpass filters  
[NASA-CASE-NPO-13506-1] c35 N76-15435
- Microwave dichroic plate  
[NASA-CASE-GSC-12171-1] c33 N79-28416
- DICKE RADIOMETERS**
- Distributed-switch Dicke radiometers  
[NASA-CASE-GSC-12219-1] c35 N80-18359
- DIELECTRIC POLARIZATION**
- Charge injection method and apparatus of producing large area electrets  
[NASA-CASE-MFS-23186-2] c24 N78-25137
- DIELECTRIC PROPERTIES**
- Capacitive tank gaging device for monitoring one constituent of two phase fluid by sensing dielectric constant  
[NASA-CASE-MFS-21629] c14 N72-22442
- Fine particulate capture device  
[NASA-CASE-LEW-11583-1] c35 N79-17192
- DIELECTRICS**
- Fabricating solar cells with dielectric layers to improve glass fusion  
[NASA-CASE-XGS-04531] c03 N69-24267
- Temperature sensitive capacitor device for detecting very low intensity infrared radiation  
[NASA-CASE-XNP-09750] c14 N69-39937
- Electrical power system for space flight vehicles operating over extended periods  
[NASA-CASE-XMP-00517] c03 N70-34157
- Nose cone mounted heat resistant antenna comprising plurality of adjacent layers of silica not introducing paths of high thermal conductivity through ablative shield  
[NASA-CASE-XMS-04312] c07 N71-22984
- Broadband microwave waveguide window to compensate dielectric material filling  
[NASA-CASE-XNP-08880] c09 N71-24808
- Laser machining device with dielectric functioning as beam waveguide for mechanical and medical applications

- [NASA-CASE-HQN-10541-2] c15 N71-27135  
Quasi-optical microwave circuit with dielectric body for use with oversize waveguides  
[NASA-CASE-ERC-10011] c07 N71-29065  
Semiconductor device manufacture using refractory dielectrics as diffusant masks and interconnection insulating materials  
[NASA-CASE-XER-08476-1] c26 N72-17820  
Material compositions and processes for developing dielectric thick films used in microcircuit capacitors  
[NASA-CASE-LAR-10294-1] c26 N72-28762  
Low loss dichroic plate  
[NASA-CASE-NPO-13171-1] c32 N74-11000  
Electrostatic measurement system --- for contact-electrifying a dielectric  
[NASA-CASE-MFS-22129-1] c33 N75-18477  
Method and apparatus for measurement of trap density and energy distribution in dielectric films  
[NASA-CASE-NPO-13443-1] c76 N76-20994  
Charge injection method and apparatus of producing large area electrets  
[NASA-CASE-MFS-23186-1] c33 N76-23483  
Preparation of dielectric coating of variable dielectric constant by plasma polymerization  
[NASA-CASE-ARC-10892-2] c27 N79-14214  
Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures  
[NASA-CASE-NPO-14254-1] c36 N80-18372  
Microwave switching power divider --- for use in Earth orbiting satellites having spherical multi-element antenna arrays  
[NASA-CASE-GSC-12420-1] c33 N80-21670
- DIES**  
Punch and die device for forming convolution series in thin gage metal hemispheres  
[NASA-CASE-XNP-05297] c15 N71-23611  
Development and characteristics of frusto-conical die nib for extrusion of refractory metals  
[NASA-CASE-XLE-06773] c15 N71-23617  
Holding fixture for a hot stamping press  
[NASA-CASE-GSC-12619-1] c37 N81-16470
- DIESEL ENGINES**  
Diesel engine catalytic combustor system --- turbocharging  
[NASA-CASE-LEW-12995-1] c37 N80-26659
- DIETS**  
Reduction of blood serum cholesterol  
[NASA-CASE-NPO-12119-1] c52 N75-15270
- DIFFERENTIAL AMPLIFIERS**  
Temperature compensated solid state differential amplifier with application in bioinstrumentation circuits  
[NASA-CASE-XAC-00435] c09 N70-35440  
Stepping motor control apparatus exciting windings in proper time sequence to cause motor to rotate in either direction  
[NASA-CASE-GSC-10366-1] c10 N71-18772  
Multi-channel temperature measurement amplification system  
[NASA-CASE-MFS-23775-1] c35 N80-17421
- DIFFERENTIAL INTERFEROMETRY**  
Device for determining acceleration of gravity by interferometric measurement of travel of falling body  
[NASA-CASE-XMP-05844] c14 N71-17587
- DIFFERENTIAL PRESSURE**  
Relief valve to permit slow and fast bleeding rates at difference pressure levels  
[NASA-CASE-XMS-05894-1] c15 N69-21924  
Apparatus for ejecting covers of instrument packages using differential pressure principle  
[NASA-CASE-XMP-04132] c15 N69-27502  
Differential sound level meter  
[NASA-CASE-LAR-12106-1] c71 N78-14667  
Differential optoacoustic absorption detector  
[NASA-CASE-NPO-13759-1] c74 N78-17867  
System for use in conducting wake investigation for a wing in flight --- differential pressure measurements for drag investigations  
[NASA-CASE-PRC-11024-1] c02 N80-28300
- DIFFERENTIATORS**  
Window comparator  
[NASA-CASE-PRC-10090-1] c33 N78-18308
- DIFFRACTION**  
Highly stable optical mirror assembly optimizing image quality of light diffraction patterns  
[NASA-CASE-ERC-10001] c23 N71-24868
- DIFFRACTION PATTERNS**  
Digital sensor for counting fringes produced by interferometers with improved sensitivity and one photomultiplier tube to eliminate alignment problem  
[NASA-CASE-LAR-10204] c14 N71-27215
- DIFFRACTOMETERS**  
Dual purpose optical instrument capable of simultaneously acting as spectrometer and diffractometer  
[NASA-CASE-XNP-05231] c14 N73-28491
- DIFFUSE RADIATION**  
Transmitting and reflecting diffuser --- using ultraviolet grade fused silica coatings  
[NASA-CASE-LAR-10385-3] c74 N78-15879
- DIFFUSERS**  
Application of semiconductor diffusants to solar cells by screen printing  
[NASA-CASE-LEW-12775-1] c44 N79-11468
- DIFFUSION**  
Selective gold diffusion on monolithic silicon chips for switching and nonswitching amplifier devices and circuits and linear and digital logic circuits  
[NASA-CASE-ERC-10072] c09 N70-11148  
Metallic film diffusion for boundary lubrication in aerospace engineering  
[NASA-CASE-XLE-10337] c15 N71-24046  
Transmitting and reflecting diffuser --- for ultraviolet light  
[NASA-CASE-LAR-10385-2] c70 N74-13436
- DIFFUSION PUMPS**  
Oil trap for preventing diffusion pump backstreaming into evacuated system  
[NASA-CASE-GSC-10518-1] c15 N72-22489  
Programmable physiological infusion  
[NASA-CASE-ARC-10447-1] c52 N74-22771
- DIFFUSION WELDING**  
Method for diffusion welding dissimilar metals in vacuum chamber  
[NASA-CASE-GSC-10303] c15 N72-22487  
Reinforced FEP Teflon composite material diffusion bonded to metal substrate  
[NASA-CASE-MFS-20482] c15 N72-22492  
Two-step diffusion welding process of unrecrystallized alloys  
[NASA-CASE-LEW-11388-1] c15 N73-32358  
Method of fluxless brazing and diffusion bonding of aluminum containing components  
[NASA-CASE-MSC-14435-1] c37 N76-18455
- DIGITAL COMMAND SYSTEMS**  
Digitally controlled frequency synthesizer for pulse frequency modulation telemetry systems  
[NASA-CASE-IGS-02317] c09 N71-23525  
System for maintaining motor at predetermined speed using digital pulses  
[NASA-CASE-XNP-06892] c09 N71-24805  
Digital filter for reducing jitter in digital control systems  
[NASA-CASE-NPO-11088] c08 N71-29034
- DIGITAL COMPUTERS**  
Device for removing plastic dust cover from digital computer disk packs for inspection and cleaning  
[NASA-CASE-LAR-10590-1] c15 N70-26819  
Binary number sorter for arranging numbers in order of magnitude  
[NASA-CASE-NPO-10112] c08 N71-12502  
Binary sequence detector with few memory elements and minimized logic circuit complexity  
[NASA-CASE-XNP-05415] c08 N71-12505  
Digital computer system for automatic prelaunch checkout of spacecraft  
[NASA-CASE-XRS-08012-2] c31 N71-15566  
Description of error correcting methods for use with digital data computers and apparatus for encoding and decoding digital data  
[NASA-CASE-XNP-02748] c08 N71-22749  
Serial digital decoder design with square circuit matrix and serial memory storage units  
[NASA-CASE-NFO-10150] c08 N71-24650  
Digital magnetic core memory with sensing amplifier circuits  
[NASA-CASE-XNP-01012] c08 N71-28925  
Redundant memory for enhanced reliability of digital data processing system  
[NASA-CASE-GSC-10564] c10 N71-29135

- Digital converter for scaling binary number to binary coded decimal number of higher multiple  
[NASA-CASE-KSC-10595] c08 N73-12176
- Fault tolerant clock apparatus utilizing a controlled minority of clock elements  
[NASA-CASE-MSC-12531-1] c35 N75-30504
- Two-dimensional radiant energy array computers and computing devices  
[NASA-CASE-GSC-11839-1] c60 N77-14751
- Memory device for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-2] c60 N78-10709
- DIGITAL DATA**
- Phase shift data transmission system with pseudo-noise synchronization code modulated with digital data into single channel for spacecraft communication  
[NASA-CASE-INP-00911] c08 N70-41961
- Tape guidance system for multichannel digital recording system  
[NASA-CASE-INP-09453] c08 N71-19420
- Digital telemetry system apparatus to reduce tape recorder wow and flutter noise during playback  
[NASA-CASE-XGS-01812] c07 N71-23001
- Digital data handling circuits for pulse amplifiers  
[NASA-CASE-INP-01068] c10 N71-28739
- Bit synchronization system using digital data transition tracking phased locked loop  
[NASA-CASE-NPO-10844] c07 N72-20140
- Control and information system for digital telemetry data using analog converter to digitize sensed parameter values  
[NASA-CASE-NPO-11016] c08 N72-31226
- Digital plus analog output encoder  
[NASA-CASE-GSC-12115-1] c62 N76-31946
- Digital data reformatter/deserializer  
[NASA-CASE-NPO-13676-1] c60 N79-20751
- DIGITAL FILTERS**
- Design and development of signal detection and tracking apparatus  
[NASA-CASE-XGS-03502] c10 N71-20852
- Digital filter for reducing jitter in digital control systems  
[NASA-CASE-NPO-11088] c08 N71-29034
- Nonrecursive counting digital filter containing shift register  
[NASA-CASE-NPO-11821-1] c08 N73-26175
- Filtering device --- removing electromagnetic noise from voice communication signals  
[NASA-CASE-MFS-22729-1] c32 N76-21366
- DIGITAL INTEGRATORS**
- Digital automatic gain amplifier  
[NASA-CASE-KSC-11008-1] c33 N79-22373
- DIGITAL SPACECRAFT TELEVISION**
- TV camera output signal control system for digital spacecraft communication  
[NASA-CASE-INP-01472] c14 N70-41807
- DIGITAL SYSTEMS**
- Light sensitive digital aspect sensor for attitude control of earth satellites or space probes  
[NASA-CASE-XGS-00359] c14 N70-34158
- Circuit diagram and operation of full binary adder  
[NASA-CASE-XGS-00689] c08 N70-34787
- Digital telemetry system apparatus to reduce tape recorder wow and flutter noise during playback  
[NASA-CASE-XGS-01812] c07 N71-23001
- Reliable magnetic core circuit apparatus with application in selection matrices for digital memories  
[NASA-CASE-INP-01318] c10 N71-23033
- Noninterruptable digital counter circuit design with display device for pulse frequency modulation  
[NASA-CASE-INP-09759] c08 N71-24891
- Digital memory system with multiple switch cores for driving each word location  
[NASA-CASE-INP-01466] c10 N71-26434
- Digital quasi-exponential function generator  
[NASA-CASE-NPO-11130] c08 N72-20176
- Digital function generator for generating any arbitrary single valued function  
[NASA-CASE-NPO-11104] c08 N72-22165
- Digital video system for displaying image and alphanumeric data on cathode ray tube  
[NASA-CASE-NPO-11342] c09 N72-25248
- Data compression using decreasing slope threshold test and digital techniques  
[NASA-CASE-NFO-11630] c08 N72-33172
- Characteristics of digital data processor using pulse from clock source to derive binary singles to show state of various indicators in processor  
[NASA-CASE-GSC-10975-1] c08 N73-13187
- Low phase noise frequency divider for use with deep space network communication system  
[NASA-CASE-NFO-11569] c10 N73-26229
- Synchronized digital communication system  
[NASA-CASE-INP-03623] c09 N73-28084
- Digital second-order phase-locked loop  
[NASA-CASE-NPO-11905-1] c33 N74-12887
- Digital controller for a Baum folding machine --- providing automatic counting and machine shutoff  
[NASA-CASE-LAR-10688-1] c37 N74-21056
- Digital transmitter for data bus communications system  
[NASA-CASE-MSC-14558-1] c32 N75-21486
- Automatic character skew and spacing checking network --- of digital tape drive systems  
[NASA-CASE-GSC-11925-1] c33 N76-18353
- Anti-multipath digital signal detector  
[NASA-CASE-LAR-11827-1] c32 N77-10392
- Multiple rate digital command detection system with range clean-up capability  
[NASA-CASE-NPO-13753-1] c32 N77-20289
- Open loop digital frequency multiplier  
[NASA-CASE-MSC-12709-1] c33 N77-24375
- Bit error rate measurement above and below bit rate tracking threshold  
[NASA-CASE-MSC-12743-1] c32 N79-10263
- Apparatus and method for stabilized phase detection for binary signal tracking loops  
[NASA-CASE-MSC-16461-1] c33 N79-11313
- Digital demodulator-correlator  
[NASA-CASE-NPO-13982-1] c32 N79-14267
- Memory-based frame synchronizer --- for voice data processing in digital communication systems  
[NASA-CASE-GSC-12430-1] c32 N80-20453
- DIGITAL TECHNIQUES**
- Describing frequency discriminator using digital logic circuits and supplying single binary output signal  
[NASA-CASE-MFS-14322] c08 N71-18692
- Constructing Exclusive-Or digital logic circuit in single module  
[NASA-CASE-ILA-07732] c08 N71-18751
- Horizon sensor design with digital sampling of spaced radiation-compensated thermopile infrared detectors  
[NASA-CASE-INP-06957] c14 N71-21088
- Digital cardiometer incorporating circuit for measuring heartbeat rate of subject over predetermined portion of one minute also converting rate to beats per minute  
[NASA-CASE-XNS-02399] c05 N71-22896
- Digital synchronizer for extracting binary data in receiver of PSK/PCM communication system  
[NASA-CASE-NPO-10851] c07 N71-24613
- Digital sensor for counting fringes produced by interferometers with improved sensitivity and one photomultiplier tube to eliminate alignment problem  
[NASA-CASE-LAR-10204] c14 N71-27215
- Apparatus and digital technique for coding rate data  
[NASA-CASE-LAR-10128-1] c08 N73-20217
- Digital communication system  
[NASA-CASE-MSC-13912-1] c32 N74-30524
- Digital phase-locked loop  
[NASA-CASE-GSC-11623-1] c33 N75-25040
- Digital numerically controlled oscillator  
[NASA-CASE-MSC-16747-1] c33 N81-17349
- DIGITAL TO ANALOG CONVERTERS**
- Development and characteristics of rate augmented digital to analog converter for computed time-dependent data  
[NASA-CASE-ILA-07828] c08 N71-27057
- Digital to analog converter with parallel input/output memory device  
[NASA-CASE-KSC-10397] c08 N72-25206
- Digital to analog converter for sampled signal reconstruction  
[NASA-CASE-MSC-12458-1] c08 N73-32081

- High speed, glitch-free digital to analog converter  
[NASA-CASE-GSC-12319-1] c60 N79-32852
- Smoothing filter for digital to analog conversion  
[NASA-CASE-FRC-11025-1] c60 N80-17723
- DIGITAL TRANSDUCERS**
- Digital to analog converter for sampled signal reconstruction  
[NASA-CASE-MSC-12458-1] c08 N73-32081
- Angle detector  
[NASA-CASE-ARC-11036-1] c35 N78-32395
- DIISOCYANATES**
- Chemical and physical properties of synthetic polyurethane polymer prepared by reacting hydroxy carbonate with organic diisocyanate  
[NASA-CASE-MFS-10512] c06 N73-30099
- Preparation of stable polyurethane polymer by reacting polymer with diisocyanate  
[NASA-CASE-MFS-10506] c06 N73-30100
- Preparation of polyurethane polymer by reacting hydroxy polyformal with organic diisocyanate  
[NASA-CASE-MFS-10509] c06 N73-30103
- DIMENSIONS**
- Projection system for display of parallax and perspective  
[NASA-CASE-MFS-23194-1] c35 N78-17357
- DIODES**
- Single electrical circuit component combining diode, fuse, and blown indicator with elongated tube of heat resistant transparent material  
[NASA-CASE-XKS-03381] c09 N71-22796
- Maintaining current flow through solar cells with open connection using shunting diode  
[NASA-CASE-XLE-04535] c03 N71-23354
- Gunn effect microwave diodes with RF shielding  
[NASA-CASE-ERC-10119] c26 N72-21701
- Transistorized switching logic circuits with tunnel diodes  
[NASA-CASE-GSC-10878-1] c10 N72-22236
- Development of method and apparatus for detecting surface ions on silicon diodes and transistors  
[NASA-CASE-ERC-10325] c15 N72-25457
- Development of temperature compensated light source with components and circuitry for maintaining luminous intensity independent of temperature variations  
[NASA-CASE-ARC-10467-1] c09 N73-14214
- Silicon carbide backward diode with coated lead attachment  
[NASA-CASE-ERC-10224-2] c09 N73-27150
- High isolation RF signal selection switches  
[NASA-CASE-NPO-13081-1] c33 N74-22814
- Logarithmic circuit with wide dynamic range  
[NASA-CASE-GSC-12145-1] c33 N78-32339
- Regulated high efficiency, lightweight capacitor-diode multiplier dc to dc converter  
[NASA-CASE-LEW-12791-1] c33 N78-32341
- Thermal compensator for closed-cycle helium refrigerator --- assuring constant temperature for an infrared laser diode  
[NASA-CASE-GSC-12168-1] c31 N79-17029
- Power converter --- for display devices, lighting equipment  
[NASA-CASE-FRC-11014-1] c33 N79-27395
- DIPOLE ANTENNAS**
- Circularly polarized antenna with linearly polarized pair of elements  
[NASA-CASE-ERC-10214] c09 N72-31235
- DIRECT CURRENT**
- Regulated dc to dc converter  
[NASA-CASE-XGS-03429] c03 N69-21330
- Automatic control of voltage supply to direct current motor  
[NASA-CASE-XMS-04215-1] c09 N69-39587
- Thermionic diode switch for use in high temperature region to chop current from dc source  
[NASA-CASE-NPO-10404] c03 N71-12255
- Transistorized dc-coupled multivibrator with noninverted output signal  
[NASA-CASE-XNP-09450] c10 N71-18723
- Stepping motor control apparatus exciting windings in proper time sequence to cause motor to rotate in either direction  
[NASA-CASE-GSC-10366-1] c10 N71-18772
- Frequency control network for current feedback oscillators converting dc voltage to ac or higher dc voltages  
[NASA-CASE-GSC-10041-1] c10 N71-19418
- Direct current powered self repeating plasma accelerator with interconnected annular and linear discharge channels  
[NASA-CASE-XLA-03103] c25 N71-21693
- Conversion of positive dc voltage to positive dc voltage of lower amplitude  
[NASA-CASE-XMP-14301] c09 N71-23188
- Converting output of positive dc voltage source to negative dc voltage across load with common reference point  
[NASA-CASE-XMP-08217] c03 N71-23239
- Blood pressure measuring system for separately recording dc and ac pressure signals of Korotkoff sounds  
[NASA-CASE-XMS-06061] c05 N71-23317
- Radio frequency coaxial filter to provide dc isolation and low frequency signal rejection in audio range  
[NASA-CASE-XGS-01418] c09 N71-23573
- Brushless dc tachometer design with Hall effect crystals and output voltage magnitude proportional to rotor speed  
[NASA-CASE-MFS-20385] c09 N71-24904
- Inverters for changing direct current to alternating current  
[NASA-CASE-XGS-06226] c10 N71-25950
- Circuits for controlling reversible dc motor  
[NASA-CASE-XNP-07477] c09 N71-26092
- Feedback control for direct current motor to achieve constant speed under varying loads  
[NASA-CASE-MFS-14610] c09 N71-28886
- High dc switch for causing abrupt, cyclic, decreases of current to operate under zero or varying gravity conditions  
[NASA-CASE-LEW-10155-1] c09 N71-29035
- Power converters for supplying direct current at one voltage from source at another voltage  
[NASA-CASE-XER-11046] c09 N72-22203
- Dc to ac to dc converter with transistor driven synchronous rectifiers  
[NASA-CASE-GSC-11126-1] c09 N72-25253
- Direct current motor including stationary field windings and stationary armature winding  
[NASA-CASE-XGS-07805] c15 N72-33476
- Powerplexer for distribution of dc power levels to loads which require different voltages  
[NASA-CASE-MSC-12396-1] c03 N73-31988
- Bio-isolated dc operational amplifier --- for bioelectric measurements  
[NASA-CASE-ARC-10596-1] c33 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] c33 N74-22864
- Differential pulse code modulation  
[NASA-CASE-MSC-12506-1] c32 N77-12239
- Three phase full wave dc motor decoder  
[NASA-CASE-GSC-11824-1] c33 N77-26386
- Time domain phase measuring apparatus  
[NASA-CASE-GSC-12228-1] c33 N79-10338
- Direct current transformer  
[NASA-CASE-MFS-23659-1] c33 N79-17133
- Elimination of current spikes in buck power converters  
[NASA-CASE-NPO-14505-1] c33 N81-19393
- Controller for computer control of brushless dc motors --- automobile engines  
[NASA-CASE-NPO-13970-1] c33 N81-20352
- DIRECT LIFT CONTROLS**
- Velocity vector control system augmented with direct lift control  
[NASA-CASE-LAR-12268-1] c08 N81-24106
- DIRECT POWER GENERATORS**
- Direct conversion of thermal energy into electrical energy using crossed electric and magnetic fields  
[NASA-CASE-XLE-00212] c03 N70-34134
- Thermal pump-compressor for converting solar energy  
[NASA-CASE-XLA-00377] c33 N71-17610
- Converting output of positive dc voltage source to negative dc voltage across load with common reference point  
[NASA-CASE-XMP-08217] c03 N71-23239
- Unsaturating magnetic core transformer design with warning signal for electrical power processing equipment



- [NASA-CASE-ERC-10125] c09 N71-24893  
Load insensitive electrical device --- power converters for supplying direct current at one voltage from a source at another voltage  
[NASA-CASE-YER-11046-2] c33 N74-22864
- DIRECTIONAL ANTENNAS**  
Mechanical coordinate converter for use with spacecraft tracking antennas  
[NASA-CASE-INP-00614] c14 N70-36907  
Weatherproof helix antenna  
[NASA-CASE-XKS-08485] c07 N71-19493  
Tracking antenna system with array for synchronous satellite or ground based radar  
[NASA-CASE-GSC-10553-1] c07 N71-19854  
Drive system for parabolic tracking antenna with reversible motion and minimal backlash  
[NASA-CASE-NPO-10173] c15 N71-24696  
Variable beamwidth antenna --- with multiple beam, variable feed system  
[NASA-CASE-GSC-11862-1] c32 N76-18295  
An improved suspension system for a wheel rolling on a flat track --- bearings for directional antennas  
[NASA-CASE-NPO-14395-1] c37 N79-12446
- DIRECTIONAL CONTROL**  
Gimbaled partially submerged nozzle for solid propellant rocket engines for providing directional control  
[NASA-CASE-INP-01544] c28 N70-34162  
Omnidirectional wheel  
[NASA-CASE-MFS-21309-1] c37 N74-18125  
Velocity vector control system augmented with direct lift control  
[NASA-CASE-IAR-12268-1] c08 N81-24106
- DIRECTIONAL SOLIDIFICATION (CRYSTALS)**  
Preparation of monotectic alloys having a controlled microstructure by directional solidification under dopant-induced interface breakdown  
[NASA-CASE-MFS-23816-1] c26 N80-23419
- DIRECTIONAL STABILITY**  
Nose gear steering system for vehicles with main skids to provide directional stability after loss of aerodynamic control  
[NASA-CASE-XLA-01804] c02 N70-34160  
System for imposing directional stability on a rocket-propelled vehicle  
[NASA-CASE-MFS-21311-1] c20 N76-21275
- DIRECTIVITY**  
Multiprism collimator  
[NASA-CASE-GSC-12608-1] c35 N81-12387
- DISCONNECT DEVICES**  
Patent data on gas actuated bolt disconnect assembly  
[NASA-CASE-XLA-00326] c03 N70-34667  
Remotely actuated quick disconnect mechanism for umbilical cables  
[NASA-CASE-XLA-00711] c03 N71-12258  
Remotely actuated quick disconnect for tubular umbilical conduits used to transfer fluids from ground to rocket vehicle  
[NASA-CASE-XLA-01396] c03 N71-12259  
Design and development of quick release connector  
[NASA-CASE-XLA-01141] c15 N71-13789  
Split nut and bolt separation device  
[NASA-CASE-INP-06914] c15 N71-21489  
Electrical circuit selection device for simulating stage separation of flight vehicle  
[NASA-CASE-XKS-04631] c10 N71-23663  
Quick disconnect duct coupling device for single-handed operation  
[NASA-CASE-MFS-20395] c15 N71-24903  
Breakaway multiwire electrical cable connector with particular application for umbilical type cables  
[NASA-CASE-NPO-11140] c15 N72-17455  
Torsional disconnect device for releasably coupling distal ends of fluid conduits  
[NASA-CASE-NPO-10704] c15 N72-20445  
Frangible connecting link suitable for rocket stage separation  
[NASA-CASE-MSC-11849-1] c15 N72-22488  
Gas operated quick disconnect coupling for umbilical connectors  
[NASA-CASE-NPO-11202] c15 N72-25450  
Quick disconnect filter coupling  
[NASA-CASE-MFS-22323-1] c37 N76-14463  
Positive isolation disconnect  
[NASA-CASE-MSC-16043-1] c37 N79-11402
- DISCONTINUITY**  
Servocontrol system for measuring local stresses at geometric discontinuity in stressed material  
[NASA-CASE-XLA-08530] c32 N71-25360
- DISCRIMINATORS**  
Detector assembly for discriminating first signal with respect to presence or absence of second signal at time of occurrence of first signal  
[NASA-CASE-INP-00701] c09 N70-40272  
Difference indicating circuit used in conjunction with device measuring gravitational fields  
[NASA-CASE-INP-08274] c10 N71-13537  
Describing frequency discriminator using digital logic circuits and supplying single binary output signal  
[NASA-CASE-MFS-14322] c08 N71-18692  
Characteristics of comparator circuits for comparison of binary numbers in information processing system  
[NASA-CASE-INP-04819] c08 N71-23295  
Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-3] c33 N75-19520  
Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-2] c33 N75-25041  
Discriminator aided phase lock acquisition for suppressed carrier signals  
[NASA-CASE-NPO-14311-1] c32 N79-14276
- DISPENSERS**  
Liquid aerosol dispenser with explosively driven piston to compress light gas to extremely high pressure  
[NASA-CASE-MFS-20829] c12 N72-21310  
Potable water dispenser  
[NASA-CASE-MFS-21115-1] c54 N74-12779  
Lyophilized spore dispenser  
[NASA-CASE-IAR-10544-1] c37 N74-13178  
Metering gun for dispensing precisely measured charges of fluid  
[NASA-CASE-MFS-21163-1] c54 N74-17853  
Automatic fluid dispenser  
[NASA-CASE-ARC-10820-1] c35 N78-19466
- DISPERSING**  
Apparatus for mechanically dispersing ultrafine metal powders subjected to shock waves  
[NASA-CASE-XLB-04946] c17 N71-24911
- DISPERSIONS**  
Method for producing alkali metal dispersions of high purity  
[NASA-CASE-INP-08876] c17 N73-28573
- DISPLACEMENT**  
Bimetallic fluid displacement apparatus --- for stirring and heating stored gases and liquids  
[NASA-CASE-ARC-10441-1] c35 N74-15126
- DISPLACEMENT MEASUREMENT**  
Null-type vacuum microbalance for measuring minute mechanical displacements  
[NASA-CASE-XAC-00472] c15 N70-40180  
Development and characteristics of self-calibrating displacement transducer for measuring magnitude and frequency of displacement of bodies  
[NASA-CASE-XLA-00781] c09 N71-22999  
Gas bearing for model support with capacity for measuring angular displacement of model in bearing  
[NASA-CASE-XLA-09346] c15 N71-28740  
Method and apparatus for remote measurement of displacement of marks on specimen undergoing tensile test  
[NASA-CASE-NPO-10778] c14 N72-11364  
Miniature muscle displacement transducer  
[NASA-CASE-NFO-13519-1] c33 N76-19338  
Simultaneous muscle force and displacement transducer  
[NASA-CASE-NFO-14212-1] c52 N80-27072
- DISPLAY DEVICES**  
Integrated time shared instrumentation display for aerospace vehicle simulators  
[NASA-CASE-XLA-01952] c08 N71-12507  
Data processing and display system for terminal guidance of X-15 aircraft  
[NASA-CASE-IFR-00756] c02 N71-13421  
Fluidic-thermochromic display device  
[NASA-CASE-ERC-10031] c12 N71-18603  
Cathode ray tube system for displaying ones and zeros in binary wave train  
[NASA-CASE-XGS-04987] c08 N71-20571

- Optical projector system for establishing optimum arrangement of instrument displays in aircraft, spacecraft, other vehicles, and industrial instrument consoles  
[NASA-CASE-XNP-03853] c23 N71-21882
- Optical monitor panel consisting of translucent screen with test or meter information projected onto it from rear for application in control rooms of missile launching and tracking stations  
[NASA-CASE-XKS-03509] c14 N71-23175
- Binary to decimal decoder logic circuit design with feedback control and display device  
[NASA-CASE-XKS-06167] c08 N71-24890
- Noninterruptable digital counter circuit design with display device for pulse frequency modulation  
[NASA-CASE-XNP-09759] c08 N71-24891
- Data acquisition system for converting displayed analog signal to digital values  
[NASA-CASE-NPO-10344] c10 N71-26544
- Plasma-fluidic hybrid display system combining high brightness and memory characteristics  
[NASA-CASE-ERC-10100] c09 N71-33519
- System for digitizing graphic displays  
[NASA-CASE-NPO-10745] c08 N72-22164
- Digital video system for displaying image and alphanumeric data on cathode ray tube  
[NASA-CASE-NPO-11342] c09 N72-25248
- Development of apparatus for mounting scientific experiments in spacecraft to permit utilization without maneuvering spacecraft  
[NASA-CASE-MS-C-12372-1] c31 N72-25842
- Situational display system of cathode ray tubes to assist pilot in aircraft control  
[NASA-CASE-ERC-10350] c14 N73-20474
- Transparent switchboard which permits optical display devices to be adapted for use in man machine communications  
[NASA-CASE-MS-C-13746-1] c10 N73-32143
- Recorder/processor apparatus --- for optical data processing  
[NASA-CASE-GSC-11553-1] c35 N74-15831
- Rotating raster generator  
[NASA-CASE-FRC-10071-1] c32 N74-20813
- G-load measuring and indicator apparatus --- for aircraft  
[NASA-CASE-ARC-10806] c06 N74-27872
- X-Y alphanumeric character generator for oscilloscopes  
[NASA-CASE-GSC-11582-1] c33 N75-19517
- Binocular device for displaying numerical information in field of view  
[NASA-CASE-LAR-11782-1] c74 N77-20882
- Particle parameter analyzing system --- x-y plotter circuits and display  
[NASA-CASE-XLE-06094] c33 N78-17293
- Projection system for display of parallax and perspective  
[NASA-CASE-MFS-23194-1] c35 N78-17357
- Full color hybrid display for aircraft simulators --- landing aids  
[NASA-CASE-ARC-10903-1] c09 N78-18083
- Chromatically corrected virtual image display --- lens design for flight simulators  
[NASA-CASE-LAR-12251-1] c74 N79-14892
- Miniature implantable ultrasonic echosonometer  
[NASA-CASE-ARC-11035-1] c52 N79-18580
- System and method for obtaining wide screen Schlieren photographs  
[NASA-CASE-NPO-14174-1] c74 N79-20856
- A system for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-FRC-11005-1] c06 N79-24988
- Power converter --- for display devices, lighting equipment  
[NASA-CASE-FRC-11014-1] c33 N79-27395
- Environmental fog/rain visual display system for aircraft simulators  
[NASA-CASE-ARC-11158-1] c09 N79-33220
- An image readout device with electrically variable spatial resolution  
[NASA-CASE-LAR-12633-1] c35 N80-22661
- Chromatically corrected virtual image visual display --- reducing eye strain in flight simulators  
[NASA-CASE-LAR-12251-1] c74 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] c33 N81-14221
- DISSIPATION  
Dissipative voltage regulator system for minimizing heat dissipation  
[NASA-CASE-GSC-10891-1] c10 N71-26626
- DISSOCIATION  
Solar hydrogen generator  
[NASA-CASE-LAR-11361-1] c44 N77-22607
- DISSOLVING  
Apparatus for mixing two or more liquids under zero gravity conditions  
[NASA-CASE-LAR-10195-1] c15 N73-19458
- DISTANCE MEASURING EQUIPMENT  
Binary coded sequential acquisition ranging system for distance measurements  
[NASA-CASE-NPO-11194] c08 N72-25209
- Apparatus for determining distance to lighting strokes from single station by magnetic and electric field sensing antennas  
[NASA-CASE-KSC-10698] c07 N73-20175
- Terminal guidance sensor system --- space shuttle coupling to orbiting satellites  
[NASA-CASE-NPO-14521-1] c37 N81-27519
- DISTILLATION EQUIPMENT  
Utilization of solar radiation by solar still for converting salt and brackish water into potable water  
[NASA-CASE-XMS-04533] c15 N71-23086
- Purification apparatus for vaporization and fractional distillation of liquids  
[NASA-CASE-XNP-08124] c15 N71-27184
- U shaped heated tube for distillation and purification of liquid metals  
[NASA-CASE-XNP-08124-2] c06 N73-13129
- DISTRIBUTED AMPLIFIERS  
Broadband distribution amplifier with complementary pair transistor output stages  
[NASA-CASE-NPO-10003] c10 N71-26415
- DISTRIBUTORS  
High voltage distributor  
[NASA-CASE-GSC-11849-1] c33 N76-16332
- DIVERGENT NOZZLES  
Jet exhaust noise suppressor  
[NASA-CASE-LEW-11286-1] c07 N74-27490
- DIVERTERS  
Flow diverter valve and flow diversion method  
[NASA-CASE-HQN-00573-1] c37 N79-33468
- DIVIDERS  
A synchronous binary array divider  
[NASA-CASE-ERC-10180-1] c60 N74-20836
- DOCUMENT STORAGE  
Describing device for flagging punched business cards  
[NASA-CASE-XLA-02705] c08 N71-15908
- DOORS  
Design and specifications of emergency escape system for spacecraft structures  
[NASA-CASE-MS-C-12086-1] c05 N71-12345
- Fiberglass/epoxy composite automotive door structure including a glass-reinforced intrusion strip  
[NASA-CASE-NFO-15057-1] c24 N81-19230
- DOPPLER EFFECT  
Doppler frequency shift correction device for multiplex communication with Applications Technology Satellites  
[NASA-CASE-XGS-02749] c07 N69-39978
- Describing laser Doppler velocimeter for measuring mean velocity and turbulence of fluid flow  
[NASA-CASE-MFS-20386] c21 N71-19212
- Doppler compensated communication system for locating supersonic transport position  
[NASA-CASE-GSC-10087-4] c07 N73-20174
- Doppler shift system --- system for measuring velocities of radiating particles  
[NASA-CASE-HQN-10740-1] c72 N74-19310
- Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NFO-14524-1] c32 N80-24510
- An electro-optical Doppler tracker means and method for optical correlation of synthetic aperture radar data  
[NASA-CASE-NPO-14998-1] c33 N81-15194

## DOPPLER RADAR

Cooperative Doppler radar system for avoiding midair collisions  
[NASA-CASE-LAR-10403] c21 N71-11766

Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-2] c32 N80-32607

Doppler radar having phase modulation of both transmitted and reflected return signals --- ranging  
[NASA-CASE-MSC-18675-1] c32 N81-29312

**DOSIMETERS**

Development of dosimeter for measuring absorbed dose of high energy ionizing radiation  
[NASA-CASE-XLA-03645] c14 N71-20430

Miniature spectrally selective dosimeter  
[NASA-CASE-LAR-12469-1] c35 N81-12388

**DRAG CHUTES**

Deployment system for flexible wing with rigid superstructure  
[NASA-CASE-XLA-01220] c02 N70-41663

Lightweight, variable solidity knitted parachute fabric --- for aerodynamic decelerators  
[NASA-CASE-LAR-10776-1] c02 N74-10034

**DRAG MEASUREMENT**

Device for measuring drag forces in flight tests  
[NASA-CASE-XLA-00113] c14 N70-33386

Electric analog for measuring induced drag on nonplanar airfoils  
[NASA-CASE-XLA-00755] c01 N71-13410

Electric analog for measuring induced drag on nonplanar airfoils  
[NASA-CASE-XLA-05828] c01 N71-13411

Impact energy absorber with decreasing absorption rate  
[NASA-CASE-XLA-01530] c14 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] c02 N80-28300

Skin friction measuring device for aircraft  
[NASA-CASE-FRC-11029-1] c06 N81-17057

**DRAG REDUCTION**

Directed fluid stream for propeller blade loading control  
[NASA-CASE-XAC-00139] c02 N70-34856

Aircraft wheel spray drag alleviator for dual tandem landing gear  
[NASA-CASE-XLA-01583] c02 N70-36825

Improved method for driving two-phase turbines with enhanced efficiency  
[NASA-CASE-NPO-15037-1] c37 N80-26660

Improved low-drag ground vehicle particularly suited for use in safely transporting livestock  
[NASA-CASE-FRC-11058-1] c85 N80-33312

Leading edge vortex flaps for drag reduction --- during subsonic flight  
[NASA-CASE-LAR-12750-1] c02 N81-19016

**DRIFT (INSTRUMENTATION)**

Automatic measuring and recording of gain and zero drift characteristics of electronic amplifier  
[NASA-CASE-XMS-05562-1] c09 N69-39586

Solar radiation direction detector and device for compensating degradation of photocells  
[NASA-CASE-XLA-00183] c14 N70-40239

Failure detection and control means for improved drift performance of a gimballed platform system  
[NASA-CASE-MFS-23551-1] c04 N76-26475

**DRILL BITS**

Impact bit for cutting, collecting, and storing samples such as lunar rock cuttings  
[NASA-CASE-XNP-01412] c15 N70-42034

Hole cutter --- drill bits and rotating shaft  
[NASA-CASE-MFS-22649-1] c37 N75-25186

**DRILLING**

Method for milling and drilling glass  
[NASA-CASE-GSC-12636-1] c37 N80-29705

**DRILLS**

Rotary impact-type rock drill for recovering rock cuttings  
[NASA-CASE-XNP-07478] c14 N69-21923

Auger-type soil penetrometer for burrowing into soil formations  
[NASA-CASE-XNP-05530] c14 N73-32221

**DRIVES**

Inverter drive circuit for semiconductor switch  
[NASA-CASE-LEW-10233] c10 N71-27126

## DROPS (LIQUIDS)

Development of droplet monitoring probe for use in analysis of droplet propagation in mixed-phase fluid stream  
[NASA-CASE-NPO-10985] c14 N73-20478

Method of forming frozen spheres in a force-free drop tower --- microballoons for inertial confinement fusion  
[NASA-CASE-NPO-14845-1] c31 N81-16328

**DRUGS**

Automated analysis of oxidative metabolites  
[NASA-CASE-ARC-10469-1] c25 N75-12086

**DRYING**

Drying chamber for photographic sheet material  
[NASA-CASE-GSC-11074-1] c14 N73-28489

**DRYING APPARATUS**

Gas purged dry box glove reducing permeation of air or moisture into dry box or isolator by diffusion through glove  
[NASA-CASE-XLE-02531] c05 N71-23080

**DUCTED FANS**

Cam-operated pitch-change apparatus  
[NASA-CASE-LEW-13050-1] c07 N79-14095

**DUCTS**

Quick disconnect duct coupling device for single-handed operation  
[NASA-CASE-MFS-20395] c15 N71-24903

Externally supported internally stabilized flexible duct joint  
[NASA-CASE-MFS-19194-1] c37 N76-14460

Apparatus for supplying conditioned air at a substantially constant temperature and humidity  
[NASA-CASE-GSC-12191-1] c31 N80-32583

**DURABILITY**

Belt for transmitting power from a cogged driving member to a cogged driven member  
[NASA-CASE-GSC-12289-1] c37 N80-32717

**DUST COLLECTORS**

Device for removing plastic dust cover from digital computer disk packs for inspection and cleaning  
[NASA-CASE-LAR-10590-1] c15 N70-26819

**DYE LASERS**

Infrared tunable dye laser with nonlinear wavelength mixing crystal in optical cavity  
[NASA-CASE-ARC-10463-1] c09 N73-32111

Laser head for simultaneous optical pumping of several dye lasers --- with single flash lamp  
[NASA-CASE-LAR-11341-1] c36 N75-19655

**DYES**

Dye penetrant and technique for nondestructive tests of solid surfaces contacted by liquid oxygen  
[NASA-CASE-XMP-02221] c18 N71-27170

**DYNAMIC CHARACTERISTICS**

Dynamic sensor for gas pressure or density measurement  
[NASA-CASE-XAC-02877] c14 N70-41681

Design of precision vertical alignment system using laser with gravitationally sensitive cavity  
[NASA-CASE-ARC-10444-1] c16 N73-33397

Apparatus for and method of compensating dynamic unbalance  
[NASA-CASE-GSC-12550-1] c37 N81-22358

**DYNAMIC CONTROL**

Motion restraining device  
[NASA-CASE-NPO-13619-1] c37 N78-16369

**DYNAMIC LOADS**

Multilegged support system for wind tunnel test models subjected to thermal dynamic loading  
[NASA-CASE-XLA-01326] c11 N71-21481

Apparatus for measuring load on cable under static or dynamic conditions comprising pulleys pivoting structure against restraint of tension strap  
[NASA-CASE-XMS-04545] c15 N71-22878

Development and characteristics of device for indicating and recording magnitude of force applied in axial direction  
[NASA-CASE-MSC-15626-1] c14 N72-25411

**DYNAMIC MODULUS OF ELASTICITY**

Apparatus for testing metallic and nonmetallic beams or rods by bending at high temperatures in vacuum or inert atmosphere  
[NASA-CASE-XLE-01300] c15 N70-41993

**DYNAMIC RESPONSE**

Lunar and planetary gravity simulator to test vehicular response to landing

- [NASA-CASE-XLA-00493] c11 N70-34786  
Pressure sensor network for measuring liquid dynamic response in flight including fuel tank acceleration, liquid slosh amplitude, and fuel depth monitoring
- [NASA-CASE-XLA-05541] c12 N71-26387  
Response analyzing apparatus for liquid vapor interface sensor of sloshing rocket propellant [NASA-CASE-MFS-11204] c14 N71-29134  
Cam-operated pitch-change apparatus [NASA-CASE-LEW-13050-1] c07 N79-14095
- DYNAMIC STRUCTURAL ANALYSIS**  
Development of system for measuring damping characteristics of structure or system subjected to random forces or influences [NASA-CASE-ARC-10154-1] c14 N72-22440
- DYNAMIC TESTS**  
Hydraulic support equipment for full scale dynamic testing of large rocket vehicle under free flight conditions [NASA-CASE-IMP-01772] c11 N70-41677  
Hydraulic support apparatus for dynamic testing of space vehicles under near-free flight conditions [NASA-CASE-IMP-03248] c11 N71-10604
- DYNAMOMETERS**  
Dynamometer measuring microforce thrust produced by ion engine [NASA-CASE-XLE-00702] c14 N70-40203  
Development of thrust dynamometer for measuring performance of jet and rocket engines [NASA-CASE-XLE-05260] c14 N71-20429
- E**
- EAR**  
Ear oximeter for monitoring blood oxygenation and pressure, pulse rate, and pressure pulse curve, using dc and ac amplifiers [NASA-CASE-XAC-05422] c04 N71-23185
- EARTH (PLANET)**  
Camera arrangement --- for satellite scanning of earth or sky [NASA-CASE-GSC-12032-2] c35 N76-19408
- EARTH ATMOSPHERE**  
Ablation sensor for measuring surface ablation rate of material on vehicles entering earths atmosphere on entry into planetary atmospheres [NASA-CASE-XLA-01751] c14 N71-22991
- EARTH CRUST**  
Seismic vibration source [NASA-CASE-NPO-14112-1] c46 N79-22679
- EARTH ORBITS**  
Electric furnace for vacuum and zero gravity melting of high melting point materials during earth orbit [NASA-CASE-MFS-20710] c11 N72-23215  
Design and development of space shuttle system for delivering payload to earth orbit or celestial orbit [NASA-CASE-MSC-12391] c30 N73-12884
- ECCENTRICS**  
Hot gas engine with dual crankshafts [NASA-CASE-NPO-14221-1] c37 N81-25370
- ECHELLETT GRATINGS**  
Cooled echelle grating spectrometer --- for space telescope applications [NASA-CASE-NPO-14372-1] c35 N80-26635
- ECHOES**  
Miniature implantable ultrasonic echosonometer [NASA-CASE-ARC-11035-1] c52 N79-18580  
Echo tracker/range finder for radars and sonars [NASA-CASE-NPO-14361-1] c32 N79-26253
- EDGES**  
Method of forming a sharp edge on an optical device [NASA-CASE-GSC-12348-1] c74 N80-24149
- EFFICIENCY**  
Recovering efficiency of solar cells damaged by environmental radiation through thermal annealing [NASA-CASE-XGS-04047-2] c03 N72-11062  
High efficiency multifrequency feed [NASA-CASE-GSC-11909] c32 N74-20863
- EFFLUENTS**  
Vortex generator for controlling the dispersion of effluents in a flowing liquid [NASA-CASE-LAR-12045-1] c34 N77-24423
- Fluid sample collection and distribution system --- qualitative analysis of aqueous samples from several points [NASA-CASE-MSC-16841-1] c34 N79-24285
- EGRESS**  
Explosively activated egress area [NASA-CASE-LAR-12624-1] c03 N81-29107
- EJECTION**  
Apparatus for ejecting covers of instrument packages using differential pressure principle [NASA-CASE-IMP-04132] c15 N69-27502
- EJECTION SEATS**  
Ejector for separating astronaut from ejection seat during prelaunch or initial launch phase of flight [NASA-CASE-XMS-04625] c05 N71-20718
- EJECTORS**  
Automatic ejection valve for attitude control and midcourse guidance of space vehicles [NASA-CASE-IMP-00676] c15 N70-38996  
Ejector for separating astronaut from ejection seat during prelaunch or initial launch phase of flight [NASA-CASE-XMS-04625] c05 N71-20718  
Latching mechanism with pivoting catch and self-contained spring ejector [NASA-CASE-XLA-03538] c15 N71-24897
- ELASTIC BODIES**  
Belleville spring assembly with elastic guides having low hysteresis [NASA-CASE-IMP-09452] c15 N69-27504  
Development of systems for automatically and continually suppressing or attenuating bending motion in elastic bodies [NASA-CASE-XAC-05632] c32 N71-23971  
Device for measuring tensile forces [NASA-CASE-MFS-21728-1] c35 N74-27865
- ELASTIC DEFORMATION**  
Measuring shear-creep compliance of solid and liquid materials used in spacecraft components [NASA-CASE-XLE-01481] c14 N71-10781  
Development of systems for automatically and continually suppressing or attenuating bending motion in elastic bodies [NASA-CASE-XAC-05632] c32 N71-23971
- ELASTIC MEDIA**  
Miniature vibration isolator utilizing elastic tubing material [NASA-CASE-XLA-01019] c15 N70-40156
- ELASTIC PROPERTIES**  
Elastic universal joint for rocket motor mounting [NASA-CASE-IMP-00416] c15 N70-36947  
Resilient vehicle wheel for lunar surface travel [NASA-CASE-MFS-20400] c31 N71-18611  
Threadless fastener apparatus comprising receiving apertures for plurality of articles, self-locked condition, and capable of using nonmalleable materials in both ends [NASA-CASE-XFR-05302] c15 N71-23254  
Chemical and elastic properties of fluorinated polyurethanes [NASA-CASE-NPO-10767-1] c06 N73-33076  
Meter for use in detecting tension in straps having predetermined elastic characteristics [NASA-CASE-MFS-22189-1] c35 N75-19615
- ELASTIC SHEETS**  
Hot forming of plastic sheets [NASA-CASE-XMS-05516] c15 N71-17803
- ELASTOMERS**  
Describing metal valve pintle with encapsulated elastomeric body [NASA-CASE-MSC-12116-1] c15 N71-17648  
Development of apparatus for measuring successive increments of strain on elastomers [NASA-CASE-IMP-04680] c15 N71-19489  
Preparation of elastomeric diamine silazane polymers [NASA-CASE-IMP-04133] c06 N71-20717  
Leak resistant bonded elastomeric seal for secondary electrochemical cells [NASA-CASE-IGS-02631] c03 N71-23006  
Conductive elastomeric extensometer [NASA-CASE-MFS-21049-1] c52 N74-27864  
Vacuum pressure molding technique [NASA-CASE-LAR-10073-1] c37 N76-24575  
Method of making hollow elastomeric bodies [NASA-CASE-NPO-13535-1] c37 N76-31524  
Process for spinning flame retardant elastomeric compositions --- fabricating synthetic fibers

- for high oxygen environments  
[NASA-CASE-MSC-14331-3] c27 N78-32262
- Curable liquid hydrocarbon prepolymers  
containing hydroxyl groups and process for  
producing same  
[NASA-CASE-NPO-13137-1] c27 N80-32514
- Prepolymer dianhydrides  
[NASA-CASE-NPO-13899-1] c27 N80-32515
- Viscoelastic cationic polymers containing the  
urethane linkage  
[NASA-CASE-NPO-10830-1] c27 N81-15104
- Method of bonding plasticized elastomer to metal  
and article produced thereby  
[NASA-CASE-MFS-25181-1] c27 N81-16238
- Process for the preparation of fluorine  
containing crosslinked elastomeric  
polytriazine and product so produced  
[NASA-CASE-ARC-11248-1] c27 N81-17259
- The 1,2,4-oxadiazole elastomers --- heat  
resistant polymers  
[NASA-CASE-ARC-11253-1] c27 N81-17262
- Bifunctional monomers having terminal oxime and  
cyano or amidine groups  
[NASA-CASE-ARC-11253-3] c27 N81-24256
- Circumferential shaft seal  
[NASA-CASE-LEW-12119-2] c37 N81-26447
- ELECTRETS**
- Charge injection method and apparatus of  
producing large area electrets  
[NASA-CASE-MFS-23186-1] c33 N76-23483
- Charge injection method and apparatus of  
producing large area electrets  
[NASA-CASE-MFS-23186-2] c24 N78-25137
- ELECTRIC ARCS**
- Magnetically diffused radial electric arc heater  
[NASA-CASE-XLA-00330] c33 N70-34540
- Controlled arc spot welding method  
[NASA-CASE-XMF-00392] c15 N70-34814
- Triggering system for electric arc driven  
impulse wind tunnel  
[NASA-CASE-XMF-00411] c11 N70-36913
- Electric arc device for minimizing electrode  
ablation and heating gases to supersonic or  
hypersonic wind tunnel temperatures  
[NASA-CASE-XAC-00319] c25 N70-41628
- Electric arc heater with supersonic nozzle and  
fixed arc length for use in high temperature  
wind tunnels  
[NASA-CASE-XAC-01677] c09 N71-20816
- Arc electrode of graphite with tantalum ball tip  
[NASA-CASE-XLE-04788] c09 N71-22987
- High powered arc electrodes --- producing solar  
simulator radiation  
[NASA-CASE-LEW-11162-1] c33 N74-12913
- Electric arc light source having undercut  
recessed anode  
[NASA-CASE-ARC-10266-1] c33 N75-29318
- ELECTRIC BATTERIES**
- Spacecraft battery seals  
[NASA-CASE-XGS-03864] c15 N69-24320
- Sealed electric storage battery with gas  
manifold interconnecting each cell  
[NASA-CASE-XNP-03378] c03 N71-11051
- Battery charging system with cell to cell  
voltage balance  
[NASA-CASE-XGS-05432] c03 N71-19438
- Development and characteristics of battery  
charging circuits with coulometer for control  
of available current  
[NASA-CASE-GSC-10487-1] c03 N71-24719
- Heat activated emf cells with aluminum anode  
[NASA-CASE-LEW-11359] c03 N71-28579
- Development of device for simulating charge and  
discharge cycle of battery in synchronous orbit  
[NASA-CASE-GSC-11211-1] c03 N72-25020
- Storage battery comprising negative plates of a  
wedge shaped configuration --- for preventing  
shape change induced malfunctions  
[NASA-CASE-NPO-11806-1] c44 N74-19693
- Battery testing device --- for testing cells of  
multiple-cell battery  
[NASA-CASE-MFS-20761-1] c44 N74-27519
- Rapid activation and checkout device for batteries  
[NASA-CASE-MFS-22749-1] c44 N76-14601
- Zinc-halide battery with molten electrolyte  
[NASA-CASE-NPO-11961-1] c44 N76-18643
- Lead-oxygen dc power supply system having a  
closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c44 N76-27664
- Voltage regulator for battery power source ---  
using a bipolar transistor  
[NASA-CASE-FRC-10116-1] c33 N79-23345
- In-situ cross linking of polyvinyl alcohol ---  
application to battery separator films  
[NASA-CASE-LEW-13135-2] c27 N81-24257
- ELECTRIC BRIDGES**
- Pulsed excitation voltage circuit for strain  
gage bridge transducers  
[NASA-CASE-FRC-10036] c09 N72-22200
- Bridge-type gain control circuit  
[NASA-CASE-GSC-10786-1] c10 N72-28241
- Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-2] c33 N75-25041
- Germanium coated microbridge and method  
[NASA-CASE-MFS-23274-1] c33 N78-13320
- Power converter --- for display devices,  
lighting equipment  
[NASA-CASE-FRC-11014-1] c33 N79-27395
- ELECTRIC CELLS**
- Expanding and contracting connector strip for  
solar cell array of Nimbus satellite  
[NASA-CASE-XGS-01395] c03 N69-21539
- Design and characteristics of heat activated  
electric cell with anode made from one or more  
alkali metals and cathode made from oxidizing  
material  
[NASA-CASE-LEW-11358] c03 N71-26084
- Development and characteristics of ion-exchange  
membrane and electrode assembly for fuel cells  
or electrolysis cells  
[NASA-CASE-XMS-02063] c03 N71-29044
- ELECTRIC CHARGE**
- Indicator device for monitoring charge of wet  
cell battery, using semiconductor light  
emitter and photodetector  
[NASA-CASE-NPO-10194] c03 N71-20407
- Automatically charging battery of electric  
storage cells  
[NASA-CASE-XNP-04758] c03 N71-24605
- ELECTRIC CHOPPERS**
- Monostable multivibrator for conserving power in  
spacecraft systems  
[NASA-CASE-GSC-10082-1] c10 N72-20221
- Transformer regulated self-stabilizing chopper  
[NASA-CASE-XGS-09186] c33 N78-17295
- ELECTRIC COILS**
- Broadband chokes and absorbers to reduce  
spurious radiation patterns of antenna array  
caused by support structures  
[NASA-CASE-XMS-05303] c07 N69-27462
- ELECTRIC CONDUCTORS**
- Hollow spherical electrode for shielding  
dielectric junction between high voltage  
conductor and insulator  
[NASA-CASE-XLE-03778] c09 N69-21542
- Conductor for connecting parallel cells into  
submodules in series to form solar cell matrix  
[NASA-CASE-NPO-10821] c03 N71-19545
- Electrical switching device comprising  
conductive liquid confined within square loop  
of deformable nonconductive tubing also used  
for leveling  
[NASA-CASE-NPO-10037] c09 N71-19610
- Dry electrode design with wire sandwiched  
between two flexible conductive discs for  
monitoring physiological responses  
[NASA-CASE-FRC-10029] c09 N71-24618
- Development of process for forming insulating  
layer between two electrical conductor or  
semiconductor materials  
[NASA-CASE-LEW-10489-1] c15 N72-25447
- Improved injector with porous plug for bubbles  
of gas into feed lines of electrically  
conductive liquid  
[NASA-CASE-NPO-11377] c15 N73-27406
- Solar cell grid patterns  
[NASA-CASE-NPO-13087-2] c44 N76-31666
- Velocity measurement system  
[NASA-CASE-MFS-23363-1] c35 N78-32396
- Shielded conductor cable system  
[NASA-CASE-MSC-12745-1] c33 N81-27397
- ELECTRIC CONNECTORS**
- Distribution of currents to circuits using  
electrical adaptor  
[NASA-CASE-XLA-01288] c09 N69-21470
- Fixture for simultaneously supporting several  
components for electrical testing  
[NASA-CASE-XNP-06032] c09 N69-21926

- Releasable coupling device designed to receive and retain matching ends of electrical connectors  
[NASA-CASE-XMS-07846-1] c09 N69-21527
- Electrical feedthrough connection for printed circuit boards  
[NASA-CASE-XMP-01483] c14 N69-27431
- Electrical connector pin with wiping action to assure reliable contact  
[NASA-CASE-XMP-04238] c09 N69-39734
- Rectangular electric conductors for conductor cables to withstand spacecraft vibration and controlled atmosphere  
[NASA-CASE-HFS-14741] c09 N70-20737
- Patent data on terminal insert connector for flat electric cables  
[NASA-CASE-XMP-00324] c09 N70-34596
- Electric connector for printed cable to printed cable or to printed board  
[NASA-CASE-XMP-00369] c09 N70-36494
- Electrical connection for printed circuits on common board, using bellows principle in rivet  
[NASA-CASE-XNP-05082] c15 N70-41960
- Method of making molded electric connector for use with flat conductor cables  
[NASA-CASE-XMP-03498] c15 N71-15586
- Design and development of electric connectors for rigid and semirigid coaxial cables  
[NASA-CASE-XNP-04732] c09 N71-20651
- Connector internal force gage for measuring strength of electrical connection  
[NASA-CASE-XNP-03918] c14 N71-23087
- Maintaining current flow through solar cells with open connection using shunting diode  
[NASA-CASE-XLE-04535] c03 N71-23354
- Electrical connections for thin film hybrid microcircuits  
[NASA-CASE-XMS-02182] c10 N71-28783
- Breakaway multiwire electrical cable connector with particular application for umbilical type cables  
[NASA-CASE-NPO-11140] c15 N72-17455
- Reliability of electrical connectors after heat sterilization  
[NASA-CASE-NPO-10694] c09 N72-20200
- Development of electric connector and pin assembly with radio frequency absorbing sleeve to reduce radio frequency interference  
[NASA-CASE-XLA-02609] c09 N72-25256
- Electrical interconnection of unilluminated solar cells in solar battery array  
[NASA-CASE-GSC-10344-1] c03 N72-27053
- Separable flat cable connector with isolated electrical contacts  
[NASA-CASE-HFS-20757] c09 N72-28225
- Device for configuring multiple leads --- method for connecting electric leads to printed circuit board  
[NASA-CASE-HFS-22133-1] c33 N74-26977
- Connector --- for connecting circuits on different layers of multilayer printed circuit boards  
[NASA-CASE-LAR-11709-1] c37 N76-27567
- Percutaneous connector device  
[NASA-CASE-KSC-10849-1] c52 N77-14738
- Magnetic electrical connectors for biomedical percutaneous implants  
[NASA-CASE-KSC-11030-1] c52 N77-25772
- Electrical self-aligning connector  
[NASA-CASE-HFS-25211-1] c33 N80-32651
- Decommutator patchboard verifier  
[NASA-CASE-KSC-11065-1] c33 N81-26359
- ELECTRIC CONTACTS**
- Solid state switching circuit design to increase current capacity of low rated relay contacts  
[NASA-CASE-XNP-09228] c09 N69-27500
- Characteristics of hermetically sealed electric switch with flexible operating capability  
[NASA-CASE-XNP-09808] c09 N71-12518
- Electrode connection for n-on-p silicon solar cell  
[NASA-CASE-XLE-04787] c03 N71-20492
- Development of slip ring assembly with inner and outer peripheral surfaces used as electrical contacts for brushes  
[NASA-CASE-XMP-01049] c15 N71-23049
- Separable flat cable connector with isolated electrical contacts  
[NASA-CASE-HFS-20757] c09 N72-28225
- Electrostatic measurement system --- for contact-electrifying a dielectric  
[NASA-CASE-HFS-22129-1] c33 N75-18477
- Process for preparing liquid metal electrical contact device  
[NASA-CASE-LEW-11978-1] c33 N77-26385
- ELECTRIC CONTROL**
- Switching series regulator with gating control network  
[NASA-CASE-XMS-09352] c09 N71-23316
- ELECTRIC CORONA**
- Charge injection method and apparatus of producing large area electrets  
[NASA-CASE-HFS-23186-1] c33 N76-23483
- ELECTRIC CURRENT**
- Including didymium hydrate in nickel hydroxide of positive electrode of storage batteries to increase ampere hour capacity  
[NASA-CASE-XGS-03505] c03 N71-10608
- Development of in-line fuse device for protection of electric circuits from excessive currents and voltages  
[NASA-CASE-MSC-12135-1] c09 N71-12526
- Micromicroampere current measuring circuit, with two subminiature thermionic diodes with filament cathodes  
[NASA-CASE-XNP-00384] c09 N71-13530
- Connector internal force gage for measuring strength of electrical connection  
[NASA-CASE-XNP-03918] c14 N71-23087
- Electric circuit for producing high current pulse having fast rise and fall time  
[NASA-CASE-XMS-04919] c09 N71-23270
- Electric circuit for reversing direction of current flow  
[NASA-CASE-XNP-00952] c10 N71-23271
- Maintaining current flow through solar cells with open connection using shunting diode  
[NASA-CASE-XLE-04535] c03 N71-23354
- Color television system utilizing single gun current sensitive color cathode ray tube  
[NASA-CASE-ERC-10098] c09 N71-28618
- Current dependent variable inductance for input filter chokes of ac or dc power supplies  
[NASA-CASE-ERC-10139] c09 N72-17154
- Amplifying circuit with constant current source for accumulator load and high gain voltage amplification  
[NASA-CASE-EFC-11023] c09 N72-17155
- Commutator for steering precisely controlled bidirectional currents through numerous loads by use of magnetic core shift registers  
[NASA-CASE-NPO-10743] c08 N72-21199
- Current protection equipment for saturable core transformers  
[NASA-CASE-ERC-10075-2] c09 N72-22196
- Development of thermal to electric power conversion system using solid state switches of electrical currents to load for Seebeck effect compensation  
[NASA-CASE-NPO-11388] c03 N72-23048
- Load current sensor for series pulse width modulated power supply  
[NASA-CASE-GSC-10656-1] c09 N72-25249
- Electrode with multiple columnar conductors for limiting field emission current  
[NASA-CASE-ERC-10015-2] c10 N72-27246
- Means of vapor deposition using electric current and evaporator filament  
[NASA-CASE-LAR-10541-1] c15 N72-32487
- Lightning current measuring systems  
[NASA-CASE-KSC-10807-1] c33 N75-26246
- Overload protection system for power inverter  
[NASA-CASE-NPO-13872-1] c33 N78-10377
- Shunt regulation electric power system  
[NASA-CASE-GSC-10135] c33 N78-17296
- Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c33 N79-10337
- Electroexplosive device  
[NASA-CASE-NPO-13858-1] c28 N79-11231
- Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c33 N79-11315
- Lightning current detector  
[NASA-CASE-KSC-11057-1] c33 N79-14305
- Driver for solar cell I-V characteristic plots  
[NASA-CASE-NPO-14096-1] c44 N80-18551
- Electrical power generating system --- for windpowered generation  
[NASA-CASE-HFS-24368-3] c33 N81-22280

## ELECTRIC DISCHARGES

Electric discharge apparatus for electrohydraulic explosive forming  
 [NASA-CASE-XMF-00375] c15 N70-34249  
 High voltage pulse generator for testing flash and ignition limits of nonmetallic materials in controlled atmospheres  
 [NASA-CASE-MSC-12178-1] c09 N71-13518  
 Pulse generating circuit for operation at very high duty cycles and repetition rates  
 [NASA-CASE-XNP-00745] c10 N71-28960  
 Rapidly pulsed, high intensity, incoherent light source  
 [NASA-CASE-XLE-2E29-3] c33 N74-20859  
 Voltage feed through apparatus having reduced partial discharge  
 [NASA-CASE-GSC-12347-1] c33 N80-18286

## ELECTRIC ENERGY STORAGE

Electric current measuring apparatus design including saturable core transformer and energy storage device to avoid magnetizing current errors from transformer output winding  
 [NASA-CASE-XGS-02439] c14 N71-19431  
 Lead-oxygen dc power supply system having a closed loop oxygen and water system  
 [NASA-CASE-MFS-23059-1] c44 N76-27664  
 Electrically rechargeable REDOX flow cell  
 [NASA-CASE-LEW-12220-1] c44 N77-14581  
 Gels as battery separators for soluble electrode cells  
 [NASA-CASE-LEW-12364-1] c44 N77-22606  
 Electrochemical cell for rebalancing REDOX flow system  
 [NASA-CASE-LEW-1E150-1] c44 N79-26474  
 Toroidal cell and battery --- storage battery for high amp-hour load applications  
 [NASA-CASE-LEW-12918-1] c44 N81-24521

## ELECTRIC EQUIPMENT

Characteristics of high power, low distortion, alternating current power amplifier  
 [NASA-CASE-LAR-10218-1] c09 N70-34559  
 Design and development of electric generator for space power system  
 [NASA-CASE-XLE-04250] c09 N71-20446  
 Development of electrical system for measuring high impedance  
 [NASA-CASE-XMS-08589-1] c09 N71-20569  
 Design, development, and operating principles of power supply with starting circuit which is independent of voltage regulator  
 [NASA-CASE-XMS-01991] c09 N71-21449  
 Development of method for improving signal to noise ratio and accuracy of wheatstone bridge type radiation measuring instrument  
 [NASA-CASE-XLA-02810] c14 N71-25901  
 Design and development of buck-boost voltage regulator circuit with additive or subtractive alternating current impressed on variable direct current source voltage  
 [NASA-CASE-GSC-10735-1] c10 N71-26085  
 Development and characteristics of electronically resettable fuse with saturable core current sensing transformer having two outside legs and center leg  
 [NASA-CASE-XGS-11177] c09 N71-27001  
 Development and characteristics of voltage regulator for connection in series with alternating current source and load using three leg, two-window transformer  
 [NASA-CASE-ERC-10113] c09 N71-27053  
 Development of electric circuit for production of different pulse width signals  
 [NASA-CASE-XLA-07788] c09 N71-29139  
 Development of solar energy powered heliotrope assembly to orient solar array toward sun  
 [NASA-CASE-GSC-10945-1] c21 N72-31637  
 Development of temperature compensated light source with components and circuitry for maintaining luminous intensity independent of temperature variations  
 [NASA-CASE-ARC-10467-1] c09 N73-14214  
 Development and characteristics of hermetically sealed coaxial package for containing microwave semiconductor components  
 [NASA-CASE-GSC-10791-1] c15 N73-14469  
 Overvoltage protection network  
 [NASA-CASE-ARC-10197-1] c33 N74-17929  
 Sprag solenoid brake --- development and operations of electrically controlled brake

[NASA-CASE-MFS-21846-1] c37 N74-26976  
 Shock absorbing mount for electrical components  
 [NASA-CASE-NFO-13253-1] c37 N75-18573  
 Self-regulating proportionally controlled heating apparatus and technique  
 [NASA-CASE-GSC-11752-1] c77 N75-20140

## ELECTRIC EQUIPMENT TESTS

Fixture for simultaneously supporting several components for electrical testing  
 [NASA-CASE-XNP-06032] c09 N69-21926  
 Electrical testing apparatus for detecting amplitude and width of transient pulse  
 [NASA-CASE-XMF-06519] c09 N71-12519  
 Variable water load for dissipating large amounts of electrical power during high voltage power supply tests  
 [NASA-CASE-XNP-05381] c09 N71-20842

## ELECTRIC FIELD STRENGTH

Low impedance apparatus for measuring electrostatic field intensity near space vehicles  
 [NASA-CASE-XLE-00820] c14 N71-16014  
 Space environment simulation system for measuring spacecraft electric field strength in plasma sheath  
 [NASA-CASE-XLE-02038] c09 N71-16086  
 Device for measuring two orthogonal components of force with gallium flotation of measuring target for use in vacuum environments  
 [NASA-CASE-XAC-04885] c14 N71-23790  
 Apparatus to determine electric field strength by measuring deflection of electron beam impinging on target  
 [NASA-CASE-XMF-06617] c09 N71-24843

## ELECTRIC FIELDS

Electric analog for measuring induced drag on nonplanar airfoils  
 [NASA-CASE-XLA-00755] c01 N71-13410  
 Electric analog for measuring induced drag on nonplanar airfoils  
 [NASA-CASE-XLA-05828] c01 N71-13411  
 Instrument for measuring potentials on two dimensional electric field plot  
 [NASA-CASE-XLA-08493] c10 N71-19421  
 Electron beam deflection devices for measuring electric fields  
 [NASA-CASE-XMF-10289] c14 N71-23699  
 Electrodes having array of small surfaces for field ionization  
 [NASA-CASE-ERC-10013] c09 N71-26678  
 Apparatus for determining distance to lighting strokes from single station by magnetic and electric field sensing antennas  
 [NASA-CASE-KSC-10698] c07 N73-20175  
 Development and characteristics of apparatus for measuring intensity of electric field in atmosphere  
 [NASA-CASE-KSC-10730-1] c14 N73-32318  
 Electric field measuring and display system --- for cloud formations  
 [NASA-CASE-KSC-10731-1] c33 N74-27862

## ELECTRIC FILTERS

Describing static inverter with single or multiple phase output  
 [NASA-CASE-XMF-00663] c08 N71-18752  
 Apparatus for filtering input signals  
 [NASA-CASE-NFO-10198] c09 N71-24806  
 Active RC filter networks and amplifiers for deep space magnetic field measurement  
 [NASA-CASE-XAC-05462-2] c10 N72-17171  
 Multiloop RC active filter network with low parameter sensitivity and low amplifier gain  
 [NASA-CASE-ARC-10192] c09 N72-21245  
 Development of electric connector and pin assembly with radio frequency absorbing sleeve to reduce radio frequency interference  
 [NASA-CASE-XLA-02609] c09 N72-25256  
 Filter for third order phase locked loops in signal receivers  
 [NASA-CASE-NFO-11941-1] c10 N73-27171

## ELECTRIC FUSES

Development of in-line fuse device for protection of electric circuits from excessive currents and voltages  
 [NASA-CASE-MSC-12135-1] c09 N71-12526  
 Single electrical circuit component combining diode, fuse, and blown indicator with elongated tube of heat resistant transparent material

- [NASA-CASE-IKS-03381] c09 N71-22796  
Fused switch  
[NASA-CASE-XMS-01244-1] c33 N79-33393
- ELECTRIC GENERATORS**  
Regulated dc to dc converter  
[NASA-CASE-IGS-03429] c03 N69-21330  
Design and development of electric generator for space power system  
[NASA-CASE-XLE-04250] c09 N71-20446  
Development and characteristics of single or double pulse generator which produces constant width pulses in nanosecond region  
[NASA-CASE-IGS-03427] c10 N71-23029  
Development of slip ring assembly with inner and outer peripheral surfaces used as electrical contacts for brushes  
[NASA-CASE-XMF-01049] c15 N71-23049  
Conversion of positive dc voltage to positive dc voltage of lower amplitude  
[NASA-CASE-XMF-14301] c09 N71-23188  
High temperature ferromagnetic cobalt-base alloy for electrical power generating equipment  
[NASA-CASE-XLR-03629] c17 N71-23248  
Solid state integrator for converting variable width pulses into analog voltage  
[NASA-CASE-XLA-03356] c10 N71-23315  
Electric power system with circulatory liquid coolant cooling system  
[NASA-CASE-MFS-14114-2] c09 N71-24807  
Device utilizing RC rate generators for continuous slow speed measurement  
[NASA-CASE-XMF-02966] c10 N71-24863  
Device for voltage conversion using controlled pulse widths and arrangements to generate ac output voltage  
[NASA-CASE-MFS-10068] c10 N71-25139  
Multiple varactor for generating high frequencies with high power and high conversion efficiency  
[NASA-CASE-XMF-04958-1] c10 N71-26414  
Circuit design for failure sensing and protecting low voltage electric generator and power transmission networks  
[NASA-CASE-GSC-10114-1] c10 N71-27366  
Electric power system with thermionic diodes and circulatory liquid metal coolant lines  
[NASA-CASE-MFS-14114] c33 N71-27862  
Power converters for supplying direct current at one voltage from source at another voltage  
[NASA-CASE-XER-11046] c09 N72-22203  
Inductive-capacitive loops as load insensitive power converters  
[NASA-CASE-ERC-10268] c09 N72-25252  
Dc to ac to dc converter with transistor driven synchronous rectifiers  
[NASA-CASE-GSC-11126-1] c09 N72-25253  
Device for converting electromagnetic wave energy into electric power  
[NASA-CASE-GSC-11394-1] c09 N73-32109  
Heat operated cryogenic electrical generator  
[NASA-CASE-NPO-15303-1] c20 N75-24837  
Electric power generation system directory from laser power  
[NASA-CASE-NPO-13308-1] c36 N75-30524  
Smoke generator  
[NASA-CASE-ARC-10905-1] c37 N77-13418  
Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-11389-1] c33 N77-26387  
A linear magnetic motor/generator --- to generate electric energy using magnetic flux for spacecraft's power supply  
[NASA-CASE-GSC-12518-1] c33 N80-19424  
Wind wheel electric power generator  
[NASA-CASE-MFS-23515-1] c44 N80-21828  
Natural turbulence electrical power generator --- using wave action or random motion  
[NASA-CASE-LAR-11551-1] c44 N80-29834  
Electrical power generating system --- for windpowered generation  
[NASA-CASE-MFS-24368-3] c33 N81-22280
- ELECTRIC IGNITION**  
Method of making solid propellant rocket motor having reliable high altitude capabilities, long shelf life, and capable of firing with nozzle closure with foamed plastic permanent mandrel  
[NASA-CASE-XLA-04126] c28 N71-26779
- ELECTRIC MOTOR VEHICLES**  
Automotive absorption air conditioner utilizing solar and motor waste heat  
[NASA-CASE-NFO-15183] c44 N80-29843
- ELECTRIC MOTORS**  
Automatic control of voltage supply to direct current motor  
[NASA-CASE-XMS-04215-1] c09 N69-39987  
Electronic circuit system for controlling electric motor speed  
[NASA-CASE-XMF-01129] c09 N70-38712  
Using electron beam switching for brushless motor commutation  
[NASA-CASE-IGS-01451] c09 N71-10677  
Direct current electromotive system for regenerative braking of electric motor  
[NASA-CASE-XMF-01096] c10 N71-16030  
Describing angular position and velocity sensing apparatus  
[NASA-CASE-IGS-05680] c14 N71-17585  
Reversible current directing circuitry for reversible motor control  
[NASA-CASE-XLA-09371] c10 N71-18724  
Stepping motor control apparatus exciting windings in proper time sequence to cause motor to rotate in either direction  
[NASA-CASE-GSC-10366-1] c10 N71-18772  
Electromagnetic braking arrangement for controlling rotor rotation in electric motor  
[NASA-CASE-XMF-06936] c15 N71-24695  
Electric motor control system with pulse width modulation for providing automatic null seeking servo  
[NASA-CASE-XMF-05195] c10 N71-24861  
Velocity limiting safety system for motor driven research vehicle  
[NASA-CASE-XLA-07473] c15 N71-24895  
Design and development of electric motor with stationary field and armature windings which operates on direct current  
[NASA-CASE-IGS-05290] c09 N71-25999  
Circuits for controlling reversible dc motor  
[NASA-CASE-XMF-07477] c09 N71-26092  
Pulse duration control device for driving slow response time loads in selected sequence including switching and delay circuits and magnetic storage  
[NASA-CASE-IGS-04224] c10 N71-26418  
Feedback control for direct current motor to achieve constant speed under varying loads  
[NASA-CASE-MFS-14610] c09 N71-28886  
Optimal control system for automatic speed regulation of electric driven motor vehicle  
[NASA-CASE-NPO-11210] c11 N72-20244  
Direct current motor including stationary field windings and stationary armature winding  
[NASA-CASE-IGS-07805] c15 N72-33476  
Speed control system for dc motor equipped with brushless Hall effect device  
[NASA-CASE-MFS-20207-1] c09 N73-32107  
Three phase full wave dc motor decoder  
[NASA-CASE-GSC-11824-1] c33 N77-26386  
Rotary electric device  
[NASA-CASE-GSC-12138-1] c33 N79-20314  
A linear magnetic motor/generator --- to generate electric energy using magnetic flux for spacecraft's power supply  
[NASA-CASE-GSC-12518-1] c33 N80-19424  
Controller for computer control of brushless dc motors --- automobile engines  
[NASA-CASE-NFO-13970-1] c33 N81-20352
- ELECTRIC NETWORKS**  
Electric network for monitoring temperatures, detecting critical temperatures, and indicating critical time duration  
[NASA-CASE-XMF-01097] c10 N71-16058  
Development and characteristics of single or double pulse generator which produces constant width pulses in nanosecond region  
[NASA-CASE-IGS-03427] c10 N71-23029  
Switching series regulator with gating control network  
[NASA-CASE-XMS-09352] c09 N71-23316  
Broadband frequency discriminator with resistive captive inductive networks  
[NASA-CASE-NFO-10096] c07 N71-24583  
Electrical short locator --- identifying shorts occurring while an electrical system is being wired  
[NASA-CASE-ARC-11116-1] c33 N79-31498



## ELECTRIC POTENTIAL

Battery charging system with cell to cell voltage balance  
[NASA-CASE-XGS-05432] c03 N71-19438

Conversion of positive dc voltage to positive dc voltage of lower amplitude  
[NASA-CASE-XMF-14301] c09 N71-23188

Solid state integrator for converting variable width pulses into analog voltage  
[NASA-CASE-XLA-03356] c10 N71-23315

Device for monitoring voltage by generating signal when voltages drop below predetermined value  
[NASA-CASE-KSC-10020] c10 N71-27338

Plotter device for automatically drawing equipotential lines on sheet of resistance paper  
[NASA-CASE-NPO-11134] c09 N72-21246

Pulsed excitation voltage circuit for strain gage bridge transducers  
[NASA-CASE-FRC-10036] c09 N72-22200

Power converters for supplying direct current at one voltage from source at another voltage  
[NASA-CASE-XER-11046] c09 N72-22203

Continuously variable, voltage-controlled phase shifter  
[NASA-CASE-NPO-11129] c09 N72-33204

Photoelectron spectrometer with means for stabilizing sample surface potential  
[NASA-CASE-NPO-13772-1] c35 N78-10429

Microcomputerized electric field meter diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c35 N78-28411

Driver for solar cell I-V characteristic plots  
[NASA-CASE-NPO-14096-1] c44 N80-18551

Microwave integrated circuit for Josephson voltage standards  
[NASA-CASE-MFS-23845-1] c33 N81-17348

**ELECTRIC POWER**

Switching circuit with regeneratively connected transistors eliminating power consumption when not in use  
[NASA-CASE-XNP-02654] c10 N70-42032

Variable water load for dissipating large amounts of electrical power during high voltage power supply tests  
[NASA-CASE-XNP-05381] c09 N71-20842

Power factor control system for AC induction motors  
[NASA-CASE-MFS-23280-1] c33 N78-10376

Shunt regulation electrical power system  
[NASA-CASE-GSC-10135] c33 N78-17296

Electrical power generating system --- for windpowered generation  
[NASA-CASE-MFS-24368-3] c33 N81-22280

**ELECTRIC POWER PLANTS**

Ocean thermal plant  
[NASA-CASE-KSC-10134-1] c44 N78-32542

**ELECTRIC POWER SUPPLIES**

Current dependent variable inductance for input filter chokes of ac or dc power supplies  
[NASA-CASE-ERC-10139] c09 N72-17154

Development of thermal to electric power conversion system using solid state switches of electrical currents to load for Seebeck effect compensation  
[NASA-CASE-NPO-11388] c03 N72-23048

Development of electrical circuit for suppressing oscillations across inductor operating in resonant mode  
[NASA-CASE-ERC-10403-1] c10 N73-26228

Powerplexer for distribution of dc power levels to loads which require different voltages  
[NASA-CASE-MSC-12396-1] c03 N73-31588

Reliable electrical element heater using plural wire system and backup power sources  
[NASA-CASE-MFS-21462-1] c33 N74-14935

Temperature compensated current source  
[NASA-CASE-MSC-11235] c33 N78-17294

**ELECTRIC POWER TRANSMISSION**

Power switch with transfluxor type magnetic core  
[NASA-CASE-NPO-10242] c09 N71-24803

Circuit design for failure sensing and protecting low voltage electric generator and power transmission networks  
[NASA-CASE-GSC-10114-1] c10 N71-27366

Powerplexer for distribution of dc power levels to loads which require different voltages  
[NASA-CASE-MSC-12396-1] c03 N73-31588

Microwave power transmission system wherein level of transmitted power is controlled by reflections from receiver  
[NASA-CASE-MFS-21470-1] c44 N74-19870

Electrical rotary joint apparatus for large space structures  
[NASA-CASE-MFS-23981-1] c33 N81-19394

**ELECTRIC PROPULSION**

Electric propulsion engine test chamber  
[NASA-CASE-XLE-00252] c11 N70-34844

**ELECTRIC PULSES**

RC transistor circuit to indicate each pulse of pulse train and occurrence of nth pulse  
[NASA-CASE-XMF-00906] c09 N70-41655

Design and development of variable pulse width multiplier  
[NASA-CASE-XLA-02850] c09 N71-20447

Piezoelectric transducer for monitoring sound waves of physiological origin  
[NASA-CASE-IMS-05365] c14 N71-22993

Development and characteristics of single or double pulse generator which produces constant width pulses in nanosecond region  
[NASA-CASE-XGS-03427] c10 N71-23029

Solid state integrator for converting variable width pulses into analog voltage  
[NASA-CASE-XLA-03356] c10 N71-23315

Development and characteristics of electric circuitry for detecting electrical pulses rise time and amplitude  
[NASA-CASE-XMF-08804] c09 N71-24717

Circuit for measuring wide range of pulse rates by utilizing high capacity counter  
[NASA-CASE-XNP-06234] c10 N71-27137

Precision full wave rectifier circuit for rectifying incoming electrical signals having positive or negative polarity with only positive output signals  
[NASA-CASE-ARC-10101-1] c09 N71-33109

Phase modulating with odd and even finite power series of a modulating signal  
[NASA-CASE-LAB-11607-1] c32 N77-14292

Telephone multiline signaling using common signal pair  
[NASA-CASE-KSC-11023-1] c32 N79-23310

**ELECTRIC RELAYS**

Spark gap type protective circuit for fast sensing and removal of overvoltage conditions  
[NASA-CASE-YAC-08981] c09 N69-39897

Time division multiplexer with magnetic latching relays  
[NASA-CASE-XNP-00431] c09 N70-38998

Alarm system design for monitoring one or more relay circuits  
[NASA-CASE-YMS-10984-1] c10 N71-19417

Time division relay synchronizer with master sync pulse for activating binary counter to produce signal identifying time slot for station  
[NASA-CASE-GSC-10373-1] c07 N71-19773

Relay circuit breaker with magnetic latching to provide conductive and nonconductive paths for current devices  
[NASA-CASE-MSC-11277] c09 N71-29008

Multi-cell battery protection system  
[NASA-CASE-LEW-12039-1] c44 N78-14625

**ELECTRIC ROCKET ENGINES**

Electric rocket engine with electron bombardment ionization chamber  
[NASA-CASE-XNP-04124] c28 N71-21822

**ELECTRIC STIMULI**

Tread drum for animals --- having an electrical shock station  
[NASA-CASE-AEC-10917-1] c51 N78-27733

**ELECTRIC SWITCHES**

Thermionic diode switch for use in high temperature region to chop current from dc source  
[NASA-CASE-NPO-10404] c03 N71-12255

Characteristics of hermetically sealed electric switch with flexible operating capability  
[NASA-CASE-XNP-09808] c09 N71-12518

Electrical switching device comprising conductive liquid confined within square loop of deformable nonconductive tubing also used for leveling  
[NASA-CASE-NPO-10037] c09 N71-19610

System for checking status of several double-throw switches by readout indications  
[NASA-CASE-XLA-08799] c10 N71-27272

- Pulse generating circuit for operation at very high duty cycles and repetition rates  
[NASA-CASE-XNP-00745] c10 N71-28960
- High dc switch for causing abrupt, cyclic, decreases of current to operate under zero or varying gravity conditions  
[NASA-CASE-LEW-10155-1] c09 N71-29035
- Zero power telemetry actuated switch for biomedical equipment  
[NASA-CASE-ARC-10105] c09 N72-17153
- Development of differential pressure control system using motion of mechanical diaphragms to operate electric switch  
[NASA-CASE-MFS-14216] c14 N73-13418
- Pulse switching for high energy lasers  
[NASA-CASE-NPO-14556-1] c36 N79-21336
- Fused switch  
[NASA-CASE-XMS-01244-1] c33 N79-33393
- ELECTRIC TERMINALS**
- Electrical connector pin with wiping action to assure reliable contact  
[NASA-CASE-XMF-04238] c09 N69-39734
- Patent data on terminal insert connector for flat electric cables  
[NASA-CASE-XMF-00324] c09 N70-34596
- Tool attachment for spreading or moving away loose elements from terminal posts during winding of filamentary elements  
[NASA-CASE-XMF-02107] c15 N71-10809
- Electrical spot terminal assembly for printed circuit boards  
[NASA-CASE-NPO-10034] c15 N71-17685
- Device for resistance soldering electrical leads to solder cups of multiple terminal block  
[NASA-CASE-GSC-10913] c15 N72-22491
- Development of electric connector and pin assembly with radio frequency absorbing sleeve to reduce radio frequency interference  
[NASA-CASE-XLA-02609] c09 N72-25256
- Device for configuring multiple leads --- method for connecting electric leads to printed circuit board  
[NASA-CASE-MFS-22133-1] c33 N74-26977
- ELECTRIC WELDING**
- Development of electric weeding torch with casing on one end to form inert gas shield  
[NASA-CASE-XMF-02330] c15 N71-23798
- Electrical resistance butt welder for welding fine gauge tungsten/rhenium thermocouple wire  
[NASA-CASE-LAR-10103-1] c15 N73-14468
- Process for welding compressor and turbine blades to rotors and discs of jet engines  
[NASA-CASE-LEW-10533-1] c15 N73-28515
- ELECTRIC WIRE**
- Apparatus for forming wire grids for electric strain gages  
[NASA-CASE-XLE-00023] c15 N70-33330
- Control of fusion welding through use of thermocouple wire  
[NASA-CASE-MFS-06074] c15 N71-20393
- Ablation sensor for measuring char layer recession rate using electric wires  
[NASA-CASE-XLA-01794] c33 N71-21586
- Device for resistance soldering electrical leads to solder cups of multiple terminal block  
[NASA-CASE-GSC-10913] c15 N72-22491
- Lead attachment for high temperature operation of electronic devices  
[NASA-CASE-ERC-10224] c09 N72-25261
- Means for accommodating large overstrain in lead wires --- by storing extra length of wire in stretchable loop  
[NASA-CASE-LAR-10168-1] c33 N74-22865
- Device for configuring multiple leads --- method for connecting electric leads to printed circuit board  
[NASA-CASE-MFS-22133-1] c33 N74-26977
- High current electrical lead --- for thermionic converters  
[NASA-CASE-LEW-10950-1] c33 N74-27683
- Wire stripper  
[NASA-CASE-PRC-10111-1] c37 N79-10419
- Method and apparatus for preparing multiconductor cable with flat conductors  
[NASA-CASE-MFS-10946-1] c31 N79-21226
- Edge coating of flat wires  
[NASA-CASE-XMF-05757-1] c31 N79-21227
- ELECTRICAL ENGINEERING**
- Counter-divider circuit for accuracy and reliability in binary circuits  
[NASA-CASE-XMF-00421] c09 N70-34502
- Vibrating element electrometer producing high conversion gain by input current control of elements resonant frequency displacement amplitude  
[NASA-CASE-XAC-02807] c09 N71-23021
- ELECTRICAL FAULTS**
- Overcurrent protecting circuit for push-pull transistor amplifiers  
[NASA-CASE-MSC-12033-1] c09 N71-13531
- Circuit design for failure sensing and protecting low voltage electric generator and power transmission networks  
[NASA-CASE-GSC-10114-1] c10 N71-27366
- Test method and equipment for identifying faulty cells or connections in solar cell assemblies  
[NASA-CASE-NFO-10401] c03 N72-20033
- Shared memory for a fault-tolerant computer  
[NASA-CASE-NPO-13139-1] c60 N76-21914
- ELECTRICAL IMPEDANCE**
- High voltage transistor circuit  
[NASA-CASE-XNP-06937] c09 N71-19516
- Development of electrical system for measuring high impedance  
[NASA-CASE-XMS-08589-1] c09 N71-20569
- Signaling summary alarm circuit with semiconductor switch for faulty contact indications  
[NASA-CASE-XLE-03061-1] c10 N71-24798
- Signal conditioning circuit apparatus --- with constant input impedance  
[NASA-CASE-ARC-10348-1] c33 N75-19518
- Readout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c35 N76-24525
- Solid-state current transformer  
[NASA-CASE-MFS-22560-1] c33 N77-14335
- ELECTRICAL INSULATION**
- Water cooled solenoid capable of producing magnetic field intensities up to 100 kilogauss  
[NASA-CASE-XNP-01951] c09 N70-41929
- Method and apparatus for removing plastic insulation from wire using cryogenic equipment  
[NASA-CASE-MFS-10340] c15 N71-17628
- Nonconductive tube as feed system for plasma thruster  
[NASA-CASE-XLE-02902] c25 N71-21694
- Internal labyrinth and shield structure to improve electrical isolation of propellant feed source from ion thruster  
[NASA-CASE-LEW-10210-1] c28 N71-26781
- Development of process for forming insulating layer between two electrical conductor or semiconductor materials  
[NASA-CASE-LEW-10489-1] c15 N72-25447
- Bio-isolated dc operational amplifier --- for bioelectric measurements  
[NASA-CASE-ARC-10596-1] c33 N74-21851
- Stored charge transistor  
[NASA-CASE-NFO-11156-2] c33 N75-31331
- Method of making an insulation foil  
[NASA-CASE-LEW-11484-1] c24 N75-33181
- Gas ion laser construction for electrically isolating the pressure gauge thereof  
[NASA-CASE-MFS-22597] c36 N78-17366
- Wire stripper  
[NASA-CASE-PRC-10111-1] c37 N79-10419
- ELECTRICAL MEASUREMENT**
- Capacitance measuring device for determining flare accuracy on tapered tubes  
[NASA-CASE-XKS-03495] c14 N69-39785
- Bootstrap unloading circuits for sampling transducer voltage sources without drawing current  
[NASA-CASE-XNP-09768] c09 N71-12516
- Micromicroampere current measuring circuit, with two subminiature thermionic diodes with filament cathodes  
[NASA-CASE-XMF-00384] c09 N71-13530
- Low impedance apparatus for measuring electrostatic field intensity near space vehicles  
[NASA-CASE-XLE-00820] c14 N71-16014
- Electric current measuring apparatus design including saturable core transformer and energy storage device to avoid magnetizing current errors from transformer output winding  
[NASA-CASE-XGS-02439] c14 N71-19431

- High voltage divider system for attenuating high voltages to convenient levels suitable for introduction to measuring circuits  
[NASA-CASE-XLE-02008] c09 N71-21583
- Ablation sensor for measuring char layer recession rate using electric wires  
[NASA-CASE-XLA-01794] c33 N71-21586
- Current measurement by use of Hall effect generator  
[NASA-CASE-XAC-01662] c14 N71-23037
- Connector internal force gage for measuring strength of electrical connection  
[NASA-CASE-XNP-03918] c14 N71-23087
- Voltage range selection apparatus for sensing and applying voltages to electronic instruments without loading signal source  
[NASA-CASE-XMS-06497] c14 N71-26244
- Lightning current measuring systems  
[NASA-CASE-KSC-10807-1] c33 N75-26246
- Rapid activation and checkout device for batteries  
[NASA-CASE-MFS-22749-1] c44 N76-14601
- Electrical conductivity cell and method for fabricating the same  
[NASA-CASE-ARC-10810-1] c33 N76-19339
- Trielectrode capacitive pressure transducer  
[NASA-CASE-ARC-10711-2] c33 N76-21390
- Readout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c35 N76-24525
- Apparatus for measuring semiconductor device resistance  
[NASA-CASE-NPO-14424-1] c33 N80-32650
- Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c35 N81-12389
- ELECTRICAL PROPERTIES**
- Voltage drift compensation circuit for analog-to-digital converter  
[NASA-CASE-XNP-04780] c08 N71-19687
- Development and characteristics of electronically resettable fuse with saturable core current sensing transformer having two outside legs and center leg  
[NASA-CASE-IGS-11177] c09 N71-27001
- Development and characteristics of voltage regulator for connection in series with alternating current source and load using three leg, two-window transformer  
[NASA-CASE-ERC-10113] c09 N71-27053
- Development of system with electrical properties which vary with changes in temperature for use with feedback loop in operational amplifier circuit  
[NASA-CASE-MSC-13276-1] c14 N71-27058
- Electrically coupled individually encapsulated solar cell matrix  
[NASA-CASE-NPO-11190] c03 N71-34044
- Storage battery comprising negative plates of a wedge shaped configuration --- for preventing shape change induced malfunctions  
[NASA-CASE-NPO-11806-1] c44 N74-19693
- Thermocouple tape --- developed from thermoelectrically different metals  
[NASA-CASE-LEW-11072-2] c35 N76-15434
- Modification of the electrical and optical properties of polymers --- ion irradiation to create texture  
[NASA-CASE-LEW-13027-1] c27 N80-24437
- ELECTRICAL RESISTANCE**
- Development of electrical system for indicating optimum contact between electrode and metal surface to permit improved soldering operation  
[NASA-CASE-KSC-10242] c15 N72-23497
- Radio frequency source resistance measuring instruments of varied design  
[NASA-CASE-NPO-11291-1] c14 N73-30388
- Apparatus for measuring semiconductor device resistance  
[NASA-CASE-NPO-14424-1] c33 N80-32650
- ELECTRICAL RESISTIVITY**
- Describing method for vapor deposition of gallium arsenide films to manganese substrates to provide semiconductor devices with low resistance substrates  
[NASA-CASE-INP-01328] c26 N71-18064
- Simulating operation of thermopile vacuum gage tube at high and low pressures  
[NASA-CASE-XLA-02758] c14 N71-18481
- Electrically conductive fluorocarbon polymers  
[NASA-CASE-XLE-06774-2] c06 N72-25150
- Electrical conductivity cell and method for fabricating the same  
[NASA-CASE-ARC-10810-1] c33 N76-19339
- Durable antistatic coating for polymethylmethacrylate  
[NASA-CASE-NFO-13867-1] c27 N78-14164
- Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c33 N79-11315
- Lightweight electrically-powered flexible thermal laminate --- made of metal and nonconductive yarns  
[NASA-CASE-MSC-12662-1] c33 N79-12331
- Electrically conductive thermal control coatings  
[NASA-CASE-GSC-12207-1] c24 N79-14156
- Electrically conductive palladium containing polyimide films  
[NASA-CASE-LAR-12705-1] c33 N80-24549
- Electrical self-aligning connector  
[NASA-CASE-MFS-25211-1] c33 N80-32651
- High voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c44 N81-16529
- ELECTRICITY**
- Thermionic converter for converting heat energy directly into electrical energy  
[NASA-CASE-XLE-01903] c22 N71-23599
- ELECTRO-OPTICS**
- Electro-optical system with scan-in illuminator and scan-out photosensor for scanning variable transmittance objects  
[NASA-CASE-NFO-11106] c14 N70-34697
- Electro-optical system for maintaining two-axis alignment during milling operations on large tank-sections  
[NASA-CASE-XMF-00908] c14 N70-40238
- Automatic polarimeter capable of measuring transient birefringence changes in electro-optic materials  
[NASA-CASE-XNP-08883] c23 N71-16101
- Design and development of light sensing device for controlling orientation of object relative to sun or other light source  
[NASA-CASE-NFO-11201] c14 N72-27409
- Electro-optical stabilization of calibrated light source  
[NASA-CASE-MSC-12293-1] c14 N72-27411
- Optical conversion method --- for spacecraft television  
[NASA-CASE-MSC-12618-1] c74 N78-17865
- Noncontacting method for measuring angular deflection  
[NASA-CASE-LAR-12178-1] c74 N80-21138
- ELECTROACOUSTIC TRANSDUCERS**
- Transducer for monitoring oxygen flow in respirator  
[NASA-CASE-FRC-10012] c14 N72-17329
- Material suspension within an acoustically excited resonant chamber --- at near weightless conditions  
[NASA-CASE-NPO-13263-1] c12 N75-24774
- CDS solid state phase insensitive ultrasonic transducer --- annealing cadmium sulfide crystals  
[NASA-CASE-LAR-12304-1] c35 N80-20559
- ELECTROACOUSTIC WAVES**
- Phonocardiogram simulator producing electrical voltage waves to control amplitude and duration between simulated sounds  
[NASA-CASE-XKS-10804] c05 N71-24606
- ELECTROCARDIOGRAPHY**
- Phonocardiogram simulator producing electrical voltage waves to control amplitude and duration between simulated sounds  
[NASA-CASE-XKS-10804] c05 N71-24606
- Development of instantaneous reading tachometer for measuring electrocardiogram signal rate  
[NASA-CASE-MFS-20418] c14 N73-24473
- Insulated electrocardiographic electrodes --- without paste electrolyte  
[NASA-CASE-MSC-14339-1] c05 N75-24716
- Pocket ECG electrode  
[NASA-CASE-ARC-11258-1] c52 N80-33081
- Subcutaneous electrode structure  
[NASA-CASE-ARC-11117-1] c52 N81-14612
- ELECTROCATALYSTS**
- Electrocatalyst for oxygen reduction in low temperature alkaline fuel cell  
[NASA-CASE-HQN-10537-1] c06 N72-10138
- Catalyst surfaces for the chromous/chromic redox couple

- [NASA-CASE-LEW-12148-1] c33 N80-20487  
Zirconium carbide as an electrocatalyst for the  
chromous/chronic redox couple
- [NASA-CASE-LEW-13246-1] c25 N81-26203
- ELECTROCHEMICAL CELLS**
- Apparatus for measuring polymer membrane  
expansion in electrochemical cells  
[NASA-CASE-IGS-03865] c14 N69-21363
- Preventing pressure buildup in electrochemical  
cells by reacting palladium oxide with evolved  
hydrogen  
[NASA-CASE-IGS-01419] c03 N70-41864
- Nonmagnetic hermetically sealed battery case  
made of epoxy resin and woven glass tape for  
use with electrochemical cells in spacecraft  
[NASA-CASE-IGS-00886] c03 N71-11053
- Epoxy resin sealing device for electrochemical  
cells in high vacuum environments  
[NASA-CASE-IGS-02630] c03 N71-22974
- Sealed electrochemical cell with flexible casing  
for varying electrolyte level in cell  
[NASA-CASE-IGS-01513] c03 N71-23336
- Elimination of two step voltage discharge  
property of silver zinc batteries by using  
divalent silver oxide capacity of cell to  
charge anodes to monovalent silver state  
[NASA-CASE-IGS-01674] c03 N71-29129
- Flexible, frangible electrochemical cell and  
package for operation in low temperature  
environment  
[NASA-CASE-IGS-10010] c03 N72-15986
- Porous electrode for use in electrochemical cells  
[NASA-CASE-GSC-11368-1] c09 N73-32108
- Battery testing device --- for testing cells of  
multiple-cell battery  
[NASA-CASE-MPS-20761-1] c44 N74-27519
- Electrical conductivity cell and method for  
fabricating the same  
[NASA-CASE-ARC-10810-1] c33 N76-19339
- Multi-cell battery protection system  
[NASA-CASE-LEW-12039-1] c44 N78-14625
- Method and device for the detection of phenol  
and related compounds --- in an  
electrochemical cell  
[NASA-CASE-LEW-12513-1] c25 N79-22235
- Electrochemical cell for rebalancing REDOX flow  
system  
[NASA-CASE-LEW-13150-1] c44 N79-26474
- Catalyst surfaces for the chromous/chronic redox  
couple  
[NASA-CASE-LEW-13148-1] c33 N80-20487
- ELECTROCHEMICAL MACHINING**
- Apparatus for electrolytically tapered or  
contoured cavities  
[NASA-CASE-XNP-08835-1] c37 N80-14395
- ELECTROCHEMICAL OXIDATION**
- Method and device for the detection of phenol  
and related compounds --- in an  
electrochemical cell  
[NASA-CASE-LEW-12513-1] c25 N79-22235
- Method for depositing an oxide coating ---  
producing solar panels  
[NASA-CASE-LEW-13131-1] c26 N81-24230
- ELECTROCHEMISTRY**
- Electrochemically reversible silver-silver  
chloride electrode for detecting bioelectric  
potential differences generated by human  
muscles and organs  
[NASA-CASE-IMS-02872] c05 N69-21925
- Electrochemical detection device --- for use in  
microbiology  
[NASA-CASE-LAR-11922-1] c25 N79-24073
- ELECTRODE FILM BARRIERS**
- Formulated plastic separators for soluble  
electrode cells --- rubber-ion transport  
membranes  
[NASA-CASE-LEW-12358-1] c44 N79-17313
- ELECTRODELESS DISCHARGES**
- Lightning discharge identification system  
[NASA-CASE-KSC-11099-1] c33 N79-25313
- ELECTRODEPOSITION**
- Binding layer of semiconductor particles by  
electrodeposition  
[NASA-CASE-XNP-01959] c26 N71-23043
- Electrodeposition method for producing  
crystalline material from dense gaseous medium  
[NASA-CASE-NPO-10440] c15 N72-21466
- Electrophoretic sample insertion --- device for  
uniformly distributing samples in flow path
- [NASA-CASE-MPS-21395-1] c25 N74-26948  
Multitarget sequential sputtering apparatus
- [NASA-CASE-NPO-13345-1] c37 N75-19684  
Method and device for the detection of phenol  
and related compounds --- in an  
electrochemical cell  
[NASA-CASE-LEW-12513-1] c25 N79-22235
- Improved refractory coatings and method of  
producing the same  
[NASA-CASE-LEW-13169-1] c26 N80-14232
- ELECTRODES**
- Hollow spherical electrode for shielding  
dielectric junction between high voltage  
conductor and insulator  
[NASA-CASE-XLE-03778] c09 N69-21542
- Electrochemically reversible silver-silver  
chloride electrode for detecting bioelectric  
potential differences generated by human  
muscles and organs  
[NASA-CASE-IMS-02872] c05 N69-21925
- Bonding method for improving contact between  
lead telluride thermoelectric elements and  
tungsten electrodes  
[NASA-CASE-IGS-04554] c15 N69-39786
- Ionization vacuum gage  
[NASA-CASE-XNP-00646] c14 N70-35666
- Accel and focus electrode design for ion engine  
with improved efficiency  
[NASA-CASE-XNP-02839] c28 N70-41922
- Including didymium hydrate in nickel hydroxide  
of positive electrode of storage batteries to  
increase ampere hour capacity  
[NASA-CASE-IGS-03505] c03 N71-10608
- Apertured electrode focusing system for ion  
sources with nonuniform plasma density  
[NASA-CASE-XNP-03332] c09 N71-10618
- Electromedical garment, applying  
vectorcardiologic type electrodes to human  
torsos for data recording during physical  
activity  
[NASA-CASE-XPR-10856] c05 N71-11189
- Electrode attached to helmets for detecting low  
level signals from skin of living creatures  
[NASA-CASE-ARC-10043-1] c05 N71-11193
- Characteristics of pressed disc electrode for  
biological measurements  
[NASA-CASE-IMS-04212-1] c05 N71-12346
- Electrode connection for n-on-p silicon solar cell  
[NASA-CASE-XLE-04787] c03 N71-20492
- Arc electrode of graphite with tantalum ball tip  
[NASA-CASE-XLE-04788] c09 N71-22987
- Electrode sealing and insulation for fuel cells  
containing caustic liquid electrolytes using  
powdered plastic and metal  
[NASA-CASE-IMS-01625] c15 N71-23022
- Automatic recording McLeod gage with three  
electrodes and solenoid valve connection  
[NASA-CASE-XLE-03280] c14 N71-23093
- Dry electrode design with wire sandwiched  
between two flexible conductive discs for  
monitoring physiological responses  
[NASA-CASE-FRC-10029] c09 N71-24618
- Development and characteristics of electrodes in  
which poisoning by organic molecules is  
prevented by ion selective electrolytic  
deposition of hydrophilic protein colloid  
[NASA-CASE-IMS-04213-1] c09 N71-26002
- Adhesive spray process for attaching biomedical  
skin electrodes  
[NASA-CASE-IFR-07658-1] c05 N71-26293
- Electrodes having array of small surfaces for  
field ionization  
[NASA-CASE-ERC-10013] c09 N71-26678
- Manufacturing process for making perspiration  
resistant-stress resistant biopotential  
electrode  
[NASA-CASE-MSC-90153-2] c05 N72-25120
- Dry electrode manufacture, using silver powder  
with cement  
[NASA-CASE-PEC-10029-2] c05 N72-25121
- Compressible electrolyte saturated sponge  
electrode for biomedical applications  
[NASA-CASE-MSC-13648] c05 N72-27103
- Electrode with multiple columnar conductors for  
limiting field emission current  
[NASA-CASE-ERC-10015-2] c10 N72-27246
- Coaxial, high density, hypervelocity plasma  
generator and accelerator using electrodes  
[NASA-CASE-MPS-20589] c25 N72-32686

- Characteristics of ion rocket engine with combination keeper electrode and electron baffle  
[NASA-CASE-NPO-11880] c28 N73-24783
- Silicon carbide backward diode with coated lead attachment  
[NASA-CASE-ERC-10224-2] c09 N73-27150
- Porous electrode for use in electrochemical cells  
[NASA-CASE-GSC-11368-1] c09 N73-32108
- High powered arc electrodes --- producing solar simulator radiation  
[NASA-CASE-LEW-11162-1] c33 N74-12513
- Method of making porous conductive supports for electrodes --- by electroforming and stacking nickel foils  
[NASA-CASE-GSC-11367-1] c44 N74-19692
- Insulated electrocardiographic electrodes --- without paste electrolyte  
[NASA-CASE-MSC-14339-1] c05 N75-24716
- Readout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c35 N76-24525
- Gels as battery separators for soluble electrode cells  
[NASA-CASE-LEW-12364-1] c44 N77-22606
- Snap-in compressible biomedical electrode  
[NASA-CASE-MSC-14623-1] c52 N77-28717
- Cesium thermionic converters having improved electrodes  
[NASA-CASE-LEW-12038-3] c44 N78-25555
- Apparatus for electrolytically tapered or contoured cavities  
[NASA-CASE-XNP-08835-1] c37 N80-14395
- Toroidal cell and battery --- storage battery for high amp-hour load applications  
[NASA-CASE-LEW-12918-1] c44 N81-24521
- Additive for zinc electrodes  
[NASA-CASE-LEW-13286-1] c44 N81-27597
- Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-2] c44 N81-29524
- ELECTRODIALYSIS**  
Electrophoresis device  
[NASA-CASE-MFS-25426-1] c25 N81-29179
- ELECTROFORMING**  
Method of electroforming a rocket chamber  
[NASA-CASE-LEW-11118-1] c20 N74-32919
- ELECTROHYDRAULIC FORMING**  
Electric discharge apparatus for electrohydraulic explosive forming  
[NASA-CASE-XMF-00375] c15 N70-34249
- ELECTROHYDRODYNAMICS**  
Control valve for switching main stream of fluid from one stable position to another by means of electrohydrodynamic forces  
[NASA-CASE-NPO-10416] c12 N71-27332
- ELECTROKINETICS**  
Zeta potential flowmeter for measuring very slow to very high flows  
[NASA-CASE-XNP-06509] c14 N71-23226
- ELECTROLYSIS**  
Water electrolysis rocket engine with self-regulating stoichiometric fuel mixing regulator  
[NASA-CASE-XGS-08729] c28 N71-14044
- Operation method for combined electrolysis device and fuel cell using molten salt to produce power by thermolectric regeneration mechanism  
[NASA-CASE-XLE-01645] c03 N71-20904
- Polymeric electrolytic hygrometer  
[NASA-CASE-NPO-13948-1] c35 N78-25391
- ELECTROLYTES**  
Apparatus for measuring polymer membrane expansion in electrochemical cells  
[NASA-CASE-XGS-03865] c14 N69-21363
- Electrolytically regenerative hydrogen-oxygen fuel cells  
[NASA-CASE-XLE-04526] c03 N71-11052
- Sealed electrochemical cell with flexible casing for varying electrolyte level in cell  
[NASA-CASE-XGS-01513] c03 N71-23336
- Compressible electrolyte saturated sponge electrode for biomedical applications  
[NASA-CASE-MSC-13648] c05 N72-27103
- An improved solid electrolyte cell  
[NASA-CASE-NPO-15269-1] c33 N81-16385
- ELECTROLYTIC CELLS**  
Heat activated cell with aluminum anode  
[NASA-CASE-LEW-11359-2] c03 N72-20034
- Actuator operated by electrolytic drive gas generator and evacuator  
[NASA-CASE-NPO-11369] c15 N73-13467
- Electrolytic cell structure  
[NASA-CASE-LAR-11042-1] c33 N75-27252
- Reconstituted asbestos matrix --- for use in fuel or electrolysis cells  
[NASA-CASE-MSC-12568-1] c24 N76-14204
- Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-1] c33 N80-20487
- An improved solid electrolyte cell  
[NASA-CASE-NFO-15269-1] c33 N81-16385
- Cell and method for electrolysis of water and anode  
[NASA-CASE-MSC-16394-1] c28 N81-24280
- Toroidal cell and battery --- storage battery for high amp-hour load applications  
[NASA-CASE-LEW-12918-1] c44 N81-24521
- ELECTROMAGNETIC ABSORPTION**  
Optical imaging system for increasing light absorption efficiency of imaging detector  
[NASA-CASE-ARC-10194-1] c23 N73-20741
- Method and apparatus for background signal reduction in opto-acoustic absorption measurement  
[NASA-CASE-NPO-13683-1] c35 N77-14411
- Electromagnetic radiation energy arrangement --- coatings for solar energy absorption and infrared reflection  
[NASA-CASE-WOO-00428-1] c32 N79-19186
- Electromagnetic power absorber  
[NASA-CASE-NPO-13830-1] c32 N80-14281
- ELECTROMAGNETIC FIELDS**  
Tumbling motion system for object demagnetization  
[NASA-CASE-XGS-02437] c15 N69-21472
- Device for high vacuum film deposition with electromagnetic ion steering  
[NASA-CASE-NPO-10331] c09 N71-26701
- Metal detection system with electromagnetic transmitter with single coil and receiver with single coil  
[NASA-CASE-ARC-10265-1] c10 N72-28240
- Low power electromagnetic flowmeter system producing zero output signal for zero flow  
[NASA-CASE-ARC-10362-1] c14 N73-32326
- Electromagnetic flow rate meter --- for liquid metals  
[NASA-CASE-LEW-10981-1] c35 N74-21018
- Microcomputerized electric field meter diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c35 N78-28411
- ELECTROMAGNETIC HAMMERS**  
Method and apparatus for shaping and joining large diameter metal tubes using magnetomotive forces  
[NASA-CASE-XMP-05114] c15 N71-17650
- Portable magnetomotive hammer for metal working  
[NASA-CASE-XMP-03793] c15 N71-24833
- ELECTROMAGNETIC INTERFERENCE**  
Sealed housing for protecting electronic equipment against electromagnetic interference  
[NASA-CASE-MSC-12168-1] c09 N71-18600
- Method of treating the surface of a glass member  
[NASA-CASE-GSC-12110-1] c27 N77-32308
- ELECTROMAGNETIC MEASUREMENT**  
Apparatus for measuring backscatter and transmission characteristics of sample segment of large spherical passive satellites  
[NASA-CASE-XGS-02608] c07 N70-41678
- Microcomputerized electric field meter diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c35 N78-28411
- ELECTROMAGNETIC NOISE**  
Development of idler feedback system to reduce electronic noise problem in two parametric amplifiers  
[NASA-CASE-LAR-10253-1] c09 N72-25258
- Audio equipment for removing impulse noise from audio signals  
[NASA-CASE-NPO-11631] c10 N73-12244
- Filtering device --- removing electromagnetic noise from voice communication signals  
[NASA-CASE-MFS-22729-1] c32 N76-21366
- ELECTROMAGNETIC PROPULSION**  
Hypervelocity gun --- using both electric and chemical energy for projectile propulsion  
[NASA-CASE-XLE-03186-1] c09 N79-21084

**ELECTROMAGNETIC PUMPS**

Multiducted electromagnetic pump for conductive liquids  
[NASA-CASE-NPO-10755] c15 N71-27084

**ELECTROMAGNETIC RADIATION**

Inflatable radar reflector unit - lightweight, highly reflective to electromagnetic radiation, and adaptable for erection and deployment with minimum effort and time  
[NASA-CASE-IMS-00893] c07 N70-40063

Development of electromagnetic wave transmission line circulator and application to parametric amplifier circuits  
[NASA-CASE-INP-02140] c09 N71-23097

Left and right hand circular electromagnetic polarization excitation by phase shifter and hybrid networks  
[NASA-CASE-GSC-10021-1] c09 N71-24595

Development of method for suppressing excitation of electromagnetic surface waves on dielectric converter antenna  
[NASA-CASE-XLA-10772] c07 N71-28980

Characteristics of microwave antenna with conical reflectors to generate plane wave front  
[NASA-CASE-NPO-11661] c07 N73-14130

Method and apparatus for measuring electromagnetic radiation  
[NASA-CASE-LEW-11159-1] c14 N73-28488

**ELECTROMAGNETIC SHIELDING**

Shielded flat conductor cable fabricated by electroless and electrolytic plating  
[NASA-CASE-MFS-13687] c09 N71-28691

Wire stripper  
[NASA-CASE-FRC-10111-1] c37 N79-10419

Shielded conductor cable system  
[NASA-CASE-MSC-12745-1] c33 N81-27397

**ELECTROMAGNETIC WAVE FILTERS**

Design and characteristics of laser camera system with diffusion filter of small particles with average diameter larger than wavelength of laser light  
[NASA-CASE-NPO-10417] c16 N71-33410

**ELECTROMAGNETIC WAVE TRANSMISSION**

Apparatus for measuring backscatter and transmission characteristics of sample segment of large spherical passive satellites  
[NASA-CASE-XGS-02608] c07 N70-41678

Gyrottron transmitting tube  
[NASA-CASE-LEW-13429-1] c33 N81-16384

**ELECTROMAGNETISM**

Electromagnetic braking arrangement for controlling rotor rotation in electric motor  
[NASA-CASE-INP-06936] c15 N71-24695

Linear magnetic bearing  
[NASA-CASE-GSC-12517-1] c33 N81-22279

**ELECTROMAGNETS**

Oscillatory electromagnetic mirror drive system for horizon scanners  
[NASA-CASE-XLA-03724] c14 N69-27461

Water cooled solenoid capable of producing magnetic field intensities up to 100 kilogauss  
[NASA-CASE-INP-01951] c09 N70-41929

Magnetic element position sensing device, using misaligned electromagnets  
[NASA-CASE-XGS-07514] c23 N71-16099

Electroexplosive safe-arm initiator using electric driven electromagnetic coils and magnets to align charge  
[NASA-CASE-LAR-10372] c09 N71-18599

Magnetic bearing --- for supplying magnetic fluxes  
[NASA-CASE-GSC-11079-1] c37 N75-18574

Linear magnetic bearings --- active magnetic suspension of armatures  
[NASA-CASE-GSC-12582-1] c37 N81-16469

**ELECTROMECHANICAL DEVICES**

Electromechanical actuator and its use in rocket thrust control valve  
[NASA-CASE-INP-05975] c15 N69-23185

Power controlled bimetallic electromechanical actuator for accurate, timely, and reliable response to remote control signal  
[NASA-CASE-INP-09776] c09 N69-39929

Electro-mechanical circuit for converting floating intelligence signal to common electrically grounded intelligence recorder  
[NASA-CASE-IAC-00086] c09 N70-33182

Describing device for velocity control of electromechanical drive mechanism of scanning mirror of interferometer  
[NASA-CASE-XGS-03532] c14 N71-17627

Mechanical actuator wherein linear motion changes to rotational motion  
[NASA-CASE-XGS-04548] c15 N71-24045

Solid state force measuring electromechanical transducers made of piezoresistive materials  
[NASA-CASE-ERC-10088] c26 N71-25490

Electromechanical control actuator system using double differential screws  
[NASA-CASE-ERC-10022] c15 N71-26635

Miniature electromechanical junction transducer operating on piezjunction effect and utilizing epoxy for stress coupling component  
[NASA-CASE-ERC-10087] c14 N71-27334

Service life of electromechanical device for generating sine/cosine functions  
[NASA-CASE-LAR-10503-1] c09 N72-21248

Electromechanical actuator for producing mechanical force and/or motion in response to electrical signals  
[NASA-CASE-NPO-11738-1] c09 N73-30185

Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-11389-1] c33 N77-26387

Rotary electric device  
[NASA-CASE-GSC-12138-1] c33 N79-20314

Coal-shale interface detection system  
[NASA-CASE-MFS-23720-2] c43 N80-14423

Magnetic field control --- electromechanical torquing devices  
[NASA-CASE-MFS-23828-1] c33 N80-17359

Coal-shale interface detector  
[NASA-CASE-MFS-23720-1] c43 N80-23711

**ELECTROMETERS**

Vibrating element electrometer producing high conversion gain by input current control of elements resonant frequency displacement amplitude  
[NASA-CASE-IAC-02807] c09 N71-23021

Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c35 N81-12389

**ELECTROMIGRATION**

Electromigration process for the purification of molten silicon during crystal growth  
[NASA-CASE-NPO-14831-1] c76 N81-19944

**ELECTROMOTIVE FORCES**

Heat activated emf cells with aluminum anode  
[NASA-CASE-LEW-11359] c03 N71-28579

Flexible formulated plastic separators for alkaline batteries  
[NASA-CASE-LEW-12363-4] c44 N80-18555

**ELECTRON ATTACHMENT**

High resolution threshold photoelectron spectroscopy by electron attachment  
[NASA-CASE-NPO-14078-1] c72 N80-14877

**ELECTRON BEAM WELDING**

Portable electron beam welding chamber  
[NASA-CASE-LEW-11531] c15 N71-14932

Development of device to prevent high voltage arcing in electron beam welding  
[NASA-CASE-INP-08522] c15 N71-19486

**ELECTRON BEAMS**

Using electron beam switching for brushless motor commutation  
[NASA-CASE-XGS-01451] c09 N71-10677

Electron beam scanning system for improved image definition and reduced power requirements for video signal transmission  
[NASA-CASE-ERC-10552] c09 N71-12539

Electron beam deflection devices for measuring electric fields  
[NASA-CASE-INP-10289] c14 N71-23699

Apparatus to determine electric field strength by measuring deflection of electron beam impinging on target  
[NASA-CASE-INP-06617] c09 N71-24843

Characteristics of infrared photodetectors manufactured from semiconductor material irradiated by electron beam  
[NASA-CASE-LAR-10728-1] c14 N73-12445

Electron beam controller --- using magnetic field to refocus spent electron beam in microwave oscillator tube  
[NASA-CASE-LEW-11617-1] c33 N74-10195

Image tube --- deriving electron beam replica of image  
[NASA-CASE-GSC-11602-1] c33 N74-21850

Very high intensity light source using a cathode ray tube --- electron beams  
[NASA-CASE-INP-01296] c33 N75-27250

- Coupled cavity traveling wave tube with velocity tapering  
[NASA-CASE-LBW-12296-1] c33 N80-19425
- A low energy electron magnetometer  
[NASA-CASE-LAR-12706-1] c35 N81-19428
- ELECTRON BOMBARDMENT**
- Improved cathode containing barium carbonate block and heated tungsten screen for electron bombardment ion thruster  
[NASA-CASE-XLE-07087] c06 N69-39889
- Device and method for particle bombardment of specimens in electron microscope and measurement of beam intensities  
[NASA-CASE-XGS-01725] c14 N69-39582
- Electric rocket engine with electron bombardment ionization chamber  
[NASA-CASE-INP-04124] c28 N71-21E22
- Electronic cathodes for use in electron bombardment ion thrusters  
[NASA-CASE-XLE-04501] c09 N71-23190
- Single grid accelerator system for electron bombardment type ion thruster  
[NASA-CASE-XLE-10453-2] c28 N73-27699
- Containerless high temperature calorimeter apparatus  
[NASA-CASE-MFS-23923-1] c35 N81-19426
- ELECTRON CAPTURE**
- Multistage depressed collector for dual node operation --- for travelling wave tubes  
[NASA-CASE-LBW-13282-1] c33 N79-32463
- ELECTRON DISTRIBUTION**
- Measurement of plasma temperature and density using radiative absorption  
[NASA-CASE-ARC-10598-1] c75 N74-30156
- ELECTRON EMISSION**
- Vacuum thermionic converter with short-circuited triodes and increased electron transmission and conversion efficiency  
[NASA-CASE-XLE-01015] c03 N69-39898
- ELECTRON FLUX DENSITY**
- Device and method for particle bombardment of specimens in electron microscope and measurement of beam intensities  
[NASA-CASE-XGS-01725] c14 N69-39982
- ELECTRON IRRADIATION**
- Electrostatic ion engines using high velocity electrons to ionize propellant  
[NASA-CASE-XLE-00376] c28 N70-37245
- ELECTRON MICROSCOPES**
- Device and method for particle bombardment of specimens in electron microscope and measurement of beam intensities  
[NASA-CASE-XGS-01725] c14 N69-39582
- Method of forming aperture plate for electron microscope  
[NASA-CASE-ARC-10448-2] c74 N75-12732
- Electron microscope aperture system  
[NASA-CASE-ARC-10448-3] c35 N77-14408
- ELECTRON PHOTON CASCADES**
- Resistive anode image converter  
[NASA-CASE-HQN-10876-1] c33 N76-27473
- ELECTRON PLASMA**
- Apparatus for producing highly conductive, high temperature electron plasma with homogeneous temperature and pressure distribution  
[NASA-CASE-XLA-00147] c25 N70-34661
- ELECTRON SOURCES**
- Electron microscope aperture system  
[NASA-CASE-ARC-10448-3] c35 N77-14408
- ELECTRON TRANSFER**
- Method for treating metal surfaces to prevent secondary electron transmission  
[NASA-CASE-INP-09469] c24 N71-25555
- ELECTRON TRANSITIONS**
- Diatonic infrared gasdynamic laser --- for producing different wavelengths  
[NASA-CASE-ARC-10370-1] c36 N75-31426
- ELECTRON TUBES**
- Direct radiation cooling of linear beam collector tubes  
[NASA-CASE-INP-09227] c15 N69-24319
- Refractory filament series circuitry for radiant heater  
[NASA-CASE-XLE-00387] c33 N70-34E12
- Gyrotion transmitting tube  
[NASA-CASE-LBW-13429-1] c33 N81-16384
- Ion sputter textured graphite --- applications to electron tube devices  
[NASA-CASE-LBW-12919-1] c24 N81-27198
- ELECTRON TUNNELING**
- Doped Josephson tunneling junction for use in a sensitive IR detector  
[NASA-CASE-NPO-13348-1] c33 N75-31332
- ELECTRONIC CONTROL**
- Electronic and mechanical scanning control system for monopulse tracking antenna  
[NASA-CASE-XGS-05582] c07 N69-27460
- Electronic circuit system for controlling electric motor speed  
[NASA-CASE-INP-01129] c09 N70-38712
- Scanning signal phase and amplitude electronic control device with hybrid T waveguide junction  
[NASA-CASE-NPO-10302] c10 N71-26142
- Ion beam deflector system for electronic thrust vector control for ion propulsion yaw, pitch, and roll forces  
[NASA-CASE-LBW-10689-1] c28 N71-26173
- Electronic detection system for peak acceleration limits in vibrational testing of spacecraft components  
[NASA-CASE-NPO-10556] c14 N71-27185
- Control and information system for digital telemetry data using analog converter to digitize sensed parameter values  
[NASA-CASE-NPO-11016] c08 N72-31226
- ELECTRONIC EQUIPMENT**
- Electronic and mechanical scanning control system for monopulse tracking antenna  
[NASA-CASE-IGS-05582] c07 N69-27460
- Development of pulse-activated polarographic hydrogen detector  
[NASA-CASE-INP-06531] c14 N71-17575
- Development of stable electronic amplifier adaptable for monolithic and thin film construction  
[NASA-CASE-IGS-02812] c09 N71-19466
- Development and characteristics of oscillating static inverter  
[NASA-CASE-IGS-05289] c09 N71-19470
- Development of electromagnetic wave transmission line circulator and application to parametric amplifier circuits  
[NASA-CASE-INP-02140] c09 N71-23097
- Development of optimum pre-detection diversity combining receiving system adapted for use with amplitude modulation, phase modulation, and frequency modulation systems  
[NASA-CASE-IGS-00740] c07 N71-23098
- Electronic cathodes for use in electron bombardment ion thrusters  
[NASA-CASE-XLE-04501] c09 N71-23190
- Method and apparatus for adjusting thermal conductance in electronic components for space use  
[NASA-CASE-INP-05524] c33 N71-24876
- Development and characteristics of solid state acoustic variable time delay line using direct current voltage and radic frequency pulses  
[NASA-CASE-ERC-10032] c10 N71-25900
- Voltage range selection apparatus for sensing and applying voltages to electronic instruments without loading signal source  
[NASA-CASE-XMS-06497] c14 N71-26244
- Digital sensor for counting fringes produced by interferometers with improved sensitivity and one photon multiplier tube to eliminate alignment problem  
[NASA-CASE-LAR-10204] c14 N71-27215
- Device for rapid adjustment and maintenance of temperature in electronic components  
[NASA-CASE-INP-02792] c14 N71-28958
- Apparatus with summing network for compression of analog data by decreasing slope threshold sampling  
[NASA-CASE-NPO-10769] c08 N72-11171
- Readily assembled universal environment housing for electronic equipment  
[NASA-CASE-KSC-10031] c15 N72-22486
- Lead attachment for high temperature operation of electronic devices  
[NASA-CASE-ERC-10224] c09 N72-25261
- Development of method and apparatus for detecting surface ions on silicon diodes and transistors  
[NASA-CASE-ERC-10325] c15 N72-25457
- Development and characteristics of data decoder to process convolution encoded information  
[NASA-CASE-NFC-11371] c08 N73-12177

- Characteristics of digital data processor using pulse from clock source to derive binary singles to show state of various indicators in processor  
[NASA-CASE-GSC-10975-1] c08 N73-13187
- Thermochromic compositions for detecting heat levels in electronic circuits and devices  
[NASA-CASE-NPO-10764-1] c14 N73-14428
- Development of phase control coupling for use with phased array antenna  
[NASA-CASE-BRC-10285] c10 N73-16206
- Device for locating electrically nonlinear objects and determining distance to object by FM signal transmission  
[NASA-CASE-KSC-10108] c14 N73-25461
- Electronic strain level counter on in-flight aircraft  
[NASA-CASE-LAR-10756-1] c32 N73-26510
- Automatic vehicle location system  
[NASA-CASE-NPO-11850-1] c32 N74-12512
- Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c35 N75-15014
- Electronic analog divider  
[NASA-CASE-LBP-11881-1] c33 N77-17354
- Multistage depressed collector for dual node operation --- for travelling wave tubes  
[NASA-CASE-LBW-15282-1] c33 N79-32463
- ELECTRONIC EQUIPMENT TESTS**
- Apparatus for automatically testing analog to digital converters for open and short circuits  
[NASA-CASE-XLA-06713] c14 N71-28591
- Signal conditioner test set  
[NASA-CASE-KSC-10750-1] c35 N75-12270
- Decommutator patchboard verifier  
[NASA-CASE-KSC-11065-1] c33 N81-26359
- ELECTRONIC FILTERS**
- Self-tuning electronic filter for maintaining constant bandwidth and center frequency gain  
[NASA-CASE-ARC-10264-1] c09 N73-20231
- Capacitance multiplier and filter synthesizing network  
[NASA-CASE-NPO-11948-1] c33 N74-32712
- Notch filter  
[NASA-CASE-MFS-23303-1] c32 N77-18307
- ELECTRONIC MODULES**
- Thermal conductive, electrically insulated cleavable adhesive connection between electronic module and heat sink  
[NASA-CASE-IHS-02087] c09 N70-41717
- Fabrication methods for matrices of solar cell submodules  
[NASA-CASE-XNP-05821] c03 N71-11056
- Development and characteristics of cooling system to maintain temperature of rack mounted electronic modules  
[NASA-CASE-MSC-12389] c33 N71-29052
- Tool for use in lifting pin supported objects  
[NASA-CASE-NPO-13157-1] c37 N74-32918
- Phase substitution of spare converter for a failed one of parallel phase staggered converters  
[NASA-CASE-NPO-13812-1] c33 N77-30365
- Method of making encapsulated solar cell modules  
[NASA-CASE-LBW-12185-1] c44 N78-25528
- Electronically scanned pressure sensor module with in situ calibration capability  
[NASA-CASE-LAR-12230-1] c35 N79-14347
- Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c33 N79-24254
- Circuit for automatic load sharing in parallel converter modules  
[NASA-CASE-NPO-14056-1] c33 N79-24257
- Method and apparatus for fabricating improved solar cell modules  
[NASA-CASE-NPO-14416-1] c44 N81-14389
- Redundant operation of counter modules  
[NASA-CASE-NPO-14162-1] c60 N81-15706
- ELECTRONIC PACKAGING**
- Electrical feedthrough connection for printed circuit boards  
[NASA-CASE-XNP-01483] c14 N69-27431
- Capacitor fabrication by solidifying mixture of ferromagnetic metal particles, nonferromagnetic particles, and dielectric material  
[NASA-CASE-LBW-10364-1] c09 N71-13522
- Method of evaluating moisture barrier properties of materials used in electronics encapsulation  
[NASA-CASE-NPO-10051] c18 N71-24934
- Electrical connections for thin film hybrid microcircuits  
[NASA-CASE-XMS-02182] c10 N71-28783
- Flexible, frangible electrochemical cell and package for operation in low temperature environment  
[NASA-CASE-XGS-10010] c03 N72-15986
- Development and characteristics of hermetically sealed coaxial package for containing microwave semiconductor components  
[NASA-CASE-GSC-10791-1] c15 N73-14469
- Techniques for packaging and mounting printed circuit boards  
[NASA-CASE-MFS-21919-1] c10 N73-25243
- Integrated circuit package with lead structure and method of preparing the same  
[NASA-CASE-MFS-21374-1] c33 N74-12951
- Tool for use in lifting pin supported objects  
[NASA-CASE-NPO-13157-1] c37 N74-32918
- Chassis unit insert tightening-extract device  
[NASA-CASE-XMS-01077-1] c37 N79-33467
- Computer circuit card puller  
[NASA-CASE-PRC-11042-1] c37 N80-20589
- ELECTRONIC RECORDING SYSTEMS**
- Electronic recording system for spatial mass distribution of liquid rocket propellant droplets or vapors ejected from high velocity nozzles  
[NASA-CASE-NPO-10185] c10 N71-26339
- A self-correcting electronically scanned pressure sensor  
[NASA-CASE-LAR-12686-1] c09 N81-27121
- ELECTRONIC TRANSDUCERS**
- Fiber optic transducers for monitoring and analysis of vibration in aerospace vehicles and onboard equipment  
[NASA-CASE-XMF-02433] c14 N71-10616
- Transducer circuit design with single coaxial cable for input and output connections including incorporation into miniaturized catheter transducer  
[NASA-CASE-ARC-10132-1] c09 N71-24597
- Circuit design for failure sensing and protecting low voltage electric generator and power transmission networks  
[NASA-CASE-GSC-10114-1] c10 N71-27366
- Electromagnetic transducer recording head having a laminated core section and tapered gap  
[NASA-CASE-NPO-10711-1] c35 N77-21392
- Distributed-switch Dicke radiometers  
[NASA-CASE-GSC-12219-1] c35 N80-18359
- ELECTROPHORESIS**
- Electrophoretic sample insertion --- device for uniformly distributing samples in flow path  
[NASA-CASE-MFS-21395-1] c25 N74-26948
- Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-MFS-21394-1] c34 N74-27744
- Automatic multiple-sample applicator and electrophoresis apparatus  
[NASA-CASE-ARC-10991-1] c25 N78-14104
- Portable electrophoresis apparatus using minimum electrolyte  
[NASA-CASE-NEO-13274-1] c25 N79-10163
- Microelectrophoretic apparatus and process  
[NASA-CASE-ARC-11121-1] c25 N79-14169
- Electrophoretic fractional elution apparatus employing a rotational seal fraction collector  
[NASA-CASE-MFS-23284-1] c37 N80-14397
- Method for separating biological cells --- suspended in aqueous polymer systems  
[NASA-CASE-MFS-23883-1] c51 N80-16715
- Electrophoresis device  
[NASA-CASE-MFS-25426-1] c25 N81-29179
- ELECTROPHOTOMETERS**
- Method and photodetector device for locating abnormal voids in low density materials  
[NASA-CASE-MFS-20044] c14 N71-28993
- ELECTROPHYSIOLOGY**
- Dry electrode design with wire sandwiched between two flexible conductive discs for monitoring physiological responses  
[NASA-CASE-PRC-10029] c09 N71-24618
- ELECTROPLATING**
- Method of plating copper on aluminum to permit conventional soldering of structural aluminum



bodies  
 [NASA-CASE-XLA-08966-1] c17 N71-25903  
 Shielded flat conductor cable fabricated by  
 electroless and electrolytic plating  
 [NASA-CASE-MFS-13687] c09 N71-28691  
 Technique and equipment for sputtering using  
 apertured electrode and pulsed substrate bias  
 [NASA-CASE-LEW-10920-1] c17 N73-24569  
 Method for depositing an oxide coating ---  
 producing solar panels  
 [NASA-CASE-LEW-13131-1] c26 N81-24230  
 Method of forming oxide coatings  
 [NASA-CASE-LEW-13132-1] c44 N81-27616  
 Catalyst surfaces for the chromous/chromic redox  
 couple  
 [NASA-CASE-LEW-13148-2] c44 N81-29524

**ELECTROSTATIC CHARGE**  
 Charged particle analyzer with periodically  
 varying voltage applied across electrostatic  
 deflection members  
 [NASA-CASE-XAC-05506-1] c24 N71-16095  
 Electrostatic measurement system --- for  
 contact-electrifying a dielectric  
 [NASA-CASE-MFS-22129-1] c33 N75-18477  
 Use of glow discharge in fluidized beds  
 [NASA-CASE-ARC-11245-1] c33 N80-11326

**ELECTROSTATIC ENGINES**  
 Colloidal particle generator for electrostatic  
 engine for propelling space vehicles  
 [NASA-CASE-XLE-00817] c28 N70-33265  
 Encapsulated heater forming hollow body for  
 cathode used in ion thruster  
 [NASA-CASE-LEW-10814-1] c28 N70-35422  
 Electrostatic ion engines using high velocity  
 electrons to ionize propellant  
 [NASA-CASE-XLE-00376] c28 N70-37245  
 Electron bombardment ion rocket engine with  
 improved propellant introduction system  
 [NASA-CASE-XLE-02066] c28 N71-15661

**ELECTROSTATIC GENERATORS**  
 Electrostatic modulator for communicating  
 through plasma sheath formed around spacecraft  
 during reentry  
 [NASA-CASE-XLA-01400] c07 N70-41331

**ELECTROSTATIC PRECIPITATORS**  
 Fine particulate capture device  
 [NASA-CASE-LEW-11583-1] c35 N79-17192

**ELECTROSTATIC PROBES**  
 Low impedance apparatus for measuring  
 electrostatic field intensity near space  
 vehicles  
 [NASA-CASE-XLE-00820] c14 N71-16014

**ELECTROSTATIC PROPULSION**  
 High voltage insulators for direct current in  
 acceleration system of electrostatic thruster  
 [NASA-CASE-XLE-01902] c28 N71-10574  
 Electrostatic microthruster propulsion system with  
 annular slit colloid thruster  
 [NASA-CASE-GSC-10709-1] c28 N71-25213

**ELECTROSTATIC SHIELDING**  
 Ion beam thruster shield  
 [NASA-CASE-LEW-12082-1] c20 N77-10148  
 Shielded conductor cable system  
 [NASA-CASE-MSC-12745-1] c33 N81-27397

**ELECTROSTATICS**  
 Controllable high voltage source having fast  
 settling time  
 [NASA-CASE-GSC-11844-1] c33 N75-19522

**ELECTROTHERMAL ENGINES**  
 Electrothermal rocket engine using resistance  
 heated heat exchanger  
 [NASA-CASE-XLE-00267] c28 N70-33356  
 High resistance cross flow heat exchangers for  
 electrothermal rocket engines  
 [NASA-CASE-XLE-01783] c28 N70-34175

**ELEVATION**  
 Tracking mount for laser telescope employed in  
 tracking large rockets and space vehicles to  
 give information regarding azimuth and elevation  
 [NASA-CASE-MFS-14017] c14 N71-26627  
 Automatic braking device for rapidly  
 transferring humans or materials from elevated  
 location  
 [NASA-CASE-XKS-07814] c15 N71-27067

**ELEVATORS (LIFTS)**  
 Centrifuge mounted motion simulator with  
 elevator mechanism  
 [NASA-CASE-XAC-00399] c11 N70-34615

Guide member for stabilizing cable of open shaft  
 elevator  
 [NASA-CASE-KSC-10513] c15 N72-25453

**ELEVONS**  
 Supersonic or hypersonic vehicle control system  
 comprising elevons with hinge line sweep and  
 free of adverse aerodynamic cross coupling  
 [NASA-CASE-XLA-08967] c02 N71-27088

**ELLIPSES**  
 Ellipsograph for describing and cutting ellipses  
 with minimal axial dimensions  
 [NASA-CASE-XLA-03102] c14 N71-21079

**ELLIPSOIDMETERS**  
 Remote sensing of vegetation and soil using  
 microwave ellipsometry  
 [NASA-CASE-GSC-11976-1] c43 N78-10529

**ELONGATION**  
 Strain gage measurement of elongation due to  
 thermally and mechanically induced stresses  
 [NASA-CASE-IGS-04478] c14 N71-24233  
 Amplifying ribbon extensometer  
 [NASA-CASE-LAR-11825-1] c35 N77-22449  
 Moving body velocity arresting line ---  
 elongating steel cable  
 [NASA-CASE-LAR-12372-1] c37 N80-18399

**ELUTION**  
 Amino acid analysis  
 [NASA-CASE-NPO-12130-1] c25 N75-14844  
 Electrophoretic fractional elution apparatus  
 employing a rotational seal fraction collector  
 [NASA-CASE-MFS-23284-1] c37 N80-14397

**EMERGENCIES**  
 Silent alarm system for multiple room facility or  
 school  
 [NASA-CASE-NPO-11307-1] c10 N73-30205  
 Emergency space-suit helmet  
 [NASA-CASE-MSC-10954-1] c54 N78-18761

**EMERGENCY BREATHING TECHNIQUES**  
 Pulmonary resuscitation method and apparatus  
 with adjustable pressure regulator  
 [NASA-CASE-XMS-01115] c05 N70-39922

**EMERGENCY LIFE SUSTAINING SYSTEMS**  
 Development and characteristics of inflatable  
 structure to provide escape from orbit for  
 spacecrews under emergency conditions  
 [NASA-CASE-XMS-06162] c31 N71-28851  
 Three transceiver lunar emergency system to  
 relay voice communication of astronaut  
 [NASA-CASE-MFS-21042] c07 N72-25171  
 Emergency descent device  
 [NASA-CASE-MFS-23074-1] c54 N77-21844

**EMISSION SPECTRA**  
 Emission spectroscopy method for contamination  
 monitoring of inert gas metal arc welding  
 [NASA-CASE-XMF-02039] c15 N71-15871

**EMITTANCE**  
 High thermal emittance black surface coatings  
 and process for applying to metal and metal  
 alloy surfaces used in radiative cooling of  
 spacecraft  
 [NASA-CASE-XLA-06199] c15 N71-24875

**EMITTERS**  
 Inverted geometry transistor for use with  
 monolithic integrated circuit  
 [NASA-CASE-ARC-10330-1] c09 N73-32112

**EMULSIONS**  
 Apparatus for obtaining isotropic irradiation on  
 film emulsion from parallel radiation source  
 [NASA-CASE-MFS-20095] c24 N72-11595

**ENAMELS**  
 Refractory porcelain enamel passive control  
 coating for high temperature alloys  
 [NASA-CASE-MFS-22324-1] c27 N75-27160

**ENCAPSULATING**  
 Development of bacteriostatic conformal coating  
 and methods of application  
 [NASA-CASE-GSC-10007] c18 N71-16046  
 Flexible, repairable, portable composition for  
 encapsulating electric connectors  
 [NASA-CASE-IGS-05180] c18 N71-25881  
 Test chambers with orifice and helium mass  
 spectrometer for detecting leak rate of  
 encapsulated semiconductor devices  
 [NASA-CASE-ERC-10150] c14 N71-28992  
 Electrically coupled individually encapsulated  
 solar cell matrix  
 [NASA-CASE-NPO-11190] c03 N71-34044  
 Method of making encapsulated solar cell modules  
 [NASA-CASE-LEW-12185-1] c44 N78-25528

## ENCLOSURES

Method and apparatus for bowing of instrument panels to improve radio frequency shielded enclosure  
[NASA-CASE-XMF-09422] c07 N71-19436  
Totally confined explosive welding  
[NASA-CASE-LAR-10941-2] c37 N79-13364

## ENDOSCOPES

Borescope with adjustable hinged telescoping optical system  
[NASA-CASE-MFS-15162] c14 N72-32452  
Apparatus for endoscopic examination --- analysis of the propulsion system configuration and transmitter  
[NASA-CASE-NPO-14092-1] c52 N80-16725

## ENDOTHERMIC REACTIONS

Sensor device with switches for measuring surface recession of charring and noncharring ablaters  
[NASA-CASE-XLA-01781] c14 N69-39975

## ENEMY PERSONNEL

Development of electronic detection system for remotely determining number and movement of enemy personnel  
[NASA-CASE-ARC-10097-2] c07 N73-25160

## ENERGY ABSORPTION

Non-reusable kinetic energy absorber for application in soft landing of space vehicles  
[NASA-CASE-XLE-00810] c15 N70-34861  
Low onset rate energy absorber in form of strut assembly for crew couch of Apollo command module  
[NASA-CASE-MSC-12279-1] c15 N70-35679  
Air brake device for absorbing and measuring power from rotating shafts  
[NASA-CASE-XLE-00720] c14 N70-40201

Design and development of double acting shock absorber for spacecraft docking operations  
[NASA-CASE-XMS-03722] c15 N71-21530

Nonreusable energy absorbing device comprising ring member with plurality of recesses, cutting members, and guide member mounted in each recess  
[NASA-CASE-XMF-10040] c15 N71-22877

Suspended mass oscillation damper based on impact energy absorption for damping wind induced oscillations of tall stacks, antennas, and umbilical towers  
[NASA-CASE-LAR-10193-1] c15 N71-27146

Energy absorption device in high precision gear train for protection against damage to components caused by stop loads  
[NASA-CASE-XNP-01848] c15 N71-28959

Shock absorber for use as protective barrier in impact energy absorbing system  
[NASA-CASE-NPO-10671] c15 N72-20443

High energy absorption docking system design for docking large spacecraft  
[NASA-CASE-MFS-20863] c31 N73-26876

Metal shearing energy absorber  
[NASA-CASE-HQN-10638-1] c15 N73-30460

## ENERGY CONSERVATION

Remote platform power conserving system  
[NASA-CASE-GSC-11182-1] c15 N75-13007

## ENERGY CONVERSION

Thermoelectric power conversion by liquid metal flowing through magnetic field  
[NASA-CASE-XNP-00644] c03 N70-36803

Concentrator device for controlling direction of solar energy onto energy converters  
[NASA-CASE-ILE-01716] c09 N70-40234

Device for converting electromagnetic wave energy into electric power  
[NASA-CASE-GSC-11394-1] c09 N73-32109

Electric power generation system directory from laser power  
[NASA-CASE-NPO-13308-1] c36 N75-30524

Mechanical thermal motor  
[NASA-CASE-MFS-23062-1] c37 N77-12402

Low to high temperature energy conversion system  
[NASA-CASE-NPO-13510-1] c44 N77-32581

Solar energy collection system  
[NASA-CASE-NPO-13810-1] c44 N77-32582

Microwave power converter  
[NASA-CASE-NPO-14068-1] c44 N78-19609

Amplified wind turbine apparatus  
[NASA-CASE-MFS-23830-1] c44 N80-21831

## ENERGY CONVERSION EFFICIENCY

Vacuum thermionic converter with short-circuited triodes and increased electron transmission

and conversion efficiency  
[NASA-CASE-XLE-01015] c03 N69-39898  
Direct conversion of thermal energy into electrical energy using crossed electric and magnetic fields  
[NASA-CASE-XLE-00212] c03 N70-34134

Increasing power conversion efficiency of electronic amplifiers by power supply switching  
[NASA-CASE-XMS-00945] c09 N71-10798

Energy storage apparatus  
[NASA-CASE-GSC-12030-1] c44 N78-24608  
Solar cell system having alternating current output  
[NASA-CASE-LEW-12806-1] c44 N78-25553

Method of construction of a multi-cell solar array  
[NASA-CASE-MFS-23540-1] c44 N79-26475

Self-reconfiguring solar cell system  
[NASA-CASE-LEW-12586-1] c44 N80-14472

Improving the efficiency of silicon solar cells containing chromium  
[NASA-CASE-NPO-15179-1] c44 N80-32850

## ENERGY DISSIPATION

Energy dissipating shock absorbing system for land payload recovery or vehicle braking  
[NASA-CASE-XLA-00754] c15 N70-34850

Wingtip vortex dissipator for aircraft  
[NASA-CASE-LAR-11645-1] c02 N77-10001

Motion restraining device  
[NASA-CASE-NPO-13619-1] c37 N78-16369

## ENERGY DISTRIBUTION

Method and apparatus for measurement of trap density and energy distribution in dielectric films  
[NASA-CASE-NPO-13443-1] c76 N76-20994

## ENERGY LEVELS

High resolution threshold photoelectron spectroscopy by electron attachment  
[NASA-CASE-NFO-14078-1] c72 N80-14877

A low energy electron magnetometer  
[NASA-CASE-LAR-12706-1] c35 N81-19428

## ENERGY POLICY

Solar energy power system  
[NASA-CASE-MFS-21628-2] c44 N76-23675

Thermal energy storage system --- operating on superheating of liquids  
[NASA-CASE-MFS-23167-1] c44 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] c35 N77-20401

Lightweight reflector assembly  
[NASA-CASE-NPO-13707-1] c74 N77-28933

Solar photolysis of water  
[NASA-CASE-NFO-13675-1] c44 N77-32580

Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c44 N78-19599

Microwave power converter  
[NASA-CASE-NFO-14068-1] c44 N78-19609

Solar pond  
[NASA-CASE-NFO-13581-2] c44 N78-31525

Non-tracking solar energy collector system  
[NASA-CASE-NFO-13813-1] c44 N78-31526

Coal desulfurization process  
[NASA-CASE-NFO-13937-1] c44 N78-31527

Primary reflector for solar energy collection systems  
[NASA-CASE-NPO-13579-4] c44 N79-14529

Primary reflector for solar energy collection systems and method of making same  
[NASA-CASE-NPO-13579-3] c44 N79-24432

Solar energy collection system  
[NASA-CASE-NPO-13579-2] c44 N79-24433

Combined solar collector and energy storage system  
[NASA-CASE-LAR-12205-1] c44 N80-20810

Wind wheel electric power generator  
[NASA-CASE-MFS-23515-1] c44 N80-21828

Amplified wind turbine apparatus  
[NASA-CASE-MFS-23830-1] c44 N80-21831

Solar-heated fluidized bed gasification system  
[NASA-CASE-NPO-15071-1] c44 N80-24747

Induced junction solar cell and method of fabrication  
[NASA-CASE-NFO-13786-1] c44 N80-29835

Solar power satellite system  
[NASA-CASE-HQN-10949-1] c44 N81-16530

Solar energy receiver for a Stirling engine  
[NASA-CASE-NFO-14619-1] c44 N81-17518

- Copper doped polycrystalline silicon solar cell  
[NASA-CASE-NPO-14670-1] c44 N81-19558
- ENERGY SOURCES**
- Pulse generator for synchronizing or resetting electronic signals without requiring separate external source  
[NASA-CASE-XGS-03632] c09 N71-23311
- Controllable high voltage source having fast settling time  
[NASA-CASE-GSC-11844-1] c33 N75-19522
- Wingtip vortex turbine  
[NASA-CASE-LAR-12544-1] c67 N81-27096
- ENERGY STORAGE**
- Switching mechanism with energy stored in coil spring  
[NASA-CASE-XGS-00473] c03 N70-38713
- Stored charge transistor  
[NASA-CASE-NPO-11156-2] c33 N75-31331
- Mechanical energy storage device for hip disarticulation  
[NASA-CASE-ARC-10916-1] c52 N78-10686
- Energy storage apparatus  
[NASA-CASE-GSC-12030-1] c44 N78-24608
- Rotatable mass for a flywheel  
[NASA-CASE-MFS-23051-1] c37 N79-10422
- Combined solar collector and energy storage system  
[NASA-CASE-LAR-12205-1] c44 N80-20810
- Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c28 N81-14103
- ENERGY TECHNOLOGY**
- Solar energy collection system  
[NASA-CASE-NPO-13810-1] c44 N77-32582
- Method for producing solar energy panels by automation  
[NASA-CASE-LEW-12541-1] c44 N78-25529
- Hydrogen-fueled engine  
[NASA-CASE-NPO-13763-1] c44 N78-33526
- Surfactant-assisted liquefaction of particulate carbonaceous substances  
[NASA-CASE-NPO-13904-1] c25 N79-11152
- Back wall solar cell  
[NASA-CASE-LEW-12236-2] c44 N79-14528
- Solar cell module assembly jig  
[NASA-CASE-XGS-00829-1] c44 N79-19447
- Solar energy collection system  
[NASA-CASE-NPO-13579-2] c44 N79-24433
- Solar concentrator  
[NASA-CASE-MFS-23727-1] c44 N80-14473
- Method for forming a solar array strip  
[NASA-CASE-NPO-13652-3] c44 N80-14474
- ENERGY TRANSFER**
- Solar energy absorber  
[NASA-CASE-MFS-22743-1] c44 N76-22657
- ENGINE ANALYZERS**
- Indicated mean-effective pressure instrument  
[NASA-CASE-LEW-12661-1] c35 N79-14345
- ENGINE CONTROL**
- Direct current electromotive system for regenerative braking of electric motor  
[NASA-CASE-XMP-01096] c10 N71-16030
- Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c05 N75-12930
- Power control for hot gas engines  
[NASA-CASE-NPO-14220-1] c37 N81-14318
- Apparatus for sensor failure detection and correction in a gas turbine engine control system  
[NASA-CASE-LEW-12907-2] c07 N81-19115
- ENGINE COOLANTS**
- Apparatus for cooling and injecting hypergolic propellants into combustion chamber of small rocket engine  
[NASA-CASE-XLE-00303] c15 N70-36535
- Injector manifold assembly for bipropellant rocket engines providing for fuel propellant to serve as coolant  
[NASA-CASE-XMP-00148] c28 N70-38710
- ENGINE DESIGN**
- Design and development of gas turbine combustion unit with nozzle guide vanes for introducing diluent air into combustion gases  
[NASA-CASE-XLE-103477-1] c28 N71-20330
- Construction and method of arranging plurality of ion engines to form cluster thereby increasing efficiency and control by decreasing heat radiated to space  
[NASA-CASE-XNP-02923] c28 N71-23081
- Space vehicle system  
[NASA-CASE-MSC-12561-1] c18 N76-17185
- Noise suppressor for turbo fan jet engines  
[NASA-CASE-ARC-10812-1] c07 N76-18131
- Solid propellant motor  
[NASA-CASE-NPO-11458A] c20 N78-32179
- Hydrogen-fueled engine  
[NASA-CASE-NPO-13763-1] c44 N78-33526
- Solar engine --- Flat plate type  
[NASA-CASE-LAR-12148-1] c44 N79-29608
- Method and apparatus for rapid thrust increases in a turbofan engine  
[NASA-CASE-LEW-12971-1] c07 N80-18039
- Free-piston regenerative hot gas hydraulic engine  
[NASA-CASE-LEW-12274-1] c37 N80-31790
- Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c37 N81-17432
- Hot gas engine with dual cranks shafts  
[NASA-CASE-NPO-14221-1] c37 N81-25370
- ENGINE FAILURE**
- System for monitoring presence of neutrals in streams of ions - ion engine control  
[NASA-CASE-XNP-02592] c24 N71-20518
- ENGINE INLETS**
- Variably positioned guide vanes for aerodynamic choking  
[NASA-CASE-LAR-10642-1] c07 N74-31270
- The engine air intake system  
[NASA-CASE-ARC-10761-1] c07 N77-18154
- Self stabilizing sonic inlet  
[NASA-CASE-LEW-11890-1] c05 N79-24976
- ENGINE MONITORING INSTRUMENTS**
- System for monitoring presence of neutrals in streams of ions - ion engine control  
[NASA-CASE-XNP-02592] c24 N71-20518
- ENGINE NOISE**
- Variably positioned guide vanes for aerodynamic choking  
[NASA-CASE-LAR-10642-1] c07 N74-31270
- Variable thrust nozzle for quiet turbofan engine and method of operating same  
[NASA-CASE-LEW-12317-1] c07 N78-17055
- Multiple pure tone elimination strut assembly  
[NASA-CASE-FRC-11062-1] c07 N80-32393
- ENGINE PARTS**
- Gas turbine engine with convertible accessories  
[NASA-CASE-LEW-12390-1] c07 N78-17056
- Gas path seal  
[NASA-CASE-NPO-12131-3] c37 N80-18400
- Heat pipes to reduce engine exhaust emissions  
[NASA-CASE-LEW-12590-1] c25 N81-19245
- ENGINE STARTERS**
- Portable device for use in starting air-start-units for aircraft and having cable lead testing capability  
[NASA-CASE-FRC-10113-1] c33 N80-26599
- ENGINE TESTS**
- Electric propulsion engine test chamber  
[NASA-CASE-XLE-00252] c11 N70-34844
- ENGINEERING DRAWINGS**
- High-temperature, high-pressure spherical segment valve  
[NASA-CASE-XAC-00074] c15 N70-34817
- Graphic illustration of lifting body design  
[NASA-CASE-FRC-10063] c01 N71-12217
- Specifications and drawings for semipassive optical communication system  
[NASA-CASE-XLA-01090] c07 N71-12389
- Method of making molded electric connector for use with flat conductor cables  
[NASA-CASE-XMP-03498] c15 N71-15986
- ENTHALPY**
- Measuring conductive heat flow and thermal conductivity of laminar gas stream in cylindrical plug to simulate atmospheric reentry  
[NASA-CASE-XLE-00266] c14 N70-34156
- ENTRAINMENT**
- Water separator  
[NASA-CASE-XMS-01295-1] c37 N79-21345
- ENUMERATION**
- Apparatus and process for microbial detection and enumeration  
[NASA-CASE-LAR-12709-1] c51 N81-29727
- ENVIRONMENT SIMULATION**
- Method and apparatus for applying compressional forces to skeletal structure of subject to simulate force during ambulatory conditions  
[NASA-CASE-ARC-10100-1] c05 N71-24738
- Gravity environment simulation by locomotion and restraint aid for studying manual operation performance of astronauts at zero gravity

- [NASA-CASE-ABC-10153] c05 N71-28619
- ENVIRONMENT SIMULATORS**  
Space environment simulator for testing spacecraft components under aerospace conditions [NASA-CASE-NPO-10141] c11 N71-24564  
Environmental fog/rain visual display system for aircraft simulators [NASA-CASE-ABC-11158-1] c09 N79-33220
- ENVIRONMENTAL CONTROL**  
Portable environmental control and life support system for astronaut in and out of spacecraft [NASA-CASE-XMS-09632-1] c05 N71-11203  
Portable apparatus producing high velocity annular air column surrounding low velocity, filtered, superclean air central core for industrial clean room environmental control [NASA-CASE-XMP-03212] c15 N71-22721  
Development and characteristics of thermal sensitive panel for controlling ratio of solar absorptivity to surface emissivity for space vehicle temperature control [NASA-CASE-XIA-07728] c33 N71-22890  
Dual solid cryogenics for spacecraft refrigeration insuring low temperature cooling for extended periods [NASA-CASE-GSC-10188-1] c23 N71-24725  
Vibration control of flexible bodies in steady accelerating environment [NASA-CASE-LAR-10106-1] c15 N71-27169  
Test chamber for determining decomposition and autoignition of materials used in spacecraft under controlled environmental conditions [NASA-CASE-KSC-10198] c11 N71-28629  
Readily assembled universal environment housing for electronic equipment [NASA-CASE-KSC-10031] c15 N72-22486  
Environmentally controlled suit for working in sterile chamber [NASA-CASE-LAR-10076-1] c05 N73-20137  
Dual stage check valve for cryogenic supply systems used in space flight environmental control system [NASA-CASE-MSC-13587-1] c15 N73-30459  
Spacecraft with artificial gravity and earthlike atmosphere [NASA-CASE-LEW-11101-1] c31 N73-32750
- ENVIRONMENTAL ENGINEERING**  
Thermal control wall panel with application to spacecraft cabins [NASA-CASE-XLA-01243] c33 N71-22792
- ENVIRONMENTAL MONITORING**  
System for real-time crustal deformation monitoring [NASA-CASE-NPO-14124-1] c46 N80-14603
- ENVIRONMENTAL TESTS**  
Multisample test chamber for exposing materials to X rays, temperature change, and gaseous conditions and determination of material effects [NASA-CASE-XMS-02930] c11 N71-23042  
Space suit using nonflexible material with low leakage and providing protection against thermal extremes, physical punctures, and radiation with high mobility articulation [NASA-CASE-XAC-07043] c05 N71-23161  
Flammability test chamber for testing materials in certain predetermined environments [NASA-CASE-KSC-10126] c11 N71-24985  
Multiaxes vibration device for making vibration tests along orthogonal axes of test specimen [NASA-CASE-MPS-20242] c14 N73-19421  
Fixture for environmental exposure of structural materials under compression [NASA-CASE-LAR-12602-1] c35 N81-19429
- ENVIRONMENTS**  
Hermetically sealed elbow actuator for use in severe environments [NASA-CASE-MPS-14710] c09 N72-22195
- ENZYME ACTIVITY**  
Use of enzyme hexokinase and glucose to reduce inherent light levels of ATP in luciferase compositions [NASA-CASE-IGS-05533] c04 N69-27487  
Enzymatic luminescent bioassay method for determining bacterial levels in urine [NASA-CASE-GSC-11092-2] c04 N73-27052
- ENZYMES**  
Protein sterilization of firefly luciferase without denaturation [NASA-CASE-GSC-10225-1] c06 N73-27086
- EPICYCLOIDS**  
Sequencing device utilizing planetary gear set [NASA-CASE-MSC-19514-1] c37 N79-20377
- EPITAXY**  
Method for the preparation of inorganic single crystal and polycrystalline electronic materials [NASA-CASE-XLE-02545-1] c76 N79-21910
- EPOXY COMPOUNDS**  
Synthesis of siloxane containing epoxy polymers with low dielectric properties [NASA-CASE-MPS-13994-1] c06 N71-11240  
Synthesis of siloxane containing epoxide and diamine polymers [NASA-CASE-MPS-13994-2] c06 N72-25148  
Fire protection covering for small diameter missiles [NASA-CASE-ABC-11104-1] c15 N79-26100
- EPOXY MATRIX COMPOSITE MATERIALS**  
Fiberglass/epoxy composite automotive door structure including a glass-reinforced intrusion strip [NASA-CASE-NPO-15057-1] c24 N81-19230
- EPOXY RESINS**  
Nonmagnetic hermetically sealed battery case made of epoxy resin and woven glass tape for use with electrochemical cells in spacecraft [NASA-CASE-IGS-00886] c03 N71-11053  
Epoxy resin sealing device for electrochemical cells in high vacuum environments [NASA-CASE-IGS-02630] c03 N71-22974  
Cold metal hydroforming techniques using epoxy molds for counteracting creep or stretch [NASA-CASE-XLE-05641-1] c15 N71-26346  
Miniature electromechanical junction transducer operating on piezoelectric effect and utilizing epoxy for stress coupling component [NASA-CASE-BEC-10087] c14 N71-27334  
Infusible polymer production from reaction of polyfunctional epoxy resins with polyfunctional aziridine compounds [NASA-CASE-NPO-10701] c06 N71-28620  
Method of repairing discontinuity in fiberglass structures [NASA-CASE-LAR-10416-1] c24 N74-30001  
Transparent fire resistant polymeric structures [NASA-CASE-ABC-10813-1] c27 N76-16230  
Curing agent for polyepoxides and epoxy resins and composites cured therewith --- preventing carbon fiber release [NASA-CASE-LEW-13226-1] c27 N81-17260  
Universal connectors for joining stringers [NASA-CASE-LAR-12744-1] c37 N81-31551
- EQUATIONS OF MOTION**  
Kinesimetric method and apparatus [NASA-CASE-MSC-18929-1] c54 N81-15699
- EQUIPMENT**  
Bimetallic fluid displacement apparatus --- for stirring and heating stored gases and liquids [NASA-CASE-ABC-10441-1] c35 N74-15126  
Apparatus for supplying conditioned air at a substantially constant temperature and humidity [NASA-CASE-GSC-12191-1] c31 N80-32583
- EQUIPMENT SPECIFICATIONS**  
Differential pressure cell insensitive to changes in ambient temperature and extreme overload [NASA-CASE-XAC-00042] c14 N70-34816  
High-temperature, high-pressure spherical segment valve [NASA-CASE-XAC-00074] c15 N70-34817  
Remote-reading torque meter for use where high horsepower are transmitted at high rotative speeds [NASA-CASE-XLE-00503] c14 N70-34818  
Magnetically centered liquid column float [NASA-CASE-XAC-00030] c14 N70-34820  
Electric propulsion engine test chamber [NASA-CASE-XLE-00252] c11 N70-34844  
Channel-type shell construction for rocket engines and related configurations [NASA-CASE-XLE-00144] c28 N70-34860  
Non-reusable kinetic energy absorber for application in soft landing of space vehicles [NASA-CASE-XLE-00810] c15 N70-34861  
Slit regulated gas journal bearing [NASA-CASE-XMP-00476] c15 N70-38620  
Specifications and drawings for semipassive optical communication system [NASA-CASE-XLA-01090] c07 N71-12389

- Stretcher with rigid head and neck support with capability of supporting immobilized person in vertical position for removal from vehicle hatch to exterior also useful as splint stretcher  
[NASA-CASE-XNP-06589] c05 N71-23159
- Development of vortex fluid amplifier for throttling rocket exhaust  
[NASA-CASE-LEW-16374-1] c28 N73-13773
- Simplified technique and device for producing industrial grade synthetic diamonds  
[NASA-CASE-MFS-20698-2] c15 N73-19457
- Anti-buckling fatigue test assembly --- for subjecting metal specimen to tensile and compressive loads at constant temperature  
[NASA-CASE-LAR-10426-1] c09 N74-19528
- Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-MFS-21394-1] c34 N74-27744
- Thermocouple tape --- developed from thermoelectrically different metals  
[NASA-CASE-LEW-11072-2] c35 N76-15434
- Field effect transistor and method of construction thereof  
[NASA-CASE-MFS-23312-1] c33 N78-27326
- EQUIPOTENTIALS**
- Equipotential space suits utilizing mechanical aids to minimize astronaut energy at bending joints  
[NASA-CASE-LAR-10007-1] c05 N71-11195
- Instrument for measuring potentials on two dimensional electric field plot  
[NASA-CASE-XLA-08493] c10 N71-19421
- ERGOMETERS**
- Development of restraint system for securing personnel to ergometer while exercising under weightless conditions  
[NASA-CASE-MFS-21046-1] c14 N73-27377
- Versatile ergometer with work load control  
[NASA-CASE-MFS-21109-1] c05 N73-27941
- Tilting table for testing human body in variety of positions while exercising on ergometer or other biomedical devices  
[NASA-CASE-MFS-21010-1] c05 N73-30078
- Pneumatic foot pedal operated fluidic exercising device  
[NASA-CASE-MSC-11561-1] c05 N73-32014
- Ergometer calibrator --- for any ergometer utilizing rotating shaft  
[NASA-CASE-MFS-21045-1] c35 N75-15932
- EROSION**
- Thermal shock and erosion resistant tantalum carbide ceramic material  
[NASA-CASE-LAR-11902-1] c27 N78-17206
- ERROR ANALYSIS**
- Development of computer program for estimating reliability of self-repair and fault-tolerant systems with respect to selected system and mission parameters  
[NASA-CASE-NPO-13086-1] c15 N73-12495
- Bit error rate measurement above and below bit rate tracking threshold  
[NASA-CASE-MSC-12743-1] c32 N79-10263
- ERROR CORRECTING DEVICES**
- Error correction circuitry for binary signal channels  
[NASA-CASE-XNP-03263] c09 N71-18843
- Multiplexed communication system design including automatic correction of transmission errors introduced by frequency spectrum shifts  
[NASA-CASE-XNP-01306] c07 N71-20814
- Description of error correcting methods for use with digital data computers and apparatus for encoding and decoding digital data  
[NASA-CASE-XNP-02748] c08 N71-22749
- Failure detection and control means for improved drift performance of a gimbaled platform system  
[NASA-CASE-MFS-23551-1] c04 N76-26175
- Guide for a typewriter  
[NASA-CASE-MFS-15218-1] c37 N77-19457
- A self-correcting electronically scanned pressure sensor  
[NASA-CASE-LAR-12686-1] c09 N81-27121
- ERROR DETECTION CODES**
- Self testing and repairing computer comprising control and diagnostic unit and rollback points for error correction  
[NASA-CASE-NPO-10567] c08 N71-24633
- ERROR SIGNALS**
- Error correction circuitry for binary signal channels  
[NASA-CASE-XNP-03263] c09 N71-18843
- Feedback controller for sampling error signals within single control formulation time interval  
[NASA-CASE-GSC-10554-1] c08 N71-29033
- Bit error rate measurement above and below bit rate tracking threshold  
[NASA-CASE-MSC-12743-1] c32 N79-10263
- ERRORS**
- Analog to digital converter using offset voltage to eliminate errors  
[NASA-CASE-MSC-13110-1] c08 N72-22163
- ESCAPE CAPSULES**
- Aerial capsule emergency separation device using jettisonable towers  
[NASA-CASE-XLA-00115] c03 N70-33343
- Emergency escape cabin system for launch towers  
[NASA-CASE-IKS-02342] c05 N71-11199
- Spacecraft design with single point aerodynamic and hydrodynamic stability for emergency transport of men from space station to splashdown  
[NASA-CASE-MSC-13281] c31 N72-18859
- ESCAPE SYSTEMS**
- Design and specifications of emergency escape system for spacecraft structures  
[NASA-CASE-MSC-12086-1] c05 N71-12345
- Automatic braking device for rapidly transferring humans or materials from elevated location  
[NASA-CASE-IKS-07814] c15 N71-27067
- Explosively activated egress area  
[NASA-CASE-LAR-12624-1] c03 N81-29107
- ESTERS**
- Fluorinated esters of polycarboxylic acid and lubricating compositions for use at extreme temperature  
[NASA-CASE-MFS-21040-1] c06 N73-30098
- ETCHING**
- Reusable masking boot for chemical machining operations  
[NASA-CASE-XNP-02092] c15 N70-42033
- Development of method for etching copper  
[NASA-CASE-XGS-06306] c17 N71-16044
- Composition and process for improving definition of resin masks used in chemical etching  
[NASA-CASE-XGS-04993] c14 N71-17574
- Etching aluminum alloys with aqueous solution containing sulfuric acid, hydrofluoric acid, and an alkali metal dischromate for adhesive bonding  
[NASA-CASE-XNP-02303] c17 N71-23828
- Selective plating of etched circuits without removing previous plating  
[NASA-CASE-XGS-03120] c15 N71-24047
- Nickel plating onto etched aluminum castings  
[NASA-CASE-XNP-04148] c17 N71-24830
- Scanning nozzle plating system --- for etching or plating metals on substrates without masking  
[NASA-CASE-NPO-11758-1] c31 N74-23065
- Liquid immersion apparatus for minute articles  
[NASA-CASE-MFS-25363-1] c31 N80-32585
- Method for applying photographic resists to otherwise incompatible substrates  
[NASA-CASE-MSC-18107-1] c27 N81-25209
- Method of making V-MOS field effect transistors utilizing a two-step anisotropic etching and ion implantation  
[NASA-CASE-GSC-12515-1] c33 N81-26360
- ETHANE**
- Synthesis of multifunction triaryltrifluoroethanes  
[NASA-CASE-ARC-11097-1] c23 N78-22154
- Synthesis of multifunction triaryltrifluoroethanes  
[NASA-CASE-ARC-11097-2] c23 N78-22155
- ETHERS**
- Method for producing alternating ether-siloxane copolymers with stable properties when exposed to elevated temperatures and UV radiation  
[NASA-CASE-XNP-02584] c06 N71-20905
- Chemical synthesis of hydroxy terminated perfluoro ethers as intermediates for highly fluorinated polyurethane resins  
[NASA-CASE-NPO-10768] c06 N71-27254
- Formation of polyurethane resins from hydroxy terminated perfluoro ethers  
[NASA-CASE-NPO-10768-2] c06 N72-27144

## ETHYLENE COMPOUNDS

Precision heat forming of tetrafluoroethylene tubing  
[NASA-CASE-MSC-18430-1] c31 N80-17292

## ETHYLENE OXIDE

Using ethylene oxide in preparation of sterilized solid rocket propellants and encapsulating materials  
[NASA-CASE-XNP-01749] c27 N70-41897

Ethylene oxide sterilization and encapsulating process for sterile preservation of instruments and solid propellants  
[NASA-CASE-XNP-05763] c14 N71-20461

System for sterilizing objects --- cleaning space vehicle systems  
[NASA-CASE-KSC-11085-1] c54 N81-24724

## EUTECTIC ALLOYS

Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-1] c37 N75-15992

Method of growing composites of the type exhibiting the Soret effect --- improved structure of eutectic alloy crystals  
[NASA-CASE-MPS-22926-1] c24 N77-27187

Directionally solidified eutectic gamma plus beta nickel-base superalloys  
[NASA-CASE-LEW-12906-1] c26 N77-32279

Directionally solidified eutectic gamma-gamma nickel-base superalloys  
[NASA-CASE-LEW-12905-1] c26 N78-18183

Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-3] c24 N79-25143

## EVACUATING (VACUUM)

Filling honeycomb matrix with deaerated paste filler  
[NASA-CASE-XMS-01108] c15 N69-24322

Sealing evacuation port and evacuating vacuum container such as space jackets  
[NASA-CASE-XMP-03290] c15 N71-23256

Gas leak detection in evacuated systems using ultraviolet radiation probe  
[NASA-CASE-ERC-10034] c15 N71-24896

Evacuated, displacement compression mold --- of tubular bodies from thermosetting plastics  
[NASA-CASE-LAR-10782-2] c31 N75-13111

## EVAPORATION

Evaporating crucible of tantalum-tungsten foil, nickel alumina bonding agent, and ceramic coating  
[NASA-CASE-XLA-03105] c15 N69-27483

## EVAPORATIVE COOLING

Tubular sublimatory evaporator heat sink  
[NASA-CASE-ARC-10912-1] c34 N77-19353

Refrigerator module, system and process --- regenerative, cryogenic cooling of an infrared radiation detection system  
[NASA-CASE-ARC-11263-1] c31 N81-27328

## EVAPORATORS

Spatter proof evaporant source design for use in vacuum deposition of solid thin films on substrates  
[NASA-CASE-XMP-06065] c15 N71-20395

Means of vapor deposition using electric current and evaporator filament  
[NASA-CASE-LAR-10541-1] c15 N72-32487

## EXAMINATION

Apparatus for use in examining the lattice of a semiconductor wafer by X-ray diffraction  
[NASA-CASE-MPS-23315-1] c76 N78-24950

## EXCLUSION

Counter pumping debris excluder and separator --- gas turbine shaft seals  
[NASA-CASE-LEW-11855-1] c67 N78-25C90

## EXHAUST GASES

Device for adding water to high velocity exhaust jets to reduce velocity, noise, and temperature  
[NASA-CASE-XMP-04813] c28 N70-41582

Gas turbine exhaust nozzle --- for noise reduction  
[NASA-CASE-LEW-11569-1] c07 N74-15453

Abating exhaust noises in jet engines  
[NASA-CASE-ARC-10712-1] c67 N74-33218

Exhaust flow deflector --- for ducted gas flow  
[NASA-CASE-LAR-11570-1] c34 N76-18364

Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c07 N78-25089

High performance ammonium nitrate propellant  
[NASA-CASE-NPO-14260-1] c28 N79-28342

Heat pipes to reduce engine exhaust emissions  
[NASA-CASE-LEW-12590-1] c25 N81-19245

Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c07 N81-29129

## EXHAUST NOZZLES

High thrust annular liquid propellant rocket engine and exhaust nozzle design  
[NASA-CASE-XLE-00078] c28 N70-33284

Exhaust nozzle with afterburning for generating thrust  
[NASA-CASE-XLA-00154] c28 N70-33374

Penshaped, supersonic exhaust nozzle design  
[NASA-CASE-XLE-00057] c28 N70-38711

Automatic ejection valve for attitude control and midcourse guidance of space vehicles  
[NASA-CASE-XNP-00676] c15 N70-38996

Two dimensional wedge/translating shroud nozzle  
[NASA-CASE-LAR-11919-1] c07 N78-27121

Variable area exhaust nozzle  
[NASA-CASE-LEW-12378-1] c07 N79-14097

Propulsive lateral control nozzle  
[NASA-CASE-LAR-12136-1] c08 N81-33210

## EXOTHERMIC REACTIONS

Ambient cure polyimide foams --- thermal resistant foams  
[NASA-CASE-ARC-11170-1] c27 N79-11215

## EXPANDABLE STRUCTURES

Expanding and contracting connector strip for solar cell array of Nimbus satellite  
[NASA-CASE-XGS-01395] c03 N69-21539

Method of compactly packaging centrifugally expandable lightweight flexible reflector satellite  
[NASA-CASE-XLA-00138] c31 N70-37981

Foldable conduit capable of springing back as self erecting structural member  
[NASA-CASE-XLE-00620] c32 N70-41579

Collapsible high gain antenna which can be automatically expanded to operating state  
[NASA-CASE-KSC-10392] c07 N73-26117

Expandable space frames with high expansion to collapse ratio  
[NASA-CASE-BEC-10365-1] c31 N73-32749

Means for accommodating large overstrain in lead wires --- by storing extra length of wire in stretchable loop  
[NASA-CASE-LAR-10168-1] c33 N74-22865

Antenna deployment mechanism for use with a spacecraft --- extensible and retractable telescopic antenna mast  
[NASA-CASE-GSC-12331-1] c18 N80-14183

## EXPANSION

Apparatus for measuring polymer membrane expansion in electrochemical cells  
[NASA-CASE-XGS-03865] c14 N69-21363

Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-2] c24 N81-26179

## EXPERIMENTAL DESIGN

Efficient operation of improved hydrofoil design  
[NASA-CASE-XLA-00229] c12 N70-33305

Sealed electric storage battery with gas manifold interconnecting each cell  
[NASA-CASE-XNP-03378] c03 N71-11051

Electrode attached to helmets for detecting low level signals from skin of living creatures  
[NASA-CASE-ARC-10043-1] c05 N71-11193

Conditioning suit for normal function of astronaut cardiovascular system in gravity environment  
[NASA-CASE-XLA-02898] c05 N71-20268

Space suit using nonflexible material with low leakage and providing protection against thermal extremes, physical punctures, and radiation with high mobility articulation  
[NASA-CASE-XAC-07043] c05 N71-23161

## EXPIRED AIR

Metabolic rate meter and method  
[NASA-CASE-MSC-12239-1] c52 N79-21750

## EXPLOSIONS

Device for detection of combustion light preceding gaseous explosions  
[NASA-CASE-LAR-10739-1] c14 N73-16484

## EXPLOSIVE DEVICES

Stage separation using remote control release of joint with explosive insert  
[NASA-CASE-XLA-02854] c15 N69-27490

Hermetically sealed explosive release mechanism for actuator device

- [NASA-CASE-XGS-00824] c15 N71-16078  
Development of non-magnetic indexing device for orienting magnetic flux sensing instrument in magnetic field without generation of detrimental magnetic fields
- [NASA-CASE-XGS-02422] c15 N71-21529  
Development of apparatus for detonating explosive devices in order to determine forces generated and detonation propagation rate
- [NASA-CASE-LAR-10800-1] c33 N72-27959  
Development and characteristics of squib actuated explosive disconnect for spacecraft release from launch vehicle
- [NASA-CASE-NPO-11330] c33 N73-26958  
Pressure limiting propellant actuating system
- [NASA-CASE-MS-C-18179-1] c20 N80-18097
- EXPLOSIVE FORMING**  
Electric discharge apparatus for electrohydraulic explosive forming
- [NASA-CASE-XMF-00375] c15 N70-34249
- EXPLOSIVE WELDING**  
Totally confined explosive welding --- apparatus to reduce noise level and protect personnel during explosive bonding
- [NASA-CASE-LAR-10941-1] c37 N74-21057  
Method of making an explosively welded scarf joint
- [NASA-CASE-LAR-11211-1] c37 N75-12326  
Totally confined explosive welding
- [NASA-CASE-LAR-10941-2] c37 N79-13364
- EXPLOSIVES**  
Production of intermetallic compounds by effect of shock waves from explosions and compaction of powder
- [NASA-CASE-MFS-20861-1] c18 N73-32437  
Optically detonated explosive device
- [NASA-CASE-NPO-11743-1] c28 N74-27425  
Electroexplosive device
- [NASA-CASE-NPO-13858-1] c28 N79-11231
- EXPONENTIAL FUNCTIONS**  
Digital quasi-exponential function generator
- [NASA-CASE-NPO-11130] c08 N72-20176
- EXPOSURE**  
Mechanical exposure interlock device for preventing film overexposure in oscilloscope camera
- [NASA-CASE-LAR-10319-1] c14 N73-32322  
Selective image area control of X-ray film exposure density
- [NASA-CASE-NPO-13808-1] c35 N78-15461  
Method of and apparatus for double-exposure holographic interferometry
- [NASA-CASE-MFS-25405-1] c35 N81-27459
- EXPULSION BLADDERS**  
Expulsion bladder equipped storage tank structure
- [NASA-CASE-XNP-00612] c11 N70-38182
- EXTENSIONS**  
Support for flexible conductor cable between drawers or racks holding electronic equipment and cabinet assembly housing drawers or racks
- [NASA-CASE-XMF-07587] c15 N71-18701
- EXTENSOMETERS**  
Transducer frame for use with extensometer to continuously monitor specimen sample
- [NASA-CASE-XLA-10322] c15 N72-17452  
Conductive elastomeric extensometer
- [NASA-CASE-MFS-21049-1] c52 N74-27864  
Amplifying ribbon extensometer
- [NASA-CASE-LAR-11825-1] c35 N77-22449  
Laser extensometer
- [NASA-CASE-MFS-19259-1] c36 N78-14380
- EXTERNAL COMBUSTION ENGINES**  
Hot gas engine with dual crankshafts
- [NASA-CASE-NPO-14221-1] c37 N81-25370
- EXTERNAL STORES**  
Decoupler pylon; wing/store flutter suppressor
- [NASA-CASE-LAR-12468-1] c08 N80-22359
- EXTRACTION**  
Liquid-gas separator adapted for use in zero gravity environment - drawings
- [NASA-CASE-XNS-01624] c15 N70-40062  
Chassis unit insert tightening-extract device
- [NASA-CASE-XNS-01077-1] c37 N79-33467
- EXTRAVEHICULAR ACTIVITY**  
Portable environmental control and life support system for astronaut in and out of spacecraft
- [NASA-CASE-XNS-09632-1] c05 N71-11203  
Hand-held maneuvering unit for propulsion and attitude control of astronauts in zero or reduced gravity environment
- [NASA-CASE-XMS-05304] c05 N71-12336  
Internal and external serpentine devices for performing physical operations around orbital space stations
- [NASA-CASE-XMF-05344] c31 N71-16345  
Releasable, pin-type fastener, easily operated during EVA
- [NASA-CASE-ARC-10140-1] c15 N71-17653  
Design and development of flexible tunnel for use by spacecrews in performing extravehicular activities
- [NASA-CASE-MS-C-12243-1] c05 N71-24728  
Open loop life support subsystem using breathing bag as reservoir for EVA
- [NASA-CASE-MS-C-12411-1] c05 N72-20096  
Intra- and extravehicular life support space suite for Apollo astronauts
- [NASA-CASE-MS-C-12609-1] c05 N73-32012
- EXTREMELY LOW RADIO FREQUENCIES**  
VHF/UHF parasitic probe antenna for spacecraft communication
- [NASA-CASE-XKS-09340] c07 N71-24614  
Frequency tracked pulse technique for ultrasonic analysis
- [NASA-CASE-LAR-12697-1] c32 N80-26571
- EXTRUDING**  
Extrusion can for extruding ceramics under heat and pressure
- [NASA-CASE-NPO-10812] c15 N73-13464  
Brazing alloy binder
- [NASA-CASE-XMF-05868] c26 N75-27125  
Continuous coal processing method
- [NASA-CASE-NPO-13758-2] c31 N81-15154
- EYE (ANATOMY)**  
Sight switch using infrared source and sensor mounted beside eye
- [NASA-CASE-XMF-03934] c09 N71-22985  
Ultrasonic device for ophthalmic eye surgery with safe removal of macerated material
- [NASA-CASE-LEW-11669-1] c05 N73-27062  
Spectrally balanced chromatic landing approach lighting system
- [NASA-CASE-ARC-10990-1] c04 N77-12031  
Corneal seal device
- [NASA-CASE-LEW-12258-1] c52 N77-28716  
Intra-ocular pressure normalization technique and equipment
- [NASA-CASE-LEW-12723-1] c52 N80-18690  
Chromatically corrected virtual image visual display --- reducing eye strain in flight simulators
- [NASA-CASE-LAR-12251-1] c74 N80-27185
- EYE EXAMINATIONS**  
Automated visual sensitivity tester for determining visual field sensitivity and blind spot size
- [NASA-CASE-ARC-10329-1] c05 N73-26072  
Multiparameter vision testing apparatus
- [NASA-CASE-MS-C-13601-2] c54 N75-27759  
Visual examination apparatus
- [US-PATENT-RE-28,921] c52 N76-30793
- EYEPIECES**  
Wide angle eyepiece with long eye-relief distance
- [NASA-CASE-XNS-06056-1] c23 N71-24857
- F**
- FABRICATION**  
Fabrication of pressure-telemetry transducers
- [NASA-CASE-XNP-09752] c14 N69-21541  
Fabrication method for lightweight regeneratively cooled combustion chamber of channel construction
- [NASA-CASE-XLE-00150] c28 N70-41818  
Fabrication methods for matrices of solar cell submodules
- [NASA-CASE-XNP-05821] c03 N71-11056  
Capacitor fabrication by solidifying mixture of ferromagnetic metal particles, nonferromagnetic particles, and dielectric material
- [NASA-CASE-LEW-10364-1] c09 N71-13522  
Method and apparatus for fabricating solar cell panels
- [NASA-CASE-XNP-03413] c03 N71-26726  
Fabrication of root cord restrained fabric suit sections from sheets of fabric
- [NASA-CASE-MS-C-12398] c05 N72-20098

- Method of fabricating equal length insulated wire  
[NASA-CASE-FRC-10038] c15 N72-20444
- Development of thin film temperature sensor from TaO  
[NASA-CASE-NPO-11775] c26 N72-28761
- Fabrication of polycrystalline solar cells on low-cost substrates  
[NASA-CASE-GSC-12022-1] c44 N76-28635
- Lightweight reflector assembly  
[NASA-CASE-NPO-13707-1] c74 N77-28933
- Process for spinning flame retardant elastomeric compositions --- fabricating synthetic fibers for high oxygen environments  
[NASA-CASE-MSC-14331-3] c27 N78-32262
- Solar array strip and a method for forming the same  
[NASA-CASE-NPO-13652-1] c44 N79-17314
- Method for fabricating solar cells having integrated collector grits  
[NASA-CASE-LEW-12819-2] c44 N79-18444
- Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c44 N79-24431
- Method for forming a solar array strip  
[NASA-CASE-NPO-13652-3] c44 N80-14474
- Castable high temperature refractory materials  
[NASA-CASE-LEW-13080-1] c27 N80-29496
- Induced junction solar cell and method of fabrication  
[NASA-CASE-NPO-13786-1] c44 N80-29835
- High voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c44 N81-16529
- Copper doped polycrystalline silicon solar cell  
[NASA-CASE-NPO-14670-1] c44 N81-19558
- Heat exchanger and method of making  
[NASA-CASE-LEW-12441-3] c44 N81-24519
- Schottky barrier cell and method of fabricating it  
[NASA-CASE-NPO-13689-4] c44 N81-26553
- FABRICS**
- Fabrication of root cord restrained fabric suit sections from sheets of fabric  
[NASA-CASE-MSC-12398] c05 N72-20098
- Amplifying ribbon extensometer  
[NASA-CASE-LAR-11825-1] c35 N77-22449
- Nozzle extraction process and handlemeter for measuring handle  
[NASA-CASE-LAR-12147-1] c31 N79-11246
- Adjustable high emittance gap filler --- reentry shielding for space shuttle vehicles  
[NASA-CASE-ARC-11310-1] c27 N80-23454
- Heat sealable, flame and abrasion resistant coated fabric  
[NASA-CASE-MSC-18382-1] c27 N80-24440
- Absorbent product and articles made therefrom --- for collection of human wastes  
[NASA-CASE-MSC-18223-1] c24 N81-16127
- Composition and method for making polyimide resin-reinforced fabric  
[NASA-CASE-LEW-12933-1] c27 N81-19296
- FABRY-PEROT INTERFEROMETERS**
- Fabry-Perot interferometer retrodirective reflector modulator for optical communication  
[NASA-CASE-XGS-04480] c16 N69-27491
- FACSIMILE COMMUNICATION**
- Restoration and improvement of demodulated facsimile video signals  
[NASA-CASE-GSC-10185-1] c07 N72-12081
- Spectrometer integrated with a facsimile camera  
[NASA-CASE-LAR-11207-1] c35 N75-19613
- FACTORIAL DESIGN**
- Space suit with pressure-volume compensator system  
[NASA-CASE-XLA-05332] c05 N71-11194
- Equipotential space suits utilizing mechanical aids to minimize astronaut energy at bending joints  
[NASA-CASE-LAR-10007-1] c05 N71-11195
- FAIL-SAFE SYSTEMS**
- Fail-safe multiple transformer circuit configuration  
[NASA-CASE-NPO-11078] c09 N72-25262
- Latch mechanism  
[NASA-CASE-MSC-12549-1] c37 N74-27903
- Safety flywheel --- using flexible materials energy storage  
[NASA-CASE-HQN-10888-1] c44 N79-14527
- Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c33 N79-24254
- Reconfiguring redundancy management  
[NASA-CASE-MSC-18498-1] c60 N80-30050
- Apparatus for sensor failure detection and correction in a gas turbine engine control system  
[NASA-CASE-LEW-12907-2] c07 N81-19115
- FAILURE ANALYSIS**
- Fatigue failure load indicator  
[NASA-CASE-LAR-12027-1] c39 N79-22537
- FAILURE MODES**
- Method for reducing mass of ball bearings for long life operation at high speed  
[NASA-CASE-LEW-10856-1] c15 N72-22490
- Inverter ratio failure detector  
[NASA-CASE-NPO-13160-1] c35 N74-18090
- FAIRINGS**
- System for deploying and ejecting releasable clamshell fairing sections from spinning sounding rockets  
[NASA-CASE-GSC-10590-1] c31 N73-14853
- FALLING SPHERES**
- Device for determining acceleration of gravity by interferometric measurement of travel of falling body  
[NASA-CASE-XNP-05844] c14 N71-17587
- Method of forming frozen spheres in a force-free drop tower --- microballcons for inertial confinement fusion  
[NASA-CASE-NPO-14845-1] c31 N81-16328
- FAR INFRARED RADIATION**
- Collimator for analyzing spatial location of near and distant sources of radiation  
[NASA-CASE-MFS-20546-2] c14 N73-30389
- FAR ULTRAVIOLET RADIATION**
- Transient heat transfer gage for measuring total radiant intensity from far ultraviolet and ionized high temperature gases  
[NASA-CASE-XNP-09802] c33 N71-15641
- FARADAY EFFECT**
- Faraday rotation measurement method and apparatus --- to receive HF signals from spacecraft which exhibits polarization characteristics due to spin stabilization  
[NASA-CASE-NPO-14839-1] c35 N80-16313
- FASTENERS**
- Force measuring instrument for structural members, particularly fastening bolts or studs  
[NASA-CASE-XNP-00456] c14 N70-34705
- Lightweight life preserver without fastening devices  
[NASA-CASE-XMS-00864] c05 N70-36493
- Nut and bolt fastener permitting all-directional movement of skin sections with respect to supporting structure  
[NASA-CASE-XLA-01807] c15 N71-10799
- Releasable, pin-type fastener, easily operated during EVA  
[NASA-CASE-ARC-10140-1] c15 N71-17653
- Ultrasonic wrench for applying vibratory energy to mechanical fasteners  
[NASA-CASE-MFS-20586] c15 N71-17686
- Design and development of electric connectors for rigid and semirigid coaxial cables  
[NASA-CASE-XNP-04732] c09 N71-20851
- Design, development, and characteristics of latching mechanism for operation in limited access areas  
[NASA-CASE-XMS-03745] c15 N71-21076
- Design and development of module joint clamping device for application to solar array construction  
[NASA-CASE-XNP-02341] c15 N71-21531
- Threadless fastener apparatus comprising receiving apertures for plurality of articles, self-locked condition, and capable of using nonmalleable materials in both ends  
[NASA-CASE-XFR-05302] c15 N71-23254
- Development of resilient fastener for attaching skin of aerospace vehicles to permit movement of skin relative to framework  
[NASA-CASE-XLA-01027] c31 N71-24035
- Pneumatic mechanism for releasing hook and loop fasteners between large rigid structures  
[NASA-CASE-XMS-10660-1] c15 N71-25975
- Helmet latching and attaching ring  
[NASA-CASE-XMS-04670] c54 N78-17678
- Chassis unit insert tightening-extract device  
[NASA-CASE-XMS-01077-1] c37 N79-33467



- One step dual purpose joining technique  
[NASA-CASE-LAR-12595-1] c37 N80-11469
- FATIGUE (MATERIALS)**
- Servocontrol system for measuring local stresses at geometric discontinuity in stressed material  
[NASA-CASE-XLA-08530] c32 N71-25360
- TV fatigue crack monitoring system  
[NASA-CASE-LAR-11490-1] c39 N78-16387
- Pulsed phase locked loop strain monitor  
[NASA-CASE-LAR-12772-1] c33 N81-15195
- Antenna grout replacement system  
[NASA-CASE-NPO-15205-1] c37 N81-19457
- FATIGUE LIFE**
- Fatigue resistant shear pin with hollow shaft and two plugs  
[NASA-CASE-XLA-09122] c15 N69-27505
- Improving load capacity and fatigue life of rolling element systems in rockets and missiles  
[NASA-CASE-XLE-02999] c15 N71-16052
- Method for reducing mass of ball bearings for long life operation at high speed  
[NASA-CASE-LEW-16856-1] c15 N72-22490
- Fatigue life of hybrid antifriction bearings at ultrahigh speeds  
[NASA-CASE-LEW-11152-1] c15 N73-32359
- Machine for use in monitoring fatigue life for a plurality of elastomeric specimens  
[NASA-CASE-NPO-13731-1] c39 N78-10493
- FATIGUE TESTING MACHINES**
- Cryostat for use with horizontal fatigue testing machines at low temperatures  
[NASA-CASE-XNP-10968] c14 N71-24234
- Fatigue testing apparatus with light shield and infrared reflector for high temperature evaluation of loaded sheet samples  
[NASA-CASE-XLA-01782] c14 N71-26136
- FATIGUE TESTS**
- Fatigue testing device applying random discrete load levels to test specimen and applicable to aircraft structures  
[NASA-CASE-XLA-02131] c32 N70-42003
- Fatigue failure load indicator  
[NASA-CASE-LAR-12027-1] c39 N79-22537
- Heating and cooling system --- for fatigue test specimens  
[NASA-CASE-LAR-12393-1] c39 N80-25693
- FATS**
- Oil and fat absorbing polymers  
[NASA-CASE-NPO-11609-2] c27 N77-31308
- FECELS**
- Fecal waste disposal container  
[NASA-CASE-XNS-06761] c05 N69-23192
- FEED SYSTEMS**
- Nonconductive tube as feed system for plasma thruster  
[NASA-CASE-XLE-02902] c25 N71-21694
- Method and apparatus for pressurizing propellant tanks used in propulsion motor feed system  
[NASA-CASE-XNP-00650] c27 N71-28929
- Pressurized tank for feeding liquid waste into processing equipment  
[NASA-CASE-LAR-10365-1] c05 N72-27102
- Pressurized inert gas feed for lighting system  
[NASA-CASE-KSC-10644] c09 N72-27227
- Dual frequency feed systems for Cassegrainian antennas  
[NASA-CASE-NPO-13091-1] c09 N73-12214
- Improved injector with porous plug for bubbles of gas into feed lines of electrically conductive liquid  
[NASA-CASE-NPO-11377] c15 N73-27406
- Supercharged topping rocket propellant feed system  
[NASA-CASE-XLE-02062-1] c20 N80-14188
- Method of producing silicon --- gas phase reactor multiple injector liquid feed system  
[NASA-CASE-NPO-14382-1] c31 N80-18231
- Continuous coal processing method  
[NASA-CASE-NPO-13758-2] c31 N81-15154
- FEEDBACK**
- RC networks with voltage amplifier, RC input circuit, and positive feedback  
[NASA-CASE-ARC-10020] c10 N72-17172
- Multistage feedback shift register with states decomposable into cycles of equal length  
[NASA-CASE-NPO-11082] c08 N72-22167
- Inverter oscillator with voltage feedback  
[NASA-CASE-NPO-10760] c09 N72-25254
- FEEDBACK AMPLIFIERS**
- Development of system with electrical properties which vary with changes in temperature for use with feedback loop in operational amplifier circuit  
[NASA-CASE-MSC-13276-1] c14 N71-27058
- Phase locked demodulator with bandwidth switching amplifier circuit  
[NASA-CASE-XNP-01107] c10 N71-28859
- Monostable multivibrator for producing output pulse widths with positive feedback NOR gates  
[NASA-CASE-MSC-13492-1] c10 N71-28860
- High stability amplifier  
[NASA-CASE-GSC-12646-1] c33 N81-32391
- FEEDBACK CIRCUITS**
- Low power drain transistor feedback circuit  
[NASA-CASE-XGS-04999] c09 N69-24317
- Linear three-tap feedback shift register  
[NASA-CASE-NPO-10351] c08 N71-12503
- Frequency control network for current feedback oscillators converting dc voltage to ac or higher dc voltages  
[NASA-CASE-GSC-10041-1] c10 N71-19418
- Feedback integrating circuit with grounded capacitor for signal processing  
[NASA-CASE-XAC-10607] c10 N71-23669
- Development of idler feedback system to reduce electronic noise problem in two parametric amplifiers  
[NASA-CASE-LAR-10253-1] c09 N72-25258
- Linear shift register with feedback logic for generating pseudonoise linear recurring binary sequences  
[NASA-CASE-NPO-11406] c08 N73-12175
- Logarithmic circuit with wide dynamic range  
[NASA-CASE-GSC-12145-1] c33 N78-32339
- Automatic level control circuit  
[NASA-CASE-KSC-11170-1] c33 N81-29347
- FEEDBACK CONTROL**
- Describing continuous analog to digital converter with parallel digital output and nonlinear feedback  
[NASA-CASE-XAC-04031] c08 N71-18594
- Pulsed magnetic core memory element with blocking oscillator feedback for interrogation without loss of digital information  
[NASA-CASE-XGS-03303] c08 N71-18595
- Binary to decimal decoder logic circuit design with feedback control and display device  
[NASA-CASE-XKS-06167] c08 N71-24890
- Feedback control for direct current motor to achieve constant speed under varying loads  
[NASA-CASE-MFS-14610] c09 N71-28886
- Feedback controller for sampling error signals within single control formulation time interval  
[NASA-CASE-GSC-10554-1] c08 N71-29033
- Closed loop servosystem for variable speed tape recorders onboard spacecraft  
[NASA-CASE-NPO-10700] c07 N71-33613
- Development of aerodynamic control system to control flutter over large range of oscillatory frequencies using stability augmentation techniques  
[NASA-CASE-LAR-10682-1] c02 N73-26004
- Regulated dc-to-dc converter for voltage step-up or step-down with input-output isolation  
[NASA-CASE-HQN-10792-1] c33 N74-11049
- Diffused waveguiding capillary tube with distributed feedback for a gas laser  
[NASA-CASE-NPO-13544-1] c36 N76-18428
- The dc-to-dc converters employing staggered-phase power switches with two-loop control  
[NASA-CASE-NPO-13512-1] c33 N77-10428
- System and method for tracking a signal source --- employing feedback control  
[NASA-CASE-HQN-10880-1] c17 N78-17140
- Closed loop spray cooling apparatus --- for particle accelerator targets  
[NASA-CASE-LEW-11981-1] c31 N78-17237
- Wide power range microwave feedback controller  
[NASA-CASE-GSC-12146-1] c33 N78-32340
- Discriminator aided phase lock acquisition for suppressed carrier signals  
[NASA-CASE-NPO-14311-1] c32 N79-14276
- Active notch filter network with variable notch depth, width and frequency  
[NASA-CASE-FRC-11055-1] c33 N80-29583
- FEEDBACK FREQUENCY MODULATION**
- Method and apparatus for communicating through ionized layer of gases surrounding spacecraft

- during reentry into planetary atmospheres  
[NASA-CASE-XLA-01127] c07 N70-41372
- Characteristics of data-aided carrier tracking  
loop used for tracking carrier in angle  
modulated communications system  
[NASA-CASE-NPO-11282] c10 N73-16205
- Linear phase demodulator including a phase  
locked loop with auxiliary feedback loop  
[NASA-CASE-GSC-12018-1] c33 N77-14334
- FEDBERS**  
Automatic real-time pair-feeding system for  
animals  
[NASA-CASE-ARC-10302-1] c51 N74-15778
- FELTS**  
Thermal insulation attaching means --- adhesive  
bonding of felt vibration insulators under  
ceramic tiles  
[NASA-CASE-NSC-12619-2] c27 N79-12221
- FERRALS**  
Liquid cooled brassiere and method of diagnosing  
malignant tumors therewith  
[NASA-CASE-ARC-11007-1] c52 N77-14736
- Urine collection device  
[NASA-CASE-NSC-16433-1] c52 N78-27750
- Urine collection apparatus --- feminine hygiene  
[NASA-CASE-NSC-18381-1] c52 N81-28740
- FERRITES**  
Magnetic recording head composed of ferrite core  
coated with thin film of aluminum-iron-silicon  
alloy  
[NASA-CASE-GSC-10097-1] c08 N71-27210
- Method for making conductors for ferrite memory  
arrays --- from pre-formed metal conductors  
[NASA-CASE-LAR-10994-1] c24 N75-13032
- Device for measuring the ferrite content in an  
austenitic stainless-steel weld  
[NASA-CASE-NFS-22907-1] c26 N76-18257
- FERROMAGNETIC MATERIALS**  
Magnetic heat pumping  
[NASA-CASE-LRW-12508-1] c34 N78-17335
- FERROMAGNETISM**  
High temperature ferromagnetic cobalt-base alloy  
for electrical power generating equipment  
[NASA-CASE-XLE-03629] c17 N71-23248
- FIBER COMPOSITES**  
Fibrous refractory composite insulation ---  
shielding reusable spacecraft  
[NASA-CASE-ARC-11169-1] c24 N79-24062
- Method for making patterns for resin matrix  
composites  
[NASA-CASE-ARC-11246-1] c24 N80-22410
- A** method and technique for installing  
light-weight fragile, high-temperature fiber  
insulation --- spacecraft heat sealing  
[NASA-CASE-NSC-16934-2] c37 N81-16468
- Universal connectors for joining stringers  
[NASA-CASE-LAR-12744-1] c37 N81-31551
- FIBER OPTICS**  
Fiber optic transducers for monitoring and  
analysis of vibration in aerospace vehicles  
and onboard equipment  
[NASA-CASE-XMP-02433] c14 N71-10616
- Fiber distributed feedback laser  
[NASA-CASE-NPO-13531-1] c36 N76-24553
- Fiber optic multiplex optical transmission system  
[NASA-CASE-KSC-11047-1] c74 N78-14889
- Low intensity X-ray and gamma-ray imaging device  
--- fiber optics  
[NASA-CASE-GSC-12263-1] c74 N79-20857
- Low intensity X-ray and gamma-ray imaging  
spectrometer  
[NASA-CASE-GSC-12587-1] c35 N80-29635
- A** fiber optic transmission line stabilization  
apparatus and method  
[NASA-CASE-NPO-15036-1] c74 N80-34250
- Fiber optic crossbar switch for automatically  
patching optical signals  
[NASA-CASE-KSC-11104-1] c74 N81-12862
- Precise RF timing signal distribution to remote  
stations --- fiber optics  
[NASA-CASE-NPO-14749-1] c32 N81-14186
- Optical crystal temperature gauge with fiber  
optic connections --- cryogenic systems  
[NASA-CASE-NSC-18627-1] c74 N81-15818
- Apparatus for fiber optic liquid level sensing  
[NASA-CASE-NSC-18674-1] c74 N81-24907
- Interleaving device  
[NASA-CASE-GSC-12111-2] c33 N81-29342
- Optical gyroscope system  
[NASA-CASE-NPO-14258-1] c35 N81-33448
- FIBER REINFORCED COMPOSITES**  
Fiberglass/epoxy composite automotive door  
structure including a glass-reinforced  
intrusion strip  
[NASA-CASE-NPO-15057-1] c24 N81-19230
- Composition and method for making polyimide  
resin-reinforced fabric  
[NASA-CASE-LRW-12933-1] c27 N81-19296
- FIBER RELEASE**  
Curing agent for polyepoxides and epoxy resins  
and composites cured therewith --- preventing  
carbon fiber release  
[NASA-CASE-LRW-13226-1] c27 N81-17260
- FIBERS**  
Process for fiberizing ceramic materials with  
high fusion temperatures and tensile strength  
[NASA-CASE-XNP-00597] c18 N71-23088
- Method and apparatus for fluffing, separating,  
and cleaning fibers  
[NASA-CASE-LAR-11224-1] c37 N76-18456
- Composite lamination method  
[NASA-CASE-LAR-12019-1] c24 N78-17150
- Dual membrane hollow fiber fuel cell and method  
of operating same  
[NASA-CASE-NPO-13732-1] c44 N79-10513
- Ion-exchange hollow fibers  
[NASA-CASE-NPO-13309-1] c25 N81-19244
- FIELD EFFECT TRANSISTORS**  
Frequency to analog converters with unipolar  
field effect transistor for determining  
potential charge by pulse duration of input  
signal  
[NASA-CASE-XNP-07040] c08 N71-12500
- Voltage controlled, variable frequency  
relaxation oscillator with MOSFET variable  
current feed  
[NASA-CASE-GSC-10022-1] c10 N71-25882
- Circuitry for high input impedance video  
processor with high noise immunity  
[NASA-CASE-NPO-10199] c09 N72-17156
- Development and characteristics of data  
multiplexer circuit using field effect  
transistors arranged in tree switching  
configuration  
[NASA-CASE-NPO-11333] c08 N72-22162
- Single integrated circuit chip with field effect  
transistor  
[NASA-CASE-GSC-10835-1] c09 N72-33205
- Radiation hardening of MOS devices by boron ---  
for stabilizing gate threshold potential of  
field effect device  
[NASA-CASE-GSC-11425-1] c76 N74-20329
- Stored charge transistor  
[NASA-CASE-NPO-11156-2] c33 N75-31331
- Field effect transistor and method of  
construction thereof  
[NASA-CASE-NFS-23312-1] c33 N78-27326
- JFET oscillator  
[NASA-CASE-GSC-12555-1] c33 N80-26601
- Method of making V-MOS field effect transistors  
utilizing a two-step anisotropic etching and  
ion implantation  
[NASA-CASE-GSC-12515-1] c33 N81-26360
- CCD correlated quadruple sampling processor  
[NASA-CASE-NFO-14426-1] c33 N81-27396
- FIELD EMISSION**  
Electrode with multiple columnar conductors for  
limiting field emission current  
[NASA-CASE-ERC-10015-2] c10 N72-27246
- FILAMENT WINDING**  
Tool attachment for spreading or moving away  
loose elements from terminal posts during  
winding of filamentary elements  
[NASA-CASE-XMP-02107] c15 N71-10809
- Fabrication of filament wound propellant tank  
for cryogenic storage  
[NASA-CASE-XLE-03803-2] c15 N71-17651
- Twisted wire or tube superconductor for filament  
windings  
[NASA-CASE-LRW-11015] c26 N73-32571
- Method of making reinforced composite structure  
[NASA-CASE-LRW-12619-1] c24 N77-19171
- FILAMENTS**  
Refractory filament series circuitry for radiant  
heater  
[NASA-CASE-XLE-00387] c33 N70-34812

- Controlled diffusion reaction process for masking substrate of twisted multifilament superconductive ribbon  
[NASA-CASE-LEW-11726-1] c26 N73-26752
- FILLERS**  
Filling honeycomb matrix with deaerated paste filler  
[NASA-CASE-XMS-01108] c15 N69-24322  
Intumescent-ablator coatings using endothermic fillers  
[NASA-CASE-ARC-11043-1] c24 N78-27180  
Adjustable high emittance gap filler --- reentry shielding for space shuttle vehicles  
[NASA-CASE-ARC-11510-1] c27 N80-23454  
Polymeric compositions and their method of manufacture --- forming filled polymer systems using cryogenics  
[NASA-CASE-NPO-10424-1] c27 N81-24258  
Polyvinyl alcohol battery separator containing inert filler --- alkaline batteries  
[NASA-CASE-LEW-13556-1] c44 N81-27615
- FILM COOLING**  
Multislot film cooled pyrolytic graphite rocket nozzle  
[NASA-CASE-XNP-04389] c28 N71-20942  
Curved film cooling admission tube  
[NASA-CASE-LEW-13174-1] c34 N81-12363
- FILM THICKNESS**  
Chemical vapor deposition reactor --- providing uniform film thickness  
[NASA-CASE-NPO-13650-1] c25 N79-28253  
Dual-beam skin friction interferometer --- portable equipment  
[NASA-CASE-ARC-11354-1] c36 N81-29415
- FILES**  
Apparatus for obtaining isotropic irradiation on film emulsion from parallel radiation source  
[NASA-CASE-MFS-20095] c24 N72-11595  
Method and apparatus for measurement of trap density and energy distribution in dielectric films  
[NASA-CASE-NPO-13443-1] c76 N76-20994
- FILTERS**  
Development of filter system for control of outgas contamination in vacuum conditions using absorbent beds of molecular sieve zeolite, silica gel, and charcoal  
[NASA-CASE-MFS-14711] c15 N71-26185  
Heated tungsten filter for removing oxygen impurities from cesium  
[NASA-CASE-XNP-04262-2] c17 N71-26773  
Centrifugal lyophobic separator  
[NASA-CASE-LAR-10194-1] c34 N74-30608
- FILTRATION**  
Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c28 N81-15119
- FINS**  
Thrust and attitude control apparatus using jet nozzle in movable canard surface or fin configuration  
[NASA-CASE-XLE-03583] c31 N71-17629  
Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft  
[NASA-CASE-LAR-10753-1] c08 N74-30421
- FIRE EXTINGUISHERS**  
Synthesis of dawsonites  
[NASA-CASE-ARC-113261-1] c25 N80-31490  
Fire extinguishing apparatus having a slidable mass for a penetrator nozzle --- for penetrating aircraft and shuttle orbiter skin  
[NASA-CASE-KSC-11064-1] c31 N81-14137
- FIRE PREVENTION**  
Hydrogen fire blink detector for high altitude rocket or ground installation  
[NASA-CASE-MFS-15063] c10 N72-25412  
Method and apparatus for checking fire detectors  
[NASA-CASE-GSC-11600-1] c35 N74-21019
- FIREPROOFING**  
Fireproof potassium silicate coating composition, insoluble in water after application  
[NASA-CASE-GSC-10072] c18 N71-14014  
Lightweight fire resistant plastic foam for thermal protection of reentry vehicles and aircraft structures  
[NASA-CASE-ARC-10180-1] c28 N72-20767  
Intumescent paint containing nitrile rubber for fire protection  
[NASA-CASE-ARC-10196-1] c18 N73-13562
- Para-benzoquinone dioxime and concentrated mineral acid processed to yield intumescent or fire resistant, heat insulating materials  
[NASA-CASE-ARC-10304-1] c18 N73-26572  
Flexible fire retardant polyisocyanate modified neoprene foam --- for thermal protective devices  
[NASA-CASE-ARC-10180-1] c27 N74-12814  
Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[NASA-CASE-MSC-14331-1] c27 N76-24405  
Flame retardant spandex type polyurethanes  
[NASA-CASE-MSC-14331-2] c27 N78-17213  
Fire protection covering for small diameter missiles  
[NASA-CASE-ARC-11104-1] c15 N79-26100
- FIRES**  
Device for generating and controlling combustion products for testing of fire detection system  
[NASA-CASE-GSC-11095-1] c14 N72-10375  
Device for detecting hydrogen fires onboard high altitude rockets  
[NASA-CASE-MFS-13130] c10 N72-17173
- FIRING (IGNITING)**  
Contamination free separation nut eliminating combustion products from ambient surroundings generated by squib firing  
[NASA-CASE-IGS-01971] c15 N71-15922
- FITTINGS**  
Design and development of quick release connector  
[NASA-CASE-XLA-01141] c15 N71-13789  
Development and characteristics of strainer for flared tube fitting  
[NASA-CASE-XLA-05056] c15 N72-11389
- FIXED WINGS**  
Design of supersonic aircraft with novel fixed, swept wing planform  
[NASA-CASE-XLA-04451] c02 N71-12243
- FIXTURES**  
Tool for use in lifting pin supported objects  
[NASA-CASE-NPO-13157-1] c37 N74-32918  
Apparatus for positioning modular components on a vertical or overhead surface  
[NASA-CASE-LAR-11465-1] c37 N76-21554  
Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c26 N80-28492
- FLAME PROBES**  
Flame detector operable in presence of proton radiation  
[NASA-CASE-MFS-21577-1] c19 N74-29410
- FLAME RETARDANTS**  
Flame retardant spandex type polyurethanes  
[NASA-CASE-MSC-14331-2] c27 N78-17213  
Process for spinning flame retardant elastomeric compositions --- fabricating synthetic fibers for high oxygen environments  
[NASA-CASE-MSC-14331-3] c27 N78-32262  
Catalysts for polyamide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams  
[NASA-CASE-ARC-11107-1] c25 N80-16116  
Crystalline polyimides --- reinforcing fibers for high temperature composites and adhesives as well as flame retardation  
[NASA-CASE-LAR-12099-1] c27 N80-16158  
Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-3] c27 N80-24438  
Heat sealable, flame and abrasion resistant coated fabric  
[NASA-CASE-MSC-18382-1] c27 N80-24440  
Structural wood panels with improved fire resistance  
[NASA-CASE-ARC-11174-1] c24 N81-13999  
Resin composition, process for producing the same, product produced therefrom and process for producing said product  
[NASA-CASE-ARC-11331-1] c27 N81-31363  
Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c27 N81-31364
- FLAME SPRAYING**  
Flame or plasma spraying for molybdenum coating of carbon or graphite surfaces to prevent oxidative corrosion  
[NASA-CASE-XLA-00302] c15 N71-16077  
Modification of polyurethanes with alkyl halide resins, inorganic salts, and encapsulated volatile and reactive halogen for fuel fire control

[NASA-CASE-ARC-10098-1] c06 N71-24739  
 Method of making pressure tight seal for super alloy

[NASA-CASE-LAR-10170-1] c37 N74-11301  
**FLAME TEMPERATURE**  
 Direct heating surface combustor  
 [NASA-CASE-LEW-11877-1] c34 N78-27357

**FLAMES**  
 Anodizing method for providing metal surfaces with temperature reducing coatings against flames  
 [NASA-CASE-XLE-00035] c33 N71-29151  
 Modulated hydrogen ion flame detector  
 [NASA-CASE-ARC-10322-1] c35 N76-18403

**FLAMMABILITY**  
 Flammability test chamber for testing materials in certain predetermined environments  
 [NASA-CASE-KSC-10126] c11 N71-24985  
 Development of apparatus for testing burning rate and flammability of materials  
 [NASA-CASE-XMS-05690] c33 N72-25913  
 Compound oxidized styrylphosphine --- flame resistant vinyl polymers  
 [NASA-CASE-MSC-14903-2] c27 N80-10358  
 Ultra-violet process for producing flame resistant polyamides and products produced thereby --- protective clothing for high oxygen environments  
 [NASA-CASE-MSC-16074-1] c27 N80-26446

**FLANGES**  
 Cassegrain antenna subreflector flange for suppressing ground noise and increasing antenna transmitting efficiency  
 [NASA-CASE-XNP-00683] c09 N70-35425  
 Light baffle with oblate hemispheroid surface, and shading flange  
 [NASA-CASE-NPO-10337] c14 N71-15604  
 Flanged major modular assembly jig  
 [NASA-CASE-MSC-19372-1] c39 N76-31562

**FLAPS (CONTROL SURFACES)**  
 Upper surface, external flow, jet-augmented flap configuration for high wing jet aircraft for noise reduction  
 [NASA-CASE-XLA-00087] c02 N70-33332  
 Assembly for opening flight capsule stabilizing and decelerating flaps with reference to capsule recovery  
 [NASA-CASE-XMP-00641] c31 N70-36410  
 Direct lift control system having flaps with slots adjacent to their leading edge and particularly adapted for lightweight aircraft  
 [NASA-CASE-LAR-10249-1] c02 N71-26110  
 Reversed cowl flap inlet thrust augmentor --- with adjustable airfoil  
 [NASA-CASE-ARC-10754-1] c07 N75-24736

**FLARED BODIES**  
 Development and characteristics of strainer for flared tube fitting  
 [NASA-CASE-XLA-05056] c15 N72-11389

**FLAT CONDUCTORS**  
 Method of making mcded electric connector for use with flat conductor cables  
 [NASA-CASE-XMP-03498] c15 N71-15986  
 Shielded flat conductor cable fabricated by electroless and electrolytic plating  
 [NASA-CASE-MFS-13687] c09 N71-28691  
 Shielded flat conductor cable of ribbonlike wires laminates in thin flexible insulation  
 [NASA-CASE-MFS-13687-2] c09 N72-22198  
 Separable flat cable connector with isolated electrical contacts  
 [NASA-CASE-MFS-20757] c09 N72-28225  
 Method and apparatus for preparing multiconductor cable with flat conductors  
 [NASA-CASE-MFS-10946-1] c31 N79-21226  
 Edge coating of flat wires  
 [NASA-CASE-XMP-05757-1] c31 N79-21227

**FLAT PLATES**  
 Reduced gravity liquid configuration simulator to study propellant behavior in rocket fuel tanks  
 [NASA-CASE-XLE-02624] c12 N69-39588  
 Exponential horn, copper plate, magnetic hammer, and anvil in apparatus for making diamonds  
 [NASA-CASE-MFS-20698] c15 N72-20446  
 Heat transfer device  
 [NASA-CASE-MFS-22938-1] c34 N76-18374  
 Flat-plate heat pipe  
 [NASA-CASE-GSC-11998-1] c34 N77-32413

Solar engine --- Flat plate type  
 [NASA-CASE-LAR-12148-1] c44 N79-29608

**FLEXIBILITY**  
 Weatherproof helix antenna  
 [NASA-CASE-XKS-08485] c07 N71-19493  
 Flexible bellows joint shielding sleeve for propellant transfer pipelines  
 [NASA-CASE-XNP-01855] c15 N71-28937  
 Flexible joint for pressurizable garment  
 [NASA-CASE-MSC-11072] c54 N74-32546  
 Nozzle extraction process and handlemeter for measuring handle  
 [NASA-CASE-LAR-12147-1] c31 N79-11246  
 Safety flywheel --- using flexible materials energy storage  
 [NASA-CASE-HQN-10888-1] c44 N79-14527

**FLEXIBLE BODIES**  
 Flexible backup bar for welding awkwardly shaped structures  
 [NASA-CASE-XMP-00722] c15 N70-40204  
 Characteristics of hermetically sealed electric switch with flexible operating capability  
 [NASA-CASE-XNF-09808] c09 N71-12518  
 Flexible composite membrane structure impervious to extremely reactive chemicals in rocket propellants  
 [NASA-CASE-XNP-08837] c18 N71-16210  
 Development and characteristics of self supporting space vehicle  
 [NASA-CASE-XLA-00117] c31 N71-17680  
 Design and development of flexible tunnel for use by spacecrews in performing extravehicular activities  
 [NASA-CASE-MSC-12243-1] c05 N71-24728  
 Vibration control of flexible bodies in steady accelerating environment  
 [NASA-CASE-LAR-10106-1] c15 N71-27169  
 Flexible barrier membrane comprising porous substrate and incorporating liquid gallium or indium metal used as sealant barriers for spacecraft walls and pumping liquid propellants  
 [NASA-CASE-XNP-08881] c17 N71-28747  
 Development of device for simulating cyclic thermal loading of flexible materials by application of mechanical stresses and deformations  
 [NASA-CASE-LAR-10270-1] c32 N72-25877  
 Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft  
 [NASA-CASE-LAR-10753-1] c08 N74-30421  
 Internally supported flexible duct joint --- device for conducting fluids in high pressure systems  
 [NASA-CASE-MFS-19193-1] c37 N75-19686  
 Surface conforming thermal/pressure seal --- for control devices in space vehicles  
 [NASA-CASE-MSC-18422-1] c37 N80-14400  
 Strong thin membrane structure --- solar sails  
 [NASA-CASE-NPO-14021-2] c27 N80-16163

**FLEXIBLE WINGS**  
 Aeroflexible wing structure with air scoop for inflating stiffeners with ram air  
 [NASA-CASE-XLA-06095] c01 N69-39981  
 Deployment system for flexible wing with rigid superstructure  
 [NASA-CASE-XLA-01220] c02 N70-41863  
 Development and characteristics of control system for flexible wings  
 [NASA-CASE-XLA-Q6958] c02 N71-11038

**FLEXING**  
 Two degree inverted flexure from single block of material  
 [NASA-CASE-ARC-10345-1] c15 N73-12488  
 Pressure suit joint analyzer  
 [NASA-CASE-ARC-11314-1] c54 N80-30043

**FLIGHT**  
 Flow meter for measuring stagnation pressure in boundary layer around high speed flight vehicle  
 [NASA-CASE-IFR-02007] c12 N71-24692

**FLIGHT ALTITUDE**  
 Surface based altitude measuring system for accurately measuring altitude of airborne vehicle  
 [NASA-CASE-ERC-10412-1] c09 N73-12211  
 Terminal guidance system --- for guiding aircraft into preselected altitude and/or heading at terminal point  
 [NASA-CASE-FRC-10049-1] c04 N74-13420

**FLIGHT CONTROL**

**SUBJECT INDEX**

Apparatus for measuring an aircraft's speed and height  
 [NASA-CASE-LAR-12275-1] c35 N79-18296  
 Sidelooking laser altimeter for a flight simulator  
 [NASA-CASE-ARC-11312-1] c36 N81-19439

**FLIGHT CONTROL**

Aircraft indicator for pilot control of takeoff roll, climbout path and verticle flight path in poor visibility conditions  
 [NASA-CASE-XLA-00487] c14 N70-40157  
 Two axis flight controller with potentiometer control shafts directly coupled to rotatable ball members  
 [NASA-CASE-XFR-04104] c03 N70-42073  
 Development of aircraft control system with high performance electrically controlled and mechanically operated hydraulic valves for precise flight operation  
 [NASA-CASE-YAC-00048] c02 N71-29128  
 Development of flight simulator system to show position of joystick displacement  
 [NASA-CASE-NPO-11497] c08 N73-25206  
 Solid state controller three axes controller  
 [NASA-CASE-MSC-12394-1] c08 N74-10942  
 G-load measuring and indicator apparatus --- for aircraft  
 [NASA-CASE-ARC-10806] c06 N74-27872  
 Integrated lift/drag controller for aircraft  
 [NASA-CASE-ARC-10456-1] c05 N75-12930  
 Deploy/release system --- model aircraft flight control  
 [NASA-CASE-LAR-11575-1] c02 N76-16014  
 Apparatus for damping operator induced oscillations of a controlled system --- using adaptive filters to damp oscillations in a flight control system  
 [NASA-CASE-FRC-11041-1] c33 N80-20488  
 Aircraft body-axis rotation measurement system  
 [NASA-CASE-FRC-11043-1] c06 N81-22048

**FLIGHT CREWS**

Survival couch for aircraft or spacecraft crews  
 [NASA-CASE-XLA-00118] c05 N70-33285

**FLIGHT HAZARDS**

CAT altitude avoidance system  
 [NASA-CASE-NPO-15351-1] c47 N81-16677

**FLIGHT RECORDERS**

Event recorder with constant speed motor which rotates recording disk  
 [NASA-CASE-XLA-01832] c14 N71-21006

**FLIGHT SAFETY**

Aerial capsule emergency separation device using jettisonable towers  
 [NASA-CASE-XLA-00115] c03 N70-33343  
 Development and characteristics of electronic signalling system and data processing equipment for warning systems to avoid midair collisions between aircraft  
 [NASA-CASE-LAR-10717-1] c21 N73-30641

**FLIGHT SIMULATION**

Lunar landing flight research vehicle  
 [NASA-CASE-XFR-00929] c31 N70-34566  
 Television simulation for aircraft and space flight  
 [NASA-CASE-XFR-03107] c09 N71-19449  
 Electrical circuit selection device for simulating stage separation of flight vehicle  
 [NASA-CASE-XKS-04631] c10 N71-23663

**FLIGHT SIMULATORS**

Centrifuge mounted motion simulator with elevator mechanism  
 [NASA-CASE-YAC-00399] c11 N70-34815  
 Table structure and rotating magnet system simulating gravitational forces on spacecraft and displaying trajectories between Earth, Venus, and Mercury  
 [NASA-CASE-XNP-00708] c14 N70-35394  
 Wind tunnel test section for simulating high Reynolds number over transonic speed range  
 [NASA-CASE-MFS-20509] c11 N72-17183  
 Development of flight simulator system to show position of joystick displacement  
 [NASA-CASE-NPO-11497] c08 N73-25206  
 Apparatus for applying simulator g-forces to an arm of an aircraft simulator pilot  
 [NASA-CASE-LAR-10550-1] c09 N74-30597  
 Vehicle simulator binocular multiplanar visual display system  
 [NASA-CASE-ARC-10808-1] c09 N76-24280

Full color hybrid display for aircraft simulators --- landing aids  
 [NASA-CASE-ARC-10903-1] c09 N78-18083  
 Chromatically corrected virtual image display --- lens design for flight simulators  
 [NASA-CASE-LAR-12251-1] c74 N79-14892  
 Seat cushion to provide realistic acceleration cues to aircraft simulator pilot  
 [NASA-CASE-LAR-12149-2] c09 N79-31228  
 Chromatically corrected virtual image visual display --- reducing eye strain in flight simulators  
 [NASA-CASE-LAR-12251-1] c74 N80-27185  
 Sidelooking laser altimeter for a flight simulator  
 [NASA-CASE-ARC-11312-1] c36 N81-19439  
 Helmet weight simulator  
 [NASA-CASE-LAR-12320-1] c54 N81-27806  
 Biocentrifuge system capable of exchanging specimen cages while in operational mode  
 [NASA-CASE-MFS-23825-1] c51 N81-32829

**FLIGHT TESTS**

Device for measuring drag forces in flight tests  
 [NASA-CASE-XLA-00113] c14 N70-33386

**FLIGHT VEHICLES**

Construction of leading edges of surfaces for aerial vehicles performing from subsonic to above transonic speeds  
 [NASA-CASE-XLA-01486] c01 N71-23497  
 Electro-optical attitude sensing device for landing approach of flight vehicle  
 [NASA-CASE-XMS-01994-1] c14 N72-17326

**FLIP-FLOPS**

Bistable multivibrator circuits operating at high speed and low power dissipation  
 [NASA-CASE-XGS-00823] c10 N71-15910  
 Stepping motor control apparatus exciting windings in proper time sequence to cause motor to rotate in either direction  
 [NASA-CASE-GSC-10366-1] c10 N71-18772  
 Interrogator and current driver circuit for combination with transistor flip-flop circuit  
 [NASA-CASE-XGS-03058] c10 N71-19547

**FLOATING**

Floating baffle for tank drain  
 [NASA-CASE-KSC-10639] c15 N73-26472  
 Modification of one man life raft  
 [NASA-CASE-LAR-10241-1] c54 N74-14845  
 Floating nut retention system  
 [NASA-CASE-MSC-16938-1] c37 N80-23653

**FLOATS**

Magnetically centered liquid column float  
 [NASA-CASE-YAC-00030] c14 N70-34820

**FLOTATION**

Development and characteristics of rescue litter with inflatable flotation device for water rescue application  
 [NASA-CASE-XMS-04170] c05 N71-22748

**FLOW CHAMBERS**

Multi-chamber controllable heat pipe  
 [NASA-CASE-ARC-10199] c34 N78-17337

**FLOW DIRECTION INDICATORS**

Electric circuit for reversing direction of current flow  
 [NASA-CASE-XNP-00952] c10 N71-23271  
 Flow angle sensor and remote readout system for use with cryogenic fluids  
 [NASA-CASE-XLE-04503] c14 N71-24864

**FLOW DISTRIBUTION**

Multiple orifice fluid flow control valve to provide different flow patterns  
 [NASA-CASE-ERC-10208] c15 N70-10867  
 Photographing surface flow patterns on wind tunnel test models  
 [NASA-CASE-XLA-01353] c14 N70-41366  
 Color photointerpretation of interference colors reflected from thin film oil-coated components in moving gases for gas flow visualization  
 [NASA-CASE-XNP-01779] c12 N71-20815  
 Dual wavelength scanning Doppler velocimeter --- without perturbation of flow fields  
 [NASA-CASE-ARC-10637-1] c35 N75-16783  
 Controlled separation combustor --- airflow distribution in gas turbine engines  
 [NASA-CASE-LEW-11593-1] c20 N76-14190

**FLOW MEASUREMENT**

Collapsible flow test device for obstructed passages  
 [NASA-CASE-XMS-04917] c14 N69-24257

- Mass flow meter containing beta source for measuring nonpolar liquid flow  
[NASA-CASE-MFS-20485] c14 N72-11365
- Instrument for measuring magnitude and direction of flow velocity in flow field  
[NASA-CASE-LAR-10855-1] c14 N73-13415
- Flow measuring apparatus  
[NASA-CASE-LEW-12078-1] c35 N75-30503
- Method for making a hot wire anemometer and product thereof  
[NASA-CASE-ARC-10900-1] c35 N77-24454
- Fluid velocity measuring device  
[NASA-CASE-LAR-11729-1] c34 N79-12359
- Biomedical flow sensor --- intravenous procedures  
[NASA-CASE-MSC-18761-1] c52 N81-24717
- Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c34 N81-26402
- Aeroelastic instability stoppers for wind-tunnel models  
[NASA-CASE-LAR-12720-1] c09 N81-31229
- FLOW REGULATORS**
- Antibacklash circuit for hydraulic drive system  
[NASA-CASE-XNP-01020] c03 N71-12260
- Tubular flow restrictor for gas flow control in pipeline  
[NASA-CASE-NPO-10117] c15 N71-15608
- Fluid flow control valve for regulating fluids in molecular quantities  
[NASA-CASE-XLE-00703] c15 N71-15967
- Control of gas flow from pressurized vessel by thermal expansion of metal plug  
[NASA-CASE-NPO-10298] c12 N71-17661
- Semitoroidal diaphragm cavitating flow control valve  
[NASA-CASE-XNP-09704] c12 N71-18615
- Describing device for changing flow rate of fluid in duct in response to change in temperature  
[NASA-CASE-MFS-14259] c15 N71-19213
- Pneumatic servoamplifier for controlling flow regulation  
[NASA-CASE-MSC-12121-1] c15 N71-27147
- Gas flow control device, including housing and input port  
[NASA-CASE-NPO-11479] c15 N73-13462
- Pressure modulating valve  
[NASA-CASE-MSC-14905-1] c37 N77-28487
- Automotive gas turbine fuel control  
[NASA-CASE-LEW-12785-1] c37 N78-24545
- Flow diverter valve and flow diversion method  
[NASA-CASE-HQN-00573-1] c37 N79-33468
- Automatic thermal switch --- Space Shuttle equipment bay temperature control  
[NASA-CASE-GSC-12415-1] c34 N80-18338
- Biomedical flow sensor --- intravenous procedures  
[NASA-CASE-MSC-18761-1] c52 N81-24717
- FLOW STABILITY**
- Detonation reaction engine comprising outer housing enclosing pair of inner walls for continuous flow  
[NASA-CASE-XNP-06926] c28 N71-22583
- Apparatus for establishing flow of a fluid mass having a known velocity  
[NASA-CASE-MFS-21424-1] c34 N74-27730
- Aeroelastic instability stoppers for wind-tunnel models  
[NASA-CASE-LAR-12720-1] c09 N81-31229
- FLOW VELOCITY**
- Continuous variation of propellant flow and thrust by application of liquid foam flow theory to injection orifice  
[NASA-CASE-XLE-00177] c28 N70-40367
- Measuring density of single and two-phase cryogenic fluids in rocket fuel tanks  
[NASA-CASE-XLE-00688] c14 N70-41330
- Device for adding water to high velocity exhaust jets to reduce velocity, noise, and temperature  
[NASA-CASE-XNF-01813] c28 N70-41582
- Positive displacement flowmeter for measuring extremely low flows of fluid with self calibrating features  
[NASA-CASE-XNF-02822] c14 N70-41994
- Zeta potential flowmeter for measuring very slow to very high flows  
[NASA-CASE-XNP-06509] c14 N71-23226
- Device for simultaneously determining density, velocity, and temperature of streaming gas  
[NASA-CASE-XLA-03375] c16 N71-24074
- Doppler shifted laser beam as fluid velocity sensor  
[NASA-CASE-XAC-10770-1] c16 N71-24828
- Flowmeters for sensing low fluid flow rate and pressure for application to respiration rate studies  
[NASA-CASE-FRC-10022] c12 N71-26546
- Force balanced throttle valve for fuel control in rocket engines  
[NASA-CASE-NPO-10808] c15 N71-27432
- Flow rate switch for detecting variations in fluid flow velocity through conduits of pressurized systems  
[NASA-CASE-NPO-10722] c09 N72-20199
- Instrument for measuring magnitude and direction of flow velocity in flow field  
[NASA-CASE-LAR-10855-1] c14 N73-13415
- Apparatus for establishing flow of a fluid mass having a known velocity  
[NASA-CASE-MFS-21424-1] c34 N74-27730
- Wind tunnel flow generation section  
[NASA-CASE-ARC-10710-1] c09 N75-12969
- Combined dual scatter, local oscillator laser Doppler velocimeter  
[NASA-CASE-ARC-10642-1] c36 N76-14447
- System for measuring three fluctuating velocity components in a turbulently flowing fluid  
[NASA-CASE-ARC-10974-1] c34 N77-27345
- Fluid velocity measuring device  
[NASA-CASE-LAR-11729-1] c34 N79-12359
- Pressure letdown method and device for coal conversion systems  
[NASA-CASE-NPO-15100-1] c28 N81-33306
- FLOW VISUALIZATION**
- Method and apparatus for measuring shock layer radiation distribution about high velocity objects  
[NASA-CASE-XAC-02970] c14 N69-39896
- Color photointerpretation of interference colors reflected from thin film oil-coated components in moving gases for gas flow visualization  
[NASA-CASE-XNP-01779] c12 N71-20815
- FLOWMETERS**
- Collapsible flow test device for obstructed passages  
[NASA-CASE-INS-04917] c14 N69-24257
- Positive displacement flowmeter for measuring extremely low flows of fluid with self calibrating features  
[NASA-CASE-XNP-02822] c14 N70-41994
- Heated element sensor for fluid flow detection in thermal conductive conduit with adaptive means to determine flow rate and direction  
[NASA-CASE-MSC-12084-1] c12 N71-17569
- Describing laser Doppler velocimeter for measuring mean velocity and turbulence of fluid flow  
[NASA-CASE-MFS-20386] c21 N71-19212
- Zeta potential flowmeter for measuring very slow to very high flows  
[NASA-CASE-XNP-06509] c14 N71-23226
- Flow meter for measuring stagnation pressure in boundary layer around high speed flight vehicle  
[NASA-CASE-XPR-02007] c12 N71-24692
- Doppler shifted laser beam as fluid velocity sensor  
[NASA-CASE-XAC-10770-1] c16 N71-24828
- Flowmeters for sensing low fluid flow rate and pressure for application to respiration rate studies  
[NASA-CASE-FRC-10022] c12 N71-26546
- Mass flow meter containing beta source for measuring nonpolar liquid flow  
[NASA-CASE-MFS-20485] c14 N72-11365
- Respiratory analysis system to determine gas flow rate and frequency of respiration and expiration cycles in real time  
[NASA-CASE-MSC-13436-1] c05 N73-32015
- Low power electromagnetic flowmeter system producing zero output signal for zero flow  
[NASA-CASE-ARC-10362-1] c14 N73-32326
- Electromagnetic flow rate meter --- for liquid metals  
[NASA-CASE-LEW-10981-1] c35 N74-21018
- Leak detector  
[NASA-CASE-MFS-21761-1] c35 N75-15931
- System for measuring three fluctuating velocity components in a turbulently flowing fluid  
[NASA-CASE-ARC-10974-1] c34 N77-27345

- Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c34 N81-26402
- FLUID AMPLIFIERS**
- Fluid jet amplifier with fluid from jet nozzle deflected by inlet pressure  
[NASA-CASE-XLE-03512] c12 N69-21466
- Multiple vortex amplifier system as fluid valve  
[NASA-CASE-XMP-04709] c15 N71-15609
- Shear modulated fluid amplifier of high pressure hydraulic vortex amplifier type  
[NASA-CASE-MFS-10412] c12 N71-17578
- Development of vortex fluid amplifier for throttling rocket exhaust  
[NASA-CASE-LEW-10374-1] c28 N73-13773
- Fluid pressure amplifier and system  
[NASA-CASE-LAR-10868-1] c33 N74-11050
- Fluid thrust control system --- for liquid propellant rocket engines  
[NASA-CASE-XMP-05964-1] c20 N79-21124
- FLUID FILMS**
- Journal bearings --- for lubricant films  
[NASA-CASE-LEW-11076-1] c37 N74-21061
- Fluid journal bearings  
[NASA-CASE-LEW-11076-4] c37 N76-15461
- Fluid seal for rotating shafts  
[NASA-CASE-LEW-11676-1] c37 N76-22541
- FLUID FILTERS**
- Absorbent apparatus for separating gas from liquid-gas stream used in environmental control under zero gravity conditions  
[NASA-CASE-XMS-01492] c05 N70-41297
- Compact high pressure filter for rocket fuel lines  
[NASA-CASE-XMP-00732] c28 N70-41447
- Development of liquid separating system using capillary device connected to flexible bladder storage chamber  
[NASA-CASE-XMS-13052] c14 N71-20427
- Fluid control apparatus and method  
[NASA-CASE-LAR-11110-1] c34 N75-26282
- Filter regeneration systems --- a system for regenerating a system filter in a fluid flow line  
[NASA-CASE-MS-C-14273-1] c34 N75-33342
- Quick disconnect filter coupling  
[NASA-CASE-MFS-22323-1] c37 N76-14463
- Rapid, quantitative determination of bacteria in water  
[NASA-CASE-GSC-12158-1] c51 N78-22585
- Fluid sample collection and distribution system --- qualitative analysis of aqueous samples from several points  
[NASA-CASE-MSC-16841-1] c34 N79-24285
- FLUID FLOW**
- Fluid jet amplifier with fluid from jet nozzle deflected by inlet pressure  
[NASA-CASE-XLE-03512] c12 N69-21466
- Pneumatic system for cyclic control of fluid flow in pneumatic device  
[NASA-CASE-XMS-04843] c03 N69-21469
- Multiple orifice fluid flow control valve to provide different flow patterns  
[NASA-CASE-BRC-10208] c15 N70-10867
- Conical valve plug for use with reactive cryogenic fluids  
[NASA-CASE-XLE-00715] c15 N70-34859
- Pressure regulating system with high pressure fluid source, adapted to maintain constant downstream pressure  
[NASA-CASE-XMP-00450] c15 N70-38603
- Antiflutter check valve for use with high pressure fluid flow  
[NASA-CASE-XMP-01152] c15 N70-41611
- Inductive liquid level detection system  
[NASA-CASE-XLE-01609] c14 N71-10500
- Multiple vortex amplifier system as fluid valve  
[NASA-CASE-XMP-04709] c15 N71-15609
- Heated element sensor for fluid flow detection in thermal conductive conduit with adaptive means to determine flow rate and direction  
[NASA-CASE-MSC-12084-1] c12 N71-17569
- Throttle valve for regulating fluid flow volume  
[NASA-CASE-XMP-05698] c15 N71-18580
- Photometric flow meter with comparator reference means  
[NASA-CASE-XGS-01331] c14 N71-22996
- Combination pressure transducer-calibrator assembly for measuring fluid  
[NASA-CASE-XMP-01660] c14 N71-23036
- Valve assembly for controlling simultaneously more than one fluid flow, and having stable qualities under loads  
[NASA-CASE-XMS-05890] c09 N71-23191
- Flowmeters for sensing low fluid flow rate and pressure for application to respiration rate studies  
[NASA-CASE-FRC-10022] c12 N71-26546
- Control valve for switching main stream of fluid from one stable position to another by means of electrohydrodynamic forces  
[NASA-CASE-NPO-10416] c12 N71-27332
- Fluid control jet amplifiers  
[NASA-CASE-XLE-09341] c12 N71-28741
- Mass flow meter containing beta source for measuring nonpolar liquid flow  
[NASA-CASE-MFS-20485] c14 N72-11365
- Flow rate switch for detecting variations in fluid flow velocity through conduits of pressurized systems  
[NASA-CASE-NFO-10722] c09 N72-20199
- Torsional disconnect device for releasably coupling distal ends of fluid conduits  
[NASA-CASE-NPO-10704] c15 N72-20445
- Capacitive tank gaging device for monitoring one constituent of two phase fluid by sensing dielectric constant  
[NASA-CASE-MFS-21629] c14 N72-22442
- Transferring liquid nitrogen through vacuum chamber to cryopanel  
[NASA-CASE-LAR-10031] c15 N72-22484
- Design and development of device to prevent geysering during convective circulation of cryogenic fluids  
[NASA-CASE-KSC-10615] c15 N73-12486
- Design and development of thermomechanical pump for transmitting warming fluid through fluid circuit to control temperature of spacecraft instrumentation  
[NASA-CASE-NPO-11417] c15 N73-24513
- Flow control valve --- for high temperature fluids  
[NASA-CASE-NPO-11951-1] c37 N74-21065
- Apparatus for establishing flow of a fluid mass having a known velocity  
[NASA-CASE-MFS-21424-1] c34 N74-27730
- Internally supported flexible duct joint --- device for conducting fluids in high pressure systems  
[NASA-CASE-MFS-19193-1] c37 N75-19686
- Flow measuring apparatus  
[NASA-CASE-LEW-12078-1] c35 N75-30503
- Filter regeneration systems --- a system for regenerating a system filter in a fluid flow line  
[NASA-CASE-MSC-14273-1] c34 N75-33342
- Combined dual scatter, local oscillator laser Doppler velocimeter  
[NASA-CASE-ARC-10642-1] c36 N76-14447
- Externally supported internally stabilized flexible duct joint  
[NASA-CASE-MFS-19194-1] c37 N76-14460
- Vortex generator for controlling the dispersion of effluents in a flowing liquid  
[NASA-CASE-LAR-12045-1] c34 N77-24423
- Pseudo-backscatter laser Doppler velocimeter employing antiparallel-reflector in the forward direction  
[NASA-CASE-ARC-10970-1] c36 N77-25501
- Accumulator  
[NASA-CASE-MFS-19287-1] c34 N77-30399
- Apparatus for measuring a sorbate dispersed in a fluid stream  
[NASA-CASE-ARC-10896-1] c35 N78-19465
- Flow compensating pressure regulator  
[NASA-CASE-LEW-12718-1] c34 N78-25351
- Fluid valve assembly  
[NASA-CASE-MSC-12731-1] c37 N78-25426
- Positive isolation disconnect  
[NASA-CASE-MSC-16043-1] c37 N79-11402
- Fluid velocity measuring device  
[NASA-CASE-LAR-11729-1] c34 N79-12359
- Hot foil transducer skin friction sensor  
[NASA-CASE-LAR-12321-1] c35 N81-12390
- Dual laser optical system and method for studying fluid flow  
[NASA-CASE-MFS-25315-1] c36 N81-19440
- FLUID INJECTION**
- Solid propellant ignition with hypergolic fluid injected to predetermined portions of propellant

- [NASA-CASE-XLE-00207] c28 N70-33375  
Method for igniting solid propellant rocket motors by injecting hypergolic fluids
- [NASA-CASE-XLE-01988] c27 N71-15634  
Constructing fluid spike nozzle to eliminate heat transfer and high temperature problems inherent in physical spikes
- [NASA-CASE-XGS-01143] c31 N71-15647  
Method and apparatus for producing fine particles in cryogenic liquid bath for gelled rocket propellants
- [NASA-CASE-NPO-10250] c23 N71-16212  
Fluid transferring system design for purging toxic, corrosive, or noxious fluids and fumes from materials handling equipment for cleansing and accident prevention
- [NASA-CASE-XMS-01905] c12 N71-21089  
Tertiary flow injection system for thrust vectoring of propulsive nozzle flow
- [NASA-CASE-MFS-20831] c28 N71-29153  
Programmable physiological infusion
- [NASA-CASE-ARC-10447-1] c52 N74-22771
- FLUID JBTS**  
Directed fluid stream for propeller blade loading control
- [NASA-CASE-XAC-00139] c02 N70-34856
- FLUID LOGIC**  
Logic AND gate for fluid circuits
- [NASA-CASE-XLA-07391] c12 N71-17579
- FLUID MECHANICS**  
Fluid leakage detection system with automatic monitoring capability
- [NASA-CASE-LAR-10323-1] c12 N71-17573  
Development and characteristics of parallel plate viscometer for determination of absolute viscosity of liquids and viscoelastic materials
- [NASA-CASE-NPO-11387] c14 N73-14429
- FLUID POWER**  
Fluid power transmission and gas bearing system
- [NASA-CASE-XMS-01445] c12 N71-16031  
Low friction gas bearing system for fluid power transmission to bearing-supported payload
- [NASA-CASE-ERC-10097] c15 N71-28465
- FLUID PRESSURE**  
Flow compensating pressure regulator
- [NASA-CASE-LEW-12718-1] c34 N78-25351  
Self-stabilizing radial face seal
- [NASA-CASE-LEW-12991-1] c37 N81-24442
- FLUID ROTOR GYROSCOPES**  
Piezoelectric pump for supplying fluid at high frequencies to gyroscope fluid suspension system
- [NASA-CASE-INP-05429] c26 N71-21824
- FLUID SWITCHING ELEMENTS**  
Two phase fluid pressurization system for propellant tank
- [NASA-CASE-MSC-12390] c27 N71-29155
- FLUID TRANSMISSION LINES**  
Low heat leak connector for cryogenic system
- [NASA-CASE-XLE-02367-1] c31 N79-21225
- FLUIDIC CIRCUITS**  
Using molds for fabricating individual fluid circuit components
- [NASA-CASE-XLA-07829] c15 N72-16329  
Flow measuring apparatus
- [NASA-CASE-LEW-12078-1] c35 N75-30503
- FLUIDICS**  
Fluidic-thermochromic display device
- [NASA-CASE-ERC-10031] c12 N71-18603  
Plasma-fluidic hybrid display system combining high brightness and memory characteristics
- [NASA-CASE-ERC-10100] c09 N71-33519  
Continuous gas flow control by fluidic proportional thruster system
- [NASA-CASE-ARC-10106-1] c28 N72-22769  
Fluid pressure amplifier and system
- [NASA-CASE-LAR-10868-1] c33 N74-11050  
Fluid valve assembly
- [NASA-CASE-MSC-12731-1] c37 N78-25426
- FLUIDIZED BED PROCESSORS**  
Use of glow discharge in fluidized beds
- [NASA-CASE-ARC-11245-1] c33 N80-11326  
Solar-heated fluidized bed gasification system
- [NASA-CASE-NPO-15071-1] c44 N80-24747  
Continuous coal processing method
- [NASA-CASE-NPO-13758-2] c31 N81-15154
- FLUIDS**  
Automated fluid chemical analyzer for microchemical analysis of small quantities of liquids by use of selected reagents and analyzer units
- [NASA-CASE-INP-09451] c06 N71-26754  
Detection of bacteria in biological fluids and foods
- [NASA-CASE-GSC-11533-1] c14 N73-13435  
Fluid polydimethylsiloxane resin with low outgassing properties in cured state
- [NASA-CASE-GSC-11358-1] c06 N73-26100  
Fluid mass sensor for a zero gravity environment
- [NASA-CASE-MSC-14653-1] c35 N77-19385
- FLUORESCENCE**  
Spectrophotofluorometer with 3-dimensional display to identify fluorescence spectra of carcinogenic and noncarcinogenic hydrocarbons
- [NASA-CASE-IGS-01231] c14 N70-41676  
Sealed fluorescent tube light unit capable of connection with other units to form string of work lights
- [NASA-CASE-IKS-05932] c09 N71-26787  
Chromato-fluorographic drug detector --- device for detecting and recording fluorescent properties of materials
- [NASA-CASE-ARC-10633-1] c25 N74-26947  
Fluorescence detector for monitoring atmospheric pollutants
- [NASA-CASE-NPO-13231-1] c45 N75-27585  
Fluorescent radiation converter
- [NASA-CASE-GSC-12528-1] c74 N81-24900
- FLUORIDES**  
Self lubricating fluoride-metal composite materials for outer space applications
- [NASA-CASE-XLE-08511] c18 N71-23710  
Development of fluoride coating to prevent oxidation of beryllium surfaces at elevated temperatures
- [NASA-CASE-LEW-10327] c17 N71-33408  
Perfluoro polyether acyl fluorides
- [NASA-CASE-NPO-10765] c06 N72-20121
- FLUORINATION**  
Fluorinated polyurethanes produced by reacting hydroxy terminated perfluoro polyether with diisocyanate
- [NASA-CASE-NPO-10767-2] c06 N72-27151  
Fluorinated esters of polycarboxylic acid and lubricating compositions for use at extreme temperature
- [NASA-CASE-MFS-21040-1] c06 N73-30098
- FLUORINE**  
Reaction of polyperfluoropolyenes with fluorine to produce saturated polymer chain or create reactive sites on chain
- [NASA-CASE-NPO-10862] c06 N72-22107  
Process for the preparation of fluorine containing crosslinked elastomeric polytriazine and product so produced
- [NASA-CASE-ARC-11248-1] c27 N81-17259
- FLUORINE COMPOUNDS**  
Fluorine-containing polyformals
- [NASA-CASE-INP-06900-1] c27 N79-21191
- FLUORO COMPOUNDS**  
Synthesis of polyfluorobutadiene by polymerization of perfluorobutadiene with diisopropyl peroxydicarbonate
- [NASA-CASE-NPO-10863] c06 N70-11251  
Low pressure perfluorobutadiene polymerization with peroxide catalysts
- [NASA-CASE-NPO-10447] c06 N70-11252  
Preparation of fluorohydroxy ethers by reacting fluoroalkylene oxides with alkali salt of polyfluoroalkylene diol
- [NASA-CASE-MFS-10507] c06 N73-30101  
Preparation of fluorinated polyethers from 2-hydro-perhaloisopropyl alcohols
- [NASA-CASE-MFS-11492] c06 N73-30102  
Chemical and elastic properties of fluorinated polyurethanes
- [NASA-CASE-NPO-10767-1] c06 N73-33076  
Utilization of oxygen difluoride for syntheses of fluoropolymers
- [NASA-CASE-NPO-12061-1] c27 N76-16228  
Synthesis of multifunctional triaryltrifluoroethanes
- [NASA-CASE-ARC-11097-1] c23 N78-22154  
Synthesis of multifunctional triaryltrifluoroethanes
- [NASA-CASE-ARC-11097-2] c23 N78-22155
- FLUOROCARBONS**  
Electrically conductive fluorocarbon polymers
- [NASA-CASE-XLE-06774-2] c06 N72-25150
- FLUOROPOLYMERS**  
Perfluoroalkyl polytriazines containing pendent



- iododifluoromethyl groups  
[NASA-CASE-ARC-11241-1] c25 N81-14016
- Texturing polymer surfaces by transfer casting  
--- cardiovascular prosthesis  
[NASA-CASE-LEW-13120-1] c31 N81-16327
- FLUTTER**
- Antiflutter check valve for use with high pressure fluid flow  
[NASA-CASE-XNP-01152] c15 N70-41811
- Development of aerodynamic control system to control flutter over large range of oscillatory frequencies using stability augmentation techniques  
[NASA-CASE-LAR-10682-1] c02 N73-26004
- Decoupler pylon: Wing/store flutter suppressor  
[NASA-CASE-LAR-12468-1] c08 N80-22359
- FLUX (RATE)**
- Fluxgate magnetometer for measuring magnetic field along two axes using one sensor  
[NASA-CASE-GSC-10441-1] c14 N71-27325
- FLUX DENSITY**
- Particle beam power density detection and measurement apparatus  
[NASA-CASE-XLE-00243] c14 N70-38602
- FLUXES**
- Hydrazine monoperofluoro alkanoate solder flux leaving corrosion resistant coating, for metals such as copper  
[NASA-CASE-XNP-03459-2] c18 N71-15688
- Metal soldering with hydrazine monoperofluoro alkanoate for corrosion resistant coatings  
[NASA-CASE-XNP-03459] c15 N71-21078
- FLYWHEELS**
- Energy storage apparatus  
[NASA-CASE-GSC-12030-1] c44 N78-24608
- Rotatable mass for a flywheel  
[NASA-CASE-MFS-23051-1] c37 N79-10422
- Safety flywheel --- using flexible materials energy storage  
[NASA-CASE-HQN-10888-1] c44 N79-14527
- Method of manufacture of bonded fiber flywheel --- fiberglass-epoxy  
[NASA-CASE-MFS-23674-1] c24 N81-29163
- FOAMS**
- Plastic foam generator for space vehicle instrument payload package flotation in water landing  
[NASA-CASE-XLA-00838] c03 N70-36778
- Continuous variation of propellant flow and thrust by application of liquid foam flow theory to injection orifice  
[NASA-CASE-XLE-00177] c28 N70-40367
- Development of foam insulation for filament wound cryogenic storage tank  
[NASA-CASE-XLE-03803] c15 N71-23816
- Carboxyl terminated polyester prepolymers and foams produced from prepolymers and materials  
[NASA-CASE-NPO-10596] c06 N71-25929
- Storage stable, thermally activated foaming compositions for erecting and rigidizing mechanisms of thin sheet solar collectors  
[NASA-CASE-LAR-10373-1] c18 N71-26155
- Method of making solid propellant rocket motor having reliable high altitude capabilities, long shelf life, and capable of firing with nozzle closure with foamed plastic permanent mandrel  
[NASA-CASE-XLA-04126] c28 N71-26779
- Foam insulation thickness measuring and injection device for spacecraft applications  
[NASA-CASE-MFS-20261] c14 N71-27005
- Description of method for making homogeneous foamed materials in weightless environment using materials having different physical properties  
[NASA-CASE-XMP-09902] c15 N72-11387
- Polyimide foam for the thermal insulation and fire protection  
[NASA-CASE-ARC-10464-1] c27 N74-12812
- Intumescent composition, foamed product prepared therewith and process for making same  
[NASA-CASE-ARC-10304-2] c27 N74-27037
- Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c27 N78-31232
- Ambient cure polyimide foams --- thermal resistant foams  
[NASA-CASE-ARC-11170-1] c27 N79-11215
- Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams  
[NASA-CASE-ARC-11107-1] c25 N80-16116
- FOCUSING**
- X ray collimating structure for focusing radiation directly onto detector  
[NASA-CASE-XHQ-04106] c14 N70-40240
- Apertured electrode focusing system for ion sources with nonuniform plasma density  
[NASA-CASE-XNP-03332] c09 N71-10618
- Development and characteristics of Petzval type objective including field shaping lens for focusing light of specified wavelength band on curved photoreceptor  
[NASA-CASE-GSC-10700] c23 N71-30027
- Absolute focus locking device for microscopes to maintain set focus for extended time period  
[NASA-CASE-LAR-10184] c14 N72-22445
- Electron beam controller --- using magnetic field to refocus spent electron beam in microwave oscillator tube  
[NASA-CASE-LEW-11617-1] c33 N74-10195
- Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c35 N75-15014
- Multiplate focusing collimator --- for scanning small near radiation sources  
[NASA-CASE-MFS-20932-1] c35 N75-19616
- RF beam center location method and apparatus for power transmission system  
[NASA-CASE-NFO-13821-1] c44 N78-28594
- Gyatron transmitting tube  
[NASA-CASE-LEW-13429-1] c33 N81-16384
- FOG**
- Anti-fog composition --- for prevention of fogging on surfaces such as space helmet visors and windshields  
[NASA-CASE-MSC-13530-2] c23 N75-14834
- Environmental fog/rain visual display system for aircraft simulators  
[NASA-CASE-ARC-11158-1] c09 N79-33220
- FOILS (MATERIALS)**
- Foil seal between parts moving relative to each other  
[NASA-CASE-XLE-05130] c15 N69-21362
- Method of making an insulation foil  
[NASA-CASE-LEW-11484-1] c24 N75-33181
- Partial interlaminar separation system for composites  
[NASA-CASE-LAR-12065-1] c24 N81-14000
- Method of making a partial interlaminar separation composite system  
[NASA-CASE-LAR-12065-2] c24 N81-33235
- FOLDING**
- Characteristics of device for folding thin flexible sheets into compact configuration  
[NASA-CASE-XLA-00137] c15 N70-33180
- FOLDING STRUCTURES**
- Lenticular vehicle with foldable aerodynamic control flaps and reaction jets for operation above and within earth's atmosphere  
[NASA-CASE-YGS-00260] c31 N70-37924
- Collapsible, space erectable loop antenna system for space vehicle  
[NASA-CASE-XMF-00437] c07 N70-40202
- Unfolding boom assembly with knuckle joints for positioning equipment for spacecraft  
[NASA-CASE-YGS-00938] c32 N70-41367
- Foldable conduit capable of springing back as self erecting structural member  
[NASA-CASE-XLE-00620] c32 N70-41579
- Foldable, double cone and parabolic reflector system for solar ray concentration  
[NASA-CASE-XLA-04622] c03 N70-41580
- Method for deployment of flexible wing glider from space vehicle with minimum impact and loading  
[NASA-CASE-YMS-00907] c02 N70-41630
- Development and characteristics of variable sweep wing control system for supersonic aircraft  
[NASA-CASE-XLA-03659] c02 N71-11041
- Hydraulic actuator design for space deployment of heat radiators  
[NASA-CASE-MSC-11817-1] c15 N71-26611
- Apparatus and method of assembling building blocks by folding pre-cut flat sheets of material during on-site construction  
[NASA-CASE-MSC-12233-1] c15 N72-25454

Folding structure fabricated of rigid panels  
[NASA-CASE-IXQ-02146] c18 N75-27040

Collapsible corrugated horn antenna  
[NASA-CASE-LAR-11745-1] c32 N80-29539

Foldable beam  
[NASA-CASE-LAR-12077-1] c31 N81-25259

Telescoping columns --- parabolic antenna support  
[NASA-CASE-LAR-12195-1] c31 N81-27324

**FOOD**  
Detection of bacteria in biological fluids and foods  
[NASA-CASE-GSC-11533-1] c14 N73-13435

**FORCE**  
Electromechanical actuator for producing mechanical force and/or motion in response to electrical signals  
[NASA-CASE-NPO-11738-1] c09 N73-30185

**FORCE DISTRIBUTION**  
Device for handling heavy loads by distributing forces  
[NASA-CASE-XNP-04969] c11 N69-27466

Development of two force component measuring device  
[NASA-CASE-IAC-04886-1] c14 N71-20439

Tensile strength testing device having pulley guides for exerting multiple forces on test specimen  
[NASA-CASE-XNP-05634] c15 N71-24834

Development and characteristics of device for indicating and recording magnitude of force applied in axial direction  
[NASA-CASE-MSC-15626-1] c14 N72-25411

Variable direction force coupler for transmitting force along selectable curve path  
[NASA-CASE-MFS-20317] c15 N73-13463

Subminiature insertable force transducer --- including a strain gage to measure forces in muscles  
[NASA-CASE-NPO-13423-1] c33 N75-31329

**FORCED VIBRATION**  
Seismic vibration source  
[NASA-CASE-NPO-14112-1] c46 N79-22679

**FOREBODIES**  
Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c02 N81-14568

**FORMALDEHYDE**  
An improved synthesis of 2, 4, 8, 10-tetroxaspiro (5.5)undecane  
[NASA-CASE-ARC-11243-1] c27 N79-30375

An improved synthesis of 2,4,8,10-tetroxaspiro (5.5) undecane  
[NASA-CASE-ARC-11243-2] c23 N80-31472

**FORMAT**  
Digital data reformatter/deserializer  
[NASA-CASE-NPO-13676-1] c60 N79-20751

**FORMATES**  
Preparation of polyurethane polymer by reacting hydroxy polyformal with organic diisocyanate  
[NASA-CASE-MFS-10509] c06 N73-30103

**FORMING TECHNIQUES**  
Apparatus for forming wire grids for electric strain gages  
[NASA-CASE-XLE-00023] c15 N70-33330

Not forming of plastic sheets  
[NASA-CASE-XMS-05516] c15 N71-17803

Forming tubes from long thin flat metal strips  
[NASA-CASE-IGS-04175] c15 N71-18579

Portable magnetomotive hammer for metal working  
[NASA-CASE-XMF-03793] c15 N71-24833

Forming mold for polishing and machining curved solar magnesium reflector with reinforcing ribs  
[NASA-CASE-XLE-08917-2] c15 N71-24836

Heat treatment and tooling for forming shapes from thermosetting honeycomb core sheets  
[NASA-CASE-NPO-11036] c15 N72-24522

Method of heat treating a formed powder product material  
[NASA-CASE-LEW-10805-3] c26 N74-10521

Molding apparatus --- for thermosetting plastic compositions  
[NASA-CASE-LAR-10489-2] c31 N74-32920

Process for making sheets with parallel pores of uniform size  
[NASA-CASE-GSC-10984-1] c37 N75-26371

Drilled ball bearing with a one piece anti-tipping cage assembly  
[NASA-CASE-LEW-11925-1] c37 N75-31446

Apparatus for forming dished ion thruster grids  
[NASA-CASE-LEW-11694-2] c37 N76-14461

Acoustic energy shaping  
[NASA-CASE-NPO-13802-1] c71 N78-10837

Method of forming metal hydride films  
[NASA-CASE-LEW-12083-1] c37 N78-13436

Method of producing complex aluminum alloy parts of high temper, and products thereof  
[NASA-CASE-MSC-19693-1] c26 N78-24333

Solar cell with improved N-region contact and method of forming the same  
[NASA-CASE-NPO-14205-1] c44 N79-31752

Precision heat forming of tetrafluoroethylene tubing  
[NASA-CASE-MSC-18430-1] c31 N80-17292

Method and apparatus for producing concentric hollow spheres --- inertial confinement fusion targets  
[NASA-CASE-NPO-14596-1] c31 N81-33319

**FORWARD SCATTERING**  
Forward-scatter polarimeter for determining the gaseous depolarization factor in the presence of polluting polydispersed particles  
[NASA-CASE-NPO-13756-1] c35 N76-14434

**FOUNDATIONS**  
Base support for expansible and contractible coupling between two members  
[NASA-CASE-NPO-11059] c15 N72-17454

Adjustable securing base  
[NASA-CASE-MSC-19666-1] c37 N78-17383

**FOURIER TRANSFORMATION**  
Continuous Fourier transform method and apparatus --- for the analysis of simultaneous analog signal components  
[NASA-CASE-ARC-10466-1] c60 N75-13539

**FRACTIONATION**  
Purification apparatus for vaporization and fractional distillation of liquids  
[NASA-CASE-XNP-08124] c15 N71-27184

Electrophoretic fractional elution apparatus employing a rotational seal fraction collector  
[NASA-CASE-MFS-23284-1] c37 N80-14397

Electrophoresis device  
[NASA-CASE-MFS-25426-1] c25 N81-29179

**FRACTURE MECHANICS**  
Apparatus for testing metallic and nonmetallic beams or rods by bending at high temperatures in vacuum or inert atmosphere  
[NASA-CASE-XLE-01300] c15 N70-41993

**FRACTURE STRENGTH**  
High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-1] c26 N77-24254

Process for making a high toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-2] c26 N79-22271

High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-3] c26 N80-32484

Method of making a partial interlaminar separation composite system  
[NASA-CASE-LAR-12065-2] c24 N81-33235

**FRAME PHOTOGRAPHY**  
Film advance indicator  
[NASA-CASE-LAR-12474-1] c35 N80-31774

**FRAMES**  
Shock absorbing articulated multiple couch assembly  
[NASA-CASE-MSC-11253] c05 N71-12343

Pliable frame for sunglasses in emergency survival kits  
[NASA-CASE-XMS-06064] c05 N71-23096

Expandable space frames with high expansion to collapse ratio  
[NASA-CASE-ERC-10365-1] c31 N73-32749

Laser measuring system for incremental assemblies --- measuring wire-wrapped frame assemblies in spark chambers  
[NASA-CASE-GSC-12321-1] c36 N80-18380

Inorganic spark chamber frame and method of making the same  
[NASA-CASE-GSC-12354-1] c35 N80-20565

**FRAMING CAMERAS**  
High speed photo-optical time recorder for indicating time at exposure of each frame of high speed movie camera film  
[NASA-CASE-KSC-10294] c14 N72-18411

**FREE FLIGHT TEST APPARATUS**  
Hydraulic support equipment for full scale dynamic testing of large rocket vehicle under free flight conditions  
[NASA-CASE-XMF-01772] c11 N70-41677

Hydraulic support apparatus for dynamic testing of space vehicles under near-free flight conditions  
[NASA-CASE-XMF-03248] c11 N71-10604

Free flight suspension system for use with aircraft models in wind tunnel tests  
[NASA-CASE-XLA-00939] c11 N71-15526

**FREE WING AIRCRAFT**

Free wing assembly for an aircraft  
[NASA-CASE-FHC-10092-1] c05 N79-12061

**FREEZE DRYING**

Rice preparation process consisting of cooking, two freezing-thawing cycles, and then freeze drying  
[NASA-CASE-MSC-13540-1] c05 N72-33096

**FREEZING**

System for and method of freezing biological tissue  
[NASA-CASE-GSC-12173-1] c51 N79-10694

Method of forming frozen spheres in a force-free drop tower --- microballoons for inertial confinement fusion  
[NASA-CASE-NPO-14845-1] c31 N81-16328

**FREON**

Solar energy power system --- using Freon  
[NASA-CASE-MFS-21628-1] c44 N75-32581

**FREQUENCIES**

Controlled oscillator system with a time dependent output frequency  
[NASA-CASE-NPO-11962-1] c33 N74-10194

High efficiency multifrequency feed  
[NASA-CASE-GSC-11909] c32 N74-20863

**FREQUENCY ANALYZERS**

Describing frequency discriminator using digital logic circuits and supplying single binary output signal  
[NASA-CASE-MFS-14322] c08 N71-18692

Broadband frequency discriminator with resistive captive inductive networks  
[NASA-CASE-NPO-10096] c07 N71-24583

Audio frequency analysis circuit for determining, displaying, and recording frequency of sweeping audio frequency signal  
[NASA-CASE-NPO-11147] c14 N72-27408

Continuous Fourier transform method and apparatus --- for the analysis of simultaneous analog signal components  
[NASA-CASE-ARC-10466-1] c60 N75-13539

Frequency discriminator and phase detector circuit  
[NASA-CASE-NPO-11515-1] c33 N77-13315

Frequency tracked pulse technique for ultrasonic analysis  
[NASA-CASE-LAR-12697-1] c32 N80-26571

**FREQUENCY CONTROL**

Automatic control of voltage supply to direct current motor  
[NASA-CASE-XMS-04215-1] c09 N69-39587

Variable frequency magnetic coupled multivibrator with temperature compensated frequency control circuit  
[NASA-CASE-XGS-00458] c09 N70-38604

Variable frequency magnetic coupled multivibrator with output signal of constant amplitude and waveform  
[NASA-CASE-XGS-00131] c09 N70-38595

Development of automatic frequency discriminators and control for phase lock loop providing frequency preset capabilities  
[NASA-CASE-XMF-08665] c10 N71-19467

Linear accelerator frequency control system  
[NASA-CASE-XGS-05441] c10 N71-22962

Tuning arrangement for frequency control of magnetron-type electron discharge device  
[NASA-CASE-XNP-09771] c09 N71-24841

Low loss dichroic plate  
[NASA-CASE-NPO-13171-1] c32 N74-11000

Automatic frequency control for FM transmitter  
[NASA-CASE-MFS-21540-1] c32 N74-19790

Acoustically controlled distributed feedback laser  
[NASA-CASE-NPO-13175-1] c36 N75-31427

Reflex feed system for dual frequency antenna with frequency cutoff means  
[NASA-CASE-NPO-14022-1] c32 N78-31321

Cam-operated pitch-change apparatus  
[NASA-CASE-LEW-13050-1] c07 N79-14095

Digital numerically controlled oscillator  
[NASA-CASE-MSC-16747-1] c33 N81-17349

High stability buffered phase comparator  
[NASA-CASE-GSC-12645-1] c33 N81-31482

**FREQUENCY CONVERTERS**

Frequency to analog converters with unipolar field effect transistor for determining potential charge by pulse duration of input signal  
[NASA-CASE-XNP-07040] c08 N71-12500

Describing static inverter with single or multiple phase output  
[NASA-CASE-XMF-00663] c08 N71-18752

Voltage controlled, variable frequency relaxation oscillator with MOSFET variable current feed  
[NASA-CASE-GSC-10022-1] c10 N71-25882

Development of family of frequency to amplitude converters for frequency analysis of complex input signal waveforms  
[NASA-CASE-MSC-12395] c09 N72-25257

Variable frequency inverter for ac induction motors with torque, speed and braking control  
[NASA-CASE-MFS-22088-1] c33 N75-15874

**FREQUENCY DISCRIMINATORS**

FM lock indicator for dithered FM code tracking loop  
[NASA-CASE-NPO-14435-1] c33 N81-33405

**FREQUENCY DISTRIBUTION**

Monopole antenna system for maximum omnidirectional efficiency for use on satellites  
[NASA-CASE-XLA-00414] c07 N70-38200

Variable frequency subcarrier oscillator with temperature compensation  
[NASA-CASE-XNP-03916] c09 N71-28810

Ultra stable frequency distribution system  
[NASA-CASE-NPO-13836-1] c32 N78-15323

**FREQUENCY DIVIDERS**

Low phase noise frequency divider for use with deep space network communication system  
[NASA-CASE-NPO-11569] c10 N73-26229

Technique for extending the frequency range of digital dividers  
[NASA-CASE-LAR-10730-1] c33 N74-10223

Symmetrical odd-modulus frequency divider  
[NASA-CASE-NFO-13426-1] c33 N75-31330

Electronic analog divider  
[NASA-CASE-LEW-11881-1] c33 N77-17354

Unequal split microwave power divider  
[NASA-CASE-LAR-12889-1] c33 N81-31483

**FREQUENCY DIVISION MULTIPLEXING**

Earth satellite relay station for frequency multiplexed voice transmission  
[NASA-CASE-GSC-10118-1] c07 N71-24621

System for monitoring condition responsive devices by using frequency division multiplex technique  
[NASA-CASE-KSC-10521] c07 N73-20176

**FREQUENCY MEASUREMENT**

Measurement system for physical quantity represented by or converted to variable frequency signal  
[NASA-CASE-MFS-20658-1] c14 N73-30386

Frequency measurement by coincidence detection with standard frequency  
[NASA-CASE-MSC-14649-1] c33 N76-16331

Time domain phase measuring apparatus  
[NASA-CASE-GSC-12228-1] c33 N79-10338

**FREQUENCY MODULATION**

Accelerometer with FM output signals indicative of mechanical strain on it  
[NASA-CASE-XLA-00492] c14 N70-34799

Circuitry for generating sync signals in FM communication systems including video information  
[NASA-CASE-XNP-10830] c07 N71-11281

Demodulator for simultaneous demodulation of two modulating ac signal carriers close in frequency  
[NASA-CASE-XMF-01160] c07 N71-11298

Optical tracker with pair of FM reticles having patterns 90 deg out of phase  
[NASA-CASE-XGS-05715] c23 N71-16100

Atomic hydrogen maser with bulb temperature control by output frequency difference signal for wall shift elimination  
[NASA-CASE-HQB-10654-1] c16 N73-13489

Device for locating electrically nonlinear objects and determining distance to object by FM signal transmission  
[NASA-CASE-KSC-10108] c14 N73-25461

Automatic frequency control for FM transmitter  
[NASA-CASE-MFS-21540-1] c32 N74-19790

- Symmetrical odd-modulus frequency divider  
[NASA-CASE-NPO-13426-1] c33 N75-31330
- Frequency modulated oscillator  
[NASA-CASE-MFS-23181-1] c33 N77-17351
- FM/CW radar system  
[NASA-CASE-MFS-22234-1] c32 N79-10264
- Thickness measurement system  
[NASA-CASE-MFS-23721-1] c31 N79-28370
- Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14524-1] c32 N80-24510
- Adaptive control system for line-commutated inverters  
[NASA-CASE-MFS-25209-1] c33 N81-31480
- FREQUENCY MULTIPLIERS**
- Multiple varactor for generating high frequencies with high power and high conversion efficiency  
[NASA-CASE-XMP-04958-1] c10 N71-26414
- Open loop digital frequency multiplier  
[NASA-CASE-MSC-12709-1] c33 N77-24375
- FREQUENCY RANGES**
- Variable time constant, wide frequency range smoothing network for noise removal from pulse chains  
[NASA-CASE-XGS-01983] c10 N70-41964
- Variable frequency nuclear magnetic resonance spectrometer providing drive signals over wide frequency range and minimizing noise effects  
[NASA-CASE-NPO-09830] c14 N71-26266
- Technique for extending the frequency range of digital dividers  
[NASA-CASE-LAR-10730-1] c33 N74-10223
- Multichannel logarithmic RF level detector  
[NASA-CASE-LAR-11021-1] c32 N76-14321
- Multiple rate digital command detection system with range clean-up capability  
[NASA-CASE-NPO-13753-1] c32 N77-20289
- Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-1] c32 N79-19195
- FREQUENCY SCANNING**
- Automatic communication signal monitoring system  
[NASA-CASE-NPO-13941-1] c32 N79-10262
- Discriminator aided phase lock acquisition for suppressed carrier signals  
[NASA-CASE-NPO-14311-1] c32 N79-14276
- Frequency-scanning particle size spectrometer  
[NASA-CASE-NPO-13606-2] c35 N80-18364
- Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c32 N81-27341
- FREQUENCY SHIFT**
- Doppler frequency shift correction device for multiplex communication with Applications Technology Satellites  
[NASA-CASE-XGS-02749] c07 N69-39978
- Serrodyne traveling wave tube reentrant amplifier for synchronous communication satellites operating at microwave frequencies  
[NASA-CASE-IGS-01022] c07 N71-16088
- Multiplexed communication system design including automatic correction of transmission errors introduced by frequency spectrum shifts  
[NASA-CASE-XMP-01306] c07 N71-20814
- Doppler shifted laser beam as fluid velocity sensor  
[NASA-CASE-XAC-10770-1] c16 N71-24828
- Laser Doppler velocity simulator --- to induce frequency shift  
[NASA-CASE-LAR-12176-1] c36 N80-16321
- FREQUENCY SHIFT KEYING**
- Frequency shift keyed demodulator - circuit diagrams  
[NASA-CASE-XGS-02889] c07 N71-11282
- Frequency shift keying apparatus for use with pulse code modulation data transmission system  
[NASA-CASE-XGS-01537] c07 N71-23405
- FREQUENCY STABILITY**
- Gas laser frequency stabilized by position of mirrors in resonant cavity  
[NASA-CASE-XGS-03644] c16 N71-18614
- Solid state broadband stable power amplifier  
[NASA-CASE-XMP-10854] c10 N71-26331
- FREQUENCY STANDARDS**
- Development of method for synchronizing clocks at several ground stations based on signals received from spacecraft or satellites  
[NASA-CASE-XMP-08875] c10 N71-23099
- Atomic standard with variable storage volume  
[NASA-CASE-GSC-11895-1] c35 N76-15436
- Ultra stable frequency distribution system  
[NASA-CASE-NFO-13836-1] c32 N78-15323
- External bulb variable volume maser  
[NASA-CASE-GSC-12334-1] c36 N79-14362
- Precise RF timing signal distribution to remote stations --- fiber optics  
[NASA-CASE-NPO-14749-1] c32 N81-14186
- FREQUENCY SYNCHRONIZATION**
- Synchronized digital communication system  
[NASA-CASE-XMP-03623] c09 N73-28084
- Ultra stable frequency distribution system  
[NASA-CASE-NFO-13836-1] c32 N78-15323
- System for synchronizing synthesizers of communication systems  
[NASA-CASE-GSC-12148-1] c32 N79-20296
- FREQUENCY SYNTHESIZERS**
- Digitally controlled frequency synthesizer for pulse frequency modulation telemetry systems  
[NASA-CASE-XGS-02317] c09 N71-23525
- System for synchronizing synthesizers of communication systems  
[NASA-CASE-GSC-12148-1] c32 N79-20296
- Method for shaping and aiming narrow beams --- using a linear frequency chirp for sonar reception  
[NASA-CASE-NFO-14632-1] c32 N80-12256
- FRICTION FACTOR**
- Self lubricating gears and other mechanical parts having surface adapted to frictional contact  
[NASA-CASE-MFS-14971] c15 N71-24984
- FRICTION MEASUREMENT**
- Kinetic and static friction force measurement between magnetic tape and magnetic head surfaces  
[NASA-CASE-XMP-08680] c14 N71-22995
- Static coefficient test method and apparatus  
[NASA-CASE-GSC-11893-1] c35 N76-31489
- FRICTION REDUCTION**
- Development of low friction magnetic recording tape  
[NASA-CASE-XGS-00373] c23 N71-15978
- Hollow high strength rolling elements for antifriction bearings fabricated from preformed components  
[NASA-CASE-LEW-11026-1] c15 N73-33383
- FRICTIONLESS ENVIRONMENTS**
- Air bearings for near frictionless transfer of loads from one body to another  
[NASA-CASE-XMP-01887] c15 N71-10617
- Platform with several ground effect pads and plenum chambers  
[NASA-CASE-MFS-14685] c31 N71-15689
- Development of apparatus for simulating zero gravity conditions  
[NASA-CASE-MFS-12750] c27 N71-16223
- FROST**
- Insulating system for receptacles of liquefied gases using wire cloth for forming frost layer  
[NASA-CASE-XMP-00341] c15 N70-33323
- FUEL CELLS**
- Inorganic ion exchange membrane electrolytes for fuel cell use  
[NASA-CASE-XMP-04264] c03 N69-21337
- Operation method for combined electrolysis device and fuel cell using molten salt to produce power by thermoelectric regeneration mechanism  
[NASA-CASE-XLE-01645] c03 N71-20904
- Electrode sealing and insulation for fuel cells containing caustic liquid electrolytes using powdered plastic and metal  
[NASA-CASE-XMS-01625] c15 N71-23022
- Development and characteristics of ion-exchange membrane and electrode assembly for fuel cells or electrolysis cells  
[NASA-CASE-XMS-02063] c03 N71-29044
- Reconstituted asbestos matrix --- for use in fuel or electrolysis cells  
[NASA-CASE-MSC-12568-1] c24 N76-14204
- Dual membrane hollow fiber fuel cell and method of operating same  
[NASA-CASE-NPO-13732-1] c44 N79-10513
- FUEL COMBUSTION**
- Fuel combustor  
[NASA-CASE-LEW-12137-1] c25 N78-10224

## FUEL CONTROL

Attitude and propellant flow control system for liquid propellant rocket vehicles  
[NASA-CASE-XNF-00185] c21 N70-34539

Flexible ring slosh damping baffle for spacecraft fuel tank  
[NASA-CASE-LAR-10317-1] c32 N71-16103

Submerged fuel tank baffles to prevent sloshing in liquid propellant rocket flight  
[NASA-CASE-XLA-04605] c32 N71-16106

Control valve and coaxial variable injector for controlling bipropellant mixture ratio and flow  
[NASA-CASE-XNP-09702] c15 N71-17654

Force balanced throttle valve for fuel control in rocket engines  
[NASA-CASE-NPO-10808] c15 N71-27432

Variable-orifice hydraulic mechanism for aircraft gas turbine engine fuel control  
[NASA-CASE-LEW-11187-1] c28 N73-19793

Automotive gas turbine fuel control  
[NASA-CASE-LEW-12785-1] c37 N78-24545

Electrical servo actuator bracket --- fuel control valves on jet engines  
[NASA-CASE-FRC-11044-1] c37 N81-33483

**FUEL FLOW**  
Development of system for preheating vaporized fuel for use with internal combustion engines  
[NASA-CASE-NPO-12072] c28 N72-22772

**FUEL FLOW REGULATORS**  
Solenoid two-step valve for bipropellant flow rate control to rocket engine  
[NASA-CASE-XMS-04890-1] c15 N70-22192

Water electrolysis rocket engine with self-regulating stoichiometric fuel mixing regulator  
[NASA-CASE-XGS-08729] c28 N71-14044

Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12830-1] c07 N77-23106

**FUEL GAGES**  
Response analyzing apparatus for liquid vapor interface sensor of sloshing rocket propellant  
[NASA-CASE-MFS-11204] c14 N71-29134

**FUEL INJECTION**  
Apparatus for cooling and injecting hypergolic propellants into combustion chamber of small rocket engine  
[NASA-CASE-XLE-00303] c15 N70-36535

Fuel injection system for maximum combustion efficiency of rocket engines  
[NASA-CASE-XLE-00111] c28 N70-38199

Propellant injection assembly having individually removable and replaceable nozzles for liquid fueled rocket engines  
[NASA-CASE-XMF-00968] c28 N71-15660

Fuel and oxidizer injection head for thrust chamber of reaction engine  
[NASA-CASE-NPO-10046] c28 N72-17843

Improved injector with porous plug for bubbles of gas into feed lines of electrically conductive liquid  
[NASA-CASE-NPO-11377] c15 N73-27406

Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c07 N81-29129

**FUEL OILS**  
Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12830-1] c07 N77-23106

**FUEL PUMPS**  
Variable displacement fuel pump for internal combustion engines  
[NASA-CASE-HSC-12139-1] c28 N71-14058

**FUEL SYSTEMS**  
Internal labyrinth and shield structure to improve electrical isolation of propellant feed source from ion thruster  
[NASA-CASE-LEW-10210-1] c28 N71-26781

Development of system for preheating vaporized fuel for use with internal combustion engines  
[NASA-CASE-NPO-12072] c28 N72-22772

Supersonic-combustion rocket  
[NASA-CASE-LEW-11058-1] c20 N74-13502

Fuel combustor  
[NASA-CASE-LEW-12137-1] c25 N78-10224

Fuel delivery system including heat exchanger means  
[NASA-CASE-LEW-12793-1] c37 N79-11403

A system for concurrently delivering a stream of powdered fuel and a stream of powdered oxidizer to a combustion chamber for a reaction motor  
[NASA-CASE-MFS-23904-1] c20 N79-13077

Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c07 N81-29129

**FUEL TANK PRESSURIZATION**  
Fuel tank pressure-relief device for venting cryogenic liquid vapors through tubes with porous plug  
[NASA-CASE-XLE-00288] c15 N70-34247

Automatically reciprocating, high pressure pump for use in spacecraft cryogenic propellants  
[NASA-CASE-XNP-04731] c15 N71-24042

Method and apparatus for pressurizing propellant tanks used in propulsion motor feed system  
[NASA-CASE-XNP-00650] c27 N71-28929

**FUEL TANKS**  
Reduced gravity liquid configuration simulator to study propellant behavior in rocket fuel tanks  
[NASA-CASE-XLE-02624] c12 N69-39988

Flexible ring slosh damping baffle for spacecraft fuel tank  
[NASA-CASE-LAR-10317-1] c32 N71-16103

Submerged fuel tank baffles to prevent sloshing in liquid propellant rocket flight  
[NASA-CASE-XLA-04605] c32 N71-16106

Pressure sensor network for measuring liquid dynamic response in flight including fuel tank acceleration, liquid slosh amplitude, and fuel depth monitoring  
[NASA-CASE-XLA-05541] c12 N71-26387

Electrical failure detector in solid rocket propellant motor insulation against thermal degradation by fuel grain  
[NASA-CASE-XNF-03968] c14 N71-27186

**FUEL VALVES**  
Apparatus for cooling and injecting hypergolic propellants into combustion chamber of small rocket engine  
[NASA-CASE-XLE-00303] c15 N70-36535

Semitoroidal diaphragm cavitating flow control valve  
[NASA-CASE-XNP-09704] c12 N71-18615

Filler valve design for supplying liquid propellants at high pressure to space vehicles  
[NASA-CASE-XNP-01747] c15 N71-23024

Combination automatic-starting electrical plasma torch and gas shutoff valve --- for satellite attitude control  
[NASA-CASE-XLE-10717] c37 N75-29426

**FUELS**  
Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c28 N81-14103

**FUNCTION GENERATORS**  
Mechanical function generators with potentiometer as sensing element  
[NASA-CASE-XAC-00001] c15 N71-28952

Digital quasi-exponential function generator  
[NASA-CASE-NPO-11130] c08 N72-20176

Service life of electromechanical device for generating sine/cosine functions  
[NASA-CASE-LAR-10503-1] c09 N72-21248

Function generators for producing complex vibration mode patterns used to identify vibration mode data  
[NASA-CASE-LAR-10310-1] c10 N73-20253

Integrated circuit tangent function generator  
[NASA-CASE-HSC-13907-1] c10 N73-26230

**FURLABLE ANTENNAS**  
Development and characteristics of extensible dipole antenna using deformable tubular metallic strip element  
[NASA-CASE-HCN-00937] c07 N71-28979

Furlable antenna for spacecraft  
[NASA-CASE-NPO-11361] c07 N72-32169

Furlable antenna --- antenna design  
[NASA-CASE-NFO-13553-1] c33 N76-32457

**FURNACES**  
High speed infrared furnace  
[NASA-CASE-XLE-10466] c17 N69-25147

Development of black-body source calibration furnace  
[NASA-CASE-XLE-01399] c33 N71-15625

Induction heating of metallurgical specimens to high temperatures in coil furnace  
[NASA-CASE-XLE-04026] c14 N71-23267

Electric furnace for vacuum and zero gravity melting of high melting point materials during earth orbit  
[NASA-CASE-MFS-20710] c11 N72-23215

- High temperature strain gage calibration fixture  
[NASA-CASE-LAR-11500-1] c35 N76-24523
- Apparatus and method for heating a material in a transparent ampoule --- crystal growth  
[NASA-CASE-MPS-25436-1] c76 N81-30012
- FUSELAGES**
- Fuselage structure using advanced technology metal matrix fiber reinforced composites  
[NASA-CASE-LAR-11688-1] c05 N78-18045
- FUSION (HEATING)**
- Silver chloride use in technique for fusion bonding of graphite to silver, glass, ceramics, and certain other metals  
[NASA-CASE-XGS-00963] c15 N69-39735
- Process for fiberizing ceramic materials with high fusion temperatures and tensile strength  
[NASA-CASE-XNP-00597] c18 N71-23088
- Induction heating gun  
[NASA-CASE-LAR-12540-1] c37 N80-11468
- One step dual purpose joining technique  
[NASA-CASE-LAR-12595-1] c37 N80-11469
- FUSION WELDING**
- Fabricating solar cells with dielectric layers to improve glass fusion  
[NASA-CASE-XGS-04531] c03 N69-24267
- Control of fusion welding through use of thermocouple wire  
[NASA-CASE-MPS-06074] c15 N71-20393
- Electrical resistance butt welder for welding fine gauge tungsten/rhenium thermocouple wire  
[NASA-CASE-LAR-10103-1] c15 N73-14468
- Diffusion welding in air --- solid state welding of butt joint by fusion welding, surface cleaning, and heating  
[NASA-CASE-LEW-11387-1] c37 N74-18128
- G**
- GADOLINIUM**
- Doping silicon material with gadolinium to increase radiation resistance of solar cells  
[NASA-CASE-XLE-02792] c26 N71-10607
- Gadolinium or samarium doped-silicon semiconductor material with resistance to radiation damage for use in solar cells  
[NASA-CASE-XLE-10715] c26 N71-23292
- GALLIUM**
- Device for measuring two orthogonal components of force with gallium flotation of measuring target for use in vacuum environments  
[NASA-CASE-XAC-04885] c14 N71-23790
- GALLIUM ARSENIDES**
- Describing method for vapor deposition of gallium arsenide films to manganese substrates to provide semiconductor devices with low resistance substrates  
[NASA-CASE-XNP-01328] c26 N71-18064
- Gallium arsenide solar cell preparation by surface deposition of cuprous iodide on thin n-type polycrystalline layers and heating in iodine vapor  
[NASA-CASE-XNP-01960] c09 N71-23027
- Water content in vapor deposition atmosphere for forming n-type and p-type junctions of zinc doped gallium arsenide  
[NASA-CASE-XNP-01961] c26 N71-29156
- Vapor phase growth of groups 3-5 compounds by hydrogen chloride transport of the elements  
[NASA-CASE-LAR-11144-1] c25 N75-26043
- Vapor deposition apparatus --- semiconductors and gallium arsenides  
[NASA-CASE-HQN-10462] c25 N75-29192
- GALVANIC SKIN RESPONSE**
- Adhesive spray process for attaching biomedical skin electrodes  
[NASA-CASE-XPR-07658-1] c05 N71-26293
- GAMMA RAY SPECTROMETERS**
- Low intensity X-ray and gamma-ray imaging spectrometer  
[NASA-CASE-GSC-12587-1] c35 N80-29635
- GAMMA RAYS**
- Design of gamma ray spectrometer for measurement of intense radiation using Compton scattering effect  
[NASA-CASE-MPS-21441-1] c14 N73-30392
- Low intensity X-ray and gamma-ray imaging device --- fiber optics  
[NASA-CASE-GSC-12263-1] c74 N79-20857
- GANTRY CRANES**
- Design and characteristics of mechanically extended and telescoping boom on crane assembly  
[NASA-CASE-NPO-11118] c03 N72-25021
- GAPS**
- Electromagnetic transducer recording head having a laminated core section and tapered gap  
[NASA-CASE-NPO-10711-1] c35 N77-21392
- High voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c44 N81-16529
- GARMENTS**
- Electromedical garment, applying vectorcardiologic type electrodes to human torsos for data recording during physical activity  
[NASA-CASE-XPR-10856] c05 N71-11189
- Flexible joint for pressurizable garment  
[NASA-CASE-MSC-11072] c54 N74-32546
- Spacesuit torso closure  
[NASA-CASE-ABC-11100-1] c54 N78-31736
- Urine collection apparatus --- feminine hygiene  
[NASA-CASE-MSC-18381-1] c52 N81-28740
- GAS ANALYSIS**
- Gas analyzer for bi-gaseous mixtures suitable for use in test facilities  
[NASA-CASE-XLA-01131] c14 N71-10774
- Describing crystal oscillator instrument for detecting condensable gas contaminants in vacuum apparatus  
[NASA-CASE-NPO-10144] c14 N71-17701
- Design and characteristics of time of flight mass spectrometer to measure or analyze gases at low pressures and time of flight of single gas molecule  
[NASA-CASE-XNP-01056] c14 N71-23041
- Microwave double resonance spectroscopy absorption cell for gas analysis  
[NASA-CASE-LAR-10305] c14 N71-26137
- Ion microprobe mass spectrometer with cooled electrode target for analyzing traces of fluids  
[NASA-CASE-ERC-10014] c14 N71-28863
- Nondispersive gas analysis using radiation detection for quantitative analysis  
[NASA-CASE-ABC-10308-1] c06 N72-31141
- Apparatus for analyzing gas samples in containers including vacuum chamber, mass spectrometer, and gas chromatography  
[NASA-CASE-GSC-10903-1] c14 N73-12444
- Coaxial anode wire for gas radiation counters  
[NASA-CASE-GSC-11492-1] c35 N74-26949
- Fast scan control for deflection type mass spectrometers  
[NASA-CASE-LAR-11428-1] c35 N74-34857
- NDIR gas analyzer based on absorption modulation ratios for known and unknown samples  
[NASA-CASE-ABC-10802-1] c35 N75-30502
- Stack plume visualization system  
[NASA-CASE-LAR-11675-1] c45 N76-17656
- Nulling device for detection of trace gases by NDIR absorption  
[NASA-CASE-ABC-10760-1] c25 N76-22323
- Analysis of volatile organic compounds --- trace amounts of organic volatiles in gas samples  
[NASA-CASE-MSC-14428-1] c23 N77-17161
- Fluid sampling device  
[NASA-CASE-GSC-12143-1] c35 N77-32456
- Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c25 N81-14015
- Stark effect spectrophone for continuous absorption spectra monitoring --- a technique for gas analysis  
[NASA-CASE-NPO-15102-1] c25 N81-25159
- GAS BAGS**
- Payload soft landing system using storable gas bag  
[NASA-CASE-XLA-09881] c31 N71-16085
- GAS BEARINGS**
- Externally pressurized air bearing for gyros operating in high temperature, low gravity environments  
[NASA-CASE-XMF-00515] c15 N70-34664
- Slit regulated gas journal bearing  
[NASA-CASE-XNP-00476] c15 N70-38620
- Air bearings for spacecraft gyros  
[NASA-CASE-XMF-00339] c15 N70-39896
- Air bearings for near frictionless transfer of loads from one body to another  
[NASA-CASE-XMF-01887] c15 N71-10617

- Fluid power transmission and gas bearing system  
[NASA-CASE-XMS-01445] c12 N71-16031
- Bismuth and lead surface coatings for gas bearings in aerospace engineering  
[NASA-CASE-XGS-02011] c15 N71-20739
- Swivel support for gas bearing for position adjustment between ball and supporting cup  
[NASA-CASE-XMF-07808] c15 N71-23812
- Low friction gas bearing system for fluid power transmission to bearing-supported payload  
[NASA-CASE-ERC-10097] c15 N71-28465
- Gas bearing for model support with capacity for measuring angular displacement of model in bearing  
[NASA-CASE-XLA-09346] c15 N71-28740
- Journal air bearing with cylindrical cup designed to ride on shaft  
[NASA-CASE-MFS-20423] c15 N72-11388
- Air bearing for use in exterior environment for moving heavy loads  
[NASA-CASE-WLP-10002] c15 N72-17451
- Axially and radially controllable magnetic bearing  
[NASA-CASE-GSC-11551-1] c37 N76-18459
- Thrust bearing  
[NASA-CASE-LHW-11949-1] c37 N76-29588
- Cantilever mounted resilient pad gas bearing  
[NASA-CASE-LHW-12569-1] c37 N79-10418
- GAS CHROMATOGRAPHY**
- Micropacked column for rapid chromatographic analysis using low gas flow rates  
[NASA-CASE-XNP-04816] c06 N69-39936
- Automatic baseline stabilization for ionization detector used in gas chromatograph  
[NASA-CASE-XNP-03128] c10 N70-41991
- Gas chromatographic method for determining water in nitrogen tetroxide rocket propellant  
[NASA-CASE-NPO-10234] c06 N72-17094
- Gas chromatographic method for analyzing hydrogen deuterium mixtures  
[NASA-CASE-NPO-11322] c06 N72-25146
- Ultraviolet chromatographic detector for quantitative and qualitative analysis of compounds  
[NASA-CASE-HQN-10756-1] c14 N72-25428
- Apparatus for analyzing gas samples in containers including vacuum chamber, mass spectrometer, and gas chromatography  
[NASA-CASE-GSC-10903-1] c14 N73-12444
- Gas chromatograph injection system  
[NASA-CASE-ARC-10344-2] c35 N75-26334
- Chelate-modified polymers for atmospheric gas chromatography  
[NASA-CASE-ARC-11154-1] c25 N80-23383
- GAS COMPOSITION**
- Method and means for helium/hydrogen ratio measurement by alpha scattering  
[NASA-CASE-NPO-14079-1] c25 N80-20334
- Mobile sampler for use in acquiring samples of terrestrial atmospheric gasses  
[NASA-CASE-NPO-15220-1] c35 N81-24414
- GAS COOLED REACTORS**
- Gaseous core diffusion nuclear reactor for thermal energy generation  
[NASA-CASE-LHW-10250-1] c22 N71-28759
- GAS COOLING**
- Gas balancing, cryogenic refrigeration apparatus with Joule-Thomson valve assembly  
[NASA-CASE-NPO-10309] c15 N69-23190
- Gas cooled high temperature thermocouple  
[NASA-CASE-XLE-09475-1] c33 N71-15568
- Containerless melting and rapid solidification apparatus and method  
[NASA-CASE-MFS-25305-1] c35 N81-16427
- Apparatus and method for heating a material in a transparent ampoule --- crystal growth  
[NASA-CASE-MFS-25436-1] c76 N81-30012
- GAS DENSITY**
- Dynamic sensor for gas pressure or density measurement  
[NASA-CASE-YAC-02877] c14 N70-41681
- Device for simultaneously determining density, velocity, and temperature of streaming gas  
[NASA-CASE-XLA-03375] c16 N71-24074
- Coherent light beam device and method for measuring gas density in vacuum chambers  
[NASA-CASE-XER-11203] c14 N71-28994
- Absorbing gas reactivity control system for minimizing power distribution and perturbation in nuclear reactors  
[NASA-CASE-XLE-04599] c22 N72-20597
- Electrodeposition method for producing crystalline material from dense gaseous medium  
[NASA-CASE-NPO-10440] c15 N72-21466
- Wide range dynamic pressure sensor with vibrating diaphragm for measuring density and pressure of gaseous environment  
[NASA-CASE-ARC-10263-1] c14 N72-22438
- Absolute pressure measuring device for measuring gas density level in high vacuum range  
[NASA-CASE-LAR-10000] c14 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] c74 N76-20958
- GAS DETECTORS**
- Method and transducer device for detecting presence of hydrogen gas  
[NASA-CASE-XMF-03873] c06 N69-39733
- Development of device for detecting hydrogen in ambient environments  
[NASA-CASE-MFS-11537] c14 N71-20442
- Gas leak detection in evacuated systems using ultraviolet radiation probe  
[NASA-CASE-ERC-10034] c15 N71-24896
- Fast response miniature carbon dioxide detector with no moving parts for measuring concentration in any atmosphere  
[NASA-CASE-MSC-13332-1] c14 N72-21408
- Fluorescence detector for monitoring atmospheric pollutants  
[NASA-CASE-NPO-13231-1] c45 N75-27585
- Carbon monoxide monitor --- using real time operation  
[NASA-CASE-MFS-22060-1] c35 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] c74 N76-20958
- Indicator providing continuous indication of the presence of a specific pollutant in air  
[NASA-CASE-NPO-13474-1] c45 N76-21742
- Particulate and aerosol detector  
[NASA-CASE-LAR-11434-1] c35 N76-22509
- Cryogenic liquid sensor  
[NASA-CASE-NPO-10619-1] c35 N77-21393
- Optically selective, acoustically resonant gas detecting transducer  
[NASA-CASE-ARC-10639-1] c35 N78-13400
- Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c25 N81-14015
- Stark effect spectrophone for continuous absorption spectra monitoring --- a technique for gas analysis  
[NASA-CASE-NPO-15102-1] c25 N81-25159
- GAS DISCHARGE TUBES**
- Direct current powered self repeating plasma accelerator with interconnected annular and linear discharge channels  
[NASA-CASE-XLA-03103] c25 N71-21693
- GAS DISCHARGES**
- Radio frequency noise generator having microwave slow-wave structure in gas discharge plasma  
[NASA-CASE-XER-11019] c09 N71-23598
- GAS EVOLUTION**
- Development of filter system for control of outgas contamination in vacuum conditions using absorbent beds of molecular sieve zeolite, silica gel, and charcoal  
[NASA-CASE-MFS-14711] c15 N71-26185
- GAS EXPANSION**
- Sealed electric storage battery with gas manifold interconnecting each cell  
[NASA-CASE-XNP-03378] c03 N71-11051
- Method and apparatus for producing very low temperature refrigeration based on gas pressure balance  
[NASA-CASE-XNP-08877] c15 N71-23025
- Gas-operated actuator with cyclic motion of expansion chamber  
[NASA-CASE-NPO-11340] c15 N72-33477
- GAS FLOW**
- Tubular flow restrictor for gas flow control in pipeline  
[NASA-CASE-NPO-10117] c15 N71-15608

- Developing high pressure gas purification and filtration system for use in test operations of space vehicles  
[NASA-CASE-MFS-12806] c14 N71-17588
- Burst diaphragm flow initiator for installation in short duration wind tunnels  
[NASA-CASE-MFS-12915] c11 N71-17600
- Color photointerpretation of interference colors reflected from thin film oil-coated components in moving gases for gas flow visualization  
[NASA-CASE-XMF-01779] c12 N71-20815
- Transducer for monitoring oxygen flow in respirator  
[NASA-CASE-FRC-10012] c14 N72-17329
- Design, development, and operation of shock tube with bypass piston tunnel  
[NASA-CASE-NPO-12109] c11 N72-22245
- Continuous gas flow control by fluidic proportional thruster system  
[NASA-CASE-ARC-10106-1] c28 N72-22769
- Development of filter apparatus for gas separation and characteristics of filter cell support frame for improved operation  
[NASA-CASE-MSC-12297] c14 N72-23457
- Pressurized inert gas feed for lighting system  
[NASA-CASE-KSC-10644] c09 N72-27227
- Development of method for controlling vapor content of gas  
[NASA-CASE-NPO-10633] c03 N72-28025
- Gas flow control device, including housing and input port  
[NASA-CASE-NPO-11479] c15 N73-13462
- Compact hydrogenator  
[NASA-CASE-NPO-11682-1] c35 N74-15127
- Apparatus for establishing flow of a fluid mass having a known velocity  
[NASA-CASE-MFS-21424-1] c34 N74-27730
- Condensate removal device for heat exchanger  
[NASA-CASE-MSC-14143-1] c77 N75-20139
- Flow measuring apparatus  
[NASA-CASE-LEW-12078-1] c35 N75-30503
- Gas compression apparatus  
[NASA-CASE-MSC-14757-1] c35 N78-10428
- Variable cycle gas turbine engines  
[NASA-CASE-LEW-12916-1] c37 N78-17384
- GAS GENERATORS**
- Chlorine generator for purifying water in life support systems of manned spacecraft  
[NASA-CASE-XLA-08913] c14 N71-28933
- Gas operated quick disconnect coupling for umbilical connectors  
[NASA-CASE-NPO-11202] c15 N72-25450
- Actuator operated by electrolytic drive gas generator and evacuator  
[NASA-CASE-NPO-11369] c15 N73-13467
- Development and operating principles of gas generator for deploying recovery parachutes from space capsules during atmospheric entry  
[NASA-CASE-LAB-10549-1] c31 N73-13898
- Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-1] c37 N76-16446
- Hydrogen-rich gas generator  
[NASA-CASE-NPO-13464-1] c44 N76-18642
- Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-2] c44 N76-29700
- Hydrogen rich gas generator  
[NASA-CASE-NPO-13464-2] c44 N76-29704
- Hydrogen-rich gas generator  
[NASA-CASE-NPO-13560-1] c44 N77-10636
- A gas-to-hydraulic power converter  
[NASA-CASE-MSC-16794-1] c37 N81-24445
- GAS GUNS**
- Electric arc device for minimizing electrode ablation and heating gases to supersonic or hypersonic wind tunnel temperatures  
[NASA-CASE-XAC-00319] c25 N70-41628
- GAS HEATING**
- Bi-metallic fluid displacement apparatus --- for stirring and heating stored gases and liquids  
[NASA-CASE-ARC-10441-1] c35 N74-15126
- GAS INJECTION**
- Pressurized gas injection for burning rate control of solid propellants  
[NASA-CASE-XLE-03494] c27 N71-21619
- Compact hydrogenator  
[NASA-CASE-NPO-11682-1] c35 N74-15127
- Gas chromatograph injection system  
[NASA-CASE-ARC-10344-2] c35 N75-26334
- In-situ laser retorting of oil shale  
[NASA-CASE-LEW-12217-1] c43 N78-14452
- Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c07 N78-25089
- Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c45 N80-14579
- Containerless melting and rapid solidification apparatus and method  
[NASA-CASE-MFS-25305-1] c35 N81-16427
- GAS IONIZATION**
- Electrostatic modulator for communicating through plasma sheath formed around spacecraft during reentry  
[NASA-CASE-XLA-01400] c07 N70-41331
- Multichannel photoionization chamber for measuring absorption, photoionization yield, and coefficients of gases  
[NASA-CASE-ERC-10044-1] c14 N71-27090
- Modulated hydrogen ion flame detector  
[NASA-CASE-ARC-10322-1] c35 N76-18403
- Gas ion laser construction for electrically isolating the pressure gauge thereof  
[NASA-CASE-MFS-22597] c36 N78-17366
- Charge transfer reaction laser with preionization means  
[NASA-CASE-NPO-13945-1] c36 N78-27402
- Hydrogen hollow cathode ion source  
[NASA-CASE-LEW-12940-1] c72 N80-33186
- GAS LASERS**
- Gas laser frequency stabilized by position of mirrors in resonant cavity  
[NASA-CASE-XGS-03644] c16 N71-18614
- Inert gas metallic vapor laser  
[NASA-CASE-NPO-13449-1] c36 N75-32441
- Diffused waveguiding capillary tube with distributed feedback for a gas laser  
[NASA-CASE-NPO-13544-1] c36 N76-18428
- Gas ion laser construction for electrically isolating the pressure gauge thereof  
[NASA-CASE-MFS-22597] c36 N78-17366
- Charge transfer reaction laser with preionization means  
[NASA-CASE-NPO-13945-1] c36 N78-27402
- GAS LUBRICANTS**
- High temperature gas lubricant consisting of two fluoro-bromo-methanes  
[NASA-CASE-XLE-00353] c18 N70-39897
- Thrust bearing  
[NASA-CASE-LEW-11949-1] c37 N76-29588
- Cantilever mounted resilient pad gas bearing  
[NASA-CASE-LEW-12569-1] c37 N79-10418
- GAS MASERS**
- Solid state chemical source for ammonia beam masers  
[NASA-CASE-XGS-01504] c16 N70-41578
- Atomic hydrogen maser with bulb temperature control by output frequency difference signal for wall shift elimination  
[NASA-CASE-HQN-10654-1] c16 N73-13489
- Method of producing a storage bulb for an atomic hydrogen maser  
[NASA-CASE-NPO-13050-1] c36 N75-15029
- Atomic standard with variable storage volume  
[NASA-CASE-GSC-11895-1] c35 N76-15436
- GAS MIXTURES**
- Gas analyzer for bi-gaseous mixtures suitable for use in test facilities  
[NASA-CASE-XLA-01131] c14 N71-10774
- Equipment for measuring partial water vapor pressure in gas tank  
[NASA-CASE-XMS-01618] c14 N71-20741
- Separation cell with permeable membranes for fluid mixture component separation  
[NASA-CASE-XMS-02952] c18 N71-20742
- Gas chromatographic method for analyzing hydrogen deuterium mixtures  
[NASA-CASE-NPO-11322] c06 N72-25146
- Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-2] c44 N76-29700
- Hydrogen-rich gas generator  
[NASA-CASE-NPO-13560-1] c44 N77-10636
- Chemical vapor deposition reactor --- providing uniform film thickness  
[NASA-CASE-NPO-13650-1] c25 N79-28253
- GAS PIPES**
- Tubular flow restrictor for gas flow control in pipeline  
[NASA-CASE-NPO-10117] c15 N71-15608



## GAS PRESSURE

Expulsion and measuring device for determining quantity of liquid in tank under conditions of weightlessness  
[NASA-CASE-XMS-01546] c14 N70-40233

Dynamic sensor for gas pressure or density measurement  
[NASA-CASE-XAC-02877] c14 N70-41681

Wide range dynamic pressure sensor with vibrating diaphragm for measuring density and pressure of gaseous environment  
[NASA-CASE-ARC-10263-1] c14 N72-22438

Measurement of gas production of microorganisms --- using pressure sensors  
[NASA-CASE-LAR-11326-1] c35 N75-33368

Depressurization of arc lamps  
[NASA-CASE-NPO-10790-1] c33 N77-21316

Pressure limiting propellant actuating system  
[NASA-CASE-MS-C-18179-1] c20 N80-18097

**GAS STREAMS**

Device for simultaneously determining density, velocity, and temperature of streaming gas  
[NASA-CASE-XLA-03375] c16 N71-24074

Stagnation pressure probe --- for measuring pressure of supersonic gas streams  
[NASA-CASE-LAR-11139-1] c35 N74-32E78

Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c07 N78-18067

Simultaneous treatment of SO<sub>2</sub> containing stack gases and waste water  
[NASA-CASE-MS-C-16258-1] c45 N79-12584

**GAS TEMPERATURE**

Device for simultaneously determining density, velocity, and temperature of streaming gas  
[NASA-CASE-XLA-03375] c16 N71-24074

**GAS TRANSPORT**

Purging means and method for Xenon arc lamps  
[NASA-CASE-NPO-11978] c31 N78-17238

**GAS TUBES**

Toggle mechanism for pinching metal tubes  
[NASA-CASE-GSC-12274-1] c37 N79-28550

**GAS TURBINE ENGINES**

Variable-orifice hydraulic mechanism for aircraft gas turbine engine fuel control  
[NASA-CASE-LEW-11187-1] c28 N73-19793

Swirl can, full-annulus combustion chambers for high performance gas turbine engines  
[NASA-CASE-LEW-11326-1] c23 N73-30665

Controlled separation combustor --- airflow distribution in gas turbine engines  
[NASA-CASE-LEW-11593-1] c20 N76-14190

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] c27 N76-16229

Dual output variable pitch turbofan actuation system  
[NASA-CASE-LEW-12419-1] c07 N77-14025

Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12830-1] c07 N77-23106

Blade retainer assembly  
[NASA-CASE-LEW-12608-1] c07 N77-27116

Nickel base alloy --- for gas turbine engine stator vanes  
[NASA-CASE-LEW-12270-1] c26 N77-32280

Bearing seat usable in a gas turbine engine  
[NASA-CASE-LEW-12477-1] c37 N77-32501

Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12321-1] c37 N78-10467

Variable cycle gas turbine engines  
[NASA-CASE-LEW-12916-1] c37 N78-17384

Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-2] c07 N78-18066

Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c07 N78-18067

Automotive gas turbine fuel control  
[NASA-CASE-LEW-12785-1] c37 N78-24545

Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c07 N78-25089

Independent power generator  
[NASA-CASE-LAR-11208-1] c44 N78-32539

Redundant disc  
[NASA-CASE-LEW-12496-1] c07 N78-33101

Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-3] c07 N79-14096

Variable area exhaust nozzle  
[NASA-CASE-LEW-12378-1] c07 N79-14097

A silicon-slurry/aluminide coating --- protects aircraft and land-based gas turbine engines  
[NASA-CASE-LEW-13343-1] c24 N80-26389

Power control for hot gas engines  
[NASA-CASE-NPO-14220-1] c37 N81-14318

Curved centerline air intake for a gas turbine engine  
[NASA-CASE-LEW-13201-1] c07 N81-14999

Apparatus for sensor failure detection and correction in a gas turbine engine control system  
[NASA-CASE-LEW-12907-2] c07 N81-19115

**GAS TURBINES**

Method for maintaining good performance in gas turbine during air flow distortion  
[NASA-CASE-LEW-10286-1] c28 N71-28915

Gas turbine exhaust nozzle --- for noise reduction  
[NASA-CASE-LEW-11569-1] c07 N74-15453

Gas turbine engine with convertible accessories  
[NASA-CASE-LEW-12390-1] c07 N78-17056

Counter pumping debris excluder and separator --- gas turbine shaft seals  
[NASA-CASE-LEW-11855-1] c07 N78-25090

Direct heating surface combustor  
[NASA-CASE-LEW-11877-1] c34 N78-27357

Apparatus and method for reducing thermal stress in a turbine rotor  
[NASA-CASE-LEW-12232-1] c07 N79-10057

Method and turbine for extracting kinetic energy from a stream of two-phase fluid  
[NASA-CASE-NPO-14130-1] c34 N79-20335

Corrosion resistant thermal barrier coating --- protecting gas turbines and other engine parts  
[NASA-CASE-LEW-13088-1] c26 N81-25188

**GAS VALVES**

High-temperature, high-pressure spherical segment valve  
[NASA-CASE-XAC-00074] c15 N70-34817

Shrink-fit vacuum system gas valve  
[NASA-CASE-XGS-00587] c15 N70-35087

Gas valve operated by thermally expanding and contracting device  
[NASA-CASE-XLE-00815] c15 N70-35407

Three-port transfer valve with one port open continuously suitable for manned space flight  
[NASA-CASE-XAC-01158] c15 N71-23051

**GAS WELDING**

Emission spectroscopy method for contamination monitoring of inert gas metal arc welding  
[NASA-CASE-XMP-02039] c15 N71-15871

Grain refinement control in TIG arc welding  
[NASA-CASE-MS-C-19095-1] c37 N75-19683

**GAS-LIQUID INTERACTIONS**

Fluid control apparatus and method  
[NASA-CASE-LAR-11110-1] c34 N75-26282

**GAS-METAL INTERACTIONS**

Improved refractory coatings --- sputtered coatings on substrates that form stable nitrides  
[NASA-CASE-LEW-23169-2] c26 N81-16209

**GASDYNAMIC LASERS**

Diatonic infrared gasdynamic laser --- for producing different wavelengths  
[NASA-CASE-ARC-10370-1] c36 N75-31426

**GASEOUS DIFFUSION**

Gas purged dry box glove reducing permeation of air or moisture into dry box or isolator by diffusion through glove  
[NASA-CASE-XLE-02531] c05 N71-23080

Gaseous core diffusion nuclear reactor for thermal energy generation  
[NASA-CASE-LEW-10250-1] c22 N71-28759

Gas diffusion liquid storage bag and method of use for storing blood  
[NASA-CASE-NPO-13930-1] c52 N79-14749

**GASEOUS FISSION REACTORS**

Gaseous core diffusion nuclear reactor for thermal energy generation  
[NASA-CASE-LEW-10250-1] c22 N71-28759

**GASEOUS ROCKET PROPELLANTS**

Electrostatic ion engines using high velocity electrons to ionize propellant  
[NASA-CASE-XIE-00376] c28 N70-37245

Detonation reaction engine comprising outer housing enclosing pair of inner walls for continuous flow  
[NASA-CASE-XMP-06926] c28 N71-22983

**CASES**

Apparatus and process for volumetrically dispensing reagent quantities of volatile

- chemicals for small batch reactions  
[NASA-CASE-NPO-10070] c15 N71-27372
- Observation window for internal gas confining chamber  
[NASA-CASE-NPO-10890] c11 N73-12265
- Device for detection of combustion light preceding gaseous explosions  
[NASA-CASE-LAR-10739-1] c14 N73-16484
- Low gravity phase separator  
[NASA-CASE-MSC-14773-1] c35 N78-12390
- Water separator  
[NASA-CASE-XMS-01295-1] c37 N79-21345
- GASKETS**
- Leakproof soft metal seal for use in very high vacuum systems operating at cryogenic temperatures  
[NASA-CASE-XGS-02441] c15 N70-41629
- Reinforced polyquinoxaline gasket and method of preparing the same --- resistant to ionizing radiation and liquid hydrogen temperatures  
[NASA-CASE-MFS-21364-1] c37 N74-18126
- GATES (CIRCUITS)**
- Flux gate magnetometer with toroidal gating coil and solenoidal output coil for signal modulation or amplification  
[NASA-CASE-XGS-01881] c09 N70-40123
- Silicon controlled rectifier pulse gate amplifier for blocking false gating caused by negative transient voltages  
[NASA-CASE-XLA-07497] c09 N71-12514
- Logic AND gate for fluid circuits  
[NASA-CASE-XLA-07391] c12 N71-17579
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Development of instantaneous reading tachometer for measuring electrocardiogram signal rate  
[NASA-CASE-MFS-20418] c14 N73-24473
- Ultrasonic biomedical measuring and recording apparatus --- for recording motion of internal organs such as heart valves  
[NASA-CASE-ARC-10597-1] c52 N74-20726
- HEART RATE**  
Digital cardiometer incorporating circuit for measuring heartbeat rate of subject over predetermined portion of one minute also converting rate to beats per minute  
[NASA-CASE-XMS-02399] c05 N71-22896
- Development of instantaneous reading tachometer for measuring electrocardiogram signal rate  
[NASA-CASE-MFS-20418] c14 N73-24473
- Digital computing cardiometer  
[NASA-CASE-MFS-20284-1] c52 N74-12778
- Pulse transducer with artifact signal attenuator --- heart rate sensors  
[NASA-CASE-PRC-11012-1] c52 N80-23969
- HEAT**  
Thermionic converter for converting heat energy directly into electrical energy  
[NASA-CASE-XLE-01903] c22 N71-23599
- HEAT EXCHANGERS**  
Electrothermal rocket engine using resistance heated heat exchanger  
[NASA-CASE-XLE-00267] c28 N70-33356
- Space suit body heat exchanger design composed of thermal conductance yarn and liquid coolant loops  
[NASA-CASE-XMS-09571] c05 N71-19439
- Dual solid cryogens for spacecraft refrigeration insuring low temperature cooling for extended periods  
[NASA-CASE-GSC-10188-1] c23 N71-24725
- Shell-side liquid metal boiler employing tube and shell heat exchanger  
[NASA-CASE-NPO-10831] c33 N72-20915
- Heat exchanger and decontamination system for multistage refrigeration unit  
[NASA-CASE-NPO-10634] c23 N72-25619

Condensate removal device for heat exchanger  
 [NASA-CASE-MSC-14143-1] c77 N75-20139

Heat exchanger system and method  
 [NASA-CASE-LAR-10799-2] c34 N76-17317

Heat transfer device  
 [NASA-CASE-MFS-22938-1] c34 N76-18374

Heat exchanger  
 [NASA-CASE-MFS-22991-1] c34 N77-10463

Flat-plate heat pipe  
 [NASA-CASE-GSC-11998-1] c34 N77-32413

Combuster --- low nitrogen oxide formation  
 [NASA-CASE-NPO-13958-1] c25 N79-11151

Fuel delivery system including heat exchanger means  
 [NASA-CASE-LEW-12793-1] c37 N79-11403

Heat exchanger --- rocket combustion chambers and cooling systems  
 [NASA-CASE-LEW-12252-1] c34 N79-13288

Heat exchanger and method of making --- bonding rocket chambers with a porous metal matrix  
 [NASA-CASE-LEW-12441-1] c34 N79-13289

Thermal energy transformer  
 [NASA-CASE-NPO-14058-1] c44 N79-18443

Portable breathing system --- a breathing apparatus using a rebreathing system of heat exchangers for carbon dioxide removal  
 [NASA-CASE-MSC-16182-1] c54 N80-10799

Potential heat exchange fluids for use in sulfuric acid vaporizers  
 [NASA-CASE-NPO-15015-1] c25 N80-23394

Heat exchanger and method of making --- rocket lining  
 [NASA-CASE-LEW-12441-2] c34 N80-24573

A cycling Joule Thomson refrigerator  
 [NASA-CASE-NPO-15251-1] c31 N81-19344

Heat exchanger and method of making  
 [NASA-CASE-LEW-12441-3] c44 N81-24519

**HEAT FLUX**

Heat flux sensor assembly with proviso for heat shield to reduce radiative transfer between sensor elements  
 [NASA-CASE-XMS-05909-1] c14 N69-27459

Heat flux sensor adapted for mounting on aircraft or spacecraft to measure aerodynamic heat flux inflow to aircraft skin  
 [NASA-CASE-XPR-03802] c33 N71-23085

Radial heat flux transformer for use in heating and cooling processes  
 [NASA-CASE-NPO-10828] c33 N72-17948

**HEAT MEASUREMENT**

Electromagnetic energy detection by thermal sensor with vibrating electrode  
 [NASA-CASE-XAC-10768] c09 N71-18830

Specific wavelength colorimeter --- for measuring given solute concentration in test sample  
 [NASA-CASE-MSC-14081-1] c35 N74-27860

**HEAT OF FORMATION**

An improved synthesis of 2, 4, 8, 10-tetroxaspiro (5.5) undecane  
 [NASA-CASE-ARC-11243-1] c27 N79-30375

Improved synthesis of polyformals  
 [NASA-CASE-ARC-11244-1] c27 N79-30376

**HEAT PIPES**

Electric power system utilizing thermionic plasma diodes in parallel and heat pipes as cathodes  
 [NASA-CASE-XMP-05843] c03 N71-11055

Microwave power receiving antenna solving heat dissipation problems by construction of elements as heat pipe devices  
 [NASA-CASE-MFS-20333] c09 N71-13486

Double-wall isothermal cylinder containing heat transfer fluid thermal reservoir as spacecraft insulation cover  
 [NASA-CASE-MFS-20355] c33 N71-25353

Structural heat pipe --- for spacecraft wall thermal insulation system  
 [NASA-CASE-GSC-11619-1] c34 N75-12222

Method of forming a wick for a heat pipe  
 [NASA-CASE-NPO-13391-1] c34 N76-27515

Production of I-123  
 [NASA-CASE-LEW-11390-3] c25 N76-29379

Heat pipe with dual working fluids  
 [NASA-CASE-ARC-10198] c34 N78-17336

Multi-chamber controllable heat pipe  
 [NASA-CASE-ARC-10199] c34 N78-17337

Thermal control canister  
 [NASA-CASE-GSC-12253-1] c34 N79-31523

Heat pipe honeycomb panel  
 [NASA-CASE-LAR-12637-1] c34 N81-12362

Heat pipes to reduce engine exhaust emissions  
 [NASA-CASE-LEW-12590-1] c25 N81-19245

Heat pipes containing alkali metal working fluid  
 [NASA-CASE-LEW-12253-1] c34 N81-22310

Heat pipe cooled probe  
 [NASA-CASE-LAR-12588-1] c44 N81-24525

**HEAT PUMPS**

Thermal pump-compressor for converting solar energy  
 [NASA-CASE-XLA-00377] c33 N71-17610

Manually activated heat pump for mechanically converting human operator output into heat energy  
 [NASA-CASE-NPO-10677] c05 N72-11084

Design and development of thermomechanical pump for transmitting warning fluid through fluid circuit to control temperature of spacecraft instrumentation  
 [NASA-CASE-NFO-11417] c15 N73-24513

Magnetic heat pumping  
 [NASA-CASE-LEW-12508-1] c34 N78-17335

Cooling system for high speed aircraft  
 [NASA-CASE-LAR-12406-1] c05 N81-26114

**HEAT RADIATORS**

Capillary radiator for carrying heat transfer liquid in planetary spacecraft structures  
 [NASA-CASE-XLB-03307] c33 N71-14035

Hydraulic actuator design for space deployment of heat radiators  
 [NASA-CASE-MSC-11817-1] c15 N71-26611

Development of method and equipment for testing heat radiative properties of material under controlled environmental conditions  
 [NASA-CASE-MFS-20096] c14 N71-30026

**HEAT RESISTANT ALLOYS**

Preparation of nickel alloys for jet turbine blades operating at high temperatures  
 [NASA-CASE-XLB-00151] c17 N70-33283

Nickel alloy series for aerospace structures subjected to high temperatures  
 [NASA-CASE-XLB-00283] c17 N70-36616

High temperature cobalt-base alloy resistant to corrosion by liquid metals and to sublimation in vacuum environment  
 [NASA-CASE-XLB-02991] c17 N71-16025

Brazing alloy adapted for brazing corrosion resistant steel to refractory metals, also for brazing refractory metals to other refractory metals  
 [NASA-CASE-XNP-03063] c17 N71-23365

Superalloys from prealloyed powders at high temperatures  
 [NASA-CASE-LEW-10805-1] c15 N73-13465

Method of making pressure tight seal for super alloy  
 [NASA-CASE-LAR-10170-1] c37 N74-11301

Method of forming articles of manufacture from superalloy powders  
 [NASA-CASE-LEW-10805-2] c37 N74-13179

Refractory porcelain enamel passive control coating for high temperature alloys  
 [NASA-CASE-MFS-22324-1] c27 N75-27160

Cermet composition and method of fabrication --- heat resistant alloys and powders  
 [NASA-CASE-NFO-13120-1] c27 N76-15311

Metallic hot wire anemometer --- for high speed wind tunnel tests  
 [NASA-CASE-ARC-10911-1] c35 N77-20400

Method of growing composites of the type exhibiting the Soret effect --- improved structure of eutectic alloy crystals  
 [NASA-CASE-MFS-22926-1] c24 N77-27187

Directionally solidified eutectic gamma plus beta nickel-base superalloys  
 [NASA-CASE-LEW-12906-1] c26 N77-32279

Nickel base alloy --- for gas turbine engine stator vanes  
 [NASA-CASE-LEW-12270-1] c26 N77-32280

Directionally solidified eutectic gamma-gamma nickel-base superalloys  
 [NASA-CASE-LEW-12905-1] c26 N78-18183

Heat pipes containing alkali metal working fluid  
 [NASA-CASE-LEW-12253-1] c34 N81-22310

**HEAT SHIELDING**

Heat flux sensor assembly with proviso for heat shield to reduce radiative transfer between sensor elements

- [NASA-CASE-XMS-05909-1] c14 N69-27459  
 Oven for heat treating heat shields  
 [NASA-CASE-XMS-04318] c15 N69-27871  
 Compact heat shielding for interplanetary space vehicles  
 [NASA-CASE-XMS-00486] c33 N70-33344  
 Sandwich panel structure for removing heat from shield between hot and cold areas  
 [NASA-CASE-XLA-00349] c33 N70-37979  
 Aerodynamic configuration of reentry vehicle heat shield to provide longitudinal and directional stability at hypersonic velocities  
 [NASA-CASE-XMS-04142] c31 N70-41631  
 Transpirationally cooled heat ablation system for interplanetary spacecraft reentry shielding  
 [NASA-CASE-XMS-02677] c31 N70-42075  
 Synthesis of azine polymers for heat shields by azine-aromatic aldehyde reaction  
 [NASA-CASE-XMF-08656] c06 N71-11242  
 Synthesis of schiff bases for heat shields by acetal amine reactions  
 [NASA-CASE-XMF-08652] c06 N71-11243  
 Preparation and characteristics of lightweight refractory insulation  
 [NASA-CASE-XMF-05279] c18 N71-16124  
 Development and characteristics of thermal radiation shielding of refractory metal foil used for induction furnace  
 [NASA-CASE-XLE-03432] c33 N71-24145  
 Design and development of spacecraft with outer shell structure heat shielding and built-in, removable excursion module  
 [NASA-CASE-MSC-13047-1] c31 N71-25434  
 Structure of fabric layers for micrometeoroid protection garment with capability for eliminating heat shorts for use in manufacturing space suits  
 [NASA-CASE-MSC-12109] c18 N71-26285  
 Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles  
 [NASA-CASE-MSC-12619-2] c27 N79-12221  
 Thermal insulation protection means  
 [NASA-CASE-MSC-12737-1] c24 N79-25142  
 Installing fiber insulation  
 [NASA-CASE-MSC-16973-1] c37 N81-14317  
 Thermal barrier pressure seal --- shielding junctions between spacecraft control surfaces and structures  
 [NASA-CASE-MSC-18134-1] c37 N81-15363
- HEAT SINKS**  
 Thermal conductive, electrically insulated cleavable adhesive connection between electronic module and heat sink  
 [NASA-CASE-XMS-02087] c09 N70-41717  
 Development and characteristics of calorimeter with integral heat sink for maintenance of constant temperature  
 [NASA-CASE-XMP-04208] c33 N71-29051  
 Tubular sublimatory evaporator heat sink  
 [NASA-CASE-ARC-10912-1] c34 N77-19353  
 Compact pulsed laser having improved heat conductance  
 [NASA-CASE-NPO-13147-1] c36 N77-25502  
 Hypersonic airbreathing missile  
 [NASA-CASE-LAR-12264-1] c15 N78-32168  
 Electroexplosive device  
 [NASA-CASE-NPO-13858-1] c28 N79-11231  
 Thermal control canister  
 [NASA-CASE-GSC-12253-1] c34 N79-31523
- HEAT SOURCES**  
 Black body radiometer design with temperature sensing and cavity heat source cone winding  
 [NASA-CASE-XNP-09701] c14 N71-26475  
 Thermally cascaded thermoelectric generator with radioisotopic heat source  
 [NASA-CASE-NPO-10753] c03 N72-26031  
 Protected isotope heat source --- for atmospheric reentry protection and heat transmission to spacecraft  
 [NASA-CASE-LEW-11227-1] c73 N75-30876  
 Portable electrophoresis apparatus using minimum electrolyte  
 [NASA-CASE-NPO-13274-1] c25 N79-10163
- HEAT STORAGE**  
 Solar energy trap  
 [NASA-CASE-MPS-22744-1] c44 N76-24696  
 Thermal energy storage system --- operating on superheating of liquids
- [NASA-CASE-MPS-23167-1] c44 N76-31667  
**HEAT TRANSFER**  
 Thermal switch for transferring excess heat from one region to another heat dissipating one  
 [NASA-CASE-XNP-00463] c33 N70-36847  
 Sandwich panel structure for removing heat from shield between hot and cold areas  
 [NASA-CASE-XLA-00349] c33 N70-37979  
 Apparatus for cryogenic liquid storage with heat transfer reduction and for liquid transfer at zero gravity conditions  
 [NASA-CASE-XLE-00345] c15 N70-38020  
 Method for improving heat transfer characteristics in nucleate boiling process  
 [NASA-CASE-XMS-04268] c33 N71-16277  
 Design and development of device for cooling inner conductor of coaxial cable  
 [NASA-CASE-XNP-09775] c09 N71-20445  
 Heat sensing instrument, using thermocouple junction connected under heavy conducting material  
 [NASA-CASE-XLA-01551] c14 N71-22989  
 Mixed liquid and vapor phase analyzer design with thermocouples for relative heat transfer measurement  
 [NASA-CASE-NPO-10691] c14 N71-26199  
 Development and characteristics of cooling system to maintain temperature of rack mounted electronic modules  
 [NASA-CASE-MSC-12389] c33 N71-29052  
 Development of method and equipment for testing heat radiative properties of material under controlled environmental conditions  
 [NASA-CASE-MPS-20096] c14 N71-30026  
 Manually activated heat pump for mechanically converting human operator output into heat energy  
 [NASA-CASE-NPO-10677] c05 N72-11084  
 High intensity radiant energy pulse source for calibrating heat transfer gages with thermoluminescent shutter activation  
 [NASA-CASE-ARC-10178-1] c09 N72-17152  
 Development of thermocouple instrument for measuring temperature of wall heated by flowing fluid without disturbing boundary layer  
 [NASA-CASE-XLE-05230] c14 N72-27410  
 Development and characteristics of thermal control system for maintaining constant temperature within spacecraft module with wide variations of component heat transfer  
 [NASA-CASE-GSC-11018-1] c31 N73-30829  
 Thermal flux transfer system for maintaining thrust chamber of operative reaction motor at given temperatures  
 [NASA-CASE-NPO-12070-1] c28 N73-32606  
 Electrostatically controlled heat transfer system for conducting thermal energy  
 [NASA-CASE-NPO-11942-1] c33 N73-32818  
 Heat transfer device  
 [NASA-CASE-NPO-11120-1] c34 N74-18552  
 Heat exchanger  
 [NASA-CASE-MPS-22991-1] c34 N77-10463  
 Heat pipe with dual working fluids  
 [NASA-CASE-ARC-10198] c34 N78-17336  
 Low cost cryostat  
 [NASA-CASE-NPO-14513-1] c35 N81-14287  
 Heat pipes containing alkali metal working fluid  
 [NASA-CASE-LEW-12253-1] c34 N81-22310  
 Heat exchanger and method of making  
 [NASA-CASE-LEW-12441-3] c44 N81-24519  
 A stable density-stratification solar pond  
 [NASA-CASE-NPO-15419-1] c44 N81-27599
- HEAT TRANSMISSION**  
 Heat flow calorimeter --- measures output of Ni-Cd batteries  
 [NASA-CASE-GSC-11434-1] c34 N74-27859  
 Protected isotope heat source --- for atmospheric reentry protection and heat transmission to spacecraft  
 [NASA-CASE-LEW-11227-1] c73 N75-30876  
 Heat transparent high intensity high efficiency solar cell  
 [NASA-CASE-LEW-12892-1] c44 N81-27598
- HEAT TREATMENT**  
 High speed infrared furnace  
 [NASA-CASE-XLE-10466] c17 N69-25147  
 Oven for heat treating heat shields  
 [NASA-CASE-XMS-04318] c15 N69-27871

- Vacuum method for molding thermosetting compounds used as ablative materials  
[NASA-CASE-XLA-01091] c15 N71-10672
- Production of refractory bodies with controlled porosity by pressing and heating mixtures of refractory and inert metal powders  
[NASA-CASE-LEW-10393-1] c17 N71-15468
- White paint production by heating impure aluminum silicate clay having low solar absorptance  
[NASA-CASE-XNP-02139] c18 N71-24184
- Method for diffusion welding dissimilar metals in vacuum chamber  
[NASA-CASE-GSC-10303] c15 N72-22487
- Method of heat treating a formed powder product material  
[NASA-CASE-LEW-10805-3] c26 N74-10521
- Diffusion welding --- heat treatment of nickel alloys following single step vacuum welding process  
[NASA-CASE-LEW-11388-2] c37 N74-21055
- Heat sterilizable patient ventilator  
[NASA-CASE-NPO-13313-1] c54 N75-27761
- Method of heat treating age-hardenable alloys  
[NASA-CASE-XNP-01311] c26 N75-29236
- Method for detecting pollutants --- through chemical reactions and heat treatment  
[NASA-CASE-LAR-11405-1] c45 N76-31714
- Method of producing complex aluminum alloy parts of high temper, and products thereof  
[NASA-CASE-MSC-19693-1] c26 N78-24333
- Bakeable McLeod gauge  
[NASA-CASE-XGS-01293-1] c35 N79-33450
- Precision heat forming of tetrafluoroethylene tubing  
[NASA-CASE-MSC-18430-1] c31 N80-17292
- Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c26 N80-28492
- HEATERS**  
Reliable electrical element heater using plural wire system and backup power sources  
[NASA-CASE-MFS-21462-1] c33 N74-14935
- HEATING**  
Development of system for preheating vaporized fuel for use with internal combustion engines  
[NASA-CASE-NPO-12072] c28 N72-22772
- Diffusion welding in air --- solid state welding of butt joint by fusion welding, surface cleaning, and heating  
[NASA-CASE-LEW-11387-1] c37 N74-18128
- Heating and cooling system --- for fatigue test specimens  
[NASA-CASE-LAR-12393-1] c39 N80-25693
- An improved synthesis of 2,4,8,10-tetroxaspiro (5.5) undecane  
[NASA-CASE-ARC-11243-2] c23 N80-31472
- HEATING EQUIPMENT**  
Using heat control unit to preheat circulating fluid  
[NASA-CASE-XMF-04237] c33 N71-16278
- Electric arc heater with supersonic nozzle and fixed arc length for use in high temperature wind tunnels  
[NASA-CASE-IAC-01677] c09 N71-20816
- Radial heat flux transformer for use in heating and cooling processes  
[NASA-CASE-NPO-10828] c33 N72-17948
- Self-cycling fluid heater for heating continuous fluid stream to ultrahigh temperatures to facilitate chemical reactions  
[NASA-CASE-MSC-15567-1] c33 N73-16518
- Portable heatable container  
[NASA-CASE-NPO-14237-1] c44 N80-20808
- HELICAL ANTENNAS**  
Weatherproof helix antenna  
[NASA-CASE-IKS-08485] c07 N71-19493
- Collapsible high gain antenna which can be automatically expanded to operating state  
[NASA-CASE-KSC-10392] c07 N73-26117
- HELICOPTER WAKES**  
Variable geometry rotor system for direct control over wake vortex  
[NASA-CASE-LAR-10557] c02 N72-11018
- HELICOPTERS**  
Hingeless helicopter rotor with improved stability  
[NASA-CASE-ARC-10807-1] c05 N77-17029
- Non-destructive method for applying and removing instrumentation on helicopter rotor blades  
[NASA-CASE-LAR-11201-1] c35 N78-24515
- Constant lift rotor for a heavier than air craft  
[NASA-CASE-ARC-11045-1] c05 N79-17847
- Helicopter rotor airfoil  
[NASA-CASE-LAR-12396-1] c02 N79-24958
- HELIOSTATS**  
Solar tracking system  
[NASA-CASE-MFS-23999-1] c44 N81-24520
- HELIUM**  
Helium refining by superfluidity  
[NASA-CASE-XNP-00733] c06 N70-34946
- Apparatus and method capable of receiving large quantity of high pressure helium, removing impurities, and discharging at received pressure  
[NASA-CASE-XMF-06888] c15 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] c36 N76-29575
- Cryostat system for temperatures on the order of 2 deg K or less  
[NASA-CASE-NPO-13459-1] c31 N77-10229
- Thermal compensator for closed-cycle helium refrigerator --- assuring constant temperature for an infrared laser diode  
[NASA-CASE-GSC-12168-1] c31 N79-17029
- HELIUM HYDROGEN ATMOSPHERES**  
Method and means for helium/hydrogen ratio measurement by alpha scattering  
[NASA-CASE-NPO-14079-1] c25 N80-20334
- HELIUM IONS**  
Charge transfer reaction laser with preionization means  
[NASA-CASE-NPO-13945-1] c36 N78-27402
- HELIUM-NEON LASERS**  
Design and development of multichannel laser remote control system using modulated helium-neon laser as transmitter and light collector as receiving antenna  
[NASA-CASE-LAR-10311-1] c16 N73-16536
- Laser measuring system for incremental assemblies --- measuring wire-wrapped frame assemblies in spark chambers  
[NASA-CASE-GSC-12321-1] c36 N80-18380
- Direction sensitive laser velocimeter --- determining the direction of particles using a helium-neon laser  
[NASA-CASE-LAR-12177-1] c36 N81-24422
- HELMETS**  
Transparent polycarbonate resin, shell helmet and latch design for high altitude and space flight  
[NASA-CASE-IHS-04935] c05 N71-11190
- Electrode attached to helmets for detecting low level signals from skin of living creatures  
[NASA-CASE-ABC-10043-1] c05 N71-11193
- Venting device for pressurized space suit helmet to eliminate vomit expelled by crewmen  
[NASA-CASE-IHS-09652-1] c05 N71-26333
- Helmet latching and attaching ring  
[NASA-CASE-IHS-04670] c54 N78-17678
- Protective garment ventilation system  
[NASA-CASE-IHS-04928] c54 N78-17679
- Helmet feedport  
[NASA-CASE-IHS-09653] c54 N78-17680
- Emergency space-suit helmet  
[NASA-CASE-MSC-10954-1] c54 N78-18761
- Helmet weight simulator  
[NASA-CASE-LAR-12320-1] c54 N81-27806
- HEMISPHERICAL SHELLS**  
Light baffle with oblate hemispheroid surface and shading flange  
[NASA-CASE-NPO-10337] c14 N71-15604
- HERMETIC SEALS**  
Piston in bore cutter for severing parachute control lines and sealing cable hole to prevent water leakage into load  
[NASA-CASE-IHS-04072] c15 N70-42017
- Hermetically sealed explosive release mechanism for actuator device  
[NASA-CASE-XGS-00824] c15 N71-16078
- Sealing apparatus for joining two pieces of frangible materials  
[NASA-CASE-XLA-01494] c15 N71-24164
- Method for locating leaks in hermetically sealed containers  
[NASA-CASE-EBC-10045] c15 N71-24910
- Hermetically sealed vibration damper design for use in global assembly of spacecraft inertial guidance system



[NASA-CASE-MS-C-10959] c15 N71-26243  
 Method of forming ceramic to metal seals  
 impervious to gaseous and liquid mercury at  
 high temperature  
 [NASA-CASE-XNP-01263-2] c15 N71-26312  
 Pressure seals suitable for use in environmental  
 test chambers  
 [NASA-CASE-NPO-10796] c15 N71-27068  
 Hermetic sealing device for ends of tubular  
 bodies during materials testing operations  
 [NASA-CASE-NPO-10431] c15 N71-29132  
 Hermetically sealed elbow actuator for use in  
 severe environments  
 [NASA-CASE-MFS-14710] c09 N72-22195  
 Heat transfer device  
 [NASA-CASE-NPO-11120-1] c34 N74-18552  
 Device for tensioning test specimens within an  
 hermetically sealed chamber  
 [NASA-CASE-MFS-23281-1] c35 N77-22450  
 Cooling system for removing metabolic heat from  
 an hermetically sealed spacesuit  
 [NASA-CASE-ARC-11059-1] c54 N78-32721  
 Hermetic seal for a shaft  
 [NASA-CASE-NPO-15115-1] c37 N80-25660

**HEXAGONS**  
 Hexagon solar power panel  
 [NASA-CASE-NPO-12148-1] c44 N78-27515

**HEXAMETHYLENETETRAMINE**  
 Structural wood panels with improved fire  
 resistance  
 [NASA-CASE-ARC-11174-1] c24 N81-13999

**HEXOKINASE**  
 Use of enzyme hexokinase and glucose to reduce  
 inherent light levels of ATP in luciferase  
 compositions  
 [NASA-CASE-XGS-05533] c04 N69-27487

**HIGH ACCELERATION**  
 Astronaut restraint suit for high acceleration  
 protection  
 [NASA-CASE-XAC-00405] c05 N70-41619  
 High acceleration cable deployment system  
 [NASA-CASE-ARC-11256-1] c37 N79-23432

**HIGH ALTITUDE**  
 Compact bellows spirometer for high speed and  
 high altitude space travel  
 [NASA-CASE-XAR-01547] c05 N69-21473

**HIGH ALTITUDE ENVIRONMENTS**  
 Method of making solid propellant rocket motor  
 having reliable high altitude capabilities,  
 long shelf life, and capable of firing with  
 nozzle closure with foamed plastic permanent  
 mandrel  
 [NASA-CASE-XLA-04126] c28 N71-26779

**HIGH ASPECT RATIO**  
 Aerospace configuration with low and high aspect  
 ratio variability for high and low speed flight  
 [NASA-CASE-XLA-00142] c02 N70-33286  
 Aerodynamic configuration for aircraft capable  
 of high speed flight and low drag for low  
 speed takeoff or landing upon presently  
 existing airfields  
 [NASA-CASE-XLA-00806] c02 N70-34858

**HIGH FREQUENCIES**  
 Apparatus for ballasting high frequency  
 transistors  
 [NASA-CASE-XGS-05003] c09 N69-24318  
 Holder for high frequency crystal resonators  
 [NASA-CASE-XNP-03637] c15 N71-21311  
 Multiple varactor for generating high  
 frequencies with high power and high  
 conversion efficiency  
 [NASA-CASE-XMP-04958-1] c10 N71-26414  
 Filtering technique based on high-frequency  
 plant modeling for high-gain control  
 [NASA-CASE-LAR-12215-1] c08 N79-23097

**HIGH GAIN**  
 Filtering technique based on high-frequency  
 plant modeling for high-gain control  
 [NASA-CASE-LAR-12215-1] c08 N79-23097

**HIGH PASS FILTERS**  
 Radio frequency coaxial filter to provide dc  
 isolation and low frequency signal rejection  
 in audio range  
 [NASA-CASE-XGS-01418] c09 N71-23573

**HIGH POLYMERS**  
 Shock and vibration damping device using  
 temperature sensitive solid amorphous polymers  
 [NASA-CASE-XAC-11225] c14 N69-27486

**HIGH POWER LASERS**  
 High power metallic halide laser  
 [NASA-CASE-NPO-14782-1] c36 N80-18381

**HIGH PRESSURE**  
 High-temperature, high-pressure spherical  
 segment valve  
 [NASA-CASE-XAC-00074] c15 N70-34817  
 High pressure four-way valve with O ring adapted  
 to pass across inlet port  
 [NASA-CASE-XNP-00214] c15 N70-36908  
 Compact high pressure filter for rocket fuel lines  
 [NASA-CASE-XNP-00732] c28 N70-41447  
 Antiflutter check valve for use with high  
 pressure fluid flow  
 [NASA-CASE-XNP-01152] c15 N70-41811  
 High pressure liquid flow sight assembly for  
 wide temperature range applications including  
 cryogenic fluids  
 [NASA-CASE-XLE-02998] c14 N70-42074  
 Structural design of high pressure regulator valve  
 [NASA-CASE-XNP-00710] c15 N71-10778  
 Hypersonic test facility for studying ablation  
 in models under high pressure and high  
 temperature  
 [NASA-CASE-XLA-00378] c11 N71-15925  
 Development and characteristics of high pressure  
 control valve  
 [NASA-CASE-MS-C-11010] c15 N71-19485  
 Valve seat with resilient support ring for  
 venting valves subjected to high pressure  
 sealing loads  
 [NASA-CASE-XKS-02582] c15 N71-21234  
 Apparatus and method capable of receiving large  
 quantity of high pressure helium, removing  
 impurities, and discharging at received pressure  
 [NASA-CASE-XMF-06888] c15 N71-24044  
 Liquid aerosol dispenser with explosively driven  
 piston to compress light gas to extremely high  
 pressure  
 [NASA-CASE-MFS-20829] c12 N72-21310  
 Gas compression apparatus  
 [NASA-CASE-MS-C-14757-1] c35 N78-10428  
 Purging means and method for Xenon arc lamps  
 [NASA-CASE-NPO-11978] c31 N78-17238  
 Shaft seal assembly for high speed and high  
 pressure applications  
 [NASA-CASE-LEW-11873-1] c37 N79-22475

**HIGH RESOLUTION**  
 High resolution radar transmitting system for  
 transmitting optical pulses to targets  
 [NASA-CASE-NPO-11426] c07 N73-26119  
 High resolution Fourier  
 interferometer-spectrophotopolarimeter  
 [NASA-CASE-NPO-13604-1] c35 N76-31490  
 High resolution threshold photoelectron  
 spectroscopy by electron attachment  
 [NASA-CASE-NPO-14078-1] c72 N80-14877  
 Interferometer --- high resolution  
 [NASA-CASE-NPO-14448-1] c74 N81-29963

**HIGH SPEED**  
 Compact bellows spirometer for high speed and  
 high altitude space travel  
 [NASA-CASE-XAR-01547] c05 N69-21473  
 High speed low level voltage commutating switch  
 [NASA-CASE-XAC-00060] c09 N70-39915  
 Impact testing machine for imparting large  
 impact forces on high velocity packages  
 [NASA-CASE-XNP-04817] c14 N71-23225  
 Flow meter for measuring stagnation pressure in  
 boundary layer around high speed flight vehicle  
 [NASA-CASE-XFR-02007] c12 N71-24692  
 Method for reducing mass of ball bearings for  
 long life operation at high speed  
 [NASA-CASE-LEW-10856-1] c15 N72-22490  
 Two stage light gas-plasma projectile accelerator  
 [NASA-CASE-MFS-22287-1] c75 N76-14931  
 Selective data segment monitoring system ---  
 using shift registers  
 [NASA-CASE-ARC-10899-1] c60 N77-19760  
 Shaft seal assembly for high speed and high  
 pressure applications  
 [NASA-CASE-LEW-11873-1] c37 N79-22475  
 High speed, glitch-free digital to analog  
 converter  
 [NASA-CASE-GSC-12319-1] c60 N79-32852

**HIGH SPEED CAMERAS**  
 Electrically operated rotary shutter for  
 television camera aboard spacecraft  
 [NASA-CASE-XNP-00637] c14 N70-40273

## HIGH STRENGTH

Method for making fiber composites with high strength at high temperatures  
[NASA-CASE-LEW-10424-2-2] c18 N72-25539

## HIGH STRENGTH ALLOYS

High strength, corrosion resistant cobalt-based alloys for aerospace structures  
[NASA-CASE-XLE-00726] c17 N71-15644

High strength aluminum casting alloy for cryogenic applications in aerospace engineering  
[NASA-CASE-XMF-02786] c17 N71-20743

Production of high strength refractory compounds and microconstituents into refractory metal matrix  
[NASA-CASE-XLE-03940] c18 N71-26153

High strength nickel based alloys  
[NASA-CASE-LEW-10874-1] c17 N72-22535

Cobalt-tungsten alloys with superior strength at elevated temperatures  
[NASA-CASE-LEW-10436-1] c17 N73-32415

High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-3] c26 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] c24 N76-14203

High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-1] c26 N77-24254

Process for making a high toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-2] c26 N79-22271

## HIGH TEMPERATURE

High temperature source of thermal radiation  
[NASA-CASE-XLE-00490] c33 N70-34545

Thermonic diode switch for use in high temperature region to chop current from dc source  
[NASA-CASE-NPO-10404] c03 N71-12255

Hypersonic test facility for studying ablation in models under high pressure and high temperature  
[NASA-CASE-XLA-00378] c11 N71-15925

Process for fiberizing ceramic materials with high fusion temperatures and tensile strength  
[NASA-CASE-XNP-00597] c18 N71-23088

Induction heating of metallurgical specimens to high temperatures in coil furnace  
[NASA-CASE-XLE-04026] c14 N71-23267

Method of forming ceramic to metal seals impervious to gaseous and liquid mercury at high temperature  
[NASA-CASE-XNP-01263-2] c15 N71-26312

Method for making fiber composites with high strength at high temperatures  
[NASA-CASE-LEW-10424-2-2] c18 N72-25539

Superalloys from prealloyed powders at high temperatures  
[NASA-CASE-LEW-10805-1] c15 N73-13465

High temperature beryllium oxide capacitor  
[NASA-CASE-LEW-11938-1] c33 N76-15373

Low to high temperature energy conversion system  
[NASA-CASE-NPO-13510-1] c44 N77-32581

Thermocouples of molybdenum and iridium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12174-2] c35 N79-14346

## HIGH TEMPERATURE AIR

Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds  
[NASA-CASE-LAR-10612-1] c12 N73-28144

## HIGH TEMPERATURE ENVIRONMENTS

High speed infrared furnace  
[NASA-CASE-XLE-10466] c17 N69-25147

Nickel alloy series for aerospace structures subjected to high temperatures  
[NASA-CASE-XLE-00283] c17 N70-36616

Water cooled gage for strain measurements in high temperature environments  
[NASA-CASE-XNP-09205] c14 N71-17657

Trielectrode capacitive pressure transducer  
[NASA-CASE-ARC-10711-2] c33 N76-21390

Integrated structure vacuum tube  
[NASA-CASE-ARC-10445-1] c31 N76-31365

High temperature penetrator assembly with bayonet plug and ramp-activated lock  
[NASA-CASE-NSC-18526-1] c35 N80-19468

Installing fiber insulation  
[NASA-CASE-MS-C-16973-1] c37 N81-14317

A method and technique for installing light-weight fragile, high-temperature fiber insulation --- spacecraft heat sealing  
[NASA-CASE-MS-C-16934-2] c37 N81-16468

Corrosion resistant thermal barrier coating --- protecting gas turbines and other engine parts  
[NASA-CASE-LEW-13088-1] c26 N81-25188

## HIGH TEMPERATURE FLUIDS

Self-cycling fluid heater for heating continuous fluid stream to ultrahigh temperatures to facilitate chemical reactions  
[NASA-CASE-MS-C-15567-1] c33 N73-16918

High-temperature microphone system --- for measuring pressure fluctuations in gases at high temperature  
[NASA-CASE-LAR-12375-1] c32 N79-24203

## HIGH TEMPERATURE GASES

Multiple wavelength radiation measuring instrument for determining hot body or gas temperature  
[NASA-CASE-XLE-00011] c14 N70-41946

Ablative resins used for retarding regression in ablative material  
[NASA-CASE-XLE-05913] c33 N71-14032

Transient heat transfer gage for measuring total radiant intensity from far ultraviolet and ionized high temperature gases  
[NASA-CASE-XNP-09802] c33 N71-15641

Generation of high temperature, high mass flow, and high Reynolds number air at hypersonic speeds  
[NASA-CASE-LAR-10578-1] c12 N73-25262

Isotope separation using metallic vapor lasers  
[NASA-CASE-NPO-13550-1] c36 N77-26477

Start up system for hydrogen generator used with an internal combustion engine  
[NASA-CASE-NFO-13849-1] c28 N80-10374

Free-piston regenerative hot gas hydraulic engine  
[NASA-CASE-LEW-12274-1] c37 N80-31790

Curved film cooling admission tube  
[NASA-CASE-LEW-13174-1] c34 N81-12363

Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c37 N81-25370

## HIGH TEMPERATURE LUBRICANTS

Production of barium fluoride-calcium fluoride composite lubricant for bearings or seals  
[NASA-CASE-XLE-08511-2] c18 N71-16105

Self lubricating fluoride-metal composite materials for outer space applications  
[NASA-CASE-XLE-08511] c18 N71-23710

Method of making bearing materials --- self-lubricating, oxidation resistant composites for high temperature applications  
[NASA-CASE-LEW-11930-4] c24 N79-17916

## HIGH TEMPERATURE PLASMAS

Apparatus for producing highly conductive, high temperature electron plasma with homogenous temperature and pressure distribution  
[NASA-CASE-XLA-00147] c25 N70-34661

## HIGH TEMPERATURE PROPELLANTS

Development of system for delivering vaporized mercury to electron bombardment ion engine  
[NASA-CASE-NPO-10737] c28 N72-11709

## HIGH TEMPERATURE RESEARCH

Gas cooled high temperature thermocouple  
[NASA-CASE-XLE-09475-1] c33 N71-15568

Fatigue testing apparatus with light shield and infrared reflector for high temperature evaluation of loaded sheet samples  
[NASA-CASE-XLA-01782] c14 N71-26136

High temperature oxidation resistant cermet compositions  
[NASA-CASE-NPO-13666-1] c27 N77-13217

## HIGH TEMPERATURE TESTS

High-temperature, high-pressure spherical segment valve  
[NASA-CASE-XAC-00074] c15 N70-34817

Test apparatus for determining mechanical properties of refractory materials at high temperatures in vacuum or inert atmospheres  
[NASA-CASE-XLE-00335] c14 N70-35368

Apparatus for testing metallic and nonmetallic beams or rods by bending at high temperatures in vacuum or inert atmosphere  
[NASA-CASE-XLE-01300] c15 N70-41993

Heating and cooling system --- for fatigue test specimens

- [NASA-CASE-LAR-12393-1] c39 N80-25693  
Containerless high temperature calorimeter apparatus  
[NASA-CASE-MFS-23923-1] c35 N81-19426
- HIGH VACUUM**  
Epoxy resin sealing device for electrochemical cells in high vacuum environments  
[NASA-CASE-XGS-02630] c03 N71-22574  
Device for high vacuum film deposition with electromagnetic ion steering  
[NASA-CASE-NPO-10331] c09 N71-26701  
Absolute pressure measuring device for measuring gas density level in high vacuum range  
[NASA-CASE-LAR-10000] c14 N73-30394  
Plasma cleaning device --- designed for high vacuum environments  
[NASA-CASE-MFS-22906-1] c75 N78-27913
- HIGH VACUUM ORBITAL SIMULATOR**  
Space environmental work simulator with portions of space suit mounted to vacuum chamber wall  
[NASA-CASE-XMF-07488] c11 N71-18773
- HIGH VOLTAGES**  
Hollow spherical electrode for shielding dielectric junction between high voltage conductor and insulator  
[NASA-CASE-XLE-03778] c09 N69-21542  
High voltage cable for use in high intensity ionizing radiation fields  
[NASA-CASE-XNP-00738] c09 N70-38201  
High voltage pulse generator for testing flash and ignition limits of nonmetallic materials in controlled atmospheres  
[NASA-CASE-MSC-12178-1] c09 N71-13518  
High voltage transistor circuit  
[NASA-CASE-XNP-06937] c09 N71-19516  
High voltage divider system for attenuating high voltages to convenient levels suitable for introduction to measuring circuits  
[NASA-CASE-XLE-02008] c09 N71-21583  
High voltage distributor  
[NASA-CASE-GSC-11849-1] c33 N76-16332  
Sustained arc ignition system  
[NASA-CASE-LEW-12444-1] c33 N77-28385  
High voltage planar multijunction --- solar cells  
[NASA-CASE-LEW-13400-1] c44 N81-16528
- HIGHWAYS**  
Traffic survey system --- using optical scanners  
[NASA-CASE-MFS-22631-1] c66 N76-19888
- HINGES**  
Foldable beam  
[NASA-CASE-LAR-12077-1] c31 N81-25259
- HISTOGRAMS**  
System for storing histogram data in optimum number of elements  
[NASA-CASE-XNP-09785] c08 N69-21928
- HOLDERS**  
Water cooled contactors for holding rotating carbon arc anode  
[NASA-CASE-XMS-03700] c15 N69-24266  
Quick disconnect latch and handle combination for mounting articles on walls or supporting bases in spacecraft under zero gravity conditions  
[NASA-CASE-MFS-11132] c15 N71-17649  
Holder for high frequency crystal resonators  
[NASA-CASE-XNP-03637] c15 N71-21311  
Design and construction of mechanical probe for determining if object is properly secured  
[NASA-CASE-MFS-20760] c14 N72-33377  
Fifth wheel  
[NASA-CASE-PRC-10081-1] c37 N77-14477  
Combined docking and grasping device  
[NASA-CASE-MFS-23088-1] c37 N77-23483  
Plural output optometric sample cell and analysis system  
[NASA-CASE-NPO-10233-1] c74 N78-33913  
Method and apparatus for holding two separate metal pieces together for welding  
[NASA-CASE-GSC-12318-1] c37 N80-23655  
Liquid immersion apparatus for minute articles  
[NASA-CASE-MFS-25363-1] c31 N80-32585  
Fixture for environmental exposure of structural materials under compression  
[NASA-CASE-LAR-12602-1] c35 N81-19429  
Compression test fixture  
[NASA-CASE-MSC-18723-1] c39 N81-24470  
Head for high speed spinner having a vacuum chuck --- holding silicon dioxide chips for etching  
[NASA-CASE-NPO-15227-1] c37 N81-33482
- HOLE DISTRIBUTION (MECHANICS)**  
Thermocouple installation  
[NASA-CASE-NPO-13540-1] c35 N77-14409
- HOLE MOBILITY**  
Hole mobility of deposited semiconductor films in vacuum utilizing thermal gradient  
[NASA-CASE-XKS-04614] c15 N69-21460
- HOLLOW**  
Dual membrane hollow fiber fuel cell and method of operating same  
[NASA-CASE-NPO-13732-1] c44 N79-10513
- HOLLOW CATHODES**  
Hydrogen hollow cathode ion source  
[NASA-CASE-LEW-12940-1] c72 N80-33186
- HOLOGRAPHIC INTERFEROMETRY**  
Interferometric angle monitor  
[NASA-CASE-GSC-12614-1] c35 N81-12386  
Method of and apparatus for double-exposure holographic interferometry  
[NASA-CASE-MFS-25405-1] c35 N81-27459
- HOLOGRAPHY**  
Development of focused image holography with extended sources  
[NASA-CASE-ERC-10019] c16 N71-15551  
Hybrid holographic system using reference, transmitted, and reflected beams simultaneously  
[NASA-CASE-MFS-20074] c16 N71-15565  
Recording and reconstructing focused image holograms  
[NASA-CASE-ERC-10017] c16 N71-15567  
Method and means for recording and reconstructing holograms without use of reference beam  
[NASA-CASE-ERC-10020] c16 N71-26154  
Multiple image storing system for obtaining holographic record on film of high speed projectile  
[NASA-CASE-MFS-20596] c14 N72-17324  
Thin film analyzer utilizing holographic techniques  
[NASA-CASE-MFS-20823-1] c16 N73-30476  
Method and apparatus for checking the stability of a setup for making reflection type holograms  
[NASA-CASE-MFS-21455-1] c35 N74-15146  
Real time moving scene holographic camera system  
[NASA-CASE-MFS-21087-1] c35 N74-17153  
Holography utilizing surface plasmon resonances  
[NASA-CASE-MFS-22040-1] c35 N74-26946  
Holographic system for nondestructive testing  
[NASA-CASE-MFS-21704-1] c35 N75-25124  
Real time, large volume, moving scene holographic camera system  
[NASA-CASE-MFS-22537-1] c35 N75-27328  
Holographic motion picture camera with Doppler shift compensation  
[NASA-CASE-MFS-22517-1] c35 N76-18402  
Optical process for producing classification maps from multispectral data  
[NASA-CASE-MSC-14472-1] c43 N77-10584
- HONING DEVICES**  
Location identification system with ground based transmitter and aircraft borne receiver/decoder  
[NASA-CASE-ERC-10324] c07 N72-25173
- HONEYCOMB CORES**  
Technique for making foldable, inflatable, plastic honeycomb core panels for use in building and bridge structures, light and radio wave reflectors, and spacecraft  
[NASA-CASE-XLA-03492] c15 N71-22713  
Heat treatment and tooling for forming shapes from thermosetting honeycomb core sheets  
[NASA-CASE-NPO-11036] c15 N72-24522  
Honeycomb core structures of minimum surface tubule sections  
[NASA-CASE-ERC-10363] c18 N72-25541
- HONEYCOMB STRUCTURES**  
Filling honeycomb matrix with deaerated paste filler  
[NASA-CASE-XMS-01108] c15 N69-24322  
Inflatable honeycomb panel element for lightweight structures usable in space stations and other construction  
[NASA-CASE-XLA-00204] c32 N70-36536  
Fluid flow control valve for regulating fluids in molecular quantities  
[NASA-CASE-XLE-00703] c15 N71-15967  
Method and apparatus for fabrication of heat insulating and ablative reentry structure  
[NASA-CASE-XMS-02009] c33 N71-20834

- Method for honeycomb panel bonding by thermosetting film adhesive with electrical heat means  
[NASA-CASE-XMF-01402] c18 N71-21651
- Development of thermal insulation material for insulating liquid hydrogen tanks in spacecraft  
[NASA-CASE-XMF-05046] c33 N71-28692
- Honeycomb panels of minimal surface, periodic tubule layers  
[NASA-CASE-ERC-10364] c18 N72-25540
- Development of process for bonding resinous body in cavities of honeycomb structures  
[NASA-CASE-MSC-12357] c15 N73-12489
- Insert facing tool --- manually operated cutting tool for forming studs in honeycomb material  
[NASA-CASE-MFS-21485-1] c37 N74-25968
- Vacuum pressure molding technique  
[NASA-CASE-LAR-10073-1] c37 N76-24575
- Honeycomb-laminate composite structure  
[NASA-CASE-ARC-10913-1] c24 N78-15180
- Method of making a composite sandwich lattice structure  
[NASA-CASE-LAR-11898-2] c24 N78-17149
- Low density bisaleamide-carbon microballoon composites  
[NASA-CASE-ARC-11040-1] c24 N79-16915
- Heat pipe honeycomb panel  
[NASA-CASE-LAR-12637-1] c34 N81-12362
- HORIZON SCANNERS**
- Oscillatory electromagnetic mirror drive system for horizon scanners  
[NASA-CASE-XLA-03724] c14 N69-27461
- Multi-lobar scan horizon sensor  
[NASA-CASE-XGS-00809] c21 N70-35427
- Attitude orientation control of spin stabilized final stage space vehicles, using horizon scanners  
[NASA-CASE-XLA-00281] c21 N70-36943
- Clamped amplifier circuit for horizon scanner enabling amplification and accurate measurement of specified parameters  
[NASA-CASE-XGS-01784] c10 N71-20782
- Horizon sensor design with digital sampling of spaced radiation-compensated thermopile infrared detectors  
[NASA-CASE-XNP-06957] c14 N71-21088
- Method and equipment for locating earth infrared horizon from space, independent of season and latitude  
[NASA-CASE-LAR-10726-1] c14 N73-20475
- HORIZONTAL FLIGHT**
- A system for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-PRC-11005-1] c06 N79-24568
- HORIZONTAL SPACECRAFT LANDING**
- Delta winged, manned reentry vehicle capable of horizontal glide landing at low speeds  
[NASA-CASE-XLA-00241] c31 N70-37586
- HORIZONTAL TAIL SURFACES**
- Development and characteristics of translating horizontal tail assembly for supersonic aircraft  
[NASA-CASE-XLA-08801-1] c02 N71-11043
- HORN ANTENNAS**
- Device for improving efficiency of parabolic horn antenna system for linearly polarized signals  
[NASA-CASE-XNP-00611] c09 N70-35219
- Device for improving efficiency of parabolic reflector horn for linearly or circularly polarized waves  
[NASA-CASE-XNP-00540] c09 N70-35382
- Characteristics of antenna horn feeds consisting of central horn with overlapping peripheral horns  
[NASA-CASE-GSC-10452] c07 N71-12396
- Multiple mode horn antenna with radiation pattern of equal beamwidths and suppressed sidelobes  
[NASA-CASE-XNP-01057] c07 N71-15507
- Multipurpose microwave antenna, employing dish reflector with plural coaxial horn feeds  
[NASA-CASE-NFO-11264] c07 N72-25174
- Horn antenna having V-shaped corrugated slots  
[NASA-CASE-LAR-11112-1] c32 N76-15330
- Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector  
[NASA-CASE-NFO-13568-1] c32 N76-21365
- Reflex feed system for dual frequency antenna with frequency cutoff means  
[NASA-CASE-NFO-14022-1] c32 N78-31321
- Dual band combiner for horn antenna  
[NASA-CASE-NFO-14519-1] c32 N80-23524
- Collapsible corrugated horn antenna  
[NASA-CASE-LAR-11745-1] c32 N80-29539
- Multifrequency broadband polarized horn antenna  
[NASA-CASE-NFO-14588-1] c32 N81-25278
- HOT CATHODES**
- Improved cathode containing barium carbonate block and heated tungsten screen for electron bombardment ion thruster  
[NASA-CASE-XLE-07087] c06 N69-39889
- HOT CORROSION**
- Heat pipes containing alkali metal working fluid  
[NASA-CASE-LEW-12253-1] c34 N81-22310
- HOT PRESSING**
- Cermet for nuclear fuel constructed by pressing metal coated ceramic particles in die at temperature to cause bonding of metal coatings, and tested for thermal stability  
[NASA-CASE-LEW-10219-1] c18 N71-28729
- Holding fixture for a hot stamping press  
[NASA-CASE-GSC-12619-1] c37 N81-16470
- HOT WORKING**
- Hot forming of plastic sheets  
[NASA-CASE-XMS-05516] c15 N71-17803
- HOT-WIRE ANEMOMETERS**
- Metallic hot wire anemometer --- for high speed wind tunnel tests  
[NASA-CASE-ARC-10911-1] c35 N77-20400
- Method for making a hot wire anemometer and product thereof  
[NASA-CASE-ARC-10900-1] c35 N77-24454
- HOT-WIRE FLOWMETERS**
- Hot-wire liquid level detector for cryogenic propellants  
[NASA-CASE-XLE-00454] c23 N71-17802
- Flow separation detector  
[NASA-CASE-ARC-11046-1] c35 N78-14364
- Hot foil transducer skin friction sensor  
[NASA-CASE-LAR-12321-1] c35 N81-12390
- HOUSINGS**
- Sealed housing for protecting electronic equipment against electromagnetic interference  
[NASA-CASE-MSC-12168-1] c09 N71-18600
- Open type urine receptacle with tubular housing  
[NASA-CASE-MSC-12324-1] c05 N72-22093
- Readily assembled universal environment housing for electronic equipment  
[NASA-CASE-KSC-10031] c15 N72-22486
- Gas flow control device, including housing and input port  
[NASA-CASE-NFO-11479] c15 N73-13462
- Cryogenic gyroscope housing --- with annular disks for gas spin-up  
[NASA-CASE-MFS-21136-1] c35 N74-18323
- Heat transfer device  
[NASA-CASE-NFO-11120-1] c34 N74-18552
- Deformable bearing seat  
[NASA-CASE-LEW-12527-1] c37 N77-32500
- HOVERING**
- Hovering type flying vehicle design and principle mechanisms for manned or unmanned use  
[NASA-CASE-MSC-12111-1] c02 N71-11039
- HUGENIOT EQUATION OF STATE**
- Determining particle density using known material Hugoniot curves  
[NASA-CASE-LAR-11059-1] c76 N75-12810
- HULLS (STRUCTURES)**
- Efficient operation of improved hydrofoil design  
[NASA-CASE-XLA-00229] c12 N70-33305
- HUMAN BEINGS**
- Method and apparatus for applying compressional forces to skeletal structure of subject to simulate force during ambulatory conditions  
[NASA-CASE-ARC-10100-1] c05 N71-24738
- Automatic braking device for rapidly transferring humans or materials from elevated location  
[NASA-CASE-XKS-07814] c15 N71-27067
- HUMAN BODY**
- Apparatus for measuring human body mass in zero or reduced gravity environment  
[NASA-CASE-XMS-03371] c05 N70-42000
- Electromedical garment, applying vectorcardiologic type electrodes to human

- torsos for data recording during physical activity  
[NASA-CASE-XFR-10856] c05 N71-11189
- Thermoregulating with cooling flow pipe network for humans  
[NASA-CASE-XMS-10269] c05 N71-24147
- Tilting table for testing human body in variety of positions while exercising on ergometer or other biomedical devices  
[NASA-CASE-MFS-21010-1] c05 N73-30078
- Method and system for in vivo measurement of bone tissue using a two level energy source  
[NASA-CASE-MSC-14276-1] c52 N77-14737
- HUMAN FACTORS ENGINEERING**
- Shock absorbing couch for body support under high acceleration or deceleration forces  
[NASA-CASE-XMS-01240] c05 N70-35152
- Harness assembly adapted to support man on ground based apparatus which simulates weightlessness  
[NASA-CASE-MFS-14671] c05 N71-12341
- Multiple circuit switch apparatus requiring minimum hand and eye movement by operator  
[NASA-CASE-IAC-03777] c10 N71-15909
- Remote control device operated by movement of finger tips for manual control of spacecraft attitude  
[NASA-CASE-XAC-02405] c09 N71-16089
- Design and development of flexible tunnel for use by spacecrews in performing extravehicular activities  
[NASA-CASE-MSC-12243-1] c05 N71-24728
- Development of apparatus and method for quantitatively measuring brain activity as automatic indication of sleep state and level of consciousness  
[NASA-CASE-MSC-13282-1] c05 N71-24729
- Spacesuit mobility joints  
[NASA-CASE-ARC-11058-1] c54 N78-31735
- Spacesuit torso closure  
[NASA-CASE-ARC-11100-1] c54 N78-31736
- Apparatus and method of inserting a microelectrode in body tissue or the like using vibration means  
[NASA-CASE-NPO-13910-1] c52 N79-27836
- Kinesimetric method and apparatus  
[NASA-CASE-MSC-18929-1] c54 N81-15699
- Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c52 N81-25661
- Urine collection apparatus --- feminine hygiene  
[NASA-CASE-MSC-18381-1] c52 N81-28740
- HUMAN PERFORMANCE**
- Color perception tester for testing color code perceptiveness of individuals  
[NASA-CASE-KSC-10278] c05 N72-16015
- HUMAN REACTIONS**
- Reaction tester for testing reaction to light stimuli  
[NASA-CASE-MSC-13604-1] c05 N73-13114
- HUMAN WASTES**
- Reduced gravity fecal collector seat and urinal  
[NASA-CASE-MFS-22102-1] c54 N74-20725
- Automatic bio waste sampling  
[NASA-CASE-MSC-14640-1] c54 N76-14804
- Absorbent product and articles made therefrom --- for collection of human wastes  
[NASA-CASE-MSC-18223-1] c24 N81-16127
- HUMIDITY**
- Passive intrusion detection system  
[NASA-CASE-NPO-13804-1] c33 N80-23559
- Apparatus for supplying conditioned air at a substantially constant temperature and humidity  
[NASA-CASE-GSC-12191-1] c31 N80-32583
- HYBRID COMPUTERS**
- Adaptive voting computer system  
[NASA-CASE-MSC-13932-1] c62 N74-14520
- HYBRID PROPELLANTS**
- Liner for hybrid solid propellants to bind propellant to rocket motor case  
[NASA-CASE-INP-09744] c27 N71-16392
- HYDRAULIC CONTROL**
- Shear modulated fluid amplifier of high pressure hydraulic vortex amplifier type  
[NASA-CASE-MFS-10412] c12 N71-17578
- Throttle valve for regulating fluid flow volume  
[NASA-CASE-INP-09698] c15 N71-18580
- Fluidic-thermochromic display device  
[NASA-CASE-ERC-10031] c12 N71-18603
- Development and characteristics of variable displacement fluid pump for transforming hydraulic pressures  
[NASA-CASE-MFS-20830] c15 N71-30028
- Hydraulic drain means for servo-systems  
[NASA-CASE-NPO-10316-1] c37 N77-22479
- HYDRAULIC EQUIPMENT**
- Hydraulic support equipment for full scale dynamic testing of large rocket vehicle under free flight conditions  
[NASA-CASE-XMP-01772] c11 N70-41677
- Hydraulic support apparatus for dynamic testing of space vehicles under near-free flight conditions  
[NASA-CASE-XMP-03248] c11 N71-10604
- Hydraulic drive mechanism for leveling isolation platforms  
[NASA-CASE-XMS-03252] c15 N71-10658
- Antibacklash circuit for hydraulic drive system  
[NASA-CASE-INP-01020] c03 N71-12260
- Hydraulic clamping of sheet stock specimens  
[NASA-CASE-XLA-05100] c15 N71-17696
- Design and development of double acting shock absorber for spacecraft docking operations  
[NASA-CASE-XMS-03722] c15 N71-21530
- Hydraulic apparatus for casting and molding of liquid polymers  
[NASA-CASE-XNP-07659] c06 N71-22975
- System to control speed of hydraulically movable members by limiting energy applied to actuators with hydraulic servo loop  
[NASA-CASE-ARC-10131-1] c15 N71-27754
- Development of aircraft control system with high performance electrically controlled and mechanically operated hydraulic valves for precise flight operation  
[NASA-CASE-XAC-00048] c02 N71-29128
- Development and characteristics of variable displacement fluid pump for transforming hydraulic pressures  
[NASA-CASE-MFS-20830] c15 N71-30028
- Design and characteristics of mechanically extended and telescoping boom on crane assembly  
[NASA-CASE-NPO-11118] c03 N72-25021
- Design and development of device to prevent geysering during convective circulation of cryogenic fluids  
[NASA-CASE-KSC-10615] c15 N73-12486
- Redundant hydraulic control system for actuators with three main valve combination  
[NASA-CASE-MFS-20944] c15 N73-13466
- Combined pressure regulator and shutoff valve  
[NASA-CASE-NPO-13201-1] c37 N75-15050
- Ultrasonically bonded valve assembly  
[NASA-CASE-NPO-13360-1] c37 N75-25185
- Filter regeneration systems --- a system for regenerating a system filter in a fluid flow line  
[NASA-CASE-MSC-14273-1] c34 N75-33342
- Quick disconnect filter coupling  
[NASA-CASE-MFS-22323-1] c37 N76-14463
- Actuator device for artificial leg  
[NASA-CASE-MFS-23225-1] c52 N77-14735
- Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c37 N81-17432
- A gas-to-hydraulic power converter  
[NASA-CASE-MSC-18794-1] c37 N81-24445
- Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c43 N81-26509
- HYDRAULIC FLUIDS**
- Free-piston regenerative hot gas hydraulic engine  
[NASA-CASE-LEW-12274-1] c37 N80-31790
- HYDRAZINE ENGINES**
- Reciprocating engines  
[NASA-CASE-MSC-16239-1] c37 N81-32510
- HYDRAZINE NITROFORM**
- Solid propellant containing hydrazinium nitroformate oxidizer and polymeric hydrocarbon binder  
[NASA-CASE-NPO-12015] c27 N73-16764
- HYDRAZINES**
- Catalyst bed ignition system for hydrazine propellants  
[NASA-CASE-INP-00876] c28 N70-41311
- Hydrazine monoperfluoro alkanoate solder flux leaving corrosion resistant coating, for metals such as copper  
[NASA-CASE-XNP-03459-2] c18 N71-15688

- Prevention of hydrogen embrittlement of high strength steel by hydrazine compositions --- by adding potassium hydroxide to hydrazine [NASA-CASE-NPO-12122-1] c24 N76-14203
- HYDROCARBON COMBUSTION**  
In-situ laser retorting of oil shale [NASA-CASE-LEW-12217-1] c43 N78-14452
- HYDROCARBON FUEL PRODUCTION**  
Molten salt pyrolysis of latex --- synthetic hydrocarbon fuel production using the Guayule shrub [NASA-CASE-NPO-14315-1] c27 N81-17261
- HYDROCARBON FUELS**  
Apparatus for producing hydrocarbon slurry containing small particles of magnesium for use as jet aircraft fuel [NASA-CASE-XLE-00010] c15 N70-33382  
Hydrogen rich gas generator [NASA-CASE-NPO-13342-2] c44 N76-29700  
Hydrogen rich gas generator [NASA-CASE-NPO-13464-2] c44 N76-29704
- HYDROCARBONS**  
Solid propellant containing hydrazinium nitroformate oxidizer and polymeric hydrocarbon binder [NASA-CASE-NPO-12015] c27 N73-16764  
Hydrogen rich gas generator [NASA-CASE-NPO-13342-1] c37 N76-16446  
Combustion engine --- for air pollution control [NASA-CASE-NPO-13671-1] c37 N77-31497  
Curable liquid hydrocarbon prepolymers containing hydroxyl groups and process for producing same [NASA-CASE-NPO-13137-1] c27 N80-32514
- HYDROCHLORIC ACID**  
Indicator providing continuous indication of the presence of a specific pollutant in air [NASA-CASE-NPO-13474-1] c45 N76-21742
- HYDROFOILS**  
Efficient operation of improved hydrofoil design [NASA-CASE-XLA-00229] c12 N70-33305
- HYDROFORMING**  
Cold metal hydroforming techniques using epoxy molds for counteracting creep or stretch [NASA-CASE-XLE-05641-1] c15 N71-26346
- HYDROGEN**  
Method and transducer device for detecting presence of hydrogen gas [NASA-CASE-XMF-03873] c06 N69-39733  
Preventing pressure buildup in electrochemical cells by reacting palladium oxide with evolved hydrogen [NASA-CASE-XGS-01419] c03 N70-41664  
Development of pulse-activated polarographic hydrogen detector [NASA-CASE-XMF-06531] c14 N71-17575  
Development of device for detecting hydrogen in ambient environments [NASA-CASE-MFS-11537] c14 N71-20442  
Gas chromatographic method for analyzing hydrogen deuterium mixtures [NASA-CASE-NPO-11322] c06 N72-25146  
Hydrogen fire blink detector for high altitude rocket or ground installation [NASA-CASE-MFS-15063] c14 N72-25412  
Separation of dissolved hydrogen from water and coating with palladium black [NASA-CASE-MSC-13335-1] c06 N72-31140  
Atomic hydrogen maser with bulb temperature control by output frequency difference signal for wall shift elimination [NASA-CASE-BQN-10654-1] c16 N73-13489  
Method of producing a storage bulb for an atomic hydrogen maser [NASA-CASE-NPO-13050-1] c36 N75-15029  
Atomic standard with variable storage volume [NASA-CASE-GSC-11895-1] c35 N76-15436  
Hydrogen rich gas generator [NASA-CASE-NPO-13342-1] c37 N76-16446  
Hydrogen-bromine secondary battery [NASA-CASE-NPO-15237-1] c44 N76-18641  
Hydrogen-rich gas generator [NASA-CASE-NPO-13464-1] c44 N76-18642  
Solar hydrogen generator [NASA-CASE-LAR-11361-1] c44 N77-22607  
Solar photolysis of water [NASA-CASE-NPO-13675-1] c44 N77-32580  
Improved synthesis of polyformals [NASA-CASE-ARC-11244-1] c27 N79-30376
- Method and automated apparatus for detecting coliform organisms [NASA-CASE-MSC-16777-1] c51 N80-27067  
Method of cross-linking polyvinyl alcohol and other water soluble resins [NASA-CASE-LEW-13103-1] c27 N80-32516
- HYDROGEN ATOMS**  
Atomic hydrogen storage method and apparatus [NASA-CASE-LEW-12081-1] c28 N78-24365  
Atomic hydrogen storage --- cryotrapping and magnetic field strength [NASA-CASE-LEW-12081-2] c28 N80-20402  
Atomic hydrogen storage method and apparatus [NASA-CASE-LEW-12081-3] c28 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] c24 N76-14203
- HYDROGEN ENGINES**  
Hydrogen-fueled engine [NASA-CASE-NPO-13763-1] c44 N78-33526
- HYDROGEN FUELS**  
Hydrogen rich gas generator [NASA-CASE-NPO-13342-2] c44 N76-29700  
Hydrogen rich gas generator [NASA-CASE-NPO-13464-2] c44 N76-29704  
Hydrogen-rich gas generator [NASA-CASE-NPO-13560-1] c44 N77-10636
- HYDROGEN IONS**  
Hydrogen hollow cathode ion source [NASA-CASE-LEW-12940-1] c72 N80-33186
- HYDROGEN OXYGEN FUEL CELLS**  
Electrolytically regenerative hydrogen-oxygen fuel cells [NASA-CASE-XLE-04526] c03 N71-11052  
Water electrolysis rocket engine with self-regulating stoichiometric fuel mixing regulator [NASA-CASE-XGS-08729] c28 N71-14044
- HYDROGEN PEROXIDE**  
Unit for generating thrust from catalytic decomposition of hydrogen peroxide, for high altitude aircraft or spacecraft reaction control [NASA-CASE-XMS-00583] c28 N70-38504
- HYDROGEN PRODUCTION**  
Start up system for hydrogen generator used with an internal combustion engine [NASA-CASE-NPO-13849-1] c28 N80-10374  
Potential heat exchange fluids for use in sulfuric acid vaporizers [NASA-CASE-NPO-15015-1] c25 N80-23394
- HYDROGENATION**  
Producing high purity silicon carbide on carbon base by hydrogen reduction of silicon tetrachloride [NASA-CASE-XLA-00158] c26 N70-36805  
Compact hydrogenator [NASA-CASE-NPO-11682-1] c35 N74-15127
- HYDROLOGY**  
Radar target for remotely sensing hydrological phenomena [NASA-CASE-LAR-12344-1] c43 N80-18498
- HYDROSTATICS**  
Hydrostatic bearing support [NASA-CASE-LEW-11158-1] c37 N77-28486
- HYDROXIDES**  
Method for determining presence and type of OH in MgO [NASA-CASE-NPO-10774] c06 N72-17095
- HYGIENE**  
Urine collection apparatus --- feminine hygiene [NASA-CASE-MSC-18381-1] c52 N81-28740
- HYGROMETERS**  
Polymeric electrolytic hygrometer [NASA-CASE-NPO-13948-1] c35 N78-25391
- HYGROSCOPICITY**  
Method of evaluating moisture barrier properties of materials used in electronics encapsulation [NASA-CASE-NPO-10051] c18 N71-24934
- HYPERFINE STRUCTURE**  
Process for producing dispersion strengthened nickel with aluminum comprising metallic matrices embedded with oxides or other hyperfine compounds [NASA-CASE-XLE-06969] c17 N71-24142
- HYPERGOLIC ROCKET PROPELLANTS**  
Solid propellant ignition with hypergolic fluid injected to predetermined portions of propellant [NASA-CASE-XLE-00207] c28 N70-33375

- Regenerative cooling system for small rocket engine having restart capability and using noncryogenic hypergolic propellants  
[NASA-CASE-XLE-00685] c28 N70-41992
- Method for igniting solid propellant rocket motors by injecting hypergolic fluids  
[NASA-CASE-XLE-01988] c27 N71-15634
- HYPERSOUND AIRCRAFT**  
Multistage aerospace craft --- perspective drawings of conceptual design  
[NASA-CASE-XMF-02263] c05 N74-10907
- HYPERSOUND FLIGHT**  
Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c15 N78-32168
- HYPERSOUND FLOW**  
Design of hypersonic test facility for ablation tests and performance tests of vehicles under conditions of high temperature and pressure  
[NASA-CASE-XLA-05378] c11 N71-21475
- HYPERSOUND SPEED**  
Leading edge design for hypersonic reentry vehicles  
[NASA-CASE-XLA-00165] c31 N70-33242
- Aerospace vehicle with variable planform for hypersonic and subsonic flight  
[NASA-CASE-XLA-00805] c31 N70-38010
- Variable geometry manned orbital vehicle having high aerodynamic efficiency over wide speed range and incorporating auxiliary pivotal wings  
[NASA-CASE-XLA-03691] c31 N71-15674
- Supersonic or hypersonic vehicle control system comprising elevons with hinge line sweep and free of adverse aerodynamic cross coupling  
[NASA-CASE-XLA-08967] c02 N71-27088
- Generation of high temperature, high mass flow, and high Reynolds number air at hypersonic speeds  
[NASA-CASE-LAR-10578-1] c12 N73-25262
- Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds  
[NASA-CASE-LAR-10612-1] c12 N73-28144
- HYPERSOUND VEHICLES**  
Carbon dioxide purge systems to prevent condensation in spaces between cryogenic fuel tanks and hypersonic vehicle skin  
[NASA-CASE-XLA-01967] c31 N70-42015
- HYPERSOUND WIND TUNNELS**  
A rectangular rod-wall sound shield  
[NASA-CASE-LAR-12883-1] c09 N81-29138
- HYPERVELOCITY GUNS**  
Method and apparatus for use in forming highly collimated beam of microparticles with high charge to mass ratio and injecting beam into electrostatic accelerating tube  
[NASA-CASE-IGS-06628] c24 N71-16213
- Implosion driven, light gas, hypervelocity gun  
[NASA-CASE-XAC-05902] c11 N71-18578
- Collapsible piston for hypervelocity gun  
[NASA-CASE-MSC-13789-1] c11 N73-32152
- Hypervelocity gun --- using both electric and chemical energy for projectile propulsion  
[NASA-CASE-XLE-03186-1] c09 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] c91 N74-13130
- HYPERVELOCITY PROJECTILES**  
Impact measuring technique for determining size of hypervelocity projectiles  
[NASA-CASE-LAR-10913] c14 N72-16282
- Multiple image storing system for obtaining holographic record on film of high speed projectile  
[NASA-CASE-NFS-20596] c14 N72-17324
- HYPERVELOCITY WIND TUNNELS**  
Hypersonic test facility for studying ablation in models under high pressure and high temperature  
[NASA-CASE-XLA-00378] c11 N71-15925
- Design of hypersonic test facility for ablation tests and performance tests of vehicles under conditions of high temperature and pressure.  
[NASA-CASE-XLA-05378] c11 N71-21475
- HYSTEREISIS**  
Bellefonte spring assembly with elastic guides having low hysteresis
- [NASA-CASE-XNP-09452] c15 N69-27504
- IGNITERS**  
Characteristics of solid propellant rocket engine with controlled rate of thrust buildup operating in vacuum environment  
[NASA-CASE-NPO-11559] c28 N73-24784
- Remote fire stack igniter --- with solenoid-controlled valve  
[NASA-CASE-MFS-21675-1] c25 N74-33378
- Molded composite pyrogen igniter for rocket motors --- solid propellant ignition  
[NASA-CASE-LAR-12018-1] c20 N78-24275
- Plasma igniter for internal combustion engine  
[NASA-CASE-NPO-13828-1] c37 N79-11405
- IGNITION**  
Magnetically controlled plasma accelerator capable of ignition in low density gaseous environment  
[NASA-CASE-XLA-00327] c25 N71-29184
- IGNITION LIMITS**  
High voltage pulse generator for testing flash and ignition limits of nonmetallic materials in controlled atmospheres  
[NASA-CASE-MSC-12178-1] c09 N71-13518
- IGNITION SYSTEMS**  
Solid propellant ignition with hypergolic fluid injected to predetermined portions of propellant  
[NASA-CASE-XLE-00207] c28 N70-33375
- Ignition system for monopropellant combustion devices  
[NASA-CASE-XNP-00249] c28 N70-38249
- Igniter capsule for chemical ignition of liquid rocket propellants  
[NASA-CASE-XLE-00323] c28 N70-38505
- Catalyst bed ignition system for hydrazine propellants  
[NASA-CASE-XNP-00876] c28 N70-41311
- Sustained arc ignition system  
[NASA-CASE-LEW-12444-1] c33 N77-28385
- IGNITION TEMPERATURE**  
Test chamber for determining decomposition and autoignition of materials used in spacecraft under controlled environmental conditions  
[NASA-CASE-KSC-10198] c11 N71-28629
- ILLUMINATORS**  
Camera adapter design for image magnification including lens and illuminator  
[NASA-CASE-IMP-03844-1] c14 N71-26474
- Illumination system design for use as sunlight simulator in space environment simulators with multiple light sources reflected to single virtual source  
[NASA-CASE-HQN-10781] c23 N71-30292
- Focal plane array optical proximity sensor  
[NASA-CASE-NPO-15155-1] c74 N81-22894
- IMAGE CONTRAST**  
Video signal enhancement of signal component representing brightness of scene element in low contrast  
[NASA-CASE-NPO-10343] c07 N71-27341
- Method and apparatus for producing an image from a transparent object  
[NASA-CASE-GSC-11989-1] c74 N77-28932
- IMAGE CONVERTERS**  
Deep trap, laser activated image converting system  
[NASA-CASE-NPO-13131-1] c36 N75-19652
- Resistive anode image converter  
[NASA-CASE-HQN-10876-1] c33 N76-27473
- Wedge immersed thermistor bolometers  
[NASA-CASE-IGS-01245-1] c35 N79-33449
- Photocapacitive image converter  
[NASA-CASE-LAR-12513-1] c33 N80-28635
- IMAGE CORRELATORS**  
Multiple pattern holographic information storage and readout system  
[NASA-CASE-ERC-10151] c16 N71-29131
- Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c35 N75-15014
- Azimuth correlator for real-time synthetic aperture radar image processing  
[NASA-CASE-NPO-14019-1] c32 N79-14268
- An electro-optical Doppler tracker means and method for optical correlation of synthetic aperture radar data  
[NASA-CASE-NPO-14998-1] c33 N81-15194

- Optical signature generating and correlating apparatus  
[NASA-CASE-NPO-15226-1] c74 N81-19899
- IMAGE DISSECTOR TUBES**  
Apparatus for calibrating an image dissector tube  
[NASA-CASE-MFS-22208-1] c33 N75-26244  
Electronic optical transfer function analyzer  
[NASA-CASE-MFS-21672-1] c74 N76-19535
- IMAGE ENHANCEMENT**  
Electron beam scanning system for improved image definition and reduced power requirements for video signal transmission  
[NASA-CASE-ERC-10552] c09 N71-12539  
Physical correction filter for improving the optical quality of an image  
[NASA-CASE-HQN-10542-1] c74 N75-25706  
Method of obtaining intensified image from developed photographic films and plates  
[NASA-CASE-MFS-23461-1] c35 N79-10389
- IMAGE FILTERS**  
Filter arrangement for controlling light intensity in motion picture camera used in optical pyrometry  
[NASA-CASE-XLA-00062] c14 N70-33254  
Development and characteristics of spectroradiometer with wedge filters to eliminate adverse effect of pinholes in filters  
[NASA-CASE-HQN-10683] c14 N71-34389  
Physical correction filter for improving the optical quality of an image  
[NASA-CASE-HQN-10542-1] c74 N75-25706
- IMAGE INTENSIFIERS**  
Magnifying image intensifier  
[NASA-CASE-GSC-12010-1] c74 N78-18905  
Method of obtaining intensified image from developed photographic films and plates  
[NASA-CASE-MFS-23461-1] c35 N79-10389
- IMAGE PROCESSING**  
Azimuth correlator for real-time synthetic aperture radar image processing  
[NASA-CASE-NPO-14019-1] c32 N79-14268  
Interleaving device  
[NASA-CASE-GSC-12111-2] c33 N81-29342
- IMAGE RESOLUTION**  
An image readout device with electrically variable spatial resolution  
[NASA-CASE-LAR-12633-1] c35 N80-22661
- IMAGE TUBES**  
Image tube --- deriving electron beam replica of image  
[NASA-CASE-GSC-11602-1] c33 N74-21850  
System for producing chroma signals  
[NASA-CASE-MSC-14683-1] c74 N77-18893
- IMAGES**  
Camera adapter design for image magnification including lens and illuminator  
[NASA-CASE-XMP-03844-1] c14 N71-26474  
Stereoscopic television system, including projecting pair of binocular images  
[NASA-CASE-ARC-10160-1] c23 N72-27728
- IMAGING TECHNIQUES**  
Highly stable optical mirror assembly optimizing image quality of light diffraction patterns  
[NASA-CASE-ERC-10001] c23 N71-24868  
Noise elimination in coherent imaging system by axial rotation of optical lens for spectral distribution of degrading affects  
[NASA-CASE-GSC-11133-1] c23 N72-11568  
Phototransistor imaging system with mosaic of phototransistors on semiconductor substrate  
[NASA-CASE-MFS-20809] c23 N73-13660  
Computerized optical system for producing multiple images of a scene simultaneously  
[NASA-CASE-MSC-12404-1] c23 N73-13661  
Optical imaging system for increasing light absorption efficiency of imaging detector  
[NASA-CASE-ARC-10194-1] c23 N73-20741  
Ritchey-Chretien telescope responsive to images located off telescope optical axis  
[NASA-CASE-GSC-11487-1] c14 N73-30393  
Data storage, image tube type  
[NASA-CASE-MSC-14053-1] c60 N74-12888  
Optical instruments  
[NASA-CASE-MSC-14096-1] c74 N74-15095  
Electron microscope aperture system  
[NASA-CASE-ARC-10448-3] c35 N77-14408  
Method and apparatus for producing an image from a transparent object  
[NASA-CASE-GSC-11989-1] c74 N77-28932
- Full color hybrid display for aircraft simulators --- landing aids  
[NASA-CASE-ARC-10903-1] c09 N78-18083  
Chromatically corrected virtual image display --- lens design for flight simulators  
[NASA-CASE-LAR-12251-1] c74 N79-14892  
Multispectral imaging and analysis system --- using charge coupled devices and linear arrays  
[NASA-CASE-NPO-13691-1] c43 N79-17288  
System and method for obtaining wide screen Schlieren photographs  
[NASA-CASE-NPO-14174-1] c74 N79-20856  
Low intensity X-ray and gamma-ray imaging device --- fiber optics  
[NASA-CASE-GSC-12263-1] c74 N79-20857  
Diffraction grating configuration for X-ray and ultraviolet focusing  
[NASA-CASE-GSC-12357-1] c74 N80-21140  
Low intensity X-ray and gamma-ray imaging spectrometer  
[NASA-CASE-GSC-12587-1] c35 N80-29635  
Multispectral scanner optical system  
[NASA-CASE-MSC-18255-1] c74 N80-33210  
System for forming a quadrified image comprising angularly related fields of view of a three dimensional object  
[NASA-CASE-NPO-14219-1] c74 N81-17886  
Time delay and integration detectors using charge transfer devices  
[NASA-CASE-GSC-12324-1] c33 N81-33403
- IMIDES**  
Synthesis and chemical properties of imidazopyrrolone/imide copolymers  
[NASA-CASE-XLA-08802] c06 N71-11238  
Molding process for imidazopyrrolone polymers  
[NASA-CASE-LAR-10547-1] c31 N74-13177  
Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c27 N81-31364
- IMINES**  
Synthesis of polymeric schiff bases by schiff-base exchange reactions  
[NASA-CASE-XMP-08651] c06 N71-11236  
Direct synthesis of polymeric schiff bases from two amines and two aldehydes  
[NASA-CASE-XMP-08655] c06 N71-11239  
Synthesis of schiff bases for heat shields by acetal amine reactions  
[NASA-CASE-XMP-08652] c06 N71-11243  
Synthesis of aromatic diamines and dialdehyde polymers using Schiff base  
[NASA-CASE-XMP-03074] c06 N71-24740
- IMMOBILIZATION**  
Stretcher with rigid head and neck support with capability of supporting immobilized person in vertical position for removal from vehicle hatch to exterior also useful as splint stretcher  
[NASA-CASE-XMP-06589] c05 N71-23159  
Absolute focus locking device for microscopes to maintain set focus for extended time period  
[NASA-CASE-LAR-10184] c14 N72-22445  
Spine immobilization apparatus  
[NASA-CASE-ARC-11167-1] c52 N81-25662
- IMPACT**  
Shock absorber for use as protective barrier in impact energy absorbing system  
[NASA-CASE-NPO-10671] c15 N72-20443  
System for detecting impact position of cosmic dust on detector surface  
[NASA-CASE-GSC-11291-1] c25 N72-33696  
Impact position detector for outer space particles  
[NASA-CASE-GSC-11829-1] c35 N75-27331
- IMPACT ACCCELERATION**  
Suspended mass oscillation damper based on impact energy absorption for damping wind induced oscillations of tall stacks, antennas, and umbilical towers  
[NASA-CASE-LAR-10193-1] c15 N71-27146
- IMPACT DAMAGE**  
Measuring micrometeoroid depth of penetration into various materials  
[NASA-CASE-XLA-00941] c14 N71-23240
- IMPACT LOADS**  
Piezoelectric transducer for detecting and measuring micrometeoroids  
[NASA-CASE-XAC-01101] c14 N70-41957  
Impact testing machine for imparting large impact forces on high velocity packages  
[NASA-CASE-XMP-04817] c14 N71-23225



## IMPACT RESISTANCE

Electric storage battery with high impact resistance  
[NASA-CASE-NPO-11021] c03 N72-20032

Hybrid composite laminate structures  
[NASA-CASE-LEW-12118-1] c24 N77-27188

**IMPACT STRENGTH**  
High impact pressure regulator having minimum number of lightweight movable elements  
[NASA-CASE-NPO-10175] c14 N71-18625

**IMPACT TESTING MACHINES**  
Development and characteristics of pentometer for measuring physical properties of lunar surface  
[NASA-CASE-XLA-00934] c14 N71-22765

Impact testing machine for imparting large impact forces on high velocity packages  
[NASA-CASE-XNP-04817] c14 N71-23225

**IMPACT TOLERANCES**  
High impact antennas with high radiating efficiency  
[NASA-CASE-NPO-10231] c07 N71-26101

vehicular impact absorption system  
[NASA-CASE-NPO-14014-1] c37 N79-10420

**IMPEDANCE MATCHING**  
Impedance transformation device for signal mixing  
[NASA-CASE-YGS-01110] c07 N65-24334

Reflectometer for receiver input impedance match measurement  
[NASA-CASE-XNP-10843] c07 N71-11267

Radio frequency coaxial filter to provide dc isolation and low frequency signal rejection in audio range  
[NASA-CASE-YGS-01418] c09 N71-23573

Pattern and impedance matching improvements in transversely polarized triaxial antenna  
[NASA-CASE-YGS-02290] c07 N71-28609

Pulse switching for high energy lasers  
[NASA-CASE-NPO-14556-1] c36 N79-21336

**IMPEDANCE MEASUREMENTS**  
Development of electrical system for measuring high impedance  
[NASA-CASE-XMS-06589-1] c09 N71-20569

Apparatus for measuring semiconductor device resistance  
[NASA-CASE-NPO-14424-1] c33 N80-32650

**IMPLANTATION**  
Biotelemetry apparatus with dual voltage generators for implanting in animals  
[NASA-CASE-XAC-05706] c05 N71-12342

Magnetic electrical connectors for biomedical percutaneous implants  
[NASA-CASE-KSC-11030-1] c52 N77-25772

**IMPLANTED ELECTRODES (BIOLOGY)**  
An implantable electrical device  
[NASA-CASE-GSC-12560-1] c52 N80-27073

pocket ECG electrode  
[NASA-CASE-ARC-11258-1] c52 N80-33081

Subcutaneous electrode structure  
[NASA-CASE-ARC-11117-1] c52 N81-14612

**IMPLOSIONS**  
Implosion driven, light gas, hypervelocity gun  
[NASA-CASE-XAC-05902] c11 N71-18578

**IMPREGNATING**  
Composite lamination method  
[NASA-CASE-LAR-12019-1] c24 N78-17150

Insoluble polyelectrolyte and ion-exchange hollow fiber impregnated therewith  
[NASA-CASE-NPO-13530-1] c25 N81-17187

**IMPULSE GENERATORS**  
Percutaneous connector device  
[NASA-CASE-KSC-10849-1] c52 N77-14738

**IMPURITIES**  
Fabrication of sintered impurity semiconductor brushes for electrical energy transfer  
[NASA-CASE-XNP-01016] c26 N71-17618

Method of mitigating titanium impurities effects in p-type silicon material for solar cells  
[NASA-CASE-NPO-14635-1] c44 N80-24741

**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] c02 N80-28300

**INCIDENCE**  
Method of and means for testing a glancing-incidence mirror system of an X-ray telescope  
[NASA-CASE-MPS-22409-2] c74 N78-15880

## INCIDENT RADIATION

Solar cell assembly --- for use under high intensity illumination  
[NASA-CASE-LEW-11549-1] c44 N77-19571

**INCLINATION**  
Hingeless helicopter rotor with improved stability  
[NASA-CASE-ARC-10807-1] c05 N77-17629

**INCOHERENT SCATTERING**  
Rapidly pulsed, high intensity, incoherent light source  
[NASA-CASE-XLE-2529-3] c33 N74-20859

**INDICATING INSTRUMENTS**  
Piezoelectric means for missile stage separation indication and stage initiation  
[NASA-CASE-XLA-00791] c03 N70-39930

Inductive liquid level detection system  
[NASA-CASE-XLE-01609] c14 N71-10500

Apparatus for determining quality of bond between high density material and low density material  
[NASA-CASE-MFS-13686] c15 N71-18132

Device for detecting hydrogen fires onboard high altitude rockets  
[NASA-CASE-MFS-13130] c10 N72-17173

Fatigue failure load indicator  
[NASA-CASE-LAR-12027-1] c39 N79-22537

**INDIUM ALLOYS**  
Method for attaching a fused-quartz mirror to a conductive metal substrate  
[NASA-CASE-MFS-23405-1] c26 N77-29260

Solar cell collector  
[NASA-CASE-LEW-12552-1] c44 N78-25527

**INDUCTANCE**  
Current dependent variable inductance for input filter chokes of ac or dc power supplies  
[NASA-CASE-ERC-10139] c09 N72-17154

Inductance device with vacuum insulation and materials of low gas entrapping capability  
[NASA-CASE-LEW-10330-1] c09 N72-27226

Direct reading inductance meter  
[NASA-CASE-NPO-13792-1] c35 N77-32455

**INDUCTION HEATING**  
Induction heating of metallurgical specimens to high temperatures in coil furnace  
[NASA-CASE-XLE-04026] c14 N71-23267

Induction heating gun  
[NASA-CASE-LAR-12540-1] c37 N80-11468

One step dual purpose joining technique  
[NASA-CASE-LAR-12595-1] c37 N80-11469

Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c33 N81-19389

**INDUCTION MOTORS**  
Voltage controlled oscillator circuit for two-phase induction motor control  
[NASA-CASE-MFS-21465-1] c10 N73-32145

Variable frequency inverter for ac induction motors with torque, speed and braking control  
[NASA-CASE-MFS-22088-1] c33 N75-15874

Power factor control system for AC induction motors  
[NASA-CASE-MFS-23280-1] c33 N78-10376

Magnetic field control --- electromechanical torquing devices  
[NASA-CASE-MFS-23828-1] c33 N80-17359

Three phase power factor controller  
[NASA-CASE-MFS-25535-1] c33 N81-12330

Power factor control system for ac induction motors  
[NASA-CASE-MFS-23988-1] c33 N81-27395

**INDUCTORS**  
Inductive liquid level detection system  
[NASA-CASE-XLE-01609] c14 N71-10500

Describing apparatus used in vacuum deposition of thin film inductive windings for spacecraft microcircuitry  
[NASA-CASE-XNP-01667] c15 N71-17647

Double-induction variable speed system for constant-frequency electrical power generation  
[NASA-CASE-ERC-10065] c09 N71-27364

Elimination of current spikes in buck power converters  
[NASA-CASE-NPO-14505-1] c33 N81-19393

**INDUSTRIAL PLANTS**  
Simplified technique and device for producing industrial grade synthetic diamonds  
[NASA-CASE-MFS-20698-2] c15 N73-19457

**INDUSTRIAL WASTES**  
Process of forming catalytic surfaces for wet

- oxidation reactions  
[NASA-CASE-MSC-14831-1] c25 N78-10225  
Process for purification of waste water produced  
by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c85 N79-17747
- INERTIA**  
Gearing system for eliminating backlash and  
filtering input torque fluctuations from high  
inertia load  
[NASA-CASE-IGS-04227] c15 N71-21744
- INERTIAL GUIDANCE**  
Hermetically sealed vibration damper design for  
use in gimbal assembly of spacecraft inertial  
guidance system  
[NASA-CASE-MSC-10959] c15 N71-26243
- INERTIAL NAVIGATION**  
Autonomous navigation system --- gyroscopic  
pendulum for air navigation  
[NASA-CASE-ABC-11257-1] c04 N81-21647
- INERTIAL PLATFORMS**  
Inertial component clamping assembly design for  
spacecraft guidance and control system mounting  
[NASA-CASE-XMS-02184] c15 N71-20813  
Inertial gimbal alignment system for spacecraft  
guidance  
[NASA-CASE-XMP-01669] c21 N71-23289  
Temperature compensated digital inertial sensor  
--- circuit for maintaining inertial element  
of gyroscope or accelerometer at constant  
position  
[NASA-CASE-NPO-13044-1] c35 N74-15694  
Attitude control system  
[NASA-CASE-MFS-22787-1] c15 N77-10113  
Rim inertial measuring system  
[NASA-CASE-LAR-12052-1] c18 N81-29152
- INERTIAL REFERENCE SYSTEMS**  
Development of attitude control system for  
spacecraft orientation  
[NASA-CASE-IGS-04393] c21 N71-14159  
Large amplitude, linear inertial reference  
system of vibrating string type for spacecraft  
reference plane  
[NASA-CASE-XAC-03107] c23 N71-16698
- INFLATABLE SPACECRAFT**  
Passive thermal control coating on aluminum foil  
laminate for inflatable spacecraft surfaces  
[NASA-CASE-XLA-01291] c33 N70-36617  
Erectable, inflatable, radio signal reflecting  
passive communication satellite  
[NASA-CASE-XLA-00210] c30 N70-40309  
Rotating, multisided mandrel for fabricating  
gored inflatable spacecraft  
[NASA-CASE-XLA-04143] c15 N71-17687  
Forming inflatable panels erectable in space for  
passive communication satellite  
[NASA-CASE-XLA-03497] c15 N71-23652  
Development and characteristics of inflatable  
structure to provide escape from orbit for  
spacecrews under emergency conditions  
[NASA-CASE-XMS-06162] c31 N71-28851
- INFLATABLE STRUCTURES**  
Aeroflexible wing structure with air scoop for  
inflating stiffeners with ram air  
[NASA-CASE-XLA-06095] c01 N69-39581  
Design of inflatable life raft for aircrafts and  
boats  
[NASA-CASE-XMS-00863] c05 N70-34857  
Lightweight life preserver without fastening  
devices  
[NASA-CASE-XMS-00864] c05 N70-36493  
Inflatable honeycomb panel element for  
lightweight structures usable in space  
stations and other construction  
[NASA-CASE-XLA-00204] c32 N70-36536  
Inflatable radar reflector unit - lightweight,  
highly reflective to electromagnetic  
radiation, and adaptable for erection and  
deployment with minimum effort and time  
[NASA-CASE-XMS-00893] c07 N70-40063  
Temperature sensor warning system for pneumatic  
tires of aircraft and ground vehicles  
[NASA-CASE-XLA-01926] c14 N71-15620  
Inflation system for balloon type satellites  
[NASA-CASE-XGS-03351] c31 N71-16081  
Development and characteristics of protective  
coatings for spacecraft  
[NASA-CASE-IMP-02507] c31 N71-17679  
Development and characteristics of self  
supporting space vehicle  
[NASA-CASE-XLA-00117] c31 N71-17680  
Conforming polisher for aspheric surfaces of  
revolution with inflatable tube  
[NASA-CASE-XGS-02884] c15 N71-22705  
Technique for making foldable, inflatable,  
plastic honeycomb core panels for use in  
building and bridge structures, light and  
radio wave reflectors, and spacecraft  
[NASA-CASE-XLA-03492] c15 N71-22713  
Collapsible antenna boom and coaxial  
transmission line having inflatable inner tube  
[NASA-CASE-MFS-20068] c07 N71-27191  
Space expandable tether device for use as  
passageway between two docked spacecraft  
[NASA-CASE-XMS-10993] c15 N71-28936  
Inflatable rocket engine nozzle skirt with  
transpiration cooling  
[NASA-CASE-MFS-20619] c28 N72-11708  
Modification of one man life raft  
[NASA-CASE-LAR-10241-1] c54 N74-14845  
Emergency space-suit helmet  
[NASA-CASE-MSC-10954-1] c54 N78-18761  
Pressure control valve --- inflating flexible  
bladders  
[NASA-CASE-ABC-11251-1] c37 N81-17433  
Pneumatic inflatable end effector  
[NASA-CASE-MFS-23696-1] c54 N81-26718
- INFORMATION RETRIEVAL**  
Multiple pattern holographic information storage  
and readout system  
[NASA-CASE-ERC-10151] c16 N71-29131
- INFRARED DETECTORS**  
Temperature sensitive capacitor device for  
detecting very low intensity infrared radiation  
[NASA-CASE-XNP-09750] c14 N69-39937  
Sight switch using infrared source and sensor  
mounted beside eye  
[NASA-CASE-XMP-03934] c09 N71-22985  
Characteristics of infrared photodetectors  
manufactured from semiconductor material  
irradiated by electron beam  
[NASA-CASE-LAR-10728-1] c14 N73-12445  
Doped Josephson tunneling junction for use in a  
sensitive IR detector  
[NASA-CASE-NPO-13348-1] c33 N75-31332  
Multispectral scanner optical system  
[NASA-CASE-MSC-18255-1] c74 N80-33210  
Refrigerator module, system and process ---  
regenerative, cryogenic cooling of an infrared  
radiation detection system  
[NASA-CASE-ABC-11263-1] c31 N81-27328
- INFRARED INSTRUMENTS**  
Infrared scanning system for maintaining  
spacecraft orientation with earth reference  
[NASA-CASE-XLA-00120] c21 N70-33181
- INFRARED INTERFEROMETERS**  
Over-under double-pass interferometer  
[NASA-CASE-NPO-13999-1] c35 N78-18395
- INFRARED LASERS**  
Monitoring atmospheric pollutants with a  
heterodyne radiometer transmitter-receiver  
[NASA-CASE-NPO-11919-1] c35 N74-11284  
Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c74 N77-26942  
Thermal compensator for closed-cycle helium  
refrigerator --- assuring constant temperature  
for an infrared laser diode  
[NASA-CASE-GSC-12168-1] c31 N79-17029
- INFRARED RADIATION**  
High speed infrared furnace  
[NASA-CASE-XLE-10466] c17 N69-25147  
High field CdS detector for infrared radiation  
[NASA-CASE-LAR-11027-1] c35 N74-18088
- INFRARED REFLECTION**  
Electromagnetic radiation energy arrangement ---  
coatings for solar energy absorption and  
infrared reflection  
[NASA-CASE-NPO-00428-1] c32 N79-19186
- INFRARED SCANNERS**  
Infrared scanning system for maintaining  
spacecraft orientation with earth reference  
[NASA-CASE-XLA-00120] c21 N70-33181  
Method and equipment for locating earth infrared  
horizon from space, independent of season and  
latitude  
[NASA-CASE-LAR-10726-1] c14 N73-20475
- INFRARED SPECTRA**  
Diatomic infrared gasdynamic laser --- for  
producing different wavelengths

- [NASA-CASE-ARC-10370-1] c36 N75-31426  
**INFRARED SPECTROMETERS**  
 Telespectrograph for analyzing upper atmosphere by tracking bodies reentering atmosphere at high velocities  
 [NASA-CASE-XLA-03273] c14 N71-18699  
 Cooled echelle grating spectrometer --- for space telescope applications  
 [NASA-CASE-NPO-14372-1] c35 N80-26635  
**INFRARED SPECTROSCOPY**  
 Apparatus for providing a servo drive signal in a high-speed stepping interferometer  
 [NASA-CASE-NPO-13569-2] c35 N79-14348  
**INFRASONIC FREQUENCIES**  
 Resonant infrasonic gauging device for measuring liquid quantity in closed bladderless reservoir  
 [NASA-CASE-MSC-11847-1] c14 N72-11363  
**INHIBITORS**  
 Inhibited solid propellant composition containing beryllium hydride  
 [NASA-CASE-NPO-10866-1] c28 N79-14228  
**INITIATORS (EXPLOSIVES)**  
 Piezoelectric means for missile stage separation indication and stage initiation  
 [NASA-CASE-XLA-00791] c03 N70-39930  
 Electroexplosive safe-arm initiator using electric driven electromagnetic coils and magnets to align charge  
 [NASA-CASE-LAR-10372] c09 N71-18599  
 Electroexplosive device  
 [NASA-CASE-NPO-13858-1] c28 N79-11231  
**INJECTION**  
 Foam insulation thickness measuring and injection device for spacecraft applications  
 [NASA-CASE-MPS-20261] c14 N71-27005  
**INJECTORS**  
 Propellant injectors for rocket combustion chambers  
 [NASA-CASE-XLE-00103] c28 N70-33241  
 Fuel injection system for maximum combustion efficiency of rocket engines  
 [NASA-CASE-XLE-00111] c28 N70-38199  
 Injector manifold assembly for bipropellant rocket engines providing for fuel propellant to serve as coolant  
 [NASA-CASE-XMP-00148] c28 N70-38710  
 Method and apparatus for use in forming highly collimated beam of microparticles with high charge to mass ratio and injecting beam into electrostatic accelerating tube  
 [NASA-CASE-IGS-06628] c24 N71-16213  
 Control valve and coaxial variable injector for controlling bipropellant mixture ratio and flow  
 [NASA-CASE-XNP-09702] c15 N71-17654  
 Rocket engine injector orifice to accommodate changes in density, velocity, and pressure, thereby maintaining constant mass flow rate of propellant into rocket combustion chamber  
 [NASA-CASE-XLE-03157] c28 N71-24736  
 Bipropellant injector with pair of concave deflector plates  
 [NASA-CASE-XNP-09461] c28 N72-23609  
 Coaxial injector for mixing liquid propellants within combustion chambers  
 [NASA-CASE-NPO-11095] c15 N72-25455  
 Improved injector with porous plug for bubbles of gas into feed lines of electrically conductive liquid  
 [NASA-CASE-NPO-11377] c15 N73-27406  
 Rocket injector head  
 [NASA-CASE-XMP-04592-1] c20 N79-21125  
**INLET FLOW**  
 High pressure four-way valve with C ring adapted to pass across inlet port  
 [NASA-CASE-XNP-00214] c15 N70-36908  
 Method for maintaining good performance in gas turbine during air flow distortion  
 [NASA-CASE-LEW-10286-1] c28 N71-28915  
 Airflow control system for supersonic inlets  
 [NASA-CASE-LEW-11188-1] c02 N74-20646  
 Variably positioned guide vanes for aerodynamic choking  
 [NASA-CASE-LAR-10642-1] c07 N74-31270  
 Shock position sensor for supersonic inlets --- measuring pressure in the throat of a supersonic inlet  
 [NASA-CASE-LEW-11915-1] c35 N76-14431  
 Method for fabricating a mass spectrometer inlet leak
- [NASA-CASE-GSC-12077-1] c35 N77-24455  
 Gas turbine engine with recirculating bleed  
 [NASA-CASE-LEW-12452-1] c07 N78-25089  
 Self stabilizing sonic inlet  
 [NASA-CASE-LEW-11890-1] c05 N79-24976  
**INLET NOZZLES**  
 Rocket injector head  
 [NASA-CASE-XMP-04592-1] c20 N79+21125  
**INLET PRESSURE**  
 Fluid jet amplifier with fluid from jet nozzle deflected by inlet pressure  
 [NASA-CASE-XLE-03512] c12 N69-21466  
 Shock position sensor for supersonic inlets --- measuring pressure in the throat of a supersonic inlet  
 [NASA-CASE-LEW-11915-1] c35 N76-14431  
**INOCULATION**  
 Automatic inoculating apparatus --- includes movable carriage, drive motor, and swabbing motor  
 [NASA-CASE-LAR-11074-1] c51 N75-13502  
**INORGANIC COATINGS**  
 Composition of diffuse reflective coating containing sodium chloride in combination with diol solvent and organic wetting and drying agents  
 [NASA-CASE-GSC-11214-1] c06 N73-13128  
 Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
 [NASA-CASE-ABC-11057-1] c27 N78-31233  
 Advanced inorganic separators for alkaline batteries and method of making same --- a polymeric coating applied to a porous flexible substrate  
 [NASA-CASE-LEW-13171-1] c44 N81-22466  
**INORGANIC COMPOUNDS**  
 Inorganic ion exchange membrane electrolytes for fuel cell use  
 [NASA-CASE-XNP-04264] c03 N69-21337  
 Preparation of inorganic solid film lubricants with long wear life and stability in aerospace environments  
 [NASA-CASE-XMP-03988] c15 N71-21403  
 Modification of polyurethanes with alkyl halide resins, inorganic salts, and encapsulated volatile and reactive halogen for fuel fire control  
 [NASA-CASE-ABC-10098-1] c06 N71-24739  
 Inorganic thermal control and solar reflector coatings  
 [NASA-CASE-MPS-20011] c18 N72-22566  
 Inorganic-organic separators for alkaline batteries  
 [NASA-CASE-LEW-12649-1] c44 N78-25530  
 Method for the preparation of inorganic single crystal and polycrystalline electronic materials  
 [NASA-CASE-XLE-02545-1] c76 N79-21910  
 Carboranyl cyclotriphosphazenes and their polymers --- thermal insulation  
 [NASA-CASE-ABC-11176-1] c27 N80-21533  
**INORGANIC PEROXIDES**  
 Process for preparing higher oxides of the alkali and alkaline earth metals  
 [NASA-CASE-ABC-10992-1] c26 N78-32229  
 Process for the preparation of calcium superoxide  
 [NASA-CASE-ABC-11053-1] c25 N79-10162  
**INPUT**  
 Apparatus for filtering input signals  
 [NASA-CASE-NPO-10198] c09 N71-24806  
 RC networks with voltage amplifier, RC input circuit, and positive feedback  
 [NASA-CASE-ABC-10020] c10 N72-17172  
 High-speed multiplexing of keyboard data inputs  
 [NASA-CASE-NPO-14554-1] c60 N81-27814  
**INPUT/OUTPUT ROUTINES**  
 Analog to digital converter  
 [NASA-CASE-NPO-13385-1] c33 N76-18345  
**INSERTION**  
 Apparatus and method of inserting a microelectrode in body tissue or the like using vibration means  
 [NASA-CASE-NPO-13910-1] c52 N79-27836  
**INSERTION LOSS**  
 High impedance alternating current sensing transformer device between two bolometers for measuring insertion loss of test component  
 [NASA-CASE-XNP-01193] c10 N71-16057

**INSPECTION**

Automatic visual inspection system for microelectronics  
[NASA-CASE-NPO-13282] c38 N78-17396  
System for refurbishing and processing parachutes  
[NASA-CASE-KSC-11042-1] c02 N81-14967

**INSTALLING**

Device for installing rocket engines  
[NASA-CASE-NFS-19220-1] c20 N76-22296  
Thermocouple installation  
[NASA-CASE-NPO-13540-1] c35 N77-14409  
A method and technique for installing light-weight fragile, high-temperature fiber insulation --- spacecraft heat sealing  
[NASA-CASE-MSC-16934-2] c37 N81-16468

**INSTRUMENT ERRORS**

Solar radiation direction detector and device for compensating degradation of photocells  
[NASA-CASE-XLA-00183] c14 N70-40239

**INSTRUMENT FLIGHT RULES**

Controlled visibility device for simulating poor visibility conditions in training pilots in instrument landing and flight procedures  
[NASA-CASE-XPR-04147] c11 N71-10748

**INSTRUMENT ORIENTATION**

Sensor consisting of photocells mounted on pyramidal base for improved pointing accuracy of planetary trackers  
[NASA-CASE-XMP-04180] c07 N69-39736  
Inertial gimbal alignment system for spacecraft guidance  
[NASA-CASE-XMP-01669] c21 N71-23289  
Optical gauging system for monitoring machine tool alignment  
[NASA-CASE-XAC-09489-1] c15 N71-26673  
Development of solar energy powered heliotope assembly to orient solar array toward sun  
[NASA-CASE-GSC-10945-1] c21 N72-31637

**INSTRUMENT PACKAGES**

Apparatus for ejecting covers of instrument packages using differential pressure principle  
[NASA-CASE-XMP-04132] c15 N69-27502  
Removable potting compound for instrument shock protection  
[NASA-CASE-XLA-00482] c15 N70-36409  
Plastic foam generator for space vehicle instrument payload package flotation in water landing  
[NASA-CASE-XLA-00838] c03 N70-36778  
High velocity guidance and spin stabilization gyro controlled jet reaction system for launch vehicle payloads  
[NASA-CASE-XLA-01339] c31 N71-15692  
Ethylene oxide sterilization and encapsulating process for sterile preservation of instruments and solid propellants  
[NASA-CASE-XMP-09763] c14 N71-20461  
Thermal control canister  
[NASA-CASE-GSC-12253-1] c34 N79-31523

**INSTRUMENTS**

Method and apparatus for bowing of instrument panels to improve radio frequency shielded enclosure  
[NASA-CASE-XMP-09422] c07 N71-19436  
Design and development of pressure sensor for measuring differential pressures of few pounds per square inch  
[NASA-CASE-XMP-01974] c14 N71-22752  
Development of temperature compensated thrust measuring gage for measuring forces as function of time in environment with varying temperature  
[NASA-CASE-IGS-02319] c14 N71-22565  
Development and characteristics of self-calibrating displacement transducer for measuring magnitude and frequency of displacement of bodies  
[NASA-CASE-XLA-00781] c09 N71-22999  
Design, development, and characteristics of pressure and temperature sensor operating immersed in fluid flow  
[NASA-CASE-LEW-10281-1] c14 N72-17327  
Development of apparatus for mounting scientific experiments in spacecraft to permit utilization without maneuvering spacecraft  
[NASA-CASE-MSC-12372-1] c31 N72-25842  
Magnetic suspension and pointing system  
[NASA-CASE-LAR-11889-2] c37 N78-27424

Rotary leveling base platform  
[NASA-CASE-ARC-10981-1] c37 N78-27425  
**INSULATED STRUCTURES**  
Low thermal loss piping arrangement for moving cryogenic media through double chamber structure  
[NASA-CASE-XMP-08882] c15 N69-39935

**INSULATION**

Electrode attached to helmets for detecting low level signals from skin of living creatures  
[NASA-CASE-ARC-10043-1] c05 N71-11193  
Characteristics of foamed-in-place ceramic refractory insulating material and method of fabrication  
[NASA-CASE-IGS-02435] c18 N71-22998  
Method of fabricating equal length insulated wire  
[NASA-CASE-PRC-10038] c15 N72-20444  
Inductance device with vacuum insulation and materials of low gas entrapping capability  
[NASA-CASE-LEW-10330-1] c09 N72-27226  
Insulated electrocardiographic electrodes --- without paste electrolyte  
[NASA-CASE-MSC-14339-1] c05 N75-24716  
Silica reusable surface insulation  
[NASA-CASE-ARC-10721-1] c27 N76-22376  
Two-component ceramic coating for silica insulation  
[NASA-CASE-MSC-14270-1] c27 N76-22377  
Three-component ceramic coating for silica insulation  
[NASA-CASE-MSC-14270-2] c27 N76-23426  
Field effect transistor and method of construction thereof  
[NASA-CASE-MPS-23312-1] c33 N78-27326  
Cork-resin ablative insulation for complex surfaces and method for applying the same  
[NASA-CASE-MPS-23626-1] c24 N80-26388

**INSULATORS**

High voltage insulators for direct current in acceleration system of electrostatic thruster  
[NASA-CASE-XLE-01902] c28 N71-10574  
High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
[NASA-CASE-NPO-13690-1] c27 N78-19302

**INTAKE SYSTEMS**

Deflector for preventing objects from entering nacelle inlets of jet aircraft  
[NASA-CASE-XLE-00388] c28 N70-34788  
The engine air intake system  
[NASA-CASE-ARC-10761-1] c07 N77-18154  
Fluid sampling device  
[NASA-CASE-GSC-12143-1] c35 N77-32456  
Passive propellant system  
[NASA-CASE-MPS-23642-1] c20 N80-10278  
Reciprocating engines  
[NASA-CASE-MSC-16239-1] c37 N81-32510

**INTEGRATED CIRCUITS**

Computer circuit performing both counting and shifting logic operations also capable of miniaturization and integration in basic circuits  
[NASA-CASE-XMP-01753] c08 N71-22897  
Development and characteristics of electric circuitry for detecting electrical pulses rise time and amplitude  
[NASA-CASE-XMP-08804] c09 N71-24717  
Method and apparatus for testing integrated circuit microtab welds  
[NASA-CASE-ARC-10176-1] c15 N72-21464  
Single integrated circuit chip with field effect transistor  
[NASA-CASE-GSC-10835-1] c09 N72-33205  
Integrated circuit tangnet function generator  
[NASA-CASE-MSC-13907-1] c10 N73-26230  
Inverted geometry transistor for use with monolithic integrated circuit  
[NASA-CASE-ARC-10330-1] c09 N73-32112  
Integrated circuit package with lead structure, and method of preparing the same  
[NASA-CASE-MPS-21374-1] c33 N74-12951  
Integrated P-channel MOS gyrator  
[NASA-CASE-MPS-22343-1] c33 N74-34638  
Four phase logic systems --- including integrated microcircuits  
[NASA-CASE-MSC-14240-1] c33 N75-14957  
Integrable power gyrator --- with 2-matrix design using parallel transistors  
[NASA-CASE-MPS-22342-1] c33 N75-30428

- Cross correlation anomaly detection system  
[NASA-CASE-NPO-13283] c38 N78-17395
- Solar cell system having alternating current output  
[NASA-CASE-LEW-12806-1] c44 N78-25553
- Complementary DMOS-V MOS integrated circuit structure  
[NASA-CASE-GSC-12190-1] c33 N79-12321
- A general logic structure for custom LSI circuits  
[NASA-CASE-NPO-14410-1] c33 N79-25314
- Method for analyzing radiation sensitivity of integrated circuits  
[NASA-CASE-NPO-14350-1] c33 N80-14332
- Digital demodulator  
[NASA-CASE-LAR-12659-1] c33 N80-31731
- Liquid immersion apparatus for minute articles  
[NASA-CASE-MFS-25363-1] c31 N80-32585
- Solar cell system having alternating current output  
[NASA-CASE-LEW-12806-2] c44 N81-12542
- Microwave integrated circuit for Josephson voltage standards  
[NASA-CASE-MFS-23845-1] c33 N81-17348
- High stability amplifier  
[NASA-CASE-GSC-12646-1] c33 N81-32391
- INTEGRATORS**
- Solid state operational integrator  
[NASA-CASE-NPO-10230] c09 N71-12520
- Variable duration pulse integrator design for integrating pulse duration modulated pulses with elimination of ripple content  
[NASA-CASE-XLA-01219] c10 N71-23084
- Solid state integrator for converting variable width pulses into analog voltage  
[NASA-CASE-XLA-03356] c10 N71-23315
- Feedback integrating circuit with grounded capacitor for signal processing  
[NASA-CASE-XAC-10607] c10 N71-23669
- High speed phase detector design indicating phase relationship between two square wave input signals  
[NASA-CASE-XNP-01306-2] c09 N71-24596
- Adaptive control system for line-commutated inverters  
[NASA-CASE-MFS-25209-1] c33 N81-31480
- INTERFACIAL TENSION**
- Passive propellant system  
[NASA-CASE-MFS-23642-1] c20 N80-10278
- INTERFEROMETERS**
- Describing device for velocity control of electromechanical drive mechanism of scanning mirror of interferometer  
[NASA-CASE-XGS-03532] c14 N71-17627
- Incremental motion drive system applied to interferometer components  
[NASA-CASE-XNP-08897] c15 N71-17694
- Design and development of optical interferometer with laser light source for application to schlieren systems  
[NASA-CASE-XLA-04295] c16 N71-24170
- Digital sensor for counting fringes produced by interferometers with improved sensitivity and one photomultiplier tube to eliminate alignment problem  
[NASA-CASE-LAR-10204] c14 N71-27215
- Two beam interferometer-polarimeter  
[NASA-CASE-NPO-11239] c14 N73-12446
- Interferometer prism and control system for precisely determining direction to remote light source  
[NASA-CASE-ARC-10278-1] c14 N73-25463
- High resolution Fourier interferometer-spectropolarimeter  
[NASA-CASE-NPO-13604-1] c35 N76-31490
- Apparatus for providing a servo drive signal in a high-speed stepping interferometer  
[NASA-CASE-NPO-13569-2] c35 N79-14348
- Velocity servo for continuous scan Fourier interference spectrometer  
[NASA-CASE-NPO-14093-1] c35 N80-20563
- Interferometric angle monitor  
[NASA-CASE-GSC-12614-1] c35 N81-12386
- Interferometer  
[NASA-CASE-NPO-14502-1] c74 N81-17888
- Dual-beam skin friction interferometer --- portable equipment  
[NASA-CASE-ARC-11354-1] c36 N81-29415
- Interferometer --- high resolution  
[NASA-CASE-NPO-14448-1] c74 N81-29563
- Optical gyroscope system  
[NASA-CASE-NPO-14258-1] c35 N81-33448
- INTERFEROMETRY**
- Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
[NASA-CASE-NPO-13862-1] c35 N79-10391
- Interferometric locating system  
[NASA-CASE-NPO-14173-1] c04 N80-32359
- INTERLAYERS**
- Method of making a partial interlaminar separation composite system  
[NASA-CASE-LAR-12065-2] c24 N81-33235
- INTERMEDIATE FREQUENCIES**
- Doppler radar having phase modulation of both transmitted and reflected return signals --- ranging  
[NASA-CASE-MSC-18675-1] c32 N81-29312
- INTERMEDIATE FREQUENCY AMPLIFIERS**
- Multichannel logarithmic RF level detector  
[NASA-CASE-LAR-11021-1] c32 N76-14321
- INTERMETALLICS**
- Controlled diffusion reaction process for masking substrate of twisted multifilament superconductive ribbon  
[NASA-CASE-LEW-11726-1] c26 N73-26752
- Production of intermetallic compounds by effect of shock waves from explosions and compaction of powder  
[NASA-CASE-MFS-20861-1] c18 N73-32437
- INTERNAL COMBUSTION ENGINES**
- Variable displacement fuel pump for internal combustion engines  
[NASA-CASE-MSC-12139-1] c28 N71-14058
- Detonation reaction engine comprising outer housing enclosing pair of inner walls for continuous flow  
[NASA-CASE-XMF-06926] c28 N71-22983
- Development of system for preheating vaporized fuel for use with internal combustion engines  
[NASA-CASE-NPO-12072] c28 N72-22772
- System for minimizing internal combustion engine pollution emission  
[NASA-CASE-NPO-13402-1] c37 N76-18457
- Combustion engine --- for air pollution control  
[NASA-CASE-NPO-13671-1] c37 N77-31497
- Hydrogen-fueled engine  
[NASA-CASE-NPO-13763-1] c44 N78-33526
- Plasma igniter for internal combustion engine  
[NASA-CASE-NPO-13828-1] c37 N79-11405
- Indicated mean-effective pressure instrument  
[NASA-CASE-LEW-12661-1] c35 N79-14345
- Start up system for hydrogen generator used with an internal combustion engine  
[NASA-CASE-NPO-13849-1] c28 N80-10374
- Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c07 N81-29129
- Automatic compression adjusting mechanism for internal combustion engines  
[NASA-CASE-MSC-18807-1] c37 N81-29442
- INTERPLANETARY SPACE**
- Compact heat shielding for interplanetary space vehicles  
[NASA-CASE-XNS-00486] c33 N70-33344
- Active RC filter networks and amplifiers for deep space magnetic field measurement  
[NASA-CASE-XAC-05462-2] c10 N72-17171
- INTERPLANETARY SPACECRAFT**
- Transpirationally cooled heat ablation system for interplanetary spacecraft reentry shielding  
[NASA-CASE-XNS-02677] c31 N70-42075
- INTERPLANETARY TRAJECTORIES**
- Table structure and rotating magnet system simulating gravitational forces on spacecraft and displaying trajectories between Earth, Venus, and Mercury  
[NASA-CASE-XNP-00708] c14 N70-35394
- INTRACRANIAL PRESSURE**
- Induction powered biological radiosonde  
[NASA-CASE-ARC-11120-1] c52 N80-18691
- INTRAOCULAR PRESSURE**
- Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12955-1] c52 N80-14684
- Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12723-1] c52 N80-18690
- INTRAVEHICULAR ACTIVITY**
- Intra- and extravehicular life support space

- suite for Apollo astronauts  
 [NASA-CASE-MSC-12609-1] c05 N73-32012
- INTRAVENOUS PROCEDURES**  
 Biomedical flow sensor --- intravenous procedures  
 [NASA-CASE-MSC-18761-1] c52 N81-24717
- INTRUSION**  
 Passive intrusion detection system  
 [NASA-CASE-NPO-13804-1] c33 N80-23559
- INVENTIONS**  
 Active notch filter network with variable notch  
 depth, width and frequency  
 [NASA-CASE-FRC-11055-1] c33 N80-29583  
 Superconducting gyrocon for high power high  
 efficiency microwave generator/amplifier  
 application  
 [NASA-CASE-NPO-14975-1] c33 N80-29584  
 Pressure suit joint analyzer  
 [NASA-CASE-ARC-11314-1] c54 N80-30043  
 Ion-exchange hollow fibers  
 [NASA-CASE-NPO-13309-1] c25 N81-19244  
 Waveguide cooling system  
 [NASA-CASE-NPO-15401-1] c33 N81-29344
- INVERTED CONVERTERS (DC TO AC)**  
 Inverter ratio failure detector  
 [NASA-CASE-NPO-13160-1] c35 N74-18090  
 Variable frequency inverter for ac induction  
 motors with torque, speed and braking control  
 [NASA-CASE-MFS-22088-1] c33 N75-15674  
 Solar cell system having alternating current  
 output  
 [NASA-CASE-LEW-12806-2] c44 N81-12542
- INVERTERS**  
 Silicon controlled rectifier inverter with  
 compensation of transients to avoid false gating  
 [NASA-CASE-ILA-08507] c09 N69-39984  
 Inverter oscillator with voltage feedback  
 [NASA-CASE-NPO-10760] c09 N72-25254  
 Overload protection system for power inverter  
 [NASA-CASE-NPO-13872-1] c33 N78-10377  
 Module failure isolation circuit for paralleled  
 inverters --- preventing system failure during  
 power conditioning for spacecraft applications  
 [NASA-CASE-NPO-14000-1] c33 N79-24254  
 Base drive for paralleled inverter systems  
 [NASA-CASE-NPO-14163-1] c33 N81-14220  
 Adaptive control system for line-commutated  
 inverters  
 [NASA-CASE-MFS-25209-1] c33 N81-31480  
 Adaptive reference voltage generator for firing  
 angle control of line-commutated inverters  
 [NASA-CASE-MFS-25215-1] c33 N81-31481
- IODINE**  
 Method of producing output voltage from  
 photovoltaic cell using poly-N-vinyl carbazole  
 complexed with iodine  
 [NASA-CASE-NPO-10373] c03 N71-18698  
 Gallium arsenide solar cell preparation by  
 surface deposition of cuprous iodide on thin  
 n-type polycrystalline layers and heating in  
 iodine vapor  
 [NASA-CASE-XNP-01960] c09 N71-23027  
 Iodine generator for reclaimed water purification  
 [NASA-CASE-MSC-14632-1] c54 N78-14784
- IODINE COMPOUNDS**  
 Perfluoroalkyl polytriazines containing pendent  
 iododifluoromethyl groups  
 [NASA-CASE-ARC-11241-1] c25 N81-14616
- IODINE ISOTOPES**  
 Production of I-123 for use as  
 radiopharmaceutical for low radiation exposure  
 [NASA-CASE-LEW-10518-1] c24 N72-33681  
 Method of producing I-123 --- by bombardment of  
 cesium causing spallation  
 [NASA-CASE-LEW-11390-2] c25 N76-27383  
 Production of I-123  
 [NASA-CASE-LEW-11390-3] c25 N76-29379
- ION ACCELERATORS**  
 Helium outgassing process for fused glass  
 coating on ion accelerator grid  
 [NASA-CASE-LEW-10278-1] c15 N71-28582
- ION BEAMS**  
 Ion beam deflector system for electronic thrust  
 vector control for ion propulsion yaw, pitch,  
 and roll forces  
 [NASA-CASE-LEW-10689-1] c28 N71-26173  
 Dispensing targets for ion beam particle  
 generators  
 [NASA-CASE-NPO-13112-1] c73 N74-26767
- Sputtering holes with ion beamlets  
 [NASA-CASE-LEW-11646-1] c20 N74-31269  
 Method of constructing dished ion thruster grids  
 to provide hole array spacing compensation  
 [NASA-CASE-LEW-11876-1] c20 N76-21276  
 Ion beam thruster shield  
 [NASA-CASE-LEW-12082-1] c20 N77-10148  
 Targets for producing high purity I-123  
 [NASA-CASE-LEW-10518-3] c25 N78-27226  
 Method of cold welding using ion beam technology  
 [NASA-CASE-LEW-12982-1] c37 N81-19455
- ION CHARGE**  
 Quadrupole mass spectrometer using noise  
 spectrum for ion separation and identification  
 [NASA-CASE-XNP-04231] c14 N73-32325
- ION CONCENTRATION**  
 Deposition of alloy films --- on irregularly  
 shaped metal object  
 [NASA-CASE-LEW-11262-1] c27 N74-13270
- ION CURRENTS**  
 System for monitoring presence of neutrals in  
 streams of ions - ion engine control  
 [NASA-CASE-XNP-02592] c24 N71-20518
- ION CYCLOTRON RADIATION**  
 Ion and electron detector for use in an ICE  
 spectrometer  
 [NASA-CASE-NPO-13479-1] c35 N77-10492
- ION DENSITY (CONCENTRATION)**  
 Method and apparatus for measurement of trap  
 density and energy distribution in dielectric  
 films  
 [NASA-CASE-NPO-13443-1] c76 N76-20994
- ION ENGINES**  
 Improved cathode containing barium carbonate  
 block and heated tungsten screen for electron  
 bombardment ion thruster  
 [NASA-CASE-XLE-07087] c06 N69-39889  
 High-vacuum condenser tank for testing ion  
 rocket engines  
 [NASA-CASE-XLE-00168] c11 N70-33278  
 Encapsulated heater forming hollow body for  
 cathode used in ion thruster  
 [NASA-CASE-LEW-10814-1] c28 N70-35422  
 Electrostatic ion engines using high velocity  
 electrons to ionize propellant  
 [NASA-CASE-XLE-00376] c28 N70-37245  
 Metal ion rocket engine design  
 [NASA-CASE-XLE-00342] c28 N70-37980  
 Dynamometer measuring microforce thrust produced  
 by ion engine  
 [NASA-CASE-XLE-00702] c14 N70-40203  
 Increasing available power per unit area in ion  
 rocket engine by increasing beam density  
 [NASA-CASE-XLE-00519] c28 N70-41576  
 Accel and focus electrode design for ion engine  
 with improved efficiency  
 [NASA-CASE-XNP-02839] c28 N70-41922  
 Ion engine with magnetic circuit for optimal  
 discharge  
 [NASA-CASE-XLE-01124] c28 N71-14043  
 Electron bombardment ion rocket engine with  
 improved propellant introduction system  
 [NASA-CASE-XLE-02066] c28 N71-15661  
 System for monitoring presence of neutrals in  
 streams of ions - ion engine control  
 [NASA-CASE-XNP-02592] c24 N71-20518  
 Construction and method of arranging plurality  
 of ion engines to form cluster thereby  
 increasing efficiency and control by  
 decreasing heat radiated to space  
 [NASA-CASE-XNP-02923] c28 N71-23081  
 Electronic cathodes for use in electron  
 bombardment ion thrusters  
 [NASA-CASE-XLE-04501] c09 N71-23190  
 Permanently magnetized ion engine casing  
 construction for use in spacecraft propulsion  
 systems  
 [NASA-CASE-XNP-06942] c28 N71-23293  
 Development and characteristics of ion thruster  
 accelerator with single glass coated grid to  
 provide increased ion extraction capability  
 and larger diameter accelerator system  
 [NASA-CASE-LEW-10106-1] c28 N71-26642  
 Internal labyrinth and shield structure to  
 improve electrical isolation of propellant  
 feed source from ion thruster  
 [NASA-CASE-LEW-10210-1] c28 N71-26781  
 Low mass ionizing device for use in electric  
 thrust spacecraft engines

- [NASA-CASE-XNP-01954] c28 N71-28850  
Development of system for delivering vaporized mercury to electron bombardment ion engine  
[NASA-CASE-NPO-10737] c28 N72-11709  
Characteristics of ion rocket engine with combination keeper electrode and electron baffle  
[NASA-CASE-NPO-11880] c28 N73-24783  
Single grid accelerator system for electron bombardment type ion thruster  
[NASA-CASE-XLE-10453-2] c28 N73-27699  
Method of making dished ion thruster grids  
[NASA-CASE-LEW-11694-1] c20 N75-18310  
Method of constructing dished ion thruster grids to provide hole array spacing compensation  
[NASA-CASE-LEW-11876-1] c20 N76-21276
- ION EXCHANGE MEMBRANE ELECTROLYTES**  
Inorganic ion exchange membrane electrolytes for fuel cell use  
[NASA-CASE-XNP-04264] c03 N69-21337  
Development and characteristics of ion-exchange membrane and electrode assembly for fuel cells or electrolysis cells  
[NASA-CASE-XMS-02063] c03 N71-29044  
Formulated plastic separators for soluble electrode cells  
[NASA-CASE-LEW-12358-2] c25 N78-25149  
Formulated plastic separators for soluble electrode cells --- rubber-ion transport membranes  
[NASA-CASE-LEW-12358-1] c44 N79-17313  
Insoluble polyelectrolyte and ion-exchange hollow fiber impregnated therewith  
[NASA-CASE-NPO-13530-1] c25 N81-17187
- ION EXCHANGE RESINS**  
Inorganic-organic separators for alkaline batteries  
[NASA-CASE-LEW-12649-1] c44 N78-25530  
Dialysis system --- using ion exchange resin membranes permeable to urea molecules  
[NASA-CASE-NPO-14101-1] c52 N80-14687  
Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NPO-14001-1] c27 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] c27 N81-14076  
Ion-exchange hollow fibers  
[NASA-CASE-NPO-13309-1] c25 N81-19244
- 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] c25 N78-25148
- ION IMPLANTATION**  
Method of making V-MOS field effect transistors utilizing a two-step anisotropic etching and ion implantation  
[NASA-CASE-GSC-12515-1] c33 N81-26360
- ION IRRADIATION**  
Modification of the electrical and optical properties of polymers --- ion irradiation to create texture  
[NASA-CASE-LEW-13027-1] c27 N80-24437
- ION PLATING**  
Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-2] c44 N81-29524
- ION PROBES**  
Ion microprobe mass spectrometer with cooled electrode target for analyzing traces of fluids  
[NASA-CASE-BEC-10014] c14 N71-28863
- ION PROPULSION**  
Variable thrust ion engine using thermal decomposition of solid cesium compound to produce propulsive vapor  
[NASA-CASE-XNP-00923] c28 N70-36802  
Electrostatic ion engines using high velocity electrons to ionize propellant  
[NASA-CASE-XLE-00376] c28 N70-37245  
Metal ion rocket engine design  
[NASA-CASE-XLE-00342] c28 N70-37580  
Method for producing porous tungsten plates for ionizing cesium compounds for propulsion of ion engines  
[NASA-CASE-XLE-00455] c28 N70-38197
- Accel and focus electrode design for ion engine with improved efficiency  
[NASA-CASE-XNP-02839] c28 N70-41922  
Electric rocket engine with electron bombardment ionization chamber  
[NASA-CASE-XNP-04124] c28 N71-21822  
Ion beam deflector system for electronic thrust vector control for ion propulsion yaw, pitch, and roll forces  
[NASA-CASE-LEW-10689-1] c28 N71-26173  
Development and characteristics of ion thruster accelerator with single glass coated grid to provide increased ion extraction capability and larger diameter accelerator system  
[NASA-CASE-LEW-10106-1] c28 N71-26642  
Development of system for delivering vaporized mercury to electron bombardment ion engine  
[NASA-CASE-NPO-10737] c28 N72-11709  
Radial magnetic field for ion thruster  
[NASA-CASE-LEW-10770-1] c28 N72-22770  
Automatic shunting of ion thruster magnetic field when thruster is not operating  
[NASA-CASE-LEW-10835-1] c28 N72-22771  
Method of making dished ion thruster grids  
[NASA-CASE-LEW-11694-1] c20 N75-18310  
Apparatus for forming dished ion thruster grids  
[NASA-CASE-LEW-11694-2] c37 N76-14461  
Anode for ion thruster  
[NASA-CASE-LEW-12048-1] c20 N77-20162  
Closed Loop solar array-ion thruster system with power control circuitry  
[NASA-CASE-LEW-12780-1] c20 N79-20179
- 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] c35 N77-14406
- ION SOURCES**  
Apertured electrode focusing system for ion sources with nonuniform plasma density  
[NASA-CASE-XNP-03332] c09 N71-10618  
Multilayer porous refractory metal ionizer design with thick, porous, large-grain substrates and thin, porous micron-grain substrates  
[NASA-CASE-XNP-04338] c17 N71-23046  
Development and characteristics of ion thruster accelerator with single glass coated grid to provide increased ion extraction capability and larger diameter accelerator system  
[NASA-CASE-LEW-10106-1] c28 N71-26642  
Low mass ionizing device for use in electric thrust spacecraft engines  
[NASA-CASE-XNP-01954] c28 N71-28850  
Development and characteristics of apparatus for ionization analysis  
[NASA-CASE-BEC-10017-1] c14 N72-29464  
Sputtering holes with ion beamlets  
[NASA-CASE-LEW-11646-1] c20 N74-31269  
Multitarget sequential sputtering apparatus  
[NASA-CASE-NPO-13345-1] c37 N75-19684  
Miniature cyclotron resonance ion source using small permanent magnet  
[NASA-CASE-NPO-14324-1] c72 N80-27163  
Hydrogen hollow cathode ion source  
[NASA-CASE-LEW-12940-1] c72 N80-33186
- ION TRAPS (INSTRUMENTATION)**  
Method and apparatus for measurement of trap density and energy distribution in dielectric films  
[NASA-CASE-NPO-13443-1] c76 N76-20994
- IONIC MOBILITY**  
An improved solid electrolyte cell  
[NASA-CASE-NPO-15269-1] c33 N81-16385
- IONIZATION CHAMBERS**  
Automatic baseline stabilization for ionization detector used in gas chromatograph  
[NASA-CASE-XNP-03128] c10 N70-41991  
Electric rocket engine with electron bombardment ionization chamber  
[NASA-CASE-XNP-04124] c28 N71-21822  
Multichannel photoionization chamber for measuring absorption, photoionization yield, and coefficients of gases  
[NASA-CASE-BEC-10044-1] c14 N71-27090  
Development and characteristics of apparatus for ionization analysis  
[NASA-CASE-BEC-10017-1] c14 N72-29464

## IONIZATION GAGES

Ionization vacuum gage  
[NASA-CASE-XNP-00646] c14 N70-35666

Ionization control system design for monitoring separately located ion gage pressures on vacuum chambers  
[NASA-CASE-XLE-00787] c14 N71-21090

Development and characteristics of apparatus for ionization analysis  
[NASA-CASE-ABC-10017-1] c14 N72-29464

Ionization gage for measuring ultrahigh vacuum levels  
[NASA-CASE-XLA-05087] c14 N73-30391

## IONIZATION POTENTIALS

Electrodes having array of small surfaces for field ionization  
[NASA-CASE-BRC-10013] c09 N71-26678

## IONIZED GASES

Plasma probes having guard ring and primary sensor at same potential to prevent stray wall current collection in ionized gases  
[NASA-CASE-XLE-06690] c25 N69-39884

Transient heat transfer gage for measuring total radiant intensity from far ultraviolet and ionized high temperature gases  
[NASA-CASE-XNP-09802] c33 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] c25 N78-25148

## IONIZERS

Description of electrical equipment and system for purification of waste water by producing silver ions for bacterial control  
[NASA-CASE-MSC-10960-1] c03 N71-24718

Method of making dished ion thruster grids  
[NASA-CASE-LEW-11694-1] c20 N75-18310

## IONIZING RADIATION

High voltage cable for use in high intensity ionizing radiation fields  
[NASA-CASE-XNP-00738] c09 N70-38201

Reinforced polyquinoxaline gasket and method of preparing the same --- resistant to ionizing radiation and liquid hydrogen temperatures  
[NASA-CASE-MFS-21364-1] c37 N74-18126

## IONOSPHERE

Lightweight, rugged, inexpensive satellite battery for producing electrical power from ionosphere using electrodes with different contact potentials  
[NASA-CASE-XGS-01593] c03 N70-35408

## IONS

Micrometeoroid analyzer using arrays of interconnected capacitors and ion detector  
[NASA-CASE-ABC-10443-1] c14 N73-20477

## IRIDIUM

Thermocouples of molybdenum and iridium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12174-2] c35 N79-14346

## IRISES (MECHANICAL APERTURES)

Waveguide, thin film window and microwave irises  
[NASA-CASE-LAR-10513-1] c07 N72-25170

Development of thin film microwave iris installed in microwave waveguide transverse to flow of energy in waveguide  
[NASA-CASE-LAR-10511-1] c09 N72-29172

## IRON ALLOYS

Tantalum modified ferritic iron base alloys  
[NASA-CASE-LEW-12095-1] c26 N78-18182

Process for making a high toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-2] c26 N79-22271

High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-3] c26 N80-32484

## IRON COMPOUNDS

Coal desulfurization --- using iron pentacarbonyl  
[NASA-CASE-NPO-14272-1] c25 N81-33246

## IRRADIATION

Solar sensor with coarse and fine sensing elements for matching preirradiated cells on degradation rates  
[NASA-CASE-XLA-01584] c14 N71-23269

Apparatus for obtaining isotropic irradiation on film emulsion from parallel radiation source  
[NASA-CASE-MFS-20095] c24 N72-11595

Production of pure metals  
[NASA-CASE-LEW-10906-1] c25 N74-30502

Method for analyzing radiation sensitivity of integrated circuits  
[NASA-CASE-NPO-14350-1] c33 N80-14332

Vitro-violet process for producing flame resistant polyamides and products produced thereby --- protective clothing for high oxygen environments  
[NASA-CASE-MSC-16074-1] c27 N80-26446

## IRRIGATION

Solar-powered pump  
[NASA-CASE-NFO-13567-1] c44 N76-29701

## ISOLATORS

Internal labyrinth and shield structure to improve electrical isolation of propellant feed source from ion thruster  
[NASA-CASE-LEW-10210-1] c28 N71-26781

Positive isolation disconnect  
[NASA-CASE-MSC-16043-1] c37 N79-11402

Resonant isolator for maser amplifier  
[NASA-CASE-NPO-15201-1] c36 N81-24426

## ISOPROPYL ALCOHOL

Preparation of fluorinated polyethers from 2-hydro-perhaloisopropyl alcohols  
[NASA-CASE-MFS-11492] c06 N73-30102

## ISOTHERMAL LAYERS

Double-wall isothermal cylinder containing heat transfer fluid thermal reservoir as spacecraft insulation cover  
[NASA-CASE-MFS-20355] c33 N71-25353

## ISOTHERMAL PROCESSES

Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c35 N77-27366

## ISOTOPE SEPARATION

Isotope separation using metallic vapor lasers  
[NASA-CASE-NPO-13550-1] c36 N77-26477

## JET AIRCRAFT

Deflector for preventing objects from entering nacelle inlets of jet aircraft  
[NASA-CASE-XLE-00388] c28 N70-34788

## JET AIRCRAFT NOISE

Upper surface, external flow, jet-augmented flap configuration for high wing jet aircraft for noise reduction  
[NASA-CASE-XLA-00087] c02 N70-33332

Noise suppressor --- for turbofan engine by incorporating annular acoustically porous elements in exhaust and inlet ducts  
[NASA-CASE-LAR-11141-1] c07 N74-32418

Abating exhaust noises in jet engines  
[NASA-CASE-ARC-10712-1] c07 N74-33218

Instrumentation for measurement of aircraft noise and sonic boom  
[NASA-CASE-LAR-11173-1] c35 N75-19614

Cascade plug nozzle --- for jet noise reduction  
[NASA-CASE-LAR-11674-1] c07 N76-18117

## JET AMPLIFIERS

Fluid jet amplifier with fluid from jet nozzle deflected by inlet pressure  
[NASA-CASE-XLE-03512] c12 N69-21466

Fluid control jet amplifiers  
[NASA-CASE-XLE-09341] c12 N71-28741

## JET BLAST EFFECTS

Separation mechanism for use between stages of multistage rocket vehicles  
[NASA-CASE-XLA-00188] c15 N71-22874

## JET CONTROL

Attitude control device for space vehicles  
[NASA-CASE-INP-00294] c21 N70-36938

## JET ENGINES

Absorptive, nonreflecting barrier mounted between closely spaced jet engines on supersonic aircraft, for preventing shock wave interference  
[NASA-CASE-XLA-02865] c28 N71-15563

Development of thrust dynamometer for measuring performance of jet and rocket engines  
[NASA-CASE-XLE-05260] c14 N71-20429

Afterburner-equipped jet engine nacelle with slotted configuration afterbody  
[NASA-CASE-XLA-10450] c28 N71-21493

Process for welding compressor and turbine blades to rotors and discs of jet engines  
[NASA-CASE-LEW-10533-1] c15 N73-28515

Variably positioned guide vanes for aerodynamic choking



- [NASA-CASE-LAR-10642-1] c07 N74-31270  
Cascade plug nozzle --- for jet noise reduction  
[NASA-CASE-LAR-11674-1] c07 N76-18117  
The engine air intake system  
[NASA-CASE-ARC-10761-1] c07 N77-18154  
Stator rotor tools  
[NASA-CASE-MS-C-16000-1] c37 N78-24544  
Electrical servo actuator bracket --- fuel  
control valves on jet engines  
[NASA-CASE-PRC-11044-1] c37 N81-33483
- JET EXHAUST**  
Jet exhaust noise suppressor  
[NASA-CASE-LEW-11286-1] c07 N74-27490  
Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c07 N78-25089  
Reduction of nitric oxide emissions from a  
combustor  
[NASA-CASE-ARC-10814-2] c07 N80-26298
- JET FLAPS**  
Upper surface, external flow, jet-augmented flap  
configuration for high wing jet aircraft for  
noise reduction  
[NASA-CASE-XLA-00087] c02 N70-33332
- JET FLOW**  
Two-phase flow system with discrete, impinging  
two-phase jets  
[NASA-CASE-NPO-11556] c12 N72-25292
- JET MIXING FLOW**  
Fuel injection system for maximum combustion  
efficiency of rocket engines  
[NASA-CASE-XLE-00111] c28 N70-38199
- JET NOZZLES**  
Fluid jet amplifier with fluid from jet nozzle  
deflected by inlet pressure  
[NASA-CASE-XLE-03512] c12 N69-21466  
Thrust and attitude control apparatus using jet  
nozzle in movable canard surface or fin  
configuration  
[NASA-CASE-XLE-03583] c31 N71-17629  
Heater-mixer for stored fluids  
[NASA-CASE-ARC-10442-1] c35 N74-15093
- JET PROPULSION**  
Two dimensional wedge/translating shroud nozzle  
[NASA-CASE-LAR-11919-1] c07 N78-27121
- JET STREAMS (METEOROLOGY)**  
CAI altitude avoidance system  
[NASA-CASE-NPO-15351-1] c47 N81-16677
- JET THRUST**  
System for aerodynamic control of rocket  
vehicles by secondary injection of fluid into  
nozzle exhaust stream  
[NASA-CASE-XLA-01163] c21 N71-15582  
Drive mechanism for operating reactance attitude  
control system for aerospace bodies  
[NASA-CASE-XMP-01598] c21 N71-15583  
Method and apparatus for rapid thrust increases  
in a turbofan engine  
[NASA-CASE-LEW-12971-1] c07 N80-18039
- JETTISON SYSTEMS**  
Describing assembly for opening stabilizing and  
decelerating flaps of flight capsules used in  
space research  
[NASA-CASE-XMF-03169] c31 N71-15675  
System for deploying and ejecting releasable  
clamshell fairing sections from spinning  
sounding rockets  
[NASA-CASE-GSC-10590-1] c31 N73-14853  
Explosively activated egress area  
[NASA-CASE-LAR-12624-1] c03 N81-29107
- JIGS**  
Apparatus for positioning modular components on  
a vertical or overhead surface  
[NASA-CASE-LAR-11465-1] c37 N76-21554  
Solar cell module assembly jig  
[NASA-CASE-XGS-00829-1] c44 N79-19447
- JOINING**  
Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-3] c07 N79-14096
- JOINTS (ANATOMY)**  
Space suit with pressure-volume compensator system  
[NASA-CASE-XLA-05332] c05 N71-11194  
Equipotential space suits utilizing mechanical  
aids to minimize astronaut energy at bending  
joints  
[NASA-CASE-LAR-10007-1] c05 N71-11195  
Cold restraint system for pressure suit joints  
[NASA-CASE-XMS-09635] c05 N71-24623  
Orthotic arm joint --- for use in mechanical arms  
[NASA-CASE-MPS-21611-1] c54 N75-12616
- Rotational joint assembly for the prosthetic leg  
[NASA-CASE-KSC-11004-1] c54 N77-30749  
Spacesuit mobility knee joints  
[NASA-CASE-ARC-11058-2] c54 N79-24651
- JOINTS (JUNCTIONS)**  
Hollow spherical electrode for shielding  
dielectric junction between high voltage  
conductor and insulator  
[NASA-CASE-XLE-03778] c09 N69-21542  
Elastic universal joint for rocket motor mounting  
[NASA-CASE-XNP-00416] c15 N70-36947  
Portable device for aligning surfaces of two  
adjacent wall or sheet sections for joining at  
point of junction  
[NASA-CASE-XMP-01452] c15 N70-41371  
Design and development of flexible joint for  
pressure suits  
[NASA-CASE-XMS-09636] c05 N71-12344  
Elbow forming in jacketed pipes while  
maintaining separation between core shape and  
jacket pipes  
[NASA-CASE-XNP-10475] c15 N71-24679  
Method and apparatus for precision sizing and  
joining of large diameter tubes by bulging or  
constricting overlapping ends  
[NASA-CASE-XMP-05114-2] c15 N71-26148  
Universal joints for connecting two displaced  
shafts or members  
[NASA-CASE-NPO-10646] c15 N71-28467  
Flexible bellows joint shielding sleeve for  
propellant transfer pipelines  
[NASA-CASE-XNP-01855] c15 N71-28937  
Mechanism for restraining universal joints to  
prevent separation while allowing bending,  
angulation, and lateral offset in any position  
about axis  
[NASA-CASE-XNP-02278] c15 N71-28951  
Diffusion welding in air --- solid state welding  
of butt joint by fusion welding, surface  
cleaning, and heating  
[NASA-CASE-LEW-11387-1] c37 N74-18128  
Bonded joint and method --- for reducing peak  
shear stress in adhesive bonds  
[NASA-CASE-LAR-10900-1] c37 N74-23064  
Flexible joint for pressurizable garment  
[NASA-CASE-MSC-11072] c54 N74-32546  
Method of making an explosively welded scarf joint  
[NASA-CASE-LAR-11211-1] c37 N75-12326  
Latching device  
[NASA-CASE-MPS-21606-1] c37 N75-19685  
Method of determining bond quality of power  
transistors attached to substrates --- I ray  
inspection of junction microstructure  
[NASA-CASE-MPS-21931-1] c37 N75-26372  
Externally supported internally stabilized  
flexible duct joint  
[NASA-CASE-MPS-19194-1] c37 N76-14460  
Wrist joint assembly  
[NASA-CASE-MPS-23311-1] c54 N78-17676  
Spacesuit mobility joints  
[NASA-CASE-ARC-11058-1] c54 N78-31735  
Mechanical end joint system for structural  
column elements  
[NASA-CASE-LAR-12482-1] c37 N80-22704  
Pressure suit joint analyzer  
[NASA-CASE-ARC-11314-1] c54 N80-30043  
Thermal barrier pressure seal --- shielding  
junctions between spacecraft control surfaces  
and structures  
[NASA-CASE-MSC-18134-1] c37 N81-15363  
Electrical rotary joint apparatus for large  
space structures  
[NASA-CASE-MPS-23981-1] c33 N81-19394
- JOSEPHSON JUNCTIONS**  
Doped Josephson tunneling junction for use in a  
sensitive IR detector  
[NASA-CASE-NPO-13348-1] c33 N75-31332  
Microwave integrated circuit for Josephson  
voltage standards  
[NASA-CASE-MPS-23845-1] c33 N81-17348
- JOULE-THOMSON EFFECT**  
Gas balancing, cryogenic refrigeration apparatus  
with Joule-Thomson valve assembly  
[NASA-CASE-NPO-10309] c15 N69-23190  
A cycling Joule Thomson refrigerator  
[NASA-CASE-NPO-15251-1] c31 N81-19344
- JOURNAL BEARINGS**  
Slit regulated gas journal bearing  
[NASA-CASE-XNP-00476] c15 N70-38620

- Journal air bearing with cylindrical cup designed to ride on shaft  
[NASA-CASE-MFS-20423] c15 N72-11388
- Journal bearings --- for lubricant films  
[NASA-CASE-LEW-11076-1] c37 N74-21061
- Journal Bearings  
[NASA-CASE-LEW-11076-2] c37 N74-32921
- Lubricated journal bearing  
[NASA-CASE-LEW-11076-3] c37 N75-30562
- Fluid journal bearings  
[NASA-CASE-LEW-11076-4] c37 N76-15461
- JUNCTION DIODES**
- Phototransistor with base collector junction diode for integration into photo sensor arrays  
[NASA-CASE-MFS-20407] c09 N73-19235
- Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-2] c33 N75-25041
- Charge storage diode modulators and demodulators  
[NASA-CASE-NPO-10189-1] c33 N77-21314
- JUNCTION TRANSISTORS**
- Apparatus for ballasting high frequency transistors  
[NASA-CASE-XGS-05003] c09 N69-24318
- Miniature piezjunction semiconductor transducer with in situ stress coupling  
[NASA-CASE-ERC-10087-2] c14 N72-31446
- Method of determining bond quality of power transistors attached to substrates --- X ray inspection of junction microstructure  
[NASA-CASE-MFS-21931-1] c37 N75-26372
- K**
- KEYING**
- High-speed multiplexing of keyboard data inputs  
[NASA-CASE-NPO-14554-1] c60 N81-27814
- KIDNEY DISEASES**
- Aldehyde-containing urea-absorbing polysaccharides  
[NASA-CASE-NPO-13620-1] c27 N77-30236
- KINETIC ENERGY**
- Non-reusable kinetic energy absorber for application in soft landing of space vehicles  
[NASA-CASE-XLE-00810] c15 N70-34861
- Method and turbine for extracting kinetic energy from a stream of two-phase fluid  
[NASA-CASE-NPO-14130-1] c34 N79-20335
- KINETIC FRICTION**
- Kinetic and static friction force measurement between magnetic tape and magnetic head surfaces  
[NASA-CASE-INP-08680] c14 N71-22595
- KINETICS**
- Micrometeoroid analyzer using arrays of interconnected capacitors and ion detector  
[NASA-CASE-ARC-10443-1] c14 N73-20477
- KRAFT PROCESS (WOODPULP)**
- Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c85 N79-17747
- L**
- LABORATORY EQUIPMENT**
- Design of mechanical device for stirring several test tubes simultaneously  
[NASA-CASE-XAC-06956] c15 N71-21177
- Gas purged dry box glove reducing permeation of air or moisture into dry box or isolator by diffusion through glove  
[NASA-CASE-XLE-02531] c05 N71-23080
- Apparatus and process for volumetrically dispensing reagent quantities of volatile chemicals for small batch reactions  
[NASA-CASE-NPO-10070] c15 N71-27372
- Development of variable angle device for positioning test tubes to permit optimum drying of culture medium  
[NASA-CASE-LAR-10507-1] c11 N72-25284
- Development of method for controlling vapor content of gas  
[NASA-CASE-NPO-10633] c03 N72-28025
- Apparatus for mixing two or more liquids under zero gravity conditions  
[NASA-CASE-LAR-10195-1] c15 N73-19458
- Automatic real-time pair-feeding system for animals  
[NASA-CASE-ARC-10302-1] c51 N74-15778
- Automated single-slide staining device  
[NASA-CASE-LAR-11649-1] c51 N77-27677
- Machine for use in monitoring fatigue life for a plurality of elastomeric specimens  
[NASA-CASE-NPO-13731-1] c39 N78-10493
- The 2 deg/90 deg laboratory scattering photometer --- particulate refractivity in hydrosols  
[NASA-CASE-GSC-12088-1] c74 N78-13874
- Automatic multiple-sample applicator and electrophoresis apparatus  
[NASA-CASE-ARC-10991-1] c25 N78-14104
- Microelectrophoretic apparatus and process  
[NASA-CASE-ARC-11121-1] c25 N79-14169
- Electrophoresis device  
[NASA-CASE-MFS-25426-1] c25 N81-29179
- LACQUERS**
- Method for applying photographic resists to otherwise incompatible substrates  
[NASA-CASE-MSC-18107-1] c27 N81-25209
- LAMINAR FLOW**
- Laminar flow of liquid coolants in rocket engines  
[NASA-CASE-NPO-10122] c12 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] c02 N80-20224
- LAMINATES**
- Multilayer porous refractory metal ionizer design with thick, porous, large-grain substrates and thin, porous micron-grain substrates  
[NASA-CASE-INP-04338] c17 N71-23046
- Development and characteristics of polyimide impregnated laminates with fiberglass cloth backing for application as printed circuit boards  
[NASA-CASE-MFS-20408] c18 N73-12604
- Reinforced polyquinoxaline gasket and method of preparing the same --- resistant to ionizing radiation and liquid hydrogen temperatures  
[NASA-CASE-MFS-21364-1] c37 N74-18126
- Method of laminating structural members  
[NASA-CASE-XLA-11028-1] c24 N74-27035
- Bonding method in the manufacture of continuous regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c24 N75-30260
- Transparent fire resistant polymeric structures  
[NASA-CASE-ARC-10813-1] c27 N76-16230
- Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c24 N77-19170
- Hybrid composite laminate structures  
[NASA-CASE-LEW-12118-1] c24 N77-27188
- Honeycomb-laminate composite structure  
[NASA-CASE-ARC-10913-1] c24 N78-15180
- Composite lamination method  
[NASA-CASE-LAR-12019-1] c24 N78-17150
- Lightweight electrically-powered flexible thermal laminate --- made of metal and nonconductive yarns  
[NASA-CASE-MSC-12662-1] c33 N79-12331
- Method for making patterns for resin matrix composites  
[NASA-CASE-ARC-11246-1] c24 N80-22410
- Process for preparing high temperature polyimide film laminates  
[NASA-CASE-LAR-12742-1] c24 N81-12174
- Method for alleviating thermal stress damage in laminates --- metal matrix composites  
[NASA-CASE-LEW-12493-1] c24 N81-17170
- Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-2] c24 N81-26179
- Method of making a partial interlaminar separation composite system  
[NASA-CASE-LAR-12065-2] c24 N81-33235
- LANDFORMS**
- Method for observing the features characterizing the surface of a land mass  
[NASA-CASE-FRC-11013-1] c43 N81-17499
- LANDING AIDS**
- Electro-optical attitude sensing device for landing approach of flight vehicle  
[NASA-CASE-INS-01994-1] c14 N72-17326
- Magnetic method for detection of aircraft position relative to runway  
[NASA-CASE-ARC-10179-1] c21 N72-22619
- Full color hybrid display for aircraft simulators --- landing aids  
[NASA-CASE-ARC-10903-1] c09 N78-18083

## LANDING GEAR

Pivotal shock absorbing assembly for use as load distributing portion in landing gear systems of space vehicles  
 [NASA-CASE-XMF-03856] c31 N70-34159

Nose gear steering system for vehicles with main skids to provide directional stability after loss of aerodynamic control  
 [NASA-CASE-XLA-01804] c02 N70-34160

Landing pad assembly for aerospace vehicles  
 [NASA-CASE-XMF-02853] c31 N70-36654

Aircraft wheel spray drag alleviator for dual tandem landing gear  
 [NASA-CASE-XLA-01583] c02 N70-36825

Spacecraft shock absorbing system for soft landings  
 [NASA-CASE-XMF-02108] c31 N70-36845

Shock absorber for landing gear of lunar or planetary landing modules  
 [NASA-CASE-XMF-01045] c15 N70-40354

Vertically descending flight vehicle landing gear for rough terrain  
 [NASA-CASE-XMF-01174] c02 N70-41589

Tire/wheel concept  
 [NASA-CASE-LAR-11695-2] c37 N81-24443

**LANDING MODULES**  
 Shock absorber for landing gear of lunar or planetary landing modules  
 [NASA-CASE-XMF-01045] c15 N70-40354

**LANDING SIMULATION**  
 Lunar and planetary gravity simulator to test vehicular response to landing  
 [NASA-CASE-XLA-00493] c11 N70-34786

**LANTHANUM COMPOUNDS**  
 Cesium thermionic converters having improved electrodes  
 [NASA-CASE-LEW-12038-3] c44 N78-25555

**LARGE SCALE INTEGRATION**  
 A general logic structure for custom LSI circuits  
 [NASA-CASE-NPO-14410-1] c33 N79-25314

Tactile sensing system --- manipulator controllers  
 [NASA-CASE-NPO-15094-1] c33 N81-16386

**LARGE SPACE STRUCTURES**  
 Electrical rotary joint apparatus for large space structures  
 [NASA-CASE-MFS-23981-1] c33 N81-19394

Structural members, method and apparatus  
 [NASA-CASE-MSC-16217-1] c31 N81-27323

**LARGE 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] c74 N79-11865

**LASER ALTIMETERS**  
 Sidelooking laser altimeter for a flight simulator  
 [NASA-CASE-ARC-11312-1] c36 N81-19439

**LASER APPLICATIONS**  
 High power laser apparatus and system  
 [NASA-CASE-XLE-2529-2] c36 N75-27364

Fiber distributed feedback laser  
 [NASA-CASE-NPO-13531-1] c36 N76-24553

Wind measurement system  
 [NASA-CASE-MFS-23362-1] c47 N77-10753

Pseudo-backscatter laser Doppler velocimeter employing antiparallel-reflector in the forward direction  
 [NASA-CASE-ARC-10970-1] c36 N77-25501

Compact pulsed laser having improved heat conductance  
 [NASA-CASE-NPO-13147-1] c36 N77-25502

Laser extensometer  
 [NASA-CASE-MFS-19259-1] c36 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] c25 N78-25148

Volumetric direct nuclear pumped laser  
 [NASA-CASE-LAR-12183-1] c36 N79-18307

Dual laser optical system and method for studying fluid flow  
 [NASA-CASE-MFS-25315-1] c36 N81-19440

**LASER CAVITIES**  
 Laser apparatus  
 [NASA-CASE-GSC-12237-1] c36 N80-14384

**LASER DOPPLER VELOCIMETERS**  
 Dual wavelength scanning Doppler velocimeter --- without perturbation of flow fields  
 [NASA-CASE-ARC-10637-1] c35 N75-16783

Combined dual scatter, local oscillator laser Doppler velocimeter  
 [NASA-CASE-ARC-10642-1] c36 N76-14447

Focused laser Doppler velocimeter  
 [NASA-CASE-MFS-23178-1] c35 N77-10493

Pseudo-backscatter laser Doppler velocimeter employing antiparallel-reflector in the forward direction  
 [NASA-CASE-ARC-10970-1] c36 N77-25501

Optical scanner --- laser doppler velocimeters  
 [NASA-CASE-LAR-11711-1] c74 N78-17866

Versatile LDV burst simulator  
 [NASA-CASE-LAR-11859-1] c35 N79-14349

Scanning afocal laser velocimeter projection lens system  
 [NASA-CASE-LAR-12328-1] c74 N80-12866

Laser Doppler velocity simulator --- to induce frequency shift  
 [NASA-CASE-LAR-12176-1] c36 N80-16321

Rhomboid prism pair for rotating the plane of parallel light beams --- laser velocimeters  
 [NASA-CASE-ARC-11311-1] c74 N81-16882

Direction sensitive laser velocimeter --- determining the direction of particles using a helium-neon laser  
 [NASA-CASE-LAR-12177-1] c36 N81-24422

**LASER DRILLING**  
 In-situ laser retorting of oil shale  
 [NASA-CASE-LEW-12217-1] c43 N78-14452

**LASER FUSION**  
 Laser surface fusion of plasma sprayed ceramic turbine seals  
 [NASA-CASE-LEW-13269-1] c27 N81-22190

**LASER GUIDANCE**  
 Scanning afocal laser velocimeter projection lens system  
 [NASA-CASE-LAR-12328-1] c74 N80-12866

**LASER GYROSCOPES**  
 Optical gyroscope system  
 [NASA-CASE-NPO-14258-1] c35 N81-33448

**LASER HEATING**  
 Electric power generation system directory from laser power  
 [NASA-CASE-NPO-13308-1] c36 N75-30524

Method and apparatus for shaping and enhancing acoustical levitation forces  
 [NASA-CASE-MFS-25050-1] c71 N81-15767

**LASER INTERFEROMETRY**  
 Dual-beam skin friction interferometer --- portable equipment  
 [NASA-CASE-ARC-11354-1] c36 N81-29415

**LASER MATERIALS**  
 Laser head for simultaneous optical pumping of several dye lasers --- with single flash lamp  
 [NASA-CASE-LAR-11341-1] c36 N75-19655

**LASER MODE LOCKING**  
 Laser system with an antiresonant optical ring  
 [NASA-CASE-BQN-10844-1] c36 N75-19653

Dually mode locked Nd:YAG laser  
 [NASA-CASE-GSC-11746-1] c36 N75-19654

Length controlled stabilized mode-lock Nd:YAG laser  
 [NASA-CASE-GSC-11571-1] c36 N77-25499

**LASER MODES**  
 Xenon flashlamp driver system for optical laser pumping  
 [NASA-CASE-ERC-10283] c16 N72-25485

Acoustically controlled distributed feedback laser  
 [NASA-CASE-NPO-13175-1] c36 N75-31427

**LASER OUTPUTS**  
 Method and apparatus using temperature control for wavelength tuning of liquid lasers  
 [NASA-CASE-ERC-10187] c16 N69-31343

Describing laser Doppler velocimeter for measuring mean velocity and turbulence of fluid flow  
 [NASA-CASE-MFS-20386] c21 N71-19212

Development of apparatus for amplitude modulation of diode laser by periodic discharge of direct current power supply  
 [NASA-CASE-IMS-04269] c16 N71-22895

Doppler shifted laser beam as fluid velocity sensor  
 [NASA-CASE-XAC-10770-1] c16 N71-24828

Calibrator for measuring and modulating or demodulating laser outputs  
 [NASA-CASE-XLA-03410] c16 N71-25914

Method and apparatus for optically modulating light or microwave beam

- [NASA-CASE-GSC-10216-1] c23 N71-26722  
Laser machining device with dielectric functioning as beam waveguide for mechanical and medical applications
- [NASA-CASE-HQN-10541-2] c15 N71-27135  
Optical communication system with gas filled waveguide for laser beam transmission
- [NASA-CASE-HQN-10541-4] c16 N71-27183  
Design and development of multichannel laser remote control system using modulated helium-neon laser as transmitter and light collector as receiving antenna
- [NASA-CASE-LAB-10311-1] c16 N73-16536  
Performance of ac power supply developed for CO2 laser system
- [NASA-CASE-GSC-11222-1] c16 N73-32391  
Thermomagnetic recording and magneto-optic playback system having constant intensity laser beam control
- [NASA-CASE-NPO-11317-2] c36 N74-13205  
Apparatus for scanning the surface of a cylindrical body
- [NASA-CASE-NPO-11861-1] c36 N74-20009  
Optically detonated explosive device
- [NASA-CASE-NPO-11743-1] c28 N74-27425  
Clear air turbulence detector
- [NASA-CASE-MPS-21244-1] c36 N75-15028  
Dually mode locked Nd:YAG laser
- [NASA-CASE-GSC-11746-1] c36 N75-19654  
Laser head for simultaneous optical pumping of several dye lasers --- with single flash lamp
- [NASA-CASE-LAB-11341-1] c36 N75-19655  
Acoustically controlled distributed feedback laser
- [NASA-CASE-NPO-13175-1] c36 N75-31427  
Optical noise suppression device and method --- laser light exposing film
- [NASA-CASE-MSC-12640-1] c74 N76-31598  
Length controlled stabilized mode-lock Nd:YAG laser
- [NASA-CASE-GSC-11571-1] c36 N77-25499  
Apparatus for photon excited catalysis
- [NASA-CASE-NPO-13566-1] c25 N77-32255  
Method and apparatus for Doppler frequency modulation of radiation
- [NASA-CASE-NPO-14524-1] c32 N80-24510  
Collimated beam manifold and method for using the same --- laser beams
- [NASA-CASE-MPS-25312-1] c74 N80-34251  
Method of and apparatus for double-exposure holographic interferometry
- [NASA-CASE-MPS-25405-1] c35 N81-27459  
**LASER PLASMAS**  
Continuous plasma laser --- method and apparatus for producing intense, coherent, monochromatic light from low temperature plasma
- [NASA-CASE-YNP-04167-3] c36 N77-19416  
**LASER PUMPING**  
Large volume multiple path nuclear pumped laser
- [NASA-CASE-LAR-12592-1] c36 N79-26385  
Laser apparatus
- [NASA-CASE-GSC-12237-1] c36 N80-14384  
**LASER RANGE FINDERS**  
Laser measuring system for incremental assemblies --- measuring wire-wrapped frame assemblies in spark chambers
- [NASA-CASE-GSC-12321-1] c36 N80-18380  
**LASER RANGER/TRACKER**  
Laser beam projector for continuous, precise alignment between target, laser generator, and astronomical telescope during tracking
- [NASA-CASE-NPO-11087] c23 N71-29125  
**LASER SPECTROSCOPY**  
Stark effect spectrophone for continuous absorption spectra monitoring --- a technique for gas analysis
- [NASA-CASE-NPO-15102-1] c25 N81-25159  
**LASER WINDOWS**  
Optical scanner --- laser doppler velocimeters
- [NASA-CASE-LAR-11711-1] c74 N78-17866  
**LASERS**  
Laser device for removing material from rotating object for dynamic balancing
- [NASA-CASE-MPS-11279] c16 N71-20400  
Design and development of optical interferometer with laser light source for application to schlieren systems
- [NASA-CASE-XLA-04295] c16 N71-24170  
Self-generating optical frequency waveguide
- [NASA-CASE-HQN-10541-1] c07 N71-26291  
Design and characteristics of laser camera system with diffusion filter of small particles with average diameter larger than wavelength of laser light
- [NASA-CASE-NPO-10417] c16 N71-33410  
Optical sensing of supersonic flows by correlating deflections in laser beams through flow
- [NASA-CASE-MPS-20642] c14 N72-21407  
Laser technique for breaking ice in ship path
- [NASA-CASE-LAR-10815-1] c16 N72-22520  
Design of precision vertical alignment system using laser with gravitationally sensitive cavity
- [NASA-CASE-ABC-10444-1] c16 N73-33397  
Tunable cavity resonator with ramp shaped supports
- [NASA-CASE-HQN-10790-1] c36 N74-11313  
Short range laser obstacle detector --- for surface vehicles using laser diode array
- [NASA-CASE-NFO-11856-1] c36 N74-15145  
Long range laser traversing system
- [NASA-CASE-GSC-11262-1] c36 N74-21091  
Deep trap, laser activated image converting system
- [NASA-CASE-NPO-13131-1] c36 N75-19652  
Laser system with an antiresonant optical ring
- [NASA-CASE-HQN-10844-1] c36 N75-19653  
Acoustically controlled distributed feedback laser
- [NASA-CASE-NFO-13175-1] c36 N75-31427  
Method and apparatus for generating coherent radiation in the ultra-violet region and above by use of distributed feedback
- [NASA-CASE-NFC-13346-1] c36 N76-29575  
Polarization compensator for optical communications
- [NASA-CASE-GSC-11782-1] c74 N76-30053  
Gregorian all-reflective optical system
- [NASA-CASE-GSC-12058-1] c74 N77-26942  
Wideband heterodyne receiver for laser communication system
- [NASA-CASE-GSC-12053-1] c32 N77-28346  
Method and apparatus for splitting a beam of energy --- optical communication
- [NASA-CASE-GSC-12083-1] c73 N78-32848  
Large volume multiple path nuclear pumped laser
- [NASA-CASE-LAR-12592-1] c36 N79-26385  
Shock isolator for operating a diode laser on a closed-cycle refrigerator
- [NASA-CASE-GSC-12297-1] c37 N79-28549  
Off-axis coherently pumped laser
- [NASA-CASE-GSC-12592-1] c36 N81-12407  
**LATCHES**  
Bolt-latch mechanism for releasing despin weights from space vehicle
- [NASA-CASE-XLA-00679] c15 N70-38601  
Transparent polycarbonate resin, shell helmet and latch design for high altitude and space flight
- [NASA-CASE-XMS-04935] c05 N71-11190  
Quick disconnect latch and handle combination for mounting articles on walls or supporting bases in spacecraft under zero gravity conditions
- [NASA-CASE-MPS-11132] c15 N71-17649  
Design, development, and characteristics of latching mechanism for operation in limited access areas
- [NASA-CASE-XMS-03745] c15 N71-21076  
Latching mechanism with pivoting catch and self-contained spring ejector
- [NASA-CASE-XLA-03538] c15 N71-24897  
Latch for fastening spacecraft docking rings
- [NASA-CASE-MSC-15474-1] c15 N71-26162  
Latch mechanism
- [NASA-CASE-MSC-12549-1] c37 N74-27903  
Latching device
- [NASA-CASE-MPS-21606-1] c37 N75-19685  
Load regulating latch
- [NASA-CASE-MSC-19535-1] c37 N77-32499  
Helmet latching and attaching ring
- [NASA-CASE-XMS-04670] c54 N78-17678  
**LATERAL CONTROL**  
Three-axis controller operated by hand-wrist motion for yaw, pitch, and roll control
- [NASA-CASE-IAC-01404] c05 N70-41581  
Star sensor system for roll attitude control of spacecraft
- [NASA-CASE-YNP-01307] c21 N70-41856  
Supersonic or hypersonic vehicle control system comprising elevons with hinge line sweep and

- free of adverse aerodynamic cross coupling  
[NASA-CASE-XLA-08967] c02 N71-27088
- Vortex-lift roll-control device  
[NASA-CASE-LAR-11868-2] c08 N79-14108
- Propulsive lateral control nozzle  
[NASA-CASE-LAR-12136-1] c08 N81-33210
- LATERAL STABILITY**
- An annular wing  
[NASA-CASE-PRC-11007-2] c02 N79-24959
- LATEX**
- Molten salt pyrolysis of latex --- synthetic hydrocarbon fuel production using the Guayule shrub  
[NASA-CASE-NPO-14315-1] c27 N81-17261
- Process for preparation of large-particle-size monodisperse latexes  
[NASA-CASE-MFS-25000-1] c25 N81-19242
- LATHES**
- Rotary spindle lathe attachments for machining geometrical cones  
[NASA-CASE-XMS-04292] c15 N71-22722
- Lathe tool and holder combination for machining resin impregnated fiberglass cloth laminates  
[NASA-CASE-XLA-10470] c15 N72-21489
- LAUNCH ESCAPE SYSTEMS**
- Emergency escape cabin system for launch towers  
[NASA-CASE-XKS-02342] c05 N71-11199
- Ejector for separating astronaut from ejection seat during prelaunch or initial launch phase of flight  
[NASA-CASE-XMS-04625] c05 N71-20718
- LAUNCH VEHICLE CONFIGURATIONS**
- Rotating launch device for a remotely piloted aircraft  
[NASA-CASE-ARC-10979-1] c09 N77-19076
- LAUNCH VEHICLES**
- Support techniques for restraint of slender bodies such as launch vehicles  
[NASA-CASE-XLA-02704] c11 N69-21540
- Microleak detector mounted on weld seam of propellant tank of launch vehicle  
[NASA-CASE-XMF-02307] c14 N71-10779
- LAUNCHING PADS**
- Launch pad missile release system with bending moment change rate reduction in thrust distribution structure at lift-off  
[NASA-CASE-XMF-03198] c30 N70-40353
- Remotely actuated quick disconnect for tubular umbilical conduits used to transfer fluids from ground to rocket vehicle  
[NASA-CASE-XLA-01396] c03 N71-12259
- Portable equipment for validating C band launch pad antennas and transmission lines used for spacecraft checkout  
[NASA-CASE-XKS-10543] c07 N71-26292
- LAY-UP**
- Method of making a partial interlaminar separation composite system  
[NASA-CASE-LAR-12065-2] c24 N81-33235
- LAYERS**
- Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-1] c28 N78-24365
- LEACHING**
- Process for the leaching of AP from propellant  
[NASA-CASE-NFO-14109-1] c28 N80-23471
- LEAD (METAL)**
- Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c44 N76-27664
- Catalyst surfaces for the chronous/chronic redox couple  
[NASA-CASE-LEW-13148-2] c44 N81-29524
- LEAD TELLURIDES**
- Bonding method for improving contact between lead telluride thermoelectric elements and tungsten electrodes  
[NASA-CASE-XGS-04554] c15 N69-39786
- Procedure for segmenting lead telluride and silicon germanium thermoelectric elements to obtain composite elements effective over wide temperature range  
[NASA-CASE-IGS-05718] c26 N71-16037
- LEADING EDGE FLAPS**
- Leading edge vortex flaps for drag reduction --- during subsonic flight  
[NASA-CASE-LAR-12750-1] c02 N81-19016
- LEADING EDGES**
- Leading edge design for hypersonic reentry vehicles  
[NASA-CASE-XLA-00165] c31 N70-33242
- Construction of leading edges of surfaces for aerial vehicles perforating from subsonic to above transonic speeds  
[NASA-CASE-XLA-01486] c01 N71-23497
- Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c24 N77-19170
- LEAKAGE**
- Rocket chamber leak test fixture using tubular plug  
[NASA-CASE-XFR-09479] c14 N69-27503
- Microleak detector mounted on weld seam of propellant tank of launch vehicle  
[NASA-CASE-IMF-02307] c14 N71-10779
- Fluid leakage detection system with automatic monitoring capability  
[NASA-CASE-LAR-10323-1] c12 N71-17573
- Space suit using nonflexible material with low leakage and providing protection against thermal extremes, physical punctures, and radiation with high mobility articulation  
[NASA-CASE-XAC-07043] c05 N71-23161
- Development of apparatus and method for testing leakage of large tanks  
[NASA-CASE-IMF-02392] c32 N71-24285
- Gas leak detection in evacuated systems using ultraviolet radiation probe  
[NASA-CASE-ERC-10034] c15 N71-24896
- Method for locating leaks in hermetically sealed containers  
[NASA-CASE-ERC-10045] c15 N71-24910
- Volume displacement transducer for leak detection in hermetically sealed semiconductor devices  
[NASA-CASE-ERC-10033] c14 N71-26672
- Test chambers with orifice and helium mass spectrometer for detecting leak rate of encapsulated semiconductor devices  
[NASA-CASE-ERC-10150] c14 N71-28992
- Leak detector  
[NASA-CASE-MFS-21761-1] c35 N75-15931
- Vacuum leak detector  
[NASA-CASE-LAR-11237-1] c35 N75-19612
- Low heat leak connector for cryogenic system  
[NASA-CASE-XLE-02367-1] c31 N79-21225
- LEG (ANATOMY)**
- Actuator device for artificial leg  
[NASA-CASE-MFS-23225-1] c52 N77-14735
- Rotational joint assembly for the prosthetic leg  
[NASA-CASE-KSC-11004-1] c54 N77-30749
- Mechanical energy storage device for hip disarticulation  
[NASA-CASE-ARC-10916-1] c52 N78-10686
- LENS DESIGN**
- Chromatically corrected virtual image display --- lens design for flight simulators  
[NASA-CASE-LAR-12251-1] c74 N79-14892
- LENSES**
- Lens assembly for solar furnace or solar simulator  
[NASA-CASE-XMF-04111] c14 N71-15622
- Camera adapter design for image magnification including lens and illuminator  
[NASA-CASE-XMF-03844-1] c14 N71-26474
- Development and characteristics of Petzval type objective including field shaping lens for focusing light of specified wavelength band on curved photoreceptor  
[NASA-CASE-GSC-10700] c23 N71-30027
- Noise elimination in coherent imaging system by axial rotation of optical lens for spectral distribution of degrading affects  
[NASA-CASE-GSC-11133-1] c23 N72-11568
- Plural beam antenna with parabolic reflectors  
[NASA-CASE-GSC-11013-1] c09 N73-19234
- Spatial filter for Q-switched lasers  
[NASA-CASE-LEW-12164-1] c36 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] c74 N78-32854
- Scanning afocal laser velocimeter projection lens system  
[NASA-CASE-LAR-12328-1] c74 N80-12866
- Constant magnification optical tracking system  
[NASA-CASE-NFO-14813-1] c74 N80-24152
- Chromatically corrected virtual image visual display --- reducing eye strain in flight simulators

- [NASA-CASE-LAR-12251-1] c74 N80-27185  
Interferometric angle monitor  
[NASA-CASE-GSC-12614-1] c35 N81-12386
- LENTICULAR BODIES**  
Lenticular vehicle with foldable aerodynamic control flaps and reaction jets for operation above and within earth's atmosphere  
[NASA-CASE-IGS-00260] c31 N70-37924
- LEVEL (HORIZONTAL)**  
Hot-wire liquid level detector for cryogenic propellants  
[NASA-CASE-XLE-00454] c23 N71-17802  
Rotary leveling base platform  
[NASA-CASE-ARC-10981-1] c37 N78-27425
- LEVEL (QUANTITY)**  
Gauge for measuring quantity of liquid in spherical tank in reduced gravity  
[NASA-CASE-XMS-06236] c14 N71-21007  
Conversion of positive dc voltage to positive dc voltage of lower amplitude  
[NASA-CASE-IMP-14301] c09 N71-23188
- LEVELING**  
Development of adjustable attitude guide block for setting pins perpendicular to irregular convex work surface  
[NASA-CASE-XLA-07911] c15 N71-15571  
Electrical switching device comprising conductive liquid confined within square loop of deformable nonconductive tubing also used for leveling  
[NASA-CASE-NPO-10037] c09 N71-19610  
Adjustable support device with jacket screw for altering distance between base and supported member  
[NASA-CASE-NPO-10721] c15 N72-27484  
Automatically operable self-leveling load table  
[NASA-CASE-MFS-22039-1] c09 N75-12568
- LEVITATION**  
Containerless melting and rapid solidification apparatus and method  
[NASA-CASE-MFS-25305-1] c35 N81-16427
- LIPE (DURABILITY)**  
Hollow rolling element bearings  
[NASA-CASE-LEW-11087-3] c37 N74-21064
- LIPE DETECTORS**  
Use of enzyme hexokinase and glucose to reduce inherent light levels of ATP in luciferase compositions  
[NASA-CASE-IGS-05533] c04 N69-27487  
Describing method for lyophilization of luciferase containing mixtures for use in life detection reactions  
[NASA-CASE-IGS-05532] c06 N71-17705
- LIPE RAFTS**  
Design of inflatable life raft for aircrafts and boats  
[NASA-CASE-XMS-00863] c05 N70-34657  
Inflatable stabilizing system for use on life raft to reduce rocking and preclude capsizing  
[NASA-CASE-MSC-12393-1] c02 N73-26006  
Modification of one man life raft  
[NASA-CASE-LAR-10241-1] c54 N74-14845
- LIPE SUPPORT SYSTEMS**  
Shock absorbing couch for body support under high acceleration or deceleration forces  
[NASA-CASE-XMS-01240] c05 N70-35152  
Portable environmental control and life support system for astronaut in and out of spacecraft  
[NASA-CASE-XMS-09632-1] c05 N71-11203  
Design and development of flexible tunnel for use by spacecrews in performing extravehicular activities  
[NASA-CASE-MSC-12243-1] c05 N71-24728  
Development of improved convolute section for pressurized suits to provide high degree of mobility in response to minimum of applied torque  
[NASA-CASE-XMS-09637-1] c05 N71-24730  
Development and characteristics of inflatable structure to provide escape from orbit for spacecrews under emergency conditions  
[NASA-CASE-XMS-06162] c31 N71-28851  
Chlorine generator for purifying water in life support systems of manned spacecraft  
[NASA-CASE-XLA-08913] c14 N71-28533  
Open loop life support subsystem using breathing bag as reservoir for EVA  
[NASA-CASE-MSC-12411-1] c05 N72-20096
- Device for removing air from water for use in life support systems in manned space flight  
[NASA-CASE-XLA-8914] c15 N73-12492  
Intra- and extravehicular life support space suite for Apollo astronauts  
[NASA-CASE-MSC-12609-1] c05 N73-32012  
Catalyst cartridge for carbon dioxide reduction unit  
[NASA-CASE-LAR-10551-1] c25 N74-12813  
Helmet feedport  
[NASA-CASE-XMS-09653] c54 N78-17680  
Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c54 N78-32721  
Improved low-drag ground vehicle particularly suited for use in safely transporting livestock  
[NASA-CASE-PRC-11058-1] c85 N80-33312
- LIFT DEVICES**  
Device for handling heavy loads by distributing forces  
[NASA-CASE-XMP-04969] c11 N69-27466  
Techniques for recovery of multistage rocket vehicles by providing lifting surfaces on individual sections  
[NASA-CASE-IMP-00389] c31 N70-34176  
Direct lift control system having flaps with slots adjacent to their leading edge and particularly adapted for lightweight aircraft  
[NASA-CASE-LAR-10249-1] c02 N71-26110  
Development of auxiliary lifting system to provide ferry capability for entry vehicles  
[NASA-CASE-LAR-10574-1] c11 N73-13257  
High lift aircraft --- with improved stability, control, performance, and noise characteristics  
[NASA-CASE-LAR-11252-1] c05 N75-25914  
Device for installing rocket engines  
[NASA-CASE-MFS-19220-1] c20 N76-22296  
Vortex-lift roll-control device  
[NASA-CASE-LAR-11868-2] c08 N79-14108
- LIFT DRAG RATIO**  
Design of ring wing vehicle of high drag-to-weight ratio to withstand reentry stress into low density atmosphere  
[NASA-CASE-XLA-04901] c31 N71-24315  
An annular wing  
[NASA-CASE-PRC-11007-2] c02 N79-24959
- LIFTING BODIES**  
Techniques for recovery of multistage rocket vehicles by providing lifting surfaces on individual sections  
[NASA-CASE-IMP-00389] c31 N70-34176  
Graphic illustration of lifting body design  
[NASA-CASE-PRC-10063] c01 N71-12217  
Static force balancing system attached to lifting body  
[NASA-CASE-LAR-10348-1] c11 N73-12264
- LIFTING REENTRY VEHICLES**  
Lenticular vehicle with foldable aerodynamic control flaps and reaction jets for operation above and within earth's atmosphere  
[NASA-CASE-IGS-00260] c31 N70-37924  
Variable geometry manned orbital vehicle having high aerodynamic efficiency over wide speed range and incorporating auxiliary pivotal wings  
[NASA-CASE-XLA-03691] c31 N71-15674  
Designing spacecraft for flight into space, atmospheric reentry, and landing at selected sites  
[NASA-CASE-XAC-02058] c02 N71-16087
- LIGHT (VISIBLE RADIATION)**  
Light baffle with oblate hemispheroid surface and shading flange  
[NASA-CASE-NPO-10337] c14 N71-15604  
Maksutov spectrograph for low light level research  
[NASA-CASE-XLA-10402] c14 N71-29041  
Device for detection of combustion light preceding gaseous explosions  
[NASA-CASE-LAR-10739-1] c14 N73-16484
- LIGHT AIRCRAFT**  
Direct lift control system having flaps with slots adjacent to their leading edge and particularly adapted for lightweight aircraft  
[NASA-CASE-LAR-10249-1] c02 N71-26110
- LIGHT AMPLIFIERS**  
High power metallic halide laser  
[NASA-CASE-NPO-14782-1] c36 N80-18381
- LIGHT BEAMS**  
Cylindrical reflector for resolving wide angle light beam from telescope into narrow beam for

- spectroscopic analysis  
[NASA-CASE-XGS-08269] c23 N71-26206
- Development and characteristics of optical communications system based on modulation of light beams  
[NASA-CASE-XLA-01090] c16 N71-28963
- Multiple pattern holographic information storage and readout system  
[NASA-CASE-ERC-10151] c16 N71-29131
- Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c74 N80-24152
- Rhomboid prism pair for rotating the plane of parallel light beams --- laser velocimeters  
[NASA-CASE-ARC-11311-1] c74 N81-16882
- LIGHT GAS GUNS**  
Implosion driven, light gas, hypervelocity gun  
[NASA-CASE-XAC-05902] c11 N71-18578
- LIGHT MODULATION**  
Optical retrodirective modulator with focus spoiling reflector driven by modulation signal  
[NASA-CASE-GSC-10062] c14 N71-15605
- Modulating and controlling intensity of light beam from high temperature source by servocontrolled rotating cylinders  
[NASA-CASE-XMS-04300] c09 N71-19479
- Method and apparatus for optically modulating light or microwave beam  
[NASA-CASE-GSC-10216-1] c23 N71-26722
- Development and characteristics of optical communications system based on modulation of light beams  
[NASA-CASE-XLA-01090] c16 N71-28963
- Lamp modulator for generating visual indication of presence and magnitude of signal  
[NASA-CASE-KSC-10565] c09 N72-25250
- Polarization compensator for optical communications  
[NASA-CASE-GSC-11782-1] c74 N76-30053
- Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14524-1] c32 N80-24510
- Collimated beam manifold and method for using the same --- laser beams  
[NASA-CASE-MFS-25312-1] c74 N80-34251
- Fluorescent radiation converter  
[NASA-CASE-GSC-12528-1] c74 N81-24900
- LIGHT SCATTERING**  
Forward-scatter polarimeter for determining the gaseous depolarization factor in the presence of polluting polydispersed particles  
[NASA-CASE-NPO-13756-1] c35 N76-14434
- The 2 deg/90 deg laboratory scattering photometer --- particulate refractivity in hydrosols  
[NASA-CASE-GSC-12088-1] c74 N78-13874
- 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] c74 N79-11865
- LIGHT SOURCES**  
Light radiation direction indicator with baffle of two parallel grids  
[NASA-CASE-XNP-03930] c14 N69-24331
- High intensity heat and light unit containing quartz lamp elements protectively positioned to withstand severe environmental stress  
[NASA-CASE-XLA-00141] c09 N70-33312
- Photosensitive light source device for detecting unmanned spacecraft deviation from reference attitude  
[NASA-CASE-XNP-00438] c21 N70-35089
- Electro-optical detector for determining position of light source  
[NASA-CASE-XNP-01059] c23 N71-21821
- Optical system for selecting particular wavelength light beams from multiple wavelength light source  
[NASA-CASE-ERC-10248] c14 N72-17323
- Electro-optical stabilization of calibrated light source  
[NASA-CASE-HSC-12293-1] c14 N72-27411
- Development of temperature compensated light source with components and circuitry for maintaining luminous intensity independent of temperature variations  
[NASA-CASE-ARC-10467-1] c09 N73-14214
- Interferometer prism and control system for precisely determining direction to remote light source  
[NASA-CASE-ARC-10278-1] c14 N73-25463
- Attitude sensor  
[NASA-CASE-LAR-10586-1] c19 N74-15089
- Very high intensity light source using a cathode ray tube --- electron beams  
[NASA-CASE-XNP-01296] c33 N75-27250
- Electric arc light source having undercut recessed anode  
[NASA-CASE-ARC-10266-1] c33 N75-29318
- Uniform variable light source  
[NASA-CASE-NPO-11429-1] c74 N77-21941
- LIGHT TRANSMISSION**  
Hybrid holographic system using reference, transmitted, and reflected beams simultaneously  
[NASA-CASE-MFS-20074] c16 N71-15565
- Optical characteristics measuring apparatus  
[NASA-CASE-XNP-08840] c23 N71-16365
- Optical monitor panel consisting of translucent screen with test or meter information projected onto it from rear for application in control rooms of missile launching and tracking stations  
[NASA-CASE-XKS-03509] c14 N71-23175
- Solar cell panel with light transmitting cover plate  
[NASA-CASE-NPO-10747] c03 N72-22042
- Method and system for transmitting and distributing optical frequency radiation  
[NASA-CASE-HQN-10541-3] c23 N72-23695
- Thin absorbing metallic film for increased visible light transmission  
[NASA-CASE-LAR-10836-1] c26 N72-27784
- Transmitting and reflecting diffuser --- for ultraviolet light  
[NASA-CASE-LAR-10385-2] c70 N74-13436
- Optical instrument employing reticle having preselected visual response pattern formed thereon  
[NASA-CASE-ARC-10976-1] c74 N77-22950
- Transmitting and reflecting diffuser --- using ultraviolet grade fused silica coatings  
[NASA-CASE-LAR-10385-3] c74 N78-15879
- LIGHTING EQUIPMENT**  
Sealed fluorescent tube light unit capable of connection with other units to form string of work lights  
[NASA-CASE-XKS-05932] c09 N71-26787
- Pressurized inert gas feed for lighting system  
[NASA-CASE-KSC-10644] c09 N72-27227
- Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c33 N79-11315
- Power converter --- for display devices, lighting equipment  
[NASA-CASE-FRC-11014-1] c33 N79-27395
- LIGHTNING**  
Apparatus for determining distance to lightning strokes from single station by magnetic and electric field sensing antennas  
[NASA-CASE-KSC-10698] c07 N73-20175
- System for locating lightning strokes by coordination of directional antenna signals  
[NASA-CASE-KSC-10729-1] c09 N73-32110
- Monitoring and recording lightning strokes in predetermined area  
[NASA-CASE-KSC-10728-1] c14 N73-32319
- Lightning current measuring systems  
[NASA-CASE-KSC-10807-1] c33 N75-26246
- Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c33 N79-10337
- Lightning current detector  
[NASA-CASE-KSC-11057-1] c33 N79-14305
- Lightning discharge identification system  
[NASA-CASE-KSC-11099-1] c33 N79-25313
- LIMBS (ANATOMY)**  
Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c52 N79-26772
- Apparatus for determining changes in limb volume  
[NASA-CASE-MSC-18759-1] c52 N81-24716
- LIMITER CIRCUITS**  
Variable duration pulse integrator design for integrating pulse duration modulated pulses with elimination of ripple content  
[NASA-CASE-XLA-01219] c10 N71-23084
- Circuits for amplitude limiting of random noise inputs  
[NASA-CASE-NPO-10169] c10 N71-24844
- Velocity limiting safety system for motor driven research vehicle  
[NASA-CASE-XLA-07473] c15 N71-24895

- Low level signal limiter  
[NASA-CASE-ILR-04791] c32 N74-22096
- Inrush current limiter  
[NASA-CASE-GSC-11789-1] c33 N77-14333
- LINE SPECTRA**
- Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c25 N81-14015
- LINEAR ACCELERATORS**
- Linear accelerator frequency control system  
[NASA-CASE-XGS-05441] c10 N71-22962
- LINEAR ARRAYS**
- Multispectral imaging and analysis system --- using charge coupled devices and linear arrays  
[NASA-CASE-NPO-13691-1] c43 N79-17288
- LINEAR RECEIVERS**
- Antenna array at focal plane of reflector with coupling network for beam switching  
[NASA-CASE-GSC-10220-1] c07 N71-27233
- LINEAR SYSTEMS**
- Linear three-tap feedback shift register  
[NASA-CASE-NPO-10351] c08 N71-12503
- Family of m-ary linear feedback shift register with binary logic  
[NASA-CASE-NPO-11868] c10 N73-20254
- LINEARITY**
- Semilinear bearing comprising two rows of roller bearings separated by spherical bearings and permitting rotational and translational movement  
[NASA-CASE-XLA-02809] c15 N71-22582
- Mechanical actuator wherein linear motion changes to rotational motion  
[NASA-CASE-XGS-04548] c15 N71-24045
- Linear magnetic bearing  
[NASA-CASE-GSC-12517-1] c33 N81-22279
- LINING PROCESSES**
- Fully plasma-sprayed compliant lapped ceramic turbine seal  
[NASA-CASE-LEW-13268-1] c37 N80-24619
- LINKAGES**
- Development of collapsible nozzle extension for rocket engines  
[NASA-CASE-MFS-11497] c28 N71-16224
- Design and construction of mechanical probe for determining if object is properly secured  
[NASA-CASE-MFS-20760] c14 N72-33377
- Locking redundant link  
[NASA-CASE-LAR-11900-1] c37 N79-14382
- Compensating linkage for main rotor control  
[NASA-CASE-LAR-11797-1] c05 N81-19087
- LIQUEFACTION**
- Ophthalmic liquifaction pump  
[NASA-CASE-LEW-12051-1] c52 N75-33640
- LIQUID BEARINGS**
- Fatigue life of hybrid antifriction bearings at ultrahigh speeds  
[NASA-CASE-LEW-11152-1] c15 N73-32359
- LIQUID COOLING**
- Water cooled contactors for holding rotating carbon arc anode  
[NASA-CASE-XMS-03700] c15 N69-24266
- External device for liquid spray cooling of gas turbine blades  
[NASA-CASE-ILE-00037] c28 N70-33372
- Water cooled solenoid capable of producing magnetic field intensities up to 100 kilogauss  
[NASA-CASE-XNP-01951] c09 N70-41929
- Laminar flow of liquid coolants in rocket engines  
[NASA-CASE-NPO-10122] c12 N71-17631
- Space suit body heat exchanger design composed of thermal conductance yarn and liquid coolant loops  
[NASA-CASE-XMS-09571] c05 N71-19439
- Electric power system with circulatory liquid coolant cooling system  
[NASA-CASE-MFS-14114-2] c09 N71-24807
- Electric power system with thermionic diodes and circulatory liquid metal coolant lines  
[NASA-CASE-MFS-14114] c33 N71-27862
- Apparatus for liquid spray cooling of turbine blades  
[NASA-CASE-ILE-00027] c33 N71-29152
- Automatic control device for regulating inlet water temperature of liquid cooled spacesuit  
[NASA-CASE-MSC-13917-1] c05 N72-15698
- Automatic temperature control for liquid cooled space suit  
[NASA-CASE-ARC-10599-1] c05 N73-26071
- Heat exchanger system and method  
[NASA-CASE-LAR-10799-2] c34 N76-17317
- Liquid cooled brassiere and method of diagnosing malignant tumors therewith  
[NASA-CASE-ARC-11007-1] c52 N77-14736
- Closed loop spray cooling apparatus --- for particle accelerator targets  
[NASA-CASE-LEW-11981-1] c31 N78-17237
- LIQUID CRYSTALS**
- Development of combined velocimeter and accelerometer based on color changes in liquid crystalline material subjected to shear stresses  
[NASA-CASE-ERC-10292] c14 N72-25410
- Input signal measurement using liquid crystalline elements  
[NASA-CASE-ERC-10275] c26 N72-25680
- LIQUID FILLED SHELLS**
- Liquid rocket systems for propulsion and control of spacecraft  
[NASA-CASE-XNP-00610] c28 N70-36910
- Design and development of fluid sample collector  
[NASA-CASE-XMS-06767-1] c14 N71-20435
- Manufacture of fluid containers from fused coated polyester sheets having resealable septum  
[NASA-CASE-NPO-10123] c15 N71-24835
- Omnidirectional liquid filled accelerometer design with liquid and housing temperature compensation  
[NASA-CASE-HQN-10780] c14 N71-30265
- LIQUID FLOW**
- Reduced gravity liquid configuration simulator to study propellant behavior in rocket fuel tanks  
[NASA-CASE-ILE-02624] c12 N69-39988
- Liquid junction for glass electrode or pH meters  
[NASA-CASE-NPO-10682] c15 N70-34699
- Actuator using compressed gas as driving force to control valve handling large liquid flows  
[NASA-CASE-XHQ-01208] c15 N70-35409
- Two component valve assembly for cryogenic liquid transfer regulation  
[NASA-CASE-ILE-00397] c15 N70-36492
- Positive displacement flowmeter for measuring extremely low flows of fluid with self calibrating features  
[NASA-CASE-XMP-02822] c14 N70-41994
- High pressure liquid flow sight assembly for wide temperature range applications including cryogenic fluids  
[NASA-CASE-ILE-02998] c14 N70-42074
- Carrier liquid system containing bodies of ablative material  
[NASA-CASE-LEW-10359-2] c33 N73-25952
- Zero gravity liquid transfer device, using spiral shaped screen  
[NASA-CASE-KSC-10626] c14 N73-27378
- System for measuring Reynolds in a turbulently flowing fluid --- signal processing  
[NASA-CASE-ARC-10755-2] c34 N76-27517
- LIQUID HELIUM**
- Heat operated cryogenic electrical generator  
[NASA-CASE-NPO-13303-1] c20 N75-24837
- Helium refrigerator  
[NASA-CASE-NPO-13435-1] c31 N76-14284
- Cryostat system for temperatures on the order of 2 deg K or less  
[NASA-CASE-NPO-13459-1] c31 N77-10229
- Multistation refrigeration system  
[NASA-CASE-NPO-13839-1] c31 N78-25256
- Stabilization of He2(a 3 Sigma u+ molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c72 N79-13826
- Low cost cryostat  
[NASA-CASE-NPO-14513-1] c35 N81-14287
- LIQUID HYDROGEN**
- Development of thermal insulation material for insulating liquid hydrogen tanks in spacecraft  
[NASA-CASE-XMF-05046] c33 N71-28892
- Reinforced polyquinoxaline gasket and method of preparing the same --- resistant to ionizing radiation and liquid hydrogen temperatures  
[NASA-CASE-MFS-21364-1] c37 N74-18126
- LIQUID INJECTION**
- Thrust vector control by secondary injection of fluid into rocket nozzle flow field to separate exhaust flow  
[NASA-CASE-ILE-00208] c28 N70-34294



- System for aerodynamic control of rocket vehicles by secondary injection of fluid into nozzle exhaust stream  
[NASA-CASE-XLA-01163] c21 N71-15582
- Propellant injection assembly having individually removable and replaceable nozzles for liquid fueled rocket engines  
[NASA-CASE-XMP-00968] c28 N71-15660
- Sodium storage and injection system  
[NASA-CASE-NPO-14384-1] c37 N80-10494
- Method of producing silicon --- gas phase reactor multiple injector liquid feed system  
[NASA-CASE-NPO-14382-1] c31 N80-18231
- LIQUID LASERS**
- Method and apparatus using temperature control for wavelength tuning of liquid lasers  
[NASA-CASE-ERC-10187] c16 N69-31343
- LIQUID LEVELS**
- Inductive liquid level detection system  
[NASA-CASE-XLE-01609] c14 N71-10500
- Apparatus for fiber optic liquid level sensing  
[NASA-CASE-MSC-18674-1] c74 N81-24907
- LIQUID METALS**
- Magneto hydrodynamic generator for mixing nonconductive gas and liquid metal mist to form slugs  
[NASA-CASE-XLE-02083] c03 N69-39583
- Thermoelectric power conversion by liquid metal flowing through magnetic field  
[NASA-CASE-XNP-00644] c03 N70-36803
- Analytical test apparatus and method for determining oxygen content in alkali liquid metal  
[NASA-CASE-XLE-01997] c06 N71-23527
- Electric power system with thermionic diodes and circulatory liquid metal coolant lines  
[NASA-CASE-MFS-14114] c33 N71-27862
- Flexible barrier membrane comprising porous substrate and incorporating liquid gallium or indium metal used as sealant barriers for spacecraft walls and pumping liquid propellants  
[NASA-CASE-XNP-08881] c17 N71-28747
- Shell-side liquid metal boiler employing tube and shell heat exchanger  
[NASA-CASE-NPO-10831] c33 N72-20515
- U shaped heated tube for distillation and purification of liquid metals  
[NASA-CASE-XNP-08124-2] c06 N73-13129
- Electromagnetic flow rate meter --- for liquid metals  
[NASA-CASE-LEW-10981-1] c35 N74-21018
- Process for preparing liquid metal electrical contact device  
[NASA-CASE-LEW-11978-1] c33 N77-26385
- Liquid metal slip ring  
[NASA-CASE-LEW-12277-2] c33 N78-25323
- Solar driven liquid metal MHD power generator  
[NASA-CASE-LAR-12495-1] c44 N81-32609
- LIQUID NITROGEN**
- Transferring liquid nitrogen through vacuum chamber to cryopanel  
[NASA-CASE-LAR-10031] c15 N72-22484
- LIQUID OXYGEN**
- Dye penetrant and technique for nondestructive tests of solid surfaces contacted by liquid oxygen  
[NASA-CASE-XMP-02221] c18 N71-27170
- LIQUID PHASES**
- Method and feed system for separating and orienting liquid and vapor phases of liquid propellants in zero gravity environment  
[NASA-CASE-XLE-01182] c27 N71-15635
- Hydraulic apparatus for casting and molding of liquid polymers  
[NASA-CASE-XNP-07659] c06 N71-22575
- Mixed liquid and vapor phase analyzer design with thermocouples for relative heat transfer measurement  
[NASA-CASE-NPO-10691] c14 N71-26199
- Cryogenic liquid sensor  
[NASA-CASE-NPO-10619-1] c35 N77-21393
- LIQUID PROPELLANT ROCKET ENGINES**
- High thrust annular liquid propellant rocket engine and exhaust nozzle design  
[NASA-CASE-XLE-00078] c28 N70-33284
- Attitude and propellant flow control system for liquid propellant rocket vehicles  
[NASA-CASE-XMP-00185] c21 N70-34539
- Injector manifold assembly for bipropellant rocket engines providing for fuel propellant to serve as coolant  
[NASA-CASE-XMP-00148] c28 N70-38710
- Collapsible auxiliary tank for restarting liquid propellant rocket motors under zero gravity  
[NASA-CASE-XMP-01390] c28 N70-41275
- Supersonic combustion rocket  
[NASA-CASE-LEW-11058-1] c20 N74-13502
- Space vehicle  
[NASA-CASE-MFS-22734-1] c18 N75-19329
- Low thrust monopropellant engine --- low temperature environments  
[NASA-CASE-GSC-12194-2] c20 N79-15151
- Fluid thrust control system --- for liquid propellant rocket engines  
[NASA-CASE-XMP-05964-1] c20 N79-21124
- Rocket injector head  
[NASA-CASE-XMP-04592-1] c20 N79-21125
- LIQUID ROCKET PROPELLANTS**
- Propellant injectors for rocket combustion chambers  
[NASA-CASE-XLE-00103] c28 N70-33241
- Liquid rocket systems for propulsion and control of spacecraft  
[NASA-CASE-XNP-00610] c28 N70-36910
- Igniter capsule for chemical ignition of liquid rocket propellants  
[NASA-CASE-XLE-00323] c28 N70-38505
- High temperature spark plug for igniting liquid rocket propellants  
[NASA-CASE-XLE-00660] c28 N70-39925
- Compact high pressure filter for rocket fuel lines  
[NASA-CASE-XNP-00732] c28 N70-41447
- Venting device for liquid propellant storage tank using magnetic field to separate liquid and gaseous phases  
[NASA-CASE-XLE-01449] c15 N70-41646
- Liquid propellant tank design with semitoroidal bulkhead  
[NASA-CASE-XMP-01899] c31 N70-41948
- Method and feed system for separating and orienting liquid and vapor phases of liquid propellants in zero gravity environment  
[NASA-CASE-XLE-01182] c27 N71-15635
- Control valve and coaxial variable injector for controlling bipropellant mixture ratio and flow  
[NASA-CASE-XNP-09702] c15 N71-17654
- Slosh and swirl alleviator for liquid propellant tanks during transport and flight  
[NASA-CASE-XLA-05749] c15 N71-19569
- Filler valve design for supplying liquid propellants at high pressure to space vehicles  
[NASA-CASE-XNP-01747] c15 N71-23024
- Electronic recording system for spatial mass distribution of liquid rocket propellant droplets or vapors ejected from high velocity nozzles  
[NASA-CASE-NPO-10185] c10 N71-26339
- Flexible barrier membrane comprising porous substrate and incorporating liquid gallium or indium metal used as sealant barriers for spacecraft walls and pumping liquid propellants  
[NASA-CASE-XNP-08881] c17 N71-28747
- Response analyzing apparatus for liquid vapor interface sensor of sloshing rocket propellant  
[NASA-CASE-MFS-11204] c14 N71-29134
- Passive propellant system  
[NASA-CASE-MFS-23642-1] c20 N80-10278
- Supercharged topping rocket propellant feed system  
[NASA-CASE-XLE-02062-1] c20 N80-14188
- LIQUID SLOSHING**
- Slosh damping method for liquid rocket propellant tanks  
[NASA-CASE-XMP-00658] c12 N70-38997
- Flexible ring slosh damping baffle for spacecraft fuel tank  
[NASA-CASE-LAR-10317-1] c32 N71-16103
- Submerged fuel tank baffles to prevent sloshing in liquid propellant rocket flight  
[NASA-CASE-XLA-04605] c32 N71-16106
- Hot-wire liquid level detector for cryogenic propellants  
[NASA-CASE-XLE-00454] c23 N71-17802
- Slosh and swirl alleviator for liquid propellant tanks during transport and flight  
[NASA-CASE-XLA-05749] c15 N71-19569
- Pressure sensor network for measuring liquid dynamic response in flight including fuel tank

acceleration, liquid slosh amplitude, and fuel depth monitoring  
[NASA-CASE-XLA-05541] c12 N71-26387

**LIQUID SODIUM**  
Sodium storage and injection system  
[NASA-CASE-NPO-14384-1] c37 N80-10494

**LIQUID-GAS MIXTURES**  
Liquid-gas separator adapted for use in zero gravity environment - drawings  
[NASA-CASE-XMS-01624] c15 N70-40062  
Absorbent apparatus for separating gas from liquid-gas stream used in environmental control under zero gravity conditions  
[NASA-CASE-XMS-01492] c05 N70-41297  
Venting device for liquid propellant storage tank using magnetic field to separate liquid and gaseous phases  
[NASA-CASE-XLE-01449] c15 N70-41646  
Liquid-gaseous centrifugal separator for weightlessness environment  
[NASA-CASE-XLA-00415] c15 N71-16079  
Vapor-liquid separator design with vapor driven pump for separated liquid pumping for application in propellant transfer  
[NASA-CASE-XMF-04042] c15 N71-23023

**LIQUID-VAPOR INTERFACES**  
Describing apparatus for separating gas from cryogenic liquid under zero gravity and for venting gas from fuel tank  
[NASA-CASE-XLE-00586] c15 N71-15968  
Liquid-vapor interface seal design for turbine rotating shafts including helical and molecular pumps and liquid cooling of mercury vapor  
[NASA-CASE-XNP-02862-1] c15 N71-26294  
Response analyzing apparatus for liquid vapor interface sensor of sloshing rocket propellant  
[NASA-CASE-MFS-11204] c14 N71-29134

**LIQUIDS**  
Liquid-gas separator adapted for use in zero gravity environment - drawings  
[NASA-CASE-XMS-01624] c15 N70-40062  
Electrical switching device comprising conductive liquid confined within square loop of deformable nonconductive tubing also used for leveling  
[NASA-CASE-NPO-10037] c09 N71-19610  
Purification apparatus for vaporization and fractional distillation of liquids  
[NASA-CASE-XNP-08124] c15 N71-27184  
Quantitative liquid measurements in container by resonant frequencies  
[NASA-CASE-XNP-02500] c18 N71-27397  
Resonant infrasonic gauging device for measuring liquid quantity in closed bladderless reservoir  
[NASA-CASE-MSC-11847-1] c14 N72-11363  
Ablative system with liquid carrying ablative material bodies and forming self-replacing ablative surface  
[NASA-CASE-LEW-10359] c33 N72-25511  
Pressurized tank for feeding liquid waste into processing equipment  
[NASA-CASE-LAR-10365-1] c05 N72-27102  
Apparatus for mixing two or more liquids under zero gravity conditions  
[NASA-CASE-LAR-10195-1] c15 N73-19458  
Bimetallic fluid displacement apparatus --- for stirring and heating stored gases and liquids  
[NASA-CASE-ARC-10441-1] c35 N74-15126  
Method and device for detection of surface discontinuities or defects  
[NASA-CASE-MSC-14187-1] c35 N74-32879  
Automatic liquid inventory collecting and dispensing unit  
[NASA-CASE-LAR-11071-1] c35 N75-19611  
Thermal energy storage system --- operating on superheating of liquids  
[NASA-CASE-MFS-23167-1] c44 N76-31667  
Low gravity phase separator  
[NASA-CASE-MSC-14773-1] c35 N78-12390  
Automatic fluid dispenser  
[NASA-CASE-ARC-10820-1] c35 N78-19466  
Liquid-immersible electrostatic ultrasonic transducer  
[NASA-CASE-LAR-12465-1] c35 N80-18363  
System for monitoring physical characteristics of fluids. --- acoustic techniques  
[NASA-CASE-NPO-15400-1] c34 N81-24384

**LITHIUM COMPOUNDS**  
Utilization of lithium p-lithiphenoxide to prepare star polymers  
[NASA-CASE-NFO-10998-1] c06 N73-32029

**LOAD DISTRIBUTION (FORCES)**  
Force measuring instrument for structural members, particularly fastening bolts or studs  
[NASA-CASE-XMF-00456] c14 N70-34705  
Multiple Belleville spring assembly with even load distribution  
[NASA-CASE-XNP-00840] c15 N70-38225  
Device for use in loading tension members --- characterized by elongated elastic body  
[NASA-CASE-MFS-21488-1] c14 N75-24794  
Pneumatic load compensating or controlling system  
[NASA-CASE-ARC-10907-1] c37 N75-32465

**LOAD TESTING MACHINES**  
Load cell protection device using spring-loaded breakaway mechanism  
[NASA-CASE-XMS-06782] c32 N71-15974  
Development of device for transferring load from load cell to bypass mechanism  
[NASA-CASE-XMS-06329-1] c15 N71-20441  
Method and apparatus for tensile testing of metal foil  
[NASA-CASE-LAR-10208-1] c35 N76-18400  
Fatigue failure load indicator  
[NASA-CASE-LAR-12027-1] c39 N79-22537

**LOAD TESTS**  
Differential pressure cell insensitive to changes in ambient temperature and extreme overload  
[NASA-CASE-XAC-00042] c14 N70-34816

**LOADING OPERATIONS**  
Air bearings for near frictionless transfer of loads from one body to another  
[NASA-CASE-XMF-01887] c15 N71-10617

**LOADS (FORCES)**  
Device for handling heavy loads by distributing forces  
[NASA-CASE-XNP-04969] c11 N69-27466  
Two plane balance for simultaneous measurements of multiple forces  
[NASA-CASE-XAC-00073] c14 N70-34813  
Improving load capacity and fatigue life of rolling element systems in rockets and missiles  
[NASA-CASE-XLE-02999] c15 N71-16052  
Development of device for transferring load from load cell to bypass mechanism  
[NASA-CASE-XMS-06329-1] c15 N71-20441  
Valve assembly for controlling simultaneously more than one fluid flow, and having stable qualities under loads  
[NASA-CASE-XMS-05890] c09 N71-23191  
Solid state force measuring electromechanical transducers made of piezoresistive materials  
[NASA-CASE-ERC-10088] c26 N71-25490  
Turn on current transient limiter for controlling peak current flow in high capacity load  
[NASA-CASE-GSC-10413] c10 N71-26531  
Synchronous dc direct-drive system comprising multiple-loop hybrid control system controlling load directly connected to actuator  
[NASA-CASE-GSC-10065-1] c10 N71-27136  
Force balanced throttle valve for fuel control in rocket engines  
[NASA-CASE-NFO-10808] c15 N71-27432  
Energy absorption device in high precision gear train for protection against damage to components caused by stop loads  
[NASA-CASE-XNP-01848] c15 N71-28959  
Air bearing for use in exterior environment for moving heavy loads  
[NASA-CASE-WLP-10002] c15 N72-17451  
Measuring device for bearing preload using spring washers  
[NASA-CASE-MFS-20434] c11 N72-25288  
Variable direction force coupler for transmitting force along selectable curve path  
[NASA-CASE-MFS-20317] c15 N73-13463  
Versatile ergometer with work load control  
[NASA-CASE-MFS-21109-1] c05 N73-27941  
Three-axis adjustable loading structure  
[NASA-CASE-FRC-10051-1] c35 N74-13129  
G-load measuring and indicator apparatus --- for aircraft  
[NASA-CASE-ARC-10806] c06 N74-27872

- Spring operated accelerator and constant force spring mechanism therefor  
[NASA-CASE-ARC-10898-1] c35 N77-18417
- Penetrometer --- for determining load bearing characteristics of inclined surfaces  
[NASA-CASE-NPO-11103-1] c35 N77-27367
- Load regulating latch  
[NASA-CASE-MSC-19535-1] c37 N77-32499
- LOCATES SYSTEM**
- System for locating lightning strokes by coordinaticn of directional antenna signals  
[NASA-CASE-KSC-10729-1] c09 N73-32110
- Position determination systems --- using orbital antenna scan of celestial bodies  
[NASA-CASE-MSC-12593-1] c17 N76-21250
- LOCKING**
- Releasable coupling device designed to receive and retain matching ends of electrical connectors  
[NASA-CASE-XMS-07846-1] c09 N69-21927
- LOCKS (FASTENERS)**
- Ball locking device which releases in response to small forces when subjected to high axial loads  
[NASA-CASE-IMP-01371] c15 N70-41829
- Low friction bearing and lock mechanism for two-axis gimbal carrying satellite payload  
[NASA-CASE-GSC-10556-1] c31 N71-26537
- Locking device for retaining turbine rotor blades on turbine wheel  
[NASA-CASE-XNP-00816] c28 N71-28928
- Longitudinal film gate and lock mechanism for securing film in motion picture cameras under vibration and high acceleration loads  
[NASA-CASE-LAR-10686] c14 N71-28935
- Design of quick release locking pin for joining two or more load-carrying structural members  
[NASA-CASE-MFS-18495] c15 N72-11385
- Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-1] c54 N76-22514
- High temperature penetrator assembly with bayonet plug and ramp-activated lock  
[NASA-CASE-MSC-18526-1] c35 N80-19468
- Aircraft canopy lock  
[NASA-CASE-FRC-11065-1] c05 N81-24047
- Portable appliance security apparatus  
[NASA-CASE-GSC-12399-1] c33 N81-25299
- Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c52 N81-25661
- LOCOMOTION**
- Jet shoes for space locomotion  
[NASA-CASE-XLA-08491] c05 N69-21380
- Attitude control training device for astronauts permitting friction-free movement with five degrees of freedom  
[NASA-CASE-XMS-02977] c11 N71-10746
- Restraint torso for increased mobility and reduced physiological effects while wearing pressurized suits  
[NASA-CASE-MSC-12397-1] c05 N72-25119
- Kinesimetric method and apparatus  
[NASA-CASE-MSC-18929-1] c54 N81-15699
- LOGARITHMIC RECEIVERS**
- Logarithmic circuit with wide dynamic range  
[NASA-CASE-GSC-12145-1] c33 N78-32339
- LOGARITHMS**
- Technique for deriving logarithm of input signal using exponentially varying electric signal inversely  
[NASA-CASE-ERC-10267] c09 N72-23173
- LOGIC CIRCUITS**
- Selective gold diffusion on monolithic silicon chips for switching and nonswitching amplifier devices and circuits and linear and digital logic circuits  
[NASA-CASE-ERC-10072] c09 N70-11148
- Counter-divider circuit for accuracy and reliability in binary circuits  
[NASA-CASE-IMP-00421] c09 N70-34502
- Binary to binary-coded decimal converter using single set of logic circuits notwithstanding number of shift register decades  
[NASA-CASE-XNP-00432] c08 N70-35423
- Conversion system for increasing resolution of analog to digital converters  
[NASA-CASE-XAC-00404] c08 N70-40125
- Data processor having multiple sections activated at different times by selective power coupling to sections  
[NASA-CASE-XGS-04767] c08 N71-12494
- Binary sequence detector with few memory elements and minimized logic circuit complexity  
[NASA-CASE-XNP-05415] c08 N71-12505
- Bistable multivibrator circuits operating at high speed and low power dissipation  
[NASA-CASE-XGS-00823] c10 N71-15910
- Logic AND gate for fluid circuits  
[NASA-CASE-XLA-07391] c12 N71-17579
- Logic circuit to ripple add and subtract binary counters for spaceborne computers  
[NASA-CASE-XGS-04766] c08 N71-18602
- Constructing Exclusive-Or digital logic circuit in single module  
[NASA-CASE-XLA-07732] c08 N71-18751
- Stepping motor control apparatus exciting windings in proper time sequence to cause motor to rotate in either direction  
[NASA-CASE-GSC-10366-1] c10 N71-18772
- Serial digital decoder design with square circuit matrix and serial memory storage units  
[NASA-CASE-NPO-10150] c08 N71-24650
- Binary to decimal decoder logic circuit design with feedback control and display device  
[NASA-CASE-XKS-06167] c08 N71-24890
- Design and development of multistage current steering switch with inductively coupled magnetic cores  
[NASA-CASE-XNP-08567] c09 N71-26000
- Logic circuit for generating multibit binary code word in parallel  
[NASA-CASE-XNP-04623] c10 N71-26103
- Adaptive signal generating system and logic circuits for satellite television systems  
[NASA-CASE-GSC-11367] c10 N71-26374
- Transistorized switching logic circuits with tunnel diodes  
[NASA-CASE-GSC-10878-1] c10 N72-22236
- Logical function and circuit generator  
[NASA-CASE-XLA-05099] c09 N73-13209
- A synchronous binary array divider  
[NASA-CASE-ERC-10180-1] c60 N74-20836
- Four phase logic systems --- including integrated microcircuits  
[NASA-CASE-MSC-14240-1] c33 N75-14957
- A general logic structure for custom LSI circuits  
[NASA-CASE-NPO-14410-1] c33 N79-25314
- Combinational logic for generating gate drive signals for phase control rectifiers  
[NASA-CASE-MFS-25208-1] c33 N81-27402
- Interleaving device  
[NASA-CASE-GSC-12111-2] c33 N81-29342
- Adaptive control system for line-commutated inverters  
[NASA-CASE-MFS-25209-1] c33 N81-31480
- Adaptive reference voltage generator for firing angle control of line-commutated inverters  
[NASA-CASE-MFS-25215-1] c33 N81-31481
- LONGITUDINAL CONTROL**
- Three-axis controller operated by hand-wrist motion for yaw, pitch, and roll control  
[NASA-CASE-XAC-01404] c05 N70-41581
- Pitch attitude stabilization system utilizing engine pressure ratio feedback signals  
[NASA-CASE-LAR-12562-1] c08 N81-26152
- LONGITUDINAL STABILITY**
- An annular wing  
[NASA-CASE-FRC-11007-2] c02 N79-24959
- LOOP ANTENNAS**
- Collapsible, space erectable loop antenna system for space vehicle  
[NASA-CASE-IMP-00437] c07 N70-40202
- Automatic carrier acquisition system for phase locked loop receiver  
[NASA-CASE-NPO-11628-1] c07 N73-30113
- LOOPS**
- Tape cartridge with high capacity storage of endless-loop magnetic tape  
[NASA-CASE-XGS-00769] c14 N70-41647
- Endless loop tape transport mechanism for driving and tensioning recording medium in magnetic tape recorder  
[NASA-CASE-XGS-01223] c07 N71-10609
- Filter for third order phase locked loops in signal receivers  
[NASA-CASE-NPO-11941-1] c10 N73-27171
- High speed shutter --- electrically actuated ribbon loop for shuttering optical or fluid passageways

- [NASA-CASE-ARC-10516-1] c70 N74-21300  
Means for accommodating large overstrain in lead wires --- by storing extra length of wire in stretchable loop
- [NASA-CASE-LAR-10168-1] c33 N74-22865  
Closed loop spray cooling apparatus
- [NASA-CASE-LEW-11981-2] c34 N79-20336  
Pseudonoise code tracking loop
- [NASA-CASE-MSC-18035-1] c32 N81-15179  
Pulsed phase locked loop strain monitor
- [NASA-CASE-LAR-12772-1] c33 N81-15195
- LOW ASPECT RATIO**  
Aerospace configuration with low and high aspect ratio variability for high and low speed flight
- [NASA-CASE-ILA-00142] c02 N70-33286  
Aerodynamic configuration for aircraft capable of high speed flight and low drag for low speed takeoff or landing upon presently existing airfields
- [NASA-CASE-ILA-00806] c02 N70-34858
- LOW COST**  
Fabrication of polycrystalline solar cells on low-cost substrates
- [NASA-CASE-GSC-12022-1] c44 N76-28635  
Process for utilizing low-cost graphite substrates for polycrystalline solar cells
- [NASA-CASE-GSC-12022-2] c44 N78-24609
- LOW CURRENTS**  
Low current linearization of magnetic amplifier for dc transducer
- [NASA-CASE-NPO-14617-1] c33 N81-24338
- LOW DENSITY MATERIALS**  
Method and photodetector device for locating abnormal voids in low density materials
- [NASA-CASE-MPS-20044] c14 N71-28993  
Intumescent composition, foamed product prepared therewith and process for making same
- [NASA-CASE-ARC-10304-2] c27 N74-27037  
Mixing insert for foam dispensing apparatus
- [NASA-CASE-MPS-20607-1] c37 N76-19436  
Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety
- [NASA-CASE-ARC-11040-2] c24 N78-27184  
Low density bismaleimide-carbon microballoon composites
- [NASA-CASE-ARC-11040-1] c24 N79-16915  
Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams
- [NASA-CASE-ARC-11107-1] c25 N80-16116
- LOW FREQUENCIES**  
Determining sway of buildings by low frequency device using pendulum
- [NASA-CASE-IMP-00479] c14 N70-34794  
Low-frequency radio navigation system
- [NASA-CASE-NPO-15264-1] c04 N81-22036
- LOW GRAVITY MANUFACTURING**  
Method for manufacturing mirrors in zero gravity environment
- [NASA-CASE-MSC-12611-1] c12 N76-15189
- LOW MOLECULAR WEIGHTS**  
Process for preparing high molecular weight polyaryloxysilanes from lower molecular weight forms
- [NASA-CASE-IMP-06674] c06 N71-28607
- LOW NOISE**  
Low phase noise frequency divider for use with deep space network communication system
- [NASA-CASE-NPO-11569] c10 N73-26229  
Reflected-wave maser --- low noise amplifier
- [NASA-CASE-NPO-13490-1] c36 N76-31512
- LOW PASS FILTERS**  
Filtering technique based on high-frequency plant modeling for high-gain control
- [NASA-CASE-LAR-12215-1] c08 N79-23697
- LOW PRESSURE**  
Flowmeters for sensing low fluid flow rate and pressure for application to respiration rate studies
- [NASA-CASE-FRC-10022] c12 N71-26546  
Bakeable McLeod gauge
- [NASA-CASE-IGS-01293-1] c35 N79-33450
- LOW SPEED**  
Variable geometry manned orbital vehicle having high aerodynamic efficiency over wide speed range and incorporating auxiliary pivotal wings
- [NASA-CASE-XLA-03691] c31 N71-15674
- Device utilizing RC rate generators for continuous slow speed measurement
- [NASA-CASE-IMP-02966] c10 N71-24863
- LOW TEMPERATURE**  
Atomic hydrogen storage method and apparatus
- [NASA-CASE-LEW-12081-3] c28 N81-14103
- LOW TEMPERATURE ENVIRONMENTS**  
Flexible, frangible electrochemical cell and package for operation in low temperature environment
- [NASA-CASE-IGS-10010] c03 N72-15986  
Low thrust monopropellant engine --- low temperature environments
- [NASA-CASE-GSC-12194-2] c20 N79-15151  
Optical crystal temperature gauge with fiber optic connections --- cryogenic systems
- [NASA-CASE-MSC-18627-1] c74 N81-15818
- LOW TEMPERATURE TESTS**  
Cryostat for flexure fatigue testing of composite materials
- [NASA-CASE-IMP-02964] c14 N71-17659  
Cryostat for use with horizontal fatigue testing machines at low temperatures
- [NASA-CASE-IMP-10968] c14 N71-24234  
Heating and cooling system --- for fatigue test specimens
- [NASA-CASE-LAR-12393-1] c39 N80-25693
- LOW THRUST PROPULSION**  
Low thrust monopropellant engine --- low temperature environments
- [NASA-CASE-GSC-12194-2] c20 N79-15151
- LOW VACUUM**  
Vibration damping system operating in low vacuum environment for spacecraft mechanisms
- [NASA-CASE-XMS-01620] c23 N71-15673
- LOW VOLTAGE**  
High speed low level voltage commutating switch
- [NASA-CASE-XAC-00060] c09 N70-39915  
Flexible monopole antenna with broad bandwidth and low voltage standing wave ratio
- [NASA-CASE-MSC-12101] c09 N71-18720  
Circuit design for failure sensing and protecting low voltage electric generator and power transmission networks
- [NASA-CASE-GSC-10114-1] c10 N71-27366
- LUBRICANTS**  
Metallic film diffusion into metal or ceramic surfaces for boundary lubrication in aerospace environments
- [NASA-CASE-XLE-01765] c18 N71-10772  
Metallic film diffusion for boundary lubrication in aerospace engineering
- [NASA-CASE-XLE-10337] c15 N71-24046  
Fluorinated esters of polycarboxylic acid and lubricating compositions for use at extreme temperature
- [NASA-CASE-MPS-21040-1] c06 N73-30098  
Thiophenyl ether disiloxanes and trisiloxanes useful as lubricant fluids
- [NASA-CASE-MPS-22411-1] c37 N74-21058  
Journal bearings --- for lubricant films
- [NASA-CASE-LEW-11076-1] c37 N74-21061  
Method for milling and drilling glass
- [NASA-CASE-GSC-12636-1] c37 N80-29705
- LUBRICATING OILS**  
Fluid seal formed by flexible disk on rotating shaft to retain lubricating oils around shaft
- [NASA-CASE-XLE-05130-2] c15 N71-19570
- LUBRICATION**  
Hollow high strength rolling elements for antifriction bearings fabricated from preformed components
- [NASA-CASE-LEW-11026-1] c15 N73-33383  
Variable resistance constant tension and lubrication device --- using oil-saturated leather wiper
- [NASA-CASE-KSC-10723-1] c37 N75-13265  
Fluid journal bearings
- [NASA-CASE-LEW-11076-4] c37 N76-15461
- LUBRICATION SYSTEMS**  
Development of hybrid bearing lubrication system with combination of standard type lubrication and magnetic flux field for earth atmosphere and space environment operation
- [NASA-CASE-IMP-01641] c15 N71-22997  
Lubrication for bearings by capillary action from oil reservoir of porous material
- [NASA-CASE-IMP-03972] c15 N71-23048

Journal Bearings  
[NASA-CASE-LEW-11076-2] c37 N74-32521  
Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12321-1] c37 N78-10467

## LUMINAIRES

Visual target luminaires for retrofire attitude control  
[NASA-CASE-XMS-12158-1] c31 N69-27499  
Development of ultraviolet resonance lamp with improved transmission of radiation  
[NASA-CASE-ARC-10030] c09 N71-12521  
Lamp modulator for generating visual indication of presence and magnitude of signal  
[NASA-CASE-KSC-10565] c09 N72-25250  
Electrodeless lamp circuit driven by induction  
[NASA-CASE-MFS-21214-1] c09 N73-30181  
Uniform variable light source  
[NASA-CASE-NPO-11429-1] c74 N77-21941

## LUMINOUSITY

Mechanism for measuring nanosecond time differences between luminous events using streak camera  
[NASA-CASE-XLA-01987] c23 N71-23976

## LUMINOUS INTENSITY

Filter arrangement for controlling light intensity in motion picture camera used in optical pyrometry  
[NASA-CASE-XLA-00062] c14 N70-33254  
Development of star intensity measuring system which minimizes effects of outside interference  
[NASA-CASE-XP-06510] c14 N71-23797  
Continuous plasma laser --- method and apparatus for producing intense, coherent, monochromatic light from low temperature plasma  
[NASA-CASE-XP-04167-3] c36 N77-19416  
Solar cell assembly --- for use under high intensity illumination  
[NASA-CASE-LEW-11549-1] c44 N77-19571  
Compact, high intensity arc lamp with internal magnetic field producing means  
[NASA-CASE-NPO-11510-1] c33 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] c74 N79-11865

## LUNAR BASES

Development and characteristics of natural circulation radiator for use with nuclear power plants installed in lunar space stations  
[NASA-CASE-XHQ-03673] c33 N71-29046

## LUNAR COMMUNICATION

Conversion system for transforming slow scan rate of Apollo TV camera on moon to fast scan of commercial TV  
[NASA-CASE-XMS-07168] c07 N71-11300  
Three transceiver lunar emergency system to relay voice communication of astronaut  
[NASA-CASE-MFS-21042] c07 N72-25171

## LUNAR COMPOSITION

Development and characteristics of pentrometer for measuring physical properties of lunar surface  
[NASA-CASE-XLA-00934] c14 N71-22765

## LUNAR EXPLORATION

Backpack carrier with retractable legs suitable for lunar exploration and convertible to rescue vehicle  
[NASA-CASE-LAR-10056] c05 N71-12351  
Development and characteristics of pentrometer for measuring physical properties of lunar surface  
[NASA-CASE-XLA-00934] c14 N71-22765  
Lightweight propulsion unit for movement of personnel and equipment across lunar surface  
[NASA-CASE-MFS-20130] c28 N71-27585  
Three transceiver lunar emergency system to relay voice communication of astronaut  
[NASA-CASE-MFS-21042] c07 N72-25171

## LUNAR GRAVITATION

Apparatus for training astronaut crews to perform on simulated lunar surface under conditions of lunar gravity  
[NASA-CASE-XMS-04798] c11 N71-21474

## LUNAR GRAVITY SIMULATOR

Lunar and planetary gravity simulator to test vehicular response to landing  
[NASA-CASE-XLA-00493] c11 N70-34786

## LUNAR LANDING

Lunar landing flight research vehicle

[NASA-CASE-XP-00929] c31 N70-34966  
**LUNAR LOGISTICS**  
Lightweight propulsion unit for movement of personnel and equipment across lunar surface  
[NASA-CASE-MFS-20130] c28 N71-27585

## LUNAR ROCKS

Impact bit for cutting, collecting, and storing samples such as lunar rock cuttings  
[NASA-CASE-XP-01412] c15 N70-42034

## LUNAR SOIL

Development of device for separating, collecting, and viewing soil particles  
[NASA-CASE-XP-09770] c15 N71-20440  
Device which separates and screens particles of soil samples for vidicon viewing in vacuum and reduced gravity environments  
[NASA-CASE-XP-09770-3] c11 N71-27036  
Portable penetrometer for analyzing soil characteristics  
[NASA-CASE-MFS-20774] c14 N73-19420  
Method for obtaining oxygen from lunar or similar soil  
[NASA-CASE-MSC-12408-1] c46 N74-13011

## LUNAR SURFACE VEHICLES

Resilient vehicle wheel for lunar surface travel  
[NASA-CASE-MFS-20400] c31 N71-18611  
Resilient wheel design with woven wire tire and abrasive treads for lunar surface vehicles  
[NASA-CASE-MFS-13929] c15 N71-27091

## LUNGS

Piston device for producing known constant positive pressure within lungs by using thoracic muscles  
[NASA-CASE-XMS-01615] c05 N70-41329

## M

## MACHINE TOOLS

Rotary impact-type rock drill for recovering rock cuttings  
[NASA-CASE-XP-07478] c14 N69-21923  
Description of protective device for providing safe operating conditions around work piece in machine or metal working tool  
[NASA-CASE-XLE-01092] c15 N71-22797  
Description of device for aligning stacked sheets of paper for repetitive cutting  
[NASA-CASE-XMS-04178] c15 N71-22798  
Development and characteristics of frusto-conical die nib for extrusion of refractory metals  
[NASA-CASE-XLE-06773] c15 N71-23817  
Design and development of layout tool for machine shop use to locate point in precise reference to straight or bowed reference edge  
[NASA-CASE-FRC-10005] c15 N71-26145  
Optical gauging system for monitoring machine tool alignment  
[NASA-CASE-XAC-09489-1] c15 N71-26673  
Caterpillar micropositioner for positioning machine tools adjacent to workpiece  
[NASA-CASE-GSC-10780-1] c14 N72-16283  
Geneva mechanism --- including star wheel and driver  
[NASA-CASE-NPO-13281-1] c37 N75-13266  
Zero torque gear head wrench  
[NASA-CASE-NPO-13059-1] c37 N76-20480  
Precision alignment apparatus for cutting a workpiece  
[NASA-CASE-LAR-11658-1] c37 N77-14478  
Toggle mechanism for pinching metal tubes  
[NASA-CASE-GSC-12274-1] c37 N79-28550  
Crystal cleaving machine  
[NASA-CASE-GSC-12584-1] c76 N80-32246  
Method and tool for machining a transverse slot about a bore  
[NASA-CASE-LAR-11855-1] c37 N81-14319  
Holding fixture for a hot stamping press  
[NASA-CASE-GSC-12619-1] c37 N81-16470

## MACHINERY

Design of mechanical device for stirring several test tubes simultaneously  
[NASA-CASE-XAC-06956] c15 N71-21177  
Precipitation detector and mechanism for stopping and restarting machinery at initiation and cessation of rain  
[NASA-CASE-XLA-02619] c10 N71-26334  
Apparatus for forming drive belts  
[NASA-CASE-NPO-13205-1] c31 N74-32917

## MACHINING

Laser machining device with dielectric functioning as beam waveguide for mechanical and medical applications  
[NASA-CASE-HQN-10541-2] c15 N71-27135

Lathe tool and holder combination for machining resin impregnated fiberglass cloth laminates  
[NASA-CASE-XLA-10470] c15 N72-21489

Drilled ball bearing with a one piece anti-tipping cage assembly  
[NASA-CASE-LEN-11925-1] c37 N75-31446

## MAGNESIUM

Chemical spot test for identifying magnesium or magnesium alloys used in aerospace applications  
[NASA-CASE-LAR-10953-1] c17 N73-27446

## MAGNESIUM ALLOYS

Procedure for bonding polytetrafluoroethylene thermal protective sleeves to magnesium alloy conical shell components with different thermal coefficients  
[NASA-CASE-XLA-01262] c15 N71-21404

Chemical spot test for identifying magnesium or magnesium alloys used in aerospace applications  
[NASA-CASE-LAR-10953-1] c17 N73-27446

## MAGNESIUM OXIDES

Method for determining presence and type of OH in MgO  
[NASA-CASE-NPO-10774] c06 N72-17095

## MAGNET COILS

Improved alternator with windings of superconducting materials acting as permanent magnet  
[NASA-CASE-XLE-02824] c03 N69-39890

Relay circuit breaker with magnetic latching to provide conductive and nonconductive paths for current devices  
[NASA-CASE-HSC-11277] c09 N71-29008

## MAGNETIC AMPLIFIERS

Low current linearization of magnetic amplifier for dc transducer  
[NASA-CASE-NPO-14617-1] c33 N81-24338

## MAGNETIC CHARGE DENSITY

Ion engine with magnetic circuit for optimal discharge  
[NASA-CASE-XLE-01124] c28 N71-14043

## MAGNETIC CIRCUITS

Ion engine with magnetic circuit for optimal discharge  
[NASA-CASE-XLE-01124] c28 N71-14043

## MAGNETIC COILS

Time division multiplexer with magnetic latching relays  
[NASA-CASE-XNP-00431] c09 N70-38598

Linear magnetic braking system with nonuniformly wrapped primary coil producing constant braking force on secondary coil  
[NASA-CASE-XLE-05079] c15 N71-17652

Electroexplosive safe-arm initiator using electric driven electromagnetic coils and magnets to align charge  
[NASA-CASE-LAR-10372] c09 N71-18599

Magnifying image intensifier  
[NASA-CASE-GSC-12010-1] c74 N78-18905

## MAGNETIC CONTROL

Magnetically opened diaphragm design with camera shutter and expansion tube applications  
[NASA-CASE-XLA-03660] c15 N71-21060

Magnetically controlled plasma accelerator capable of ignition in low density gaseous environment  
[NASA-CASE-XLA-00327] c25 N71-29184

Axially and radially controllable magnetic bearing  
[NASA-CASE-GSC-11551-1] c37 N76-18459

Magnetic bearing system  
[NASA-CASE-GSC-11978-1] c37 N77-17464

## MAGNETIC CORES

Variable frequency magnetic coupled multivibrator with temperature compensated frequency control circuit  
[NASA-CASE-XGS-00458] c09 N70-38604

Variable frequency magnetic coupled multivibrator with output signal of constant amplitude and waveform  
[NASA-CASE-XGS-00131] c09 N70-38995

Electronic counter circuit utilizing magnetic core and low power consumption  
[NASA-CASE-XNP-08836] c09 N71-12515

Pulsed magnetic core memory element with blocking oscillator feedback for interrogation

without loss of digital information  
[NASA-CASE-XGS-03303] c08 N71-18595

Describing magnetic core current switching device for steering bipolar current pulses to memory units  
[NASA-CASE-NPO-10201] c08 N71-18694

Reliable magnetic core circuit apparatus with application in selection matrices for digital memories  
[NASA-CASE-XNP-01318] c10 N71-23033

Magnetic current regulator for saturable core transformer  
[NASA-CASE-ERC-10075] c09 N71-24800

Power switch with transfuxor type magnetic core  
[NASA-CASE-NPO-10242] c09 N71-24803

Unsaturation magnetic core transformer design with warning signal for electrical power processing equipment  
[NASA-CASE-ERC-10125] c09 N71-24893

Temperature sensitive magnetometer with pulsating thermally cycled magnetic core  
[NASA-CASE-XAC-03740] c14 N71-26135

Digital magnetic core memory with sensing amplifier circuits  
[NASA-CASE-XNP-01012] c08 N71-28925

Saturable magnetic core and signal detection for indicating impending saturation  
[NASA-CASE-ERC-10089] c23 N72-17747

Commutator for steering precisely controlled bidirectional currents through numerous loads by use of magnetic core shift registers  
[NASA-CASE-NPO-10743] c08 N72-21199

Banded transformer cores  
[NASA-CASE-NPO-11966-1] c33 N74-17928

## MAGNETIC DIPOLES

Torque meter for determining magnitude of torque generated by interaction of magnetic dipole between test specimen and ambient magnetic field  
[NASA-CASE-IGS-01013] c14 N71-23725

## MAGNETIC DISKS

Device for removing plastic dust cover from digital computer disk packs for inspection and cleaning  
[NASA-CASE-LAR-10590-1] c15 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] c35 N77-14406

Magnifying image intensifier  
[NASA-CASE-GSC-12010-1] c74 N78-18905

Linear magnetic bearings --- active magnetic suspension of armatures  
[NASA-CASE-GSC-12582-1] c37 N81-16469

## MAGNETIC FIELDS

Magnetically diffused radial electric arc heater  
[NASA-CASE-XLA-00330] c33 N70-34540

Method and apparatus for communicating through ionized layer of gases surrounding spacecraft during reentry into planetary atmospheres  
[NASA-CASE-XLA-01127] c07 N70-41372

Venting device for liquid propellant storage tank using magnetic field to separate liquid and gaseous phases  
[NASA-CASE-XLE-01449] c15 N70-41646

Ion engine with magnetic circuit for optimal discharge  
[NASA-CASE-XLE-01124] c28 N71-14043

Development of wide range linear fluxgate magnetometer  
[NASA-CASE-XGS-01587] c14 N71-15962

Magnetic element position sensing device, using misaligned electromagnets  
[NASA-CASE-XGS-07514] c23 N71-16099

Development of non-magnetic indexing device for orienting magnetic flux sensing instrument in magnetic field without generation of detrimental magnetic fields  
[NASA-CASE-XGS-02422] c15 N71-21529

Reduction of magnetic fields produced by thin waferlike circuit elements in space vehicles  
[NASA-CASE-XGS-03390] c03 N71-23187

Torque meter for determining magnitude of torque generated by interaction of magnetic dipole between test specimen and ambient magnetic field  
[NASA-CASE-XGS-01013] c14 N71-23725

Fluxgate magnetometer for measuring magnetic field along two axes using one sensor  
[NASA-CASE-GSC-10441-1] c14 N71-27325

- Segmented superconducting magnet producing staggered magnetic field and suitable for broadband traveling wave masers  
[NASA-CASE-XGS-10518] c16 N71-28554
- Magnetic method for detection of aircraft position relative to runway  
[NASA-CASE-ARC-10179-1] c21 N72-22619
- Radial magnetic field for ion thruster  
[NASA-CASE-LEW-10770-1] c28 N72-22770
- Automatic shunting of ion thruster magnetic field when thruster is not operating  
[NASA-CASE-LEW-10835-1] c28 N72-22771
- Apparatus for determining distance to lighting strokes from single station by magnetic and electric field sensing antennas  
[NASA-CASE-KSC-10698] c07 N73-20175
- Superconducting magnetic field trapping device for producing magnetic field in air  
[NASA-CASE-XNP-01185] c26 N73-28710
- Electron beam controller --- using magnetic field to refocus spent electron beam in microwave oscillator tube  
[NASA-CASE-LEW-11617-1] c33 N74-10195
- Magnetometer using superconducting rotating body  
[NASA-CASE-NPO-13388-1] c35 N76-16390
- Compact, high intensity arc lamp with internal magnetic field producing means  
[NASA-CASE-NPO-11510-1] c33 N77-21315
- Magnetic heat pumping  
[NASA-CASE-LEW-12508-1] c34 N78-17335
- Atomic hydrogen storage --- cryotrapping and magnetic field strength  
[NASA-CASE-LEW-12081-2] c28 N80-20402
- Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c28 N81-14103
- MAGNETIC FILMS**  
Manganese bismuth films with narrow transfer characteristics for Curie-point switching  
[NASA-CASE-NPO-11336-1] c76 N79-16678
- MAGNETIC FLUX**  
Excitation and detection circuitry for flux responsive magnetic head  
[NASA-CASE-XNP-04183] c09 N69-24329
- Cryogenic flux-gated magnetometer using superconductors  
[NASA-CASE-XAC-02407] c14 N69-27423
- Flux gate magnetometer with toroidal gating coil and solenoidal output coil for signal modulation or amplification  
[NASA-CASE-XGS-01881] c09 N70-40123
- Development of hybrid bearing lubrication system with combination of standard type lubrication and magnetic flux field for earth atmosphere and space environment operation  
[NASA-CASE-XNP-01641] c15 N71-22997
- Magnetic current regulator for saturable core transformer  
[NASA-CASE-ERC-10075] c09 N71-24800
- Magnetic flux pump for changing intensity of magnetic fields  
[NASA-CASE-XNP-01187] c15 N73-28516
- Method for increasing intensity of magnetic field by transferring flux  
[NASA-CASE-XNP-01188] c15 N73-32361
- Magnetic bearing --- for supplying magnetic fluxes  
[NASA-CASE-GSC-11079-1] c37 N75-18574
- A linear magnetic motor/generator --- to generate electric energy using magnetic flux for spacecraft's power supply  
[NASA-CASE-GSC-12518-1] c33 N80-19424
- Linear magnetic bearing  
[NASA-CASE-GSC-12517-1] c33 N81-22279
- MAGNETIC FORMING**  
Portable magnetomotive hammer for metal working  
[NASA-CASE-XMF-03793] c15 N71-24833
- Method and apparatus for portable high precision magnetomotive bulging, constricting, and joining of large diameter metal tubes  
[NASA-CASE-XMF-05114-3] c15 N71-24665
- MAGNETIC INDUCTION**  
Continuous operation, single phased, induction plasma accelerator producing supersonic speeds  
[NASA-CASE-XLA-01354] c25 N70-36946
- Automatic power supply circuit design for driving inductive loads and minimizing power consumption including solenoid example  
[NASA-CASE-NPO-10716] c09 N71-24892
- Double-induction variable speed system for constant-frequency electrical power generation  
[NASA-CASE-ERC-10065] c09 N71-27364
- Microwave generator using Gunn effect for magnetic tuning  
[NASA-CASE-NPO-12106] c09 N73-15235
- High speed shutter --- electrically actuated ribbon loop for shuttering optical or fluid passageways  
[NASA-CASE-ARC-10516-1] c70 N74-21300
- MAGNETIC LENSES**  
Quadrupole mass spectrometer using noise spectrum for ion separation and identification  
[NASA-CASE-XNP-04231] c14 N73-32325
- MAGNETIC MATERIALS**  
Low density and low viscosity magnetic propellant for use under zero gravity conditions  
[NASA-CASE-XLE-01512] c12 N70-40124
- MAGNETIC MEASUREMENT**  
Cryogenic flux-gated magnetometer using superconductors  
[NASA-CASE-XAC-02407] c14 N69-27423
- Development of wide range linear fluxgate magnetometer  
[NASA-CASE-XGS-01587] c14 N71-15962
- Active RC filter networks and amplifiers for deep space magnetic field measurement  
[NASA-CASE-XAC-05462-2] c10 N72-17171
- Magnetometer using superconducting rotating body  
[NASA-CASE-NPO-13388-1] c35 N76-16390
- MAGNETIC POLES**  
Design of magnetohydrodynamic induction machine with end poles which produce compensating magnetic fields  
[NASA-CASE-XNP-07481] c25 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] c35 N77-14406
- MAGNETIC PUMPING**  
Magnetic flux pump for changing intensity of magnetic fields  
[NASA-CASE-XNP-01187] c15 N73-28516
- Method for increasing intensity of magnetic field by transferring flux  
[NASA-CASE-XNP-01188] c15 N73-32361
- Magnetocaloric pump --- for cryogenic fluids  
[NASA-CASE-LEW-11672-1] c37 N74-27904
- MAGNETIC RECORDING**  
Development of data storage system for storing digital data in high density format on magnetic tape  
[NASA-CASE-XNP-02778] c08 N71-22710
- Magnetic recording head composed of ferrite core coated with thin film of aluminum-iron-silicon alloy  
[NASA-CASE-GSC-10097-1] c08 N71-27210
- Thermomagnetic recording and magnetic-optic playback system  
[NASA-CASE-NPO-10872-1] c35 N79-16246
- Manganese bismuth films with narrow transfer characteristics for Curie-point switching  
[NASA-CASE-NPO-11336-1] c76 N79-16678
- MAGNETIC SIGNALS**  
Plural recorder system which limits signal recording to signals of sufficient interest  
[NASA-CASE-XMS-06949] c09 N69-21467
- MAGNETIC STORAGE**  
Nondestructive interrogating and state changing circuit for binary magnetic storage elements  
[NASA-CASE-XGS-00174] c08 N70-34743
- Magnetic matrix memory system for nondestructive reading of information contained in matrix  
[NASA-CASE-XMF-05835] c08 N71-12504
- Pulse duration control device for driving slow response time loads in selected sequence including switching and delay circuits and magnetic storage  
[NASA-CASE-XGS-04224] c10 N71-26418
- Redundant memory for enhanced reliability of digital data processing system  
[NASA-CASE-GSC-10564] c10 N71-29135
- Momentum wheel design for spacecraft attitude control and magnetic drum and head system for data storage  
[NASA-CASE-NPO-11481] c21 N73-13644
- Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-1] c28 N78-24365
- MAGNETIC SUSPENSION**  
Magnetic suspension and pointing system  
[NASA-CASE-LAB-11889-2] c37 N78-27424

- Magnetic suspension and pointing system --- on a carrier vehicle  
[NASA-CASE-LAR-11869-1] c35 N79-26372
- Containerless melting and rapid solidification apparatus and method  
[NASA-CASE-MPS-25305-1] c35 N81-16427
- Linear magnetic bearings --- active magnetic suspension of armatures  
[NASA-CASE-GSC-12582-1] c37 N81-16469
- MAGNETIC SWITCHING**
- Power switch with transfluxor type magnetic core  
[NASA-CASE-NPO-10242] c09 N71-24603
- Design and development of multistage current steering switch with inductively coupled magnetic cores  
[NASA-CASE-XP-08567] c09 N71-26000
- MAGNETIC TAPE TRANSPORTS**
- Reel safety brake  
[NASA-CASE-GSC-11960-1] c37 N77-14479
- MAGNETIC TAPES**
- Tape cartridge with high capacity storage of endless-loop magnetic tape  
[NASA-CASE-IGS-00769] c14 N70-41647
- Endless loop tape transport mechanism for driving and tensioning recording medium in magnetic tape recorder  
[NASA-CASE-IGS-01223] c07 N71-10609
- Development of low friction magnetic recording tape  
[NASA-CASE-IGS-00373] c23 N71-15978
- System for recording and reproducing PCM data from data stored on magnetic tape  
[NASA-CASE-IGS-01021] c08 N71-21042
- Kinetic and static friction force measurement between magnetic tape and magnetic head surfaces  
[NASA-CASE-XP-08680] c14 N71-22995
- Technique for recovery of voice data from heat damaged magnetic tape  
[NASA-CASE-MSC-14219-1] c32 N74-27612
- Automatic character skew and spacing checking network --- of digital tape drive systems  
[NASA-CASE-GSC-11925-1] c33 N76-18353
- MAGNETIC TRANSDUCERS**
- Magnetometer with a miniature transducer and automatic scanning  
[NASA-CASE-LAR-11617-2] c35 N78-32397
- MAGNETIZATION**
- Permanently magnetized ion engine casing construction for use in spacecraft propulsion systems  
[NASA-CASE-XP-06942] c28 N71-23293
- MAGNETO-OPTICS**
- Thermomagnetic recording and magneto-optic playback system having constant intensity laser beam control  
[NASA-CASE-NPO-11317-2] c36 N74-13205
- MAGNETOHYDRODYNAMIC FLOW**
- Improving performance of magnetoplasmadynamic arc rocket engine  
[NASA-CASE-LEW-11180-1] c25 N73-25760
- MAGNETOHYDRODYNAMIC GENERATORS**
- Design of magnetohydrodynamic induction machine with end poles which produce compensating magnetic fields  
[NASA-CASE-XP-07481] c25 N69-21929
- Magnetohydrodynamic generator for mixing nonconductive gas and liquid metal mist to form slugs  
[NASA-CASE-XLE-02083] c03 N69-39983
- Thermoelectric power conversion by liquid metal flowing through magnetic field  
[NASA-CASE-XP-00644] c03 N70-36803
- Crossed field MHD plasma generator-accelerator  
[NASA-CASE-XLA-03374] c25 N71-15562
- Solar driven liquid metal MHD power generator  
[NASA-CASE-LAR-12495-1] c44 N81-32609
- MAGNETOMETERS**
- Nonmagnetic thermal motor for magnetometer movement  
[NASA-CASE-XAR-03786] c09 N69-21313
- Cryogenic flux-gated magnetometer using superconductors  
[NASA-CASE-XAC-02407] c14 N69-27423
- Flux gate magnetometer with toroidal gating coil and solenoidal output coil for signal modulation or amplification  
[NASA-CASE-IGS-01881] c09 N70-40123
- Development of wide range linear fluxgate magnetometer  
[NASA-CASE-IGS-01587] c14 N71-15962
- Design and development of optically pumped resonance magnetometer for determining vectoral components in spatial coordinate system  
[NASA-CASE-IGS-04879] c14 N71-20428
- Temperature sensitive magnetometer with pulsating thermally cycled magnetic core  
[NASA-CASE-XAC-03740] c14 N71-26135
- Fluxgate magnetometer for measuring magnetic field along two axes using one sensor  
[NASA-CASE-GSC-10441-1] c14 N71-27325
- Hall effect magnetometer  
[NASA-CASE-LEW-11632-2] c35 N75-13213
- Magnetometer using superconducting rotating body  
[NASA-CASE-NPO-13388-1] c35 N76-16390
- Magnetic heading reference  
[NASA-CASE-LAR-11387-1] c04 N76-20114
- Magnetic heading reference  
[NASA-CASE-LAR-11387-2] c04 N77-19056
- Magnetometer with a miniature transducer and automatic scanning  
[NASA-CASE-LAR-11617-2] c35 N78-32397
- A low energy electron magnetometer  
[NASA-CASE-LAR-12706-1] c35 N81-19428
- MAGNETRONS**
- Tuning arrangement for frequency control of magnetron-type electron discharge device  
[NASA-CASE-XP-09771] c09 N71-24841
- MAGNETS**
- Magnetic electrical connectors for biomedical percutaneous implants  
[NASA-CASE-KSC-11030-1] c52 N77-25772
- Miniature cyclotron resonance ion source using small permanent magnet  
[NASA-CASE-NPO-14324-1] c72 N80-27163
- Linear magnetic bearing  
[NASA-CASE-GSC-12517-1] c33 N81-22279
- MAGNIFICATION**
- Camera adapter design for image magnification including lens and illuminator  
[NASA-CASE-XP-03844-1] c14 N71-26474
- Passive type, magnifying scratch gage, force transducer  
[NASA-CASE-LAR-10496-1] c14 N72-22437
- Magnifying image intensifier  
[NASA-CASE-GSC-12010-1] c74 N78-18905
- MAGNITUDE**
- Torque meter for determining magnitude of torque generated by interaction of magnetic dipole between test specimen and ambient magnetic field  
[NASA-CASE-IGS-01013] c14 N71-23725
- MAINTENANCE**
- Self testing and repairing computer comprising control and diagnostic unit and rollback points for error correction  
[NASA-CASE-NPO-10567] c08 N71-24633
- Development of process for bonding resinous body in cavities of honeycomb structures  
[NASA-CASE-MSC-12357] c15 N73-12489
- Method of repairing discontinuity in fiberglass structures  
[NASA-CASE-LAR-10416-1] c24 N74-30001
- Computer circuit card puller  
[NASA-CASE-FRC-11042-1] c37 N80-20589
- System for refurbishing and processing parachutes  
[NASA-CASE-KSC-11042-1] c02 N81-14967
- System and method for refurbishing and processing parachutes --- monorial conveyor system  
[NASA-CASE-KSC-11042-2] c02 N81-26073
- Method of repairing surface damage to porous refractory substrates --- shuttle orbiter tiles  
[NASA-CASE-MSC-18736-1] c27 N81-29231
- MAJFUNCTIONS**
- Aircraft instrument for indicating malfunctions during takeoff  
[NASA-CASE-XLA-00100] c14 N70-36807
- MANDRELS**
- Mandrel for shaping solid propellant rocket fuel into engine casing  
[NASA-CASE-XLA-00304] c27 N70-34783
- Rotating, multisided mandrel for fabricating gored inflatable spacecraft  
[NASA-CASE-XLA-04143] c15 N71-17687
- Method of making solid propellant rocket motor having reliable high altitude capabilities, long shelf life, and capable of firing with nozzle closure with foamed plastic permanent mandrel



- [NASA-CASE-XLA-04126] c28 N71-26779  
**MANGANESE**  
 Manganese bismuth films with narrow transfer characteristics for Curie-point switching  
 [NASA-CASE-NPO-11336-1] c76 N79-16678
- MANIFOLDS**  
 Injector manifold assembly for bipropellant rocket engines providing for fuel propellant to serve as coolant  
 [NASA-CASE-XMP-00148] c28 N70-38710  
 Collimated beam manifold and method for using the same --- laser beams  
 [NASA-CASE-MFS-25312-1] c74 N80-34251
- MANIPULATORS**  
 Manipulator for remote handling in zero gravity environment  
 [NASA-CASE-MFS-14405] c15 N72-28495  
 Orthotic arm joint --- for use in mechanical arms  
 [NASA-CASE-MFS-21611-1] c54 N75-12616  
 Variable ratio mixed-mode bilateral master-slave control system for shuttle remote manipulator system  
 [NASA-CASE-MSC-14245-1] c18 N75-27041  
 Cooperative multiaxis sensor for teleoperation of article manipulating apparatus  
 [NASA-CASE-NPO-13386-1] c54 N75-27758  
 Remotely operable articulated manipulator  
 [NASA-CASE-MFS-22707-1] c37 N76-15457  
 Remote manipulator system  
 [NASA-CASE-MFS-22022-1] c37 N76-15460  
 Anthropomorphic master/slave manipulator system  
 [NASA-CASE-ARC-10756-1] c54 N77-32721  
 Wrist joint assembly  
 [NASA-CASE-MFS-23311-1] c54 N78-17676  
 Terminal guidance sensor system  
 [NASA-CASE-NPO-14521-1] c54 N79-20746  
 Compact artificial hand  
 [NASA-CASE-NPO-13906-1] c54 N79-24652  
 Controller arm for a remotely related slave arm  
 [NASA-CASE-ARC-11052-1] c37 N79-28551  
 Apparatus for sequentially transporting containers  
 [NASA-CASE-MFS-23846] c37 N80-29704  
 Device for coupling a first vehicle to a second vehicle  
 [NASA-CASE-GSC-12429-1] c37 N81-14320  
 Tactile sensing system --- manipulator controllers  
 [NASA-CASE-NPO-15094-1] c33 N81-16386  
 Pneumatic inflatable end effector  
 [NASA-CASE-MFS-23696-1] c54 N81-26718  
 Terminal guidance sensor system --- space shuttle coupling to orbiting satellites  
 [NASA-CASE-NPO-14521-1] c37 N81-27519
- MANNED ORBITAL LABORATORIES**  
 Artificial gravity system for simulating self-locomotion capability of astronauts in rotating environments  
 [NASA-CASE-XLA-03127] c11 N71-10776
- MANNED ORBITAL RESEARCH LABORATORIES**  
 Manned space station collapsible for launching and self-erectable in orbit  
 [NASA-CASE-XLA-00678] c31 N70-34296  
 Radial module manned space station with artificial gravity environment  
 [NASA-CASE-XMS-01906] c31 N70-41373
- MANNED SPACE FLIGHT**  
 Three-port transfer valve with one port open continuously suitable for manned space flight  
 [NASA-CASE-XAC-01158] c15 N71-23051  
 Device for removing air from water for use in life support systems in manned space flight  
 [NASA-CASE-XLA-8914] c15 N73-12492
- MANNED SPACECRAFT**  
 Manned space capsule configuration for orbital flight and atmospheric reentry  
 [NASA-CASE-XLA-00149] c31 N70-37538  
 Delta winged, manned reentry vehicle capable of horizontal glide landing at low speeds  
 [NASA-CASE-XLA-00241] c31 N70-37586  
 Parachute system for lowering manned spacecraft from post-reentry to ocean landing  
 [NASA-CASE-XLA-00195] c02 N70-38009  
 Design and configuration of manned space capsule  
 [NASA-CASE-XLA-01332] c31 N71-15664  
 Development of method for producing artificial gravity in manned spacecraft  
 [NASA-CASE-XNP-02595] c31 N71-21881  
 Chlorine generator for purifying water in life support systems of manned spacecraft  
 [NASA-CASE-XLA-08913] c14 N71-28933
- Collapsible couch system for manned space vehicles  
 [NASA-CASE-HSC-13140] c05 N72-11085  
 Spacecraft with artificial gravity and earthlike atmosphere  
 [NASA-CASE-LRW-11101-1] c31 N73-32750
- MANOMETERS**  
 Magnetically centered liquid column float  
 [NASA-CASE-XAC-00030] c14 N70-34820  
 Absolute pressure measuring device for measuring gas density level in high vacuum range  
 [NASA-CASE-LAR-10000] c14 N73-30394
- MANUAL CONTROL**  
 Multiple circuit switch apparatus requiring minimum hand and eye movement by operator  
 [NASA-CASE-XAC-03777] c10 N71-15909  
 Manual control mechanism for adjusting control rod to null position  
 [NASA-CASE-XLA-01808] c15 N71-20740  
 Manually activated heat pump for mechanically converting human operator output into heat energy  
 [NASA-CASE-NPO-10677] c05 N72-11084  
 Development of flight simulator system to show position of joystick displacement  
 [NASA-CASE-NFO-11497] c08 N73-25206  
 Solid state controller three axes controller  
 [NASA-CASE-MSC-12394-1] c08 N74-10942  
 G-load measuring and indicator apparatus  
 [NASA-CASE-ARC-10806-1] c35 N75-29381
- MANUFACTURING**  
 Selective gold diffusion on monolithic silicon chips for switching and nonswitching amplifier devices and circuits and linear and digital logic circuits  
 [NASA-CASE-EBC-10072] c09 N70-11148  
 Standard coupling design for mass production  
 [NASA-CASE-XMS-02532] c15 N70-41808  
 Method for making screen with unlimited fineness of mesh and screen thickness  
 [NASA-CASE-XLE-00953] c15 N71-15966  
 Describing apparatus for manufacturing operations in low and zero gravity environments of orbital space flight  
 [NASA-CASE-MFS-20410] c15 N71-19214  
 Manufacture of fluid containers from fused coated polyester sheets having resealable septum  
 [NASA-CASE-NFO-10123] c15 N71-24835  
 Method of making solid propellant rocket motor having reliable high altitude capabilities, long shelf life, and capable of firing with nozzle closure with foamed plastic permanent mandrel  
 [NASA-CASE-XLA-04126] c28 N71-26779  
 Shielded flat conductor cable fabricated by electroless and electrolytic plating  
 [NASA-CASE-MFS-13687] c09 N71-28691  
 Production method for manufacturing porous tungsten bodies from tungsten powder particles  
 [NASA-CASE-XNP-04339] c17 N71-29137  
 Method of making porous conductive supports for electrodes --- by electroforming and stacking nickel foils  
 [NASA-CASE-GSC-11367-1] c44 N74-19692  
 Apparatus for forming drive belts  
 [NASA-CASE-NPO-13205-1] c31 N74-32917  
 Bonding method in the manufacture of continuous regression rate sensor devices  
 [NASA-CASE-LAR-10337-1] c24 N75-30260  
 Process for fabricating SiC semiconductor devices  
 [NASA-CASE-LRW-12094-1] c76 N76-25049  
 Solar hydrogen generator  
 [NASA-CASE-LAR-11361-1] c44 N77-22607  
 Method of forming shrink-fit compression seal  
 [NASA-CASE-LAR-11563-1] c37 N77-23482  
 Method for making a hot wire anemometer and product thereof  
 [NASA-CASE-ARC-10900-1] c35 N77-24454  
 Aluminum or copper substrate panel for selective absorption of solar energy  
 [NASA-CASE-MFS-23518-3] c44 N80-16452  
 Inorganic spark chamber frame and method of making the same  
 [NASA-CASE-GSC-12354-1] c35 N80-20565  
 Polymeric compositions and their method of manufacture --- forming filled polymer systems using cryogenics  
 [NASA-CASE-NPO-10424-1] c27 N81-24258
- MAPPING**  
 Design and development of random function tracer

- for obtaining coordinates of points on contour maps  
[NASA-CASE-XLA-01401] c15 N71-21179
- Spacecraft transponder and ground station radar system for mapping planetary surfaces  
[NASA-CASE-NPO-11001] cC7 N72-21118
- Seismic vibration source  
[NASA-CASE-NPO-14112-1] c46 N79-22679
- MAPS**
- Orbital and entry tracking accessory for globes --- to provide range requirements for reentry vehicles to any landing site  
[NASA-CASE-LAR-10626-1] c19 N74-21015
- Optical process for producing classification maps from multispectral data  
[NASA-CASE-HSC-14472-1] c43 N77-10584
- MASES**
- Segmented superconducting magnet producing staggered magnetic field and suitable for broadband traveling wave masers  
[NASA-CASE-IGS-10518] c16 N71-28554
- Traveling wave maser for operation in 7 to 20 GHz frequency range  
[NASA-CASE-NPO-11437] c16 N72-28521
- Reflected-wave maser --- low noise amplifier  
[NASA-CASE-NPO-13490-1] c36 N76-31512
- Multistation refrigeration system  
[NASA-CASE-NPO-13839-1] c31 N78-25256
- External bulb variable volume maser  
[NASA-CASE-GSC-12334-1] c36 N79-14362
- Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures  
[NASA-CASE-NPO-14254-1] c36 N80-18372
- Precise RF timing signal distribution to remote stations --- fiber optics  
[NASA-CASE-NPO-14749-1] c32 N81-14186
- Maser amplifier slow wave structure --- detecting weak signals from spacecraft  
[NASA-CASE-NPO-15211-1] c36 N81-24425
- Resonant isolator for maser amplifier  
[NASA-CASE-NPO-15201-1] c36 N81-24426
- MASKING**
- Reusable masking boot for chemical machining operations  
[NASA-CASE-INP-02092] c15 N70-42033
- Composition and process for improving definition of resin masks used in chemical etching  
[NASA-CASE-IGS-04993] c14 N71-17574
- MASS**
- Apparatus for measuring human body mass in zero or reduced gravity environment  
[NASA-CASE-XMS-03371] c05 N70-42000
- Tuned damped vibration absorber for mass vibrating in more than one degree of freedom for use with wind tunnel models  
[NASA-CASE-LAR-10083-1] c15 N71-27006
- Fluid mass sensor for a zero gravity environment  
[NASA-CASE-HSC-14653-1] c35 N77-19385
- MASS BALANCE**
- Two plane balance for simultaneous measurements of multiple forces  
[NASA-CASE-XAC-00073] c14 N70-34813
- Control system for pressure balance device used in calibrating pressure gages  
[NASA-CASE-INP-04134] c14 N71-23755
- MASS DISTRIBUTION**
- Electronic recording system for spatial mass distribution of liquid rocket propellant droplets or vapors ejected from high velocity nozzles  
[NASA-CASE-NPO-10185] c10 N71-26339
- MASS FLOW**
- Rocket engine injector orifice to accommodate changes in density, velocity, and pressure, thereby maintaining constant mass flow rate of propellant into rocket combustion chamber  
[NASA-CASE-XLE-03157] c28 N71-24736
- Mass flow meter containing beta source for measuring nonpolar liquid flow  
[NASA-CASE-MFS-20485] c14 N72-11365
- Generation of high temperature, high mass flow, and high Reynolds number air at hypersonic speeds  
[NASA-CASE-LAR-10578-1] c12 N73-25262
- MASS SPECTROMETERS**
- Analytical photoionization mass spectrometer with argon gas filter between light source and monochromator  
[NASA-CASE-LAR-10180-1] c06 N71-13461
- Design and characteristics of time of flight mass spectrometer to measure or analyze gases at low pressures and time of flight of single gas molecule  
[NASA-CASE-INP-01056] c14 N71-23041
- Ion microprobe mass spectrometer with cooled electrode target for analyzing traces of fluids  
[NASA-CASE-BEC-10014] c14 N71-28863
- Test chambers with orifice and helium mass spectrometer for detecting leak rate of encapsulated semiconductor devices  
[NASA-CASE-BEC-10150] c14 N71-28992
- Apparatus for analyzing gas samples in containers including vacuum chamber, mass spectrometer, and gas chromatography  
[NASA-CASE-GSC-10903-1] c14 N73-12444
- Quadrupole mass spectrometer using noise spectrum for ion separation and identification  
[NASA-CASE-INP-04231] c14 N73-32325
- Fast scan control for deflection type mass spectrometers  
[NASA-CASE-LAR-11428-1] c35 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] c35 N77-14406
- Method for fabricating a mass spectrometer inlet leak  
[NASA-CASE-GSC-12077-1] c35 N77-24455
- Dual acting slit control mechanism  
[NASA-CASE-LAR-11370-1] c35 N80-28686
- MASS SPECTROSCOPY**
- Moving particle composition analyzer  
[NASA-CASE-GSC-11889-1] c35 N76-16393
- Fluid sampling device  
[NASA-CASE-GSC-12143-1] c35 N77-32456
- MATERIAL ABSORPTION**
- Describing sorption vacuum trap having housing with group of reentrant wall portions projecting into internal gas-pervious container filled with gas and vapor sorbent material  
[NASA-CASE-XER-09519] c14 N71-18483
- MATERIALS HANDLING**
- Two component valve assembly for cryogenic liquid transfer regulation  
[NASA-CASE-XLE-00397] c15 N70-36492
- Catalyst bed element removing tool  
[NASA-CASE-XFR-00811] c15 N70-36901
- Air bearings for near frictionless transfer of loads from one body to another  
[NASA-CASE-INP-01887] c15 N71-10617
- Quick-release coupling for fueling rocket vehicles with cryogenic propellants  
[NASA-CASE-XKS-01985] c15 N71-10782
- Method and apparatus for removing plastic insulation from wire using cryogenic equipment  
[NASA-CASE-MFS-10340] c15 N71-17628
- Fluid transferring system design for purging toxic, corrosive, or noxious fluids and fumes from materials handling equipment for cleansing and accident prevention  
[NASA-CASE-XMS-01905] c12 N71-21089
- Description of method for making homogeneous foamed materials in weightless environment using materials having different physical properties  
[NASA-CASE-INP-09902] c15 N72-11387
- Design and characteristics of mechanically extended and telescoping boom on crane assembly  
[NASA-CASE-NPO-11118] c03 N72-25021
- Development of ultrasonic radiation equipment for removing material from host surface and vacuum apparatus for recovery of material  
[NASA-CASE-NPO-11213] c15 N73-20514
- Development and characteristics of system for skin packaging articles using thermoplastic film heating and vacuum operated equipment  
[NASA-CASE-MFS-20855] c15 N73-27405
- Apparatus for inserting and removing specimens from high temperature vacuum furnaces  
[NASA-CASE-LAR-10841-1] c31 N74-27900
- Deployable flexible tunnel  
[NASA-CASE-MFS-22636-1] c37 N76-22540
- Liquid immersion apparatus for minute articles  
[NASA-CASE-MFS-25363-1] c31 N80-32585
- MATERIALS RECOVERY**
- Automated system for identifying traces of

- organic chemical compounds in aqueous solutions  
[NASA-CASE-NPO-13063-1] c25 N76-18245  
Process for the leaching of AP from propellant  
[NASA-CASE-NPO-14109-1] c28 N80-23471  
Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c28 N81-15119
- MATERIALS SCIENCE**  
Flammability test chamber for testing materials  
in certain predetermined environments  
[NASA-CASE-KSC-10126] c11 N71-24985  
Device for measuring thermoelectric properties  
of materials under high pressure  
[NASA-CASE-NPO-11749] c14 N73-28486
- MATERIALS TESTS**  
Development of equipment for measuring thermal  
shock resistance of thin discs of material  
[NASA-CASE-XLE-02024] c14 N71-22964  
Multisample test chamber for exposing materials  
to X rays, temperature change, and gaseous  
conditions and determination of material effects  
[NASA-CASE-XMS-02930] c11 N71-23042  
Automated ball rebound resilience test equipment  
for determining viscoelastic properties of  
polymers  
[NASA-CASE-XLA-08254] c14 N71-26161  
Hermetic sealing device for ends of tubular  
bodies during materials testing operations  
[NASA-CASE-NPO-10431] c15 N71-29132  
Development of apparatus for testing burning  
rate and flammability of materials  
[NASA-CASE-XMS-09690] c33 N72-25913  
Multiaxial vibration device for making vibration  
tests along orthogonal axes of test specimen  
[NASA-CASE-MFS-20242] c14 N73-19421  
Material testing system with load sensor for  
applying and measuring cyclic tensile and  
compressive loads to test specimens  
[NASA-CASE-MFS-20673] c14 N73-20476
- MATHEMATICAL LOGIC**  
Logical function and circuit generator  
[NASA-CASE-XLA-05099] c09 N73-13209
- MATRICES (CIRCUITS)**  
Fabrication methods for matrices of solar cell  
submodules  
[NASA-CASE-XNP-05821] c03 N71-11056  
Magnetic matrix memory system for nondestructive  
reading of information contained in matrix  
[NASA-CASE-XMP-05835] c08 N71-12504  
Conductor for connecting parallel cells into  
submodules in series to form solar cell matrix  
[NASA-CASE-NPO-10821] c03 N71-19545  
Reliable magnetic core circuit apparatus with  
application in selection matrices for digital  
memories  
[NASA-CASE-XNP-01318] c10 N71-23033  
Serial digital decoder design with square  
circuit matrix and serial memory storage units  
[NASA-CASE-NPO-10150] c08 N71-24650  
Electrically connected matrix of discrete solar  
cell blanks  
[NASA-CASE-NPO-10591] c03 N72-22041
- MCLEOD GAGES**  
Automatic recording McLeod gage with three  
electrodes and sclenoid valve connection  
[NASA-CASE-XLE-03280] c14 N71-23093  
Bakeable McLeod gauge  
[NASA-CASE-XGS-01293-1] c35 N79-33450
- MEASURING INSTRUMENTS**  
Capacitance measuring device for determining  
flare accuracy on tapered tubes  
[NASA-CASE-IKS-03495] c14 N69-39785  
Characteristics and performance of electrical  
system to determine angular rotation  
[NASA-CASE-XMP-00447] c14 N70-33179  
Two plane balance for simultaneous measurements  
of multiple forces  
[NASA-CASE-XAC-00073] c14 N70-34813  
Parallel motion suspension device for measuring  
instruments  
[NASA-CASE-XNP-01567] c15 N70-41310  
Transducer for measuring deflections from  
vibrating structures  
[NASA-CASE-XLA-03135] c32 N71-16428  
Gage for quality control of sealing surfaces of  
threaded boss  
[NASA-CASE-XMP-04966] c14 N71-17658  
Equipment for measuring partial water vapor  
pressure in gas tank  
[NASA-CASE-XMS-01618] c14 N71-20741
- Gauge for measuring quantity of liquid in  
spherical tank in reduced gravity  
[NASA-CASE-XMS-06236] c14 N71-21007  
Nonreusable energy absorbing device comprising  
ring member with plurality of recesses,  
cutting members, and guide member mounted in  
each recess  
[NASA-CASE-XMP-10040] c15 N71-22877  
Ablation sensor for measuring surface ablation  
rate of material on vehicles entering earth's  
atmosphere on entry into planetary atmospheres  
[NASA-CASE-XLA-01791] c14 N71-22991  
Test fixture for measuring moment of inertia of  
irregularly shaped body with multiple axes  
[NASA-CASE-XGS-01023] c14 N71-22992  
Electron beam deflection devices for measuring  
electric fields  
[NASA-CASE-XMP-10289] c14 N71-23699  
Device for measuring two orthogonal components  
of force with gallium flotation of measuring  
target for use in vacuum environments  
[NASA-CASE-XAC-04885] c14 N71-23790  
Gage for measuring internal angle of flare on  
end of tube  
[NASA-CASE-XMP-04415] c14 N71-24693  
Device utilizing RC rate generators for  
continuous slow speed measurement  
[NASA-CASE-XMP-02966] c10 N71-24863  
Solid state force measuring electromechanical  
transducers made of piezoresistive materials  
[NASA-CASE-ERC-10088] c26 N71-25490  
Design and development of layout tool for  
machine shop use to locate point in precise  
reference to straight or bowed reference edge  
[NASA-CASE-FRC-10005] c15 N71-26145  
Volume displacement transducer for leak  
detection in hermetically sealed semiconductor  
devices  
[NASA-CASE-ERC-10033] c14 N71-26672  
Deformation measuring apparatus with feedback  
control for arbitrarily shaped structures  
[NASA-CASE-LAR-10098] c32 N71-26681  
Foam insulation thickness measuring and  
injection device for spacecraft applications  
[NASA-CASE-MFS-20261] c14 N71-27005  
Resonant infrasonic gauging device for measuring  
liquid quantity in closed bladderless reservoir  
[NASA-CASE-MSC-11847-1] c14 N72-11363  
Measuring roll alignment of test body with  
respect to reference body  
[NASA-CASE-GSC-10514-1] c14 N72-20379  
Sensor for detecting and measuring energy,  
velocity and direction of travel of a cosmic  
dust particle  
[NASA-CASE-GSC-10503-1] c14 N72-20381  
Pumping and metering dual piston system and  
monitor for reaction chamber constituents  
[NASA-CASE-GSC-10218-1] c15 N72-21465  
Capacitive tank gaging device for monitoring one  
constituent of two phase fluid by sensing  
dielectric constant  
[NASA-CASE-MFS-21629] c14 N72-22442  
Development of mechanical device for measuring  
distance of point within sphere from surface  
of sphere  
[NASA-CASE-XLA-06683] c14 N72-28436  
Surface based altitude measuring system for  
accurately measuring altitude of airborne  
vehicle  
[NASA-CASE-ERC-10412-1] c09 N73-12211  
Instrument for measuring magnitude and direction  
of flow velocity in flow field  
[NASA-CASE-LAR-10855-1] c14 N73-13415  
Multiaxial vibration device for making vibration  
tests along orthogonal axes of test specimen  
[NASA-CASE-MFS-20242] c14 N73-19421  
Material testing system with load sensor for  
applying and measuring cyclic tensile and  
compressive loads to test specimens  
[NASA-CASE-MFS-20673] c14 N73-20476  
Development of droplet monitoring probe for use  
in analysis of droplet propagation in  
mixed-phase fluid stream  
[NASA-CASE-NPO-10985] c14 N73-20478  
Device for measuring thermoelectric properties  
of materials under high pressure  
[NASA-CASE-NPO-11749] c14 N73-28486  
Radio frequency source resistance measuring  
instruments of varied design

[NASA-CASE-NPO-11291-1] c14 N73-30388  
 Absolute pressure measuring device for measuring  
 gas density level in high vacuum range  
 [NASA-CASE-LAR-10000] c14 N73-30394  
 Thin film analyzer utilizing holographic  
 techniques  
 [NASA-CASE-MFS-20823-1] c16 N73-30476  
 Three-axis adjustable loading structure  
 [NASA-CASE-FRC-10051-1] c35 N74-13129  
 Thin film gauge --- for measuring convective  
 heat transfer rates along test surfaces in  
 wind tunnels  
 [NASA-CASE-NPO-10617-1] c35 N74-22095  
 Apparatus and method for processing Korotkov  
 sounds --- for blood pressure measurement  
 [NASA-CASE-MSC-13999-1] c52 N74-26626  
 Electric field measuring and display system ---  
 for cloud formations  
 [NASA-CASE-KSC-10731-1] c33 N74-27862  
 Device for measuring tensile forces  
 [NASA-CASE-MFS-21728-1] c35 N74-27865  
 Measuring probe position recorder  
 [NASA-CASE-LAR-10806-1] c35 N74-32877  
 Meter for use in detecting tension in straps  
 having predetermined elastic characteristics  
 [NASA-CASE-MFS-22189-1] c35 N75-19615  
 Thrust measurement  
 [NASA-CASE-XMS-05731] c35 N75-29382  
 Method and apparatus for measuring web material  
 wound on a reel  
 [NASA-CASE-GSC-11902-1] c38 N77-17495  
 Optical instrument employing reticle having  
 preselected visual response pattern formed  
 thereon  
 [NASA-CASE-ARC-10976-1] c74 N77-22950  
 Direct reading inductance meter  
 [NASA-CASE-NPO-13792-1] c35 N77-32455  
 Ruler for making navigational computations  
 [NASA-CASE-XNF-01458] c04 N78-17031  
 Apparatus for handling micron size range  
 particulate material  
 [NASA-CASE-NPO-10151] c37 N78-17386  
 Apparatus for measuring a sorbate dispersed in a  
 fluid stream  
 [NASA-CASE-ARC-10896-1] c35 N78-19465  
 Condition sensor system and method  
 [NASA-CASE-MSC-14805-1] c54 N78-32720  
 Lightning current waveform measuring system  
 [NASA-CASE-KSC-11018-1] c33 N79-10337  
 Time domain phase measuring apparatus  
 [NASA-CASE-GSC-12228-1] c33 N79-10338  
 Fluid velocity measuring device  
 [NASA-CASE-LAR-11729-1] c34 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] c44 N79-12541  
 Lightning current detector  
 [NASA-CASE-KSC-11057-1] c33 N79-14305  
 Lightning discharge identification system  
 [NASA-CASE-KSC-11099-1] c33 N79-25313  
 Contour measurement system  
 [NASA-CASE-MFS-23726-1] c43 N79-26439  
 Borehole geological assessment  
 [NASA-CASE-NPO-14231-1] c46 N80-10709  
 Displacement probes with self-contained exciting  
 medium  
 [NASA-CASE-LAR-11690-1] c35 N80-14371  
 Faraday rotation measurement method and apparatus  
 --- to receive RF signals from spacecraft  
 which exhibits polarization characteristics  
 due to spin stabilization  
 [NASA-CASE-NPO-14839-1] c35 N80-16313  
 Viscosity measuring instrument  
 [NASA-CASE-NPO-14501-1] c35 N80-18357  
 Method and device for destructive detection of a  
 substance --- useful in determining the  
 concentration of carbon fibers or pollutant  
 particles  
 [NASA-CASE-NPO-14940-1] c35 N80-21723  
 Geological assessment probe  
 [NASA-CASE-NPO-14558-1] c46 N80-24506  
 Method and automated apparatus for detecting  
 coliform organisms  
 [NASA-CASE-MSC-16777-1] c51 N80-27067  
 Skin friction measuring device for aircraft  
 [NASA-CASE-FRC-11029-1] c06 N81-17057  
 Heat pipe cooled probe  
 [NASA-CASE-LAR-12588-1] c44 N81-24525

## MECHANICAL DEVICES

Mechanical coordinate converter for use with  
 spacecraft tracking antennas  
 [NASA-CASE-XNF-00614] c14 N70-36907  
 Load cell protection device using spring-loaded  
 breakaway mechanism  
 [NASA-CASE-XMS-06782] c32 N71-15974  
 Design and development of satellite despin device  
 [NASA-CASE-XNF-08523] c31 N71-20396  
 Development of two force component measuring  
 device  
 [NASA-CASE-XAC-04886-1] c14 N71-20439  
 Design, development, and characteristics of  
 latching mechanism for operation in limited  
 access areas  
 [NASA-CASE-XMS-03745] c15 N71-21076  
 Design of mechanical device for stirring several  
 test tubes simultaneously  
 [NASA-CASE-XAC-06956] c15 N71-21177  
 Design and development of random function tracer  
 for obtaining coordinates of points on contour  
 maps  
 [NASA-CASE-XLA-01401] c15 N71-21179  
 Design and characteristics of device for closing  
 canisters under high vacuum conditions  
 [NASA-CASE-XLA-01446] c15 N71-21528  
 Development of non-magnetic indexing device for  
 orienting magnetic flux sensing instrument in  
 magnetic field without generation of  
 detrimental magnetic fields  
 [NASA-CASE-XGS-02422] c15 N71-21529  
 Design and development of module joint clamping  
 device for application to solar array  
 construction  
 [NASA-CASE-XNF-02341] c15 N71-21531  
 Hand controller operable about three  
 respectively perpendicular axes and capable of  
 actuating signal generators for attitude  
 control devices  
 [NASA-CASE-XMS-07487] c15 N71-23255  
 Metal alloy bearing materials for space  
 applications  
 [NASA-CASE-XLE-05033] c15 N71-23810  
 Mechanical actuator wherein linear motion  
 changes to rotational motion  
 [NASA-CASE-XGS-04548] c15 N71-24045  
 Design and characteristics of device for showing  
 amount of cable payed out from winch and load  
 imposed  
 [NASA-CASE-MSC-12052-1] c15 N71-24599  
 Design and development of release mechanism for  
 spacecraft components, releasable despin  
 weights, and extensible gravity booms  
 [NASA-CASE-XGS-08718] c15 N71-24600  
 Apparatus for mechanically dispersing ultrafine  
 metal powders subjected to shock waves  
 [NASA-CASE-XLE-04946] c17 N71-24911  
 Self lubricating gears and other mechanical  
 parts having surface adapted to frictional  
 contact  
 [NASA-CASE-MFS-14971] c15 N71-24984  
 Design and development of layout tool for  
 machine shop use to locate point in precise  
 reference to straight or bowed reference edge  
 [NASA-CASE-FRC-10005] c15 N71-26145  
 Design and development of linear actuator based  
 on bimetallic spring expansion  
 [NASA-CASE-NPO-10637] c15 N72-12409  
 Characteristics of lightweight actuator for  
 imparting linear motion using elongated output  
 shaft  
 [NASA-CASE-NPO-11222] c15 N72-25456  
 Development of mechanical device for measuring  
 distance of point within sphere from surface  
 of sphere  
 [NASA-CASE-XLA-06683] c14 N72-28436  
 Development of thermal compensating structure  
 which maintains uniform length with changes in  
 temperature  
 [NASA-CASE-MFS-20433] c15 N72-28496  
 Development of mating flat surfaces to inhibit  
 leakage of fluid around shafts  
 [NASA-CASE-XLE-10326-2] c15 N72-29488  
 Development of solar energy powered heliotrope  
 assembly to orient solar array toward sun  
 [NASA-CASE-GSC-10945-1] c21 N72-31637  
 Design and construction of mechanical probe for  
 determining if object is properly secured  
 [NASA-CASE-MFS-20760] c14 N72-33377

- Development and characteristics of rotary actuator for use on spacecraft to deploy and support pivotal structures such as solar panels [NASA-CASE-NPO-10680] c31 N73-14855
- Collapsible support for antenna reflector applied to installation of spacecraft antennas [NASA-CASE-NPO-11751] c07 N73-24176
- Pneumatic foot pedal operated fluidic exercising device [NASA-CASE-MSC-11561-1] c05 N73-32014
- Mechanical exposure interlock device for preventing film overexposure in oscilloscope camera [NASA-CASE-LAR-10319-1] c14 N73-32322
- Reefing system [NASA-CASE-LAR-10129-2] c37 N74-20063
- Sprag solenoid brake --- development and operations of electrically controlled brake [NASA-CASE-MFS-21846-1] c37 N74-26976
- Solid medium thermal engine [NASA-CASE-ARC-10461-1] c44 N74-33379
- Automatic inoculating apparatus --- includes movable carriage, drive motor, and swabbing motor [NASA-CASE-LAR-11074-1] c51 N75-13502
- Clock setter [NASA-CASE-LAR-11458-1] c35 N76-16392
- Apparatus for positioning modular components on a vertical or overhead surface [NASA-CASE-LAR-11465-1] c37 N76-21554
- Reel safety brake [NASA-CASE-GSC-11960-1] c37 N77-14479
- Mechanical sequencer [NASA-CASE-MSC-19536-1] c37 N77-22482
- Combined docking and grasping device [NASA-CASE-MFS-23088-1] c37 N77-23483
- Wrist joint assembly [NASA-CASE-MFS-23311-1] c54 N78-17676
- Tetherline system for orbiting satellites [NASA-CASE-MFS-23564-1] c15 N78-25119
- Actuator mechanism [NASA-CASE-GSC-11883-2] c37 N78-31426
- Mechanical end joint system for structural column elements [NASA-CASE-LAR-12482-1] c37 N80-22704
- Quartz ball valve [NASA-CASE-NPO-14473-1] c37 N80-23654
- Method and apparatus for holding two separate metal pieces together for welding [NASA-CASE-GSC-12318-1] c37 N80-23655
- Heat treat fixture and method of heat treating [NASA-CASE-LAR-11821-1] c26 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] c31 N81-14137
- Device for coupling a first vehicle to a second vehicle [NASA-CASE-GSC-12429-1] c37 N81-14320
- Apparatus for accurately preloading auger attachment means for frangible protective material [NASA-CASE-MSC-18791-1] c37 N81-24446
- Compression test fixture [NASA-CASE-MSC-18723-1] c39 N81-24470
- Locking mechanism for orthopedic braces [NASA-CASE-GSC-12082-2] c52 N81-25661
- MECHANICAL DRIVES**
- Hydraulic drive mechanism for leveling isolation platforms [NASA-CASE-XMS-03252] c15 N71-10658
- Antibacklash circuit for hydraulic drive system [NASA-CASE-XNP-01020] c03 N71-12260
- Precision stepping drive device using cam disk [NASA-CASE-MFS-14772] c15 N71-17692
- Incremental motion drive system applied to interferometer components [NASA-CASE-XNP-08897] c15 N71-17694
- Ratchet mechanism for high speed operation at reduced backlash [NASA-CASE-MFS-12805] c15 N71-17805
- Development of apparatus for automatically changing carriage speed of welding machine to obtain constant speed of torch along work surface [NASA-CASE-XMF-07069] c15 N71-23815
- Drive system for parabolic tracking antenna with reversible motion and minimal backlash [NASA-CASE-NPO-10173] c15 N71-24696
- Synchronous dc direct-drive system comprising multiple-loop hybrid control system controlling load directly connected to actuator [NASA-CASE-GSC-10065-1] c10 N71-27136
- Energy absorption device in high precision gear train for protection against damage to components caused by stop loads [NASA-CASE-XNP-01848] c15 N71-28959
- Automatic controlled drive mechanism for portable boring bar [NASA-CASE-XLA-03661] c15 N71-33518
- Rotary actuator for use in environments with no rolling and sliding friction [NASA-CASE-NPO-10244] c15 N72-26371
- Development and characteristics of rotary actuator for use on spacecraft to deploy and support pivotal structures such as solar panels [NASA-CASE-NPO-10680] c31 N73-14855
- Optically actuated two position mechanical mover [NASA-CASE-NPO-13105-1] c37 N74-21060
- Two speed drive system --- mechanical device for changing speed on rotating vehicle wheel [NASA-CASE-MFS-20645-1] c37 N74-23070
- Concentric differential gearing arrangement [NASA-CASE-ARC-10462-1] c37 N74-27901
- Geneva mechanism --- including star wheel and driver [NASA-CASE-NPO-13281-1] c37 N75-13266
- Mechanical thermal motor [NASA-CASE-MFS-23062-1] c37 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] c35 N77-20401
- Hydraulic drain means for servo-systems [NASA-CASE-NPO-10316-1] c37 N77-22479
- Mechanical sequencer [NASA-CASE-MSC-19536-1] c37 N77-22482
- Gas turbine engine with convertible accessories [NASA-CASE-LEW-12390-1] c07 N78-17056
- Wobble gear drive mechanism --- for aerospace environments [NASA-CASE-WOO-00625] c37 N78-17385
- Toggle mechanism for pinching metal tubes [NASA-CASE-GSC-12274-1] c37 N79-28550
- Antenna deployment mechanism for use with a spacecraft --- extensible and retractable telescopic antenna mast [NASA-CASE-GSC-12331-1] c18 N80-14183
- Redundant motor drive system [NASA-CASE-MFS-23777-1] c37 N80-32716
- Belt for transmitting power from a cogged driving member to a cogged driven member [NASA-CASE-GSC-12289-1] c37 N80-32717
- Base drive for paralleled inverter systems [NASA-CASE-NPO-14163-1] c33 N81-14220
- Speed control device for a heavy duty shaft --- solar sails for spacecraft propulsion [NASA-CASE-NPO-14170-1] c37 N81-15364
- Variable speed drive [NASA-CASE-GSC-12643-1] c37 N81-24447
- MECHANICAL ENGINEERING**
- Manual actuator --- for spacecraft exercising machines [NASA-CASE-MFS-21481-1] c37 N74-18127
- Shaft seal assembly for high speed and high pressure applications [NASA-CASE-LEW-11873-1] c37 N79-22475
- MECHANICAL MEASUREMENT**
- Strain gage for detecting and measuring mechanical strain in thermally strained specimens [NASA-CASE-FRC-10053] c14 N70-35587
- Air brake device for absorbing and measuring power from rotating shafts [NASA-CASE-XLE-00720] c14 N70-40201
- Water cooled gage for strain measurements in high temperature environments [NASA-CASE-XNP-09205] c14 N71-17657
- Development of apparatus for measuring successive increments of strain on elastomers [NASA-CASE-XMF-04680] c15 N71-19489
- Development of Hall effect transducer for converting mechanical shaft rotations into proportional electrical signals [NASA-CASE-LAR-10620-1] c09 N72-25255
- Strain gage mounting assembly [NASA-CASE-NPO-13170-1] c35 N76-14430

- Pulsed phase locked loop strain monitor  
[NASA-CASE-LAR-12772-1] c33 N81-15195
- Photomechanical transducer  
[NASA-CASE-NPO-14363-1] c39 N81-25400
- MECHANICAL PROPERTIES**
- Test apparatus for determining mechanical properties of refractory materials at high temperatures in vacuum or inert atmospheres  
[NASA-CASE-XLE-00335] c14 N70-35368
- Fixture for environmental exposure of structural materials under compression  
[NASA-CASE-LAR-12602-1] c35 N81-19429
- MECHANICS (PHYSICS)**
- Hovering type flying vehicle design and principle mechanisms for manned or unmanned use  
[NASA-CASE-HSC-12111-1] c02 N71-11639
- MECHANIZATION**
- Machine for use in monitoring fatigue life for a plurality of elastomeric specimens  
[NASA-CASE-NPO-13731-1] c39 N78-10493
- MEDICAL ELECTRONICS**
- Circuit for detecting initial systole and diastolic notch --- for monitoring arterial pressure  
[NASA-CASE-LEW-11581-1] c54 N75-13531
- Pocket ECG electrode  
[NASA-CASE-ARC-11258-1] c52 N80-33081
- Subcutaneous electrode structure  
[NASA-CASE-ARC-11117-1] c52 N81-14612
- MEDICAL EQUIPMENT**
- Electromedical garment, applying vectorcardiologic type electrodes to human torsos for data recording during physical activity  
[NASA-CASE-XFR-10856] c05 N71-11189
- Respiration analyzing method and apparatus for determining subjects oxygen consumption in aerospace environments  
[NASA-CASE-XFR-08403] c05 N71-11202
- Laser machining device with dielectric functioning as beam waveguide for mechanical and medical applications  
[NASA-CASE-HQN-10541-2] c15 N71-27135
- Zero power telemetry actuated switch for biomedical equipment  
[NASA-CASE-ARC-10105] c09 N72-17153
- Tilting table for testing human body in variety of positions while exercising on ergometer or other biomedical devices  
[NASA-CASE-MFS-21010-1] c05 N73-30078
- Automatic device for assaying urine on bacterial adenosine triphosphate content  
[NASA-CASE-GSC-11169-2] c05 N73-32011
- Servo-controlled intravital microscope system  
[NASA-CASE-NPO-13214-1] c35 N75-25123
- Heat sterilizable patient ventilator  
[NASA-CASE-NPO-13313-1] c54 N75-27761
- Medical subject monitoring systems --- multichannel monitoring systems  
[NASA-CASE-HSC-14180-1] c52 N76-14757
- Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-1] c54 N76-22914
- Readout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c35 N76-24525
- A cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c52 N77-26796
- Corneal seal device  
[NASA-CASE-LEW-12258-1] c52 N77-28716
- Snap-in compressible biomedical electrode  
[NASA-CASE-HSC-14623-1] c52 N77-28717
- Tissue macerating instrument  
[NASA-CASE-LEW-12668-1] c52 N78-14773
- Flow compensating pressure regulator  
[NASA-CASE-LEW-12718-1] c34 N78-25351
- Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12723-1] c52 N80-18690
- Acoustic tooth cleaner  
[NASA-CASE-LAR-12471-1] c52 N81-12724
- Micro-fluid exchange coupling apparatus  
[NASA-CASE-ARC-11114-1] c51 N81-14605
- Urine collection device  
[NASA-CASE-HSC-16433-1] c52 N81-24711
- Spine immobilization apparatus  
[NASA-CASE-ARC-11167-1] c52 N81-25662
- System for moving a probe to follow movements of tissue  
[NASA-CASE-NFO-15197-1] c52 N81-26697
- Ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-1] c52 N81-27786
- Low X-ray absorption aneurism clips  
[NASA-CASE-LAR-12650-1] c52 N81-29768
- MELTING POINTS**
- Mixed diamines for lower melting addition polyimide preparation and utilization  
[NASA-CASE-LAR-12054-1] c27 N79-33316
- MELTS (CRYSTAL GROWTH)**
- Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt  
[NASA-CASE-NFO-13969-1] c76 N79-23798
- Preparation of monotectic alloys having a controlled microstructure by directional solidification under dopant-induced interface breakdown  
[NASA-CASE-MFS-23816-1] c26 N80-23419
- Means for growing ribbon crystals without subjecting the crystals to thermal shock-induced strains  
[NASA-CASE-NPO-14298-1] c76 N80-32244
- Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c33 N81-19389
- Electromigration process for the purification of molten silicon during crystal growth  
[NASA-CASE-NPO-14831-1] c76 N81-19944
- Apparatus and method for heating a material in a transparent ampoule --- crystal growth  
[NASA-CASE-MFS-25436-1] c76 N81-30012
- MEMBRANE STRUCTURES**
- Liquid junction for glass electrode or pH meters  
[NASA-CASE-NPO-10682] c15 N70-34699
- Expulsion and measuring device for determining quantity of liquid in tank under conditions of weightlessness  
[NASA-CASE-XMS-01546] c14 N70-40233
- Flexible composite membrane structure impervious to extremely reactive chemicals in rocket propellants  
[NASA-CASE-XNP-08837] c18 N71-16210
- Flexible barrier membrane comprising porous substrate and incorporating liquid gallium or indium metal used as sealant barriers for spacecraft walls and pumping liquid propellants  
[NASA-CASE-XNP-08881] c17 N71-28747
- Meteoroid capture cell construction  
[NASA-CASE-HSC-12423-1] c91 N76-30131
- Strong thin membrane structure --- solar sails  
[NASA-CASE-NPO-14021-2] c27 N80-16163
- In-situ cross linking of polyvinyl alcohol --- application to battery separator films  
[NASA-CASE-LEW-13135-2] c27 N81-24257
- MEMBRANES**
- Apparatus for measuring polymer membrane expansion in electrochemical cells  
[NASA-CASE-XGS-03865] c14 N69-21363
- Separation cell with permeable membranes for fluid mixture component separation  
[NASA-CASE-XMS-02952] c18 N71-20742
- Water insoluble, cationic permselective membrane  
[NASA-CASE-NFO-11091] c18 N72-22567
- Dual membrane hollow fiber fuel cell and method of operating same  
[NASA-CASE-NPO-13732-1] c44 N79-10513
- Microelectrophoretic apparatus and process  
[NASA-CASE-ARC-11121-1] c25 N79-14169
- Dialysis system --- using ion exchange resin membranes permeable to urea molecules  
[NASA-CASE-NPO-14101-1] c52 N80-14687
- Method of forming dynamic membrane on stainless steel support  
[NASA-CASE-HSC-18172-1] c26 N80-19237
- Reverse osmosis membrane of high urea rejection properties --- water purification  
[NASA-CASE-ARC-10980-1] c27 N80-23452
- Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NPO-14001-1] c27 N81-14076
- Asymmetric polyimide separation membrane and method  
[NASA-CASE-NPO-15431-1] c25 N81-29178
- MEMORY**
- Method for making conductors for ferrite memory

- arrays --- from pre-formed metal conductors  
[NASA-CASE-LAR-16994-1] c24 N75-13C32
- MERCURY (METAL)**
- Interrupter switching device utilizing electrodes and mercury filled capillary tubes in which current flow vaporizes mercury as circuit breaker  
[NASA-CASE-XNP-02251] c12 N71-20896
- Method of forming ceramic to metal seals impervious to gaseous and liquid mercury at high temperature  
[NASA-CASE-XNP-01263-2] c15 N71-26312
- Development of system for delivering vaporized mercury to electron bombardment ion engine  
[NASA-CASE-NPO-10737] c28 N72-11709
- MERCURY VAPOR**
- Interrupter switching device utilizing electrodes and mercury filled capillary tubes in which current flow vaporizes mercury as circuit breaker  
[NASA-CASE-XNP-02251] c12 N71-20896
- Liquid-vapor interface seal design for turbine rotating shafts including helical and molecular pumps and liquid cooling of mercury vapor  
[NASA-CASE-XNP-02862-1] c15 N71-26294
- METABOLIC WASTES**
- Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c54 N78-32721
- Method and autocated apparatus for detecting coliform organisms  
[NASA-CASE-MSC-16777-1] c51 N80-27067
- METABOLISM**
- Automated analysis of oxidative metabolites  
[NASA-CASE-ARC-10469-1] c25 N75-12C86
- Process for control of cell division  
[NASA-CASE-LAR-10773-3] c51 N77-25769
- Metabolic rate meter and method  
[NASA-CASE-MSC-12239-1] c52 N79-21750
- METAL BONDING**
- Bonding method for improving contact between lead telluride thermoelectric elements and tungsten electrodes  
[NASA-CASE-XGS-04554] c15 N69-39786
- Plasma spraying gun for forming diffusion bonded metal or ceramic coatings on substrates  
[NASA-CASE-XLE-01604-2] c15 N71-15610
- Describing metal valve pintle with encapsulated elastomeric body  
[NASA-CASE-HSC-12116-1] c15 N71-17648
- Apparatus for determining quality of bond between high density material and low density material  
[NASA-CASE-MFS-13686] c15 N71-18132
- Metal soldering with hydrazine monoperfluoro alkanate for corrosion resistant coatings  
[NASA-CASE-XNP-03459] c15 N71-21078
- Leak resistant bonded elastomeric seal for secondary electrochemical cells  
[NASA-CASE-IGS-02631] c03 N71-23006
- Metal pattern bonding technique for cover glass attachment to silicon solar cells for space applications  
[NASA-CASE-XLE-08569] c03 N71-23449
- Development of electrical system for indicating optimum contact between electrode and metal surface to permit improved soldering operation  
[NASA-CASE-KSC-10242] c15 N72-23497
- Development of process for bonding resinous body in cavities of honeycomb structures  
[NASA-CASE-MSC-12357] c15 N73-12489
- Totally confined explosive welding --- apparatus to reduce noise level and protect personnel during explosive bonding  
[NASA-CASE-LAR-10941-1] c37 N74-21057
- Ultrasonically bonded valve assembly  
[NASA-CASE-NPO-13360-1] c37 N75-25185
- Bi-metallic junctions**  
[NASA-CASE-LEW-11573-1] c26 N77-28265
- Heat exchanger and method of making --- bonding rocket chambers with a porous metal matrix  
[NASA-CASE-LEW-12441-1] c34 N79-13289
- Totally confined explosive welding  
[NASA-CASE-LAR-10941-2] c37 N79-13364
- Method and apparatus for holding two separate metal pieces together for welding  
[NASA-CASE-GSC-12318-1] c37 N80-23655
- Heat exchanger and method of making --- rocket lining  
[NASA-CASE-LEW-12441-2] c34 N80-24573
- Method of bonding plasticized elastomer to metal and article produced thereby  
[NASA-CASE-MFS-25181-1] c27 N81-16238
- Thermal barrier coating system having improved adhesion  
[NASA-CASE-LEW-13359-1] c27 N81-24265
- METAL COATINGS**
- Joining aluminum to stainless steel by bonding aluminum coatings onto titanium coated stainless steel and brazing aluminum to aluminum/titanium coated steel  
[NASA-CASE-MFS-07369] c15 N71-20443
- Metal soldering with hydrazine monoperfluoro alkanate for corrosion resistant coatings  
[NASA-CASE-XNP-03459] c15 N71-21078
- Low concentration alkaline solution treatment of aluminum with metal phosphate surface coatings to improve chemical bonding and reduce coating weight  
[NASA-CASE-XLA-01995] c18 N71-23047
- Organometallic compounds of niobium and tantalum useful for film deposition  
[NASA-CASE-XNP-04023] c06 N71-28808
- Silicide coating process and composition for protection of refractory metals from oxidation  
[NASA-CASE-XLE-10910] c18 N71-29040
- Selective nickel deposition on irradiation sensitive compounds  
[NASA-CASE-LEW-10965-1] c15 N72-25452
- Silicon carbide backward diode with coated lead attachment  
[NASA-CASE-ERC-10224-2] c09 N73-27150
- Panel for selectively absorbing solar thermal energy and the method of producing said panel  
[NASA-CASE-MFS-22562-1] c44 N76-14595
- Ultraviolet light reflective coating  
[NASA-CASE-GSC-11786-1] c24 N76-24363
- Metallic hot wire anemometer --- for high speed wind tunnel tests  
[NASA-CASE-ARC-10911-1] c35 N77-20400
- Solar cell collector  
[NASA-CASE-LEW-12552-1] c44 N78-25527
- Electromagnetic radiation energy arrangement --- coatings for solar energy absorption and infrared reflection  
[NASA-CASE-WOO-00428-1] c32 N79-19186
- METAL CUTTING**
- Metal shearing energy absorber  
[NASA-CASE-HQM-10638-1] c15 N73-30460
- Vee-notching device --- with adjustable carriage  
[NASA-CASE-MFS-20730-1] c39 N74-13131
- Hole cutter --- drill bits and rotating shaft  
[NASA-CASE-MFS-22649-1] c37 N75-25186
- Method and tool for machining a transverse slot about a bore  
[NASA-CASE-LAR-11855-1] c37 N81-14319
- METAL FATIGUE**
- Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-2] c24 N81-26179
- METAL FIBERS**
- Lightweight electrically-powered flexible thermal laminate --- made of metal and nonconductive yarns  
[NASA-CASE-MSC-12662-1] c33 N79-12331
- A method and technique for installing light-weight fragile, high-temperature fiber insulation --- spacecraft heat sealing  
[NASA-CASE-MSC-16934-2] c37 N81-16468
- METAL FILMS**
- Means and methods of depositing thin films on substrates  
[NASA-CASE-XNP-00595] c15 N70-34967
- Metallic film diffusion into metal or ceramic surfaces for boundary lubrication in aerospace environments  
[NASA-CASE-XLE-01765] c18 N71-10772
- Bismuth and lead surface coatings for gas bearings in aerospace engineering  
[NASA-CASE-XGS-02011] c15 N71-20739
- Metallic film diffusion for boundary lubrication in aerospace engineering  
[NASA-CASE-XLE-10337] c15 N71-24046
- Magnetic recording head composed of ferrite core coated with thin film of aluminum-iron-silicon alloy

- [NASA-CASE-GSC-10097-1] c68 N71-27210  
Thin absorbing metallic film for increased visible light transmission
- [NASA-CASE-LAR-10836-1] c26 N72-27784  
Deposition of alloy films --- on irregularly shaped metal object
- [NASA-CASE-LEW-11262-1] c27 N74-13270  
Multitarget sequential sputtering apparatus
- [NASA-CASE-NPO-13345-1] c37 N75-19684  
Method of forming metal hydride films
- [NASA-CASE-LEW-12083-1] c37 N78-13436  
**METAL FINISHING**  
Selective plating of etched circuits without removing previous plating
- [NASA-CASE-IGS-03120] c15 N71-24047  
Surface finishing --- for aircraft wings
- [NASA-CASE-MSC-12631-1] c24 N77-28225  
**METAL FOILS**  
Characteristics of device for folding thin flexible sheets into compact configuration
- [NASA-CASE-XLA-00137] c15 N70-33180  
Passive thermal control coating on aluminum foil laminate for inflatable spacecraft surfaces
- [NASA-CASE-XLA-01291] c33 N70-36617  
Development and characteristics of thermal radiation shielding of refractory metal foil used for induction furnace
- [NASA-CASE-XLE-03432] c33 N71-24145  
Method of making porous conductive supports for electrodes --- by electroforming and stacking nickel foils
- [NASA-CASE-GSC-11367-1] c44 N74-19692  
Method and apparatus for tensile testing of metal foil
- [NASA-CASE-LAR-10208-1] c35 N76-18400  
Process for preparing high temperature polyimide film laminates
- [NASA-CASE-LAR-12742-1] c24 N81-12174  
Hot foil transducer skin friction sensor
- [NASA-CASE-LAR-12321-1] c35 N81-12390  
**METAL FUELS**  
Preparing oxidizer coated metal fuel particles
- [NASA-CASE-NPO-11975-1] c28 N74-33209  
**METAL HALIDES**  
Process for making anhydrous metal halides
- [NASA-CASE-LEW-11860-1] c37 N76-18458  
High power metallic halide laser
- [NASA-CASE-NPO-14782-1] c36 N80-18381  
**METAL HYDRIDES**  
Method of forming metal hydride films
- [NASA-CASE-LEW-12083-1] c37 N78-13436  
**METAL IONS**  
Chemical synthesis of thermally stable organometallic polymers with divalent metal ion and tetraphenylphosphonitrilic units
- [NASA-CASE-BQN-10364] c06 N71-27363  
Electrically conductive palladium containing polyimide films
- [NASA-CASE-LAR-12705-1] c33 N80-24549  
**METAL JOINTS**  
Leakproof soft metal seal for use in very high vacuum systems operating at cryogenic temperatures
- [NASA-CASE-IGS-02441] c15 N70-41629  
Non-floating universal joint
- [NASA-CASE-MSC-19546-1] c37 N77-25536  
**METAL MATRIX COMPOSITES**  
High strength reinforced metallic composites for applications over wide temperature range
- [NASA-CASE-XLE-02428] c17 N70-33288  
Process for producing dispersion strengthened nickel with aluminum comprising metallic matrices embedded with oxides or other hyperfine compounds
- [NASA-CASE-XLE-06969] c17 N71-24142  
Self lubricating gears and other mechanical parts having surface adapted to frictional contact
- [NASA-CASE-MFS-14971] c15 N71-24584  
Development of procedure for improved distribution of refractory compounds and micro-constituents in refractory metal matrix
- [NASA-CASE-XLE-03940-2] c17 N72-28536  
Method of preparing graphite reinforced aluminum composite
- [NASA-CASE-MFS-21077-1] c24 N75-28135  
Method of making reinforced composite structure
- [NASA-CASE-LEW-12619-1] c24 N77-19171  
Fuselage structure using advanced technology metal matrix fiber reinforced composites
- [NASA-CASE-LAR-11688-1] c05 N78-18045  
Heat exchanger and method of making --- bonding rocket chambers with a porous metal matrix
- [NASA-CASE-LEW-12441-1] c34 N79-13289  
Preparation of monotectic alloys having a controlled microstructure by directional solidification under dopant-induced interface breakdown
- [NASA-CASE-MFS-23816-1] c26 N80-23419  
Heat exchanger and method of making --- rocket lining
- [NASA-CASE-LEW-12441-2] c34 N80-24573  
Method for alleviating thermal stress damage in laminates --- metal matrix composites
- [NASA-CASE-LEW-12493-1] c24 N81-17170  
Method for alleviating thermal stress damage in laminates
- [NASA-CASE-LEW-12493-2] c24 N81-26179  
**METAL OXIDE SEMICONDUCTORS**  
Gyrator circuit using MOS field effect transistors
- [NASA-CASE-MFS-21433] c09 N73-20232  
Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential of field effect device
- [NASA-CASE-GSC-11425-1] c76 N74-20329  
Integrated P-channel MOS gyrator
- [NASA-CASE-MFS-22343-1] c33 N74-34638  
Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential
- [NASA-CASE-GSC-11425-2] c76 N75-25730  
Solar cell collector
- [NASA-CASE-LEW-12552-1] c44 N78-25527  
Multilevel metallization method for fabricating a metal oxide semiconductor device
- [NASA-CASE-MFS-23541-1] c76 N79-14906  
Method of making V-MOS field effect transistors utilizing a two-step anisotropic etching and ion implantation
- [NASA-CASE-GSC-12515-1] c33 N81-26360  
Schottky barrier solar cell
- [NASA-CASE-NPO-13689-2] c44 N81-29525  
**METAL OXIDES**  
Process for producing dispersion strengthened nickel with aluminum comprising metallic matrices embedded with oxides or other hyperfine compounds
- [NASA-CASE-XLE-06969] c17 N71-24142  
Photofabrication techniques for selective removal of conductive metals oxide coatings from nonconductive substrates
- [NASA-CASE-ERC-10108] c06 N72-21094  
Producing metal powders of controlled particle size by reducing oxide using reactive metal vapor in vacuum
- [NASA-CASE-XLE-06461] c17 N72-22530  
Method for obtaining oxygen from lunar or similar soil
- [NASA-CASE-MSC-12408-1] c46 N74-13011  
Method of forming dynamic membrane on stainless steel support
- [NASA-CASE-MSC-18172-1] c26 N80-19237  
Method for depositing an oxide coating --- producing solar panels
- [NASA-CASE-LEW-13131-1] c26 N81-24230  
Method of forming oxide coatings
- [NASA-CASE-LEW-13132-1] c44 N81-27616  
**METAL PARTICLES**  
Magnetohydrodynamic generator for mixing nonconductive gas and liquid metal mist to form slugs
- [NASA-CASE-XLE-02083] c03 N69-39983  
Cermet for nuclear fuel constructed by pressing metal coated ceramic particles in die at temperature to cause bonding of metal coatings, and tested for thermal stability
- [NASA-CASE-LEW-10219-1] c18 N71-28729  
Preparing oxidizer coated metal fuel particles
- [NASA-CASE-NPO-11975-1] c28 N74-33209  
**METAL PLATES**  
Development of large area micrometeoroid impact detector panels
- [NASA-CASE-XLA-05906] c31 N71-16221  
Tungsten-coated tungsten-uranium dioxide nuclear fuel plates
- [NASA-CASE-XLE-00209] c22 N73-32528  
Strain arrestor plate for fused silica tile --- bonding of thermal insulation to metallic



- plates or structural parts  
[NASA-CASE-MSC-14182-1] c27 N76-14264
- Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c26 N80-28492
- METAL POWDER**
- Production of refractory bodies with controlled porosity by pressing and heating mixtures of refractory and inert metal powders  
[NASA-CASE-LEW-10393-1] c17 N71-15468
- Electrode sealing and insulation for fuel cells containing caustic liquid electrolytes using powdered plastic and metal  
[NASA-CASE-XMS-01625] c15 N71-23622
- Apparatus for mechanically dispersing ultrafine metal powders subjected to shock waves  
[NASA-CASE-XLE-04946] c17 N71-24911
- Method to produce high purity copper fluoride by heating copper hydroxyfluoride powder and subjecting to flowing fluorine gas  
[NASA-CASE-LEW-10794-1] c06 N72-17693
- Producing metal powders of controlled particle size by reducing oxide using reactive metal vapor in vacuum  
[NASA-CASE-XLE-06461] c17 N72-22530
- Development of apparatus for producing metal powder particles of controlled size  
[NASA-CASE-XLE-06461-2] c17 N72-28535
- Metal plating process employing spraying of metallic power/peening particle mixture  
[NASA-CASE-GSC-11163-1] c15 N73-32360
- METAL SHEETS**
- Fatigue testing apparatus with light shield and infrared reflector for high temperature evaluation of loaded sheet samples  
[NASA-CASE-XLA-C1782] c14 N71-26136
- Method of making pressure tight seal for super alloy  
[NASA-CASE-LAR-10170-1] c37 N74-11301
- Method of making an explosively welded scarf joint  
[NASA-CASE-LAR-11211-1] c37 N75-12326
- Process for making sheets with parallel pores of uniform size  
[NASA-CASE-GSC-10984-1] c37 N75-26371
- Apparatus for welding sheet material --- butt joints  
[NASA-CASE-XMS-01330] c37 N75-27376
- METAL SPINNING**
- Apparatus and method for spin forming tubular elbows with high strength, uniform thickness, and close tolerances  
[NASA-CASE-XMP-01083] c15 N71-22723
- METAL STRIPS**
- Metal ribbon wrapped outer wall for regeneratively cooled combustion chamber  
[NASA-CASE-XLE-00164] c15 N70-36411
- Metal strip mounting arrangement for solar cell arrays on spacecraft  
[NASA-CASE-XGS-01475] c03 N71-11058
- Forming tubes from long thin flat metal strips  
[NASA-CASE-XGS-04175] c15 N71-18579
- High speed shutter --- electrically actuated ribbon loop for shuttering optical or fluid passageways  
[NASA-CASE-ARC-10516-1] c70 N74-21300
- METAL SURFACES**
- Condenser-separator for dehumidifying air utilizing sintered metal surface  
[NASA-CASE-XLA-08645] c15 N69-21465
- Nickel plating onto etched aluminum castings  
[NASA-CASE-XNP-04148] c17 N71-24830
- High thermal emittance black surface coatings and process for applying to metal and metal alloy surfaces used in radiative cooling of spacecraft  
[NASA-CASE-XLA-06199] c15 N71-24875
- Method for treating metal surfaces to prevent secondary electron transmission  
[NASA-CASE-XNP-09469] c24 N71-25555
- Method of forming ceramic to metal seals impervious to gaseous and liquid mercury at high temperature  
[NASA-CASE-XNP-01263-2] c15 N71-26312
- Anodizing method for providing metal surfaces with temperature reducing coatings against flames  
[NASA-CASE-XLE-00035] c33 N71-29151
- Thin film gauge --- for measuring convective heat transfer rates along test surfaces in wind tunnels
- [NASA-CASE-NFO-10617-1] c35 N74-22095
- Surface finishing  
[NASA-CASE-MSC-12631-3] c27 N81-14077
- Improved refractory coatings --- sputtered coatings on substrates that form stable nitrides  
[NASA-CASE-LEW-23169-2] c26 N81-16209
- Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c37 N81-19455
- Corrosion resistant thermal barrier coating --- protecting gas turbines and other engine parts  
[NASA-CASE-LEW-13088-1] c26 N81-25188
- METAL VAPOR LASERS**
- Method and apparatus for convection control of metallic halide vapor density in a metallic halide laser  
[NASA-CASE-NFO-15021-1] c36 N80-20574
- METAL VAPORS**
- Magnetohydrodynamic generator for mixing nonconductive gas and liquid metal mist to form slugs  
[NASA-CASE-XLE-02083] c03 N69-39983
- Apparatus for producing hydrocarbon slurry containing small particles of magnesium for use as jet aircraft fuel  
[NASA-CASE-XLE-00010] c15 N70-33382
- Inert gas metallic vapor laser  
[NASA-CASE-NFO-13449-1] c36 N75-32441
- Isotope separation using metallic vapor lasers  
[NASA-CASE-NFO-13550-1] c36 N77-26477
- Method and apparatus for convection control of metallic halide vapor density in a metallic halide laser  
[NASA-CASE-NFO-15021-1] c36 N80-20574
- METAL WORKING**
- Controlled arc spot welding method  
[NASA-CASE-XMF-00392] c15 N70-34814
- Method and apparatus for shaping and joining large diameter metal tubes using magnetomotive forces  
[NASA-CASE-XMF-05114] c15 N71-17650
- Description of protective device for providing safe operating conditions around work piece in machine or metal working tool  
[NASA-CASE-XLE-01092] c15 N71-22797
- Description of portable milling tool for milling tube or pipe ends to desired shape and thickness  
[NASA-CASE-XMF-03511] c15 N71-22799
- Development and characteristics of frusto-conical die nib for extrusion of refractory metals  
[NASA-CASE-XLE-06773] c15 N71-23817
- Portable magnetomotive hammer for metal working  
[NASA-CASE-XMF-03793] c15 N71-24833
- Method and apparatus for portable high precision magnetomotive bulging, constricting, and joining of large diameter metal tubes  
[NASA-CASE-XMF-05114-3] c15 N71-24865
- Insert facing tool --- manually operated cutting tool for forming studs in honeycomb material  
[NASA-CASE-MFS-21485-1] c37 N74-25968
- Apparatus for forming dished ion thruster grids  
[NASA-CASE-LEW-11694-2] c37 N76-14461
- Holding fixture for a hot stamping press  
[NASA-CASE-GSC-12619-1] c37 N81-16470
- METAL-METAL BONDING**
- Joining aluminum to stainless steel by bonding aluminum coatings onto titanium coated stainless steel and brazing aluminum to aluminum/titanium coated steel  
[NASA-CASE-MFS-07369] c15 N71-20443
- Method for honeycomb panel bonding by thermosetting film adhesive with electrical heat means  
[NASA-CASE-XMP-01402] c18 N71-21651
- Capillary flow weld-bonding  
[NASA-CASE-LAR-11726-1] c37 N76-27568
- Mechanical bonding of metal  
[NASA-CASE-LEW-12941-1] c31 N81-16329
- Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c37 N81-19455
- METALLIZING**
- Multilevel metallization method for fabricating a metal oxide semiconductor device  
[NASA-CASE-MFS-23541-1] c76 N79-14906
- METALLOGRAPHY**
- Development of method for etching copper  
[NASA-CASE-XGS-06306] c17 N71-16044
- METALLOSILOXANE POLYMER**
- Thiophenyl ether disiloxanes and trisiloxanes

- useful as lubricant fluids  
[NASA-CASE-MFS-22411-1] c37 N74-21058
- METALLURGY**  
Induction heating of metallurgical specimens to high temperatures in coil furnace  
[NASA-CASE-XLE-04026] c14 N71-23267  
Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c26 N80-14229
- METALS**  
Transpiration cooled turbine blade made from metallic or ceramic wires  
[NASA-CASE-XLE-00020] c15 N70-33226  
Self lubricating fluoride-metal composite materials for outer space applications  
[NASA-CASE-XLE-08511] c18 N71-23710  
Punch and die device for forming convolution series in thin gage metal hemispheres  
[NASA-CASE-XNP-05297] c15 N71-23811  
Device for bending metal ribbon or wire  
[NASA-CASE-XLA-05966] c15 N72-12408  
Metal plating process employing spraying of metallic powder/peening particle mixture  
[NASA-CASE-GSC-11163-1] c15 N73-32360  
Glass-to-metal seals comprising relatively high expansion metals  
[NASA-CASE-LEW-10698-1] c37 N74-21063  
Scanning nozzle plating system --- for etching or plating metals on substrates without masking  
[NASA-CASE-NPO-11758-1] c31 N74-23065  
Production of pure metals  
[NASA-CASE-LEW-10906-1] c25 N74-30502  
Thermocouple tape --- developed from thermoelectrically different metals  
[NASA-CASE-LEW-11072-2] c35 N76-15434  
Method of forming shrink-fit compression seal  
[NASA-CASE-LAR-11563-1] c37 N77-23482  
Solar cells having integral collector grids  
[NASA-CASE-LEW-12819-1] c44 N79-11467
- METASTABLE STATE**  
Stabilization of He2(a 3 Sigma u+ molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c72 N79-13826
- METEORITE COLLISIONS**  
Pressurized panel meteoroid detector  
[NASA-CASE-XLA-08916-2] c14 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] c91 N74-13130
- METEORITES**  
Method for making pressurized meteoroid penetration detector panels  
[NASA-CASE-XLA-08916] c15 N71-29018
- METEORITIC DAMAGE**  
Capacitor sandwich structure containing metal sheets of known thickness for counting penetration rates of meteoroids  
[NASA-CASE-XLE-01246] c14 N71-10797
- METEOROID HAZARDS**  
Meteoroid impact position locator aid for manned space station  
[NASA-CASE-LAR-10629-1] c35 N75-33367
- METEOROID PROTECTION**  
Development and characteristics of protective coatings for spacecraft  
[NASA-CASE-XNP-02507] c31 N71-17679
- METEOROIDS**  
Cameras for photographing meteors in selected sky area  
[NASA-CASE-LAR-10226-1] c14 N73-19419  
Meteoroid capture cell construction  
[NASA-CASE-MSC-12423-1] c91 N76-30131
- METEOROLOGICAL BALLOONS**  
Aerodynamically stable meteorological balloon using surface roughness effect  
[NASA-CASE-XMP-04163] c02 N71-23007
- METHANE**  
High temperature gas lubricant consisting of two fluoro-bromo-methanes  
[NASA-CASE-XLE-00353] c18 N70-39897
- MICHELSON INTERFEROMETERS**  
Michelson interferometer with photodetector for optical direction sensing  
[NASA-CASE-NPO-10320] c14 N71-17655  
Servo system for retroreflector of Michelson interferometer  
[NASA-CASE-NPO-10300] c14 N71-17662
- Computerized optical system for producing multiple images of a scene simultaneously  
[NASA-CASE-MSC-12404-1] c23 N73-13661  
Interferometer mirror tilt correcting system  
[NASA-CASE-NPO-13687-1] c35 N78-18391
- MICROANALYSIS**  
Plural output optometric sample cell and analysis system  
[NASA-CASE-NPO-10233-1] c74 N78-33913
- MICROBALANCES**  
Null-type vacuum microbalance for measuring minute mechanical displacements  
[NASA-CASE-XAC-00472] c15 N70-40180  
Microbalance --- for measuring particle mass  
[NASA-CASE-MSC-11242] c35 N78-17358
- MICROBALLOONS**  
Method of forming frozen spheres in a force-free drop tower --- microballoons for inertial confinement fusion  
[NASA-CASE-NPO-14845-1] c31 N81-16328
- MICROBIOLOGY**  
Development of variable angle device for positioning test tubes to permit optimum drying of culture medium  
[NASA-CASE-LAR-10507-1] c11 N72-25284  
Apparatus for microbiological sampling --- including automatic swabbing  
[NASA-CASE-LAR-11069-1] c35 N75-12272  
Automatic inoculating apparatus --- includes movable carriage, drive motor, and swabbing motor  
[NASA-CASE-LAR-11074-1] c51 N75-13502  
Automatic microbial transfer device  
[NASA-CASE-LAR-11354-1] c35 N75-27330  
Application of luciferase assay for ATP to antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c51 N77-22794  
Electrochemical detection device --- for use in microbiology  
[NASA-CASE-LAR-11922-1] c25 N79-24073  
Indirect microbial detection  
[NASA-CASE-LAR-12520-1] c51 N81-28698
- MICROCHANNELS**  
Low intensity X-ray and gamma-ray imaging spectrometer  
[NASA-CASE-GSC-12587-1] c35 N80-29635
- MICROCRACKS**  
System for detecting substructure microfractures and method therefore  
[NASA-CASE-NPO-14192-1] c39 N80-10507  
Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c27 N81-22190
- MICROELECTRONICS**  
Separation of semiconductor wafer into chips bounded by scribe lines  
[NASA-CASE-ERC-10138] c26 N71-14354  
Vibrophonocardiograph comprising low weight and small volume piezoelectric microphone with amplifier having high input impedance for high sensitivity and low frequency response  
[NASA-CASE-XFR-07172] c05 N71-27234  
Electrical connections for thin film hybrid microcircuits  
[NASA-CASE-XMS-02182] c10 N71-28783  
Method for coating through-holes in ceramic substrates used in fabricating miniaturized electronic circuits  
[NASA-CASE-XMP-05999] c15 N71-29032  
Precision surface cutter for screen circuit negatives and other microcircuits  
[NASA-CASE-XLA-09843] c15 N72-27485  
Material compositions and processes for developing dielectric thick films used in microcircuit capacitors  
[NASA-CASE-LAR-10294-1] c26 N72-28762  
Active tuned circuits for microelectronic construction  
[NASA-CASE-GSC-11340-1] c10 N72-33230  
Automatic visual inspection system for microelectronics  
[NASA-CASE-NPO-13282] c38 N78-17396  
Inductorless narrow-band filter/amplifier  
[NASA-CASE-GSC-12410-1] c33 N79-24260  
Method and apparatus for fabricating improved solar cell modules  
[NASA-CASE-NPO-14416-1] c44 N81-14389

- High voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c44 N81-16529
- MICROFILMS**  
Apparatus for semiautomatic inspection of microfilmed documents for density, resolution, size, and position  
[NASA-CASE-MFS-20240] c14 N71-26788
- MICROINSTRUMENTATION**  
Apparatus for handling micron size range particulate material  
[NASA-CASE-NPO-10151] c37 N78-17386
- MICROMETEORITES**  
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] c91 N74-13130  
Micrometeoroid velocity and trajectory analyzer  
[NASA-CASE-GSC-11892-1] c35 N76-15433
- MICROMETEOROIDS**  
Particle detector for measuring micrometeoroid velocity in space  
[NASA-CASE-XLA-00495] c14 N70-41332  
Piezoelectric transducer for detecting and measuring micrometeoroids  
[NASA-CASE-XAC-01101] c14 N70-41957  
Pressurized cell micrometeoroid detector  
[NASA-CASE-XLA-00936] c14 N71-14996  
Development of large area micrometeoroid impact detector panels  
[NASA-CASE-XLA-05906] c31 N71-16221  
Rotary bead dropper and selector for testing micrometeorite transducers  
[NASA-CASE-XGS-03304] c09 N71-22588  
Measuring micrometeoroid depth of penetration into various materials  
[NASA-CASE-XLA-00941] c14 N71-23240  
Structure of fabric layers for micrometeoroid protection garment with capability for eliminating heat shorts for use in manufacturing space suits  
[NASA-CASE-MSC-12109] c18 N71-26285  
Micrometeoroid analyzer using arrays of interconnected capacitors and ion detector  
[NASA-CASE-ARC-10443-1] c14 N73-20477  
Cold cathode discharge tube with pressurized gas cell for meteoroid detection in space  
[NASA-CASE-LAR-10483-1] c14 N73-32327  
Deployable pressurized cell structure for a micrometeoroid detector  
[NASA-CASE-LAR-10295-1] c35 N74-21062  
Semiconductor projectile impact detector  
[NASA-CASE-MFS-23008-1] c35 N78-18390
- MICROMETERS**  
Apparatus for handling micron size range particulate material  
[NASA-CASE-NPO-10151] c37 N78-17386
- MICROMINIATURIZATION**  
Miniaturized radiometer for detecting low level thermal radiation  
[NASA-CASE-XLA-04556] c14 N69-27484
- MICROORGANISMS**  
Development of bacteriostatic conformal coating and methods of application  
[NASA-CASE-GSC-10007] c18 N71-16046  
Portable vacuum probe surface sampler for sampling large surface areas with relatively light loading densities of microorganisms  
[NASA-CASE-LAR-10623-1] c14 N73-30395  
Measurement of gas production of microorganisms --- using pressure sensors  
[NASA-CASE-LAR-11326-1] c35 N75-33368  
Biocontamination and particulate detection system  
[NASA-CASE-NPO-13953-1] c35 N79-28527  
Indirect microbial detection  
[NASA-CASE-LAR-12520-1] c51 N81-28658  
Apparatus and process for microbial detection and enumeration  
[NASA-CASE-LAR-12709-1] c51 N81-29727
- MICROPARTICLES**  
Micropacked column for rapid chromatographic analysis using low gas flow rates  
[NASA-CASE-XNP-04816] c06 N69-39936
- MICROPHONES**  
Audio signal processing system for noise surge elimination at low amplitude audio input  
[NASA-CASE-MSC-12223-1] c07 N71-26181  
Vibrophonocardiograph comprising low weight and small volume piezoelectric microphone with amplifier having high input impedance for high sensitivity and low frequency response  
[NASA-CASE-XFB-07172] c05 N71-27234  
Development of wind tunnel microphone structure to minimize effects of vibrations and eliminate unwanted signals in microphone output  
[NASA-CASE-XNP-00250] c11 N71-28779  
High-temperature microphone system --- for measuring pressure fluctuations in gases at high temperature  
[NASA-CASE-LAR-12375-1] c32 N79-24203
- MICROPROCESSORS**  
Microcomputerized electric field meter diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c35 N78-28411
- MICROSCOPES**  
Absolute focus locking device for microscopes to maintain set focus for extended time period  
[NASA-CASE-LAR-10184] c14 N72-22445  
Hand-held, lightweight, portable photomicroscope  
[NASA-CASE-ABC-10468-1] c14 N73-33361
- MICROSTRIP TRANSMISSION LINES**  
Thin conformal antenna array for microwave power conversions  
[NASA-CASE-NPO-13886-1] c32 N78-24391  
Multiple band circularly polarized microstrip antenna  
[NASA-CASE-MSC-18334-1] c32 N80-32604
- MICROSTRUCTURE**  
Production of high strength refractory compounds and microconstituents into refractory metal matrix  
[NASA-CASE-XLE-03940] c18 N71-26153  
Development of procedure for improved distribution of refractory compounds and micro-constituents in refractory metal matrix  
[NASA-CASE-XLE-03940-2] c17, N72-28536  
Diffusion welding --- heat treatment of nickel alloys following single step vacuum welding process  
[NASA-CASE-LEW-11388-2] c37 N74-21055  
Method of determining bond quality of power transistors attached to substrates --- X ray inspection of junction microstructure  
[NASA-CASE-MFS-21931-1] c37 N75-26372  
Preparation of monotectic alloys having a controlled microstructure by directional solidification under dopant-induced interface breakdown  
[NASA-CASE-MFS-23816-1] c26 N80-23419
- MICROTHRUST**  
Electrostatic microthrust propulsion system with annular slit colloid thruster  
[NASA-CASE-GSC-10709-1] c28 N71-25213  
Heated porous plug microthruster for spacecraft reaction jet controlled systems such as fuel flow regulation, propellant disassociation, and heat transfer augmentation  
[NASA-CASE-GSC-10640-1] c28 N72-18766
- MICROWAVE AMPLIFIERS**  
Thermally sensitive tuning probe for nullifying detuning effects in microwave cavity resonator of amplifier  
[NASA-CASE-XNP-00449] c14 N70-35220  
Superconducting gyrocon for high power high efficiency microwave generator/amplifier application  
[NASA-CASE-NFO-14975-1] c33 N80-29584  
Maser amplifier slow wave structure --- detecting weak signals from spacecraft  
[NASA-CASE-NFO-15211-1] c36 N81-24425  
Resonant isolator for maser amplifier  
[NASA-CASE-NFO-15201-1] c36 N81-24426
- MICROWAVE ANTENNAS**  
Microwave power receiving antenna solving heat dissipation problems by construction of elements as heat pipe devices  
[NASA-CASE-MFS-20333] c09 N71-13486  
Development and characteristics of low-noise multimode monopulse antenna feed system for use with microwave communication equipment  
[NASA-CASE-XNP-01735] c07 N71-22750  
Microwave omnidirectional antenna for use on spacecraft  
[NASA-CASE-XLA-03114] c09 N71-22888  
Portable equipment for validating C band launch pad antennas and transmission lines used for spacecraft checkout  
[NASA-CASE-XKS-10543] c07 N71-26292

- Multipurpose microwave antenna, employing dish reflector with plural coaxial horn feeds  
[NASA-CASE-NPO-11264] c07 N72-25174
- Omnidirectional antenna array with circumferential slots for mounting on cylindrical space vehicle  
[NASA-CASE-LAR-10163-1] c09 N72-25247
- Characteristics of microwave antenna with conical reflectors to generate plane wave front  
[NASA-CASE-NPO-11661] c07 N73-14130
- This conformal antenna array for microwave power conversions  
[NASA-CASE-NPO-13886-1] c32 N78-24391
- MICROWAVE CIRCUITS**
- Quasi-optical microwave circuit with dielectric body for use with oversized waveguides  
[NASA-CASE-ERC-10011] c07 N71-29065
- Microwave integrated circuit for Josephson voltage standards  
[NASA-CASE-MFS-23845-1] c33 N81-17348
- MICROWAVE COUPLING**
- Microwave waveguide switch with rotor position control  
[NASA-CASE-IXP-06507] c09 N71-23548
- MICROWAVE EQUIPMENT**
- Apparatus for generating microwave signals at progressively related phase angles for driving antenna array  
[NASA-CASE-ERC-10046] c10 N71-18722
- Broadband microwave waveguide window to compensate dielectric material filling  
[NASA-CASE-IXP-08880] c09 N71-24608
- Dual frequency feed systems for Cassegrainian antennas  
[NASA-CASE-NPO-13091-1] c09 N73-12214
- Resonant waveguide stark cell --- using microwave spectrometers  
[NASA-CASE-LAR-11352-1] c33 N75-26245
- Refrigerated coaxial coupling --- for microwave equipment  
[NASA-CASE-NPO-13504-1] c33 N75-30430
- Microwave dichroic plate  
[NASA-CASE-GSC-12171-1] c33 N79-28416
- Unequal split microwave power divider  
[NASA-CASE-LAR-12889-1] c33 N81-31483
- MICROWAVE FILTERS**
- Microwave power divider for providing variable output power to output waveguide in fixed waveguide system  
[NASA-CASE-NPO-11031] c07 N71-33606
- Selective bandpass resonators using bandstop resonator pairs for microwave frequency operation  
[NASA-CASE-GSC-10990-1] c09 N73-26195
- MICROWAVE FREQUENCIES**
- Varactor microwave frequency mixing circuit  
[NASA-CASE-XGS-02171] c09 N69-24324
- Voltage tunable Gunn effect semiconductor for microwave generation  
[NASA-CASE-XER-07894] c09 N71-18721
- Multinode antenna feed system for microwave and broadband communication  
[NASA-CASE-GSC-11046-1] c07 N73-28013
- MICROWAVE OSCILLATORS**
- Microwave generator using Gunn effect for magnetic tuning  
[NASA-CASE-NPO-12106] c09 N73-15235
- Electron beam controller --- using magnetic field to refocus spent electron beam in microwave oscillator tube  
[NASA-CASE-LEW-11617-1] c33 N74-10195
- MICROWAVE RADIOMETERS**
- Input radio frequency circuit for switching type absolute temperature measuring radiometer for noise sources  
[NASA-CASE-ERC-11020] c14 N71-26774
- Microwave limb sounder --- to measure trace gases in the upper atmosphere  
[NASA-CASE-NPO-14544-1] c74 N79-34014
- Electromagnetic power absorber  
[NASA-CASE-NPO-13830-1] c32 N80-14281
- CAT altitude avoidance system  
[NASA-CASE-NPO-15351-1] c47 N81-16677
- MICROWAVE REFLECTOMETERS**
- Reflectometer for receiver input impedance match measurement  
[NASA-CASE-IXP-10843] c07 N71-11267
- Surface defect detection by reflected microwave radiation pattern  
[NASA-CASE-ARC-10009-1] c15 N71-17822
- MICROWAVE RESONANCE**
- Microwave double resonance spectroscopy absorption cell for gas analysis  
[NASA-CASE-LAR-10305] c14 N71-26137
- MICROWAVE SWITCHING**
- Design of gyrator circuit using operational amplifiers to replace ungrounded inductors  
[NASA-CASE-XAC-10608-1] c09 N71-12517
- Microwave switching power divider --- for use in Earth orbiting satellites having spherical multi-element antenna arrays  
[NASA-CASE-GSC-12420-1] c33 N80-21670
- MICROWAVE TRANSMISSION**
- Microwave power converter  
[NASA-CASE-NPO-14068-1] c44 N78-19609
- Frequency translating phase conjugation circuit for active retrodirective antenna array --- microwave transmission  
[NASA-CASE-NFO-14536-1] c32 N81-14185
- Solar power satellite system  
[NASA-CASE-HQN-10949-1] c44 N81-16530
- Doppler radar having phase modulation of both transmitted and reflected return signals --- ranging  
[NASA-CASE-MSC-18675-1] c32 N81-29312
- Waveguide cooling system  
[NASA-CASE-NFO-15401-1] c33 N81-29344
- MICROWAVE TUBES**
- Electrostatic charged particle collector containing stacked electrodes for microwave tube  
[NASA-CASE-LEW-11192-1] c09 N73-13208
- MICROWAVES**
- Radio frequency noise generator having microwave slow-wave structure in gas discharge plasma  
[NASA-CASE-XER-11019] c09 N71-23598
- Method and apparatus for optically modulating light or microwave beam  
[NASA-CASE-GSC-10216-1] c23 N71-26722
- Microwave waveguide mixer  
[NASA-CASE-ERC-10179] c07 N72-20141
- Microwave power transmission system wherein level of transmitted power is controlled by reflections from receiver  
[NASA-CASE-MFS-21470-1] c44 N74-19870
- Wide power range microwave feedback controller  
[NASA-CASE-GSC-12146-1] c33 N78-32340
- Microwave power transmission beam safety system  
[NASA-CASE-NFO-14224-1] c33 N80-18287
- MIDAIR COLLISIONS**
- Development and characteristics of electronic signalling system and data processing equipment for warning systems to avoid midair collisions between aircraft  
[NASA-CASE-LAR-10717-1] c21 N73-30641
- MILLIMETER WAVES**
- Millimeter wave antenna system for spacecraft use  
[NASA-CASE-GSC-10949-1] c07 N71-28965
- Millimeter wave pumped parametric amplifier  
[NASA-CASE-GSC-11617-1] c33 N74-32660
- MILLING (MACHINING)**
- Rotary spindle lathe attachments for machining geometrical cones  
[NASA-CASE-XMS-04292] c15 N71-22722
- Method for milling and drilling glass  
[NASA-CASE-GSC-12636-1] c37 N80-29705
- Method and tool for machining a transverse slot about a bore  
[NASA-CASE-LAR-11855-1] c37 N81-14319
- MILLING MACHINES**
- Electro-optical system for maintaining two-axis alignment during milling operations on large tank-sections  
[NASA-CASE-IXP-00908] c14 N70-40238
- Description of portable milling tool for milling tube or pipe ends to desired shape and thickness  
[NASA-CASE-IXP-03511] c15 N71-22799
- Grinding arrangement for ball nose milling cutters  
[NASA-CASE-LAR-10450-1] c37 N74-27905
- MINERAL DEPOSITS**
- Underground mineral extraction  
[NASA-CASE-NFO-14140-1] c31 N78-24387
- Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c43 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] c52 N77-14737

## MINIATURE ELECTRONIC EQUIPMENT

Miniature solid state, direction sensitive, stress transducer design with bonded semiconductive piezoresistive element for sensing residual stresses  
[NASA-CASE-XNP-02983] c14 N71-21091

Transducer circuit design with single coaxial cable for input and output connections including incorporation into miniaturized catheter transducer  
[NASA-CASE-ARC-10132-1] c09 N71-24597

Solid state television camera system consisting of monolithic semiconductor mosaic sensor and molecular digital readout systems  
[NASA-CASE-XNP-06092] c07 N71-24612

Miniature ingestible telemeter devices to measure deep-body temperature  
[NASA-CASE-ARC-10563-1] c52 N76-25894

Miniature biaxial strain transducer  
[NASA-CASE-LAR-11648-1] c35 N77-14407

**MINIATURIZATION**

Miniature vibration isolator utilizing elastic tubing material  
[NASA-CASE-XLA-01019] c15 N70-40156

Computer circuit performing both counting and shifting logic operations also capable of miniaturization and integration in basic circuits  
[NASA-CASE-XNP-01753] c08 N71-22897

Fast response miniature carbon dioxide detector with no moving parts for measuring concentration in any atmosphere  
[NASA-CASE-MS-C-13332-1] c14 N72-21408

Magnetometer with a miniature transducer and automatic scanning  
[NASA-CASE-LAR-11617-2] c35 N78-32397

Miniature cyclotron resonance ion source using small permanent magnet  
[NASA-CASE-NPO-14324-1] c72 N80-27163

**MINING**

Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c31 N78-24387

Coal-shale interface detection system  
[NASA-CASE-MFS-23720-2] c43 N80-14423

Coal-shale interface detector  
[NASA-CASE-MFS-23720-1] c43 N80-23711

Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c43 N81-26509

**MIRRORS**

Pneumatic control of telescopic mirror support system  
[NASA-CASE-XLA-03271] c11 N69-24321

Oscillatory electromagnetic mirror drive system for horizon scanners  
[NASA-CASE-MFS-03724] c14 N69-27461

Servo system for retroreflector of Michelson interferometer  
[NASA-CASE-NPO-10300] c14 N71-17662

Gas laser frequency stabilized by position of mirrors in resonant cavity  
[NASA-CASE-XGS-03644] c16 N71-18614

Highly stable optical mirror assembly optimizing image quality of light diffractive patterns  
[NASA-CASE-ERC-10001] c23 N71-24668

Adjustable rigid mount for trihedral mirror formed of alloy with small coefficient of thermal expansion supporting screws and spring-biased plates  
[NASA-CASE-XNP-08907] c23 N71-29123

Optical range finder using reflective first surfaces mirror and transmitting beam splitter  
[NASA-CASE-MS-C-12105-1] c14 N72-21409

Optical mirror support system  
[NASA-CASE-XER-07896-2] c23 N72-22673

Strain gauge ambiguity sensor for segmented mirror active optical system  
[NASA-CASE-MFS-20506-1] c35 N75-12273

Method for manufacturing mirrors in zero gravity environment  
[NASA-CASE-MS-C-12611-1] c12 N76-15189

Method of and means for testing a glancing-incidence mirror system of an X-ray telescope  
[NASA-CASE-MFS-22409-2] c74 N78-15880

Interferometer mirror tilt correcting system  
[NASA-CASE-NPO-13687-1] c35 N78-18391

Anastigmatic three-mirror telescope  
[NASA-CASE-MFS-23675-1] c89 N79-10969

## MIS (SEMICONDUCTORS)

Photocapacitive image converter  
[NASA-CASE-LAR-12513-1] c33 N80-28635

**MISSILE CONTROL**

Turnstile slot antenna  
[NASA-CASE-GSC-11428-1] c32 N74-20864

**MISSILE LAUNCHERS**

Launch pad missile release system with bending moment change rate reduction in thrust distribution structure at liftoff  
[NASA-CASE-XNP-03198] c30 N70-40353

Optical monitor panel consisting of translucent screen with test or meter information projected onto it from rear for application in control rooms of missile launching and tracking stations  
[NASA-CASE-XKS-03509] c14 N71-23175

Controlled release device for use in launching rockets or missiles  
[NASA-CASE-XKS-03338] c15 N71-24043

**MISSILES**

Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c15 N78-32168

Fire protection covering for small diameter missiles  
[NASA-CASE-ARC-11104-1] c15 N79-26100

**MITOSIS**

Process for control of cell division  
[NASA-CASE-LAR-10773-3] c51 N77-25769

**MIXERS**

Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c07 N78-18067

**MIXING CIRCUITS**

Varactor microwave frequency mixing circuit  
[NASA-CASE-XGS-02171] c09 N69-24324

Microwave waveguide mixer  
[NASA-CASE-ERC-10179] c07 N72-20141

**MIXTURES**

Low gravity phase separator  
[NASA-CASE-MS-C-14773-1] c35 N78-12390

**MOBILITY**

Traveling wave solid state amplifier utilizing a semiconductor with negative differential mobility  
[NASA-CASE-HQN-10069] c33 N75-27251

Mobile sampler for use in acquiring samples of terrestrial atmospheric gasses  
[NASA-CASE-NPO-15220-1] c35 N81-24414

**MODE TRANSFORMERS**

Silicon controlled rectifier inverter with compensation of transients to avoid false gating  
[NASA-CASE-XLA-08507] c09 N69-39984

Dual waveguide mode source for controlling amplitudes of two modes  
[NASA-CASE-XNP-03134] c07 N71-10676

Direct current transformer  
[NASA-CASE-MFS-29659-1] c33 N79-17133

**MODEMS**

Charge storage diode modulators and demodulators  
[NASA-CASE-NPO-10189-1] c33 N77-21314

**MODULATION**

Demodulator for carrier transducers  
[NASA-CASE-NUC-10107-1] c33 N74-17930

**MODULATORS**

Fabry-Perot interferometer retrodirective reflector modulator for optical communication  
[NASA-CASE-XGS-04480] c16 N69-27491

Optical retrodirective modulator with focus spoiling reflector driven by modulation signal  
[NASA-CASE-GSC-10062] c14 N71-15605

Calibrator for measuring and modulating or demodulating laser outputs  
[NASA-CASE-XLA-03410] c16 N71-25914

Full wave modulator-demodulator amplifier apparatus --- for generating rectified output signal  
[NASA-CASE-FRC-10072-1] c33 N74-14939

Charge storage diode modulators and demodulators  
[NASA-CASE-NPO-10189-1] c33 N77-21314

Coherently pulsed laser source  
[NASA-CASE-NPO-15111-1] c36 N80-24602

**MODULES**

Biorthogonal encoder with modular design  
[NASA-CASE-NPO-10629] c08 N72-18184

Solar cell module assembly jig  
[NASA-CASE-XGS-00829-1] c44 N79-19447

Method of fabricating a photovoltaic module of a substantially transparent construction  
[NASA-CASE-NPO-14303-1] c44 N80-18550

- MODULUS OF ELASTICITY**  
Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-1] c37 N80-24619
- MOISTURE**  
Gas purged dry box glove reducing permeation of air or moisture into dry box or isolator by diffusion through glove  
[NASA-CASE-XLE-02531] c05 N71-23080
- MOISTURE METERS**  
Method of evaluating moisture barrier properties of materials used in electronics encapsulation  
[NASA-CASE-NPO-10051] c18 N71-24934
- MOLDING MATERIALS**  
Vacuum method for molding thermosetting compounds used as ablative materials  
[NASA-CASE-XLA-01091] c15 N71-10672  
Method of making molded electric connector for use with flat conductor cables  
[NASA-CASE-XMP-03498] c15 N71-15986  
Hydraulic apparatus for casting and molding of liquid polymers  
[NASA-CASE-XMP-07659] c06 N71-22975  
Cold metal hydroforming techniques using epoxy molds for counteracting creep or stretch  
[NASA-CASE-XLE-05641-1] c15 N71-26346  
Molding process for imidazopyrrolone polymers  
[NASA-CASE-LAB-10547-1] c31 N74-13177  
Evacuated displacement compression molding  
[NASA-CASE-LAB-10782-1] c31 N74-14133  
Molded composite pyrogen igniter for rocket motors --- solid propellant ignition  
[NASA-CASE-LAB-12018-1] c20 N78-24275  
Method of making a rocket nozzle  
[NASA-CASE-XMP-06884-1] c20 N79-21123
- MOLDS**  
Forming mold for polishing and machining curved solar magnesium reflector with reinforcing ribs  
[NASA-CASE-XLE-08917-2] c15 N71-24836  
Using molds for fabricating individual fluid circuit components  
[NASA-CASE-XLA-07829] c15 N72-16329  
Evacuated displacement compression molding  
[NASA-CASE-LAB-10782-1] c31 N74-14133  
Molding apparatus --- for thermosetting plastic compositions  
[NASA-CASE-LAB-10489-2] c31 N74-32920  
Evacuated, displacement compression mold --- of tubular bodies from thermosetting plastics  
[NASA-CASE-LAB-10782-2] c31 N75-13111  
Method of making an apertured casting --- using duplicate mold  
[NASA-CASE-LEW-11169-1] c37 N76-23570
- MOLECULAR BEAMS**  
Selector mechanism for mechanical separation and discrimination of high velocity molecular particles  
[NASA-CASE-XLE-01533] c11 N71-10777  
Sputtering holes with ion beamlets  
[NASA-CASE-LEW-11646-1] c20 N74-31269
- MOLECULAR CHAINS**  
Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c27 N81-15104
- MOLECULAR GASES**  
Compact hydrogenator  
[NASA-CASE-NPO-11682-1] c35 N74-15127
- MOLECULAR PUMPS**  
Omnidirectional anisotropic molecular trap, used with vacuum pump to simulate space environments for testing spacecraft components  
[NASA-CASE-XGS-00783] c30 N71-17788  
Liquid-vapor interface seal design for turbine rotating shafts including helical and molecular pumps and liquid cooling of mercury vapor  
[NASA-CASE-XMP-02862-1] c15 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] c74 N81-17887
- MOLECULAR ROTATION**  
Diatomic infrared gasdynamic laser --- for producing different wavelengths  
[NASA-CASE-ARC-10370-1] c36 N75-31426
- MOLECULAR SPECTROSCOPY**  
Microwave double resonance spectroscopy
- absorption cell for gas analysis  
[NASA-CASE-LAR-10305] c14 N71-26137
- 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-NFO-13993-1] c72 N79-13826
- MOLTEN SALT ELECTROLYTES**  
Operation method for combined electrolysis device and fuel cell using molten salt to produce power by thermoelectric regeneration mechanism  
[NASA-CASE-XLE-01645] c03 N71-20904  
Zinc-halide battery with molten electrolyte  
[NASA-CASE-NFO-11961-1] c44 N76-18643
- MOLTEN SALTS**  
Molten salt pyrolysis of latex --- synthetic hydrocarbon fuel production using the Guayule shrub  
[NASA-CASE-NFO-14315-1] c27 N81-17261
- MOLYBDENUM**  
Thermocouples of molybdenum and iridium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12174-2] c35 N79-14346
- MOLYBDENUM CARBIDES**  
Flame or plasma spraying for molybdenum coating of carbon or graphite surfaces to prevent oxidative corrosion  
[NASA-CASE-XLA-00302] c15 N71-16077
- MOLYBDENUM DISULFIDES**  
Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c28 N81-14103
- MOMENTS OF INERTIA**  
Test fixture for measuring moment of inertia of irregularly shaped body with multiple axes  
[NASA-CASE-XGS-01023] c14 N71-22992
- MOMENTUM**  
Utilization of momentum devices for forming attitude control and damping system for spacecraft  
[NASA-CASE-XLA-02551] c21 N71-21708  
Momentum-velocity analyzer for measuring minute space particles  
[NASA-CASE-XMS-04201] c14 N71-22990
- MONATOMIC GASES**  
Atomic hydrogen storage --- cryotrapping and magnetic field strength  
[NASA-CASE-LEW-12081-2] c28 N80-20402
- MONITORS**  
Fluid leakage detection system with automatic monitoring capability  
[NASA-CASE-LAR-10323-1] c12 N71-17573  
Monitoring circuit design for sampling circuit control and reduction of time-bandwidth in video communication systems  
[NASA-CASE-XMP-02791] c07 N71-23026  
Optical monitor panel consisting of translucent screen with test or meter information projected onto it from rear for application in control rooms of missile launching and tracking stations  
[NASA-CASE-XKS-03509] c14 N71-23175  
Peak polarity selector for monitoring waveforms  
[NASA-CASE-FRC-10010] c10 N71-24862  
Circuit for monitoring power supply by ripple current indication  
[NASA-CASE-KSC-10162] c09 N72-11225  
Development of droplet monitoring probe for use in analysis of droplet propagation in mixed-phase fluid stream  
[NASA-CASE-NPO-10985] c14 N73-20478  
Monitoring and recording lightning strokes in predetermined area  
[NASA-CASE-KSC-10728-1] c14 N73-32319  
Method and apparatus for optically monitoring the angular position of a rotating mirror  
[NASA-CASE-GSC-11353-1] c74 N74-21304  
Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c33 N79-11315  
Apparatus including a plurality of spaced transformers for locating short circuits in cables  
[NASA-CASE-KSC-10899-1] c33 N79-18193  
Intrusion detection method and apparatus --- monitoring unwanted subterranean entry and departure  
[NASA-CASE-ARC-11317-1] c35 N81-19430

- Indirect microbial detection  
[NASA-CASE-LAR-12520-1] c51 N81-28698
- MONOCHROMATIC RADIATION**  
Apparatus for producing monochromatic light from continuous plasma source  
[NASA-CASE-XNP-04167-2] c25 N72-24753  
Laser extensometer  
[NASA-CASE-MFS-19259-1] c36 N76-14380  
Multiprism collimator  
[NASA-CASE-GSC-12608-1] c35 N81-12387
- MONOCHROMATORS**  
Analytical photoionization mass spectrometer with argon gas filter between light source and monochromator  
[NASA-CASE-LAR-10180-1] c06 N71-13461  
Color television system for allowing monochrome television camera to produce color pictures  
[NASA-CASE-MSC-12146-1] c07 N72-17109
- MONOMERS**  
Pressure transducer --- using a monomeric charge transfer complex sensor  
[NASA-CASE-NPO-11150] c35 N78-17359  
Bifunctional monomers having terminal oxime and cyano or amidine groups  
[NASA-CASE-ARC-11253-3] c27 N81-24256  
Cross-linked polyvinyl alcohol and method of making same  
[NASA-CASE-LEW-13101-2] c23 N81-29160  
Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c27 N81-31364
- MONOPOLE ANTENNAS**  
Monopole antenna system for maximum omnidirectional efficiency for use on satellites  
[NASA-CASE-XLA-00414] c07 N70-38200  
Flexible monopole antenna with broad bandwidth and low voltage standing wave ratio  
[NASA-CASE-MSC-12101] c09 N71-18720
- MONOPROPELLANTS**  
Ignition system for monopropellant combustion devices  
[NASA-CASE-XNP-00249] c28 N70-38249  
Catalyst bed ignition system for hydrazine propellants  
[NASA-CASE-XNP-00876] c28 N70-41311  
Low thrust monopropellant engine --- low temperature environments  
[NASA-CASE-GSC-12194-2] c20 N79-15151
- MONOPULSE ANTENNAS**  
Electronic and mechanical scanning control system for monopulse tracking antenna  
[NASA-CASE-IGS-05582] c07 N69-27460  
Development and characteristics of low-noise multimode monopulse antenna feed system for use with microwave communication equipment  
[NASA-CASE-XNP-01735] c07 N71-22750  
Monopulse scanning network for scanning volumetric antenna pattern  
[NASA-CASE-GSC-10299-1] c09 N71-24804  
Switchable beamwidth monopulse method and system  
[NASA-CASE-GSC-11924-1] c33 N76-27472
- MONOPULSE RADAR**  
Polarization diversity monopulse tracking receiver design without radio frequency switches  
[NASA-CASE-IGS-03501] c09 N71-20864  
Monopulse tracking system with antenna array of three radiators for deriving azimuth and elevation indications  
[NASA-CASE-IGS-01155] c10 N71-21483
- MONOSTABLE MULTIVIBRATORS**  
Development and characteristics of resettable monostable pulse generator with charge rundown-timing circuit  
[NASA-CASE-GSC-11139] c09 N71-27016  
Monostable multivibrator for producing output pulse widths with positive feedback NOR gates  
[NASA-CASE-MSC-13492-1] c10 N71-28660
- MOSSBAUER EFFECT**  
Mossbauer spectrometer radiation detector  
[NASA-CASE-LAR-11155-1] c35 N74-15091  
Method and apparatus for vibration analysis utilizing the Mossbauer effect  
[NASA-CASE-XNP-05882] c35 N75-27329
- MOTION**  
Quick attach mechanism for moving or stationary wires, ropes, or cables  
[NASA-CASE-XPR-05421] c15 N71-22994
- MOTION PICTURES**  
Real time moving scene holographic camera system  
[NASA-CASE-MFS-21087-1] c35 N74-17153
- Real time, large volume, moving scene holographic camera system  
[NASA-CASE-MFS-22537-1] c35 N75-27328
- MOTION SIMULATORS**  
Kinesthetic control simulator --- for pilot training  
[NASA-CASE-LAR-10276-1] c09 N75-15662  
Helmet weight simulator  
[NASA-CASE-LAR-12320-1] c54 N81-27806
- MOTION STABILITY**  
Hydraulic drive mechanism for leveling isolation platforms  
[NASA-CASE-XMS-03252] c15 N71-10658
- MOTORS**  
Nonmagnetic thermal motor for magnetometer movement  
[NASA-CASE-XAR-03786] c09 N69-21313  
System for maintaining motor at predetermined speed using digital pulses  
[NASA-CASE-XNP-06892] c09 N71-24805  
Mechanical thermal motor  
[NASA-CASE-MFS-23062-1] c37 N77-12402  
Redundant motor drive system  
[NASA-CASE-MFS-23777-1] c37 N80-32716
- MOUNTING**  
Mounting fixture for supporting thermobulb in pipeline  
[NASA-CASE-NPO-10158] c33 N71-16356  
Mounting apparatus for temperature control system  
[NASA-CASE-NPO-10138] c33 N71-16357  
Inertial component clamping assembly design for spacecraft guidance and control system mounting  
[NASA-CASE-XMS-02184] c15 N71-20813  
Techniques for packaging and mounting printed circuit boards  
[NASA-CASE-MFS-21919-1] c10 N73-25243  
Lubricated journal bearing  
[NASA-CASE-LEW-11076-3] c37 N75-30562  
Translatory shock absorber for attitude sensors  
[NASA-CASE-MFS-22905-1] c19 N76-22284  
Deformable bearing seat  
[NASA-CASE-LEW-12527-1] c37 N77-32500  
Impact absorbing blade mounts for variable pitch blades  
[NASA-CASE-LEW-12313-1] c37 N78-10468  
Attaching of strain gages to substrates  
[NASA-CASE-FRC-10093-1] c35 N80-20560  
Unidirectional flexural pivot  
[NASA-CASE-GSC-12622-1] c37 N81-22359
- MOVING TARGET INDICATORS**  
Automatic vehicle location system  
[NASA-CASE-NPO-11850-1] c32 N74-12912  
Interferometric locating system  
[NASA-CASE-NPO-14173-1] c04 N80-32359
- MULTICHANNEL COMMUNICATION**  
Tape guidance system for multichannel digital recording system  
[NASA-CASE-XNP-09453] c08 N71-19420  
Plural channel data transmission system with quadrature modulation and complementary demodulation  
[NASA-CASE-XAC-06302] c08 N71-19763  
Improved phase lock loop for receiver in multichannel telemetry system with suppressed carrier  
[NASA-CASE-NPO-11593-1] c07 N73-28012  
Miniature multichannel biotelemetry system  
[NASA-CASE-NPO-13065-1] c52 N74-26625  
Medical subject monitoring systems --- multichannel monitoring systems  
[NASA-CASE-MSC-14180-1] c52 N76-14757  
Multi-channel rotating optical interface for data transmission  
[NASA-CASE-NPO-14066-1] c74 N79-34011
- MULTILAYER INSULATION**  
Electrode sealing and insulation for fuel cells containing caustic liquid electrolytes using powdered plastic and metal  
[NASA-CASE-XMS-01625] c15 N71-23022  
Multilayer insulation panels for cryogenic liquid containers  
[NASA-CASE-MFS-14023] c33 N71-25351  
Electrical failure detector in solid rocket propellant motor insulation against thermal degradation by fuel grain  
[NASA-CASE-XNP-03968] c14 N71-27186  
Method of making an insulation foil  
[NASA-CASE-LEW-11484-1] c24 N75-33181

Multivall thermal protection system  
 [NASA-CASE-LAR-12620-1] c24 N80-12117  
 Process for preparing high temperature polyimide  
 film laminates  
 [NASA-CASE-LAR-12742-1] c24 N81-12174

**MULTIFACTOR DISCHARGES**  
 High power RF coaxial switch  
 [NASA-CASE-NPO-14229-1] c33 N80-18285

**MULTIPATH TRANSMISSION**  
 Anti-multipath digital signal detector  
 [NASA-CASE-LAR-11827-1] c32 N77-10392  
 Large volume multiple path nuclear pumped laser  
 [NASA-CASE-LAR-12592-1] c36 N79-26385

**MULTIPLE BEAM INTERVAL SCANNERS**  
 Tracking antenna system with array for  
 synchronous satellite or ground based radar  
 [NASA-CASE-GSC-10553-1] c07 N71-19654  
 Variable beamwidth antenna --- with multiple  
 beam, variable feed system  
 [NASA-CASE-GSC-11862-1] c32 N76-18295

**MULTIPLE DOCKING ADAPTERS**  
 Probe and drogue assembly for mechanical linking  
 of two space vehicles  
 [NASA-CASE-XMS-03613] c31 N71-16346

**MULTIPLE OUTPUT PROGRAMS**  
 Multi-computer multiple data path hardware  
 exchange system  
 [NASA-CASE-NPO-13422-1] c60 N76-14618

**MULTIPLEXING**  
 Doppler frequency shift correction device for  
 multiplex communication with Applications  
 Technology Satellites  
 [NASA-CASE-IGS-02749] c07 N69-39578  
 Multiplexed communication system design  
 including automatic correction of transmission  
 errors introduced by frequency spectrum shifts  
 [NASA-CASE-XNP-01306] c07 N71-20814  
 Satellite network synchronization system with  
 multiple access to multiplex repeater  
 [NASA-CASE-GSC-10390-1] c07 N72-11149  
 Apparatus with summing network for compression  
 of analog data by decreasing slope threshold  
 sampling  
 [NASA-CASE-NPO-10769] c08 N72-11171  
 Development and characteristics of data  
 multiplexer circuit using field effect  
 transistors arranged in tree switching  
 configuration  
 [NASA-CASE-NPO-11333] c08 N72-22162  
 Television multiplexing system, using single  
 crystal controlled clock for signal  
 synchronization  
 [NASA-CASE-KSC-10654-1] c07 N73-30115  
 Asynchronous, multiplexing, single line  
 transmission and recovery data system --- for  
 satellite use  
 [NASA-CASE-NPO-13321-1] c32 N75-26195  
 Correlation type phase detector --- with time  
 correlation integrator for frequency  
 multiplexed signals  
 [NASA-CASE-GSC-11744-1] c33 N75-26243  
 System for producing chroma signals  
 [NASA-CASE-MSC-14683-1] c74 N77-18893  
 Fiber optic multiplex optical transmission system  
 [NASA-CASE-KSC-11047-1] c74 N78-14889  
 Multi-channel temperature measurement  
 amplification system  
 [NASA-CASE-NPS-23775-1] c35 N80-17421  
 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] c33 N81-14221  
 Multifrequency broadband polarized horn antenna  
 [NASA-CASE-NPO-14588-1] c32 N81-25278  
 High-speed multiplexing of keyboard data inputs  
 [NASA-CASE-NPO-14554-1] c60 N81-27814

**MULTIPLIERS**  
 Pulse duration modulation multiplier system  
 [NASA-CASE-YER-09213] c07 N71-12390  
 Design and development of variable pulse width  
 multiplier  
 [NASA-CASE-XLA-02850] c09 N71-20447  
 Capacitance multiplier and filter synthesizing  
 network  
 [NASA-CASE-NPO-11948-1] c33 N74-32712  
 Regulated high efficiency, lightweight  
 capacitor-diode multiplier dc to dc converter  
 [NASA-CASE-LEW-12791-1] c33 N78-32341

**MULTISPECTRAL BAND SCANNERS**

Optical process for producing classification  
 maps from multispectral data  
 [NASA-CASE-MSC-14472-1] c43 N77-10584  
 Interactive color display for multispectral  
 imagery using correlation clustering  
 [NASA-CASE-MSC-16253-1] c32 N79-20297  
 Multispectral scanner optical system  
 [NASA-CASE-MSC-18255-1] c74 N80-33210  
 Medical diagnosis system and method with  
 multispectral imaging --- depth of burns and  
 optical density of the skin  
 [NASA-CASE-NPO-14402-1] c52 N81-27783

**MULTISPECTRAL LINEAR ARRAYS**  
 Time delay and integration detectors using  
 charge transfer devices  
 [NASA-CASE-GSC-12324-1] c33 N81-33403

**MULTISPECTRAL PHOTOGRAPHY**  
 Computerized optical system for producing  
 multiple images of a scene simultaneously  
 [NASA-CASE-MSC-12404-1] c23 N73-13661  
 Optical process for producing classification  
 maps from multispectral data  
 [NASA-CASE-MSC-14472-1] c43 N77-10584  
 Multispectral imaging and analysis system ---  
 using charge coupled devices and linear arrays  
 [NASA-CASE-NPO-13691-1] c43 N79-17288  
 Interactive color display for multispectral  
 imagery using correlation clustering  
 [NASA-CASE-MSC-16253-1] c32 N79-20297

**MULTISTAGE ROCKET VEHICLES**  
 Techniques for recovery of multistage rocket  
 vehicles by providing lifting surfaces on  
 individual sections  
 [NASA-CASE-XNP-00389] c31 N70-34176  
 Steerable solid propellant rocket motor adapted  
 to effect payload orientation as multistage  
 rocket stage or reduce velocity as retrorocket  
 [NASA-CASE-XNP-00234] c28 N70-38645  
 Multi-mission space vehicle module stage design  
 [NASA-CASE-XNP-01543] c31 N71-17730  
 Separation mechanism for use between stages of  
 multistage rocket vehicles  
 [NASA-CASE-XLA-00188] c15 N71-22874  
 Development of remotely controlled shaped charge  
 for lateral displacement of rocket stages  
 after separation  
 [NASA-CASE-XLA-04804] c31 N71-23008  
 Frangible connecting link suitable for rocket  
 stage separation  
 [NASA-CASE-MSC-11849-1] c15 N72-22488

**MULTIVIBRATORS**  
 Extra-long monostable multivibrator employing  
 bistable semiconductor switch to allow  
 charging of timing circuit  
 [NASA-CASE-IGS-00381] c09 N70-34819  
 Variable frequency magnetic coupled  
 multivibrator with temperature compensated  
 frequency control circuit  
 [NASA-CASE-IGS-00458] c09 N70-38604  
 Variable frequency magnetic coupled  
 multivibrator with output signal of constant  
 amplitude and waveform  
 [NASA-CASE-IGS-00131] c09 N70-38995  
 Improved semiconductor multivibrator circuit  
 which approaches 100 percent efficiency  
 [NASA-CASE-XAC-00942] c10 N71-16042  
 Transistorized dc-coupled multivibrator with  
 noninverted output signal  
 [NASA-CASE-INP-09450] c10 N71-18723  
 One shot multivibrator circuit for producing  
 long duration output pulses  
 [NASA-CASE-ARC-10137-1] c09 N71-28468

**MUSCLES**  
 Subminiature insertable force transducer ---  
 including a strain gage to measure forces in  
 muscles  
 [NASA-CASE-NPO-13423-1] c33 N75-31329  
 Multifunctional transducer  
 [NASA-CASE-NPO-14329-1] c52 N81-20703

**MUSCULAR FUNCTION**  
 Miniature muscle displacement transducer  
 [NASA-CASE-NPO-13519-1] c33 N76-19338  
 Simultaneous muscle force and displacement  
 transducer  
 [NASA-CASE-NPO-14212-1] c52 N80-27072

**MUSCULOSKELETAL SYSTEM**  
 Method and apparatus for applying compressional  
 forces to skeletal structure of subject to



- simulate force during ambulatory conditions  
[NASA-CASE-ARC-10100-1] c05 N71-24738
- MYOCARDIUM**  
Myocardium wall thickness transducer and measuring method  
[NASA-CASE-NPO-13644-1] c52 N76-25695  
Simultaneous muscle force and displacement transducer  
[NASA-CASE-NPO-14212-1] c52 N80-27072
- N**
- N-TYPE SEMICONDUCTORS**  
Complementary DMOS-VMOS integrated circuit structure  
[NASA-CASE-GSC-12190-1] c33 N79-12321  
Schottky barrier cell and method of fabricating it  
[NASA-CASE-NPO-13689-4] c44 N81-26553
- NACELLES**  
Deflector for preventing objects from entering nacelle inlets of jet aircraft  
[NASA-CASE-XLE-00388] c28 N70-34788  
Afterburner-equipped jet engine nacelle with slotted configuration afterbody  
[NASA-CASE-XLA-10450] c28 N71-21493  
Integrated gas turbine engine nacelle  
[NASA-CASE-LEW-12389-2] c07 N78-18066  
Integrated gas turbine engine nacelle  
[NASA-CASE-LEW-12389-3] c07 N79-14096
- NASA PROGRAMS**  
Retractable environmental seal  
[NASA-CASE-MFS-23646-1] c37 N79-22474
- NAVIGATION**  
A system for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-PRC-11005-1] c06 N79-24588  
Navigation system and method  
[NASA-CASE-GSC-12508-1] c04 N81-26085
- NAVIGATION AIDS**  
Magnetic heading reference  
[NASA-CASE-LAR-11387-1] c04 N76-20114  
Ruler for making navigational computations  
[NASA-CASE-XNP-01458] c04 N78-17031  
Low-frequency radio navigation system  
[NASA-CASE-NPO-15264-1] c04 N81-22036
- NAVIGATION INSTRUMENTS**  
Sun angle calculator  
[NASA-CASE-MSC-12617-1] c35 N76-29552
- NAVIGATION SATELLITES**  
Satellite aided aircraft collision avoidance system effective for large number of aircraft  
[NASA-CASE-ERC-10090] c21 N71-24948
- NEAR INFRARED RADIATION**  
Collimator for analyzing spatial location of near and distant sources of radiation  
[NASA-CASE-MFS-20546-2] c14 N73-30389
- NEGATIVE FEEDBACK**  
Complementary regenerative transistorized switch circuit employing positive and negative feedback  
[NASA-CASE-XGS-02751] c09 N71-23015  
Solid-state current transformer  
[NASA-CASE-MFS-22560-1] c33 N77-14335
- NEODYMIUM LASERS**  
Length controlled stabilized mode-lock Nd:YAG laser  
[NASA-CASE-GSC-11571-1] c36 N77-25499
- NETWORK SYNTHESIS**  
Left and right hand circular electromagnetic polarization excitation by phase shifter and hybrid networks  
[NASA-CASE-GSC-10021-1] c09 N71-24595  
High speed phase detector design indicating phase relationship between two square wave input signals  
[NASA-CASE-XNP-01306-2] c09 N71-24596
- NEUROGLIA**  
Percutaneous connector device  
[NASA-CASE-KSC-10849-1] c52 N77-14738
- NEUROLOGY**  
An implantable electrical device  
[NASA-CASE-GSC-12560-1] c52 N80-27073
- NEUTRALIZERS**  
Method and apparatus for neutralizing potentials induced on spacecraft surfaces  
[NASA-CASE-GSC-11963-1] c33 N77-10429
- NEUTRON EMISSION**  
Deuterium pass through target --- neutron emitting target  
[NASA-CASE-LEW-11866-1] c72 N76-15860
- NICKEL**  
Process for producing dispersion strengthened nickel with aluminum comprising metallic matrices embedded with oxides or other hyperfine compounds  
[NASA-CASE-XLE-06969] c17 N71-24142  
Selective nickel deposition on irradiation sensitive compounds  
[NASA-CASE-LEW-10965-1] c15 N72-25452  
Brazing alloy composition  
[NASA-CASE-XMP-06053] c26 N75-27126  
Method of making reinforced composite structure  
[NASA-CASE-LEW-12619-1] c24 N77-19171  
Directionally solidified eutectic gamma-gamma nickel-base superalloys  
[NASA-CASE-LEW-12905-1] c26 N78-18183
- NICKEL ALLOYS**  
Preparation of nickel alloys for jet turbine blades operating at high temperatures  
[NASA-CASE-XLE-00151] c17 N70-33283  
Nickel alloy series for aerospace structures subjected to high temperatures  
[NASA-CASE-XLE-00283] c17 N70-36616  
Nickel base alloy with resistance to oxidation at high temperatures and superior stress-rupture properties  
[NASA-CASE-XLE-02082] c17 N71-16026  
High strength nickel based alloys  
[NASA-CASE-LEW-10874-1] c17 N72-22535  
Diffusion welding --- heat treatment of nickel alloys following single step vacuum welding process  
[NASA-CASE-LEW-11388-2] c37 N74-21055  
Method of heat treating age-hardenable alloys  
[NASA-CASE-XNP-01311] c26 N75-29236  
Zirconium modified nickel-copper alloy  
[NASA-CASE-LEW-12245-1] c26 N77-20201  
Directionally solidified eutectic gamma plus beta nickel-base superalloys  
[NASA-CASE-LEW-12906-1] c26 N77-32279  
Nickel base alloy --- for gas turbine engine stator vanes  
[NASA-CASE-LEW-12270-1] c26 N77-32280  
NiCrAl ternary alloy having improved cyclic oxidation resistance  
[NASA-CASE-LEW-13339-1] c26 N81-12211
- NICKEL CADMIUM BATTERIES**  
Heat flow calorimeter --- measures output of Ni-Cd batteries  
[NASA-CASE-GSC-11434-1] c34 N74-27859  
Method and apparatus for conditioning of nickel-cadmium batteries  
[NASA-CASE-MFS-23270-1] c44 N78-25531
- NICKEL COATINGS**  
Intermetallic chromium containing nickel aluminate for high temperature corrosion protection of stainless steels  
[NASA-CASE-LEW-11267-1] c17 N73-32414  
Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c44 N78-19599
- NICKEL COMPOUNDS**  
Including didymium hydrate in nickel hydroxide of positive electrode of storage batteries to increase ampere hour capacity  
[NASA-CASE-XGS-03505] c03 N71-10608  
Brazing alloy  
[NASA-CASE-XNP-03878] c26 N75-27127
- NICKEL FLATE**  
Nickel plating onto etched aluminum castings  
[NASA-CASE-XNP-04148] c17 N71-24830
- NICKEL ZINC BATTERIES**  
Additive for zinc electrodes  
[NASA-CASE-LEW-13286-1] c44 N81-27597
- NIObIUM**  
Organometallic compounds of niobium and tantalum useful for film deposition  
[NASA-CASE-XNP-04023] c06 N71-28808
- NITRAMINE PROPELLANTS**  
Nitramine propellants --- gun propellant burning rate  
[NASA-CASE-NEO-14103-1] c28 N78-31255
- NITRATES**  
Method of forming dynamic membrane on stainless steel support  
[NASA-CASE-MSC-18172-1] c26 N80-19237

**NITRIC OXIDE**

Reduction of nitric oxide emissions from a combustor  
[NASA-CASE-ARC-10814-2] c07 N80-26298

**NITRILES**

Intumescent paint containing nitrile rubber for fire protection  
[NASA-CASE-ARC-10196-1] c18 N73-13562  
Trimerization of aromatic nitriles  
[NASA-CASE-LEW-12053-1] c27 N78-15276  
Preparation of perfluorinated imidoylamidoximes --- for eventual preparation of heat and chemical resistant polymers  
[NASA-CASE-ARC-11267-1] c23 N80-26386

**NITRO COMPOUNDS**

Intumescent coatings containing 4,4'-dinitrosulfanilide  
[NASA-CASE-ARC-11042-1] c24 N78-14696

**NITROAMINES**

Nitroaniline sulfate, intumescent paints  
[NASA-CASE-ARC-10099-1] c18 N71-15469  
Mercaptan terminated polymer containing sulfonic acid salts of nitrosubstituted aromatic amines for heat and moisture resistant coatings  
[NASA-CASE-ARC-10325] c06 N72-25147

**NITROGEN**

III-V photocathode with nitrogen doping for increased quantum efficiency  
[NASA-CASE-NPO-12134-1] c33 N76-31409

**NITROGEN COMPOUNDS**

Method for preparing addition type polyimide prepreps  
[NASA-CASE-LAR-12054-2] c27 N81-14078

**NITROGEN OXIDES**

Combustion engine --- for air pollution control  
[NASA-CASE-NPO-13671-1] c37 N77-31497  
Combustor --- low nitrogen oxide formation  
[NASA-CASE-NPO-13958-1] c25 N79-11151

**NITROGEN TETROXIDE**

Gas chromatographic method for determining water in nitrogen tetroxide rocket propellant  
[NASA-CASE-NPO-10234] c06 N72-17094

**NITROGUANIDINE**

Solid propellant stabilizer containing nitroguanidine  
[NASA-CASE-NPO-12000] c27 N72-25699

**NOISE GENERATORS**

Pseudo-noise test set for communication system evaluation --- test signals  
[NASA-CASE-MPS-22671-1] c35 N75-21582  
Method of and means for testing a tape record/playback system  
[NASA-CASE-MPS-22671-2] c35 N77-17426

**NOISE MEASUREMENT**

Ride quality meter  
[NASA-CASE-LAR-12882-1] c54 N81-31848

**NOISE METERS**

Instrumentation for measurement of aircraft noise and sonic boom  
[NASA-CASE-LAR-11173-1] c35 N75-19614  
Differential sound level meter  
[NASA-CASE-LAR-12106-1] c71 N78-14867  
Ride quality meter  
[NASA-CASE-LAR-12882-1] c54 N81-31848

**NOISE REDUCTION**

Upper surface, external flow, jet-augmented flap configuration for high wing jet aircraft for noise reduction  
[NASA-CASE-XLA-00087] c02 N70-33332  
Cassegrain antenna subreflector flange for suppressing ground noise and increasing antenna transmitting efficiency  
[NASA-CASE-XP-00683] c09 N70-35425  
Device for adding water to high velocity exhaust jets to reduce velocity, noise, and temperature  
[NASA-CASE-IMP-01813] c28 N70-41582  
Variable time constant, wide frequency range smoothing network for noise removal from pulse chains  
[NASA-CASE-IGS-01983] c10 N70-41964  
Digital telemetry system apparatus to reduce tape recorder wow and flutter noise during playback  
[NASA-CASE-IGS-01812] c07 N71-23001  
Audio signal processing system for noise surge elimination at low amplitude audio input  
[NASA-CASE-MSC-12223-1] c07 N71-26181  
Variable frequency nuclear magnetic resonance spectrometer providing drive signals over wide

frequency range and minimizing noise effects  
[NASA-CASE-XP-09830] c14 N71-26266  
Noise elimination in coherent imaging system by axial rotation of optical lens for spectral distribution of degrading affects  
[NASA-CASE-GSC-11133-1] c23 N72-11568  
Audio equipment for removing impulse noise from audio signals  
[NASA-CASE-NPO-11631] c10 N73-12244  
Gas turbine exhaust nozzle --- for noise reduction  
[NASA-CASE-LEW-11569-1] c07 N74-15453  
Totally confined explosive welding --- apparatus to reduce noise level and protect personnel during explosive bonding  
[NASA-CASE-LAR-10941-1] c37 N74-21057  
Jet exhaust noise suppressor  
[NASA-CASE-LEW-11286-1] c07 N74-27490  
Supersonic fan blading --- noise reduction in turbofan engines  
[NASA-CASE-LEW-11402-1] c07 N74-28226  
Variably positioned guide vanes for aerodynamic choking  
[NASA-CASE-LAR-10642-1] c07 N74-31270  
Noise suppressor --- for turbofan engine by incorporating annular acoustically porous elements in exhaust and inlet ducts  
[NASA-CASE-LAR-11141-1] c07 N74-32418  
Abating exhaust noises in jet engines  
[NASA-CASE-ARC-10712-1] c07 N74-33218  
Television noise reduction device  
[NASA-CASE-MSC-12607-1] c32 N75-21485  
Cascade plug nozzle --- for jet noise reduction  
[NASA-CASE-LAR-11674-1] c07 N76-18117  
Noise suppressor for turbo fan jet engines  
[NASA-CASE-ARC-10812-1] c07 N76-18131  
Apparatus for reducing aerodynamic noise in a wind tunnel  
[NASA-CASE-MPS-23099-1] c09 N76-23273  
Optical noise suppression device and method --- laser light exposing film  
[NASA-CASE-MSC-12640-1] c74 N76-31998  
Variable thrust nozzle for quiet turbofan engine and method of operating same  
[NASA-CASE-LEW-12317-1] c07 N78-17055  
Magneto-optic detection system with noise cancellation  
[NASA-CASE-NPO-11954-1] c35 N78-29421  
Totally confined explosive welding  
[NASA-CASE-LAR-10941-2] c37 N79-13364  
Sound-suppressing structure with thermal relief  
[NASA-CASE-LEW-12658-1] c71 N79-14871  
Acoustically swept rotor --- helicopter noise reduction  
[NASA-CASE-ARC-11106-1] c05 N80-14107  
Multiple pure tone elimination strut assembly  
[NASA-CASE-FRC-11062-1] c07 N80-32393  
Support assembly for cryogenically coolable low-noise choke waveguide  
[NASA-CASE-NPO-14253-1] c32 N80-32605  
Curved centerline air intake for a gas turbine engine  
[NASA-CASE-LEW-13201-1] c07 N81-14999  
A rectangular rod-wall sound shield  
[NASA-CASE-LAR-12883-1] c09 N81-29138

**NOISE TEMPERATURE**  
Input radio frequency circuit for switching type absolute temperature measuring radiometer for noise sources  
[NASA-CASE-FRC-11020] c14 N71-26774

**NOISE THRESHOLD**  
Threshold extension device for improving operating performance of frequency modulation demodulators by eliminating click-type noise impulses  
[NASA-CASE-MSC-12165-1] c07 N71-33696

**NONADIABATIC CONDITIONS**  
Direct heating surface combustor  
[NASA-CASE-LEW-11877-1] c34 N78-27357

**NONDESTRUCTIVE TESTS**  
Nondestructive radiographic tests of resistance welds  
[NASA-CASE-IMP-02588] c15 N71-18613  
Space environment simulator for testing spacecraft components under aerospace conditions  
[NASA-CASE-NPO-10141] c11 N71-24964  
Apparatus for semiautomatic inspection of microfilmed documents for density, resolution, size, and position  
[NASA-CASE-MPS-20240] c14 N71-26788

- Dye penetrant and technique for nondestructive tests of solid surfaces contacted by liquid oxygen  
[NASA-CASE-XMF-02221] c18 N71-27170
- Method and photodetector device for locating abnormal voids in low density materials  
[NASA-CASE-MFS-20044] c14 N71-28993
- Holographic system for nondestructive testing  
[NASA-CASE-MFS-21704-1] c35 N75-25124
- Method and apparatus for nondestructive testing of pressure vessels  
[NASA-CASE-NPO-12142-1] c38 N76-28563
- Non-destructive method for applying and removing instrumentation on helicopter rotor blades  
[NASA-CASE-LAR-11201-1] c35 N78-24515
- Hybrid holographic non-destructive test system  
[NASA-CASE-MFS-23114-1] c38 N78-32447
- NONEQUILIBRIUM CONDITIONS**
- Condition sensor system and method  
[NASA-CASE-MSC-14805-1] c54 N78-32720
- NONEQUILIBRIUM PLASMAS**
- Plasma probes having guard ring and primary sensor at same potential to prevent stray wall current collection in ionized gases  
[NASA-CASE-XLE-00690] c25 N69-39884
- NONEQUILIBRIUM RADIATION**
- Non-equilibrium radiation nuclear reactor  
[NASA-CASE-HQN-10841-1] c73 N78-19920
- NONFLAMMABLE MATERIALS**
- Intumescent paint containing nitrile rubber for fire protection  
[NASA-CASE-ARC-10196-1] c18 N73-13562
- Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[NASA-CASE-MSC-14331-1] c27 N76-24405
- NONLINEAR FEEDBACK**
- Coherent receiver employing nonlinear coherence detection for carrier tracking  
[NASA-CASE-NPO-11921-1] c32 N74-30523
- Nonlinear nonsingular feedback shift registers  
[NASA-CASE-NPO-13451-1] c33 N76-14373
- NONLINEAR SYSTEMS**
- Detector assembly for discriminating first signal with respect to presence or absence of second signal at time of occurrence of first signal  
[NASA-CASE-XMF-00701] c09 N70-40272
- Describing continuous analog to digital converter with parallel digital output and nonlinear feedback  
[NASA-CASE-XAC-04031] c08 N71-18594
- Split range transducer  
[NASA-CASE-XLA-11189] c10 N72-20222
- Contour measurement system  
[NASA-CASE-MFS-23726-1] c43 N79-26439
- NOSE CONES**
- Automatically deploying nozzle exit cone extension  
[NASA-CASE-XLE-01640] c31 N71-15637
- Nose cone mounted heat resistant antenna comprising plurality of adjacent layers of silica not introducing paths of high thermal conductivity through ablative shield  
[NASA-CASE-XMS-04312] c07 N71-22984
- NOSE WHEELS**
- Nose gear steering system for vehicles with main skids to provide directional stability after loss of aerodynamic control  
[NASA-CASE-XLA-01804] c02 N70-34160
- NOTCH STRENGTH**
- Active notch filter network with variable notch depth, width and frequency  
[NASA-CASE-FRC-11055-1] c33 N80-29583
- NOTCH TESTS**
- Vee-notching device --- with adjustable carriage  
[NASA-CASE-MFS-20730-1] c39 N74-13131
- Notch filter  
[NASA-CASE-MFS-23303-1] c32 N77-18307
- NOTCHES**
- Notch filter  
[NASA-CASE-MFS-23303-1] c32 N77-18307
- NOZZLE DESIGN**
- High thrust annular liquid propellant rocket engine and exhaust nozzle design  
[NASA-CASE-XLE-00078] c28 N70-33284
- Penshaped, supersonic exhaust nozzle design  
[NASA-CASE-XLE-00057] c28 N70-38711
- Telescoping-spike supersonic nozzle for turbojet or ramjet engines  
[NASA-CASE-XLE-00005] c28 N70-39899
- Automatically deploying nozzle exit cone extension  
[NASA-CASE-XLE-01640] c31 N71-15637
- Propellant injection assembly having individually removable and replaceable nozzles for liquid fueled rocket engines  
[NASA-CASE-XMF-00968] c28 N71-15660
- Development of collapsible nozzle extension for rocket engines  
[NASA-CASE-MFS-11497] c28 N71-16224
- Design and development of gas turbine combustion unit with nozzle guide vanes for introducing diluent air into combustion gases  
[NASA-CASE-XLE-103477-1] c28 N71-20330
- Prestressed rocket nozzle with ceramic inner rings and refractory metal outer rings  
[NASA-CASE-XNP-02888] c18 N71-21068
- Scanning nozzle plating system --- for etching or plating metals on substrates without masking  
[NASA-CASE-NFO-11758-1] c31 N74-23065
- Variable thrust nozzle for quiet turbofan engine and method of operating same  
[NASA-CASE-LEW-12317-1] c07 N78-17055
- Variable area exhaust nozzle  
[NASA-CASE-LEW-12378-1] c07 N79-14097
- Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c07 N80-32392
- Sandblasting nozzle  
[NASA-CASE-NFO-13823-1] c37 N81-25371
- NOZZLE FLOW**
- System for aerodynamic control of rocket vehicles by secondary injection of fluid into nozzle exhaust stream  
[NASA-CASE-XLA-01163] c21 N71-15582
- Constructing fluid spike nozzle to eliminate heat transfer and high temperature problems inherent in physical spikes  
[NASA-CASE-XGS-01143] c31 N71-15647
- Electronic recording system for spatial mass distribution of liquid rocket propellant droplets or vapors ejected from high velocity nozzles  
[NASA-CASE-NFO-10185] c10 N71-26339
- Tertiary flow injection system for thrust vectoring of propulsive nozzle flow  
[NASA-CASE-MFS-20831] c28 N71-29153
- Multi-purpose wind tunnel reaction control model block  
[NASA-CASE-MSC-19706-1] c09 N78-31129
- NOZZLE GEOMETRY**
- Method of making a rocket nozzle  
[NASA-CASE-XMF-06884-1] c20 N79-21123
- NOZZLE INSERTS**
- Flexible rocket motor nozzle closure device to aid ignition and protect rocket chamber from foreign objects  
[NASA-CASE-XLA-02651] c28 N70-41967
- NUCLEAR DEVICES**
- Large volume multiple path nuclear pumped laser  
[NASA-CASE-LAR-12592-1] c36 N79-26385
- NUCLEAR EXPLOSION EFFECT**
- Development of method for protecting large and oddly shaped areas from radiant and convective heat  
[NASA-CASE-XNP-01310] c33 N71-28852
- NUCLEAR FUEL ELEMENTS**
- Tungsten-coated tungsten-uranium dioxide nuclear fuel plates  
[NASA-CASE-XLE-00209] c22 N73-32528
- NUCLEAR MAGNETIC RESONANCE**
- Variable frequency nuclear magnetic resonance spectrometer providing drive signals over wide frequency range and minimizing noise effects  
[NASA-CASE-XNP-09830] c14 N71-26266
- NUCLEAR POWER PLANTS**
- Development and characteristics of natural circulation radiator for use with nuclear power plants installed in lunar space stations  
[NASA-CASE-IHQ-03673] c33 N71-29046
- NUCLEAR PUMPED LASERS**
- Voluetric direct nuclear pumped laser  
[NASA-CASE-LAR-12183-1] c36 N79-18307
- NUCLEAR REACTOR CONTROL**
- Absorbing gas reactivity control system for minimizing power distribution and perturbation in nuclear reactors  
[NASA-CASE-XLE-04599] c22 N72-20597
- Control for nuclear thermionic power source  
[NASA-CASE-NPO-13114-2] c73 N78-28913

**NUCLEAR REACTORS**  
Nuclear thermionic converter --- tungsten-thorium oxide rods  
[NASA-CASE-NPO-13121-1] c73 N77-18891

**NUCLEATE BOILING**  
Method for improving heat transfer characteristics in nucleate boiling process  
[NASA-CASE-XMS-04268] c33 N71-16277

**NUCLEATION**  
Method and apparatus for supercooling and solidifying substances --- containless melts and space processing  
[NASA-CASE-NFS-25242-1] c35 N81-24413

**NULL ZONES**  
Manual control mechanism for adjusting control rod to null position  
[NASA-CASE-XLA-01808] c15 N71-20740

**NUMBER THEORY**  
Binary concatenated coding system  
[NASA-CASE-MSC-14082-1] c60 N76-23850

**NUMERICAL CONTROL**  
Digital sensor for counting fringes produced by interferometers with improved sensitivity and one photomultiplier tube to eliminate alignment problem  
[NASA-CASE-LAR-10204] c14 N71-27215  
Digital numerically controlled oscillator  
[NASA-CASE-MSC-16747-1] c33 N81-17349  
Controller for computer control of brushless dc motors --- automobile engines  
[NASA-CASE-NPO-13970-1] c33 N81-20352

**NUMERICAL INTEGRATION**  
Apparatus for computing square roots  
[NASA-CASE-XGS-04768] c08 N71-19437

**NUOTATION**  
Flexible turnstile antenna system for reducing nutation in spin-oriented satellites  
[NASA-CASE-XMF-00442] c31 N71-10747  
Nutation damper for use on spinning body  
[NASA-CASE-GSC-11205-1] c15 N73-25513

**NUOTATION DAMPERS**  
Active nutation controller  
[NASA-CASE-GSC-12273-1] c35 N80-21719  
Method of and apparatus for damping nutation motion with minimum spin axis attitude disturbance  
[NASA-CASE-GSC-12551-1] c18 N81-12156

**NUTS (FASTENERS)**  
Contamination free separation nut eliminating combustion products from ambient surroundings generated by squib firing  
[NASA-CASE-XGS-01971] c15 N71-15922  
Split nut and bolt separation device  
[NASA-CASE-XNP-06914] c15 N71-21489  
Device for securing together structural members with axially stretched bolt and nut  
[NASA-CASE-GSC-11149-1] c15 N73-30457  
High-torque open-end wrench  
[NASA-CASE-NPO-13541-1] c37 N79-14383  
Floating nut retention system  
[NASA-CASE-MSC-16938-1] c37 N80-23653

**O**

**O RING SEALS**  
High pressure four-way valve with O ring adapted to pass across inlet port  
[NASA-CASE-XNP-00214] c15 N70-36908  
Modified spiral wound retaining ring  
[NASA-CASE-LAR-12361-1] c37 N81-12422  
Self-stabilizing radial face seal  
[NASA-CASE-LEW-12991-1] c37 N81-24442  
Circumferential shaft seal  
[NASA-CASE-LEW-12119-2] c37 N81-26447

**OBLIQUE WINGS**  
Oblique-wing supersonic aircraft  
[NASA-CASE-ARC-10470-3] c05 N76-29217

**OCEAN DATA ACQUISITIONS SYSTEMS**  
Oceanic wave measurement system  
[NASA-CASE-NFS-23862-1] c48 N80-18667

**OCEAN SURFACE**  
Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
[NASA-CASE-NPO-13862-1] c35 N79-10391  
Oceanic wave measurement system  
[NASA-CASE-NFS-23862-1] c48 N80-18667

**OCEAN THERMAL ENERGY CONVERSION**  
Ocean thermal plant  
[NASA-CASE-KSC-11034-1] c44 N78-32542

**OFFSHORE PLATFORMS**  
Ocean thermal plant  
[NASA-CASE-KSC-11034-1] c44 N78-32542

**OHMMETERS**  
Development of electrical system for indicating optimum contact between electrode and metal surface to permit improved soldering operation  
[NASA-CASE-KSC-10242] c15 N72-23497

**OIL EXPLORATION**  
Underwater seismic source --- for petroleum exploration  
[NASA-CASE-NFO-14255-1] c46 N79-23555  
Borehole geological assessment  
[NASA-CASE-NPO-14231-1] c46 N80-10709

**OIL RECOVERY**  
Oil and fat absorbing polymers  
[NASA-CASE-NPO-11609-2] c27 N77-31308  
In-situ laser retorting of oil shale  
[NASA-CASE-LEW-12217-1] c43 N78-14452

**OILS**  
Color photointerpretation of interference colors reflected from thin film oil-coated components in moving gases for gas flow visualization  
[NASA-CASE-XMF-01779] c12 N71-20815  
Oil and fat absorbing polymers  
[NASA-CASE-NFO-11609-2] c27 N77-31308

**OMNIDIRECTIONAL ANTENNAS**  
Microwave omnidirectional antenna for use on spacecraft  
[NASA-CASE-XLA-03114] c09 N71-22888  
Vertically stacked collinear array of independently fed omnidirectional antennas for use in collision warning systems on commercial aircraft  
[NASA-CASE-LAR-10545-1] c09 N72-21244  
Omnidirectional antenna array with circumferential slots for mounting on cylindrical space vehicle  
[NASA-CASE-LAR-10163-1] c09 N72-25247

**ONBOARD EQUIPMENT**  
Survival couch for aircraft or spacecraft crews  
[NASA-CASE-XLA-00118] c05 N70-33285  
Cryogenic storage system for gases onboard spacecraft  
[NASA-CASE-XMS-04390] c31 N70-41871  
Fiber optic transducers for monitoring and analysis of vibration in aerospace vehicles and onboard equipment  
[NASA-CASE-XMF-02433] c14 N71-10616  
Design and construction of satellite appendage tie-down cord  
[NASA-CASE-XGS-02554] c31 N71-21064  
Satellite aided aircraft collision avoidance system effective for large number of aircraft  
[NASA-CASE-ERC-10090] c21 N71-24548  
Closed loop servosystem for variable speed tape recorders onboard spacecraft  
[NASA-CASE-NPO-10700] c07 N71-33613  
Collapsible couch system for manned space vehicles  
[NASA-CASE-MSC-13140] c05 N72-11085  
Monostable multivibrator for conserving power in spacecraft systems  
[NASA-CASE-GSC-10082-1] c10 N72-20221  
Delayed simultaneous appendage release mechanism for use on spacecraft equipped with despin mechanisms and releasable components  
[NASA-CASE-GSC-10814-1] c03 N73-20039  
Electronic strain level counter on in-flight aircraft  
[NASA-CASE-LAR-10756-1] c32 N73-26910  
Magnetic heading reference  
[NASA-CASE-LAR-11387-1] c04 N76-20114

**OPERATIONAL AMPLIFIERS**  
Digital automatic gain amplifier  
[NASA-CASE-KSC-11008-1] c33 N79-22373  
Automatic level control circuit  
[NASA-CASE-KSC-11170-1] c33 N81-29347

**OPHTHALMOLOGY**  
Ultrasonic device for ophthalmic eye surgery with safe removal of macerated material  
[NASA-CASE-LEW-11669-1] c05 N73-27062  
Ophthalmic liquifaction pump  
[NASA-CASE-LEW-12051-1] c52 N75-33640

**OPTICAL COMMUNICATION**  
Fabry-Perot interferometer retrodirective reflector modulator for optical communication  
[NASA-CASE-XGS-04480] c16 N69-27491

- Specifications and drawings for semipassive optical communication system  
[NASA-CASE-XLA-01090] c07 N71-12389
- Optical communication system with gas filled waveguide for laser beam transmission  
[NASA-CASE-HQN-10541-4] c16 N71-27183
- Development and characteristics of optical communications system based on modulation of light beams  
[NASA-CASE-XLA-01090] c16 N71-28963
- High resolution radar transmitting system for transmitting optical pulses to targets  
[NASA-CASE-NPO-11426] c07 N73-26119
- Apparatus for simulating optical transmission links  
[NASA-CASE-GSC-11877-1] c74 N76-18913
- Fiber distributed feedback laser  
[NASA-CASE-NPO-13531-1] c36 N76-24553
- Polarization compensator for optical communications  
[NASA-CASE-GSC-11782-1] c74 N76-30053
- Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c74 N77-26942
- Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c32 N77-28346
- Fiber optic multiplex optical transmission system  
[NASA-CASE-KSC-11047-1] c74 N78-14889
- Fiber optic crossbar switch for automatically patching optical signals  
[NASA-CASE-KSC-11104-1] c74 N81-12862
- OPTICAL COUPLING**
- Automatic quadrature control and measuring system --- using optical coupling circuitry  
[NASA-CASE-MFS-21660-1] c35 N74-21017
- OPTICAL DATA PROCESSING**
- Optical data processing system using paraboloidal reflecting surfaces  
[NASA-CASE-GSC-11256-1] c23 N73-30666
- Recorder/processor apparatus --- for optical data processing  
[NASA-CASE-GSC-11553-1] c35 N74-15831
- Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-1] c32 N79-19195
- Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-2] c32 N80-32607
- Interleaving device  
[NASA-CASE-GSC-12111-2] c33 N81-29342
- OPTICAL DENSITY**
- Medical diagnosis system and method with multispectral imaging --- depth of burns and optical density of the skin  
[NASA-CASE-NPO-14402-1] c52 N81-27783
- OPTICAL EMISSION SPECTROSCOPY**
- Maksutov spectrograph for low light level research  
[NASA-CASE-XLA-10402] c14 N71-29041
- OPTICAL EQUIPMENT**
- Detection instrument for light emitted from ATP biochemical reaction  
[NASA-CASE-XGS-05534] c23 N71-16355
- Optical characteristics measuring apparatus  
[NASA-CASE-INP-08840] c23 N71-16365
- Combined optical attitude and altitude indicating instrument for use in aircraft or spacecraft  
[NASA-CASE-XLA-01907] c14 N71-23268
- Design and development of optical interferometer with laser light source for application to schlieren systems  
[NASA-CASE-XLA-04295] c16 N71-24170
- Highly stable optical mirror assembly optimizing image quality of light diffraction patterns  
[NASA-CASE-ERC-10001] c23 N71-24868
- Optical device containing rotatable prism and reflecting mirror for generating precise angles  
[NASA-CASE-XGS-04173] c19 N71-26674
- Development and characteristics of Petzval type objective including field shaping lens for focusing light of specified wavelength band on curved photoreceptor  
[NASA-CASE-GSC-10700] c23 N71-30027
- Development and characteristics of spectroradiometer with wedge filters to eliminate adverse effect of pinholes in filters  
[NASA-CASE-HQN-10683] c14 N71-34389
- Slotted fine-adjustment support for optical devices  
[NASA-CASE-MFS-20249] c15 N72-11386
- Development of process for constructing protective covers for solar cells  
[NASA-CASE-GSC-11514-1] c03 N72-24037
- Development of light sensing system for controlled orientation of object relative to sun or other light source  
[NASA-CASE-NPO-11311] c14 N72-25414
- Borescope with adjustable hinged telescoping optical system  
[NASA-CASE-MFS-15162] c14 N72-32452
- Development and characteristics of cyclically operable, optical shutter for use as focal plane shutter for transmitting single radiation pulses  
[NASA-CASE-NPO-10758] c14 N73-14427
- Method for producing reticles for use in outer space  
[NASA-CASE-GSC-11188-2] c21 N73-19630
- Method and equipment for locating earth infrared horizon from space, independent of season and latitude  
[NASA-CASE-LAR-10726-1] c14 N73-20475
- Optical imaging system for increasing light absorption efficiency of imaging detector  
[NASA-CASE-ARC-10194-1] c23 N73-20741
- Attitude sensor  
[NASA-CASE-LAR-10586-1] c19 N74-15089
- Formation of star tracking reticles  
[NASA-CASE-GSC-11188-3] c74 N74-20008
- Method and apparatus for optically monitoring the angular position of a rotating mirror  
[NASA-CASE-GSC-11353-1] c74 N74-21304
- Single reflector interference spectrometer and drive system therefor  
[NASA-CASE-NPO-11932-1] c35 N74-23040
- Strain gauge ambiguity sensor for segmented mirror active optical system  
[NASA-CASE-MFS-20506-1] c35 N75-12273
- Optical alignment device  
[NASA-CASE-ARC-10932-1] c74 N76-22993
- Visual examination apparatus  
[US-PATENT-RE-28,921] c52 N76-30793
- Optical instrument employing reticle having preselected visual response pattern formed thereon  
[NASA-CASE-ARC-10976-1] c74 N77-22950
- Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c35 N77-27366
- Method and apparatus for producing an image from a transparent object  
[NASA-CASE-GSC-11989-1] c74 N77-28932
- Method of treating the surface of a glass member  
[NASA-CASE-GSC-12110-1] c27 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] c74 N78-32854
- Water system virus detection  
[NASA-CASE-MS-C-16098-1] c51 N79-10693
- Method of forming a sharp edge on an optical device  
[NASA-CASE-GSC-12348-1] c74 N80-24149
- OPTICAL FILTERS**
- Lens assembly for solar furnace or solar simulator  
[NASA-CASE-XNP-04111] c14 N71-15622
- Noise elimination in coherent imaging system by axial rotation of optical lens for spectral distribution of degrading affects  
[NASA-CASE-GSC-11133-1] c23 N72-11568
- Optical noise suppression device and method --- laser light exposing film  
[NASA-CASE-MS-C-12640-1] c74 N76-31998
- System for producing chroma signals  
[NASA-CASE-MS-C-14683-1] c74 N77-18893
- Optical conversion method --- for spacecraft television  
[NASA-CASE-MS-C-12618-1] c74 N78-17865
- Partial polarizer filter  
[NASA-CASE-GSC-12225-1] c74 N79-14891
- OPTICAL GYROSCOPES**
- Optical gyroscope system  
[NASA-CASE-NPO-14258-1] c35 N81-33448
- OPTICAL HETERODYNING**
- Computerized optical system for producing

- multiple images of a scene simultaneously  
[NASA-CASE-MSC-12404-1] c23 N73-13661
- Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c74 N77-26942
- Wideband heterodyne receiver for laser  
communication system  
[NASA-CASE-GSC-12053-1] c32 N77-28346
- OPTICAL MEASUREMENT**
- Passive optical wind and turbulence remote  
detection system  
[NASA-CASE-IMP-14032] c20 N71-16340
- Ellipsoidal mirror reflector for measuring  
reflectance  
[NASA-CASE-IGS-05291] c23 N71-16341
- Single reflector interference spectrometer and  
drive system therefor  
[NASA-CASE-NPO-11932-1] c35 N74-23040
- Hybrid holographic non-destructive test system  
[NASA-CASE-MPS-23114-1] c38 N78-32447
- Plural output optometric sample cell and  
analysis system  
[NASA-CASE-NPO-10233-1] c74 N78-33913
- Rotary target V-block --- aligning wind tunnel  
apparatus for optical measurement  
[NASA-CASE-LAR-12007-2] c74 N79-25E76
- Interferometric angle monitor  
[NASA-CASE-GSC-12614-1] c35 N81-12386
- Apparatus for fiber optic liquid level sensing  
[NASA-CASE-MSC-18674-1] c74 N81-24907
- OPTICAL MEASURING INSTRUMENTS**
- Design and development of optically pumped  
resonance magnetometer for determining  
vectoral components in spatial coordinate system  
[NASA-CASE-IGS-04879] c14 N71-20428
- Optical gauging system for monitoring machine  
tool alignment  
[NASA-CASE-IAC-09489-1] c15 N71-26673
- Optical system for selecting particular  
wavelength light beams from multiple  
wavelength light source  
[NASA-CASE-ERC-10248] c14 N72-17323
- Optical sensing of supersonic flows by  
correlating deflections in laser beams through  
flow  
[NASA-CASE-MPS-20642] c14 N72-21407
- Multiparameter vision testing apparatus  
[NASA-CASE-MSC-13601-2] c54 N75-27759
- Noncontacting method for measuring angular  
deflection  
[NASA-CASE-LAR-12178-1] c74 N80-21138
- Visible and infrared polarization ratio  
spectroreflectometer  
[NASA-CASE-LAR-12285-1] c35 N80-28687
- Film advance indicator  
[NASA-CASE-LAR-12474-1] c35 N80-31774
- Optical crystal temperature gauge with fiber  
optic connections --- cryogenic systems  
[NASA-CASE-MSC-18627-1] c74 N81-15818
- Interferometer  
[NASA-CASE-NPO-14502-1] c74 N81-17888
- Focal plane array optical proximity sensor  
[NASA-CASE-NPO-15155-1] c74 N81-22894
- OPTICAL PATHS**
- Optical instruments  
[NASA-CASE-MSC-14096-1] c74 N74-15095
- OPTICAL PROPERTIES**
- Remote-reading torque meter for use where high  
horsepowers are transmitted at high rotative  
speeds  
[NASA-CASE-XLE-00503] c14 N70-34818
- Quasi-optical microwave circuit with dielectric  
body for use with oversize waveguides  
[NASA-CASE-ERC-10011] c07 N71-29065
- Development of light sensing system for  
controlled orientation of object relative to  
sun or other light source  
[NASA-CASE-NPO-11311] c14 N72-25414
- Design and development of light sensing device  
for controlling orientation of object relative  
to sun or other light source  
[NASA-CASE-NPO-11201] c14 N72-27409
- Device and method for determining X ray  
reflection efficiency, scattering properties,  
and surface finish of optical surfaces  
[NASA-CASE-MPS-20243] c23 N73-13662
- Formation of star tracking reticles  
[NASA-CASE-GSC-11188-3] c74 N74-20008
- Optically actuated two position mechanical mover  
[NASA-CASE-NPO-13105-1] c37 N74-21060
- Modification of the electrical and optical  
properties of polymers --- ion irradiation to  
create texture  
[NASA-CASE-LEW-13027-1] c27 N80-24437
- Heat transparent high intensity high efficiency  
solar cell  
[NASA-CASE-LEW-12892-1] c44 N81-27598
- OPTICAL PUMPING**
- Xenon flashlamp driver system for optical laser  
pumping  
[NASA-CASE-ERC-10283] c16 N72-25485
- Laser head for simultaneous optical pumping of  
several dye lasers --- with single flash lamp  
[NASA-CASE-LAR-11341-1] c36 N75-19655
- Stabilization of He2 (a 3 Sigma u+ molecules in  
liquid helium by optical pumping for vacuum UV  
laser 6  
[NASA-CASE-NFO-13993-1] c72 N79-13826
- Off-axis coherently pumped laser  
[NASA-CASE-GSC-12592-1] c36 N81-12407
- OPTICAL PYROMETERS**
- Filter arrangement for controlling light  
intensity in motion picture camera used in  
optical pyrometry  
[NASA-CASE-XLA-00062] c14 N70-33254
- OPTICAL RADAR**
- Acquisition and tracking system for optical radar  
[NASA-CASE-MPS-20125] c16 N72-13437
- OPTICAL RANGE FINDERS**
- Electro-optical attitude sensing device for  
landing approach of flight vehicle  
[NASA-CASE-IHS-01994-1] c14 N72-17326
- Optical range finder using reflective first  
surfaces mirror and transmitting beam splitter  
[NASA-CASE-MSC-12105-1] c14 N72-21409
- OPTICAL REFLECTION**
- Hybrid holographic system using reference,  
transmitted, and reflected beams simultaneously  
[NASA-CASE-MPS-20074] c16 N71-15565
- Optical device containing rotatable prism and  
reflecting mirror for generating precise angles  
[NASA-CASE-IGS-04173] c19 N71-26674
- Illumination system design for use as sunlight  
simulator in space environment simulators with  
multiple light sources reflected to single  
virtual source  
[NASA-CASE-HQN-10781] c23 N71-30292
- Composition of diffuse reflective coating  
containing sodium chloride in combination with  
diol solvent and organic wetting and drying  
agents  
[NASA-CASE-GSC-11214-1] c06 N73-13128
- Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c74 N77-26942
- Lightweight reflector assembly  
[NASA-CASE-NFO-13707-1] c74 N77-28933
- Method and apparatus for splitting a beam of  
energy --- optical communication  
[NASA-CASE-GSC-12083-1] c73 N78-32848
- Apparatus for and method of compensating dynamic  
unbalance  
[NASA-CASE-GSC-12550-1] c37 N81-22358
- OPTICAL RESONANCE**
- Design and development of optically pumped  
resonance magnetometer for determining  
vectoral components in spatial coordinate system  
[NASA-CASE-IGS-04879] c14 N71-20428
- Laser system with an antiresonant optical ring  
[NASA-CASE-HQN-10844-1] c36 N75-19653
- OPTICAL SCANNERS**
- Optical scanner mounted on rotating support  
structure with method of compensating for  
image or satellite rotation  
[NASA-CASE-IGS-02401] c14 N69-27485
- Optical apparatus for visual detection of  
roundness and regularity of cone surfaces  
[NASA-CASE-IMP-00462] c14 N70-34298
- Electro-optical system with scan-in illuminator  
and scan-out photosensor for scanning variable  
transmittance objects  
[NASA-CASE-NPO-11106] c14 N70-34697
- Multi-lobar scan horizon sensor  
[NASA-CASE-IGS-00809] c21 N70-35427
- Optical scanner with linear housing and rotating  
camera  
[NASA-CASE-NPO-11002] c14 N72-22441
- Spacecraft attitude sensing system design with  
narrow field of view sensor rotating about  
spacecraft x-y axis

- [NASA-CASE-GSC-10890-1] c21 N73-30640  
Optical instruments  
[NASA-CASE-MS-C-14096-1] c74 N74-15095  
Dual digital video switcher  
[NASA-CASE-KSC-10782-1] c33 N75-30431  
Traffic survey system --- using optical scanners  
[NASA-CASE-MFS-22631-1] c66 N76-19888  
Optical scanner --- laser doppler velocimeters  
[NASA-CASE-LAR-11711-1] c74 N78-17866  
Device for measuring the contour of a surface  
[NASA-CASE-LAR-11869-1] c74 N78-27904  
Velocity servo for continuous scan Fourier  
interference spectrometer  
[NASA-CASE-NPO-14093-1] c35 N80-20563  
Method of growing a ribbon crystal particularly  
suited for facilitating automated control of  
ribbon width  
[NASA-CASE-NPO-14295-1] c76 N80-32245
- OPTICAL TRACKING**  
Sun tracker with rotatable plane-parallel plate  
and two photocells  
[NASA-CASE-XGS-01159] c21 N71-10678  
Optical tracker with pair of FM reticles having  
patterns 90 deg out of phase  
[NASA-CASE-XGS-05715] c23 N71-16100  
Tracking mount for laser telescope employed in  
tracking large rockets and space vehicles to  
give information regarding azimuth and elevation  
[NASA-CASE-MFS-14017] c14 N71-26627  
Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c74 N80-24152  
Solar tracking system  
[NASA-CASE-MFS-23999-1] c44 N81-24520
- OPTICAL TRANSFER FUNCTION**  
Electronic optical transfer function analyzer  
[NASA-CASE-MFS-21672-1] c74 N76-19935
- OPTIMIZATION**  
Power point tracker for maintaining optimal  
output voltage of power source  
[NASA-CASE-GSC-10376-1] c14 N71-27407
- ORAL HYGIENE**  
Acoustic tooth cleaner  
[NASA-CASE-LAR-12471-1] c52 N81-12724
- ORBITAL ASSEMBLY**  
Structural members, method and apparatus  
[NASA-CASE-MS-C-16217-1] c51 N81-27323
- ORBITAL MANEUVERS**  
Passive propellant system  
[NASA-CASE-MFS-23642-1] c20 N80-10278
- ORBITAL MECHANICS**  
Design and development of space shuttle system  
for delivering payload to earth orbit or  
celestial orbit  
[NASA-CASE-MS-C-12391] c30 N73-12884
- ORBITAL SPACE STATIONS**  
Radial module manned space station with  
artificial gravity environment  
[NASA-CASE-XMS-01906] c51 N70-41373  
Internal and external serpentine devices for  
performing physical operations around orbital  
space stations  
[NASA-CASE-XMF-05344] c31 N71-16345  
Describing apparatus for manufacturing  
operations in low and zero gravity  
environments of orbital space flight  
[NASA-CASE-MFS-20410] c15 N71-19214
- ORGANIC CHEMISTRY**  
Process for interfacial polymerization of  
pyromellitic dianhydride and tetraamino benzene  
[NASA-CASE-XLA-03104] c06 N71-11235  
Amino acid analysis  
[NASA-CASE-NPO-12130-1] c25 N75-14844
- ORGANIC COMPOUNDS**  
Synthesis of high purity dianilinosilanes  
[NASA-CASE-XMF-06409] c06 N71-23230  
Preparation of dicyanoacetylene and vinylidene  
copolymers using organic compounds  
[NASA-CASE-XNP-03250] c06 N71-23500  
Infusible polymer production from reaction of  
polyfunctional epoxy resins with  
polyfunctional aziridine compounds  
[NASA-CASE-NPO-10701] c06 N71-28620  
Composition of diffuse reflective coating  
containing sodium chloride in combination with  
diol solvent and organic wetting and drying  
agents  
[NASA-CASE-GSC-11214-1] c06 N73-13128  
Automated system for identifying traces of  
organic chemical compounds in aqueous solutions
- [NASA-CASE-NPO-13063-1] c25 N76-18245  
Analysis of volatile organic compounds --- trace  
amounts of organic volatiles in gas samples  
[NASA-CASE-MS-C-14428-1] c23 N77-17161  
Electrophotolysis oxidation system for  
measurement of organic concentration in water  
[NASA-CASE-MS-C-16497-1] c25 N79-23167
- ORGANIC SILICON COMPOUNDS**  
Oxygen post-treatment of plastic surface coated  
with plasma polymerized silicon-containing  
monomers  
[NASA-CASE-ARC-10915-2] c27 N79-18052
- ORGANIC SULFUR COMPOUNDS**  
Coal desulfurization --- using iron pentacarbonyl  
[NASA-CASE-NPO-14272-1] c25 N81-33246
- ORGANOMETALLIC COMPOUNDS**  
Ammonium perchlorate composite propellant with  
organic Cu/II/ chelate catalytic additive  
[NASA-CASE-LAR-10173-1] c27 N71-14090  
Organometallic compounds of niobium and tantalum  
useful for film deposition  
[NASA-CASE-XNP-04023] c06 N71-28808
- ORGANOMETALLIC POLYMERS**  
Chemical synthesis of thermally stable  
organometallic polymers with divalent metal  
ion and tetraphenylphosphonitrilic units  
[NASA-CASE-HQN-10364] c06 N71-27363  
Thiophenyl ether disiloxanes and trisiloxanes  
useful as lubricant fluids  
[NASA-CASE-MFS-22411-1] c37 N74-21058
- ORIFICE FLOW**  
Relief valve to permit slow and fast bleeding  
rates at difference pressure levels  
[NASA-CASE-XMS-05894-1] c15 N69-21924
- ORIFICES**  
Rocket engine injector orifice to accommodate  
changes in density, velocity, and pressure,  
thereby maintaining constant mass flow rate of  
propellant into rocket combustion chamber  
[NASA-CASE-XIE-03157] c28 N71-24736
- ORTHOGONAL MULTIPLEXING THEORY**  
Encoders designed to generate comma free  
biorthogonal Reed-Muller type code comprising  
conversion of 64 6-bit words into 64 32-bit  
data for communication purposes  
[NASA-CASE-NPO-10595] c10 N71-25917
- ORTHOGONALITY**  
Device for measuring two orthogonal components  
of force with gallium flotation of measuring  
target for use in vacuum environments  
[NASA-CASE-XAC-04885] c14 N71-23790
- ORTHOPEDICS**  
Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-1] c54 N76-22914  
Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c52 N81-25661
- ORTHOTROPIC CYLINDERS**  
Method for shaping regeneratively cooled rocket  
motor casing having minimum thickness at each  
channel cross section  
[NASA-CASE-XLE-00409] c28 N71-15658  
Regeneratively cooled rocket motor casing with  
tapered channels to insure minimum thicknesses  
at each channel cross section for necessary  
strength requirements  
[NASA-CASE-XLE-05689] c28 N71-15659
- OSCILLATION DAMPERS**  
Design and operation of viscous pendulum damper  
[NASA-CASE-XLA-02079] c12 N71-16894  
Stabilization system for gravity-oriented  
satellites using single damper rod  
[NASA-CASE-XAC-01591] c31 N71-17729  
Suspended mass oscillation damper based on  
impact energy absorption for damping wind  
induced oscillations of tall stacks, antennas,  
and umbilical towers  
[NASA-CASE-LAR-10193-1] c15 N71-27146  
Damper system for alleviating air flow shock  
loads on wind tunnel models  
[NASA-CASE-XLA-09480] c11 N71-33612  
Apparatus for damping operator induced  
oscillations of a controlled system --- using  
adaptive filters to damp oscillations in a  
flight control system  
[NASA-CASE-FRC-11041-1] c33 N80-20488  
Method of and apparatus for damping nutation  
motion with minimum spin axis attitude  
disturbance  
[NASA-CASE-GSC-12551-1] c18 N81-12156

## OSCILLATIONS

Development of electrical circuit for suppressing oscillations across inductor operating in resonant mode  
[NASA-CASE-BRC-10403-1] c10 N73-26228

## OSCILLATORS

Oscillatory electromagnetic mirror drive system for horizon scanners  
[NASA-CASE-XLA-03724] c14 N69-27461

Frequency control network for current feedback oscillators converting dc voltage to ac or higher dc voltages  
[NASA-CASE-GSC-10041-1] c10 N71-19418

Development and characteristics of oscillating static inverter  
[NASA-CASE-IGS-05289] c09 N71-19470

Voltage controlled oscillators and pulse amplitude modulation for signal ratio system  
[NASA-CASE-XMF-04367] c09 N71-23545

Development and characteristics of fluid oscillator analog to digital converter with variable frequency controlled by signal passing through conditioning circuit  
[NASA-CASE-LBW-10345-1] c10 N71-25899

Wideband voltage controlled oscillator with high phase stability  
[NASA-CASE-XLA-03893] c10 N71-27271

Variable frequency subcarrier oscillator with temperature compensation  
[NASA-CASE-IXP-03916] c09 N71-28810

Inverter oscillator with voltage feedback  
[NASA-CASE-NPO-10760] c09 N72-25254

Controlled oscillator system with a time dependent output frequency  
[NASA-CASE-NPO-11962-1] c33 N74-10194

Ultra-stable oscillator with complementary transistors  
[NASA-CASE-GSC-11513-1] c33 N74-20862

LC-oscillator with automatic stabilized amplitude via bias current control --- power supply circuit for transducers  
[NASA-CASE-MFS-21698-1] c33 N74-26732

Frequency modulated oscillator  
[NASA-CASE-MFS-23181-1] c33 N77-17351

Distributed feedback acoustic surface wave oscillator  
[NASA-CASE-NPO-13673-1] c71 N77-26919

JFET oscillator  
[NASA-CASE-GSC-12555-1] c33 N80-26601

Digital numerically controlled oscillator  
[NASA-CASE-MSC-16747-1] c33 N81-17349

## OSCILLOSCOPES

Sign wave generation simulator for variable amplitude, frequency, damping, and phase pulses for oscilloscope display  
[NASA-CASE-NPO-10251] c10 N71-27365

Scan oscilloscope for mapping surface sensitivity of photomultiplier tube  
[NASA-CASE-LAR-10320-1] c09 N72-23172

Mechanical exposure interlock device for preventing film overexposure in oscilloscope camera  
[NASA-CASE-LAR-10319-1] c14 N73-32322

X-Y alphanumeric character generator for oscilloscopes  
[NASA-CASE-GSC-11582-1] c33 N75-19517

## OUTER PLANETS EXPLORERS

Spectrometer integrated with a facsimile camera  
[NASA-CASE-LAR-11207-1] c35 N75-19613

## OUTGASSING

Optical characteristics measuring apparatus  
[NASA-CASE-IXP-08840] c23 N71-16365

Helium outgassing process for fused glass coating on ion accelerator grid  
[NASA-CASE-LBW-10278-1] c15 N71-28582

Fluid polydimethylsiloxane resin with low outgassing properties in cured state  
[NASA-CASE-GSC-11358-1] c06 N73-26100

## OUTPUT

Nonlinear nonsingular feedback shift registers  
[NASA-CASE-NPO-13451-1] c33 N76-14373

## OVENS

Oven for heat treating heat shields  
[NASA-CASE-IMS-04318] c15 N69-27871

Thermocouple, multiple junction reference oven  
[NASA-CASE-FRC-10112-1] c35 N81-26431

## OVERVOLTAGE

Spark gap type protective circuit for fast sensing and removal of overvoltage conditions

[NASA-CASE-XAC-08981] c09 N69-39897  
Sensing circuit for instantaneous reaction to power overloads

[NASA-CASE-GSC-10667-1] c10 N71-33129  
Overvoltage protection network

[NASA-CASE-ARC-10197-1] c33 N74-17929  
Overload protection system for power inverter

[NASA-CASE-NPO-13872-1] c33 N78-10377

## OXAZOLE

Preparation of heterocyclic block copolymer omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c27 N79-22300

The 1,2,4-oxadiazole elastomers --- heat resistant polymers  
[NASA-CASE-ARC-11253-1] c27 N81-17262

## OXIDATION

Silicide coating process and composition for protection of refractory metals from oxidation  
[NASA-CASE-XLE-10910] c18 N71-29040

Automated analysis of oxidative metabolites  
[NASA-CASE-ARC-10469-1] c25 N75-12086

Hydrogen rich gas generator  
[NASA-CASE-NPO-13464-2] c44 N76-29704

Process of forming catalytic surfaces for wet oxidation reactions  
[NASA-CASE-MSC-14831-1] c25 N78-10225

Compound oxidized styrylphosphine --- flame resistant vinyl polymers  
[NASA-CASE-MSC-14903-2] c27 N80-10358

## OXIDATION RESISTANCE

Nickel base alloy with resistance to oxidation at high temperatures and superior stress-rupture properties  
[NASA-CASE-XLE-02082] c17 N71-16026

Method of protecting the surface of a substrate --- by applying aluminate coating  
[NASA-CASE-LBW-11696-1] c37 N75-13261

Duplex aluminized coatings  
[NASA-CASE-LBW-11696-2] c26 N75-19408

High temperature oxidation resistant cermet compositions  
[NASA-CASE-NPO-13666-1] c27 N77-13217

High temperature resistant cermet and ceramic compositions  
[NASA-CASE-NPO-13690-2] c27 N79-14213

Method of making bearing materials --- self-lubricating, oxidation resistant composites for high temperature applications  
[NASA-CASE-LBW-11930-4] c24 N79-17916

NiCrAl ternary alloy having improved cyclic oxidation resistance  
[NASA-CASE-LBW-13339-1] c26 N81-12211

## OXIDATION-REDUCTION REACTIONS

Formulated plastic separators for soluble electrode cells  
[NASA-CASE-LBW-12358-2] c25 N78-25149

Electrochemical cell for rebalancing REDOX flow system  
[NASA-CASE-LBW-13150-1] c44 N79-26474

Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LBW-13148-1] c33 N80-20487

## OXIDE FILMS

Stainless steel panel for selective absorption of solar energy and the method of producing said panel  
[NASA-CASE-MFS-23518-2] c44 N77-31611

Method for depositing an oxide coating --- producing solar panels  
[NASA-CASE-LBW-13131-1] c26 N81-24230

Method of forming oxide coatings  
[NASA-CASE-LBW-13132-1] c44 N81-27616

## OXIDES

Utilization of lithium p-lithiophenoxide to prepare star polymers  
[NASA-CASE-NPO-10998-1] c06 N73-32029

## OXIDIZERS

Electrolytically regenerative hydrogen-oxygen fuel cells  
[NASA-CASE-XLE-04526] c03 N71-11052

Fuel and oxidizer injection head for thrust chamber of reaction engine  
[NASA-CASE-NPO-10046] c28 N72-17843

## OXIMETRY

Ear oximeter for monitoring blood oxygenation and pressure, pulse rate, and pressure pulse curve, using dc and ac amplifiers  
[NASA-CASE-XAC-05422] c04 N71-23185



## OXYGEN

Analytical test apparatus and method for determining oxygen content in alkali liquid metal  
[NASA-CASE-XLE-01997] c06 N71-23527

Heated tungsten filter for removing oxygen impurities from cesium  
[NASA-CASE-INP-04262-2] c17 N71-26773

Method for detecting oxygen in gas by thermoluminescence  
[NASA-CASE-LAR-10668-1] c06 N73-16106

Method for obtaining oxygen from lunar or similar soil  
[NASA-CASE-MSC-12408-1] c46 N74-13011

Nonflammable coating compositions --- for use in high oxygen environments  
[NASA-CASE-MFS-20486-2] c27 N74-17283

**OXYGEN CONSUMPTION**

Respiration analyzing method and apparatus for determining subjects oxygen consumption in aerospace environments  
[NASA-CASE-IFB-08403] c05 N71-11202

**OXYGEN FLUORIDES**

Utilization of oxygen difluoride for syntheses of fluoropolymers  
[NASA-CASE-NPO-12061-1] c27 N76-16228

**OXYGEN METABOLISM**

Metabolic analyzer --- for measuring metabolic rate and breathing dynamics of human beings  
[NASA-CASE-MFS-21415-1] c52 N74-20728

**OXYGEN PLASMA**

Oxygen post-treatment of plastic surface coated with plasma polymerized silicon-containing monomers  
[NASA-CASE-ARC-10915-2] c27 N79-18052

**OXYGEN REGULATORS**

Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c44 N76-27664

**OXYGEN SUPPLY EQUIPMENT**

Self-contained breathing apparatus  
[NASA-CASE-MSC-14733-1] c54 N76-24900

**OZONE**

Thermoluminescent aerosol analysis  
[NASA-CASE-LAR-12046-1] c25 N78-15210

Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c45 N80-14579

Curable liquid hydrocarbon prepolymers containing hydroxyl groups and process for producing same  
[NASA-CASE-NPO-13137-1] c27 N80-32514

## P

## P-N JUNCTIONS

Lithium drifted silicon radiation detector with gold rectifying contacts  
[NASA-CASE-XLE-10529] c14 N69-23191

Semiconductor p-n junction on needle apex to provide stress and strain sensor  
[NASA-CASE-XLA-04980] c09 N69-27422

Improving radiation resistance of silicon semiconductor junctions by doping with lithium  
[NASA-CASE-XGS-07801] c09 N71-12513

Silicon radiation detecting probe design for in vivo biomedical use  
[NASA-CASE-XMS-01177] c05 N71-19440

Electrode connection for n-on-p silicon solar cell  
[NASA-CASE-XLE-04787] c03 N71-20492

Water content in vapor deposition atmosphere for forming n-type and p-type junctions of zinc doped gallium arsenide  
[NASA-CASE-XNP-01961] c26 N71-29156

Method for making semiconductor p-n junction stress and strain sensor  
[NASA-CASE-XLA-04980-2] c14 N72-28438

Resin for protecting p-n semiconductor junction surface  
[NASA-CASE-ERC-10339-1] c18 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] c44 N79-12541

Back wall solar cell  
[NASA-CASE-LEW-12236-2] c44 N79-14528

**P-TYPE SEMICONDUCTORS**

Addition of group 3 elements to silicon semiconductor material for increased resistance to radiation damage in solar cells

[NASA-CASE-XLE-02798] c26 N71-23654

Integrated P-channel MOS gyrator  
[NASA-CASE-MFS-22343-1] c33 N74-34638

**PACKAGES**

Impact testing machine for imparting large impact forces on high velocity packages  
[NASA-CASE-INP-04817] c14 N71-23225

One hand backpack harness  
[NASA-CASE-LAR-10102-1] c05 N72-23085

**PACKAGING**

Characteristics of device for folding thin flexible sheets into compact configuration  
[NASA-CASE-XLA-00137] c15 N70-33180

Method of compactly packaging centrifugally expandable lightweight flexible reflector satellite  
[NASA-CASE-XLA-00138] c31 N70-37981

Development and characteristics of system for skin packaging articles using thermoplastic film heating and vacuum operated equipment  
[NASA-CASE-MFS-20855] c15 N73-27405

Double-sided solar cell package  
[NASA-CASE-NPO-14199-1] c44 N79-25482

**PACKING DENSITY**

Micropacked column for rapid chromatographic analysis using low gas flow rates  
[NASA-CASE-XNP-04816] c06 N69-39936

**PACKINGS (SEALS)**

Fluid seal for rotating shafts  
[NASA-CASE-LEW-11676-1] c37 N76-22541

**PAD**

Lubricated journal bearing  
[NASA-CASE-LEW-11076-3] c37 N75-30562

**PAINTS**

Nitroaniline sulfate, intumescent paints  
[NASA-CASE-ARC-10099-1] c18 N71-15469

Composition and production method of alkali metal silicate paint with ultraviolet reflection properties  
[NASA-CASE-XGS-04799] c18 N71-24183

White paint production by heating impure aluminum silicate clay having low solar absorptance  
[NASA-CASE-XNP-02139] c18 N71-24184

**PALLADIUM**

Electrically conductive palladium containing polyimide films  
[NASA-CASE-LAR-12705-1] c33 N80-24549

**PALLADIUM COMPOUNDS**

Preventing pressure buildup in electrochemical cells by reacting palladium oxide with evolved hydrogen  
[NASA-CASE-XGS-01419] c03 N70-41864

Separation of dissolved hydrogen from water and coating with palladium black  
[NASA-CASE-MSC-13335-1] c06 N72-31140

**PANELS**

Nut and bolt fastener permitting all-directional movement of skin sections with respect to supporting structure  
[NASA-CASE-XLA-01807] c15 N71-10799

Multilayer insulation panels for cryogenic liquid containers  
[NASA-CASE-MFS-14023] c33 N71-25351

Method and apparatus for fabricating solar cell panels  
[NASA-CASE-INP-03413] c03 N71-26726

Method for making pressurized meteoroid penetration detector panels  
[NASA-CASE-XLA-08916] c15 N71-29018

Honeycomb panels of minimal surface, periodic tubule layers  
[NASA-CASE-ERC-10364] c18 N72-25540

Pressurized panel meteoroid detector  
[NASA-CASE-XLA-08916-2] c14 N73-28487

Ultrasonic scanner for radial and flat panels  
[NASA-CASE-MFS-20335-1] c35 N74-10415

Folding structure fabricated of rigid panels  
[NASA-CASE-IFB-02146] c18 N75-27040

Method of making a composite sandwich lattice structure  
[NASA-CASE-LAR-11898-2] c24 N78-17149

Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c44 N78-19599

High visibility air sea rescue panel  
[NASA-CASE-MSC-12564-2] c03 N78-25070

Hexagon solar power panel  
[NASA-CASE-NPO-12148-1] c44 N78-27515

- Aluminium or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-3] c44 N80-16452
- Structural wood panels with improved fire resistance  
[NASA-CASE-ARC-11174-1] c24 N81-13999
- PAPER (MATERIAL)**  
Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c85 N79-17747
- PAPERS**  
Guide for a typewriter  
[NASA-CASE-MFS-15218-1] c37 N77-19457
- PARABOLIC ANTENNAS**  
Device for improving efficiency of parabolic horn antenna system for linearly polarized signals  
[NASA-CASE-XNP-00611] c09 N70-35219
- Drive system for parabolic tracking antenna with reversible motion and minimal backlash  
[NASA-CASE-NPO-10173] c15 N71-24696
- Switchable beamwidth monopulse method and system  
[NASA-CASE-GSC-11924-1] c33 N76-27472
- Telescoping columns --- parabolic antenna support  
[NASA-CASE-LAR-12195-1] c31 N81-27324
- PARABOLIC REFLECTORS**  
Device for improving efficiency of parabolic reflector horn for linearly or circularly polarized waves  
[NASA-CASE-XNP-00540] c09 N70-35382
- Foldable, double cone and parabolic reflector system for solar ray concentration  
[NASA-CASE-XLA-04622] c03 N70-41580
- Self erecting parabolic reflector design for use in space  
[NASA-CASE-XMS-03454] c09 N71-20658
- Plural beam antenna with parabolic reflectors  
[NASA-CASE-GSC-11013-1] c09 N73-19234
- Multimode antenna feed system for microwave and broadband communication  
[NASA-CASE-GSC-11046-1] c07 N73-28013
- Single frequency, two feed dish antenna having switchable beamwidth  
[NASA-CASE-GSC-11968-1] c32 N76-15329
- Sun tracking solar energy collector  
[NASA-CASE-NPO-13921-1] c44 N79-14526
- Horizontally mounted solar collector  
[NASA-CASE-MFS-23349-1] c44 N79-23481
- Solar concentrator  
[NASA-CASE-MFS-23727-1] c44 N80-14473
- Apparatus for and method of compensating dynamic unbalance  
[NASA-CASE-GSC-12550-1] c37 N81-22358
- PARABOLOID MIRRORS**  
Optical data processing system using paraboloidal reflecting surfaces  
[NASA-CASE-GSC-11296-1] c23 N73-30666
- Three mirror glancing incidence system for X-ray telescope  
[NASA-CASE-MFS-21372-1] c74 N74-27866
- PARACHUTE DESCENT**  
Multiple parachute system for landing control of Apollo type spacecraft  
[NASA-CASE-XLA-00898] c02 N70-36804
- Parachute system for lowering manned spacecraft from post-reentry to ocean landing  
[NASA-CASE-XLA-00195] c02 N70-38009
- Piston in bore cutter for severing parachute control lines and sealing cable hole to prevent water leakage into load  
[NASA-CASE-XMS-04072] c15 N70-42017
- Development and operating principles of gas generator for deploying recovery parachutes from space capsules during atmospheric entry  
[NASA-CASE-LAR-10549-1] c31 N73-13898
- PARACHUTE FABRICS**  
Lightweight, variable solidity knitted parachute fabric --- for aerodynamic decelerators  
[NASA-CASE-LAR-10776-1] c02 N74-10034
- System for refurbishing and processing parachutes  
[NASA-CASE-KSC-11042-1] c02 N81-14967
- PARACHUTES**  
System for controlling torque buildup in suspension of gondola connected to balloon by parachute shroud lines  
[NASA-CASE-GSC-11077-1] c02 N73-13008
- Deploy/release system --- model aircraft flight control  
[NASA-CASE-LAR-11575-1] c02 N76-16014
- System for refurbishing and processing parachutes  
[NASA-CASE-KSC-11042-1] c02 N81-14967
- System and method for refurbishing and processing parachutes --- monorial conveyor system  
[NASA-CASE-KSC-11042-2] c02 N81-26073
- PARAGLIDERS**  
Multiple parachute system for landing control of Apollo type spacecraft  
[NASA-CASE-XLA-00898] c02 N70-36804
- PARALLAX**  
Projection system for display of parallax and perspective  
[NASA-CASE-MFS-23194-1] c35 N78-17357
- PARALLEL PLATES**  
Describing instrument capable of measuring true shear viscosity of liquids and viscoelastic materials  
[NASA-CASE-XNP-09462] c14 N71-17584
- Dynamic capacitor having a peripherally driven element and system incorporating the same  
[NASA-CASE-XNP-02899-1] c33 N79-21265
- Multiple plate hydrostatic viscous damper  
[NASA-CASE-LEW-12445-1] c37 N81-22360
- PARALLEL PROCESSING (COMPUTERS)**  
Digital data reformatter/deserializer  
[NASA-CASE-NPO-13676-1] c60 N79-20751
- Massively parallel processor computer  
[NASA-CASE-GSC-12223-1] c60 N79-27864
- PARALLELOGRAMS**  
Unidirectional flexural pivot  
[NASA-CASE-GSC-12622-1] c37 N81-22359
- PARAMETRIC AMPLIFIERS**  
Development of idler feedback system to reduce electronic noise problem in two parametric amplifiers  
[NASA-CASE-LAR-10253-1] c09 N72-25258
- Millimeter wave pumped parametric amplifier  
[NASA-CASE-GSC-11617-1] c33 N74-32660
- PARAMETRIC FREQUENCY CONVERTERS**  
Method and apparatus for quadriphase-shift-key and linear phase modulation  
[NASA-CASE-NPO-14444-1] c33 N81-15192
- PARAWINGS**  
Method for deployment of flexible wing glider from space vehicle with minimum impact and loading  
[NASA-CASE-XMS-00907] c02 N70-41630
- PARKING**  
Automated multi-level vehicle parking system  
[NASA-CASE-NPO-13058-1] c37 N77-22480
- PARTIAL PRESSURE**  
Equipment for measuring partial water vapor pressure in gas tank  
[NASA-CASE-XMS-01618] c14 N71-20741
- PARTICLE ACCELERATION**  
Selector mechanism for mechanical separation and discrimination of high velocity molecular particles  
[NASA-CASE-XLE-01533] c11 N71-10777
- Method and apparatus for use in forming highly collimated beam of microparticles with high charge to mass ratio and injecting beam into electrostatic accelerating tube  
[NASA-CASE-XGS-06628] c24 N71-16213
- PARTICLE ACCELERATOR TARGETS**  
Dispensing targets for ion beam particle generators  
[NASA-CASE-NPO-13112-1] c73 N74-26767
- Deuterium pass through target --- neutron emitting target  
[NASA-CASE-LEW-11866-1] c72 N76-15860
- Closed loop spray cooling apparatus --- for particle accelerator targets  
[NASA-CASE-LEW-11981-1] c31 N78-17237
- PARTICLE BEAMS**  
Particle beam power density detection and measurement apparatus  
[NASA-CASE-XLI-00243] c14 N70-38602
- Doppler shift system --- system for measuring velocities of radiating particles  
[NASA-CASE-BQN-10740-1] c72 N74-19310
- PARTICLE COLLISIONS**  
Momentum-velocity analyzer for measuring minute space particles  
[NASA-CASE-XMS-04201] c14 N71-22990
- PARTICLE DENSITY (CONCENTRATION)**  
Particle detector for measuring micrometeoroid velocity in space

- [NASA-CASE-XLA-00495] c14 N70-41332
- PARTICLE EMISSION**  
Mosaic semiconductor radiation detector and position indicator systems engineering for low energy particles  
[NASA-CASE-XGS-03230] c14 N71-23401  
Apparatus for detecting particle emission lower than noise level of multiplier tube  
[NASA-CASE-XLA-07813] c14 N72-17328
- PARTICLE ENERGY**  
Particle detector for indicating incidence and energy of minute space particles  
[NASA-CASE-XLA-00135] c14 N70-33322  
Particulate and aerosol detector  
[NASA-CASE-LAR-11434-1] c35 N76-22509
- PARTICLE MASS**  
Cosmic dust analyzer  
[NASA-CASE-MSC-13802-2] c35 N76-15431  
Microbalance --- for measuring particle mass  
[NASA-CASE-MSC-11242] c35 N78-17358
- PARTICLE MOTION**  
Moving particle composition analyzer  
[NASA-CASE-GSC-11889-1] c35 N76-16353
- PARTICLE PRODUCTION**  
Production of I-123  
[NASA-CASE-LEW-11390-3] c25 N76-29379
- PARTICLE SIZE DISTRIBUTION**  
Micropacked column for rapid chromatographic analysis using low gas flow rates  
[NASA-CASE-XNP-04816] c66 N69-39936  
Apparatus for producing hydrocarbon slurry containing small particles of magnesium for use as jet aircraft fuel  
[NASA-CASE-XLE-00010] c15 N70-33382  
Production of high strength refractory compounds and microconstituents into refractory metal matrix  
[NASA-CASE-XLE-03940] c18 N71-26153  
Grain refinement control in TIG arc welding  
[NASA-CASE-MSC-19095-1] c37 N75-19683  
Forward-scatter polarimeter for determining the gaseous depolarization factor in the presence of polluting polydispersed particles  
[NASA-CASE-NPO-13756-1] c35 N76-14434  
Apparatus for handling micron size range particulate material  
[NASA-CASE-NPO-10151] c37 N78-17386  
Frequency-scanning particle size spectrometer  
[NASA-CASE-NPO-13606-2] c35 N80-18364  
Process for preparation of large-particle-size monodisperse latexes  
[NASA-CASE-MPS-25000-1] c25 N81-19242  
Polyvinyl alcohol battery separator containing inert filler --- alkaline batteries  
[NASA-CASE-LEW-13556-1] c44 N81-27615
- PARTICLE TRAJECTORIES**  
Micrometeoroid velocity and trajectory analyzer  
[NASA-CASE-GSC-11892-1] c35 N76-15433  
Direction sensitive laser velocimeter --- determining the direction of particles using a helium-neon laser  
[NASA-CASE-LAR-12177-1] c36 N81-24422
- PARTICLES**  
Development of device for separating, collecting, and viewing soil particles  
[NASA-CASE-XNP-09770] c15 N71-20440  
Development of apparatus for producing metal powder particles of controlled size  
[NASA-CASE-XLE-06461-2] c17 N72-28535  
Particle parameter analyzing system --- x-y plotter circuits and display  
[NASA-CASE-XLE-06094] c33 N78-17293  
Surfactant-assisted liquefaction of particulate carbonaceous substances  
[NASA-CASE-NPO-13904-1] c25 N79-11152
- PARTICULATE SAMPLING**  
Development and operation of apparatus for sampling particulates in gases in upper atmosphere  
[NASA-CASE-BQN-10037-1] c14 N73-27376  
Electrophoretic sample insertion --- device for uniformly distributing samples in flow path  
[NASA-CASE-MPS-21395-1] c25 N74-26948  
Sampler of gas borne particles  
[NASA-CASE-NPO-13396-1] c35 N76-18401  
Fine particulate capture device  
[NASA-CASE-LEW-11583-1] c35 N79-17192  
Biocontamination and particulate detection system  
[NASA-CASE-NPO-13953-1] c35 N79-28527
- PASSAGEWAYS**  
Space expandable tether device for use as passageway between two docked spacecraft  
[NASA-CASE-XMS-10993] c15 N71-28936
- PASSIVE SATELLITES**  
Erectable, inflatable, radio signal reflecting passive communication satellite  
[NASA-CASE-XLA-00210] c30 N70-40309  
Apparatus for measuring backscatter and transmission characteristics of sample segment of large spherical passive satellites  
[NASA-CASE-XGS-02608] c07 N70-41678  
Forming inflatable panels erectable in space for passive communication satellite  
[NASA-CASE-XLA-03497] c15 N71-23052
- PATIENTS**  
Stretcher with rigid head and neck support with capability of supporting immobilized person in vertical position for removal from vehicle hatch to exterior also useful as splint stretcher  
[NASA-CASE-XMF-06589] c05 N71-23159
- PATTERN RECOGNITION**  
Roughness detector for recording surface pattern of irregularities  
[NASA-CASE-XLA-00203] c14 N70-34161  
Auditory display for the blind  
[NASA-CASE-BQN-10832-1] c71 N74-21014  
Optical signature generating and correlating apparatus  
[NASA-CASE-NPO-15226-1] c74 N81-19899
- PAYLOAD RETRIEVAL (STS)**  
Simulator method and apparatus for practicing the mating of an observer-controlled object with a target  
[NASA-CASE-MPS-23052-2] c74 N79-13855  
Satellite retrieval system  
[NASA-CASE-MPS-25403-1] c18 N81-24164
- PAYLOADS**  
Plastic foam generator for space vehicle instrument payload package flotation in water landing  
[NASA-CASE-XLA-00838] c03 N70-36778  
Stage separation system for spinning vehicles and payloads  
[NASA-CASE-XLA-02132] c31 N71-10582  
Payload/spent rocket engine case separation system  
[NASA-CASE-XLA-05369] c31 N71-15687  
High velocity guidance and spin stabilization gyro controlled jet reaction system for launch vehicle payloads  
[NASA-CASE-XLA-01339] c31 N71-15692  
Payload soft landing system using stowable gas bag  
[NASA-CASE-XLA-09881] c31 N71-16085  
Zero gravity apparatus utilizing pneumatic decelerating means to create payload subjected to zero gravity conditions by dropping its height  
[NASA-CASE-XMP-06515] c14 N71-23227
- PCM TELEMETRY**  
Variable time constant, wide frequency range smoothing network for noise removal from pulse chains  
[NASA-CASE-XGS-01983] c10 N70-41964  
Data acquisition and processing system with buffer storage and timing device for magnetic tape recording of PCM data and timing information  
[NASA-CASE-NPO-12107] c08 N71-27255  
High speed direct binary to binary coded decimal converter for use in PCM telemetry systems  
[NASA-CASE-KSC-10326] c08 N72-21197
- PEELING**  
Wire stripper  
[NASA-CASE-FEC-10111-1] c37 N79-10419
- PELLETS**  
Supporting structure for simultaneous exposure of pellets to X rays  
[NASA-CASE-XNP-06031] c15 N71-15606
- PELLTIER EFFECTS**  
Use of silicon controlled rectifier shorting circuit to protect thermoelectric generator source from thermal destruction  
[NASA-CASE-XGS-04808] c03 N69-25146
- PENETRANTS**  
Dye penetrant and technique for nondestructive tests of solid surfaces contacted by liquid oxygen  
[NASA-CASE-XMP-02221] c18 N71-27170

**PENETRATION**

Method and device for detection of surface discontinuities or defects  
[NASA-CASE-MSC-14187-1] c35 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] c31 N81-14137

**PENETROMETERS**

Development and characteristics of penetrometer for measuring physical properties of lunar surface  
[NASA-CASE-XLA-00934] c14 N71-22765

Portable penetrometer for analyzing soil characteristics  
[NASA-CASE-MFS-20774] c14 N73-19420

Auger-type soil penetrometer for burrowing into soil formations  
[NASA-CASE-XMP-05530] c14 N73-32321

Penetrometer --- for determining load bearing characteristics of inclined surfaces  
[NASA-CASE-NPO-11103-1] c35 N77-27367

Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c43 N79-25443

**PERCEPTION**

Measuring method for cutaneous perception using instrument with elongated tubular housing  
[NASA-CASE-MSC-13609-1] c05 N72-25122

**PERFLUORO COMPOUNDS**

Chemical synthesis of hydroxy terminated perfluoro ethers as intermediates for highly fluorinated polyurethane resins  
[NASA-CASE-NPO-10768] c06 N71-27254

Perfluoro polyether acyl fluorides  
[NASA-CASE-NPO-10765] c06 N72-20121

Reaction of polyperfluoropolyenes with fluorine to produce saturated polymer chain or create reactive sites on chain  
[NASA-CASE-NPO-10862] c06 N72-22107

Silphenylenesiloxane polymer with in-chain perfluoroalkyl groups  
[NASA-CASE-MFS-26979] c06 N72-25151

Polymerization of perfluorobutadiene  
[NASA-CASE-NPO-10863-2] c06 N72-25152

Formation of polyurethane resins from hydroxy terminated perfluoro ethers  
[NASA-CASE-NPO-10768-2] c06 N72-27144

Process for preparing disilanolis with in-chain perfluoroalkyl groups  
[NASA-CASE-MFS-20979-2] c06 N73-32030

Perfluoro alkylene dioxy-bis-(4-phthalic anhydrides and oxy-bis-(perfluoroalkyleneoxyphthalic anhydrides  
[NASA-CASE-MFS-22356-1] c23 N75-30256

Precision heat forming of tetrafluoroethylene tubing  
[NASA-CASE-MSC-18430-1] c31 N80-17292

Preparation of perfluorinated imidoamidoximes --- for eventual preparation of heat and chemical resistant polymers  
[NASA-CASE-ARC-11267-1] c23 N80-26386

Preparation of perfluorinated 1,2,4-oxadiazoles --- heat and chemical resistant polymers  
[NASA-CASE-ARC-11267-2] c25 N80-26407

**PERFLUOROALKANE**

Preparation of heterocyclic block copolymer omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c27 N79-22300

**PERFORATED PLATES**

Helium outgassing process for fused glass coating on ion accelerator grid  
[NASA-CASE-LBW-10278-1] c15 N71-28582

**PERFORATED SHELLS**

Method of fabricating an article with cavities --- with thin bottom walls  
[NASA-CASE-LAR-10318-1] c31 N74-18089

**PERFORMANCE PREDICTION**

Failure detection and control means for improved drift performance of a gimbaled platform system  
[NASA-CASE-MFS-23551-1] c04 N76-26175

**PERFORMANCE TESTS**

Flexible, frangible electrochemical cell and package for operation in low temperature environment  
[NASA-CASE-XGS-10010] c03 N72-15586

Test method and equipment for identifying faulty cells or connections in solar cell assemblies  
[NASA-CASE-NPO-10401] c03 N72-20C33

Development of apparatus for detonating explosive devices in order to determine forces generated and detonation propagation rate  
[NASA-CASE-LAR-10800-1] c33 N72-27959

**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] c35 N77-20401

**PERMEABILITY**

Water insoluble, cationic permselective membrane  
[NASA-CASE-NFO-11091] c18 N72-22567

System for detecting substructure microfractures and method therefore  
[NASA-CASE-NPO-14192-1] c39 N80-10507

Dialysis system --- using ion exchange resin membranes permeable to urea molecules  
[NASA-CASE-NPO-14101-1] c52 N80-14687

Geological assessment probe  
[NASA-CASE-NPO-14558-1] c46 N80-24906

Absorbent product and articles made therefrom --- for collection of human wastes  
[NASA-CASE-MSC-18223-1] c24 N81-16127

**PEROXIDES**

Low pressure perfluorobutadiene polymerization with peroxide catalysts  
[NASA-CASE-NFO-10447] c06 N70-11252

**PEBSPIRATION**

Manufacturing process for making perspiration resistant-stress resistant biopotential electrode  
[NASA-CASE-MSC-90153-2] c05 N72-25120

Sweat collection capsule  
[NASA-CASE-ARC-11031-1] c52 N81-29763

**PERTURBATION**

Absorbing gas reactivity control system for minimizing power distribution and perturbation in nuclear reactors  
[NASA-CASE-XLE-04599] c22 N72-20597

**PERTURBATION THEORY**

Dual wavelength scanning Doppler velocimeter --- without perturbation of flow fields  
[NASA-CASE-ARC-10637-1] c35 N75-16783

**PHASE COHERENCE**

Apparatus for estimating amplitude and sign of phase difference or time lag between two signals  
[NASA-CASE-NPO-11203] c10 N72-20224

Coherent receiver employing nonlinear coherence detection for carrier tracking  
[NASA-CASE-NFO-11921-1] c32 N74-30523

**PHASE CONTROL**

System designed to reduce time required for obtaining synchronization in data communication with spacecraft utilizing pseudonoise codes  
[NASA-CASE-NPO-10214] c10 N71-26577

Wideband voltage controlled oscillator with high phase stability  
[NASA-CASE-XLA-03893] c10 N71-27271

Voltage controlled oscillator circuit for two-phase induction motor control  
[NASA-CASE-MFS-21465-1] c10 N73-32145

System for generating timing and control signals  
[NASA-CASE-NPO-13125-1] c33 N75-19519

Digital numerically controlled oscillator  
[NASA-CASE-MSC-16747-1] c33 N81-17349

Combinational logic for generating gate drive signals for phase control rectifiers  
[NASA-CASE-MFS-25208-1] c33 N81-27402

**PHASE DEMODULATORS**

Development of phase demodulation system with two phase locked loops  
[NASA-CASE-XMP-00777] c10 N71-19469

Linear phase demodulator including a phase locked loop with auxiliary feedback loop  
[NASA-CASE-GSC-12018-1] c33 N77-14334

**PHASE DETECTORS**

Detector assembly for discriminating first signal with respect to presence or absence of second signal at time of occurrence of first signal  
[NASA-CASE-XMP-00701] c09 N70-40272

Bipolar phase detector and corrector for split phase PCM data signals  
[NASA-CASE-XGS-01590] c07 N71-12392

High speed phase detector design indicating phase relationship between two square wave input signals  
[NASA-CASE-XMP-01306-2] c09 N71-24596

- Phase protection system for ac power lines  
[NASA-CASE-MSC-17832-1] c33 N74-14956
- Low distortion automatic phase control circuit  
--- voltage controlled phase shifter  
[NASA-CASE-MFS-21671-1] c33 N74-22885
- Correlation type phase detector --- with time  
correlation integrator for frequency  
multiplexed signals  
[NASA-CASE-GSC-11744-1] c33 N75-26243
- Impact position detector for outer space particles  
[NASA-CASE-GSC-11829-1] c35 N75-27331
- Frequency discriminator and phase detector circuit  
[NASA-CASE-NPO-11515-1] c33 N77-13315
- Phase substitution of spare converter for a  
failed one of parallel phase staggered  
converters  
[NASA-CASE-NPO-13812-1] c33 N77-30365
- Apparatus and method for stabilized phase  
detection for binary signal tracking loops  
[NASA-CASE-MSC-16461-1] c33 N79-11313
- Receiving and tracking phase modulated signals  
[NASA-CASE-MSC-16170-2] c32 N81-16338
- High stability buffered phase comparator  
[NASA-CASE-GSC-12645-1] c33 N81-31482
- PHASE DEVIATION**
- System for stabilizing cable phase delay  
utilizing a coaxial cable under pressure  
[NASA-CASE-NPO-13138-1] c33 N74-17927
- PHASE LOCK DEMODULATORS**
- Phase locked demodulator with bandwidth  
switching amplifier circuit  
[NASA-CASE-XNP-01107] c10 N71-28659
- PHASE LOCKED SYSTEMS**
- System for phase locking onto carrier frequency  
signal located within receiver bandpass  
[NASA-CASE-XGS-04994] c09 N69-21543
- Phase locked loop with sideband rejecting  
properties in continuous wave tracking radar  
[NASA-CASE-XNP-02723] c07 N70-41680
- Development of automatic frequency  
discriminators and control for phase lock loop  
providing frequency preset capabilities  
[NASA-CASE-XMF-08665] c10 N71-19467
- Development and characteristics of burst  
synchronization detection system  
[NASA-CASE-XMS-05605-1] c10 N71-19468
- Development of phase demodulation system with  
two phase locked loops  
[NASA-CASE-XNP-00777] c10 N71-19469
- Diversity receiving system with diversity phase  
lock  
[NASA-CASE-XGS-01222] c10 N71-20841
- Phase locked phase modulation system with  
voltage controlled oscillator for final phase  
linearity  
[NASA-CASE-XNP-05382] c10 N71-23544
- Video sync processor with phase locked system  
[NASA-CASE-KSC-10002] c10 N71-25865
- Characteristics of data-aided carrier tracking  
loop used for tracking carrier in angle  
modulated communications system  
[NASA-CASE-NPO-11282] c10 N73-16205
- Filter for third order phase locked loops in  
signal receivers  
[NASA-CASE-NPO-11941-1] c10 N73-27171
- Improved phase lock loop for receiver in  
multichannel telemetry system with suppressed  
carrier  
[NASA-CASE-NPO-11593-1] c07 N73-28012
- Automatic carrier acquisition system for phase  
locked loop receiver  
[NASA-CASE-NPO-11628-1] c07 N73-30113
- Phase-locked servo system --- for synchronizing  
the rotation of slip ring assembly  
[NASA-CASE-MFS-22073-1] c33 N75-13139
- Low speed phaselock speed control system --- for  
brushless dc motor  
[NASA-CASE-GSC-11127-1] c09 N75-24758
- Digital phase-locked loop  
[NASA-CASE-GSC-11623-1] c33 N75-25040
- Telemetry synchronizer  
[NASA-CASE-GSC-11868-1] c17 N76-22245
- Discriminator aided phase lock acquisition for  
suppressed carrier signals  
[NASA-CASE-NPO-14311-1] c32 N79-14276
- Frequency translating phase conjugation circuit  
for active retrodirective antenna array ---  
microwave transmission  
[NASA-CASE-NPO-14536-1] c32 N81-14185
- PN lock indicator for dithered PN code tracking  
loop  
[NASA-CASE-NPO-14435-1] c33 N81-33405
- PHASE MODULATION**
- Plural channel data transmission system with  
quadrature modulation and complementary  
demodulation  
[NASA-CASE-XAC-06302] c08 N71-19763
- Adaptive notch filter, using modulation  
techniques for reversed phase noise signal  
[NASA-CASE-XMF-01892] c10 N71-22986
- Phase locked phase modulation system with  
voltage controlled oscillator for final phase  
linearity  
[NASA-CASE-XNP-05382] c10 N71-23544
- Scanning signal phase and amplitude electronic  
control device with hybrid T waveguide junction  
[NASA-CASE-NPO-10302] c10 N71-26142
- Phase modulator with tuned variable length  
electrical lines including coupling and  
varactor diode circuits  
[NASA-CASE-MSC-13201-1] c07 N71-28429
- Multicarrier communications system for  
transmitting modulated signals from single  
transmitter  
[NASA-CASE-NPO-11548] c07 N73-26118
- Decision feedback loop for tracking a polyphase  
modulated carrier  
[NASA-CASE-NPO-13103-1] c32 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] c32 N75-24981
- Phase modulating with odd and even finite power  
series of a modulating signal  
[NASA-CASE-LAR-11607-1] c32 N77-14292
- Swept group delay measurement  
[NASA-CASE-NPO-13909-1] c33 N78-25319
- Quadrature demodulation  
[NASA-CASE-GSC-12137-1] c33 N78-32338
- Closed Loop solar array-ion thruster system with  
power control circuitry  
[NASA-CASE-LEW-12780-1] c20 N79-20179
- A fiber optic transmission line stabilization  
apparatus and method  
[NASA-CASE-NPO-15036-1] c74 N80-34250
- Receiving and tracking phase modulated signals  
[NASA-CASE-MSC-16170-2] c32 N81-16338
- Baseband signal combiner for large aperture  
antenna array  
[NASA-CASE-NPO-14641-1] c32 N81-29308
- Doppler radar having phase modulation of both  
transmitted and reflected return signals ---  
range-finding  
[NASA-CASE-MSC-18675-1] c32 N81-29312
- PHASE SHIFT**
- Bipolar phase detector and corrector for split  
phase FCM data signals  
[NASA-CASE-XGS-01590] c07 N71-12392
- Left and right hand circular electromagnetic  
polarization excitation by phase shifter and  
hybrid networks  
[NASA-CASE-GSC-10021-1] c09 N71-24595
- Pulse code modulated data from frequency  
multiplex communications by digital phase  
shift or carrier  
[NASA-CASE-NPO-11338] c08 N72-25208
- Time domain phase measuring apparatus  
[NASA-CASE-GSC-12228-1] c33 N79-10338
- Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c37 N81-17432
- PHASE SHIFT CIRCUITS**
- Design of gyrator circuit using operational  
amplifiers to replace ungrounded inductors  
[NASA-CASE-XAC-10608-1] c09 N71-12517
- Phase shifting circuit for selecting phase of  
input signal  
[NASA-CASE-ARC-10269-1] c10 N72-16172
- Continuously variable, voltage-controlled phase  
shifter  
[NASA-CASE-NPO-11129] c09 N72-33204
- Voltage controlled oscillator circuit for  
two-phase induction motor control  
[NASA-CASE-MFS-21465-1] c10 N73-32145
- Low distortion automatic phase control circuit  
--- voltage controlled phase shifter  
[NASA-CASE-MFS-21671-1] c33 N74-22885
- A fiber optic transmission line stabilization  
apparatus and method

- [NASA-CASE-NPO-15036-1] c74 N80-34250  
Pseudonoise code tracking loop  
[NASA-CASE-MSC-18035-1] c32 N81-15179
- PHASE SHIFT KEYING**  
Decision feedback loop for tracking a polyphase modulated carrier  
[NASA-CASE-NPO-13103-1] c32 N74-20811  
Differential phase shift keyed communication system  
[NASA-CASE-MSC-14065-1] c32 N74-26654  
Differential phase shift keyed signal resolver  
[NASA-CASE-MSC-14066-1] c33 N74-27705  
Unbalanced quadriphase demodulator  
[NASA-CASE-MSC-14840-1] c32 N77-24331  
Method and apparatus for quadriphase-shift-key and linear phase modulation  
[NASA-CASE-NPO-14444-1] c33 N81-15192
- PHASE SWITCHING INTERFEROMETERS**  
Interferometric tuning acquisition and tracking radar antenna system  
[NASA-CASE-IMS-09610] c07 N71-24625
- PHASE TRANSFORMATIONS**  
Magnetohydrodynamic generator for mixing nonconductive gas and liquid metal mist to form slugs  
[NASA-CASE-XLE-02083] c03 N69-39583  
Method and feed system for separating and orienting liquid and vapor phases of liquid propellants in zero gravity environment  
[NASA-CASE-XLE-01182] c27 N71-15635
- PHASE VELOCITY**  
Ultrasonic calibration device --- for producing changes in acoustic attenuation and phase velocity  
[NASA-CASE-LAR-11435-1] c35 N76-15432
- PHASED ARRAYS**  
Development of phase control coupling for use with phased array antenna  
[NASA-CASE-ERC-10285] c10 N73-16206  
Phased array antenna control  
[NASA-CASE-MSC-14939-1] c32 N79-11264  
Phase conjugation method and apparatus for an active retrodirective antenna array  
[NASA-CASE-NPO-13641-1] c32 N79-24210  
Complementary cross-slot phased array antenna  
[NASA-CASE-MSC-18532-1] c32 N80-29543  
Coaxial phased array antenna  
[NASA-CASE-MSC-16800-1] c32 N81-14187
- PHASED LOCKED SYSTEMS**  
Bit synchronization system using digital data transition tracking phased locked loop  
[NASA-CASE-NPO-10844] c07 N72-20140  
Digital second-order phase-locked loop  
[NASA-CASE-NPO-11905-1] c33 N74-12887  
Linear phase demodulator including a phase locked loop with auxiliary feedback loop  
[NASA-CASE-GSC-12018-1] c33 N77-14334
- PHENOLIC RESINS**  
Bonding method in the manufacture of continuous regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c24 N75-30260
- PHENOLS**  
Utilization of lithium p-lithiphenoxide to prepare star polymers  
[NASA-CASE-NPO-10998-1] c06 N73-32029  
Method and device for the detection of phenol and related compounds --- in an electrochemical cell  
[NASA-CASE-LEW-12513-1] c25 N79-22235
- PHONOCARDIOGRAPHY**  
Phonocardiogram simulator producing electrical voltage waves to control amplitude and duration between simulated sounds  
[NASA-CASE-IKS-10804] c05 N71-24606  
Vibrophonocardiograph comprising low weight and small volume piezoelectric microphone with amplifier having high input impedance for high sensitivity and low frequency response  
[NASA-CASE-XPR-07172] c05 N71-27234
- PHOSPHATES**  
Low concentration alkaline solution treatment of aluminum with metal phosphate surface coatings to improve chemical bonding and reduce coating weight  
[NASA-CASE-XLA-01995] c18 N71-23047
- PHOSPHAZENES**  
Process for the preparation of polycarboranylphosphazenes --- thermal insulation  
[NASA-CASE-ARC-11176-2] c27 N81-27271
- PHOSPHINES**  
Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-1] c27 N78-32256  
Compound oxidized styrylphosphine --- flame resistant vinyl polymers  
[NASA-CASE-MSC-14903-2] c27 N80-10358  
Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-3] c27 N80-24438  
Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c27 N81-31364
- PHOSPHONITRILES**  
Chemical synthesis of thermally stable organometallic polymers with divalent metal ion and tetraphenylphosphonitrilic units  
[NASA-CASE-HQN-10364] c06 N71-27363
- PHOSPHORS**  
Cathode ray tube with coating of phosphor and cobalt oxides  
[NASA-CASE-ERC-10468] c09 N72-20206
- PHOSPHORUS COMPOUNDS**  
Phosphorus-containing bisimide resins  
[NASA-CASE-ARC-11321-1] c27 N81-27272
- PHOSPHORUS POLYMERS**  
Carboranylclotriphosphazenes and their polymers --- thermal insulation  
[NASA-CASE-ARC-11176-1] c27 N80-21533  
Process for the preparation of polycarboranylphosphazenes --- thermal insulaticn  
[NASA-CASE-ARC-11176-2] c27 N81-27271
- PHOTOABSORPTION**  
Photomechanical transducer  
[NASA-CASE-NFO-14363-1] c39 N81-25400
- PHOTOCATHODES**  
Spectrometer using photoelectric effect to obtain spectral data  
[NASA-CASE-XNP-04161] c14 N71-15599  
III-V photocathode with nitrogen doping for increased quantum efficiency  
[NASA-CASE-NFO-12134-1] c33 N76-31409
- PHOTOCHEMICAL REACTIONS**  
Apparatus for photon excited catalysis  
[NASA-CASE-NPO-13566-1] c25 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] c25 N78-25148  
Vitra-violet process for producing flame resistant polyamides and products produced thereby --- protective clothing for high oxygen environments  
[NASA-CASE-MSC-16074-1] c27 N80-26446
- PHOTOCONDUCTIVE CELLS**  
Two-dimensional radiant energy array computers and computing devices  
[NASA-CASE-GSC-11839-1] c60 N77-14751  
Plural output optometric sample cell and analysis system  
[NASA-CASE-NFO-10233-1] c74 N78-33913
- PHOTOCONDUCTIVITY**  
Photofabrication techniques for selective removal of conductive metals oxide coatings from nonconductive substrates  
[NASA-CASE-ERC-10108] c06 N72-21094
- PHOTOCONDUCTORS**  
Electronic divider and multiplier for analog electric signals  
[NASA-CASE-XPR-05637] c09 N71-19480
- PHOTODIODES**  
Shock isolator for operating a diode laser on a closed-cycle refrigerator  
[NASA-CASE-GSC-12297-1] c37 N79-28549
- 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] c25 N78-25148
- PHOTOELECTRIC CELLS**  
Sun tracker with rotatable plane-parallel plate and two photocells  
[NASA-CASE-XGS-01159] c21 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] c91 N74-13130  
Noncontacting method for measuring angular  
deflection  
[NASA-CASE-LAR-12178-1] c74 N80-21138
- PHOTOELECTRIC EFFECT**  
Spectrometer using photoelectric effect to  
obtain spectral data  
[NASA-CASE-XNP-04161] c14 N71-15599
- PHOTOELECTRIC EMISSION**  
High resolution threshold photoelectron  
spectroscopy by electron attachment  
[NASA-CASE-NPO-14078-1] c72 N80-14877
- PHOTOELECTRIC MATERIALS**  
Light radiation direction indicator with baffle  
of two parallel grids  
[NASA-CASE-XNP-03930] c14 N69-24331  
Use of thin film light detector  
[NASA-CASE-NPO-11432-2] c35 N74-15090
- PHOTOELECTRICITY**  
Photoelectric detection system  
[NASA-CASE-MFS-23776-1] c74 N80-25134
- PHOTOELECTRON SPECTROSCOPY**  
Photoelectron spectrometer with means for  
stabilizing sample surface potential  
[NASA-CASE-NPO-13772-1] c35 N78-10429  
High resolution threshold photoelectron  
spectroscopy by electron attachment  
[NASA-CASE-NPO-14078-1] c72 N80-14877  
Low intensity X-ray and gamma-ray imaging  
spectrometer  
[NASA-CASE-GSC-12587-1] c35 N80-29635
- PHOTOGRAPHIC EMULSIONS**  
Method for applying photographic resists to  
otherwise incompatible substrates  
[NASA-CASE-MSC-18107-1] c27 N81-25209
- PHOTOGRAPHIC EQUIPMENT**  
Camera protecting device for use in  
photographing rocket engine nozzles or other  
engine components  
[NASA-CASE-NPO-10174] c14 N71-18465  
Method of treating the surface of a glass member  
[NASA-CASE-GSC-12110-1] c27 N77-32308  
Film advance indicator  
[NASA-CASE-LAR-12474-1] c35 N80-31774  
System for forming a quadrified image comprising  
angularly related fields of view of a three  
dimensional object  
[NASA-CASE-NPO-14219-1] c74 N81-17886
- PHOTOGRAPHIC FILM**  
Longitudinal film gate and lock mechanism for  
securing film in motion picture cameras under  
vibration and high acceleration loads  
[NASA-CASE-LAR-10686] c14 N71-28535  
Mechanical exposure interlock device for  
preventing film overexposure in oscilloscope  
camera  
[NASA-CASE-LAR-10319-1] c14 N73-32322  
Optical noise suppression device and method ---  
laser light exposing film  
[NASA-CASE-MSC-12640-1] c74 N76-31998  
Selective image area control of X-ray film  
exposure density  
[NASA-CASE-NPO-13808-1] c35 N78-15461
- PHOTOGRAPHIC MEASUREMENT**  
Photographic method for measuring viscoelastic  
strain in solid propellants and other materials  
[NASA-CASE-XNP-01153] c32 N71-17645  
Impact measuring technique for determining size  
of hypervelocity projectiles  
[NASA-CASE-LAR-10913] c14 N72-16282  
TV fatigue crack monitoring system  
[NASA-CASE-LAR-11490-1] c39 N78-16387
- PHOTOGRAPHIC PROCESSING**  
Method and apparatus for producing an image from  
a transparent object  
[NASA-CASE-GSC-11989-1] c74 N77-28532  
Method of obtaining intensified image from  
developed photographic films and plates  
[NASA-CASE-MFS-23461-1] c35 N79-10389
- PHOTOGRAPHIC PROCESSING EQUIPMENT**  
Drying chamber for photographic sheet material  
[NASA-CASE-GSC-11074-1] c14 N73-28489
- PHOTOGRAPHIC RECORDING**  
Photographing surface flow patterns on wind  
tunnel test models  
[NASA-CASE-XLA-01353] c14 N70-41366  
Development of focused image holography with  
extended sources  
[NASA-CASE-ERC-10019] c16 N71-15551  
Recording and reconstructing focused image  
holograms  
[NASA-CASE-ERC-10017] c16 N71-15567  
Method and means for recording and  
reconstructing holograms without use of  
reference beam  
[NASA-CASE-ERC-10020] c16 N71-26154  
Multiple image storing system for obtaining  
holographic record on film of high speed  
projectile  
[NASA-CASE-MFS-20596] c14 N72-17324  
Phototropic composition of matter with  
sensitivity to ultraviolet light and usable  
for producing positive photographic images  
[NASA-CASE-XGS-03736] c14 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] c25 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] c74 N81-17886
- PHOTOINTERPRETATION**  
Constant magnification optical tracking system  
[NASA-CASE-NFO-14813-1] c74 N80-24152
- PHOTOIONIZATION**  
Multichannel photoionization chamber for  
measuring absorption, photoionization yield,  
and coefficients of gases  
[NASA-CASE-ERC-10044-1] c14 N71-27090
- PHOTOLYSIS**  
Solar photolysis of water  
[NASA-CASE-NPO-13675-1] c44 N77-32580  
Solar photolysis of water  
[NASA-CASE-NPO-14126-1] c44 N79-11470
- PHOTOMAPPING**  
Window defect planar mapping technique  
[NASA-CASE-MSC-19442-1] c74 N77-10899
- PHOTOMASKS**  
Method for applying photographic resists to  
otherwise incompatible substrates  
[NASA-CASE-MSC-18107-1] c27 N81-25209
- PHOTOMECHANICAL EFFECT**  
Photomechanical transducer  
[NASA-CASE-NPO-14363-1] c39 N81-25400
- PHOTOMETERS**  
Michelson interferometer with photodetector for  
optical direction sensing  
[NASA-CASE-NPO-10320] c14 N71-17655  
Indicator device for monitoring charge of wet  
cell battery, using semiconductor light  
emitter and photodetector  
[NASA-CASE-NPO-10194] c03 N71-20407  
Electro-optical detector for determining  
position of light source  
[NASA-CASE-XNP-01059] c23 N71-21821  
Photometric flow meter with comparator reference  
beams  
[NASA-CASE-XGS-01331] c14 N71-22996  
Development of radiant energy sensor to detect  
the radiant energy wavelength bands from  
portions of radiating body  
[NASA-CASE-ERC-10174] c14 N72-25409  
Characteristics of infrared photodetectors  
manufactured from semiconductor material  
irradiated by electron beam  
[NASA-CASE-LAR-10728-1] c14 N73-12445  
Chromato-fluorographic drug detector --- device  
for detecting and recording fluorescent  
properties of materials  
[NASA-CASE-ABC-10633-1] c25 N74-26947  
The 2 deg/90 deg laboratory scattering photometer  
--- particulate refractivity in hydrosols  
[NASA-CASE-GSC-12088-1] c74 N78-13874  
Magneto-optic detection system with noise  
cancellation  
[NASA-CASE-NPO-11954-1] c35 N78-29421
- PHOTOMICROGRAPHY**  
Stereo photomicrography system with stereo  
microscope for viewing specimen at various  
magnifications  
[NASA-CASE-LAR-10176-1] c14 N72-20380  
Hand-held, lightweight, portable photomicroscope  
[NASA-CASE-ABC-10468-1] c14 N73-33361

**PHOTOMULTIPLIER TUBES**

- Photomultiplier detector of Canopus for spacecraft attitude control  
[NASA-CASE-XNP-03914] c21 N71-10771
- Electronic divider and multiplier for analog electric signals  
[NASA-CASE-XFR-05637] c09 N71-19480
- Apparatus for detecting particle emission lower than noise level of multiplier tube  
[NASA-CASE-XLA-07813] c14 N72-17328
- Scan oscilloscope for mapping surface sensitivity of photomultiplier tube  
[NASA-CASE-LAR-10320-1] c09 N72-23172
- Design and development of light sensing device for controlling orientation of object relative to sun or other light source  
[NASA-CASE-NPO-11201] c14 N72-27409
- Photomultiplier circuit including means for rapidly reducing the sensitivity thereof --- and protection from radiation damage  
[NASA-CASE-ARC-10593-1] c33 N74-27682

**PHOTON BEAMS**

- Apparatus for photon excited catalysis  
[NASA-CASE-NPO-13566-1] c25 N77-32255

**PHOTONS**

- Solar cell collector  
[NASA-CASE-LEW-12552-1] c44 N78-25527

**PHOTOSENSITIVITY**

- Photosensitive light source device for detecting unmanned spacecraft deviation from reference attitude  
[NASA-CASE-XNP-00438] c21 N70-35089
- Light sensitive control system for automatically opening and closing dome of solar optical telescope  
[NASA-CASE-MSC-10966] c14 N71-19568
- Scan oscilloscope for mapping surface sensitivity of photomultiplier tube  
[NASA-CASE-LAR-10320-1] c09 N72-23172
- Holography utilizing surface plasmon resonances  
[NASA-CASE-MFS-22040-1] c35 N74-26946
- Apparatus for calibrating an image dissector tube  
[NASA-CASE-MFS-22208-1] c33 N75-26244

**PHOTOTRANSISTORS**

- Phototransistor imaging system with mosaic of phototransistors on semiconductor substrate  
[NASA-CASE-MFS-20809] c23 N73-13660
- Phototransistor with base collector junction diode for integration into photo sensor arrays  
[NASA-CASE-MFS-20407] c09 N73-19235

**PHOTOTROPISM**

- Phototropic composition of matter with sensitivity to ultraviolet light and usable for producing positive photographic images  
[NASA-CASE-XGS-03736] c14 N72-22443

**PHOTOVISCOELASTICITY**

- Photographic method for measuring viscoelastic strain in solid propellants and other materials  
[NASA-CASE-XNP-01153] c32 N71-17645

**PHOTOVOLTAIC CELLS**

- Sensor consisting of photocells mounted on pyramidal base for improved pointing accuracy of planetary trackers  
[NASA-CASE-XNP-04180] c07 N69-39736
- Light sensitive digital aspect sensor for attitude control of earth satellites or space probes  
[NASA-CASE-XGS-00359] c14 N70-34158
- Method of producing output voltage from photovoltaic cell using poly-N-vinyl carbazole complexed with iodine  
[NASA-CASE-NPO-10373] c03 N71-18698
- Use of thin film light detector  
[NASA-CASE-NPO-11432-2] c35 N74-15090
- Photovoltaic cell array  
[NASA-CASE-MFS-22458-1] c44 N77-10635
- Solar cells having integral collector grids  
[NASA-CASE-LEW-12819-1] c44 N79-11467
- Double-sided solar cell package  
[NASA-CASE-NPO-14199-1] c44 N79-25482
- Method of construction of a multi-cell solar array  
[NASA-CASE-MFS-23540-1] c44 N79-26475
- Solar cell with improved N-region contact and method of forming the same  
[NASA-CASE-NPO-14205-1] c44 N79-31752
- Method of fabricating a photovoltaic module of a substantially transparent construction  
[NASA-CASE-NPO-14303-1] c44 N80-18550

- Improving the efficiency of silicon solar cells containing chromium  
[NASA-CASE-NFO-15179-1] c44 N80-32850
- Miniature spectrally selective dosimeter  
[NASA-CASE-LAR-12469-1] c35 N81-12388
- High voltage planar multijunction --- solar cells  
[NASA-CASE-LEW-13400-1] c44 N81-16528
- High voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c44 N81-16529
- Copper doped polycrystalline silicon solar cell  
[NASA-CASE-NPO-14670-1] c44 N81-19558

**PHOTOVOLTAIC EFFECT**

- Semiconductor in resonant cavity for improving signal to noise ratio of communication receiver  
[NASA-CASE-MSC-12259-1] c07 N70-12616
- Use of thin film light detector  
[NASA-CASE-NFO-11432-2] c35 N74-15090
- Heat transparent high intensity high efficiency solar cell  
[NASA-CASE-LEW-12892-1] c44 N81-27598

**PHYSICAL EXERCISE**

- Development of restraint system for securing personnel to ergometer while exercising under weightless conditions  
[NASA-CASE-MFS-21046-1] c14 N73-27377
- Tilting table for testing human body in variety of positions while exercising on ergometer or other biomedical devices  
[NASA-CASE-MFS-21010-1] c05 N73-30078
- Manual actuator --- for spacecraft exercising machines  
[NASA-CASE-MFS-21481-1] c37 N74-18127
- Therapeutic hand exerciser  
[NASA-CASE-LAR-11667-1] c52 N76-19785

**PHYSICAL PROPERTIES**

- Chemical and physical properties of synthetic polyurethane polymer prepared by reacting hydroxy carbonate with organic diisocyanate  
[NASA-CASE-MFS-10512] c06 N73-30099
- System for monitoring physical characteristics of fluids --- acoustic techniques  
[NASA-CASE-NPO-15400-1] c34 N81-24384

**PHYSIOLOGICAL EFFECTS**

- Restraint torso for increased mobility and reduced physiological effects while wearing pressurized suits  
[NASA-CASE-MSC-12397-1] c05 N72-25119

**PHYSIOLOGICAL TESTS**

- Vibrophonocardiograph comprising low weight and small volume piezoelectric microphone with amplifier having high input impedance for high sensitivity and low frequency response  
[NASA-CASE-XFR-07172] c05 N71-27234
- Medical subject monitoring systems --- multichannel monitoring systems  
[NASA-CASE-MSC-14180-1] c52 N76-14757

**PHYSIOLOGY**

- Piezoelectric transducer for monitoring sound waves of physiological origin  
[NASA-CASE-XMS-05365] c14 N71-22993
- Method of detecting and counting bacteria  
[NASA-CASE-GSC-11917-2] c51 N76-29891

**PIERCING**

- Pressurized cell micrometeoroid detector  
[NASA-CASE-XLA-00936] c14 N71-14996

**PIEZOELECTRIC CRYSTALS**

- Miniature solid state, direction sensitive, stress transducer design with bonded semiconductive piezoresistive element for sensing residual stresses  
[NASA-CASE-XNP-02983] c14 N71-21091
- Ultra-stable oscillator with complementary transistors  
[NASA-CASE-GSC-11513-1] c33 N74-20862
- CDS solid state phase insensitive ultrasonic transducer --- annealing cadmium sulfide crystals  
[NASA-CASE-LAR-12304-1] c35 N80-20559

**PIEZOELECTRIC TRANSDUCERS**

- Piezoelectric transducer for detecting and measuring micrometeoroids  
[NASA-CASE-XAC-01101] c14 N70-41957
- Describing crystal oscillator instrument for detecting condensable gas contaminants in vacuum apparatus  
[NASA-CASE-NFO-10144] c14 N71-17701
- Piezoelectric transducer for monitoring sound waves of physiological origin  
[NASA-CASE-XMS-05365] c14 N71-22993



- Miniature piezjunction semiconductor transducer with in situ stress coupling  
[NASA-CASE-ERC-10087-2] c14 N72-31446
- Length mode piezoelectric ultrasonic transducer for inspection of solid objects  
[NASA-CASE-MSC-15672-1] c38 N79-14398
- PIEZOELECTRICITY**
- Piezoelectric means for missile stage separation indication and stage initiation  
[NASA-CASE-XLA-00791] c03 N70-39930
- Piezoelectric pump for supplying fluid at high frequencies to gyroscope fluid suspension system  
[NASA-CASE-XNP-05429] c26 N71-21824
- Miniature electromechanical junction transducer operating on piezjunction effect and utilizing epoxy for stress coupling component  
[NASA-CASE-ERC-10087] c14 N71-27334
- PIEZORESISTIVE TRANSDUCERS**
- Miniature solid state, direction sensitive, stress transducer design with bonded semiconductive piezoresistive element for sensing residual stresses  
[NASA-CASE-XNP-02983] c14 N71-21091
- Solid state force measuring electromechanical transducers made of piezoresistive materials  
[NASA-CASE-ERC-10088] c26 N71-25490
- PIGMENTS**
- Binder stabilized zinc oxide pigmented coating for spacecraft thermal control  
[NASA-CASE-XMF-07770-2] c18 N71-26772
- PILOT ERROR**
- Spectrally balanced chromatic landing approach lighting system  
[NASA-CASE-ARC-10990-1] c04 N77-12031
- PILOT TRAINING**
- Controlled visibility device for simulating poor visibility conditions in training pilots in instrument landing and flight procedures  
[NASA-CASE-XFR-04147] c11 N71-10748
- Kinesthetic control simulator --- for pilot training  
[NASA-CASE-LAR-10276-1] c09 N75-15662
- PILOTS (PERSONNEL)**
- Pilot warning indicator system of intruder aircraft  
[NASA-CASE-ERC-10226-1] c14 N73-16483
- PINCH EFFECT**
- Toggle mechanism for pinching metal tubes  
[NASA-CASE-GSC-12274-1] c37 N75-28550
- PINS**
- Fatigue resistant shear pin with hollow shaft and two plugs  
[NASA-CASE-XLA-09122] c15 N69-27505
- Blade vibration damping pins for turbomachinery  
[NASA-CASE-XLE-00155] c28 N71-29154
- Design of quick release locking pin for joining two or more load-carrying structural members  
[NASA-CASE-MFS-18495] c15 N72-11385
- PINTLES**
- Describing metal valve pintle with encapsulated elastomeric body  
[NASA-CASE-MSC-12116-1] c15 N71-17648
- PIPE FLOW**
- Flat-plate heat pipe  
[NASA-CASE-GSC-11998-1] c34 N77-32413
- PIPELINES**
- Flexible bellows joint shielding sleeve for propellant transfer pipelines  
[NASA-CASE-XNP-01855] c15 N71-28537
- PIPES (TUBES)**
- Capacitance measuring device for determining flare accuracy on tapered tubes  
[NASA-CASE-XKS-03495] c14 N69-39785
- Low thermal loss piping arrangement for moving cryogenic media through double chamber structure  
[NASA-CASE-XNP-08882] c15 N69-39935
- Foldable conduit capable of springing back as self erecting structural member  
[NASA-CASE-XLE-00620] c32 N70-41579
- Mounting fixture for supporting thermobulb in pipeline  
[NASA-CASE-NPO-10158] c33 N71-16356
- Method and apparatus for shaping and joining large diameter metal tubes using magnetomotive forces  
[NASA-CASE-XMF-05114] c15 N71-17650
- Sealed separable connection for thin wall metal tube  
[NASA-CASE-NPO-10064] c15 N71-17693
- Electrical switching device comprising conductive liquid confined within square loop of deformable nonconductive tubing also used for leveling  
[NASA-CASE-NFO-10037] c09 N71-19610
- Hand tool for forming dimples and nipples on end portion of tubes  
[NASA-CASE-XMS-06876] c15 N71-21536
- Nonconductive tube as feed system for plasma thruster  
[NASA-CASE-XLE-02902] c25 N71-21694
- Apparatus and method for spin forming tubular elbows with high strength, uniform thickness, and close tolerances  
[NASA-CASE-XMF-01083] c15 N71-22723
- Description of portable milling tool for milling tube or pipe ends to desired shape and thickness  
[NASA-CASE-XMF-03511] c15 N71-22799
- Gage for measuring internal angle of flare on end of tube  
[NASA-CASE-XMF-04415] c14 N71-24693
- Method and apparatus for portable high precision magnetomotive bulging, constricting, and joining of large diameter metal tubes  
[NASA-CASE-XMF-05114-3] c15 N71-24865
- Portable cutting machine for piping weld preparation  
[NASA-CASE-XKS-07953] c15 N71-26134
- Method and apparatus for precision sizing and joining of large diameter tubes by bulging or constricting overlapping ends  
[NASA-CASE-XMF-05114-2] c15 N71-26148
- Collapsible antenna boom and coaxial transmission line having inflatable inner tube  
[NASA-CASE-MFS-20068] c07 N71-27191
- Process for developing filament reinforced plastic tubes used in research and development programs  
[NASA-CASE-LAR-10203-1] c15 N72-16330
- Torsional disconnect device for releasably coupling distal ends of fluid conduits  
[NASA-CASE-NPO-10704] c15 N72-20445
- Open type urine receptacle with tubular housing  
[NASA-CASE-MSC-12324-1] c05 N72-22093
- Measuring method for cutaneous perception using instrument with elongated tubular housing  
[NASA-CASE-MSC-13609-1] c05 N72-25122
- Low mass truss structure with elongated thin-walled tubular segments  
[NASA-CASE-LAR-10546-1] c11 N72-25287
- Honeycomb panels of minimal surface, periodic tubule layers  
[NASA-CASE-ERC-10364] c18 N72-25540
- Honeycomb core structures of minimum surface tubule sections  
[NASA-CASE-ERC-10363] c18 N72-25541
- U shaped heated tube for distillation and purification of liquid metals  
[NASA-CASE-XNP-08124-2] c06 N73-13129
- Cable guide and restraint device for reefing tubes in uniform manner  
[NASA-CASE-LAR-10129-1] c15 N73-25512
- Twisted wire or tube superconductor for filament windings  
[NASA-CASE-LEW-11015] c26 N73-32571
- Open tube guideway for high speed air cushioned vehicles  
[NASA-CASE-LAR-10256-1] c85 N74-34672
- Method for fabricating a mass spectrometer inlet leak  
[NASA-CASE-GSC-12077-1] c35 N77-24455
- Precision heat forming of tetrafluoroethylene tubing  
[NASA-CASE-MSC-18430-1] c31 N80-17292
- Open ended ratchet type tubing cutter  
[NASA-CASE-MSC-18538-1] c37 N80-22703
- PISTON ENGINES**
- Stirling cycle engine and refrigeration systems  
[NASA-CASE-NFO-13613-1] c37 N76-29590
- Solar engine --- Flat plate type  
[NASA-CASE-LAR-12148-1] c44 N79-29608
- A gas-to-hydraulic power converter  
[NASA-CASE-MSC-18794-1] c37 N81-24445
- Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c37 N81-25370
- PISTONS**
- Automatically reciprocating, high pressure pump for use in spacecraft cryogenic propellants  
[NASA-CASE-XNP-04731] c15 N71-24042

- Pumping and metering dual piston system and monitor for reaction chamber constituents  
[NASA-CASE-GSC-10218-1] c15 N72-21465
- Collapsible piston for hypervelocity gun  
[NASA-CASE-MSC-13789-1] c11 N73-32152
- Airflow control system for supersonic inlets  
[NASA-CASE-LEW-11188-1] c02 N74-20646
- Centrifugal-reciprocating compressor  
[NASA-CASE-NPO-14597-1] c37 N79-23431
- Free-piston regenerative hot gas hydraulic engine  
[NASA-CASE-LEW-12274-1] c37 N80-31790
- Power control for hot gas engines  
[NASA-CASE-NPO-14220-1] c37 N81-14318
- Multiple plate hydrostatic viscous damper  
[NASA-CASE-LEW-12445-1] c37 N81-22360
- PITCH (INCLINATION)**
- Reverse pitch fan with divided splitter  
[NASA-CASE-LEW-12760-1] c07 N77-17059
- Velocity vector control system augmented with direct lift control  
[NASA-CASE-LAR-12268-1] c08 N81-24106
- Pitch attitude stabilization system utilizing engine pressure ratio feedback signals  
[NASA-CASE-LAR-12562-1] c08 N81-26152
- PIVOTS**
- Apparatus for measuring load on cable under static or dynamic conditions comprising pulleys pivoting structure against restraint of tension strap  
[NASA-CASE-XMS-04545] c15 N71-22678
- Unidirectional flexural pivot  
[NASA-CASE-GSC-12622-1] c37 N81-22359
- PLANAR STRUCTURES**
- Window defect planar mapping technique  
[NASA-CASE-MSC-19442-1] c74 N77-10899
- Method and apparatus for preparing multiconductor cable with flat conductors  
[NASA-CASE-MFS-10946-1] c31 N79-21226
- High voltage planar multijunction --- solar cells  
[NASA-CASE-LEW-13400-1] c44 N81-16528
- PLANE WAVES**
- Characteristics of microwave antenna with conical reflectors to generate plane wave front  
[NASA-CASE-NPO-11661] c07 N73-14130
- PLANETARY ATMOSPHERES**
- Planetary atmospheric investigation using split trajectory dual flyby mode  
[NASA-CASE-YAC-08494] c30 N71-15990
- Wind tunnel method for simulating flow fields around blunt vehicles entering planetary atmospheres without involving high temperatures  
[NASA-CASE-LAR-11138] c12 N71-20436
- Ablation sensor for measuring surface ablation rate of material on vehicles entering earths atmosphere on entry into planetary atmospheres  
[NASA-CASE-XLA-01791] c14 N71-22991
- PLANETARY GRAVITATION**
- Lunar and planetary gravity simulator to test vehicular response to landing  
[NASA-CASE-XLA-00493] c11 N70-34786
- Table structure and rotating magnet system simulating gravitational forces on spacecraft and displaying trajectories between Earth, Venus, and Mercury  
[NASA-CASE-XNP-00708] c14 N70-35394
- PLANETARY LANDING**
- Multiple parachute system for landing control of Apollo type spacecraft  
[NASA-CASE-XLA-06898] c02 N70-36804
- Payload soft landing system using stowable gas bag  
[NASA-CASE-XLA-09881] c31 N71-16085
- PLANETARY ORBITS**
- Self-erectable space structures of flexible foam for application in planetary orbits  
[NASA-CASE-XLA-00686] c31 N70-34135
- Manned space station collapsible for launching and self-erectable in orbit  
[NASA-CASE-XLA-00678] c31 N70-34296
- PLANETARY RADIATION**
- Attitude sensor with scanning mirrors for detecting orientation of space vehicle with respect to planet  
[NASA-CASE-XLA-00793] c21 N71-22880
- PLANETARY SURFACES**
- Spacecraft transponder and ground station radar system for mapping planetary surfaces  
[NASA-CASE-NPO-11001] c07 N72-21118
- PLANTS (BOTANY)**
- Rotary plant growth accelerating apparatus --- weightlessness  
[NASA-CASE-ARC-10722-1] c51 N75-25503
- Molten salt pyrolysis of latex --- synthetic hydrocarbon fuel production using the Guayule shrub  
[NASA-CASE-NFO-14315-1] c27 N81-17261
- Enhancement of in vitro Guayule propagation  
[NASA-CASE-NPO-15213-1] c51 N81-29728
- PLASMA ACCELERATION**
- Increasing available power per unit area in ion rocket engine by increasing beam density  
[NASA-CASE-XLE-00519] c28 N70-41576
- Coaxial, high density, hypervelocity plasma generator and accelerator using electrodes  
[NASA-CASE-MFS-20589] c25 N72-32688
- PLASMA ACCELERATORS**
- Crossed-field plasma accelerator for laboratory simulation of atmospheric reentry conditions  
[NASA-CASE-XLA-00675] c25 N70-33267
- Continuous operation, single phased, induction plasma accelerator producing supersonic speeds  
[NASA-CASE-XLA-01354] c25 N70-36946
- Crossed field MHD plasma generator-accelerator  
[NASA-CASE-XLA-03374] c25 N71-15562
- Direct current powered self repeating plasma accelerator with interconnected annular and linear discharge channels  
[NASA-CASE-XLA-03103] c25 N71-21693
- Magnetically controlled plasma accelerator capable of ignition in low density gaseous environment  
[NASA-CASE-XLA-00327] c25 N71-29184
- Two stage light gas-plasma projectile accelerator  
[NASA-CASE-MFS-22287-1] c75 N76-14931
- PLASMA CONTROL**
- Superconducting magnetic field trapping device for producing magnetic field in air  
[NASA-CASE-XNP-01185] c26 N73-28710
- Self-energized plasma compressor --- for compressing plasma discharged from coaxial plasma generator  
[NASA-CASE-MFS-22145-1] c75 N75-13625
- PLASMA CYLINDERS**
- Plasma-fluidic hybrid display system combining high brightness and memory characteristics  
[NASA-CASE-ERC-10100] c09 N71-33519
- PLASMA DENSITY**
- Apertured electrode focusing system for ion sources with nonuniform plasma density  
[NASA-CASE-XNP-03332] c09 N71-10618
- Measurement of plasma temperature and density using radiation absorption  
[NASA-CASE-ARC-10598-1] c75 N74-30156
- PLASMA DIAGNOSTICS**
- Plasma probes having guard ring and primary sensor at same potential to prevent stray wall current collection in ionized gases  
[NASA-CASE-XLE-00690] c25 N69-39884
- Apparatus for measuring conductivity and velocity of plasma with multiple sensing coils positioned in plasma  
[NASA-CASE-YAC-05695] c25 N71-16073
- Measurement of plasma temperature and density using radiation absorption  
[NASA-CASE-ARC-10598-1] c75 N74-30156
- PLASMA DYNAMICS**
- Apparatus for measuring conductivity and velocity of plasma with multiple sensing coils positioned in plasma  
[NASA-CASE-YAC-05695] c25 N71-16073
- Self-energized plasma compressor --- for compressing plasma discharged from coaxial plasma generator  
[NASA-CASE-MFS-22145-1] c75 N75-13625
- PLASMA ENGINES**
- Nonconductive tube as feed system for plasma thruster  
[NASA-CASE-XLE-02902] c25 N71-21694
- PLASMA GENERATORS**
- Apparatus for producing highly conductive, high temperature electron plasma with homogenous temperature and pressure distribution  
[NASA-CASE-XLA-00147] c25 N70-34661
- Crossed field MHD plasma generator-accelerator  
[NASA-CASE-XLA-03374] c25 N71-15562
- Coaxial, high density, hypervelocity plasma generator and accelerator using electrodes  
[NASA-CASE-MFS-20589] c25 N72-32688

- Self-energized plasma compressor --- for compressing plasma discharged from coaxial plasma generator  
[NASA-CASE-MFS-22145-1] c75 N75-13625
- Self-energized plasma compressor  
[NASA-CASE-MFS-22145-2] c75 N76-17551
- Continuous plasma laser --- method and apparatus for producing intense, coherent, monochromatic light from low temperature plasma  
[NASA-CASE-XNP-04167-3] c36 N77-19416
- PLASMA GUNS**
- Plasma spraying gun for forming diffusion bonded metal or ceramic coatings on substrates  
[NASA-CASE-XLE-01604-2] c15 N71-15610
- PLASMA JETS**
- Method of preparing water purification membranes --- polymerization of allyl amine as thin films in plasma discharge  
[NASA-CASE-ARC-10643-1] c25 N75-12087
- Combination automatic-starting electrical plasma torch and gas shutoff valve --- for satellite attitude control  
[NASA-CASE-XLE-10717] c37 N75-29426
- Plasma cleaning device --- designed for high vacuum environments  
[NASA-CASE-MFS-22906-1] c75 N78-27913
- PLASMA LAYERS**
- Electrostatic modulator for communicating through plasma sheath formed around spacecraft during reentry  
[NASA-CASE-XLA-01400] c07 N70-41331
- Method and apparatus for communicating through ionized layer of gases surrounding spacecraft during reentry into planetary atmospheres  
[NASA-CASE-XLA-01127] c07 N70-41372
- Reentry communication by injection of water droplets into plasma layer surrounding space vehicle  
[NASA-CASE-XLA-01552] c07 N71-11284
- PLASMA LOSS**
- Improved thermionic energy converters  
[NASA-CASE-LEW-12443-1] c44 N81-19561
- PLASMA POTENTIALS**
- Method and apparatus for neutralizing potentials induced on spacecraft surfaces  
[NASA-CASE-GSC-11963-1] c33 N77-10429
- PLASMA PROBES**
- Plasma probes having guard ring and primary sensor at same potential to prevent stray wall current collection in ionized gases  
[NASA-CASE-XLE-00690] c25 N69-39884
- Small plasma probe using tungsten wire collector in tubular shield  
[NASA-CASE-XLE-02578] c25 N71-20747
- PLASMA PROPULSION**
- Method of making dished ion thruster grids  
[NASA-CASE-LEW-11694-1] c20 N75-18310
- PLASMA RADIATION**
- Development of method for measuring electron density gradients of plasma sheath around space vehicle during atmospheric entry  
[NASA-CASE-XLA-06232] c25 N71-20563
- Apparatus for producing monochromatic light from continuous plasma source  
[NASA-CASE-XNP-04167-2] c25 N72-24753
- PLASMA SHEATHS**
- Space environment simulation system for measuring spacecraft electric field strength in plasma sheath  
[NASA-CASE-XLE-02038] c09 N71-16086
- Development of method for measuring electron density gradients of plasma sheath around space vehicle during atmospheric entry  
[NASA-CASE-XLA-06232] c25 N71-20563
- PLASMA SPRAYING**
- Flame or plasma spraying for molybdenum coating of carbon or graphite surfaces to prevent oxidative corrosion  
[NASA-CASE-XLA-00302] c15 N71-16077
- Improved refractory coatings and method of producing the same  
[NASA-CASE-LEW-13169-1] c26 N80-14232
- Fully plasma-sprayed compliant laced ceramic turbine seal  
[NASA-CASE-LEW-13268-1] c37 N80-24619
- PLASMA TEMPERATURE**
- Measurement of plasma temperature and density using radiation absorption  
[NASA-CASE-ARC-10598-1] c75 N74-30156
- PLASMA-ELECTROMAGNETIC INTERACTION**
- Plasma igniter for internal combustion engine  
[NASA-CASE-NPO-13828-1] c37 N79-11405
- PLASMAS (PHYSICS)**
- Apparatus for measuring conductivity and velocity of plasma with multiple sensing coils positioned in plasma  
[NASA-CASE-XAC-05695] c25 N71-16073
- PLASTIC COATINGS**
- Process permitting application of synthetic resin coating to irregular-shaped objects at ambient temperature  
[NASA-CASE-XNP-06508] c18 N69-39895
- Development and characteristics of system for skin packaging articles using thermoplastic film heating and vacuum operated equipment  
[NASA-CASE-MFS-20855] c15 N73-27405
- Silicon nitride coated, plastic covered solar cell  
[NASA-CASE-LEW-11496-1] c44 N77-14580
- Oxygen post-treatment of plastic surface coated with plasma polymerized silicon-containing monomers  
[NASA-CASE-ARC-10915-2] c27 N79-18052
- Flexible formulated plastic separators for alkaline batteries  
[NASA-CASE-LEW-12363-4] c44 N80-18555
- PLASTIC DEFORMATION**
- Process for analysis of strain field of structures subjected to large deformations involving low modulus substrate with thin coating  
[NASA-CASE-LAR-10765-1] c32 N73-20740
- Mechanical bonding of metal  
[NASA-CASE-LEW-12941-1] c31 N81-16329
- PLASTIC TAPES**
- Development of flexible thermocouple in form of tape for adaptation to special temperature measuring conditions  
[NASA-CASE-LEW-11072-1] c14 N73-24472
- PLASTICIZERS**
- Inorganic-organic separators for alkaline batteries  
[NASA-CASE-LEW-12649-1] c44 N78-25530
- Method of bonding plasticized elastomer to metal and article produced thereby  
[NASA-CASE-MFS-25181-1] c27 N81-16238
- Advanced inorganic separators for alkaline batteries and method of making same --- a polymeric coating applied to a porous flexible substrate  
[NASA-CASE-LEW-13171-1] c44 N81-22466
- Tackifier for addition polyimides containing monoethylphthalate  
[NASA-CASE-LAR-12642-1] c27 N81-29229
- PLASTICS**
- Hot forming of plastic sheets  
[NASA-CASE-XMS-05516] c15 N71-17803
- Technique for making foldable, inflatable, plastic honeycomb core panels for use in building and bridge structures, light and radio wave reflectors, and spacecraft  
[NASA-CASE-XLA-03492] c15 N71-22713
- Electrode sealing and insulation for fuel cells containing caustic liquid electrolytes using powdered plastic and metal  
[NASA-CASE-XMS-01625] c15 N71-23022
- Dielectric apparatus for heating, fusing, and hardening of organic matrix to form plastic material into shaped product  
[NASA-CASE-LAR-10121-1] c15 N71-26721
- Plastic sphere for radar tracking and calibration  
[NASA-CASE-XLA-11154] c07 N72-21117
- Molding apparatus --- for thermosetting plastic compositions  
[NASA-CASE-LAR-10489-2] c31 N74-32920
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c27 N76-32315
- Abrasion resistant coatings for plastic surfaces  
[NASA-CASE-ARC-10915-3] c24 N77-24200
- Precision heat forming of tetrafluoroethylene tubing  
[NASA-CASE-MSC-18430-1] c31 N80-17292
- PLATENS**
- Compression test fixture  
[NASA-CASE-MSC-18723-1] c39 N81-24470
- PLATES (STRUCTURAL MEMBERS)**
- Foil seal between parts moving relative to each other

- [NASA-CASE-XLE-05130] c15 N69-21362  
Fifth wheel
- [NASA-CASE-FRC-10081-1] c37 N77-14477  
Microwave dichroic plate
- [NASA-CASE-GSC-12171-1] c33 N79-28416  
Floating nut retention system
- [NASA-CASE-MSC-16938-1] c37 N80-23653
- PLATING**
- Selective plating of etched circuits without removing previous plating  
[NASA-CASE-XGS-03120] c15 N71-24047
- Metal plating process employing spraying of metallic powder/peening particle mixture  
[NASA-CASE-GSC-11163-1] c15 N73-32360
- Scanning nozzle plating system --- for etching or plating metals on substrates without masking  
[NASA-CASE-NPO-11758-1] c51 N74-23665
- PLATINUM**
- Electrolytic cell structure  
[NASA-CASE-LAR-11042-1] c33 N75-27252
- Platinum resistance thermometer circuit  
[NASA-CASE-MSC-12327-1] c35 N77-27368
- PLAYBACKS**
- Method of and means for testing a tape record/playback system  
[NASA-CASE-MFS-22671-2] c35 N77-17426
- Thermomagnetic recording and magnetic-optic playback system  
[NASA-CASE-NPO-10872-1] c35 N79-16246
- PLENUM CHAMBERS**
- Platform with several ground effect pads and plenum chambers  
[NASA-CASE-MFS-14685] c31 N71-15689
- Development of filter apparatus for gas separation and characteristics of filter cell support frame for improved operation  
[NASA-CASE-MSC-12297] c14 N72-23457
- Micro-fluid exchange coupling apparatus  
[NASA-CASE-ARC-11114-1] c51 N81-14605
- PLETHYSMOGRAPHY**
- Readout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c35 N76-24525
- Apparatus for determining changes in limb volume  
[NASA-CASE-MSC-18759-1] c52 N81-24716
- PLOTTERS**
- Plotter device for automatically drawing equipotential lines on sheet of resistance paper  
[NASA-CASE-NPO-11134] c09 N72-21246
- Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c32 N81-27341
- PLOTTING**
- Instrument for measuring potentials on two dimensional electric field plot  
[NASA-CASE-XLA-08493] c10 N71-19421
- PLUG NOZZLES**
- Cascade plug nozzle --- for jet noise reduction  
[NASA-CASE-LAR-11674-1] c67 N76-18117
- PLUGS**
- Rocket chamber leak test fixture using tubular plug  
[NASA-CASE-XPR-09479] c14 N69-27503
- Fatigue resistant shear pin with hollow shaft and two plugs  
[NASA-CASE-XLA-09122] c15 N69-27505
- Control of gas flow from pressurized vessel by thermal expansion of metal plug  
[NASA-CASE-NPO-10298] c12 N71-17661
- Heated porous plug microthrustor for spacecraft reaction jet controlled systems such as fuel flow regulation, propellant disassociation, and heat transfer augmentation  
[NASA-CASE-GSC-10640-1] c28 N72-18766
- High temperature penetrator assembly with bayonet plug and ramp-activated lock  
[NASA-CASE-MSC-18526-1] c35 N80-19468
- PNEUMATIC CONTROL**
- Pneumatic system for cyclic control of fluid flow in pneumatic device  
[NASA-CASE-XMS-04843] c03 N69-21469
- Pneumatic control of telescopic mirror support system  
[NASA-CASE-XLA-03271] c11 N69-24321
- Actuator using compressed gas as driving force to control valve handling large liquid flows  
[NASA-CASE-XHQ-01208] c15 N70-35409
- Pneumatic mechanism for releasing hook and loop fasteners between large rigid structures  
[NASA-CASE-XMS-10660-1] c15 N71-25975
- Pneumatic foot pedal operated fluidic exercising device  
[NASA-CASE-MSC-11561-1] c05 N73-32014
- Pneumatic load compensating or controlling system  
[NASA-CASE-ARC-10907-1] c37 N75-32465
- PNEUMATIC EQUIPMENT**
- Development and characteristics of high pressure control valve  
[NASA-CASE-MSC-11010] c15 N71-19485
- Pneumatic cantilever beams and platform for space erectable structure  
[NASA-CASE-XLA-01731] c32 N71-21045
- Fluid transferring system design for purging toxic, corrosive, or noxious fluids and fumes from materials handling equipment for cleansing and accident prevention  
[NASA-CASE-XMS-01905] c12 N71-21089
- Zero gravity apparatus utilizing pneumatic decelerating means to create payload subjected to zero gravity conditions by dropping its height  
[NASA-CASE-XMP-06515] c14 N71-23227
- Pneumatic servoamplifier for controlling flow regulation  
[NASA-CASE-MSC-12121-1] c15 N71-27147
- Inflatable stabilizing system for use on life raft to reduce rocking and preclude capsizing  
[NASA-CASE-MSC-12393-1] c02 N73-26006
- Airlock  
[NASA-CASE-MFS-20922-1] c18 N74-22136
- Pneumatic load compensating or controlling system  
[NASA-CASE-ARC-10907-1] c37 N75-32465
- Improved tire/wheel concept --- pneumatic aircraft tire  
[NASA-CASE-LAR-11695-2] c37 N80-18402
- System for moving a probe to follow movements of tissue  
[NASA-CASE-NPO-15197-1] c52 N81-26697
- POINT SOURCES**
- Electronic background suppression field scanning sensor for detecting point source targets  
[NASA-CASE-XGS-05211] c07 N69-39980
- X ray collimating structure for focusing radiation directly onto detector  
[NASA-CASE-XHQ-04106] c14 N70-40240
- Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c32 N81-27341
- POINTING CONTROL SYSTEMS**
- Development of reflector system for application to line-of-sight pointing and tracking telescopes  
[NASA-CASE-NPO-10468] c23 N71-33229
- All sky pointing attitude control system  
[NASA-CASE-ARC-10716-1] c35 N77-20399
- Magnetic suspension and pointing system  
[NASA-CASE-LAR-11889-2] c37 N78-27424
- Magnetic suspension and pointing system --- on a carrier vehicle  
[NASA-CASE-LAR-11889-1] c35 N79-26372
- Solar tracking system  
[NASA-CASE-MFS-23999-1] c44 N81-24520
- POLAR ORBITS**
- Spin phase synchronization of cartwheel satellite in polar orbit  
[NASA-CASE-XGS-05579] c31 N71-15676
- POLARIMETERS**
- Automatic polarimeter capable of measuring transient birefringence changes in electro-optic materials  
[NASA-CASE-XNP-08883] c23 N71-16101
- Two beam interferometer-polarimeter  
[NASA-CASE-NPO-11239] c14 N73-12446
- Forward-scatter polarimeter for determining the gaseous depolarization factor in the presence of polluting polydispersed particles  
[NASA-CASE-NPO-13756-1] c35 N76-14434
- POLARITY**
- Converting output of positive dc voltage source to negative dc voltage across load with common reference point  
[NASA-CASE-XNP-08217] c03 N71-23239
- Peak polarity selector for monitoring waveforms  
[NASA-CASE-FRC-10010] c10 N71-24862
- Precision full wave rectifier circuit for rectifying incoming electrical signals having positive or negative polarity with only positive output signals

- [NASA-CASE-ARC-10101-1] c09 N71-33109
- POLARIZATION (CHARGE SEPARATION)**
- Charge injection method and apparatus of producing large area electrets [NASA-CASE-MFS-23186-2] c24 N78-25137
- POLARIZATION (WAVES)**
- System for interference signal nulling by polarization adjustment [NASA-CASE-NPO-13140-1] c32 N75-24982
- Paraday rotation measurement method and apparatus --- to receive RF signals from spacecraft which exhibits polarization characteristics due to spin stabilization [NASA-CASE-NPO-14839-1] c35 N80-16313
- Multiprism cclinator [NASA-CASE-GSC-12608-1] c35 N81-12387
- Multifrequency broadband polarized horn antenna [NASA-CASE-NPO-14588-1] c32 N81-25278
- POLARIZED ELECTROMAGNETIC RADIATION**
- Device for improving efficiency of parabolic horn antenna system for linearly polarized signals [NASA-CASE-XNP-00611] c09 N70-35219
- Device for improving efficiency of parabolic reflector horn for linearly or circularly polarized waves [NASA-CASE-XNP-00540] c09 N70-35382
- Antenna feed system for receiving circular polarization and transmitting linear polarization [NASA-CASE-NPO-14362-1] c32 N80-16261
- Coaxial phased array antenna [NASA-CASE-MSC-16800-1] c32 N81-14167
- POLARIZED LIGHT**
- Polarization compensator for optical communications [NASA-CASE-GSC-11782-1] c74 N76-30053
- Visible and infrared polarization ratio spectroreflectometer [NASA-CASE-LAR-12285-1] c35 N80-28687
- POLARIZERS**
- Partial polarizer filter [NASA-CASE-GSC-12225-1] c74 N79-14891
- POLISHING**
- Conforming polisher for aspheric surfaces of revolution with inflatable tube [NASA-CASE-XGS-02884] c15 N71-22705
- Method of forming a sharp edge on an optical device [NASA-CASE-GSC-12348-1] c74 N80-24149
- POLLUTION CONTROL**
- System for minimizing internal combustion engine pollution emission [NASA-CASE-NPO-13402-1] c37 N76-18457
- Combustion engine --- for air pollution control [NASA-CASE-NPO-13671-1] c37 N77-31497
- Heat pipes to reduce engine exhaust emissions [NASA-CASE-LEW-12590-1] c25 N81-19245
- Supercritical fuel injection system [NASA-CASE-LEW-12990-1] c07 N81-29129
- POLLUTION MONITORING**
- Fluorescence detector for monitoring atmospheric pollutants [NASA-CASE-NPO-13231-1] c45 N75-27585
- Stack plume visualization system [NASA-CASE-LAR-11675-1] c45 N76-17656
- Indicator providing continuous indication of the presence of a specific pollutant in air [NASA-CASE-NPO-13474-1] c45 N76-21742
- Method for detecting pollutants --- through chemical reactions and heat treatment [NASA-CASE-LAR-11405-1] c45 N76-31714
- Automated syringe sampler --- remote sampling of air and water [NASA-CASE-LAR-12308-1] c35 N81-29407
- POLYAMIDE RESINS**
- Vitro-violet process for producing flame resistant polyamides and products produced thereby --- protective clothing for high oxygen environments [NASA-CASE-MSC-16074-1] c27 N80-26446
- Thermoset-thermoplastic aromatic polyamides [NASA-CASE-LAR-12723-1] c27 N81-15107
- POLYBENZIMIDAZOLE**
- Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles [NASA-CASE-ARC-11008-1] c27 N78-31232
- POLYBUTADIENE**
- Synthesis of polyfluorobutadiene by polymerization of perfluorobutadiene with diisopropyl peroxydicarbonate [NASA-CASE-NPO-10863] c06 N70-11251
- Low pressure perfluorobutadiene polymerization with peroxide catalysts [NASA-CASE-NPO-10447] c06 N70-11252
- Inhibited solid propellant composition containing beryllium hydride [NASA-CASE-NPO-10866-1] c28 N79-14228
- POLYCARBONATES**
- Transparent polycarbonate resin, shell helmet and latch design for high altitude and space flight [NASA-CASE-XHS-04935] c05 N71-11190
- POLYCRYSTALS**
- Fabrication of polycrystalline solar cells on low-cost substrates [NASA-CASE-GSC-12022-1] c44 N76-28635
- Process for utilizing low-cost graphite substrates for polycrystalline solar cells [NASA-CASE-GSC-12022-2] c44 N78-24609
- Method for the preparation of inorganic single crystal and polycrystalline electronic materials [NASA-CASE-XLE-02545-1] c76 N79-21910
- A method for producing a solidified body of silicon --- solar cells [NASA-CASE-NPO-15250-1] c25 N81-16174
- POLYESTERS**
- Carboxyl terminated polyester prepolymers and foams produced from prepolymers and materials [NASA-CASE-NPO-10596] c06 N71-25929
- Apparatus for forming drive belts [NASA-CASE-NPO-13205-1] c31 N74-32917
- POLYETHER RESINS**
- Preparation of stable polyurethane polymer by reacting polymer with diisocyanate [NASA-CASE-MFS-10506] c06 N73-30100
- Preparation of fluorohydroxy ethers by reacting fluoroalkylene oxides with alkali salt of polyfluoroalkylene diol [NASA-CASE-MFS-10507] c06 N73-30101
- Preparation of fluorinated polyethers from 2-hydro-perhaloisopropyl alcohols [NASA-CASE-MFS-11492] c06 N73-30102
- POLYIMIDE RESINS**
- Polyimide adhesives [NASA-CASE-LAR-11397-1] c27 N75-29263
- Polyimide adhesives [NASA-CASE-LAR-12181-1] c27 N78-17205
- Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety [NASA-CASE-ARC-11040-2] c24 N78-27184
- Mixed diamines for lower melting addition polyimide preparation and utilization [NASA-CASE-LAR-12054-1] c27 N79-33316
- Process for preparing high temperature polyimide film laminates [NASA-CASE-LAR-12742-1] c24 N81-12174
- Composition and method for making polyimide resin-reinforced fabric [NASA-CASE-LEW-12933-1] c27 N81-19296
- Tackifier for addition polyimides containing monoethylphthalate [NASA-CASE-LAR-12642-1] c27 N81-29229
- POLYIMIDES**
- Stable polyimide synthesis from mixtures of monomeric diamines and polycarboxylic acid esters [NASA-CASE-LEW-11325-1] c06 N73-27980
- Polyimide foam for the thermal insulation and fire protection [NASA-CASE-ARC-10464-1] c27 N74-12812
- Reinforced structural plastics [NASA-CASE-LEW-10199-1] c27 N74-23125
- Polyimides of ether-linked aryl tetracarboxylic dianhydrides [NASA-CASE-MFS-22355-1] c23 N76-15268
- Process for preparing thermoplastic aromatic polyimides [NASA-CASE-LAR-11828-1] c27 N78-32261
- Ambient cure polyimide foams --- thermal resistant foams [NASA-CASE-ARC-11170-1] c27 N79-11215
- Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams [NASA-CASE-ARC-11107-1] c25 N80-16116

- Crystalline polyimides --- reinforcing fibers for high temperature composites and adhesives as well as flame retardation  
[NASA-CASE-LAR-12099-1] c27 N80-16158
- Electrically conductive palladium containing polyimide films  
[NASA-CASE-LAR-12705-1] c33 N80-24549
- Low temperature cross linking polyimides  
[NASA-CASE-LEW-12676-1] c27 N80-26447
- Method for preparing addition type polyimide prepregs  
[NASA-CASE-LAR-12054-2] c27 N81-14078
- Asymmetric polyimide separation membrane and method  
[NASA-CASE-NPO-15431-1] c25 N81-29178
- POLYISOBUTYLENE**  
Chemical process for production of polyisobutylene compounds and application as solid rocket propellant binder  
[NASA-CASE-NPO-10893] c27 N73-22710
- POLYMER CHEMISTRY**  
New trifunctional alcohol derived from trimer acid and novel method of preparation  
[NASA-CASE-NPO-10714] c06 N69-31244
- Synthesis of siloxane containing epoxy polymers with low dielectric properties  
[NASA-CASE-MFS-13994-1] c06 N71-11240
- Apparatus for determining volatile condensable material present in polymeric products  
[NASA-CASE-XMP-05699] c06 N71-24607
- Polyimide adhesives  
[NASA-CASE-LAR-11397-1] c27 N75-29263
- Trimerization of aromatic nitriles  
[NASA-CASE-LEW-12053-1] c27 N78-15276
- Polyimide adhesives  
[NASA-CASE-LAR-12181-1] c27 N78-17205
- Infusible silazane polymer and process for producing same --- protective coatings  
[NASA-CASE-XMP-02526-1] c27 N79-21190
- Fluorine-containing polyformals  
[NASA-CASE-XMP-06900-1] c27 N79-21191
- In situ self cross-linking of polyvinyl alcohol battery separators  
[NASA-CASE-LEW-12972-1] c44 N79-25481
- Bifunctional monomers having terminal oxime and cyano or amidine groups  
[NASA-CASE-ARC-11253-3] c27 N81-24256
- In-situ cross linking of polyvinyl alcohol --- application to battery separator films  
[NASA-CASE-LEW-13135-2] c27 N81-24257
- Polymeric compositions and their method of manufacture --- forming filled polymer systems using cryogenics  
[NASA-CASE-NPO-10424-1] c27 N81-24258
- Process for the preparation of polycarbonanylphosphazenes --- thermal insulation  
[NASA-CASE-ARC-11176-2] c27 N81-27271
- Phosphorus-containing bisimide resins  
[NASA-CASE-ARC-11321-1] c27 N81-27272
- POLYMER MATRIX COMPOSITE MATERIALS**  
Intumescent-ablator coatings using endothermic fillers  
[NASA-CASE-ARC-11043-1] c24 N78-27180
- POLYMERIC FILMS**  
Ethylene oxide sterilization and encapsulating process for sterile preservation of instruments and solid propellants  
[NASA-CASE-XMP-09763] c14 N71-20461
- Hydraulic apparatus for casting and molding of liquid polymers  
[NASA-CASE-XMP-07659] c06 N71-22575
- Thermodielectric radiometer using polymer film as capacitor  
[NASA-CASE-ARC-10138-1] c14 N72-24477
- Development and characteristics of system for skin packaging articles using thermoplastic film heating and vacuum operated equipment  
[NASA-CASE-MFS-20855] c15 N73-27405
- Covered silicon solar cells and method of manufacture --- with polymeric films  
[NASA-CASE-LEW-11065-2] c44 N76-14600
- Preparation of dielectric coating of variable dielectric constant by plasma polymerization  
[NASA-CASE-ARC-10892-2] c27 N79-14214
- Reverse osmosis membrane of high urea rejection properties --- water purification  
[NASA-CASE-ARC-10980-1] c27 N80-23452
- Electrically conductive palladium containing polyimide films  
[NASA-CASE-LAR-12705-1] c33 N80-24549
- Surface finishing  
[NASA-CASE-MSC-12631-3] c27 N81-14077
- Texturing polymer surfaces by transfer casting --- cardiovascular prosthesis  
[NASA-CASE-LEW-13120-1] c31 N81-16327
- Advanced inorganic separators for alkaline batteries and method of making same --- a polymeric coating applied to a porous flexible substrate  
[NASA-CASE-LEW-13171-1] c44 N81-22466
- Cross-linked polyvinyl alcohol and method of making same  
[NASA-CASE-LEW-13101-2] c23 N81-29160
- POLYMERIZATION**  
Synthesis of polyfluorobutadiene by polymerization of perfluorobutadiene with diisopropyl peroxydicarbonate  
[NASA-CASE-NPO-10863] c06 N70-11251
- Low pressure perfluorobutadiene polymerization with peroxide catalysts  
[NASA-CASE-NFO-10447] c06 N70-11252
- Process for interfacial polymerization of pyromellitic dianhydride and tetraamino benzene  
[NASA-CASE-XLA-03104] c06 N71-11235
- Synthesis and chemical properties of imidazopyrrolone/imide copolymers  
[NASA-CASE-XLA-08802] c06 N71-11238
- Direct synthesis of polymeric schiff bases from two amines and two aldehydes  
[NASA-CASE-XMP-08655] c06 N71-11239
- Synthesis of azine polymers for heat shields by azine-aromatic aldehyde reaction  
[NASA-CASE-XMP-08656] c06 N71-11242
- Synthesis of schiff bases for heat shields by acetal amine reactions  
[NASA-CASE-XMP-08652] c06 N71-11243
- Preparation of elastomeric diamine silazane polymers  
[NASA-CASE-XMP-04133] c06 N71-20717
- Reaction of polyperfluoropolyenes with fluorine to produce saturated polymer chain or create reactive sites on chain  
[NASA-CASE-NEO-10862] c06 N72-22107
- Silphenylenesiloxane polymer with in-chain perfluoroalkyl groups  
[NASA-CASE-MFS-20979] c06 N72-25151
- Polymerization of perfluorobutadiene  
[NASA-CASE-NFO-10863-2] c06 N72-25152
- Preparation of fluorohydroxy ethers by reacting fluoroalkylene oxides with alkali salt of polyfluoroalkylene diol  
[NASA-CASE-MFS-10507] c06 N73-30101
- Preparation of fluorinated polyethers from 2-hydro-perhaloisopropyl alcohols  
[NASA-CASE-MFS-11492] c06 N73-30102
- Method of preparing water purification membranes --- polymerization of allyl amine as thin films in plasma discharge  
[NASA-CASE-ARC-10643-1] c25 N75-12087
- Utilization of oxygen difluoride for syntheses of fluoropolymers  
[NASA-CASE-NPO-12061-1] c27 N76-16228
- Nuclear alkylated pyridine aldehyde polymers and conductive compositions thereof  
[NASA-CASE-NFO-10557] c27 N78-17214
- Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c27 N78-31232
- Ambient cure polyimide foams --- thermal resistant foams  
[NASA-CASE-ARC-11170-1] c27 N79-11215
- Preparation of heterocyclic block copolymer omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c27 N79-22300
- 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] c27 N79-28307
- An improved synthesis of 2, 4, 8, 10-tetroxaspiro (5.5)undecane  
[NASA-CASE-ARC-11243-1] c27 N79-30375
- Improved synthesis of polyformals  
[NASA-CASE-ARC-11244-1] c27 N79-30376
- Mixed diamines for lower melting addition polyimide preparation and utilization

- [NASA-CASE-LAR-12054-1] c27 N79-33316  
Compound oxidized styrylphosphine --- flame  
resistant vinyl polymers
- [NASA-CASE-MSC-14903-2] c27 N80-10358  
Carboranylcyctriphosphazenes and their polymers  
--- thermal insulaticn
- [NASA-CASE-ARC-11176-1] c27 N80-21533  
Heat resistant polymers of oxidized  
styrylphosphine
- [NASA-CASE-MSC-14903-3] c27 N80-24438  
Perfluoroalkyl polytriazines containing pendent  
iododifluoromethyl groups
- [NASA-CASE-ARC-11241-1] c25 N81-14016  
Viscoelastic cationic polymers containing the  
urethane linkage
- [NASA-CASE-NPO-10830-1] c27 N81-15104  
Process for the preparation of fluorine  
containing crosslinked elastomeric  
polytriazine and product so produced
- [NASA-CASE-ARC-11248-1] c27 N81-17259  
The 1,2,4-oxadiazole elastomers --- heat  
resistant polymers
- [NASA-CASE-ARC-11253-1] c27 N81-17262  
Process for preparation of large-particle-size  
monodisperse latexes
- [NASA-CASE-MFS-25000-1] c25 N81-19242  
Ion-exchange hollow fibers
- [NASA-CASE-NPO-13309-1] c25 N81-19244
- POLYMERS**
- Preparation of ordered poly/arylenesiloxane/  
polymers
- [NASA-CASE-XMP-10753] c06 N71-11237  
Synthesis of aromatic diamines and dialdehyde  
polymers using Schiff base
- [NASA-CASE-XMP-03074] c06 N71-24740  
Automated ball rebound resilience test equipment  
for determining viscoelastic properties of  
polymers
- [NASA-CASE-XLA-08254] c14 N71-26161  
Infusible polymer production from reaction of  
polyfunctional epoxy resins with  
polyfunctional aziridine compounds
- [NASA-CASE-NPO-10701] c06 N71-28620  
Development of solid state polymer coating for  
obtaining thermal balance in spacecraft  
components
- [NASA-CASE-XLA-01745] c33 N71-28903  
Mercaptan terminated polymer containing sulfonic  
acid salts of nitrosubstituted aromatic amines  
for heat and moisture resistant coatings
- [NASA-CASE-ARC-10325] c06 N72-25147  
Solid propellant containing hydrazinium  
nitroformate oxidizer and polymeric  
hydrocarbon binder
- [NASA-CASE-NPO-12015] c27 N73-16764  
Chemical process for production of  
polyisobutylene compounds and application as  
solid rocket propellant binder
- [NASA-CASE-NPO-10893] c27 N73-22710  
Utilization of lithium p-lithiphenoxide to  
prepare star polymers
- [NASA-CASE-NPO-10998-1] c06 N73-32029  
Ultraviolet and thermally stable polymer  
compositions
- [NASA-CASE-ARC-10592-1] c27 N74-21156  
Ultraviolet and thermally stable polymer  
compositions
- [NASA-CASE-ARC-10592-2] c27 N76-32315  
Oil and fat absorbing polymers
- [NASA-CASE-NPO-11609-2] c27 N77-31308  
Method for separating biological cells ---  
suspended in aqueous polymer systems
- [NASA-CASE-MFS-23883-1] c51 N80-16715  
Chelate-modified polymers for atmospheric gas  
chromatography
- [NASA-CASE-ARC-11154-1] c25 N80-23383  
Modification of the electrical and optical  
properties of polymers --- ion irradiation to  
create texture
- [NASA-CASE-LEW-13027-1] c27 N80-24437  
Preparation of perfluorinated imidoylamidoximes  
--- for eventual preparation of heat and  
chemical resistant polymers
- [NASA-CASE-ARC-11267-1] c23 N80-26386  
Preparation of perfluorinated 1,2,4-oxadiazoles  
--- heat and chemical resistant polymers
- [NASA-CASE-ARC-11267-2] c25 N80-26407
- POLYMETHYL METHACRYLATE**  
Durable antistatic coating for  
polymethylmethacrylate
- [NASA-CASE-NPO-13867-1] c27 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] c74 N78-32854
- POLYSACCHARIDES**  
Aldehyde-containing urea-absorbing polysaccharides
- [NASA-CASE-NPO-13620-1] c27 N77-30236
- POLYTETRAFLUOROETHYLENE**  
Procedure for bonding polytetrafluoroethylene  
thermal protective sleeves to magnesium alloy  
conical shell components with different  
thermal coefficients
- [NASA-CASE-XLA-01262] c15 N71-21404
- POLYURETHANE FOAM**  
Self-erectable space structures of flexible foam  
for application in planetary orbits
- [NASA-CASE-XLA-00686] c31 N70-34135  
Modification of polyurethanes with alkyl halide  
resins, inorganic salts, and encapsulated  
volatile and reactive halogen for fuel fire  
control
- [NASA-CASE-ARC-10098-1] c06 N71-24739  
Lightweight fire resistant plastic foam for  
thermal protection of reentry vehicles and  
aircraft structures
- [NASA-CASE-ARC-10180-1] c28 N72-20767  
Flexible fire retardant polyisocyanate modified  
neoprene foam --- for thermal protective devices
- [NASA-CASE-ARC-10180-1] c27 N74-12814  
Fiber modified polyurethane foam for ballistic  
protection
- [NASA-CASE-ARC-10714-1] c27 N76-15310  
Mixing insert for foam dispensing apparatus
- [NASA-CASE-MFS-20607-1] c37 N76-19436
- POLYURETHANE RESINS**  
Chemical synthesis of hydroxy terminated  
perfluoro ethers as intermediates for highly  
fluorinated polyurethane resins
- [NASA-CASE-NEO-10768] c06 N71-27254  
Formation of polyurethane resins from hydroxy  
terminated perfluoro ethers
- [NASA-CASE-NPO-10768-2] c06 N72-27144  
Fluorinated polyurethanes produced by reacting  
hydroxy terminated perfluoro polyether with  
diisocyanate
- [NASA-CASE-NPO-10767-2] c06 N72-27151  
Chemical and physical properties of synthetic  
polyurethane polymer prepared by reacting  
hydroxy carbonate with organic diisocyanate
- [NASA-CASE-MFS-10512] c06 N73-30099  
Preparation of stable polyurethane polymer by  
reacting polymer with diisocyanate
- [NASA-CASE-MFS-10506] c06 N73-30100  
Preparation of polyurethane polymer by reacting  
hydroxy polyformal with organic diisocyanate
- [NASA-CASE-MFS-10509] c06 N73-30103  
Chemical and elastic properties of fluorinated  
polyurethanes
- [NASA-CASE-NPO-10767-1] c06 N73-33076  
Flame retardant spandex type polyurethanes
- [NASA-CASE-MSC-14331-2] c27 N78-17213
- POLYVINYL ALCOHOL**  
In situ self cross-linking of polyvinyl alcohol  
battery separators
- [NASA-CASE-LEW-12972-1] c44 N79-25481  
Method of cross-linking polyvinyl alcohol and  
other water soluble resins
- [NASA-CASE-LEW-13103-1] c27 N80-32516  
In-situ cross linking of polyvinyl alcohol ---  
application to battery separator films
- [NASA-CASE-LEW-13135-2] c27 N81-24257  
Cross-linked polyvinyl alcohol and method of  
making same
- [NASA-CASE-LEW-13504-1] c27 N81-27279  
Polyvinyl alcohol battery separator containing  
inert filler --- alkaline batteries
- [NASA-CASE-LEW-13556-1] c44 N81-27615  
Cross-linked polyvinyl alcohol and method of  
making same
- [NASA-CASE-LEW-13101-2] c23 N81-29160  
Alkaline battery containing a separator of a  
cross-linked copolymer of vinyl alcohol and  
unsaturated carboxylic acid
- [NASA-CASE-LEW-13102-1] c44 N81-29531
- PORCELAIN**  
Refractory porcelain enamel passive control

coating for high temperature alloys  
[NASA-CASE-MFS-22324-1] c27 N75-27160

**POROSITY**  
Process for making sheets with parallel pores of uniform size  
[NASA-CASE-GSC-10984-1] c37 N75-26371

**POROUS MATERIALS**  
Production of refractory bodies with controlled porosity by pressing and heating mixtures of refractory and inert metal powders  
[NASA-CASE-LEW-10393-1] c17 N71-15468  
Multilayer porous refractory metal igniter design with thick, porous, large-grain substrates and thin, porous micron-grain substrates  
[NASA-CASE-XNP-04338] c17 N71-23046  
Lubrication for bearings by capillary action from oil reservoir of porous material  
[NASA-CASE-XNP-03972] c15 N71-23048  
Method and photodetector device for locating abnormal voids in low density materials  
[NASA-CASE-MFS-20044] c14 N71-28993  
Production method for manufacturing porous tungsten bodies from tungsten powder particles  
[NASA-CASE-XNP-04339] c17 N71-29137  
Compressible electrolyte saturated sponge electrode for biomedical applications  
[NASA-CASE-MSC-13648] c05 N72-27103  
Porous electrode for use in electrochemical cells  
[NASA-CASE-GSC-11368-1] c09 N73-32108  
Method of making porous conductive supports for electrodes --- by electroforming and stacking nickel foils  
[NASA-CASE-GSC-11367-1] c44 N74-19692  
Fluid valve assembly  
[NASA-CASE-MSC-12731-1] c37 N78-25426  
Heat exchanger and method of making --- bonding rocket chambers with a porous metal matrix  
[NASA-CASE-LEW-12441-1] c34 N79-13289  
Castable high temperature refractory materials  
[NASA-CASE-LEW-13080-1] c27 N80-29496  
Densification of porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MSC-18737-1] c25 N81-29180  
Method of repairing surface damage to porous refractory substrates --- shuttle orbiter tiles  
[NASA-CASE-MSC-18736-1] c27 N81-29231

**POROUS PLATES**  
Method for producing porous tungsten plates for ionizing cesium compounds for propulsion of ion engines  
[NASA-CASE-XLE-00455] c28 N70-38197

**PORPHYRINS**  
Method and apparatus for eliminating luminol interference material  
[NASA-CASE-MSC-16260-1] c51 N80-16714

**PORTABLE EQUIPMENT**  
Portable electron beam welding chamber  
[NASA-CASE-LEW-11531] c15 N71-14932  
Portable apparatus producing high velocity annular air column surrounding low velocity, filtered, superclean air central core for industrial clean room environmental control  
[NASA-CASE-XMF-03212] c15 N71-22721  
Portable cutting machine for piping weld preparation  
[NASA-CASE-XKS-07953] c15 N71-26134  
Method and apparatus for precision sizing and joining of large diameter tubes by bulging or constricting overlapping ends  
[NASA-CASE-XMF-05114-2] c15 N71-26148  
Portable cryogenic cooling system design including turbine pump, cooling chamber, and atomizer  
[NASA-CASE-NPO-10467] c23 N71-26654  
Automatic controlled drive mechanism for portable boring bar  
[NASA-CASE-XLA-03661] c15 N71-33518  
One hand backpack harness  
[NASA-CASE-LAR-10302-1] c05 N72-23085  
Portable tester for monitoring bacterial contamination by adenosine triphosphate light reaction  
[NASA-CASE-GSC-10879-1] c14 N72-25413  
Portable penetrometer for analyzing soil characteristics  
[NASA-CASE-MFS-20774] c14 N73-19420  
Hand-held, lightweight, portable photomicroscope  
[NASA-CASE-ARC-10468-1] c14 N73-33361

System for enhancing tool-exchange capabilities of a portable wrench  
[NASA-CASE-MFS-22283-1] c37 N75-33395  
Method of peening and portable peening gun  
[NASA-CASE-MFS-23047-1] c37 N76-18454  
Portable electrophoresis apparatus using minimum electrolyte  
[NASA-CASE-NFO-13274-1] c25 N79-10163  
Portable heatable container  
[NASA-CASE-NFO-14237-1] c44 N80-20808  
Portable device for use in starting air-start-units for aircraft and having cable lead testing capability  
[NASA-CASE-FRC-10113-1] c33 N80-26599  
Portable appliance security apparatus  
[NASA-CASE-GSC-12399-1] c33 N81-25299  
Dual-beam skin friction interferometer --- portable equipment  
[NASA-CASE-ARC-11354-1] c36 N81-29415

**PORTABLE LIFE SUPPORT SYSTEMS**  
Portable breathing system --- a breathing apparatus using a rebreathing system of heat exchangers for carbon dioxide removal  
[NASA-CASE-NSC-16182-1] c54 N80-10799

**PORTS (OPENINGS)**  
Sealing evacuation port and evacuating vacuum container such as space jackets  
[NASA-CASE-XMF-03290] c15 N71-23256  
Safety shield for vacuum/pressure chamber viewing port  
[NASA-CASE-GSC-12513-1] c31 N81-19343

**POSITION (LOCATION)**  
Position locating system for remote aircraft using voice communication and digital signals  
[NASA-CASE-GSC-10087-2] c21 N71-13958  
Development of telemetry system for position location and data acquisition  
[NASA-CASE-GSC-10083-1] c30 N71-16090  
Automatic braking device for rapidly transferring humans or materials from elevated location  
[NASA-CASE-XKS-07814] c15 N71-27067  
System and method for position locating for air traffic control involving supersonic transports  
[NASA-CASE-GSC-10087-3] c07 N72-12080  
Location identification system with ground based transmitter and aircraft borne receiver/decoder  
[NASA-CASE-BRC-10324] c07 N72-25173  
System for detecting impact position of cosmic dust on detector surface  
[NASA-CASE-GSC-11291-1] c25 N72-33696  
Collimator for analyzing spatial location of near and distant sources of radiation  
[NASA-CASE-MFS-20546-2] c14 N73-30389  
Measuring probe position recorder  
[NASA-CASE-LAR-10806-1] c35 N74-32877  
Vehicle locating system utilizing AM broadcasting station carriers  
[NASA-CASE-NFO-13217-1] c32 N75-26194  
Impact position detector for outer space particles  
[NASA-CASE-GSC-11829-1] c35 N75-27331  
Aircraft-mounted crash-activated transmitter device  
[NASA-CASE-MFS-16609-3] c03 N76-32140  
Twin-capacitive shaft angle encoder with analog output signal  
[NASA-CASE-ARC-10897-1] c33 N77-31404  
X-ray position detector  
[NASA-CASE-NFO-12087-1] c74 N81-19898  
Navigation system and method  
[NASA-CASE-GSC-12508-1] c04 N81-26085

**POSITION INDICATORS**  
Rocket-borne aspect sensor consisting of radiation sensor, apertured disk, commutator, and counting circuits  
[NASA-CASE-XGS-08266] c14 N69-27432  
Characteristics and performance of electrical system to determine angular rotation  
[NASA-CASE-XMF-00447] c14 N70-33179  
Magnetic element position sensing device, using misaligned electromagnets  
[NASA-CASE-XGS-07514] c23 N71-16099  
Describing angular position and velocity sensing apparatus  
[NASA-CASE-XGS-05680] c14 N71-17585  
Mosaic semiconductor radiation detector and position indicator systems engineering for low energy particles  
[NASA-CASE-XGS-03230] c14 N71-23401



- Doppler compensated communication system for locating supersonic transport position  
[NASA-CASE-GSC-10087-4] c07 N73-20174
- Meteoroid impact position locator aid for manned space station  
[NASA-CASE-LAR-10629-1] c35 N75-33367
- Position determination systems --- using orbital antenna scan of celestial bodies  
[NASA-CASE-MSC-12593-1] c17 N76-21250
- Solar cell angular position transducer  
[NASA-CASE-LAR-11999-1] c44 N80-18552
- POSITIONING**
- Centering device with ultrafine adjustment for use with roundness measuring apparatus  
[NASA-CASE-XMF-00480] c14 N70-39898
- Portable device for aligning surfaces of two adjacent wall or sheet sections for joining at point of junction  
[NASA-CASE-XMF-01452] c15 N70-41371
- Electro-optical/computer system for aligning large structural members and maintaining correct position  
[NASA-CASE-XMP-02029] c14 N70-41955
- Manual control mechanism for adjusting control rod to null position  
[NASA-CASE-XLA-01808] c15 N71-20740
- Rotating raster generator  
[NASA-CASE-FRC-10071-1] c32 N74-20813
- POSITIONING DEVICES (MACHINERY)**
- Swivel support for gas bearing for position adjustment between ball and supporting cup  
[NASA-CASE-XMF-07808] c15 N71-23812
- Caterpillar micropositioner for positioning machine tools adjacent to workpiece  
[NASA-CASE-GSC-10780-1] c14 N72-16283
- Positioning mechanism for converting translatory motion into rotary motion  
[NASA-CASE-NPO-10679] c15 N72-21462
- Design and development of test stand system for supporting test items in vacuum chamber  
[NASA-CASE-MFS-21362] c11 N73-20267
- Method and apparatus for optically monitoring the angular position of a rotating mirror  
[NASA-CASE-GSC-11353-1] c74 N74-21304
- Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c35 N75-15014
- Reference apparatus for medical ultrasonic transducer  
[NASA-CASE-ARC-10753-1] c54 N75-27760
- Controlled caging and uncaging mechanism  
[NASA-CASE-GSC-11063-1] c37 N77-27400
- POSITIVE FEEDBACK**
- Complementary regenerative transistorized switch circuit employing positive and negative feedback  
[NASA-CASE-IGS-02751] c09 N71-23015
- POTABLE WATER**
- Potable water reclamation from human wastes in zero-G environment  
[NASA-CASE-XLA-03213] c05 N71-11207
- Utilization of solar radiation by solar still for converting salt and brackish water into potable water  
[NASA-CASE-XMS-04533] c15 N71-23086
- Chlorine generator for purifying water in life support systems of manned spacecraft  
[NASA-CASE-XLA-08913] c14 N71-28933
- Potable water dispenser  
[NASA-CASE-MFS-21115-1] c54 N74-12779
- Metering gun for dispensing precisely measured charges of fluid  
[NASA-CASE-MFS-21163-1] c54 N74-17853
- Iodine generator for reclaimed water purification  
[NASA-CASE-MSC-14632-1] c54 N78-14784
- POTASSIUM SILICATES**
- Fireproof potassium silicate coating composition, insoluble in water after application  
[NASA-CASE-GSC-10072] c18 N71-14014
- POTENTIOMETERS**
- Angle detector  
[NASA-CASE-ARC-11036-1] c35 N78-32395
- POTENTIOMETERS (INSTRUMENTS)**
- Two axis flight controller with potentiometer control shafts directly coupled to rotatable ball members  
[NASA-CASE-XFR-04104] c03 N70-42073
- Device for controlling rotary potentiometer mounted on aircraft steering wheel or aileron control
- [NASA-CASE-XAC-10019] c15 N71-23809
- Mechanical function generators with potentiometer as sensing element  
[NASA-CASE-XAC-00001] c15 N71-28952
- Indirect microbial detection  
[NASA-CASE-LAR-12520-1] c51 N81-28698
- POTTING COMPOUNDS**
- Removable potting compound for instrument shock protection  
[NASA-CASE-XLA-00482] c15 N70-36409
- Flexible, repairable, pottable composition for encapsulating electric connectors  
[NASA-CASE-XGS-05180] c18 N71-25881
- Thermally conductive polymer for potting electrical components  
[NASA-CASE-GSC-11304-1] c06 N72-21105
- POWDER (PARTICLES)**
- A system for concurrently delivering a stream of powdered fuel and a stream of powdered oxidizer to a combustion chamber for a reaction motor  
[NASA-CASE-MFS-23904-1] c20 N79-13077
- A method for producing a solidified body of silicon --- solar cells  
[NASA-CASE-NPO-15250-1] c25 N81-16174
- POWDER METALLURGY**
- Freeze casting of metal ceramic and refractory compound powders into plastic slips  
[NASA-CASE-XLE-00106] c15 N71-16076
- Production method for manufacturing porous tungsten bodies from tungsten powder particles  
[NASA-CASE-INP-04339] c17 N71-29137
- Dry electrode manufacture, using silver powder with cement  
[NASA-CASE-FRC-10029-2] c05 N72-25121
- Grinding mixtures of powdered metals and inert fillers for conversion to halide  
[NASA-CASE-LEW-10450-1] c15 N72-25448
- Superalloys from prealloyed powders at high temperatures  
[NASA-CASE-LEW-10805-1] c15 N73-13465
- Method of heat treating a formed powder product material  
[NASA-CASE-LEW-10805-3] c26 N74-10521
- Method of forming articles of manufacture from superalloy powders  
[NASA-CASE-LEW-10805-2] c37 N74-13179
- Cermet composition and method of fabrication --- heat resistant alloys and powders  
[NASA-CASE-NPO-13120-1] c27 N76-15311
- POWER AMPLIFIERS**
- Characteristics of high power, low distortion, alternating current power amplifier  
[NASA-CASE-LAR-10218-1] c09 N70-34559
- Power supply with automatic power factor conversion system  
[NASA-CASE-XMS-02159] c10 N71-22961
- Solid state broadband stable power amplifier  
[NASA-CASE-INP-10854] c10 N71-26331
- High efficiency transformerless amplitude modulator coupled to BF power amplifier  
[NASA-CASE-GSC-10668-1] c07 N71-28430
- Isolated output system for a class D switching-mode amplifier  
[NASA-CASE-MFS-21616-1] c33 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] c33 N79-24254
- Self-reconfiguring solar cell system  
[NASA-CASE-LEW-12586-1] c44 N80-14472
- Microwave switching power divider --- for use in Earth orbiting satellites having spherical multi-element antenna arrays  
[NASA-CASE-GSC-12420-1] c33 N80-21670
- Unequal split microwave power divider  
[NASA-CASE-LAR-12889-1] c33 N81-31483
- POWER CONVERTERS**
- A gas-to-hydraulic power converter  
[NASA-CASE-MSC-18794-1] c37 N81-24445
- POWER EFFICIENCY**
- Low power drain transistor feedback circuit  
[NASA-CASE-IGS-04999] c09 N69-24317
- Excitation and detection circuitry for flux responsive magnetic head  
[NASA-CASE-XMF-04183] c09 N69-24329
- Increasing available power per unit area in ion rocket engine by increasing beam density

- [NASA-CASE-XLE-00519] c28 N70-41576  
Absorbing gas reactivity control system for  
minimizing power distribution and perturbation  
in nuclear reactors  
[NASA-CASE-XLE-04599] c22 N72-20597  
Remote platform power conserving system  
[NASA-CASE-GSC-11182-1] c15 N75-13007  
A gas-to-hydraulic power converter  
[NASA-CASE-MSC-18794-1] c37 N81-24445
- POWER GAIN**  
Serrrodyne traveling wave tube reentrant  
amplifier for synchronous communication  
satellites operating at microwave frequencies  
[NASA-CASE-XGS-01022] c07 N71-16088  
Switching circuit for control of cathode ray  
tube beam with fast rise time for output signal  
[NASA-CASE-KSC-10647-1] c10 N72-31273
- POWER LIMITERS**  
Monostable multivibrator for conserving power in  
spacecraft systems  
[NASA-CASE-GSC-10082-1] c10 N72-20221
- POWER LINES**  
Patent data on terminal insert connector for  
flat electric cables  
[NASA-CASE-IMF-00324] c09 N70-34596  
Motor run-up system --- power lines  
[NASA-CASE-NPO-13374-1] c33 N75-19524  
Apparatus including a plurality of spaced  
transformers for locating short circuits in  
cables  
[NASA-CASE-KSC-10899-1] c33 N79-18193  
Shielded conductor cable system  
[NASA-CASE-MSC-12745-1] c33 N81-27397
- POWER SERIES**  
Describing circuit for obtaining sum of squares  
of numbers  
[NASA-CASE-XGS-04765] c08 N71-18693  
Phase modulating with odd and even finite power  
series of a modulating signal  
[NASA-CASE-LAB-11607-1] c32 N77-14292
- POWER SPECTRA**  
Method and apparatus for high resolution power  
spectrum analysis  
[NASA-CASE-NPO-10748] c08 N72-20177  
An instrument for determining coincidence and  
elapse time between independent sources of  
random sequential events  
[NASA-CASE-LAB-12531-1] c35 N81-31529
- POWER SUPPLIES**  
Tape recorder designed for low power consumption  
and resistance to operational failure under  
high stress conditions  
[NASA-CASE-XGS-08259] c14 N71-23698  
Current dependent variable inductance for input  
filter chokes of ac or dc power supplies  
[NASA-CASE-ERC-10139] c09 N72-17154  
Performance of ac power supply developed for CO2  
laser system  
[NASA-CASE-GSC-11222-1] c16 N73-32391  
High voltage distributor  
[NASA-CASE-GSC-11849-1] c33 N76-16332
- POWER SUPPLY CIRCUITS**  
Regulated dc to dc converter  
[NASA-CASE-XGS-03429] c03 N69-21330  
Power control switching circuit using low  
voltage semiconductor controlled rectifiers  
for high voltage isolation  
[NASA-CASE-XNP-02713] c10 N69-39888  
Increasing power conversion efficiency of  
electronic amplifiers by power supply switching  
[NASA-CASE-IMS-00945] c09 N71-10798  
Electric power system utilizing thermionic  
plasma diodes in parallel and heat pipes as  
cathodes  
[NASA-CASE-IMF-05843] c03 N71-11055  
Pulsed energy power system for application of  
combustible gases to turbine controlling ac  
voltage generator  
[NASA-CASE-MSC-13112] c03 N71-11057  
Data processor having multiple sections  
activated at different times by selective  
power coupling to sections  
[NASA-CASE-IGS-04767] c08 N71-12494  
Microwave power receiving antenna solving heat  
dissipation problems by construction of  
elements as heat pipe devices  
[NASA-CASE-MFS-20333] c09 N71-13486  
Design, development, and operating principles of  
power supply with starting circuit which is  
independent of voltage regulator  
[NASA-CASE-IMS-01991] c09 N71-21449  
Power supply with automatic power factor  
conversion system  
[NASA-CASE-IMS-02159] c10 N71-22961  
Electric circuit for reversing direction of  
current flow  
[NASA-CASE-XNP-00952] c10 N71-23271  
Power supply with overload protection for series  
stage transistor  
[NASA-CASE-KMS-00913] c10 N71-23543  
Automatic power supply circuit design for  
driving inductive loads and minimizing power  
consumption including solenoid example  
[NASA-CASE-NFO-10716] c09 N71-24892  
Unsaturating magnetic core transformer design  
with warning signal for electrical power  
processing equipment  
[NASA-CASE-ERC-10125] c09 N71-24893  
Device for monitoring voltage by generating  
signal when voltages drop below predetermined  
value  
[NASA-CASE-KSC-10020] c10 N71-27338  
Power point tracker for maintaining optimal  
output voltage of power source  
[NASA-CASE-GSC-10376-1] c14 N71-27407  
Microwave power divider for providing variable  
output power to output waveguide in fixed  
waveguide system  
[NASA-CASE-NFO-11031] c07 N71-33606  
Circuit for monitoring power supply by ripple  
current indication  
[NASA-CASE-KSC-10162] c09 N72-11225  
Dc to ac to dc converter with transistor driven  
synchronous rectifiers  
[NASA-CASE-GSC-11126-1] c09 N72-25253  
LC-oscillator with automatic stabilized  
amplitude via bias current control --- power  
supply circuit for transducers  
[NASA-CASE-MFS-21698-1] c33 N74-26732  
Integrable power gyrator --- with Z-matrix  
design using parallel transistors  
[NASA-CASE-MFS-22342-1] c33 N75-30428  
The dc-to-dc converters employing  
staggered-phase power switches with two-loop  
control  
[NASA-CASE-NFO-13512-1] c33 N77-10428  
Control for nuclear thermionic power source  
[NASA-CASE-NPO-13114-2] c73 N78-28913  
Closed Loop solar array-ion thruster system with  
power control circuitry  
[NASA-CASE-LEW-12780-1] c20 N79-20179  
Three phase power factor controller  
[NASA-CASE-MFS-25535-1] c33 N81-12330  
Power factor control system for ac induction  
motors  
[NASA-CASE-MFS-23988-1] c33 N81-27395
- PRECESSION**  
Dynamic precession damping of spin-stabilized  
vehicles by using rate gyroscope and angular  
accelerometer  
[NASA-CASE-XLA-01989] c21 N70-34295
- PRECIPITATION (CHEMISTRY)**  
Production of pure metals  
[NASA-CASE-LEW-10906-1] c25 N74-30502
- PRECISION**  
Precision stepping drive device using cam disk  
[NASA-CASE-MFS-14772] c15 N71-17692  
Method and apparatus for precision sizing and  
joining of large diameter tubes by bulging or  
constricting overlapping ends  
[NASA-CASE-XNP-05114-2] c15 N71-26148  
Method and apparatus for precision control of  
radiometer  
[NASA-CASE-NPO-15398-1] c35 N81-33449
- PREFLIGHT OPERATIONS**  
Automatic balancing device for use on  
frictionless supported attitude-controlled  
test platforms  
[NASA-CASE-LAR-10774] c10 N71-13545
- PRELAUNCH TESTS**  
Low loss parasitic probe antenna for prelaunch  
tests of spacecraft antennas  
[NASA-CASE-YKS-09348] c09 N71-13521  
Digital computer system for automatic prelaunch  
checkout of spacecraft  
[NASA-CASE-YKS-08012-2] c31 N71-15566
- PREPOLYMERS**  
Carboxyl terminated polyester prepolymers and

- foams produced from prepolymers and materials  
[NASA-CASE-NPO-10596] c06 N71-25929
- Low temperature cross linking polyimides  
[NASA-CASE-LEW-12876-1] c27 N80-26447
- Curable liquid hydrocarbon prepolymers  
containing hydroxyl groups and process for  
producing same  
[NASA-CASE-NPO-13137-1] c27 N80-32514
- Prepolymer dianhydrides  
[NASA-CASE-NPO-13899-1] c27 N80-32515
- Structural wood panels with improved fire  
resistance  
[NASA-CASE-ARC-11174-1] c24 N81-13999
- PREPREGS**
- Tackifier for addition polyimides containing  
monoethylphthalate  
[NASA-CASE-LAR-12642-1] c27 N81-29229
- PRESSURE**
- Strain gage mounting assembly  
[NASA-CASE-NPO-13170-1] c35 N76-14430
- Surface conforming thermal/pressure seal --- for  
control devices in space vehicles  
[NASA-CASE-MSC-18422-1] c37 N80-14400
- PRESSURE CHAMBERS**
- Triggering system for electric arc driven  
impulse wind tunnel  
[NASA-CASE-IMP-00411] c11 N70-36913
- Whole body measurement systems --- for  
weightlessness simulation  
[NASA-CASE-MSC-13972-1] c52 N74-10975
- Accumulator  
[NASA-CASE-MFS-15267-1] c34 N77-30399
- Safety shield for vacuum/pressure chamber  
viewing port  
[NASA-CASE-GSC-12513-1] c31 N81-19343
- PRESSURE DISTRIBUTION**
- Piston device for producing known constant  
positive pressure within lungs by using  
thoracic muscles  
[NASA-CASE-XMS-01615] c05 N70-41329
- Preventing pressure buildup in electrochemical  
cells by reacting palladium oxide with evolved  
hydrogen  
[NASA-CASE-XGS-01419] c03 N70-41864
- Accumulator  
[NASA-CASE-MFS-19287-1] c34 N77-30399
- Continuous self-locking spiral wound seal ---  
for maintaining pressure between chambers in  
cryogenic wind tunnels  
[NASA-CASE-LAR-12315-1] c37 N80-16339
- Thermal barrier pressure seal --- shielding  
junctions between spacecraft control surfaces  
and structures  
[NASA-CASE-MSC-18134-1] c37 N81-15363
- PRESSURE DROP**
- Leak detector  
[NASA-CASE-MFS-21761-1] c35 N75-15931
- PRESSURE EFFECTS**
- System for stabilizing cable phase delay  
utilizing a coaxial cable under pressure  
[NASA-CASE-NPO-13138-1] c33 N74-17927
- Evacuated, displacement compression mold --- of  
tubular bodies from thermosetting plastics  
[NASA-CASE-LAR-10782-2] c31 N75-13111
- Internally supported flexible duct joint ---  
device for conducting fluids in high pressure  
systems  
[NASA-CASE-MFS-19193-1] c37 N75-19686
- Fluid pressure balanced seal  
[NASA-CASE-XGS-01286-1] c37 N79-33469
- PRESSURE GAGES**
- Differential pressure cell insensitive to  
changes in ambient temperature and extreme  
overload  
[NASA-CASE-XAC-00042] c14 N70-34816
- Blood pressure measuring system for separately  
recording dc and ac pressure signals of  
Korotkoff sounds  
[NASA-CASE-XMS-06061] c05 N71-23317
- Control system for pressure balance device used  
in calibrating pressure gages  
[NASA-CASE-IMP-04134] c14 N71-23755
- Improved McLeod gage for pressure measurement  
[NASA-CASE-XAC-04458] c14 N71-24232
- Ultrahigh vacuum gage with two collector  
electrodes  
[NASA-CASE-LAR-02743] c14 N73-32324
- Gas ion laser construction for electrically  
isolating the pressure gage thereof  
[NASA-CASE-MFS-22597] c36 N78-17366
- PRESSURE GRADIENTS**
- Positive displacement flowmeter for measuring  
extremely low flows of fluid with self  
calibrating features  
[NASA-CASE-IMP-02822] c14 N70-41994
- Dual laser optical system and method for  
studying fluid flow  
[NASA-CASE-MFS-25315-1] c36 N81-19440
- PRESSURE HEADS**
- Head for high speed spinner having a vacuum chuck  
--- holding silicon dioxide chips for etching  
[NASA-CASE-NPO-15227-1] c37 N81-33482
- PRESSURE MEASUREMENTS**
- Design and development of inertia diaphragm  
pressure transducer  
[NASA-CASE-XAC-02981] c14 N71-21072
- Design and development of pressure sensor for  
measuring differential pressures of few pounds  
per square inch  
[NASA-CASE-IMP-01974] c14 N71-22752
- Improved McLeod gage for pressure measurement  
[NASA-CASE-XAC-04458] c14 N71-24232
- Coherent light beam device and method for  
measuring gas density in vacuum chambers  
[NASA-CASE-XER-11203] c14 N71-28994
- Design, development, and characteristics of  
pressure and temperature sensor operating  
immersed in fluid flow  
[NASA-CASE-LEW-10281-1] c14 N72-17327
- Calibration of vacuum gauges for measuring total  
and partial pressures in ultrahigh vacuum region  
[NASA-CASE-XGS-07752] c14 N73-30390
- Absolute pressure measuring device for measuring  
gas density level in high vacuum range  
[NASA-CASE-LAR-10000] c14 N73-30394
- Wind tunnel model and method  
[NASA-CASE-LAR-10812-1] c09 N74-17955
- Indicated mean-effective pressure instrument  
[NASA-CASE-LEW-12661-1] c35 N79-14345
- High-temperature microphone system --- for  
measuring pressure fluctuations in gases at  
high temperature  
[NASA-CASE-LAR-12375-1] c32 N79-24203
- Static pressure orifice system testing method  
and apparatus  
[NASA-CASE-LAR-12269-1] c35 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] c02 N80-20224
- A self-correcting electronically scanned  
pressure sensor  
[NASA-CASE-LAR-12686-1] c09 N81-27121
- Non-invasive method and apparatus for measuring  
pressure within a pliable vessel  
[NASA-CASE-ARC-11264-1] c52 N81-33804
- PRESSURE REDUCTION**
- Relief valve to permit slow and fast bleeding  
rates at difference pressure levels  
[NASA-CASE-XMS-05894-1] c15 N69-21924
- Sealed electric storage battery with gas  
manifold interconnecting each cell  
[NASA-CASE-IMP-03378] c03 N71-11051
- Depressurization of arc lamps  
[NASA-CASE-NPO-10790-1] c33 N77-21316
- Method of purifying metallurgical grade silicon  
employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c26 N80-14229
- Pressure letdown method and device for coal  
conversion systems  
[NASA-CASE-NPO-15100-1] c28 N81-33306
- PRESSURE REGULATORS**
- Pressure regulating system with high pressure  
fluid source, adapted to maintain constant  
downstream pressure  
[NASA-CASE-IMP-00450] c15 N70-38603
- Pulmonary resuscitation method and apparatus  
with adjustable pressure regulator  
[NASA-CASE-XMS-01115] c05 N70-39922
- Structural design of high pressure regulator valve  
[NASA-CASE-IMP-00710] c15 N71-10778
- Space suit with pressure-volume compensator system  
[NASA-CASE-XLA-05332] c05 N71-11194
- Portable environmental control and life support  
system for astronaut in and out of spacecraft  
[NASA-CASE-XMS-09632-1] c05 N71-11203

- Antibacklash circuit for hydraulic drive system  
[NASA-CASE-XNP-01020] c03 N71-12260
- High impact pressure regulator having minimum number of lightweight movable elements  
[NASA-CASE-NPO-10175] c14 N71-18625
- Pressure regulator for space suit worn underwater to simulate space environment for testing and experimentation  
[NASA-CASE-MPS-20332] c05 N72-20C97
- Underwater space suit pressure control regulator  
[NASA-CASE-MPS-20332-2] c05 N73-25125
- Combined pressure regulator and shutoff valve  
[NASA-CASE-NPO-13201-1] c37 N75-15050
- Pressure modulating valve  
[NASA-CASE-MSC-14905-1] c37 N77-28487
- Flow compensating pressure regulator  
[NASA-CASE-LRW-12718-1] c34 N78-25351
- Flow diverter valve and flow diversion method  
[NASA-CASE-HQN-00573-1] c37 N79-33468
- Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LRW-12955-1] c52 N80-14684
- Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LRW-12723-1] c52 N80-18690
- Pressure control valve --- inflating flexible bladders  
[NASA-CASE-ARC-11251-1] c37 N81-17433
- Prosthetic urinary sphincter  
[NASA-CASE-MPS-23717-1] c52 N81-25660
- Ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LRW-13107-1] c52 N81-27786
- PRESSURE SENSORS**
- Fabrication of pressure-telemetry transducers  
[NASA-CASE-XNP-09752] c14 N69-21541
- Pressure probe for sensing ambient static air pressures  
[NASA-CASE-XLA-00481] c14 N70-36824
- Ambient atmospheric pressure sensing device for determining altitude of flight vehicles  
[NASA-CASE-XLA-00128] c15 N70-37925
- Dynamic sensor for gas pressure or density measurement  
[NASA-CASE-XAC-02877] c14 N70-41681
- Design and development of inertia diaphragm pressure transducer  
[NASA-CASE-XAC-02981] c14 N71-21072
- Design and development of pressure sensor for measuring differential pressures of few pounds per square inch  
[NASA-CASE-XMF-01974] c14 N71-22752
- Combination pressure transducer-calibrator assembly for measuring fluid  
[NASA-CASE-XNP-01660] c14 N71-23036
- Pressure sensor network for measuring liquid dynamic response in flight including fuel tank acceleration, liquid slosh amplitude, and fuel depth monitoring  
[NASA-CASE-XLA-05541] c12 N71-26387
- Miniature electromechanical junction transducer operating on piezjunction effect and utilizing epoxy for stress coupling component  
[NASA-CASE-ERC-10087] c14 N71-27334
- Method for making pressurized meteoroid penetration detector panels  
[NASA-CASE-XLA-08916] c15 N71-29018
- Design, development, and characteristics of pressure and temperature sensor operating immersed in fluid flow  
[NASA-CASE-LRW-10281-1] c14 N72-17327
- Pressure transducer for systems for measuring forces of compression  
[NASA-CASE-NPO-10832] c14 N72-21405
- Pressure operated electrical switch responsive to pressure decrease after pressure increase  
[NASA-CASE-LAB-10137-1] c09 N72-22204
- Wide range dynamic pressure sensor with vibrating diaphragm for measuring density and pressure of gaseous environment  
[NASA-CASE-ARC-10263-1] c14 N72-22438
- Development of differential pressure control system using motion of mechanical diaphragms to operate electric switch  
[NASA-CASE-MPS-14216] c14 N73-13418
- Pressurized panel meteoroid detector  
[NASA-CASE-XLA-08916-2] c14 N73-28487
- System for calibrating pressure transducer  
[NASA-CASE-LAB-10910-1] c35 N74-13132
- Stagnation pressure probe --- for measuring pressure of supersonic gas streams  
[NASA-CASE-LAB-11139-1] c35 N74-32878
- Circuit for detecting initial systole and diastolic notch --- for monitoring arterial pressure  
[NASA-CASE-LRW-11581-1] c54 N75-13531
- Leak detector  
[NASA-CASE-MPS-21761-1] c35 N75-15931
- Measurement of gas production of microorganisms --- using pressure sensors  
[NASA-CASE-LAB-11326-1] c35 N75-33368
- Static pressure probe  
[NASA-CASE-LAB-11552-1] c35 N76-14429
- Trielectrode capacitive pressure transducer  
[NASA-CASE-ARC-10711-2] c33 N76-21390
- Catheter tip force transducer for cardiovascular research  
[NASA-CASE-NPO-13643-1] c52 N76-29896
- Miniature biaxial strain transducer  
[NASA-CASE-LAB-11648-1] c35 N77-14407
- Pressure transducer --- using a monomeric charge transfer complex sensor  
[NASA-CASE-NPO-11150] c35 N78-17359
- Electronically scanned pressure sensor module with in SITO calibration capability  
[NASA-CASE-LAB-12230-1] c35 N79-14347
- System for use in conducting wake investigation for a wing in flight --- differential pressure measurements for drag investigations  
[NASA-CASE-FRC-11024-1] c02 N80-28300
- Tactile sensing system --- manipulator controllers  
[NASA-CASE-NPO-15094-1] c33 N81-16386
- A self-correcting electronically scanned pressure sensor  
[NASA-CASE-LAB-12686-1] c09 N81-27121
- Automatic compression adjusting mechanism for internal combustion engines  
[NASA-CASE-MSC-18807-1] c37 N81-29442
- Non-invasive method and apparatus for measuring pressure within a pliable vessel  
[NASA-CASE-ARC-11264-1] c52 N81-33804
- PRESSURE SUITS**
- Helmet and torso tie-down mechanism for shortening pressure suits upon inflation  
[NASA-CASE-XMS-00784] c05 N71-12335
- Design and development of flexible joint for pressure suits  
[NASA-CASE-XMS-09636] c05 N71-12344
- Cord restraint system for pressure suit joints  
[NASA-CASE-XMS-09635] c05 N71-24623
- Development of improved convolute section for pressurized suits to provide high degree of mobility in response to minimum of applied torque  
[NASA-CASE-XMS-09637-1] c05 N71-24730
- Fabrication of root cord restrained fabric suit sections from sheets of fabric  
[NASA-CASE-MSC-12398] c05 N72-20098
- Restraint torso for increased mobility and reduced physiological effects while wearing pressurized suits  
[NASA-CASE-MSC-12397-1] c05 N72-25119
- Flexible joint for pressurizable garment  
[NASA-CASE-MSC-11072] c54 N74-32546
- Walking boot assembly  
[NASA-CASE-ARC-11101-1] c54 N78-17675
- Pressure suit joint analyzer  
[NASA-CASE-ARC-11314-1] c54 N80-30043
- PRESSURE SWITCHES**
- Reinforcing beam system for highly flexible diaphragms in valves or pressure switches  
[NASA-CASE-XNP-01962] c32 N70-41370
- Calibrating pressure switch  
[NASA-CASE-XMF-04494-1] c33 N79-33392
- PRESSURE VESSELS**
- Liquid rocket systems for propulsion and control of spacecraft  
[NASA-CASE-XNP-00610] c28 N70-36910
- Thin walled pressure test vessel using low-melting alloy-filled joint to attach shell to heads  
[NASA-CASE-XLE-04677] c15 N71-10577
- Control of gas flow from pressurized vessel by thermal expansion of metal plug  
[NASA-CASE-NPO-10298] c12 N71-17661
- Method and apparatus for inducing compressive stresses in pressure vessel to prevent stress corrosion

- [NASA-CASE-XLA-07390] c15 N71-18616  
Heater-mixer for stored fluids
- [NASA-CASE-ARC-10442-1] c35 N74-15093  
Method and apparatus for nondestructive testing of pressure vessels
- [NASA-CASE-NPO-12142-1] c38 N76-28563  
Gas compression apparatus
- [NASA-CASE-MSC-14757-1] c35 N78-10428  
Pressure control valve --- inflating flexible bladders
- [NASA-CASE-ARC-11251-1] c37 N81-17433
- PRESSURE WELDING**
- Diffusion welding --- heat treatment of nickel alloys following single step vacuum welding process
- [NASA-CASE-LEW-11388-2] c37 N74-21055
- PRESSURIZING**
- Restraining mechanism
- [NASA-CASE-MSC-13054] c54 N78-17677
- PRESTRESSING**
- Prestressed rocket nozzle with ceramic inner rings and refractory metal outer rings
- [NASA-CASE-XNP-02888] c18 N71-21068
- Apparatus for accurately preloading auger attachment means for frangible protective material
- [NASA-CASE-MSC-18791-1] c37 N81-24446
- Method of manufacture of bonded fiber flywheel --- fiberglass-epoxy
- [NASA-CASE-MFS-23674-1] c24 N81-29163
- PRETREATMENT**
- Anti-wettable materials brazing processes using titanium and zirconium for surface pretreatment
- [NASA-CASE-XMS-03537] c15 N69-21471
- Apparatus for accurately preloading auger attachment means for frangible protective material
- [NASA-CASE-MSC-18791-1] c37 N81-24446
- PRIMERS (COATINGS)**
- Advanced inorganic separators for alkaline batteries and method of making same --- a polymeric coating applied to a porous flexible substrate
- [NASA-CASE-LEW-13171-1] c44 N81-22466
- Thermal barrier coating system having improved adhesion
- [NASA-CASE-LEW-13359-1] c27 N81-24265
- PRINTED CIRCUITS**
- Electrical feedthrough connection for printed circuit boards
- [NASA-CASE-IMP-01483] c14 N69-27431
- Electric connector for printed cable to printed cable or to printed board
- [NASA-CASE-XMP-00369] c09 N70-36494
- Electrical connection for printed circuits on common board, using bellows principle in rivet
- [NASA-CASE-XNP-05082] c15 N70-41560
- Electrical spot terminal assembly for printed circuit boards
- [NASA-CASE-NPO-10034] c15 N71-17685
- Solder coating process for printed copper circuit protection
- [NASA-CASE-IMP-01599] c09 N71-20705
- Handling tool for printed circuit cards
- [NASA-CASE-MFS-20453] c15 N71-29133
- Development and characteristics of polyimide impregnated laminates with fiberglass cloth backing for application as printed circuit boards
- [NASA-CASE-MFS-20408] c18 N73-12604
- Techniques for packaging and mounting printed circuit boards
- [NASA-CASE-MFS-21919-1] c10 N73-25243
- Device for configuring multiple leads --- method for connecting electric leads to printed circuit board
- [NASA-CASE-MFS-22133-1] c33 N74-26977
- Connector --- for connecting circuits on different layers of multilayer printed circuit boards
- [NASA-CASE-LAR-11709-1] c37 N76-27567
- Controlled caging and uncaging mechanism
- [NASA-CASE-GSC-11063-1] c37 N77-27400
- Solar array strip and a method for forming the same
- [NASA-CASE-NPO-13652-1] c44 N79-17314
- PRINTING**
- Application of semiconductor diffusants to solar cells by screen printing
- [NASA-CASE-LEW-12775-1] c44 N79-11468
- PRINTOUTS**
- Handling tool for printed circuit cards
- [NASA-CASE-MFS-20453] c15 N71-29133
- PRISMS**
- Interferometer prism and control system for precisely determining direction to remote light source
- [NASA-CASE-ARC-10278-1] c14 N73-25463
- Method and apparatus for splitting a beam of energy --- optical communication
- [NASA-CASE-GSC-12083-1] c73 N78-32848
- Multiprism collimator
- [NASA-CASE-GSC-12608-1] c35 N81-12387
- Rhomboid prism pair for rotating the plane of parallel light beams --- laser velocimeters
- [NASA-CASE-ARC-11311-1] c74 N81-16882
- PROBABILITY THEORY**
- System and method for character recognition
- [NASA-CASE-NPO-11337-1] c74 N81-19896
- PROBES**
- Method and apparatus for connecting two spacecraft with probe of one inserted in rocket engine nozzle of other spacecraft
- [NASA-CASE-MFS-11133] c31 N71-16222
- Development of droplet monitoring probe for use in analysis of droplet propagation in mixed-phase fluid stream
- [NASA-CASE-NPO-10985] c14 N73-20478
- System for moving a probe to follow movements of tissue
- [NASA-CASE-NPO-15197-1] c52 N81-26697
- PRODUCT DEVELOPMENT**
- Using molds for fabricating individual fluid circuit components
- [NASA-CASE-XLA-07829] c15 N72-16329
- Process for developing filament reinforced plastic tubes used in research and development programs
- [NASA-CASE-LAR-10203-1] c15 N72-16330
- Simplified technique and device for producing industrial grade synthetic diamonds
- [NASA-CASE-MFS-20698-2] c15 N73-19457
- High power laser apparatus and system
- [NASA-CASE-XLE-2529-2] c36 N75-27364
- Induced junction solar cell and method of fabrication
- [NASA-CASE-NPO-13786-1] c44 N80-29835
- Fiber optic crossbar switch for automatically patching optical signals
- [NASA-CASE-KSC-11104-1] c74 N81-12862
- Process for preparation of large-particle-size monodisperse latexes
- [NASA-CASE-MFS-25000-1] c25 N81-19242
- Ion-exchange hollow fibers
- [NASA-CASE-NPO-13309-1] c25 N81-19244
- Resin composition, process for producing the same, product produced therefrom and process for producing said product
- [NASA-CASE-ARC-11331-1] c27 N81-31363
- Phosphorus-containing imide resins
- [NASA-CASE-ARC-11368-1] c27 N81-31364
- PRODUCTION ENGINEERING**
- Standard coupling design for mass production
- [NASA-CASE-XMS-02532] c15 N70-41808
- Fabrication of curved reflector segments for solar mirror
- [NASA-CASE-XLE-08917] c15 N71-15597
- Production of barium fluoride-calcium fluoride composite lubricant for bearings or seals
- [NASA-CASE-XLE-08511-2] c18 N71-16105
- Fabrication of sintered impurity semiconductor brushes for electrical energy transfer
- [NASA-CASE-IMP-01016] c26 N71-17818
- Technique for making foldable, inflatable, plastic honeycomb core panels for use in building and bridge structures, light and radio wave reflectors, and spacecraft
- [NASA-CASE-XLA-03492] c15 N71-22713
- Multilayer porous refractory metal ionizer design with thick, porous, large-grain substrates and thin, porous micron-grain substrates
- [NASA-CASE-XNP-04338] c17 N71-23046
- Permanently magnetized ion engine casing construction for use in spacecraft propulsion systems
- [NASA-CASE-XNP-06942] c28 N71-23293

- Dry electrode design with wire sandwiched between two flexible conductive discs for monitoring physiological responses  
[NASA-CASE-FRC-10029] c09 N71-24618
- Production method of star tracking reticles for transmitting in visible and near ultraviolet regions  
[NASA-CASE-GSC-11188-1] c14 N73-32320
- Process for making sheets with parallel pores of uniform size  
[NASA-CASE-GSC-10984-1] c37 N75-26371
- Solar cell collector and method for producing same  
[NASA-CASE-LEW-12552-2] c44 N79-11472
- Multilevel metallization method for fabricating a metal oxide semiconductor device  
[NASA-CASE-MFS-23541-1] c76 N79-14906
- Solar array strip and a method for forming the same  
[NASA-CASE-NPO-13652-1] c44 N79-17314
- Method of fabricating a photovoltaic module of a substantially transparent construction  
[NASA-CASE-NPO-14303-1] c44 N80-18550
- Apparatus for sequentially transporting containers  
[NASA-CASE-MFS-23846] c37 N80-29704
- Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c33 N81-19389
- Method and apparatus for producing concentric hollow spheres --- inertial confinement fusion targets  
[NASA-CASE-NPO-14596-1] c51 N81-33319
- PROJECTILES**
- Self-obluring gas-operated launcher for launching projectiles in decontaminated medium  
[NASA-CASE-NPO-11013] c11 N72-22247
- Two stage light gas-plasma projectile accelerator  
[NASA-CASE-MFS-22287-1] c75 N76-14931
- PROJECTION**
- Projection system for display of parallax and perspective  
[NASA-CASE-MFS-23194-1] c35 N78-17357
- PROJECTIVE GEOMETRY**
- Projection system for display of parallax and perspective  
[NASA-CASE-MFS-23194-1] c35 N78-17357
- PROJECTORS**
- Optical projector system for establishing optimum arrangement of instrument displays in aircraft, spacecraft, other vehicles, and industrial instrument consoles  
[NASA-CASE-XNP-03853] c23 N71-21882
- System and method for obtaining wide screen Schlieren photographs  
[NASA-CASE-NPO-14174-1] c74 N79-20856
- PROPAGATION MODES**
- Dual waveguide mode source for controlling amplitudes of two modes  
[NASA-CASE-XNP-03134] c07 N71-10676
- PROPELLANT ACTUATED INSTRUMENTS**
- Pressure limiting propellant actuating system  
[NASA-CASE-MSC-18179-1] c20 N80-18C97
- PROPELLANT ADMIXTURES**
- Inhibited solid propellant composition containing beryllium hydride  
[NASA-CASE-NPO-10866-1] c28 N79-14228
- PROPELLANT BINDERS**
- Chemical process for production of polyisobutylene compounds and application as solid rocket propellant binder  
[NASA-CASE-NPO-10893] c27 N73-22710
- Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c28 N81-15119
- PROPELLANT CASTING**
- Casting propellant in rocket engine  
[NASA-CASE-LAR-11995-1] c28 N77-10213
- Solid propellant rocket motor and method of making same  
[NASA-CASE-XLA-1349] c20 N77-17143
- PROPELLANT CHEMISTRY**
- Bitramine propellants --- gun propellant burning rate  
[NASA-CASE-NPO-14103-1] c28 N78-31255
- PROPELLANT COMBUSTION**
- Spherical solid propellant rocket engine having abrupt burnout  
[NASA-CASE-IHQ-01897] c28 N70-35381
- Rocket combustion chamber stability by controlling transverse instability during propellant combustion  
[NASA-CASE-XLE-04603] c33 N71-21507
- PROPELLANT DECOMPOSITION**
- Unit for generating thrust from catalytic decomposition of hydrogen peroxide, for high altitude aircraft or spacecraft reaction control  
[NASA-CASE-XMS-00583] c28 N70-38504
- PROPELLANT GRAINS**
- Grain configuration for solid propellant rocket engines  
[NASA-CASE-XGS-03556] c27 N70-35534
- PROPELLANT TANKS**
- Liquid rocket systems for propulsion and control of spacecraft  
[NASA-CASE-XNP-00610] c28 N70-36910
- Slosh damping method for liquid rocket propellant tanks  
[NASA-CASE-XMP-00658] c12 N70-38997
- Expulsion and measuring device for determining quantity of liquid in tank under conditions of weightlessness  
[NASA-CASE-XMS-01546] c14 N70-40233
- Collapsible auxiliary tank for restarting liquid propellant rocket motors under zero gravity  
[NASA-CASE-XNP-01390] c28 N70-41275
- Liquid propellant tank design with semitoroidal bulkhead  
[NASA-CASE-XMP-01899] c31 N70-41948
- Microleak detector mounted on weld seam of propellant tank of launch vehicle  
[NASA-CASE-IMF-02307] c14 N71-10779
- Fabrication of filament wound propellant tank for cryogenic storage  
[NASA-CASE-XLE-03803-2] c15 N71-17651
- Slosh and swirl alleviator for liquid propellant tanks during transport and flight  
[NASA-CASE-XLA-05749] c15 N71-19569
- Two phase fluid pressurization system for propellant tank  
[NASA-CASE-MSC-12390] c27 N71-29155
- Space vehicle system  
[NASA-CASE-MSC-12561-1] c18 N76-17185
- Passive propellant system  
[NASA-CASE-MFS-23642-2] c20 N78-27176
- PROPELLANT TRANSFER**
- Two component valve assembly for cryogenic liquid transfer regulation  
[NASA-CASE-XLE-00397] c15 N70-36492
- Apparatus for cryogenic liquid storage with heat transfer reduction and for liquid transfer at zero gravity conditions  
[NASA-CASE-XLE-00345] c15 N70-38020
- Continuous variation of propellant flow and thrust by application of liquid foam flow theory to injection orifice  
[NASA-CASE-XLE-00177] c28 N70-40367
- Method and feed system for separating and orienting liquid and vapor phases of liquid propellants in zero gravity environment  
[NASA-CASE-XLE-01182] c27 N71-15635
- Electron bombardment ion rocket engine with improved propellant introduction system  
[NASA-CASE-XLE-02066] c28 N71-15661
- Rocket combustion chamber stability by controlling transverse instability during propellant combustion  
[NASA-CASE-XLE-04603] c33 N71-21507
- Vapor-liquid separator design with vapor driven pump for separated liquid pumping for application in propellant transfer  
[NASA-CASE-XMP-04042] c15 N71-23023
- Filler valve design for supplying liquid propellants at high pressure to space vehicles  
[NASA-CASE-XNP-01747] c15 N71-23024
- Internal labyrinth and shield structure to improve electrical isolation of propellant feed source from ion thruster  
[NASA-CASE-LEW-10210-1] c28 N71-26781
- Flexible bellows joint shielding sleeve for propellant transfer pipelines  
[NASA-CASE-XNP-01855] c15 N71-28937
- Passive propellant system  
[NASA-CASE-MFS-23642-2] c20 N78-27176
- A system for concurrently delivering a stream of powdered fuel and a stream of powdered oxidizer to a combustion chamber for a reaction motor  
[NASA-CASE-MFS-23904-1] c20 N79-13077
- PROPELLER BLADES**
- Directed fluid stream for propeller blade

loading control  
[NASA-CASE-XAC-00139] c02 N70-34856

**PROPORTIONAL CONTROL**  
Proportional controller for regulating aircraft or spacecraft motion about three axes  
[NASA-CASE-XAC-03392] c03 N70-41954

**PROPULSION SYSTEM CONFIGURATIONS**  
Electrothermal rocket engine using resistance heated heat exchanger  
[NASA-CASE-XLE-00267] c28 N70-33356  
Grain configuration for solid propellant rocket engines  
[NASA-CASE-XGS-03556] c27 N70-35534  
Shrouded composite propulsion system configuration  
[NASA-CASE-XLA-01043] c28 N71-10780  
Electrostatic microthrust propulsion system with annular slit colloid thruster  
[NASA-CASE-GSC-10709-1] c28 N71-25213  
Method and apparatus for pressurizing propellant tanks used in propulsion motor feed system  
[NASA-CASE-XNP-00650] c27 N71-28929  
A system for concurrently delivering a stream of powdered fuel and a stream of powdered oxidizer to a combustion chamber for a reaction motor  
[NASA-CASE-MFS-23904-1] c20 N79-13077  
Apparatus for endoscopic examination --- analysis of the propulsion system configuration and transmitter  
[NASA-CASE-NPO-14092-1] c52 N80-16725

**PROPULSION SYSTEM PERFORMANCE**  
Variable mixer propulsion cycle  
[NASA-CASE-LFW-12917-1] c07 N78-18067

**PROSTHETIC DEVICES**  
Prosthetic limb with tactile sensing device  
[NASA-CASE-MFS-16570-1] c05 N73-32013  
Orthotic arm joint --- for use in mechanical arms  
[NASA-CASE-MFS-21611-1] c54 N75-12616  
Actuator device for artificial leg  
[NASA-CASE-MFS-23225-1] c52 N77-14735  
Aldehyde-containing urea-absorbing polysaccharides  
[NASA-CASE-NPO-13620-1] c27 N77-30236  
Rotational joint assembly for the prosthetic leg  
[NASA-CASE-KSC-11004-1] c54 N77-30749  
Mechanical energy storage device for hip disarticulation  
[NASA-CASE-ARC-10916-1] c52 N78-10686  
Method of adhering bone to a rigid substrate using a graphite fiber reinforced bone cement  
[NASA-CASE-NPO-13764-1] c27 N76-17215  
Compact artificial hand  
[NASA-CASE-NPO-13906-1] c54 N79-24652  
Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c52 N79-26772  
Texturing polymer surfaces by transfer casting --- cardiovascular prosthesis  
[NASA-CASE-LFW-13120-1] c31 N81-16327  
Prosthetic urinary sphincter  
[NASA-CASE-MFS-23717-1] c52 N81-25660

**PROTECTION**  
Camera protecting device for use in photographing rocket engine nozzles or other engine components  
[NASA-CASE-NPO-10174] c14 N71-18465  
Fiber modified polyurethane foam for ballistic protection  
[NASA-CASE-ARC-10714-1] c27 N76-15310

**PROTECTIVE CLOTHING**  
Conditioning tanned sharkskin for use as abrasive resistant clothing  
[NASA-CASE-XMS-09691-1] c18 N71-15545  
One piece human garment for use as contamination proof garment  
[NASA-CASE-MSC-12206-1] c05 N71-17599  
Thermoregulating with cooling flow pipe network for humans  
[NASA-CASE-XMS-10269] c05 N71-24147  
Development of improved convolute section for pressurized suits to provide high degree of mobility in response to minimum of applied torque  
[NASA-CASE-XMS-09637-1] c05 N71-24730  
Voice operated receiving and transmitting system for use in protective suits  
[NASA-CASE-KSC-10164] c07 N71-33108  
Protective garment ventilation system  
[NASA-CASE-XMS-04928] c54 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] c27 N80-26446

**PROTECTIVE COATINGS**  
Process permitting application of synthetic resin coating to irregular-shaped objects at ambient temperature  
[NASA-CASE-XNP-06508] c18 N69-39895  
Ultraviolet radiation resistant alkali-metal silicate coatings for temperature control of spacecraft  
[NASA-CASE-IGS-04119] c18 N69-39979  
Application techniques for protecting materials during salt bath brazing  
[NASA-CASE-XLE-00046] c15 N70-33311  
Removable potting compound for instrument shock protection  
[NASA-CASE-XLA-00482] c15 N70-36409  
Passive thermal control coating on aluminum foil laminate for inflatable spacecraft surfaces  
[NASA-CASE-XLA-01291] c33 N70-36617  
Using ethylene oxide in preparation of sterilized solid rocket propellants and encapsulating materials  
[NASA-CASE-XNP-01749] c27 N70-41897  
Fireproof potassium silicate coating composition, insoluble in water after application  
[NASA-CASE-GSC-10072] c18 N71-14014  
Development of bacteriostatic conformal coating and methods of application  
[NASA-CASE-GSC-10007] c18 N71-16046  
Vapor deposited laminated nitride-silicon coating for corrosion prevention of carbonaceous surfaces  
[NASA-CASE-XLA-00284] c15 N71-16075  
Flame or plasma spraying for molybdenum coating of carbon or graphite surfaces to prevent oxidative corrosion  
[NASA-CASE-XLA-00302] c15 N71-16077  
Development and characteristics of protective coatings for spacecraft  
[NASA-CASE-XNP-02507] c31 N71-17679  
Development of thermal insulation system for wing and control surfaces of hypersonic aircraft and reentry vehicles  
[NASA-CASE-XLA-00892] c33 N71-17897  
Bismuth and lead surface coatings for gas bearings in aerospace engineering  
[NASA-CASE-IGS-02011] c15 N71-20739  
Composition and production method of alkali metal silicate paint with ultraviolet reflection properties  
[NASA-CASE-IGS-04799] c18 N71-24183  
Method for treating metal surfaces to prevent secondary electron transmission  
[NASA-CASE-XNP-09469] c24 N71-25555  
Development of solid state polymer coating for obtaining thermal balance in spacecraft components  
[NASA-CASE-XLA-01745] c33 N71-28903  
Method for coating through-holes in ceramic substrates used in fabricating miniaturized electronic circuits  
[NASA-CASE-XMF-05999] c15 N71-29032  
Zinc dust formulation for abrasion resistant steel coatings  
[NASA-CASE-GSC-10361-1] c18 N72-23581  
Development of process for constructing protective covers for solar cells  
[NASA-CASE-GSC-11514-1] c03 N72-24037  
Resin for protecting p-n semiconductor junction surface  
[NASA-CASE-ERC-10339-1] c18 N73-30532  
Nonflammable coating compositions --- for use in high oxygen environments  
[NASA-CASE-MFS-20486-2] c27 N74-17283  
Fused silicide coatings containing discrete particles for protecting niobium alloys --- used in space shuttle thermal protection systems and turbine engine components  
[NASA-CASE-LFW-11179-1] c27 N76-16229  
High temperature oxidation resistant cermet compositions  
[NASA-CASE-NPO-13666-1] c27 N77-13217  
Leading edge protection for composite blades  
[NASA-CASE-LFW-12550-1] c24 N77-19170  
Abrasion resistant coatings for plastic surfaces  
[NASA-CASE-ARC-10915-3] c24 N77-24200

Intumescent coatings containing  
 4,4'-dinitrosulfanilide  
 [NASA-CASE-ARC-11042-1] c24 N78-14096

Sprayable low density ablator and application  
 process  
 [NASA-CASE-MFS-23506-1] c24 N78-24290

Reaction cured glass and glass coatings  
 [NASA-CASE-ARC-11051-1] c27 N78-32260

Spray coating apparatus having a rotatable  
 workpiece holder  
 [NASA-CASE-ARC-11110-1] c37 N78-32434

Infusible silazane pplymer and process for  
 producing same --- protective coatings  
 [NASA-CASE-IMP-02526-1] c27 N79-21190

Fire protection covering for small diameter  
 missiles  
 [NASA-CASE-ARC-11104-1] c15 N79-26100

Improved refractory coatings and method of  
 producing the same  
 [NASA-CASE-LBW-13169-1] c26 N80-14232

Heat sealable, flame and abrasion resistant  
 coated fabric  
 [NASA-CASE-MS-18382-1] c27 N80-24440

A silicon-slurry/aluminide coating --- protects  
 aircraft and land-based gas turbine engines  
 [NASA-CASE-LBW-13343-1] c24 N80-26389

Curved film cooling admission tube  
 [NASA-CASE-LBW-13174-1] c34 N81-12363

Improved refractory coatings --- sputtered  
 coatings on substrates that form stable nitrides  
 [NASA-CASE-LBW-23169-2] c26 N81-16209

Corrosion resistant thermal barrier coating ---  
 protecting gas turbines and other engine parts  
 [NASA-CASE-LBW-13088-1] c26 N81-25188

**PROTECTORS**

Load cell protection device using spring-loaded  
 breakaway mechanism  
 [NASA-CASE-XMS-06782] c32 N71-15974

Payload soft landing system using stowable gas bag  
 [NASA-CASE-XLA-09881] c31 N71-16085

**PROTEINS**

Protein sterilization of firefly luciferase  
 without denaturation  
 [NASA-CASE-GSC-10225-1] c06 N73-27086

**PROTON FLUX DENSITY**

Flame detector operable in presence of proton  
 radiation  
 [NASA-CASE-MFS-21577-1] c19 N74-29410

**PROXIMITY**

Focal plane array optical proximity sensor  
 [NASA-CASE-NPO-15155-1] c74 N81-22694

**PSEUDONOISE**

System designed to reduce time required for  
 obtaining synchronization in data  
 communication with spacecraft utilizing  
 pseudonoise codes  
 [NASA-CASE-NPO-10214] c10 N71-26577

Linear shift register with feedback logic for  
 generating pseudonoise linear recurring binary  
 sequences  
 [NASA-CASE-NPO-11406] c08 N73-12175

Multicarrier communications system for  
 transmitting modulated signals from single  
 transmitter  
 [NASA-CASE-NPO-11548] c07 N73-26118

Pseudo-noise test set for communication system  
 evaluation --- test signals  
 [NASA-CASE-MFS-22671-1] c35 N75-21582

Pseudonoise code tracking loop  
 [NASA-CASE-MS-18035-1] c32 N81-15179

**PULLEYS**

Apparatus for measuring load on cable under  
 static or dynamic conditions comprising  
 pulleys pivoting structure against restraint  
 of tension strap  
 [NASA-CASE-XMS-04545] c15 N71-22678

Tensile strength testing device having pulley  
 guides for exerting multiple forces on test  
 specimen  
 [NASA-CASE-IMP-05634] c15 N71-24834

**PULMONARY CIRCULATION**

Pulmonary resuscitation method and apparatus  
 with adjustable pressure regulator  
 [NASA-CASE-XMS-01115] c05 N70-35922

**PULMONARY FUNCTIONS**

Piston device for producing known constant  
 positive pressure within lungs by using  
 thoracic muscles  
 [NASA-CASE-XMS-01615] c05 N70-41329

**PULSE AMPLITUDE**

Monitoring system for signal amplitude ranges  
 over predetermined time interval  
 [NASA-CASE-XMS-04061-1] c09 N69-39885

Analog to digital converter for converting  
 pulses to frequencies  
 [NASA-CASE-XLA-00670] c08 N71-12501

Electrical testing apparatus for detecting  
 amplitude and width of transient pulse  
 [NASA-CASE-IMP-06519] c09 N71-12519

Analog to digital converter circuit for pulse  
 height analysis  
 [NASA-CASE-IMP-00477] c08 N73-28045

Electro-mechanical sine/cosine generator  
 [NASA-CASE-LAB-11389-1] c33 N77-26387

Speech analyzer  
 [NASA-CASE-GSC-11898-1] c32 N77-30309

Power factor control system for ac induction  
 motors  
 [NASA-CASE-MFS-23988-1] c33 N81-27395

**PULSE AMPLITUDE MODULATION**

Voltage controlled oscillators and pulse  
 amplitude modulation for signal ratio system  
 [NASA-CASE-IMP-04367] c09 N71-23545

Pulse switching for high energy lasers  
 [NASA-CASE-NPO-14556-1] c36 N79-21336

**PULSE CODE MODULATION**

Adaptive compression signal processor for PCM  
 communication systems  
 [NASA-CASE-XLA-03076] c07 N71-11266

Bipolar phase detector and corrector for split  
 phase PCM data signals  
 [NASA-CASE-XGS-01590] c07 N71-12392

System for recording and reproducing PCM data  
 from data stored on magnetic tape  
 [NASA-CASE-IGS-01021] c08 N71-21042

Frequency shift keying apparatus for use with  
 pulse code modulation data transmission system  
 [NASA-CASE-XGS-01537] c07 N71-23405

Data reduction and transmission system for TV  
 PCM data  
 [NASA-CASE-NPO-11243] c07 N72-20154

Pulse code modulated data from frequency  
 multiplex communications by digital phase  
 shift or carrier  
 [NASA-CASE-NPO-11338] c08 N72-25208

Bit synchronization of PCM communications  
 signal, without separate synchronization  
 channel by digital correlation  
 [NASA-CASE-NPO-11302-1] c07 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] c32 N74-10132

Multifunction audio digitizer --- producing  
 direct delta and pulse code modulation  
 [NASA-CASE-MS-13855-1] c35 N74-17885

Pulse code modulated signal synchronizer  
 [NASA-CASE-MS-12462-1] c32 N74-20809

Pulse code modulated signal synchronizer  
 [NASA-CASE-MS-12494-1] c32 N74-20810

Digital transmitter for data bus communications  
 system  
 [NASA-CASE-MS-14558-1] c32 N75-21486

Compact-bi-phase pulse coded modulation decoder  
 [NASA-CASE-KSC-10834-1] c33 N76-14371

Low distortion receiver for bi-level baseband  
 PCM waveforms  
 [NASA-CASE-MS-14557-1] c32 N76-16249

Differential pulse code modulation  
 [NASA-CASE-MS-12506-1] c32 N77-12239

Digital demodulator  
 [NASA-CASE-LAB-12659-1] c33 N80-31731

**PULSE COMMUNICATION**

Phase shift data transmission system with  
 pseudo-noise synchronization code modulated  
 with digital data into single channel for  
 spacecraft communication  
 [NASA-CASE-IMP-00911] c08 N70-41961

Differential pulse code modulation  
 [NASA-CASE-MS-12506-1] c32 N77-12239

Memory-based frame synchronizer --- for voice  
 data processing in digital communication systems  
 [NASA-CASE-GSC-12430-1] c32 N80-20453

**PULSE DURATION**

Frequency to analog converters with unipolar  
 field effect transistor for determining  
 potential charge by pulse duration of input



- signal  
[NASA-CASE-XNP-07040] c08 N71-12500
- Electrical testing apparatus for detecting amplitude and width of transient pulse  
[NASA-CASE-XHP-06519] c09 N71-12519
- Design and development of variable pulse width multiplier  
[NASA-CASE-XLA-02850] c09 N71-20447
- Device for voltage conversion using controlled pulse widths and arrangements to generate ac output voltage  
[NASA-CASE-MFS-10068] c10 N71-25139
- One shot multivibrator circuit for producing long duration output pulses  
[NASA-CASE-ARC-10137-1] c09 N71-28468
- Pulse stretcher for narrow pulses  
[NASA-CASE-MSC-14130-1] c33 N74-32711
- PULSE DURATION MODULATION**
- Pulse duration modulation multiplier system  
[NASA-CASE-XER-09213] c07 N71-12390
- Variable duration pulse integrator design for integrating pulse duration modulated pulses with elimination of ripple content  
[NASA-CASE-XLA-01219] c10 N71-23084
- Electric motor control system with pulse width modulation for providing automatic null seeking servo  
[NASA-CASE-XMP-05195] c10 N71-24861
- Pulse duration control device for driving slow response time loads in selected sequence including switching and delay circuits and magnetic storage  
[NASA-CASE-XGS-04224] c10 N71-26418
- Monostable multivibrator for producing output pulse widths with positive feedback NOR gates  
[NASA-CASE-MSC-13492-1] c10 N71-28860
- Load current sensor for series pulse width modulated power supply  
[NASA-CASE-GSC-10656-1] c09 N72-25249
- Buck/boost regulator  
[NASA-CASE-GSC-12360-1] c33 N81-19392
- PULSE FREQUENCY MODULATION**
- Electric current measuring apparatus design including saturable core transformer and energy storage device to avoid magnetizing current errors from transformer output winding  
[NASA-CASE-XGS-02439] c14 N71-19431
- Digitally controlled frequency synthesizer for pulse frequency modulation telemetry systems  
[NASA-CASE-XGS-02317] c09 N71-23525
- Noninterruptable digital counter circuit design with display device for pulse frequency modulation  
[NASA-CASE-XNP-05759] c08 N71-24891
- Threshold extension device for improving operating performance of frequency modulation demodulators by eliminating click-type noise impulses  
[NASA-CASE-MSC-12165-1] c07 N71-33696
- Versatile LDV burst simulator  
[NASA-CASE-LAR-11859-1] c35 N79-14349
- PULSE GENERATORS**
- High voltage pulse generator for testing flash and ignition limits of nonmetallic materials in controlled atmospheres  
[NASA-CASE-MSC-12178-1] c09 N71-13518
- Interrogator and current driver circuit for combination with transistor flip-flop circuit  
[NASA-CASE-XGS-03058] c10 N71-19547
- Electric circuit for producing high current pulse having fast rise and fall time  
[NASA-CASE-XMS-04919] c09 N71-23270
- Pulse generator for synchronizing or resetting electronic signals without requiring separate external source  
[NASA-CASE-XGS-03632] c09 N71-23311
- Development and characteristics of resettable monostable pulse generator with charge rundown-timing circuit  
[NASA-CASE-GSC-11139] c09 N71-27016
- Pulse generating circuit for operation at very high duty cycles and repetition rates  
[NASA-CASE-XNP-00745] c10 N71-28960
- Pulse coupling circuit with switch between generator and winding  
[NASA-CASE-LEW-10433-1] c09 N72-22197
- Method and apparatus for nondestructive testing --- using high frequency arc discharges  
[NASA-CASE-MFS-21233-1] c38 N74-15395
- Random pulse generator  
[NASA-CASE-MSC-14131-1] c33 N75-19515
- Frequency tracked pulse technique for ultrasonic analysis  
[NASA-CASE-LAR-12697-1] c32 N80-26571
- PULSE RADAR**
- Echo tracker/range finder for radars and sonars  
[NASA-CASE-NFO-14361-1] c32 N79-26253
- PULSE RATE**
- Circuit for measuring wide range of pulse rates by utilizing high capacity counter  
[NASA-CASE-XNP-06234] c10 N71-27137
- Peak holding circuit for extremely narrow pulses  
[NASA-CASE-MSC-14129-1] c33 N75-18479
- Pulse transducer with artifact signal attenuator --- heart rate sensors  
[NASA-CASE-FRC-11012-1] c52 N80-23969
- PULSED LASERS**
- Repetitively pulsed wavelength selective carbon dioxide laser  
[NASA-CASE-ERC-10178] c16 N71-24832
- Dually mode locked Nd:YAG laser  
[NASA-CASE-GSC-11746-1] c36 N75-19654
- Isotope separation using metallic vapor lasers  
[NASA-CASE-NPO-13550-1] c36 N77-26477
- Pulse switching for high energy lasers  
[NASA-CASE-NPO-14556-1] c36 N79-21336
- Coherently pulsed laser source  
[NASA-CASE-NFO-15111-1] c36 N80-24602
- Tunable injection-locked pulsed CO2 laser  
[NASA-CASE-NFO-14984-1] c36 N81-15350
- 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] c74 N81-17887
- Method of and apparatus for double-exposure holographic interferometry  
[NASA-CASE-MFS-25405-1] c35 N81-27459
- PULSED RADIATION**
- Development and characteristics of cyclically operable, optical shutter for use as focal plane shutter for transmitting single radiation pulses  
[NASA-CASE-NPO-10758] c14 N73-14427
- PULSES**
- High resolution radar transmitting system for transmitting optical pulses to targets  
[NASA-CASE-NPO-11426] c07 N73-26119
- PUMP SEALS**
- Flexible barrier membrane comprising porous substrate and incorporating liquid gallium or indium metal used as sealant barriers for spacecraft walls and pumping liquid propellants  
[NASA-CASE-XNP-08881] c17 N71-28747
- Spiral groove seal --- for hydraulic rotating shaft  
[NASA-CASE-LEW-10326-3] c37 N74-10474
- PUMPS**
- Piezoelectric pump for supplying fluid at high frequencies to gyroscope fluid suspension system  
[NASA-CASE-XNP-05429] c26 N71-21824
- Vapor-liquid separator design with vapor driven pump for separated liquid pumping for application in propellant transfer  
[NASA-CASE-XMP-04042] c15 N71-23023
- Automatically reciprocating, high pressure pump for use in spacecraft cryogenic propellants  
[NASA-CASE-XNP-04731] c15 N71-24042
- Development and characteristics of variable displacement fluid pump for transforming hydraulic pressures  
[NASA-CASE-MFS-20830] c15 N71-30028
- Pumping and metering dual piston system and monitor for reaction chamber constituents  
[NASA-CASE-GSC-10218-1] c15 N72-21465
- Magnetocaloric pump --- for cryogenic fluids  
[NASA-CASE-LEW-11672-1] c37 N74-27904
- Continuous coal processing method  
[NASA-CASE-NPO-13758-2] c31 N81-15154
- A gas-to-hydraulic power converter  
[NASA-CASE-MSC-18794-1] c37 N81-24445
- PUNCHED CARDS**
- Describing device for flagging punched business cards  
[NASA-CASE-XLA-02705] c08 N71-15908
- Handling tool for printed circuit cards  
[NASA-CASE-MFS-20453] c15 N71-29133

## PUNCHES

Punch and die device for forming convolution series in thin gage metal hemispheres  
[NASA-CASE-XNP-05297] c15 N71-23811

## PURGING

Carbon dioxide purge systems to prevent condensation in spaces between cryogenic fuel tanks and hypersonic vehicle skin  
[NASA-CASE-XLA-01967] c31 N70-42015

Developing high pressure gas purification and filtration system for use in test operations of space vehicles  
[NASA-CASE-MFS-12806] c14 N71-17588

Fluid transferring system design for purging toxic, corrosive, or noxious fluids and fumes from materials handling equipment for cleansing and accident prevention  
[NASA-CASE-XMS-01905] c12 N71-21089

Device for back purging thrust engines  
[NASA-CASE-XMS-04826] c28 N71-28649

Purging means and method for Xenon arc lamps  
[NASA-CASE-NPO-11978] c31 N78-17238

## PURIFICATION

Apparatus and method capable of receiving large quantity of high pressure helium, removing impurities, and discharging at received pressure  
[NASA-CASE-XMP-06888] c15 N71-24044

Purification apparatus for vaporization and fractional distillation of liquids  
[NASA-CASE-XNP-08124] c15 N71-27184

Targets for producing high purity I-123  
[NASA-CASE-LEW-10518-3] c25 N78-27226

Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c85 N79-17747

Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c26 N80-14229

Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NPO-14001-1] c27 N81-14076

Electromigration process for the purification of molten silicon during crystal growth  
[NASA-CASE-NPO-14831-1] c76 N81-19944

## PURITY

Synthesis of high purity dianilinosilanes  
[NASA-CASE-IMF-06409] c06 N71-23230

## PUSH-PULL AMPLIFIERS

Frequency modulated oscillator  
[NASA-CASE-MFS-23181-1] c33 N77-17351

Low current linearization of magnetic amplifier for dc transducer  
[NASA-CASE-NPO-14617-1] c33 N81-24338

Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NPO-14316-1] c33 N81-33404

## PYLONS

Decoupler pylon: Wing/store flutter suppressor  
[NASA-CASE-LAR-12468-1] c08 N80-22359

## PYRIDINES

Nuclear alkylated pyridine aldehyde polymers and conductive compositions thereof  
[NASA-CASE-NPO-10557] c27 N78-17214

## PYROELECTRICITY

Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c35 N81-12389

## PYROGEN

Molded composite pyrogen igniter for rocket motors --- solid propellant ignition  
[NASA-CASE-LAR-12018-1] c20 N78-24275

## PYROLYSIS

Thermal reactor and process --- liquid silicon production from silane  
[NASA-CASE-NPO-14369-1] c25 N80-20338

Molten salt pyrolysis of latex --- synthetic hydrocarbon fuel production using the Guayule shrub  
[NASA-CASE-NPO-14315-1] c27 N81-17261

## PYROLYTIC GRAPHITE

Multislot film cooled pyrolytic graphite rocket nozzle  
[NASA-CASE-XNP-04389] c28 N71-20942

## PYROLYTIC MATERIALS

Design, development, and characteristics of ablation structures  
[NASA-CASE-XMS-01816] c33 N71-15623

## PYROMETERS

Sensor device with switches for measuring surface recession of charring and noncharring ablators  
[NASA-CASE-XLA-01781] c14 N69-39975

## PYROTECHNICS

Development and characteristics of squib actuated explosive disconnect for spacecraft release from launch vehicle  
[NASA-CASE-NPO-11330] c33 N73-26958

## Q

## Q SWITCHED LASERS

Optically detonated explosive device  
[NASA-CASE-NPO-11743-1] c28 N74-27425

Spatial filter for Q-switched lasers  
[NASA-CASE-LEW-12164-1] c36 N77-32478

## Q VALUES

Design of active RC network capable of operating at high Q values with reduced sensitivity to gain amplification and number of passive components  
[NASA-CASE-ARC-10942-2] c10 N72-11256

## QUADRATIC PROGRAMMING

Quadrature demodulation  
[NASA-CASE-GSC-12137-1] c33 N78-32338

## QUADRATURES

Automatic quadrature control and measuring system --- using optical coupling circuitry  
[NASA-CASE-MFS-21660-1] c35 N74-21017

## QUALITATIVE ANALYSIS

Ultraviolet chromatographic detector for quantitative and qualitative analysis of compounds  
[NASA-CASE-HQN-10756-1] c14 N72-25428

Analysis of volatile organic compounds --- trace amounts of organic volatiles in gas samples  
[NASA-CASE-MSC-14428-1] c23 N77-17161

Fluid sample collection and distribution system --- qualitative analysis of aqueous samples from several points  
[NASA-CASE-MSC-16841-1] c34 N79-24285

## QUANTITATIVE ANALYSIS

Mixed liquid and vapor phase analyzer design with thermocouples for relative heat transfer measurement  
[NASA-CASE-NPO-10691] c14 N71-26199

Quantitative liquid measurements in container by resonant frequencies  
[NASA-CASE-IXP-02500] c18 N71-27397

Ultraviolet chromatographic detector for quantitative and qualitative analysis of compounds  
[NASA-CASE-HQN-10756-1] c14 N72-25428

Nondispersive gas analysis using radiation detection for quantitative analysis  
[NASA-CASE-ARC-10308-1] c06 N72-31141

Analysis of volatile organic compounds --- trace amounts of organic volatiles in gas samples  
[NASA-CASE-MSC-14428-1] c23 N77-17161

Electrophotoanalysis oxidation system for measurement of organic concentration in water  
[NASA-CASE-MSC-16497-1] c25 N79-23167

## QUANTUM THEORY

III-V photocathode with nitrogen doping for increased quantum efficiency  
[NASA-CASE-NPO-12134-1] c33 N76-31409

## QUARTZ

Ultraviolet filter of thorium fluoride and cryolite on quartz base  
[NASA-CASE-IXP-02340] c23 N69-24332

Method for attaching a fused-quartz mirror to a conductive metal substrate  
[NASA-CASE-MFS-23405-1] c26 N77-29260

Quartz ball valve  
[NASA-CASE-NPO-14473-1] c37 N80-23654

## QUARTZ LAMPS

High intensity heat and light unit containing quartz lamp elements protectively positioned to withstand severe environmental stress  
[NASA-CASE-XLA-00141] c09 N70-33312

Light shield and cooling apparatus --- high intensity ultraviolet lamp  
[NASA-CASE-LAR-10089-1] c34 N74-23066

## R

## RACKS (FRAMES)

Design and development of test stand system for supporting test items in vacuum chamber  
[NASA-CASE-MFS-21362] c11 N73-20267

Thrust-isolating mounting --- characteristics of support for loads mounted in spacecraft  
[NASA-CASE-MFS-21680-1] c18 N74-27397

Automated syringe sampler --- remote sampling of air and water  
[NASA-CASE-LAR-12308-1] c35 N81-29407

**RADAR ANTENNAS**  
Interferometric tuning acquisition and tracking radar antenna system  
[NASA-CASE-XMS-09610] c07 N71-24625

Variable beamwidth antenna --- with multiple beam, variable feed system  
[NASA-CASE-GSC-11862-1] c32 N76-18295

Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector  
[NASA-CASE-NPO-13568-1] c32 N76-21365

Baseband signal combiner for large aperture antenna array  
[NASA-CASE-NPO-14641-1] c32 N81-29308

**RADAR ATTENUATION**  
FM/CW radar system  
[NASA-CASE-MFS-22234-1] c32 N79-10264

**RADAR DATA**  
Charge-coupled device data processor for an airborne imaging radar system  
[NASA-CASE-NPO-13587-1] c32 N77-32342

**RADAR ECHOES**  
Charge-coupled device data processor for an airborne imaging radar system  
[NASA-CASE-NPO-13587-1] c32 N77-32342

**RADAR EQUIPMENT**  
Spacecraft transponder and ground station radar system for mapping planetary surfaces  
[NASA-CASE-NPO-11001] c07 N72-21118

FM/CW radar system  
[NASA-CASE-MFS-22234-1] c32 N79-10264

**RADAR IMAGERY**  
Method of locating persons in distress --- by using radar imagery from radar reflectors  
[NASA-CASE-LAR-11390-1] c32 N77-21267

Clutter free synthetic aperture radar correlator  
[NASA-CASE-NPO-14035-1] c32 N78-18266

Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-1] c32 N79-19195

Radar target for remotely sensing hydrological phenomena  
[NASA-CASE-LAR-12344-1] c43 N80-18498

Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-2] c32 N80-32607

**RADAR MEASUREMENT**  
Thickness measurement system  
[NASA-CASE-MFS-23721-1] c31 N79-28370

**RADAR RANGE**  
Radar signal receiver arrangement for extending range and increasing signal to noise ratio  
[NASA-CASE-XNP-00748] c07 N70-36911

**RADAR RECEIVERS**  
Polarization diversity monopulse tracking receiver design without radio frequency switches  
[NASA-CASE-XGS-03501] c09 N71-20864

**RADAR RECEPTION**  
Radar signal receiver arrangement for extending range and increasing signal to noise ratio  
[NASA-CASE-XNP-00748] c07 N70-36911

**RADAR REFLECTORS**  
Inflatable radar reflector unit - lightweight, highly reflective to electromagnetic radiation, and adaptable for erection and deployment with minimum effort and time  
[NASA-CASE-XMS-00893] c07 N70-40063

Method of locating persons in distress --- by using radar imagery from radar reflectors  
[NASA-CASE-LAR-11390-1] c32 N77-21267

**RADAR TARGETS**  
Radar target for remotely sensing hydrological phenomena  
[NASA-CASE-LAR-12344-1] c43 N80-18498

## RADAR TRACKING

Tracking antenna system with array for synchronous satellite or ground based radar  
[NASA-CASE-GSC-10553-1] c07 N71-19854

Polarization diversity monopulse tracking receiver design without radio frequency switches  
[NASA-CASE-XGS-03501] c09 N71-20864

Monopulse tracking system with antenna array of three radiators for deriving azimuth and elevation indications  
[NASA-CASE-XGS-01155] c10 N71-21483

Plastic sphere for radar tracking and calibration  
[NASA-CASE-XLA-11154] c07 N72-21117

Echo tracker/range finder for radars and sonars  
[NASA-CASE-NPO-14361-1] c32 N79-26253

**RADAR TRANSMITTERS**  
High resolution radar transmitting system for transmitting optical pulses to targets  
[NASA-CASE-NPO-11426] c07 N73-26119

**RADIAL FLOW**  
Radial heat flux transformer for use in heating and cooling processes  
[NASA-CASE-NPO-10828] c33 N72-17948

Axially and radially controllable magnetic bearing  
[NASA-CASE-GSC-11551-1] c37 N76-18459

**RADIANCE**  
Method and apparatus for measuring shock layer radiation distribution about high velocity objects  
[NASA-CASE-XAC-02970] c14 N69-39896

**RADIANT COOLING**  
Direct radiation cooling of linear beam collector tubes  
[NASA-CASE-XNP-09227] c15 N69-24319

High thermal emittance black surface coatings and process for applying to metal and metal alloy surfaces used in radiative cooling of spacecraft  
[NASA-CASE-XLA-06199] c15 N71-24875

Method for attaching a fused-quartz mirror to a conductive metal substrate  
[NASA-CASE-MFS-23405-1] c26 N77-29260

**RADIANT FLUX DENSITY**  
High intensity radiant energy pulse source for calibrating heat transfer gages with thermoluminescent shutter activation  
[NASA-CASE-ARC-10178-1] c09 N72-17152

Microwave power transmission beam safety system  
[NASA-CASE-NPO-14224-1] c33 N80-18287

**RADIANT HEATING**  
High intensity heat and light unit containing quartz lamp elements protectively positioned to withstand severe environmental stress  
[NASA-CASE-XLA-00141] c09 N70-33312

High temperature source of thermal radiation  
[NASA-CASE-XLE-00490] c33 N70-34545

Refractory filament series circuitry for radiant heater  
[NASA-CASE-XLE-00387] c33 N70-34812

Unfired ceramic insulation for protection from radiant heating environments  
[NASA-CASE-MFS-14253] c33 N71-24858

Portable linear-focused solar thermal energy collecting system  
[NASA-CASE-NPO-13734-1] c44 N78-10554

**RADIATION**  
Development of radiant energy sensor to detect the radiant energy wavelength bands from portions of radiating body  
[NASA-CASE-ERC-10174] c14 N72-25409

Development of thermopile with sensor surface to receive radiant energy and to provide measurement of energy quantity  
[NASA-CASE-NPO-11493] c14 N73-12447

Analog to digital converter for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-3] c60 N77-32731

Memory device for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-2] c60 N78-10709

**RADIATION ABSORPTION**  
NDIR gas analyzer based on absorption modulation ratios for known and unknown samples  
[NASA-CASE-ARC-10802-1] c35 N75-30502

Method for making an aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-1] c44 N79-11469

**RADIATION COUNTERS**

Particle detector for indicating incidence and energy of minute space particles  
[NASA-CASE-XLA-00135] c14 N70-33322

Sensing method and device for determining orientation of space vehicle or satellite by using particle traps  
[NASA-CASE-XGS-00466] c21 N70-34297

Particle beam power density detection and measurement apparatus  
[NASA-CASE-XLE-00243] c14 N70-38602

Automatic baseline stabilization for ionization detector used in gas chromatograph  
[NASA-CASE-XNP-03128] c10 N70-41991

Method of forming thin window drifted silicon charged particle detector  
[NASA-CASE-XLE-00808] c24 N71-10560

Development of dosimeter for measuring absorbed dose of high energy ionizing radiation  
[NASA-CASE-XLA-03645] c14 N71-20430

Apparatus for detecting particle emission lower than noise level of multiplier tube  
[NASA-CASE-XLA-07813] c14 N72-17328

Radiation or charged particle detector and amplifier  
[NASA-CASE-NPO-12128-1] c14 N73-32317

Coaxial anode wire for gas radiation counters  
[NASA-CASE-GSC-11492-1] c35 N74-26949

Particle parameter analyzing system --- x-y plotter circuits and display  
[NASA-CASE-XLE-06094] c33 N76-17293

Method and means for helium/hydrogen ratio measurement by alpha scattering  
[NASA-CASE-NPO-14079-1] c25 N80-20334

**RADIATION DAMAGE**

Addition of group 3 elements to silicon semiconductor material for increased resistance to radiation damage in solar cells  
[NASA-CASE-XLE-02798] c26 N71-23654

Recovering efficiency of solar cells damaged by environmental radiation through thermal annealing  
[NASA-CASE-XGS-04047-2] c03 N72-11062

Photomultiplier circuit including means for rapidly reducing the sensitivity thereof --- and protection from radiation damage  
[NASA-CASE-ABC-10593-1] c33 N74-27682

**RADIATION DETECTORS**

Radiation source and detection system for measuring amount of liquid inside tanks independently of liquid configuration  
[NASA-CASE-HSC-12280] c27 N71-16348

Detection instrument for light emitted from ATP biochemical reaction  
[NASA-CASE-XGS-05534] c23 N71-16355

Attitude sensor with scanning mirrors for detecting orientation of space vehicle with respect to planet  
[NASA-CASE-XLA-00793] c21 N71-22880

Mosaic semiconductor radiation detector and position indicator systems engineering for low energy particles  
[NASA-CASE-XGS-03230] c14 N71-23401

Nondispersive gas analysis using radiation detection for quantitative analysis  
[NASA-CASE-ABC-10308-1] c06 N72-31141

Radiation source tracker comprised of sectored matrix of detectors with output voltages corresponding to irradiance levels  
[NASA-CASE-NPO-11686] c14 N73-25462

Radiation or charged particle detector and amplifier  
[NASA-CASE-NPO-12128-1] c14 N73-32317

Mossbauer spectrometer radiation detector  
[NASA-CASE-LAR-11155-1] c35 N74-15091

High field CdS detector for infrared radiation  
[NASA-CASE-LAR-11027-1] c35 N74-18088

Flame detector operable in presence of proton radiation  
[NASA-CASE-MFS-21577-1] c19 N74-29410

Wide angle sun sensor --- consisting of cylinder, insulation and pair of detectors  
[NASA-CASE-NPO-13327-1] c35 N75-23910

Detector absorptivity measuring method and apparatus  
[NASA-CASE-LAR-10907-1] c35 N76-29551

Wedge immersed thermistor bolometers  
[NASA-CASE-XGS-01245-1] c35 N79-33449

Miniature spectrally selective dosimeter  
[NASA-CASE-LAR-12469-1] c35 N81-12388

X-ray position detector  
[NASA-CASE-NPO-12087-1] c74 N81-19898

**RADIATION DISTRIBUTION**

Space simulator with uniform test region radiation distribution, adapted to simulate Venus solar radiations  
[NASA-CASE-XNP-00459] c11 N70-38675

**RADIATION DOSAGE**

Development of dosimeter for measuring absorbed dose of high energy ionizing radiation  
[NASA-CASE-XLA-03645] c14 N71-20430

Method for analyzing radiation sensitivity of integrated circuits  
[NASA-CASE-NPO-14350-1] c33 N80-14332

**RADIATION EFFECTS**

Method for temperature compensating semiconductor gages by exposure to high energy radiation  
[NASA-CASE-XLA-04555-1] c14 N71-25892

**RADIATION HARDENING**

Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential of field effect device  
[NASA-CASE-GSC-11425-1] c76 N74-20329

**RADIATION HAZARDS**

Miniature spectrally selective dosimeter  
[NASA-CASE-LAR-12469-1] c35 N81-12388

**RADIATION MEASUREMENT**

Development of thermopile with sensor surface to receive radiant energy and to provide measurement of energy quantity  
[NASA-CASE-NPO-11493] c14 N73-12447

**RADIATION MEASURING INSTRUMENTS**

Rocket-borne aspect sensor consisting of radiation sensor, apertured disk, commutator, and counting circuits  
[NASA-CASE-XGS-08266] c14 N69-27432

Infrared scanning system for maintaining spacecraft orientation with earth reference  
[NASA-CASE-XLA-00120] c21 N70-33181

Multiple wavelength radiation measuring instrument for determining hot body or gas temperature  
[NASA-CASE-XLE-00011] c14 N70-41946

Development of method for improving signal to noise ratio and accuracy of Wheatstone bridge type radiation measuring instrument  
[NASA-CASE-XLA-02810] c14 N71-25901

Development of thermopile with sensor surface to receive radiant energy and to provide measurement of energy quantity  
[NASA-CASE-NPO-11493] c14 N73-12447

Phototransistor with base collector junction diode for integration into photo sensor arrays  
[NASA-CASE-MFS-20407] c09 N73-19235

Method and apparatus for measuring electromagnetic radiation  
[NASA-CASE-LEW-11159-1] c14 N73-28488

Design of gamma ray spectrometer for measurement of intense radiation using Compton scattering effect  
[NASA-CASE-MFS-21441-1] c14 N73-30392

Coaxial anode wire for gas radiation counters  
[NASA-CASE-GSC-11492-1] c35 N74-26949

Cloud cover sensor  
[NASA-CASE-NPO-14936-1] c47 N80-26992

**RADIATION MEDICINE**

Method of producing I-123 --- by bombardment of cesium causing spallation  
[NASA-CASE-LEW-11390-2] c25 N76-27383

**RADIATION PROTECTION**

Development of method for protecting large and oddly shaped areas from radiant and convective heat  
[NASA-CASE-XNP-01310] c33 N71-28952

Cooling and radiation protection of ruby lasers using copper sulfate solution in alcohol  
[NASA-CASE-MFS-20180] c16 N72-12440

Photomultiplier circuit including means for rapidly reducing the sensitivity thereof --- and protection from radiation damage  
[NASA-CASE-ABC-10593-1] c33 N74-27682

**RADIATION SHIELDING**

Encapsulated heater forming hollow body for cathode used in ion thruster  
[NASA-CASE-LEW-10814-1] c28 N70-35422

- Describing hot filament type Bayard-Alpert ionization gage with ion collector buried or removed from grid structure  
[NASA-CASE-XLA-07424] c14 N71-18482
- Sealed housing for protecting electronic equipment against electromagnetic interference  
[NASA-CASE-MSC-12168-1] c09 N71-18600
- Internal labyrinth and shield structure to improve electrical isolation of propellant feed source from ion thruster  
[NASA-CASE-LEW-10210-1] c28 N71-26781
- Apparatus for aligning shadow shields and cryogenic storage tanks in outer space with the sun  
[NASA-CASE-KSC-10622-1] c31 N72-21893
- Light shield and cooling apparatus --- high intensity ultraviolet lamp  
[NASA-CASE-LAR-10089-1] c34 N74-23066
- RADIATION SOURCES**
- Sight switch using infrared source and sensor mounted beside eye  
[NASA-CASE-XMP-03934] c09 N71-22585
- Apparatus for obtaining isotropic irradiation on film emulsion from parallel radiation source  
[NASA-CASE-MPS-20095] c24 N72-11595
- Radiation source tracker comprised of sectored matrix of detectors with output voltages corresponding to irradiance levels  
[NASA-CASE-NPO-11686] c14 N73-25462
- High powered arc electrodes --- producing solar simulator radiation  
[NASA-CASE-LEW-11162-1] c33 N74-12913
- Electric arc light source having undercut recessed anode  
[NASA-CASE-ARC-10266-1] c33 N75-29318
- RADIATION SPECTRA**
- Maksutov spectrograph for low light level research  
[NASA-CASE-XLA-10402] c14 N71-29041
- RADIATION THERAPY**
- A cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c52 N77-26796
- RADIATION TOLERANCE**
- Ultraviolet radiation resistant alkali-metal silicate coatings for temperature control of spacecraft  
[NASA-CASE-XGS-04119] c18 N69-39979
- Doping silicon material with gadolinium to increase radiation resistance of solar cells  
[NASA-CASE-XLE-02792] c26 N71-10607
- Improving radiation resistance of silicon semiconductor junctions by doping with lithium  
[NASA-CASE-XGS-07801] c09 N71-12513
- Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential  
[NASA-CASE-GSC-11425-2] c76 N75-25730
- Method for analyzing radiation sensitivity of integrated circuits  
[NASA-CASE-NPO-14350-1] c33 N80-14332
- RADIATIVE HEAT TRANSFER**
- Heat flux sensor assembly with proviso for heat shield to reduce radiative transfer between sensor elements  
[NASA-CASE-XMS-05909-1] c14 N69-27459
- Capillary radiator for carrying heat transfer liquid in planetary spacecraft structures  
[NASA-CASE-XLE-03307] c33 N71-14035
- Transient heat transfer gage for measuring total radiant intensity from far ultraviolet and ionized high temperature gases  
[NASA-CASE-XNP-09802] c33 N71-15641
- Construction and method of arranging plurality of ion engines to form cluster thereby increasing efficiency and control by decreasing heat radiated to space  
[NASA-CASE-XNP-02923] c28 N71-23081
- Apparatus and method for heating a material in a transparent anopole --- crystal growth  
[NASA-CASE-MPS-25436-1] c76 N81-30012
- RADIATORS**
- Development and characteristics of natural circulation radiator for use with nuclear power plants installed in lunar space stations  
[NASA-CASE-XHQ-03673] c33 N71-29046
- RADIO ANTENNAS**
- Low loss parasitic probe antenna for prelaunch tests of spacecraft antennas  
[NASA-CASE-XKS-09348] c09 N71-13521
- VHF/UHF parasitic probe antenna for spacecraft communication  
[NASA-CASE-XKS-09340] c07 N71-24614
- Development and characteristics of extensible dipole antenna using deformable tubular metallic strip element  
[NASA-CASE-HQN-00937] c07 N71-28979
- Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector  
[NASA-CASE-NPO-13568-1] c32 N76-21365
- RADIO ASTRONOMY**
- Synchronous detection system for detecting weak radio astronomical signals  
[NASA-CASE-XNP-09832] c30 N71-23723
- RADIO BEACONS**
- RF beam center location method and apparatus for power transmission system  
[NASA-CASE-NPO-13821-1] c44 N78-28594
- RADIO COMMUNICATION**
- System for synchronizing synthesizers of communication systems  
[NASA-CASE-GSC-12148-1] c32 N79-20296
- RADIO CONTROL**
- Radio frequency controlled solid state switch  
[NASA-CASE-ARC-10136-1] c09 N72-22202
- RADIO EQUIPMENT**
- System for synchronizing synthesizers of communication systems  
[NASA-CASE-GSC-12148-1] c32 N79-20296
- RADIO FREQUENCIES**
- Helical coaxial resonator RF filter  
[NASA-CASE-XGS-02816] c07 N69-24323
- Automatic gain control amplifier system  
[NASA-CASE-XMS-05307] c09 N69-24330
- Method and apparatus for bowing of instrument panels to improve radio frequency shielded enclosure  
[NASA-CASE-XMF-09422] c07 N71-19436
- Development of automatic frequency discriminators and control for phase lock loop providing frequency preset capabilities  
[NASA-CASE-XMF-08665] c10 N71-19467
- System generating sidereal frequency signals from signals of standard solar frequency without use of mixing operations or feedback loops  
[NASA-CASE-XGS-02610] c14 N71-23174
- Radio frequency coaxial filter to provide dc isolation and low frequency signal rejection in audio range  
[NASA-CASE-XGS-01418] c09 N71-23573
- Variable frequency nuclear magnetic resonance spectrometer providing drive signals over wide frequency range and minimizing noise effects  
[NASA-CASE-XNP-09830] c14 N71-26266
- High efficiency transformerless amplitude modulator coupled to RF power amplifier  
[NASA-CASE-GSC-10668-1] c07 N71-28430
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[NASA-CASE-XLA-00901] c07 N71-10775  
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Thermoelectric radiometer using polymer film as capacitor  
[NASA-CASE-ARC-10138-1] c14 N72-24477  
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[NASA-CASE-NPO-15398-1] c35 N81-33449
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Induction powered biological radiosonde  
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- RAIN**  
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- RANDOM ACCESS MEMORY**  
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- RANDOM LOADS**  
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Echo tracker/range finder for radars and sonars  
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Doppler radar having phase modulation of both transmitted and reflected return signals --- ranging  
[NASA-CASE-MSC-18675-1] c32 N81-29312

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[NASA-CASE-XMS-05454-1] c07 N71-12391

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Orbital and entry tracking accessory for globes --- to provide range requirements for reentry vehicles to any landing site  
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[NASA-CASE-XLE-10529] c14 N69-23191
- Power control switching circuit using low  
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[NASA-CASE-XNP-02713] c10 N69-39888
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[NASA-CASE-ARC-10101-1] c09 N71-33109
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[NASA-CASE-MFS-25208-1] c33 N81-27402
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[NASA-CASE-XLE-02624] c12 N69-39988
- Apparatus for measuring human body mass in zero  
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[NASA-CASE-XMS-03371] c05 N70-42000
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simulating reduced or zero gravity environments  
[NASA-CASE-XLA-01787] c11 N71-16028
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[NASA-CASE-MFS-21046-1] c14 N73-27377
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[NASA-CASE-XLE-06461] c17 N72-22530
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[NASA-CASE-NPO-13137-1] c27 N80-32514
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[NASA-CASE-MSC-18498-1] c60 N80-30050
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[NASA-CASE-GSC-10564] c10 N71-29135
- Redundant disc  
[NASA-CASE-LEW-12496-1] c07 N78-33101
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[NASA-CASE-MFS-23777-1] c37 N80-32716
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during reentry  
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- Method and apparatus for communicating through  
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[NASA-CASE-XLA-01127] c07 N70-41372
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[NASA-CASE-XLA-01552] c07 N71-11284
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for interplanetary spacecraft reentry shielding  
[NASA-CASE-XMS-02677] c31 N70-42075
- Method and apparatus for fabrication of heat  
insulating and ablative reentry structure  
[NASA-CASE-XMS-02009] c33 N71-20834
- Ablative heat shield for protection from  
aerodynamic heating of reentry spacecraft  
[NASA-CASE-MSC-12143-1] c33 N72-17947
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transmission to spacecraft  
[NASA-CASE-LEW-11227-1] c73 N75-30876
- Fibrous refractory composite insulation ---  
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[NASA-CASE-ARC-11169-1] c24 N79-24062
- Adjustable high emittance gap filler --- reentry  
shielding for space shuttle vehicles  
[NASA-CASE-ARC-11310-1] c27 N80-23454
- REENTRY TRAJECTORIES**  
Aerodynamic configuration of reentry vehicle



heat shield to provide longitudinal and directional stability at hypersonic velocities  
[NASA-CASE-XMS-04142] c31 N70-41631

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[NASA-CASE-XLA-00165] c31 N70-33242  
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[NASA-CASE-XLA-00241] c31 N70-37986  
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[NASA-CASE-XLA-03273] c14 N71-18699  
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[NASA-CASE-XLA-01791] c14 N71-22991  
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[NASA-CASE-XLA-04901] c31 N71-24315  
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[NASA-CASE-LAR-10549-1] c31 N73-13898  
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Automatic frequency control device for providing frequency reference for voltage controlled oscillator  
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[NASA-CASE-XNP-00733] c06 N70-34946

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[NASA-CASE-XNP-08840] c23 N71-16365  
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[NASA-CASE-XNF-05844] c14 N71-17587  
Highly stable optical mirror assembly optimizing image quality of light diffraction patterns  
[NASA-CASE-ERC-10001] c23 N71-24868

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[NASA-CASE-MFS-20243] c23 N73-13662  
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[NASA-CASE-MFS-21244-1] c36 N75-15028  
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[NASA-CASE-NPO-13490-1] c36 N76-31512

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Anastigmatic three-mirror telescope  
[NASA-CASE-MFS-23675-1] c89 N79-10969

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Real time reflectometer --- measurement of specular reflectance  
[NASA-CASE-MFS-23118-1] c35 N77-31465  
Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c43 N79-25443  
Visible and infrared polarization ratio spectroreflectometer  
[NASA-CASE-LAR-12285-1] c35 N80-28687

REFLECTORS

Method of compactly packaging centrifugally expandable lightweight flexible reflector satellite

[NASA-CASE-XLA-00138] c31 N70-37981  
Antenna design with self erecting mesh reflector  
[NASA-CASE-XGS-09190] c31 N71-16102  
Cylindrical reflector for resolving wide angle light beam from telescope into narrow beam for spectroscopic analysis  
[NASA-CASE-XGS-08269] c23 N71-26206  
Conical reflector antenna with feed approximating line source  
[NASA-CASE-NPO-10303] c07 N72-22127  
Target acquisition antenna feed with reflector system  
[NASA-CASE-GSC-10064-1] c10 N72-22235  
Multipurpose microwave antenna, employing dish reflector with plural coaxial horn feeds  
[NASA-CASE-NPO-11264] c07 N72-25174  
Characteristics of microwave antenna with conical reflectors to generate plane wave front  
[NASA-CASE-NPO-11661] c07 N73-14130  
Non-tracking solar energy collector system  
[NASA-CASE-NPO-13813-1] c44 N78-31526  
Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c74 N80-24152  
Acoustic suspension system  
[NASA-CASE-NPO-15435-1] c71 N81-27887

REFRACTIVITY

The 2 deg/90 deg laboratory scattering photometer --- particulate refractivity in hydrosols  
[NASA-CASE-GSC-12088-1] c74 N78-13874  
Chromatically corrected virtual image visual display --- reducing eye strain in flight simulators  
[NASA-CASE-LAR-12251-1] c74 N80-27185  
Dual laser optical system and method for studying fluid flow  
[NASA-CASE-MFS-25315-1] c36 N81-19440

REFRACTORY MATERIALS

Test apparatus for determining mechanical properties of refractory materials at high temperatures in vacuum or inert atmospheres  
[NASA-CASE-XLE-00335] c14 N70-35368  
Prestressed rocket nozzle with ceramic inner rings and refractory metal outer rings  
[NASA-CASE-XNP-02888] c18 N71-21068  
Semiconductor device manufacture using refractory dielectrics as diffusant masks and interconnection insulating materials  
[NASA-CASE-XER-08476-1] c26 N72-17820  
Electric furnace for vacuum and zero gravity melting of high melting point materials during earth orbit  
[NASA-CASE-MFS-20710] c11 N72-23215  
High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
[NASA-CASE-NPO-13690-1] c27 N78-19302  
High temperature resistant cermet and ceramic compositions  
[NASA-CASE-NPO-13690-2] c27 N79-14213  
Fibrous refractory composite insulation --- shielding reusable spacecraft  
[NASA-CASE-ARC-11169-1] c24 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] c27 N79-28507  
Improved refractory coatings and method of producing the same  
[NASA-CASE-LEW-13169-1] c26 N80-14232  
Adjustable high emittance gap filler --- reentry shielding for space shuttle vehicles  
[NASA-CASE-ARC-11310-1] c27 N80-23454  
Castable high temperature refractory materials  
[NASA-CASE-LEW-13080-1] c27 N80-29496  
Improved attachment system for silica tiles --- thermal protection for space shuttle orbiter  
[NASA-CASE-MSC-18741-1] c16 N81-16110  
Improved refractory coatings --- sputtered coatings on substrates that form stable nitrides  
[NASA-CASE-LEW-23169-2] c26 N81-16209  
Apparatus for accurately preloading auger attachment means for fragile protective material  
[NASA-CASE-MSC-18791-1] c37 N81-24446  
Densification of porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MSC-18737-1] c25 N81-29180

- Method of repairing surface damage to porous refractory substrates --- shuttle orbiter tiles  
[NASA-CASE-MSC-18736-1] c27 N81-29231
- REFRACTORY METALS**
- Refractory filament series circuitry for radiant heater  
[NASA-CASE-XLE-00387] c33 N70-34812
- Production of refractory bodies with controlled porosity by pressing and heating mixtures of refractory and inert metal powders  
[NASA-CASE-LEW-10393-1] c17 N71-15468
- Multilayer porous refractory metal ionizer design with thick, porous, large-grain substrates and thin, porous micron-grain substrates  
[NASA-CASE-XNP-04338] c17 N71-23046
- Brazing alloy adapted for brazing corrosion resistant steel to refractory metals, also for brazing refractory metals to other refractory metals  
[NASA-CASE-XNP-03063] c17 N71-23365
- Development and characteristics of thermal radiation shielding of refractory metal foil used for induction furnace  
[NASA-CASE-XLE-03432] c33 N71-24145
- Production of high strength refractory compounds and microconstituents into refractory metal matrix  
[NASA-CASE-XLE-03940] c18 N71-26153
- Silicide coating process and composition for protection of refractory metals from oxidation  
[NASA-CASE-XLE-10910] c18 N71-29040
- Development of procedure for improved distribution of refractory compounds and micro-constituents in refractory metal matrix  
[NASA-CASE-XLE-03940-2] c17 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] c27 N76-16229
- Method of making an apertured casting --- using duplicate mold  
[NASA-CASE-LEW-11169-1] c37 N76-23570
- REFRIGERATING**
- Heat exchanger and decontamination system for multistage refrigeration unit  
[NASA-CASE-NPO-10634] c23 N72-25619
- REFRIGERATING MACHINERY**
- Gas balancing, cryogenic refrigeration apparatus with Joule-Thomson valve assembly  
[NASA-CASE-NPO-10309] c15 N69-23190
- Method and apparatus for producing very low temperature refrigeration based on gas pressure balance  
[NASA-CASE-XNP-08877] c15 N71-23025
- Dual solid cryogenics for spacecraft refrigeration insuring low temperature cooling for extended periods  
[NASA-CASE-GSC-10188-1] c23 N71-24725
- Stirling cycle engine and refrigeration systems  
[NASA-CASE-NPO-13613-1] c37 N76-29590
- A cycling Joule Thomson refrigerator  
[NASA-CASE-NPO-15251-1] c31 N81-19344
- REFRIGERATORS**
- Intermittent type silica gel adsorption refrigerator for providing temperature control for spacecraft components  
[NASA-CASE-XNP-00920] c15 N71-15906
- Helium refrigerator  
[NASA-CASE-NPO-13435-1] c31 N76-14284
- Thermal compensator for closed-cycle helium refrigerator --- assuring constant temperature for an infrared laser diode  
[NASA-CASE-GSC-12168-1] c31 N79-17029
- Refrigerator module, system and process --- regenerative, cryogenic cooling of an infrared radiation detection system  
[NASA-CASE-ARC-11263-1] c31 N81-27328
- REGENERATION (ENGINEERING)**
- Switching circuit with regeneratively connected transistors eliminating power consumption when not in use  
[NASA-CASE-XNP-02654] c10 N70-42032
- Direct current electromotive system for regenerative braking of electric motor  
[NASA-CASE-XNP-01096] c10 N71-16030
- Free-piston regenerative hot gas hydraulic engine  
[NASA-CASE-LEW-12274-1] c37 N80-31790
- REGENERATION (PHYSIOLOGY)**
- An implantable electrical device  
[NASA-CASE-GSC-12560-1] c52 N80-27073
- REGENERATIVE COOLING**
- Metal ribbon wrapped outer wall for regeneratively cooled combustion chamber  
[NASA-CASE-XLE-00164] c15 N70-36411
- Fabrication method for lightweight regeneratively cooled combustion chamber of channel construction  
[NASA-CASE-XLE-00150] c28 N70-41818
- Regenerative cooling system for small rocket engine having restart capability and using noncryogenic hypergolic propellants  
[NASA-CASE-XLE-00685] c28 N70-41992
- Regenerative cooling system for rocket combustion chamber using coolant tubes in convergent-divergent nozzle  
[NASA-CASE-XLE-04857] c28 N71-23968
- Thermocouple apparatus for measuring wall temperatures in regeneratively cooled rocket engines having thin walled cooling passages  
[NASA-CASE-XLE-05230-2] c14 N73-13417
- Refrigerator module, system and process --- regenerative, cryogenic cooling of an infrared radiation detection system  
[NASA-CASE-ARC-11263-1] c31 N81-27328
- REGENERATIVE FUEL CELLS**
- Electrolytically regenerative hydrogen-oxygen fuel cells  
[NASA-CASE-XLE-04526] c03 N71-11052
- REGENERATORS**
- Loop transponder for regenerating code of mu-type ranging system  
[NASA-CASE-NPO-11707] c07 N73-25161
- REGISTERS (COMPUTERS)**
- Data processor with plural register stages for selectively interconnecting with each other to effect multiplicity of operations  
[NASA-CASE-GSC-10186] c08 N71-33110
- Priority interrupt system --- comprised of four registers  
[NASA-CASE-NPO-13067-1] c60 N76-18800
- REINFORCED PLASTICS**
- Process for developing filament reinforced plastic tubes used in research and development programs  
[NASA-CASE-LAR-10203-1] c15 N72-16330
- Reinforced structural plastics  
[NASA-CASE-LEW-10199-1] c27 N74-23125
- REINFORCEMENT (STRUCTURES)**
- Reinforcing beam system for highly flexible diaphragms in valves or pressure switches  
[NASA-CASE-XNP-01962] c32 N70-41370
- REINFORCING FIBERS**
- High strength reinforced metallic composites for applications over wide temperature range  
[NASA-CASE-XLE-02428] c17 N70-33288
- Method for producing fiber reinforced metallic composites with high strength and elasticity over wide temperature range  
[NASA-CASE-XLE-00231] c17 N70-38198
- Description of method for producing metallic composites reinforced with ceramic and refractory hard metals that are fibered in place  
[NASA-CASE-XLE-03925] c18 N71-22894
- Production and application of sprayable fiber reinforced ablation material  
[NASA-CASE-XLA-04251] c18 N71-26100
- Method of preparing graphite reinforced aluminum composite  
[NASA-CASE-MFS-21077-1] c24 N75-28135
- Fuselage structure using advanced technology metal matrix fiber reinforced composites  
[NASA-CASE-LAR-11688-1] c05 N78-18045
- Crystalline polyimides --- reinforcing fibers for high temperature composites and adhesives as well as flame retardation  
[NASA-CASE-LAR-12099-1] c27 N80-16158
- Composition and method for making polyimide resin-reinforced fabric  
[NASA-CASE-LEW-12933-1] c27 N81-19296
- Resin composition, process for producing the same, product produced therefrom and process for producing said product  
[NASA-CASE-ARC-11331-1] c27 N81-31363
- RELAXATION OSCILLATORS**
- Voltage controlled, variable frequency relaxation oscillator with MOSFET variable

- current feed  
[NASA-CASE-GSC-10022-1] c10 N71-25882
- RELAY SATELLITES**  
Earth satellite relay station for frequency multiplexed voice transmission  
[NASA-CASE-GSC-10118-1] c07 N71-24621  
Satellite personal communications system  
[NASA-CASE-NPO-14480-1] c32 N80-20448
- RELEASING**  
Bolt-latch mechanism for releasing despin weights from space vehicle  
[NASA-CASE-XLA-00679] c15 N70-38601  
Quick-release coupling for fueling rocket vehicles with cryogenic propellants  
[NASA-CASE-IKS-01985] c15 N71-10782  
Design and development of release mechanism for spacecraft components, releasable despin weights, and extensible gravity booms  
[NASA-CASE-IGS-08718] c15 N71-24600  
Pneumatic mechanism for releasing hook and loop fasteners between large rigid structures  
[NASA-CASE-XMS-10660-1] c15 N71-25975  
Delayed simultaneous appendage release mechanism for use on spacecraft equipped with despin mechanisms and releasable components  
[NASA-CASE-GSC-10814-1] c03 N73-20C39
- RELIABILITY ANALYSIS**  
Development of computer program for estimating reliability of self-repair and fault-tolerant systems with respect to selected system and mission parameters  
[NASA-CASE-NPO-13086-1] c15 N73-12495
- RELIABILITY ENGINEERING**  
Improving load capacity and fatigue life of rolling element systems in rockets and missiles  
[NASA-CASE-XLE-02999] c15 N71-16052  
Gage for quality control of sealing surfaces of threaded boss  
[NASA-CASE-XMF-04966] c14 N71-17658  
Reliability of automatic refilling valving device for cryogenic liquid systems  
[NASA-CASE-NPO-11177] c15 N72-17453  
Reliability of electrical connectors after heat sterilization  
[NASA-CASE-NPO-10694] c09 N72-20200  
Reliable electrical element heater using plural wire system and backup power sources  
[NASA-CASE-MFS-21462-1] c33 N74-14935  
Hollow rolling element bearings  
[NASA-CASE-LEW-11087-3] c37 N74-21064
- RELIEF VALVES**  
Relief valve to permit slow and fast bleeding rates at difference pressure levels  
[NASA-CASE-XMS-05894-1] c15 N69-21924  
Describing apparatus for separating gas from cryogenic liquid under zero gravity and for venting gas from fuel tank  
[NASA-CASE-XLE-00586] c15 N71-15968  
Redundant hydraulic control system for actuators with three main valve combination  
[NASA-CASE-MFS-20944] c15 N73-13466  
Prosthetic urinary sphincter  
[NASA-CASE-MFS-23717-1] c52 N81-25660  
Ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-1] c52 N81-27786
- REMOTE CONTROL**  
Oscillatory electromagnetic mirror drive system for horizon scanners  
[NASA-CASE-XLA-03724] c14 N69-27461  
Stage separation using remote control release of joint with explosive insert  
[NASA-CASE-XLA-02854] c15 N69-27490  
Power controlled bimetallic electromechanical actuator for accurate, timely, and reliable response to remote control signal  
[NASA-CASE-XNP-09776] c09 N69-39929  
Two component valve assembly for cryogenic liquid transfer regulation  
[NASA-CASE-XLE-00397] c15 N70-36492  
Remotely actuated quick disconnect mechanism for umbilical cables  
[NASA-CASE-XLA-00711] c03 N71-12258  
Remotely actuated quick disconnect for tubular umbilical conduits used to transfer fluids from ground to rocket vehicle  
[NASA-CASE-XLA-01396] c03 N71-12259  
Remote control device operated by movement of finger tips for manual control of spacecraft attitude  
[NASA-CASE-XAC-02405] c09 N71-16089  
Satellite radio communication system with remote steerable antenna  
[NASA-CASE-XNP-02389] c07 N71-28900  
Laser beam projector for continuous, precise alignment between target, laser generator, and astronomical telescope during tracking  
[NASA-CASE-NPO-11087] c23 N71-29125  
Solid state remote circuit selector switching circuit  
[NASA-CASE-LEW-10387] c09 N72-22201  
Design and development of multichannel laser remote control system using modulated helium-neon laser as transmitter and light collector as receiving antenna  
[NASA-CASE-LAB-10311-1] c16 N73-16536  
Cooperative multi-axis sensor for teleoperation of article manipulating apparatus  
[NASA-CASE-NPO-13386-1] c54 N75-27758  
Remotely operable articulated manipulator  
[NASA-CASE-MFS-22707-1] c37 N76-15457  
Remote manipulator system  
[NASA-CASE-MFS-22022-1] c37 N76-15460  
Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c33 N79-11315  
Simulator method and apparatus for practicing the mating of an observer-controlled object with a target  
[NASA-CASE-MFS-23052-2] c74 N79-13855  
Terminal guidance sensor system  
[NASA-CASE-NPO-14521-1] c54 N79-20746  
Tactile sensing system --- manipulator controllers  
[NASA-CASE-NPO-15094-1] c33 N81-16386  
Terminal guidance sensor system --- space shuttle coupling to orbiting satellites  
[NASA-CASE-NPO-14521-1] c37 N81-27519
- REMOTE HANDLING**  
Manipulator for remote handling in zero gravity environment  
[NASA-CASE-MFS-14405] c15 N72-28495  
Apparatus for remote handling of materials --- mixing or analyzing dangerous chemicals  
[NASA-CASE-LAB-10634-1] c37 N74-18123  
Anthropomorphic master/slave manipulator system  
[NASA-CASE-ARC-10756-1] c54 N77-32721  
Controller arm for a remotely related slave arm  
[NASA-CASE-ARC-11052-1] c37 N79-28551  
Apparatus for sequentially transporting containers  
[NASA-CASE-MFS-23846] c37 N80-29704
- REMOTE MANIPULATOR SYSTEM**  
Coupling device for moving vehicles  
[NASA-CASE-GSC-12322-1] c37 N80-14398
- REMOTE SENSORS**  
Passive optical wind and turbulence remote detection system  
[NASA-CASE-XMF-14032] c20 N71-16340  
Ionization control system design for monitoring separately located ion gage pressures on vacuum chambers  
[NASA-CASE-XLE-00787] c14 N71-21090  
Flow angle sensor and remote readout system for use with cryogenic fluids  
[NASA-CASE-XLE-04503] c14 N71-24864  
Time synchronization system for synchronizing clocks at remote locations with master clock using moon reflected coded signals  
[NASA-CASE-NPO-10143] c10 N71-26326  
Development of radiometric sensor to warn aircraft pilots of region of clear air turbulence along flight path  
[NASA-CASE-ERC-10081] c14 N72-28437  
Development of electronic detection system for remotely determining number and movement of enemy personnel  
[NASA-CASE-ARC-10097-2] c07 N73-25160  
Microwave power transmission system wherein level of transmitted power is controlled by reflections from receiver  
[NASA-CASE-MFS-21470-1] c44 N74-19870  
Voltage monitoring system  
[NASA-CASE-KSC-10736-1] c33 N75-19521  
Wind sensor  
[NASA-CASE-NPO-13462-1] c35 N76-24524  
Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c35 N77-10493  
Wind measurement system  
[NASA-CASE-MFS-23362-1] c47 N77-10753

- Penetrometer --- for determining load bearing characteristics of inclined surfaces  
[NASA-CASE-NPO-11103-1] c35 N77-27367
- Remote sensing of vegetation and soil using microwave ellipsometry  
[NASA-CASE-GSC-11976-1] c43 N78-10529
- Remote water monitoring system  
[NASA-CASE-LAR-11973-1] c35 N78-27384
- Radar target for remotely sensing hydrological phenomena  
[NASA-CASE-LAR-12344-1] c43 N80-18498
- Photoelectric detection system  
[NASA-CASE-MFS-23776-1] c74 N80-25134
- REMOTELY PILOTED VEHICLES**  
Rotating launch device for a remotely piloted aircraft  
[NASA-CASE-ARC-10979-1] c09 N77-19076
- REMOVAL**  
Catalyst bed element removing tool  
[NASA-CASE-IFR-00811] c15 N70-36501
- Recovery of alumina from composite propellants  
[NASA-CASE-NPO-14110-1] c28 N81-15119
- REPEATERS**  
Time division relay synchronizer with master sync pulse for activating binary counter to produce signal identifying time slot for station  
[NASA-CASE-GSC-10373-1] c07 N71-19773
- REPLACING**  
Indexing mechanism for cathode array substitution in electron beam tube  
[NASA-CASE-NPO-10625] c09 N71-26182
- RESCUE OPERATIONS**  
Backpack carrier with retractable legs suitable for lunar exploration and convertible to rescue vehicle  
[NASA-CASE-LAR-10056] c05 N71-12351
- Development and characteristics of rescue litter with inflatable flotation device for water rescue application  
[NASA-CASE-XMS-04170] c05 N71-22748
- Method of locating persons in distress --- by using radar imagery from radar reflectors  
[NASA-CASE-LAR-11390-1] c32 N77-21267
- High visibility air sea rescue panel  
[NASA-CASE-MSC-12564-2] c03 N78-25070
- RESEARCH AND DEVELOPMENT**  
Process for developing filament reinforced plastic tubes used in research and development programs  
[NASA-CASE-LAR-10203-1] c15 N72-16330
- RESEARCH VEHICLES**  
Lunar landing flight research vehicle  
[NASA-CASE-XPR-00929] c31 N70-34566
- Velocity limiting safety system for motor driven research vehicle  
[NASA-CASE-XLA-07473] c15 N71-24895
- RESIDUAL STRESS**  
Miniature solid state, direction sensitive, stress transducer design with bonded semiconductive piezoresistive element for sensing residual stresses  
[NASA-CASE-XNP-02983] c14 N71-21091
- Manufacturing process for making perspiration resistant-stress resistant biopotential electrode  
[NASA-CASE-MSC-90153-2] c05 N72-25120
- RESILIENCE**  
Automated ball rebound resilience test equipment for determining viscoelastic properties of polymers  
[NASA-CASE-XLA-08254] c14 N71-26161
- RESIN BONDING**  
Procedure for bonding polytetrafluoroethylene thermal protective sleeves to magnesium alloy conical shell components with different thermal coefficients  
[NASA-CASE-XLA-01262] c15 N71-21404
- Covered silicon solar cells and method of manufacture --- with polymeric films  
[NASA-CASE-LBW-11065-2] c44 N76-14600
- Method of manufacture of bonded fiber flywheel --- fiberglass-epoxy  
[NASA-CASE-MFS-23674-1] c24 N81-29163
- RESIN MATRIX COMPOSITES**  
Phosphorus-containing bisimide resins  
[NASA-CASE-ARC-11321-1] c27 N81-27272
- RESINS**  
Modification of polyurethanes with alkyl halide resins, inorganic salts, and encapsulated volatile and reactive halogen for fuel fire control  
[NASA-CASE-ARC-10098-1] c06 N71-24739
- Development of process for bonding resinous body in cavities of honeycomb structures  
[NASA-CASE-MSC-12357] c15 N73-12489
- Resin for protecting p-n semiconductor junction surface  
[NASA-CASE-EBC-10339-1] c18 N73-30532
- Composite lamination method  
[NASA-CASE-LAR-12019-1] c24 N78-17150
- Resin composition, process for producing the same, product produced therefrom and process for producing said product  
[NASA-CASE-ARC-11331-1] c27 N81-31363
- Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c27 N81-31364
- RESISTANCE**  
Manufacturing process for making perspiration resistant-stress resistant biopotential electrode  
[NASA-CASE-MSC-90153-2] c05 N72-25120
- Variable resistance constant tension and lubrication device --- using oil-saturated leather wiper  
[NASA-CASE-KSC-10723-1] c37 N75-13265
- RESISTANCE HEATING**  
High resistance cross flow heat exchangers for electrothermal rocket engines  
[NASA-CASE-XLE-01783] c28 N70-34175
- RESISTORS**  
High isolation RF signal selection switches  
[NASA-CASE-NPO-13081-1] c33 N74-22814
- Resistive anode image converter  
[NASA-CASE-HQN-10876-1] c33 N76-27473
- RESOLUTION**  
Conversion system for increasing resolution of analog to digital converters  
[NASA-CASE-XAC-00404] c08 N70-40125
- Cylindrical reflector for resolving wide angle light beam from telescope into narrow beam for spectroscopic analysis  
[NASA-CASE-XGS-08269] c23 N71-26206
- Resolution enhanced sound detecting apparatus  
[NASA-CASE-NPO-14134-1] c71 N79-23753
- RESOLVERS**  
Differential phase shift keyed signal resolver  
[NASA-CASE-MSC-14066-1] c33 N74-27705
- RESONANCE**  
Optically selective, acoustically resonant gas detecting transducer  
[NASA-CASE-ARC-10639-1] c35 N78-13400
- Resonant isolator for maser amplifier  
[NASA-CASE-NPO-15201-1] c36 N81-24426
- RESONANT FREQUENCIES**  
Vibrating element electrometer producing high conversion gain by input current control of elements resonant frequency displacement amplitude  
[NASA-CASE-IAC-02807] c09 N71-23021
- Quantitative liquid measurements in container by resonant frequencies  
[NASA-CASE-XNP-02500] c18 N71-27397
- Development of electrical circuit for suppressing oscillations across inductor operating in resonant mode  
[NASA-CASE-EBC-10403-1] c10 N73-26228
- CW ultrasonic bolt tensioning monitor  
[NASA-CASE-LAR-12016-1] c39 N78-15512
- Microbalance --- for measuring particle mass  
[NASA-CASE-MSC-11242] c35 N78-17356
- Method and apparatus for shaping and enhancing acoustical levitation forces  
[NASA-CASE-MFS-25050-1] c71 N81-15767
- RESONATORS**  
Selective bandpass resonators using bandstop resonator pairs for microwave frequency operation  
[NASA-CASE-GSC-10990-1] c09 N73-26195
- RESPIRATION**  
Respiration analyzing method and apparatus for determining subjects oxygen consumption in aerospace environments  
[NASA-CASE-IFR-08403] c05 N71-11202
- RESPIRATORS**  
Transducer for monitoring oxygen flow in respirator  
[NASA-CASE-FRC-10012] c14 N72-17329

## RESPIRATORY RATE

Flowmeters for sensing low fluid flow rate and pressure for application to respiration rate studies  
[NASA-CASE-PRC-10022] c12 N71-26546

Respiratory analysis system to determine gas flow rate and frequency of respiration and expiration cycles in real time  
[NASA-CASE-MSC-13436-1] c05 N73-32015

Metabolic analyzer --- for measuring metabolic rate and breathing dynamics of human beings  
[NASA-CASE-HFS-21415-1] c52 N74-20728

**RESPIROMETERS**  
Metabolic analyzer --- for measuring metabolic rate and breathing dynamics of human beings  
[NASA-CASE-HFS-21415-1] c52 N74-20728

**RESPONSES**  
System for monitoring condition responsive devices by using frequency division multiplex technique  
[NASA-CASE-KSC-10521] c07 N73-20176

**RESTARTABLE ROCKET ENGINES**  
Collapsible auxiliary tank for restarting liquid propellant rocket motors under zero gravity  
[NASA-CASE-XNP-01390] c28 N70-41275

Regenerative cooling system for small rocket engine having restart capability and using noncryogenic hypergolic propellants  
[NASA-CASE-XLE-00685] c28 N70-41992

**RESUSCITATION**  
Pulmonary resuscitation method and apparatus with adjustable pressure regulator  
[NASA-CASE-XMS-01115] c05 N70-39522

**RETAINING**  
Floating nut retention system  
[NASA-CASE-MSC-16938-1] c37 N80-23653

Modified spiral wound retaining ring  
[NASA-CASE-LAR-12361-1] c37 N81-12422

**RETARDING**  
Ablative resins used for retarding regression in ablative material  
[NASA-CASE-XLE-05913] c33 N71-14032

**RETICLES**  
Optical tracker with pair of FM reticles having patterns 90 deg out of phase  
[NASA-CASE-XGS-05715] c23 N71-16100

Method for producing reticles for use in outer space  
[NASA-CASE-GSC-11188-2] c21 N73-19630

Production method of star tracking reticles for transmitting in visible and near ultraviolet regions  
[NASA-CASE-GSC-11188-1] c14 N73-32320

Formation of star tracking reticles  
[NASA-CASE-GSC-11188-3] c74 N74-20008

Star scanner --- with a reticle with a pair of slits having differing separation  
[NASA-CASE-GSC-11569-1] c89 N74-30886

**RETRACTABLE EQUIPMENT**  
Retractable runway lights  
[NASA-CASE-XLA-00119] c11 N70-33329

Support for flexible conductor cable between drawers or racks holding electronic equipment and cabinet assembly housing drawers or racks  
[NASA-CASE-XMF-07587] c15 N71-18701

Retractable environmental seal  
[NASA-CASE-HFS-23646-1] c37 N79-22474

Antenna deployment mechanism for use with a spacecraft --- extensible and retractable telescopic antenna mast  
[NASA-CASE-GSC-12331-1] c18 N80-14183

Satellite retrieval system  
[NASA-CASE-HFS-25403-1] c18 N81-24164

**RETROFIRING**  
Visual target luminaires for retrofire attitude control  
[NASA-CASE-XMS-12158-1] c31 N69-27499

Device for use in descending spacecraft as altitude sensor for actuating deceleration retrorockets  
[NASA-CASE-XMS-03792] c14 N70-41812

**RETROREFLECTION**  
Servo system for retroreflector of Michelson interferometer  
[NASA-CASE-NPO-10300] c14 N71-17662

Over-under double-pass interferometer  
[NASA-CASE-NPO-13999-1] c35 N78-18395

Method and apparatus for Doppler frequency modulation of radiation

[NASA-CASE-NPO-14524-1] c32 N80-24510

**RETROREFLECTORS**  
Interferometer --- high resolution  
[NASA-CASE-NPO-14448-1] c74 N81-29963

**RETROCKET ENGINES**  
Steerable solid propellant rocket motor adapted to effect payload orientation as multistage rocket stage or reduce velocity as retrorocket  
[NASA-CASE-XNP-00234] c28 N70-38645

**REUSABLE SPACECRAFT**  
Recoverable, reusable single stage booster capable of injecting large payloads into circular earth orbit  
[NASA-CASE-XNF-01973] c31 N70-41588

Spacecraft configurations and aerodynamic characteristics of space shuttle systems with two reusable stages  
[NASA-CASE-MSC-12433] c31 N73-14854

**REUSE**  
Silica reusable surface insulation  
[NASA-CASE-ARC-10721-1] c27 N76-22376

**REVERSE OSMOSIS**  
Reverse osmosis membrane of high urea rejection properties --- water purification  
[NASA-CASE-ARC-10980-1] c27 N80-23452

**REVERSED FLOW**  
Multistage multiple reentry axial flow reaction turbine with reverse flow reentry ducting  
[NASA-CASE-XLE-00170] c15 N70-36412

Reversible current directing circuitry for reversible motor control  
[NASA-CASE-XLA-09371] c10 N71-18724

Positive locking check valve for stopping reversed flow  
[NASA-CASE-XMS-09310] c15 N71-22706

Reverse pitch fan with divided splitter  
[NASA-CASE-LEW-12760-1] c07 N77-17059

**REYNOLDS NUMBER**  
Wind tunnel test section for simulating high Reynolds number over transonic speed range  
[NASA-CASE-HFS-20509] c11 N72-17183

**REYNOLDS STRESS**  
System for measuring Reynolds in a turbulently flowing fluid --- signal processing  
[NASA-CASE-ARC-10755-2] c34 N76-27517

**RHENIUM**  
Thermocouples of tantalum and rhenium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12050-1] c35 N77-32454

**RHEOMETERS**  
Viscosity measuring instrument  
[NASA-CASE-NPO-14501-1] c35 N80-18357

**RIBBONS**  
Metal ribbon wrapped outer wall for regeneratively cooled combustion chamber  
[NASA-CASE-XLE-00164] c15 N70-36411

Device for bending metal ribbon or wire  
[NASA-CASE-XLA-05966] c15 N72-12408

Controlled diffusion reaction process for masking substrate of twisted multifilament superconductive ribbon  
[NASA-CASE-LEW-11726-1] c26 N73-26752

Method of controlling defect orientation in silicon crystal ribbon growth  
[NASA-CASE-NPO-13918-1] c76 N79-11920

Solar array strip and a method for forming the same  
[NASA-CASE-NPO-13652-1] c44 N79-17314

Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt  
[NASA-CASE-NPO-13969-1] c76 N79-23798

Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c44 N79-24431

Method for forming a solar array strip  
[NASA-CASE-NPO-13652-3] c44 N80-14474

Means for growing ribbon crystals without subjecting the crystals to thermal shock-induced strains  
[NASA-CASE-NPO-14298-1] c76 N80-32244

Method of growing a ribbon crystal particularly suited for facilitating automated control of ribbon width  
[NASA-CASE-NPO-14295-1] c76 N80-32245

Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c33 N81-19389

**RIBOFLAVIN**  
Bioassay of flavin coenzymes  
[NASA-CASE-GSC-10565-1] c06 N72-25149

- RIBS (SUPPORTS)**  
Aeroflexible wing structure with air scoop for inflating stiffeners with ram air  
[NASA-CASE-XLA-06095] c01 N69-39581
- RICE**  
Rice preparation process consisting of cooking, two freezing-thawing cycles, and then freeze drying  
[NASA-CASE-MSC-13540-1] c05 N72-33096
- RIDING QUALITY**  
Ride quality meter  
[NASA-CASE-LAR-12882-1] c54 N81-31848
- RIGID ROTORS**  
Hingeless helicopter rotor with improved stability  
[NASA-CASE-ARC-10807-1] c05 N77-17029
- RIGID STRUCTURES**  
Pneumatic mechanism for releasing hook and loop fasteners between large rigid structures  
[NASA-CASE-XMS-10660-1] c15 N71-25575  
Storage stable, thermally activated foaming compositions for erecting and rigidizing mechanisms of thin sheet solar collectors  
[NASA-CASE-LAR-10373-1] c18 N71-26155  
Adjustable rigid mount for trihedral mirror formed of alloy with small coefficient of thermal expansion supporting screws and spring-biased plates  
[NASA-CASE-XNP-08907] c23 N71-29123  
Folding structure fabricated of rigid panels  
[NASA-CASE-XHQ-02146] c18 N75-27040  
Telescoping columns --- parabolic antenna support  
[NASA-CASE-LAR-12195-1] c31 N81-27324
- RIGID WINGS**  
Deployment system for flexible wing with rigid superstructure  
[NASA-CASE-XLA-01220] c02 N70-41863
- RIMS**  
Rim inertial measuring system  
[NASA-CASE-LAR-12052-1] c18 N81-29152
- RING CURRENTS**  
Design of transistorized ring counter circuit with special steering and triggering circuits  
[NASA-CASE-XGS-03095] c09 N69-27463
- RING STRUCTURES**  
Reversible ring counter using cascaded single silicon controlled rectifier stages  
[NASA-CASE-XGS-01473] c09 N71-10673  
Nonreusable energy absorbing device comprising ring member with plurality of recesses, cutting members, and guide member mounted in each recess  
[NASA-CASE-XMF-10040] c15 N71-22E77  
Phase-locked servo system --- for synchronizing the rotation of slip ring assembly  
[NASA-CASE-MFS-22073-1] c33 N75-13139  
Laser system with an antiresonant optical ring  
[NASA-CASE-HQN-10844-1] c36 N75-19653  
Helmet latching and attaching ring  
[NASA-CASE-XMS-04670] c54 N78-17678  
Liquid metal slip ring  
[NASA-CASE-LEW-12277-2] c33 N78-25323  
Collapsible corrugated horn antenna  
[NASA-CASE-LAR-11745-1] c32 N80-29539  
Modified spiral wound retaining ring  
[NASA-CASE-LAR-12361-1] c37 N81-12422  
Ladder supported ring bar circuit  
[NASA-CASE-LEW-13570-1] c33 N81-24348
- RING WINGS**  
Design of ring wing vehicle of high drag-to-weight ratio to withstand reentry stress into low density atmosphere  
[NASA-CASE-XLA-04901] c31 N71-24315
- RIPPLES**  
Circuit for monitoring power supply by ripple current indication  
[NASA-CASE-KSC-10162] c09 N72-11225
- RIVETS**  
Electrical connection for printed circuits on common board, using bellows principle in rivet  
[NASA-CASE-XNP-05082] c15 N70-41960
- ROCKET ENGINE CASES**  
Method for shaping regeneratively cooled rocket motor casing having minimum thickness at each channel cross section  
[NASA-CASE-XLE-00409] c28 N71-15658  
Regeneratively cooled rocket motor casing with tapered channels to insure minimum thicknesses at each channel cross section for necessary strength requirements  
[NASA-CASE-XLE-05689] c28 N71-15659  
Payload/spent rocket engine case separation system  
[NASA-CASE-XLA-05369] c31 N71-15687  
Liner for hybrid solid propellants to bind propellant to rocket motor case  
[NASA-CASE-INP-09744] c27 N71-16392  
Permanently magnetized ion engine casing construction for use in spacecraft propulsion systems  
[NASA-CASE-INP-06942] c28 N71-23293  
Casting propellant in rocket engine  
[NASA-CASE-LAR-11995-1] c28 N77-10213  
Solid propellant rocket motor and method of making same  
[NASA-CASE-XLA-1349] c20 N77-17143
- ROCKET ENGINE CONTROL**  
Fluid thrust control system --- for liquid propellant rocket engines  
[NASA-CASE-IMP-05964-1] c20 N79-21124
- ROCKET ENGINE DESIGN**  
High thrust annular liquid propellant rocket engine and exhaust nozzle design  
[NASA-CASE-XLE-00078] c28 N70-33284  
Spherical solid propellant rocket engine design  
[NASA-CASE-XLA-00105] c28 N70-33331  
Spherical solid propellant rocket engine having abrupt burnout  
[NASA-CASE-XHQ-01897] c28 N70-35381  
Metal ion rocket engine design  
[NASA-CASE-XLE-00342] c28 N70-37980  
Improvement in rocket engine performance with swirling flow exhaust nozzle development  
[NASA-CASE-XNP-03692] c28 N71-24321  
Characteristics of ion rocket engine with combination keeper electrode and electron baffle  
[NASA-CASE-NPO-11880] c28 N73-24783  
Supersonic-combustion rocket  
[NASA-CASE-LEW-11058-1] c20 N74-13502  
Rocket chamber and method of making  
[NASA-CASE-LEW-11118-2] c20 N76-14191  
System for imposing directional stability on a rocket-propelled vehicle  
[NASA-CASE-MFS-21311-1] c20 N76-21275  
Low thrust monopropellant engine --- low temperature environments  
[NASA-CASE-GSC-12194-2] c20 N79-15151
- ROCKET ENGINES**  
Channel-type shell construction for rocket engines and related configurations  
[NASA-CASE-XLE-00144] c28 N70-34860  
Encapsulated heater forming hollow body for cathode used in ion thruster  
[NASA-CASE-LEW-10814-1] c28 N70-35422  
Apparatus for cooling and injecting hypergolic propellants into combustion chamber of small rocket engine  
[NASA-CASE-XLE-00303] c15 N70-36535  
Elastic universal joint for rocket motor mounting  
[NASA-CASE-INP-00416] c15 N70-36947  
Water electrolysis rocket engine with self-regulating stoichiometric fuel mixing regulator  
[NASA-CASE-XGS-08729] c28 N71-14044  
Method for igniting solid propellant rocket motors by injecting hypergolic fluids  
[NASA-CASE-XLE-01988] c27 N71-15634  
Laminar flow of liquid coolants in rocket engines  
[NASA-CASE-NPO-10122] c12 N71-17631  
Improvement in rocket engine performance with swirling flow exhaust nozzle development  
[NASA-CASE-INP-03692] c28 N71-24321  
System for removing and repairing spacecraft control thrusters by use of portable air locks  
[NASA-CASE-MFS-20325] c28 N71-27095  
Device for back purging thrust engines  
[NASA-CASE-XMS-04826] c28 N71-28849  
Development of method for cooling high temperature wall members with cooling medium having high heat absorption capability  
[NASA-CASE-HQN-00938] c33 N71-29053  
Automatic shunting of ion thruster magnetic field when thruster is not operating  
[NASA-CASE-LEW-10835-1] c28 N72-22771  
Vacuum chamber with scale model of rocket engine base area of space vehicle  
[NASA-CASE-MFS-20620] c11 N72-27262  
Thermocouple apparatus for measuring wall temperatures in regeneratively cooled rocket engines having thin walled cooling passages  
[NASA-CASE-XLE-05230-2] c14 N73-13417

- Improving performance of magnetoplasmadynamic arc rocket engine  
[NASA-CASE-LEW-11180-1] c25 N73-25760
- Method of electroforming a rocket chamber  
[NASA-CASE-LEW-11118-1] c20 N74-32519
- Device for installing rocket engines  
[NASA-CASE-MFS-19220-1] c20 N76-22296
- Ion beam thruster shield  
[NASA-CASE-LEW-12082-1] c20 N77-10148
- Anode for ion thruster  
[NASA-CASE-LEW-12048-1] c20 N77-20162
- General purpose rocket furnace  
[NASA-CASE-MFS-23460-1] c12 N79-26075
- ROCKET EXHAUST**
- Thrust vector control by secondary injection of fluid into rocket nozzle flow field to separate exhaust flow  
[NASA-CASE-XLE-00208] c28 N70-34294
- Development of vortex fluid amplifier for throttling rocket exhaust  
[NASA-CASE-LEW-10374-1] c28 N73-13773
- ROCKET FIRING**
- Design and characteristics of linkage to alleviate rocket vehicle divergence during launch  
[NASA-CASE-XLA-00256] c31 N71-15663
- ROCKET FLIGHT**
- Development of technique for control of free flight rocket vehicles  
[NASA-CASE-XLA-00937] c31 N71-17691
- ROCKET LAUNCHING**
- Design and characteristics of linkage to alleviate rocket vehicle divergence during launch  
[NASA-CASE-XLA-00256] c31 N71-15663
- Controlled release device for use in launching rockets or missiles  
[NASA-CASE-XKS-03338] c15 N71-24043
- ROCKET LININGS**
- Heat exchanger and method of making --- rocket lining  
[NASA-CASE-LEW-12441-2] c34 N80-24573
- ROCKET NOZZLES**
- Gimbaled partially submerged nozzle for solid propellant rocket engines for providing directional control  
[NASA-CASE-XNP-01544] c28 N70-34162
- Large area-ratio nozzles for rocket motor thrust chambers  
[NASA-CASE-XLE-00145] c28 N70-36806
- Flexible rocket motor nozzle closure device to aid ignition and protect rocket chamber from foreign objects  
[NASA-CASE-XLA-02651] c28 N70-41567
- Automatically deploying nozzle exit cone extension  
[NASA-CASE-XLE-01640] c31 N71-15637
- Method for testing rocket nozzles at high tensile stress levels  
[NASA-CASE-NPO-10311] c31 N71-15643
- Development of collapsible nozzle extension for rocket engines  
[NASA-CASE-MFS-11497] c28 N71-16224
- Camera protecting device for use in photographing rocket engine nozzles or other engine components  
[NASA-CASE-NPO-10174] c14 N71-18465
- Multislit film cooled pyrolytic graphite rocket nozzle  
[NASA-CASE-XNP-04389] c28 N71-20942
- Prestressed rocket nozzle with ceramic inner rings and refractory metal outer rings  
[NASA-CASE-XNP-02888] c18 N71-21068
- Improvement in rocket engine performance with swirling flow exhaust nozzle development  
[NASA-CASE-XNP-03692] c28 N71-24321
- Development of method for cooling high temperature wall members with cooling medium having high heat absorption capability  
[NASA-CASE-HQN-00938] c33 N71-29053
- Inflatable rocket engine nozzle skirt with transpiration cooling  
[NASA-CASE-MFS-20619] c28 N72-11708
- Thin walled nozzle with insulative nonablative coating for solid propellant rocket engines  
[NASA-CASE-NPO-11458] c28 N72-23810
- Method of making a rocket nozzle  
[NASA-CASE-XNP-06884-1] c20 N79-21123
- Retractable environmental seal  
[NASA-CASE-MFS-23646-1] c37 N79-22474
- ROCKET OXIDIZERS**
- Preparing oxidizer coated metal fuel particles  
[NASA-CASE-NFO-11975-1] c28 N74-33209
- A system for concurrently delivering a stream of powdered fuel and a stream of powdered oxidizer to a combustion chamber for a reaction motor  
[NASA-CASE-MFS-23904-1] c20 N79-13077
- ROCKET PROPELLANTS**
- Solenoid two-step valve for bipropellant flow rate control to rocket engine  
[NASA-CASE-XMS-04890-1] c15 N70-22192
- Rocket engine injector orifice to accommodate changes in density, velocity, and pressure, thereby maintaining constant mass flow rate of propellant into rocket combustion chamber  
[NASA-CASE-XLE-03157] c28 N71-24736
- Bipropellant injector with pair of concave deflector plates  
[NASA-CASE-XNP-09461] c28 N72-23809
- ROCKET TEST FACILITIES**
- High-vacuum condenser tank for testing ion rocket engines  
[NASA-CASE-XLE-00168] c11 N70-33278
- Micro-pound extended range thrust stand for small rocket engines  
[NASA-CASE-GSC-10710-1] c28 N71-27094
- ROCKET THRUST**
- Solid propellant rocket vehicle thrust control method and apparatus  
[NASA-CASE-XNP-00217] c28 N70-38181
- High voltage insulators for direct current in acceleration system of electrostatic thruster  
[NASA-CASE-XLE-01902] c28 N71-10574
- Characteristics of solid propellant rocket engine with controlled rate of thrust buildup operating in vacuum environment  
[NASA-CASE-NFO-11559] c28 N73-24784
- Thrust measurement  
[NASA-CASE-XMS-05731] c35 N75-29382
- ROCKET VEHICLES**
- Umbilical separator for rockets  
[NASA-CASE-XNP-00425] c11 N70-38202
- Hydraulic support equipment for full scale dynamic testing of large rocket vehicle under free flight conditions  
[NASA-CASE-XMP-01772] c11 N70-41677
- Design and characteristics of linkage to alleviate rocket vehicle divergence during launch  
[NASA-CASE-XLA-00256] c31 N71-15663
- Development of technique for control of free flight rocket vehicles  
[NASA-CASE-XLA-00937] c31 N71-17691
- Coupling device for moving vehicles  
[NASA-CASE-GSC-12322-1] c37 N80-14398
- ROCKET-BORNE INSTRUMENTS**
- Rocket-borne aspect sensor consisting of radiation sensor, apertured disk, commutator, and counting circuits  
[NASA-CASE-XGS-08266] c14 N69-27432
- ROCKETS**
- Device for detecting hydrogen fires onboard high altitude rockets  
[NASA-CASE-MFS-13130] c10 N72-17173
- ROCKS**
- Rotary impact-type rock drill for recovering rock cuttings  
[NASA-CASE-XNP-07478] c14 N69-21923
- Rock sampling --- apparatus for controlling particle size  
[NASA-CASE-XNP-10007-1] c46 N74-23068
- Rock sampling --- method for controlling particle size distribution  
[NASA-CASE-XNP-09755] c46 N74-23069
- Coal-rock interface detector  
[NASA-CASE-MFS-23725-1] c43 N79-31706
- RODS**
- Nuclear thermionic converter --- tungsten-thorium oxide rods  
[NASA-CASE-NFO-13121-1] c73 N77-18891
- ROLL**
- Measuring roll alignment of test body with respect to reference body  
[NASA-CASE-GSC-10514-1] c14 N72-20379
- ROLLER BEARINGS**
- Solid lubricant applied to porous roller bearings prior to use in ultrahigh vacuum  
[NASA-CASE-XLE-09527] c15 N71-17688

- Semilinear bearing comprising two rows of roller bearings separated by spherical bearings and permitting rotational and translational movement  
[NASA-CASE-XLA-02809] c15 N71-22982
- Low mass rolling element bearing assembly  
[NASA-CASE-LBW-11087-1] c15 N73-30458
- Method of making rolling element bearings  
[NASA-CASE-LBW-11087-2] c37 N74-15128
- Bearing material --- composite material with low friction surface for rolling or sliding contact  
[NASA-CASE-LBW-11930-1] c24 N76-22309
- ROLLERS**
- Improving load capacity and fatigue life of rolling element systems in rockets and missiles  
[NASA-CASE-XLE-02999] c15 N71-16052
- Load regulating latch  
[NASA-CASE-MSL-19535-1] c37 N77-32499
- An improved suspension system for a wheel rolling on a flat track --- bearings for directional antennas  
[NASA-CASE-NPO-14395-1] c37 N79-12446
- ROLLING CONTACT LOADS**
- Development of rolling element bearing for operation in ultrahigh vacuum environment  
[NASA-CASE-XLE-09527-2] c15 N71-26189
- ROLLING MOMENTS**
- Star sensor system for roll attitude control of spacecraft  
[NASA-CASE-XNP-01307] c21 N70-41856
- ROOM TEMPERATURE**
- Process permitting application of synthetic resin coating to irregular-shaped objects at ambient temperature  
[NASA-CASE-XNP-06508] c18 N69-39895
- ROTARY STABILITY**
- Drive mechanism for operating reactance attitude control system for aerospace bodies  
[NASA-CASE-YMF-01598] c21 N71-15583
- Combination guide and rotary bearing for freely moving shaft  
[NASA-CASE-XLA-00013] c15 N71-29136
- Lubricated journal bearing  
[NASA-CASE-LBW-11076-3] c37 N75-30562
- Cyclical bi-directional rotary actuator  
[NASA-CASE-GSC-11883-1] c37 N77-19458
- Apparatus for and method of compensating dynamic unbalance  
[NASA-CASE-GSC-12550-1] c37 N81-22358
- ROTARY WING AIRCRAFT**
- Aircraft control system for rotary wing aircraft  
[NASA-CASE-ERC-10439] c02 N73-19004
- ROTARY WINGS**
- Variable geometry rotor system for direct control over wake vortex  
[NASA-CASE-LAR-10557] c02 N72-11018
- Hingeless helicopter rotor with improved stability  
[NASA-CASE-ARC-10807-1] c05 N77-17029
- Locking redundant link  
[NASA-CASE-LAR-11900-1] c37 N79-14382
- Helicopter rotor airfoil  
[NASA-CASE-LAR-12396-1] c02 N79-24958
- Acoustically swept rotor --- helicopter noise reduction  
[NASA-CASE-ARC-11106-1] c05 N80-14107
- Compensating linkage for main rotor control  
[NASA-CASE-LAR-11797-1] c05 N81-19C87
- ROTATING BODIES**
- Optical scanner mounted on rotating support structure with method of compensating for image or satellite rotation  
[NASA-CASE-XGS-02401] c14 N69-27485
- Laser device for removing material from rotating object for dynamic balancing  
[NASA-CASE-MFS-11279] c16 N71-20400
- Phase-locked servo system --- for synchronizing the rotation of slip ring assembly  
[NASA-CASE-MFS-22073-1] c33 N75-13139
- Annular momentum control device used for stabilization of space vehicles and the like  
[NASA-CASE-LAR-11051-1] c15 N76-14158
- Axially and radially controllable magnetic bearing  
[NASA-CASE-GSC-11551-1] c37 N76-18459
- Multiple in-line docking capability for rotating space stations  
[NASA-CASE-MFS-20855-1] c15 N77-10112
- Rotatable mass for a flywheel  
[NASA-CASE-MFS-23051-1] c37 N79-10422
- Acoustic driving of rotor  
[NASA-CASE-NPO-14005-1] c71 N79-20627
- Rotary target V-block --- aligning wind tunnel apparatus for optical measurement  
[NASA-CASE-LAR-12007-2] c74 N79-25876
- Multi-channel rotating optical interface for data transmission  
[NASA-CASE-NFO-14066-1] c74 N79-34011
- Rhomboid prism pair for rotating the plane of parallel light beams --- laser velocimeters  
[NASA-CASE-ARC-11311-1] c74 N81-16882
- Apparatus for and method of compensating dynamic unbalance  
[NASA-CASE-GSC-12550-1] c37 N81-22358
- ROTATING CYLINDERS**
- Tread drum for animals --- having an electrical shock station  
[NASA-CASE-ARC-10917-1] c51 N78-27733
- Head for high speed spinner having a vacuum chuck --- holding silicon dioxide chips for etching  
[NASA-CASE-NFO-15227-1] c37 N81-33482
- ROTATING DISKS**
- Poil seal between parts moving relative to each other  
[NASA-CASE-XLE-05130] c15 N69-21362
- Rocket-borne aspect sensor consisting of radiation sensor, apertured disk, commutator, and counting circuits  
[NASA-CASE-XGS-08266] c14 N69-27432
- Redundant disc  
[NASA-CASE-LBW-12496-1] c07 N78-33101
- ROTATING ELECTRICAL MACHINES**
- Modulating and controlling intensity of light beam from high temperature source by servocontrolled rotating cylinders  
[NASA-CASE-XMS-04300] c09 N71-19479
- Design and development of electric motor with stationary field and armature windings which operates on direct current  
[NASA-CASE-XGS-05290] c09 N71-25999
- Double-induction variable speed system for constant-frequency electrical power generation  
[NASA-CASE-ERC-10065] c09 N71-27364
- ROTATING ENVIRONMENTS**
- Radial module manned space station with artificial gravity environment  
[NASA-CASE-XMS-01906] c31 N70-41373
- Artificial gravity system for simulating self-locomotion capability of astronauts in rotating environments  
[NASA-CASE-XLA-03127] c11 N71-10776
- ROTATING GENERATORS**
- Rotating raster generator  
[NASA-CASE-ERC-10071-1] c32 N74-20813
- Wind wheel electric power generator  
[NASA-CASE-MFS-23515-1] c44 N80-21828
- Wingtip vortex turbine  
[NASA-CASE-LAR-12544-1] c07 N81-27096
- ROTATING MIRRORS**
- Optical retrodirective modulator with focus spoiling reflector driven by modulation signal  
[NASA-CASE-GSC-10062] c14 N71-15605
- Attitude sensor with scanning mirrors for detecting orientation of space vehicle with respect to planet  
[NASA-CASE-XLA-00793] c21 N71-22880
- Optical device containing rotatable prism and reflecting mirror for generating precise angles  
[NASA-CASE-XGS-04173] c19 N71-26674
- Method and apparatus for optically monitoring the angular position of a rotating mirror  
[NASA-CASE-GSC-11353-1] c74 N74-21304
- ROTATING SHAFTS**
- Fluid seal formed by flexible disk on rotating shaft to retain lubricating oils around shaft  
[NASA-CASE-XLE-05130-2] c15 N71-19570
- Anemometer with braking mechanism to prevent rotation of wind driven elements  
[NASA-CASE-YMF-05224] c14 N71-23726
- Electromagnetic braking arrangement for controlling rotor rotation in electric motor  
[NASA-CASE-XNP-06936] c15 N71-24695
- Liquid-vapor interface seal design for turbine rotating shafts including helical and molecular pumps and liquid cooling of mercury vapor  
[NASA-CASE-INP-02862-1] c15 N71-26294
- Combination guide and rotary bearing for freely moving shaft  
[NASA-CASE-XLA-00013] c15 N71-29136



Development of Hall effect transducer for converting mechanical shaft rotations into proportional electrical signals  
 [NASA-CASE-LAR-10620-1] c09 N72-25255  
 Spiral groove seal --- for rotating shaft  
 [NASA-CASE-XLE-10326-4] c37 N74-15125  
 Digital servo controller --- for rotating antenna shaft  
 [NASA-CASE-KSC-10769-1] c33 N74-29556  
 Solid medium thermal engine  
 [NASA-CASE-ARC-10461-1] c44 N74-33379  
 Ergometer calibrator --- for any ergometer utilizing rotating shaft  
 [NASA-CASE-MFS-21045-1] c35 N75-15932  
 Fluid seal for rotating shafts  
 [NASA-CASE-LEW-11676-1] c37 N76-22541  
 Cyclical bi-directional rotary actuator  
 [NASA-CASE-GSC-11883-1] c37 N77-19458  
 Tachometer  
 [NASA-CASE-MFS-23175-1] c35 N77-30436  
 Rotary leveling base platform  
 [NASA-CASE-ARC-10981-1] c37 N78-27425  
 Rotary electric device  
 [NASA-CASE-GSC-12138-1] c33 N79-20314  
 Circumferential shaft seal  
 [NASA-CASE-LEW-12119-1] c37 N80-28711  
 Multiple plate hydrostatic viscous damper  
 [NASA-CASE-LEW-12445-1] c37 N81-22360

**ROTATION**  
 Semilinear bearing comprising two rows of roller bearings separated by spherical bearings and permitting rotational and translational movement  
 [NASA-CASE-XLA-02809] c15 N71-22982  
 Mechanical actuator wherein linear motion changes to rotational motion  
 [NASA-CASE-XGS-04548] c15 N71-24045  
 Positioning mechanism for converting translatory motion into rotary motion  
 [NASA-CASE-NPO-10679] c15 N72-21462

**ROTOR AERODYNAMICS**  
 Acoustically swept rotor --- helicopter noise reduction  
 [NASA-CASE-ARC-11106-1] c05 N80-14107

**ROTOR BLADES**  
 Non-destructive method for applying and removing instrumentation on helicopter rotor blades  
 [NASA-CASE-LAR-11201-1] c35 N78-24515  
 Apparatus and method for reducing thermal stress in a turbine rotor  
 [NASA-CASE-LEW-12232-1] c07 N79-10057

**ROTOR BLADES (TURBOMACHINERY)**  
 Locking device for retaining turbine rotor blades on turbine wheel  
 [NASA-CASE-XNP-00816] c28 N71-28528  
 Blade vibration damping pins for turbomachinery  
 [NASA-CASE-XLE-00155] c28 N71-29154  
 Apparatus for welding blades to rotors  
 [NASA-CASE-LEW-10533-2] c37 N74-11300  
 Supersonic fan blading --- noise reduction in turbopfan engines  
 [NASA-CASE-LEW-11402-1] c07 N74-28226  
 Blade retainer assembly  
 [NASA-CASE-LEW-12608-1] c07 N77-27116  
 Platform for a swing root turbomachinery blade  
 [NASA-CASE-LEW-12312-1] c07 N77-32148  
 Helicopter rotor airfoil  
 [NASA-CASE-LAR-12396-1] c02 N79-24558

**ROTOR LIFT**  
 Constant lift rotor for a heavier than air craft  
 [NASA-CASE-ARC-11045-1] c05 N79-17847

**ROTOR SPEED**  
 Brushless dc tachometer design with Hall effect crystals and output voltage magnitude proportional to rotor speed  
 [NASA-CASE-MFS-20385] c09 N71-24904  
 Improved method for driving two-phase turbines with enhanced efficiency  
 [NASA-CASE-NPO-15037-1] c37 N80-26660

**ROTORCRAFT AIRCRAFT**  
 Constant lift rotor for a heavier than air craft  
 [NASA-CASE-ARC-11045-1] c05 N79-17847

**ROTOR**  
 Multistage, multiple reentry, single rotor, axial flow turbine  
 [NASA-CASE-XLE-00085] c28 N70-39895  
 Describing angular position and velocity sensing apparatus  
 [NASA-CASE-XGS-05680] c14 N71-17585

Microwave waveguide switch with rotor position control  
 [NASA-CASE-XNP-06507] c09 N71-23548  
 Electromagnetic braking arrangement for controlling rotor rotation in electric motor  
 [NASA-CASE-XNP-06936] c15 N71-24695  
 Rotary vane attenuator with two stators and intermediary rotor, using resistive and orthogonally disposed cards  
 [NASA-CASE-NPO-11418-1] c14 N73-13420  
 Process for welding compressor and turbine blades to rotors and discs of jet engines  
 [NASA-CASE-LEW-10533-1] c15 N73-28515  
 Liquid metal slip ring  
 [NASA-CASE-LEW-12277-2] c33 N78-25323  
 Magnetic field control --- electromechanical torquing devices  
 [NASA-CASE-MFS-23828-1] c33 N80-17359

**RUBBER**  
 Thermoplastic rubber comprising ethylene-vinyl acetate copolymer, asphalt and fluxing oil  
 [NASA-CASE-NPO-08835-1] c27 N78-33228  
 Formulated plastic separators for soluble electrode cells --- rubber-ion transport membranes  
 [NASA-CASE-LEW-12358-1] c44 N79-17313  
 Enhancement of in vitro Guayule propagation  
 [NASA-CASE-NPO-15213-1] c51 N81-29728

**RUBBER COATINGS**  
 Intumescent paint containing nitrile rubber for fire protection  
 [NASA-CASE-ARC-10196-1] c18 N73-13562

**RUBY**  
 Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
 [NASA-CASE-GSC-11577-1] c37 N75-15992  
 Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
 [NASA-CASE-GSC-11577-3] c24 N79-25143

**RUBY LASERS**  
 Cooling and radiation protection of ruby lasers using copper sulfate solution in alcohol  
 [NASA-CASE-MFS-20180] c16 N72-12440  
 Method of and apparatus for double-exposure holographic interferometry  
 [NASA-CASE-MFS-25405-1] c35 N81-27459

**RUNWAY ALIGNMENT**  
 Magnetic method for detection of aircraft position relative to runway  
 [NASA-CASE-ARC-10179-1] c21 N72-22619

**RUNWAY LIGHTS**  
 Retractable runway lights  
 [NASA-CASE-XLA-00119] c11 N70-33329  
 Spectrally balanced chromatic landing approach lighting system  
 [NASA-CASE-ARC-10990-1] c04 N77-12031

**RUNWAYS**  
 Environmental fog/rain visual display system for aircraft simulators  
 [NASA-CASE-ARC-11158-1] c09 N79-33220

**RUPTURING**  
 Knife structure for controlling rupture of shock tube diaphragms  
 [NASA-CASE-XAC-00731] c11 N71-15960

**RYDBERG SERIES**  
 A low energy electron magnetometer  
 [NASA-CASE-LAR-12706-1] c35 N81-19428

**S**

**SABOT PROJECTILES**  
 Hypervelocity gun --- using both electric and chemical energy for projectile propulsion  
 [NASA-CASE-XLE-03186-1] c09 N79-21084

**SAFETY DEVICES**  
 Helmet and torso tiedown mechanism for shortening pressure suits upon inflation  
 [NASA-CASE-IMS-00784] c05 N71-12335  
 Positive locking check valve for stopping reversed flow  
 [NASA-CASE-IMS-09310] c15 N71-22706  
 Description of protective device for providing safe operating conditions around work piece in machine or metal working tool  
 [NASA-CASE-XLE-01092] c15 N71-22797  
 Velocity limiting safety system for motor driven research vehicle  
 [NASA-CASE-XLA-07473] c15 N71-24895

- Device for generating and controlling combustion products for testing of fire detection system  
[NASA-CASE-GSC-11095-1] c14 N72-10375
- Restraint torso for increased mobility and reduced physiological effects while wearing pressurized suits  
[NASA-CASE-MSC-12397-1] c05 N72-25119
- Totally confined explosive welding --- apparatus to reduce noise level and protect personnel during explosive bonding  
[NASA-CASE-LAR-10941-1] c37 N74-21057
- Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft  
[NASA-CASE-LAR-10753-1] c08 N74-30421
- Shoulder harness and lap belt restraint system  
[NASA-CASE-ARC-10519-2] c05 N75-25915
- Fifth wheel  
[NASA-CASE-FRC-10081-1] c37 N77-14477
- Microwave power transmission beam safety system  
[NASA-CASE-NPO-14224-1] c33 N80-18287
- Safety shield for vacuum/pressure chamber viewing port  
[NASA-CASE-GSC-12513-1] c31 N81-19343
- SAFETY FACTORS**  
Safety flywheel --- using flexible materials energy storage  
[NASA-CASE-HQN-10888-1] c44 N79-14527
- SAHA EQUATIONS**  
Cosmic dust analyzer  
[NASA-CASE-MSC-13802-2] c35 N76-15431
- SALT BATHS**  
Application techniques for protecting materials during salt bath brazing  
[NASA-CASE-XLE-00046] c15 N70-33311
- SAMARIUM**  
Gadolinium or samarium doped-silicon semiconductor material with resistance to radiation damage for use in solar cells  
[NASA-CASE-XLE-10715] c26 N71-23292
- SAMPLES**  
Portable vacuum probe surface sampler for sampling large surface areas with relatively light loading densities of microorganisms  
[NASA-CASE-LAR-10623-1] c14 N73-30395
- Method and device for destructive detection of a substance --- useful in determining the concentration of carbon fibers or pollutant particles  
[NASA-CASE-NPO-14940-1] c35 N80-21723
- Mobile sampler for use in acquiring samples of terrestrial atmospheric gasses  
[NASA-CASE-NPO-15220-1] c35 N81-24414
- Automated syringe sampler --- remote sampling of air and water  
[NASA-CASE-LAR-12308-1] c35 N81-29407
- SAMPLES**  
Plural output optometric sample cell and analysis system  
[NASA-CASE-NPO-10233-1] c74 N78-33913
- SAMPLING**  
Impact bit for cutting, collecting, and storing samples such as lunar rock cuttings  
[NASA-CASE-XNP-01412] c15 N70-42034
- Design and development of fluid sample collector  
[NASA-CASE-YMS-06767-1] c14 N71-20435
- Design and development of two types of atmosphere sampling chambers  
[NASA-CASE-NPO-11373] c13 N72-25323
- Digital to analog converter for sampled signal reconstruction  
[NASA-CASE-MSC-12458-1] c68 N73-32081
- Rock sampling --- apparatus for controlling particle size  
[NASA-CASE-XNP-10007-1] c46 N74-23068
- Rock sampling --- method for controlling particle size distribution  
[NASA-CASE-XNP-09755] c46 N74-23069
- Apparatus for microbiological sampling --- including automatic swabbing  
[NASA-CASE-LAR-11069-1] c35 N75-12272
- Automatic biowaste sampling  
[NASA-CASE-MSC-14640-1] c54 N76-14804
- Remote water monitoring system  
[NASA-CASE-LAR-11973-1] c35 N78-27384
- CCD correlated quadruple sampling processor  
[NASA-CASE-NPO-14426-1] c33 N79-17134
- Fluid sample collection and distribution system --- qualitative analysis of aqueous samples from several points  
[NASA-CASE-MSC-16841-1] c34 N79-24285
- SANDWICH STRUCTURES**  
Sandwich panel structure for removing heat from shield between hot and cold areas  
[NASA-CASE-XLA-00349] c33 N70-37979
- Particle detector for measuring micrometeoroid velocity in space  
[NASA-CASE-XLA-00495] c14 N70-41332
- Capacitor sandwich structure containing metal sheets of known thickness for counting penetration rates of meteoroids  
[NASA-CASE-XLE-01246] c14 N71-10797
- Technique for making foldable, inflatable, plastic honeycomb core panels for use in building and bridge structures, light and radio wave reflectors, and spacecraft  
[NASA-CASE-XLA-03492] c15 N71-22713
- Punch and die device for forming convolution series in thin gage metal hemispheres  
[NASA-CASE-XNP-05297] c15 N71-23811
- Composite sandwich lattice structure  
[NASA-CASE-LAR-11898-1] c24 N78-10214
- Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-1] c24 N79-16915
- Superplastically formed diffusion bonded metallic structure  
[NASA-CASE-FRC-11026-1] c39 N79-25424
- Multivall thermal protection system  
[NASA-CASE-LAR-12620-1] c24 N80-12117
- SAPPHIRE**  
Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-1] c37 N75-15992
- Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-3] c24 N79-25143
- SATELLITE ANTENNAS**  
Monopole antenna system for maximum omnidirectional efficiency for use on satellites  
[NASA-CASE-XLA-00414] c07 N70-38200
- Development of antenna system for spin stabilized communication satellite for simultaneous reception and transmission of data  
[NASA-CASE-XGS-02607] c31 N71-23009
- Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c32 N81-27341
- SATELLITE ATTITUDE CONTROL**  
Photosensitive light source device for detecting unmanned spacecraft deviation from reference attitude  
[NASA-CASE-XNP-00438] c21 N70-35089
- Attitude control system for spacecraft based on conversion of incident solar radiation on movable control surfaces into mechanical torques  
[NASA-CASE-XNP-02982] c31 N70-41855
- Design and development of satellite despin device  
[NASA-CASE-XMF-08523] c31 N71-20396
- Utilization of momentum devices for forming attitude control and damping system for spacecraft  
[NASA-CASE-XLA-02551] c21 N71-21708
- Gravity gradient attitude control system with gravity gradiometer and reaction wheels for artificial satellite attitude control  
[NASA-CASE-GSC-10555-1] c21 N71-27324
- Method and apparatus for providing active attitude control for spacecraft by converting any attitude motion of vehicle into simple rotational motion  
[NASA-CASE-HQN-10439] c21 N72-21624
- Momentum wheel design for spacecraft attitude control and magnetic drum and head system for data storage  
[NASA-CASE-NPO-11481] c21 N73-13644
- Combination automatic-starting electrical plasma torch and gas shutoff valve --- for satellite attitude control  
[NASA-CASE-XLE-10717] c37 N75-29426
- Attitude control system  
[NASA-CASE-MFS-22787-1] c15 N77-10113
- Rim inertial measuring system  
[NASA-CASE-LAR-12052-1] c18 N81-29152
- SATELLITE CONTROL**  
Stabilization system for gravity-oriented satellites using single damper rod  
[NASA-CASE-XAC-01591] c31 N71-17729

## SATELLITE DESIGN

Inflation system for balloon type satellites  
[NASA-CASE-XGS-03351] c31 N71-16081

## SATELLITE INSTRUMENTS

Satellite stabilization reaction wheel scanner  
[NASA-CASE-XGS-02629] c14 N71-21082

## SATELLITE NETWORKS

Satellite network synchronization system with multiple access to multiplex repeater  
[NASA-CASE-GSC-10390-1] c07 N72-11149

## SATELLITE ORBITS

Development of method and apparatus for spinning satellite about selected axis after reaching predetermined orientation  
[NASA-CASE-HQN-00936] c31 N71-29050

## SATELLITE ORIENTATION

Sensing method and device for determining orientation of space vehicle or satellite by using particle traps  
[NASA-CASE-XGS-00466] c21 N70-34297

Spin phase synchronization of cartwheel satellite in polar orbit  
[NASA-CASE-XGS-05579] c31 N71-15676

Development of method and apparatus for spinning satellite about selected axis after reaching predetermined orientation  
[NASA-CASE-HQN-00936] c31 N71-29050

Analog spatial maneuver computer with three output angles for obtaining desired spatial attitude  
[NASA-CASE-GSC-10880-1] c08 N72-11172

## SATELLITE PERTURBATION

Flexible turnstile antenna system for reducing nutation in spin-oriented satellites  
[NASA-CASE-XMF-00442] c31 N71-10747

## SATELLITE POWER TRANSMISSION (TO EARTH)

Microwave power transmission beam safety system  
[NASA-CASE-NPO-14224-1] c33 N80-18287

## SATELLITE ROTATION

Optical scanner mounted on rotating support structure with method of compensating for image or satellite rotation  
[NASA-CASE-XGS-02401] c14 N69-27485

Stretch Yo-Yo mechanism for reducing initial spin rate of space vehicle  
[NASA-CASE-XGS-00619] c30 N70-40016

Development of method and apparatus for spinning satellite about selected axis after reaching predetermined orientation  
[NASA-CASE-HQN-00936] c31 N71-29050

## SATELLITE SOLAR POWER STATIONS

Solar power satellite system  
[NASA-CASE-HQN-10949-1] c44 N81-16530

## SATELLITE TELEVISION

Adaptive signal generating system and logic circuits for satellite television systems  
[NASA-CASE-GSC-11367] c10 N71-26374

## SATELLITE TRACKING

Design and development of tracking receiver for tracking satellites and receiving radio signal transmissions under adverse noise conditions  
[NASA-CASE-XGS-08679] c10 N71-21473

Simultaneous acquisition of tracking data from two stations  
[NASA-CASE-NPO-13292-1] c32 N75-15654

Switchable beamwidth monopulse method and system  
[NASA-CASE-GSC-11924-1] c33 N76-27472

## SATELLITE TRANSMISSION

Asynchronous, multiplexing, single line transmission and recovery data system --- for satellite use  
[NASA-CASE-NPO-13321-1] c32 N75-26195

## 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] c33 N74-20861

## SATURATION

Saturable magnetic core and signal detection for indicating impending saturation  
[NASA-CASE-ERC-10089] c23 N72-17747

## SAWTOOTH WAVEFORMS

Linear sawtooth voltage wave generator with transistor timing circuit having capacitor and zener diode feedback loops  
[NASA-CASE-XMS-01315] c09 N70-41675

## SCANNERS

Electronic and mechanical scanning control system for monopulse tracking antenna

[NASA-CASE-XGS-05582] c07 N69-27460  
Electronic background suppression field scanning sensor for detecting point source targets

[NASA-CASE-XGS-05211] c07 N69-39980  
Electron beam scanning system for improved image definition and reduced power requirements for video signal transmission

[NASA-CASE-ERC-10552] c09 N71-12539  
Satellite stabilization reaction wheel scanner

[NASA-CASE-XGS-02629] c14 N71-21082  
Monopulse scanning network for scanning volumetric antenna pattern

[NASA-CASE-GSC-10299-1] c09 N71-24804  
Scan oscilloscope for mapping surface sensitivity of photomultiplier tube

[NASA-CASE-LAB-10320-1] c09 N72-23172  
Ultrasonic scanner for radial and flat panels

[NASA-CASE-MPS-20335-1] c35 N74-10415  
Apparatus for scanning the surface of a cylindrical body

[NASA-CASE-NPO-11861-1] c36 N74-20009  
Fast scan control for deflection type mass spectrometers

[NASA-CASE-LAB-11428-1] c35 N74-34857  
Electronically scanned pressure sensor module with in situ calibration capability

[NASA-CASE-LAB-12230-1] c35 N79-14347  
Scannable beam forming interferometer antenna array system

[NASA-CASE-GSC-12365-1] c32 N80-28578  
Intrusion detection method and apparatus --- monitoring unwanted subterranean entry and departure

[NASA-CASE-ARC-11317-1] c35 N81-19430  
Programmable scan/read circuitry for charge coupled device imaging detectors --- for a startracker

[NASA-CASE-NPO-15345-1] c33 N81-27403

## SCANNING

Conversion system for transforming slow scan rate of Apollo TV camera on moon to fast scan of commercial TV

[NASA-CASE-IMS-07168] c07 N71-11300  
Operation of vidicon tube for scanning spatial charge density pattern

[NASA-CASE-XNP-06028] c09 N71-23189  
Position determination systems --- using orbital antenna scan of celestial bodies

[NASA-CASE-MS-12593-1] c17 N76-21250  
Magnetometer with a miniature transducer and automatic scanning

[NASA-CASE-LAB-11617-2] c35 N78-32397  
System and method for character recognition

[NASA-CASE-NPO-11337-1] c74 N81-19896

## SCATTERING CROSS SECTIONS

Method and means for helium/hydrogen ratio measurement by alpha scattering  
[NASA-CASE-NPO-14079-1] c25 N80-20334

## SCHLIEREN PHOTOGRAPHY

System and method for obtaining wide screen Schlieren photographs  
[NASA-CASE-NPO-14174-1] c74 N79-20856

## SCHMIDT CAMERAS

Cooled echelle grating spectrometer --- for space telescope applications  
[NASA-CASE-NPO-14372-1] c35 N80-26635

## SCHOOLS

Silent alarm system for multiple room facility or school  
[NASA-CASE-NPO-11307-1] c10 N73-30205

## SCHOTTKY DIODES

High voltage, high current Schottky barrier solar cell  
[NASA-CASE-NPO-13482-1] c44 N78-13526

Solar cells having integral collector grids  
[NASA-CASE-LBW-12819-1] c44 N79-11467

Back wall solar cell  
[NASA-CASE-LBW-12236-2] c44 N79-14528

Schottky barrier cell and method of fabricating it  
[NASA-CASE-NPO-13689-4] c44 N81-26553

Schottky barrier solar cell  
[NASA-CASE-NPO-13689-2] c44 N81-29525

## SCOOPS

Aeroflexible wing structure with air scoop for inflating stiffeners with ram air  
[NASA-CASE-XLA-06095] c01 N69-39981

## SCRAMBLING (COMMUNICATION)

Secure communication system  
[NASA-CASE-MS-16462-1] c32 N78-25274

- SCREWS**  
 Electromechanical control actuator system using double differential screws  
 [NASA-CASE-ERC-10022] c15 N71-26635  
 Adjustable support device with jacket screw for altering distance between base and supported member  
 [NASA-CASE-NPO-10721] c15 N72-27484
- SCRUBBERS**  
 Developing high pressure gas purification and filtration system for use in test operations of space vehicles  
 [NASA-CASE-MFS-12806] c14 N71-17588
- SRA ICE**  
 Laser technique for breaking ice in ship path  
 [NASA-CASE-LAR-10815-1] c16 N72-22520
- SEA STATES**  
 Oceanic wave measurement system  
 [NASA-CASE-MFS-23862-1] c48 N80-18667
- SEALERS**  
 Design and development of flexible joint for pressure suits  
 [NASA-CASE-XMS-09636] c05 N71-12344  
 Epoxy resin sealing device for electrochemical cells in high vacuum environments  
 [NASA-CASE-IGS-02630] c03 N71-22974  
 Leak resistant bonded elastomeric seal for secondary electrochemical cells  
 [NASA-CASE-IGS-02631] c03 N71-23006  
 Self lubricating fluoride-metal composite materials for outer space applications  
 [NASA-CASE-XLE-08511] c18 N71-23710  
 Polyimides of ether-linked aryl tetracarboxylic dianhydrides  
 [NASA-CASE-MFS-22355-1] c23 N76-15268
- SEALING**  
 Foil seal between parts moving relative to each other  
 [NASA-CASE-XLE-05130] c15 N69-21362  
 Sealed electric storage battery with gas manifold interconnecting each cell  
 [NASA-CASE-IMP-03378] c03 N71-11051  
 Epoxy resin sealing device for electrochemical cells in high vacuum environments  
 [NASA-CASE-IGS-02630] c03 N71-22974  
 Electrode sealing and insulation for fuel cells containing caustic liquid electrolytes using powdered plastic and metal  
 [NASA-CASE-XMS-01625] c15 N71-23022  
 Sealing evacuation port and evacuating vacuum container such as space jackets  
 [NASA-CASE-IMP-03290] c15 N71-23256  
 Segmented sealing surface in valve seat  
 [NASA-CASE-NPO-10606] c15 N72-25451  
 Heat sealable, flame and abrasion resistant coated fabric  
 [NASA-CASE-MSC-18382-1] c27 N80-24440
- SEALS (STOPPERS)**  
 Spacecraft battery seals  
 [NASA-CASE-IGS-03864] c15 N69-24320  
 Flexible inflatable seal for butterfly valves  
 [NASA-CASE-XLE-00101] c15 N70-33376  
 Shrink-fit vacuum system gas valve  
 [NASA-CASE-IGS-00587] c15 N70-35067  
 Thin walled pressure test vessel using low-melting alloy-filled joint to attach shell to heads  
 [NASA-CASE-XLE-04677] c15 N71-10577  
 Fluid seal formed by flexible disk on rotating shaft to retain lubricating oils around shaft  
 [NASA-CASE-XLE-05130-2] c15 N71-19570  
 Sealed storage container for channel carriers with mounted miniature electronic components  
 [NASA-CASE-MFS-20075] c09 N71-26133  
 Liquid-vapor interface seal design for turbine rotating shafts including helical and molecular pumps and liquid cooling of mercury vapor  
 [NASA-CASE-XNP-02862-1] c15 N71-26294  
 Spiral groove seal --- for rotating shaft  
 [NASA-CASE-XLE-10326-4] c37 N74-15125  
 Glass-to-metal seals comprising relatively high expansion metals  
 [NASA-CASE-LEW-10698-1] c37 N74-21063  
 High speed, self-acting shaft seal --- for use in turbine engines  
 [NASA-CASE-LEW-11274-1] c37 N75-21631  
 Method of forming shrink-fit compression seal  
 [NASA-CASE-LAR-11563-1] c37 N77-23482
- Counter pumping debris excluder and separator --- gas turbine shaft seals  
 [NASA-CASE-LEW-11855-1] c07 N78-25090  
 Composite seal for turbomachinery --- backings for turbine engine shrouds  
 [NASA-CASE-LEW-12131-1] c37 N79-18318  
 Retractable environmental seal  
 [NASA-CASE-MFS-23646-1] c37 N79-22474  
 Shaft seal assembly for high speed and high pressure applications  
 [NASA-CASE-LEW-11873-1] c37 N79-22475  
 Fluid pressure balanced seal  
 [NASA-CASE-IGS-01286-1] c37 N79-33469  
 Modified face seal for positive film stiffness  
 [NASA-CASE-LEW-12989-1] c37 N80-12414  
 Surface conforming thermal/pressure seal --- for control devices in space vehicles  
 [NASA-CASE-MSC-18422-1] c37 N80-14400  
 Continuous self-locking spiral wound seal --- for maintaining pressure between chambers in cryogenic wind tunnels  
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- SHIFT REGISTERS**  
Binary to binary-coded decimal converter using single set of logic circuits notwithstanding number of shift register decades  
[NASA-CASE-XMP-00432] c08 N70-35423
- Linear three-tap feedback shift register  
[NASA-CASE-NPO-10351] c08 N71-12503
- Computer circuit performing both counting and shifting logic operations also capable of miniaturization and integration in basic circuits  
[NASA-CASE-XMP-01753] c08 N71-22697
- Commutator for steering precisely controlled bidirectional currents through numerous loads by use of magnetic core shift registers  
[NASA-CASE-NPO-10743] c08 N72-21199
- Multistage feedback shift register with states decomposable into cycles of equal length  
[NASA-CASE-NPO-11082] c08 N72-22167
- MOD 2 sequential function generator for multibit sequence, with two-bit shift register for each pair of bits**  
[NASA-CASE-NPO-10636] c08 N72-25210
- Linear shift register with feedback logic for generating pseudonoise linear recurring binary sequences  
[NASA-CASE-NPO-11406] c08 N73-12175
- Family of n-ary linear feedback shift register with binary logic  
[NASA-CASE-NPO-11868] c10 N73-20254
- Nonrecursive counting digital filter containing shift register  
[NASA-CASE-NPO-11821-1] c08 N73-26175
- Event sequence detector with several input and shift register responsive to clock pulses  
[NASA-CASE-NPO-11703-1] c10 N73-32144
- Method and apparatus for decoding compatible convolutional codes  
[NASA-CASE-MSC-14070-1] c32 N74-32598
- Nonlinear nonsingular feedback shift registers  
[NASA-CASE-NPO-13451-1] c33 N76-14373
- Selective data segment monitoring system --- using shift registers  
[NASA-CASE-ARC-10899-1] c60 N77-19760
- Digital data reformatter/deserializer  
[NASA-CASE-NPO-13676-1] c60 N79-20751
- SHOCK ABSORBERS**  
Pivotal shock absorbing assembly for use as load distributing portion in landing gear systems of space vehicles  
[NASA-CASE-XMP-03856] c31 N70-34159
- Energy dissipating shock absorbing system for land payload recovery or vehicle braking  
[NASA-CASE-XLA-00754] c15 N70-34850
- Shock absorbing couch for body support under high acceleration or deceleration forces  
[NASA-CASE-XMS-01240] c05 N70-35152
- Low onset rate energy absorber in form of strut assembly for crew couch of Apollo command module  
[NASA-CASE-MSC-12279-1] c15 N70-35679
- Landing pad assembly for aerospace vehicles  
[NASA-CASE-XMP-02853] c31 N70-36654
- Spacecraft shock absorbing system for soft landings  
[NASA-CASE-XMP-02108] c31 N70-36845
- Shock absorber for landing gear of lunar or planetary landing modules  
[NASA-CASE-XMP-01045] c15 N70-40354
- Shock absorbing articulated multiple couch assembly  
[NASA-CASE-MSC-11253] c05 N71-12343
- Design and development of double acting shock absorber for spacecraft docking operations  
[NASA-CASE-XMS-03722] c15 N71-21530
- Impact energy absorber with decreasing absorption rate  
[NASA-CASE-XLA-01530] c14 N71-23092
- Energy absorbing crew couch strut for Apollo command module  
[NASA-CASE-MSC-12279] c15 N72-17450
- Shock absorber for use as protective barrier in impact energy absorbing system  
[NASA-CASE-NPO-10671] c15 N72-20443
- Translatory shock absorber for attitude sensors  
[NASA-CASE-MFS-22905-1] c19 N76-22284
- Vehicle impact absorption system  
[NASA-CASE-NPO-14014-1] c37 N79-10420
- SHOCK LOADS**  
Damper system for alleviating air flow shock loads on wind tunnel models  
[NASA-CASE-XLA-09480] c11 N71-33612
- SHOCK MEASURING INSTRUMENTS**  
Semiconductor projectile impact detector  
[NASA-CASE-MFS-23008-1] c35 N78-18390
- SHOCK RESISTANCE**  
Removable potting compound for instrument shock protection  
[NASA-CASE-XLA-00482] c15 N70-36409
- Thermal shock resistant hafnia ceramic materials  
[NASA-CASE-LAR-10894-1] c18 N73-14584
- Thermal shock and erosion resistant tantalum carbide ceramic material  
[NASA-CASE-LAR-11902-1] c27 N78-17206
- Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c27 N81-22190
- SHOCK TUBES**  
Knife structure for controlling rupture of shock tube diaphragms  
[NASA-CASE-XAC-00731] c11 N71-15960
- Design, development, and operation of shock tube with bypass piston tunnel  
[NASA-CASE-NPO-12109] c11 N72-22245
- Annular arc accelerator shock tube  
[NASA-CASE-NPO-13528-1] c09 N77-10071
- SHOCK WAVE INTERACTION**  
Absorptive, nonreflecting barrier mounted between closely spaced jet engines on supersonic aircraft, for preventing shock wave interference  
[NASA-CASE-XLA-02865] c28 N71-15563



## SHOCK WAVE LUMINESCENCE

Method and apparatus for measuring shock layer radiation distribution about high velocity objects  
[NASA-CASE-XAC-02970] c14 N69-39896

## SHOCK WAVE PROFILES

Method and apparatus for measuring shock layer radiation distribution about high velocity objects  
[NASA-CASE-XAC-02970] c14 N69-39896

## SHOCK WAVES

Apparatus for mechanically dispersing ultrafine metal powders subjected to shock waves  
[NASA-CASE-XLE-04946] c17 N71-24511

Electrical device for developing converging spherical shock waves  
[NASA-CASE-MFS-20890] c14 N72-22439

Production of intermetallic compounds by effect of shock waves from explosions and compaction of powder  
[NASA-CASE-MFS-20861-1] c18 N73-32437

Shock position sensor for supersonic inlets --- measuring pressure in the throat of a supersonic inlet  
[NASA-CASE-LEW-11915-1] c35 N76-14431

## SHOES

Jet shoes for space locomotion  
[NASA-CASE-XLA-08491] c05 N69-21380

## SHORT CIRCUITS

Use of silicon controlled rectifier shorting circuit to protect thermoelectric generator source from thermal destruction  
[NASA-CASE-XGS-04808] c03 N69-25146

Vacuum thermionic converter with short-circuited triodes and increased electron transmission and conversion efficiency  
[NASA-CASE-XLE-01015] c03 N69-39898

Apparatus for automatically testing analog to digital converters for open and short circuits  
[NASA-CASE-XLA-06713] c14 N71-28991

Apparatus including a plurality of spaced transformers for locating short circuits in cables  
[NASA-CASE-KSC-10899-1] c33 N79-18193

Electrical short locator --- identifying shorts occurring while an electrical system is being wired  
[NASA-CASE-ARC-11116-1] c33 N79-31498

## SHOT PEENING

Method of peening and portable peening gun  
[NASA-CASE-MFS-23047-1] c37 N76-18454

## SHROUDED NOZZLES

Two dimensional wedge/translating shroud nozzle  
[NASA-CASE-LAR-11919-1] c67 N78-27121

## SHROUDED TURBINES

Composite seal for turbomachinery --- backings for turbine engine shrouds  
[NASA-CASE-LEW-12131-1] c37 N79-18318

Gas path seal  
[NASA-CASE-NPO-12131-3] c37 N80-18400

Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-2] c37 N80-26658

Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c27 N81-22190

## SHROUDS

Shrouded composite propulsion system configuration  
[NASA-CASE-XLA-01043] c28 N71-10780

Composite seal for turbomachinery --- backings for turbine engine shrouds  
[NASA-CASE-LEW-12131-1] c37 N79-18318

## SHUTTERS

High speed shutter --- electrically actuated ribbon loop for shuttering optical or fluid passageways  
[NASA-CASE-ARC-10516-1] c70 N74-21300

## SIDE BANDS

Phase locked loop with sideband rejecting properties in continuous wave tracking radar  
[NASA-CASE-XNP-02723] c07 N70-41680

## SIDELOBE REDUCTION

Multiple mode horn antenna with radiation pattern of equal beamwidths and suppressed sidelobes  
[NASA-CASE-XNP-01057] c07 N71-15907

## SIGNAL ANALYSIS

Design and development of signal detection and tracking apparatus  
[NASA-CASE-XGS-03502] c10 N71-20652

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] c32 N74-10132

Differential phase shift keyed signal resolver  
[NASA-CASE-MSC-14066-1] c33 N74-27705

Correlation type phase detector --- with time correlation integrator for frequency multiplexed signals  
[NASA-CASE-GSC-11744-1] c33 N75-26243

Real time analysis of voiced sounds  
[NASA-CASE-NPO-13465-1] c32 N76-31372

Digital plus analog output encoder  
[NASA-CASE-GSC-12115-1] c62 N76-31946

Serial data correlator/code translator  
[NASA-CASE-KSC-11025-1] c32 N79-28383

## SIGNAL ANALYZERS

Monitoring system for signal amplitude ranges over predetermined time interval  
[NASA-CASE-XMS-04061-1] c09 N69-39885

Feedback controller for sampling error signals within single control formulation time interval  
[NASA-CASE-GSC-10554-1] c08 N71-29033

Development of family of frequency to amplitude converters for frequency analysis of complex input signal waveforms  
[NASA-CASE-MSC-12395] c09 N72-25257

Device for performing statistical time-series analysis of complex electrical signal waveforms  
[NASA-CASE-MSC-12428-1] c10 N73-25240

Pulse stretcher for narrow pulses  
[NASA-CASE-MSC-14130-1] c33 N74-32711

Electronic optical transfer function analyzer  
[NASA-CASE-MFS-21672-1] c74 N76-19935

Speech analyzer  
[NASA-CASE-GSC-11898-1] c32 N77-30309

## SIGNAL DETECTION

Position locating system for remote aircraft using voice communication and digital signals  
[NASA-CASE-GSC-10087-2] c21 N71-13958

Saturable magnetic core and signal detection for indicating impending saturation  
[NASA-CASE-ERC-10089] c23 N72-17747

Anti-multipath digital signal detector  
[NASA-CASE-LAR-11827-1] c32 N77-10392

Multiple rate digital command detection system with range clean-up capability  
[NASA-CASE-NPO-13753-1] c32 N77-20289

Automatic communication signal monitoring system  
[NASA-CASE-NPO-13941-1] c32 N79-10262

Apparatus and method for stabilized phase detection for binary signal tracking loops  
[NASA-CASE-MSC-16461-1] c33 N79-11313

Photocapacitive image converter  
[NASA-CASE-LAR-12513-1] c33 N80-28635

Reconfiguring redundancy management  
[NASA-CASE-MSC-18498-1] c60 N80-30050

Receiving and tracking phase modulated signals  
[NASA-CASE-MSC-16170-2] c32 N81-16338

## SIGNAL DETECTORS

Roughness detector for recording surface pattern of irregularities  
[NASA-CASE-XLA-00203] c14 N70-34161

Electrical testing apparatus for detecting amplitude and width of transient pulse  
[NASA-CASE-XNP-06519] c09 N71-12519

System for monitoring presence of neutrals in streams of ions - ion engine control  
[NASA-CASE-XNP-02592] c24 N71-20518

Development of apparatus for generating output signal commensurate with information contained in input signal  
[NASA-CASE-ERC-10041] c08 N71-29138

Coal-shale interface detection system  
[NASA-CASE-MFS-23720-2] c43 N80-14423

Pulse transducer with artifact signal attenuator --- heart rate sensors  
[NASA-CASE-ERC-11012-1] c52 N80-23969

Self-calibrating threshold detector  
[NASA-CASE-MSC-16370-1] c35 N81-19427

Maser amplifier slow wave structure --- detecting weak signals from spacecraft  
[NASA-CASE-NPO-15211-1] c36 N81-24425

## SIGNAL DISTORTION

Low distortion receiver for hi-level baseband PCM waveforms  
[NASA-CASE-MSC-14557-1] c32 N76-16249

## SIGNAL ENCODING

Adaptive compression signal processor for PCM communication systems  
[NASA-CASE-XLA-03076] c07 N71-11266

Secure communication system  
[NASA-CASE-MSC-16462-1] c32 N78-25274

Self-calibrating threshold detector  
[NASA-CASE-MSC-16370-1] c35 N81-19427

## SIGNAL GENERATORS

Plural recorder system which limits signal recording to signals of sufficient interest  
[NASA-CASE-XMS-06949] c09 N69-21467

Alternating current signal generator providing plurality of amplitude modulated output signals  
[NASA-CASE-XNP-05612] c09 N69-21468

Circuitry for generating sync signals in FM communication systems including video information  
[NASA-CASE-XNP-10830] c07 N71-11281

Apparatus for generating microwave signals at progressively related phase angles for driving antenna array  
[NASA-CASE-ERC-10046] c10 N71-18722

System generating sidereal frequency signals from signals of standard solar frequency without use of mixing operations or feedback loops  
[NASA-CASE-XGS-02610] c14 N71-23174

Hand controller operable about three respectively perpendicular axes and capable of actuating signal generators for attitude control devices  
[NASA-CASE-XMS-074E7] c15 N71-23255

Voltage controlled oscillators and pulse amplitude modulation for signal ratio system  
[NASA-CASE-XMF-04367] c09 N71-23545

Sampling circuit for signal processing in multiplex transmission by Fourier analysis  
[NASA-CASE-NPO-10388] c07 N71-24622

Signaling summary alarm circuit with semiconductor switch for faulty contact indications  
[NASA-CASE-XLE-03061-1] c10 N71-24798

Adaptive signal generating system and logic circuits for satellite television systems  
[NASA-CASE-GSC-11367] c10 N71-26374

Device for monitoring voltage by generating signal when voltages drop below predetermined value  
[NASA-CASE-KSC-10020] c10 N71-27338

System for control of variable signal generator  
[NASA-CASE-NPO-11064] c07 N72-11150

Digital function generator for generating any arbitrary single valued function  
[NASA-CASE-NPO-11104] c08 N72-22165

Development of Hall effect transducer for converting mechanical shaft rotations into proportional electrical signals  
[NASA-CASE-LAR-10620-1] c09 N72-25255

Multiterminal Gunn-type semiconductor microwave generator for producing stable signals  
[NASA-CASE-XER-07895] c26 N72-25679

Audio frequency analysis circuit for determining, displaying, and recording frequency of sweeping audio frequency signal  
[NASA-CASE-NPO-11147] c14 N72-27408

Digital servo control of random sound test excitation --- in reverberant acoustic chamber  
[NASA-CASE-NPO-11623-1] c71 N74-31148

Signal conditioner test set  
[NASA-CASE-KSC-10750-1] c35 N75-12270

System for generating timing and control signals  
[NASA-CASE-NPO-13125-1] c33 N75-19519

Pseudo-noise test set for communication system evaluation --- test signals  
[NASA-CASE-MFS-22671-1] c35 N75-21582

NDIR gas analyzer based on absorption modulation ratios for known and unknown samples  
[NASA-CASE-ARC-10802-1] c35 N75-30502

Twin-capacitive shaft angle encoder with analog output signal  
[NASA-CASE-ARC-10897-1] c33 N77-31404

Apparatus for providing a servo drive signal in a high-speed stepping interferometer  
[NASA-CASE-NPO-13569-2] c35 N79-14348

Versatile LDV burst simulator  
[NASA-CASE-LAR-11859-1] c35 N79-14349

Underwater seismic source --- for petroleum exploration

[NASA-CASE-NPO-14255-1] c46 N79-23555

Photoelectric detection system  
[NASA-CASE-MFS-23776-1] c74 N80-25134

Frequency translating phase conjugation circuit for active retrodirective antenna array --- microwave transmission  
[NASA-CASE-NPO-14536-1] c32 N81-14185

Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c07 N81-19116

Adaptive reference voltage generator for firing angle control of line-commutated inverters  
[NASA-CASE-MFS-25215-1] c33 N81-31481

SIGNAL MIXING

Impedance transformation device for signal mixing  
[NASA-CASE-XGS-01110] c07 N69-24334

Baseband signal combiner for large aperture antenna array  
[NASA-CASE-NPO-14641-1] c32 N81-29308

SIGNAL PROCESSING

Adaptive compression signal processor for PCM communication systems  
[NASA-CASE-XLA-03076] c07 N71-11266

Conversion system for transforming slow scan rate of Apollo TV camera on moon to fast scan of commercial TV  
[NASA-CASE-XMS-07168] c07 N71-11300

Difference indicating circuit used in conjunction with device measuring gravitational fields  
[NASA-CASE-XNP-06274] c10 N71-13537

Circuitry for developing autocorrelation function continuously within signal receiving period  
[NASA-CASE-XNP-00746] c07 N71-21476

System generating sidereal frequency signals from signals of standard solar frequency without use of mixing operations or feedback loops  
[NASA-CASE-XGS-02610] c14 N71-23174

Feedback integrating circuit with grounded capacitor for signal processing  
[NASA-CASE-IAC-10607] c10 N71-23669

Sampling circuit for signal processing in multiplex transmission by Fourier analysis  
[NASA-CASE-NPO-10388] c07 N71-24622

Video signal processing system for sampling video brightness levels  
[NASA-CASE-NPO-10140] c07 N71-24742

Monopulse scanning network for scanning volumetric antenna pattern  
[NASA-CASE-GSC-10299-1] c09 N71-24804

Apparatus for filtering input signals  
[NASA-CASE-NPO-10198] c09 N71-24806

Video sync processor with phase locked system  
[NASA-CASE-KSC-10002] c10 N71-25865

Transient video-signal tape recorder with expanded playback  
[NASA-CASE-ARC-10003-1] c09 N71-25866

Scanning signal phase and amplitude electronic control device with hybrid T waveguide junction  
[NASA-CASE-NPO-10302] c10 N71-26142

Variable frequency nuclear magnetic resonance spectrometer providing drive signals over wide frequency range and minimizing noise effects  
[NASA-CASE-XNP-09830] c14 N71-26266

Development of apparatus for generating output signal commensurate with information contained in input signal  
[NASA-CASE-ERC-10041] c08 N71-29138

Development of electric circuit for production of different pulse width signals  
[NASA-CASE-XLA-07788] c09 N71-29139

Phase shifting circuit for selecting phase of input signal  
[NASA-CASE-ARC-10269-1] c10 N72-16172

Processing system for semiperiodic electrical signals to produce real time contoured display  
[NASA-CASE-MSC-13407-1] c10 N72-20225

Design and characteristics of recording system for selective reprocessing and filtering of data to obtain optimum signal to noise ratios  
[NASA-CASE-ERC-10112] c07 N72-21119

Technique for deriving logarithm of input signal using exponentially varying electric signal inversely  
[NASA-CASE-ERC-10267] c09 N72-23173

Development and characteristics of telemetry system using computer-accessed circuits and remotely controlled from ground station

[NASA-CASE-NPO-11358] c07 N72-25172  
 Characteristics of digital data processor using pulse from clock source to derive binary singles to show state of various indicators in processor

[NASA-CASE-GSC-10975-1] c08 N73-13187  
 Characteristics of two channel telemetry system with two data rate channels for high and low data rate communication

[NASA-CASE-NPO-11572] c07 N73-16121  
 Measurement system for physical quantity represented by or converted to variable frequency signal

[NASA-CASE-MFS-20658-1] c14 N73-30386  
 Digital to analog converter for sampled signal reconstruction

[NASA-CASE-MSC-12458-1] c08 N73-32081  
 Fluid pressure amplifier and system

[NASA-CASE-LAR-10868-1] c33 N74-11050  
 Low level signal limiter

[NASA-CASE-XLE-04791] c32 N74-22696  
 Miniature multichannel biotelemeter system

[NASA-CASE-NPO-13065-1] c52 N74-26625  
 Apparatus and method for processing Korotkov sounds --- for blood pressure measurement

[NASA-CASE-MSC-13999-1] c52 N74-26626  
 Pulse stretcher for narrow pulses

[NASA-CASE-MSC-14130-1] c33 N74-32711  
 Continuous Fourier transform method and apparatus --- for the analysis of simultaneous analog signal components

[NASA-CASE-ARC-10466-1] c60 N75-13539  
 Signal conditioning circuit apparatus --- with constant input impedance

[NASA-CASE-ARC-10348-1] c33 N75-19518  
 Television noise reduction device

[NASA-CASE-MSC-12607-1] c32 N75-21485  
 Isolated output system for a class D switching-mode amplifier

[NASA-CASE-MFS-21616-1] c33 N75-30429  
 Compact-bi-phase pulse coded modulation decoder

[NASA-CASE-KSC-10834-1] c33 N76-14371  
 Filtering device --- removing electromagnetic noise from voice communication signals

[NASA-CASE-MFS-22729-1] c32 N76-21366  
 System for measuring Reynolds in a turbulently flowing fluid --- signal processing

[NASA-CASE-ARC-10755-2] c34 N76-27517  
 Three phase full wave dc motor decoder

[NASA-CASE-GSC-11824-1] c33 N77-26386  
 Apparatus for determining thermophysical properties of test specimens

[NASA-CASE-LAR-11883-1] c09 N77-27131  
 Analog to digital converter for two-dimensional radiant energy array computers

[NASA-CASE-GSC-11839-3] c60 N77-32731  
 Hearing aid malfunction detection system

[NASA-CASE-MSC-14916-1] c33 N78-10375  
 Swept group delay measurement

[NASA-CASE-NPO-13909-1] c33 N78-25319  
 Quadrature demodulation

[NASA-CASE-GSC-12137-1] c33 N78-32338  
 Bit error rate measurement above and below bit rate tracking threshold

[NASA-CASE-MSC-12743-1] c32 N79-10263  
 Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths

[NASA-CASE-NPO-14525-1] c32 N79-19195  
 Electrochemical detection device --- for use in microbiology

[NASA-CASE-LAR-11922-1] c25 N79-24073  
 Serial data correlator/code translator

[NASA-CASE-KSC-11025-1] c32 N79-28383  
 Scannable beam forming interferometer antenna array system

[NASA-CASE-GSC-12365-1] c32 N80-28578  
 System for plotting subsoil structure and method therefor

[NASA-CASE-NPO-14191-1] c31 N80-32584  
 Interferometric angle monitor

[NASA-CASE-GSC-12614-1] c35 N81-12386  
 Navigation system and method

[NASA-CASE-GSC-12508-1] c04 N81-26085  
 CCD correlated quadruple sampling processor

[NASA-CASE-NPO-14426-1] c33 N81-27396  
 Interleaving device

[NASA-CASE-GSC-12111-2] c33 N81-29342

## SIGNAL RECEPTION

Radar signal receiver arrangement for extending range and increasing signal to noise ratio

[NASA-CASE-XNP-00748] c07 N70-36911  
 Reflectometer for receiver input impedance match measurement

[NASA-CASE-XNP-10843] c07 N71-11267  
 Diversity receiving system with diversity phase lock

[NASA-CASE-XGS-01222] c10 N71-20841  
 Design and development of signal detection and tracking apparatus

[NASA-CASE-XGS-03502] c10 N71-20852  
 Development of optimum pre-detection diversity combining receiving system adapted for use with amplitude modulation, phase modulation, and frequency modulation systems

[NASA-CASE-XGS-00740] c07 N71-23098  
 Binary data decoding device for use at receiving end of communication channel

[NASA-CASE-NPO-10118] c07 N71-24741  
 Development of electronic circuit for combining input signals on two separate antennas to form two processed signals

[NASA-CASE-MSC-12205-1] c07 N71-27056  
 Input signal measurement using liquid crystalline elements

[NASA-CASE-ERC-10275] c26 N72-25680  
 Filter for third order phase locked loops in signal receivers

[NASA-CASE-NPO-11941-1] c10 N73-27171  
 Electromechanical actuator for producing mechanical force and/or motion in response to electrical signals

[NASA-CASE-NPO-11738-1] c09 N73-30185  
 Scan converting video tape recorder

[NASA-CASE-NPO-10166-2] c35 N76-16391  
 Receiving and tracking phase modulated signals

[NASA-CASE-MSC-16170-2] c32 N81-16338

**SIGNAL REFLECTION**

Reflectometer for receiver input impedance match measurement

[NASA-CASE-XNP-10843] c07 N71-11267  
 Reflex feed system for dual frequency antenna with frequency cutoff means

[NASA-CASE-NPO-14022-1] c32 N78-31321  
 Doppler radar having phase modulation of both transmitted and reflected return signals --- ranging

[NASA-CASE-MSC-18675-1] c32 N81-29312

**SIGNAL STABILIZATION**

Linear accelerator frequency control system

[NASA-CASE-XGS-05441] c10 N71-22962  
 Development of apparatus for generating output signal commensurate with information contained in input signal

[NASA-CASE-ERC-10041] c08 N71-29138  
 System for interference signal nulling by polarization adjustment

[NASA-CASE-NFC-13140-1] c32 N75-24982  
 A fiber optic transmission line stabilization apparatus and method

[NASA-CASE-NFO-15036-1] c74 N80-34250

**SIGNAL TO NOISE RATIOS**

Semiconductor in resonant cavity for improving signal to noise ratio of communication receiver

[NASA-CASE-MSC-12259-1] c07 N70-12616  
 Radar signal receiver arrangement for extending range and increasing signal to noise ratio

[NASA-CASE-XNP-00748] c07 N70-36911  
 Detector assembly for discriminating first signal with respect to presence or absence of second signal at time of occurrence of first signal

[NASA-CASE-XNP-00701] c09 N70-40272  
 Automatic estimation of signal to noise ratio and other parameters in signal communication systems

[NASA-CASE-XNP-05254] c07 N71-20791  
 Voltage controlled oscillators and pulse amplitude modulation for signal ratio system

[NASA-CASE-XNP-04367] c09 N71-23545  
 Design and characteristics of recording system for selective reprocessing and filtering of data to obtain optimum signal to noise ratios

[NASA-CASE-ERC-10112] c07 N72-21119  
 Development of idler feedback system to reduce electronic noise problem in two parametric amplifiers

- [NASA-CASE-LAR-10253-1] c09 N72-25258  
 Superconductive resonant cavity for improved  
 signal to noise ratio in communication signal  
 [NASA-CASE-HSC-12259-2] c07 N72-33146  
 Signal to noise ratio determination circuit  
 using bandpass limiter  
 [NASA-CASE-GSC-11239-1] c10 N73-25241  
 Gated compressor, distortionless signal limiter  
 [NASA-CASE-NPO-11820-1] c32 N74-19788
- SIGNAL TRANSMISSION**  
 Synchronizing apparatus for multi-access  
 satellite time division multiplex system  
 [NASA-CASE-XGS-05918] c07 N69-39974  
 Electro-mechanical circuit for converting  
 floating intelligence signal to common  
 electrically grounded intelligence recorder  
 [NASA-CASE-XAC-00086] c09 N70-33182  
 Demodulator for simultaneous demodulation of two  
 modulating ac signal carriers close in frequency  
 [NASA-CASE-XMP-01160] c07 N71-11298  
 Bipolar phase detector and corrector for split  
 phase PCM data signals  
 [NASA-CASE-XGS-01590] c07 N71-12392  
 Automatic estimation of signal to noise ratio  
 and other parameters in signal communication  
 systems  
 [NASA-CASE-XNP-05254] c07 N71-20791  
 Multiplexed communication system design  
 including automatic correction of transmission  
 errors introduced by frequency spectrum shifts  
 [NASA-CASE-XNP-01306] c07 N71-20814  
 Adaptive notch filter, using modulation  
 techniques for reversed phase noise signal  
 [NASA-CASE-XMP-01892] c10 N71-22986  
 Pulse generator for synchronizing or resetting  
 electronic signals without requiring separate  
 external source  
 [NASA-CASE-XGS-03632] c09 N71-23311  
 Device for locating electrically nonlinear  
 objects and determining distance to object by  
 PM signal transmission  
 [NASA-CASE-KSC-10108] c14 N73-25461  
 Television multiplexing system, using single  
 crystal controlled clock for signal  
 synchronization  
 [NASA-CASE-KSC-10654-1] c07 N73-30115  
 Controlled oscillator system with a time  
 dependent output frequency  
 [NASA-CASE-NPO-11962-1] c33 N74-10194  
 Pulse code modulated signal synchronizer  
 [NASA-CASE-HSC-12462-1] c32 N74-20809  
 Pulse code modulated signal synchronizer  
 [NASA-CASE-HSC-12494-1] c32 N74-20610  
 Digital transmitter for data bus communications  
 system  
 [NASA-CASE-HSC-14558-1] c32 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] c32 N75-24581  
 Method and apparatus for background signal  
 reduction in opto-acoustic absorption  
 measurement  
 [NASA-CASE-NPO-13683-1] c35 N77-14411  
 Automatic transponder --- measurement of the  
 internal delay time of a transponder  
 [NASA-CASE-GSC-12075-1] c32 N77-31350  
 Fiber optic multiplex optical transmission system  
 [NASA-CASE-KSC-11047-1] c74 N78-14889  
 Telephone multiline signaling using common  
 signal pair  
 [NASA-CASE-KSC-11023-1] c32 N79-23310  
 Precise RF timing signal distribution to remote  
 stations --- fiber optics  
 [NASA-CASE-NPO-14749-1] c32 N81-14186  
 Digital numerically controlled oscillator  
 [NASA-CASE-HSC-16747-1] c33 N81-17349
- SIGNATURE ANALYSIS**  
 Multispectral imaging and analysis system ---  
 using charge coupled devices and linear arrays  
 [NASA-CASE-NPO-13691-1] c43 N79-17288  
 Optical signature generating and correlating  
 apparatus  
 [NASA-CASE-NPO-15226-1] c74 N81-19899
- SILANES**  
 Preparation of elastomeric diamine silazane  
 polymers  
 [NASA-CASE-XMP-04133] c06 N71-20717
- Synthesis of high purity dianilinosilanes  
 [NASA-CASE-XMP-06409] c06 N71-23230  
 Process for preparing high molecular weight  
 polyaryloxysilanes from lower molecular weight  
 forms  
 [NASA-CASE-XMP-08674] c06 N71-28807  
 Oxygen post-treatment of plastic surface coated  
 with plasma polymerized silicon-containing  
 monomers  
 [NASA-CASE-ARC-10915-2] c27 N79-18052  
 Thermal reactor and process --- liquid silicon  
 production from silane  
 [NASA-CASE-NPO-14369-1] c25 N80-20338
- SILICA GEL**  
 Gels as battery separators for soluble  
 electrode cells  
 [NASA-CASE-LEW-12364-1] c44 N77-22606
- SILICATES**  
 Ultraviolet radiation resistant alkali-metal  
 silicate coatings for temperature control of  
 spacecraft  
 [NASA-CASE-XGS-04119] c18 N69-39979  
 Alkali-metal silicate binders and methods of  
 manufacture  
 [NASA-CASE-GSC-12303-1] c24 N79-31347
- SILICIDES**  
 Silicide coating process and composition for  
 protection of refractory metals from oxidation  
 [NASA-CASE-XLE-10910] c18 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] c27 N76-16229
- SILICON**  
 Method of forming thin window drifted silicon  
 charged particle detector  
 [NASA-CASE-XLE-00808] c24 N71-10560  
 Gadolinium or samarium doped-silicon  
 semiconductor material with resistance to  
 radiation damage for use in solar cells  
 [NASA-CASE-XLE-10715] c26 N71-23292  
 Metal pattern bonding technique for cover glass  
 attachment to silicon solar cells for space  
 applications  
 [NASA-CASE-XLE-08569] c03 N71-23449  
 Covered silicon solar cells and method of  
 manufacture --- with polymeric films  
 [NASA-CASE-LEW-11065-2] c44 N76-14600  
 Method of controlling defect orientation in  
 silicon crystal ribbon growth  
 [NASA-CASE-NPO-13918-1] c76 N79-11920  
 Method of purifying metallurgical grade silicon  
 employing reduced pressure atmospheric control  
 [NASA-CASE-NPO-14474-1] c26 N80-14229  
 Method of producing silicon --- gas phase  
 reactor multiple injector liquid feed system  
 [NASA-CASE-NPO-14382-1] c31 N80-18231  
 Thermal reactor and process --- liquid silicon  
 production from silane  
 [NASA-CASE-NPO-14369-1] c25 N80-20338  
 A silicon-slurry/aluminide coating --- protects  
 aircraft and land-based gas turbine engines  
 [NASA-CASE-LEW-13343-1] c24 N80-26389  
 System for slicing silicon wafers  
 [NASA-CASE-NPO-14406-1] c37 N80-29703  
 A method for producing a solidified body of  
 silicon --- solar cells  
 [NASA-CASE-NPO-15250-1] c25 N81-16174  
 Apparatus for use in the production of  
 ribbon-shaped crystals from a silicon melt  
 [NASA-CASE-NPO-14297-1] c33 N81-19389  
 Electromigration process for the purification of  
 molten silicon during crystal growth  
 [NASA-CASE-NPO-14831-1] c76 N81-19944
- SILICON CARBIDES**  
 Deposition method for epitaxial beta SiC films  
 having high degree of crystallographic  
 perfection  
 [NASA-CASE-ERC-10120] c26 N69-33482  
 Producing high purity silicon carbide on carbon  
 base by hydrogen reduction of silicon  
 tetrachloride  
 [NASA-CASE-XLA-00158] c26 N70-36805  
 Device for producing high purity silicon carbide  
 on carbon base by hydrogen reduction of  
 silicon tetrachloride  
 [NASA-CASE-XLA-02057] c26 N70-40015

- Process for fabricating SiC semiconductor devices  
[NASA-CASE-LEW-12094-1] c76 N76-25C49
- Growth of silicon carbide crystals on a seed  
while pulling silicon crystals from a melt  
[NASA-CASE-NPO-13969-1] c76 N79-23798
- SILICON COMPOUNDS**
- Doping silicon material with gadolinium to  
increase radiation resistance of solar cells  
[NASA-CASE-YLE-02792] c26 N71-10607
- Process for preparing disilanolols with in-chain  
perfluoroalkyl groups  
[NASA-CASE-MFS-20979-2] c06 N73-32030
- Infusible silazane polymer and process for  
producing same --- protective coatings  
[NASA-CASE-XMF-02526-1] c27 N79-21190
- SILICON CONTROLLED RECTIFIERS**
- Use of silicon controlled rectifier shorting  
circuit to protect thermoelectric generator  
source from thermal destruction  
[NASA-CASE-YGS-04808] c03 N69-25146
- Silicon controlled rectifier inverter with  
compensation of transients to avoid false gating  
[NASA-CASE-XLA-08507] c09 N69-39584
- Reversible ring counter using cascaded single  
silicon controlled rectifier stages  
[NASA-CASE-XGS-01473] c09 N71-10673
- Silicon controlled rectifier pulse gate  
amplifier for blocking false gating caused by  
negative transient voltages  
[NASA-CASE-XLA-07497] c09 N71-12514
- SILICON DIOXIDE**
- Intermittent type silica gel adsorption  
refrigerator for providing temperature control  
for spacecraft components  
[NASA-CASE-YNP-00920] c15 N71-15906
- Nose cone mounted heat resistant antenna  
comprising plurality of adjacent layers of  
silica not introducing paths of high thermal  
conductivity through ablative shield  
[NASA-CASE-XMS-04312] c07 N71-22584
- Method and apparatus for stable silicon dioxide  
layers on silicon grown in silicon nitride  
ambient  
[NASA-CASE-ERC-10073-1] c24 N74-19769
- Silica reusable surface insulation  
[NASA-CASE-ARC-10721-1] c27 N76-22376
- Two-component ceramic coating for silica  
insulation  
[NASA-CASE-MS-C-14270-1] c27 N76-22377
- Transmitting and reflecting diffuser --- using  
ultraviolet grade fused silica coatings  
[NASA-CASE-LAR-10385-3] c74 N78-15879
- Field effect transistor and method of  
construction thereof  
[NASA-CASE-MFS-23312-1] c33 N78-27326
- Fibrous refractory composite insulation ---  
shielding reusable spacecraft  
[NASA-CASE-ARC-11169-1] c24 N79-24062
- Improved attachment system for silica tiles ---  
thermal protection for space shuttle orbiter  
[NASA-CASE-MS-C-18741-1] c16 N81-16110
- Apparatus and method for heating a material in a  
transparent ampoule --- crystal growth  
[NASA-CASE-MFS-25436-1] c76 N81-30012
- SILICON FILMS**
- Deposition method for epitaxial beta SiC films  
having high degree of crystallographic  
perfection  
[NASA-CASE-ERC-10120] c26 N69-33482
- Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c35 N81-12389
- SILICON JUNCTIONS**
- Improving radiation resistance of silicon  
semiconductor junctions by doping with lithium  
[NASA-CASE-XGS-07801] c09 N71-12513
- SILICON NITRIDES**
- Method and apparatus for stable silicon dioxide  
layers on silicon grown in silicon nitride  
ambient  
[NASA-CASE-ERC-10073-1] c24 N74-19769
- Silicon nitride coated, plastic covered solar cell  
[NASA-CASE-LEW-11496-1] c44 N77-14580
- Sandblasting nozzle  
[NASA-CASE-NPO-13823-1] c37 N81-25371
- SILICON OXIDES**
- Three-component ceramic coating for silica  
insulation  
[NASA-CASE-MS-C-14270-2] c27 N76-23426
- SILICON POLYMERS**
- Oxygen post-treatment of plastic surface coated  
with plasma polymerized silicon-containing  
monomers  
[NASA-CASE-ARC-10915-2] c27 N79-18052
- SILICON RADIATION DETECTORS**
- Lithium drifted silicon radiation detector with  
gold rectifying contacts  
[NASA-CASE-YLE-10529] c14 N69-23191
- Silicon radiation detecting probe design for in  
vivo biomedical use  
[NASA-CASE-XMS-01177] c05 N71-19440
- SILICON TRANSISTORS**
- Vapor deposition method for forming metallized  
tungsten contacts on silicon substrates  
[NASA-CASE-GSC-10695-1] c09 N72-25259
- Development of method and apparatus for  
detecting surface ions on silicon diodes and  
transistors  
[NASA-CASE-ERC-10325] c15 N72-25457
- SILICON RESINS**
- Vacuum pressure molding technique  
[NASA-CASE-LAR-10073-1] c37 N76-24575
- SILICONES**
- Silicone containing solid propellant  
[NASA-CASE-NPO-14477-1] c28 N80-28536
- SILICONIZING**
- Vapor deposited laminated nitride-silicon  
coating for corrosion prevention of  
carbonaceous surfaces  
[NASA-CASE-XLA-00284] c15 N71-16075
- SILOXANES**
- Synthesis of siloxane containing epoxy polymers  
with low dielectric properties  
[NASA-CASE-MFS-13994-1] c06 N71-11240
- Method for producing alternating ether-siloxane  
copolymers with stable properties when exposed  
to elevated temperatures and UV radiation  
[NASA-CASE-XMF-02584] c06 N71-20905
- Synthesis of siloxane containing epoxide and  
diamine polymers  
[NASA-CASE-MFS-13994-2] c06 N72-25148
- Silphenylenesiloxane polymer with in-chain  
perfluoroalkyl groups  
[NASA-CASE-MFS-20979] c06 N72-25151
- Fluid polydimethylsiloxane resin with low  
outgassing properties in cured state  
[NASA-CASE-GSC-11358-1] c06 N73-26100
- SILVER**
- Dry electrode manufacture, using silver powder  
with cement  
[NASA-CASE-ERC-10029-2] c05 N72-25121
- SILVER ALLOYS**
- Brazing alloy composition  
[NASA-CASE-XMF-06053] c26 N75-27126
- SILVER CHLORIDES**
- Electrochemically reversible silver-silver  
chloride electrode for detecting bioelectric  
potential differences generated by human  
muscles and organs  
[NASA-CASE-XMS-02872] c05 N69-21925
- Silver chloride use in technique for fusion  
bonding of graphite to silver, glass,  
ceramics, and certain other metals  
[NASA-CASE-XGS-00963] c15 N69-39735
- SILVER COMPOUNDS**
- Description of electrical equipment and system  
for purification of waste water by producing  
silver ions for bacterial control  
[NASA-CASE-MS-C-10960-1] c03 N71-24718
- SILVER ZINC BATTERIES**
- Elimination of two step voltage discharge  
property of silver zinc batteries by using  
divalent silver oxide capacity of cell to  
charge anodes to monovalent silver state  
[NASA-CASE-XGS-01674] c03 N71-29129
- Additive for zinc electrodes  
[NASA-CASE-LEW-13286-1] c44 N81-27597
- SIMULATORS**
- Development of apparatus for simulating zero  
gravity conditions  
[NASA-CASE-MFS-12750] c27 N71-16223
- Phonocardiogram simulator producing electrical  
voltage waves to control amplitude and  
duration between simulated sounds  
[NASA-CASE-XKS-10804] c05 N71-24606
- Sign wave generation simulator for variable  
amplitude, frequency, damping, and phase  
pulses for oscilloscope display

- [NASA-CASE-NPO-10251] c10 N71-27365  
Laser Doppler velocity simulator --- to induce frequency shift  
[NASA-CASE-LAR-12176-1] c36 N80-16321
- SINE SERIES**  
Service life of electromechanical device for generating sine/cosine functions  
[NASA-CASE-LAR-10503-1] c09 N72-21248  
Function generators for producing complex vibration mode patterns used to identify vibration mode data  
[NASA-CASE-LAR-10310-1] c10 N73-20253
- SINE WAVES**  
Sign wave generation simulator for variable amplitude, frequency, damping, and phase pulses for oscilloscope display  
[NASA-CASE-NPO-10251] c10 N71-27365  
Wideband generator for producing sine wave quadrature and second harmonic of input signal  
[NASA-CASE-NPO-11133] c10 N72-20223  
Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-11389-1] c33 N77-26387
- SINGLE CRYSTALS**  
Producing high purity silicon carbide on carbon base by hydrogen reduction of silicon tetrachloride  
[NASA-CASE-XLA-00158] c26 N70-36805  
Single crystal film semiconductor devices  
[NASA-CASE-ERC-10222] c09 N72-22199  
Hall effect magnetometer  
[NASA-CASE-LEW-11632-2] c35 N75-13213  
Vapor phase growth of groups 3-5 compounds by hydrogen chloride transport of the elements  
[NASA-CASE-LAR-11144-1] c25 N75-26043  
Method for the preparation of inorganic single crystal and polycrystalline electronic materials  
[NASA-CASE-XLE-02545-1] c76 N79-21910  
Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt  
[NASA-CASE-NPO-13969-1] c76 N79-23798
- SINTERING**  
Condenser-separator for dehumidifying air utilizing sintered metal surface  
[NASA-CASE-XLA-08645] c15 N69-21465  
Production of refractory bodies with controlled porosity by pressing and heating mixtures of refractory and inert metal powders  
[NASA-CASE-LEW-10393-1] c17 N71-15468
- SIZE (DIMENSIONS)**  
Development of apparatus for producing metal powder particles of controlled size  
[NASA-CASE-XLE-06461-2] c17 N72-28535
- SIZE DETERMINATION**  
Impact measuring technique for determining size of hypervelocity projectiles  
[NASA-CASE-LAR-10913] c14 N72-16282
- SIZE SEPARATION**  
Method and apparatus for precision sizing and joining of large diameter tubes by bulging or constricting overlapping ends  
[NASA-CASE-XMP-05114-2] c15 N71-26148  
Device which separates and screens particles of soil samples for vidicon viewing in vacuum and reduced gravity environments  
[NASA-CASE-XMP-09770-3] c11 N71-27036
- SIZING (SHAPING)**  
Method and apparatus for shaping and joining large diameter metal tubes using magnetomotive forces  
[NASA-CASE-XMP-05114] c15 N71-17650
- SIZING SCREENS**  
Method for making screen with unlimited fineness of mesh and screen thickness  
[NASA-CASE-XLE-00953] c15 N71-15966  
Screen particle separator for soil samples  
[NASA-CASE-XMP-09770-2] c15 N72-22483
- SKEWNESS**  
Tape guidance system for multichannel digital recording system  
[NASA-CASE-XMP-09453] c08 N71-19420  
Automatic character skew and spacing checking network --- of digital tape drive systems  
[NASA-CASE-GSC-11925-1] c33 N76-18353
- SKID LANDINGS**  
Nose gear steering system for vehicles with main skids to provide directional stability after loss of aerodynamic control  
[NASA-CASE-XLA-01804] c02 N70-34160
- SKIN (ANATOMY)**  
Conditioning tanned sharkskin for use as abrasive resistant clothing  
[NASA-CASE-XMS-09691-1] c18 N71-15545  
Percutaneous connector device  
[NASA-CASE-KSC-10849-1] c52 N77-14738  
Medical diagnosis system and method with multispectral imaging --- depth of burns and optical density of the skin  
[NASA-CASE-NFO-14402-1] c52 N81-27783
- SKIN (STRUCTURAL MEMBER)**  
Development of resilient fastener for attaching skin of aerospace vehicles to permit movement of skin relative to framework  
[NASA-CASE-XLA-01027] c31 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] c31 N81-14137
- SKIN FRICTION**  
Hot foil transducer skin friction sensor  
[NASA-CASE-LAR-12321-1] c35 N81-12390  
Skin friction measuring device for aircraft  
[NASA-CASE-FRC-11029-1] c06 N81-17057  
Dual-beam skin friction interferometer --- portable equipment  
[NASA-CASE-ARC-11354-1] c36 N81-29415
- SKIN TEMPERATURE (BIOLOGY)**  
Thermistor holder for skin temperature measurements  
[NASA-CASE-ARC-10855-1] c52 N77-10780
- SKIN TEMPERATURE (NON-BIOLOGICAL)**  
Heat flux sensor adapted for mounting on aircraft or spacecraft to measure aerodynamic heat flux inflow to aircraft skin  
[NASA-CASE-XFR-03802] c33 N71-23085
- SKIRTS**  
Inflatable rocket engine nozzle skirt with transpiration cooling  
[NASA-CASE-MFS-20619] c28 N72-11708
- SKY**  
Camera arrangement --- for satellite scanning of earth or sky  
[NASA-CASE-GSC-12032-2] c35 N76-19408
- SKY BRIGHTNESS**  
Cloud cover sensor  
[NASA-CASE-NPO-14936-1] c47 N80-26992
- SLEEP**  
Development of apparatus and method for quantitatively measuring brain activity as automatic indication of sleep state and level of consciousness  
[NASA-CASE-MSC-13282-1] c05 N71-24729
- SLEEVES**  
Nonreusable energy absorbing device comprising ring member with plurality of recesses, cutting members, and guide member mounted in each recess  
[NASA-CASE-XMP-10040] c15 N71-22877  
System for enhancing tool-exchange capabilities of a portable wrench  
[NASA-CASE-MFS-22283-1] c37 N75-33395  
Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c52 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] c31 N81-14137
- SLENDER BODIES**  
Support techniques for restraint of slender bodies such as launch vehicles  
[NASA-CASE-XLA-02704] c11 N69-21540
- SLENDER WINGS**  
Means for controlling aerodynamically induced twist --- equipment to control twisting of slender wings due to aerodynamic loads  
[NASA-CASE-LAR-12175-1] c05 N80-16055  
Leading edge vortex flaps for drag reduction --- during subsonic flight  
[NASA-CASE-LAR-12750-1] c02 N81-19016
- SLICING**  
Method and apparatus for slicing crystals  
[NASA-CASE-GSC-12291-1] c76 N80-18951  
System for slicing silicon wafers  
[NASA-CASE-NPO-14406-1] c37 N80-29703
- SLIDING CONTACT**  
Electrical connector pin with wiping action to assure reliable contact  
[NASA-CASE-XMP-04238] c09 N69-39734

- Development of slip ring assembly with inner and outer peripheral surfaces used as electrical contacts for brushes  
[NASA-CASE-XMP-01049] c15 N71-23049
- SLIDING FRICTION**  
Bearing material --- composite material with low friction surface for rolling or sliding contact  
[NASA-CASE-LEW-11930-1] c24 N76-22309  
Non-contacting power transfer device  
[NASA-CASE-GSC-12595-1] c33 N81-12331
- SLIP CASTING**  
Freeze casting of metal ceramic and refractory compound powders into plastic slips  
[NASA-CASE-XLE-00106] c15 N71-16076
- SLITS**  
Slit regulated gas journal bearing  
[NASA-CASE-XNP-00476] c15 N70-38620  
Method of fabricating an object with a thin wall having a precisely shaped slit.  
[NASA-CASE-LAR-10409-1] c31 N74-21659  
Dual acting slit control mechanism  
[NASA-CASE-LAR-11370-1] c35 N80-28686
- SLOPES**  
Penetrometer --- for determining load bearing characteristics of inclined surfaces  
[NASA-CASE-NFO-11103-1] c35 N77-27367
- SLOT ANTENNAS**  
Planar array circularly polarized antenna with wall slot excitation  
[NASA-CASE-NPO-10301] c07 N72-11148  
Omnidirectional antenna array with circumferential slots for mounting on cylindrical space vehicle  
[NASA-CASE-LAR-10163-1] c09 N72-25247  
Circularly polarized antenna with linearly polarized pair of elements  
[NASA-CASE-ERC-10214] c09 N72-31235  
Turnstile slot antenna  
[NASA-CASE-GSC-11428-1] c32 N74-20864  
Horn antenna having V-shaped corrugated slots  
[NASA-CASE-LAR-11112-1] c32 N76-15330
- SLOTS**  
Belleville spring assembly with elastic guides having low hysteresis  
[NASA-CASE-XNP-09452] c15 N69-27504  
Direct lift control system having flaps with slots adjacent to their leading edge and particularly adapted for lightweight aircraft  
[NASA-CASE-LAR-10249-1] c02 N71-26110  
Slotted fine-adjustment support for optical devices  
[NASA-CASE-MFS-20249] c15 N72-11386  
Method and tool for machining a transverse slot about a bore  
[NASA-CASE-LAR-11855-1] c37 N81-14319
- SLURRY PROPELLANTS**  
Apparatus for producing hydrocarbon slurry containing small particles of magnesium for use as jet aircraft fuel  
[NASA-CASE-XLE-00010] c15 N70-33382
- SMOKE**  
Development of method for protecting large and oddly shaped areas from radiant and convective heat  
[NASA-CASE-XNP-01310] c33 N71-26652  
Stack plume visualization system  
[NASA-CASE-LAR-11675-1] c45 N76-17656  
Smoke generator  
[NASA-CASE-ARC-10905-1] c37 N77-13418
- SODIUM CHLORIDES**  
Composition of diffuse reflective coating containing sodium chloride in combination with diol solvent and organic wetting and drying agents  
[NASA-CASE-GSC-11214-1] c06 N73-13128
- SODIUM VAPOR**  
Method of producing silicon --- gas phase reactor multiple injector liquid feed system  
[NASA-CASE-NPO-14382-1] c31 N80-18231
- SOFT LANDING**  
Non-reusable kinetic energy absorber for application in soft landing of space vehicles  
[NASA-CASE-XLE-00810] c15 N70-34661  
Spacecraft shock absorbing system for soft landings  
[NASA-CASE-XMP-02108] c31 N70-36805  
Payload soft landing system using stowable gas bag  
[NASA-CASE-XLA-09881] c31 N71-16085
- SOFT LANDING SPACECRAFT**  
Pivotal shock absorbing assembly for use as load distributing portion in landing gear systems of space vehicles  
[NASA-CASE-XMP-03856] c31 N70-34159
- SOIL MECHANICS**  
Penetrometer --- for determining load bearing characteristics of inclined surfaces  
[NASA-CASE-NFO-11103-1] c35 N77-27367
- SOIL MOISTURE**  
Radar target for remotely sensing hydrological phenomena  
[NASA-CASE-LAR-12344-1] c43 N80-18498
- SOIL SCIENCE**  
Auger-type soil penetrometer for burrowing into soil formations  
[NASA-CASE-XNP-05530] c14 N73-32321  
System for plotting subsoil structure and method therefor  
[NASA-CASE-NFO-14191-1] c31 N80-32584
- SOILS**  
Screen particle separator for soil samples  
[NASA-CASE-XNP-09770-2] c15 N72-22483  
Soil burrowing mole apparatus  
[NASA-CASE-XNP-07169] c15 N73-32362  
Remote sensing of vegetation and soil using microwave ellipsometry  
[NASA-CASE-GSC-11976-1] c43 N78-10529
- SOL-GEL PROCESSES**  
Alkali-metal silicate binders and methods of manufacture  
[NASA-CASE-GSC-12303-1] c24 N79-31347
- SOLAR ACTIVITY**  
Radiometric measuring system for solar activity and atmospheric attenuation and emission  
[NASA-CASE-ERC-10276] c14 N73-26432
- SOLAR ARRAYS**  
Deployable cantilever support for deploying solar cell arrays aboard spacecraft and reducing transient loading  
[NASA-CASE-NPO-10883] c31 N72-22874  
Electrical interconnection of unilluminated solar cells in solar battery array  
[NASA-CASE-GSC-10344-1] c03 N72-27053  
Development of solar energy powered heliotope assembly to orient solar array toward sun  
[NASA-CASE-GSC-10945-1] c21 N72-31637  
Method of making silicon solar cell array --- and mounting on flexible substrate  
[NASA-CASE-LEW-11069-1] c44 N74-14784  
Solar cell shingle  
[NASA-CASE-LEW-12587-1] c44 N77-31601  
Hexagon solar power panel  
[NASA-CASE-NPO-12148-1] c44 N78-27515  
Solar array strip and a method for forming the same  
[NASA-CASE-NPO-13652-1] c44 N79-17314  
Closed loop solar array-ion thruster system with power control circuitry  
[NASA-CASE-LEW-12780-1] c20 N79-20179  
Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c44 N79-24431  
Double-sided solar cell package  
[NASA-CASE-NPO-14199-1] c44 N79-25482  
Method of construction of a multi-cell solar array  
[NASA-CASE-MFS-23540-1] c44 N79-26475  
Method for forming a solar array strip  
[NASA-CASE-NPO-13652-3] c44 N80-14474  
Solar power satellite system  
[NASA-CASE-HQN-10949-1] c44 N81-16530  
Electrical rotary joint apparatus for large space structures  
[NASA-CASE-MFS-23981-1] c33 N81-19394
- SOLAR CELLS**  
Fabricating solar cells with dielectric layers to improve glass fusion  
[NASA-CASE-IGS-04531] c03 N69-24267  
Solar radiation direction detector and device for compensating degradation of photocells  
[NASA-CASE-XLA-00183] c14 N70-40239  
Attitude control system for spacecraft based on conversion of incident solar radiation on movable control surfaces into mechanical torques  
[NASA-CASE-INP-02982] c31 N70-41855  
Simulating voltage-current characteristic curves of solar cell panel with different operational parameters  
[NASA-CASE-IMS-01554] c10 N71-10578

- Doping silicon material with gadolinium to increase radiation resistance of solar cells  
[NASA-CASE-XLE-02792] c26 N71-10607
- Modifying existing solar cells for temperature control  
[NASA-CASE-NPO-10109] c03 N71-11049
- Solar battery with interconnecting means for plural cells  
[NASA-CASE-YNP-06506] c03 N71-11050
- Fabrication methods for matrices of solar cell submodules  
[NASA-CASE-YNP-05821] c03 N71-11056
- Metal strip mounting arrangement for solar cell arrays on spacecraft  
[NASA-CASE-XGS-01475] c03 N71-11058
- Conductor for connecting parallel cells into submodules in series to form solar cell matrix  
[NASA-CASE-NPO-10821] c03 N71-19545
- Space erectable rollup solar array of arcuate solar panels furlcd on tapered drum for spacecraft storage during launch  
[NASA-CASE-NPO-10188] c03 N71-20273
- Electrode connection for n-on-p silicon solar cell  
[NASA-CASE-XLE-04787] c03 N71-20492
- Fabrication of solar cell banks for attaching solar cells to base members or substrates  
[NASA-CASE-YNP-00826] c03 N71-20895
- Gallium arsenide solar cell preparation by surface deposition of cuprous iodide on thin n-type polycrystalline layers and heating in iodine vapor  
[NASA-CASE-YNP-01960] c09 N71-23027
- Gadolinium or samarium doped-silicon semiconductor material with resistance to radiation damage for use in solar cells  
[NASA-CASE-XLE-10715] c26 N71-23292
- Maintaining current flow through solar cells with open connection using shunting diode  
[NASA-CASE-XLE-04535] c03 N71-23354
- Metal pattern bonding technique for cover glass attachment to silicon solar cells for space applications  
[NASA-CASE-XLE-08569] c03 N71-23449
- Addition of group 3 elements to silicon semiconductor material for increased resistance to radiation damage in solar cells  
[NASA-CASE-XLE-02798] c26 N71-23654
- Method of attaching cover glass to silicon solar cell without using adhesive  
[NASA-CASE-XLE-08569-2] c03 N71-24681
- Method and apparatus for fabricating solar cell panels  
[NASA-CASE-YNP-03413] c03 N71-26726
- Development and characteristics of solar cells with phosphors in cover glass to improve response to solar ultraviolet radiation  
[NASA-CASE-ARC-10050] c03 N71-33409
- Electrically coupled individually encapsulated solar cell matrix  
[NASA-CASE-NPO-11190] c03 N71-34044
- Recovering efficiency of solar cells damaged by environmental radiation through thermal annealing  
[NASA-CASE-XGS-04047-2] c03 N72-11062
- Spacecraft solar cell system with switching circuit to provide compensation for environmental changes  
[NASA-CASE-GSC-10669-1] c03 N72-20031
- Test method and equipment for identifying faulty cells or connections in solar cell assemblies  
[NASA-CASE-NPO-10401] c03 N72-20633
- Electrically connected matrix of discrete solar cell blanks  
[NASA-CASE-NPO-10591] c03 N72-22041
- Solar cell panel with light transmitting cover plate  
[NASA-CASE-NPO-10747] c03 N72-22042
- Development of process for constructing protective covers for solar cells  
[NASA-CASE-GSC-11514-1] c03 N72-24037
- Apparatus for applying thin glass slides to solar cells  
[NASA-CASE-NPO-10575] c03 N72-25019
- Electrical interconnection of unilluminated solar cells in solar battery array  
[NASA-CASE-GSC-10344-1] c03 N72-27053
- Rectangular solar cell stacked panels to generate electrical power aboard spacecraft  
[NASA-CASE-NPO-11771] c03 N73-20040
- Method of making silicon solar cell array --- and mounting on flexible substrate  
[NASA-CASE-LEW-11069-1] c44 N74-14784
- Covered silicon solar cells and method of manufacture --- with polymeric films  
[NASA-CASE-LEW-11065-2] c44 N76-14600
- Fabrication of polycrystalline solar cells on low-cost substrates  
[NASA-CASE-GSC-12022-1] c44 N76-28635
- Solar cell grid patterns  
[NASA-CASE-NPO-13087-2] c44 N76-31666
- Photovoltaic cell array  
[NASA-CASE-MFS-22458-1] c44 N77-10635
- Silicon nitride coated, plastic covered solar cell  
[NASA-CASE-LEW-11496-1] c44 N77-14580
- Solar cell assembly --- for use under high intensity illumination  
[NASA-CASE-LEW-11549-1] c44 N77-19571
- High voltage, high current Schottky barrier solar cell  
[NASA-CASE-NFO-13482-1] c44 N78-13526
- Shunt regulation electric power system  
[NASA-CASE-GSC-10135] c33 N78-17296
- Process for utilizing low-cost graphite substrates for polycrystalline solar cells  
[NASA-CASE-GSC-12022-2] c44 N78-24609
- Method of making encapsulated solar cell modules  
[NASA-CASE-LEW-12185-1] c44 N78-25528
- Method for producing solar energy panels by automation  
[NASA-CASE-LEW-12541-1] c44 N78-25529
- Solar cell system having alternating current output  
[NASA-CASE-LEW-12806-1] c44 N78-25553
- Hexagon solar power panel  
[NASA-CASE-NPO-12148-1] c44 N78-27515
- Application of semiconductor diffusants to solar cells by screen printing  
[NASA-CASE-LEW-12775-1] c44 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] c44 N79-12541
- Back wall solar cell  
[NASA-CASE-LEW-12236-2] c44 N79-14528
- Method for fabricating solar cells having integrated collector grits  
[NASA-CASE-LEW-12819-2] c44 N79-18444
- Solar cell module assembly jig  
[NASA-CASE-XGS-00829-1] c44 N79-19447
- Double-sided solar cell package  
[NASA-CASE-NPO-14199-1] c44 N79-25482
- Solar cell with improved N-region contact and method of forming the same  
[NASA-CASE-NPO-14205-1] c44 N79-31752
- Solar cell module  
[NASA-CASE-NFO-14467-1] c44 N79-31753
- Self-reconfiguring solar cell system  
[NASA-CASE-LEW-12586-1] c44 N80-14472
- Driver for solar cell I-V characteristic plots  
[NASA-CASE-NPO-14096-1] c44 N80-18551
- Solar cell angular position transducer  
[NASA-CASE-LAR-11999-1] c44 N80-18552
- Method of mitigating titanium impurities effects in p-type silicon material for solar cells  
[NASA-CASE-NPO-14635-1] c44 N80-24741
- Induced junction solar cell and method of fabrication  
[NASA-CASE-NPO-13786-1] c44 N80-29835
- Improving the efficiency of silicon solar cells containing chromium  
[NASA-CASE-NFO-15179-1] c44 N80-32850
- Solar cell system having alternating current output  
[NASA-CASE-LEW-12806-2] c44 N81-12542
- Method and apparatus for fabricating improved solar cell modules  
[NASA-CASE-NFO-14416-1] c44 N81-14389
- A method for producing a solidified body of silicon --- solar cells  
[NASA-CASE-NPO-15250-1] c25 N81-16174
- High voltage planar multijunction --- solar cells  
[NASA-CASE-LEW-13400-1] c44 N81-16528
- High voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c44 N81-16529
- Copper doped polycrystalline silicon solar cell  
[NASA-CASE-NPO-14670-1] c44 N81-19558
- Schottky barrier cell and method of fabricating it  
[NASA-CASE-NFO-13689-4] c44 N81-26553



- Heat transparent high intensity high efficiency solar cell  
[NASA-CASE-LEW-12892-1] c44 N81-27598
- Schottky barrier solar cell  
[NASA-CASE-NPO-13689-2] c44 N81-29525
- SOLAR COLLECTORS**
- Expanding and contracting connector strip for solar cell array of Nimbus satellite  
[NASA-CASE-XGS-01395] c03 N69-21539
- Concentrator device for controlling direction of solar energy onto energy converters  
[NASA-CASE-XLE-01716] c09 N70-40234
- Space erectable rollup solar array of arcuate solar panels furled on tapered drum for spacecraft storage during launch  
[NASA-CASE-NPO-10188] c03 N71-20273
- Storage stable, thermally activated foaming compositions for erecting and rigidizing mechanisms of thin sheet solar collectors  
[NASA-CASE-LAR-10373-1] c18 N71-26155
- Development and characteristics of solar cells with phosphors in cover glass to improve response to solar ultraviolet radiation  
[NASA-CASE-ARC-10050] c03 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] c35 N77-20401
- Solar cell shingle  
[NASA-CASE-LEW-12587-1] c44 N77-31601
- Stainless steel panel for selective absorption of solar energy and the method of producing said panel  
[NASA-CASE-MFS-23518-2] c44 N77-31611
- Solar energy collection system  
[NASA-CASE-NPO-13810-1] c44 N77-32582
- Three-dimensional tracking solar energy concentrator and method for making same  
[NASA-CASE-NPO-13736-1] c44 N77-32583
- Portable linear-focused solar thermal energy collecting system  
[NASA-CASE-NPO-13734-1] c44 N78-10554
- Solar heating system  
[NASA-CASE-LAR-12009-1] c44 N78-15560
- Low cost solar energy collection system  
[NASA-CASE-NPO-13579-1] c44 N78-17460
- Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c44 N78-19599
- Solar cell collector  
[NASA-CASE-LEW-12552-1] c44 N78-25527
- Non-tracking solar energy collector system  
[NASA-CASE-NPO-13813-1] c44 N78-31526
- Solar cells having integral collector grids  
[NASA-CASE-LEW-12819-1] c44 N79-11467
- Method for making an aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-1] c44 N79-11469
- Non-tracking solar energy collector system  
[NASA-CASE-NPO-13817-1] c44 N79-11471
- Solar cell collector and method for producing same  
[NASA-CASE-LEW-12552-2] c44 N79-11472
- Electromagnetic radiation energy arrangement --- coatings for solar energy absorption and infrared reflection  
[NASA-CASE-WOO-00428-1] c32 N79-19186
- Horizontally mounted solar collector  
[NASA-CASE-MFS-23349-1] c44 N79-23481
- Primary reflector for solar energy collection systems and method of making same  
[NASA-CASE-NPO-13579-3] c44 N79-24432
- Solar energy collection system  
[NASA-CASE-NPO-13579-2] c44 N79-24433
- Solar concentrator  
[NASA-CASE-MFS-23727-1] c44 N80-14473
- Combined solar collector and energy storage system  
[NASA-CASE-LAR-12205-1] c44 N80-20610
- Automotive absorption air conditioner utilizing solar and motor waste heat  
[NASA-CASE-NPO-15183] c44 N80-29843
- Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c44 N81-17518
- Solar tracking system  
[NASA-CASE-MFS-23999-1] c44 N81-24520
- Method of forming oxide coatings  
[NASA-CASE-LEW-13132-1] c44 N81-27616
- SOLAR ELECTRIC PROPULSION**
- Closed loop solar array-ion thruster system with power control circuitry  
[NASA-CASE-LEW-12780-1] c20 N79-20179
- SOLAR ENERGY**
- Rectangular solar cell stacked panels to generate electrical power aboard spacecraft  
[NASA-CASE-NFO-11771] c03 N73-20040
- Solar energy power system --- using Freon  
[NASA-CASE-MFS-21628-1] c44 N75-32581
- Thermostatically controlled non-tracking type solar energy concentrator  
[NASA-CASE-NFO-13497-1] c44 N76-14602
- Solar photolysis of water  
[NASA-CASE-NPO-13675-1] c44 N77-32580
- Three-dimensional tracking solar energy concentrator and method for making same  
[NASA-CASE-NPO-13736-1] c44 N77-32583
- Solar heating system  
[NASA-CASE-LAR-12009-1] c44 N78-15560
- Method for producing solar energy panels by automation  
[NASA-CASE-LEW-12541-1] c44 N78-25529
- Method for making an aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-1] c44 N79-11469
- Primary reflector for solar energy collection systems  
[NASA-CASE-NPO-13579-4] c44 N79-14529
- Method of construction of a multi-cell solar array  
[NASA-CASE-MFS-23540-1] c44 N79-26475
- Solar cell module  
[NASA-CASE-NPO-14467-1] c44 N79-31753
- Solar-heated fluidized bed gasification system  
[NASA-CASE-NFO-15071-1] c44 N80-24747
- SOLAR ENERGY ABSORBERS**
- Panel for selectively absorbing solar thermal energy and the method of producing said panel  
[NASA-CASE-MFS-22562-1] c44 N76-14595
- Solar energy absorber  
[NASA-CASE-MFS-22743-1] c44 N76-22657
- Solar energy trap  
[NASA-CASE-MFS-22744-1] c44 N76-24696
- Solar cell shingle  
[NASA-CASE-LEW-12587-1] c44 N77-31601
- Stainless steel panel for selective absorption of solar energy and the method of producing said panel  
[NASA-CASE-MFS-23518-2] c44 N77-31611
- Low cost solar energy collection system  
[NASA-CASE-NPO-13579-1] c44 N78-17460
- Electromagnetic radiation energy arrangement --- coatings for solar energy absorption and infrared reflection  
[NASA-CASE-WOO-00428-1] c32 N79-19186
- Aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-3] c44 N80-16452
- Method for depositing an oxide coating --- producing solar panels  
[NASA-CASE-LEW-13131-1] c26 N81-24230
- A stable density-stratification solar pond  
[NASA-CASE-NPO-15419-1] c44 N81-27599
- SOLAR ENERGY CONVERSION**
- Solar energy power system  
[NASA-CASE-MFS-21628-2] c44 N76-23675
- High voltage, high current Schottky barrier solar cell  
[NASA-CASE-NPO-13482-1] c44 N78-13526
- Process for utilizing low-cost graphite substrates for polycrystalline solar cells  
[NASA-CASE-GSC-12022-2] c44 N78-24609
- Solar photolysis of water  
[NASA-CASE-NPO-14126-1] c44 N79-11470
- Thermal energy transformer  
[NASA-CASE-NPO-14058-1] c44 N79-18443
- Solar engine --- Flat plate type  
[NASA-CASE-LAR-12148-1] c44 N79-29608
- Solar concentrator  
[NASA-CASE-MFS-23727-1] c44 N80-14473
- Copper doped polycrystalline silicon solar cell  
[NASA-CASE-NFO-14670-1] c44 N81-19558
- Solar driven liquid metal MHD power generator  
[NASA-CASE-LAR-12495-1] c44 N81-32609
- SOLAR FURNACES**
- Lens assembly for solar furnace or solar simulator  
[NASA-CASE-XNP-04111] c14 N71-15622
- SOLAR GENERATORS**
- Describing method for vapor deposition of gallium arsenide films to manganese substrates

- to provide semiconductor devices with low resistance substrates  
[NASA-CASE-XNP-01328] c26 N71-18064
- Microwave power converter  
[NASA-CASE-NPO-14068-1] c44 N78-19609
- SOLAR GRAVITATION**  
Table structure and rotating magnet system simulating gravitational forces on spacecraft and displaying trajectories between Earth, Venus, and Mercury  
[NASA-CASE-XNP-00708] c14 N70-35394
- SOLAR HEATING**  
Portable linear-focused solar thermal energy collecting system  
[NASA-CASE-NPO-13734-1] c44 N78-10554  
Solar heating system  
[NASA-CASE-LAR-12009-1] c44 N78-15560  
Solar energy control system  
[NASA-CASE-MFS-25287-1] c44 N80-17544  
Combined solar collector and energy storage system  
[NASA-CASE-LAR-12205-1] c44 N80-20810
- SOLAR OBSERVATORIES**  
Light sensitive control system for automatically opening and closing dome of solar optical telescope  
[NASA-CASE-MSC-10966] c14 N71-19568
- SOLAR PONDS (HEAT STORAGE)**  
Solar pond  
[NASA-CASE-NPO-13581-2] c44 N78-31525  
A stable density-stratification solar pond  
[NASA-CASE-NPO-15419-1] c44 N81-27599
- SOLAR POSITION**  
Sun angle calculator  
[NASA-CASE-MSC-12617-1] c35 N76-29552  
Solar tracking system  
[NASA-CASE-MFS-23999-1] c44 N81-24520
- SOLAR POWERED AIRCRAFT**  
Solar powered aircraft  
[NASA-CASE-LAR-12615-1] c05 N81-32138
- SOLAR RADIATION**  
Space simulator with uniform test region radiation distribution, adapted to simulate Venus solar radiations  
[NASA-CASE-XNP-00459] c11 N70-38675  
Design and characteristics of device for sensing solar radiation and providing spacecraft attitude control to maintain direction with respect to incident radiation  
[NASA-CASE-XNP-05535] c14 N71-23040  
Utilization of solar radiation by solar still for converting salt and brackish water into potable water  
[NASA-CASE-XMS-04533] c15 N71-23086  
Wide angle sun sensor --- consisting of cylinder, insulation and pair of detectors  
[NASA-CASE-NPO-13327-1] c35 N75-23910  
Particulate and solar radiation stable coating for spacecraft  
[NASA-CASE-LAR-10805-2] c34 N77-18382
- SOLAR RADIO EMISSION**  
System generating sidereal frequency signals from signals of standard solar frequency without use of mixing operations or feedback loops  
[NASA-CASE-XGS-02610] c14 N71-23174
- SOLAR REFLECTORS**  
Foldable, double cone and parabolic reflector system for solar ray concentration  
[NASA-CASE-XLA-04622] c03 N70-41580  
Modifying existing solar cells for temperature control  
[NASA-CASE-NPO-10109] c03 N71-11049  
Fabrication of curved reflector segments for solar mirror  
[NASA-CASE-XLE-08917] c15 N71-15597  
Thermal pump-compressor for converting solar energy  
[NASA-CASE-XLA-00377] c33 N71-17610  
Forming mold for polishing and machining curved solar magnesium reflector with reinforcing ribs  
[NASA-CASE-XLE-08917-2] c15 N71-24836  
Inorganic thermal control and solar reflector coatings  
[NASA-CASE-MFS-20011] c18 N72-22566  
Lightweight reflector assembly  
[NASA-CASE-NPO-13707-1] c74 N77-28533  
Primary reflector for solar energy collection systems  
[NASA-CASE-NPO-13579-4] c44 N79-14529
- Primary reflector for solar energy collection systems and method of making same  
[NASA-CASE-NPO-13579-3] c44 N79-24432  
Solar energy collection system  
[NASA-CASE-NPO-13579-2] c44 N79-24433
- SOLAR SAILS**  
Strong thin membrane structure --- solar sails  
[NASA-CASE-NPO-14021-2] c27 N80-16163  
Speed control device for a heavy duty shaft --- solar sails for spacecraft propulsion  
[NASA-CASE-NPO-14170-1] c37 N81-15364
- SOLAR SENSORS**  
Sensor consisting of photocells mounted on pyramidal base for improved pointing accuracy of planetary trackers  
[NASA-CASE-XNP-04180] c07 N69-39736  
Spacecraft attitude control system using solar and earth sensors, gyroscopes, and jet actuators  
[NASA-CASE-XNP-00465] c21 N70-35395  
Sun tracker with rotatable plane-parallel plate and two photocells  
[NASA-CASE-XGS-01159] c21 N71-10678  
Solar sensor with coarse and fine sensing elements for matching preirradiated cells on degradation rates  
[NASA-CASE-XLA-01584] c14 N71-23269  
Sun direction detection system  
[NASA-CASE-NPO-13722-1] c74 N77-22951  
Sun tracking solar energy collector  
[NASA-CASE-NPO-13921-1] c44 N79-14526  
Improved Sun-sensing guidance system for high-altitude aircraft  
[NASA-CASE-FRC-11052-1] c04 N80-20249  
Solar tracking system  
[NASA-CASE-MFS-23999-1] c44 N81-24520
- SOLAR SIMULATORS**  
Lens assembly for solar furnace or solar simulator  
[NASA-CASE-XNP-04111] c14 N71-15622  
High powered arc electrodes --- producing solar simulator radiation  
[NASA-CASE-LEW-11162-1] c33 N74-12913
- SOLDERED JOINTS**  
Soldering device particularly suited to making high quality wiring joints for aerospace engineering utilizing capillary attraction to regulate flow of solder  
[NASA-CASE-XLA-08911] c15 N71-27214
- SOLDERING**  
Hydrazine monoperfluoro alkanoate solder flux leaving corrosion resistant coating, for metals such as copper  
[NASA-CASE-XNP-03459-2] c18 N71-15688  
Metal soldering with hydrazine monoperfluoro alkanoate for corrosion resistant coatings  
[NASA-CASE-XNP-03459] c15 N71-21078  
Method of plating copper on aluminum to permit conventional soldering of structural aluminum bodies  
[NASA-CASE-XLA-08966-1] c17 N71-25903  
Device for resistance soldering electrical leads to solder cups of multiple terminal block  
[NASA-CASE-GSC-10913] c15 N72-22491  
Development of electrical system for indicating optimum contact between electrode and metal surface to permit improved soldering operation  
[NASA-CASE-KSC-10242] c15 N72-23497  
Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c44 N79-24431
- SOLDERS**  
Solder coating process for printed copper circuit protection  
[NASA-CASE-XNP-01599] c09 N71-20705  
Method for attaching a fused-quartz mirror to a conductive metal substrate  
[NASA-CASE-MFS-23405-1] c26 N77-29260
- SOLENOID VALVES**  
Solenoid two-step valve for bipropellant flow rate control to rocket engine  
[NASA-CASE-XMS-04890-1] c15 N70-22192  
Automatic recording McLeod gage with three electrodes and solenoid valve connection  
[NASA-CASE-XLE-03280] c14 N71-23093  
Solenoid valve including guide for armature and valve member  
[NASA-CASE-GSC-10607-1] c15 N72-20442  
Remote fire stack igniter --- with solenoid-controlled valve  
[NASA-CASE-MFS-21675-1] c25 N74-33378

- Automatically operable self-leveling load table  
[NASA-CASE-MFS-22039-1] c09 N75-12968
- SOLENOIDS**
- Water cooled solenoid capable of producing magnetic field intensities up to 100 kilogauss  
[NASA-CASE-XNP-01951] c09 N70-41529
- Automatic power supply circuit design for driving inductive loads and minimizing power consumption including solenoid example  
[NASA-CASE-NPO-10716] c09 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] c33 N74-20861
- Sprag solenoid brake --- development and operations of electrically controlled brake  
[NASA-CASE-MFS-21846-1] c37 N74-26976
- SOLID ELECTRODES**
- Polymeric electrolytic hygrometer  
[NASA-CASE-NPO-13948-1] c35 N78-25391
- SOLID LUBRICANTS**
- Bonded solid lubricant coatings of calcium fluoride and binder for high temperature stability  
[NASA-CASE-XMS-00259] c18 N70-36400
- Solid lubricant applied to porous roller bearings prior to use in ultrahigh vacuum  
[NASA-CASE-XLE-09527] c15 N71-17688
- Preparation of inorganic solid film lubricants with long wear life and stability in aerospace environments  
[NASA-CASE-XMP-C3988] c15 N71-21403
- Development of rolling element bearing for operation in ultrahigh vacuum environment  
[NASA-CASE-XLE-09527-2] c15 N71-26189
- Method of making bearing materials --- self-lubricating, oxidation resistant composites for high temperature applications  
[NASA-CASE-LEW-11930-4] c24 N79-17516
- SOLID PHASES**
- An improved solid electrolyte cell  
[NASA-CASE-NPO-15269-1] c33 N81-16385
- SOLID PROPELLANT IGNITION**
- Solid propellant ignition with hypergolic fluid injected to predetermined portions of propellant  
[NASA-CASE-XLE-00207] c28 N70-33375
- Method for igniting solid propellant rocket motors by injecting hypergolic fluids  
[NASA-CASE-XLE-01988] c27 N71-15634
- Molded composite pyrogen igniter for rocket motors --- solid propellant ignition  
[NASA-CASE-LAR-12018-1] c20 N78-24275
- SOLID PROPELLANT ROCKET ENGINES**
- Spherical solid propellant rocket engine design  
[NASA-CASE-XLA-00105] c28 N70-33331
- Mandrel for shaping solid propellant rocket fuel into engine casing  
[NASA-CASE-XLA-00304] c27 N70-34783
- Spherical solid propellant rocket engine having abrupt burnout  
[NASA-CASE-XHQ-01897] c28 N70-35381
- Grain configuration for solid propellant rocket engines  
[NASA-CASE-XGS-03556] c27 N70-35534
- Solid propellant rocket vehicle thrust control method and apparatus  
[NASA-CASE-XNP-00217] c28 N70-38181
- Steerable solid propellant rocket motor adapted to effect payload orientation as multistage rocket stage or reduce velocity as retrorocket  
[NASA-CASE-XNP-00234] c28 N70-38645
- Method of making solid propellant rocket motor having reliable high altitude capabilities, long shelf life, and capable of firing with nozzle closure with foamed plastic permanent mandrel  
[NASA-CASE-XLA-04126] c28 N71-26779
- Electrical failure detector in solid rocket propellant motor insulation against thermal degradation by fuel grain  
[NASA-CASE-XMF-03968] c14 N71-27186
- Solid propellant rocket engine with venting system to control effective nozzle throat area  
[NASA-CASE-XNP-03282] c28 N72-20758
- Thin walled nozzle with insulative nonablative coating for solid propellant rocket engines  
[NASA-CASE-NPO-11458] c28 N72-23610
- Characteristics of solid propellant rocket engine with controlled rate of thrust buildup operating in vacuum environment  
[NASA-CASE-NPO-11559] c28 N73-24784
- Space vehicle  
[NASA-CASE-MFS-22734-1] c18 N75-19329
- Solid propellant rocket motor and method of making same  
[NASA-CASE-XLA-1349] c20 N77-17143
- Molded composite pyrogen igniter for rocket motors --- solid propellant ignition  
[NASA-CASE-LAR-12018-1] c20 N78-24275
- Solid propellant motor  
[NASA-CASE-NPO-11458A] c20 N78-32179
- SOLID PROPELLANTS**
- Variable thrust ion engine using thermal decomposition of solid cesium compound to produce propulsive vapor  
[NASA-CASE-XMF-00923] c28 N70-36802
- Photographic method for measuring viscoelastic strain in solid propellants and other materials  
[NASA-CASE-XNP-01153] c32 N71-17645
- Ethylene oxide sterilization and encapsulating process for sterile preservation of instruments and solid propellants  
[NASA-CASE-XNP-09763] c14 N71-20461
- Chemical process for production of polyisobutylene compounds and application as solid rocket propellant binder  
[NASA-CASE-NPO-10893] c27 N73-22710
- A system for concurrently delivering a stream of powdered fuel and a stream of powdered oxidizer to a combustion chamber for a reaction motor  
[NASA-CASE-MFS-23904-1] c20 N79-13077
- SOLID ROCKET BINDERS**
- Liner for hybrid solid propellants to bind propellant to rocket motor case  
[NASA-CASE-XNP-09744] c27 N71-16392
- Silicone containing solid propellant  
[NASA-CASE-NPO-14477-1] c28 N80-28536
- SOLID ROCKET PROPELLANTS**
- Using ethylene oxide in preparation of sterilized solid rocket propellants and encapsulating materials  
[NASA-CASE-XNP-01749] c27 N70-41897
- Pressurized gas injection for burning rate control of solid propellants  
[NASA-CASE-XLE-03494] c27 N71-21819
- Solid propellant stabilizer containing nitroguanidine  
[NASA-CASE-NPO-12000] c27 N72-25699
- Solid propellant containing hydrazinium nitroformate oxidizer and polymeric hydrocarbon binder  
[NASA-CASE-NPO-12015] c27 N73-16764
- Preparing oxidizer coated metal fuel particles  
[NASA-CASE-NPO-11975-1] c28 N74-33209
- Casting propellant in rocket engine  
[NASA-CASE-LAR-11995-1] c28 N77-10213
- Solid propellant rocket motor and method of making same  
[NASA-CASE-XLA-1349] c20 N77-17143
- High performance ammonium nitrate propellant  
[NASA-CASE-NPO-14260-1] c28 N79-28342
- Process for the leaching of AP from propellant  
[NASA-CASE-NPO-14109-1] c28 N80-23471
- Silicone containing solid propellant  
[NASA-CASE-NPO-14477-1] c28 N80-28536
- SOLID STATE**
- Solid state chemical source for ammonia beam masers  
[NASA-CASE-IGS-01504] c16 N70-41578
- SOLID STATE DEVICES**
- Solid state switching circuit design to increase current capacity of low rated relay contacts  
[NASA-CASE-XNP-09228] c09 N69-27500
- Temperature compensated solid state differential amplifier with application in bioinstrumentation circuits  
[NASA-CASE-XAC-00435] c09 N70-35440
- Solid state operational integrator  
[NASA-CASE-NPO-10230] c09 N71-12520
- Microwave power receiving antenna solving heat dissipation problems by construction of elements as heat pipe devices  
[NASA-CASE-MFS-20333] c09 N71-13486
- Computer circuit performing both counting and shifting logic operations also capable of miniaturization and integration in basic circuits

- [NASA-CASE-XNP-01753] c08 N71-22897  
Solid state television camera system consisting of monolithic semiconductor mosaic sensor and molecular digital readout systems
- [NASA-CASE-XMP-06092] c07 N71-24612  
Solid state circuit for switching alternating current input signal as function of direct current gating transistor
- [NASA-CASE-XNP-06505] c10 N71-24799  
Solid state force measuring electromechanical transducers made of piezoresistive materials
- [NASA-CASE-ERC-10088] c26 N71-25490  
Development and characteristics of solid state acoustic variable time delay line using direct current voltage and radio frequency pulses
- [NASA-CASE-ERC-1C032] c10 N71-25900  
Solid state broadband stable power amplifier
- [NASA-CASE-XNP-10854] c10 N71-26331  
Solid state remote circuit selector switching circuit
- [NASA-CASE-LEW-10387] c09 N72-22201  
Radio frequency controlled solid state switch
- [NASA-CASE-ARC-10136-1] c09 N72-22202  
Development of thermal to electric power conversion system using solid state switches of electrical currents to load for Seebeck effect compensation
- [NASA-CASE-NPO-11388] c03 N72-23048  
Solid state switch for variable circuit switching
- [NASA-CASE-NPO-10817-1] c08 N73-30135  
Full wave modulator-demodulator amplifier apparatus --- for generating rectified output signal
- [NASA-CASE-FRC-10072-1] c33 N74-14939  
Traveling wave solid state amplifier utilizing a semiconductor with negative differential mobility
- [NASA-CASE-HQN-10069] c33 N75-27251  
Solid-state current transformer
- [NASA-CASE-MFS-22560-1] c33 N77-14335  
Space-charge-limited solid-state triode
- [NASA-CASE-NPO-13064-1] c33 N79-11314  
Control means for a solid state crossbar switch
- [NASA-CASE-NPO-15066-1] c33 N80-33679  
Optical crystal temperature gauge with fiber optic connections --- cryogenic systems
- [NASA-CASE-MSC-18627-1] c74 N81-15818
- SOLID SURFACES**  
Dye penetrant and technique for nondestructive tests of solid surfaces contacted by liquid oxygen
- [NASA-CASE-XNP-02221] c18 N71-27170
- SOLID WASTES**  
Process of forming catalytic surfaces for wet oxidation reactions
- [NASA-CASE-MSC-14831-1] c25 N78-10225
- SOLID-SOLID INTERFACES**  
Coal-shale interface detection
- [NASA-CASE-MFS-23720-3] c43 N79-25443  
Coal-rock interface detector
- [NASA-CASE-MFS-23725-1] c43 N79-31706
- SOLIDIFICATION**  
A method for producing a solidified body of silicon --- solar cells
- [NASA-CASE-NPO-15250-1] c25 N81-16174  
Containerless melting and rapid solidification apparatus and method
- [NASA-CASE-MFS-25305-1] c35 N81-16427  
Method and apparatus for supercooling and solidifying substances --- containerless melts and space processing
- [NASA-CASE-MFS-25242-1] c35 N81-24413
- SOLUBILITY**  
Fireproof potassium silicate coating composition, insoluble in water after application
- [NASA-CASE-GSC-10072] c18 N71-14014  
Formulated plastic separators for soluble electrode cells
- [NASA-CASE-LEW-12358-2] c25 N78-25149  
Insoluble polyelectrolyte and ion-exchange hollow fiber impregnated therewith
- [NASA-CASE-NPO-13530-1] c25 N81-17187
- SOLUTES**  
Specific wavelength colorimeter --- for measuring given solute concentration in test sample
- [NASA-CASE-MSC-14081-1] c35 N74-27860
- SOLUTIONS**  
Asymmetric polyimide separation membrane and method
- [NASA-CASE-NPO-15431-1] c25 N81-29178
- SOLVENT EXTRACTION**  
Recovery of aluminum from composite propellants
- [NASA-CASE-NPO-14110-1] c28 N81-15119
- SOLVENTS**  
Coal desulfurization --- using iron pentacarbonyl
- [NASA-CASE-NPO-14272-1] c25 N81-33246
- SONAR**  
Echo tracker/range finder for radars and sonars
- [NASA-CASE-NPO-14361-1] c32 N79-26253  
Method for shaping and aiming narrow beams --- using a linear frequency chirp for sonar reception
- [NASA-CASE-NPO-14632-1] c32 N80-12256
- SONIC BOOMS**  
Instrumentation for measurement of aircraft noise and sonic boom
- [NASA-CASE-LAR-11173-1] c35 N75-19614  
Instrumentation for measuring aircraft noise and sonic boom
- [NASA-CASE-LAR-11476-1] c07 N76-27232
- SORBATES**  
Apparatus for measuring a sorbate dispersed in a fluid stream
- [NASA-CASE-ARC-10896-1] c35 N78-19465
- SORET COEFFICIENT**  
Method of growing composites of the type exhibiting the Soret effect --- improved structure of eutectic alloy crystals
- [NASA-CASE-MFS-22926-1] c24 N77-27187
- SOUND FIELDS**  
Multiple pure tone elimination strut assembly
- [NASA-CASE-FRC-11062-1] c07 N80-32393
- SOUND GENERATORS**  
Ejectable underwater sound source recovery assembly
- [NASA-CASE-LAR-10595-1] c35 N74-16135
- SOUND LOCALIZATION**  
Resolution enhanced sound detecting apparatus
- [NASA-CASE-NPO-14134-1] c71 N79-23753
- SOUND PRESSURE**  
Instrumentation for measurement of aircraft noise and sonic boom
- [NASA-CASE-LAR-11173-1] c35 N75-19614  
Differential sound level meter
- [NASA-CASE-LAR-12106-1] c71 N78-14867
- SOUND PROPAGATION**  
System for plotting subsoil structure and method therefor
- [NASA-CASE-NPO-14191-1] c31 N80-32584
- SOUND TRANSDUCERS**  
Method and transducer device for detecting presence of hydrogen gas
- [NASA-CASE-XMP-03873] c06 N69-39733  
Sensor for detecting and measuring energy, velocity and direction of travel of a cosmic dust particle
- [NASA-CASE-GSC-10503-1] c14 N72-20381  
Resolution enhanced sound detecting apparatus
- [NASA-CASE-NPO-14134-1] c71 N79-23753  
Pulse transducer with artifact signal attenuator --- heart rate sensors
- [NASA-CASE-FRC-11012-1] c52 N80-23969
- SOUND WAVES**  
Piezoelectric transducer for monitoring sound waves of physiological origin
- [NASA-CASE-XMS-05365] c14 N71-22993  
Material suspension within an acoustically excited resonant chamber --- at near weightless conditions
- [NASA-CASE-NPO-13263-1] c12 N75-24774  
Acoustic energy shaping
- [NASA-CASE-NPO-13802-1] c71 N78-10837  
Acoustic driving of rotor
- [NASA-CASE-NPO-14005-1] c71 N79-20827  
Acoustic suspension system
- [NASA-CASE-NPO-15435-1] c71 N81-27887
- SOUNDING ROCKETS**  
Development of attitude control system for sounding rocket stabilization during ballistic phase of flight
- [NASA-CASE-XGS-01654] c31 N71-24750  
System for deploying and ejecting releasable clamshell fairing sections from spinning sounding rockets
- [NASA-CASE-GSC-10590-1] c31 N73-14853

## SPACE CAPSULES

Assembly for opening flight capsule stabilizing and decelerating flaps with reference to capsule recovery  
[NASA-CASE-XMF-00641] c31 N70-36410

Design and configuration of manned space capsule  
[NASA-CASE-XLA-01332] c31 N71-15664

Describing assembly for opening stabilizing and decelerating flaps of flight capsules used in space research  
[NASA-CASE-XMF-03169] c31 N71-15675

**SPACE CHARGE**  
Space-charge-limited solid-state triode  
[NASA-CASE-NPO-13064-1] c33 N79-11314

**SPACE COMMUNICATION**  
Radio receiver with array of independently steerable antennas for deep space communication  
[NASA-CASE-XLA-00901] c07 N71-10775

Design and development of tracking receiver for tracking satellites and receiving radio signal transmissions under adverse noise conditions  
[NASA-CASE-XGS-08679] c10 N71-21473

Development of antenna system for spin stabilized communication satellite for simultaneous reception and transmission of data  
[NASA-CASE-XGS-02607] c31 N71-23009

Space communication system for compressed data with a concatenated Reed-Solomon-Viterbi coding channel  
[NASA-CASE-NPO-13545-1] c32 N77-12240

**SPACE ENVIRONMENT SIMULATION**  
Simulating voltage-current characteristic curves of solar cell panel with different operational parameters  
[NASA-CASE-XMS-01554] c10 N71-10578

Method and feed system for separating and orienting liquid and vapor phases of liquid propellants in zero gravity environment  
[NASA-CASE-XLE-01182] c27 N71-15635

Cable suspension and inclined walkway system for simulating reduced or zero gravity environments  
[NASA-CASE-XLA-01787] c11 N71-16028

Space environment simulation system for measuring spacecraft electric field strength in plasma sheath  
[NASA-CASE-XLE-02038] c09 N71-16086

Optical characteristics measuring apparatus  
[NASA-CASE-XNP-08840] c23 N71-16365

Omnidirectional anisotropic molecular trap, used with vacuum pump to simulate space environments for testing spacecraft components  
[NASA-CASE-XGS-00783] c30 N71-17788

Space environmental work simulator with portions of space suit mounted to vacuum chamber wall  
[NASA-CASE-XMP-07488] c11 N71-18773

Low and zero gravity simulator for astronaut training  
[NASA-CASE-MFS-10555] c11 N71-19494

Self lubricating fluoride-metal composite materials for outer space applications  
[NASA-CASE-XLE-08511] c18 N71-23710

Test chamber for determining decomposition and autoignition of materials used in spacecraft under controlled environmental conditions  
[NASA-CASE-KSC-10198] c11 N71-28629

Illumination system design for use as sunlight simulator in space environment simulators with multiple light sources reflected to single virtual source  
[NASA-CASE-HQN-10781] c23 N71-30292

Pressure regulator for space suit worn underwater to simulate space environment for testing and experimentation  
[NASA-CASE-MFS-20332] c05 N72-20097

**SPACE ERECTABLE STRUCTURES**  
Self-erectable space structures of flexible foam for application in planetary orbits  
[NASA-CASE-XLA-00686] c31 N70-34135

Manned space station collapsible for launching and self-erectable in orbit  
[NASA-CASE-XLA-00678] c31 N70-34296

Manned space station launched in packaged condition and self erecting in orbit  
[NASA-CASE-XLA-00258] c31 N70-38676

Collapsible, space erectable loop antenna system for space vehicle  
[NASA-CASE-XMF-00437] c07 N70-40202

Erectable, inflatable, radio signal reflecting passive communication satellite

[NASA-CASE-XLA-00210] c30 N70-40309

Deployment system for flexible wing with rigid superstructure  
[NASA-CASE-XLA-01220] c02 N70-41863

Capillary radiator for carrying heat transfer liquid in planetary spacecraft structures  
[NASA-CASE-XLE-03307] c33 N71-14035

Describing apparatus for manufacturing operations in low and zero gravity environments of orbital space flight  
[NASA-CASE-MFS-20410] c15 N71-19214

Space erectable rollup solar array of arcuate solar panels furled on tapered drum for spacecraft storage during launch  
[NASA-CASE-NPO-10188] c03 N71-20273

Self erecting parabolic reflector design for use in space  
[NASA-CASE-XMS-03454] c09 N71-20658

Pneumatic cantilever beams and platform for space erectable structure  
[NASA-CASE-XLA-01731] c32 N71-21045

Hydraulic actuator design for space deployment of heat radiators  
[NASA-CASE-MSC-11817-1] c15 N71-26611

Space expandable tether device for use as passageway between two docked spacecraft  
[NASA-CASE-XMS-10993] c15 N71-28936

Expandable space frames with high expansion to collapse ratio  
[NASA-CASE-ERC-10365-1] c31 N73-32749

Apparatus for assembling space structure  
[NASA-CASE-MFS-23579-1] c18 N79-11108

Lightweight structural columns --- space erectable trusses  
[NASA-CASE-LAR-12095-1] c31 N81-25258

Telescoping columns --- parabolic antenna support  
[NASA-CASE-LAR-12195-1] c31 N81-27324

**SPACE EXPLOATION**  
Self-propelled vehicle with wheel, track laying, and walking capability for exploratory exploitation  
[NASA-CASE-NFO-11366] c11 N73-26238

**SPACE FLIGHT**  
Portable environmental control and life support system for astronaut in and out of spacecraft  
[NASA-CASE-XMS-09632-1] c05 N71-11203

Television simulation for aircraft and space flight  
[NASA-CASE-XFR-03107] c09 N71-19449

**SPACE FLIGHT FEEDING**  
Helmet feedport  
[NASA-CASE-XMS-09653] c54 N78-17680

**SPACE INDUSTRIALIZATION**  
Apparatus for assembling space structure  
[NASA-CASE-MFS-23579-1] c18 N79-11108

**SPACE MAINTENANCE**  
System for removing and repairing spacecraft control thrusters by use of portable air locks  
[NASA-CASE-MFS-20325] c28 N71-27095

**SPACE MANUFACTURING**  
Material suspension within an acoustically excited resonant chamber --- at near weightless conditions  
[NASA-CASE-NFO-13263-1] c12 N75-24774

Method for manufacturing mirrors in zero gravity environment  
[NASA-CASE-MSC-12611-1] c12 N76-15189

Apparatus for assembling space structure  
[NASA-CASE-MFS-23579-1] c18 N79-11108

Structural members, method and apparatus  
[NASA-CASE-MSC-16217-1] c31 N81-27323

**SPACE MISSIONS**  
Planetary atmospheric investigation using split trajectory dual flyby mode  
[NASA-CASE-XAC-08494] c30 N71-15990

Elimination of tracking occultation problems occurring during continuous monitoring of interplanetary missions by using Earth orbiting communications satellite  
[NASA-CASE-XAC-06029-1] c31 N71-24813

Design and development of space shuttle system for delivering payload to earth orbit or celestial orbit  
[NASA-CASE-MSC-12391] c30 N73-12884

**SPACE NAVIGATION**  
Electrical and electromechanical trigonometric computation assembly and space vehicle guidance system for aligning perpendicular axes of two sets of three-axes coordinate

- references  
 [NASA-CASE-IXF-006E4] c21 N71-21688  
 Momentum wheel design for spacecraft attitude control and magnetic drum and head system for data storage  
 [NASA-CASE-NPO-11481] c21 N73-13644  
 Method for producing reticles for use in outer space  
 [NASA-CASE-GSC-11188-2] c21 N73-19630
- SPACE ORIENTATION**  
 Sensing method and device for determining orientation of space vehicle or satellite by using particle traps  
 [NASA-CASE-XGS-00466] c21 N70-34297
- SPACE PROCESSING**  
 Method and apparatus for supercooling and solidifying substances --- containess melts and space processing  
 [NASA-CASE-MFS-25242-1] c35 N81-24413
- SPACE RENDEZVOUS**  
 Method and apparatus for connecting two spacecraft with probe of one inserted in rocket engine nozzle of other spacecraft  
 [NASA-CASE-MFS-11133] c31 N71-16222
- SPACE SHUTTLE ORBITERS**  
 Improved attachment system for silica tiles --- thermal protection for space shuttle orbiter  
 [NASA-CASE-MSC-18741-1] c16 N81-16110
- SPACE SHUTTLES**  
 Designing spacecraft for flight into space, atmospheric reentry, and landing at selected sites  
 [NASA-CASE-IAC-02058] c02 N71-16C87  
 Design and development of space shuttle system for delivering payload to earth orbit or celestial orbit  
 [NASA-CASE-MSC-12391] c30 N73-12884  
 Spacecraft configurations and aerodynamic characteristics of space shuttle systems with two reusable stages  
 [NASA-CASE-MSC-12433] c31 N73-14E54  
 Variable ratio mixed-mode bilateral master-slave control system for shuttle remote manipulator system  
 [NASA-CASE-MSC-14245-1] c18 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] c27 N76-16229  
 Automatic thermal switch --- Space Shuttle equipment bay temperature control  
 [NASA-CASE-GSC-12415-1] c34 N80-18338  
 Adjustable high emittance gap filler --- reentry shielding for space shuttle vehicles  
 [NASA-CASE-ARC-11310-1] c27 N80-23454  
 Device for coupling a first vehicle to a second vehicle  
 [NASA-CASE-GSC-12429-1] c37 N81-14320  
 System for sterilizing objects --- cleaning space vehicle systems  
 [NASA-CASE-KSC-11085-1] c54 N81-24724  
 Terminal guidance sensor system --- space shuttle coupling to orbiting satellites  
 [NASA-CASE-NPO-14521-1] c37 N81-27519
- SPACE SIMULATORS**  
 Space simulator with uniform test region radiation distribution, adapted to simulate Venus solar radiations  
 [NASA-CASE-XNP-00459] c11 N70-38675  
 Variable geometry manned orbital vehicle having high aerodynamic efficiency over wide speed range and incorporating auxiliary pivotal wings  
 [NASA-CASE-XLA-03691] c31 N71-15674  
 Development of method and equipment for testing heat radiative properties of material under controlled environmental conditions  
 [NASA-CASE-MFS-20096] c14 N71-30C26  
 Biocentrifuge system capable of exchanging specimen cages while in operational mode  
 [NASA-CASE-MFS-23825-1] c51 N81-32829
- SPACE STATIONS**  
 Manned space station launched in packaged condition and self erecting in orbit  
 [NASA-CASE-XLA-00258] c31 N70-38676  
 Meteoroid impact position locator aid for manned space station  
 [NASA-CASE-LAR-10629-1] c35 N75-33367
- Multiple in-line docking capability for rotating space stations  
 [NASA-CASE-MFS-20855-1] c15 N77-10112
- SPACE SUITS**  
 Astronaut restraint suit for high acceleration protection  
 [NASA-CASE-XAC-00405] c05 N70-41819  
 Space suit with pressure-volume compensator system  
 [NASA-CASE-XLA-05332] c05 N71-11194  
 Equipotential space suits utilizing mechanical aids to minimize astronaut energy at bending joints  
 [NASA-CASE-LAR-10007-1] c05 N71-11195  
 One piece human garment for use as contamination proof garment  
 [NASA-CASE-MSC-12206-1] c05 N71-17599  
 Space environmental work simulator with portions of space suit mounted to vacuum chamber wall  
 [NASA-CASE-IXF-07488] c11 N71-18773  
 Space suit body heat exchanger design composed of thermal conductance yarn and liquid coolant loops  
 [NASA-CASE-XMS-09571] c05 N71-19439  
 Conditioning suit for normal function of astronaut cardiovascular system in gravity environment  
 [NASA-CASE-XLA-02898] c05 N71-20268  
 Space suit using nonflexible material with low leakage and providing protection against thermal extremes, physical punctures, and radiation with high mobility articulation  
 [NASA-CASE-XAC-07043] c05 N71-23161  
 Sealing evacuation port and evacuating vacuum container such as space jackets  
 [NASA-CASE-IXF-03290] c15 N71-23256  
 Structure of fabric layers for micrometeoroid protection garment with capability for eliminating heat shorts for use in manufacturing space suits  
 [NASA-CASE-MSC-12109] c18 N71-26285  
 Venting device for pressurized space suit helmet to eliminate vomit expelled by crewmen  
 [NASA-CASE-XMS-09652-1] c05 N71-26333  
 Automatic control device for regulating inlet water temperature of liquid cooled spacesuit  
 [NASA-CASE-MSC-13917-1] c05 N72-15098  
 Pressure regulator for space suit worn underwater to simulate space environment for testing and experimentation  
 [NASA-CASE-MFS-20332] c05 N72-20097  
 Space suit with improved waist and torso movement  
 [NASA-CASE-ARC-10275-1] c05 N72-22092  
 Underwater space suit pressure control regulator  
 [NASA-CASE-MFS-20332-2] c05 N73-25125  
 Automatic temperature control for liquid cooled space suit  
 [NASA-CASE-ARC-10599-1] c05 N73-26071  
 Intra- and extravehicular life support space suite for Apollo astronauts  
 [NASA-CASE-MSC-12609-1] c05 N73-32012  
 Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
 [NASA-CASE-MSC-14331-1] c27 N76-24405  
 Protective garment ventilation system  
 [NASA-CASE-XMS-04928] c54 N78-17679  
 Emergency space-suit helmet  
 [NASA-CASE-MSC-10954-1] c54 N78-18761  
 Spacesuit mobility joints  
 [NASA-CASE-ARC-11058-1] c54 N78-31735  
 Spacesuit torso closure  
 [NASA-CASE-ARC-11100-1] c54 N78-31736  
 Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
 [NASA-CASE-ARC-11059-1] c54 N78-32721  
 Spacesuit mobility knee joints  
 [NASA-CASE-ARC-11058-2] c54 N79-24651  
 Pressure suit joint analyzer  
 [NASA-CASE-ARC-11314-1] c54 N80-30043  
 Absorbent product and articles made therefrom --- for collection of human wastes  
 [NASA-CASE-MSC-18223-1] c24 N81-16127
- SPACE TOOLS**  
 Pneumatic inflatable end effector  
 [NASA-CASE-MFS-23696-1] c54 N81-26718
- SPACE TRANSPORTATION SYSTEM**  
 Coupling device for moving vehicles  
 [NASA-CASE-GSC-12322-1] c37 N80-14398

## SPACE VEHICLE CHECKOUT PROGRAM

Hydraulic support apparatus for dynamic testing of space vehicles under near-free flight conditions  
[NASA-CASE-XMF-03248] c11 N71-10604

Digital computer system for automatic prelaunch checkout of spacecraft  
[NASA-CASE-XKS-08012-2] c31 N71-15566

Developing high pressure gas purification and filtration system for use in test operations of space vehicles  
[NASA-CASE-MFS-12806] c14 N71-17588

**SPACEBORNE PHOTOGRAPHY**  
Camera arrangement --- for satellite scanning of earth or sky  
[NASA-CASE-GSC-12032-2] c35 N76-19408

**SPACEBORNE TELESCOPES**  
Anastigmatic three-mirror telescope  
[NASA-CASE-MFS-23675-1] c89 N79-10969

Cooled echelle grating spectrometer --- for space telescope applications  
[NASA-CASE-NFO-14372-1] c35 N80-26635

Extended range X-ray telescope  
[NASA-CASE-MFS-25282-1] c89 N81-34122

**SPACECRAFT**  
Metal strip mounting arrangement for solar cell arrays on spacecraft  
[NASA-CASE-IGS-01475] c03 N71-11058

Attitude sensor with scanning mirrors for detecting orientation of space vehicle with respect to planet  
[NASA-CASE-XLA-00793] c21 N71-22680

Negation of magnetic fields produced by thin waferlike circuit elements in space vehicles  
[NASA-CASE-XGS-03390] c03 N71-23187

Low mass ionizing device for use in electric thrust spacecraft engines  
[NASA-CASE-XNP-01954] c28 N71-28850

Vacuum chamber with scale model of rocket engine base area of space vehicle  
[NASA-CASE-MFS-20620] c11 N72-27262

**SPACECRAFT ANTENNAS**  
Low loss parasitic probe antenna for prelaunch tests of spacecraft antennas  
[NASA-CASE-XKS-09348] c09 N71-13521

Millimeter wave antenna system for spacecraft use  
[NASA-CASE-GSC-10949-1] c07 N71-28565

Low weight, integrated thermoelectric generator/antenna combination for spacecraft  
[NASA-CASE-XER-09521] c09 N72-12136

Omnidirectional antenna array with circumferential slots for mounting on cylindrical space vehicle  
[NASA-CASE-LAR-10163-1] c09 N72-25247

Purlable antenna for spacecraft  
[NASA-CASE-NFO-11361] c07 N72-32169

Collapsible support for antenna reflector applied to installation of spacecraft antennas  
[NASA-CASE-NPO-11751] c07 N73-24176

Multi-channel rotating optical interface for data transmission  
[NASA-CASE-NFO-14066-1] c74 N79-34011

Antenna deployment mechanism for use with a spacecraft --- extensible and retractable telescopic antenna mast  
[NASA-CASE-GSC-12331-1] c18 N80-14183

**SPACECRAFT CABIN ATMOSPHERES**  
Thermal control wall panel with application to spacecraft cabins  
[NASA-CASE-XLA-01243] c33 N71-22792

Nonflammable coating compositions --- for use in high oxygen environments  
[NASA-CASE-MFS-20486-2] c27 N74-17283

Regenerable device for scrubbing breathable air of CO<sub>2</sub> and moisture without special heat exchanger equipment  
[NASA-CASE-MSC-14771-1] c54 N77-32722

**SPACECRAFT COMMUNICATION**  
Synchronizing apparatus for multi-access satellite time division multiplex system  
[NASA-CASE-XGS-05918] c07 N69-39974

Phase shift data transmission system with pseudo-noise synchronization code modulated with digital data into single channel for spacecraft communication  
[NASA-CASE-XNP-00911] c08 N70-41561

Design and development of tracking receiver for tracking satellites and receiving radio signal transmissions under adverse noise conditions  
[NASA-CASE-XGS-08679] c10 N71-21473

Microwave omnidirectional antenna for use on spacecraft  
[NASA-CASE-XLA-03114] c09 N71-22888

VHF/UHF parasitic probe antenna for spacecraft communication  
[NASA-CASE-XKS-09340] c07 N71-24614

System designed to reduce time required for obtaining synchronization in data communication with spacecraft utilizing pseudonoise codes  
[NASA-CASE-NFO-10214] c10 N71-26577

Turnstile slot antenna  
[NASA-CASE-GSC-11428-1] c32 N74-20864

Switchable beamwidth monopulse method and system  
[NASA-CASE-GSC-11924-1] c33 N76-27472

Antenna feed system for receiving circular polarization and transmitting linear polarization  
[NASA-CASE-NFO-14362-1] c32 N80-16261

Common data buffer system --- communication with computational equipment utilized in spacecraft operations  
[NASA-CASE-KSC-11048-1] c62 N81-24779

Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c32 N81-27341

**SPACECRAFT COMPONENTS**  
Rectangular electric conductors for conductor cables to withstand spacecraft vibration and controlled atmosphere  
[NASA-CASE-MFS-14741] c09 N70-20737

Vibration damping system operating in low vacuum environment for spacecraft mechanisms  
[NASA-CASE-XMS-01620] c23 N71-15673

Intermittent type silica gel adsorption refrigerator for providing temperature control for spacecraft components  
[NASA-CASE-XNP-00920] c15 N71-15906

Omnidirectional anisotropic molecular trap, used with vacuum pump to simulate space environments for testing spacecraft components  
[NASA-CASE-XGS-00783] c30 N71-17788

Spacecraft air lock system to provide ingress and egress of astronaut without subjecting vehicular environment to vacuum of space  
[NASA-CASE-XLA-02050] c31 N71-22968

Development and characteristics of docking structure and apparatus for spacecraft docking  
[NASA-CASE-XMF-05941] c31 N71-23912

Design and development of release mechanism for spacecraft components, releasable despinn weights, and extensible gravity booms  
[NASA-CASE-XGS-08718] c15 N71-24600

Space environment simulator for testing spacecraft components under aerospace conditions  
[NASA-CASE-NFO-10141] c11 N71-24964

Design and development of spacecraft with outer shell structure heat shielding and built-in, removable excursion module  
[NASA-CASE-MSC-13047-1] c31 N71-25434

Electronic detection system for peak acceleration limits in vibrational testing of spacecraft components  
[NASA-CASE-NFO-10556] c14 N71-27185

Development of solid state polymer coating for obtaining thermal balance in spacecraft components  
[NASA-CASE-XLA-01745] c33 N71-28903

Development of apparatus for mounting scientific experiments in spacecraft to permit utilization without maneuvering spacecraft  
[NASA-CASE-MSC-12372-1] c31 N72-25842

Airlock  
[NASA-CASE-MFS-20922-1] c18 N74-22136

Thrust-isolating mounting --- characteristics of support for loads mounted in spacecraft  
[NASA-CASE-MFS-21680-1] c18 N74-27397

Variable ratio mixed-mode bilateral master-slave control system for shuttle remote manipulator system  
[NASA-CASE-MSC-14245-1] c18 N75-27041

Surface conforming thermal/pressure seal --- for control devices in space vehicles  
[NASA-CASE-MSC-18422-1] c37 N80-14400

High temperature penetrator assembly with bayonet plug and ramp-activated lock  
[NASA-CASE-MSC-18526-1] c35 N80-19468

## SPACECRAFT CONFIGURATIONS

Inflatable honeycomb panel element for lightweight structures usable in space stations and other construction  
[NASA-CASE-XLA-00204] c32 N70-36536

Lenticular vehicle with foldable aerodynamic control flaps and reaction jets for operation above and within earth's atmosphere  
[NASA-CASE-XGS-00260] c31 N70-37924

Stage separation system for spinning vehicles and payloads  
[NASA-CASE-XLA-02132] c31 N71-10582

Spacecraft configurations and aerodynamic characteristics of space shuttle systems with two reusable stages  
[NASA-CASE-MS-C-12433] c31 N73-14854

Space vehicle  
[NASA-CASE-MFS-22734-1] c18 N75-19329

## SPACECRAFT CONSTRUCTION MATERIALS

Pressurized cell micrometeoroid detector  
[NASA-CASE-XLA-00936] c14 N71-14996

Flexible barrier membrane comprising porous substrate and incorporating liquid gallium or indium metal used as sealant barriers for spacecraft walls and pumping liquid propellants  
[NASA-CASE-XNP-08881] c17 N71-28747

Method of making a composite sandwich lattice structure  
[NASA-CASE-LAR-11898-2] c24 N78-17149

## SPACECRAFT CONTROL

Light sensitive digital aspect sensor for attitude control of earth satellites or space probes  
[NASA-CASE-XGS-00359] c14 N70-34158

Spacecraft attitude control system using solar and earth sensors, gyroscopes, and jet actuators  
[NASA-CASE-XNP-00465] c21 N70-35395

Multiple parachute system for landing control of Apollo type spacecraft  
[NASA-CASE-XLA-00898] c02 N70-36804

Attitude control device for space vehicles  
[NASA-CASE-XNP-00294] c21 N70-36938

Attitude orientation control of spin stabilized final stage space vehicles, using horizon scanners  
[NASA-CASE-XLA-00281] c21 N70-36943

Aerodynamic configuration of reentry vehicle heat shield to provide longitudinal and directional stability at hypersonic velocities  
[NASA-CASE-XMS-04142] c31 N70-41631

Star sensor system for roll attitude control of spacecraft  
[NASA-CASE-XNP-01307] c21 N70-41856

Photomultiplier detector of Canopus for spacecraft attitude control  
[NASA-CASE-XNP-03914] c21 N71-10771

Development of spacecraft experiment pointing and attitude control system  
[NASA-CASE-XLA-05464] c21 N71-14132

Development of attitude control system for spacecraft orientation  
[NASA-CASE-XGS-04393] c21 N71-14159

Drive mechanism for operating reactance attitude control system for aerospace bodies  
[NASA-CASE-XNP-01598] c21 N71-15583

Attitude detection system using stellar references for three-axis control and spin stabilized spacecraft  
[NASA-CASE-XGS-03431] c21 N71-15642

Large amplitude, linear inertial reference system of vibrating string type for spacecraft reference plane  
[NASA-CASE-XAC-03107] c23 N71-16098

Construction and method of arranging plurality of ion engines to form cluster thereby increasing efficiency and control by decreasing heat radiated to space  
[NASA-CASE-XNP-02923] c28 N71-23081

Ion beam deflector system for electronic thrust vector control for ion propulsion yaw, pitch, and roll forces  
[NASA-CASE-LEW-10689-1] c28 N71-26173

Heated porous plug microthruster for spacecraft reaction jet controlled systems such as fuel flow regulation, propellant disassociation, and heat transfer augmentation  
[NASA-CASE-GSC-10640-1] c28 N72-18766

Development of thrust control system for application to control of aircraft and

spacecraft

[NASA-CASE-MS-C-13397-1] c21 N72-25595

All sky pointing attitude control system  
[NASA-CASE-ABC-10716-1] c35 N77-20399

**SPACECRAFT DESIGN**

Lunar landing flight research vehicle  
[NASA-CASE-XPR-00929] c31 N70-34966

Design and configuration of manned space capsule  
[NASA-CASE-XLA-01332] c31 N71-15664

Development of spacecraft radiator cover  
[NASA-CASE-MS-C-12049] c31 N71-16080

Method and apparatus for connecting two spacecraft with probe of one inserted in rocket engine nozzle of other spacecraft  
[NASA-CASE-MFS-11133] c31 N71-16222

Development and characteristics of protective coatings for spacecraft  
[NASA-CASE-XNP-02507] c31 N71-17679

Development and characteristics of self supporting space vehicle  
[NASA-CASE-XLA-00117] c31 N71-17680

Multi-mission space vehicle module stage design  
[NASA-CASE-XMF-01543] c31 N71-17730

Development and characteristics of docking structure and apparatus for spacecraft docking  
[NASA-CASE-XMP-05941] c31 N71-23912

Design and development of spacecraft with outer shell structure heat shielding and built-in, removable excursion module  
[NASA-CASE-MS-C-13047-1] c31 N71-25434

Spacecraft design with single point aerodynamic and hydrodynamic stability for emergency transport of men from space station to splashdown  
[NASA-CASE-MS-C-13281] c31 N72-18859

Space vehicle  
[NASA-CASE-MFS-22734-1] c18 N75-19329

Space vehicle system  
[NASA-CASE-MS-C-12561-1] c18 N76-17185

Method and apparatus for neutralizing potentials induced on spacecraft surfaces  
[NASA-CASE-GSC-11963-1] c33 N77-10429

**SPACECRAFT DOCKING**

Probe and drogue assembly for mechanical linking of two space vehicles  
[NASA-CASE-XMS-03613] c31 N71-16346

Development and characteristics of docking structure and apparatus for spacecraft docking  
[NASA-CASE-XMP-05941] c31 N71-23912

Latch for fastening spacecraft docking rings  
[NASA-CASE-MS-C-15474-1] c15 N71-26162

High energy absorption docking system design for docking large spacecraft  
[NASA-CASE-MFS-20863] c31 N73-26876

Latch mechanism  
[NASA-CASE-MS-C-12549-1] c37 N74-27903

Spacecraft docking and alignment system --- using television camera system  
[NASA-CASE-MS-C-12559-1] c18 N76-14186

Multiple in-line docking capability for rotating space stations  
[NASA-CASE-MFS-20855-1] c15 N77-10112

Combined docking and grasping device  
[NASA-CASE-MFS-23088-1] c37 N77-23483

Satellite retrieval system  
[NASA-CASE-MFS-25403-1] c18 N81-24164

Terminal guidance sensor system --- space shuttle coupling to orbiting satellites  
[NASA-CASE-NPO-14521-1] c37 N81-27519

**SPACECRAFT ELECTRONIC EQUIPMENT**

Equipment for testing of ground station ranging equipment and spacecraft transponders  
[NASA-CASE-XMS-05454-1] c07 N71-12391

Describing apparatus used in vacuum deposition of thin film inductive windings for spacecraft microcircuitry  
[NASA-CASE-XMP-01667] c15 N71-17647

Nose cone mounted heat resistant antenna comprising plurality of adjacent layers of silica not introducing paths of high thermal conductivity through ablative shield  
[NASA-CASE-XMS-04312] c07 N71-22984

**SPACECRAFT ENVIRONMENTS**

Portable environmental control and life support system for astronaut in and out of spacecraft  
[NASA-CASE-XMS-09632-1] c05 N71-11203

Quick disconnect latch and handle combination for mounting articles on walls or supporting bases in spacecraft under zero gravity.



- conditions  
[NASA-CASE-MFS-11132] c15 N71-17649
- Dual solid cryogens for spacecraft refrigeration insuring low temperature cooling for extended periods  
[NASA-CASE-GSC-10188-1] c23 N71-24725
- Dual stage check valve for cryogenic supply systems used in space flight environmental control system  
[NASA-CASE-MSC-13587-1] c15 N73-30459
- Metering gun for dispensing precisely measured charges of fluid  
[NASA-CASE-MFS-21163-1] c54 N74-17853
- SPACECRAFT GUIDANCE**
- Automatic ejection valve for attitude control and midcourse guidance of space vehicles  
[NASA-CASE-XNP-00676] c15 N70-38596
- Electrical and electromechanical trigonometric computation assembly and space vehicle guidance system for aligning perpendicular axes of two sets of three-axes coordinate references  
[NASA-CASE-XMF-00684] c21 N71-21688
- Design and characteristics of device for sensing solar radiation and providing spacecraft attitude control to maintain direction with respect to incident radiation  
[NASA-CASE-XNP-05535] c14 N71-23040
- Inertial gimbal alignment system for spacecraft guidance  
[NASA-CASE-XMF-01669] c21 N71-23289
- Hermetically sealed vibration damper design for use in gimbal assembly of spacecraft inertial guidance system  
[NASA-CASE-MSC-10959] c15 N71-26243
- SPACECRAFT INSTRUMENTS**
- Mechanical coordinate converter for use with spacecraft tracking antennas  
[NASA-CASE-XNP-00614] c14 N70-36907
- Air bearings for spacecraft gyros  
[NASA-CASE-XMF-00339] c15 N70-39896
- Unfolding boom assembly with knuckle joints for positioning equipment for spacecraft  
[NASA-CASE-YGS-00938] c32 N70-41367
- Pressurized cell micrometeoroid detector  
[NASA-CASE-XLA-06936] c14 N71-14996
- Guidance analyzer having suspended spacecraft simulating sphere for astronavigation  
[NASA-CASE-XNP-09572] c14 N71-15621
- Inertial component clamping assembly design for spacecraft guidance and control system mounting  
[NASA-CASE-YMS-02184] c15 N71-20813
- Optical projector system for establishing optimum arrangement of instrument displays in aircraft, spacecraft, other vehicles, and industrial instrument consoles  
[NASA-CASE-XNP-03853] c23 N71-21882
- Combined optical attitude and altitude indicating instrument for use in aircraft or spacecraft  
[NASA-CASE-XLA-01907] c14 N71-23268
- Spacecraft transponder and ground station radar system for mapping planetary surfaces  
[NASA-CASE-NPO-11001] c07 N72-21118
- Method and apparatus for providing active attitude control for spacecraft by converting any attitude motion of vehicle into simple rotational motion  
[NASA-CASE-HQN-10439] c21 N72-21624
- Design and development of thermochemical pump for transmitting warming fluid through fluid circuit to control temperature of spacecraft instrumentation  
[NASA-CASE-NFO-11417] c15 N73-24513
- Deployable pressurized cell structure for a micrometeoroid detector  
[NASA-CASE-LAR-10295-1] c35 N74-21062
- Distributed-switch Dicke radiometers  
[NASA-CASE-GSC-12219-1] c35 N80-18359
- SPACECRAFT LANDING**
- Non-reusable kinetic energy absorber for application in soft landing of space vehicles  
[NASA-CASE-XLE-00810] c15 N70-34661
- Plastic foam generator for space vehicle instrument payload package flotation in water landing  
[NASA-CASE-XLA-00838] c03 N70-36778
- Device for use in descending spacecraft as altitude sensor for actuating deceleration retrorockets  
[NASA-CASE-YMS-03792] c14 N70-41812
- SPACECRAFT LAUNCHING**
- Three stage motion restraining mechanism for restraining and damping three dimensional vibrational movement of gimballed package during launch of spacecraft  
[NASA-CASE-GSC-10306-1] c15 N71-24694
- Development and characteristics of squib actuated explosive disconnect for spacecraft release from launch vehicle  
[NASA-CASE-NFO-11330] c33 N73-26958
- SPACECRAFT MODELS**
- Space environment simulation system for measuring spacecraft electric field strength in plasma sheath  
[NASA-CASE-XLE-02038] c09 N71-16086
- SPACECRAFT MODULES**
- Radial module manned space station with artificial gravity environment  
[NASA-CASE-YMS-01906] c31 N70-41373
- Multi-mission space vehicle module stage design  
[NASA-CASE-XMF-01543] c31 N71-17730
- Design and development of spacecraft with outer shell structure heat shielding and built-in, removable excursion module  
[NASA-CASE-MSC-13047-1] c31 N71-25434
- Development and characteristics of thermal control system for maintaining constant temperature within spacecraft module with wide variations of component heat transfer  
[NASA-CASE-GSC-11018-1] c31 N73-30829
- SPACECRAFT MOTION**
- Magnetic suspension and pointing system --- on a carrier vehicle  
[NASA-CASE-LAR-11889-1] c35 N79-26372
- SPACECRAFT POSITION INDICATORS**
- Device for determining relative angular position of spacecraft and radiating celestial body  
[NASA-CASE-GSC-11444-1] c14 N73-28490
- Spacecraft attitude sensing system design with narrow field of view sensor rotating about spacecraft x-y axis  
[NASA-CASE-GSC-10890-1] c21 N73-30640
- SPACECRAFT POWER SUPPLIES**
- Spacecraft battery seals  
[NASA-CASE-YGS-03864] c15 N69-24320
- Electrical power system for space flight vehicles operating over extended periods  
[NASA-CASE-XMF-00517] c03 N70-34157
- Lightweight, rugged, inexpensive satellite battery for producing electrical power from ionosphere using electrodes with different contact potentials  
[NASA-CASE-YGS-01593] c03 N70-35408
- Design and development of electric generator for space power system  
[NASA-CASE-XLE-04250] c09 N71-20446
- Monostable multivibrator for conserving power in spacecraft systems  
[NASA-CASE-GSC-10082-1] c10 N72-20221
- Rectangular solar cell stacked panels to generate electrical power aboard spacecraft  
[NASA-CASE-NFO-11771] c03 N73-20040
- Thermoelectric power system --- for spacecraft  
[NASA-CASE-MFS-22002-1] c44 N76-16612
- Solar energy power system  
[NASA-CASE-MFS-21628-2] c44 N76-23675
- Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c33 N79-24254
- A linear magnetic motor/generator --- to generate electric energy using magnetic flux for spacecraft's power supply  
[NASA-CASE-GSC-12518-1] c33 N80-19424
- Solar driven liquid metal MHD power generator  
[NASA-CASE-LAR-12495-1] c44 N81-32609
- SPACECRAFT PROPULSION**
- Colloidal particle generator for electrostatic engine for propelling space vehicles  
[NASA-CASE-XLE-00817] c28 N70-33265
- Spacecraft trajectory correction propulsion system  
[NASA-CASE-XNP-01104] c28 N70-39931
- Permanently magnetized ion engine casing construction for use in spacecraft propulsion systems  
[NASA-CASE-XNP-06942] c28 N71-23293

- Development of voice operated controller for controlling reaction jets of spacecraft  
[NASA-CASE-XLA-04063] c31 N71-32160
- Solid propellant motor  
[NASA-CASE-NPO-11458A] c20 N78-32179
- General purpose rocket furnace  
[NASA-CASE-MFS-23460-1] c12 N79-26075
- Speed control device for a heavy duty shaft --- solar sails for spacecraft propulsion  
[NASA-CASE-NPO-14170-1] c37 N81-15364
- SPACECRAFT RADIATORS**
- Thermal control canister  
[NASA-CASE-GSC-12253-1] c34 N79-31523
- SPACECRAFT RECOVERY**
- Assembly for opening flight capsule stabilizing and decelerating flaps with reference to capsule recovery  
[NASA-CASE-XMP-00641] c31 N70-36410
- Method for deployment of flexible wing glider from space vehicle with minimum impact and loading  
[NASA-CASE-XMS-00907] c02 N70-41630
- Satellite retrieval system  
[NASA-CASE-MFS-25403-1] c18 N81-24164
- SPACECRAFT REENTRY**
- Manned space capsule configuration for orbital flight and atmospheric reentry  
[NASA-CASE-XLA-00149] c31 N70-37538
- Event recorder with constant speed motor which rotates recording disk  
[NASA-CASE-XLA-01832] c14 N71-21006
- SPACECRAFT SHIELDING**
- Development and characteristics of protective coatings for spacecraft  
[NASA-CASE-XMP-02507] c31 N71-17679
- Double-wall isothermal cylinder containing heat transfer fluid thermal reservoir as spacecraft insulation cover  
[NASA-CASE-MFS-20355] c33 N71-25353
- Binder stabilized zinc oxide pigmented coating for spacecraft thermal control  
[NASA-CASE-XMP-07770-2] c18 N71-26772
- Electrically conductive thermal control coatings  
[NASA-CASE-GSC-12207-1] c24 N79-14156
- Thermal insulation protection means  
[NASA-CASE-MSC-12737-1] c24 N79-25142
- Thermal barrier pressure seal --- shielding junctions between spacecraft control surfaces and structures  
[NASA-CASE-MSC-18134-1] c37 N81-15363
- A method and technique for installing light-weight fragile, high-temperature fiber insulation --- spacecraft heat sealing  
[NASA-CASE-MSC-16934-2] c37 N81-16468
- SPACECRAFT STABILITY**
- Satellite stabilization reaction wheel scanner  
[NASA-CASE-XGS-02629] c14 N71-21082
- Attitude sensor  
[NASA-CASE-LAR-10586-1] c19 N74-15089
- Annular momentum control device used for stabilization of space vehicles and the like  
[NASA-CASE-LAR-11051-1] c15 N76-14158
- Tetherline system for orbiting satellites  
[NASA-CASE-MFS-23564-1] c15 N78-25119
- Active nutation controller  
[NASA-CASE-GSC-12273-1] c35 N80-21719
- Method of and apparatus for damping nutation motion with minimum spin axis attitude disturbance  
[NASA-CASE-GSC-12551-1] c18 N81-12156
- SPACECRAFT STRUCTURES**
- Collapsible, space erectable loop antenna system for space vehicle  
[NASA-CASE-XMP-00437] c07 N70-40202
- Electro-optical system for maintaining two-axis alignment during milling operations on large tank-sections  
[NASA-CASE-XMP-00908] c14 N70-40238
- Development of spacecraft radiator cover  
[NASA-CASE-MSC-12049] c31 N71-16080
- Design and construction of satellite appendage tie-down cord  
[NASA-CASE-XGS-02554] c31 N71-21064
- Development and characteristics of thermal sensitive panel for controlling ratio of solar absorptivity to surface emissivity for space vehicle temperature control  
[NASA-CASE-XLA-07728] c33 N71-22690
- Space expandable tether device for use as passageway between two docked spacecraft  
[NASA-CASE-XMS-10993] c15 N71-28936
- Delayed simultaneous appendage release mechanism for use on spacecraft equipped with despin mechanisms and releasable components  
[NASA-CASE-GSC-10814-1] c03 N73-20039
- Pressurized panel meteoroid detector  
[NASA-CASE-XLA-08916-2] c14 N73-28487
- Structural heat pipe --- for spacecraft wall thermal insulation system  
[NASA-CASE-GSC-11619-1] c34 N75-12222
- Auger attachment method for insulation --- of spacecraft  
[NASA-CASE-MSC-12615-1] c37 N76-19437
- Particulate and solar radiation stable coating for spacecraft  
[NASA-CASE-LAR-10805-2] c34 N77-18382
- Diced tile thermal protection for spacecraft  
[NASA-CASE-MSC-16366-1] c24 N79-23142
- Pneumatic inflatable end effector  
[NASA-CASE-MFS-23696-1] c54 N81-26718
- SPACECRAFT TELEVISION**
- Electrically operated rotary shutter for television camera aboard spacecraft  
[NASA-CASE-XMP-00637] c14 N70-40273
- Conversion system for transforming slow scan rate of Apollo TV camera on moon to fast scan of commercial TV  
[NASA-CASE-XMS-07168] c07 N71-11300
- Optical conversion method --- for spacecraft television  
[NASA-CASE-MSC-12618-1] c74 N78-17865
- SPACECRAFT TRACKING**
- Spacecraft ranging system  
[NASA-CASE-NFO-10066] c09 N71-18598
- Elimination of tracking occultation problems occurring during continuous monitoring of interplanetary missions by using Earth orbiting communications satellite  
[NASA-CASE-XAC-06029-1] c31 N71-24813
- Tracking mount for laser telescope employed in tracking large rockets and space vehicles to give information regarding azimuth and elevation  
[NASA-CASE-MFS-14017] c14 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] c19 N74-21015
- Conical scan tracking system employing a large antenna  
[NASA-CASE-NPO-14009-1] c32 N79-13214
- SPACECREWS**
- Development and characteristics of inflatable structure to provide escape from orbit for spacecrews under emergency conditions  
[NASA-CASE-XMS-06162] c31 N71-28851
- SPALLATION**
- Method of producing I-123 --- by bombardment of cesium causing spallation  
[NASA-CASE-LEW-11390-2] c25 N76-27383
- SPARK CHAMBERS**
- Laser measuring system for incremental assemblies --- measuring wire-wrapped frame assemblies in spark chambers  
[NASA-CASE-GSC-12321-1] c36 N80-18380
- Inorganic spark chamber frame and method of making the same  
[NASA-CASE-GSC-12354-1] c35 N80-20565
- SPARK GAPS**
- Spark gap type protective circuit for fast sensing and removal of overvoltage conditions  
[NASA-CASE-XAC-08981] c09 N69-39297
- Mechanism for measuring nanosecond time differences between luminous events using streak camera  
[NASA-CASE-XLA-01987] c23 N71-23976
- SPARK IGNITION**
- High temperature spark plug for igniting liquid rocket propellants  
[NASA-CASE-XLE-00660] c28 N70-39925
- Plasma igniter for internal combustion engine  
[NASA-CASE-NPO-13828-1] c37 N79-11405
- SPARK PLUGS**
- High temperature spark plug for igniting liquid rocket propellants  
[NASA-CASE-XLE-00660] c28 N70-39925
- SPATIAL DISTRIBUTION**
- Electronic recording system for spatial mass

- distribution of liquid rocket propellant droplets or vapors ejected from high velocity nozzles  
[NASA-CASE-NPO-10185] c10 N71-26339
- SPATIAL FILTERING**  
Spatial filter for Q-switched lasers  
[NASA-CASE-LEW-12164-1] c36 N77-32478
- SPECIMENS**  
Fixture for environmental exposure of structural materials under compression  
[NASA-CASE-LAR-12602-1] c35 N81-19429
- SPECTRAL REFLECTANCE**  
Single reflector interference spectrometer and drive system therefor  
[NASA-CASE-NPO-11932-1] c35 N74-23040
- SPECTRAL SIGNATURES**  
Multispectral imaging and analysis system --- using charge coupled devices and linear arrays  
[NASA-CASE-NPO-13691-1] c43 N79-17288
- SPECTROMETERS**  
Spectrometer using photoelectric effect to obtain spectral data  
[NASA-CASE-XNP-04161] c14 N71-15599  
Variable frequency nuclear magnetic resonance spectrometer providing drive signals over wide frequency range and minimizing noise effects  
[NASA-CASE-XNP-09830] c14 N71-26266  
Maksutov spectrograph for low light level research  
[NASA-CASE-XLA-10402] c14 N71-29041  
Dual purpose optical instrument capable of simultaneously acting as spectrometer and diffractometer  
[NASA-CASE-XNP-05231] c14 N73-28491  
Design of gamma ray spectrometer for measurement of intense radiation using Compton scattering effect  
[NASA-CASE-MFS-21441-1] c14 N73-30392  
Mossbauer spectrometer radiation detector  
[NASA-CASE-LAR-11155-1] c35 N74-15091  
Single reflector interference spectrometer and drive system therefor  
[NASA-CASE-NPO-11932-1] c35 N74-23040  
Spectrometer integrated with a facsimile camera  
[NASA-CASE-LAR-11207-1] c35 N75-19613  
Resonant waveguide stark cell --- using microwave spectrometers  
[NASA-CASE-LAR-11352-1] c33 N75-26245  
Ion and electron detector for use in an ICR spectrometer  
[NASA-CASE-NPO-13479-1] c35 N77-10492  
Frequency-scanning particle size spectrometer  
[NASA-CASE-NPO-13606-2] c35 N80-18364  
Velocity servo for continuous scan Fourier interference spectrometer  
[NASA-CASE-NPO-14093-1] c35 N80-20563  
Visible and infrared polarization ratio spectroradiometer  
[NASA-CASE-LAR-12285-1] c35 N80-28687
- SPECTROPHOTOMETERS**  
Spectrophotofluorometer with 3-dimensional display to identify fluorescence spectra of carcinogenic and noncarcinogenic hydrocarbons  
[NASA-CASE-XGS-01231] c14 N70-41676  
High resolution Fourier interferometer-spectrophotopolarimeter  
[NASA-CASE-NPO-13604-1] c35 N76-31490  
Differential optoacoustic absorption detector  
[NASA-CASE-NPO-13759-1] c74 N78-17667
- SPECTRORADIOMETERS**  
Development and characteristics of spectroradiometer with wedge filters to eliminate adverse effect of pinholes in filters  
[NASA-CASE-HQN-10683] c14 N71-34389
- SPECTROSCOPIC ANALYSIS**  
Cylindrical reflector for resolving wide angle light beam from telescope into narrow beam for spectroscopic analysis  
[NASA-CASE-XGS-08269] c23 N71-26206
- SPECTRUM ANALYSIS**  
Spectrometer using photoelectric effect to obtain spectral data  
[NASA-CASE-XNP-04161] c14 N71-15599  
Emission spectroscopy method for contamination monitoring of inert gas metal arc welding  
[NASA-CASE-XMF-02039] c15 N71-15671  
Method and apparatus for high resolution power spectrum analysis  
[NASA-CASE-NPO-10748] c08 N72-20177
- Frequency tracked pulse technique for ultrasonic analysis  
[NASA-CASE-LAR-12697-1] c32 N80-26571  
Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c25 N81-14015
- SPECULAR REFLECTION**  
Real time reflectometer --- measurement of specular reflectance  
[NASA-CASE-MFS-23118-1] c35 N77-31465
- SPEECH RECOGNITION**  
Speech analyzer  
[NASA-CASE-GSC-11898-1] c32 N77-30309
- SPEED CONTROL**  
System for maintaining motor at predetermined speed using digital pulses  
[NASA-CASE-XMF-06892] c09 N71-24805  
Optimal control system for automatic speed regulation of electric driven motor vehicle  
[NASA-CASE-NPO-11210] c11 N72-20244  
Two speed drive system --- mechanical device for changing speed on rotating vehicle wheel  
[NASA-CASE-MFS-20645-1] c37 N74-23070  
Low speed phaselock speed control system --- for brushless dc motor  
[NASA-CASE-GSC-11127-1] c09 N75-24758  
Speed control device for a heavy duty shaft --- solar sails for spacecraft propulsion  
[NASA-CASE-NFO-14170-1] c37 N81-15364  
Variable speed drive  
[NASA-CASE-GSC-12643-1] c37 N81-24447
- SPEED REGULATORS**  
Feedback control for direct current motor to achieve constant speed under varying loads  
[NASA-CASE-MFS-14610] c09 N71-28886
- SPHERES**  
Guidance analyzer having suspended spacecraft simulating sphere for astronavigation  
[NASA-CASE-INP-09572] c14 N71-15621  
Plastic sphere for radar tracking and calibration  
[NASA-CASE-XLA-11154] c07 N72-21117
- SPHERICAL SHELLS**  
Hollow spherical electrode for shielding dielectric junction between high voltage conductor and insulator  
[NASA-CASE-XLE-03778] c09 N69-21542  
Development of mechanical device for measuring distance of point within sphere from surface of sphere  
[NASA-CASE-XLA-06683] c14 N72-28436
- SPHERICAL TANKS**  
Gauge for measuring quantity of liquid in spherical tank in reduced gravity  
[NASA-CASE-IHS-06236] c14 N71-21007
- SPHERICAL WAVES**  
Electrical device for developing converging spherical shock waves  
[NASA-CASE-MFS-20890] c14 N72-22439
- SPIKE NOZZLES**  
Constructing fluid spike nozzle to eliminate heat transfer and high temperature problems inherent in physical spikes  
[NASA-CASE-XGS-01143] c31 N71-15647
- SPIKE POTENTIALS**  
Elimination of current spikes in buck power converters  
[NASA-CASE-NPO-14505-1] c33 N81-19393
- SPIN DYNAMICS**  
Nutation damper for use on spinning body  
[NASA-CASE-GSC-11205-1] c15 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] c72 N79-13826
- SPIN REDUCTION**  
Optical scanner mounted on rotating support structure with method of compensating for image or satellite rotation  
[NASA-CASE-XGS-02401] c14 N69-27485  
Bolt-latch mechanism for releasing despin weights from space vehicle  
[NASA-CASE-XLA-00679] c15 N70-38601  
Stretch Yo-Yo mechanism for reducing initial spin rate of space vehicle  
[NASA-CASE-XGS-00619] c30 N70-40016  
Stage separation system for spinning vehicles and payloads  
[NASA-CASE-XLA-02132] c31 N71-10582

- Flexible turnstile antenna system for reducing nutation in spin-oriented satellites  
[NASA-CASE-XMF-00442] c31 N71-10747
- SPIN STABILIZATION**  
Dynamic precession damping of spin-stabilized vehicles by using rate gyroscope and angular accelerometer  
[NASA-CASE-XLA-01989] c21 N70-34295  
Attitude orientation control of spin stabilized final stage space vehicles, using horizon scanners  
[NASA-CASE-XLA-00281] c21 N70-36943  
Attitude detection system using stellar references for three-axis control and spin stabilized spacecraft  
[NASA-CASE-XGS-03431] c21 N71-15642  
Spin phase synchronization of cartwheel satellite in polar orbit  
[NASA-CASE-XGS-05579] c31 N71-15676  
High velocity guidance and spin stabilization gyro controlled jet reaction system for launch vehicle payloads  
[NASA-CASE-XLA-01339] c31 N71-15692  
Passive dual spin misalignment compensators --- gyro-stabilized device  
[NASA-CASE-GSC-11479-1] c35 N74-28097  
Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft  
[NASA-CASE-LAR-10753-1] c08 N74-30421  
Active nutation controller  
[NASA-CASE-GSC-12273-1] c35 N80-21719  
Thrust augmented spin recovery device  
[NASA-CASE-LAR-11970-2] c08 N81-19130
- SPINDLES**  
Variable contour securing system  
[NASA-CASE-MSC-16270-1] c37 N78-27423
- SPINE**  
Spine immobilization apparatus  
[NASA-CASE-ARC-11167-1] c52 N81-25662
- SPINNERS**  
Head for high speed spinner having a vacuum chuck --- holding silicon dioxide chips for etching  
[NASA-CASE-NPO-15227-1] c37 N81-33482
- SPIRAL ANTENNAS**  
Complementary cross-slot phased array antenna  
[NASA-CASE-MSC-18532-1] c32 N80-29543
- SPIRAL WRAPPING**  
Adjustable spiral wire winding device  
[NASA-CASE-XMS-02383] c15 N71-15918  
Continuous self-locking spiral wound seal --- for maintaining pressure between chambers in cryogenic wind tunnels  
[NASA-CASE-LAR-12315-1] c37 N80-16339  
Modified spiral wound retaining ring  
[NASA-CASE-LAR-12361-1] c37 N81-12422
- SPIRALS (CONCENTRATORS)**  
Spiral groove seal --- for hydraulic rotating shaft  
[NASA-CASE-LEW-10326-3] c37 N74-10474
- SPIROMETERS**  
Compact bellows spirometer for high speed and high altitude space travel  
[NASA-CASE-XAR-01547] c05 N69-21473
- SPLINES**  
Non-floating universal joint  
[NASA-CASE-MSC-19546-1] c37 N77-25536
- SPLINTS**  
Stretcher with rigid head and neck support with capability of supporting immobilized person in vertical position for removal from vehicle hatch to exterior also useful as splint stretcher  
[NASA-CASE-XMF-06589] c05 N71-23159
- SPOILERS**  
A hydraulic actuator mechanism to control aircraft spoiler movements through dual input commands  
[NASA-CASE-LAR-12412-1] c05 N80-11065
- SPORES**  
Lyophilized spore dispenser  
[NASA-CASE-LAR-10544-1] c37 N74-13178
- SPOT WELDS**  
Controlled arc spot welding method  
[NASA-CASE-XMF-00392] c15 N70-34614  
Automatic closed circuit television arc guidance control for welding joints  
[NASA-CASE-MFS-13046] c07 N71-19433
- SPRAY CHARACTERISTICS**  
Controlled overspray spray nozzle  
[NASA-CASE-MFS-25139-1] c34 N80-20528
- SPRAY NOZZLES**  
Rocket injector head  
[NASA-CASE-XMF-04592-1] c20 N79-21125  
Controlled overspray spray nozzle  
[NASA-CASE-MFS-25139-1] c34 N80-20528  
Fire extinguishing apparatus having a slidable mass for a penetrator nozzle --- for penetrating aircraft and shuttle orbiter skin  
[NASA-CASE-KSC-11064-1] c31 N81-14137
- SPRAYED COATINGS**  
Plasma spraying gun for forming diffusion bonded metal or ceramic coatings on substrates  
[NASA-CASE-XLE-01604-2] c15 N71-15610  
Production and application of sprayable fiber reinforced ablation material  
[NASA-CASE-XLA-04251] c18 N71-26100  
Metal plating process employing spraying of metallic power/peening particle mixture  
[NASA-CASE-GSC-11163-1] c15 N73-32360  
Sprayable low density ablator and application process  
[NASA-CASE-MFS-23506-1] c24 N78-24290  
Spray coating apparatus having a rotatable workpiece holder  
[NASA-CASE-ARC-11110-1] c37 N78-32434  
Controlled overspray spray nozzle  
[NASA-CASE-MFS-25139-1] c34 N80-20528  
Thermal barrier coating system having improved adhesion  
[NASA-CASE-LEW-13359-1] c27 N81-24265
- SPRAYERS**  
External device for liquid spray cooling of gas turbine blades  
[NASA-CASE-XLE-00037] c28 N70-33372  
Adhesive spray process for attaching biomedical skin electrodes  
[NASA-CASE-XFR-07658-1] c05 N71-26293  
Apparatus for liquid spray cooling of turbine blades  
[NASA-CASE-XLE-00027] c33 N71-29152  
Closed loop spray cooling apparatus --- for particle accelerator targets  
[NASA-CASE-LEW-11981-1] c31 N78-17237  
Spray coating apparatus having a rotatable workpiece holder  
[NASA-CASE-ARC-11110-1] c37 N78-32434
- SPRAYING**  
Aircraft wheel spray drag alleviator for dual tandem landing gear  
[NASA-CASE-XLA-01583] c02 N70-36825  
Closed loop spray cooling apparatus  
[NASA-CASE-LEW-11981-2] c34 N79-20336
- SPREADING**  
Tool attachment for spreading or moving away loose elements from terminal posts during winding of filamentary elements  
[NASA-CASE-XMF-02107] c15 N71-10809
- SPRINGS (ELASTIC)**  
Belleville spring assembly with elastic guides having low hysteresis  
[NASA-CASE-XNP-09452] c15 N69-27504  
Multiple Belleville spring assembly with even load distribution  
[NASA-CASE-XNP-00840] c15 N70-38225  
Switching mechanism with energy stored in coil spring  
[NASA-CASE-XGS-00473] c03 N70-38713  
Load cell protection device using spring-loaded breakaway mechanism  
[NASA-CASE-XMS-06782] c32 N71-15974  
Vibration isolation system, using coaxial helical compression springs  
[NASA-CASE-NPO-11012] c15 N72-11391  
Spring operated accelerator and constant force spring mechanism therefor  
[NASA-CASE-ARC-10898-1] c35 N77-18417  
Natural turbulence electrical power generator --- using wave action or random motion  
[NASA-CASE-LAR-11551-1] c44 N80-29834  
Unidirectional flexural pivot  
[NASA-CASE-GSC-12622-1] c37 N81-22359
- SPUTTERING**  
Deposition method for epitaxial beta SiC films having high degree of crystallographic perfection  
[NASA-CASE-ERC-10120] c26 N69-33482  
Development of procedure for producing thin transparent films of zinc oxide on transparent

- refractory substrate  
[NASA-CASE-FRC-10019] c15 N73-12487
- Technique and equipment for sputtering using  
apertured electrode and pulsed substrate bias  
[NASA-CASE-LEW-10920-1] c17 N73-24569
- Sputtering holes with ion beamlets  
[NASA-CASE-LEW-11646-1] c20 N74-31269
- Multitarget sequential sputtering apparatus  
[NASA-CASE-NPO-13345-1] c37 N75-19684
- Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c37 N81-19455
- Ion sputter textured graphite --- applications  
to electron tube devices  
[NASA-CASE-LEW-12919-1] c24 N81-27198
- SQUARE WAVES**
- High speed phase detector design indicating  
phase relationship between two square wave  
input signals  
[NASA-CASE-XNP-01306-2] c09 N71-24596
- SQUARES (MATHEMATICS)**
- Apparatus for computing square roots  
[NASA-CASE-XGS-04768] c08 N71-19437
- SQUIBS**
- Contamination free separation nut eliminating  
combustion products from ambient surroundings  
generated by squib firing  
[NASA-CASE-XGS-01971] c15 N71-15922
- STABILITY AUGMENTATION**
- Velocity vector control system augmented with  
direct lift control  
[NASA-CASE-LAR-12268-1] c08 N61-24106
- STABILITY TESTS**
- Method and apparatus for checking the stability  
of a setup for making reflection type holograms  
[NASA-CASE-MFS-21455-1] c35 N74-15146
- STABILIZATION**
- Electro-optical stabilization of calibrated  
light source  
[NASA-CASE-MSC-12293-1] c14 N72-27411
- System for controlling torque buildup in  
suspension of gondola connected to balloon by  
parachute shroud lines  
[NASA-CASE-GSC-11077-1] c02 N73-13008
- Development of aerodynamic control system to  
control flutter over large range of  
oscillatory frequencies using stability  
augmentation techniques  
[NASA-CASE-LAR-10682-1] c02 N73-26004
- Radiation hardening of MOS devices by boron ---  
for stabilizing gate threshold potential  
[NASA-CASE-GSC-11425-2] c76 N75-25730
- Arc control in compact arc lamps  
[NASA-CASE-NPO-10870-1] c33 N77-22386
- Self-stabilizing radial face seal  
[NASA-CASE-LEW-12991-1] c37 N81-24442
- STABILIZED PLATFORMS**
- Hydraulic drive mechanism for leveling isolation  
platforms  
[NASA-CASE-XMS-03252] c15 N71-10658
- Failure detection and control means for improved  
drift performance of a gimbaled platform system  
[NASA-CASE-MFS-23551-1] c04 N76-26175
- Rotary leveling base platform  
[NASA-CASE-ARC-10981-1] c37 N78-27425
- STABILIZERS**
- Design and development of satellite despin device  
[NASA-CASE-XMP-08523] c31 N71-20396
- STABILIZERS (AGENTS)**
- Solid propellant stabilizer containing  
nitroguanidine  
[NASA-CASE-NPO-12000] c27 N72-25699
- STABILIZERS (FLOID DYNAMICS)**
- Assembly for opening flight capsule stabilizing  
and decelerating flaps with reference to  
capsule recovery  
[NASA-CASE-XMP-00641] c31 N70-36410
- Mechanical stabilization system for VTOL aircraft  
[NASA-CASE-XLA-06339] c02 N71-13422
- Attitude stabilizer for nonguided missile or  
vehicle with respect to trajectory  
[NASA-CASE-ARC-10134] c30 N72-17673
- Inflatable stabilizing system for use on life  
raft to reduce rocking and preclude capsizing  
[NASA-CASE-MSC-12393-1] c02 N73-26006
- Externally supported internally stabilized  
flexible duct joint  
[NASA-CASE-MFS-19194-1] c37 N76-14460
- STABLE OSCILLATIONS**
- Automatic measuring and recording of gain and  
zero drift characteristics of electronic  
amplifier  
[NASA-CASE-XMS-05562-1] c09 N69-39986
- STACKS**
- Remote fire stack igniter --- with  
solenoid-controlled valve  
[NASA-CASE-MFS-21675-1] c25 N74-33378
- STAGE SEPARATION**
- Stage separation using remote control release of  
joint with explosive insert  
[NASA-CASE-XLA-02854] c15 N69-27490
- Piezoelectric means for missile stage separation  
indication and stage initiation  
[NASA-CASE-XLA-00791] c03 N70-39930
- Space vehicle stage coupling and quick release  
separation mechanism  
[NASA-CASE-XLA-01441] c15 N70-41679
- Stage separation system for spinning vehicles  
and payloads  
[NASA-CASE-XLA-02132] c31 N71-10582
- Payload/spent rocket engine case separation system  
[NASA-CASE-XLA-05369] c31 N71-15687
- Separation mechanism for use between stages of  
multistage rocket vehicles  
[NASA-CASE-XLA-00188] c15 N71-22874
- Development of remotely controlled shaped charge  
for lateral displacement of rocket stages  
after separation  
[NASA-CASE-XLA-04804] c31 N71-23008
- Electrical circuit selection device for  
simulating stage separation of flight vehicle  
[NASA-CASE-XKS-04631] c10 N71-23663
- Frangible connecting link suitable for rocket  
stage separation  
[NASA-CASE-MSC-11849-1] c15 N72-22488
- STAGNATION PRESSURE**
- Flow meter for measuring stagnation pressure in  
boundary layer around high speed flight vehicle  
[NASA-CASE-IFR-02007] c12 N71-24692
- Stagnation pressure probe --- for measuring  
pressure of supersonic gas streams  
[NASA-CASE-LAR-11139-1] c35 N74-32878
- STAGNATION TEMPERATURE**
- Measuring conductive heat flow and thermal  
conductivity of laminar gas stream in  
cylindrical plug to simulate atmospheric reentry  
[NASA-CASE-XLE-00266] c14 N70-34156
- STAINING**
- Automated single-slide staining device  
[NASA-CASE-LAR-11649-1] c51 N77-27677
- STAINLESS STEELS**
- Joining aluminum to stainless steel by bonding  
aluminum coatings onto titanium coated  
stainless steel and brazing aluminum to  
aluminum/titanium coated steel  
[NASA-CASE-MFS-07369] c15 N71-20443
- Ultrasonic scanning system for in-place  
inspection of brazed tube joints  
[NASA-CASE-MFS-20767-1] c38 N74-15130
- Method of forming a wick for a heat pipe  
[NASA-CASE-NPO-13391-1] c34 N76-27515
- Method of making reinforced composite structure  
[NASA-CASE-LEW-12619-1] c24 N77-19171
- Stainless steel panel for selective absorption  
of solar energy and the method of producing  
said panel  
[NASA-CASE-MFS-23518-2] c44 N77-31611
- Method of forming dynamic membrane on stainless  
steel support  
[NASA-CASE-MSC-18172-1] c26 N80-19237
- STAMPING**
- Holding fixture for a hot stamping press  
[NASA-CASE-GSC-12619-1] c37 N81-16470
- STANDARDS**
- Microwave integrated circuit for Josephson  
voltage standards  
[NASA-CASE-MFS-23845-1] c33 N81-17348
- STANDING WAVES**
- Method and apparatus for shaping and enhancing  
acoustical levitation forces  
[NASA-CASE-MFS-25050-1] c71 N81-15767
- STAR TRACKERS**
- Star sensor system for roll attitude control of  
spacecraft  
[NASA-CASE-XNP-01307] c21 N70-41856
- Sun tracker with rotatable plane-parallel plate  
and two photocells  
[NASA-CASE-XGS-01159] c21 N71-10678

- Photomultiplier detector of Canopus for spacecraft attitude control  
[NASA-CASE-XNP-03914] c21 N71-10771
- Attitude detection system using stellar references for three-axis control and spin stabilized spacecraft  
[NASA-CASE-XGS-03431] c21 N71-15642
- Relay controlled voltage switching unit for scanning circuitry of star tracker  
[NASA-CASE-NPO-11253] c09 N72-17157
- Method for producing reticles for use in outer space  
[NASA-CASE-GSC-11188-2] c21 N73-19630
- Production method of star tracking reticles for transmitting in visible and near ultraviolet regions  
[NASA-CASE-GSC-11188-1] c14 N73-32320
- Formation of star tracking reticles  
[NASA-CASE-GSC-11188-3] c74 N74-20008
- Star scanner --- with a reticle with a pair of slits having differing separation  
[NASA-CASE-GSC-11569-1] c89 N74-30886
- Programmable scan/read circuitry for charge coupled device imaging detectors --- for a startracker  
[NASA-CASE-NPO-15345-1] c33 N81-27403
- STARK EFFECT**  
Resonant waveguide stark cell --- using microwave spectrometers  
[NASA-CASE-LAR-11352-1] c33 N75-26245
- Stark-effect modulation of CO2 laser with NH2D  
[NASA-CASE-NPO-11945-1] c36 N76-18427
- Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c25 N81-14C15
- Stark effect spectrophone for continuous absorption spectra monitoring --- a technique for gas analysis  
[NASA-CASE-NPO-15102-1] c25 N81-25159
- STARTERS**  
Starting circuit design for initiating and maintaining arcs in vapor lamps  
[NASA-CASE-XNP-01058] c09 N71-12540
- Motor run-up system --- power lines  
[NASA-CASE-NPO-13374-1] c33 N75-19524
- STARTING**  
Portable device for use in starting air-start-units for aircraft and having cable lead testing capability  
[NASA-CASE-FRC-10113-1] c33 N80-26599
- STATIC FRICTION**  
Kinetic and static friction force measurement between magnetic tape and magnetic head surfaces  
[NASA-CASE-XNP-08660] c14 N71-22995
- Static coefficient test method and apparatus  
[NASA-CASE-GSC-11893-1] c35 N76-31489
- STATIC INVERTERS**  
Describing static inverter with single or multiple phase output  
[NASA-CASE-XNP-00663] c08 N71-18752
- Development and characteristics of oscillating static inverter  
[NASA-CASE-XGS-05289] c09 N71-19470
- STATIC LOADS**  
Measuring shear-creep compliance of solid and liquid materials used in spacecraft components  
[NASA-CASE-XLE-01481] c14 N71-10781
- Apparatus for measuring load on cable under static or dynamic conditions comprising pulleys pivoting structure against restraint of tension strap  
[NASA-CASE-XMS-04545] c15 N71-22878
- STATIC PRESSURE**  
Pressure probe for sensing ambient static air pressures  
[NASA-CASE-XLA-00481] c14 N70-36824
- Ambient atmospheric pressure sensing device for determining altitude of flight vehicles  
[NASA-CASE-XLA-00128] c15 N70-37925
- Static pressure probe  
[NASA-CASE-LAR-11552-1] c35 N76-14429
- Static pressure orifice system testing method and apparatus  
[NASA-CASE-LAR-12269-1] c35 N80-18358
- STATIONKEEPING**  
Method of stationkeeping for lenticular gravity gradient satellites  
[NASA-CASE-XLA-03132] c31 N71-22969
- STATISTICAL CORRELATION**  
Optical sensing of supersonic flows by correlating deflections in laser beams through flow  
[NASA-CASE-MFS-20642] c14 N72-21407
- STATOR BLADES**  
Stator rotor tools  
[NASA-CASE-MS-C-16000-1] c37 N78-24544
- STATORS**  
Nickel base alloy --- for gas turbine engine stator vanes  
[NASA-CASE-LEW-12270-1] c26 N77-32280
- Liquid metal slip ring  
[NASA-CASE-LEW-12277-2] c33 N78-25323
- Natural turbulence electrical power generator --- using wave action or random motion  
[NASA-CASE-LAR-11551-1] c44 N80-29834
- STEADY STATE**  
Steady state thermal radiometers  
[NASA-CASE-MFS-21108-1] c34 N74-27861
- STEAM TURBINES**  
Vapor generating boiler system for turbine motor  
[NASA-CASE-XLE-00785] c33 N71-16104
- STEELES**  
Zinc dust formulation for abrasion resistant steel coatings  
[NASA-CASE-GSC-10361-1] c18 N72-23581
- Moving body velocity arresting line --- elongating steel cable  
[NASA-CASE-LAR-12372-1] c37 N80-18399
- STEERABLE ANTENNAS**  
Apparatus for generating microwave signals at progressively related phase angles for driving antenna array  
[NASA-CASE-BEC-10046] c10 N71-18722
- Satellite radio communication system with remote steerable antenna  
[NASA-CASE-XNP-02389] c07 N71-28900
- Amplitude steered array  
[NASA-CASE-GSC-11446-1] c33 N74-20860
- Phased array antenna control  
[NASA-CASE-MS-C-14939-1] c32 N79-11264
- STEERING**  
Steerable solid propellant rocket motor adapted to effect payload orientation as multistage rocket stage or reduce velocity as retrorocket  
[NASA-CASE-XNP-00234] c28 N70-38645
- STELLAR LUMINOSITY**  
Development of star intensity measuring system which minimizes effects of outside interference  
[NASA-CASE-XNP-06510] c14 N71-23797
- STELLAR SPECTRA**  
Development of star intensity measuring system which minimizes effects of outside interference  
[NASA-CASE-XNP-06510] c14 N71-23797
- STENCIL PROCESSES**  
Method for making patterns for resin matrix composites  
[NASA-CASE-ARC-11246-1] c24 N80-22410
- STEREOPHOTOGRAPHY**  
Stereo photomicrography system with stereo microscope for viewing specimen at various magnifications  
[NASA-CASE-LAR-10176-1] c14 N72-20380
- STEREOSCOPIC VISION**  
Stereoscopic television system, including projecting pair of binocular images  
[NASA-CASE-ARC-10160-1] c23 N72-27728
- STERILIZATION**  
Using ethylene oxide in preparation of sterilized solid rocket propellants and encapsulating materials  
[NASA-CASE-XNP-01749] c27 N70-41897
- Ethylene oxide sterilization and encapsulating process for sterile preservation of instruments and solid propellants  
[NASA-CASE-XNP-09763] c14 N71-20461
- Environmentally controlled suit for working in sterile chamber  
[NASA-CASE-LAR-10076-1] c05 N73-20137
- Protein sterilization of firefly luciferase without denaturation  
[NASA-CASE-GSC-10225-1] c06 N73-27086
- Heat sterilizable patient ventilator  
[NASA-CASE-NPO-13313-1] c54 N75-27761
- Portable heatable container  
[NASA-CASE-NPO-14237-1] c44 N80-20808
- System for sterilizing objects --- cleaning space vehicle systems

- [NASA-CASE-KSC-11085-1] c54 N81-24724
- STERILIZATION EFFECTS**  
Reliability of electrical connectors after heat sterilization  
[NASA-CASE-NPO-10694] c09 N72-20200
- STIFFNESS**  
Modified face seal for positive film stiffness  
[NASA-CASE-LEW-12989-1] c37 N80-12414
- STIMULATED EMISSION**  
Repetitively pulsed wavelength selective carbon dioxide laser  
[NASA-CASE-ERC-16178] c16 N71-24E32
- STIRLING CYCLE**  
Stirling cycle engine and refrigeration systems  
[NASA-CASE-NPO-13613-1] c37 N76-29590  
Power control for hot gas engines  
[NASA-CASE-NPO-14220-1] c37 N81-14318  
Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c37 N81-17432  
Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c44 N81-17518  
Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c37 N81-25370
- STIRRING**  
Design of mechanical device for stirring several test tubes simultaneously  
[NASA-CASE-YAC-06956] c15 N71-21177
- STORAGE**  
Design and development of fluid sample collector  
[NASA-CASE-XMS-06767-1] c14 N71-20435  
Sodium storage and injection system  
[NASA-CASE-NPO-14384-1] c37 N80-10494
- STORAGE BATTERIES**  
Leak resistant bonded elastomeric seal for secondary electrochemical cells  
[NASA-CASE-XGS-02631] c03 N71-23006  
Automatically charging battery of electric storage cells  
[NASA-CASE-XNP-04758] c03 N71-24605  
Elimination of two step voltage discharge property of silver zinc batteries by using divalent silver oxide capacity of cell to charge anodes to monovalent silver state  
[NASA-CASE-XGS-01674] c03 N71-29129  
Electric storage battery with high impact resistance  
[NASA-CASE-NPO-11021] c03 N72-20032  
Hydrogen-bromine secondary battery  
[NASA-CASE-NPO-13237-1] c44 N76-18641  
Rechargeable battery which combats shape change of the zinc anode  
[NASA-CASE-HQN-16862-1] c44 N76-29699  
Electrically rechargeable REDOX flow cell  
[NASA-CASE-LEW-12220-1] c44 N77-14581  
Formulated plastic separators for soluble electrode cells --- rubber-ion transport membranes  
[NASA-CASE-LEW-12358-1] c44 N79-17313  
Toroidal cell and battery --- storage battery for high amp-hour load applications  
[NASA-CASE-LEW-12918-1] c44 N81-24521
- STORAGE STABILITY**  
Storage stable, thermally activated foaming compositions for erecting and rigidizing mechanisms of thin sheet solar collectors  
[NASA-CASE-LAR-10373-1] c18 N71-26155  
Gas diffusion liquid storage bag and method of use for storing blood  
[NASA-CASE-NPO-13930-1] c52 N79-14749
- STORAGE TANKS**  
Expulsion bladder equipped storage tank structure  
[NASA-CASE-XNP-00612] c11 N70-38182  
Development of apparatus and method for testing leakage of large tanks  
[NASA-CASE-IMP-02392] c32 N71-24285  
Apparatus for aligning shadow shields and cryogenic storage tanks in outer space with the sun  
[NASA-CASE-KSC-10622-1] c51 N72-21693  
Cryogenic container compound suspension strap  
[NASA-CASE-ABC-11157-1] c37 N80-18393
- STRAIN GAGE ACCELEROMETERS**  
Accelerometer with FM output signals indicative of mechanical strain on it  
[NASA-CASE-XLA-00492] c14 N70-34799  
Strain gage accelerometer for angular acceleration measurement  
[NASA-CASE-XNS-05936] c14 N70-41682
- STRAIN GAGE BALANCES**  
Self-balancing strain gage transducer with bridge circuit  
[NASA-CASE-MFS-12827] c14 N71-17656
- STRAIN GAGES**  
Semiconductor p-n junction on needle apex to provide stress and strain sensor  
[NASA-CASE-XLA-04980] c09 N69-27422  
Apparatus for forming wire grids for electric strain gages  
[NASA-CASE-XLE-00023] c15 N70-33330  
Force measuring instrument for structural members, particularly fastening bolts or studs  
[NASA-CASE-IMP-00456] c14 N70-34705  
Strain gage for detecting and measuring mechanical strain in thermally strained specimens  
[NASA-CASE-PRC-10053] c14 N70-35587  
Difference indicating circuit used in conjunction with device measuring gravitational fields  
[NASA-CASE-XNP-08274] c10 N71-13537  
Water cooled gage for strain measurements in high temperature environments  
[NASA-CASE-XNP-09205] c14 N71-17657  
Development of apparatus for measuring successive increments of strain on elastomers  
[NASA-CASE-IMP-04680] c15 N71-19489  
Strain gage measurement of elongation due to thermally and mechanically induced stresses  
[NASA-CASE-XGS-04478] c14 N71-24233  
Method for temperature compensating semiconductor gages by exposure to high energy radiation  
[NASA-CASE-XLA-04555-1] c14 N71-25892  
Pulsed excitation voltage circuit for strain gage bridge transducers  
[NASA-CASE-PRC-10036] c09 N72-22200  
Method for making semiconductor p-n junction stress and strain sensor  
[NASA-CASE-XLA-04980-2] c14 N72-28438  
Device for monitoring a change in mass in varying gravimetric environments  
[NASA-CASE-MFS-21556-1] c35 N74-26945  
Strain gauge ambiguity sensor for segmented mirror active optical system  
[NASA-CASE-MFS-20506-1] c35 N75-12273  
Subminiature insertable force transducer --- including a strain gage to measure forces in muscles  
[NASA-CASE-NPO-13423-1] c33 N75-31329  
Self-supporting strain transducer  
[NASA-CASE-LAR-11263-1] c35 N75-33369  
Strain gage mounting assembly  
[NASA-CASE-NPO-13170-1] c35 N76-14430  
High temperature strain gage calibration fixture  
[NASA-CASE-LAR-11500-1] c35 N76-24523  
Miniature biaxial strain transducer  
[NASA-CASE-LAR-11648-1] c35 N77-14407  
CW ultrasonic bolt tensioning monitor  
[NASA-CASE-LAR-12016-1] c39 N78-15512  
Attaching of strain gages to substrates  
[NASA-CASE-PRC-10093-1] c35 N80-20560  
Pulsed phase locked loop strain monitor  
[NASA-CASE-LAR-12772-1] c33 N81-15195  
Photomechanical transducer  
[NASA-CASE-NPO-14363-1] c39 N81-25400
- STRAIN RATE**  
Process for analysis of strain field of structures subjected to large deformations involving low modulus substrate with thin coating  
[NASA-CASE-LAR-10765-1] c32 N73-20740
- STRAPDOWN INERTIAL GUIDANCE**  
All sky pointing attitude control system  
[NASA-CASE-ABC-10716-1] c35 N77-20399
- STRAPS**  
Meter for use in detecting tension in straps having predetermined elastic characteristics  
[NASA-CASE-MFS-22189-1] c35 N75-19615  
Cryogenic container compound suspension strap  
[NASA-CASE-ABC-11157-1] c37 N80-18393
- STRATIFICATION**  
A stable density-stratification solar pond  
[NASA-CASE-NPO-15419-1] c44 N81-27599
- STRATIGRAPHY**  
System for plotting subsoil structure and method therefor  
[NASA-CASE-NPO-14191-1] c31 N80-32584

## STREAMS

Apparatus for measuring a sorbate dispersed in a fluid stream  
[NASA-CASE-ARC-10896-1] c35 N78-19465

## STRESS ANALYSIS

Development of system for measuring damping characteristics of structure or system subjected to random forces or influences  
[NASA-CASE-ARC-10154-1] c14 N72-22440

Process for analysis of strain field of structures subjected to large deformations involving low modulus substrate with thin coating  
[NASA-CASE-LAR-10765-1] c32 N73-20740

High temperature strain gage calibration fixture  
[NASA-CASE-LAR-11500-1] c35 N76-24523

## STRESS CONCENTRATION

Self-supporting strain transducer  
[NASA-CASE-LAR-11263-1] c35 N75-33369

## STRESS CORROSION

Method to prevent stress corrosion cracking in titanium alloys  
[NASA-CASE-NPO-10271] c17 N71-16393

Method and apparatus for inducing compressive stresses in pressure vessel to prevent stress corrosion  
[NASA-CASE-XLA-07390] c15 N71-18616

## STRESS MEASUREMENT

Semiconductor p-n junction on needle apex to provide stress and strain sensor  
[NASA-CASE-XLA-04980] c09 N69-27422

Force measuring instrument for structural members, particularly fastening bolts or studs  
[NASA-CASE-XMP-00456] c14 N70-34705

Self-balancing strain gage transducer with bridge circuit  
[NASA-CASE-MFS-12827] c14 N71-17656

Servocontrol system for measuring local stresses at geometric discontinuity in stressed material  
[NASA-CASE-XLA-08530] c32 N71-25360

Amplifying ribbon extensometer  
[NASA-CASE-LAR-11825-1] c35 N77-22449

CW ultrasonic bolt tensioning monitor  
[NASA-CASE-LAR-12016-1] c39 N78-15512

## STRESS RELAXATION

Method for alleviating thermal stress damage in laminates --- metal matrix composites  
[NASA-CASE-LEW-12493-1] c24 N81-17170

## STRESS RELIEVING

Nut and bolt fastener permitting all-directional movement of skin sections with respect to supporting structure  
[NASA-CASE-XLA-01807] c15 N71-10799

## STRESSES

Tape recorder designed for low power consumption and resistance to operational failure under high stress conditions  
[NASA-CASE-IGS-08259] c14 N71-23698

Strain gage measurement of elongation due to thermally and mechanically induced stresses  
[NASA-CASE-IGS-04478] c14 N71-24233

Strain arrestor plate for fused silica tile --- bonding of thermal insulation to metallic plates or structural parts  
[NASA-CASE-MSC-14182-1] c27 N76-14264

Fixture for environmental exposure of structural materials under compression  
[NASA-CASE-LAR-12602-1] c35 N81-19429

## STRETCHERS

Development and characteristics of rescue litter with inflatable flotation device for water rescue application  
[NASA-CASE-XMS-04170] c05 N71-22748

Stretcher with rigid head and neck support with capability of supporting immobilized person in vertical position for removal from vehicle hatch to exterior also useful as splint stretcher  
[NASA-CASE-XMP-06589] c05 N71-23159

## STRETCHING

Device for securing together structural members with axially stretched bolt and nut  
[NASA-CASE-GSC-11149-1] c15 N73-30457

## STRINGERS

Universal connectors for joining stringers  
[NASA-CASE-LAR-12744-1] c37 N81-31551

## STRINGS

Cord restraint system for pressure suit joints  
[NASA-CASE-XMS-09635] c05 N71-24623

## STRIP TRANSMISSION LINES

Microwave integrated circuit for Josephson voltage standards  
[NASA-CASE-MFS-23845-1] c33 N81-17348

## STRUCTURAL ANALYSIS

Window defect planar mapping technique  
[NASA-CASE-MSC-19442-1] c74 N77-10899

## STRUCTURAL DESIGN

Design of inflatable life raft for aircrafts and boats  
[NASA-CASE-XMS-00863] c05 N70-34857

Structural design of high pressure regulator valve  
[NASA-CASE-XNP-00710] c15 N71-10778

Graphic illustration of lifting body design  
[NASA-CASE-FRC-10063] c01 N71-12217

Design of ring wing vehicle of high drag-to-weight ratio to withstand reentry stress into low density atmosphere  
[NASA-CASE-XLA-04901] c31 N71-24315

Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c35 N77-27366

Lightweight reflector assembly  
[NASA-CASE-NFO-13707-1] c74 N77-28933

Horizontally mounted solar collector  
[NASA-CASE-MFS-23349-1] c44 N79-23481

## STRUCTURAL ENGINEERING

Beam connector apparatus and assembly  
[NASA-CASE-MFS-25134-1] c31 N81-12283

A rectangular rod-wall sound shield  
[NASA-CASE-LAR-12883-1] c09 N81-29138

## STRUCTURAL FAILURE

Method and apparatus for nondestructive testing of pressure vessels  
[NASA-CASE-NFO-12142-1] c38 N76-28563

## STRUCTURAL MEMBERS

Broadband chokes and absorbers to reduce spurious radiation patterns of antenna array caused by support structures  
[NASA-CASE-XMS-05303] c07 N69-27462

Electro-optical/computer system for aligning large structural members and maintaining correct position  
[NASA-CASE-XNP-02029] c14 N70-41955

Nut and bolt fastener permitting all-directional movement of skin sections with respect to supporting structure  
[NASA-CASE-XLA-01807] c15 N71-10799

Universal joints for connecting two displaced shafts or members  
[NASA-CASE-NFO-10646] c15 N71-28467

Device for securing together structural members with axially stretched bolt and nut  
[NASA-CASE-GSC-11149-1] c15 N73-30457

Method of laminating structural members  
[NASA-CASE-XLA-11028-1] c24 N74-27035

Folding structure fabricated of rigid panels  
[NASA-CASE-XHQ-02146] c18 N75-27040

Strain arrestor plate for fused silica tile --- bonding of thermal insulation to metallic plates or structural parts  
[NASA-CASE-MSC-14182-1] c27 N76-14264

Mechanical end joint system for structural column elements  
[NASA-CASE-LAR-12482-1] c37 N80-22704

Universal connectors for joining stringers  
[NASA-CASE-LAR-12744-1] c37 N81-31551

## STRUCTURAL STABILITY

Latching device  
[NASA-CASE-MFS-21606-1] c37 N75-19685

Flanged major modular assembly jig  
[NASA-CASE-MSC-19372-1] c39 N76-31562

## STRUCTURAL VIBRATION

Rectangular electric conductors for conductor cables to withstand spacecraft vibration and controlled atmosphere  
[NASA-CASE-MFS-14741] c09 N70-20737

Determining sway of buildings by low frequency device using pendulum  
[NASA-CASE-XMF-00479] c14 N70-34794

Transducer for measuring deflections from vibrating structures  
[NASA-CASE-XLA-03135] c32 N71-16428

Active notch filter network with variable notch depth, width and frequency  
[NASA-CASE-FRC-11055-1] c33 N80-29583

## STRUCTURES

Deformation measuring apparatus with feedback control for arbitrarily shaped structures



- [NASA-CASE-LAR-10098] c32 N71-26681
- STRTS**
- Low onset rate energy absorber in form of strut assembly for crew couch of Apollo command module [NASA-CASE-MSC-12279-1] c15 N70-35679
- Collapsible support for antenna reflector applied to installation of spacecraft antennas [NASA-CASE-NPO-11751] c07 N73-24176
- Locking redundant link [NASA-CASE-LAR-11900-1] c37 N79-14382
- Beam connector apparatus and assembly [NASA-CASE-MFS-25134-1] c31 N81-12283
- STUDS (STRUCTURAL MEMBERS)**
- Design of quick release locking pin for joining two or more load-carrying structural members [NASA-CASE-MFS-16495] c15 N72-11385
- Tool for mounting and removing studs with adhesive coated head portion [NASA-CASE-MFS-20299] c15 N72-11392
- Insert facing tool --- manually operated cutting tool for forming studs in honeycomb material [NASA-CASE-MFS-21485-1] c37 N74-25968
- STYRENES**
- Heat resistant polymers of oxidized styrylphosphine [NASA-CASE-MSC-14903-1] c27 N78-32256
- Compound oxidized styrylphosphine --- flame resistant vinyl polymers [NASA-CASE-MSC-14903-2] c27 N80-10358
- Heat resistant polymers of oxidized styrylphosphine [NASA-CASE-MSC-14903-3] c27 N80-24438
- Low temperature cross linking polyimides [NASA-CASE-LEW-12676-1] c27 N80-26447
- SUBLIMATION**
- Tubular sublimatory evaporator heat sink [NASA-CASE-ARC-10912-1] c34 N77-19353
- Polymeric compositions and their method of manufacture --- forming filled polymer systems using cryogenics [NASA-CASE-NPO-10424-1] c27 N81-24258
- SUBMARINES**
- Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety [NASA-CASE-ARC-11040-2] c24 N78-27184
- SUBMERGING**
- Liquid-immersible electrostatic ultrasonic transducer [NASA-CASE-LAR-12465-1] c35 N80-18363
- Liquid immersion apparatus for minute articles [NASA-CASE-MFS-25363-1] c31 N80-32585
- SUBMILLIMETER WAVES**
- Ladder supported ring bar circuit [NASA-CASE-LEW-13570-1] c33 N81-24348
- SUBMINIATURIZATION**
- Micromicroampere current measuring circuit, with two subminiature thermionic diodes with filament cathodes [NASA-CASE-XNP-00384] c09 N71-13530
- SUBREFLECTORS**
- Dish antenna having switchable beamwidth --- with truncated concave ellipsoid subreflector [NASA-CASE-GSC-11760-1] c33 N75-19516
- SUBSONIC FLOW**
- Leading edge vortex flaps for drag reduction --- during subsonic flight [NASA-CASE-LAR-12750-1] c02 N81-19016
- SUBSONIC SPEED**
- Aerospace vehicle with variable planform for hypersonic and subsonic flight [NASA-CASE-XLA-00805] c31 N70-38010
- Construction of leading edges of surfaces for aerial vehicles performing from subsonic to above transonic speeds [NASA-CASE-XLA-01486] c01 N71-23497
- Airfoil shape for flight at subsonic speeds --- design analysis and aerodynamic characteristics of the GAW-1 airfoil [NASA-CASE-LAR-10585-1] c02 N76-22154
- Self stabilizing sonic inlet [NASA-CASE-LEW-11890-1] c05 N79-24976
- SUBSONIC WIND TUNNELS**
- Variable geometry wind tunnel for testing aircraft models at subsonic speeds [NASA-CASE-XLA-07430] c11 N72-22246
- SUBSTRATES**
- Means and methods of depositing thin films on substrates [NASA-CASE-XNP-00595] c15 N70-34967
- Fabrication of solar cell banks for attaching solar cells to base members or substrates [NASA-CASE-XNP-00826] c03 N71-20895
- Method and apparatus for fabricating solar cell panels [NASA-CASE-XNP-03413] c03 N71-26726
- Fabrication of polycrystalline solar cells on low-cost substrates [NASA-CASE-GSC-12022-1] c44 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] c74 N78-32854
- Attaching of strain gages to substrates [NASA-CASE-FRC-10093-1] c35 N80-20560
- Pyroelectric detector arrays [NASA-CASE-LAR-12363-1] c35 N81-12389
- Method for applying photographic resists to otherwise incompatible substrates [NASA-CASE-MSC-18107-1] c27 N81-25209
- Densification of porous refractory substrates --- space shuttle orbiter tiles [NASA-CASE-MSC-18737-1] c25 N81-29180
- Method of repairing surface damage to porous refractory substrates --- shuttle orbiter tiles [NASA-CASE-MSC-18736-1] c27 N81-29231
- SUBSTRUCTURES**
- Supporting structure for simultaneous exposure of pellets to X rays [NASA-CASE-XNP-06031] c15 N71-15606
- Opto-mechanical subsystem with temperature compensation through isothermal design [NASA-CASE-GSC-12059-1] c35 N77-27366
- System for detecting substructure microfractures and method therefore [NASA-CASE-NPO-14192-1] c39 N80-10507
- SULFATES**
- Nitroaniline sulfate, intumescent paints [NASA-CASE-ARC-10099-1] c18 N71-15469
- SULFONES**
- Electrolytic cell structure [NASA-CASE-LAR-11042-1] c33 N75-27252
- SULFONIC ACID**
- Intumescent coatings containing 4,4'-dinitrosulfanilide [NASA-CASE-ARC-11042-1] c24 N78-14096
- SULFUR COMPOUNDS**
- Mercaptan terminated polymer containing sulfonic acid salts of nitrosubstituted aromatic amines for heat and moisture resistant coatings [NASA-CASE-ARC-10325] c06 N72-25147
- SULFUR DIOXIDES**
- Stack plume visualization system [NASA-CASE-LAR-11675-1] c45 N76-17656
- Simultaneous treatment of SO<sub>2</sub> containing stack gases and waste water [NASA-CASE-MSC-16258-1] c45 N79-12584
- SULFURIC ACID**
- An improved synthesis of 2, 4, 8, 10-tetroxaspiro (5.5)undecane [NASA-CASE-ARC-11243-1] c27 N79-30375
- Potential heat exchange fluids for use in sulfuric acid vaporizers [NASA-CASE-NPO-15015-1] c25 N80-23394
- An improved synthesis of 2,4,8,10-tetroxaspiro (5.5)undecane [NASA-CASE-ARC-11243-2] c23 N80-31472
- SUM RULES**
- Describing circuit for obtaining sum of squares of numbers [NASA-CASE-XGS-04765] c08 N71-18693
- SUN**
- Sun tracking solar energy collector [NASA-CASE-NPO-13921-1] c44 N79-14526
- SUNGLASSES**
- Pliable frame for sunglasses in emergency survival kits [NASA-CASE-XMS-06064] c05 N71-23096
- SUNLIGHT**
- Illumination system design for use as sunlight simulator in space environment simulators with multiple light sources reflected to single virtual source [NASA-CASE-HQN-10781] c23 N71-30292
- Illumination control apparatus for compensating solar light [NASA-CASE-KSC-11010-1] c74 N79-12890

**SUPERCHARGERS**

Supercharged topping rocket propellant feed system  
[NASA-CASE-XLE-02062-1] c20 N80-14188  
Diesel engine catalytic combustor system ---  
turbocharging  
[NASA-CASE-LEW-12995-1] c37 N80-26659

**SUPERCONDUCTING MAGNETS**

Cryogenic flux-gated magnetometer using  
superconductors  
[NASA-CASE-XAC-02407] c14 N69-27423  
Improved alternator with windings of  
superconducting materials acting as permanent  
magnet  
[NASA-CASE-XLE-02824] c03 N69-39890  
Segmented superconducting magnet producing  
staggered magnetic field and suitable for  
broadband traveling wave masers  
[NASA-CASE-XGS-10518] c16 N71-28554  
Operating properties of superconducting magnet  
in vacuum environment  
[NASA-CASE-XNP-06503] c23 N71-29049  
Magnetometer using superconducting rotating body  
[NASA-CASE-NPO-13388-1] c35 N76-16390  
Stable superconducting magnet --- high current  
levels below critical temperature  
[NASA-CASE-XMP-05373-1] c33 N79-21264

**SUPERCONDUCTIVITY**

Superconducting alternator design with cryogenic  
fluid for cooling windings below critical  
temperature  
[NASA-CASE-XLE-02823] c09 N71-23443  
Superconductive resonant cavity for improved  
signal to noise ratio in communication signal  
[NASA-CASE-MSC-12259-2] c07 N72-33146  
Superconducting magnetic field trapping device  
for producing magnetic field in air  
[NASA-CASE-XNP-01185] c26 N73-28710  
Doped Josephson tunneling junction for use in a  
sensitive IR detector  
[NASA-CASE-NPO-13348-1] c33 N75-31332

**SUPERCONDUCTORS**

Superconductive accelerometer employing variable  
force principle to determine acceleration of  
bodies  
[NASA-CASE-XMP-01099] c14 N71-15969  
Controlled diffusion reaction process for  
masking substrate of twisted multifilament  
superconductive ribbon  
[NASA-CASE-LEW-11726-1] c26 N73-26752  
Twisted wire or tube superconductor for filament  
windings  
[NASA-CASE-LEW-11015] c26 N73-32571  
Germanium coated microbridge and method  
[NASA-CASE-MPS-23274-1] c33 N78-13320  
Superconducting gyrocon for high power high  
efficiency microwave generator/amplifier  
application  
[NASA-CASE-NPO-14975-1] c33 N80-29584

**SUPERCOOLING**

Superconducting gyrocon for high power high  
efficiency microwave generator/amplifier  
application  
[NASA-CASE-NPO-14975-1] c33 N80-29584  
Method and apparatus for supercooling and  
solidifying substances --- containless melts  
and space processing  
[NASA-CASE-MPS-25242-1] c35 N81-24413

**SUPERFLUIDITY**

Helium refining by superfluidity  
[NASA-CASE-XNP-00733] c06 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] c36 N76-29575

**SUPERHEATING**

Thermal energy storage system --- operating on  
superheating of liquids  
[NASA-CASE-MPS-23167-1] c44 N76-31667

**SUPERHIGH FREQUENCIES**

Dual band combiner for horn antenna  
[NASA-CASE-NPO-14519-1] c32 N80-23524

**SUPERPLASTICITY**

Superplastically formed diffusion bonded  
metallic structure  
[NASA-CASE-FRC-11026-1] c39 N79-25424

**SUPERSONIC AIRCRAFT**

Variable sweep wing configuration for supersonic  
aircraft  
[NASA-CASE-XLA-00230] c02 N70-33255

Supersonic aircraft variable sweep wing planform  
for varying aspect ratio  
[NASA-CASE-XLA-00350] c02 N70-38011  
Development and characteristics of variable  
sweep wing control system for supersonic  
aircraft  
[NASA-CASE-XLA-03659] c02 N71-11041  
Development and characteristics of translating  
horizontal tail assembly for supersonic aircraft  
[NASA-CASE-XLA-08801-1] c02 N71-11043  
Design of supersonic aircraft with novel fixed,  
swept wing planform  
[NASA-CASE-XLA-04451] c02 N71-12243  
Absorptive, nonreflecting barrier mounted  
between closely spaced jet engines on  
supersonic aircraft, for preventing shock wave  
interference  
[NASA-CASE-XLA-02865] c28 N71-15563  
Oblique-wing supersonic aircraft  
[NASA-CASE-ARC-10470-3] c05 N76-29217

**SUPERSONIC COMBUSTION**

Supersonic-combustion rocket  
[NASA-CASE-LEW-11058-1] c20 N74-13502  
Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c15 N78-32168

**SUPERSONIC DRAG**

Bluff-shaped annular configuration for  
supersonic decelerator for reentry vehicles  
[NASA-CASE-XLE-00222] c02 N70-37539

**SUPERSONIC FLIGHT**

Variable aspect ratio and variable sweep delta  
wing planforms for supersonic aircraft  
[NASA-CASE-XLA-00221] c02 N70-33266  
Supersonic or hypersonic vehicle control system  
comprising elevons with hinge line sweep and  
free of adverse aerodynamic cross coupling  
[NASA-CASE-XLA-08967] c02 N71-27088

**SUPERSONIC FLOW**

Optical sensing of supersonic flows by  
correlating deflections in laser beams through  
flow  
[NASA-CASE-MPS-20642] c14 N72-21407  
Stagnation pressure probe --- for measuring  
pressure of supersonic gas streams  
[NASA-CASE-LAR-11139-1] c35 N74-32878

**SUPERSONIC INLETS**

Airflow control system for supersonic inlets  
[NASA-CASE-LEW-11188-1] c02 N74-20646  
Shock position sensor for supersonic inlets ---  
measuring pressure in the throat of a  
supersonic inlet  
[NASA-CASE-LEW-11915-1] c35 N76-14431  
Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c15 N78-32168

**SUPERSONIC NOZZLES**

Penshaped, supersonic exhaust nozzle design  
[NASA-CASE-XLE-00057] c28 N70-38711  
Telescoping-spike supersonic nozzle for turbojet  
or ramjet engines  
[NASA-CASE-XLE-00005] c28 N70-39899  
Electric arc heater with supersonic nozzle and  
fixed arc length for use in high temperature  
wind tunnels  
[NASA-CASE-XAC-01677] c09 N71-20816  
Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c07 N80-32392

**SUPERSONIC SPEEDS**

Continuous operation, single phased, induction  
plasma accelerator producing supersonic speeds  
[NASA-CASE-XLA-01354] c25 N70-36946  
Static pressure probe  
[NASA-CASE-LAR-11552-1] c35 N76-14429

**SUPERSONIC TRANSPORTS**

Position locating system for remote aircraft  
using voice communication and digital signals  
[NASA-CASE-GSC-10087-2] c21 N71-13958  
Traffic control system for supersonic transports  
using synchronous satellite for data relay  
between vehicles and ground station  
[NASA-CASE-GSC-10087-1] c02 N71-19287  
System and method for position locating for air  
traffic control involving supersonic transports  
[NASA-CASE-GSC-10087-3] c07 N72-12080  
Doppler compensated communication system for  
locating supersonic transport position  
[NASA-CASE-GSC-10087-4] c07 N73-20174  
Supersonic transport --- using canard surfaces  
[NASA-CASE-LAR-11932-1] c05 N78-32086

## SUPERSONIC WIND TUNNELS

Wind tunnel  
 [NASA-CASE-LAR-10135-1] c09 N79-21083  
 A rectangular rod-wall sound shield  
 [NASA-CASE-LAR-12883-1] c09 N81-29138

**SUPPORT INTERFERENCE**  
 Spherical bearing --- to reduce vibration effects  
 [NASA-CASE-MFS-23447-1] c37 N79-11404

**SUPPORT SYSTEMS**  
 Hydraulic support apparatus for dynamic testing of space vehicles under near-free flight conditions  
 [NASA-CASE-XMF-03248] c11 N71-10604  
 Supporting structure for simultaneous exposure of pellets to X rays  
 [NASA-CASE-XMF-06031] c15 N71-15606  
 Multilegged support system for wind tunnel test models subjected to thermal dynamic loading  
 [NASA-CASE-XLA-01326] c11 N71-21481  
 Adjustable support device with jacket screw for altering distance between base and supported member  
 [NASA-CASE-NPO-10721] c15 N72-27484  
 Hydrostatic bearing support  
 [NASA-CASE-LEW-11158-1] c37 N77-28486  
 Metric half-span model support system  
 [NASA-CASE-LAR-12441-1] c09 N80-24334

**SUPPORTS**  
 Support techniques for restraint of slender bodies such as launch vehicles  
 [NASA-CASE-XLA-02704] c11 N69-21540  
 Pneumatic control of telescopic mirror support system  
 [NASA-CASE-XLA-03271] c11 N69-24321  
 Optical scanner mounted on rotating support structure with method of compensating for image or satellite rotation  
 [NASA-CASE-XGS-02401] c14 N69-27485  
 Support for flexible conductor cable between drawers or racks holding electronic equipment and cabinet assembly housing drawers or racks  
 [NASA-CASE-XMF-07587] c15 N71-18701  
 Swivel support for gas bearing for position adjustment between ball and supporting cup  
 [NASA-CASE-XMF-07808] c15 N71-23812  
 Tracking mount for laser telescope employed in tracking large rockets and space vehicles to give information regarding azimuth and elevation  
 [NASA-CASE-MFS-14017] c14 N71-26627  
 Gas bearing for model support with capacity for measuring angular displacement of model in bearing  
 [NASA-CASE-XLA-09346] c15 N71-28740  
 Adjustable rigid mount for trihedral mirror formed of alloy with small coefficient of thermal expansion supporting screws and spring-biased plates  
 [NASA-CASE-XMF-08907] c23 N71-29123  
 Slotted fine-adjustment support for optical devices  
 [NASA-CASE-MFS-20249] c15 N72-11386  
 Base support for expansible and contractible coupling between two members  
 [NASA-CASE-NPO-11059] c15 N72-17454  
 Optical mirror support system  
 [NASA-CASE-XBR-07896-2] c23 N72-22673  
 Fixture for supporting articles during vibration tests comprising integral annular unit  
 [NASA-CASE-MFS-20523] c14 N72-27412  
 Design and development of test stand system for supporting test items in vacuum chamber  
 [NASA-CASE-MFS-21362] c11 N73-20267  
 Collapsible support for antenna reflector applied to installation of spacecraft antennas  
 [NASA-CASE-NPO-11751] c07 N73-24176  
 Method of making porous conductive supports for electrodes --- by electroforming and stacking nickel foils  
 [NASA-CASE-GSC-11367-1] c44 N74-19692  
 Thrust-isolating mounting --- characteristics of support for loads mounted in spacecraft  
 [NASA-CASE-MFS-21680-1] c18 N74-27397  
 Variable contour securing system  
 [NASA-CASE-MSC-16270-1] c37 N78-27423  
 Heat treat fixture and method of heat treating  
 [NASA-CASE-LAR-11821-1] c26 N80-28492  
 Locking mechanism for orthopedic braces  
 [NASA-CASE-GSC-12082-2] c52 N81-25661

## SUPPRESSORS

Electronic background suppression field scanning sensor for detecting point source targets  
 [NASA-CASE-XGS-05211] c07 N69-39980

**SURFACE ACOUSTIC WAVE DEVICES**  
 Distributed feedback acoustic surface wave oscillator  
 [NASA-CASE-NPO-13673-1] c71 N77-26919

**SURFACE DEFECTS**  
 Surface defect detection by reflected microwave radiation pattern  
 [NASA-CASE-AEC-10009-1] c15 N71-17822  
 Method and device for detection of surface discontinuities or defects  
 [NASA-CASE-MSC-14187-1] c35 N74-32879  
 Method of repairing surface damage to porous refractory substrates --- shuttle orbiter tiles  
 [NASA-CASE-MSC-18736-1] c27 N81-29231

**SURFACE DIFFUSION**  
 Metallic film diffusion into metal or ceramic surfaces for boundary lubrication in aerospace environments  
 [NASA-CASE-XLF-01765] c18 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-NFO-14657-1] c74 N81-17887

**SURFACE FINISHING**  
 Development of procedure for producing thin transparent films of zinc oxide on transparent refractory substrate  
 [NASA-CASE-FRC-10019] c15 N73-12487  
 Device and method for determining X ray reflection efficiency, scattering properties, and surface finish of optical surfaces  
 [NASA-CASE-MFS-20243] c23 N73-13662  
 Surface finishing --- for aircraft wings  
 [NASA-CASE-MSC-12631-1] c24 N77-28225  
 Modification of the electrical and optical properties of polymers --- ion irradiation to create texture  
 [NASA-CASE-LEW-13027-1] c27 N80-24437  
 Surface finishing  
 [NASA-CASE-MSC-12631-3] c27 N81-14077  
 Method of cold welding using ion beam technology  
 [NASA-CASE-LEW-12982-1] c37 N81-19455  
 Laser surface fusion of plasma sprayed ceramic turbine seals  
 [NASA-CASE-LEW-13269-1] c27 N81-22190

**SURFACE IONIZATION**  
 Electrodes having array of small surfaces for field ionization  
 [NASA-CASE-ERC-10013] c09 N71-26678  
 Development of method and apparatus for detecting surface ions on silicon diodes and transistors  
 [NASA-CASE-ERC-10325] c15 N72-25457

**SURFACE LAYERS**  
 Bismuth and lead surface coatings for gas bearings in aerospace engineering  
 [NASA-CASE-XGS-02011] c15 N71-20739  
 Method and apparatus for stable silicon dioxide layers on silicon grown in silicon nitride ambient  
 [NASA-CASE-ERC-10073-1] c24 N74-19769

**SURFACE PROPERTIES**  
 Anti-wettable materials brazing processes using titanium and zirconium for surface pretreatment  
 [NASA-CASE-XMS-03537] c15 N69-21471  
 Ablation article and surface for analyzing flow transition on ablative surface  
 [NASA-CASE-LAR-10439-1] c33 N73-27796  
 Dual measurement ablation sensor  
 [NASA-CASE-LAR-10105-1] c34 N74-15652  
 Apparatus for scanning the surface of a cylindrical body  
 [NASA-CASE-NPO-11861-1] c36 N74-20009  
 Apparatus for microbiological sampling --- including automatic swabbing  
 [NASA-CASE-LAR-11069-1] c35 N75-12272  
 Penetrometer --- for determining load bearing characteristics of inclined surfaces  
 [NASA-CASE-NPO-11103-1] c35 N77-27367  
 Device for measuring the contour of a surface  
 [NASA-CASE-LAR-11869-1] c74 N78-27904  
 Displacement probes with self-contained exciting medium  
 [NASA-CASE-LAR-11690-1] c35 N80-14371

Apparatus for electrolytically tapered or contoured cavities  
[NASA-CASE-XNP-08835-1] c37 N80-14395

Mechanical bonding of metal  
[NASA-CASE-LEW-12941-1] c31 N81-16329

Tactile sensing system --- manipulator controllers  
[NASA-CASE-NPO-15094-1] c33 N81-16386

**SURFACE REACTIONS**  
Chemical spot test for identifying magnesium or magnesium alloys used in aerospace applications  
[NASA-CASE-LAR-10953-1] c17 N73-27446

**SURFACE ROUGHNESS**  
Roughness detector for recording surface pattern of irregularities  
[NASA-CASE-XLA-00203] c14 N70-34161

Optical apparatus for visual detection of roundness and regularity of cone surfaces  
[NASA-CASE-XMP-00462] c14 N70-34298

Describing device for surveying contour of surface using X-Y plotter and traveling transducer  
[NASA-CASE-XLA-08646] c14 N71-17586

Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
[NASA-CASE-NPO-13862-1] c35 N79-10391

Texturing polymer surfaces by transfer casting --- cardiovascular prosthesis  
[NASA-CASE-LEW-13120-1] c31 N81-16327

**SURFACE ROUGHNESS EFFECTS**  
Aerodynamically stable meteorological balloon using surface roughness effect  
[NASA-CASE-XMP-04163] c02 N71-23C07

**SURFACE TEMPERATURE**  
Curved film cooling admission tube  
[NASA-CASE-LEW-13174-1] c34 N81-12363

**SURFACE VEHICLES**  
Optimal control system for automatic speed regulation of electric driven motor vehicle  
[NASA-CASE-NPO-11210] c11 N72-20244

Self-propelled vehicle with wheel, track laying, and walking capability for exploratory expolaration  
[NASA-CASE-NPO-11366] c11 N73-26238

Short range laser obstacle detector --- for surface vehicles using laser diode array  
[NASA-CASE-NPO-11856-1] c36 N74-15145

Vehicle locating system utilizing AM broadcasting station carriers  
[NASA-CASE-NPO-13217-1] c32 N75-26194

Vehicular impact absorption system  
[NASA-CASE-NPO-14014-1] c37 N79-10420

**SURFACE WAVES**  
Development of method for suppressing excitation of electromagnetic surface waves on dielectric converter antenna  
[NASA-CASE-XLA-10772] c07 N71-28980

**SURFACES**  
Techniques for recovery of multistage rocket vehicles by providing lifting surfaces on individual sections  
[NASA-CASE-XMP-00389] c31 N70-34176

Kinetic and static friction force measurement between magnetic tape and magnetic head surfaces  
[NASA-CASE-XNP-08680] c14 N71-22995

Three-axis adjustable loading structure  
[NASA-CASE-FRC-10051-1] c35 N74-13129

Photoelectron spectrometer with means for stabilizing sample surface potential  
[NASA-CASE-NFO-13772-1] c35 N78-10429

**SURFACTANTS**  
Surfactant-assisted liquefaction of particulate carbonaceous substances  
[NASA-CASE-NPO-13904-1] c25 N79-11152

**SURGERY**  
Tissue macerating instrument  
[NASA-CASE-LEW-12668-1] c52 N78-14773

Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12955-1] c52 N80-14684

**SURGES**  
Silicon controlled rectifier inverter with compensation of transients to avoid false gating  
[NASA-CASE-XLA-06507] c09 N69-39584

Turn on current transient limiter for controlling peak current flow in high capacity load  
[NASA-CASE-GSC-10413] c10 N71-26531

**SURGICAL INSTRUMENTS**  
Ultrasonic device for ophthalmic eye surgery with safe removal of macerated material  
[NASA-CASE-LEW-11669-1] c05 N73-27062

Ophthalmic liquifaction pump  
[NASA-CASE-LEW-12051-1] c52 N75-33640

**SURVIVAL EQUIPMENT**  
Survival couch for aircraft or spacecraft crews  
[NASA-CASE-XLA-00118] c05 N70-33285

Lightweight life preserver without fastening devices  
[NASA-CASE-XMS-00864] c05 N70-36493

Fliaible frame for sunglasses in emergency survival kits  
[NASA-CASE-XMS-06064] c05 N71-23096

**SUSPENDING (HANGING)**  
Parallel motion suspension device for measuring instruments  
[NASA-CASE-XNP-01567] c15 N70-41310

Cable suspension and inclined walkway system for simulating reduced or zero gravity environments  
[NASA-CASE-XLA-01787] c11 N71-16028

Suspended mass oscillation damper based on impact energy absorption for damping wind induced oscillations of tall stacks, antennas, and umbilical towers  
[NASA-CASE-LAR-10193-1] c15 N71-27146

**SUSPENSION SYSTEMS (VEHICLES)**  
An improved suspension system for a wheel rolling on a flat track --- bearings for directional antennas  
[NASA-CASE-NPO-14395-1] c37 N79-12446

**SWEAT**  
Sweat collection capsule  
[NASA-CASE-ARC-11031-1] c52 N81-29763

**SWEAT COOLING**  
Transpiration cooled turbine blade made from metallic or ceramic wires  
[NASA-CASE-XLE-00020] c15 N70-33226

Transpirationally cooled heat ablation system for interplanetary spacecraft reentry shielding  
[NASA-CASE-XMS-02677] c31 N70-42075

Method of electroforming a rocket chamber  
[NASA-CASE-LEW-11118-1] c20 N74-32919

**SWEEP CIRCUITS**  
Transistorized circuit for producing multiple slope voltage sweep  
[NASA-CASE-XMS-03542] c09 N71-28926

**SWEEP EFFECT**  
Supersonic or hypersonic vehicle control system comprising elevons with hinge line sweep and free of adverse aerodynamic cross coupling  
[NASA-CASE-XLA-08967] c02 N71-27088

Acoustically swept rotor --- helicopter noise reduction  
[NASA-CASE-ARC-11106-1] c05 N80-14107

**SWEEP FREQUENCY**  
Swept group delay measurement  
[NASA-CASE-NFO-13909-1] c33 N78-25319

**SWELLING**  
Para-benzoquinone dioxime and concentrated mineral acid processed to yield intumescent or fire resistant, heat insulating materials  
[NASA-CASE-ARC-10304-1] c18 N73-26572

**SWEEP WINGS**  
Design of supersonic aircraft with novel fixed, swept wing planform  
[NASA-CASE-XLA-04451] c02 N71-12243

Leading edge vortex flaps for drag reduction --- during subsonic flight  
[NASA-CASE-LAR-12750-1] c02 N81-19016

**SWIRLING**  
Slosh and swirl alleviator for liquid propellant tanks during transport and flight  
[NASA-CASE-XLA-05749] c15 N71-19569

Swirl can, full-annulus combustion chambers for high performance gas turbine engines  
[NASA-CASE-LEW-11326-1] c23 N73-30665

**SWITCHES**  
Switching mechanism with energy stored in coil spring  
[NASA-CASE-XGS-00473] c03 N70-38713

Digital memory system with multiple switch cores for driving each word location  
[NASA-CASE-XNP-01466] c10 N71-26434

Radio frequency controlled solid state switch  
[NASA-CASE-ARC-10136-1] c09 N72-22202

High power BP coaxial switch  
[NASA-CASE-NFO-14229-1] c33 N80-18285

- Fiber optic crossbar switch for automatically patching optical signals  
[NASA-CASE-KSC-11104-1] c74 N81-12862
- SWITCHING CIRCUITS**
- Solid state switching circuit design to increase current capacity of low rated relay contacts  
[NASA-CASE-XNP-09228] c09 N69-27500
- Power control switching circuit using low voltage semiconductor controlled rectifiers for high voltage isolation  
[NASA-CASE-XNP-02713] c10 N69-39888
- Selective gold diffusion on monolithic silicon chips for switching and nonswitching amplifier devices and circuits and linear and digital logic circuits  
[NASA-CASE-ERC-10072] c09 N70-11148
- Electrical power system for space flight vehicles operating over extended periods  
[NASA-CASE-XMF-00517] c03 N70-34157
- High speed low level voltage commutating switch  
[NASA-CASE-XAC-00060] c09 N70-39915
- Switching circuit with regeneratively connected transistors eliminating power consumption when not in use  
[NASA-CASE-XNP-02654] c10 N70-42032
- Using electron beam switching for brushless motor commutation  
[NASA-CASE-XGS-01451] c09 N71-10677
- Increasing power conversion efficiency of electronic amplifiers by power supply switching  
[NASA-CASE-XMS-00945] c09 N71-10798
- Silicon controlled rectifier pulse gate amplifier for blocking false gating caused by negative transient voltages  
[NASA-CASE-XLA-07497] c09 N71-12514
- Describing magnetic core current switching device for steering bipolar current pulses to memory units  
[NASA-CASE-NPO-10201] c08 N71-18694
- Transistorized dc-coupled multivibrator with noninverted output signal  
[NASA-CASE-XNP-09450] c10 N71-18723
- Reversible current directing circuitry for reversible motor control  
[NASA-CASE-XLA-09371] c10 N71-18724
- Constructing Exclusive-Or digital logic circuit in single module  
[NASA-CASE-XLA-07732] c08 N71-18751
- Polarization diversity monopulse tracking receiver design without radio frequency switches  
[NASA-CASE-XGS-03501] c09 N71-20864
- Sight switch using infrared source and sensor mounted beside eye  
[NASA-CASE-XMF-03934] c09 N71-22985
- Complementary regenerative transistorized switch circuit employing positive and negative feedback  
[NASA-CASE-XGS-02751] c09 N71-23015
- Reliable magnetic core circuit apparatus with application in selection matrices for digital memories  
[NASA-CASE-XNP-01318] c10 N71-23033
- Electric circuit for producing high current pulse having fast rise and fall time  
[NASA-CASE-XMS-04919] c09 N71-23270
- Electric circuit for reversing direction of current flow  
[NASA-CASE-XNP-00952] c10 N71-23271
- Switching series regulator with gating control network  
[NASA-CASE-XMS-09352] c09 N71-23316
- Microwave waveguide switch with rotor position control  
[NASA-CASE-XNP-06507] c09 N71-23548
- Signaling summary alarm circuit with semiconductor switch for faulty contact indications  
[NASA-CASE-XLE-03061-1] c10 N71-24798
- Solid state circuit for switching alternating current input signal as function of direct current gating transistor  
[NASA-CASE-XNP-06505] c10 N71-24799
- Inverters for changing direct current to alternating current  
[NASA-CASE-XGS-06226] c10 N71-25950
- Design and development of multistage current steering switch with inductively coupled magnetic cores  
[NASA-CASE-XNP-08567] c09 N71-26000
- Pulse duration control device for driving slow response time loads in selected sequence including switching and delay circuits and magnetic storage  
[NASA-CASE-XGS-04224] c10 N71-26418
- Turn on current transient limiter for controlling peak current flow in high capacity load  
[NASA-CASE-GSC-10413] c10 N71-26531
- Input radio frequency circuit for switching type absolute temperature measuring radiometer for noise sources  
[NASA-CASE-ERC-11020] c14 N71-26774
- Inverter drive circuit for semiconductor switch  
[NASA-CASE-LEW-10233] c10 N71-27126
- Phase locked demodulator with bandwidth switching amplifier circuit  
[NASA-CASE-XNP-01107] c10 N71-28859
- Monostable multivibrator for producing output pulse widths with positive feedback NOR gates  
[NASA-CASE-HSC-13492-1] c10 N71-28860
- Digital magnetic core memory with sensing amplifier circuits  
[NASA-CASE-XNP-01012] c08 N71-28925
- Current regulating voltage divider design with load current shunting  
[NASA-CASE-HFS-20935] c09 N71-34212
- Relay controlled voltage switching unit for scanning circuitry of star tracker  
[NASA-CASE-NPO-11253] c09 N72-17157
- Spacecraft solar cell system with switching circuit to provide compensation for environmental changes  
[NASA-CASE-GSC-10669-1] c03 N72-20031
- Flow rate switch for detecting variations in fluid flow velocity through conduits of pressurized systems  
[NASA-CASE-NFO-10722] c09 N72-20199
- Switching type voltage regulator with relatively simple circuit arrangement  
[NASA-CASE-LEW-11005-1] c09 N72-21243
- Development and characteristics of data multiplexer circuit using field effect transistors arranged in tree switching configuration  
[NASA-CASE-NFO-11333] c08 N72-22162
- Pulse coupling circuit with switch between generator and winding  
[NASA-CASE-LEW-10433-1] c09 N72-22197
- Solid state remote circuit selector switching circuit  
[NASA-CASE-LEW-10387] c09 N72-22201
- Pressure operated electrical switch responsive to pressure decrease after pressure increase  
[NASA-CASE-LAR-10137-1] c09 N72-22204
- Transistorized switching logic circuits with tunnel diodes  
[NASA-CASE-GSC-10878-1] c10 N72-22236
- Switching circuit for control of cathode ray tube beam with fast rise time for output signal  
[NASA-CASE-KSC-10647-1] c10 N72-31273
- Electronic video editor for switching video input signals to common output channel  
[NASA-CASE-KSC-10003] c10 N73-13235
- Solid state switch for variable circuit switching  
[NASA-CASE-NFO-10817-1] c08 N73-30135
- Transparent switchboard which permits optical display devices to be adapted for use in man machine communications  
[NASA-CASE-HSC-13746-1] c10 N73-32143
- High isolation RF signal selection switches  
[NASA-CASE-NFO-13081-1] c33 N74-22814
- Isolated output system for a class D switching-mode amplifier  
[NASA-CASE-HFS-21616-1] c33 N75-30429
- Dual digital video switcher  
[NASA-CASE-KSC-10782-1] c33 N75-30431
- Multi-computer multiple data path hardware exchange system  
[NASA-CASE-NFO-13422-1] c60 N76-14818
- Sustained arc ignition system  
[NASA-CASE-LEW-12444-1] c33 N77-28385
- Window comparator  
[NASA-CASE-FRC-10090-1] c33 N78-18308
- Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NFO-14000-1] c33 N79-24254

- System for automatically switching transformer coupled lines  
[NASA-CASE-MSC-16697-1] c33 N79-28415
- Self-reconfiguring scalar cell system  
[NASA-CASE-LEW-12586-1] c44 N80-14472
- Microwave switching power divider --- for use in Earth orbiting satellites having spherical multi-element antenna arrays  
[NASA-CASE-GSC-12420-1] c33 N80-21670
- Control means for a solid state crossbar switch  
[NASA-CASE-NPO-15066-1] c33 N80-33679
- Fiber optic crossbar switch for automatically patching optical signals  
[NASA-CASE-KSC-11104-1] c74 N81-12662
- Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NPO-14316-1] c33 N81-33404
- SWITCHING THEORY**
- Multiple circuit switch apparatus requiring minimum hand and eye movement by operator  
[NASA-CASE-XAC-03777] c10 N71-15909
- SWIVELS**
- Swivel support for gas bearing for position adjustment between ball and supporting cup  
[NASA-CASE-XMP-07808] c15 N71-23612
- SYNCHRONISM**
- Synchronizing apparatus for multi-access satellite time division multiplex system  
[NASA-CASE-IGS-05918] c07 N69-35574
- Circuitry for generating sync signals in FM communication systems including video information  
[NASA-CASE-XNP-10830] c07 N71-11281
- Development of method for synchronizing clocks at several ground stations based on signals received from spacecraft or satellites  
[NASA-CASE-XNP-08875] c10 N71-23099
- Pulse generator for synchronizing or resetting electronic signals without requiring separate external source  
[NASA-CASE-IGS-03632] c09 N71-23311
- Time synchronization system for synchronizing clocks at remote locations with master clock using moon reflected coded signals  
[NASA-CASE-NPO-10143] c10 N71-26326
- System designed to reduce time required for obtaining synchronization in data communication with spacecraft utilizing pseudonoise codes  
[NASA-CASE-NPO-10214] c10 N71-26577
- SYNCHRONIZED OSCILLATORS**
- Development of phase demodulation system with two phase locked loops  
[NASA-CASE-XNP-00777] c10 N71-15469
- Phase locked phase modulation system with voltage controlled oscillator for final phase linearity  
[NASA-CASE-XNP-05382] c10 N71-23544
- Automatic frequency control device for providing frequency reference for voltage controlled oscillator  
[NASA-CASE-KSC-10393] c09 N72-21247
- SYNCHRONIZERS**
- Development and characteristics of burst synchronization detection system  
[NASA-CASE-XMS-05605-1] c10 N71-19468
- Time division relay synchronizer with master sync pulse for activating binary counter to produce signal identifying time slot for station  
[NASA-CASE-GSC-10373-1] c07 N71-19773
- Design and development of synchronous servo loop control system  
[NASA-CASE-XNP-03744] c10 N71-20448
- Digital synchronizer for extracting binary data in receiver of PSK/FDM communication system  
[NASA-CASE-NPO-10851] c07 N71-24613
- Video sync processor with phase locked system  
[NASA-CASE-KSC-10002] c10 N71-25665
- Pulse code modulated signal synchronizer  
[NASA-CASE-MSC-12462-1] c32 N74-20809
- Pulse code modulated signal synchronizer  
[NASA-CASE-MSC-12494-1] c32 N74-20810
- System for generating timing and control signals  
[NASA-CASE-NPO-13125-1] c33 N75-19519
- Telemetry synchronizer  
[NASA-CASE-GSC-11868-1] c17 N76-22245
- Memory-based frame synchronizer --- for voice data processing in digital communication systems  
[NASA-CASE-GSC-12430-1] c32 N80-20453
- SYNCHRONOUS MOTORS**
- Synchronous dc direct-drive system comprising multiple-loop hybrid control system controlling load directly connected to actuator  
[NASA-CASE-GSC-10065-1] c10 N71-27136
- Motor run-up system --- power lines  
[NASA-CASE-NPO-13374-1] c33 N75-19524
- SYNCHROUS SATELLITES**
- Position locating system for remote aircraft using voice communication and digital signals  
[NASA-CASE-GSC-10087-2] c21 N71-13958
- Serrodyne traveling wave tube reentrant amplifier for synchronous communication satellites operating at microwave frequencies  
[NASA-CASE-IGS-01022] c07 N71-16088
- Traffic control system for supersonic transports using synchronous satellite for data relay between vehicles and ground station  
[NASA-CASE-GSC-10087-1] c02 N71-19287
- Tracking antenna system with array for synchronous satellite or ground based radar  
[NASA-CASE-GSC-10553-1] c07 N71-19854
- Satellite network synchronization system with multiple access to multiplex repeater  
[NASA-CASE-GSC-10390-1] c07 N72-11149
- Development of device for simulating charge and discharge cycle of battery in synchronous orbit  
[NASA-CASE-GSC-11211-1] c03 N72-25020
- Camera arrangement --- for satellite scanning of earth or sky  
[NASA-CASE-GSC-12032-2] c35 N76-19408
- Systems and methods for determining radio frequency interference  
[NASA-CASE-GSC-12150-1] c32 N79-11265
- Satellite personal communications system  
[NASA-CASE-NPO-14480-1] c32 N80-20448
- SYNTHESIS**
- Synthesis of polymeric schiff bases by schiff-base exchange reactions  
[NASA-CASE-XMP-08651] c06 N71-11236
- Preparation of ordered poly/arylenesiloxane/polymers  
[NASA-CASE-XMP-10753] c06 N71-11237
- Synthesis and chemical properties of imidazopyrrolone/imide copolymers  
[NASA-CASE-XLA-08802] c06 N71-11238
- Stable polyimide synthesis from mixtures of monomeric diamines and polycarboxylic acid esters  
[NASA-CASE-LEW-11325-1] c06 N73-27980
- Synthesis of multifunction triaryltrifluoroethanes  
[NASA-CASE-ARC-11097-1] c23 N78-22154
- Synthesis of multifunction triaryltrifluoroethanes  
[NASA-CASE-ARC-11097-2] c23 N78-22155
- SYNTHESIS (CHEMISTRY)**
- Synthesis of dawsonites  
[NASA-CASE-ARC-113261-1] c25 N80-31490
- Prepolymer dianhydrides  
[NASA-CASE-NPO-13899-1] c27 N80-32515
- Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c27 N81-15104
- Bifunctional monomers having terminal oxime and cyano or amidine groups  
[NASA-CASE-ARC-11253-3] c27 N81-24256
- Cross-linked polyvinyl alcohol and method of making same  
[NASA-CASE-LEW-13504-1] c27 N81-27279
- SYNTHESIZERS**
- Digitally controlled frequency synthesizer for pulse frequency modulation telemetry systems  
[NASA-CASE-IGS-02317] c09 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] c35 N79-10391
- Azimuth correlator for real-time synthetic aperture radar image processing  
[NASA-CASE-NPO-14019-1] c32 N79-14268
- Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-1] c32 N79-19195
- Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-2] c32 N80-32607

- An electro-optical Doppler tracker means and method for optical correlation of synthetic aperture radar data  
[NASA-CASE-NPO-14998-1] c33 N81-15194
- SYNTHETIC FIBERS**  
Manufacture of fluid containers from fused coated polyester sheets having resealable septum  
[NASA-CASE-NPO-10123] c15 N71-24835  
Structure of fabric layers for micrometeoroid protection garment with capability for eliminating heat shorts for use in manufacturing space suits  
[NASA-CASE-MSC-12109] c18 N71-26285  
Flexible barrier membrane comprising porous substrate and incorporating liquid gallium or indium metal used as sealant barriers for spacecraft walls and pumping liquid propellants  
[NASA-CASE-XNP-06881] c17 N71-28747  
Polymeric electrolytic hygrometer  
[NASA-CASE-NPO-13948-1] c35 N78-25391  
Process for spinning flame retardant elastomeric compositions --- fabricating synthetic fibers for high oxygen environments  
[NASA-CASE-MSC-14331-3] c27 N78-32262  
Insoluble polyelectrolyte and ion-exchange hollow fiber impregnated therewith  
[NASA-CASE-NPO-13530-1] c25 N81-17187  
Method of carbonizing polyacrylonitrile fibers and resulting product  
[NASA-CASE-ARC-11261-1] c24 N81-29164
- SYNTHETIC FUELS**  
Solar-heated fluidized bed gasification system  
[NASA-CASE-NPO-15071-1] c44 N80-24747  
Molten salt pyrolysis of latex --- synthetic hydrocarbon fuel production using the Guayule shrub  
[NASA-CASE-NPO-14315-1] c27 N81-17261
- SYNTHETIC RESINS**  
Process permitting application of synthetic resin coating to irregular-shaped objects at ambient temperature  
[NASA-CASE-XNP-06508] c18 N69-39895  
Phosphorus-containing bisimide resins  
[NASA-CASE-ARC-11321-1] c27 N81-27272
- SYNTHETIC RUBBERS**  
Process for the preparation of polycarboranylphosphazenes --- thermal insulation  
[NASA-CASE-ARC-11176-2] c27 N81-27271
- SYRINGES**  
Micro-fluid exchange coupling apparatus  
[NASA-CASE-ARC-11114-1] c51 N81-14605  
Automated syringe sampler --- remote sampling of air and water  
[NASA-CASE-LAR-12308-1] c35 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] c74 N79-11865
- SYSTEM FAILURES**  
Tape recorder designed for low power consumption and resistance to operational failure under high stress conditions  
[NASA-CASE-XGS-08259] c14 N71-23698  
Fault tolerant clock apparatus utilizing a controlled minority of clock elements  
[NASA-CASE-MSC-12531-1] c35 N75-30504  
Apparatus for sensor failure detection and correction in a gas turbine engine control system  
[NASA-CASE-LEW-12907-2] c07 N81-19115
- SYSTEMS ANALYSIS**  
Analog to digital converter analyzing system  
[NASA-CASE-NPO-10560] c08 N72-22166
- SYSTEMS ENGINEERING**  
Design of magnetohydrodynamic induction machine with end poles which produce compensating magnetic fields  
[NASA-CASE-XNP-07481] c25 N69-21929  
Hovering type flying vehicle design and principle mechanisms for manned or unmanned use  
[NASA-CASE-MSC-12111-1] c02 N71-11039  
Solar battery with interconnecting means for plural cells  
[NASA-CASE-XNP-06506] c03 N71-11050  
Transparent polycarbonate resin, shell helmet and latch design for high altitude and space flight  
[NASA-CASE-XMS-04935] c05 N71-11190  
Design and operation of multi-feed cone Cassegrain antenna  
[NASA-CASE-NPO-10539] c07 N71-11285  
Design and operation of viscous pendulum damper  
[NASA-CASE-XLA-02079] c12 N71-16894  
Alarm system design for monitoring one or more relay circuits  
[NASA-CASE-XMS-10984-1] c10 N71-19417  
Wide range analog data compression system  
[NASA-CASE-XGS-02612] c08 N71-19435  
Space suit body heat exchanger design composed of thermal conductance yarn and liquid coolant loops  
[NASA-CASE-XMS-09571] c05 N71-19439  
Silicon radiation detecting probe design for in vivo biomedical use  
[NASA-CASE-XMS-01177] c05 N71-19440  
Design and operation of high speed binary to decimal conversion system  
[NASA-CASE-XGS-01230] c08 N71-19544  
Spatier proof evaporant source design for use in vacuum deposition of solid thin films on substrates  
[NASA-CASE-XMP-06065] c15 N71-20395  
Method and apparatus for fabrication of heat insulating and ablative reentry structure  
[NASA-CASE-XMS-02009] c33 N71-20834  
Polarization diversity monopulse tracking receiver design without radio frequency switches  
[NASA-CASE-XGS-03501] c09 N71-20864  
Pneumatic cantilever beams and platform for space erectable structure  
[NASA-CASE-XLA-01731] c32 N71-21045  
Magnetically opened diaphragm design with camera shutter and expansion tube applications  
[NASA-CASE-XLA-03660] c15 N71-21060  
Portable apparatus producing high velocity annular air column surrounding low velocity, filtered, superclean air central core for industrial clean room environmental control  
[NASA-CASE-XMP-03212] c15 N71-22721  
Rotary spindle lathe attachments for machining geometrical cones  
[NASA-CASE-XMS-04292] c15 N71-22722  
Apparatus and method for spin forming tubular elbows with high strength, uniform thickness, and close tolerances  
[NASA-CASE-XMP-01083] c15 N71-22723  
Spacecraft air lock system to provide ingress and egress of astronaut without subjecting vehicular environment to vacuum of space  
[NASA-CASE-XLA-02050] c31 N71-22968  
Method of stationkeeping for lenticular gravity gradient satellites  
[NASA-CASE-XLA-03132] c31 N71-22969  
Filler valve design for supplying liquid propellants at high pressure to space vehicles  
[NASA-CASE-XNP-01747] c15 N71-23024  
Method and apparatus for producing very low temperature refrigeration based on gas pressure balance  
[NASA-CASE-XNP-08877] c15 N71-23025  
Monitoring circuit design for sampling circuit control and reduction of time-bandwidth in video communication systems  
[NASA-CASE-XNP-02791] c07 N71-23026  
Multisample test chamber for exposing materials to X rays, temperature change, and gaseous conditions and determination of material effects  
[NASA-CASE-XMS-02930] c11 N71-23042  
Variable duration pulse integrator design for integrating pulse duration modulated pulses with elimination of ripple content  
[NASA-CASE-XLA-01219] c10 N71-23084  
Sealed electrochemical cell with flexible casing for varying electrolyte level in cell  
[NASA-CASE-XGS-01513] c03 N71-23336  
Mosaic semiconductor radiation detector and position indicator systems engineering for low energy particles  
[NASA-CASE-XGS-03230] c14 N71-23401  
Device for measuring two orthogonal components of force with gallium flotation of measuring target for use in vacuum environments  
[NASA-CASE-XAC-04885] c14 N71-23790  
Transducer circuit design with single coaxial cable for input and output connections including incorporation into miniaturized

- catheter transducer  
[NASA-CASE-ARC-10132-1] c09 N71-24597
- Method of attaching cover glass to silicon solar cell without using adhesive  
[NASA-CASE-XLE-08569-2] c03 N71-24681
- Development of attitude control system for sounding rocket stabilization during ballistic phase of flight  
[NASA-CASE-XGS-01654] c31 N71-24750
- Temperature telemetric transmitter with frequency determining tank circuit for short range transmission  
[NASA-CASE-NPO-10649] c07 N71-24840
- Tuning arrangement for frequency control of magnetron-type electron discharge device  
[NASA-CASE-XNP-09771] c09 N71-24841
- Broadband modified turnstile antenna for use in space tracking and communications  
[NASA-CASE-MSC-12209] c09 N71-24842
- Apparatus to determine electric field strength by measuring deflection of electron beam impinging on target  
[NASA-CASE-XMF-06617] c09 N71-24843
- Binary to decimal decoder logic circuit design with feedback control and display device  
[NASA-CASE-XKS-06167] c08 N71-24890
- Noninterruptable digital counter circuit design with display device for pulse frequency modulation  
[NASA-CASE-XNP-05759] c08 N71-24891
- Quick disconnect duct coupling device for single-handed operation  
[NASA-CASE-MFS-20395] c15 N71-24903
- Brushless dc tachometer design with Hall effect crystals and output voltage magnitude proportional to rotor speed  
[NASA-CASE-MFS-20385] c09 N71-24904
- Pneumatic mechanism for releasing hook and loop fasteners between large rigid structures  
[NASA-CASE-XMS-10660-1] c15 N71-25975
- Sealed fluorescent tube light unit capable of connection with other units to form string of work lights  
[NASA-CASE-XKS-05932] c09 N71-26787
- Apparatus for semiautomatic inspection of microfilmed documents for density, resolution, size, and position  
[NASA-CASE-MFS-20240] c14 N71-26788
- Method and apparatus for remote measurement of displacement of marks on specimen undergoing tensile test  
[NASA-CASE-NPO-10778] c14 N72-11364
- Spacecraft solar cell system with switching circuit to provide compensation for environmental changes  
[NASA-CASE-GSC-10669-1] c03 N72-20031
- Electric storage battery with high inductance resistance  
[NASA-CASE-NPO-11021] c03 N72-20032
- Method and apparatus for providing active attitude control for spacecraft by converting any attitude motion of vehicle into simple rotational motion  
[NASA-CASE-HQN-10439] c21 N72-21624
- Development of light sensing system for controlled orientation of object relative to sun or other light source  
[NASA-CASE-NPO-11311] c14 N72-25414
- Development of thrust control system for application to control of aircraft and spacecraft  
[NASA-CASE-MSC-13397-1] c21 N72-25595
- Development of computer program for estimating reliability of self-repair and fault-tolerant systems with respect to selected system and mission parameters  
[NASA-CASE-NPO-13086-1] c15 N73-12495
- Measurement system for physical quantity represented by or converted to variable frequency signal  
[NASA-CASE-MFS-20658-1] c14 N73-30386
- Design of precision vertical alignment system using laser with gravitationally sensitive cavity  
[NASA-CASE-ARC-10444-1] c16 N73-33397
- System for calibrating pressure transducer  
[NASA-CASE-LAR-10910-1] c35 N74-13132
- Three mirror glancing incidence system for X-ray telescope  
[NASA-CASE-MFS-21372-1] c74 N74-27866
- Holographic system for nondestructive testing  
[NASA-CASE-MFS-21704-1] c35 N75-25124
- Compact pulsed laser having improved heat conductance  
[NASA-CASE-NEO-13147-1] c36 N77-25502
- Tetherline system for orbiting satellites  
[NASA-CASE-MFS-23564-1] c15 N78-25119
- Non-tracking solar energy collector system  
[NASA-CASE-NPO-13813-1] c44 N78-31526
- Horizontally mounted solar collector  
[NASA-CASE-MFS-23349-1] c44 N79-23481
- Contour measurement system  
[NASA-CASE-MFS-23726-1] c43 N79-26439
- Solar energy control system  
[NASA-CASE-MFS-25287-1] c44 N80-17544
- Redundant motor drive system  
[NASA-CASE-MFS-23777-1] c37 N80-32716
- System for sterilizing objects --- cleaning space vehicle systems  
[NASA-CASE-KSC-11085-1] c54 N81-24724

## T

## TACHOMETERS

- Digital cardi tachometer incorporating circuit for measuring heartbeat rate of subject over predetermined portion of one minute also converting rate to beats per minute  
[NASA-CASE-XMS-02399] c05 N71-22896
- Brushless dc tachometer design with Hall effect crystals and output voltage magnitude proportional to rotor speed  
[NASA-CASE-MFS-20385] c09 N71-24904
- Development of instantaneous reading tachometer for measuring electrocardiogram signal rate  
[NASA-CASE-MFS-20418] c14 N73-24473
- Tachometer  
[NASA-CASE-MFS-23175-1] c35 N77-30436

## TAKEOFF

- Aircraft instrument for indicating malfunctions during takeoff  
[NASA-CASE-XLA-00100] c14 N70-36807
- Aircraft indicator for pilot control of takeoff roll, climbout path and verticle flight path in poor visibility conditions  
[NASA-CASE-XLA-00487] c14 N70-40157

## TANGENTS

- Integrated circuit tangent function generator  
[NASA-CASE-MSC-13907-1] c10 N73-26230

## TANK GEOMETRY

- Liquid propellant tank design with semitoroidal bulkhead  
[NASA-CASE-XMP-01899] c31 N70-41948

## TANKS (CONTAINERS)

- Radiation source and detection system for measuring amount of liquid inside tanks independently of liquid configuration  
[NASA-CASE-MSC-12280] c27 N71-16348
- Development of apparatus and method for testing leakage of large tanks  
[NASA-CASE-XMF-02392] c32 N71-24285
- Floating baffle for tank drain  
[NASA-CASE-KSC-10639] c15 N73-26472
- Method of producing a storage bulb for an atomic hydrogen maser  
[NASA-CASE-NEO-13050-1] c36 N75-15029

## TANTALUM

- Oxygen-doped tantalum emitter for thermionic devices such as cesium vapor diodes  
[NASA-CASE-NPO-11138] c03 N70-34646
- Arc electrode of graphite with tantalum ball tip  
[NASA-CASE-XLE-04788] c09 N71-22987
- Organometallic compounds of niobium and tantalum useful for film deposition  
[NASA-CASE-IXP-04023] c06 N71-28808
- Thermocouples of tantalum and rhenium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12050-1] c35 N77-32454

## TANTALUM ALLOYS

- Evaporating crucible of tantalum-tungsten foil, nickel alumina bonding agent, and ceramic coating  
[NASA-CASE-XLA-03105] c15 N69-27483
- Tantalum modified ferritic iron base alloys  
[NASA-CASE-LEW-12095-1] c26 N78-18182

## TANTALUM CARBIDES

- Thermal shock and erosion resistant tantalum carbide ceramic material



- [NASA-CASE-LAR-11902-1] c27 N78-17206
- TANTALUM OXIDES**  
Development of thin film temperature sensor from TaO  
[NASA-CASE-NPO-11775] c26 N72-28761
- TAPE RECORDERS**  
Plural recorder system which limits signal recording to signals of sufficient interest  
[NASA-CASE-XMS-06949] c09 N69-21467  
Endless loop tape transport mechanism for driving and tensioning recording medium in magnetic tape recorder  
[NASA-CASE-IGS-01223] c07 N71-10609  
Development of low friction magnetic recording tape  
[NASA-CASE-XGS-00373] c23 N71-15978  
Tape guidance system for multichannel digital recording system  
[NASA-CASE-XNP-09453] c08 N71-19420  
Design and development of synchronous servo loop control system  
[NASA-CASE-XNP-03744] c10 N71-20448  
Development of data storage system for storing digital data in high density format on magnetic tape  
[NASA-CASE-XNF-02778] c08 N71-22710  
Digital telemetry system apparatus to reduce tape recorder wow and flutter noise during playback  
[NASA-CASE-XGS-01812] c07 N71-23001  
Tape recorder designed for low power consumption and resistance to operational failure under high stress conditions  
[NASA-CASE-XGS-08259] c14 N71-23698  
Transient video signal tape recorder with expanded playback  
[NASA-CASE-ARC-10003-1] c09 N71-25866  
Closed loop servosystem for variable speed tape recorders onboard spacecraft  
[NASA-CASE-NPO-10700] c07 N71-33613  
Design and characteristics of recording system for selective reprocessing and filtering of data to obtain optimum signal to noise ratios  
[NASA-CASE-ERC-10112] c07 N72-21119  
Video tape recorder with scan conversion playback for color television signals  
[NASA-CASE-NPO-10166-1] c07 N73-22076  
Scan converting video tape recorder  
[NASA-CASE-NPO-10166-2] c35 N76-16391  
Method of and means for testing a tape record/playback system  
[NASA-CASE-MFS-22671-2] c35 N77-17426
- TAPERED COLUMNS**  
Method for shaping regeneratively cooled rocket motor casing having minimum thickness at each channel cross section  
[NASA-CASE-XLE-00409] c28 N71-15658  
Regeneratively cooled rocket motor casing with tapered channels to insure minimum thicknesses at each channel cross section for necessary strength requirements  
[NASA-CASE-XLE-05689] c28 N71-15659
- TARGET ACQUISITION**  
Acquisition and tracking system for optical radar  
[NASA-CASE-MFS-20125] c16 N72-13437  
Target acquisition antenna feed with reflector system  
[NASA-CASE-GSC-10064-1] c10 N72-22235  
Development of electronic detection system for remotely determining number and movement of enemy personnel  
[NASA-CASE-ARC-10097-2] c07 N73-25160  
Optical signature generating and correlating apparatus  
[NASA-CASE-NPO-15226-1] c74 N81-19899
- TARGET RECOGNITION**  
Electronic background suppression field scanning sensor for detecting point source targets  
[NASA-CASE-XGS-05211] c07 N69-39980
- TARGET SIMULATORS**  
Simulator method and apparatus for practicing the mating of an observer-controlled object with a target  
[NASA-CASE-MFS-23052-2] c74 N79-13855
- TARGETS**  
Method and apparatus for producing concentric hollow spheres --- inertial confinement fusion targets  
[NASA-CASE-NPO-14596-1] c31 N81-33319
- TECHNOLOGY UTILIZATION**  
Fuselage structure using advanced technology metal matrix fiber reinforced composites  
[NASA-CASE-LAR-11688-1] c05 N78-18045
- TEETH**  
Acoustic tooth cleaner  
[NASA-CASE-LAR-12471-1] c52 N81-12724
- TEFLO (TRADEMARK)**  
Reinforced FEP Teflon composite material diffusion bonded to metal substrate  
[NASA-CASE-MFS-20482] c15 N72-22492  
Method of producing a storage bulb for an atomic hydrogen maser  
[NASA-CASE-NFO-13050-1] c36 N75-15029  
Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c44 N76-27664
- TELECOMMUNICATION**  
Adaptive compression signal processor for PCM communication systems  
[NASA-CASE-XLA-03076] c07 N71-11266  
Circuitry for generating sync signals in FM communication systems including video information  
[NASA-CASE-XNP-10830] c07 N71-11281  
Automatic estimation of signal to noise ratio and other parameters in signal communication systems  
[NASA-CASE-XNF-05254] c07 N71-20791  
Digital synchronizer for extracting binary data in receiver of PSK/PCM communication system  
[NASA-CASE-NFO-10851] c07 N71-24613  
Encoders designed to generate comma free biorthogonal Reed-Muller type code comprising conversion of 64 6-bit words into 64 32-bit data for communication purposes  
[NASA-CASE-NPO-10595] c10 N71-25917  
Multicarrier communications system for transmitting modulated signals from single transmitter  
[NASA-CASE-NPO-11548] c07 N73-26118  
Synchronized digital communication system  
[NASA-CASE-XNP-03623] c09 N73-28084  
Coherent receiver employing nonlinear coherence detection for carrier tracking  
[NASA-CASE-NFO-11921-1] c32 N74-30523  
Pseudo-noise test set for communication system evaluation --- test signals  
[NASA-CASE-MFS-22671-1] c35 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] c32 N75-24981  
Secure communication system  
[NASA-CASE-MSC-16462-1] c32 N78-25274  
Method and apparatus for quadriphase-shift-key and linear phase modulation  
[NASA-CASE-NPO-14444-1] c33 N81-15192
- TELEMETRY**  
Fabrication of pressure-telemetry transducers  
[NASA-CASE-XNP-09752] c14 N69-21541  
Telemetry data unit to form multibit words for use between demodulator and computer  
[NASA-CASE-XNP-09225] c09 N69-24333  
Development of telemetry system for position location and data acquisition  
[NASA-CASE-GSC-10083-1] c30 N71-16090  
Telespectrograph for analyzing upper atmosphere by tracking bodies reentering atmosphere at high velocities  
[NASA-CASE-XLA-03273] c14 N71-18699  
Digitally controlled frequency synthesizer for pulse frequency modulation telemetry systems  
[NASA-CASE-XGS-02317] c09 N71-23525  
Time division multiplexed telemetry transmitting system controlled by programmed memory  
[NASA-CASE-GSC-10131-1] c07 N71-24624  
Temperature telemetric transmitter with frequency determining tank circuit for short range transmission  
[NASA-CASE-NFO-10649] c07 N71-24840  
System designed to reduce time required for obtaining synchronization in data communication with spacecraft utilizing pseudonoise codes  
[NASA-CASE-NFO-10214] c10 N71-26577  
Zero power telemetry actuated switch for biomedical equipment  
[NASA-CASE-ARC-10105] c09 N72-17153

- Development and characteristics of telemetry system using computer-accessed circuits and remotely controlled from ground station  
[NASA-CASE-NPO-11358] c07 N72-25172
- Control and information system for digital telemetry data using analog converter to digitize sensed parameter values  
[NASA-CASE-NPO-11016] c08 N72-31226
- Characteristics of two channel telemetry system with two data rate channels for high and low data rate communication  
[NASA-CASE-NPO-11572] c07 N73-16121
- Improved phase lock loop for receiver in multichannel telemetry system with suppressed carrier  
[NASA-CASE-NPO-11593-1] c07 N73-28012
- Telemetry synchronizer  
[NASA-CASE-GSC-11868-1] c17 N76-22245
- Memory-based parallel data output controller  
[NASA-CASE-GSC-12447-1] c60 N80-21567
- TELEOPERATORS**  
Cooperative multiaxis sensor for teleoperation of article manipulating apparatus  
[NASA-CASE-NPO-13386-1] c54 N75-27758
- TELEPHONES**  
Telephone multiline signaling using common signal pair  
[NASA-CASE-KSC-11023-1] c32 N79-23310
- TELEPHONY**  
Digital communication system  
[NASA-CASE-MSC-13912-1] c32 N74-30524
- TELESCOPES**  
Pneumatic control of telescopic mirror support system  
[NASA-CASE-XLA-03271] c11 N69-24321
- Tracking mount for laser telescope employed in tracking large rockets and space vehicles to give information regarding azimuth and elevation  
[NASA-CASE-MFS-14017] c14 N71-26627
- Development of reflector system for application to line-of-sight pointing and tracking telescopes  
[NASA-CASE-NPO-10468] c23 N71-33229
- Design and development of light sensing device for controlling orientation of object relative to sun or other light source  
[NASA-CASE-NPO-11201] c14 N72-274C9
- Borecope with adjustable hinged telescoping optical system  
[NASA-CASE-MFS-15162] c14 N72-32452
- Ritchey-Chretien telescope responsive to images located off telescope optical axis  
[NASA-CASE-GSC-11487-1] c14 N73-30393
- Servo-controlled intravitral microscope system  
[NASA-CASE-NPO-13214-1] c35 N75-25123
- TELETYPEWRITER SYSTEMS**  
Teletypewriter video communication system and apparatus  
[NASA-CASE-XNP-06611] c07 N71-26102
- TELEVISION CAMERAS**  
Electrically operated rotary shutter for television camera aboard spacecraft  
[NASA-CASE-XNP-00637] c14 N70-40273
- TV camera output signal control system for digital spacecraft communication  
[NASA-CASE-XNP-01472] c14 N70-41807
- Solid state television camera system consisting of monolithic semiconductor mosaic sensor and molecular digital readout systems  
[NASA-CASE-XMF-06092] c07 N71-24612
- Color television system for allowing monochrome television camera to produce color pictures  
[NASA-CASE-MSC-12146-1] c07 N72-17109
- TV fatigue crack monitoring system  
[NASA-CASE-LAR-11490-1] c39 N78-16387
- Optical conversion method --- for spacecraft television  
[NASA-CASE-MSC-12618-1] c74 N78-17665
- TELEVISION EQUIPMENT**  
Conversion system for transforming slow scan rate of Apollo TV camera on moon to fast scan of commercial TV  
[NASA-CASE-XMS-07168] c07 N71-11300
- Automatic closed circuit television arc guidance control for welding joints  
[NASA-CASE-MFS-13046] c07 N71-19433
- Color television system utilizing single gun current sensitive color cathode ray tube  
[NASA-CASE-ERC-10098] c09 N71-28618
- Television multiplexing system, using single crystal controlled clock for signal synchronization  
[NASA-CASE-KSC-10654-1] c07 N73-30115
- Rotating raster generator  
[NASA-CASE-PRC-10071-1] c32 N74-20813
- Auditory display for the blind  
[NASA-CASE-HQN-10832-1] c71 N74-21014
- Spacecraft docking and alignment system --- using television camera system  
[NASA-CASE-MSC-12559-1] c18 N76-14186
- System for producing chroma signals  
[NASA-CASE-MSC-14683-1] c74 N77-18893
- TELEVISION RECEIVERS**  
Improvements in receiver of narrow bandwidth television system  
[NASA-CASE-XMS-06740-1] c07 N71-26579
- TELEVISION SYSTEMS**  
Electron beam scanning system for improved image definition and reduced power requirements for video signal transmission  
[NASA-CASE-ERC-10552] c09 N71-12539
- Development and characteristics of burst synchronization detection system  
[NASA-CASE-XMS-05605-1] c10 N71-19468
- Improvements in receiver of narrow bandwidth television system  
[NASA-CASE-XMS-06740-1] c07 N71-26579
- Stereoscopic television system, including projecting pair of binocular images  
[NASA-CASE-ARC-10160-1] c23 N72-27728
- TELEVISION TRANSMISSION**  
Television simulation for aircraft and space flight  
[NASA-CASE-XFR-03107] c09 N71-19449
- Automatic frequency control for FM transmitter  
[NASA-CASE-MFS-21540-1] c32 N74-19790
- Television noise reduction device  
[NASA-CASE-MSC-12607-1] c32 N75-21485
- TELLURIUM**  
Targets for producing high purity I-123  
[NASA-CASE-LEW-10518-3] c25 N78-27226
- TEMPERATURE**  
Fluorinated esters of polycarboxylic acid and lubricating compositions for use at extreme temperature  
[NASA-CASE-MES-21040-1] c06 N73-30098
- TEMPERATURE COMPENSATION**  
Temperature compensated solid state differential amplifier with application in bioinstrumentation circuits  
[NASA-CASE-XAC-00435] c09 N70-35440
- Variable frequency magnetic coupled multivibrator with temperature compensated frequency control circuit  
[NASA-CASE-XGS-00458] c09 N70-38604
- Matched thermistors for microwave power meters with compensation for temperature changes  
[NASA-CASE-NPO-10348] c10 N71-12554
- Development of temperature compensated thrust measuring gage for measuring forces as function of time in environment with varying temperature  
[NASA-CASE-XGS-02319] c14 N71-22965
- Variable frequency subcarrier oscillator with temperature compensation  
[NASA-CASE-XNP-03916] c09 N71-28810
- Omnidirectional liquid filled accelerometer design with liquid and housing temperature compensation  
[NASA-CASE-HQN-10780] c14 N71-30265
- Development of thermal compensating structure which maintains uniform length with changes in temperature  
[NASA-CASE-MFS-20433] c15 N72-28496
- Development of temperature compensated light source with components and circuitry for maintaining luminous intensity independent of temperature variations  
[NASA-CASE-ARC-10467-1] c09 N73-14214
- Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c35 N77-27366
- Temperature compensated current source  
[NASA-CASE-MSC-11235] c33 N78-17294
- TEMPERATURE CONTROL**  
Method and apparatus using temperature control for wavelength tuning of liquid lasers  
[NASA-CASE-ERC-10187] c16 N69-31343

- Ultraviolet radiation resistant alkali-metal  
silicate coatings for temperature control of  
spacecraft  
[NASA-CASE-XGS-04119] c18 N69-39979
- Passive thermal control coating on aluminum foil  
laminates for inflatable spacecraft surfaces  
[NASA-CASE-XLA-01291] c33 N70-36617
- Thermal switch for transferring excess heat from  
one region to another heat dissipating one  
[NASA-CASE-XNP-00463] c33 N70-36847
- Sandwich panel structure for removing heat from  
shield between hot and cold areas  
[NASA-CASE-XLA-00349] c33 N70-37979
- Device for adding water to high velocity exhaust  
jets to reduce velocity, noise, and temperature  
[NASA-CASE-XMF-01813] c28 N70-41582
- Modifying existing solar cells for temperature  
control  
[NASA-CASE-NPO-10109] c03 N71-11049
- Temperature sensor warning system for pneumatic  
tires of aircraft and ground vehicles  
[NASA-CASE-XLA-01926] c14 N71-15620
- Intermittent type silica gel adsorption  
refrigerator for providing temperature control  
for spacecraft components  
[NASA-CASE-XNP-00920] c15 N71-15906
- Using heat control unit to preheat circulating  
fluid  
[NASA-CASE-XMF-04237] c33 N71-16278
- Mounting apparatus for temperature control system  
[NASA-CASE-NPO-10138] c33 N71-16357
- Design and development of device for cooling  
inner conductor of coaxial cable  
[NASA-CASE-XNP-09775] c09 N71-20445
- Thermal control wall panel with application to  
spacecraft cabins  
[NASA-CASE-XLA-01243] c33 N71-22792
- Development and characteristics of thermal  
sensitive panel for controlling ratio of solar  
absorptivity to surface emissivity for space  
vehicle temperature control  
[NASA-CASE-XLA-07728] c33 N71-22690
- Method and apparatus for adjusting thermal  
conductance in electronic components for space  
use  
[NASA-CASE-XNP-05524] c33 N71-24876
- Device for rapid adjustment and maintenance of  
temperature in electronic components  
[NASA-CASE-XNP-02792] c14 N71-28958
- Automatic control device for regulating inlet  
water temperature of liquid cooled spacesuit  
[NASA-CASE-MSC-13917-1] c05 N72-15098
- Development of method for controlling vapor  
content of gas  
[NASA-CASE-NPO-10633] c03 N72-28025
- Atomic hydrogen maser with bulb temperature  
control by output frequency difference signal  
for wall shift elimination  
[NASA-CASE-HQN-10654-1] c16 N73-13489
- Design and development of thermomechanical pump  
for transmitting warming fluid through fluid  
circuit to control temperature of spacecraft  
instrumentation  
[NASA-CASE-NPO-11417] c15 N73-24513
- Automatic temperature control for liquid cooled  
space suit  
[NASA-CASE-ARC-10559-1] c05 N73-26071
- Temperature control system comprised of  
wheatstone bridge with RC circuit  
[NASA-CASE-NPO-11304] c14 N73-26430
- Development and characteristics of thermal  
control system for maintaining constant  
temperature within spacecraft module with wide  
variations of component heat transfer  
[NASA-CASE-GSC-11018-1] c31 N73-30829
- Apparatus for controlling the temperature of  
balloon-borne equipment  
[NASA-CASE-GSC-11620-1] c34 N74-23039
- Self-regulating proportionally controlled  
heating apparatus and technique  
[NASA-CASE-GSC-11752-1] c77 N75-20140
- Rocket chamber and method of making  
[NASA-CASE-LEW-11118-2] c20 N76-14191
- Thermostatically controlled non-tracking type  
solar energy concentrator  
[NASA-CASE-NPO-13497-1] c44 N76-14602
- Multi-chamber controllable heat pipe  
[NASA-CASE-ARC-10199] c34 N78-17337
- Thermal compensator for closed-cycle helium  
refrigerator --- assuring constant temperature  
for an infrared laser diode  
[NASA-CASE-GSC-12168-1] c31 N79-17029
- Low heat leak connector for cryogenic system  
[NASA-CASE-XLE-02367-1] c31 N79-21225
- Thermal control canister  
[NASA-CASE-GSC-12253-1] c34 N79-31523
- Automatic thermal switch --- Space Shuttle  
equipment bay temperature control  
[NASA-CASE-GSC-12415-1] c34 N80-18338
- Heating and cooling system --- for fatigue test  
specimens  
[NASA-CASE-LAR-12393-1] c39 N80-25693
- Pressure letdown method and device for coal  
conversion systems  
[NASA-CASE-NPO-15100-1] c28 N81-33306
- TEMPERATURE DISTRIBUTION**
- Oven for heat treating heat shields  
[NASA-CASE-XMS-04318] c15 N69-27871
- Apparatus for supplying conditioned air at a  
substantially constant temperature and humidity  
[NASA-CASE-GSC-12191-1] c31 N80-32583
- TEMPERATURE EFFECTS**
- Shock and vibration damping device using  
temperature sensitive solid amorphous polymers  
[NASA-CASE-XAC-11225] c14 N69-27486
- Differential pressure cell insensitive to  
changes in ambient temperature and extreme  
overload  
[NASA-CASE-XAC-00042] c14 N70-34816
- Fluid flow control valve for regulating fluids  
in molecular quantities  
[NASA-CASE-XLE-00703] c15 N71-15967
- Describing device for changing flow rate of  
fluid in duct in response to change in  
temperature  
[NASA-CASE-MFS-14259] c15 N71-19213
- Temperature sensitive magnetometer with  
pulsating thermally cycled magnetic core  
[NASA-CASE-XAC-03740] c14 N71-26135
- Development of system with electrical properties  
which vary with changes in temperature for use  
with feedback loop in operational amplifier  
circuit  
[NASA-CASE-MSC-13276-1] c14 N71-27058
- TEMPERATURE GRADIENTS**
- Differential thermopile for measuring cooling  
water temperature rise  
[NASA-CASE-XAC-00812] c14 N71-15598
- Development of temperature compensated light  
source with components and circuitry for  
maintaining luminous intensity independent of  
temperature variations  
[NASA-CASE-ARC-10467-1] c09 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] c31 N74-18124
- Method and apparatus for checking fire detectors  
[NASA-CASE-GSC-11600-1] c35 N74-21019
- Heat pipe honeycomb panel  
[NASA-CASE-LAR-12637-1] c34 N81-12362
- Dual laser optical system and method for  
studying fluid flow  
[NASA-CASE-MFS-25315-1] c36 N81-19440
- TEMPERATURE MEASUREMENT**
- Filter arrangement for controlling light  
intensity in motion picture camera used in  
optical pyrometry  
[NASA-CASE-XLA-J0062] c14 N70-33254
- Development of apparatus for measuring thermal  
conductivity  
[NASA-CASE-XGS-01052] c14 N71-15992
- Design and characteristics of thermocouples  
consisting of flexible tape for improved  
attachment to temperature source  
[NASA-CASE-XNP-01659] c14 N71-23039
- Black body cavity radiometer with thermal  
resistance wire bridge circuit  
[NASA-CASE-XNP-08961] c14 N71-24809
- Design, development, and characteristics of  
pressure and temperature sensor operating  
immersed in fluid flow  
[NASA-CASE-LEW-10281-1] c14 N72-17327
- Development of thermocouple instrument for  
measuring temperature of wall heated by  
flowing fluid without disturbing boundary layer  
[NASA-CASE-XLE-05230] c14 N72-27410

- Thermocouple apparatus for measuring wall temperatures in regeneratively cooled rocket engines having thin walled cooling passages  
[NASA-CASE-XLE-05236-2] c14 N73-13417
- Thermochromic compositions for detecting heat levels in electronic circuits and devices  
[NASA-CASE-NFO-10764-1] c14 N73-14428
- Method of fabricating an article with cavities --- with thin bottom walls  
[NASA-CASE-LAR-10318-1] c31 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] c25 N74-18551
- Wind sensor  
[NASA-CASE-NPO-13462-1] c35 N76-24524
- Miniature ingestible telemeter devices to measure deep-body temperature  
[NASA-CASE-ARC-10583-1] c52 N76-29894
- Multi-channel temperature measurement amplification system  
[NASA-CASE-MFS-23775-1] c35 N80-17421
- Solar energy control system  
[NASA-CASE-MFS-25287-1] c44 N80-17544
- Thermocouple, multiple junction reference oven  
[NASA-CASE-FRC-10112-1] c35 N81-26431
- TEMPERATURE MEASURING INSTRUMENTS**
- Temperature sensor warning system for pneumatic tires of aircraft and ground vehicles  
[NASA-CASE-XLA-01926] c14 N71-15620
- Electric network for monitoring temperatures, detecting critical temperatures, and indicating critical time duration  
[NASA-CASE-XMF-01097] c10 N71-16058
- Electromagnetic energy detection by thermal sensor with vibrating electrode  
[NASA-CASE-XAC-10768] c09 N71-18830
- Input radio frequency circuit for switching type absolute temperature measuring radiometer for noise sources  
[NASA-CASE-ERC-11020] c14 N71-26774
- High intensity radiant energy pulse source for calibrating heat transfer gages with thermoluminescent shutter activation  
[NASA-CASE-ARC-10178-1] c09 N72-17152
- Development of flexible thermocouple in form of tape for adaptation to special temperature measuring conditions  
[NASA-CASE-LEW-11072-1] c14 N73-24472
- Thermocouples of tantalum and rhenium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12050-1] c35 N77-32454
- TEMPERATURE PROBES**
- Thermally sensitive tuning probe for nullifying detuning effects in microwave cavity resonator of amplifier  
[NASA-CASE-XNP-00449] c14 N70-35220
- Design, development, and characteristics of pressure and temperature sensor operating immersed in fluid flow  
[NASA-CASE-LEW-10281-1] c14 N72-17327
- TEMPERATURE SENSORS**
- Miniaturized radiometer for detecting low level thermal radiation  
[NASA-CASE-XLA-04556] c14 N69-27484
- Mounting fixture for supporting thermobulb in pipeline  
[NASA-CASE-NPO-10158] c33 N71-16356
- Mounting apparatus for temperature control system  
[NASA-CASE-NPO-10138] c33 N71-16357
- Heat flux sensor adapted for mounting on aircraft or spacecraft to measure aerodynamic heat flux inflow to aircraft skin  
[NASA-CASE-XPR-03802] c33 N71-23085
- Temperature telemetric transmitter with frequency determining tank circuit for short range transmission  
[NASA-CASE-NPO-10649] c07 N71-24840
- Black body radiometer design with temperature sensing and cavity heat source cone winding  
[NASA-CASE-XNP-05701] c14 N71-26475
- Thin film capacitive bolometer and capacitance temperature interchange sensor  
[NASA-CASE-NPO-10607] c09 N71-27232
- Development of thin film temperature sensor from TaO  
[NASA-CASE-NPO-11775] c26 N72-28761
- Heat detection and compositions and devices therefor  
[NASA-CASE-NFO-10764-2] c35 N75-25122
- Optical crystal temperature gauge with fiber optic connections --- cryogenic systems  
[NASA-CASE-MSC-18627-1] c74 N81-15818
- TEMPLATES**
- Precision surface cutter for screen circuit negatives and other microcircuits  
[NASA-CASE-XLA-09843] c15 N72-27485
- TENSILE STRENGTH**
- Method for producing fiber reinforced metallic composites with high strength and elasticity over wide temperature range  
[NASA-CASE-XLE-00231] c17 N70-38198
- Composites reinforced with short metal fibers or whiskers and having high tensile strength  
[NASA-CASE-XLE-00228] c17 N70-38490
- Apparatus for tensile strength testing of specimen by pressurized fluid  
[NASA-CASE-XKS-06250] c14 N71-15600
- Process for fiberizing ceramic materials with high fusion temperatures and tensile strength  
[NASA-CASE-XNP-00597] c18 N71-23088
- Tensile strength testing device having pulley guides for exerting multiple forces on test specimen  
[NASA-CASE-XNP-05634] c15 N71-24834
- Device for use in loading tension members --- characterized by elongated elastic body  
[NASA-CASE-MFS-21488-1] c14 N75-24794
- Method of carbonizing polyacrylonitrile fibers and resulting product  
[NASA-CASE-AEC-11261-1] c24 N81-29164
- TENSILE STRESS**
- Method for testing rocket nozzles at high tensile stress levels  
[NASA-CASE-NFO-10311] c31 N71-15643
- Device for measuring tensile forces  
[NASA-CASE-MFS-21728-1] c35 N74-27865
- Solid medium thermal engine  
[NASA-CASE-AEC-10461-1] c44 N74-33379
- TENSILE TEST**
- Tensile strength testing device having pulley guides for exerting multiple forces on test specimen  
[NASA-CASE-XNP-05634] c15 N71-24834
- TENSILE TESTS**
- Apparatus for tensile strength testing of specimen by pressurized fluid  
[NASA-CASE-XKS-06250] c14 N71-15600
- Apparatus for measuring load on cable under static or dynamic conditions comprising pulleys pivoting structure against restraint of tension strap  
[NASA-CASE-XMS-04545] c15 N71-22878
- Method and apparatus for remote measurement of displacement of marks on specimen undergoing tensile test  
[NASA-CASE-NFO-10778] c14 N72-11364
- Anti-buckling fatigue test assembly --- for subjecting metal specimen to tensile and compressive loads at constant temperature  
[NASA-CASE-LAR-10426-1] c09 N74-19528
- Method and apparatus for tensile testing of metal foil  
[NASA-CASE-LAR-10208-1] c35 N76-18400
- Device for tensioning test specimens within an hermetically sealed chamber  
[NASA-CASE-MFS-23281-1] c35 N77-22450
- TENSION**
- Meter for use in detecting tension in straps having predetermined elastic characteristics  
[NASA-CASE-MFS-22189-1] c35 N75-19615
- TERMINAL GUIDANCE**
- Data processing and display system for terminal guidance of X-15 aircraft  
[NASA-CASE-XPR-00756] c02 N71-13421
- Terminal guidance system --- for guiding aircraft into preselected altitude and/or heading at terminal point  
[NASA-CASE-FRC-10049-1] c04 N74-13420
- Terminal guidance sensor system  
[NASA-CASE-NFO-14521-1] c54 N79-20746
- Terminal guidance sensor system --- space shuttle coupling to orbiting satellites  
[NASA-CASE-NFO-14521-1] c37 N81-27519
- TERNARY SYSTEMS**
- NiCrAl ternary alloy having improved cyclic

- oxidation resistance  
[NASA-CASE-LEW-13339-1] c26 N81-12211
- TERRAIN**  
Vertically descending flight vehicle landing gear for rough terrain  
[NASA-CASE-XYF-01174] c02 N7C-41589
- TERRAIN ANALYSIS**  
Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
[NASA-CASE-NPO-13662-1] c35 N79-10391  
Method for observing the features characterizing the surface of a land mass  
[NASA-CASE-FRC-11013-1] c43 N81-17499
- TEST CHAMBERS**  
System for continuous monitoring of exhalations, weighing, and cage cleaning for animal exposed to controlled atmosphere for toxic study  
[NASA-CASE-XAC-05333] c11 N71-22675  
Multisample test chamber for exposing materials to X rays, temperature change, and gaseous conditions and determination of material effects  
[NASA-CASE-XMS-02930] c11 N71-23042  
Flammability test chamber for testing materials in certain predetermined environments  
[NASA-CASE-KSC-10126] c11 N71-24985  
Pressure seals suitable for use in environmental test chambers  
[NASA-CASE-NPO-10796] c15 N71-27668  
Test chamber for determining decomposition and autoignition of materials used in spacecraft under controlled environmental conditions  
[NASA-CASE-KSC-10198] c11 N71-28629  
Test chambers with orifice and helium mass spectrometer for detecting leak rate of encapsulated semiconductor devices  
[NASA-CASE-ERC-10150] c14 N71-28992  
Method for measuring biaxial stress in a body subjected to stress inducing loads  
[NASA-CASE-MFS-23299-1] c39 N77-28511
- TEST EQUIPMENT**  
Equipment for testing of ground station ranging equipment and spacecraft transponders  
[NASA-CASE-XMS-05454-1] c07 N71-12391  
Apparatus for tensile strength testing of specimen by pressurized fluid  
[NASA-CASE-XKS-06250] c14 N71-15600  
Development of black-body source calibration furnace  
[NASA-CASE-XLE-01399] c33 N71-15625  
Design and characteristics of thermocouples consisting of flexible tape for improved attachment to temperature source  
[NASA-CASE-XNP-01659] c14 N71-23639  
Automatic controlled thermal fatigue testing apparatus  
[NASA-CASE-XLA-02059] c33 N71-24276  
Development and characteristics of electric circuitry for detecting electrical pulses rise time and amplitude  
[NASA-CASE-XYF-08804] c09 N71-24717  
Automated ball rebound resilience test equipment for determining viscoelastic properties of polymers  
[NASA-CASE-XLA-08254] c14 N71-26161  
Portable equipment for validating C band launch pad antennas and transmission lines used for spacecraft checkout  
[NASA-CASE-XKS-10543] c07 N71-26292  
Acoustic vibration test apparatus for wiring harnesses  
[NASA-CASE-MSC-15158-1] c14 N72-17325  
Design and development of two types of atmosphere sampling chambers  
[NASA-CASE-NPO-11373] c13 N72-25323  
Development of apparatus for testing burning rate and flammability of materials  
[NASA-CASE-XMS-09690] c33 N72-25513  
Development of apparatus for detonating explosive devices in order to determine forces generated and detonation propagation rate  
[NASA-CASE-LAR-10800-1] c33 N72-27959  
Equipment for vibration testing of assemblies, components, and other articles  
[NASA-CASE-GSC-11302-1] c14 N73-13416  
Design and development of test stand system for supporting test items in vacuum chamber  
[NASA-CASE-MFS-21362] c11 N73-20267
- Development and characteristics of apparatus for measuring intensity of electric field in atmosphere  
[NASA-CASE-KSC-10730-1] c14 N73-32318  
Test equipment to prevent buckling of small diameter specimens during compression tests  
[NASA-CASE-LAR-10440-1] c14 N73-32323  
Wind tunnel model and method  
[NASA-CASE-LAR-10812-1] c09 N74-17955  
Anti-buckling fatigue test assembly --- for subjecting metal specimen to tensile and compressive loads at constant temperature  
[NASA-CASE-LAR-10426-1] c09 N74-19528  
Method and apparatus for checking fire detectors  
[NASA-CASE-GSC-11600-1] c35 N74-21019  
Battery testing device --- for testing cells of multiple-cell battery  
[NASA-CASE-MFS-20761-1] c44 N74-27519  
Signal conditioner test set  
[NASA-CASE-KSC-10750-1] c35 N75-12270  
Particulate and aerosol detector  
[NASA-CASE-LAR-11434-1] c35 N76-22509  
High temperature strain gage calibration fixture  
[NASA-CASE-LAR-11500-1] c35 N76-24523  
Method of and means for testing a tape record/playback system  
[NASA-CASE-MFS-22671-2] c35 N77-17426  
Method of and means for testing a glancing-incidence mirror system of an X-ray telescope  
[NASA-CASE-MFS-22409-2] c74 N78-15880
- TEST FACILITIES**  
Electric propulsion engine test chamber  
[NASA-CASE-XLE-00252] c11 N70-34844  
Test apparatus for determining mechanical properties of refractory materials at high temperatures in vacuum or inert atmospheres  
[NASA-CASE-XLE-00335] c14 N70-35368  
Gas analyzer for bi-gaseous mixtures suitable for use in test facilities  
[NASA-CASE-XLA-01131] c14 N71-10774  
Design and characteristics of device for launching models in wind tunnels without disturbance of air flow  
[NASA-CASE-XNP-03578] c11 N71-23030  
Design, development, and operation of shock tube with bypass piston tunnel  
[NASA-CASE-NPO-12109] c11 N72-22245
- TEST STANDS**  
Automatic balancing device for use on frictionless supported attitude-controlled test platforms  
[NASA-CASE-LAR-10774] c10 N71-13545  
Micro-pound extended range thrust stand for small rocket engines  
[NASA-CASE-GSC-10710-1] c28 N71-27094
- TETHERED SATELLITES**  
Tetherline system for orbiting satellites  
[NASA-CASE-MFS-23564-1] c15 N78-25119
- TETHERING**  
Force separation rigid tethering device using cables  
[NASA-CASE-XLA-02332] c32 N71-17609  
Space expandable tether device for use as passageway between two docked spacecraft  
[NASA-CASE-XMS-10993] c15 N71-28936
- TETHERLINES**  
Flexible cable that can be made rigid  
[NASA-CASE-MSC-13512-1] c15 N72-22485  
Tetherline system for orbiting satellites  
[NASA-CASE-MFS-23564-1] c15 N78-25119
- TETRAPHENYLS**  
Chemical synthesis of thermally stable organometallic polymers with divalent metal ion and tetraphenylphosphonitrilic units  
[NASA-CASE-HQN-10364] c06 N71-27363
- TEXTILES**  
Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[NASA-CASE-MSC-14331-1] c27 N76-24405
- TEXTURES**  
Modification of the electrical and optical properties of polymers --- ion irradiation to create texture  
[NASA-CASE-LEW-13027-1] c27 N80-24437  
Texturing polymer surfaces by transfer casting --- cardiovascular prosthesis  
[NASA-CASE-LEW-13120-1] c31 N81-16327

- Mechanical bonding of metal  
[NASA-CASE-LEW-12941-1] c31 N81-16329
- Ion sputter textured graphite --- applications  
to electron tube devices  
[NASA-CASE-LEW-12919-1] c24 N81-27198
- THERMAL ABSORPTION**
- Development and characteristics of calorimeter  
with integral heat sink for maintenance of  
constant temperature  
[NASA-CASE-XMP-04208] c33 N71-29051
- Solar pond  
[NASA-CASE-NPO-13581-2] c44 N78-31525
- THERMAL CONDUCTIVITY**
- Measuring conductive heat flow and thermal  
conductivity of laminar gas stream in  
cylindrical plug to simulate atmospheric reentry  
[NASA-CASE-XLE-00266] c14 N70-34156
- Development of apparatus for measuring thermal  
conductivity  
[NASA-CASE-XGS-01052] c14 N71-15992
- Heated element sensor for fluid flow detection  
in thermal conductive conduit with adaptive  
means to determine flow rate and direction  
[NASA-CASE-MS-C-12084-1] c12 N71-17569
- Method and apparatus for adjusting thermal  
conductance in electronic components for space  
use  
[NASA-CASE-XNP-05524] c33 N71-24876
- Thermally conductive polymer for potting  
electrical components  
[NASA-CASE-GSC-11304-1] c06 N72-21105
- Electrostatically controlled heat transfer  
system for conducting thermal energy  
[NASA-CASE-NPO-11942-1] c33 N73-32818
- Thermal barrier coating system  
[NASA-CASE-LEW-12554-1] c34 N78-18355
- Automatic thermal switch  
[NASA-CASE-GSC-12553-1] c33 N80-21671
- Support assembly for cryogenically coolable  
low-noise choke waveguide  
[NASA-CASE-NPO-14253-1] c32 N80-32605
- Heat pipe honeycomb panel  
[NASA-CASE-LAR-12637-1] c34 N81-12362
- THERMAL CONDUCTORS**
- Thermal conductive, electrically insulated  
cleavable adhesive connection between  
electronic module and heat sink  
[NASA-CASE-XMS-02087] c09 N70-41717
- Solar energy absorber  
[NASA-CASE-MFS-22743-1] c44 N76-22657
- THERMAL CONTROL COATINGS**
- Low concentration alkaline solution treatment of  
aluminum with metal phosphate surface coatings  
to improve chemical bonding and reduce coating  
weight  
[NASA-CASE-XLA-01995] c18 N71-23047
- Binder stabilized zinc oxide pigmented coating  
for spacecraft thermal control  
[NASA-CASE-XMF-07770-2] c18 N71-26772
- Inorganic thermal control and solar reflector  
coatings  
[NASA-CASE-MFS-20011] c18 N72-22566
- Mercaptan terminated polymer containing sulfonic  
acid salts of nitrosubstituted aromatic amines  
for heat and moisture resistant coatings  
[NASA-CASE-ARC-10325] c06 N72-25147
- Refractory porcelain enamel passive control  
coating for high temperature alloys  
[NASA-CASE-MFS-22324-1] c27 N75-27160
- Particulate and solar radiation stable coating  
for spacecraft  
[NASA-CASE-LAR-10805-2] c34 N77-18382
- Method of preparing zinc orthotitanate pigment  
[NASA-CASE-MFS-23345-1] c27 N77-30237
- Intumescent coatings containing  
4,4'-dinitrosulfanilide  
[NASA-CASE-ARC-11042-1] c24 N78-14096
- Thermal barrier coating system  
[NASA-CASE-LEW-12554-1] c34 N78-18355
- High temperature resistant cermet and ceramic  
compositions --- for thermal resistant  
insulators and refractory coatings  
[NASA-CASE-NPO-13690-1] c27 N78-19302
- Intumescent-ablator coatings using endothermic  
fillers  
[NASA-CASE-ARC-11043-1] c24 N78-27180
- Lightweight electrically-powered flexible  
thermal laminate --- made of metal and  
nonconductive yarns  
[NASA-CASE-MS-C-12662-1] c33 N79-12331
- Electrically conductive thermal control coatings  
[NASA-CASE-GSC-12207-1] c24 N79-14156
- THERMAL DEGRADATION**
- Use of silicon controlled rectifier shorting  
circuit to protect thermoelectric generator  
source from thermal destruction  
[NASA-CASE-XGS-04808] c03 N69-25146
- Electrical failure detector in solid rocket  
propellant motor insulation against thermal  
degradation by fuel grain  
[NASA-CASE-XMF-03968] c14 N71-27186
- 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] c74 N81-17887
- THERMAL EMISSION**
- Electromagnetic radiation energy arrangement ---  
coatings for solar energy absorption and  
infrared reflection  
[NASA-CASE-WOO-00428-1] c32 N79-19186
- THERMAL ENERGY**
- Direct conversion of thermal energy into  
electrical energy using crossed electric and  
magnetic fields  
[NASA-CASE-XLE-00212] c03 N70-34134
- Concentrator device for controlling direction of  
solar energy onto energy converters  
[NASA-CASE-XLE-01716] c09 N70-40234
- Storage stable, thermally activated foaming  
compositions for erecting and rigidizing  
mechanisms of thin sheet solar collectors  
[NASA-CASE-LAR-10373-1] c18 N71-26155
- Gaseous core diffusion nuclear reactor for  
thermal energy generation  
[NASA-CASE-LEW-10250-1] c22 N71-28759
- Electrostatically controlled heat transfer  
system for conducting thermal energy  
[NASA-CASE-NPO-11942-1] c33 N73-32818
- Solid medium thermal engine  
[NASA-CASE-ARC-10461-1] c44 N74-33379
- Panel for selectively absorbing solar thermal  
energy and the method of producing said panel  
[NASA-CASE-MFS-22562-1] c44 N76-14595
- Thermal energy storage system --- operating on  
superheating of liquids  
[NASA-CASE-MFS-23167-1] c44 N76-31667
- Low to high temperature energy conversion system  
[NASA-CASE-NPO-13510-1] c44 N77-32581
- Thermal energy transformer  
[NASA-CASE-NPO-14058-1] c44 N79-18443
- THERMAL EXPANSION**
- Gas valve operated by thermally expanding and  
contracting device  
[NASA-CASE-XLE-00815] c15 N70-35407
- Adjustable rigid mount for trihedral mirror  
formed of alloy with small coefficient of  
thermal expansion supporting screws and  
spring-biased plates  
[NASA-CASE-XNP-08907] c23 N71-29123
- Application of spiral, bimetallic strip to  
create circular motion on mechanical shaft by  
changing strip temperature  
[NASA-CASE-NPO-11283] c09 N72-25260
- Glass-to-metal seals comprising relatively high  
expansion metals  
[NASA-CASE-LEW-10698-1] c37 N74-21063
- THERMAL FATIGUE**
- Automatic controlled thermal fatigue testing  
apparatus  
[NASA-CASE-XLA-02059] c33 N71-24276
- THERMAL INSULATION**
- Low thermal loss piping arrangement for moving  
cryogenic media through double chamber structure  
[NASA-CASE-XNP-08882] c15 N69-39935
- Insulating system for receptacles of liquefied  
gases using wire cloth for forming frost layer  
[NASA-CASE-XMP-00341] c15 N70-33323
- Unfired-ceramic, highly reflective composite  
insulation for large launch vehicles  
[NASA-CASE-XMF-01030] c18 N70-41583
- Carbon dioxide purge systems to prevent  
condensation in spaces between cryogenic fuel  
tanks and hypersonic vehicle skin  
[NASA-CASE-XLA-01967] c31 N70-42015
- Preparation and characteristics of lightweight  
refractory insulation

- [NASA-CASE-XMF-05279] c18 N71-16124  
Development of thermal insulation system for wing and control surfaces of hypersonic aircraft and reentry vehicles
- [NASA-CASE-XLA-00692] c33 N71-17897  
Prefabricated multilayered self-evacuating insulation panels using gas with low vapor pressure at cryogenic temperatures for application to storage of cryogenics
- [NASA-CASE-XLE-04222] c23 N71-22681  
Light weight plastic foam thermal insulation for cryogenic storage
- [NASA-CASE-XLE-02647] c18 N71-23658  
Development of foam insulation for filament wound cryogenic storage tank
- [NASA-CASE-XLE-03803] c15 N71-23816  
Multilayer insulation panels for cryogenic liquid containers
- [NASA-CASE-MFS-14023] c33 N71-25351  
Double-wall isothermal cylinder containing heat transfer fluid thermal reservoir as spacecraft insulation cover
- [NASA-CASE-MFS-20355] c33 N71-25353  
Structure of fabric layers for micrometeoroid protection garment with capability for eliminating heat shorts for use in manufacturing space suits
- [NASA-CASE-MSC-12109] c18 N71-26285  
Foam insulation thickness measuring and injection device for spacecraft applications
- [NASA-CASE-MFS-20261] c14 N71-27005  
Development of thermal insulation material for insulating liquid hydrogen tanks in spacecraft
- [NASA-CASE-XMF-05046] c33 N71-28892  
Para-benzoquinone dioxime and concentrated mineral acid processed to yield intumescent or fire resistant, heat insulating materials
- [NASA-CASE-ARC-10304-1] c18 N73-26572  
Development and characteristics of thermal control system for maintaining constant temperature within spacecraft module with wide variations of component heat transfer
- [NASA-CASE-GSC-11018-1] c31 N73-30829  
Heater-mixer for stored fluids
- [NASA-CASE-ARC-10442-1] c35 N74-15693  
Intumescent composition, foamed product prepared therewith and process for making same
- [NASA-CASE-ARC-10304-2] c27 N74-27637  
High current electrical lead --- for thermionic converters
- [NASA-CASE-LEW-10950-1] c33 N74-27683  
Structural heat pipe --- for spacecraft wall thermal insulation system
- [NASA-CASE-GSC-11619-1] c34 N75-12222  
Strain arrester plate for fused silica tile --- bonding of thermal insulation to metallic plates or structural parts
- [NASA-CASE-MSC-14182-1] c27 N76-14264  
Auger attachment method for insulation --- of spacecraft
- [NASA-CASE-MSC-12615-1] c37 N76-19437  
Flexible pile thermal barrier insulator
- [NASA-CASE-MSC-19568-1] c34 N78-25350  
Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles
- [NASA-CASE-MSC-12619-2] c27 N79-12221  
Diced tile thermal protection for spacecraft
- [NASA-CASE-MSC-16366-1] c24 N79-23142  
Fibrous refractory composite insulation --- shielding reusable spacecraft
- [NASA-CASE-ARC-11169-1] c24 N79-24062  
Thermal insulation protection means
- [NASA-CASE-MSC-12737-1] c24 N79-25142  
Carboranylcyctotriphosphazenes and their polymers --- thermal insulation
- [NASA-CASE-ARC-11176-1] c27 N80-21533  
Installing fiber insulation
- [NASA-CASE-MSC-16973-1] c37 N81-14317  
A method and technique for installing light-weight fragile, high-temperature fiber insulation --- spacecraft heat sealing
- [NASA-CASE-MSC-16934-2] c37 N81-16468  
Process for the preparation of polycarboranylphosphazenes --- thermal insulation
- [NASA-CASE-ARC-11176-2] c27 N81-27271
- THERMAL PLASMAS**  
Apparatus for producing monochromatic light from continuous plasma source
- [NASA-CASE-ZNP-04167-2] c25 N72-24753
- THERMAL PROTECTION**  
Thermoprotective device for balances
- [NASA-CASE-XAC-00648] c14 N70-40400  
Design, development, and characteristics of ablation structures
- [NASA-CASE-XMS-01816] c33 N71-15623  
Development of spacecraft radiator cover
- [NASA-CASE-MSC-12049] c31 N71-16080  
Characteristics of foamed-in-place ceramic refractory insulating material and method of fabrication
- [NASA-CASE-XGS-02435] c18 N71-22998  
Unfired ceramic insulation for protection from radiant heating environments
- [NASA-CASE-MFS-14253] c33 N71-24858  
Development of solid state polymer coating for obtaining thermal balance in spacecraft components
- [NASA-CASE-XLA-01745] c33 N71-28903  
Anodizing method for providing metal surfaces with temperature reducing coatings against flames
- [NASA-CASE-XLE-00035] c33 N71-29151  
Ablative heat shield for protection from aerodynamic heating of reentry spacecraft
- [NASA-CASE-MSC-12143-1] c33 N72-17947  
Lightweight fire resistant plastic foam for thermal protection of reentry vehicles and aircraft structures
- [NASA-CASE-ARC-10180-1] c28 N72-20767  
Flexible fire retardant polyisocyanate modified neoprene foam --- for thermal protective devices
- [NASA-CASE-ABC-10180-1] c27 N74-12814  
Adjustable securing base
- [NASA-CASE-MSC-19666-1] c37 N78-17383  
Reaction cured glass and glass coatings
- [NASA-CASE-ARC-11051-1] c27 N78-32260  
Diced tile thermal protection for spacecraft
- [NASA-CASE-MSC-16366-1] c24 N79-23142  
Multiwall thermal protection system
- [NASA-CASE-LAR-12620-1] c24 N80-12117  
Improved attachment system for silica tiles --- thermal protection for space shuttle orbiter
- [NASA-CASE-MSC-18741-1] c16 N81-16110  
Thermal barrier coating system having improved adhesion
- [NASA-CASE-LEW-13359-1] c27 N81-24265  
Corrosion resistant thermal barrier coating --- protecting gas turbines and other engine parts
- [NASA-CASE-LEW-13088-1] c26 N81-25188
- THERMAL RADIATION**  
Miniaturized radiometer for detecting low level thermal radiation
- [NASA-CASE-XLA-04556] c14 N69-27484  
Temperature sensitive capacitor device for detecting very low intensity infrared radiation
- [NASA-CASE-ZNP-09750] c14 N69-39937  
High temperature source of thermal radiation
- [NASA-CASE-XLE-00490] c33 N70-34545  
Development and characteristics of thermal radiation shielding of refractory metal foil used for induction furnace
- [NASA-CASE-XLE-03432] c33 N71-24145  
Black body cavity radiometer with thermal resistance wire bridge circuit
- [NASA-CASE-ZNP-08961] c14 N71-24809  
Development of method for protecting large and oddly shaped areas from radiant and convective heat
- [NASA-CASE-ZNP-01310] c33 N71-28852
- THERMAL REACTORS**  
Non-equilibrium radiation nuclear reactor
- [NASA-CASE-HQN-10841-1] c73 N78-19920
- THERMAL RESISTANCE**  
Single electrical circuit component combining diode, fuse, and blown indicator with elongated tube of heat resistant transparent material
- [NASA-CASE-IXS-03381] c09 N71-22796  
Polyimide foam for the thermal insulation and fire protection
- [NASA-CASE-ARC-10464-1] c27 N74-12812  
Dual measurement ablation sensor
- [NASA-CASE-LAR-10105-1] c34 N74-15652  
Self-regulating proportionally controlled heating apparatus and technique
- [NASA-CASE-GSC-11752-1] c77 N75-20140

- Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-1] c27 N78-32256
- Ambient cure polyimide foams --- thermal resistant foams  
[NASA-CASE-ARC-11170-1] c27 N79-11215
- Surface conforming thermal/pressure seal --- for control devices in space vehicles  
[NASA-CASE-MSC-18422-1] c37 N80-14400
- The 1,2,4-oxadiazole elastomers --- heat resistant polymers  
[NASA-CASE-ARC-11253-1] c27 N81-17262
- High stability amplifier  
[NASA-CASE-GSC-12646-1] c33 N81-32391
- THERMAL SHOCK**
- Development of equipment for measuring thermal shock resistance of thin discs of material  
[NASA-CASE-XLE-02024] c14 N71-22964
- Thermal shock resistant hafnia ceramic materials  
[NASA-CASE-LAR-16894-1] c18 N73-14584
- Thermal shock and erosion resistant tantalum carbide ceramic material  
[NASA-CASE-LAR-11902-1] c27 N78-17206
- Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c27 N81-22190
- THERMAL SIMULATION**
- Simulating operation of thermopile vacuum gage tube at high and low pressures  
[NASA-CASE-XLA-02758] c14 N71-18481
- THERMAL STABILITY**
- Bonded solid lubricant coatings of calcium fluoride and binder for high temperature stability  
[NASA-CASE-XMS-00259] c18 N70-36400
- Portable environmental control and life support system for astronaut in and out of spacecraft  
[NASA-CASE-XMS-05632-1] c05 N71-11203
- Chemical synthesis of thermally stable organometallic polymers with divalent metal ion and tetraphenylphosphonitrilic units  
[NASA-CASE-BQN-10364] c06 N71-27363
- Cermet for nuclear fuel constructed by pressing metal coated ceramic particles in die at temperature to cause bonding of metal coatings, and tested for thermal stability  
[NASA-CASE-LEW-10219-1] c18 N71-28729
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-1] c27 N74-21156
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c27 N76-32315
- Sound-suppressing structure with thermal relief  
[NASA-CASE-LEW-12658-1] c71 N79-14671
- Infusible silazane polymer and process for producing same --- protective coatings  
[NASA-CASE-XMP-02526-1] c27 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] c27 N79-28307
- THERMAL STRESSES**
- Strain gage for detecting and measuring mechanical strain in thermally strained specimens  
[NASA-CASE-FRC-10053] c14 N70-35587
- Multilegged support system for wind tunnel test models subjected to thermal dynamic loading  
[NASA-CASE-XLA-01326] c11 N71-21481
- Development of device for simulating cyclic thermal loading of flexible materials by application of mechanical stresses and deformations  
[NASA-CASE-LAR-10270-1] c32 N72-25677
- Apparatus and method for reducing thermal stress in a turbine rotor  
[NASA-CASE-LEW-12232-1] c07 N79-10057
- Method for alleviating thermal stress damage in laminates --- metal matrix composites  
[NASA-CASE-LEW-12493-1] c24 N81-17170
- Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-2] c24 N81-26179
- THERMIONIC CATHODES**
- Thermionic cesium diode converter with cavity emitters  
[NASA-CASE-NPO-10412] c09 N71-28421
- THERMIONIC CONVERTERS**
- Vacuum thermionic converter with short-circuited triodes and increased electron transmission and conversion efficiency  
[NASA-CASE-XLE-01015] c03 N69-39898
- Thermionic converter for converting heat energy directly into electrical energy  
[NASA-CASE-XLE-01903] c22 N71-23599
- Thermionic cesium diode converter with cavity emitters  
[NASA-CASE-NPO-10412] c09 N71-28421
- Development and characteristics of solar cells with phosphors in cover glass to improve response to solar ultraviolet radiation  
[NASA-CASE-ARC-10050] c03 N71-33409
- Reactor heated in-core diodes for energy conversion  
[NASA-CASE-NPO-10542] c09 N72-27228
- High current electrical lead --- for thermionic converters  
[NASA-CASE-LEW-10950-1] c33 N74-27683
- Electric power generation system directory from laser power  
[NASA-CASE-NPO-13208-1] c36 N75-30524
- Nuclear thermionic converter --- tungsten-thorium oxide rods  
[NASA-CASE-NPO-13121-1] c73 N77-18891
- Cesium thermionic converters having improved electrodes  
[NASA-CASE-LEW-12038-3] c44 N78-25555
- THERMIONIC DIODES**
- Electric power system utilizing thermionic plasma diodes in parallel and heat pipes as cathodes  
[NASA-CASE-XMP-05843] c03 N71-11055
- Thermionic diode switch for use in high temperature region to chop current from dc source  
[NASA-CASE-NPO-10404] c03 N71-12255
- Micromicroampere current measuring circuit, with two subminiature thermionic diodes with filament cathodes  
[NASA-CASE-XMP-00384] c09 N71-13530
- Electric power system with thermionic diodes and circulatory liquid metal coolant lines  
[NASA-CASE-MFS-14114] c33 N71-27862
- Reactor heated in-core diodes for energy conversion  
[NASA-CASE-NPO-10542] c09 N72-27228
- THERMIONIC EMITTERS**
- Oxygen-doped tantalum emitter for thermionic devices such as cesium vapor diodes  
[NASA-CASE-NPO-11138] c03 N70-34646
- THERMIONIC POWER GENERATION**
- Control for nuclear thermionic power source  
[NASA-CASE-NPO-13114-2] c73 N78-28913
- Improved thermionic energy converters  
[NASA-CASE-LEW-12443-1] c44 N81-19561
- THERMISTORS**
- Matched thermistors for microwave power meters with compensation for temperature changes  
[NASA-CASE-NPO-10348] c10 N71-12554
- Thermistor holder for skin temperature measurements  
[NASA-CASE-ARC-10855-1] c52 N77-10780
- Wedge immersed thermistor bolometers  
[NASA-CASE-XGS-01245-1] c35 N79-33449
- THERMOCHROMATIC MATERIALS**
- Thermochromic compositions for detecting heat levels in electronic circuits and devices  
[NASA-CASE-NPO-10764-1] c14 N73-14428
- Heat detection and compositions and devices therefor  
[NASA-CASE-NPO-10764-2] c35 N75-25122
- THERMOCOUPLE PYROMETERS**
- Dual measurement ablation sensor  
[NASA-CASE-LAR-10105-1] c34 N74-15652
- THERMOCOUPLES**
- Heat flux sensor assembly with proviso for heat shield to reduce radiative transfer between sensor elements  
[NASA-CASE-XNS-05909-1] c14 N69-27459
- Gas cooled high temperature thermocouple  
[NASA-CASE-XLE-09475-1] c33 N71-15568
- Control of fusion welding through use of thermocouple wire  
[NASA-CASE-MFS-06074] c15 N71-20393
- Heat sensing instrument, using thermocouple junction connected under heavy conducting



- material  
[NASA-CASE-XLA-01551] c14 N71-22589
- Design and characteristics of thermocouples consisting of flexible tape for improved attachment to temperature source  
[NASA-CASE-IXP-01659] c14 N71-23039
- Mixed liquid and vapor phase analyzer design with thermocouples for relative heat transfer measurement  
[NASA-CASE-NPO-10691] c14 N71-26199
- Development of thermocouple instrument for measuring temperature of wall heated by flowing fluid without disturbing boundary layer  
[NASA-CASE-XLE-05230] c14 N72-27410
- Thermocouple apparatus for measuring wall temperatures in regeneratively cooled rocket engines having thin walled cooling passages  
[NASA-CASE-XLE-05230-2] c14 N73-13417
- Electrical resistance butt welder for welding fine gauge tungsten/rhenium thermocouple wire  
[NASA-CASE-LAR-10103-1] c15 N73-14468
- Development of flexible thermocouple in form of tape for adaptation to special temperature measuring conditions  
[NASA-CASE-LEW-11072-1] c14 N73-24472
- Thermocouple tape --- developed from thermoelectrically different metals  
[NASA-CASE-LEW-11072-2] c35 N76-15434
- Thermocouple installation  
[NASA-CASE-NPO-13540-1] c35 N77-14409
- Thermocouples of tantalum and rhenium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12050-1] c35 N77-32454
- Thermocouples of molybdenum and iridium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12174-2] c35 N79-14346
- Solar energy control system  
[NASA-CASE-MFS-25287-1] c44 N80-17544
- Thermocouple, multiple junction reference oven  
[NASA-CASE-FRC-10112-1] c35 N81-26431
- THERMODYNAMIC CYCLES**
- Solar engine --- Flat plate type  
[NASA-CASE-LAR-12148-1] c44 N79-29608
- THERMODYNAMIC EFFICIENCY**
- Automatic compression adjusting mechanism for internal combustion engines  
[NASA-CASE-MSC-18807-1] c37 N81-29442
- THERMODYNAMIC PROPERTIES**
- Development of equipment for measuring thermal shock resistance of thin discs of material  
[NASA-CASE-XLE-02024] c14 N71-22964
- Characteristics of foamed-in-place ceramic refractory insulating material and method of fabrication  
[NASA-CASE-XGS-02435] c18 N71-22998
- Operating properties of superconducting magnet in vacuum environment  
[NASA-CASE-IXP-06503] c23 N71-29049
- Cobalt-tungsten alloys with superior strength at elevated temperatures  
[NASA-CASE-LEW-10436-1] c17 N73-32415
- THERMOELECTRIC GENERATORS**
- Use of silicon controlled rectifier shorting circuit to protect thermoelectric generator source from thermal destruction  
[NASA-CASE-XGS-04808] c03 N69-25146
- Procedure for segmenting lead telluride and silicon germanium thermoelectric elements to obtain composite elements effective over wide temperature range  
[NASA-CASE-XGS-05718] c26 N71-16037
- Low weight, integrated thermoelectric generator/antenna combination for spacecraft  
[NASA-CASE-XER-09521] c09 N72-12136
- Thermally cascaded thermoelectric generator with radioisotopic heat source  
[NASA-CASE-NPO-10753] c03 N72-26031
- THERMOELECTRIC MATERIALS**
- Bonding method for improving contact between lead telluride thermoelectric elements and tungsten electrodes  
[NASA-CASE-XGS-04554] c15 N69-39786
- Procedure for segmenting lead telluride and silicon germanium thermoelectric elements to obtain composite elements effective over wide temperature range  
[NASA-CASE-XGS-05718] c26 N71-16037
- THERMOELECTRIC POWER GENERATION**
- Thermoelectric power conversion by liquid metal flowing through magnetic field  
[NASA-CASE-IXP-00644] c03 N70-36803
- Operation method for combined electrolysis device and fuel cell using molten salt to produce power by thermoelectric regeneration mechanism  
[NASA-CASE-XLE-01645] c03 N71-20904
- Thermoelectric power system --- for spacecraft  
[NASA-CASE-MFS-22002-1] c44 N76-16612
- THERMOELECTRICITY**
- Development of flexible thermocouple in form of tape for adaptation to special temperature measuring conditions  
[NASA-CASE-LEW-11072-1] c14 N73-24472
- Device for measuring thermoelectric properties of materials under high pressure  
[NASA-CASE-NFO-11749] c14 N73-28486
- THERMOLUMINESCENCE**
- Method for detecting oxygen in gas by thermoluminescence  
[NASA-CASE-LAR-10668-1] c06 N73-16106
- Thermoluminescent aerosol analysis  
[NASA-CASE-LAR-12046-1] c25 N78-15210
- THERMOMAGNETIC EFFECTS**
- Thermomagnetic recording and magneto-optic playback system having constant intensity laser beam control  
[NASA-CASE-NFO-11317-2] c36 N74-13205
- Thermomagnetic recording and magneto-optic playback system  
[NASA-CASE-NFO-10872-1] c35 N79-16246
- THERMOMETERS**
- Platinum resistance thermometer circuit  
[NASA-CASE-MSC-12327-1] c35 N77-27368
- 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] c25 N74-18551
- Apparatus for determining thermophysical properties of test specimens  
[NASA-CASE-LAR-11883-1] c09 N77-27131
- THERMOPILES**
- Differential thermopile for measuring cooling water temperature rise  
[NASA-CASE-XAC-00812] c14 N71-15598
- Horizon sensor design with digital sampling of spaced radiation-compensated thermopile infrared detectors  
[NASA-CASE-IXP-06957] c14 N71-21088
- Development of thermopile with sensor surface to receive radiant energy and to provide measurement of energy quantity  
[NASA-CASE-NFO-11493] c14 N73-12447
- THERMOPLASTIC RESINS**
- Formulated plastic separators for soluble electrode cells  
[NASA-CASE-LEW-12358-2] c25 N78-25149
- Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
[NASA-CASE-ARC-11057-1] c27 N78-31233
- Thermoplastic rubber comprising ethylene-vinyl acetate copolymer, asphalt and fluxing oil  
[NASA-CASE-NFO-08835-1] c27 N78-33228
- Induction heating gun  
[NASA-CASE-LAR-12540-1] c37 N80-11468
- One step dual purpose joining technique  
[NASA-CASE-LAR-12595-1] c37 N80-11469
- Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NFO-14001-1] c27 N81-14076
- Thermoset-thermoplastic aromatic polyamides  
[NASA-CASE-LAR-12723-1] c27 N81-15107
- THERMOPLASTICITY**
- Process for preparing thermoplastic aromatic polyimides  
[NASA-CASE-LAR-11828-1] c27 N78-32261
- Heat sealable, flame and abrasion resistant coated fabric  
[NASA-CASE-MSC-18382-1] c27 N80-24440
- THERMOREGULATION**
- Thermoregulating with cooling flow pipe network for humans  
[NASA-CASE-XMS-10269] c05 N71-24147

## THERMOSETTING RESINS

Vacuum method for molding thermosetting compounds used as ablative materials  
[NASA-CASE-XLA-01091] c15 N71-10672

Procedure for bonding polytetrafluoroethylene thermal protective sleeves to magnesium alloy conical shell components with different thermal coefficients  
[NASA-CASE-XLA-01262] c15 N71-21404

Method for honeycomb panel bonding by thermosetting film adhesive with electrical heat means  
[NASA-CASE-XMP-01402] c18 N71-21651

Heat treatment and tooling for forming shapes from thermosetting honeycomb core sheets  
[NASA-CASE-NPO-11036] c15 N72-24522

Fluorinated polyurethanes produced by reacting hydroxy terminated perfluoro polyether with diisocyanate  
[NASA-CASE-NPO-10767-2] c06 N72-27151

Evacuated displacement compression molding  
[NASA-CASE-LAR-10782-1] c31 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] c31 N74-18124

Evacuated, displacement compression mold --- of tubular bodies from thermosetting plastics  
[NASA-CASE-LAR-10782-2] c31 N75-13111

Cork-resin ablative insulation for complex surfaces and method for applying the same  
[NASA-CASE-MPS-23626-1] c24 N80-26388

Thermoset-thermoplastic aromatic polyamides  
[NASA-CASE-LAR-12723-1] c27 N81-15107

Polymeric compositions and their method of manufacture --- forming filled polymer systems using cryogenics  
[NASA-CASE-NPO-10424-1] c27 N81-24258

## THERMOSTATS

Thermal switch for transferring excess heat from one region to another heat dissipating one  
[NASA-CASE-XNP-00463] c33 N70-36847

Design and development of linear actuator based on bimetallic spring expansion  
[NASA-CASE-NPO-10637] c15 N72-12409

Thermostatically controlled non-tracking type solar energy concentrator  
[NASA-CASE-NPO-13497-1] c44 N76-14602

Automatic thermal switch  
[NASA-CASE-GSC-12553-1] c33 N80-21671

## THICK FILMS

Material compositions and processes for developing dielectric thick films used in microcircuit capacitors  
[NASA-CASE-LAR-10294-1] c26 N72-28762

## THICKNESS

Myocardium wall thickness transducer and measuring method  
[NASA-CASE-NPO-13644-1] c52 N76-29895

Thickness measurement system  
[NASA-CASE-MPS-23721-1] c31 N79-28370

Strong thin membrane structure --- solar sails  
[NASA-CASE-NPO-14021-2] c27 N80-16163

## THIN FILMS

Temperature sensitive capacitor device for detecting very low intensity infrared radiation  
[NASA-CASE-XNP-09750] c14 N69-39937

Means and methods of depositing thin films on substrates  
[NASA-CASE-XNP-00595] c15 N70-34967

Method of forming thin window drifted silicon charged particle detector  
[NASA-CASE-XLE-00808] c24 N71-10560

Describing apparatus used in vacuum deposition of thin film inductive windings for spacecraft microcircuitry  
[NASA-CASE-XMP-01667] c15 N71-17647

Describing method for vapor deposition of gallium arsenide films to manganese substrates to provide semiconductor devices with low resistance substrates  
[NASA-CASE-XNP-01328] c26 N71-18064

Development of stable electronic amplifier adaptable for monolithic and thin film construction  
[NASA-CASE-XGS-02812] c09 N71-19466

Spatter proof evaporant source design for use in vacuum deposition of solid thin films on substrates

[NASA-CASE-XMP-06065] c15 N71-20395

Binding layer of semiconductor particles by electrodeposition  
[NASA-CASE-XNP-01959] c26 N71-23043

Device for high vacuum film deposition with electromagnetic ion steering  
[NASA-CASE-NPO-10331] c09 N71-26701

Magnetic recording head composed of ferrite core coated with thin film of aluminum-iron-silicon alloy  
[NASA-CASE-GSC-10097-1] c08 N71-27210

Thin film capacitive bolometer and capacitance temperature interchange sensor  
[NASA-CASE-NFO-10607] c09 N71-27232

Electrical connections for thin film hybrid microcircuits  
[NASA-CASE-XMS-02182] c10 N71-28783

Single crystal film semiconductor devices  
[NASA-CASE-ERC-10222] c09 N72-22199

Waveguide, thin film window and microwave irises  
[NASA-CASE-LAR-10513-1] c07 N72-25170

Thin absorbing metallic film for increased visible light transmission  
[NASA-CASE-LAR-10P36-1] c26 N72-27784

Development of thin film microwave iris installed in microwave waveguide transverse to flow of energy in waveguide  
[NASA-CASE-LAR-10511-1] c09 N72-29172

Development of procedure for producing thin transparent films of zinc oxide on transparent refractory substrate  
[NASA-CASE-FRC-10019] c15 N73-12487

Process for analysis of strain field of structures subjected to large deformations involving low modulus substrate with thin coating  
[NASA-CASE-LAR-10765-1] c32 N73-20740

Dual wavelength system for monitoring film deposition  
[NASA-CASE-MPS-20675] c26 N73-26751

Thin film analyzer utilizing holographic techniques  
[NASA-CASE-MPS-20823-1] c16 N73-30476

Transparent switchboard which permits optical display devices to be adapted for use in man machine communications  
[NASA-CASE-MSC-13746-1] c10 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] c25 N74-18551

Method of preparing water purification membranes --- polymerization of allyl amine as thin films in plasma discharge  
[NASA-CASE-ARC-10643-1] c25 N75-12087

System for depositing thin films  
[NASA-CASE-MPS-20775-1] c31 N75-12161

Method of producing a storage bulb for an atomic hydrogen maser  
[NASA-CASE-NPO-13050-1] c36 N75-15029

Integrated structure vacuum tube  
[NASA-CASE-ARC-10445-1] c31 N76-31365

Method of forming metal hydride films  
[NASA-CASE-LFW-12083-1] c37 N78-13436

Strong thin membrane structure --- solar sails  
[NASA-CASE-NFO-14021-2] c27 N80-16163

Method of forming dynamic membrane on stainless steel support  
[NASA-CASE-MSC-18172-1] c26 N80-19237

Partial interlaminar separation system for composites  
[NASA-CASE-LAR-12065-1] c24 N81-14000

## THIN PLATES

Dichroic plate --- as bandpass filters  
[NASA-CASE-NPO-13506-1] c35 N76-15435

Adjustable securing base  
[NASA-CASE-MSC-19666-1] c37 N78-17383

## THIN WALLED SHELLS

Thin walled pressure test vessel using low-melting alloy-filled joint to attach shell to heads  
[NASA-CASE-XLE-04677] c15 N71-10577

## THIN WALLS

Channel-type shell construction for rocket engines and related configurations  
[NASA-CASE-XLE-00144] c28 N70-34860

Sealed separable connection for thin wall metal tube

- [NASA-CASE-NPO-10064] c15 N71-17693  
 Low mass truss structure with elongated thin-walled tubular segments  
 [NASA-CASE-LAR-10546-1] c11 N72-25287  
 Development of differential pressure control system using motion of mechanical diaphragms to operate electric switch  
 [NASA-CASE-MPS-14216] c14 N73-13418  
 Method of fabricating an article with cavities --- with thin bottom walls  
 [NASA-CASE-LAR-10318-1] c31 N74-18689  
 Method of fabricating an object with a thin wall having a precisely shaped slit  
 [NASA-CASE-LAR-10409-1] c31 N74-21059
- THORIUM FLUORIDES**  
 Ultraviolet filter of thorium fluoride and cryolite on quartz base  
 [NASA-CASE-XNP-02340] c23 N69-24332
- THORIUM OXIDES**  
 Nuclear thermionic converter --- tungsten-thorium oxide rods  
 [NASA-CASE-NPO-13121-1] c73 N77-18891
- THREADS**  
 Gage for quality control of sealing surfaces of threaded boss  
 [NASA-CASE-XMF-04966] c14 N71-17658  
 Threadless fastener apparatus comprising receiving apertures for plurality of articles, self-locked condition, and capable of using nonmalleable materials in both ends  
 [NASA-CASE-XPR-05302] c15 N71-23254
- THREE DIMENSIONAL MOTION**  
 Solid state controller three axes controller  
 [NASA-CASE-MSC-12394-1] c08 N74-10542
- THRESHOLD GATES**  
 Apparatus with summing network for compression of analog data by decreasing slope threshold sampling  
 [NASA-CASE-NPO-10769] c08 N72-11171  
 Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential  
 [NASA-CASE-GSC-11425-2] c76 N75-25730
- THRESHOLD LOGIC**  
 Silicon controlled rectifier pulse gate amplifier for blocking false gating caused by negative transient voltages  
 [NASA-CASE-XLA-07497] c09 N71-12514
- THROATS**  
 Method of making a rocket nozzle  
 [NASA-CASE-XMF-06884-1] c20 N79-21123
- THRUST AUGMENTATION**  
 Exhaust nozzle with afterburning for generating thrust  
 [NASA-CASE-XLA-00154] c28 N70-33374  
 Construction and method of arranging plurality of ion engines to form cluster thereby increasing efficiency and control by decreasing heat radiated to space  
 [NASA-CASE-XNP-02923] c28 N71-23081  
 Reversed cowl flap inlet thrust augmentor --- with adjustable airfoil  
 [NASA-CASE-ARC-10754-1] c07 N75-24736  
 Method and apparatus for rapid thrust increases in a turbofan engine  
 [NASA-CASE-LEW-12971-1] c07 N80-18639  
 Thrust augmented spin recovery device  
 [NASA-CASE-LAR-11970-2] c08 N81-19130
- THRUST BEARINGS**  
 Thrust bearing  
 [NASA-CASE-LEW-11949-1] c37 N76-29588
- THRUST CHAMBER PRESSURE**  
 Pitch attitude stabilization system utilizing engine pressure ratio feedback signals  
 [NASA-CASE-LAR-12562-1] c8 N81-26152
- THRUST CHAMBERS**  
 Rocket chamber leak test fixture using tubular plug  
 [NASA-CASE-XPR-09479] c14 N69-27503  
 Supporting and protecting frame structure and plug for empty thrust chamber assembly, handling, and shipping  
 [NASA-CASE-XMF-00580] c11 N70-35383  
 Large area-ratio nozzles for rocket motor thrust chambers  
 [NASA-CASE-XLE-00145] c28 N70-36806  
 Method for shaping regeneratively cooled rocket motor casing having minimum thickness at each channel cross section  
 [NASA-CASE-XLE-00409] c28 N71-15658
- Regeneratively cooled rocket motor casing with tapered channels to insure minimum thicknesses at each channel cross section for necessary strength requirements  
 [NASA-CASE-XLE-05689] c28 N71-15659  
 Rocket engine injector orifice to accommodate changes in density, velocity, and pressure, thereby maintaining constant mass flow rate of propellant into rocket combustion chamber  
 [NASA-CASE-XLE-03157] c28 N71-24736  
 Fuel and oxidizer injection head for thrust chamber of reaction engine  
 [NASA-CASE-NPO-10046] c28 N72-17843  
 Continuous gas flow control by fluidic proportional thruster system  
 [NASA-CASE-ARC-10106-1] c28 N72-22769  
 Radial magnetic field for ion thruster  
 [NASA-CASE-LEW-10770-1] c28 N72-22770  
 Thermal flux transfer system for maintaining thrust chamber of operative reaction motor at given temperatures  
 [NASA-CASE-NPO-12070-1] c28 N73-32606  
 Heat exchanger --- rocket combustion chambers and cooling systems  
 [NASA-CASE-LEW-12252-1] c34 N79-13288  
 Heat exchanger and method of making --- bonding rocket chambers with a porous metal matrix  
 [NASA-CASE-LEW-12441-1] c34 N79-13289
- THRUST CONTROL**  
 Electromechanical actuator and its use in rocket thrust control valve  
 [NASA-CASE-XNP-05975] c15 N69-23185  
 Solid propellant rocket vehicle thrust control method and apparatus  
 [NASA-CASE-XNP-00217] c28 N70-38181  
 Thrust and attitude control apparatus using jet nozzle in movable canard surface or fin configuration  
 [NASA-CASE-XLE-03583] c31 N71-17629  
 Detonation reaction engine comprising outer housing enclosing pair of inner walls for continuous flow  
 [NASA-CASE-XMF-06926] c28 N71-22983  
 Low mass ionizing device for use in electric thrust spacecraft engines  
 [NASA-CASE-XNP-01954] c28 N71-28850  
 Heated porous plug microthruster for spacecraft reaction jet controlled systems such as fuel flow regulation, propellant disassociation, and heat transfer augmentation  
 [NASA-CASE-GSC-10640-1] c28 N72-18766  
 Multi-purpose wind tunnel reaction control model block  
 [NASA-CASE-MSC-19706-1] c09 N78-31129  
 Fluid thrust control system --- for liquid propellant rocket engines  
 [NASA-CASE-XMF-05964-1] c20 N79-21124
- THRUST LOADS**  
 Thrust measurement  
 [NASA-CASE-XNS-05731] c35 N75-29382
- THRUST MEASUREMENT**  
 Dynamometer measuring microforce thrust produced by ion engine  
 [NASA-CASE-XLE-00702] c14 N70-40203  
 Development of thrust dynamometer for measuring performance of jet and rocket engines  
 [NASA-CASE-XLE-05260] c14 N71-20429  
 Development of temperature compensated thrust measuring gage for measuring forces as function of time in environment with varying temperature  
 [NASA-CASE-IGS-02319] c14 N71-22965  
 Micro-pound extended range thrust stand for small rocket engines  
 [NASA-CASE-GSC-10710-1] c28 N71-27094
- THRUST VECTOR CONTROL**  
 Thrust vector control by secondary injection of fluid into rocket nozzle flow field to separate exhaust flow  
 [NASA-CASE-XLE-00208] c28 N70-34294  
 High velocity guidance and spin stabilization gyro controlled jet reaction system for launch vehicle payloads  
 [NASA-CASE-XLA-01339] c31 N71-15692  
 Ion beam deflector system for electronic thrust vector control for ion propulsion yaw, pitch, and roll forces  
 [NASA-CASE-LEW-10689-1] c28 N71-26173

- Tertiary flow injection system for thrust vectoring of propulsive nozzle flow  
[NASA-CASE-MFS-20831] c28 N71-29153
- Development of thrust control system for application to control of aircraft and spacecraft  
[NASA-CASE-MSC-13397-1] c21 N72-25595
- Development of vortex fluid amplifier for throttling rocket exhaust  
[NASA-CASE-LRW-10374-1] c28 N73-13773
- System for imposing directional stability on a rocket-propelled vehicle  
[NASA-CASE-MFS-21311-1] c20 N76-21275
- THRUST-WEIGHT RATIO**
- Launch pad missile release system with bending moment change rate reduction in thrust distribution structure at liftoff  
[NASA-CASE-MFP-03198] c30 N70-40353
- THRISTORS**
- Electrical power generating system --- for windpowered generation  
[NASA-CASE-MFS-24368-3] c33 N81-22280
- TILES**
- Strain arrestor plate for fused silica tile --- bonding of thermal insulation to metallic plates or structural parts  
[NASA-CASE-MSC-14182-1] c27 N76-14264
- Diced tile thermal protection for spacecraft  
[NASA-CASE-MSC-16366-1] c24 N79-23142
- Improved attachment system for silica tiles --- thermal protection for space shuttle orbiter  
[NASA-CASE-MSC-18741-1] c16 N81-16110
- Apparatus for accurately preloading auger attachment means for frangible protective material  
[NASA-CASE-MSC-18791-1] c37 N81-24446
- Densification of porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MSC-18737-1] c25 N81-29180
- Method of repairing surface damage to porous refractory substrates --- shuttle orbiter tiles  
[NASA-CASE-MSC-18736-1] c27 N81-29231
- TILT WING AIRCRAFT**
- Free wing assembly for an aircraft  
[NASA-CASE-FRC-10092-1] c05 N79-12061
- TIME CONSTANT**
- Variable time constant, wide frequency range smoothing network for noise removal from pulse chains  
[NASA-CASE-XGS-01983] c10 N70-41964
- TIME DEPENDENCE**
- An instrument for determining coincidence and elapse time between independent sources of random sequential events  
[NASA-CASE-LAR-12531-1] c35 N81-31529
- TIME DISCRIMINATION**
- Extra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit  
[NASA-CASE-XGS-00381] c09 N70-34819
- TIME DIVISION MULTIPLEXING**
- Synchronizing apparatus for multi-access satellite time division multiplex system  
[NASA-CASE-XGS-05918] c07 N69-39574
- Time division multiplexer with magnetic latching relays  
[NASA-CASE-XNP-00431] c09 N70-38998
- Data processor having multiple sections activated at different times by selective power coupling to sections  
[NASA-CASE-XGS-04767] c08 N71-12494
- Minimum time delay unit for conventional time multiplexed data compression channels  
[NASA-CASE-XNP-08832] c08 N71-12506
- Time division relay synchronizer with master sync pulse for activating binary counter to produce signal identifying time slot for station  
[NASA-CASE-GSC-10373-1] c07 N71-19773
- Sampling circuit for signal processing in multiplex transmission by Fourier analysis  
[NASA-CASE-NPO-10388] c07 N71-24622
- Time division multiplexed telemetry transmitting system controlled by programmed memory  
[NASA-CASE-GSC-10131-1] c07 N71-24624
- TIME FUNCTIONS**
- Cathode ray oscilloscope for analyzing electrical waveforms representing amplitude distribution of time function  
[NASA-CASE-XNP-01383] c09 N71-10659
- TIME LAG**
- Closed loop radio communication ranging system to determine distance between moving airborne vehicle and fixed ground station  
[NASA-CASE-XNP-01501] c21 N70-41930
- Minimum time delay unit for conventional time multiplexed data compression channels  
[NASA-CASE-XNP-08832] c08 N71-12506
- Apparatus for estimating amplitude and sign of phase difference or time lag between two signals  
[NASA-CASE-NPO-11203] c10 N72-20224
- Automatic transponder --- measurement of the internal delay time of a transponder  
[NASA-CASE-GSC-12075-1] c32 N77-31350
- Time delay and integration detectors using charge transfer devices  
[NASA-CASE-GSC-12324-1] c33 N81-33403
- TIME MEASUREMENT**
- Time domain phase measuring apparatus  
[NASA-CASE-GSC-12228-1] c33 N79-10338
- TIME MEASURING INSTRUMENTS**
- Mechanism for measuring nanosecond time differences between luminous events using streak camera  
[NASA-CASE-XLA-01987] c23 N71-23976
- TIME OF FLIGHT SPECTROMETERS**
- Design and characteristics of time of flight mass spectrometer to measure or analyze gases at low pressures and time of flight of single gas molecule  
[NASA-CASE-XNP-01056] c14 N71-23041
- TIME SERIES ANALYSIS**
- Device for performing statistical time-series analysis of complex electrical signal waveforms  
[NASA-CASE-MSC-12428-1] c10 N73-25240
- TIME SHARING**
- Integrated time shared instrumentation display for aerospace vehicle simulators  
[NASA-CASE-XLA-01952] c08 N71-12507
- TIME SIGNALS**
- Monitoring system for signal amplitude ranges over predetermined time interval  
[NASA-CASE-XMS-04061-1] c09 N69-39885
- Development of method for synchronizing clocks at several ground stations based on signals received from spacecraft or satellites  
[NASA-CASE-XNP-08875] c10 N71-23099
- Time synchronization system for synchronizing clocks at remote locations with master clock using moon reflected coded signals  
[NASA-CASE-NFO-10143] c10 N71-26326
- Circuit for measuring wide range of pulse rates by utilizing high capacity counter  
[NASA-CASE-XNP-06234] c10 N71-27137
- System for generating timing and control signals  
[NASA-CASE-NFO-13125-1] c33 N75-19519
- Precise RF timing signal distribution to remote stations --- fiber optics  
[NASA-CASE-NFO-14749-1] c32 N81-14186
- TIMING DEVICES**
- Design and development of synchronous servo loop control system  
[NASA-CASE-XNP-03744] c10 N71-20448
- Development of method for synchronizing clocks at several ground stations based on signals received from spacecraft or satellites  
[NASA-CASE-XNP-08875] c10 N71-23099
- Development and characteristics of resettable monostable pulse generator with charge rundown-timing circuit  
[NASA-CASE-GSC-11139] c09 N71-27016
- Data acquisition and processing system with buffer storage and timing device for magnetic tape recording of PCM data and timing information  
[NASA-CASE-NFO-12107] c08 N71-27255
- High speed photo-optical time recorder for indicating time at exposure of each frame of high speed movie camera film  
[NASA-CASE-KSC-10294] c14 N72-18411
- Method of and apparatus for double-exposure holographic interferometry  
[NASA-CASE-MFS-25405-1] c35 N81-27459
- TIRES**
- Temperature sensor warning system for pneumatic tires of aircraft and ground vehicles  
[NASA-CASE-XLA-01926] c14 N71-15620
- Resilient wheel design with woven wire tire and abrasive treads for lunar surface vehicles

- [NASA-CASE-MFS-13929] c15 N71-27091
- TISSUES (BIOLOGY)**
- Servo-controlled intravital microscope system  
[NASA-CASE-NPO-13214-1] c35 N75-25123
- Method and system for in vivo measurement of bone tissue using a two level energy source  
[NASA-CASE-MSC-14276-1] c52 N77-14737
- System for and method of freezing biological tissue  
[NASA-CASE-GSC-12173-1] c51 N79-10654
- Coupling apparatus for ultrasonic medical diagnostic system  
[NASA-CASE-NPO-13935-1] c52 N79-14751
- Apparatus and method of inserting a microelectrode in body tissue or the like using vibration means  
[NASA-CASE-NPO-13910-1] c52 N79-27636
- Multifunctional transducer  
[NASA-CASE-NFO-14329-1] c52 N81-20703
- Enhancement of in vitro Guayule propagation  
[NASA-CASE-NPO-15213-1] c51 N81-29728
- TITANATES**
- Vacuum preparation of zinc titanate pigment resistant to loss of reflective properties  
[NASA-CASE-MFS-13532] c18 N72-17532
- TITANIUM**
- Joining aluminum to stainless steel by bonding aluminum coatings onto titanium coated stainless steel and brazing aluminum to aluminum/titanium coated steel  
[NASA-CASE-MFS-07369] c15 N71-20443
- Weld-bonded titanium structures  
[NASA-CASE-LAR-11549-1] c37 N77-11397
- Method of mitigating titanium impurities effects in p-type silicon material for solar cells  
[NASA-CASE-NPO-14635-1] c44 N80-24741
- TITANIUM ALLOYS**
- Method to prevent stress corrosion cracking in titanium alloys  
[NASA-CASE-NPO-10271] c17 N71-16393
- Chemical spot tests for identification of titanium and titanium alloys used in aerospace vehicles  
[NASA-CASE-LAR-10539-1] c17 N73-12547
- TITANIUM CARBIDES**
- Improved refractory coatings and method of producing the same  
[NASA-CASE-LEW-13169-1] c26 N80-14232
- TITANIUM NITRIDES**
- Improved refractory coatings --- sputtered coatings on substrates that form stable nitrides  
[NASA-CASE-LEW-23169-2] c26 N81-16209
- TITANIUM OXIDES**
- Method of preparing zinc orthotitanate pigment  
[NASA-CASE-MFS-23345-1] c27 N77-30237
- TOLERANCES (MECHANICS)**
- Mechanism for restraining universal joints to prevent separation while allowing bending, angulation, and lateral offset in any position about axis  
[NASA-CASE-XNP-02278] c15 N71-28951
- TOPOGRAPHY**
- System for plotting subsoil structure and method therefor  
[NASA-CASE-NFO-14191-1] c51 N80-32584
- TOOLS**
- Tool attachment for spreading or moving away loose elements from terminal posts during winding of filamentary elements  
[NASA-CASE-XMF-02107] c15 N71-10809
- Development of adjustable attitude guide block for setting pins perpendicular to irregular convex work surface  
[NASA-CASE-XLA-07911] c15 N71-15571
- Hand tool for forming dimples and nipples on end portion of tubes  
[NASA-CASE-XMS-06876] c15 N71-21536
- Tool for mounting and removing studs with adhesive coated head portion  
[NASA-CASE-MFS-20299] c15 N72-11392
- Insert facing tool --- manually operated cutting tool for forming studs in honeycomb material  
[NASA-CASE-MFS-21485-1] c37 N74-25968
- Stator rotor tools  
[NASA-CASE-MSC-16000-1] c37 N78-24544
- Computer circuit card puller  
[NASA-CASE-FRC-11042-1] c37 N80-20589
- Open ended ratchet type tubing cutter  
[NASA-CASE-MSC-18538-1] c37 N80-22703
- Apparatus for accurately preloading auger attachment means for fragile protective material  
[NASA-CASE-MSC-18791-1] c37 N81-24446
- TOOTH DISEASES**
- Process for preparing calcium phosphate salts for tooth repair  
[NASA-CASE-FRC-10338] c04 N72-33072
- TOPOGRAPHY**
- Method for observing the features characterizing the surface of a land mass  
[NASA-CASE-FRC-11013-1] c43 N81-17499
- TORCHES**
- Computer controlled apparatus for maintaining welding torch angle and velocity during seam tracking  
[NASA-CASE-XMF-03287] c15 N71-15607
- Development of electric weeding torch with casing on one end to form inert gas shield  
[NASA-CASE-XMF-02330] c15 N71-23798
- Computerized system for translating a torch head  
[NASA-CASE-MFS-23620-1] c37 N79-10421
- TOROIDAL SHELLS**
- Toroidal cell and battery --- storage battery for high amp-hour load applications  
[NASA-CASE-LEW-12918-1] c44 N81-24521
- TOROIDS**
- Flux gate magnetometer with toroidal gating coil and solenoidal output coil for signal modulation or amplification  
[NASA-CASE-XGS-01881] c09 N70-40123
- TORQUE**
- Gearing system for eliminating backlash and filtering input torque fluctuations from high inertia load  
[NASA-CASE-XGS-04227] c15 N71-21744
- Coupling arrangement for isolating torque loads from axial, radial, and bending loads  
[NASA-CASE-XLA-04897] c15 N72-22482
- High-torque open-end wrench  
[NASA-CASE-NFO-13541-1] c37 N79-14383
- Acoustic driving of rotor  
[NASA-CASE-NFO-14005-1] c71 N79-20827
- Magnetic field control --- electromechanical torquing devices  
[NASA-CASE-MFS-23828-1] c33 N80-17359
- Pressure suit joint analyzer  
[NASA-CASE-FRC-11314-1] c54 N80-30043
- TORQUE MOTORS**
- Low speed phaselock speed control system --- for brushless dc motor  
[NASA-CASE-GSC-11127-1] c09 N75-24758
- TORQUEMETERS**
- Remote-reading torquemeter for use where high horsepower are transmitted at high rotative speeds  
[NASA-CASE-XLE-00503] c14 N70-34818
- Torque meter for determining magnitude of torque generated by interaction of magnetic dipole between test specimen and ambient magnetic field  
[NASA-CASE-XGS-01013] c14 N71-23725
- TORSO**
- Restraint torso for increased mobility and reduced physiological effects while wearing pressurized suits  
[NASA-CASE-MSC-12397-1] c05 N72-25119
- Spacesuit torso closure  
[NASA-CASE-FRC-11100-1] c54 N78-31736
- TOUCH**
- Mechanically operated hand which can depress trigger using touch control device  
[NASA-CASE-MFS-20413] c15 N72-21463
- Measuring method for cutaneous perception using instrument with elongated tubular housing  
[NASA-CASE-MSC-13609-1] c05 N72-25122
- Prosthetic limb with tactile sensing device  
[NASA-CASE-MFS-16570-1] c05 N73-32013
- TOWERS**
- Aerial capsule emergency separation device using jettisonable towers  
[NASA-CASE-XLA-00115] c03 N70-33343
- TOXICITY AND SAFETY HAZARD**
- Apparatus for remote handling of materials --- mixing or analyzing dangerous chemicals  
[NASA-CASE-LAR-10634-1] c37 N74-18123
- TOXICOLOGY**
- System for continuous monitoring of exhalations, weighing, and cage cleaning for animal exposed to controlled atmosphere for toxic study

[NASA-CASE-XAC-05333] c11 N71-22875

**TRACE CONTAMINANTS**

Describing crystal oscillator instrument for detecting condensable gas contaminants in vacuum apparatus [NASA-CASE-NPO-10144] c14 N71-17701

Heated tungsten filter for removing oxygen impurities from cesium [NASA-CASE-XNP-04262-2] c17 N71-26773

Electric discharge for treatment of trace contaminants [NASA-CASE-ARC-10975-1] c33 N79-15245

**TRACE ELEMENTS**

Ion microprobe mass spectrometer with cooled electrode target for analyzing traces of fluids [NASA-CASE-ERC-10014] c14 N71-26663

Automated system for identifying traces of organic chemical compounds in aqueous solutions [NASA-CASE-NPO-13063-1] c25 N76-18245

Nulling device for detection of trace gases by NDIR absorption [NASA-CASE-ARC-10760-1] c25 N76-22323

Thermoluminescent aerosol analysis [NASA-CASE-LAR-12046-1] c25 N78-15210

**TRACKING (POSITION)**

Sensor consisting of photocells mounted on pyramidal base for improved pointing accuracy of planetary trackers [NASA-CASE-XNP-04180] c07 N69-39736

Telespectrograph for analyzing upper atmosphere by tracking bodies reentering atmosphere at high velocities [NASA-CASE-XLA-03273] c14 N71-18699

Laser beam projector for continuous, precise alignment between target, laser generator, and astronomical telescope during tracking [NASA-CASE-NPO-11087] c23 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] c35 N77-20401

System and method for tracking a signal source --- employing feedback control [NASA-CASE-HQN-10880-1] c17 N78-17140

Sun tracking solar energy collector [NASA-CASE-NPO-13921-1] c44 N79-14526

**TRACKING FILTERS**

System for phase locking onto carrier frequency signal located within receiver bandpass [NASA-CASE-XGS-04994] c09 N69-21543

Apparatus and method for stabilized phase detection for binary signal tracking loops [NASA-CASE-MSC-16461-1] c33 N79-11313

PN lock indicator for dithered PN code tracking loop [NASA-CASE-NPO-14435-1] c33 N81-33405

**TRACKING RADAR**

Electronic and mechanical scanning control system for monopulse tracking antenna [NASA-CASE-XGS-05582] c07 N69-27460

Phase locked loop with sideband rejecting properties in continuous wave tracking radar [NASA-CASE-XNP-02723] c07 N70-41680

Interferometric tuning acquisition and tracking radar antenna system [NASA-CASE-XMS-09610] c07 N71-24625

Acquisition and tracking system for optical radar [NASA-CASE-MFS-20125] c16 N72-13437

**TRACKING STATIONS**

Optical monitor panel consisting of translucent screen with test or meter information projected onto it from rear for application in control rooms of missile launching and tracking stations [NASA-CASE-XKS-03509] c14 N71-23175

Simultaneous acquisition of tracking data from two stations [NASA-CASE-NPO-13292-1] c32 N75-15654

**TRAFFIC CONTROL**

Traffic survey system --- using optical scanners [NASA-CASE-MFS-22631-1] c66 N76-19888

**TRAILERS**

Improved low-drag ground vehicle particularly suited for use in safely transporting livestock [NASA-CASE-PRC-11058-1] c65 N80-33312

**TRAILING-EDGE FLAPS**

Double hinged flap for boundary layer control over trailing edges of wings [NASA-CASE-XLA-01290] c02 N70-42C16

Variable area exhaust nozzle [NASA-CASE-LEW-12378-1] c07 N79-14097

Propulsive lateral control nozzle [NASA-CASE-LAR-12136-1] c08 N81-33210

**TRAINING SIMULATORS**

Low and zero gravity simulator for astronaut training [NASA-CASE-MFS-10555] c11 N71-19494

Apparatus for training astronaut crews to perform on simulated lunar surface under conditions of lunar gravity [NASA-CASE-XMS-04798] c11 N71-21474

Kinesthetic control simulator --- for pilot training [NASA-CASE-LAR-10276-1] c09 N75-15662

**TRAJECTORY ANALYSIS**

Table structure and rotating magnet system simulating gravitational forces on spacecraft and displaying trajectories between Earth, Venus, and Mercury [NASA-CASE-XNP-00708] c14 N70-35394

Planetary atmospheric investigation using split trajectory dual flyby mode [NASA-CASE-XAC-08494] c30 N71-15990

**TRAJECTORY CONTROL**

Spacecraft trajectory correction propulsion system [NASA-CASE-XNP-01104] c28 N70-39931

Development of technique for control of free flight rocket vehicles [NASA-CASE-XLA-00937] c31 N71-17691

Attitude stabilizer for nonguided missile or vehicle with respect to trajectory [NASA-CASE-ARC-10134] c30 N72-17873

**TRANSDUCERS**

Fabrication of pressure-telemetry transducers [NASA-CASE-XNP-09752] c14 N69-21541

Bootstrap unloading circuits for sampling transducer voltage sources without drawing current [NASA-CASE-XNP-09768] c09 N71-12516

Transducer for measuring deflections from vibrating structures [NASA-CASE-XLA-03135] c32 N71-16428

Describing device for surveying contour of surface using X-Y plotter and traveling transducer [NASA-CASE-XLA-08646] c14 N71-17586

Rotary bead dropper and selector for testing micrometeorite transducers [NASA-CASE-IGS-03304] c09 N71-22988

Development and characteristics of self-calibrating displacement transducer for measuring magnitude and frequency of displacement of bodies [NASA-CASE-XLA-00781] c09 N71-22999

Transducer frame for use with extensometer to continuously monitor specimen sample [NASA-CASE-XLA-10322] c15 N72-17452

Split range transducer [NASA-CASE-XLA-11189] c10 N72-20222

Pulsed excitation voltage circuit for strain gage bridge transducers [NASA-CASE-PRC-10036] c09 N72-22200

Passive type, magnifying scratch gage, force transducer [NASA-CASE-LAR-10496-1] c14 N72-22437

Development of electronic detection system for remotely determining number and movement of enemy personnel [NASA-CASE-ARC-10097-2] c07 N73-25160

Acoustical transducer calibrating system including differential pressure activating device [NASA-CASE-PRC-10060-1] c14 N73-27379

Demodulator for carrier transducers [NASA-CASE-NUC-10107-1] c33 N74-17930

LC-oscillator with automatic stabilized amplitude via bias current control --- power supply circuit for transducers [NASA-CASE-MFS-21698-1] c33 N74-26732

Arterial pulse wave pressure transducer [NASA-CASE-GSC-11531-1] c52 N74-27566

Diode-quad bridge circuit means [NASA-CASE-ARC-10364-3] c33 N75-19520

Subminiature insertable force transducer --- including a strain gage to measure forces in muscles [NASA-CASE-NPO-13423-1] c33 N75-31329

- Self-supporting strain transducer  
[NASA-CASE-LAR-11263-1] c35 N75-33369
- Miniature muscle displacement transducer  
[NASA-CASE-NPO-13519-1] c33 N76-19338
- Method and apparatus for nondestructive testing  
of pressure vessels  
[NASA-CASE-NPO-12142-1] c38 N76-28563
- Myocardium wall thickness transducer and  
measuring method  
[NASA-CASE-NPO-13644-1] c52 N76-29895
- Solar cell angular position transducer  
[NASA-CASE-LAR-11999-1] c44 N80-18552
- Simultaneous muscle force and displacement  
transducer  
[NASA-CASE-NPO-14212-1] c52 N80-27072
- Hot foil transducer skin friction sensor  
[NASA-CASE-LAR-12321-1] c35 N81-12390
- Optical crystal temperature gauge with fiber  
optic connections --- cryogenic systems  
[NASA-CASE-MSC-16627-1] c74 N81-15818
- Multifunctional transducer  
[NASA-CASE-NPO-14329-1] c52 N81-20703
- Heat pipe cooled probe  
[NASA-CASE-LAR-12568-1] c44 N81-24525
- Photomechanical transducer  
[NASA-CASE-NPO-14363-1] c39 N81-25400
- TRANSFORMERS**
- Impedance transformation device for signal mixing  
[NASA-CASE-XGS-01110] c07 N69-24334
- High impedance alternating current sensing  
transformer device between two bolometers for  
measuring insertion loss of test component  
[NASA-CASE-XNP-01193] c10 N71-16057
- Magnetic current regulator for saturable core  
transformer  
[NASA-CASE-ERC-10075] c09 N71-24800
- Unsaturating magnetic core transformer design  
with warning signal for electrical power  
processing equipment  
[NASA-CASE-ERC-10125] c09 N71-24893
- Development and characteristics of  
electronically resettable fuse with saturable  
core current sensing transformer having two  
outside legs and center leg  
[NASA-CASE-XGS-11177] c09 N71-27001
- Development and characteristics of voltage  
regulator for connection in series with  
alternating current source and load using  
three leg, two-window transformer  
[NASA-CASE-ERC-10113] c09 N71-27053
- Radial heat flux transformer for use in heating  
and cooling processes  
[NASA-CASE-NPO-10828] c33 N72-17548
- Current protection equipment for saturable core  
transformers  
[NASA-CASE-ERC-10075-2] c09 N72-22196
- Fail-safe multiple transformer circuit  
configuration  
[NASA-CASE-NPO-11078] c09 N72-25262
- Banded transformer cores  
[NASA-CASE-NPO-11966-1] c33 N74-17928
- Solid-state current transformer  
[NASA-CASE-MFS-22560-1] c33 N77-14335
- Transformer regulated self-stabilizing chopper  
[NASA-CASE-XGS-09186] c33 N78-17295
- Apparatus including a plurality of spaced  
transformers for locating short circuits in  
cables  
[NASA-CASE-KSC-10899-1] c33 N79-18193
- Circuit for automatic load sharing in parallel  
converter modules  
[NASA-CASE-NPO-14056-1] c33 N79-24257
- System for automatically switching transformer  
coupled lines  
[NASA-CASE-MSC-16697-1] c33 N79-28415
- Three phase power factor controller  
[NASA-CASE-MFS-25535-1] c33 N81-12330
- Non-contacting power transfer device  
[NASA-CASE-GSC-12595-1] c33 N81-12331
- Base drive for paralleled inverter systems  
[NASA-CASE-NPO-14163-1] c33 N81-14220
- Low current linearization of magnetic amplifier  
for dc transducer  
[NASA-CASE-NPO-14617-1] c33 N81-24338
- Push-pull converter with energy saving circuit  
for protecting switching transistors from peak  
power stress  
[NASA-CASE-NPO-14316-1] c33 N81-33404
- TRANSIENT HEATING**
- Thermocouple installation  
[NASA-CASE-NPO-13540-1] c35 N77-14409
- TRANSISTOR LOADS**
- Deployable cantilever support for deploying  
solar cell arrays aboard spacecraft and  
reducing transient loading  
[NASA-CASE-NPO-10883] c31 N72-22874
- TRANSISTOR AMPLIFIERS**
- Overcurrent protecting circuit for push-pull  
transistor amplifiers  
[NASA-CASE-MSC-12033-1] c09 N71-13531
- TRANSISTOR CIRCUITS**
- Low power drain transistor feedback circuit  
[NASA-CASE-XGS-04999] c09 N69-24317
- Design of transistorized ring counter circuit  
with special steering and triggering circuits  
[NASA-CASE-XGS-03095] c09 N69-27463
- BC transistor circuit to indicate each pulse of  
pulse train and occurrence of nth pulse  
[NASA-CASE-XNP-00906] c09 N70-41655
- Linear sawtooth voltage wave generator with  
transistor timing circuit having capacitor and  
zener diode feedback loops  
[NASA-CASE-XMS-01315] c09 N70-41675
- Switching circuit with regeneratively connected  
transistors eliminating power consumption when  
not in use  
[NASA-CASE-XNP-02654] c10 N70-42032
- High voltage transistor circuit  
[NASA-CASE-XNP-06937] c09 N71-19516
- Complementary regenerative transistorized switch  
circuit employing positive and negative feedback  
[NASA-CASE-XGS-02751] c09 N71-23015
- Inverter drive circuit for semiconductor switch  
[NASA-CASE-LEW-10233] c10 N71-27126
- Transistorized circuit for producing multiple  
slope voltage sweep  
[NASA-CASE-XMS-03542] c09 N71-28926
- Circuitry for high input impedance video  
processor with high noise immunity  
[NASA-CASE-NPO-10199] c09 N72-17156
- Ultra-stable oscillator with complementary  
transistors  
[NASA-CASE-GSC-11513-1] c33 N74-20862
- Inrush current limiter  
[NASA-CASE-GSC-11789-1] c33 N77-14333
- Temperature compensated current source  
[NASA-CASE-MSC-11235] c33 N78-17294
- Inductorless narrow-band filter/amplifier  
[NASA-CASE-GSC-12410-1] c33 N79-24260
- Push-pull converter with energy saving circuit  
for protecting switching transistors from peak  
power stress  
[NASA-CASE-NPO-14316-1] c33 N81-33404
- TRANSISTORS**
- Power supply with overload protection for series  
stage transistor  
[NASA-CASE-XMS-00913] c10 N71-23543
- Solid state circuit for switching alternating  
current input signal as function of direct  
current gating transistor  
[NASA-CASE-XNP-06505] c10 N71-24799
- Broadband distribution amplifier with  
complementary pair transistor output stages  
[NASA-CASE-NPO-10003] c10 N71-26415
- Transistorized switching logic circuits with  
tunnel diodes  
[NASA-CASE-GSC-10878-1] c10 N72-22236
- Inverted geometry transistor for use with  
monolithic integrated circuit  
[NASA-CASE-ARC-10330-1] c09 N73-32112
- Four phase logic systems --- including  
integrated microcircuits  
[NASA-CASE-MSC-14240-1] c33 N75-14957
- Complementary DMOS-VMOS integrated circuit  
structure  
[NASA-CASE-GSC-12190-1] c33 N79-12321
- Circuit for automatic load sharing in parallel  
converter modules  
[NASA-CASE-NPO-14056-1] c33 N79-24257
- Power converter --- for display devices,  
lighting equipment  
[NASA-CASE-PRC-11014-1] c33 N79-27395
- Base drive for paralleled inverter systems  
[NASA-CASE-NPO-14163-1] c33 N81-14220
- TRANSITION FLOW**
- Ablation article and surface for analyzing flow  
transition on ablative surface

[NASA-CASE-LAR-10439-1] c33 N73-27796

**TRANSITION TEMPERATURE**  
Process for preparing thermoplastic aromatic polyimides

[NASA-CASE-LAR-11828-1] c27 N78-32261

**TRANSLATIONAL MOTION**  
Centrifuge mounted motion simulator with elevator mechanism

[NASA-CASE-XAC-00399] c11 N70-34815

Development and characteristics of translating horizontal tail assembly for supersonic aircraft

[NASA-CASE-XLA-08801-1] c02 N71-11043

Semilinear bearing comprising two rows of roller bearings separated by spherical bearings and permitting rotational and translational movement

[NASA-CASE-XLA-02809] c15 N71-22582

Positioning mechanism for converting translatory motion into rotary motion

[NASA-CASE-NPO-10679] c15 N72-21462

**TRANSLATORS**  
Serial data correlator/code translator

[NASA-CASE-KSC-11025-1] c32 N79-28383

**TRANSMISSION EFFICIENCY**  
Microwave power transmission system wherein level of transmitted power is controlled by reflections from receiver

[NASA-CASE-MFS-21470-1] c44 N74-19870

Linear phase demodulator including a phase locked loop with auxiliary feedback loop

[NASA-CASE-GSC-12018-1] c33 N77-14334

Multistage depressed collector for dual node operation --- for travelling wave tubes

[NASA-CASE-LEW-15282-1] c33 N79-32463

**TRANSMISSION LINES**  
Portable equipment for validating C band launch pad antennas and transmission lines used for spacecraft checkout

[NASA-CASE-XKS-10543] c07 N71-26292

Collapsible antenna boom and coaxial transmission line having inflatable inner tube

[NASA-CASE-MFS-20068] c07 N71-27191

Phase modulator with tuned variable length electrical lines including coupling and varactor diode circuits

[NASA-CASE-MS-13201-1] c07 N71-28429

Shielded flat conductor cable of ribbonlike wires laminates in thin flexible insulation

[NASA-CASE-MFS-13687-2] c09 N72-22198

Development of phase control coupling for use with phased array antenna

[NASA-CASE-ERC-10265] c10 N73-16206

Phase protection system for ac power lines

[NASA-CASE-MS-17832-1] c33 N74-14956

System for stabilizing cable phase delay utilizing a coaxial cable under pressure

[NASA-CASE-NPO-13138-1] c33 N74-17527

Telephone multiline signaling using common signal pair

[NASA-CASE-KSC-11023-1] c32 N79-23310

High acceleration cable deployment system

[NASA-CASE-ARC-11256-1] c37 N79-23432

System for automatically switching transformer coupled lines

[NASA-CASE-MS-16697-1] c33 N79-28415

A fiber optic transmission line stabilization apparatus and method

[NASA-CASE-NPO-15036-1] c74 N80-34250

**TRANSMISSIONS (MACHINE ELEMENTS)**  
Compensating linkage for main rotor control

[NASA-CASE-LAR-11797-1] c05 N81-19067

**TRANSMITTANCE**  
Electrical rotary joint apparatus for large space structures

[NASA-CASE-MFS-23981-1] c33 N81-19394

**TRANSMITTER RECEIVERS**  
Low weight, integrated thermoelectric generator/antenna combination for spacecraft

[NASA-CASE-XER-09521] c09 N72-12136

Location identification system with ground based transmitter and aircraft borne receiver/decoder

[NASA-CASE-ERC-10324] c07 N72-25173

Automatic vehicle location system

[NASA-CASE-NPO-11850-1] c32 N74-12912

Digital communication system

[NASA-CASE-MS-13912-1] c32 N74-30524

**TRANSMITTERS**  
Temperature telemetric transmitter with frequency determining tank circuit for short range transmission

[NASA-CASE-NPO-10649] c07 N71-24840

Multicarrier communications system for transmitting modulated signals from single transmitter

[NASA-CASE-NPO-11548] c07 N73-26118

Miniature multichannel biotelemeter system

[NASA-CASE-NFO-13065-1] c52 N74-26625

Digital transmitter for data bus communications system

[NASA-CASE-MS-14558-1] c32 N75-21486

Apparatus for endoscopic examination --- analysis of the propulsion system configuration and transmitter

[NASA-CASE-NPO-14092-1] c52 N80-16725

**TRANSONIC SPEED**  
Construction of leading edges of surfaces for aerial vehicles performing from subsonic to above transonic speeds

[NASA-CASE-XLA-01486] c01 N71-23497

**TRANSONIC WIND TUNNELS**  
Wind tunnel test section for simulating high Reynolds number over transonic speed range

[NASA-CASE-MFS-20509] c11 N72-17183

**TRANSPARENT**  
Transparent polycarbonate resin, shell helmet and latch design for high altitude and space flight

[NASA-CASE-XMS-04935] c05 N71-11190

Method and apparatus for producing an image from a transparent object

[NASA-CASE-GSC-11989-1] c74 N77-28932

Method of fabricating a photovoltaic module of a substantially transparent construction

[NASA-CASE-NPO-14303-1] c44 N80-18550

Heat transparent high intensity high efficiency solar cell

[NASA-CASE-LEW-12892-1] c44 N81-27598

**TRANSPARATION**  
Rocket chamber and method of making

[NASA-CASE-LEW-11118-2] c20 N76-14191

**TRANSPONDERS**  
Equipment for testing of ground station ranging equipment and spacecraft transponders

[NASA-CASE-XMS-05454-1] c07 N71-12391

Spacecraft transponder and ground station radar system for mapping planetary surfaces

[NASA-CASE-NFO-11001] c07 N72-21118

Loop transponder for regenerating code of mu-type ranging system

[NASA-CASE-NFO-11707] c07 N73-25161

Automatic vehicle location system

[NASA-CASE-NPO-11850-1] c32 N74-12912

Simultaneous acquisition of tracking data from two stations

[NASA-CASE-NPO-13292-1] c32 N75-15854

Automatic transponder --- measurement of the internal delay time of a transponder

[NASA-CASE-GSC-12075-1] c32 N77-31350

**TRANSPORTATION**  
Supporting and protecting frame structure and plug for empty thrust chamber assembly, handling, and shipping

[NASA-CASE-IMF-00580] c11 N70-35383

**TRANSVERSE ACCELERATION**  
Rim inertial measuring system

[NASA-CASE-LAR-12052-1] c18 N81-29152

**TRAPS**  
Deep trap, laser activated image converting system

[NASA-CASE-NPO-13131-1] c36 N75-19652

**TRAVELING WAVE AMPLIFIERS**  
Serrrodyne traveling wave tube reentrant amplifier for synchronous communication satellites operating at microwave frequencies

[NASA-CASE-IGS-01022] c07 N71-16088

Traveling wave solid state amplifier utilizing a semiconductor with negative differential mobility

[NASA-CASE-HQH-10069] c33 N75-27251

Ladder supported ring bar circuit

[NASA-CASE-LEW-13570-1] c33 N81-24348

**TRAVELING WAVE MASERS**  
Design of folded traveling wave maser structure

[NASA-CASE-XNF-05219] c16 N71-15550

Comb type traveling wave maser amplifier for improved high gain broadband output

[NASA-CASE-NFO-10548] c16 N71-24831

Independent gain and bandwidth control of a traveling wave maser

[NASA-CASE-NFO-13801-1] c36 N78-18410



## TRAVELING WAVE TUBES

Segmented superconducting magnet producing staggered magnetic field and suitable for broadband traveling wave masers  
[NASA-CASE-XGS-10518] c16 N71-28554

Traveling wave tube circuit  
[NASA-CASE-LEW-12013-1] c33 N79-10339

Multistage depressed collector for dual mode operation --- for travelling wave tubes  
[NASA-CASE-LEW-13282-1] c33 N79-32463

Coupled cavity traveling wave tube with velocity tapering  
[NASA-CASE-LEW-12296-1] c33 N80-19425

## TRAVELING WAVES

Traveling wave maser for operation in 7 to 20 GHz frequency range  
[NASA-CASE-NPO-11437] c16 N72-28521

## TREADMILLS

Tread drum for animals --- having an electrical shock station  
[NASA-CASE-ARC-10917-1] c51 N78-27733

## TRIGGER CIRCUITS

Design of transistorized ring counter circuit with special steering and triggering circuits  
[NASA-CASE-XGS-03095] c09 N69-27463

Triggering system for electric arc driven impulse wind tunnel  
[NASA-CASE-XMF-00411] c11 N70-36513

Voltage range selection apparatus for sensing and applying voltages to electronic instruments without loading signal source  
[NASA-CASE-XMS-06497] c14 N71-26244

One shot multivibrator circuit for producing long duration output pulses  
[NASA-CASE-ARC-10137-1] c09 N71-28468

Voltage amplitude-responsive trigger circuit with silicon controlled rectifier  
[NASA-CASE-GSC-10221-1] c09 N72-23171

Rapidly pulsed, high intensity, incoherent light source  
[NASA-CASE-XLE-2529-3] c33 N74-20859

## TRIGONOMETRY

Electrical and electromechanical trigonometric computation assembly and space vehicle guidance system for aligning perpendicular axes of two sets of three-axes coordinate references  
[NASA-CASE-XMF-00684] c21 N71-21688

## TRIMERS

New trifunctional alcohol derived from trimer acid and novel method of preparation  
[NASA-CASE-NPO-10714] c06 N69-31244

Trimerization of aromatic nitriles  
[NASA-CASE-LEW-12053-1] c27 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] c27 N79-28307

## TRIODES

Vacuum thermionic converter with short-circuited triodes and increased electron transmission and conversion efficiency  
[NASA-CASE-XLE-01015] c03 N69-39898

## TRITIUM

Method for determining state of charge of alkali batteries by using tritium as tracer  
[NASA-CASE-XNP-01464] c03 N71-10728

## TROPIC PAUSE

CAI altitude avoidance system  
[NASA-CASE-NPO-15351-1] c47 N81-16677

## TRUCKS

Fifth wheel  
[NASA-CASE-FRC-10081-1] c37 N77-14477

Improved low-drag ground vehicle particularly suited for use in safely transporting livestock  
[NASA-CASE-FRC-11058-1] c85 N80-33312

## TRUSSES

Low mass truss structure with elongated thin-walled tubular segments  
[NASA-CASE-LAR-10546-1] c11 N72-25287

Lightweight structural columns --- space erectable trusses  
[NASA-CASE-LAR-12095-1] c31 N81-25258

Structural members, method and apparatus  
[NASA-CASE-MSC-16217-1] c31 N81-27323

## TUBE GRIDS

Method for fabricating solar cells having integrated collector grits

[NASA-CASE-LEW-12819-2] c44 N79-18444.

## TUBE HEAT EXCHANGERS

High resistance cross flow heat exchangers for electrothermal rocket engines  
[NASA-CASE-XLE-01783] c28 N70-34175

Gas chromatographic method for determining water in nitrogen tetroxide rocket propellant  
[NASA-CASE-NPO-10234] c06 N72-17094

Liquid cooled brassiere and method of diagnosing malignant tumors therewith  
[NASA-CASE-ARC-11007-1] c52 N77-14736

Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c44 N81-17518

## TUBES

Forming tubes from long thin flat metal strips  
[NASA-CASE-XGS-04175] c15 N71-18579

Hermetic sealing device for ends of tubular bodies during materials testing operations  
[NASA-CASE-NPO-10431] c15 N71-29132

## TUMBLING MOTION

Tumbling motion system for object demagnetization  
[NASA-CASE-XGS-02437] c15 N69-21472

Aircraft body-axis rotation measurement system  
[NASA-CASE-FRC-11043-1] c06 N81-22048

## TUMORS

Liquid cooled brassiere and method of diagnosing malignant tumors therewith  
[NASA-CASE-ARC-11007-1] c52 N77-14736

## TUNABLE LASERS

Tunable injection-locked pulsed CO2 laser  
[NASA-CASE-NPO-14984-1] c36 N81-15350

## TUNGSTEN

Bonding method for improving contact between lead telluride thermoelectric elements and tungsten electrodes  
[NASA-CASE-XGS-04554] c15 N69-39786

Method for producing porous tungsten plates for ionizing cesium compounds for propulsion of ion engines  
[NASA-CASE-XLE-00455] c28 N70-38197

Small plasma probe using tungsten wire collector in tubular shield  
[NASA-CASE-XLE-02578] c25 N71-20747

Production method for manufacturing porous tungsten bodies from tungsten powder particles  
[NASA-CASE-XNP-04339] c17 N71-29137

Vapor deposition method for forming metallized tungsten contacts on silicon substrates  
[NASA-CASE-GSC-10695-1] c09 N72-25259

Nuclear thermionic converter --- tungsten-thorium oxide rods  
[NASA-CASE-NPO-13121-1] c73 N77-18891

## TUNGSTEN ALLOYS

Evaporating crucible of tantalum-tungsten foil, nickel alumina bonding agent, and ceramic coating  
[NASA-CASE-XLA-03105] c15 N69-27483

Cobalt-tungsten alloys with superior strength at elevated temperatures  
[NASA-CASE-LEW-10436-1] c17 N73-32415

Directionally solidified eutectic gamma plus beta nickel-base superalloys  
[NASA-CASE-LEW-12906-1] c26 N77-32279

## TUNING

Active tuned circuits for microelectronic construction  
[NASA-CASE-GSC-11340-1] c10 N72-33230

Microwave generator using Gunn effect for magnetic tuning  
[NASA-CASE-NPO-12106] c09 N73-15235

## TUNNEL DIODES

Low power drain transistor feedback circuit  
[NASA-CASE-XGS-04999] c09 N69-24317

## TUNNELING (EXCAVATION)

Intrusion detection method and apparatus --- monitoring unwanted subterranean entry and departure  
[NASA-CASE-ARC-11317-1] c35 N81-19430

## TUNNELS

Deployable flexible tunnel  
[NASA-CASE-MFS-22636-1] c37 N76-22540

## TURBINE BLADES

Transpiration cooled turbine blade made from metallic or ceramic wires  
[NASA-CASE-XLE-00020] c15 N70-33226

Modification and improvement of turbine blades for maximum cooling efficiency  
[NASA-CASE-XLE-00092] c15 N70-33264

- Preparation of nickel alloys for jet turbine blades operating at high temperatures  
[NASA-CASE-XLE-00151] c17 N70-3E283
- External device for liquid spray cooling of gas turbine blades  
[NASA-CASE-XLE-00037] c28 N70-33372
- Apparatus for liquid spray cooling of turbine blades  
[NASA-CASE-XLE-00027] c33 N71-29152
- Process for welding compressor and turbine blades to rotors and discs of jet engines  
[NASA-CASE-LEW-10533-1] c15 N73-28515
- Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c24 N77-19170
- Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-1] c37 N80-24619
- Improved method for driving two-phase turbines with enhanced efficiency  
[NASA-CASE-NPO-15037-1] c37 N80-26660
- Wingtip vortex turbine  
[NASA-CASE-LAR-12544-1] c67 N81-27096
- TURBINE ENGINES**
- High speed, self-acting shaft seal --- for use in turbine engines  
[NASA-CASE-LEW-11274-1] c37 N75-21631
- Dual cycle aircraft turbine engine  
[NASA-CASE-LAR-11310-1] c67 N77-28118
- Composite seal for turbomachinery --- backings for turbine engine shrouds  
[NASA-CASE-LEW-12131-1] c37 N79-18318
- Self stabilizing sonic inlet  
[NASA-CASE-LEW-11890-1] c05 N79-24976
- Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-2] c37 N80-26658
- TURBINE PUMPS**
- Pulsed energy power system for application of combustible gases to turbine controlling ac voltage generator  
[NASA-CASE-MSC-13112] c03 N71-11057
- Portable cryogenic cooling system design including turbine pump, cooling chamber, and atomizer  
[NASA-CASE-NPO-10467] c23 N71-26654
- Supersonic-combustion rocket  
[NASA-CASE-LEW-11058-1] c20 N74-13502
- Supercharged topping rocket propellant feed system  
[NASA-CASE-XLE-02062-1] c20 N80-14188
- TURBINE WHEELS**
- Locking device for retaining turbine rotor blades on turbine wheel  
[NASA-CASE-KXP-00816] c28 N71-28528
- Apparatus for welding blades to rotors  
[NASA-CASE-LEW-10533-2] c37 N74-11300
- Blade retainer assembly  
[NASA-CASE-LEW-12608-1] c07 N77-27116
- TURBINES**
- Liquid-vapor interface seal design for turbine rotating shafts including helical and molecular pumps and liquid cooling of mercury vapor  
[NASA-CASE-KXP-02862-1] c15 N71-26294
- Amplified wind turbine apparatus  
[NASA-CASE-MFS-23830-1] c44 N80-21831
- TURBOCOMPRESSORS**
- Multistage multiple reentry axial flow reaction turbine with reverse flow reentry ducting  
[NASA-CASE-XLE-00170] c15 N70-36412
- Apparatus and method for reducing thermal stress in a turbine rotor  
[NASA-CASE-LEW-12232-1] c07 N79-10057
- Diesel engine catalytic combustor system --- turbocharging  
[NASA-CASE-LEW-12995-1] c37 N80-26659
- TURBOFAN ENGINES**
- Supersonic fan blading --- noise reduction in turbofan engines  
[NASA-CASE-LEW-11402-1] c07 N74-28226
- Noise suppressor --- for turbofan engine by incorporating annular acoustically porous elements in exhaust and inlet ducts  
[NASA-CASE-LAR-11141-1] c07 N74-32418
- Noise suppressor for turbo fan jet engines  
[NASA-CASE-ARC-10812-1] c07 N76-18131
- Variable thrust nozzle for quiet turbofan engine and method of operating same  
[NASA-CASE-LEW-12317-1] c07 N78-17055
- Method and apparatus for rapid thrust increases in a turbofan engine  
[NASA-CASE-LEW-12971-1] c07 N80-18039
- Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c07 N81-19116
- TURBOFANS**
- Dual output variable pitch turbofan actuation system  
[NASA-CASE-LEW-12419-1] c07 N77-14025
- Reverse pitch fan with divided splitter  
[NASA-CASE-LEW-12760-1] c07 N77-17059
- TURBOJET ENGINE CONTROL**
- Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c07 N81-19116
- TURBOJET ENGINES**
- Telescoping-spike supersonic nozzle for turbojet or ramjet engines  
[NASA-CASE-XLE-00005] c28 N70-39899
- Design and development of gas turbine combustion unit with nozzle guide vanes for introducing diluent air into combustion gases  
[NASA-CASE-XLE-103477-1] c28 N71-20330
- Reduction of nitric oxide emissions from a combustor  
[NASA-CASE-ARC-10814-2] c07 N80-26298
- TURBOMACHINE BLADES**
- Platform for a swing root turbomachinery blade  
[NASA-CASE-LEW-12312-1] c07 N77-32148
- Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-2] c37 N80-26658
- TURBOMACHINERY**
- Blade vibration damping pins for turbomachinery  
[NASA-CASE-XLE-00155] c28 N71-29154
- Centrifugal-reciprocating compressor  
[NASA-CASE-NPO-14597-1] c37 N79-23431
- TURBOSHAPTS**
- Remote-reading torque meter for use where high horsepower are transmitted at high rotative speeds  
[NASA-CASE-XLE-00503] c14 N70-34818
- High speed, self-acting shaft seal --- for use in turbine engines  
[NASA-CASE-LEW-11274-1] c37 N75-21631
- Improved method for driving two-phase turbines with enhanced efficiency  
[NASA-CASE-NPO-15037-1] c37 N80-26660
- TURBULENCE METERS**
- Hot foil transducer skin friction sensor  
[NASA-CASE-LAR-12321-1] c35 N81-12390
- TURBULENT FLOW**
- Exhaust flow deflector --- for ducted gas flow  
[NASA-CASE-LAR-11570-1] c34 N76-18364
- System for measuring Reynolds in a turbulently flowing fluid --- signal processing  
[NASA-CASE-ARC-10755-2] c34 N76-27517
- System for measuring three fluctuating velocity components in a turbulently flowing fluid  
[NASA-CASE-ARC-10974-1] c34 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] c02 N80-20224
- TURNSTILE ANTENNAS**
- Flexible turnstile antenna system for reducing nutation in spin-oriented satellites  
[NASA-CASE-XMF-00442] c31 N71-10747
- Broadband modified turnstile antenna for use in space tracking and communications  
[NASA-CASE-MSC-12209] c09 N71-24842
- Turnstile slot antenna  
[NASA-CASE-GSC-11428-1] c32 N74-20864
- Turnstile and flared cone UHF antenna  
[NASA-CASE-LAR-10970-1] c33 N76-14372
- TURBET**
- Indexing mechanism for cathode array substitution in electron beam tube  
[NASA-CASE-NPO-10625] c09 N71-26182
- TWISTING**
- Means for controlling aerodynamically induced twist --- equipment to control twisting of slender wings due to aerodynamic loads  
[NASA-CASE-LAR-12175-1] c05 N80-16055
- TWO BODY PROBLEM**
- Instrument for measuring potentials on two dimensional electric field plot  
[NASA-CASE-XLA-08493] c10 N71-19421
- TWO DIMENSIONAL BODIES**
- Two-dimensional radiant energy array computers and computing devices  
[NASA-CASE-GSC-11839-1] c60 N77-14751

## TWO PHASE FLOW

Solenoid two-step valve for bipropellant flow rate control to rocket engine  
[NASA-CASE-XMS-04890-1] c15 N70-22192

Two phase fluid pressurization system for propellant tank  
[NASA-CASE-HSC-12390] c27 N71-29155

Two-phase flow system with discrete, impinging two-phase jets  
[NASA-CASE-NPO-11556] c12 N72-25292

Method and turbine for extracting kinetic energy from a stream of two-phase fluid  
[NASA-CASE-NPO-14130-1] c34 N79-20335

Improved method for driving two-phase turbines with enhanced efficiency  
[NASA-CASE-NPO-15037-1] c37 N80-26660

**TWO STAGE TURBINES**

Improved method for driving two-phase turbines with enhanced efficiency  
[NASA-CASE-NPO-15037-1] c37 N80-26660

**TYPEWRITERS**

Guide for a typewriter  
[NASA-CASE-MFS-15218-1] c37 N77-19457

## U

## U BENDS

Elbow forming in jacketed pipes while maintaining separation between core shape and jacket pipes  
[NASA-CASE-XNP-10475] c15 N71-24679

U shaped heated tube for distillation and purification of liquid metals  
[NASA-CASE-XNP-08124-2] c06 N73-13129

## ULCERS

Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-2] c52 N81-14613

Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-1] c52 N81-29764

## ULLAGE

Radiation source and detection system for measuring amount of liquid inside tanks independently of liquid configuration  
[NASA-CASE-HSC-12280] c27 N71-16348

## ULTRAHIGH FREQUENCIES

Turnstile and flared cone UHF antenna  
[NASA-CASE-LAR-10970-1] c33 N76-14372

Dual band combiner for horn antenna  
[NASA-CASE-NPO-14519-1] c32 N80-23524

## ULTRAHIGH VACUUM

Solid lubricant applied to porous roller bearings prior to use in ultrahigh vacuum  
[NASA-CASE-XLE-09527] c15 N71-17688

Calibration of vacuum gauges for measuring total and partial pressures in ultrahigh vacuum region  
[NASA-CASE-XGS-07752] c14 N73-30390

Ultrahigh vacuum gauge with two collector electrodes  
[NASA-CASE-LAR-02743] c14 N73-32324

In situ transfer standard for ultrahigh vacuum gage calibration  
[NASA-CASE-LAR-10862-1] c35 N74-15092

## ULTRASONIC AGITATION

Development of ultrasonic radiation equipment for removing material from host surface and vacuum apparatus for recovery of material  
[NASA-CASE-NPO-11213] c15 N73-20514

## ULTRASONIC CLEANING

Acoustic tooth cleaner  
[NASA-CASE-LAR-12471-1] c52 N81-12724

## ULTRASONIC FLAW DETECTION

Length mode piezoelectric ultrasonic transducer for inspection of solid objects  
[NASA-CASE-HSC-19672-1] c38 N79-14398

## ULTRASONIC RADIATION

Ultrasonic biomedical measuring and recording apparatus --- for recording motion of internal organs such as heart valves  
[NASA-CASE-ARC-10597-1] c52 N74-20726

Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-1] c52 N76-33835

Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-2] c52 N79-26771

## ULTRASONIC TESTS

Ultrasonic scanner for radial and flat panels  
[NASA-CASE-MFS-20335-1] c35 N74-10415

Ultrasonic scanning system for in-place inspection of brazed tube joints  
[NASA-CASE-MFS-20767-1] c38 N74-15130

Method and apparatus for nondestructive testing --- using high frequency arc discharges  
[NASA-CASE-MFS-21233-1] c38 N74-15395

CW ultrasonic bolt tensioning monitor  
[NASA-CASE-LAR-12016-1] c39 N78-15512

**ULTRASONIC WAVE TRANSDUCERS**

Development of ultrasonic radiation equipment for removing material from host surface and vacuum apparatus for recovery of material  
[NASA-CASE-NPO-11213] c15 N73-20514

Ultrasonic bone densitometer  
[NASA-CASE-MFS-20994-1] c35 N75-12271

Reference apparatus for medical ultrasonic transducer  
[NASA-CASE-ARC-10753-1] c54 N75-27760

Ultrasonic calibration device --- for producing changes in acoustic attenuation and phase velocity  
[NASA-CASE-LAR-11435-1] c35 N76-15432

Coupling apparatus for ultrasonic medical diagnostic system  
[NASA-CASE-NPO-13935-1] c52 N79-14751

Liquid-immersible electrostatic ultrasonic transducer  
[NASA-CASE-LAR-12465-1] c35 N80-18363

CDS solid state phase insensitive ultrasonic transducer --- annealing cadmium sulfide crystals  
[NASA-CASE-LAR-12304-1] c35 N80-20559

**ULTRASONIC WELDING**

Ultrasonically bonded valve assembly  
[NASA-CASE-NPO-13360-1] c37 N75-25185

**ULTRASONICS**

Ultrasonic wrench for applying vibratory energy to mechanical fasteners  
[NASA-CASE-MFS-20586] c15 N71-17686

Pseudo continuous wave instrument --- ultrasonics  
[NASA-CASE-LAR-12260-1] c35 N79-10390

**ULTRAVIOLET FILTERS**

Ultraviolet filter of thorium fluoride and cryolite on quartz base  
[NASA-CASE-XNP-02340] c23 N69-24332

Development of ultraviolet resonance lamp with improved transmission of radiation  
[NASA-CASE-ARC-10030] c09 N71-12521

**ULTRAVIOLET LASERS**

Stabilization of He2(a 3 Sigma u+ molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c72 N79-13826

**ULTRAVIOLET RADIATION**

Ultraviolet radiation resistant alkali-metal silicate coatings for temperature control of spacecraft  
[NASA-CASE-XGS-04119] c18 N69-39979

Development of ultraviolet resonance lamp with improved transmission of radiation  
[NASA-CASE-ARC-10030] c09 N71-12521

Gas leak detection in evacuated systems using ultraviolet radiation probe  
[NASA-CASE-ERC-10034] c15 N71-24896

Phototropic composition of matter with sensitivity to ultraviolet light and usable for producing positive photographic images  
[NASA-CASE-XGS-03736] c14 N72-22443

Transmitting and reflecting diffuser --- for ultraviolet light  
[NASA-CASE-LAR-10385-2] c70 N74-13436

Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-1] c27 N74-21156

Light shield and cooling apparatus --- high intensity ultraviolet lamp  
[NASA-CASE-LAR-10089-1] c34 N74-23066

Plane detector operable in presence of proton radiation  
[NASA-CASE-MFS-21577-1] c19 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] c36 N76-29575

Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c27 N76-32315

Vitro-violet process for producing flame resistant polyamides and products produced

- thereby --- protective clothing for high oxygen environments  
[NASA-CASE-MSC-16074-1] c27 N80-26446
- ULTRAVIOLET REFLECTION**  
Composition and production method of alkali metal silicate paint with ultraviolet reflection properties  
[NASA-CASE-XGS-04799] c18 N71-24183  
Ultraviolet light reflective coating  
[NASA-CASE-GSC-11786-1] c24 N76-24363  
Transmitting and reflecting diffuser --- using ultraviolet grade fused silica coatings  
[NASA-CASE-LAR-10385-3] c74 N78-15E79
- ULTRAVIOLET SPECTRA**  
Ultraviolet chromatographic detector for quantitative and qualitative analysis of compounds  
[NASA-CASE-HQN-10756-1] c14 N72-25428
- ULTRAVIOLET SPECTROMETERS**  
Concave grating spectrometer for use in near and vacuum ultraviolet regions  
[NASA-CASE-XGS-01036] c14 N70-40003  
Telespectrograph for analyzing upper atmosphere by tracking bodies reentering atmosphere at high velocities  
[NASA-CASE-XLA-03273] c14 N71-18699
- UMBILICAL CONNECTORS**  
Umbilical separator for rockets  
[NASA-CASE-XNP-00425] c11 N70-38202  
Remotely actuated quick disconnect mechanism for umbilical cables  
[NASA-CASE-XLA-00711] c03 N71-12258  
Remotely actuated quick disconnect for tubular umbilical conduits used to transfer fluids from ground to rocket vehicle  
[NASA-CASE-XLA-01396] c03 N71-12259  
Internal and external serpentine devices for performing physical operations around orbital space stations  
[NASA-CASE-XMP-05344] c31 N71-16345  
Breakaway multiwire electrical cable connector with particular application for umbilical type cables  
[NASA-CASE-NPO-11140] c15 N72-17455  
Gas operated quick disconnect coupling for umbilical connectors  
[NASA-CASE-NPO-11202] c15 N72-25450  
Deployable flexible tunnel  
[NASA-CASE-MFS-22636-1] c37 N76-22540
- UMBILICAL TOWERS**  
Emergency escape cabin system for launch towers  
[NASA-CASE-XKS-02342] c05 N71-11199
- UNDERWATER ENGINEERING**  
Ejectable underwater sound source recovery assembly  
[NASA-CASE-LAR-10595-1] c35 N74-16135  
Underwater seismic source --- for petroleum exploration  
[NASA-CASE-NPO-14255-1] c46 N79-23555
- UNDERWATER TESTS**  
Pressure regulator for space suit worn underwater to simulate space environment for testing and experimentation  
[NASA-CASE-MFS-20332] c05 N72-20097  
Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332-2] c05 N73-25125
- UNIFORM FLOW**  
Wind tunnel flow generation section  
[NASA-CASE-ARC-10710-1] c09 N75-12969
- UNIONS (CONNECTORS)**  
Beam connector apparatus and assembly  
[NASA-CASE-MFS-25134-1] c31 N81-12283  
Universal connectors for joining stringers  
[NASA-CASE-LAR-12744-1] c37 N81-31551
- UNLOADING**  
Bootstrap unloading circuits for sampling transducer voltage sources without drawing current  
[NASA-CASE-XNP-09768] c09 N71-12516
- UNMANNED SPACECRAFT**  
Device which separates and screens particles of soil samples for vidicon viewing in vacuum and reduced gravity environments  
[NASA-CASE-XNP-09770-3] c11 N71-27036
- UP-CONVERTERS**  
Method and apparatus for quadriphase-shift-key and linear phase modulation  
[NASA-CASE-NPO-14444-1] c33 N81-15192
- UPPER ATMOSPHERE**  
Telespectrograph for analyzing upper atmosphere by tracking bodies reentering atmosphere at high velocities  
[NASA-CASE-XLA-03273] c14 N71-18699  
Development and operation of apparatus for sampling particulates in gases in upper atmosphere  
[NASA-CASE-HQN-10037-1] c14 N73-27376  
Rocket having barium release system to create ion clouds in the upper atmosphere  
[NASA-CASE-LAR-10670-2] c15 N74-27360  
Microwave limb sounder --- to measure trace gases in the upper atmosphere  
[NASA-CASE-NPO-14544-1] c74 N79-34014
- URANIUM 235**  
Isotope separation using metallic vapor lasers  
[NASA-CASE-NFO-13550-1] c36 N77-26477
- UREAS**  
Aldehyde-containing urea-absorbing polysaccharides  
[NASA-CASE-NFO-13620-1] c27 N77-30236  
Dialysis system --- using ion exchange resin membranes permeable to urea molecules  
[NASA-CASE-NFO-14101-1] c52 N80-14687  
Reverse osmosis membrane of high urea rejection properties --- water purification  
[NASA-CASE-ARC-10980-1] c27 N80-23452
- URETHANES**  
Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NFO-10830-1] c27 N81-15104
- URINALYSIS**  
Automated fluid chemical analyzer for microchemical analysis of small quantities of liquids by use of selected reagents and analyzer units  
[NASA-CASE-XNP-09451] c06 N71-26754  
Enzymatic luminescent bioassay method for determining bacterial levels in urine  
[NASA-CASE-GSC-11092-2] c04 N73-27052  
Automatic device for assaying urine on bacterial adenosine triphosphate content  
[NASA-CASE-GSC-11169-2] c05 N73-32011  
Determination of antimicrobial susceptibilities on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c52 N79-14750
- URINATION**  
Open type urine receptacle with tubular housing  
[NASA-CASE-MSC-12324-1] c05 N72-22093  
Urine collection device  
[NASA-CASE-MSC-16433-1] c52 N81-24711  
Urine collection apparatus --- feminine hygiene  
[NASA-CASE-MSC-18381-1] c52 N81-28740
- URINE**  
Urine collection device  
[NASA-CASE-MSC-16433-1] c52 N78-27750
- UROLOGY**  
Urine collection device  
[NASA-CASE-MSC-16433-1] c52 N81-24711
- UTERUS**  
A cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c52 N77-26796

## V

- V GROOVES**  
Vee-notching device --- with adjustable carriage  
[NASA-CASE-MFS-20730-1] c39 N74-13131  
Complementary DMOS-V MOS integrated circuit structure  
[NASA-CASE-GSC-12190-1] c33 N79-12321  
Rotary target V-block --- aligning wind tunnel apparatus for optical measurement  
[NASA-CASE-LAR-12007-2] c74 N79-25876
- VACANCIES (CRYSTAL DEFECTS)**  
Bimetallic junctions  
[NASA-CASE-LEN-11573-1] c26 N77-28265
- VACUUM**  
Hole mobility of deposited semiconductor films in vacuum utilizing thermal gradient  
[NASA-CASE-XKS-04614] c15 N69-21460  
Operating properties of superconducting magnet in vacuum environment  
[NASA-CASE-XNP-06503] c23 N71-29049  
Thermocouples of molybdenum and iridium alloys for more stable vacuum-high temperature performance

- [NASA-CASE-LEW-12174-2] c35 N79-14346  
 Bakeable McLeod gauge  
 [NASA-CASE-XGS-01293-1] c35 N79-33450
- VACUUM APPARATUS**
- Null-type vacuum microbalance for measuring minute mechanical displacements  
 [NASA-CASE-XAC-00472] c15 N70-40180
- Sealing evacuation port and evacuating vacuum container such as space jackets  
 [NASA-CASE-XMF-03290] c15 N71-23256
- Apparatus for determining volatile condensable material present in polymeric products  
 [NASA-CASE-XNP-09699] c06 N71-24607
- Oil trap for preventing diffusion pump backstreaming into evacuated system  
 [NASA-CASE-GSC-10518-1] c15 N72-22489
- Inductance device with vacuum insulation and materials of low gas entrapping capability  
 [NASA-CASE-LEW-10330-1] c09 N72-27226
- Development of apparatus for producing metal powder particles of controlled size  
 [NASA-CASE-XLE-06461-2] c17 N72-28535
- Portable vacuum probe surface sampler for sampling large surface areas with relatively light loading densities of microorganisms  
 [NASA-CASE-LAR-10623-1] c14 N73-30395
- Vacuum leak detector  
 [NASA-CASE-LAR-11237-1] c35 N75-19612
- Apparatus for positioning modular components on a vertical or overhead surface  
 [NASA-CASE-LAR-11465-1] c37 N76-21554
- Safety shield for vacuum/pressure chamber viewing port  
 [NASA-CASE-GSC-12513-1] c31 N81-19343
- Method and apparatus for supercooling and solidifying substances --- containless melts and space processing  
 [NASA-CASE-MFS-25242-1] c35 N81-24413
- Head for high speed spinner having a vacuum chuck --- holding silicon dioxide chips for etching  
 [NASA-CASE-NPO-15227-1] c37 N81-33482
- VACUUM CHAMBERS**
- High-vacuum condenser tank for testing ion rocket engines  
 [NASA-CASE-XLE-00168] c11 N70-33278
- Portable electron beam welding chamber  
 [NASA-CASE-LEW-11531] c15 N71-14932
- Space environmental work simulator with portions of space suit mounted to vacuum chamber wall  
 [NASA-CASE-XMF-07488] c11 N71-18773
- Ionization control system design for monitoring separately located ion gage pressures on vacuum chambers  
 [NASA-CASE-XLE-00787] c14 N71-21090
- Coherent light beam device and method for measuring gas density in vacuum chambers  
 [NASA-CASE-XER-11203] c14 N71-28994
- Transferring liquid nitrogen through vacuum chamber to cryopanel  
 [NASA-CASE-LAR-10031] c15 N72-22484
- Vacuum chamber with scale model of rocket engine base area of space vehicle  
 [NASA-CASE-MFS-20620] c11 N72-27262
- Packless valve for use with evacuation chamber with adapter for attachment to vacuum line and vacuum pump  
 [NASA-CASE-LAR-10061-1] c15 N72-31483
- Apparatus for analyzing gas samples in containers including vacuum chamber, mass spectrometer, and gas chromatography  
 [NASA-CASE-GSC-10903-1] c14 N73-12444
- Design and development of test stand system for supporting test items in vacuum chamber  
 [NASA-CASE-MFS-21362] c11 N73-20267
- Atomic hydrogen storage --- cryotrapping and magnetic field strength  
 [NASA-CASE-LEW-12081-2] c28 N80-20402
- Containerless high temperature calorimeter apparatus  
 [NASA-CASE-MFS-23923-1] c35 N81-19426
- VACUUM DEPOSITION**
- Deposition method for epitaxial beta SiC films having high degree of crystallographic perfection  
 [NASA-CASE-ERC-10120] c26 N69-33482
- Describing apparatus used in vacuum deposition of thin film inductive windings for spacecraft microcircuitry  
 [NASA-CASE-XMF-01667] c15 N71-17647
- Spatter proof evaporant source design for use in vacuum deposition of solid thin films on substrates  
 [NASA-CASE-XMF-06065] c15 N71-20395
- Device for high vacuum film deposition with electromagnetic ion steering  
 [NASA-CASE-NFO-10331] c09 N71-26701
- Preparation of dielectric coating of variable dielectric constant by plasma polymerization  
 [NASA-CASE-ARC-10892-2] c27 N79-14214
- VACUUM EFFECTS**
- High power RF coaxial switch  
 [NASA-CASE-NFO-14229-1] c33 N80-18285
- VACUUM FURNACES**
- Apparatus for inserting and removing specimens from high temperature vacuum furnaces  
 [NASA-CASE-LAR-10841-1] c31 N74-27900
- VACUUM GAGES**
- Simulating operation of thermopile vacuum gage tube at high and low pressures  
 [NASA-CASE-XLA-02758] c14 N71-18481
- Calibration of vacuum gauges for measuring total and partial pressures in ultrahigh vacuum region  
 [NASA-CASE-XGS-07752] c14 N73-30390
- Ionization gage for measuring ultrahigh vacuum levels  
 [NASA-CASE-XLA-05087] c14 N73-30391
- In situ transfer standard for ultrahigh vacuum gage calibration  
 [NASA-CASE-LAR-10862-1] c35 N74-15092
- VACUUM MELTING**
- Electric furnace for vacuum and zero gravity melting of high melting point materials during earth orbit  
 [NASA-CASE-MFS-20710] c11 N72-23215
- VACUUM PUMPS**
- Pressure control valve --- inflating flexible bladders  
 [NASA-CASE-ARC-11251-1] c37 N81-17433
- VACUUM SYSTEMS**
- Shrink-fit vacuum system gas valve  
 [NASA-CASE-XGS-00587] c15 N70-35087
- Leakproof soft metal seal for use in very high vacuum systems operating at cryogenic temperatures  
 [NASA-CASE-XGS-02441] c15 N70-41629
- Describing hot filament type Bayard-Alpert ionization gage with ion collector buried or removed from grid structure  
 [NASA-CASE-XLA-07424] c14 N71-18482
- Describing sorption vacuum trap having housing with group of reentrant wall portions projecting into internal gas-pervious container filled with gas and vapor sorbent material  
 [NASA-CASE-XER-09519] c14 N71-18483
- Vacuum leak detector  
 [NASA-CASE-LAR-11237-1] c35 N75-19612
- VACUUM TUBES**
- Integrated structure vacuum tube  
 [NASA-CASE-ARC-10445-1] c31 N76-31365
- Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control  
 [NASA-CASE-NPO-14474-1] c26 N80-14229
- VALUE**
- High impact pressure regulator having minimum number of lightweight movable elements  
 [NASA-CASE-NFO-10175] c14 N71-18625
- VALVES**
- Actuator using compressed gas as driving force to control valve handling large liquid flows  
 [NASA-CASE-XHQ-01208] c15 N70-35409
- Two component valve assembly for cryogenic liquid transfer regulation  
 [NASA-CASE-XLE-00397] c15 N70-36492
- High pressure four-way valve with O ring adapted to pass across inlet port  
 [NASA-CASE-XNP-00214] c15 N70-36908
- Reinforcing beam system for highly flexible diaphragms in valves or pressure switches  
 [NASA-CASE-XNP-01962] c32 N70-41370
- Multiple vortex amplifier system as fluid valve  
 [NASA-CASE-XMF-04709] c15 N71-15609
- Throttle valve for regulating fluid flow volume  
 [NASA-CASE-XNP-09698] c15 N71-18580
- Development and characteristics of high pressure control valve  
 [NASA-CASE-MSC-11010] c15 N71-19485

- Valve seat with resilient support ring for venting valves subjected to high pressure sealing loads  
[NASA-CASE-XKS-02582] c15 N71-21234
- Positive locking check valve for stopping reversed flow  
[NASA-CASE-XMS-09310] c15 N71-22706
- Valve assembly for controlling simultaneously more than one fluid flow, and having stable qualities under loads  
[NASA-CASE-XMS-05890] c09 N71-23191
- Segmented sealing surface in valve seat  
[NASA-CASE-NPO-10606] c15 N72-25451
- Packless valve for use with evacuation chamber with adapter for attachment to vacuum line and vacuum pump  
[NASA-CASE-LAR-10061-1] c15 N72-31483
- Flow control valve --- for high temperature fluids  
[NASA-CASE-NPO-11951-1] c37 N74-21065
- Airlock  
[NASA-CASE-NFS-20922-1] c18 N74-22136
- Reciprocating engines  
[NASA-CASE-MS-16239-1] c37 N81-32510
- VANES**  
Design and characteristics of device for sensing solar radiation and providing spacecraft attitude control to maintain direction with respect to incident radiation  
[NASA-CASE-XNP-05535] c14 N71-23040
- Rotary vane attenuator with two stators and intermediary rotor, using resistive and orthogonally disposed cards  
[NASA-CASE-NPO-11418-1] c14 N73-13420
- VAPOR DEPOSITION**  
Deposition method for epitaxial beta SiC films having high degree of crystallographic perfection  
[NASA-CASE-ERC-10120] c26 N69-33482
- Device for producing high purity silicon carbide on carbon base by hydrogen reduction of silicon tetrachloride  
[NASA-CASE-XLA-02057] c26 N70-40015
- Water content in vapor deposition atmosphere for forming n-type and p-type junctions of zinc doped gallium arsenide  
[NASA-CASE-XNP-01961] c26 N71-29156
- Vapor deposition method for forming metallized tungsten contacts on silicon substrates  
[NASA-CASE-GSC-10695-1] c09 N72-25259
- Means of vapor deposition using electric current and evaporator filament  
[NASA-CASE-LAR-10541-1] c15 N72-32487
- Deposition of alloy films --- on irregularly shaped metal object  
[NASA-CASE-LEW-11262-1] c27 N74-13270
- System for depositing thin films  
[NASA-CASE-NFS-20775-1] c31 N75-12161
- Vapor deposition apparatus --- semiconductors and gallium arsenides  
[NASA-CASE-HQN-10462] c25 N75-29192
- Chemical vapor deposition reactor --- providing uniform film thickness  
[NASA-CASE-NPO-13650-1] c25 N79-28253
- VAPOR PHASES**  
Method and feed system for separating and orienting liquid and vapor phases of liquid propellants in zero gravity environment  
[NASA-CASE-XLE-01182] c27 N71-15635
- Gallium arsenide sclar cell preparation by surface deposition of cuprous iodide on thin n-type polycrystalline layers and heating in iodine vapor  
[NASA-CASE-XNP-01960] c09 N71-23027
- Mixed liquid and vapor phase analyzer design with thermocouples for relative heat transfer measurement  
[NASA-CASE-NPO-10691] c14 N71-26199
- Electronic recording system for spatial mass distribution of liquid rocket propellant droplets or vapors ejected from high velocity nozzles  
[NASA-CASE-NPO-10185] c10 N71-26339
- VAPOR PRESSURE**  
Fuel tank pressure-relief device for venting cryogenic liquid vapors through tubes with porous plug  
[NASA-CASE-XLE-00288] c15 N70-34247
- Vapor-liquid separator design with vapor driven pump for separated liquid pumping for application in propellant transfer  
[NASA-CASE-XMP-04042] c15 N71-23023
- Method and apparatus for convection control of metallic halide vapor density in a metallic halide laser  
[NASA-CASE-NPO-15021-1] c36 N80-20574
- VAPOR TRAPS**  
Describing sorption vacuum trap having housing with group of reentrant wall portions projecting into internal gas-pervious container filled with gas and vapor sorbent material  
[NASA-CASE-XER-09519] c14 N71-18483
- VAPORIZERS**  
Vapor generating boiler system for turbine motor  
[NASA-CASE-XLE-00785] c33 N71-16104
- Potential heat exchange fluids for use in sulfuric acid vaporizers  
[NASA-CASE-NPO-15015-1] c25 N80-23394
- VAPORIZING**  
Apparatus and process for volumetrically dispensing reagent quantities of volatile chemicals for small batch reactions  
[NASA-CASE-NPO-10070] c15 N71-27372
- Development of method for controlling vapor content of gas  
[NASA-CASE-NPO-10633] c03 N72-28025
- VARIABLE DIODE CIRCUITS**  
Phase modulator with tuned variable length electrical lines including coupling and varactor diode circuits  
[NASA-CASE-MS-13201-1] c07 N71-28429
- VARIABLE DIODES**  
Varactor microwave frequency mixing circuit  
[NASA-CASE-XGS-02171] c09 N69-24324
- Multiple varactor for generating high frequencies with high power and high conversion efficiency  
[NASA-CASE-XMP-04958-1] c10 N71-26414
- Millimeter wave pumped parametric amplifier  
[NASA-CASE-GSC-11617-1] c33 N74-32660
- VARIABLE CYCLE ENGINES**  
Dual cycle aircraft turbine engine  
[NASA-CASE-LAR-11310-1] c07 N77-28118
- Variable cycle gas turbine engines  
[NASA-CASE-LEW-12916-1] c37 N78-17384
- Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c07 N78-18067
- VARIABLE GEOMETRY STRUCTURES**  
Aerospace configuration with low and high aspect ratio variability for high and low speed flight  
[NASA-CASE-XLA-00142] c02 N70-33286
- Variable geometry wind tunnel for testing aircraft models at subsonic speeds  
[NASA-CASE-XLA-07430] c11 N72-22246
- Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c07 N80-32392
- VARIABLE PITCH PROPELLERS**  
Dual output variable pitch turbofan actuation system  
[NASA-CASE-LEW-12419-1] c07 N77-14025
- Impact absorbing blade mounts for variable pitch blades  
[NASA-CASE-LEW-12313-1] c37 N78-10468
- VARIABLE SWEEP WINGS**  
Variable sweep wing configuration for supersonic aircraft  
[NASA-CASE-XLA-00230] c02 N70-33255
- Variable aspect ratio and variable sweep delta wing planforms for supersonic aircraft  
[NASA-CASE-XLA-00221] c02 N70-33266
- Supersonic aircraft configuration providing for variable aspect ratio and variable sweep wings  
[NASA-CASE-XLA-00166] c02 N70-34178
- Supersonic aircraft variable sweep wing planform for varying aspect ratio  
[NASA-CASE-XLA-00350] c02 N70-38011
- Development and characteristics of variable sweep wing control system for supersonic aircraft  
[NASA-CASE-XLA-03659] c02 N71-11041
- Design of dual fuselage aircraft with pivoting wing and horizontal stabilizer to permit yawing of wing in flight for high speed operation  
[NASA-CASE-ARC-10470-1] c02 N73-26005
- VARIABLE THRUST**  
Variable thrust ion engine using thermal decomposition of solid cesium compound to

- produce propulsive vapor  
[NASA-CASE-XMF-00923] c28 N70-36802
- Continuous variation of propellant flow and thrust by application of liquid foam flow theory to injection orifice  
[NASA-CASE-XLE-00177] c28 N70-40367
- Variable thrust nozzle for quiet turbofan engine and method of operating same  
[NASA-CASE-LEW-12317-1] c07 N78-17055
- VARIATIONS**
  - Gearing system for eliminating backlash and filtering input torque fluctuations from high inertia load  
[NASA-CASE-XGS-04227] c15 N71-21744
- VECTOR ANALYSIS**
  - Development of two force component measuring device  
[NASA-CASE-XAC-04886-1] c14 N71-20439
- VECTORCARDIOGRAPHY**
  - Electromedical garment, applying vectorcardiologic type electrodes to human torsos for data recording during physical activity  
[NASA-CASE-YFR-10856] cc5 N71-11189
- VEGETATION GROWTH**
  - Rotary plant growth accelerating apparatus --- weightlessness  
[NASA-CASE-ARC-10722-1] c51 N75-25503
  - Remote sensing of vegetation and soil using microwave ellipsometry  
[NASA-CASE-GSC-11976-1] c43 N78-10529
  - Enhancement of in vitro Guayule propagation  
[NASA-CASE-NPO-15213-1] c51 N81-29728
- VEHICLE WHEELS**
  - Resilient vehicle wheel for lunar surface travel  
[NASA-CASE-MFS-20400] c31 N71-18611
  - Resilient wheel design with woven wire tire and abrasive treads for lunar surface vehicles  
[NASA-CASE-MFS-13929] c15 N71-27091
  - Omnidirectional wheel  
[NASA-CASE-MFS-21309-1] c37 N74-18125
  - Two speed drive system --- mechanical device for changing speed on rotating vehicle wheel  
[NASA-CASE-MFS-20645-1] c37 N74-23070
  - Fifth wheel  
[NASA-CASE-FRC-10081-1] c37 N77-14477
  - Improved tire/wheel concept --- pneumatic aircraft tire  
[NASA-CASE-LAR-11695-2] c37 N80-18402
  - Tire/wheel concept  
[NASA-CASE-LAR-11695-2] c37 N81-24443
- VEHICLES**
  - Magnetic suspension and pointing system  
[NASA-CASE-LAR-11889-2] c37 N78-27424
- VEHICULAR TRACKS**
  - An improved suspension system for a wheel rolling on a flat track --- bearings for directional antennas  
[NASA-CASE-NPO-14395-1] c37 N79-12446
- VELOCITY**
  - Velocity limiting safety system for motor driven research vehicle  
[NASA-CASE-XLA-07473] c15 N71-24895
- VELOCITY MEASUREMENT**
  - Particle detector for measuring micrometeoroid velocity in space  
[NASA-CASE-XLA-00495] c14 N70-41332
  - Superconductive accelerometer employing variable force principle to determine acceleration of bodies  
[NASA-CASE-XMF-01099] c14 N71-15969
  - Device for determining acceleration of gravity by interferometric measurement of travel of falling body  
[NASA-CASE-XMF-05844] c14 N71-17587
  - Describing laser Doppler velocimeter for measuring mean velocity and turbulence of fluid flow  
[NASA-CASE-MFS-20386] c21 N71-19212
  - Momentum-velocity analyzer for measuring minute space particles  
[NASA-CASE-XMS-04201] c14 N71-22990
  - Development of combined velocimeter and accelerometer based on color changes in liquid crystalline material subjected to shear stresses  
[NASA-CASE-ERC-10292] c14 N72-25410
  - Instrument for measuring magnitude and direction of flow velocity in flow field  
[NASA-CASE-LAR-10855-1] c14 N73-13415
- Doppler shift system --- system for measuring velocities of radiating particles  
[NASA-CASE-HQN-10740-1] c72 N74-19310
- Tachometer  
[NASA-CASE-MFS-23175-1] c35 N77-30436
- Velocity measurement system  
[NASA-CASE-MFS-23363-1] c35 N78-32396
- Fluid velocity measuring device  
[NASA-CASE-LAR-11729-1] c34 N79-12359
- Air speed and attitude probe  
[NASA-CASE-FRC-11009-1] c06 N80-18036
- VELOCITY MODULATION**
  - Selector mechanism for mechanical separation and discrimination of high velocity molecular particles  
[NASA-CASE-XLE-01533] c11 N71-10777
  - Describing device for velocity control of electromechanical drive mechanism of scanning mirror of interferometer  
[NASA-CASE-IGS-03532] c14 N71-17627
  - Coupled cavity traveling wave tube with velocity tapering  
[NASA-CASE-LEW-12296-1] c33 N80-19425
- VENTILATION**
  - Protective garment ventilation system  
[NASA-CASE-XMS-04928] c54 N78-17679
- VENTILATORS**
  - Heat sterilizable patient ventilator  
[NASA-CASE-NPO-13313-1] c54 N75-27761
- VENTING**
  - Fuel tank pressure-relief device for venting cryogenic liquid vapors through tubes with porous plug  
[NASA-CASE-XLE-00288] c15 N70-34247
  - Venting device for liquid propellant storage tank using magnetic field to separate liquid and gaseous phases  
[NASA-CASE-XLE-01449] c15 N70-41646
  - Valve seat with resilient support ring for venting valves subjected to high pressure sealing loads  
[NASA-CASE-XKS-02582] c15 N71-21234
  - Venting device for pressurized space suit helmet to eliminate vomit expelled by crewmen  
[NASA-CASE-IMS-09652-1] c05 N71-26333
  - Solid propellant rocket engine with venting system to control effective nozzle throat area  
[NASA-CASE-XNP-03282] c28 N72-20758
- VENUS (PLANET)**
  - Space simulator with uniform test region radiation distribution, adapted to simulate Venus solar radiations  
[NASA-CASE-XNP-00459] c11 N70-38675
- VERTICAL FLIGHT**
  - Aircraft indicator for pilot control of takeoff roll, climbout path and verticle flight path in poor visibility conditions  
[NASA-CASE-XLA-00487] c14 N70-40157
- VERTICAL LANDING**
  - Vertically descending flight vehicle landing gear for rough terrain  
[NASA-CASE-XMF-01174] c02 N70-41589
- VERTICAL TAKEOFF AIRCRAFT**
  - Mechanical stabilization system for VTOL aircraft  
[NASA-CASE-XLA-06339] c02 N71-13422
  - Development of attitude control system for vertical takeoff aircraft using reaction nozzles displaced from various axes of aircraft  
[NASA-CASE-XAC-08972] c02 N71-20570
- VERY HIGH FREQUENCIES**
  - VHF/UHF parasitic probe antenna for spacecraft communication  
[NASA-CASE-XKS-09340] c07 N71-24614
- VERY LONG BASE INTERFEROMETRY**
  - System for real-time crustal deformation monitoring  
[NASA-CASE-NPO-14124-1] c46 N80-14603
- VESTS**
  - Lightweight life preserver without fastening devices  
[NASA-CASE-XMS-00864] c05 N70-36493
- VIBRATION**
  - Three stage motion restraining mechanism for restraining and damping three dimensional vibrational movement of gimballed package during launch of spacecraft  
[NASA-CASE-GSC-10306-1] c15 N71-24694
  - Vibration control of flexible bodies in steady accelerating environment

- [NASA-CASE-LAR-10106-1] c15 N71-27169
- VIBRATION DAMPING**
- Mercury filled pendulum damper for controlling bending vibration induced by wind effects [NASA-CASE-LAR-10274-1] c14 N71-17626
- Digital filter for reducing jitter in digital control systems [NASA-CASE-NPO-11088] c08 N71-29034
- Blade vibration damping pins for turbomachinery [NASA-CASE-XLE-00155] c28 N71-29154
- Active notch filter network with variable notch depth, width and frequency [NASA-CASE-PRC-11055-1] c33 N80-29583
- VIBRATION EFFECTS**
- Electromagnetic energy detection by thermal sensor with vibrating electrode [NASA-CASE-XAC-10768] c09 N71-18830
- Development of ultrasonic radiation equipment for removing material from host surface and vacuum apparatus for recovery of material [NASA-CASE-NPO-11213] c15 N73-20514
- Spherical bearing --- to reduce vibration effects [NASA-CASE-MFS-23447-1] c37 N79-11404
- VIBRATION ISOLATORS**
- Shock and vibration damping device using temperature sensitive solid amorphous polymers [NASA-CASE-XAC-11225] c14 N69-27486
- Miniature vibration isolator utilizing elastic tubing material [NASA-CASE-XLA-01019] c15 N70-40156
- Vibration damping system operating in low vacuum environment for spacecraft mechanisms [NASA-CASE-XMS-01620] c23 N71-15673
- Hermetically sealed vibration damper design for use in gimbal assembly of spacecraft inertial guidance system [NASA-CASE-MSC-10959] c15 N71-26243
- Tuned damped vibration absorber for mass vibrating in more than one degree of freedom for use with wind tunnel models [NASA-CASE-LAR-10083-1] c15 N71-27006
- Vibration isolation system, using coaxial helical compression springs [NASA-CASE-NPO-11012] c15 N72-11391
- Thrust-isolating mounting --- characteristics of support for loads mounted in spacecraft [NASA-CASE-MFS-21680-1] c18 N74-27397
- Shock absorbing mount for electrical components [NASA-CASE-NPO-15253-1] c37 N75-18573
- Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles [NASA-CASE-MSC-12619-2] c27 N79-12221
- Shock isolator for operating a diode laser on a closed-cycle refrigerator [NASA-CASE-GSC-12297-1] c37 N79-28549
- Decoupler pylon: Wing/store flutter suppressor [NASA-CASE-LAR-12468-1] c08 N80-22359
- VIBRATION MEASUREMENT**
- Development of system for measuring damping characteristics of structure or system subjected to random forces or influences [NASA-CASE-ARC-10154-1] c14 N72-22440
- Method and apparatus for vibration analysis utilizing the Mossbauer effect [NASA-CASE-XMF-05882] c35 N75-27329
- Displacement probes with self-contained exciting medium [NASA-CASE-LAR-11690-1] c35 N80-14371
- Ride quality meter [NASA-CASE-LAR-12882-1] c54 N81-31848
- VIBRATION METERS**
- Fiber optic transducers for monitoring and analysis of vibration in aerospace vehicles and onboard equipment [NASA-CASE-XMF-02433] c14 N71-10616
- Ride quality meter [NASA-CASE-LAR-12882-1] c54 N81-31848
- VIBRATION MODE**
- Function generators for producing complex vibration mode patterns used to identify vibration mode data [NASA-CASE-LAR-10310-1] c10 N73-20253
- VIBRATION SIMULATORS**
- Equipment for vibration testing of assemblies, components, and other articles [NASA-CASE-GSC-11302-1] c14 N73-13416
- VIBRATION TESTS**
- Electronic detection system for peak acceleration limits in vibrational testing of spacecraft components [NASA-CASE-NPO-10556] c14 N71-27185
- Fixture for supporting articles during vibration tests comprising integral annular unit [NASA-CASE-MFS-20523] c14 N72-27412
- Equipment for vibration testing of assemblies, components, and other articles [NASA-CASE-GSC-11302-1] c14 N73-13416
- Multiaxial vibration device for making vibration tests along orthogonal axes of test specimen [NASA-CASE-MFS-20242] c14 N73-19421
- Aeroelastic instability stoppers for wind-tunnel models [NASA-CASE-LAR-12458-1] c09 N81-31230
- VIBRATIONAL SPECTRA**
- Tuned damped vibration absorber for mass vibrating in more than one degree of freedom for use with wind tunnel models [NASA-CASE-LAR-10083-1] c15 N71-27006
- VIDEO COMMUNICATION**
- Circuitry for generating sync signals in PM communication systems including video information [NASA-CASE-XNP-10830] c07 N71-11281
- Monitoring circuit design for sampling circuit control and reduction of time-bandwidth in video communication systems [NASA-CASE-XNP-02791] c07 N71-23026
- Teletypewriter video communication system and apparatus [NASA-CASE-XNP-06611] c07 N71-26102
- Sampling video compression system [NASA-CASE-ARC-10984-1] c32 N77-24328
- VIDEO DATA**
- TV camera output signal control system for digital spacecraft communication [NASA-CASE-XNP-01472] c14 N70-41807
- Transient video signal tape recorder with expanded playback [NASA-CASE-ARC-10003-1] c09 N71-25866
- Restoration and improvement of demodulated facsimile video signals [NASA-CASE-GSC-10185-1] c07 N72-12081
- Dual digital video switcher [NASA-CASE-KSC-10782-1] c33 N75-30431
- Programmable scan/read circuitry for charge coupled device imaging detectors --- for a startracker [NASA-CASE-NFO-15345-1] c33 N81-27403
- VIDEO EQUIPMENT**
- Video signal processing system for sampling video brightness levels [NASA-CASE-NFO-10140] c07 N71-24742
- Video sync processor with phase locked system [NASA-CASE-KSC-10002] c10 N71-25865
- Teletypewriter video communication system and apparatus [NASA-CASE-XNP-06611] c07 N71-26102
- Video signal enhancement of signal component representing brightness of scene element in low contrast [NASA-CASE-NFO-10343] c07 N71-27341
- Circuitry for high input impedance video processor with high noise immunity [NASA-CASE-NFO-10199] c09 N72-17156
- Electronic video editor for switching video input signals to common output channel [NASA-CASE-KSC-10003] c10 N73-13235
- Video tape recorder with scan conversion playback for color television signals [NASA-CASE-NFO-10166-1] c07 N73-22076
- Scan converting video tape recorder [NASA-CASE-NFO-10166-2] c35 N76-16391
- Stack plume visualization system [NASA-CASE-LAR-11675-1] c45 N76-17656
- VIDICONS**
- Operation of vidicon tube for scanning spatial charge density pattern [NASA-CASE-XNP-06028] c09 N71-23189
- Device which separates and screens particles of soil samples for vidicon viewing in vacuum and reduced gravity environments [NASA-CASE-XNP-09770-3] c11 N71-27036
- VINYL POLYMERS**
- Method of producing output voltage from photovoltaic cell using poly-N-vinyl carbazole complexed with iodine [NASA-CASE-NPO-10373] c03 N71-18698



- Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-1] c27 N78-32256
- Compound oxidized styrylphosphine --- flame resistant vinyl polymers  
[NASA-CASE-MSC-14903-2] c27 N80-10358
- Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-3] c27 N80-24438
- VINYLIDENE**  
Preparation of dicyanoacetylene and vinylidene copolymers using organic compounds  
[NASA-CASE-XNP-03250] c06 N71-23500
- VIROSES**  
Water system virus detection  
[NASA-CASE-MSC-16098-1] c51 N79-10693
- VISCOELASTICITY**  
Automated ball rebound resilience test equipment for determining viscoelastic properties of polymers  
[NASA-CASE-XLA-08254] c14 N71-26161
- Development and characteristics of parallel plate viscometer for determination of absolute viscosity of liquids and viscoelastic materials  
[NASA-CASE-NPO-11387] c14 N73-14429
- Shock absorbing mount for electrical components  
[NASA-CASE-NPO-13253-1] c37 N75-18573
- Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c27 N81-15104
- VISCOMETERS**  
Describing instrument capable of measuring true shear viscosity of liquids and viscoelastic materials  
[NASA-CASE-XNP-09462] c14 N71-17584
- Development and characteristics of parallel plate viscometer for determination of absolute viscosity of liquids and viscoelastic materials  
[NASA-CASE-NPO-11387] c14 N73-14429
- VISCOSITY**  
Low density and low viscosity magnetic propellant for use under zero gravity conditions  
[NASA-CASE-XLE-01512] c12 N70-40124
- Viscosity measuring instrument  
[NASA-CASE-NPO-14501-1] c35 N80-18357
- VISCOUS DAMPING**  
Shock and vibration damping device using temperature sensitive solid amorphous polymers  
[NASA-CASE-YAC-11225] c14 N69-27486
- Design and operation of viscous pendulum damper  
[NASA-CASE-XLA-02079] c12 N71-16894
- Mercury filled pendulum damper for controlling bending vibration induced by wind effects  
[NASA-CASE-LAR-10274-1] c14 N71-17626
- Multiple plate hydrostatic viscous damper  
[NASA-CASE-LEW-12445-1] c37 N81-22360
- VISIBILITY**  
Controlled visibility device for simulating poor visibility conditions in training pilots in instrument landing and flight procedures  
[NASA-CASE-YPR-04147] c11 N71-10748
- High visibility air sea rescue panel  
[NASA-CASE-MSC-12564-2] c03 N78-25070
- VISORS**  
Anti-fog composition --- for prevention of fogging on surfaces such as space helmet visors and windshields  
[NASA-CASE-MSC-13530-2] c23 N75-14834
- VISUAL ACUITY**  
Multiparameter vision testing apparatus  
[NASA-CASE-MSC-13601-2] c54 N75-27759
- VISUAL CONTROL**  
Visual target luminaires for retrofire attitude control  
[NASA-CASE-IMS-12158-1] c31 N69-27499
- VISUAL FIELDS**  
Automated visual sensitivity tester for determining visual field sensitivity and blind spot size  
[NASA-CASE-ARC-10329-1] c05 N73-26072
- Visual examination apparatus  
[US-PATENT-RE-28,921] c52 N76-30793
- Binocular device for displaying numerical information in field of view  
[NASA-CASE-LAR-11762-1] c74 N77-20882
- VISUAL OBSERVATION**  
Automatic visual inspection system for microelectronics  
[NASA-CASE-NPO-13282] c38 N78-17396
- VISUAL PERCEPTION**  
High pressure liquid flow sight assembly for wide temperature range applications including cryogenic fluids  
[NASA-CASE-XLE-02998] c14 N70-42074
- VISUAL STIMULI**  
Reaction tester for testing reaction to light stimuli  
[NASA-CASE-MSC-13604-1] c05 N73-13114
- VOICE COMMUNICATION**  
Position locating system for remote aircraft using voice communication and digital signals  
[NASA-CASE-GSC-10087-2] c21 N71-13958
- Earth satellite relay station for frequency multiplexed voice transmission  
[NASA-CASE-GSC-10118-1] c07 N71-24621
- Voice operated receiving and transmitting system for use in protective suits  
[NASA-CASE-KSC-10164] c07 N71-33108
- Technique for recovery of voice data from heat damaged magnetic tape  
[NASA-CASE-MSC-14219-1] c32 N74-27612
- Filtering device --- removing electromagnetic noise from voice communication signals  
[NASA-CASE-MFS-22729-1] c32 N76-21366
- Real time analysis of voiced sounds  
[NASA-CASE-NFO-13465-1] c32 N76-31372
- Satellite personal communications system  
[NASA-CASE-NFO-14480-1] c32 N80-20448
- VOICE DATA PROCESSING**  
Digital communication system  
[NASA-CASE-MSC-13912-1] c32 N74-30524
- Memory-based frame synchronizer --- for voice data processing in digital communication systems  
[NASA-CASE-GSC-12430-1] c32 N80-20453
- VOLATILITY**  
Apparatus for determining volatile condensable material present in polymeric products  
[NASA-CASE-XNP-09699] c06 N71-24607
- VOLT-AMPERE CHARACTERISTICS**  
Simulating voltage-current characteristic curves of solar cell panel with different operational parameters  
[NASA-CASE-XMS-01554] c10 N71-10578
- The dc-to-dc converters employing staggered-phase power switches with two-loop control  
[NASA-CASE-NPO-13512-1] c33 N77-10428
- Apparatus including a plurality of spaced transformers for locating short circuits in cables  
[NASA-CASE-KSC-10899-1] c33 N79-18193
- VOLTAGE AMPLIFIERS**  
Increasing power conversion efficiency of electronic amplifiers by power supply switching  
[NASA-CASE-XMS-00945] c09 N71-10798
- Bootstrap unloading circuits for sampling transducer voltage sources without drawing current  
[NASA-CASE-XNP-09768] c09 N71-12516
- RC networks with voltage amplifier, RC input circuit, and positive feedback  
[NASA-CASE-ARC-10020] c10 N72-17172
- Wide range analog to digital converter with variable gain amplifier  
[NASA-CASE-NFO-11018] c08 N72-21200
- Voltage feed through apparatus having reduced partial discharge  
[NASA-CASE-GSC-12347-1] c33 N80-18286
- VOLTAGE CONVERTERS (DC TO DC)**  
Regulated dc-to-dc converter for voltage step-up or step-down with input-output isolation  
[NASA-CASE-BQN-10792-1] c33 N74-11049
- The dc-to-dc converters employing staggered-phase power switches with two-loop control  
[NASA-CASE-NPO-13512-1] c33 N77-10428
- Inrush current limiter  
[NASA-CASE-GSC-11789-1] c33 N77-14333
- Phase substitution of spare converter for a failed one of parallel phase staggered converters  
[NASA-CASE-NPO-13812-1] c33 N77-30365
- Regulated high efficiency, lightweight capacitor-diode multiplier dc to dc converter  
[NASA-CASE-LEW-12791-1] c33 N78-32341
- Power converter --- for display devices, lighting equipment  
[NASA-CASE-FRC-11014-1] c33 N79-27395

- Buck/boost regulator  
[NASA-CASE-GSC-12360-1] c33 N81-19392
- Elimination of current spikes in buck power converters  
[NASA-CASE-NPO-14505-1] c33 N81-19393
- Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NPO-14316-1] c33 N81-33404
- VOLTAGE GENERATORS**
- Pulsed energy power system for application of combustible gases to turbine controlling ac voltage generator  
[NASA-CASE-MS-C-13112] c03 N71-11057
- Biotelemetry apparatus with dual voltage generators for implanting in animals  
[NASA-CASE-XAC-05706] c05 N71-12342
- Transistorized circuit for producing multiple slope voltage sweep  
[NASA-CASE-XMS-03542] c09 N71-28926
- Inductive-capacitive loops as load insensitive power converters  
[NASA-CASE-ERC-10268] c09 N72-25252
- Pulse switching for high energy lasers  
[NASA-CASE-NPO-14556-1] c36 N79-21336
- Driver for solar cell I-V characteristic plots  
[NASA-CASE-NPO-14096-1] c44 N80-18551
- Adaptive reference voltage generator for firing angle control of line-commutated inverters  
[NASA-CASE-MPS-25215-1] c33 N81-31481
- VOLTAGE REGULATORS**
- Regulated dc to dc converter  
[NASA-CASE-XGS-03429] c03 N69-21330
- Power control switching circuit using low voltage semiconductor controlled rectifiers for high voltage isolation  
[NASA-CASE-XNP-02713] c10 N69-39888
- Automatic measuring and recording of gain and zero drift characteristics of electronic amplifier  
[NASA-CASE-XMS-05562-1] c09 N69-39586
- Automatic control of voltage supply to direct current motor  
[NASA-CASE-XMS-04215-1] c09 N69-39587
- Design, development, and operating principles of power supply with starting circuit which is independent of voltage regulator  
[NASA-CASE-XMS-01991] c09 N71-21449
- High voltage divider system for attenuating high voltages to convenient levels suitable for introduction to measuring circuits  
[NASA-CASE-XLE-02008] c09 N71-21583
- Power supply with overload protection for series stage transistor  
[NASA-CASE-XMS-00913] c10 N71-23543
- Voltage controlled, variable frequency relaxation oscillator with MOSFET variable current feed  
[NASA-CASE-GSC-10022-1] c10 N71-25882
- Design and development of buck-boost voltage regulator circuit with additive or subtractive alternating current impressed on variable direct current source voltage  
[NASA-CASE-GSC-10735-1] c10 N71-26085
- Voltage range selection apparatus for sensing and applying voltages to electronic instruments without loading signal source  
[NASA-CASE-XMS-06497] c14 N71-26244
- Dissipative voltage regulator system for minimizing heat dissipation  
[NASA-CASE-GSC-10891-1] c10 N71-26626
- Power point tracker for maintaining optimal output voltage of power source  
[NASA-CASE-GSC-10376-1] c14 N71-27407
- Microwave power divider for providing variable output power to output waveguide in fixed waveguide system  
[NASA-CASE-NPO-11031] c07 N71-33606
- Relay controlled voltage switching unit for scanning circuitry of star tracker  
[NASA-CASE-NPO-11253] c09 N72-17157
- Switching type voltage regulator with relatively simple circuit arrangement  
[NASA-CASE-LEW-11005-1] c09 N72-21243
- Inductive-capacitive loops as load insensitive power converters  
[NASA-CASE-ERC-10268] c09 N72-25252
- Regulated dc-to-dc converter for voltage step-up or step-down with input-output isolation  
[NASA-CASE-HQN-10792-1] c33 N74-11049
- Overvoltage protection network  
[NASA-CASE-ARC-10197-1] c33 N74-17929
- Low distortion automatic phase control circuit --- voltage controlled phase shifter  
[NASA-CASE-MPS-21671-1] c33 N74-22885
- Voltage monitoring system  
[NASA-CASE-KSC-10736-1] c33 N75-19521
- Transformer regulated self-stabilizing chopper  
[NASA-CASE-XGS-09186] c33 N78-17295
- Voltage regulator for battery power source --- using a bipolar transistor  
[NASA-CASE-FRC-10116-1] c33 N79-23345
- Buck/boost regulator  
[NASA-CASE-GSC-12360-1] c33 N81-19392
- VOLTMETERS**
- Voltage monitoring system  
[NASA-CASE-KSC-10736-1] c33 N75-19521
- VOLUMETRIC ANALYSIS**
- Volumetric direct nuclear pumped laser  
[NASA-CASE-LAR-12183-1] c36 N79-18307
- VOMITING**
- Venting device for pressurized space suit helmet to eliminate vomit expelled by crewmen  
[NASA-CASE-XMS-09652-1] c05 N71-26333
- VORTEX BREAKDOWN**
- Wingtip vortex dissipator for aircraft  
[NASA-CASE-LAR-11645-1] c02 N77-10001
- VORTEX FLAPS**
- Leading edge vortex flaps for drag reduction --- during subsonic flight  
[NASA-CASE-LAR-12750-1] c02 N81-19016
- VORTEX GENERATORS**
- Multiple vortex amplifier system as fluid valve  
[NASA-CASE-XMP-04709] c15 N71-15609
- Vortex generator for controlling the dispersion of effluents in a flowing liquid  
[NASA-CASE-LAR-12045-1] c34 N77-24423
- Wingtip vortex turbine  
[NASA-CASE-LAR-12544-1] c07 N81-27096
- VORTICES**
- Vortex-lift roll-control device  
[NASA-CASE-LAR-11868-2] c08 N79-14108
- VULCANIZING**
- Method for compression molding of thermosetting plastics utilizing a temperature gradient across the plastic to cure the article  
[NASA-CASE-LAR-10489-1] c31 N74-18124

## W

- WAFERS**
- Separation of semiconductor wafer into chips bounded by scribe lines  
[NASA-CASE-ERC-10138] c26 N71-14354
- Apparatus for use in examining the lattice of a semiconductor wafer by X-ray diffraction  
[NASA-CASE-MPS-23315-1] c76 N78-24950
- System for slicing silicon wafers  
[NASA-CASE-NPO-14406-1] c37 N80-29703
- High voltage planar multijunction --- solar cells  
[NASA-CASE-LEW-13400-1] c44 N81-16528
- High voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c44 N81-16529
- WALL TEMPERATURE**
- Thermocouple apparatus for measuring wall temperatures in regeneratively cooled rocket engines having thin walled cooling passages  
[NASA-CASE-XLE-05230-2] c14 N73-13417
- Structural heat pipe --- for spacecraft wall thermal insulation system  
[NASA-CASE-GSC-11619-1] c34 N75-12222
- Thermal control canister  
[NASA-CASE-GSC-12253-1] c34 N79-31523
- Curved film cooling admission tube  
[NASA-CASE-LEW-13174-1] c34 N81-12363
- WALLS**
- Metal ribbon wrapped outer wall for regeneratively cooled combustion chamber  
[NASA-CASE-XLE-00164] c15 N70-36411
- WARNING SYSTEMS**
- Alarm system design for monitoring one or more relay circuits  
[NASA-CASE-XMS-10984-1] c10 N71-19417
- Unsaturating magnetic core transformer design with warning signal for electrical power processing equipment  
[NASA-CASE-ERC-10125] c09 N71-24893

- Electrical failure detector in solid rocket propellant motor insulation against thermal degradation by fuel grain  
[NASA-CASE-XMP-03968] c14 N71-27186
- Device for generating and controlling combustion products for testing of fire detection system  
[NASA-CASE-GSC-11095-1] c14 N72-10375
- Vertically stacked collinear array of independently fed omnidirectional antennas for use in collision warning systems on commercial aircraft  
[NASA-CASE-LAR-10545-1] c09 N72-21244
- Development and operating principles of collision warning system for aircraft accident prevention  
[NASA-CASE-HQN-10703] c21 N73-13643
- Pilot warning indicator system of intruder aircraft  
[NASA-CASE-ERC-10226-1] c14 N73-16483
- Silent alarm system for multiple room facility or school  
[NASA-CASE-NPO-11307-1] c10 N73-30205
- Development and characteristics of electronic signalling system and data processing equipment for warning systems to avoid midair collisions between aircraft  
[NASA-CASE-LAR-10717-1] c21 N73-30641
- Inverter ratio failure detector  
[NASA-CASE-NPO-13160-1] c35 N74-18090
- Hearing aid malfunction detection system  
[NASA-CASE-MSC-14916-1] c33 N78-10375
- Automatic communication signal monitoring system  
[NASA-CASE-NPO-13941-1] c32 N79-10262
- Passive intrusion detection system  
[NASA-CASE-NPO-13804-1] c33 N80-23559
- Intrusion detection method and apparatus --- monitoring unwanted subterranean entry and departure  
[NASA-CASE-ARC-11317-1] c35 N81-19430
- WASTE DISPOSAL**
- Fecal waste disposal container  
[NASA-CASE-XMS-06761] c05 N69-23192
- Airlock for waste transferal from pressurized enclosure aboard space vehicle to waste receiver at negative pressure  
[NASA-CASE-MFS-20922] c31 N72-20840
- Pressurized tank for feeding liquid waste into processing equipment  
[NASA-CASE-LAR-10365-1] c05 N72-27102
- Reduced gravity fecal collector seat and urinal  
[NASA-CASE-MFS-22102-1] c54 N74-20725
- Airlock  
[NASA-CASE-MFS-20922-1] c18 N74-22136
- Automatic liquid inventory collecting and dispensing unit  
[NASA-CASE-LAR-11071-1] c35 N75-19611
- Automatic biowaste sampling  
[NASA-CASE-MSC-14640-1] c54 N76-14804
- WASTE ENERGY UTILIZATION**
- Automotive absorption air conditioner utilizing solar and motor waste heat  
[NASA-CASE-NPO-15183] c44 N80-29843
- WASTE UTILIZATION**
- Simultaneous treatment of SO<sub>2</sub> containing stack gases and waste water  
[NASA-CASE-MSC-16258-1] c45 N79-12584
- WASTE WATER**
- Water system virus detection  
[NASA-CASE-MSC-16098-1] c51 N79-10693
- Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c85 N79-17747
- WATER**
- Variable water load for dissipating large amounts of electrical power during high voltage power supply tests  
[NASA-CASE-XMP-05381] c09 N71-20842
- Gas chromatographic method for determining water in nitrogen tetroxide rocket propellant  
[NASA-CASE-NPO-10234] c06 N72-17094
- Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-1] c37 N76-16446
- Solar hydrogen generator  
[NASA-CASE-LAR-11361-1] c44 N77-22607
- Remote water monitoring system  
[NASA-CASE-LAR-11973-1] c35 N78-27384
- Solar photolysis of water  
[NASA-CASE-NPO-14126-1] c44 N79-11470
- WATER FLOW**
- Potable water dispenser  
[NASA-CASE-MFS-21115-1] c54 N74-12779
- WATER INJECTION**
- Reentry communication by injection of water droplets into plasma layer surrounding space vehicle  
[NASA-CASE-XLA-01552] c07 N71-11284
- WATER LANDING**
- Parachute system for lowering manned spacecraft from post-reentry to ocean landing  
[NASA-CASE-XLA-00195] c02 N70-38009
- Spacecraft design with single point aerodynamic and hydrodynamic stability for emergency transport of men from space station to splashdown  
[NASA-CASE-MSC-13281] c31 N72-18659
- WATER MANAGEMENT**
- Description of electrical equipment and system for purification of waste water by producing silver ions for bacterial control  
[NASA-CASE-MSC-10960-1] c03 N71-24718
- Solar-powered pump  
[NASA-CASE-NPO-13567-1] c44 N76-29701
- WATER POLLUTION**
- Utilization of solar radiation by solar still for converting salt and brackish water into potable water  
[NASA-CASE-XMS-04533] c15 N71-23086
- Portable tester for monitoring bacterial contamination by adenosine triphosphate light reaction  
[NASA-CASE-GSC-10879-1] c14 N72-25413
- Method and automated apparatus for detecting coliform organisms  
[NASA-CASE-MSC-16777-1] c51 N80-27067
- WATER QUALITY**
- Rapid, quantitative determination of bacteria in water  
[NASA-CASE-GSC-12158-1] c51 N78-22585
- Fluid sample collection and distribution system --- qualitative analysis of aqueous samples from several points  
[NASA-CASE-MSC-16841-1] c34 N79-24285
- WATER RECLAMATION**
- Potable water reclamation from human wastes in zero-G environment  
[NASA-CASE-XLA-03213] c05 N71-11207
- Water system virus detection  
[NASA-CASE-MSC-16098-1] c51 N79-10693
- Water separator  
[NASA-CASE-XMS-01295-1] c37 N79-21345
- WATER RESOURCES**
- Radar target for remotely sensing hydrological phenomena  
[NASA-CASE-LAR-12344-1] c43 N80-18498
- WATER TEMPERATURE**
- Differential thermopile for measuring cooling water temperature rise  
[NASA-CASE-XAC-00812] c14 N71-15598
- WATER TREATMENT**
- Description of electrical equipment and system for purification of waste water by producing silver ions for bacterial control  
[NASA-CASE-MSC-10960-1] c03 N71-24718
- Method of preparing water purification membranes --- polymerization of allyl amine as thin films in plasma discharge  
[NASA-CASE-ARC-10643-1] c25 N75-12087
- Air removal device --- for purification of water under zero gravity conditions  
[NASA-CASE-XLA-8914-2] c34 N76-23522
- Iodine generator for reclaimed water purification  
[NASA-CASE-MSC-14632-1] c54 N78-14784
- Water system virus detection  
[NASA-CASE-MSC-16098-1] c51 N79-10693
- Simultaneous treatment of SO<sub>2</sub> containing stack gases and waste water  
[NASA-CASE-MSC-16258-1] c45 N79-12584
- Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c85 N79-17747
- Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c45 N80-14579
- Reverse osmosis membrane of high urea rejection properties --- water purification  
[NASA-CASE-ARC-10980-1] c27 N80-23452
- Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the

- chains of thermoplastic matrix polymer  
[NASA-CASE-NPO-14001-1] c27 N81-14076
- WATER VAPOR**  
Equipment for measuring partial water vapor pressure in gas tank  
[NASA-CASE-XMS-01618] c14 N71-20741  
Cell and method for electrolysis of water and anode  
[NASA-CASE-MSC-16394-1] c28 N81-24280
- WATER WAVES**  
Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
[NASA-CASE-NPO-13862-1] c35 N79-10391  
Oceanic wave measurement system  
[NASA-CASE-MFS-23862-1] c48 N80-18667
- WATERPROOFING**  
Glass-to-metal seals comprising relatively high expansion metals  
[NASA-CASE-LEW-10698-1] c37 N74-21063
- WATERWAVE ENERGY CONVERSION**  
Natural turbulence electrical power generator --- using wave action or random motion  
[NASA-CASE-LAR-11551-1] c44 N80-29834
- WAVE AMPLIFICATION**  
Distributed feedback acoustic surface wave oscillator  
[NASA-CASE-NPO-13673-1] c71 N77-26919
- WAVE DIFFRACTION**  
Diffractoid grating configuration for X-ray and ultraviolet focusing  
[NASA-CASE-GSC-12357-1] c74 N80-21140
- WAVE FRONT RECONSTRUCTION**  
Recording and reconstructing focused image holograms  
[NASA-CASE-ERC-10017] c16 N71-15567
- WAVE GENERATION**  
Wind tunnel air flow modulating device and apparatus for selectively generating wave motion in wind tunnel airstream  
[NASA-CASE-XLA-00112] c11 N70-33287  
Linear sawtooth voltage wave generator with transistor timing circuit having capacitor and zener diode feedback loops  
[NASA-CASE-XMS-01315] c09 N70-41675  
Sign wave generation simulator for variable amplitude, frequency, damping, and phase pulses for oscilloscope display  
[NASA-CASE-NPO-10251] c10 N71-27365  
Wideband generator for producing sine wave quadrature and second harmonic of input signal  
[NASA-CASE-NPO-11133] c10 N72-20223  
Material suspension within an acoustically excited resonant chamber --- at near weightless conditions  
[NASA-CASE-NPO-13263-1] c12 N75-24774  
Superconducting gyrotron for high power high efficiency microwave generator/amplifier application  
[NASA-CASE-NPO-14975-1] c33 N80-29584
- WAVE PROPAGATION**  
Maser amplifier slow wave structure --- detecting weak signals from spacecraft  
[NASA-CASE-NPO-15211-1] c36 N81-24425
- WAVE REFLECTION**  
Surface defect detection by reflected microwave radiation pattern  
[NASA-CASE-ARC-10009-1] c15 N71-17822  
Millimeter wave antenna system for spacecraft use  
[NASA-CASE-GSC-10949-1] c07 N71-28965
- WAVE SCATTERING**  
Device and method for determining X ray reflection efficiency, scattering properties, and surface finish of optical surfaces  
[NASA-CASE-MFS-20243] c23 N73-13662
- WAVEFORMS**  
Variable frequency magnetic coupled multivibrator with output signal of constant amplitude and waveform  
[NASA-CASE-XGS-00131] c09 N70-38995  
Cathode ray oscilloscope for analyzing electrical waveforms representing amplitude distribution of time function  
[NASA-CASE-XNP-01383] c09 N71-10659  
Peak polarity selector for monitoring waveforms  
[NASA-CASE-PRC-10010] c10 N71-24662  
Development of family of frequency to amplitude converters for frequency analysis of complex input signal waveforms  
[NASA-CASE-MSC-12395] c09 N72-25257  
Device for performing statistical time-series analysis of complex electrical signal waveforms  
[NASA-CASE-MSC-12428-1] c10 N73-25240  
Low distortion receiver for hi-level baseband PCM waveforms  
[NASA-CASE-MSC-14557-1] c32 N76-16249  
Speech analyzer  
[NASA-CASE-GSC-11898-1] c32 N77-30309  
Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c33 N79-10337
- WAVEGUIDE ANTENNAS**  
Planar array circularly polarized antenna with wall slot excitation  
[NASA-CASE-NPO-10301] c07 N72-11148
- WAVEGUIDE FILTERS**  
Microwave power divider for providing variable output power to output waveguide in fixed waveguide system  
[NASA-CASE-NPO-11031] c07 N71-33606
- WAVEGUIDE LASERS**  
Tunable injection-locked pulsed CO2 laser  
[NASA-CASE-NFO-14988-1] c36 N81-15350
- WAVEGUIDE WINDOWS**  
Broadband microwave waveguide window to compensate dielectric material filling  
[NASA-CASE-XNP-08880] c09 N71-24808
- WAVEGUIDES**  
Dual waveguide mode source for controlling amplitudes of two modes  
[NASA-CASE-XNP-03134] c07 N71-10676  
Design of folded traveling wave maser structure  
[NASA-CASE-XNP-05219] c16 N71-15550  
Quasi-optical microwave circuit with dielectric body for use with oversize waveguides  
[NASA-CASE-ERC-10011] c07 N71-29065  
Microwave waveguide mixer  
[NASA-CASE-ERC-10179] c07 N72-20141  
Waveguide, thin film window and microwave irises  
[NASA-CASE-LAR-10513-1] c07 N72-25170  
Development of thin film microwave iris installed in microwave waveguide transverse to flow of energy in waveguide  
[NASA-CASE-LAR-10511-1] c09 N72-29172  
Resonant waveguide stark cell --- using microwave spectrometers  
[NASA-CASE-LAR-11352-1] c33 N75-26245  
Diffused waveguiding capillary tube with distributed feedback for a gas laser  
[NASA-CASE-NPO-13544-1] c36 N76-18428  
Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures  
[NASA-CASE-NPO-14254-1] c36 N80-18372  
Support assembly for cryogenically coolable low-noise choke waveguide  
[NASA-CASE-NPO-14253-1] c32 N80-32605  
Coaxial phased array antenna  
[NASA-CASE-MSC-16800-1] c32 N81-14187  
Ladder supported ring bar circuit  
[NASA-CASE-LEW-13570-1] c33 N81-24348  
Maser amplifier slow wave structure --- detecting weak signals from spacecraft  
[NASA-CASE-NEC-15211-1] c36 N81-24425  
Waveguide cooling system  
[NASA-CASE-NPO-15401-1] c33 N81-29344
- WAVELENGTHS**  
Method and apparatus using temperature control for wavelength tuning of liquid lasers  
[NASA-CASE-ERC-10187] c16 N69-31343  
Multiple wavelength radiation measuring instrument for determining hot body or gas temperature  
[NASA-CASE-XLE-00011] c14 N70-41946  
Optical system for selecting particular wavelength light beams from multiple wavelength light source  
[NASA-CASE-ERC-10248] c14 N72-17323  
Development of radiant energy sensor to detect the radiant energy wavelength bands from portions of radiating body  
[NASA-CASE-ERC-10174] c14 N72-25409  
Dual wavelength system for monitoring film deposition  
[NASA-CASE-MFS-20675] c26 N73-26751  
Dual wavelength scanning Doppler velocimeter --- without perturbation of flow fields  
[NASA-CASE-ARC-10637-1] c35 N75-16783

- Diatomic infrared gasdynamic laser --- for producing different wavelengths  
[NASA-CASE-ARC-10370-1] c36 N75-31426
- Dual laser optical system and method for studying fluid flow  
[NASA-CASE-MFS-25315-1] c36 N81-19440
- Fluorescent radiation converter  
[NASA-CASE-GSC-12528-1] c74 N81-24900
- Acoustic suspension system  
[NASA-CASE-NPO-15435-1] c71 N81-27887
- Extended range X-ray telescope  
[NASA-CASE-MFS-25282-1] c89 N81-34122
- WAVES**
- Natural turbulence electrical power generator --- using wave action or random motion  
[NASA-CASE-LAR-11551-1] c44 N80-29834
- WEATHERPROOFING**
- Weatherproof helix antenna  
[NASA-CASE-XKS-08485] c67 N71-19493
- WEBS (SHEETS)**
- Method and apparatus for measuring web material wound on a reel  
[NASA-CASE-GSC-11902-1] c38 N77-17495
- WEBS (SUPPORTS)**
- Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-2] c67 N78-18066
- Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-3] c67 N79-14096
- WEDGES**
- Two dimensional wedge/translating shroud nozzle  
[NASA-CASE-LAR-11919-1] c67 N78-27121
- WEIGHT (MASS)**
- Suspended mass oscillation damper based on impact energy absorption for damping wind induced oscillations of tall stacks, antennas, and umbilical towers  
[NASA-CASE-LAR-10193-1] c15 N71-27146
- WEIGHT INDICATORS**
- Device for monitoring a change in mass in varying gravimetric environments  
[NASA-CASE-MFS-21556-1] c35 N74-26945
- WEIGHT MEASUREMENT**
- Weighing and recording device for obtaining precise automatic record of small changes in force  
[NASA-CASE-XLA-02605] c14 N71-10773
- Device for monitoring a change in mass in varying gravimetric environments  
[NASA-CASE-MFS-21556-1] c35 N74-26945
- WEIGHTLESSNESS**
- Apparatus for cryogenic liquid storage with heat transfer reduction and for liquid transfer at zero gravity conditions  
[NASA-CASE-XLE-00345] c15 N70-38020
- Liquid-gas separator adapted for use in zero gravity environment - drawings  
[NASA-CASE-XMS-01624] c15 N70-40062
- Expulsion and measuring device for determining quantity of liquid in tank under conditions of weightlessness  
[NASA-CASE-XMS-01546] c14 N70-40233
- Collapsible auxiliary tank for restarting liquid propellant rocket motors under zero gravity  
[NASA-CASE-XNP-01390] c28 N70-41275
- Absorbent apparatus for separating gas from liquid-gas stream used in environmental control under zero gravity conditions  
[NASA-CASE-XMS-01492] c05 N70-41297
- Potable water reclamation from human wastes in zero-G environment  
[NASA-CASE-XLA-03213] c05 N71-11207
- Describing apparatus for separating gas from cryogenic liquid under zero gravity and for venting gas from fuel tank  
[NASA-CASE-XLE-00586] c15 N71-15968
- Cable suspension and inclined walkway system for simulating reduced or zero gravity environments  
[NASA-CASE-XLA-01787] c11 N71-16028
- Development of apparatus for simulating zero gravity conditions  
[NASA-CASE-MFS-12750] c27 N71-16223
- Quick disconnect latch and handle combination for mounting articles on walls or supporting bases in spacecraft under zero gravity conditions  
[NASA-CASE-MFS-11132] c15 N71-17649
- Gauge for measuring quantity of liquid in spherical tank in reduced gravity  
[NASA-CASE-XMS-06236] c14 N71-21007
- Zero gravity apparatus utilizing pneumatic decelerating means to create payload subjected to zero gravity conditions by dropping its height  
[NASA-CASE-XMP-06515] c14 N71-23227
- Method and apparatus for applying compressional forces to skeletal structure of subject to simulate force during ambulatory conditions  
[NASA-CASE-ARC-10100-1] c05 N71-24738
- Device which separates and screens particles of soil samples for vidicon viewing in vacuum and reduced gravity environments  
[NASA-CASE-XNP-09770-3] c11 N71-27036
- Description of method for making homogeneous foamed materials in weightless environment using materials having different physical properties  
[NASA-CASE-XMP-09902] c15 N72-11387
- Manipulator for remote handling in zero gravity environment  
[NASA-CASE-MFS-14405] c15 N72-28495
- Apparatus for mixing two or more liquids under zero gravity conditions  
[NASA-CASE-LAR-10195-1] c15 N73-19458
- Zero gravity liquid transfer device, using spiral shaped screen  
[NASA-CASE-KSC-10626] c14 N73-27378
- Reduced gravity fecal collector seat and urinal  
[NASA-CASE-MFS-22102-1] c54 N74-20725
- Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-MFS-21394-1] c34 N74-27744
- Rotary plant growth accelerating apparatus --- weightlessness  
[NASA-CASE-ARC-10722-1] c51 N75-25503
- Fluid control apparatus and method  
[NASA-CASE-LAR-11110-1] c34 N75-26282
- Method for manufacturing mirrors in zero gravity environment  
[NASA-CASE-MSC-12611-1] c12 N76-15189
- Air removal device --- for purification of water under zero gravity conditions  
[NASA-CASE-XLA-8914-2] c34 N76-23522
- Fluid mass sensor for a zero gravity environment  
[NASA-CASE-MSC-14653-1] c35 N77-19385
- Method of crystallization --- in gravity-free environments  
[NASA-CASE-MFS-23001-1] c76 N77-32919
- Passive propellant system  
[NASA-CASE-MFS-23642-1] c20 N80-10278
- Method and apparatus for producing concentric hollow spheres --- inertial confinement fusion targets  
[NASA-CASE-NFO-14596-1] c31 N81-33319
- WEIGHTLESSNESS SIMULATION**
- Reduced gravity liquid configuration simulator to study propellant behavior in rocket fuel tanks  
[NASA-CASE-XLE-02624] c12 N69-39988
- Apparatus for measuring human body mass in zero or reduced gravity environment  
[NASA-CASE-XMS-03371] c05 N70-42000
- Harness assembly adapted to support man on ground based apparatus which simulates weightlessness  
[NASA-CASE-MFS-14671] c05 N71-12341
- Whole body measurement systems --- for weightlessness simulation  
[NASA-CASE-MSC-13972-1] c52 N74-10975
- WELD STRENGTH**
- Grain refinement control in TIG arc welding  
[NASA-CASE-MSC-19095-1] c37 N75-19683
- WELD TESTS**
- Nondestructive radiographic tests of resistance welds  
[NASA-CASE-XNP-02588] c15 N71-18613
- Method and apparatus for testing integrated circuit microtab welds  
[NASA-CASE-ARC-10176-1] c15 N72-21464
- WELDED JOINTS**
- Apparatus for welding blades to rotors  
[NASA-CASE-LEW-10533-2] c37 N74-11300
- Ultrasonic scanning system for in-place inspection of brazed tube joints  
[NASA-CASE-MFS-20767-1] c38 N74-15130
- Device for measuring the ferrite content in an austenitic stainless-steel weld  
[NASA-CASE-MFS-22907-1] c26 N76-18257

- Capillary flow weld-bonding  
[NASA-CASE-LAR-11726-1] c37 N76-27568
- WELDED STRUCTURES**
- Grain refinement control in TIG arc welding  
[NASA-CASE-MSC-19095-1] c37 N75-19683
- Flanged major modular assembly jig  
[NASA-CASE-MSC-19372-1] c39 N76-31562
- Weld-bonded titanium structures  
[NASA-CASE-LAR-11549-1] c37 N77-11397
- Bimetallic junctions  
[NASA-CASE-LEW-11573-1] c26 N77-28265
- WELDING**
- Segmented back-up bar for butt welding large tubular structures such as rocket booster bodies or tanks  
[NASA-CASE-XMF-00640] c15 N70-39924
- Flexible backup bar for welding awkwardly shaped structures  
[NASA-CASE-XMF-00722] c15 N70-40204
- Apparatus for welding sheet material --- butt joints  
[NASA-CASE-XMS-01330] c37 N75-27376
- Weld-bonded titanium structures  
[NASA-CASE-LAR-11549-1] c37 N77-11397
- Method and apparatus for holding two separate metal pieces together for welding  
[NASA-CASE-GSC-12318-1] c37 N80-23655
- WELDING MACHINES**
- Computer controlled apparatus for maintaining welding torch angle and velocity during seam tracking  
[NASA-CASE-XMF-03287] c15 N71-15607
- Welding torch with automatic speed controller using speed sensing wheel and closed servo system  
[NASA-CASE-XMF-01730] c15 N71-23050
- Development of electric weeding torch with casing on one end to form inert gas shield  
[NASA-CASE-XMF-02330] c15 N71-23798
- Development of apparatus for automatically changing carriage speed of welding machine to obtain constant speed of torch along work surface  
[NASA-CASE-XMF-07069] c15 N71-23815
- Computerized system for translating a torch head  
[NASA-CASE-MFS-23620-1] c37 N79-10421
- WET CELLS**
- Indicator device for monitoring charge of wet cell battery, using semiconductor light emitter and photodetector  
[NASA-CASE-NPO-10194] c03 N71-20407
- WETTING**
- Anti-wettable materials brazing processes using titanium and zirconium for surface pretreatment  
[NASA-CASE-XMS-03537] c15 N69-21471
- WHEATSTONE BRIDGES**
- Self-balancing strain gage transducer with bridge circuit  
[NASA-CASE-MFS-12827] c14 N71-17656
- Development of method for improving signal to noise ratio and accuracy of wheatstone bridge type radiation measuring instrument  
[NASA-CASE-XLA-02810] c14 N71-25501
- Temperature control system comprised of wheatstone bridge with RC circuit  
[NASA-CASE-NPO-11304] c14 N73-26430
- WHEELS**
- An improved suspension system for a wheel rolling on a flat track --- bearings for directional antennas  
[NASA-CASE-NPO-14395-1] c37 N79-12446
- WHISKER COMPOSITES**
- Composites reinforced with short metal fibers or whiskers and having high tensile strength  
[NASA-CASE-XLE-00228] c17 N70-38490
- WHISKERS (SINGLE CRYSTALS)**
- Catalyst for increased growth of boron carbide crystal whiskers  
[NASA-CASE-IHQ-03903] c15 N69-21922
- WICKS**
- Method of forming a wick for a heat pipe  
[NASA-CASE-NPO-13391-1] c34 N76-27515
- WIDE ANGLE LENSES**
- Wide angle eyepiece with long eye-relief distance  
[NASA-CASE-XMS-06056-1] c23 N71-24657
- WIDEBAND COMMUNICATION**
- Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c32 N77-28346
- Multiple band circularly polarized microstrip antenna  
[NASA-CASE-MSC-18334-1] c32 N80-32604
- WINCHES**
- Design and characteristics of device for showing amount of cable payed out from winch and load imposed  
[NASA-CASE-MSC-12052-1] c15 N71-24599
- WIND EFFECTS**
- Mercury filled pendulum damper for controlling bending vibration induced by wind effects  
[NASA-CASE-LAR-10274-1] c14 N71-17626
- WIND MEASUREMENT**
- Passive optical wind and turbulence remote detection system  
[NASA-CASE-XMF-14032] c20 N71-16340
- Maxometers for measuring peak wind speeds during severe environmental conditions  
[NASA-CASE-MFS-20916] c14 N73-25460
- Wind sensor  
[NASA-CASE-NPO-13462-1] c35 N76-24524
- Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c35 N77-10493
- Wind measurement system  
[NASA-CASE-MFS-23362-1] c47 N77-10753
- WIND PROFILES**
- Free-fall body for obtaining wind velocity profiles by radar tracking  
[NASA-CASE-XLA-02081] c20 N71-16281
- WIND TUNNEL APPARATUS**
- Wind tunnel air flow modulating device and apparatus for selectively generating wave motion in wind tunnel airstream  
[NASA-CASE-XLA-00112] c11 N70-33287
- Electric arc device for minimizing electrode ablation and heating gases to supersonic or hypersonic wind tunnel temperatures  
[NASA-CASE-XAC-00319] c25 N70-41628
- Free flight suspension system for use with aircraft models in wind tunnel tests  
[NASA-CASE-XLA-00939] c11 N71-15926
- Burst diaphragm flow initiator for installation in short duration wind tunnels  
[NASA-CASE-MFS-12915] c11 N71-17600
- Electric arc heater with supersonic nozzle and fixed arc length for use in high temperature wind tunnels  
[NASA-CASE-XAC-01677] c09 N71-20816
- Design and characteristics of device for launching models in wind tunnels without disturbance of air flow  
[NASA-CASE-XNP-03578] c11 N71-23030
- Development of wind tunnel microphone structure to minimize effects of vibrations and eliminate unwanted signals in microphone output  
[NASA-CASE-XNP-00250] c11 N71-28779
- Wind tunnel  
[NASA-CASE-LAR-10135-1] c09 N79-21083
- Rotary target V-block --- aligning wind tunnel apparatus for optical measurement  
[NASA-CASE-LAR-12007-2] c74 N79-25876
- WIND TUNNEL DRIVES**
- Triggering system for electric arc driven impulse wind tunnel  
[NASA-CASE-XMF-00411] c11 N70-36913
- WIND TUNNEL MODELS**
- Wind tunnel method for simulating flow fields around blunt vehicles entering planetary atmospheres without involving high temperatures  
[NASA-CASE-LAR-11138] c12 N71-20436
- Multilegged support system for wind tunnel test models subjected to thermal dynamic loading  
[NASA-CASE-XLA-01326] c11 N71-21481
- Design and characteristics of device for launching models in wind tunnels without disturbance of air flow  
[NASA-CASE-XNP-03578] c11 N71-23030
- Damper system for alleviating air flow shock loads on wind tunnel models  
[NASA-CASE-XLA-09480] c11 N71-33612
- Wind tunnel model and method  
[NASA-CASE-LAR-10812-1] c09 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] c25 N74-18551
- Metric half-span model support system  
[NASA-CASE-LAR-12441-1] c09 N80-24334

- Aeroelastic instability stoppers for wind-tunnel models  
[NASA-CASE-LAR-12720-1] c09 N81-31229
- Aeroelastic instability stoppers for wind-tunnel models  
[NASA-CASE-LAR-12458-1] c09 N81-31230
- WIND TUNNEL NOZZLES**  
Multi-purpose wind tunnel reaction control model block  
[NASA-CASE-MSC-19706-1] c09 N78-31129
- WIND TUNNEL TESTS**  
Metallic hot wire anemometer --- for high speed wind tunnel tests  
[NASA-CASE-ARC-10911-1] c35 N77-20400
- Multi-purpose wind tunnel reaction control model block  
[NASA-CASE-MSC-19706-1] c09 N78-31129
- Metric half-span model support system  
[NASA-CASE-LAR-12441-1] c09 N80-24334
- WIND TUNNELS**  
Thin film gauge --- for measuring convective heat transfer rates along test surfaces in wind tunnels  
[NASA-CASE-NPO-10617-1] c35 N74-22095
- Wind tunnel flow generation section  
[NASA-CASE-ARC-10710-1] c09 N75-12969
- Apparatus for reducing aerodynamic noise in a wind tunnel  
[NASA-CASE-MFS-23099-1] c09 N76-23273
- Static pressure orifice system testing method and apparatus  
[NASA-CASE-LAR-12269-1] c35 N80-18358
- WIND VELOCITY MEASUREMENT**  
Free-fall body for obtaining wind velocity profiles by radar tracking  
[NASA-CASE-XLA-02081] c20 N71-16281
- WINDING**  
Black body radiometer design with temperature sensing and cavity heat source cone winding  
[NASA-CASE-XNP-09701] c14 N71-26475
- Pulse coupling circuit with switch between generator and winding  
[NASA-CASE-LEW-10433-1] c09 N72-22197
- WINDMILLS (WINDPOWERED MACHINES)**  
Electrical power generating system --- for windpowered generation  
[NASA-CASE-MFS-24368-3] c33 N81-22280
- WINDOWS (APERTURES)**  
Waveguide, thin film window and microwave irises  
[NASA-CASE-LAR-10513-1] c07 N72-25170
- Observation window for internal gas confining chamber  
[NASA-CASE-NPO-10890] c11 N73-12265
- WINDPOWER UTILIZATION**  
Amplified wind turbine apparatus  
[NASA-CASE-MFS-23830-1] c44 N80-21831
- WINDPOWERED GENERATORS**  
Wind wheel electric power generator  
[NASA-CASE-MFS-23515-1] c44 N80-21828
- Amplified wind turbine apparatus  
[NASA-CASE-MFS-23830-1] c44 N80-21831
- Electrical power generating system --- for windpowered generation  
[NASA-CASE-MFS-24368-3] c33 N81-22280
- WINDSHIELDS**  
Transparent fire resistant polymeric structures  
[NASA-CASE-ARC-10813-1] c27 N76-16230
- WING FLAPS**  
Upper surface, external flow, jet-augmented flap configuration for high wing jet aircraft for noise reduction  
[NASA-CASE-XLA-00087] c02 N70-33332
- WING PROFILES**  
Supersonic aircraft configuration providing for variable aspect ratio and variable sweep wings  
[NASA-CASE-XLA-00166] c02 N70-34178
- An annular wing  
[NASA-CASE-PRC-11007-2] c02 N79-24959
- WING ROOTS**  
Solar powered aircraft  
[NASA-CASE-LAR-12615-1] c05 N81-32138
- WING TIP VORTICES**  
Wingtip vortex dissipator for aircraft  
[NASA-CASE-LAR-11645-1] c02 N77-10001
- WING TIPS**  
Smoke generator  
[NASA-CASE-ARC-10905-1] c37 N77-13418
- Wingtip vortex turbine  
[NASA-CASE-LAR-12544-1] c07 N81-27096
- WINGS**  
Development of auxiliary lifting system to provide ferry capability for entry vehicles  
[NASA-CASE-LAR-10574-1] c11 N73-13257
- Surface finishing --- for aircraft wings  
[NASA-CASE-MSC-12631-1] c24 N77-28225
- Free wing assembly for an aircraft  
[NASA-CASE-PRC-10092-1] c05 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] c02 N80-20224
- Decoupler pylon: Wing/store flutter suppressor  
[NASA-CASE-LAR-12468-1] c08 N80-22359
- System for use in conducting wake investigation for a wing in flight --- differential pressure measurements for drag investigations  
[NASA-CASE-PRC-11024-1] c02 N80-28300
- WIRE**  
Transpiration cooled turbine blade made from metallic or ceramic wires  
[NASA-CASE-XLE-00020] c15 N70-33226
- Soldering device particularly suited to making high quality wiring joints for aerospace engineering utilizing capillary attraction to regulate flow of solder  
[NASA-CASE-XLA-08911] c15 N71-27214
- Device for bending metal ribbon or wire  
[NASA-CASE-XLA-05966] c15 N72-12408
- Method of fabricating equal length insulated wire  
[NASA-CASE-PRC-10038] c15 N72-20444
- Shielded flat conductor cable of ribbonlike wires laminates in thin flexible insulation  
[NASA-CASE-MFS-13687-2] c09 N72-22198
- Electrical resistance butt welder for welding fine gauge tungsten/rhenium thermocouple wire  
[NASA-CASE-LAR-10103-1] c15 N73-14468
- Twisted wire or tube superconductor for filament windings  
[NASA-CASE-LEW-11015] c26 N73-32571
- WIRE BRIDGE CIRCUITS**  
Black body cavity radiometer with thermal resistance wire bridge circuit  
[NASA-CASE-XNP-08961] c14 N71-24809
- WIRE CLOTH**  
Insulating system for receptacles of liquefied gases using wire cloth for forming frost layer  
[NASA-CASE-XMP-00341] c15 N70-33323
- Method for making screen with unlimited fineness of mesh and screen thickness  
[NASA-CASE-XLE-00953] c15 N71-15966
- WIRE WINDING**  
Adjustable spiral wire winding device  
[NASA-CASE-XMS-02383] c15 N71-15918
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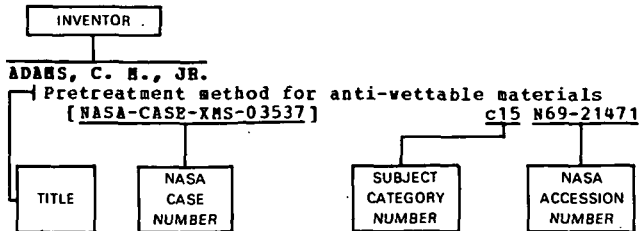
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**ALLEN, W. W.**  
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**ALLGIER, R. K., JR.**  
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**ALPER, M. E.**  
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**ALTSHULEN, T. L.**  
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**AMBRUSO, A.**  
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ANDERSON, W. J.  
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[NASA-CASE-MFS-20757] c09 N72-28225

Cryogenic gyroscope housing  
[NASA-CASE-MFS-21136-1] c35 N74-18323

ANICICH, V. G.  
Miniature cyclotron resonance ion source using small permanent magnet  
[NASA-CASE-NPO-14324-1] c72 N80-27163

ANSELMO, V. J.  
Medical diagnosis system and method with multispectral imaging  
[NASA-CASE-NPO-14402-1] c52 N81-27783

APPEL, H. A.  
Propellant tank pressurization system Patent  
[NASA-CASE-INP-00650] c27 N71-28929

APPLEBERG, W. T.  
Device for measuring tensile forces  
[NASA-CASE-MFS-21728-1] c35 N74-27865

Device for use in loading tension members  
[NASA-CASE-MFS-21488-1] c14 N75-24794

Mechanical sequencer  
[NASA-CASE-MSC-19536-1] c37 N77-22482

Non-floating universal joint  
[NASA-CASE-MSC-19546-1] c37 N77-25536

Load regulating latch  
[NASA-CASE-MSC-19535-1] c37 N77-32499

Sequencing device utilizing planetary gear set  
[NASA-CASE-MSC-19514-1] c37 N79-20377

APPLER, H. L.  
Method for generating ultra-precise angles Patent  
[NASA-CASE-XGS-04173] c19 N71-26674

APPLETON, H. W.  
Omnidirectional slot antenna for mounting on cylindrical space vehicle  
[NASA-CASE-LAR-10163-1] c09 N72-25247

ARCABO, G. H.  
Method for determining the state of charge of batteries by the use of tracers Patent  
[NASA-CASE-INP-01464] c03 N71-10728

ARCELLA, F. G.  
Method of forming a wick for a heat pipe  
[NASA-CASE-NPO-13391-1] c34 N76-27515

Bimetallic junctions  
[NASA-CASE-LEW-11573-1] c26 N77-28265

ARENS, W. E.  
Charge-coupled device data processor for an airborne imaging radar system  
[NASA-CASE-NPO-13587-1] c32 N77-32342

Azimuth correlator for real-time synthetic aperture radar image processing  
[NASA-CASE-NPO-14019-1] c32 N79-14268

ARGOOD, H. J.  
Lightweight reflector assembly  
[NASA-CASE-NPO-13707-1] c74 N77-28933

ARIAS, A.  
Apparatus for positioning and loading a test specimen Patent  
[NASA-CASE-XLE-01300] c15 N70-41993

Thermal shock apparatus Patent  
[NASA-CASE-XLE-02024] c14 N71-22964

Production of metal powders  
[NASA-CASE-XLE-06461] c17 N72-22530

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] c15 N72-25448

Apparatus for producing metal powders  
[NASA-CASE-XLE-06461-2] c17 N72-28535

ARLINE, S. B.  
Flow diverter valve and flow diversion method  
[NASA-CASE-HCN-00573-1] c37 N79-33468

ARMSTRONG, H. T.  
Coupling for linear shaped charge Patent  
[NASA-CASE-XLA-00189] c33 N70-36846

ARMSTRONG, R. W.  
Optical signature generating and correlating apparatus  
[NASA-CASE-NPO-15226-1] c74 N81-19899

ARNOLD, G. D.  
System for improving signal-to-noise ratio of a communication signal Patent Application  
[NASA-CASE-MSC-12259-1] c07 N70-12616

System for improving signal-to-noise ratio of a communication signal  
[NASA-CASE-MSC-12259-2] c07 N72-33146

ARRANCE, F. C.  
Method of making membranes  
[NASA-CASE-XNP-04264] c03 N69-21337

ASHBROOK, R. L.  
High temperature cobalt-base alloy Patent  
[NASA-CASE-XLE-00726] c17 N71-15644

High temperature cobalt-base alloy Patent  
[NASA-CASE-XLE-02991] c17 N71-16025

High temperature ferromagnetic cobalt-base alloy Patent  
[NASA-CASE-XLE-03629] c17 N71-23248

Method of forming superalloys  
[NASA-CASE-LEW-10805-1] c15 N73-13465

Method of heat treating a formed powder product material  
[NASA-CASE-LEW-10805-3] c26 N74-10521

Method of forming articles of manufacture from superalloy powders  
[NASA-CASE-LEW-10805-2] c37 N74-13179

ASHWORTH, B. E.  
Apparatus for applying simulator g-forces to an arm of an aircraft simulator pilot  
[NASA-CASE-LAR-10550-1] c09 N74-30597

Seat cushion to provide realistic acceleration cues to aircraft simulator pilot  
[NASA-CASE-LAS-12149-2] c09 N79-31228

Helmet weight simulator  
[NASA-CASE-LAR-12320-1] c54 N81-27806

ASKINS, B. S.  
Method of obtaining intensified image from developed photographic films and plates  
[NASA-CASE-MFS-23461-1] c35 N79-1C389

ASTHEIMER, R. W.  
Multi-lobar scan horizon sensor Patent  
[NASA-CASE-XGS-0C809] c21 N70-35427

ATKISSON, E. A.  
Apparatus having coaxial capacitor structure for measuring fluid density Patent  
[NASA-CASE-XLE-00143] c14 N70-36618

AUBLE, C. E.  
Instrument for the quantitative measurement of radiation at multiple wave lengths Patent  
[NASA-CASE-XLE-00011] c14 N70-41946

AUER, S. O.  
Cosmic dust or other similar outer space particles impact location detector  
[NASA-CASE-GSC-11291-1] c25 N72-33696  
Micrometeoroid analyzer  
[NASA-CASE-ARC-10443-1] c14 N73-20477  
Impact position detector for outer space particles  
[NASA-CASE-GSC-11829-1] c35 N75-27331  
Micrometeoroid velocity and trajectory analyzer  
[NASA-CASE-GSC-11892-1] c35 N76-15433  
Moving particle composition analyzer  
[NASA-CASE-GSC-11889-1] c35 N76-16393  
Remote sensing of vegetation and soil using microwave ellipsometry  
[NASA-CASE-GSC-11976-1] c43 N78-10529

AUXER, B. H.  
Refractory porcelain enamel passive control coating for high temperature alloys  
[NASA-CASE-MFS-22524-1] c27 N75-27160

AUSTIN, I. G.  
Water separator  
[NASA-CASE-XMS-01295-1] c37 N79-21345

AUSTIN, W. E.  
Compton scatter attenuation gamma ray spectrometer  
[NASA-CASE-MFS-21441-1] c14 N73-3C392

AVIZIENIS, A. A.  
Self-testing and repairing computer Patent  
[NASA-CASE-NPO-10567] c08 N71-24633

AYLWARD, J. R.  
Cell and method for electrolysis of water and anode  
[NASA-CASE-MSC-16394-1] c28 N81-24280

AYVAZIAN, E. A.  
Laminar flow enhancement Patent  
[NASA-CASE-NPO-10122] c12 N71-17631  
Propellant mass distribution metering apparatus Patent  
[NASA-CASE-NPO-10185] c10 N71-26339

**B**

BABA, P. D.  
Method for making conductors for ferrite memory arrays  
[NASA-CASE-LAR-1C994-1] c24 N75-13032

BABB, B. D.  
Method and apparatus for cryogenic wire stripping Patent  
[NASA-CASE-MFS-10340] c15 N71-17628  
Self-balancing strain gage transducer Patent  
[NASA-CASE-MFS-12827] c14 N71-17656

BABECKI, A. J.  
Peen plating  
[NASA-CASE-GSC-11163-1] c15 N73-32360

BACCHI, R.  
Valve actuator Patent  
[NASA-CASE-IHQ-01208] c15 N70-35409

BACHLE, W. H.  
Mechanically extendible telescoping boom  
[NASA-CASE-NFO-11118] c03 N72-25021

BADIN, P. E.  
Space simulation and radiative property testing system and method Patent  
[NASA-CASE-MFS-20096] c14 N71-3C026

BAEHR, E. F.  
Channel-type shell construction for rocket engines and the like Patent  
[NASA-CASE-XLE-00144] c28 N70-34860  
Rocket thrust chamber Patent  
[NASA-CASE-XLE-00145] c28 N70-36806  
Method of making a regeneratively cooled combustion chamber Patent  
[NASA-CASE-XLE-00150] c28 N70-41818

Method of making a rocket motor casing Patent  
[NASA-CASE-XLE-00409] c28 N71-15658  
Rocket motor casing Patent  
[NASA-CASE-XLE-05689] c28 N71-15659  
Ophthalmic liquification pump  
[NASA-CASE-LEW-12051-1] c52 N75-33640  
Corneal seal device  
[NASA-CASE-LEW-12258-1] c52 N77-28716  
Tissue macerating instrument  
[NASA-CASE-LEW-12668-1] c52 N78-14773  
Flow compensating pressure regulator  
[NASA-CASE-LEW-12718-1] c34 N78-25351  
Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12955-1] c52 N80-14684

BAER, D. A.  
Synchronous orbit battery cyclor  
[NASA-CASE-GSC-11211-1] c03 N72-25020

BAGANOFF, D.  
Means for controlling rupture of shock tube diaphragms Patent  
[NASA-CASE-XAC-00731] c11 N71-15960

BAGBY, J. P.  
Thermally operated valve Patent  
[NASA-CASE-XLE-00815] c15 N70-35407

BAHMAN, H.  
Self-erecting reflector Patent  
[NASA-CASE-XGS-09190] c31 N71-16102  
Belt for transmitting power from a cogged driving member to a cogged driven member  
[NASA-CASE-GSC-12289-1] c37 N80-32717  
Unidirectional flexural pivot  
[NASA-CASE-GSC-12622-1] c37 N81-22359

BAHR, E. J.  
A dc servosystem including an ac motor Patent  
[NASA-CASE-NPO-10700] c07 N71-33613

BAILEY, C. L., JR.  
Solid state controller three axes controller  
[NASA-CASE-MSC-12394-1] c08 N74-10942

BAILEY, D.  
Adaptive control system for line-commutated inverters  
[NASA-CASE-MFS-25209-1] c33 N81-31480

BAILEY, F. J., JR.  
Airplane take-off performance indicator Patent  
[NASA-CASE-XLA-00100] c14 N70-36807

BAILEY, G. A.  
Magnetic matrix memory system Patent  
[NASA-CASE-XMF-05835] c08 N71-12504

BAILEY, J. W.  
Bi-polar phase detector and corrector for split phase PCM data signals Patent  
[NASA-CASE-XGS-01590] c07 N71-12392  
Radio frequency coaxial high pass filter Patent  
[NASA-CASE-XGS-01418] c09 N71-23573  
Explosively activated egress area  
[NASA-CASE-LAR-12624-1] c03 N81-29107

BAILEY, M. C.  
Stacked array of omnidirectional antennas  
[NASA-CASE-LAR-10545-1] c09 N72-21244  
Unequal split microwave power divider  
[NASA-CASE-LAR-12889-1] c33 N81-31483

BAILEY, R. L.  
Apparatus and method for protecting a photographic device Patent  
[NASA-CASE-NPO-10174] c14 N71-16465  
Solid propellant rocket motor nozzle  
[NASA-CASE-NFO-11458] c28 N72-23810  
Electromagnetic wave energy converter  
[NASA-CASE-GSC-11394-1] c09 N73-32109

BAKER, C. D.  
Coating process  
[NASA-CASE-XNP-06508] c18 N69-39895  
Electrical spot terminal assembly Patent  
[NASA-CASE-NPO-10034] c15 N71-17685  
Electrical connector  
[NASA-CASE-NPO-10694] c09 N72-20200  
Pressure transducer  
[NASA-CASE-NFO-10832] c14 N72-21405

BAKER, E. H.  
Centrifuge mounted motion simulator Patent  
[NASA-CASE-XAC-00399] c11 N70-34815

BAKER, G. J.  
Air speed and attitude probe  
[NASA-CASE-PRC-11009-1] c06 N80-18036

BAKER, M. E.  
Omnidirectional joint Patent  
[NASA-CASE-XMS-09635] c05 N71-24623

BAKER, R. L.  
Bidirectional step torque filter with zero backlash characteristic Patent  
[NASA-CASE-XGS-04227] c15 N71-21744

BAKER, V. D.  
Vapor pressure measuring system and method Patent  
[NASA-CASE-XMS-01618] c14 N71-20741

BAKSTON, B.  
Apparatus for the determination of the existence or non-existence of a bonding between two members Patent  
[NASA-CASE-MFS-13686] c15 N71-16132

BALDWIN, L. V.  
Particle beam measurement apparatus using beam kinetic energy to change the heat sensitive resistance of the detection probe Patent  
[NASA-CASE-XLE-00243] c14 N70-38602  
Apparatus for increasing ion engine beam density Patent  
[NASA-CASE-XLE-00519] c28 N70-41576

BALES, T. T.  
Controlled glass bead peening Patent  
[NASA-CASE-XLA-07390] c15 N71-18616

BALLARD, R. E.  
Two-axis controller Patent  
[NASA-CASE-XFR-04104] c03 N70-42073

BALLENTINE, F. H., JR.  
Foam generator Patent  
[NASA-CASE-XLA-00838] c03 N70-36778

BALLOU, E. V.  
Process for the preparation of calcium superoxide  
[NASA-CASE-ARC-11053-1] c25 N79-10162  
Use of glow discharge in fluidized beds  
[NASA-CASE-ARC-11245-1] c33 N80-11326

BAMFORD, R. E.  
Elastic universal joint Patent  
[NASA-CASE-XNP-00416] c15 N70-36947  
Sealed separable connection Patent  
[NASA-CASE-NPO-10064] c15 N71-17693

BANDINI, U.  
Out of tolerance warning alarm system for plurality of monitored circuits Patent  
[NASA-CASE-XMS-10984-1] c10 N71-19417

BANK, H.  
Gas diffusion liquid storage bag and method of use for storing blood  
[NASA-CASE-NPO-13930-1] c52 N79-14749

BANKS, B.  
Ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-15107-1] c52 N81-27786

BANKS, B. A.  
Ion beam deflector Patent  
[NASA-CASE-LEW-10689-1] c28 N71-26173  
Ion thruster accelerator system Patent  
[NASA-CASE-LEW-10106-1] c28 N71-26642  
Process for glass coating an ion accelerator grid Patent  
[NASA-CASE-LEW-10278-1] c15 N71-26582  
Ion thruster magnetic field control  
[NASA-CASE-LEW-10835-1] c28 N72-22771  
Electromagnetic flow rate meter  
[NASA-CASE-LEW-10981-1] c35 N74-21018  
Sputtering holes with ion beamlets  
[NASA-CASE-LEW-11646-1] c20 N74-31269  
Method of making dished ion thruster grids  
[NASA-CASE-LEW-11694-1] c20 N75-18310  
Apparatus for forming dished ion thruster grids  
[NASA-CASE-LEW-11694-2] c37 N76-14461  
Method of constructing dished ion thruster grids to provide hole array spacing compensation  
[NASA-CASE-LEW-11876-1] c20 N76-21276  
Anode for ion thruster  
[NASA-CASE-LEW-12048-1] c20 N77-20162  
Texturing polymer surfaces by transfer casting  
[NASA-CASE-LEW-13120-1] c31 N81-16327  
Mechanical bonding of metal  
[NASA-CASE-LEW-12941-1] c31 N81-16329

BANKSTON, B. F.  
Device for measuring the ferrite content in an austenitic stainless-steel weld  
[NASA-CASE-MFS-22907-1] c26 N76-16257

BAHTA, R. D.  
Positive contact resistance soldering unit  
[NASA-CASE-KSC-10242] c15 N72-23497

BARACK, W. H.  
Redundant disc  
[NASA-CASE-LEW-12496-1] c07 N78-33101

BARBER, J. B.  
Laser grating interferometer Patent  
[NASA-CASE-XLA-04295] c16 N71-24170

BARBERA, A. J.  
Use of unilluminated solar cells as shunt diodes for a solar array  
[NASA-CASE-GSC-10344-1] c03 N72-27053

BARGER, R. L.  
Continuously operating induction plasma accelerator Patent  
[NASA-CASE-XLA-01354] c25 N70-36946

BARISH, B.  
Pulsed energy power system Patent  
[NASA-CASE-MS-13112] c03 N71-11057

BARKER, P.  
Vibrophonocardiograph Patent  
[NASA-CASE-XFR-07172] c05 N71-27234

BARNES, J. R.  
Self-calibrating threshold detector  
[NASA-CASE-MS-16370-1] c35 N81-19427

BARNES, P. E.  
Can-operated pitch-change apparatus  
[NASA-CASE-LEW-13050-1] c07 N79-14095

BARNETT, J. H., JR.  
Life raft stabilizer  
[NASA-CASE-MS-12393-1] c02 N73-26006

BARNETT, M. A.  
Furlable antenna  
[NASA-CASE-NPO-13553-1] c33 N76-32457

BARNISKIS, W. A.  
Bus voltage compensation circuit for controlling direct current motor  
[NASA-CASE-XMS-04215-1] c09 N69-39987

BARNIS, C. E.  
High acceleration cable deployment system  
[NASA-CASE-ARC-11256-1] c37 N79-23432

BARRE, T. A.  
Thickness measurement system  
[NASA-CASE-MFS-23721-1] c31 N79-28370

BARRETT, C. A.  
NiCrAl ternary alloy having improved cyclic oxidation resistance  
[NASA-CASE-LEW-13339-1] c26 N81-12211

BARRETT, T. W.  
Personal propulsion unit Patent  
[NASA-CASE-MFS-20130] c28 N71-27585

BARRINGTON, A. E.  
Sorption vacuum trap Patent  
[NASA-CASE-XER-09519] c14 N71-18483

BARRINGTON, A. E.  
Leak detector wherein a probe is monitored with ultraviolet radiation Patent  
[NASA-CASE-ERC-10034] c15 N71-24896  
Field ionization electrodes Patent  
[NASA-CASE-ERC-10013] c09 N71-26678  
Ion microprobe mass spectrometer for analyzing fluid materials Patent  
[NASA-CASE-ERC-10014] c14 N71-28863  
Device for measuring light scattering wherein the measuring beam is successively reflected between a pair of parallel reflectors Patent  
[NASA-CASE-XER-11203] c14 N71-28994

BARTERA, R. E.  
Indicator providing continuous indication of the presence of a specific pollutant in air  
[NASA-CASE-NPO-13474-1] c45 N76-21742  
Arc control in compact arc lamps  
[NASA-CASE-NPO-10870-1] c33 N77-22386  
Multiple anode arc lamp system  
[NASA-CASE-NPO-10857-1] c33 N80-14330

BARTHOLOME, D. E.  
Space suit pressure stabilizer Patent  
[NASA-CASE-XLA-05332] c05 N71-11194  
Equipotential space suit Patent  
[NASA-CASE-LAR-10007-1] c05 N71-11195  
Therapeutic hand exerciser  
[NASA-CASE-LAR-11667-1] c52 N76-19785  
Collapsible corrugated horn antenna  
[NASA-CASE-LAR-11745-1] c32 N80-29539

BARZA, M. J.  
Application of luciferase assay for ATP to antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c51 N77-22794  
Determination of antimicrobial susceptibilities on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c52 N79-14750

BASIULIS, A.  
Method and apparatus for distillation of liquids Patent

[NASA-CASE-XNP-08124] c15 N71-27184  
 Radial heat flux transformer  
 [NASA-CASE-NPO-10828] c33 N72-17948  
 Method for distillation of liquids  
 [NASA-CASE-XNP-08124-2] c06 N73-13129

BASS, A. M.  
 Ultraviolet resonance lamp Patent  
 [NASA-CASE-ARC-10030] c09 N71-12521  
 Ultraviolet atomic emission detector  
 [NASA-CASE-HQN-10756-1] c14 N72-25428

BASTIEN, G. J.  
 Fluid flow restrictor Patent  
 [NASA-CASE-NPO-10117] c15 N71-15608

BATE, E. E., JR.  
 Apparatus for establishing flow of a fluid mass  
 having a known velocity  
 [NASA-CASE-MFS-21424-1] c34 N74-27730

BATES, H. E.  
 Segmenting lead telluride-silicon germanium  
 thermoelements Patent  
 [NASA-CASE-XGS-05718] c26 N71-16037

BATHKER, D. A.  
 Dual frequency microwave reflex feed  
 [NASA-CASE-NPO-13091-1] c09 N73-12214  
 Antenna feed system for receiving circular  
 polarization and transmitting linear  
 polarization  
 [NASA-CASE-NPO-14362-1] c32 N80-16261

BATSCB, F. P.  
 Attitude control for spacecraft Patent  
 [NASA-CASE-XNP-00294] c21 N70-36938  
 Slit regulated gas journal bearing Patent  
 [NASA-CASE-XNP-00476] c15 N70-38620

BATTE, W. G.  
 Exclusive-Or digital logic module Patent  
 [NASA-CASE-XLA-07732] c08 N71-18751

BATTEB, C. E.  
 Visible and infrared polarization ratio  
 spectroradiometer  
 [NASA-CASE-LAR-12285-1] c35 N80-28687

BATTERSON, S. A.  
 Runway light Patent  
 [NASA-CASE-XLA-06119] c11 N70-33329

BATTS, C. N.  
 Contour surveying system Patent  
 [NASA-CASE-XLA-08646] c14 N71-17586

BAUCOM, E. M.  
 Extensometer frame  
 [NASA-CASE-XLA-10322] c15 N72-17452  
 Low X-ray absorption aneurism clips  
 [NASA-CASE-LAR-12650-1] c52 N81-25768

BAUER, H. B.  
 Air conditioning system and component therefore  
 distributing air flow from opposite directions  
 [NASA-CASE-GSC-11445-1] c31 N74-27902

BAUER, J. L., JR.  
 Fiberglass/epoxy composite automotive door  
 structure including a glass-reinforced  
 intrusion strip  
 [NASA-CASE-NPO-15057-1] c24 N81-15230

BAUERNSCHUB, J. P., JR.  
 Folding boom assembly Patent  
 [NASA-CASE-XGS-00938] c32 N70-41367  
 Nonmagnetic, explosive actuated indexing device  
 Patent  
 [NASA-CASE-XGS-02422] c15 N71-21529

BAUGHMAN, J. R.  
 Observation window for a gas confining chamber  
 [NASA-CASE-NPO-10890] c11 N73-12265  
 Droplet monitoring probe  
 [NASA-CASE-NPO-10985] c14 N73-20478

BAUMAN, A. J.  
 Solder flux which leaves corrosion-resistant  
 coating Patent  
 [NASA-CASE-XNP-03459-2] c18 N71-15688  
 Soldering with solder flux which leaves  
 corrosion resistant coating Patent  
 [NASA-CASE-XNP-03459] c15 N71-21078  
 Fluid impervious barrier including liquid metal  
 alloy and method of making same Patent  
 [NASA-CASE-XNP-08881] c17 N71-26747  
 Molten salt pyrolysis of latex  
 [NASA-CASE-NPO-14315-1] c27 N81-17261

BAUMER, W. E.  
 Counter Patent  
 [NASA-CASE-XNP-06234] c10 N71-27137

BAXTER, E. D.  
 Heat flux measuring system Patent  
 [NASA-CASE-XFR-03802] c33 N71-23085

BEALE, H. A.  
 Hall effect magnetometer  
 [NASA-CASE-LEW-11632-2] c35 N75-13213

BEAM, B. B.  
 Thermodielectric radiometer utilizing polymer film  
 [NASA-CASE-ARC-10138-1] c14 N72-24477

BEAM, R. A.  
 Optical projector system Patent  
 [NASA-CASE-XNP-03853] c23 N71-21882

BEAM, B. B.  
 Solid medium thermal engine  
 [NASA-CASE-ARC-10461-1] c44 N74-33379

BEASLEY, R. M.  
 Two-component ceramic coating for silica  
 insulation  
 [NASA-CASE-MS-C-14270-1] c27 N76-22377  
 Three-component ceramic coating for silica  
 insulation  
 [NASA-CASE-MS-C-14270-2] c27 N76-23426

BEASLEY, W. D.  
 Continuously operating induction plasma  
 accelerator Patent  
 [NASA-CASE-XLA-01354] c25 N70-36946

BEATTY, E. W.  
 Rotary vane attenuator wherein rotor has  
 orthogonally disposed resistive and dielectric  
 cards  
 [NASA-CASE-NFO-11418-1] c14 N73-13420

BEAUREGARD, W. W.  
 Water separating system Patent  
 [NASA-CASE-XMS-13052] c14 N71-20427

BECK, A. F.  
 Small plasma probe Patent  
 [NASA-CASE-XLE-02578] c25 N71-20747

BECK, T. B.  
 Method of inhibiting stress corrosion cracks in  
 titanium alloys Patent  
 [NASA-CASE-NFO-10271] c17 N71-16393

BECKER, R. A.  
 Photoelectric energy spectrometer Patent  
 [NASA-CASE-XNP-04161] c14 N71-15599

BECKERLE, L. D.  
 Heat shield oven  
 [NASA-CASE-XMS-04318] c15 N69-27871

BECKMAN, P.  
 Probes having ring and primary sensor at same  
 potential to prevent collection of stray wall  
 currents in ionized gases  
 [NASA-CASE-XLE-00690] c25 N69-39884

BECKWITH, I. B.  
 A rectangular rod-wall sound shield  
 [NASA-CASE-LAR-12883-1] c09 N81-29138

BECKWITH, R. B.  
 Mechanical coordinate converter Patent  
 [NASA-CASE-XNP-00614] c14 N70-36907

BEEBE, J. M.  
 Optical tracking mount Patent  
 [NASA-CASE-MFS-14017] c14 N71-26627

BEEKMAN, S. W.  
 Redundant disc  
 [NASA-CASE-LEW-12496-1] c07 N78-33101

BEEB, J. F.  
 Method and apparatus for measuring  
 electromagnetic radiation  
 [NASA-CASE-LEW-11159-1] c14 N73-28488

BBER, R.  
 Cooled echelle grating spectrometer  
 [NASA-CASE-NPO-14372-1] c35 N80-26635

BEHMER, H.  
 High-torque open-end wrench  
 [NASA-CASE-NFO-13541-1] c37 N79-14383

BEHM, J. W.  
 Solid propellant rocket motor  
 [NASA-CASE-NFO-11559] c28 N73-24784

BRITLER, R. S.  
 Integrated control system for a gas turbine engine  
 [NASA-CASE-LEW-12594-2] c07 N81-19116

BRJCZY, A. K.  
 Terminal guidance sensor system  
 [NASA-CASE-NFO-14521-1] c54 N79-20746  
 Terminal guidance sensor system  
 [NASA-CASE-NFO-14521-1] c37 N81-27519

BELANGER, R. J.  
 Fluid lubricant system Patent  
 [NASA-CASE-XNP-03972] c15 N71-23048

BELASCO, B.  
 Medical subject monitoring systems  
 [NASA-CASE-MS-C-14180-1] c52 N76-14757

**BELCHER, J. G.**  
Liquid immersion apparatus for minute articles  
[NASA-CASE-MFS-25363-1] c31 N80-32585

**BELER, H. W., JR.**  
Altitude simulation chamber for rocket engine testing  
[NASA-CASE-MFS-20620] c11 N72-27262

**BELER, R. R.**  
Thermal compensating structural member  
[NASA-CASE-MFS-20433] c15 N72-28496  
Docking structure for spacecraft  
[NASA-CASE-MFS-20863] c31 N73-26876  
Emergency descent device  
[NASA-CASE-MFS-23074-1] c54 N77-21844  
Electrical rotary joint apparatus for large space structures  
[NASA-CASE-MFS-23981-1] c33 N81-19394  
Biocentrifuge system capable of exchanging specimen cages while in operational mode  
[NASA-CASE-MFS-23825-1] c51 N81-32829

**BELL, A.**  
Process for preparing higher oxides of the alkali and alkaline earth metals  
[NASA-CASE-ARC-10992-1] c26 N78-32229

**BELL, C. H.**  
Fiber optic multiplex optical transmission system  
[NASA-CASE-KSC-11047-1] c74 N78-14889  
Fiber optic crossbar switch for automatically patching optical signals  
[NASA-CASE-KSC-11104-1] c74 N81-12862

**BELL, D., III**  
Heated element fluid flow sensor Patent  
[NASA-CASE-MSC-12084-1] c12 N71-17569

**BELL, V. L.**  
Polyimide adhesives  
[NASA-CASE-LAR-11397-1] c27 N75-29263  
Polyimide adhesives  
[NASA-CASE-LAR-12181-1] c27 N78-17205  
Process for preparing thermoplastic aromatic polyimides  
[NASA-CASE-LAR-11828-1] c27 N78-32261

**BELL, V. L., JR.**  
Process for interfacial polymerization of pyromellitic dianhydride and 1,2,4,5-tetraamino-benzene Patent  
[NASA-CASE-XLA-03104] c06 N71-11235  
Imidazopyrrolone/imide copolymers Patent  
[NASA-CASE-XLA-08802] c06 N71-11238  
Dosimeter for high levels of absorbed radiation Patent  
[NASA-CASE-XLA-03645] c14 N71-20430

**BELLAVIA, J., JR.**  
Thermal barrier pressure seal  
[NASA-CASE-MSC-18134-1] c37 N81-15363

**BELLMAN, D. R.**  
Skin friction measuring device for aircraft  
[NASA-CASE-PRC-11029-1] c06 N81-17057

**BELT, J. L.**  
Telephone multiline signaling using common signal pair  
[NASA-CASE-KSC-11023-1] c32 N79-23310

**BEMENT, L. J.**  
Linear explosive comparison  
[NASA-CASE-LAR-10800-1] c33 N72-27959  
Totally confined explosive welding  
[NASA-CASE-LAR-10941-1] c37 N74-21057  
Method of making an explosively welded scarf joint  
[NASA-CASE-LAR-11211-1] c37 N75-12326  
Totally confined explosive welding  
[NASA-CASE-LAR-10941-2] c37 N79-13364  
Explosively activated egress area  
[NASA-CASE-LAR-12624-1] c03 N81-29107

**BENEDICT, R. D.**  
Transient augmentation circuit for pulse amplifiers Patent  
[NASA-CASE-INP-01068] c10 N71-28739

**BENEDICTO, J. S. J.**  
Method and apparatus for slicing crystals  
[NASA-CASE-GSC-12291-1] c76 N80-18951  
Crystal cleaving machine  
[NASA-CASE-GSC-12584-1] c76 N80-32246

**BENGTSON, R. D.**  
Fast opening diaphragm Patent  
[NASA-CASE-XLA-03660] c15 N71-21060

**BENHAM, J. W.**  
Voltage feed through apparatus having reduced partial discharge  
[NASA-CASE-GSC-12347-1] c33 N80-18286

**BENNIGHT, J. D.**  
Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114] c15 N71-17650  
Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114-3] c15 N71-24865  
Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114-2] c15 N71-26148

**BENZ, H. F.**  
An image readout device with electrically variable spatial resolution  
[NASA-CASE-LAB-12633-1] c35 N80-22661

**BERDAHL, C. M.**  
Selective image area control of X-ray film exposure density  
[NASA-CASE-NFO-13808-1] c35 N78-15461  
Thermal energy transformer  
[NASA-CASE-NFO-14058-1] c44 N79-18443

**BERREHAND, D. G.**  
Direct heating surface combustor  
[NASA-CASE-LEW-11877-1] c34 N78-27357  
Free-piston regenerative hot gas hydraulic engine  
[NASA-CASE-LEW-12274-1] c37 N80-31790

**BERREHAND, G. B.**  
Method of making fiber composites  
[NASA-CASE-LEW-10424-2-2] c18 N72-25539

**BERG, O. E.**  
Dust particle injector for hypervelocity accelerators Patent  
[NASA-CASE-XGS-06628] c24 N71-16213  
Cosmic dust sensor  
[NASA-CASE-GSC-10503-1] c14 N72-20381

**BERGE, L. H.**  
Method and apparatus for shaping and enhancing acoustical levitation forces  
[NASA-CASE-MFS-25050-1] c71 N81-15767

**BERGLUND, R. A.**  
Erectable modular space station Patent  
[NASA-CASE-XLA-00678] c31 N70-34296

**BERKMAN, S.**  
Means for growing ribbon crystals without subjecting the crystals to thermal shock-induced strains  
[NASA-CASE-NFO-14298-1] c76 N80-32244  
Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NFO-14297-1] c33 N81-19389

**BERKOPEC, F. D.**  
Process for preparing liquid metal electrical contact device  
[NASA-CASE-LEW-11978-1] c33 N77-26385  
Liquid metal slip ring  
[NASA-CASE-LEW-12277-2] c33 N78-25323

**BERMAN, P. A.**  
Solar cell grid patterns  
[NASA-CASE-NPO-13087-2] c44 N76-31666

**BERNARDIN, R. H.**  
Measuring device Patent  
[NASA-CASE-XMS-01546] c14 N70-40233

**BERNATOWICZ, D. T.**  
Method of making silicon solar cell array  
[NASA-CASE-LEW-11069-1] c44 N74-14784

**BERNSEN, B.**  
Electrical apparatus for detection of thermal decomposition of insulation Patent  
[NASA-CASE-XMF-03968] c14 N71-27186

**BERNSTEIN, A. J.**  
Automatic communication signal monitoring system  
[NASA-CASE-NFO-13941-1] c32 N79-10262

**BERRIER, B. L.**  
Thrust augmented spin recovery device  
[NASA-CASE-LAR-11970-2] c08 N81-19130

**BERRY, E. H.**  
Positive dc to positive dc converter Patent  
[NASA-CASE-XNF-14301] c09 N71-23188  
Positive dc to negative dc converter Patent  
[NASA-CASE-XMF-08217] c03 N71-23239

**BESSETTE, R. J.**  
Space suit  
[NASA-CASE-MSC-12609-1] c05 N73-32012

**BESWICK, A. G.**  
Lunar penetrometer Patent  
[NASA-CASE-XLA-00934] c14 N71-22765

**BEUYKIAN, C. S.**  
Tube dimpling tool Patent  
[NASA-CASE-XMS-06876] c15 N71-21536



Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c26 N80-28492

BEYLK, C. H.  
Pressure seal Patent  
[NASA-CASE-NPO-10796] c15 N71-27068

BHAGAT, P. K.  
Apparatus for determining changes in limb volume  
[NASA-CASE-MSC-18759-1] c52 N81-24716

BHAT, B. N.  
Method of growing composites of the type  
exhibiting the Soret effect  
[NASA-CASE-MFS-22926-1] c24 N77-27187

BHIWANDKEE, H. C.  
Method for making conductors for ferrite memory  
arrays  
[NASA-CASE-LAR-10994-1] c24 N75-13032

BIBBO, C.  
Flexible seal for valves Patent  
[NASA-CASE-XLE-00101] c15 N70-33376

BICKNELL, T. J.  
An electro-optical Doppler tracker means and  
method for optical correlation of synthetic  
aperture radar data  
[NASA-CASE-NPO-14998-1] c33 N81-15194

BIERL, A. J.  
Hypervelocity gun  
[NASA-CASE-XLE-03186-1] c09 N79-21084

BIENIEK, T.  
Metal containing polymers from cyclic tetrameric  
phenylphosphonitrilamides Patent  
[NASA-CASE-HQN-10364] c06 N71-27363

BIER, M.  
Electrophoretic fractional elution apparatus  
employing a rotational seal fraction collector  
[NASA-CASE-MFS-23284-1] c37 N80-14397

BIKLE, P. F.  
System for use in conducting wake investigation  
for a wing in flight  
[NASA-CASE-PRC-11024-1] c02 N80-28300

BILBRO, J. W.  
Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c35 N77-10493

BILDERBACK, R. R.  
Amplitude modulated laser transmitter Patent  
[NASA-CASE-XMS-04269] c16 N71-22895

BILES, J. E., JR.  
High impact pressure regulator Patent  
[NASA-CASE-NPO-10175] c14 N71-18625

BILL, R. C.  
Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-1] c37 N79-18318

Gas path seal  
[NASA-CASE-NPO-12131-3] c37 N80-18400

Fully plasma-sprayed compliant backed ceramic  
turbine seal  
[NASA-CASE-LEW-13268-1] c37 N80-24619

Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-2] c37 N80-26658

Laser surface fusion of plasma sprayed ceramic  
turbine seals  
[NASA-CASE-LEW-13269-1] c27 N81-22190

Thermal barrier coating system having improved  
adhesion  
[NASA-CASE-LEW-13359-1] c27 N81-24265

BILLINGHAM, J.  
Temperature controller for a fluid cooled garment  
[NASA-CASE-ARC-10599-1] c05 N73-26071

BILLINGS, C. B.  
Emergency escape system Patent  
[NASA-CASE-XKS-07814] c15 N71-27067

BILLINGSLEY, P. C.  
Electro-optical scanning apparatus Patent  
Application  
[NASA-CASE-NPO-11106] c14 N70-34697

Image data rate converter having a drum with a  
fixed head and a rotatable head  
[NASA-CASE-NPO-11659-1] c35 N74-11283

BILLMAN, K. W.  
Method and apparatus for wavelength tuning of  
liquid lasers  
[NASA-CASE-ERC-10187] c16 N69-31343

Infrared tunable laser  
[NASA-CASE-ARC-10463-1] c09 N73-32111

Alignment apparatus using a laser having a  
gravitationally sensitive cavity reflector  
[NASA-CASE-ABC-10444-1] c16 N73-33397

Measurement of plasma temperature and density  
using radiation absorption  
[NASA-CASE-ARC-10598-1] c75 N74-30156

BILOW, H.  
Thiophenyl ether disiloxanes and trisiloxanes  
useful as lubricant fluids  
[NASA-CASE-MFS-22411-1] c37 N74-21058

BINCKLEY, W. G.  
Voltage regulator with plural parallel power  
source sections Patent  
[NASA-CASE-GSC-10891-1] c10 N71-26626

BINGHAM, G. J.  
Helicopter rotor airfoil  
[NASA-CASE-LAR-12396-1] c02 N79-24958

BIRCHENOUGH, A. G.  
Switching regulator  
[NASA-CASE-LEW-11005-1] c09 N72-21243

Electronic analog divider  
[NASA-CASE-LEW-11881-1] c33 N77-17354

Sustained arc ignition system  
[NASA-CASE-LEW-12444-1] c33 N77-28385

BIRD, J. D.  
Jet shoes  
[NASA-CASE-XLA-08491] c05 N69-21380

BISHOP, O. L.  
Broadband choke for antenna structure  
[NASA-CASE-XMS-05303] c07 N69-27462

BISHOP, R. E.  
Optical alignment system Patent  
[NASA-CASE-XNP-02029] c14 N70-41955

BLACK, D. H.  
Horizontally mounted solar collector  
[NASA-CASE-MFS-23349-1] c44 N79-23481

BLACK, I. A.  
Apparatus for measuring thermal conductivity  
Patent  
[NASA-CASE-XGS-01052] c14 N71-15992

BLACK, J. H.  
Full wave modulator-demodulator amplifier  
apparatus  
[NASA-CASE-PRC-10072-1] c33 N74-14939

Window comparator  
[NASA-CASE-PRC-10090-1] c33 N78-18308

Voltage regulator for battery power source  
[NASA-CASE-PRC-10116-1] c33 N79-23345

Power converter  
[NASA-CASE-PRC-11014-1] c33 N79-27395

Active notch filter network with variable notch  
depth, width and frequency  
[NASA-CASE-PRC-11055-1] c33 N80-29583

BLACK, S. H.  
Automatic gain control system  
[NASA-CASE-XMS-05307] c09 N69-24330

BLACK, W. W.  
Triaxial antenna Patent  
[NASA-CASE-XGS-02290] c07 N71-28809

BLACKABY, J. E.  
Temperature controller for a fluid cooled garment  
[NASA-CASE-ARC-10599-1] c05 N73-26071

BLACKSTOCK, T. A.  
Ferry system  
[NASA-CASE-LAR-10574-1] c11 N73-13257

BLAIR, G. B.  
Inorganic thermal control pigment Patent  
[NASA-CASE-XNP-02139] c18 N71-24184

BLAISE, H. T.  
Air cushion lift pad Patent  
[NASA-CASE-MFS-14685] c31 N71-15689

Methods and apparatus employing vibratory energy  
for wrenching Patent  
[NASA-CASE-MFS-20586] c15 N71-17686

Remote manipulator system  
[NASA-CASE-MFS-22022-1] c37 N76-15460

BLANCHARD, W. S., JR.  
Space capsule Patent  
[NASA-CASE-XLA-00149] c31 N70-37938

Space capsule Patent  
[NASA-CASE-XLA-01332] c31 N71-15664

Lateral displacement system for separated rocket  
stages Patent  
[NASA-CASE-XLA-04804] c31 N71-23008

High lift aircraft  
[NASA-CASE-LAR-11252-1] c05 N75-25914

BLANCHE, J. F.  
Electrical feed-through connection for printed  
circuit boards and printed cable  
[NASA-CASE-XNF-01483] c14 N69-27431

BLAND, C.  
Bacteriostatic conformal coating and methods of  
application Patent  
[NASA-CASE-GSC-10007] c18 N71-16046

BLAND, W. M., JR.  
Survival couch Patent  
[NASA-CASE-XLA-00118] c05 N70-33285

BLANKENSHIP, C. P.  
Protective device for machine and metalworking  
tools Patent  
[NASA-CASE-XLE-01092] c15 N71-22797  
Tantalum modified ferritic iron base alloys  
[NASA-CASE-LEW-12095-1] c26 N78-18182

BLAZE, C. J.  
Formed metal ribbon wrap Patent  
[NASA-CASE-XLE-00164] c15 N70-36411

BLESS, J. J.  
Shunt regulation electric power system  
[NASA-CASE-GSC-10135] c33 N78-17296

BLOCH, J. T.  
Method and apparatus for fabricating improved  
solar cell modules  
[NASA-CASE-NPO-14416-1] c44 N81-14389

BLOOMFIELD, H. S.  
In-situ laser retorting of oil shale  
[NASA-CASE-LEW-12217-1] c43 N78-14452

BLOSSER, B. B.  
Method for determining presence of OH in  
magnesium oxide  
[NASA-CASE-NPO-10774] c06 N72-17095

BLUE, J. W.  
Production of high purity I-123  
[NASA-CASE-LEW-10518-1] c24 N72-33681  
Method of producing I-123  
[NASA-CASE-LEW-11390-2] c25 N76-27383  
Production of I-123  
[NASA-CASE-LEW-11390-3] c25 N76-29379  
Targets for producing high purity I-123  
[NASA-CASE-LEW-10518-3] c25 N78-27226

BLUM, P.  
Rock sampling  
[NASA-CASE-XNP-10007-1] c46 N74-23068  
Rock sampling  
[NASA-CASE-XNP-09755] c46 N74-23069

BLUME, H. C.  
Parametric amplifiers with idler circuit feedback  
[NASA-CASE-LAR-10253-1] c09 N72-25258

BLUMRICH, J. F.  
Pivotal shock absorbing pad assembly Patent  
[NASA-CASE-XMF-03856] c31 N70-34159  
Landing pad assembly for aerospace vehicles Patent  
[NASA-CASE-XMF-02853] c31 N70-36654  
Double-acting shock absorber Patent  
[NASA-CASE-XMF-01045] c15 N70-40354  
Tank construction for space vehicles Patent  
[NASA-CASE-XMF-01899] c31 N70-41948  
Docking structure for spacecraft Patent  
[NASA-CASE-XMF-05941] c31 N71-23912  
Omnidirectional wheel  
[NASA-CASE-MFS-21309-1] c37 N74-18125

BLUTINGER, B.  
Signal generator  
[NASA-CASE-XNP-05612] c09 N69-21468

BLYNLILLE, E. B.  
Microcircuit negative cutter  
[NASA-CASE-XLA-09843] c15 N72-27485

BOATRIGHT, W. B.  
Apparatus and method for generating large mass  
flow of high temperature air at hypersonic  
speeds  
[NASA-CASE-LAR-10578-1] c12 N73-25262

BOCKHOLDT, W. H.  
Narrow bandwidth video Patent  
[NASA-CASE-XMS-06740-1] c07 N71-26579

BOEDY, D. D.  
Power supply circuit Patent  
[NASA-CASE-XMS-00913] c10 N71-23543

BOEHM, J.  
Gravity device Patent  
[NASA-CASE-XMF-00424] c11 N70-38196

BOEHNE, B. J.  
Electrical rotary joint apparatus for large  
space structures  
[NASA-CASE-MFS-23981-1] c33 N81-19394

BOER, K. W.  
High field CdS detector for infrared radiation  
[NASA-CASE-LAR-11027-1] c35 N74-18088

BOEX, M. W.  
Filter regeneration systems  
[NASA-CASE-MSC-14273-1] c34 N75-33342

BOGHEE, B. S.  
Storage battery comprising negative plates of a  
wedge shaped configuration  
[NASA-CASE-NPO-11806-1] c44 N74-19693

BOGUSZ, F. J.  
Pressure transducer calibrator Patent  
[NASA-CASE-XNP-01660] c14 N71-23036

BOIES, R. D.  
Instrument for measuring potentials on two  
dimensional electric field plots Patent  
[NASA-CASE-XLA-08493] c10 N71-19421

BOISSEVAIN, A. G.  
Optical machine tool alignment indicator Patent  
[NASA-CASE-XAC-09489-1] c15 N71-26673

BOLT, C. A., JR.  
Broadband choke for antenna structure  
[NASA-CASE-XMS-05303] c07 N69-27462

BOLTON, P. B.  
Fire extinguishing apparatus having a slidable  
mass for a penetrator nozzle  
[NASA-CASE-KSC-11064-1] c31 N81-14137

BOND, W. W.  
Connector internal force gauge Patent  
[NASA-CASE-XNP-03918] c14 N71-23087

BONISCH, F. H.  
Locking redundant link  
[NASA-CASE-LAR-11900-1] c37 N79-14382

BOHN, J. L.  
Wire grid forming apparatus Patent  
[NASA-CASE-XLE-00023] c15 N70-33330

BONO, P.  
Recoverable single stage spacecraft booster Patent  
[NASA-CASE-XNP-01973] c31 N70-41588

BOODLEY, L. E.  
Connector strips-positive, negative and T tabs  
[NASA-CASE-XGS-01395] c03 N69-21539

BOOM, R. W.  
Stable superconducting magnet  
[NASA-CASE-XMF-05373-1] c33 N79-21264

BOOTH, F. W.  
Condenser - Separator  
[NASA-CASE-XLA-08645] c15 N69-21465  
Separator Patent  
[NASA-CASE-XLA-00415] c15 N71-16079  
Thermal pump-compressor for space use Patent  
[NASA-CASE-XLA-00377] c33 N71-17610  
Soldering device Patent  
[NASA-CASE-XLA-08911] c15 N71-27214  
Air removal device  
[NASA-CASE-XLA-8914] c15 N73-12492  
Zero gravity liquid mixer  
[NASA-CASE-LAR-10195-1] c15 N73-19458  
Centrifugal lyophobic separator  
[NASA-CASE-LAR-10194-1] c34 N74-30608  
Air removal device  
[NASA-CASE-XLA-8914-2] c34 N76-23522

BOOTH, R. A.  
Solid state switch  
[NASA-CASE-XNP-09228] c09 N69-27500

BORELLI, E. T.  
Adaptive tracking notch filter system Patent  
[NASA-CASE-XMF-01892] c10 N71-22986

BOROSON, H. B.  
Wide range linear fluxgate magnetometer Patent  
[NASA-CASE-XGS-01587] c14 N71-15962

BOSCO, G. B., JR.  
Rotating shaft seal Patent  
[NASA-CASE-XNP-02862-1] c15 N71-26294

BOSHERS, W. A.  
Battery testing device  
[NASA-CASE-MFS-20761-1] c44 N74-27519  
Rapid activation and checkout device for batteries  
[NASA-CASE-MFS-22749-1] c44 N76-14601  
Lead-oxygen dc power supply system having a  
closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c44 N76-27664

BOSTON, R. E.  
I-Y alphanumeric character generator for  
oscilloscopes  
[NASA-CASE-GSC-11582-1] c33 N75-19517

BOTTOMS, D. J.  
Turnstile and flared cone UHF antenna  
[NASA-CASE-LAR-10970-1] c33 N76-14372

BOULDIN, D. L.  
Multilevel metallization method for fabricating  
a metal oxide semiconductor device  
[NASA-CASE-MFS-23541-1] c76 N79-14906

BOURKE, D. G.  
Data compression system with a minimum time  
delay unit Patent  
[NASA-CASE-XNP-08832] c08 N71-12506

BOUSHAN, W. G.  
Hingeless helicopter rotor with improved stability  
[NASA-CASE-ARC-10807-1] c05 N77-17029

BOWER, K. F.  
Buffered analog converter  
[NASA-CASE-KSC-10397] c08 N72-25206

BOXWELL, D. A.  
Acoustically swept rotor  
[NASA-CASE-ARC-11106-1] c05 N80-14107

BOYLE, J. C.  
Balance torquemeter Patent  
[NASA-CASE-YGS-01013] c14 N71-23725

BOYLE, J. V., JR.  
Adjustable attitude guide device Patent  
[NASA-CASE-XLA-07911] c15 N71-15571  
Canister closing device Patent  
[NASA-CASE-XLA-01446] c15 N71-21528

BOZAJIAN, J. H.  
Thermal switch Patent  
[NASA-CASE-XNP-00463] c33 N70-36847

BOZEK, J. H.  
Flexible formulated plastic separators for  
alkaline batteries  
[NASA-CASE-LEW-12363-4] c44 N80-18555

BRADFIELD, S. P., III  
Unbalanced quadriphase demodulator  
[NASA-CASE-MS-C-14840-1] c32 N77-24331

BRADLEY, R. H.  
Emergency earth orbital escape device  
[NASA-CASE-MS-C-13281] c31 N72-18859  
A method of delivering a vehicle to earth orbit  
and returning the reusable portion thereof to  
earth  
[NASA-CASE-MS-C-12391] c30 N73-12884

BRADY, J. C.  
Surface roughness detector Patent  
[NASA-CASE-XLA-00203] c14 N70-34161

BRAINARD, W. A.  
Improved refractory coatings and method of  
producing the same  
[NASA-CASE-LEW-13169-1] c26 N80-14232  
Improved refractory coatings  
[NASA-CASE-LEW-23169-2] c26 N81-16209

BRANDHORST, H. W., JR.  
Rapidly pulsed, high intensity, incoherent light  
source  
[NASA-CASE-XLE-2529-3] c33 N74-20859  
High power laser apparatus and system  
[NASA-CASE-XLE-2529-2] c36 N75-27364  
Solar cell assembly  
[NASA-CASE-LEW-11549-1] c44 N77-19571  
Application of semiconductor diffusants to solar  
cells by screen printing  
[NASA-CASE-LEW-12775-1] c44 N79-11468  
Back wall solar cell  
[NASA-CASE-LEW-12236-2] c44 N79-14528

BRANDON, C. A.  
Method of forming dynamic membrane on stainless  
steel support  
[NASA-CASE-MS-C-18172-1] c26 N80-15237

BRANSTETTER, J. R.  
Black-body furnace Patent  
[NASA-CASE-XLE-01399] c33 N71-15625

BRANTLEY, J. W.  
Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c24 N77-19170

BRANTLEY, L. W., JR.  
Solar energy absorber  
[NASA-CASE-MFS-22743-1] c44 N76-22657  
Solar energy trap  
[NASA-CASE-MFS-22744-1] c44 N76-24696  
Thermal energy storage system  
[NASA-CASE-MFS-23167-1] c44 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] c35 N77-20401

BRASCHWITZ, J. H.  
External liquid-spray cooling of turbine blades  
Patent  
[NASA-CASE-XLE-00037] c28 N70-33372

BRAUN, W.  
Ultraviolet atomic emission detector  
[NASA-CASE-HQB-10756-1] c14 N72-25428

BRAWNER, C. C.  
Specific wavelength colorimeter  
[NASA-CASE-MS-C-14081-1] c35 N74-27860

BRAWNER, E. L.  
Color perception tester  
[NASA-CASE-KSC-10278] c05 N72-16015

BREALT, B. F.  
System for the measurement of ultra-low stray  
light levels  
[NASA-CASE-MFS-23513-1] c74 N79-11865

BREAZEALE, E. A.  
Liquid-immersible electrostatic ultrasonic  
transducer  
[NASA-CASE-LAR-12465-1] c35 N80-18363

BRECKENRIDGE, H. A.  
Vapor phase growth of groups 3-5 compounds by  
hydrogen chloride transport of the elements  
[NASA-CASE-LAR-11144-1] c25 N75-26043  
Magnetometer with a miniature transducer and  
automatic scanning  
[NASA-CASE-LAR-11617-2] c35 N78-32397

BRECKINRIDGE, J. B.  
Interferometer  
[NASA-CASE-NFO-14502-1] c74 N81-17888  
Interferometer  
[NASA-CASE-NFO-14448-1] c74 N81-29963

BREED, L. L.  
Fluorinated esters of polycarboxylic acids  
[NASA-CASE-MFS-21040-1] c06 N73-30098

BREED, L. W.  
Preparation of ordered poly /arylenesiloxane/  
polymers  
[NASA-CASE-XMP-10753] c06 N71-11237

BREEZE, B. K.  
Method and system for respiration analysis Patent  
[NASA-CASE-XPR-08403] c05 N71-11202

BREGMAN, B. J.  
Derivation of a tangent function using an  
integrated circuit four-quadrant multiplier  
[NASA-CASE-MS-C-13907-1] c10 N73-26230

BRITTWIESER, B.  
High current electrical lead  
[NASA-CASE-LEW-10950-1] c33 N74-27683

BREJCHA, A. G., JR.  
Coaxial cable connector Patent  
[NASA-CASE-XNP-04732] c09 N71-20851

BRESHEARS, E. E.  
Plasma igniter for internal combustion engine  
[NASA-CASE-NFO-13828-1] c37 N79-11405

BREUER, D. E.  
Temperature compensated current source  
[NASA-CASE-MS-C-11235] c33 N78-17294

BREY, H.  
Frequency division multiplex technique  
[NASA-CASE-KSC-10521] c07 N73-20176  
FM/CW radar system  
[NASA-CASE-MFS-22234-1] c32 N79-10264

BRICKER, R. W.  
Mass measuring system Patent  
[NASA-CASE-XMS-03371] c05 N70-42000

BRIGHT, C. W.  
Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c52 N79-26772

BRIBICH, P. F.  
Electrothermal rockets having improved heat  
exchangers Patent  
[NASA-CASE-XLE-01783] c28 N70-34175

BRINKS, B. J.  
Plating nickel on aluminum castings Patent  
[NASA-CASE-XNP-04148] c17 N71-24830

BRISKEN, A. F.  
Automatic transponder  
[NASA-CASE-GSC-12075-1] c32 N77-31350

BRISSENDEN, R. F.  
Cable arrangement for rigid tethering Patent  
[NASA-CASE-XLA-02332] c32 N71-17609

BRITT, T. O.  
Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c33 N79-11315

BRITZ, W. J.  
Rapid activation and checkout device for batteries  
[NASA-CASE-MFS-22749-1] c44 N76-14601  
Lead-oxygen dc power supply system having a  
closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c44 N76-27664

BROCK, F. J.  
Gauge calibration by diffusion  
[NASA-CASE-YGS-07752] c14 N73-30390  
Ultrahigh vacuum measuring ionization gauge  
[NASA-CASE-XLA-05087] c14 N73-30391

BROCKMAN, H. H.  
Charge storage diode modulators and demodulators  
[NASA-CASE-NFO-10189-1] c33 N77-21314

Faraday rotation measurement method and apparatus  
[NASA-CASE-NPO-14839-1] c35 N80-16313  
Radio frequency arraying method for receivers  
[NASA-CASE-NPO-14328-1] c32 N80-18253

**BRODER, J. D.**  
Method of making electrical contact on silicon solar cell and resultant product Patent  
[NASA-CASE-XLE-04787] c03 N71-20492  
Method of making silicon solar cell array  
[NASA-CASE-LEW-11069-1] c44 N74-14784  
Covered silicon solar cells and method of manufacture  
[NASA-CASE-LEW-11065-2] c44 N76-14600  
Silicon nitride coated, plastic covered solar cell  
[NASA-CASE-LEW-11496-1] c44 N77-14580

**BRODERICK, J. C.**  
Solid state television camera system Patent  
[NASA-CASE-IMP-06092] c07 N71-24612

**BRODERICK, R. F.**  
Signal ratio system utilizing voltage controlled oscillators Patent  
[NASA-CASE-IMP-04367] c09 N71-23545  
Radar antenna system for acquisition and tracking Patent  
[NASA-CASE-IMS-09610] c07 N71-24625

**BRODIE, S. B.**  
Variable ratio mixed-mode bilateral master-slave control system for shuttle remote manipulator system  
[NASA-CASE-MSC-14245-1] c18 N75-27041

**BROKL, S. S.**  
Numerical computer peripheral interactive device with manual controls  
[NASA-CASE-NPO-11497] c08 N73-25206

**BROMAN, C. L.**  
Dual output variable pitch turbofan actuation system  
[NASA-CASE-LEW-12419-1] c07 N77-14025

**BROOKS, A. D.**  
Particulate and aerosol detector  
[NASA-CASE-LAR-11434-1] c35 N76-22509

**BROOKS, D. E.**  
Method for separating biological cells  
[NASA-CASE-MPS-23883-1] c51 N80-16715

**BROOKS, G. W.**  
Impact simulator Patent  
[NASA-CASE-XLA-00493] c11 N70-34786  
Flexible ring slosh damping baffle Patent  
[NASA-CASE-LAR-10317-1] c32 N71-16103  
Lunar penetrometer Patent  
[NASA-CASE-XLA-00934] c14 N71-22765

**BROOKS, J. D.**  
Continuously operating induction plasma accelerator Patent  
[NASA-CASE-XLA-01354] c25 N70-36946

**BROOKS, R. A.**  
Capacitive tank gaging apparatus being independent of liquid distribution  
[NASA-CASE-MPS-21629] c14 N72-22442

**BROOKS, R. L.**  
Fluid sample collection and distribution system  
[NASA-CASE-MSC-16841-1] c34 N79-24285

**BROOKS, W. F.**  
Refrigerator module, system and process  
[NASA-CASE-ARC-11263-1] c31 N81-27328

**BROSH, A.**  
Flow separation detector  
[NASA-CASE-ARC-11046-1] c35 N78-14364

**BROUSSARD, P. H.**  
Coal-shale interface detection  
[NASA-CASE-MPS-23720-3] c43 N79-25443

**BROUSSARD, R.**  
Optical tracking mount Patent  
[NASA-CASE-MPS-14017] c14 N71-26627

**BROWN, C. E.**  
G conditioning suit Patent  
[NASA-CASE-XLA-02898] c05 N71-20268

**BROWN, D.**  
Radial module space station Patent  
[NASA-CASE-IMS-01906] c31 N70-41373

**BROWN, D. W.**  
Phase-locked loop with sideband rejecting properties Patent  
[NASA-CASE-IMP-02723] c07 N70-41680

**BROWN, E. L.**  
Sprayable low density ablator and application process  
[NASA-CASE-MPS-23506-1] c24 N78-24290

**BROWN, G. A.**  
Integrated circuit including field effect transistor and cermet resistor  
[NASA-CASE-GSC-10835-1] c09 N72-33205

**BROWN, G. V.**  
Method of fabricating a twisted composite superconductor  
[NASA-CASE-LEW-11015] c26 N73-32571  
Magnetocaloric pump  
[NASA-CASE-LEW-11672-1] c37 N74-27904  
Magnetic heat pumping  
[NASA-CASE-LEW-12508-1] c34 N78-17335

**BROWN, H. H.**  
Reaction tester  
[NASA-CASE-MSC-13604-1] c05 N73-13114

**BROWN, J. W.**  
Reduced gravity fecal collector seat and urinal  
[NASA-CASE-MPS-22102-1] c54 N74-20725

**BROWN, K. H.**  
Phase modulator Patent  
[NASA-CASE-MSC-13201-1] c07 N71-28429

**BROWN, N. D.**  
Deployable flexible tunnel  
[NASA-CASE-MPS-22636-1] c37 N76-22540

**BROWN, P. A.**  
Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-2] c52 N81-14613  
Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-1] c52 N81-29764

**BROWN, R. H.**  
Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c07 N78-18067

**BROWN, R. L.**  
Gimbaled, partially submerged rocket nozzle Patent  
[NASA-CASE-IMP-01544] c28 N70-34162

**BROWN, R. M.**  
Multiple pass reimaging optical system  
[NASA-CASE-ARC-10194-1] c23 N73-20741

**BROWN, W. E., III**  
Method and means for providing an absolute power measurement capability Patent  
[NASA-CASE-ERC-11020] c14 N71-26774  
Clear air turbulence detector  
[NASA-CASE-ERC-10081] c14 N72-28437  
Method and apparatus for measuring solar activity and atmospheric radiation effects  
[NASA-CASE-ERC-10276] c14 N73-26432

**BROWNING, R. E.**  
Flexible seal for valves Patent  
[NASA-CASE-XLE-00101] c15 N70-33376

**BROYLES, H. P.**  
Parallel plate viscometer Patent  
[NASA-CASE-IMP-09462] c14 N71-17584  
Method of making hollow elastomeric bodies  
[NASA-CASE-NFO-13535-1] c37 N76-31524

**BROYLES, H. H.**  
Parallel plate viscometer Patent  
[NASA-CASE-IMP-09462] c14 N71-17584

**BRUCE, M. H., JR.**  
Computerized system for translating a torch head  
[NASA-CASE-MPS-23620-1] c37 N79-10421

**BRUCE, R. A.**  
Specialized halogen generator for purification of water Patent  
[NASA-CASE-XLA-08913] c14 N71-28933  
Air removal device  
[NASA-CASE-XLA-8914] c15 N73-12492  
Zero gravity liquid mixer  
[NASA-CASE-LAR-10195-1] c15 N73-19458  
Centrifugal lyophobic separator  
[NASA-CASE-LAR-10194-1] c34 N74-30608  
Air removal device  
[NASA-CASE-XLA-8914-2] c34 N76-23522

**BRUNSON, J. W.**  
Decommutator patchboard verifier  
[NASA-CASE-KSC-11065-1] c33 N81-26359

**BRUNSTIN, S. A.**  
Dual frequency microwave reflex feed  
[NASA-CASE-NPO-13091-1] c09 N73-12214

**BRYAN, C. J.**  
Autoignition test cell Patent  
[NASA-CASE-KSC-10198] c11 N71-28629  
System for sterilizing objects  
[NASA-CASE-KSC-11085-1] c54 N81-24724

**BRYAN, H. B.**  
Wind tunnel model damper Patent  
[NASA-CASE-XLA-09480] c11 N71-33612

BRYANT, E. L.  
 Fatigue testing device Patent  
 [NASA-CASE-XLA-02131] c32 N70-42003  
 Noncontacting method for measuring angular  
 deflection  
 [NASA-CASE-LAR-12178-1] c74 N80-21138

BRYANT, M. H.  
 Digital controller for a Baum folding machine  
 [NASA-CASE-LAR-10688-1] c37 N74-21056

BRYSOH, R. P.  
 Soil penetrometer  
 [NASA-CASE-XNF-05530] c14 N73-32321

BUBE, K. E.  
 Solar cell with improved N-region contact and  
 method of forming the same  
 [NASA-CASE-NPO-14205-1] c44 N79-31752

BUCHANAN, R. I.  
 Hypersonic test facility Patent  
 [NASA-CASE-XLA-00378] c11 N71-15925  
 Hypersonic test facility Patent  
 [NASA-CASE-XLA-05378] c11 N71-21475

BUCHHELE, D. R.  
 Optical torqueometer Patent  
 [NASA-CASE-XLE-00503] c14 N70-34818

BUCHHOLD, T. A.  
 Superconductive accelerometer Patent  
 [NASA-CASE-XMF-01099] c14 N71-15969

BUCHMILLER, L. D.  
 Folded traveling wave maser structure Patent  
 [NASA-CASE-XNF-05219] c16 N71-15550

BUCKLEY, D. H.  
 Gas lubricant compositions Patent  
 [NASA-CASE-XLE-00353] c18 N70-39897  
 Metallic film diffusion for boundary lubrication  
 Patent  
 [NASA-CASE-XLE-01765] c18 N71-10772  
 Alloys for bearings Patent  
 [NASA-CASE-XLE-05033] c15 N71-23610  
 Metallic film diffusion for boundary lubrication  
 Patent  
 [NASA-CASE-XLE-10337] c15 N71-24046

BUCKLEY, J. D.  
 Induction heating gun  
 [NASA-CASE-LAR-12540-1] c37 N80-11468  
 One step dual purpose joining technique  
 [NASA-CASE-LAR-12595-1] c37 N80-11469

BUHLER, G. V.  
 Meter for use in detecting tension in straps  
 having predetermined elastic characteristics  
 [NASA-CASE-MFS-22189-1] c35 N75-19615

BULLINGER, H. B.  
 Photoetching of metal-oxide layers  
 [NASA-CASE-ERC-10108] c06 N72-21094

BUNCE, R. C.  
 Closed loop ranging system Patent  
 [NASA-CASE-XNF-01501] c21 N70-41930  
 Automatic carrier acquisition system  
 [NASA-CASE-NPO-11628-1] c07 N73-30113

BUNKER, E. R., JR.  
 Automated equipotential plotter  
 [NASA-CASE-NPO-11134] c09 N72-21246

BURCH, C. P.  
 Grinding arrangement for ball nose milling cutters  
 [NASA-CASE-LAR-10450-1] c37 N74-27905

BURCH, J. L.  
 Two speed drive system  
 [NASA-CASE-MFS-20645-1] c37 N74-23070  
 Automatically operable self-leveling load table  
 [NASA-CASE-MFS-22039-1] c09 N75-12968  
 Actuator device for artificial leg  
 [NASA-CASE-MFS-23225-1] c52 N77-14735  
 Combined docking and grasping device  
 [NASA-CASE-MFS-23088-1] c37 N77-23483  
 Apparatus for assembling space structure  
 [NASA-CASE-MFS-23579-1] c18 N79-11108  
 Coal-shale interface detection  
 [NASA-CASE-MFS-23720-3] c43 N79-25443

BURCHAM, P. W., JR.  
 Multiple pure tone elimination strut assembly  
 [NASA-CASE-FRC-11062-1] c07 N80-32393

BURCHAM, T. W.  
 Controlled release device Patent  
 [NASA-CASE-XKS-03338] c15 N71-24043

BURCHER, E. E.  
 Laser communication system for controlling  
 several functions at a location remote to the  
 laser  
 [NASA-CASE-LAR-10311-1] c16 N73-16536

Transmitting and reflecting diffuser  
 [NASA-CASE-LAR-10385-2] c70 N74-13436  
 Automatic focus control for facsimile cameras  
 [NASA-CASE-LAR-11213-1] c35 N75-15014  
 Spectrometer integrated with a facsimile camera  
 [NASA-CASE-LAR-11207-1] c35 N75-19613  
 Transmitting and reflecting diffuser  
 [NASA-CASE-LAR-10385-3] c74 N78-15879  
 Device for measuring the contour of a surface  
 [NASA-CASE-LAR-11869-1] c74 N78-27904

BURDIN, C.  
 Phase-locked servo system  
 [NASA-CASE-MFS-22073-1] c33 N75-13139

BURGETT, F. A.  
 Measuring device Patent  
 [NASA-CASE-XMS-01546] c14 N70-40233  
 Process for conditioning tanned sharkskin and  
 articles made therefrom Patent  
 [NASA-CASE-XMS-09691-1] c18 N71-15545

BURK, S. S., JR.  
 Deployable flexible ventral fins for use as an  
 emergency spin recovery device in aircraft  
 [NASA-CASE-LAR-10753-1] c08 N74-30421

BURKE, J. E.  
 Optical spin compensator  
 [NASA-CASE-XGS-02401] c14 N69-27485

BURKHART, J. A.  
 Magneto-plasma-dynamic arc thruster  
 [NASA-CASE-LEW-11180-1] c25 N73-25760

BURKLEY, R. A.  
 Panelized high performance multilayer insulation  
 Patent  
 [NASA-CASE-MFS-14023] c33 N71-25351

BURKS, R. E., JR.  
 Infusible silazane polymer and process for  
 producing same  
 [NASA-CASE-XMF-02526-1] c27 N79-21190

BURBETT, J. E.  
 Tissue macerating instrument  
 [NASA-CASE-LEW-12668-1] c52 N78-14773

BURNHAM, D. C.  
 Method and apparatus for wavelength tuning of  
 liquid lasers  
 [NASA-CASE-ERC-10187] c16 N69-31343

BURNS, E. A.  
 Ablative resin Patent  
 [NASA-CASE-XLE-05913] c33 N71-14032  
 Reinforced structural plastics  
 [NASA-CASE-LEW-10199-1] c27 N74-23125

BURNS, F. P.  
 Biomedical radiation detecting probe Patent  
 [NASA-CASE-XMS-01177] c05 N71-19440

BURNS, R. H.  
 High pulse rate high resolution optical radar  
 system  
 [NASA-CASE-NPO-11426] c07 N73-26119

BURNS, R. E.  
 Protected isotope heat source  
 [NASA-CASE-LEW-11227-1] c73 N75-30876

BURROUS, C. H.  
 Temperature compensated light source using a  
 light emitting diode  
 [NASA-CASE-ARC-10467-1] c09 N73-14214

BURROWS, D. L.  
 Insulating structure Patent  
 [NASA-CASE-XMF-00341] c15 N70-33323

BURTON, D. B.  
 Garments for controlling the temperature of the  
 body Patent  
 [NASA-CASE-XMS-10269] c05 N71-24147

BURTON, W. A.  
 Endless tape cartridge Patent  
 [NASA-CASE-XGS-00769] c14 N70-41647  
 Annular slit colloid thruster Patent  
 [NASA-CASE-GSC-10709-1] c28 N71-25213

BUSEMANN, A.  
 Plasma accelerator Patent  
 [NASA-CASE-XLA-00675] c25 N70-33267

BUSH, H. G.  
 Vacuum pressure molding technique  
 [NASA-CASE-LAR-10073-1] c37 N76-24575  
 Mechanical end joint system for structural  
 column elements  
 [NASA-CASE-LAR-12482-1] c37 N80-22704  
 Lightweight structural columns  
 [NASA-CASE-LAR-12095-1] c31 N81-25258

BUTLER, D. B.  
 Miniature vibration isolator Patent  
 [NASA-CASE-XLA-01019] c15 N70-40156

Radio frequency filter device  
[NASA-CASE-XLA-02609] c09 N72-25256

BUTLER, J. M.  
Tackifier for addition polyimides containing  
monoethylphthalate  
[NASA-CASE-LAR-12642-1] c27 N81-25229

BUTMAN, S.  
Signal phase estimator  
[NASA-CASE-NPO-11203] c10 N72-20224  
Multichannel telemetry system  
[NASA-CASE-NPO-11572] c07 N73-16121  
Receiver with an improved phase lock loop in a  
multichannel telemetry system with suppressed  
carrier  
[NASA-CASE-NPO-11593-1] c07 N73-28012

BUTMAN, S. A.  
Multiple rate digital command detection system  
with range clean-up capability  
[NASA-CASE-NPO-13753-1] c32 N77-20289

BUZZARD, R. J.  
Radial heat flux transformer  
[NASA-CASE-NPO-10828] c33 N72-17948

BYERS, D. C.  
Electrostatic thruster with improved insulators  
Patent  
[NASA-CASE-XLE-01902] c28 N71-10574  
Sputtering holes with ion beamlets  
[NASA-CASE-LEW-11646-1] c20 N74-31269

BYNUM, B. G.  
Response analyzers for sensors Patent  
[NASA-CASE-MFS-11204] c14 N71-29134  
Ergometer  
[NASA-CASE-MFS-21109-1] c05 N73-27941

BYRD, A. W.  
Heat pipe thermionic diode power system Patent  
[NASA-CASE-XMP-05843] c03 N71-11055  
Power system with heat pipe liquid coolant lines  
Patent  
[NASA-CASE-MFS-14114-2] c09 N71-24607  
Isothermal cover with thermal reservoirs Patent  
[NASA-CASE-MFS-20355] c33 N71-25353  
Power system with heat pipe liquid coolant lines  
Patent  
[NASA-CASE-MFS-14114] c33 N71-27862  
Thermoelectric power system  
[NASA-CASE-MFS-22002-1] c44 N76-16612

BYRD, J. D.  
Elastomeric silazane polymers and process for  
preparing the same Patent  
[NASA-CASE-XMP-04133] c06 N71-20717

BYRD, H. R.  
Thermally conductive polymers  
[NASA-CASE-GSC-11304-1] c06 N72-21105

BYRNE, P.  
BCD to decimal decoder Patent  
[NASA-CASE-XKS-06167] c08 N71-24890  
Video sync processor Patent  
[NASA-CASE-KSC-10002] c10 N71-25865  
Automatic frequency control loop including  
synchronous switching circuits  
[NASA-CASE-KSC-10393] c09 N72-21247  
Digital servo controller  
[NASA-CASE-KSC-10769-1] c33 N74-29556  
Common data buffer system  
[NASA-CASE-KSC-11048-1] c62 N81-24779

**C**

CABLE, C. W.  
Solar cell assembly test method  
[NASA-CASE-NPO-10401] c03 N72-20033

CABLE, W. L.  
Rotary solenoid shutter drive assembly and  
rotary inertia damper and stop plate assembly  
[NASA-CASE-GSC-11560-1] c33 N74-20861

CACOSSA, R. A.  
Method of detecting impending saturation of  
magnetic cores  
[NASA-CASE-ERC-10089] c23 N72-17747

CAGLIOSTRO, D. E.  
Method of carbonizing polyacrylonitrile fibers  
and resulting product  
[NASA-CASE-ARC-11261-1] c24 N81-29164

CARILL, K. J.  
Catalyst surfaces for the chromous/chromic redox  
couple  
[NASA-CASE-LEW-13148-1] c33 N80-20487  
Catalyst surfaces for the chromous/chromic redox  
couple  
[NASA-CASE-LEW-13148-2] c44 N81-29524

CARILL, H. E.  
Positive locking check valve Patent  
[NASA-CASE-XMS-09310] c15 N71-22706

CAIRO, F. J.  
Bonding machine for forming a solar array strip  
[NASA-CASE-NFO-13652-2] c44 N79-24431

CALANDRO, J. E.  
Resilient wheel Patent  
[NASA-CASE-MFS-13929] c15 N71-27091

CALLAHAN, D. E.  
Solid state television camera system Patent  
[NASA-CASE-XMF-06092] c07 N71-24612

CALVERT, H. F.  
Modification and improvements to cooled blades  
Patent  
[NASA-CASE-XLE-00092] c15 N70-33264

CALVERT, J. A.  
Redundant motor drive system  
[NASA-CASE-MFS-23777-1] c37 N80-32716

CAMACHO, S. L.  
Protective circuit of the spark gap type  
[NASA-CASE-XAC-08981] c09 N69-39897

CAMARDA, C. J.  
Heat pipe honeycomb panel  
[NASA-CASE-LAR-12637-1] c34 N81-12362  
Heat pipe cooled probe  
[NASA-CASE-LAR-12588-1] c44 N81-24525

CAMERA, J. M.  
Overvoltage protection network  
[NASA-CASE-ARC-10197-1] c33 N74-17929

CAMERON, J. E.  
Method and system for in vivo measurement of  
bone tissue using a two level energy source  
[NASA-CASE-MSC-14276-1] c52 N77-14737

CAMP, D. W.  
Anemometer with braking mechanism Patent  
[NASA-CASE-XMF-05224] c14 N71-23726  
Maxometers (peak wind speed anemometers)  
[NASA-CASE-MFS-20916] c14 N73-25460

CAMP, E. L.  
Automatic signal range selector for metering  
devices Patent  
[NASA-CASE-XMS-06497] c14 N71-26244

CAMPBELL, B. A.  
Epoxy-aziridine polymer product Patent  
[NASA-CASE-NPO-10701] c06 N71-28620

CAMPBELL, C. C., JR.  
Discrete local altitude sensing device Patent  
[NASA-CASE-XMS-03792] c14 N70-41812

CAMPBELL, C. W.  
Collimated beam manifold and method for using  
the same  
[NASA-CASE-MFS-25312-1] c74 N80-34251

CAMPBELL, D. E.  
Method of making a rocket nozzle  
[NASA-CASE-XMF-06884-1] c20 N79-21123

CAMPBELL, D. E.  
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] c07 N71-19773

CAMPBELL, P. D.  
Radiant source tracker independent of  
nonconstant irradiance  
[NASA-CASE-NFO-11686] c14 N73-25462

CAMPBELL, G. E.  
Self-recording portable soil penetrometer  
[NASA-CASE-MFS-20774] c14 N73-19420

CAMPBELL, G. W.  
Method and system for respiration analysis Patent  
[NASA-CASE-XFR-08403] c05 N71-11202

CAMPBELL, J. G.  
Multislot film cooled pyrolytic graphite rocket  
nozzle Patent  
[NASA-CASE-XMP-04389] c28 N71-20942  
Tube sealing device Patent  
[NASA-CASE-NPO-10431] c15 N71-29132

CAMPBELL, R. A.  
Redundant hydraulic control system for actuators  
[NASA-CASE-MFS-20944] c15 N73-13466  
Contour measurement system  
[NASA-CASE-MFS-23726-1] c43 N79-26439  
Coal-shale interface detection system  
[NASA-CASE-MFS-23720-2] c43 N80-14423

CAMPBELL, R. B., JR.  
Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c35 N77-10493

CAMPBELL, T. G.  
Omnidirectional slot antenna for mounting on cylindrical space vehicle  
[NASA-CASE-LAR-10163-1] c09 N72-25247

CAMPEN, C. F., JR.  
Automated system for identifying traces of organic chemical compounds in aqueous solutions  
[NASA-CASE-NPO-13063-1] c25 N76-18245

CANCRO, C. A.  
Low power drain semi-conductor circuit  
[NASA-CASE-XGS-04999] c09 N69-24317  
Wide range data compression system Patent  
[NASA-CASE-XGS-02612] c08 N71-15435  
Passive synchronized spike generator with high input impedance and low output impedance and capacitor power supply Patent  
[NASA-CASE-XGS-03632] c09 N71-23311  
Fast response low power drain logic circuits  
[NASA-CASE-GSC-10878-1] c10 N72-22236

CANICATTI, C. L.  
Voltage monitoring system  
[NASA-CASE-KSC-10736-1] c33 N75-19521

CANNING, T. N.  
Shock-layer radiation measurement  
[NASA-CASE-XAC-02970] c14 N69-35896  
Hypervelocity gun Patent  
[NASA-CASE-XAC-05902] c11 N71-18578  
Heater-mixer for stored fluids  
[NASA-CASE-ARC-10442-1] c35 N74-15093  
Bimetallic fluid displacement apparatus  
[NASA-CASE-ARC-10441-1] c35 N74-15126  
High acceleration cable deployment system  
[NASA-CASE-ARC-11256-1] c37 N79-23432

CANTOR, C.  
Attitude control system Patent  
[NASA-CASE-XGS-04393] c21 N71-14159  
Amplifier clamping circuit for horizon scanner Patent  
[NASA-CASE-XGS-01784] c10 N71-20782  
Roll alignment detector  
[NASA-CASE-GSC-10514-1] c14 N72-20379

CANTRELL, J. H., JR.  
Liquid-immersible electrostatic ultrasonic transducer  
[NASA-CASE-LAR-12465-1] c35 N80-18363  
Frequency tracked pulse technique for ultrasonic analysis  
[NASA-CASE-LAR-12697-1] c32 N80-26571

CANVEL, H.  
Video communication system and apparatus Patent  
[NASA-CASE-XNP-06611] c07 N71-26102

CAPLETTE, R. K.  
Current steering commutator  
[NASA-CASE-NPO-10743] c08 N72-21199

CAPPS, J. B.  
Two-step rocket engine bipropellant valve Patent  
[NASA-CASE-XMS-04890-1] c15 N70-22192

CAREB, R. P.  
Dual solid cryogenics for spacecraft refrigeration Patent  
[NASA-CASE-GSC-10188-1] c23 N71-24725

CARL, C.  
Apparatus for deriving synchronizing pulses from pulses in a single channel PCM communications system  
[NASA-CASE-NPO-11302-1] c07 N73-13149  
Method and apparatus for a single channel digital communications system  
[NASA-CASE-NPO-11302-2] c32 N74-16132  
Digital second-order phase-locked loop  
[NASA-CASE-NPO-11905-1] c33 N74-12887

CARL, G. R.  
Air conditioned suit  
[NASA-CASE-LAR-10076-1] c05 N73-20137

CARLE, C. B.  
Reel safety brake  
[NASA-CASE-GSC-11960-1] c37 N77-14479

CARLISLE, T. B.  
Method and apparatus for controllably heating fluid Patent  
[NASA-CASE-XMF-04237] c33 N71-16278

CARLSON, A. W.  
Pulse-width modulation multiplier Patent  
[NASA-CASE-XER-09213] c07 N71-12390

CARLSON, H. W.  
Supersonic aircraft Patent  
[NASA-CASE-XLA-04451] c02 N71-12243

CARLSON, R. L.  
Flow diverter valve and flow diversion method  
[NASA-CASE-HQN-00573-1] c37 N79-33468

CARLSON, W. C. A.  
Electric arc device for heating gases Patent  
[NASA-CASE-XAC-00319] c25 N70-41628

CARMIN, D. L., JR.  
Anti-fog composition  
[NASA-CASE-MS-C-13530-2] c23 N75-14834

CARBODY, R. J.  
Honeycomb panel and method of making same Patent  
[NASA-CASE-XMF-01402] c18 N71-21651

CARO, E. R.  
High power RF coaxial switch  
[NASA-CASE-NFO-14229-1] c33 N80-18285

CARON, P. R.  
Logarithmic function generator utilizing an exponentially varying signal in an inverse manner  
[NASA-CASE-ERC-10267] c09 N72-23173  
Phase control circuits using frequency multiplications for phased array antennas  
[NASA-CASE-ERC-10285] c10 N73-16206

CARPINI, T. D.  
Flow velocity and directional instrument  
[NASA-CASE-LAR-10655-1] c14 N73-13415

CARR, W. F.  
Split nut separation system Patent  
[NASA-CASE-XNP-06914] c15 N71-21489

CARRAWAY, J. B.  
Miniature multichannel biotelemeter system  
[NASA-CASE-NFO-13065-1] c52 N74-26625

CARROLL, W. F.  
Stabilized zinc oxide coating compositions Patent  
[NASA-CASE-XMF-07770-2] c18 N71-26772

CARSON, J. H.  
Quasi-optical microwave component Patent  
[NASA-CASE-ERC-10011] c07 N71-29065

CARSON, L. M.  
Discriminator aided phase lock acquisition for suppressed carrier signals  
[NASA-CASE-NPO-14311-1] c32 N79-14276  
PN lock indicator for dithered PN code tracking loop  
[NASA-CASE-NPO-14435-1] c33 N81-33405

CARSON, P. R.  
Array phasing device Patent  
[NASA-CASE-ERC-10046] c10 N71-18722

CARSON, W. H., JR.  
Didymium hydrate additive to nickel hydroxide electrodes Patent  
[NASA-CASE-XGS-03505] c03 N71-10608

CARTER, A. F.  
Plasma accelerator Patent  
[NASA-CASE-XLA-00675] c25 N70-33267  
Method and apparatus for producing a plasma Patent  
[NASA-CASE-XLA-00147] c25 N70-34661

CARTER, J. H.  
Sprayable low density ablator and application process  
[NASA-CASE-MFS-23506-1] c24 N78-24290

CARTER, W. K.  
Emergency earth orbital escape device  
[NASA-CASE-MS-C-13281] c31 N72-18859

CARUSO, A. J.  
Sorption vacuum trap Patent  
[NASA-CASE-XER-09519] c14 N71-18483

CARUSO, V. P.  
Method of peening and portable peening gun  
[NASA-CASE-MFS-23047-1] c37 N76-18454

CARVER, V. C.  
Electrically conductive palladium containing polyimide films  
[NASA-CASE-LAR-12705-1] c33 N80-24549

CASE, H. C.  
Space suit  
[NASA-CASE-MS-C-12609-1] c05 N73-32012

CASEY, L. O.  
Electrical load protection device Patent  
[NASA-CASE-MS-C-12135-1] c09 N71-12526

CASH, W. H., JR.  
Pulse transducer with artifact signal attenuator  
[NASA-CASE-FRC-11012-1] c52 N80-23969

CASHION, K. D.  
Solar optical telescope dome control system Patent  
[NASA-CASE-MS-C-10966] c14 N71-19568

CASON, E. L.  
Apparatus including a plurality of spaced transformers for locating short circuits in cables  
[NASA-CASE-KSC-10899-1] c33 N79-18193

CASTLE, K. D.  
Shielded conductor cable system  
[NASA-CASE-MSC-12745-1] c33 N81-27397

CASTLEMAN, K. R.  
Automated clinical system for chromosome analysis  
[NASA-CASE-NPO-13913-1] c52 N79-12694

CATLAN, T. G.  
High contrast cathode ray tube  
[NASA-CASE-ERC-10468] c09 N72-2C206

CAUDILL, L. O.  
Long range laser traversing system  
[NASA-CASE-GSC-11262-1] c36 N74-21091

CECCON, R. L.  
Optical pump and driver system for lasers  
[NASA-CASE-ERC-10283] c16 N72-25485

CELLIER, A.  
Digital numerically controlled oscillator  
[NASA-CASE-MSC-16747-1] c33 N81-17349

CEPOLINA, P. J.  
Strain gauge measuring techniques Patent  
[NASA-CASE-XGS-04478] c14 N71-24233

CERINI, D. J.  
Hydrogen-rich gas generator  
[NASA-CASE-NPO-13560-1] c44 N77-10636  
Start up system for hydrogen generator used with  
an internal combustion engine  
[NASA-CASE-NPO-13849-1] c28 N80-1C374

CERVENKA, P. O.  
External bulb variable volume maser  
[NASA-CASE-GSC-12334-1] c36 N75-14362

CHAI, A. T.  
High voltage planar multijunction  
[NASA-CASE-LEW-13400-1] c44 N81-16528  
High voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c44 N81-16529

CHAMBERLAIN, F. B.  
Optical binocular scanning apparatus  
[NASA-CASE-NPO-11002] c14 N72-22441  
System for forming a quadrified image comprising  
angularly related fields of view of a three  
dimensional object  
[NASA-CASE-NPO-14219-1] c74 N81-17886

CHAMBERS, A. B.  
Temperature controller for a fluid cooled garment  
[NASA-CASE-ARC-10599-1] c05 N73-26071  
Walking boot assembly  
[NASA-CASE-ARC-11101-1] c54 N78-17675

CHAMIS, C. C.  
Hybrid composite laminate structures  
[NASA-CASE-LEW-12118-1] c24 N77-27188

CHANDLER, J. A.  
Discrete local altitude sensing device Patent  
[NASA-CASE-XMS-03792] c14 N70-41812  
Line cutter Patent  
[NASA-CASE-XMS-04072] c15 N70-42017  
Spacecraft radiator cover Patent  
[NASA-CASE-MSC-12049] c31 N71-16080  
Winch having cable position and load indicators  
Patent  
[NASA-CASE-MSC-12052-1] c15 N71-24599

CHANDLER, W. A.  
Cryogenic storage system Patent  
[NASA-CASE-XMS-04390] c31 N70-41871

CHANEY, B. E.  
Method of purifying metallurgical grade silicon  
employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c26 N80-14229

CHANG, C. C.  
Microwave integrated circuit for Josephson  
voltage standards  
[NASA-CASE-MFS-23845-1] c33 N81-17348

CHAO, J. I.  
Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c52 N81-25661

CHAPMAN, C. P.  
Switching circuit Patent  
[NASA-CASE-INP-06505] c10 N71-24799  
Peak acceleration limiter for vibrational tester  
Patent  
[NASA-CASE-NPO-10556] c14 N71-27185  
Apparatus for recovering matter adhered to a  
host surface  
[NASA-CASE-NPO-11213] c15 N73-20514  
Automated attendance accounting system  
[NASA-CASE-NPO-11456] c08 N73-26176  
Servo-controlled intravital microscope system  
[NASA-CASE-NPO-13214-1] c35 N75-25123

CHAPMAN, E. M.  
Inflation system for balloon type satellites  
Patent  
[NASA-CASE-XGS-03351] c31 N71-16081

CHAPPELLE, E. W.  
Use of the enzyme hexokinase for the reduction  
of inherent light levels  
[NASA-CASE-XGS-05533] c04 N69-27487  
Light detection instrument Patent  
[NASA-CASE-XGS-05534] c23 N71-16355  
Lyophilized reaction mixtures Patent  
[NASA-CASE-XGS-05532] c06 N71-17705  
Flavin coenzyme assay  
[NASA-CASE-GSC-10565-1] c06 N72-25149  
Method of detecting and counting bacteria in  
body fluids  
[NASA-CASE-GSC-11092-2] c04 N73-27052  
Protein sterilization method of firefly  
luciferase using reduced pressure and  
molecular sieves  
[NASA-CASE-GSC-10225-1] c06 N73-27086  
Automatic instrument for chemical processing to  
detect microorganism in biological samples by  
measuring light reactions  
[NASA-CASE-GSC-11169-2] c05 N73-32011  
Method of detecting and counting bacteria  
[NASA-CASE-GSC-11917-2] c51 N76-29891  
Application of luciferase assay for ATP to  
antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c51 N77-22794  
Rapid, quantitative determination of bacteria in  
water  
[NASA-CASE-GSC-12158-1] c51 N78-22585  
Determination of antimicrobial susceptibilities  
on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c52 N79-14750

CHARLES, J. F.  
Floating nut retention system  
[NASA-CASE-MSC-16938-1] c37 N80-23653

CHARLTON, K. W.  
Pneumatic system for controlling and actuating  
pneumatic cyclic devices  
[NASA-CASE-IMS-04843] c03 N69-21469

CHARNOISKY, A. J.  
Tool attachment for spreading loose elements  
away from work Patent  
[NASA-CASE-XMF-02107] c15 N71-10809

CHASE, E. W.  
Helmet latching and attaching ring  
[NASA-CASE-XMS-04670] c54 N78-17678

CHASE, E. D.  
Vehicle simulator binocular multiplanar visual  
display system  
[NASA-CASE-ARC-10808-1] c09 N76-24280  
Spectrally balanced chromatic landing approach  
lighting system  
[NASA-CASE-ARC-10990-1] c04 N77-12031  
Full color hybrid display for aircraft simulators  
[NASA-CASE-ARC-10903-1] c09 N78-18083  
Environmental fog/rain visual display system for  
aircraft simulators  
[NASA-CASE-ARC-11158-1] c09 N79-33220

CHATHAM, D. C.  
Spacecraft docking and alignment system  
[NASA-CASE-MSC-12559-1] c18 N76-14186

CHEN, B. C. J.  
Waveguide cooling system  
[NASA-CASE-NPO-15401-1] c33 N81-29344

CHEN, C. J.  
Isotope separation using metallic vapor lasers  
[NASA-CASE-NPO-13550-1] c36 N77-26477

CHEN, W.  
Arterial pulse wave pressure transducer  
[NASA-CASE-GSC-11531-1] c52 N74-27566

CHEN, W. S.  
Wind tunnel microphone structure Patent  
[NASA-CASE-INP-00250] c11 N71-28779

CHENG, D. Y.  
Reversed cowl flap inlet thrust augmentor  
[NASA-CASE-ARC-10754-1] c07 N75-24736  
Noise suppressor for turbo fan jet engines  
[NASA-CASE-ARC-10812-1] c07 N76-18131  
System for measuring Reynolds in a turbulently  
flowing fluid  
[NASA-CASE-ARC-10755-2] c34 N76-27517  
System for measuring three fluctuating velocity  
components in a turbulently flowing fluid  
[NASA-CASE-ARC-10974-1] c34 N77-27345

CHERDAK, A. S.  
Maximum power point tracker Patent  
[NASA-CASE-GSC-10376-1] c14 N71-27407



CHEEN, S. S.  
 Chemical vapor deposition reactor  
 [NASA-CASE-NPO-13650-1] c25 N79-28253  
 Induced junction solar cell and method of  
 fabrication  
 [NASA-CASE-NPO-13786-1] c44 N80-29835

CHEERNOFF, R.  
 Frequency translating phase conjugation circuit  
 for active retrodirective antenna array  
 [NASA-CASE-NPO-14536-1] c32 N81-14185

CHEERNOFF, R. C.  
 Phase conjugation method and apparatus for an  
 active retrodirective antenna array  
 [NASA-CASE-NPO-13641-1] c32 N79-24210

CHESTNUTT, D.  
 Variably positioned guide vanes for aerodynamic  
 choking  
 [NASA-CASE-LAR-10642-1] c07 N74-31270

CHI, K.  
 High pulse rate high resolution optical radar  
 system  
 [NASA-CASE-NPO-11426] c07 N73-26119

CHIAO, B. Y.  
 Optical frequency waveguide Patent  
 [NASA-CASE-HQN-10541-1] c07 N71-26291  
 Optical frequency waveguide and transmission  
 system  
 [NASA-CASE-HQN-10541-3] c23 N72-23695

CHILDRESS, J. D.  
 Process for the preparation of brushite crystals  
 [NASA-CASE-ERC-10338] c04 N72-33072

CHILDS, J. H.  
 High-vacuum condenser tank for ion rocket tests  
 Patent  
 [NASA-CASE-XLE-00168] c11 N70-33278  
 Electric propulsion engine test chamber Patent  
 [NASA-CASE-XLE-00252] c11 N70-34844

CHILENSKI, J. J.  
 Ignition system for monopropellant combustion  
 devices Patent  
 [NASA-CASE-XNP-00249] c28 N70-38249

CHILTON, R. G.  
 Space capsule Patent  
 [NASA-CASE-XLA-00149] c31 N70-37938  
 Space capsule Patent  
 [NASA-CASE-XLA-01332] c31 N71-15664

CHIOA, R. Y.  
 Laser machining apparatus Patent  
 [NASA-CASE-HQN-10541-2] c15 N71-27135  
 Optical frequency waveguide and transmission  
 system Patent  
 [NASA-CASE-HQN-10541-4] c16 N71-27183

CHISEL, D. H.  
 Fluidic proportional thruster system  
 [NASA-CASE-ARC-10106-1] c28 N72-22769

CHONG, C. F.  
 Flipflop interrogator and bi-polar current  
 driver Patent  
 [NASA-CASE-XGS-03058] c10 N71-19547

CHOW, B. Y.  
 Elastic universal joint Patent  
 [NASA-CASE-XNP-00416] c15 N70-36947

CHOWNING, D.  
 Emergency earth orbital escape device  
 [NASA-CASE-MS-13281] c31 N72-18859

CHREITZBERG, A. H.  
 Electric battery and method for operating same  
 Patent  
 [NASA-CASE-XGS-01674] c03 N71-25129

CHRISTENSEN, W. W.  
 Chelate-modified polymers for atmospheric gas  
 chromatography  
 [NASA-CASE-ARC-11154-1] c25 N80-23383

CHRISTIAN, L. H.  
 Resuscitation apparatus Patent  
 [NASA-CASE-XMS-01115] c05 N70-39922

CHRISTOPHER, P. A.  
 Method of fabricating an object with a thin wall  
 having a precisely shaped slit  
 [NASA-CASE-LAR-10409-1] c31 N74-21059

CHRISTY, C. L., JR.  
 Infusible silazane polymer and process for  
 producing same  
 [NASA-CASE-XMF-02526-1] c27 N79-21190

CHU, T. L.  
 Fabrication of polycrystalline solar cells on  
 low-cost substrates  
 [NASA-CASE-GSC-12022-1] c44 N76-28635

Process for utilizing low-cost graphite  
 substrates for polycrystalline solar cells  
 [NASA-CASE-GSC-12022-2] c44 N78-24609

CHOMLEY, J. F.  
 Zero gravity apparatus Patent  
 [NASA-CASE-XMF-06515] c14 N71-23227

CHUTJIAN, A.  
 High resolution threshold photoelectron  
 spectroscopy by electron attachment  
 [NASA-CASE-NFO-14078-1] c72 N80-14877

CIEPLUCH, C. C.  
 Apparatus for igniting solid propellants Patent  
 [NASA-CASE-XLE-00207] c28 N70-33375  
 Method of igniting solid propellants Patent  
 [NASA-CASE-XLE-01988] c27 N71-15634

CISSELL, B. E.  
 Threadless fastener apparatus Patent  
 [NASA-CASE-XFR-05302] c15 N71-23254

CISEEK, T. F.  
 Growth of silicon carbide crystals on a seed  
 while pulling silicon crystals from a melt  
 [NASA-CASE-NFO-13969-1] c76 N79-23798  
 Method of growing a ribbon crystal particularly  
 suited for facilitating automated control of  
 ribbon width  
 [NASA-CASE-NPO-14295-1] c76 N80-32245

CLAPP, W. H.  
 Increasing efficiency of switching type  
 regulator circuits Patent  
 [NASA-CASE-XMS-09352] c09 N71-23316

CLARK, C. E.  
 Helmet weight simulator  
 [NASA-CASE-LAR-12320-1] c54 N81-27806

CLARK, P. L.  
 Hypersonic test facility Patent  
 [NASA-CASE-XLA-00378] c11 N71-15925  
 Hypersonic test facility Patent  
 [NASA-CASE-XLA-05378] c11 N71-21475

CLARK, B. K.  
 Thermal pump-compressor for space use Patent  
 [NASA-CASE-XLA-00377] c33 N71-17610

CLARK, J. R.  
 Automated fluid chemical analyzer Patent  
 [NASA-CASE-XNP-09451] c06 N71-26754

CLARK, K. H.  
 Apparatus for assembling space structure  
 [NASA-CASE-MFS-23579-1] c18 N79-11108  
 Electrical self-aligning connector  
 [NASA-CASE-MFS-25211-1] c33 N80-32651  
 Pneumatic inflatable end effector  
 [NASA-CASE-MFS-23696-1] c54 N81-26718

CLARK, B. K.  
 Fixture for environmental exposure of structural  
 materials under compression  
 [NASA-CASE-LAR-12602-1] c35 N81-19429

CLARK, R. L.  
 Deposition apparatus  
 [NASA-CASE-LAR-10541-1] c15 N72-32487

CLARK, B. T.  
 Horn feed having overlapping apertures Patent  
 [NASA-CASE-GSC-10452] c07 N71-12396

CLARKE, D. B.  
 Thermal compression bonding of interconnectors  
 [NASA-CASE-GSC-10303] c15 N72-22487

CLATTERBUCK, C. H.  
 Spacecraft battery seals  
 [NASA-CASE-XGS-03864] c15 N69-24320  
 Process for making RF shielded cable connector  
 assemblies and the products formed thereby  
 [NASA-CASE-GSC-11215-1] c09 N73-28083

CLAUSS, B. C.  
 Transmission line thermal short Patent  
 [NASA-CASE-XNP-09775] c09 N71-20445  
 Circulator having quarter wavelength resonant  
 post and parametric amplifier circuits  
 utilizing the same Patent  
 [NASA-CASE-XNP-02140] c09 N71-23097  
 High-gain, broadband traveling wave maser Patent  
 [NASA-CASE-NFO-10548] c16 N71-24831  
 Maser for frequencies in the 7-20 GHz range  
 [NASA-CASE-NFO-11437] c16 N72-28521  
 Refrigerated coaxial coupling  
 [NASA-CASE-NFO-13504-1] c33 N75-30430  
 Reflected-wave maser  
 [NASA-CASE-NPO-13490-1] c36 N76-31512  
 Dielectric-loaded waveguide circulator for  
 cryogenically cooled and cascaded maser  
 waveguide structures  
 [NASA-CASE-NPO-14254-1] c36 N80-18372

Maser amplifier slow wave structure  
[NASA-CASE-NPO-15211-1] c36 N81-24425

Resonant isolator for maser amplifier  
[NASA-CASE-NPO-15201-1] c36 N81-24426

**CLAWSON, G. T.**  
Method and apparatus for checking fire detectors  
[NASA-CASE-GSC-11600-1] c35 N74-21019

**CLAY, F. P., JR.**  
Ionization vacuum gauge with all but the end of  
the ion collector shielded Patent  
[NASA-CASE-XLA-07424] c14 N71-18482

**CLELAND, E. L.**  
Gas diffusion liquid storage bag and method of  
use for storing blood  
[NASA-CASE-NPO-13930-1] c52 N79-14749

**CLEMMENS, G. W., JR.**  
Deep space monitor communication satellite  
system Patent  
[NASA-CASE-XAC-06029-1] c31 N71-24813

**CLEMMENS, P. W.**  
Device for configuring multiple leads  
[NASA-CASE-MFS-22133-1] c33 N74-26977

**CLEMENT, W. G.**  
Friction measuring apparatus Patent  
[NASA-CASE-XNP-08680] c14 N71-22995

**CLEMENTS, P. A.**  
System for stabilizing cable phase delay  
utilizing a coaxial cable under pressure  
[NASA-CASE-NPO-13138-1] c33 N74-17927

**CLEMONS, D. L., JR.**  
Thermal control of space vehicles Patent  
[NASA-CASE-XLA-01291] c33 N70-36617

**CLEMONS, J. I., JR.**  
An instrument for determining coincidence and  
elapse time between independent sources of  
random sequential events  
[NASA-CASE-LAR-12531-1] c35 N81-31529

**CLEMONS, J. H.**  
Method of bonding plasticized elastomer to metal  
and article produced thereby  
[NASA-CASE-MFS-25181-1] c27 N81-16238

**CLEVELAND, G. J.**  
Medical subject monitoring systems  
[NASA-CASE-MSC-14180-1] c52 N76-14757

**CLEVENSON, S. A.**  
Ride quality meter  
[NASA-CASE-LAR-12882-1] c54 N81-31848

**CLICKNER, R. E., JR.**  
Umbilical disconnect Patent  
[NASA-CASE-XLA-00711] c03 N71-12258

**CLIFF, R. A.**  
Data processor having multiple sections  
activated at different times by selective  
power coupling to the sections Patent  
[NASA-CASE-XGS-04767] c08 N71-12494

Ripple add and ripple subtract binary counters  
Patent  
[NASA-CASE-XGS-04766] c08 N71-18602

Apparatus for computing square roots Patent  
[NASA-CASE-XGS-04768] c08 N71-19437

Digitally controlled frequency synthesizer Patent  
[NASA-CASE-XGS-02317] c09 N71-23525

SCR lamp driver  
[NASA-CASE-GSC-10221-1] c09 N72-23171

Digital phase-locked loop  
[NASA-CASE-GSC-11623-1] c33 N75-25040

**CLIFF, W. C.**  
Wind measurement system  
[NASA-CASE-MFS-23362-1] c47 N77-10753

**CLINE, R. W.**  
Method and apparatus for optically monitoring  
the angular position of a rotating mirror  
[NASA-CASE-GSC-11353-1] c74 N74-21304

**CLOTFELTER, W. H.**  
Apparatus for the determination of the existence  
or non-existence of a bonding between two  
members Patent  
[NASA-CASE-MFS-13686] c15 N71-18132

Device for measuring the ferrite content in an  
austenitic stainless-steel weld  
[NASA-CASE-MFS-22907-1] c26 N76-18257

Method for measuring biaxial stress in a body  
subjected to stress inducing loads  
[NASA-CASE-MFS-23299-1] c39 N77-28511

**CLOUGH, L. G.**  
Driving lamps by induction  
[NASA-CASE-MFS-21214-1] c09 N73-30181

**COBIN, J. C.**  
Latching mechanism Patent

[NASA-CASE-MSC-15474-1] c15 N71-26162

**COCCA, P. J.**  
Method and apparatus for detecting surface ions  
on silicon diodes and transistors  
[NASA-CASE-ERC-10325] c15 N72-25457

**COB, H. H.**  
High-speed rolling element bearing  
[NASA-CASE-LEW-10856-1] c15 N72-22490

**COB, P. L., JR.**  
Supersonic transport  
[NASA-CASE-LAR-11932-1] c05 N78-32086

Propulsive lateral control nozzle  
[NASA-CASE-LAR-12136-1] c08 N81-33210

**COFFINBERRY, G. A.**  
Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12830-1] c07 N77-23106

Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12321-1] c37 N78-10467

Fuel delivery system including heat exchanger  
means  
[NASA-CASE-LEW-12793-1] c37 N79-11403

**COHEN, D.**  
Fluid sample collector Patent  
[NASA-CASE-XMS-06767-1] c14 N71-20435

**COHEN, E. A.**  
Audio frequency marker system  
[NASA-CASE-NPO-11147] c14 N72-27408

**COHEN, M. F.**  
Digital modulator and demodulator Patent  
[NASA-CASE-ERC-10041] c08 N71-29138

**COHEN, M. S.**  
Nitramine propellants  
[NASA-CASE-NPO-14103-1] c28 N78-31255

**COHEN, R. A.**  
A method for selective gold diffusion of  
monolithic silicon devices and/or circuits  
Patent application  
[NASA-CASE-ERC-10072] c09 N70-11148

Method and apparatus for stable silicon dioxide  
layers on silicon grown in silicon nitride  
ambient  
[NASA-CASE-ERC-10073-1] c24 N74-19769

**COHN, E. H.**  
Rechargeable battery which combats shape change  
of the zinc anode  
[NASA-CASE-BQN-10862-1] c44 N76-29699

**COHN, R. B.**  
Acoustical transducer calibrating system and  
apparatus  
[NASA-CASE-FRC-10060-1] c14 N73-27379

**COHN, S. B.**  
Dual band combiner for horn antenna  
[NASA-CASE-NPO-14519-1] c32 N80-23524

**COKER, L. B.**  
Quick disconnect latch and handle combination  
Patent  
[NASA-CASE-MFS-11132] c15 N71-17649

**COLBURN, H. E.**  
Automatic instrument for chemical processing to  
detect microorganism in biological samples by  
measuring light reactions  
[NASA-CASE-GSC-11169-2] c05 N73-32011

**COLE, H. A., JR.**  
Method and apparatus for measuring the damping  
characteristics of a structure  
[NASA-CASE-ARC-10154-1] c14 N72-22440

**COLE, H. A.**  
System for moving a probe to follow movements of  
tissue  
[NASA-CASE-NPO-15197-1] c52 N81-26697

**COLE, P. T.**  
Low friction magnetic recording tape Patent  
[NASA-CASE-IGS-00373] c23 N71-15978

System for recording and reproducing  
pulse code modulated data Patent  
[NASA-CASE-IGS-01021] c08 N71-21042

Friction measuring apparatus Patent  
[NASA-CASE-XNP-08680] c14 N71-22995

Helical recorder arrangement for multiple  
channel recording on both sides of the tape  
[NASA-CASE-GSC-10614-1] c09 N72-11224

**COLES, H. D.**  
Twisted multifilament superconductor  
[NASA-CASE-LEW-11726-1] c26 N73-26752

Method of fabricating a twisted composite  
superconductor  
[NASA-CASE-LEW-11015] c26 N73-32571

**COLLIER, L.**  
Garments for controlling the temperature of the

body Patent  
[NASA-CASE-XMS-10269] c05 N71-24147

**COLLIN, E. E.**  
Apparatus and method for skin packaging articles.  
[NASA-CASE-MFS-20855] c15 N73-27405

**COLLINS, D. D.**  
Simultaneous treatment of SO<sub>2</sub> containing stack  
gases and waste water  
[NASA-CASE-MSC-16258-1] c45 N79-12584

**COLLINS, D. F., JR.**  
Fluid power transmitting gas bearing Patent  
[NASA-CASE-ERC-1C097] c15 N71-28465

**COLLINS, E. R.**  
Automated multi-level vehicle parking system  
[NASA-CASE-NPO-13058-1] c37 N77-22480  
Geological assessment probe  
[NASA-CASE-NPO-14558-1] c46 N80-24906  
System for slicing silicon wafers  
[NASA-CASE-NPO-14406-1] c37 N80-29703

**COLLINS, E. R., JR.**  
Impact energy absorbing system utilizing  
fracturable material  
[NASA-CASE-NPO-10671] c15 N72-20443

**COLLINS, V. G.**  
Recovery of potable water from human wastes in  
below-G conditions Patent  
[NASA-CASE-XLA-03213] c05 N71-11207

**COLLINS, W. A.**  
Flight control system  
[NASA-CASE-MSC-13397-1] c21 N72-25595

**COLONY, J. A.**  
Phototropic composition of matter  
[NASA-CASE-XGS-03736] c14 N72-22443

**COMANT, J. E.**  
Television simulation for aircraft and space  
flight Patent  
[NASA-CASE-XFR-03107] c09 N71-19449

**CONE, C. D., JR.**  
Minimum induced drag airfoil body Patent  
[NASA-CASE-XLA-00755] c01 N71-13410  
Minimum induced drag airfoil body Patent  
[NASA-CASE-XLA-05828] c01 N71-13411  
Absolute focus lock for microscopes  
[NASA-CASE-LAR-10184] c14 N72-22445  
Process for control of cell division  
[NASA-CASE-LAR-10773-3] c51 N77-25769

**CONGER, C. C.**  
Inductance device with vacuum insulation  
[NASA-CASE-LEW-10330-1] c09 N72-27226

**CONIGLIO, G. V.**  
Petzval type objective including field shaping  
lens Patent  
[NASA-CASE-GSC-10700] c23 N71-30027

**CONN, J. H.**  
Moment of inertia test fixture Patent  
[NASA-CASE-XGS-01023] c14 N71-22992

**CONNELL, E. W.**  
Flexible joint for pressurizable garment  
[NASA-CASE-MSC-11072] c54 N74-32546

**CONNOLLY, D. J.**  
Traveling wave tube circuit  
[NASA-CASE-LEW-12013-1] c33 N79-10339  
Coupled cavity traveling wave tube with velocity  
tapering  
[NASA-CASE-LEW-12296-1] c33 N80-19425

**CONNOLLY, J. P.**  
Automatic real-time pair-feeding system for  
animals  
[NASA-CASE-ARC-10302-1] c51 N74-15778

**CONNORS, J. F.**  
Annular rocket motor and nozzle configuration  
Patent  
[NASA-CASE-XLE-00078] c28 N70-33284  
Annular supersonic decelerator or drogue Patent  
[NASA-CASE-XLE-00222] c02 N70-37939  
Penshape exhaust nozzle for supersonic engine  
Patent  
[NASA-CASE-XLE-00057] c28 N70-38711  
Telescoping-spike supersonic inlet for aircraft  
engines Patent  
[NASA-CASE-XLE-00005] c28 N70-39899  
Thrust and direction control apparatus Patent  
[NASA-CASE-XLE-03583] c31 N71-17629

**CONRAD, E. W.**  
Thrust vector control apparatus Patent  
[NASA-CASE-XLE-00208] c28 N70-34294  
Non-reusable kinetic energy absorber Patent  
[NASA-CASE-XLE-0C810] c15 N70-34861

**CONRAD, H. M.**  
Frequency modulation demodulator threshold  
extension device Patent  
[NASA-CASE-MSC-12165-1] c07 N71-33696

**CONSTANTINIDES, H. J.**  
Echo tracker/range finder for radars and sonars  
[NASA-CASE-NFO-14361-1] c32 N79-26253  
An electro-optical Doppler tracker means and  
method for optical correlation of synthetic  
aperture radar data  
[NASA-CASE-NPO-14998-1] c33 N81-15194

**CONWAY, E. J.**  
Method for detecting pollutants  
[NASA-CASE-LAR-11405-1] c45 N76-31714

**COOGAN, J. M.**  
Method of planetary atmospheric investigation  
using a split-trajectory dual flyby mode Patent  
[NASA-CASE-XAC-08494] c30 N71-15990

**COOK, T. A.**  
Metering gun for dispensing precisely measured  
charges of fluid  
[NASA-CASE-MFS-21163-1] c54 N74-17853

**COOK, W. M., JR.**  
Detector panels-micrometeoroid impact Patent  
[NASA-CASE-XLA-05906] c31 N71-16221

**COOLIDGE, J. E.**  
Data transfer system Patent  
[NASA-CASE-NPO-12107] c08 N71-27255

**COON, G. W.**  
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] c09 N71-23021  
Thermally cycled magnetometer Patent  
[NASA-CASE-XAC-03740] c14 N71-26135  
Trielectrode capacitive pressure transducer  
[NASA-CASE-ARC-10711-2] c33 N76-21390

**COOPER, C. R.**  
Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332] c05 N72-20097  
Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332-2] c05 N73-25125

**COOPER, D. W.**  
Generator for a space power system Patent  
[NASA-CASE-XLE-04250] c09 N71-20446  
Method of forming metal hydride films  
[NASA-CASE-LEW-12083-1] c37 N78-13436

**COOPER, L. F.**  
Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c07 N81-29129

**COOPER, W. E.**  
Collapsible Apollo couch  
[NASA-CASE-MSC-13140] c05 N72-11085

**COPELAND, J. T., JR.**  
High speed photo-optical time recording  
[NASA-CASE-KSC-10294] c14 N72-18411

**COBBIN, P. L.**  
Automatic fatigue test temperature programmer  
Patent  
[NASA-CASE-XLA-02059] c33 N71-24276

**COBLEY, R. C.**  
Method and apparatus for rapid thrust increases  
in a turbofan engine  
[NASA-CASE-LEW-12971-1] c07 N80-18039

**COBNETT, J. E.**  
Method and apparatus for rapid thrust increases  
in a turbofan engine  
[NASA-CASE-LEW-12971-1] c07 N80-18039  
Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c07 N81-19116

**CORNILLE, H. J., JR.**  
Stretch de-spin mechanism Patent  
[NASA-CASE-XGS-00619] c30 N70-40016

**CORNISE, S. D.**  
Flame detector operable in presence of proton  
radiation  
[NASA-CASE-MFS-21577-1] c19 N74-29410

**CORREALE, J. V.**  
Absorbent product and articles made therefrom  
[NASA-CASE-MSC-18223-1] c24 N81-16127

**CORSON, B. W., JR.**  
Nozzle Patent  
[NASA-CASE-XLA-00154] c28 N70-33374  
Cascade plug nozzle  
[NASA-CASE-LAR-11674-1] c07 N76-18117

**CORWIN, H. E.**  
Apparatus for determining thermophysical  
properties of test specimens

[NASA-CASE-LAR-11883-1] c09 N77-27131

**COSTAKOS, W. C.**  
Deployable flexible tunnel  
[NASA-CASE-MFS-22636-1] c37 N76-22540

**COSTEN, E. C.**  
Vortex generator for controlling the dispersion  
of effluents in a flowing liquid  
[NASA-CASE-LAR-12045-1] c34 N77-24423

**COSTES, E. C.**  
Self-recording portable soil penetrometer  
[NASA-CASE-MFS-20774] c14 N73-15420

**COSTOGUE, E. W.**  
Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c44 N79-24431

**COSTON, E. M.**  
Dual solid cryogen for spacecraft refrigeration  
Patent  
[NASA-CASE-GSC-10188-1] c23 N71-24725

**COTE, C. R.**  
Display for binary characters Patent  
[NASA-CASE-XGS-04967] c08 N71-20571

**COUCH, L. H.**  
Heat pipe cooled probe  
[NASA-CASE-LAR-12588-1] c44 N81-24525

**COUCH, R. H.**  
Apparatus for aiding a pilot in avoiding a  
midair collision between aircraft  
[NASA-CASE-LAR-10717-1] c21 N73-30641

Phase modulating with odd and even finite power  
series of a modulating signal  
[NASA-CASE-LAR-11607-1] c32 N77-14292

**COULBERT, C. D.**  
Multislot film cooled pyrolytic graphite rocket  
nozzle Patent  
[NASA-CASE-XNP-04389] c28 N71-20942

**COUVILLON, L. A., JR.**  
Signal-to-noise ratio estimating by taking ratio  
of mean and standard deviation of integrated  
signal samples Patent  
[NASA-CASE-XNP-05254] c07 N71-20791

Method and apparatus for frequency-division  
multiplex communications by digital phase  
shift of carrier  
[NASA-CASE-NPO-11338] c08 N72-25208

Apparatus for deriving synchronizing pulses from  
pulses in a single channel PCM communications  
system  
[NASA-CASE-NPO-11302-1] c07 N73-13149

Pseudonoise (PN) synchronization of data system  
with derivation of clock frequency from  
received signal for clocking receiver PN  
generator  
[NASA-CASE-XNP-03623] c09 N73-28084

Method and apparatus for a single channel  
digital communications system  
[NASA-CASE-NPO-11302-2] c32 N74-10132

**COWAN, J. J.**  
Holography utilizing surface plasmon resonances  
[NASA-CASE-MFS-22040-1] c35 N74-26946

**COWDIE, K. T.**  
Aircraft body-axis rotation measurement system  
[NASA-CASE-PRC-11043-1] c06 N81-22048

**COWELL, T. E.**  
Aerodynamic spike nozzle Patent  
[NASA-CASE-XGS-01143] c31 N71-15647

**COX, J. A.**  
Analog-to-digital converter  
[NASA-CASE-MSC-13110-1] c08 N72-22163

**COYNE, J. V.**  
Foldable beam  
[NASA-CASE-LAR-12077-1] c31 N81-25259

**CRABILL, H. L.**  
Control system for rocket vehicles Patent  
[NASA-CASE-XLA-01163] c21 N71-15582

**CRAIG, E. A.**  
Reduction of nitric oxide emissions from a  
combustor  
[NASA-CASE-ARC-10814-2] c07 N80-26298

**CRAWFORD, D. W.**  
Apparatus and method of inserting a  
microelectrode in body tissue or the like  
using vibration means  
[NASA-CASE-NPO-13910-1] c52 N79-27836

System for moving a probe to follow movements of  
tissue  
[NASA-CASE-NPO-15197-1] c52 N81-26697

**CRAWFORD, E.**  
Solar energy powered heliotrope  
[NASA-CASE-GSC-10945-1] c21 N72-31637

**CRAWFORD, E. F.**  
Foldable beam  
[NASA-CASE-LAR-12077-1] c31 N81-25259

**CRAWFORD, W. E.**  
Drive circuit for minimizing power consumption  
in inductive load Patent  
[NASA-CASE-NPO-10716] c09 N71-24892

**CREASY, W. K.**  
Shock absorber Patent  
[NASA-CASE-XMS-03722] c15 N71-21530

**CREE, D.**  
Amplifier drift tester  
[NASA-CASE-XMS-05562-1] c09 N69-39986

**CREE, R. F.**  
Catalyst for growth of boron carbide single  
crystal whiskers  
[NASA-CASE-IBQ-03903] c15 N69-21922

**CREEDON, J. F.**  
Weld-bonded titanium structures  
[NASA-CASE-LAR-11549-1] c37 N77-11397

**CREEL, T. E., JR.**  
Apparatus for determining thermophysical  
properties of test specimens  
[NASA-CASE-LAR-11883-1] c09 N77-27131

A rectangular rod-wall sound shield  
[NASA-CASE-LAR-12883-1] c09 N81-29138

**CREPBAU, P. C.**  
Flexible, repairable, portable material for  
electrical connectors Patent  
[NASA-CASE-IGS-05180] c18 N71-25881

**CRESS, S. B.**  
Coaxial inverted geometry transistor having  
buried emitter  
[NASA-CASE-ARC-10330-1] c09 N73-32112

**CRISSEY, J. R.**  
Display for binary characters Patent  
[NASA-CASE-XGS-04987] c08 N71-20571

**CREWS, J. H., JR.**  
Strain coupled servo control system Patent  
[NASA-CASE-XLA-08530] c32 N71-25360

**CRIBB, H. E.**  
Parasitic probe antenna Patent  
[NASA-CASE-IKS-09348] c09 N71-13521

Weatherproof helix antenna Patent  
[NASA-CASE-IKS-08485] c07 N71-19493

VHF/UHF parasitic probe antenna Patent  
[NASA-CASE-IKS-09340] c07 N71-24614

Validation device for spacecraft checkout  
equipment Patent  
[NASA-CASE-XKS-10543] c07 N71-26292

Protective suit having an audio transceiver Patent  
[NASA-CASE-KSC-10164] c07 N71-33108

Collapsible high gain antenna  
[NASA-CASE-KSC-10392] c07 N73-26117

**CROFT, R. H.**  
Personal propulsion unit Patent  
[NASA-CASE-MFS-20130] c28 N71-27585

**CROFTS, D. E.**  
Heat flux sensor assembly  
[NASA-CASE-XMS-05909-1] c14 N69-27459

**CROSWELL, E. F.**  
Omnidirectional microwave spacecraft antenna  
Patent  
[NASA-CASE-XLA-03114] c09 N71-22888

Stacked array of omnidirectional antennas  
[NASA-CASE-LAR-10545-1] c09 N72-21244

**CROUCH, C. E.**  
Coal-rock interface detector  
[NASA-CASE-MFS-23725-1] c43 N79-31706

**CROUCH, H. W.**  
Shrink-fit gas valve Patent  
[NASA-CASE-XGS-00587] c15 N70-35087

**CROUCH, R. K.**  
Vapor phase growth of groups 3-5 compounds by  
hydrogen chloride transport of the elements  
[NASA-CASE-LAR-11144-1] c25 N75-26043

**CROW, R. B.**  
Wide band doubler and sine wave quadrature  
generator  
[NASA-CASE-NPO-11133] c10 N72-20223

Filter for third order phase locked loops  
[NASA-CASE-NPO-11941-1] c10 N73-27171

Frequency discriminator and phase detector circuit  
[NASA-CASE-NPO-11515-1] c33 N77-13315

**CROWELL, R. T.**  
System for refurbishing and processing parachutes  
[NASA-CASE-KSC-11042-1] c02 N81-14967

System and method for refurbishing and  
processing parachutes

[NASA-CASE-KSC-11042-2]	c02 N81-26073	copolymers Patent	
CRUM, G. W.		[NASA-CASE-XMF-02584]	c06 N71-20905
Foot pedal operated fluid type exercising device		CURRY, K. C.	
[NASA-CASE-MSC-11561-1]	c05 N73-32014	Torsional disconnect unit	
CRUMPLEB, J. F.		[NASA-CASE-NFO-10704]	c15 N72-20445
Vacuum pressure molding technique		CURRY, B. E.	
[NASA-CASE-LAR-10073-1]	c37 N76-24575	Display research collision warning system	
CRUMPLEB, W. B.		[NASA-CASE-HQN-10703]	c21 N73-13643
All-directional fastener Patent		CURTIS, D. L.	
[NASA-CASE-XLA-01807]	c15 N71-10799	Life support system	
Multilegged support system Patent		[NASA-CASE-MSC-12411-1]	c05 N72-20096
[NASA-CASE-XLA-01326]	c11 N71-21481	CYGNAROWICZ, T. A.	
CRUTCHER, J. E.		System for and method of freezing biological tissue	
Isolation coupling arrangement for a torque measuring system		[NASA-CASE-GSC-12173-1]	c51 N79-10694
[NASA-CASE-XLA-04897]	c15 N72-22482	CZARCINSKI, E. A.	
CUBBISON, R. W.		Programmable telemetry system Patent	
Thrust and direction control apparatus Patent		[NASA-CASE-GSC-10131-1]	c07 N71-24624
[NASA-CASE-XLE-03583]	c31 N71-17629		
CUBLEY, H. D.			
Antenna array phase quadrature tracking system Patent			
[NASA-CASE-MSC-12205-1]	c07 N71-27056		
CUDDIHY, E. F.			
Method of making hollow elastomeric bodies			
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Myocardium wall thickness transducer and measuring method			
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Catheter tip force transducer for cardiovascular research			
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Multifunctional transducer			
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Static pressure orifice system testing method and apparatus			
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Process for preparing liquid metal electrical contact device			
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Liquid metal slip ring			
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Potable water dispenser			
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Automatic thermal switch			
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CUNNINGHAM, R. E.			
Hydrostatic bearing support			
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CURREN, A. H.			
Ion sputter textured graphite			
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Bi-carrier demodulator with modulation Patent			
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Transistor servo system including a unique differential amplifier circuit Patent			
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Pulse width inverter Patent			
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Multi-channel temperature measurement amplification system			
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Solar energy control system			
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Photoelectric detection system			
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CURRIE, R. E., JR.			
Relay binary circuit Patent			
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CURRY, J. E.			
Method of producing alternating ether siloxane			

## D

DARGES, J. J.			
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Clear air turbulence detector			
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Focused laser Doppler velocimeter			
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Wind measurement system			
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DALEDA, J. J.			
Multi-purpose wind tunnel reaction control model block			
[NASA-CASE-MSC-19706-1]	c09 N78-31129		
DAILEY, C. C.			
Microwave power receiving antenna Patent			
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Method of and means for testing a glancing-incidence mirror system of an X-ray telescope			
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Method of fabricating an article with cavities			
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Bonding method in the manufacture of continuous regression rate sensor devices			
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DALELIO, G. F.			
Synthesis of polymeric schiff bases by schiff-base exchange reactions Patent			
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Direct synthesis of polymeric schiff bases from two amines and two aldehydes Patent			
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Azine polymers and process for preparing the same Patent			
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Synthesis of polymeric schiff bases by reaction of acetals and amine compounds Patent			
[NASA-CASE-XMF-08652]	c06 N71-11243		
Aromatic diamine-aromatic dialdehyde high molecular weight Schiff base polymers prepared in a monofunctional Schiff base Patent			
[NASA-CASE-XMF-03074]	c06 N71-24740		
DALY, W. E.			
Fault tolerant clock apparatus utilizing a controlled minority of clock elements			
[NASA-CASE-MSC-12531-1]	c35 N75-30504		
DANE, J. E.			
High-torque open-end wrench			
[NASA-CASE-NFO-13541-1]	c37 N79-14383		
DANERON, C. E.			
Instrument for measuring potentials on two dimensional electric field plots Patent			
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DANNIG, A. H., JR.			
Capacitive tank gaging apparatus being independent of liquid distribution			
[NASA-CASE-MFS-21629]	c14 N72-22442		
DANCHENKO, V.			
Radiation hardening of MOS devices by boron			
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[NASA-CASE-GSC-11425-2]	c76 N75-25730		
DANE, D. H.			
Harness assembly Patent			
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Air cushion lift pad Patent [NASA-CASE-MFS-14685]	c31 N71-15689	Solar energy power system [NASA-CASE-MFS-21626-2]	c44 N76-23675
Batchet mechanism Patent [NASA-CASE-MFS-12805]	c15 N71-17805	DAVIS, D. C. Fatigue failure load indicator [NASA-CASE-LAR-12027-1]	c39 N79-22537
Mechanical simulator of low gravity conditions Patent [NASA-CASE-MFS-10555]	c11 N71-19494	DAVIS, D. P. Quick disconnect coupling [NASA-CASE-MFO-11202]	c15 N72-25450
Mechanically actuated triggered hand [NASA-CASE-MFS-20413]	c15 N72-21463	DAVIS, E. J. Cable stabilizer for open shaft cable operated elevators [NASA-CASE-KSC-10513]	c15 N72-25453
Sprag solenoid brake [NASA-CASE-MFS-21846-1]	c37 N74-26976	DAVIS, E. S. Anti-glare improvement for optical imaging systems Patent [NASA-CASE-MFO-10337]	c14 N71-15604
Orthotic arm joint [NASA-CASE-MFS-21611-1]	c54 N75-12616	Radiant energy intensity measurement system Patent [NASA-CASE-XNP-06510]	c14 N71-23797
Remote manipulator system [NASA-CASE-MFS-22022-1]	c37 N76-15460	Reference voltage switching unit [NASA-CASE-MFO-11253]	c09 N72-17157
DANELIS, J. V. Indomethacin-antihistamine combination for gastric ulceration control [NASA-CASE-ARC-11118-1]	c52 N81-25764	DAVIS, J. G., JR. Tube fabricating process [NASA-CASE-LAR-10203-1]	c15 N72-16330
DANGLE, E. E. Rocket engine Patent [NASA-CASE-XLE-00342]	c28 N70-37980	DAVIS, J. P. Multiducted electromagnetic pump Patent [NASA-CASE-MFO-10755]	c15 N71-27084
DANIELS, H. J. Adaptive tracking notch filter system Patent [NASA-CASE-XMF-01892]	c10 N71-22986	Shell side liquid metal boiler [NASA-CASE-MFO-10831]	c33 N72-20915
DANSKIN, J. H. Fuel injection pump for internal combustion engines Patent [NASA-CASE-MSC-12139-1]	c28 N71-14058	Uninsulated in-core thermionic diode [NASA-CASE-MFO-10542]	c09 N72-27228
DARCEY, R. J. Satellite communication system and method Patent [NASA-CASE-GSC-10118-1]	c07 N71-24621	DAVIS, J. W. Burst diaphragm flow initiator Patent [NASA-CASE-MFS-12915]	c11 N71-17600
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DARROW, W. E., JR. Collapsible nozzle extension for rocket engines Patent [NASA-CASE-MFS-11497]	c28 N71-16224	Altitude simulation chamber for rocket engine testing [NASA-CASE-MFS-20620]	c11 N72-27262
DASGUPTA, K. Dual purpose optical instrument capable of simultaneously acting as spectrometer and diffractometer [NASA-CASE-XNP-05231]	c14 N73-28491	DAVIS, L. P. Isolation coupling arrangement for a torque measuring system [NASA-CASE-ILA-04897]	c15 N72-22482
DASTOOR, H. H. Enhancement of in vitro Guayule propagation [NASA-CASE-MPO-15213-1]	c51 N81-29728	DAVIS, H. S. Decomposition unit Patent [NASA-CASE-XMS-00583]	c28 N70-38504
DAUD, T. Copper doped polycrystalline silicon solar cell [NASA-CASE-MPO-14670-1]	c44 N81-19558	DAVIS, W. T. Strain coupled servo control system Patent [NASA-CASE-XLA-08530]	c32 N71-25360
DAVID-HALIG, H. A. Method and tool for machining a transverse slot about a bore [NASA-CASE-LAR-11855-1]	c37 N81-14319	Fatigue failure load indicator [NASA-CASE-LAR-12027-1]	c39 N79-22537
DAVID, H. H. Insulated electrocardiographic electrodes [NASA-CASE-MSC-14339-1]	c05 N75-24716	DAVISON, E. H. Meteoroid sensing apparatus having a coincidence network connected to a pair of capacitors Patent [NASA-CASE-XLE-01246]	c14 N71-10797
DAVIDS, L. H. Guidance and maneuver analyzer Patent [NASA-CASE-XNP-09572]	c14 N71-15621	DAVISON, H. W. Gaseous control system for nuclear reactors [NASA-CASE-XLE-04599]	c22 N72-20597
DAVIDSON, A. C. Spacecraft attitude sensor [NASA-CASE-GSC-10890-1]	c21 N73-30640	DAWN, F. S. Burn rate testing apparatus [NASA-CASE-XMS-09690]	c33 N72-25913
DAVIDSON, G. A. Compact spectroradiometer [NASA-CASE-HQH-10683]	c14 N71-34389	Lightweight electrically-powered flexible thermal laminate [NASA-CASE-MSC-12662-1]	c33 N79-12331
DAVIDSON, J. K. Ripple indicator [NASA-CASE-KSC-10162]	c09 N72-11225	Absorbent product and articles made therefrom [NASA-CASE-MSC-18223-1]	c24 N81-16127
DAVIDSON, J. S. W. Centrifuge mounted motion simulator Patent [NASA-CASE-XAC-00399]	c11 N70-34815	DAY, J. L. Electrode for biological recording [NASA-CASE-XMS-02872]	c05 N69-21925
DAVIES, W. D. T. Correlation type phase detector [NASA-CASE-GSC-11744-1]	c33 N75-26243	Pressed disc type sensing electrodes with ion- screening means Patent [NASA-CASE-XMS-04212-1]	c05 N71-12346
DAVIS, A. J. Fiber optic vibration transducer and analyzer Patent [NASA-CASE-XMF-02433]	c14 N71-10616	Method of making a perspiration resistant biopotential electrode [NASA-CASE-MSC-90153-2]	c05 N72-25120
DAVIS, B. K. Spectral method for monitoring atmospheric contamination of inert-gas welding shields Patent [NASA-CASE-XMF-02039]	c15 N71-15871	DAYAN, V. H. Hydrogen leak detection device Patent [NASA-CASE-MFS-11537]	c14 N71-20442
Stud-bonding gun [NASA-CASE-MFS-20299]	c15 N72-11392	DEADMORE, D. L. A silicon-slurry/aluminide coating [NASA-CASE-LEW-13343-1]	c24 N80-26389
Solar energy power system [NASA-CASE-MFS-21628-1]	c44 N75-32581	DEATON, E. T., JR. Contour measurement system [NASA-CASE-MFS-23726-1]	c43 N79-26439
		DEBNAB, W. J. J. Magnetometer with a miniature transducer and automatic scanning [NASA-CASE-LAR-11617-2]	c35 N78-32397

DEBNAH, H. J., JR.  
Vapor phase growth of groups 3-5 compounds by hydrogen chloride transport of the elements  
[NASA-CASE-LAR-11144-1] c25 N75-26043

DEBOO, G. J.  
Gyrator type circuit Patent  
[NASA-CASE-XAC-10606-1] c09 N71-12517  
Feedback integrator with grounded capacitor Patent  
[NASA-CASE-XAC-10607] c10 N71-23669  
Precision rectifier with FET switching means Patent  
[NASA-CASE-ARC-10101-1] c09 N71-33109  
Phase shift circuit apparatus  
[NASA-CASE-ARC-10269-1] c10 N72-16172  
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[NASA-CASE-ARC-10467-1] c09 N73-14214  
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[NASA-CASE-ARC-10264-1] c09 N73-20231  
Electrical short locator  
[NASA-CASE-ARC-11116-1] c33 N79-31498

DECARLO, F. S.  
Failure detection and control means for improved drift performance of a gimbaled platform system  
[NASA-CASE-MFS-23551-1] c04 N76-26175

DECKER, A. J.  
High powered arc electrodes  
[NASA-CASE-LEW-11162-1] c33 N74-12913

DEDOLPH, R. D.  
Rotary plant growth accelerating apparatus  
[NASA-CASE-ARC-10722-1] c51 N75-25503

DEERKOSKI, L. F.  
Signal-to-noise ratio determination circuit  
[NASA-CASE-GSC-11239-1] c10 N73-25241  
Switchable beamwidth monopulse method and system  
[NASA-CASE-GSC-11924-1] c33 N76-27472  
Pseudo noise code and data transmission method and apparatus  
[NASA-CASE-GSC-12017-1] c32 N77-20308

DEPURIA, R. R.  
Fluid power transmitting gas bearing Patent  
[NASA-CASE-ERC-10097] c15 N71-28465

DEGENER, H. D.  
Traversing probe Patent  
[NASA-CASE-XFR-02007] c12 N71-24692

DEGRASSE, R. W.  
Folded traveling wave maser structure Patent  
[NASA-CASE-XNP-05219] c16 N71-15550

DEIS, B. C.  
Traveling sealer for contoured table Patent  
[NASA-CASE-XLA-01494] c15 N71-24164

DEL CASALE, L. A.  
Signal generator  
[NASA-CASE-XNP-05612] c09 N69-21468

DEL CURTO, B.  
System for monitoring the presence of neutrals in a stream of ions Patent  
[NASA-CASE-XNP-02592] c24 N71-20518

DEL DUCA, A.  
Electronic divider and multiplier using photocells Patent  
[NASA-CASE-XPR-05637] c09 N71-15480

DELANO, C. B.  
Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c27 N78-31232

DELAFLAINE, R. W.  
Rotary leveling base platform  
[NASA-CASE-ARC-10981-1] c37 N78-27425  
Sweat collection capsule  
[NASA-CASE-ARC-11031-1] c52 N81-29763

DELATEUR, L. A.  
Emergency earth orbital escape device  
[NASA-CASE-MSC-13281] c31 N72-18859

DELBREGO, D. J.  
Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c36 N75-15028

DELIOBACK, L. H.  
A system for concurrently delivering a stream of powdered fuel and a stream of powdered oxidizer to a combustion chamber for a reaction motor  
[NASA-CASE-MFS-23904-1] c20 N79-13077

DELUCA, J. J.  
Segmented superconducting magnet for a broadband traveling wave maser Patent  
[NASA-CASE-XGS-10518] c16 N71-28554  
Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
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Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
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DELVIGS, P.  
Preparation of polyimides from mixtures of monomeric diamines and esters of polycarboxylic acids  
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Curing agent for polyepoxides and epoxy resins and composites cured therewith  
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Composition and method for making polyimide resin-reinforced fabric  
[NASA-CASE-LEW-12933-1] c27 N81-19296

DELVISS, P.  
Low temperature cross linking polyimides  
[NASA-CASE-LEW-12876-1] c27 N80-26447

DERING, J.  
Rapid, quantitative determination of bacteria in water  
[NASA-CASE-GSC-12158-1] c51 N78-22585

DERING, J. W.  
Determination of antimicrobial susceptibilities on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c52 N79-14750

DEMOGHEES, C.  
Low cycle fatigue testing machine  
[NASA-CASE-LAR-10270-1] c32 N72-25877

DEMAREST, K. E.  
Self-lubricating gears and other mechanical parts Patent  
[NASA-CASE-MFS-14971] c15 N71-24984

DEMPSEY, T. K.  
Ride quality meter  
[NASA-CASE-LAR-12882-1] c54 N81-31848

DENACI, D. E.  
Clamping assembly for inertial components Patent  
[NASA-CASE-XMS-02184] c15 N71-20813

DEO, H.  
Dual purpose momentum wheels for spacecraft with magnetic recording  
[NASA-CASE-NPO-11481] c21 N73-13644

DERING, V. G.  
Vortex breech high pressure gas generator  
[NASA-CASE-LAR-10549-1] c31 N73-13898

DEER, L. J.  
Direct radiation cooling of the collector of linear beam tubes  
[NASA-CASE-XNP-09227] c15 N69-24319  
Temperature-compensating means for cavity resonator of amplifier Patent  
[NASA-CASE-XNP-00449] c14 N70-35220  
Electron beam tube containing a multiple cathode array employing indexing means for cathode substitution Patent  
[NASA-CASE-NPO-10625] c09 N71-26182  
Thermostatic actuator  
[NASA-CASE-NPO-10637] c15 N72-12409  
Thermal motor  
[NASA-CASE-NPO-11283] c09 N72-25260  
Electrostatically controlled heat shutter  
[NASA-CASE-NPO-11942-1] c33 N73-32818

DESCAMP, V. A.  
Filter regeneration systems  
[NASA-CASE-MSC-14273-1] c34 N75-33342

DESTESSE, J. G.  
Thermionic tantalum emitter doped with oxygen Patent Application  
[NASA-CASE-NPO-11138] c03 N70-34646

DETLING, J. R.  
Retractable environmental seal  
[NASA-CASE-MFS-23646-1] c37 N79-22474

DETWILLER, R. E.  
High isolation RF signal selection switches  
[NASA-CASE-NPO-13081-1] c33 N74-22814

DEVINE, D. J.  
Electrical short locator  
[NASA-CASE-ARC-11116-1] c33 N79-31498

DEVINE, R. J.  
Optical tracker having overlapping reticles on parallel axes Patent  
[NASA-CASE-XGS-05715] c23 N71-16100

DEWHIRST, D. L.  
Deformable vehicle wheel Patent  
[NASA-CASE-MFS-20400] c31 N71-18611

DEWITT, R. L.  
Fluid coupling Patent  
[NASA-CASE-XLE-00397] c15 N70-36492

**DEYOUNG, R. J.**  
 Volumetric direct nuclear pumped laser  
 [NASA-CASE-LAR-12183-1] c36 N79-18307  
 Large volume multiple path nuclear pumped laser  
 [NASA-CASE-LAR-12592-1] c36 N79-26385

**DI LOSA, V. J.**  
 Diversity receiving system with diversity phase lock Patent  
 [NASA-CASE-XGS-01222] c10 N71-20841

**DIAMOND, D. D.**  
 Stator rotor tools  
 [NASA-CASE-MSC-16000-1] c37 N78-24544

**DIAMOND, R. H.**  
 Central spar and module joint Patent  
 [NASA-CASE-XNP-02341] c15 N71-21531

**DIBATTISTA, J. D.**  
 Determining particle density using known material Hugoniot curves  
 [NASA-CASE-LAR-11059-1] c76 N75-12810  
 Meteoroid impact position locator aid for manned space station  
 [NASA-CASE-LAR-10629-1] c35 N75-33367

**DICKENS, L. E.**  
 Millimeter wave pumped parametric amplifier  
 [NASA-CASE-GSC-11617-1] c33 N74-32660

**DICKINSON, G. E.**  
 Composite lamination method  
 [NASA-CASE-LAR-12019-1] c24 N78-17150

**DICKINSON, R. H.**  
 Microwave power converter  
 [NASA-CASE-NPO-14068-1] c44 N78-15609  
 Thin conformal antenna array for microwave power conversions  
 [NASA-CASE-NPO-13886-1] c32 N78-24391  
 RF beam center location method and apparatus for power transmission system  
 [NASA-CASE-NPO-13821-1] c44 N78-28594  
 Microwave power transmission beam safety system  
 [NASA-CASE-NPO-14224-1] c33 N80-18287

**DIETRICH, F. J.**  
 Amplitude steered array  
 [NASA-CASE-GSC-11446-1] c33 N74-20860

**DILL, W. P.**  
 Method and automated apparatus for detecting coliform organisms  
 [NASA-CASE-MSC-16777-1] c51 N80-27067

**DILLARD, P. A.**  
 Method of fabricating a photovoltaic module of a substantially transparent construction  
 [NASA-CASE-NPO-14303-1] c44 N80-18550

**DILLOH, B. F., JR.**  
 Shock absorbing mount for electrical components  
 [NASA-CASE-NPO-13253-1] c37 N75-18573

**DIMEFF, J.**  
 Cryogenic apparatus for measuring the intensity of magnetic fields  
 [NASA-CASE-XAC-02407] c14 N69-27423  
 Apparatus for coupling a plurality of ungrounded circuits to a grounded circuit Patent  
 [NASA-CASE-XAC-00086] c09 N70-33182  
 Two-plane balance Patent  
 [NASA-CASE-XAC-00073] c14 N70-34813  
 Differential pressure cell Patent  
 [NASA-CASE-XAC-00042] c14 N70-34816  
 High speed low level electrical stepping switch Patent  
 [NASA-CASE-XAC-00060] c09 N70-39915  
 Dynamic sensor Patent  
 [NASA-CASE-XAC-02877] c14 N70-41681  
 Electrostatic charged particle analyzer having deflection members shaped according to the periodic voltage applied thereto Patent  
 [NASA-CASE-XAC-05506-1] c24 N71-16095  
 Inertial reference apparatus Patent  
 [NASA-CASE-XAC-03107] c23 N71-16098  
 Thermal detector of electromagnetic energy by means of a vibrating electrode Patent  
 [NASA-CASE-XAC-10768] c09 N71-18830  
 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] c09 N71-23021  
 Wide range dynamic pressure sensor  
 [NASA-CASE-ARC-10263-1] c14 N72-22438  
 Nondispersive gas analyzing method and apparatus wherein radiation is serially passed through a reference and unknown gas  
 [NASA-CASE-ARC-10388-1] c06 N72-31141

Chromato-fluorographic drug detector  
 [NASA-CASE-ARC-10633-1] c25 N74-26947  
 Diode-quad bridge circuit means  
 [NASA-CASE-ARC-10364-3] c33 N75-19520  
 Diode-quad bridge circuit means  
 [NASA-CASE-ARC-10364-2] c33 N75-25041  
 NDIR gas analyzer based on absorption modulation ratios for known and unknown samples  
 [NASA-CASE-ARC-10802-1] c35 N75-36502  
 Modulated hydrogen ion flame detector  
 [NASA-CASE-ARC-10322-1] c35 N76-18403  
 Method and apparatus for compensating reflection losses in a path length modulated absorption-absorption trace gas detector  
 [NASA-CASE-ARC-10631-1] c74 N76-20958  
 Nulling device for detection of trace gases by NDIR absorption  
 [NASA-CASE-ARC-10760-1] c25 N76-22323  
 Integrated structure vacuum tube  
 [NASA-CASE-ARC-10445-1] c31 N76-31365  
 Optically selective, acoustically resonant gas detecting transducer  
 [NASA-CASE-ARC-10639-1] c35 N78-13400

**DIX, M. G.**  
 Demodulation system Patent  
 [NASA-CASE-XAC-04030] c10 N71-19472

**DIXON, G. V.**  
 Active vibration isolator for flexible bodies Patent  
 [NASA-CASE-LAR-10106-1] c15 N71-27169

**DOBIES, E. F.**  
 Cyclically operable optical shutter  
 [NASA-CASE-NPO-10758] c14 N73-14427

**DOD, L. R.**  
 Plural beam antenna  
 [NASA-CASE-GSC-11013-1] c09 N73-19234

**DOGGETT, R. V., JR.**  
 Aeroelastic instability stoppers for wind-tunnel models  
 [NASA-CASE-LAR-12720-1] c09 N81-31229  
 Aeroelastic instability stoppers for wind-tunnel models  
 [NASA-CASE-LAR-12458-1] c09 N81-31230

**DOIAND, G. D.**  
 Method and apparatus for decoding compatible convolutional codes  
 [NASA-CASE-MSC-14070-1] c32 N74-32598  
 Secure communication system  
 [NASA-CASE-MSC-16462-1] c32 N78-25274  
 Phased array antenna control  
 [NASA-CASE-MSC-14939-1] c32 N79-11264

**DOLLAND, C. R.**  
 Combinational logic for generating gate drive signals for phase control rectifiers  
 [NASA-CASE-MPS-25208-1] c33 N81-27402  
 Adaptive control system for line-commutated inverters  
 [NASA-CASE-MPS-25209-1] c33 N81-31480  
 Adaptive reference voltage generator for firing angle control of line-commutated inverters  
 [NASA-CASE-MPS-25215-1] c33 N81-31481

**DOLLYHIGH, S. M.**  
 Metric half-span model support system  
 [NASA-CASE-LAR-12441-1] c09 N80-24334

**DONAS, P. A.**  
 Redundant disc  
 [NASA-CASE-LEW-12496-1] c07 N78-33101

**DOBROWSKI, H. G.**  
 Adjustable tension wire guide Patent  
 [NASA-CASE-XMS-02383] c15 N71-15918

**DONALDSON, B. W., JR.**  
 Gas chromatograph injection system  
 [NASA-CASE-ARC-10344-2] c35 N75-26334

**DONNELLY, P. C.**  
 Prevention of pressure build-up in electrochemical cells Patent  
 [NASA-CASE-XGS-01419] c03 N70-41864

**DONNINI, J. M.**  
 Hydrogen fire blink detector  
 [NASA-CASE-MPS-15063] c14 N72-25412

**DONOHUE, J. H.**  
 Passive dual spin misalignment compensators  
 [NASA-CASE-GSC-11479-1] c35 N74-28097  
 Active nutation controller  
 [NASA-CASE-GSC-12273-1] c35 N80-21719

**DONOVAN, B. P.**  
 Artificial gravity spin deployment system Patent  
 [NASA-CASE-XNP-02595] c31 N71-21881



DOHOVAN, G.  
Drying apparatus for photographic sheet material  
[NASA-CASE-GSC-11074-1] c14 N73-28489

DOHOVAN, B. P.  
Particulate and aerosol detector  
[NASA-CASE-LAR-11434-1] c35 N76-22509

DOONG, H.  
Analog to digital converter Patent  
[NASA-CASE-XLA-00670] c08 N71-12501  
Controllable high voltage source having fast  
settling time  
[NASA-CASE-GSC-11844-1] c33 N75-19522

DORBE, A.  
Nose cone mounted heat resistant antenna Patent  
[NASA-CASE-XMS-04312] c07 N71-22984

DOTSON, W. P., JR.  
Digital to analog conversion apparatus  
[NASA-CASE-MSC-12458-1] c08 N73-32081

DOTTS, B. L.  
Thermal insulation protection means  
[NASA-CASE-MSC-12737-1] c24 N79-25142  
Improved attachment system for silica tiles  
[NASA-CASE-MSC-18741-1] c16 N81-16110

DOUGHERTY, H. B.  
Rotary solenoid shutter drive assembly and  
rotary inertia damper and stop plate assembly  
[NASA-CASE-GSC-11560-1] c33 N74-20861

DOUGHTY, R. A.  
Automatic signal range selector for metering  
devices Patent  
[NASA-CASE-XMS-06497] c14 N71-26244

DOUGLAS, J.  
Process of casting heavy slips Patent  
[NASA-CASE-XLE-00106] c15 N71-16076

DOUGLAS, J. L.  
Maximum power point tracker Patent  
[NASA-CASE-GSC-10376-1] c14 N71-27407

DOW, M. B.  
Vacuum pressure molding technique  
[NASA-CASE-LAR-10073-1] c37 N76-24575

DOW, N. F.  
Two component bearing Patent  
[NASA-CASE-XLA-00013] c15 N71-25136

DOWLER, W. L.  
Solid propellant rocket motor nozzle  
[NASA-CASE-NPO-11458] c28 N72-23810  
Solid propellant rocket motor  
[NASA-CASE-NPO-11559] c28 N73-24784  
Seismic vibration source  
[NASA-CASE-NPO-14112-1] c46 N79-22679

DOWNING, R. G.  
Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c44 N79-24431

DOWNS, W. R.  
Transpirationally cooled heat ablation system  
Patent  
[NASA-CASE-XMS-02677] c31 N70-42075  
Method for obtaining oxygen from lunar or  
similar soil  
[NASA-CASE-MSC-12408-1] c46 N74-13011

DOYLE, J. C.  
Measuring device Patent  
[NASA-CASE-XMS-01546] c14 N70-40233

DREISBACH, F. R.  
Film advance indicator  
[NASA-CASE-LAR-12474-1] c35 N80-31774

DRESHFIELD, B. L.  
Cobalt-base alloy  
[NASA-CASE-LEW-10436-1] c17 N73-32415

DRESSEN, H. S.  
Multi-purpose wind tunnel reaction control model  
block  
[NASA-CASE-MSC-19706-1] c09 N78-31129

DREXHAGE, M. G.  
Injection head for delivering liquid fuel and  
oxidizers  
[NASA-CASE-NPO-10046] c28 N72-17843

DREYFUS, M. G.  
Wedge immersed thermistor bolometers  
[NASA-CASE-XGS-01245-1] c35 N79-33449

DRISCOLL, K. L.  
Means for accommodating large overstrain in lead  
wires  
[NASA-CASE-LAR-10168-1] c33 N74-22865

DROST, E. J.  
Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c43 N79-25443

DRUMMOND, A. S.  
Flexible back-up bar Patent  
[NASA-CASE-XMF-00722] c15 N70-40204

DU PONT, P. S.  
Solar panel fabrication Patent  
[NASA-CASE-XNF-03413] c03 N71-26726

DUBEY, M.  
Central spar and module joint Patent  
[NASA-CASE-XNF-02341] c15 N71-21531

DUBOIS, R. D.  
Guide for a typewriter  
[NASA-CASE-MFS-15218-1] c37 N77-19457

DUBUSKER, W.  
Apparatus for welding sheet material  
[NASA-CASE-XMS-01330] c37 N75-27376

DUFFY, J. O.  
Minimal logic block encoder Patent  
[NASA-CASE-NFO-10595] c10 N71-25917

DUNABETZ, R. A.  
Flexible, repairable, pottable material for  
electrical connectors Patent  
[NASA-CASE-IGS-05180] c18 N71-25881

DUNAVANT, J. C.  
Hot air balloon deceleration and recovery system  
Patent  
[NASA-CASE-XLA-06824-2] c02 N71-11037

DUNN, J. G.  
Satellite interlace synchronization system  
[NASA-CASE-GSC-10390-1] c07 N72-11149

DUNN, J. H.  
Foldable conduit Patent  
[NASA-CASE-XLE-00620] c32 N70-41579

DUNN, S. T.  
Ellipsoidal mirror reflectometer including means  
for averaging the radiation reflected from the  
sample Patent  
[NASA-CASE-IGS-05291] c23 N71-16341

DUNN, W. F.  
Water separator  
[NASA-CASE-XMS-01295-1] c37 N79-21345

DUNN, W. R.  
Coaxial inverted geometry transistor having  
buried emitter  
[NASA-CASE-ABC-10330-1] c09 N73-32112

DUNNAVANT, W. R.  
Process for preparation of dianilinosilanes Patent  
[NASA-CASE-XMF-06409] c06 N71-23230  
Process for preparation of high-molecular-  
weight polyaryloxysilanes Patent  
[NASA-CASE-XMF-08674] c06 N71-28807

DUNNING, J. W., JR.  
Slug flow magnetohydrodynamic generator  
[NASA-CASE-XLE-02083] c03 N69-39983

DUPRAW, W. A.  
Analytical test apparatus and method for  
determining oxide content of alkali metal Patent  
[NASA-CASE-XLE-01997] c06 N71-23527

DURAN, R. E.  
Subminiature insertable force transducer  
[NASA-CASE-NPO-13423-1] c33 N75-31329  
Miniature muscle displacement transducer  
[NASA-CASE-NFO-13519-1] c33 N76-19338

DURNEY, G. P.  
Space suit  
[NASA-CASE-MSC-12609-1] c05 N73-32012

DUSTIN, M. O.  
Pneumatic oscillator Patent  
[NASA-CASE-LEW-10345-1] c10 N71-25899  
Shock position sensor for supersonic inlets  
[NASA-CASE-LEW-11915-1] c35 N76-14431

DWINELL, W. S.  
System for automatically switching transformer  
coupled lines  
[NASA-CASE-MSC-16697-1] c33 N79-28415

## E

EASLEY, W. C.  
Resonant waveguide stark cell  
[NASA-CASE-LAR-11352-1] c33 N75-26245

EASTERLING, H. R.  
Baseband signal combiner for large aperture  
antenna array  
[NASA-CASE-NPO-14641-1] c32 N81-29308

EASTERLING, H. P.  
Radar ranging receiver Patent  
[NASA-CASE-XNF-00748] c07 N70-36911  
Phase-locked loop with sideband rejecting  
properties Patent  
[NASA-CASE-XNF-02723] c07 N70-41680

Time synchronization system utilizing moon reflected coded signals Patent [NASA-CASE-NPO-10143] c10 N71-26326

Two carrier communication system with single transmitter [NASA-CASE-NPO-11548] c07 N73-26118

Radio frequency arraying method for receivers [NASA-CASE-NPO-14328-1] c32 N80-16253

**EASTON, R. A.**  
Data multiplexer using tree switching configuration [NASA-CASE-NPO-11333] c08 N72-22162

Flexible computer accessed telemetry [NASA-CASE-NPO-11358] c07 N72-25172

**EATON, L. E.**  
Heat transfer device [NASA-CASE-MFS-22938-1] c34 N76-18374

**EBBERSOLE, T. J.**  
Inverter ratio failure detector [NASA-CASE-NFO-13160-1] c35 N74-18090

**EBIHARA, B. T.**  
Thermal radiation shielding Patent [NASA-CASE-XLE-03432] c33 N71-24145

**EBY, R. J.**  
Thermal control system for a spacecraft modular housing [NASA-CASE-GSC-11018-1] c31 N73-3C829

**ECKERT, E. R. G.**  
Transpiration cooled turbine blade manufactured from wires Patent [NASA-CASE-XLE-00020] c15 N70-33226

**ECKLES, P. M.**  
High-speed infrared furnace [NASA-CASE-XLE-10466] c17 N69-25147

**ECONOHU, M. A.**  
Wire stripper [NASA-CASE-FRC-10111-1] c37 N75-1C419

Air speed and attitude probe [NASA-CASE-FRC-11009-1] c06 N80-18036

**ECORD, G. E.**  
Densification of porous refractory substrates [NASA-CASE-MS-C-18737-1] c25 N81-29180

Method of repairing surface damage to porous refractory substrates [NASA-CASE-MS-C-18736-1] c27 N81-29231

**EDDINS, T. O.**  
Space craft soft landing system Patent [NASA-CASE-XMF-02108] c31 N70-36845

Missile launch release system Patent [NASA-CASE-XMF-03198] c30 N70-40353

**EDLESON, S. K.**  
Latch/ejector unit Patent [NASA-CASE-XLA-03538] c15 N71-24897

**EDMAN, C. E.**  
Electrical switching device Patent [NASA-CASE-NPO-10037] c09 N71-19610

**EDWARDS, G. G.**  
Flight craft Patent [NASA-CASE-XAC-02058] c02 N71-16087

**EDWARDS, J. W.**  
Apparatus for damping operator induced oscillations of a controlled system [NASA-CASE-FRC-11041-1] c33 N80-2C488

**EDWARDS, T. R.**  
Filtering device [NASA-CASE-MFS-22729-1] c32 N76-21366

**EGGEE, R. L.**  
Strain gage Patent Application [NASA-CASE-FRC-10053] c14 N70-35587

**EGGERS, A. J., JR.**  
Flight craft Patent [NASA-CASE-XAC-02058] c02 N71-16087

**EGLI, P. H.**  
Method of forming transparent films of ZnO [NASA-CASE-FRC-10019] c15 N73-12487

**EHRENFELD, D. A.**  
Excitation and detection circuitry for a flux responsive magnetic head [NASA-CASE-XNP-04183] c09 N69-24329

Incremental tape recorder and data rate converter Patent [NASA-CASE-XNP-02778] c08 N71-22710

**RICHHRENNER, F. F.**  
Hydraulic grip Patent [NASA-CASE-XLA-05100] c15 N71-17696

Light shield and infrared reflector for fatigue testing Patent [NASA-CASE-XLA-01782] c14 N71-26136

Anti-buckling fatigue test assembly [NASA-CASE-LAR-10426-1] c09 N74-19528

**RICHTHAL, J.**  
Wide angle long eye relief eyepiece Patent [NASA-CASE-XMS-06056-1] c23 N71-24857

**RISENBERGER, I.**  
Data compressor Patent [NASA-CASE-XNP-04067] c08 N71-22707

**EL-AASER, M. S.**  
Process for preparation of large-particle-size monodisperse latexes [NASA-CASE-MFS-25000-1] c25 N81-19242

**ELACHI, C.**  
Acoustically controlled distributed feedback laser [NASA-CASE-NFO-13175-1] c36 N75-31427

Diffused waveguiding capillary tube with distributed feedback for a gas laser [NASA-CASE-NFO-13544-1] c36 N76-18428

Fiber distributed feedback laser [NASA-CASE-NFO-13531-1] c36 N76-24553

Distributed feedback acoustic surface wave oscillator [NASA-CASE-NFO-13673-1] c71 N77-26919

**ELBER, W.**  
Means for controlling aerodynamically induced twist [NASA-CASE-LAR-12175-1] c05 N80-16055

Partial interlaminar separation system for composites [NASA-CASE-LAR-12065-1] c24 N81-14000

Method of making a partial interlaminar separation composite system [NASA-CASE-LAR-12065-2] c24 N81-33235

**ELDER, H. D.**  
Internal flare angle gauge Patent [NASA-CASE-XMF-04415] c14 N71-24693

**ELIA, A. D.**  
Monopulse system with an electronic scanner [NASA-CASE-XGS-05582] c07 N69-27460

**ELIASON, J. T.**  
Photovoltaic cell array [NASA-CASE-MFS-22458-1] c44 N77-10635

**ELKINS, W.**  
Flexible joint for pressurizable garment [NASA-CASE-MS-C-11072] c54 N74-32546

Liquid cooled brassiere and method of diagnosing malignant tumors therewith [NASA-CASE-ARC-11007-1] c52 N77-14736

**ELLEMAN, D. D.**  
Continuous magnetic flux pump [NASA-CASE-XNP-01187] c15 N73-28516

Superconductive magnetic-field-trapping device [NASA-CASE-XNP-01185] c26 N73-28710

Magnetic-flux pump [NASA-CASE-XNP-01188] c15 N73-32361

Material suspension within an acoustically excited resonant chamber [NASA-CASE-NFO-13263-1] c12 N75-24774

Heat operated cryogenic electrical generator [NASA-CASE-NFO-13303-1] c20 N75-24837

Magnetometer using superconducting rotating body [NASA-CASE-NPO-13388-1] c35 N76-16390

Acoustic energy shaping [NASA-CASE-NPO-13802-1] c71 N78-10837

Method and apparatus for producing concentric hollow spheres [NASA-CASE-NPO-14596-1] c31 N81-33319

**ELLERN, W. E.**  
Method of evaluating moisture barrier properties of encapsulating materials Patent [NASA-CASE-NPO-10051] c18 N71-24934

**ELLIOTT, D. G.**  
Magnetohydrodynamic induction machine [NASA-CASE-XNP-07481] c25 N69-21929

Two-fluid magnetohydrodynamic system and method for thermal-electric power conversion Patent [NASA-CASE-XNP-00644] c03 N70-36803

Two phase flow system with discrete impinging two-phase jets [NASA-CASE-NFO-11556] c12 N72-25292

Method and turbine for extracting kinetic energy from a stream of two-phase fluid [NASA-CASE-NFO-14130-1] c34 N79-20335

Improved method for driving two-phase turbines with enhanced efficiency [NASA-CASE-NFO-15037-1] c37 N80-26660

**ELLIOTT, R. L.**  
Preparation of ordered poly /arylenesiloxane/ polymers

[NASA-CASE-XMP-10753] c06 N71-11237  
Fluorinated esters of polycarboxylic acids  
[NASA-CASE-MPS-21040-1] c06 N73-3C098

ELLIS, D. B.  
Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c05 N75-12930

ELLIS, H., JR.  
Complementary cross-slot phased array antenna  
[NASA-CASE-MS-C-16532-1] c32 N80-29543  
Coaxial phased array antenna  
[NASA-CASE-MS-C-16800-1] c32 N81-14187

ELLIS, S. G.  
Simple method of making photovoltaic junctions  
Patent  
[NASA-CASE-XNP-01960] c09 N71-23027  
Method of electrolytically binding a layer of  
semiconductors together Patent  
[NASA-CASE-XNP-01959] c26 N71-23043  
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] c26 N71-29156

EHDE, W. D.  
Etching of aluminum for bonding Patent  
[NASA-CASE-XMP-02303] c17 N71-23828

EMERY, J. C.  
Laser grating interferometer Patent  
[NASA-CASE-XLA-04295] c16 N71-24170

ENGEL, A.  
Digital video display system using cathode ray  
tube  
[NASA-CASE-NPO-11342] c09 N72-25248  
Symmetrical odd-mcdulus frequency divider  
[NASA-CASE-NPO-13426-1] c33 N75-31330  
Digital data reformatter/deserializer  
[NASA-CASE-NPO-13676-1] c60 N79-20751

ENGLAND, C.  
Hydrogen-bromine secondary battery  
[NASA-CASE-NPO-13237-1] c44 N76-16641  
Zinc-halide battery with molten electrolyte  
[NASA-CASE-NPO-11961-1] c44 N76-18643

ENGLAR, K. G.  
Artificial gravity spin deployment system Patent  
[NASA-CASE-XNP-02595] c31 N71-21881

ENIE, B. B.  
Method of repairing discontinuity in fiberglass  
structures  
[NASA-CASE-LAR-10416-1] c24 N74-3C001

ENRIQUEZ, E. A.  
System for synchronizing synthesizers of  
communication systems  
[NASA-CASE-GSC-12148-1] c32 N79-20296

ENSTROM, R. E.  
Water cooled contactor for anode in carbon arc  
mechanism  
[NASA-CASE-XMS-03700] c15 N69-24266

EPPS, C. H., JR.  
Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-1] c54 N76-22914  
Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c52 N81-25661

EPSTEIN, J.  
Segmenting lead telluride-silicon germanium  
thermoelements Patent  
[NASA-CASE-IGS-05718] c26 N71-16037  
Tungsten contacts on silicon substrates  
[NASA-CASE-GSC-10695-1] c09 N72-25259

EPSTEIN, P.  
Drying apparatus for photographic sheet material  
[NASA-CASE-GSC-11074-1] c14 N73-28489

ERB, R. B.  
Heat shield Patent  
[NASA-CASE-XMS-00486] c33 N70-33344

ERICKSON, W. D.  
Hypersonic test facility Patent  
[NASA-CASE-XLA-00378] c11 N71-15925  
Hypersonic test facility Patent  
[NASA-CASE-XLA-05378] c11 N71-21475  
Ablation article and method  
[NASA-CASE-LAR-10439-1] c33 N73-27796

ERPEBBACH, H.  
Means and methods of depositing thin films on  
substrates Patent  
[NASA-CASE-XNP-00595] c15 N70-34967  
Process for reducing secondary electron emission  
Patent  
[NASA-CASE-XNP-09469] c24 N71-25555

Method of producing a storage bulb for an atomic  
hydrogen maser  
[NASA-CASE-NFO-13050-1] c36 N75-15029

ERRETT, D. D.  
Canopus detector including automotive gain  
control of photomultiplier tube Patent  
[NASA-CASE-XNP-03914] c21 N71-10771

ESCHER, W. J. D.  
Attitude and propellant flow control system and  
method Patent  
[NASA-CASE-XMP-00185] c21 N70-34539  
Composite powerplant and shroud therefor Patent  
[NASA-CASE-XLA-01043] c28 N71-10780  
Injector assembly for liquid fueled rocket  
engines Patent  
[NASA-CASE-XMP-00968] c28 N71-15660

ESGAR, J. B.  
Thin-walled pressure vessel Patent  
[NASA-CASE-XLE-04677] c15 N71-10577  
Ophthalmic liquification pump  
[NASA-CASE-LEW-12051-1] c52 N75-33640

ESKENAZI, R.  
Tactile sensing system  
[NASA-CASE-NFO-15094-1] c33 N81-16386

ESKEW, H. H., JR.  
Random function tracer Patent  
[NASA-CASE-XLA-01401] c15 N71-21179

ESPY, P. B.  
Coaxial high density, hypervelocity plasma  
generator and accelerator with ionizable metal  
disc  
[NASA-CASE-MPS-20589] c25 N72-32688

ESTES, E. G.  
Rocket nozzle test method Patent  
[NASA-CASE-NPO-10311] c31 N71-15643

ESTES, H. F.  
Apparatus for making diamonds  
[NASA-CASE-MFS-20698] c15 N72-20446  
Process for making diamonds  
[NASA-CASE-MFS-20698-2] c15 N73-19457

ESTEY, R. S.  
Method and apparatus for precision control of  
radiometer  
[NASA-CASE-NPO-15398-1] c35 N81-33449

ESTRELLA, C.  
Adjustable high emittance gap filler  
[NASA-CASE-ARC-11310-1] c27 N80-23454

ESTRELLA, C. A.  
Catalysts for polyimide foams from aromatic  
isocyanates and aromatic dianhydrides  
[NASA-CASE-ARC-11107-1] c25 N80-16116

ETSION, I.  
Cantilever mounted resilient pad gas bearing  
[NASA-CASE-LEW-12569-1] c37 N79-10418  
Modified face seal for positive film stiffness  
[NASA-CASE-LEW-12989-1] c37 N80-12414  
Self-stabilizing radial face seal  
[NASA-CASE-LEW-12991-1] c37 N81-24442

ETZEL, J. G.  
Laser measuring system for incremental assemblies  
[NASA-CASE-GSC-12321-1] c36 N80-18380

EUBANKS, A. G.  
Device for measuring electron-beam intensities  
and for subjecting materials to electron  
irradiation in an electron microscope  
[NASA-CASE-IGS-01725] c14 N69-39982  
Foamed in place ceramic refractory insulating  
material Patent  
[NASA-CASE-XGS-02435] c18 N71-22998

EULITZ, W. R.  
Slosh suppressing device and method Patent  
[NASA-CASE-XMP-00658] c12 N70-38997

EVANS, D. D.  
Ignition means for monopropellant Patent  
[NASA-CASE-XNP-00876] c28 N70-41311

EVANS, D. G.  
Multistage multiple-reentry turbine Patent  
[NASA-CASE-XLE-00170] c15 N70-36412  
Multistage multiple-reentry turbine Patent  
[NASA-CASE-XLE-00085] c28 N70-39895

EVANS, E. H.  
Strain sensor for high temperatures Patent  
[NASA-CASE-XNP-09205] c14 N71-17657

EVANS, F. D.  
Autoignition test cell Patent  
[NASA-CASE-KSC-10198] c11 N71-28629

EVANS, G. A.  
Fiber distributed feedback laser  
[NASA-CASE-NPO-13531-1] c36 N76-24553

EVANS, H. E.  
 Energy storage apparatus  
 [NASA-CASE-GSC-12030-1] c44 N78-24608

EVANS, J.  
 Millimeter wave antenna system Patent Application  
 [NASA-CASE-GSC-10949-1] c07 N71-28965  
 Solenoid valve including guide for armature and  
 valve member  
 [NASA-CASE-GSC-10607-1] c15 N72-20442  
 Nutation damper  
 [NASA-CASE-GSC-11205-1] c15 N73-25513

EVANS, J. C., JR.  
 Rapidly pulsed, high intensity, incoherent light  
 source  
 [NASA-CASE-XLE-2529-3] c33 N74-20859  
 High power laser apparatus and system  
 [NASA-CASE-XLE-2529-2] c36 N75-27364  
 Solar cell collector  
 [NASA-CASE-LEW-12552-1] c44 N78-25527  
 Method for producing solar energy panels by  
 automation  
 [NASA-CASE-LEW-12541-1] c44 N78-25529  
 Solar cell system having alternating current  
 output  
 [NASA-CASE-LEW-12806-1] c44 N78-25553  
 Solar cells having integral collector grids  
 [NASA-CASE-LEW-12819-1] c44 N79-11467  
 Application of semiconductor diffusants to solar  
 cells by screen printing  
 [NASA-CASE-LEW-12775-1] c44 N79-11468  
 Solar cell collector and method for producing same  
 [NASA-CASE-LEW-12552-2] c44 N79-11472  
 Method for fabricating solar cells having  
 integrated collector grids  
 [NASA-CASE-LEW-12819-2] c44 N79-18444  
 Solar cell system having alternating current  
 output  
 [NASA-CASE-LEW-12806-2] c44 N81-12542  
 High voltage planar multijunction  
 [NASA-CASE-LEW-13400-1] c44 N81-16528  
 High voltage V-groove solar cell  
 [NASA-CASE-LEW-13401-1] c44 N81-16529  
 Heat transparent high intensity high efficiency  
 solar cell  
 [NASA-CASE-LEW-12892-1] c44 N81-27598

EVANS, J. M., JR.  
 System and method for tracking a signal source  
 [NASA-CASE-HQN-10880-1] c17 N78-17140

EVANS, P. K.  
 Device for tensioning test specimens within an  
 hermetically sealed chamber  
 [NASA-CASE-MFS-23281-1] c35 N77-22450

EVENSEN, D. A.  
 Buoyant anti-slosh system Patent  
 [NASA-CASE-XLA-04605] c32 N71-16106

EYVARD, J. C.  
 Ophthalmic method and apparatus  
 [NASA-CASE-LEW-11669-1] c05 N73-27062

EWEEN, H. I.  
 Method and means for providing an absolute power  
 measurement capability Patent  
 [NASA-CASE-ERC-11020] c14 N71-26774  
 Clear air turbulence detector  
 [NASA-CASE-ERC-10081] c14 N72-28437

EXTON, R. J.  
 Stack plume visualization system  
 [NASA-CASE-LAR-11675-1] c45 N76-17656  
 TV fatigue crack monitoring system  
 [NASA-CASE-LAR-11490-1] c39 N78-16387

EZERKIEL, P. D.  
 Fluid power transmitting gas bearing Patent  
 [NASA-CASE-ERC-10097] c15 N71-28465

**F**

FAETH, P. A.  
 Automatic recording McLeod gauge Patent  
 [NASA-CASE-XLE-03280] c14 N71-23093

FAGET, B. A.  
 Survival couch Patent  
 [NASA-CASE-XLA-00118] c05 N70-33285  
 Aerial capsule emergency separation device Patent  
 [NASA-CASE-XLA-00115] c03 N70-33343  
 Space capsule Patent  
 [NASA-CASE-XLA-00149] c31 N70-37938  
 Space capsule Patent  
 [NASA-CASE-XLA-01332] c31 N71-15664  
 Space shuttle vehicle and system  
 [NASA-CASE-MSC-12433] c31 N73-14854

Space vehicle system  
 [NASA-CASE-MSC-12561-1] c18 N76-17185

FAGOT, R. J.  
 Gas low pressure low flow rate metering system  
 Patent  
 [NASA-CASE-FRC-10022] c12 N71-26546  
 Respiration monitor  
 [NASA-CASE-FRC-10012] c14 N72-17329

FARAN, J. C.  
 Superconducting alternator  
 [NASA-CASE-XLE-02824] c03 N69-39890  
 Superconducting alternator Patent  
 [NASA-CASE-XLE-02823] c09 N71-23443

FALBEL, G.  
 Multi-lobar scan horizon sensor Patent  
 [NASA-CASE-IGS-00809] c21 N70-35427

FALES, C. L., JR.  
 Magnetometer with a miniature transducer and  
 automatic scanning  
 [NASA-CASE-LAR-11617-2] c35 N78-32397

FALK, W. C.  
 Miniature vibration isolator Patent  
 [NASA-CASE-XLA-01019] c15 N70-40156  
 Canister closing device Patent  
 [NASA-CASE-XLA-01446] c15 N71-21528

FANG, P.  
 Recovery of radiation damaged solar cells  
 through thermal annealing  
 [NASA-CASE-IGS-04047-2] c03 N72-11062

FARRIN, B. B.  
 System for the measurement of ultra-low stray  
 light levels  
 [NASA-CASE-MFS-23513-1] c74 N79-11865

FARNSWORTH, D. L.  
 Phototransistor imaging system  
 [NASA-CASE-MFS-20809] c23 N73-13660  
 Solid-state current transformer  
 [NASA-CASE-MFS-22560-1] c33 N77-14335

FARNSWORTH, F. D.  
 Space simulation and radiative property testing  
 system and method Patent  
 [NASA-CASE-MFS-20096] c14 N71-30026

FARRELL, R.  
 Lead attachment to high temperature devices  
 [NASA-CASE-ERC-10224] c09 N72-25261  
 Wide temperature range electronic device with  
 lead attachment  
 [NASA-CASE-ERC-10224-2] c09 N73-27150

FARRIS, C. D.  
 Storage battery comprising negative plates of a  
 wedge shaped configuration  
 [NASA-CASE-NPO-11806-1] c44 N74-19693

FARTHING, W. H.  
 Device for determining relative angular position  
 between a spacecraft and a radiation emitting  
 celestial body  
 [NASA-CASE-GSC-11444-1] c14 N73-28490

FASSBENDER, A. G.  
 Electrical conductivity cell and method for  
 fabricating the same  
 [NASA-CASE-ARC-10810-1] c33 N76-19339

PAULKNER, R. D.  
 Bonding graphite with fused silver chloride  
 [NASA-CASE-XGS-00963] c15 N69-39735

FAY, R. J.  
 Metal shearing energy absorber  
 [NASA-CASE-HQN-10638-1] c15 N73-30460

FRAKES, F.  
 Gauge calibration by diffusion  
 [NASA-CASE-IGS-07752] c14 N73-30390

FRALEY, R. D.  
 Bacteria detection instrument and method  
 [NASA-CASE-GSC-11533-1] c14 N73-13435

FRAZNEHOUGH, H. T.  
 Parallel-plate viscometer with double diaphragm  
 suspension  
 [NASA-CASE-NPO-11387] c14 N73-14429

FEATHERSTON, A. B.  
 Method of fluxless brazing and diffusion bonding  
 of aluminum containing components  
 [NASA-CASE-MSC-14435-1] c37 N76-18455

FEDOR, J. V.  
 Stretch de-spin mechanism Patent  
 [NASA-CASE-IGS-00619] c30 N70-40016

FEDORS, R. F.  
 Parallel-plate viscometer with double diaphragm  
 suspension  
 [NASA-CASE-NPO-11387] c14 N73-14429

Photomechanical transducer [NASA-CASE-NPO-14363-1]	c39 N81-25400	[NASA-CASE-MFS-20243]	c23 N73-13662
<b>FEHRENKAMP, L. G.</b>		<b>FIET, O. O.</b>	
Surface finishing [NASA-CASE-MSC-12631-1]	c24 N77-28225	Electrohydrodynamic control valve Patent [NASA-CASE-NPO-10416]	c12 N71-27332
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<b>FEILER, C. E.</b>		Adaptive system and method for signal generation Patent [NASA-CASE-GSC-11367]	c10 N71-26374
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<b>FEINBERG, P. M.</b>		Storage container for electronic devices Patent [NASA-CASE-MFS-20075]	c09 N71-26133
Digital telemetry system Patent [NASA-CASE-XGS-01812]	c07 N71-23001	Method of coating through-holes Patent [NASA-CASE-XNF-05999]	c15 N71-29032
Programmable telemetry system Patent [NASA-CASE-GSC-10131-1]	c07 N71-24624	<b>FINDL, E.</b>	
<b>FEINSTEIN, L.</b>		Electrolytically regenerative hydrogen-oxygen fuel cell Patent [NASA-CASE-XLE-04526]	c03 N71-11052
Microwave flaw detector Patent [NASA-CASE-ARC-10009-1]	c15 N71-17822	<b>FINK, J. W.</b>	
Method and apparatus for swept-frequency impedance measurements of welds [NASA-CASE-ARC-10176-1]	c15 N72-21464	Bus voltage compensation circuit for controlling direct current motor [NASA-CASE-XMS-04215-1]	c09 N69-39987
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Viscosity measuring instrument [NASA-CASE-NPO-14501-1]	c35 N80-18357	Electrode and insulator with shielded dielectric junction [NASA-CASE-XLE-03778]	c09 N69-21542
<b>FELDSTEIN, C.</b>		Pressure monitoring with a plurality of ionization gauges controlled at a central location Patent [NASA-CASE-XLE-00787]	c14 N71-21090
Subminiature insertable force transducer [NASA-CASE-NPO-13423-1]	c33 N75-31329	<b>FINLEY, T. D.</b>	
Miniature muscle displacement transducer [NASA-CASE-NPO-13519-1]	c33 N76-19338	Split range transducer [NASA-CASE-XLA-11189]	c10 N72-20222
Myocardium wall thickness transducer and measuring method [NASA-CASE-NPO-13644-1]	c52 N76-25895	<b>FINLEY, W. R.</b>	
Catheter tip force transducer for cardiovascular research [NASA-CASE-NPO-13643-1]	c52 N76-25896	Analog-to-digital converter [NASA-CASE-MSC-13110-1]	c08 N72-22163
Apparatus and method of inserting a microelectrode in body tissue or the like using vibration means [NASA-CASE-NPO-13910-1]	c52 N79-27836	<b>FINNIE, C. J.</b>	
Simultaneous muscle force and displacement transducer [NASA-CASE-NPO-14212-1]	c52 N80-27072	Insertion loss measuring apparatus having transformer means connected across a pair of bolometers Patent [NASA-CASE-XNP-01193]	c10 N71-16057
Multifunctional transducer [NASA-CASE-NPO-14329-1]	c52 N81-20703	<b>FISCHELL, D. R.</b>	
System for moving a probe to follow movements of tissue [NASA-CASE-NPO-15197-1]	c52 N81-26697	A cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer [NASA-CASE-GSC-12081-2]	c52 N77-26796
<b>FELL, D. M.</b>		<b>FISCHER, J. A.</b>	
Flexible pile thermal barrier insulator [NASA-CASE-MSC-19568-1]	c34 N78-25350	Adjustable tension wire guide Patent [NASA-CASE-XMS-02383]	c15 N71-15918
<b>FELTNER, W. R.</b>		<b>FISCHEB, J. B.</b>	
Multilevel metallization method for fabricating a metal oxide semiconductor device [NASA-CASE-MFS-23541-1]	c76 N75-14906	Interleaving device [NASA-CASE-GSC-12111-2]	c33 N81-29342
Method of construction of a multi-cell solar array [NASA-CASE-MFS-23540-1]	c44 N79-26475	<b>FISH, D. C.</b>	
<b>FENG, S. Y.</b>		Spin forming tubular elbows Patent [NASA-CASE-XMP-01083]	c15 N71-22723
Regulated dc-to-dc converter for voltage step-up or step-down with input-output isolation [NASA-CASE-HQN-10792-1]	c33 N74-11049	<b>FISH, R. H.</b>	
<b>FENTRESS, C. E.</b>		Fiber modified polyurethane foam for ballistic protection [NASA-CASE-ARC-10714-1]	c27 N76-15310
Expanding center probe and drogue Patent [NASA-CASE-XMS-03613]	c31 N71-16346	<b>FISH, R. H.</b>	
<b>FENWICK, J. R.</b>		Auditory display for the blind [NASA-CASE-HQN-10832-1]	c71 N74-21014
Accumulator [NASA-CASE-MFS-19287-1]	c34 N77-30399	<b>FISHER, A.</b>	
<b>FERGUSON, R. E.</b>		Process for making RF shielded cable connector assemblies and the products formed thereby [NASA-CASE-GSC-11215-1]	c09 N73-28083
Two-step rocket engine bipropellant valve Patent [NASA-CASE-XMS-04890-1]	c15 N70-22192	<b>FITCH, E. J.</b>	
<b>FERRARA, L. J.</b>		Modulator for tone and binary signals [NASA-CASE-GSC-11743-1]	c32 N75-24981
Collapsible Apollo couch [NASA-CASE-MSC-13140]	c05 N72-11085	<b>FITTING, R. C.</b>	
<b>FESSLER, T. E.</b>		Phase modulator Patent [NASA-CASE-MSC-13201-1]	c07 N71-28429
Thin window, drifted silicon, charged particle detector [NASA-CASE-XLE-10529]	c14 N69-23191	<b>FITTON, J. A., JR.</b>	
Method of forming thin window drifted silicon charged particle detector Patent [NASA-CASE-XLE-00808]	c24 N71-10560	Multiple orifice throttle valve Patent [NASA-CASE-XNP-09698]	c15 N71-18580
<b>FEWELL, L. L.</b>		<b>FITZER, G. E.</b>	
Carboranycyclotriphosphazenes and their polymers [NASA-CASE-ARC-11176-1]	c27 N80-21533	Machine for use in monitoring fatigue life for a plurality of elastomeric specimens [NASA-CASE-NPO-13731-1]	c39 N78-10493
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<b>FIELDS, S. A.</b>		Ion thruster with a combination keeper electrode and electron baffle [NASA-CASE-NPO-11880]	c28 N73-24783
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		<b>FITZGERALD, J. J.</b>	
		Flow test device [NASA-CASE-XMS-04917]	c14 N69-24257
		<b>FITZGERALD, J. W.</b>	
		Visual examination apparatus	

[NASA-CASE-ARC-10329-1] c05 N73-26072  
 Visual examination apparatus  
 [US-PATENT-RE-28,921] c52 N76-3C793

**FITZGERALD, T. H.**  
 A solid state acoustic variable time delay line  
 Patent  
 [NASA-CASE-ERC-10032] c10 N71-25900

**FITZMAURICE, M. H.**  
 Retrodirective modulator Patent  
 [NASA-CASE-GSC-10062] c14 N71-15605  
 Apparatus for simulating optical transmission  
 links  
 [NASA-CASE-GSC-11877-1] c74 N76-18913  
 Polarization compensator for optical  
 communications  
 [NASA-CASE-GSC-11782-1] c74 N76-30053

**FLAGGE, B.**  
 Vibrating structure displacement measuring  
 instrument Patent  
 [NASA-CASE-XLA-03135] c32 N71-16428  
 Arbitrarily shaped model survey system Patent  
 [NASA-CASE-LAR-10098] c32 N71-26681  
 Electro-mechanical sine/cosine generator  
 [NASA-CASE-LAR-10503-1] c09 N72-21248  
 Measuring probe position recorder  
 [NASA-CASE-LAR-10806-1] c35 N74-32877  
 Electro-mechanical sine/cosine generator  
 [NASA-CASE-LAR-11389-1] c33 N77-26387  
 Displacement probes with self-contained exciting  
 medium  
 [NASA-CASE-LAR-11690-1] c35 N80-14371

**FLAHERTY, R.**  
 Thermally cascaded thermoelectric generator  
 [NASA-CASE-NPO-10753] c03 N72-26031

**FLANN, D. L.**  
 Electric discharge for treatment of trace  
 contaminants  
 [NASA-CASE-ARC-10975-1] c33 N79-15245

**FLANNERY, E. J.**  
 Method and apparatus for controllably heating  
 fluid Patent  
 [NASA-CASE-XMF-04237] c33 N71-16278

**FLATAU, C. E.**  
 Variable ratio mixed-mode bilateral master-slave  
 control system for shuttle remote manipulator  
 system  
 [NASA-CASE-MSC-14245-1] c18 N75-27041

**FLATTAU, T.**  
 Wideband heterodyne receiver for laser  
 communication system  
 [NASA-CASE-GSC-12053-1] c32 N77-28346

**FLEETWOOD, C. E.**  
 Method of forming a sharp edge on an optical  
 device  
 [NASA-CASE-GSC-12348-1] c74 N80-24149

**FLEETWOOD, C. E., JR.**  
 Method of treating the surface of a glass member  
 [NASA-CASE-GSC-12110-1] c27 N77-32308

**FLEISCHMAN, G. L.**  
 Flat-plate heat pipe  
 [NASA-CASE-GSC-11998-1] c34 N77-32413

**FLETCHER, E. A.**  
 Apparatus for igniting solid propellants Patent  
 [NASA-CASE-XLE-00207] c28 N70-33375  
 Method of igniting solid propellants Patent  
 [NASA-CASE-XLE-01988] c27 N71-15634

**FLETCHER, I. L.**  
 Satellite interlace synchronization system  
 [NASA-CASE-GSC-10390-1] c07 N72-11149

**FLETCHER, J. C.**  
 Heat flow calorimeter  
 [NASA-CASE-GSC-11434-1] c34 N74-27859

**FLETCHER, W. R.**  
 Field effect transistor and method of  
 construction thereof  
 [NASA-CASE-MFS-23312-1] c33 N78-27326

**FLIPPIN, A.**  
 Sun angle calculator  
 [NASA-CASE-MSC-12617-1] c35 N76-29552

**FLORES, A. L.**  
 Field ionization electrodes Patent  
 [NASA-CASE-ERC-10013] c09 N71-26678

**FLOYD, E. L.**  
 High impact pressure regulator Patent  
 [NASA-CASE-NPO-10175] c14 N71-18625

**FOGAL, G. L.**  
 Automatic bio-waste sampling  
 [NASA-CASE-MSC-14640-1] c54 N76-14804

Fluid mass sensor for a zero gravity environment  
 [NASA-CASE-MSC-14653-1] c35 N77-19385

**FOBLEN, G. H.**  
 Intumescent paints Patent  
 [NASA-CASE-ARC-10099-1] c18 N71-15469  
 Transparent fire resistant polymeric  
 structures  
 [NASA-CASE-ARC-10813-1] c27 N76-16230  
 Phosphorus-containing bisimide resins  
 [NASA-CASE-ARC-11321-1] c27 N81-27272  
 Phosphorus-containing imide resins  
 [NASA-CASE-ARC-11368-1] c27 N81-31364

**FONTANA, A.**  
 Solar sensor having coarse and fine sensing with  
 matched preirradiated cells and method of  
 selecting cells Patent  
 [NASA-CASE-XLA-01584] c14 N71-23269

**FONTES, M. J.**  
 Method for making patterns for resin matrix  
 composites  
 [NASA-CASE-ARC-11246-1] c24 N80-22410

**FOOTE, R. H.**  
 Adaptive system and method for signal generation  
 Patent  
 [NASA-CASE-GSC-11367] c10 N71-26374

**FORBES, S. G.**  
 Apparatus for field strength measurement of a  
 space vehicle Patent  
 [NASA-CASE-XLE-00820] c14 N71-16014

**FORD, A. G.**  
 Rock drill for recovering samples  
 [NASA-CASE-XNF-07478] c14 N69-21923  
 Electrically-operated rotary shutter  
 Patent  
 [NASA-CASE-XNF-00637] c14 N70-40273  
 Motion restraining device  
 [NASA-CASE-NFO-13619-1] c37 N78-16369  
 Speed control device for a heavy duty shaft  
 [NASA-CASE-NFO-14170-1] c37 N81-15364

**FORD, F. C.**  
 Hypervelocity gun  
 [NASA-CASE-XLE-03186-1] c09 N79-21084

**FORD, F. E.**  
 Coulometer and third electrode battery charging  
 circuit Patent  
 [NASA-CASE-GSC-10487-1] c03 N71-24719

**FORD, R. E.**  
 Antenna system using parasitic elements and two  
 driven elements at 90 deg angle fed 180 deg  
 out of phase Patent  
 [NASA-CASE-XLA-00414] c07 N70-38200

**FOREHAND, L.**  
 Solar cell mounting Patent  
 [NASA-CASE-XNP-00826] c03 N71-2C895

**FORESTIERI, A. P.**  
 Method of making silicon solar cell array  
 [NASA-CASE-LEW-11069-1] c44 N74-14784  
 Solar cell shingle  
 [NASA-CASE-LEW-12587-1] c44 N77-31601  
 Method of making encapsulated solar cell modules  
 [NASA-CASE-LEW-12185-1] c44 N78-25528

**FORLIPER, W. E.**  
 Landing gear Patent  
 [NASA-CASE-XMF-01174] c02 N70-41589

**FORMAN, R.**  
 Ion sputter textured graphite  
 [NASA-CASE-LEW-12919-1] c24 N81-27198

**FORSYTHE, A. E.**  
 Umbilical separator for rockets Patent  
 [NASA-CASE-XNP-00425] c11 N70-38202

**FORTIN, A.**  
 Method of electroforming a rocket chamber  
 [NASA-CASE-LEW-11118-1] c20 N74-32919  
 Rocket chamber and method of making  
 [NASA-CASE-LEW-11118-2] c20 N76-14191  
 Heat exchanger and method of making  
 [NASA-CASE-LEW-12441-1] c34 N79-13289  
 Heat exchanger and method of making  
 [NASA-CASE-LEW-12441-2] c34 N80-24573  
 Heat exchanger and method of making  
 [NASA-CASE-LEW-12441-3] c44 N81-24519

**POSTER, J. V.**  
 Mechanically limited, electrically operated  
 hydraulic valve system for aircraft controls  
 Patent  
 [NASA-CASE-XAC-00048] c02 N71-29128  
 Magnetic position detection method and apparatus  
 [NASA-CASE-ARC-10179-1] c21 N72-22619

**POSTER, L. E.**  
 Magnetomotive metal working device Patent  
 [NASA-CASE-XMF-03793] c15 N71-24833

FOSTER, T.  
Variable cycle gas turbine engines  
[NASA-CASE-LEW-12916-1] c37 N78-17384  
Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c07 N78-18067

FOWLER, J.  
Bit error rate measurement above and below bit  
rate tracking threshold  
[NASA-CASE-MSC-12743-1] c32 N79-16263

FOWLER, J. T.  
Parasitic suppressing circuit  
[NASA-CASE-ERC-10403-1] c10 N73-26228

FOX, E. L.  
Induction heating gun  
[NASA-CASE-LAR-12540-1] c37 N80-11468  
One step dual purpose joining technique  
[NASA-CASE-LAR-12595-1] c37 N80-11469

FOX, W. E.  
Event recorder Patent  
[NASA-CASE-XLA-01832] c14 N71-21006

FRALEY, T. O.  
Method and apparatus for rapid thrust increases  
in a turbofan engine  
[NASA-CASE-LEW-12971-1] c07 N80-16039

FRANCISCO, A. C.  
Process for applying a protective coating for  
salt bath brazing Patent  
[NASA-CASE-XLE-00046] c15 N70-33311

FRANCISCUS, L. C.  
Supersonic-combustion rocket  
[NASA-CASE-LEW-11058-1] c20 N74-13502

FRANK, H. A.  
Electrolytically regenerative hydrogen-oxygen  
fuel cell Patent  
[NASA-CASE-XLE-04526] c03 N71-11052

FRANKS, J. M.  
Laser Doppler velocity simulator  
[NASA-CASE-LAR-12176-1] c36 N80-16321  
Direction sensitive laser velocimeter  
[NASA-CASE-LAR-12177-1] c36 N81-24422

FRANKLIN, W. J.  
Segmented back-up bar Patent  
[NASA-CASE-XMF-00640] c15 N70-39924  
Portable alignment tool Patent  
[NASA-CASE-XMF-01452] c15 N70-41371

FRASER, A. S.  
Water system virus detection  
[NASA-CASE-MSC-16098-1] c51 N79-10693

FRAZE, R. E.  
Cryogenic cooling system Patent  
[NASA-CASE-NPO-10467] c23 N71-26654

FRAZER, R. E.  
Vacuum evaporator with electromagnetic ion  
steering Patent  
[NASA-CASE-NPO-10331] c09 N71-26701  
Coupling apparatus for ultrasonic medical  
diagnostic system  
[NASA-CASE-NPO-13935-1] c52 N79-14751  
Strong thin membrane structure  
[NASA-CASE-NPO-14021-2] c27 N80-16163  
Apparatus for endoscopic examination  
[NASA-CASE-NPO-14092-1] c52 N80-16725  
Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c74 N80-24152

FRAZIER, M. J.  
Junction range finder  
[NASA-CASE-KSC-10108] c14 N73-25461

FRECHER, J. C.  
High temperature nickel-base alloy Patent  
[NASA-CASE-XLE-00151] c17 N70-33283  
External liquid-spray cooling of turbine blades  
Patent  
[NASA-CASE-XLB-00037] c28 N70-33372  
Nickel-base alloy Patent  
[NASA-CASE-XLE-00283] c17 N70-36616  
High temperature cobalt-base alloy Patent  
[NASA-CASE-XLE-00726] c17 N71-15644  
High temperature cobalt-base alloy Patent  
[NASA-CASE-XLE-02991] c17 N71-16025  
Nickel-base alloy containing Mo-W-Al-Cr-  
Ta-Zr-C-Nb-B Patent  
[NASA-CASE-XLE-02082] c17 N71-16026  
High temperature ferromagnetic cobalt-base alloy  
Patent  
[NASA-CASE-XLE-03629] c17 N71-23248  
Liquid spray cooling method Patent  
[NASA-CASE-XLE-00027] c33 N71-29152  
Method of forming superalloys  
[NASA-CASE-LEW-10805-1] c15 N73-13465

Cobalt-base alloy  
[NASA-CASE-LEW-10436-1] c17 N73-32415  
Method of heat treating a formed powder product  
material  
[NASA-CASE-LEW-10805-3] c26 N74-10521  
Method of forming articles of manufacture from  
superalloy powders  
[NASA-CASE-LEW-10805-2] c37 N74-13179  
Nickel base alloy  
[NASA-CASE-LEW-12270-1] c26 N77-32280

FREDRICKSON, C. A.  
Energy absorption device Patent  
[NASA-CASE-XNP-01848] c15 N71-28959

FREEMAN, E. T.  
Film advance indicator  
[NASA-CASE-LAR-12474-1] c35 N80-31774

FREEMAN, E. S.  
Air frame drag balance Patent  
[NASA-CASE-XLA-00113] c14 N70-33386

FREGGERS, R. A.  
Thermal flux transfer system  
[NASA-CASE-NPO-12070-1] c28 N73-32606

FRENCH, K. E.  
Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c45 N80-14579

FRENCH, J. C.  
Nickel base alloy  
[NASA-CASE-LEW-10874-1] c17 N72-22535

FRIDRICH, C. W.  
Apparatus for welding sheet material  
[NASA-CASE-XMS-01330] c37 N75-27376

FRIEDAN, H. J.  
Automated clinical system for chromosome analysis  
[NASA-CASE-NPO-13913-1] c52 N79-12694

FRIEDEL, M. V.  
Positive isolation disconnect  
[NASA-CASE-MSC-16043-1] c37 N79-11402

FRIEDERICHS, J. E.  
Biomedical radiation detecting probe Patent  
[NASA-CASE-XMS-01177] c05 N71-19440

FRIEDRICH, E. W.  
Reentry vehicle leading edge Patent  
[NASA-CASE-XLA-00165] c31 N70-33242

FRIICHTENICHT, J. F.  
Apparatus for handling micron size range  
particulate material  
[NASA-CASE-NPO-10151] c37 N78-17386

FRIPP, A. L.  
Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c35 N81-12389

FRISBIE, H. P.  
Device for determining relative angular position  
between a spacecraft and a radiation emitting  
celestial body  
[NASA-CASE-GSC-11444-1] c14 N73-28490

FRITZ, W. M.  
Method of fabricating a photovoltaic module of a  
substantially transparent construction  
[NASA-CASE-NPO-14303-1] c44 N80-18550

FRIITZEN, M., JR.  
Noncontaminating swabs  
[NASA-CASE-MFS-18100] c15 N72-11390

FROENHLING, S. C.  
Casting propellant in rocket engine  
[NASA-CASE-LAR-11995-1] c28 N77-10213

FROST, J. D., JR.  
EEG sleep analyzer and method of operation Patent  
[NASA-CASE-MSC-13282-1] c05 N71-24729  
Compressible biomedical electrode  
[NASA-CASE-MSC-13648] c05 N72-27103  
Snap-in compressible biomedical electrode  
[NASA-CASE-MSC-14623-1] c52 N77-28717

FRYER, T. B.  
Telemeter adaptable for implanting in an animal  
Patent  
[NASA-CASE-XAC-05706] c05 N71-12342  
RF controlled solid state switch  
[NASA-CASE-ARC-10136-1] c09 N72-22202  
Low power electromagnetic flowmeter providing  
accurate zero set  
[NASA-CASE-ARC-10362-1] c14 N73-32326  
Miniature ingestible telemeter devices to  
measure deep-body temperature  
[NASA-CASE-ARC-10583-1] c52 N76-29894  
Induction powered biological radiosonde  
[NASA-CASE-ARC-11120-1] c52 N80-18691

FUCHS, J. C.  
Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c33 N79-10337

**FUHR, W.**  
 Method for applying photographic resists to otherwise incompatible substrates  
 [NASA-CASE-MSC-18107-1] c27 N81-25209

**FUHRMISTER, P. F.**  
 Random function tracer Patent  
 [NASA-CASE-XLA-01401] c15 N71-21179

**FUJIOKA, B. S.**  
 Folding structure fabricated of rigid panels  
 [NASA-CASE-XHQ-02146] c18 N75-27040

**FULCHER, C. W. G.**  
 Automatic control of liquid cooling garment by cutaneous and external auditory meatus temperatures  
 [NASA-CASE-MSC-13917-1] c05 N72-15098

**FULCHER, B. W.**  
 Low speed phaselock speed control system  
 [NASA-CASE-GSC-11127-1] c09 N75-24758

**FULLER, H. V.**  
 Cable restraint  
 [NASA-CASE-LAR-10129-1] c15 N73-25512  
 Reefing system  
 [NASA-CASE-LAR-10129-2] c37 N74-20063  
 Binocular device for displaying numerical information in field of view  
 [NASA-CASE-LAR-11782-1] c74 N77-20882

**FUNG, L. W.**  
 Massively parallel processor computer  
 [NASA-CASE-GSC-12223-1] c60 N79-27864

**FUNK, B. H., JR.**  
 Optical probing of supersonic flows with statistical correlation  
 [NASA-CASE-MFS-20642] c14 N72-21407

**FURCINI, C. A.**  
 Pulse-width modulation multiplier Patent  
 [NASA-CASE-XER-09213] c07 N71-12390

**FURMAN, B. E.**  
 Closed loop spray cooling apparatus  
 [NASA-CASE-LEW-11981-1] c31 N78-17237  
 Closed loop spray cooling apparatus  
 [NASA-CASE-LEW-11981-2] c34 N79-20336

**FURBER, B. L.**  
 Automated analysis of oxidative metabolites  
 [NASA-CASE-ARC-10469-1] c25 N75-12086

**FURTSCH, T. A.**  
 Electrically conductive palladium containing polyimide films  
 [NASA-CASE-LAR-12705-1] c33 N80-24549

**FURUMOTO, H. W.**  
 Optical pump and driver system for lasers  
 [NASA-CASE-ERC-10283] c16 N72-25485

**FYLER, H. P.**  
 Very high intensity light source using a cathode ray tube  
 [NASA-CASE-XNP-01296] c33 N75-27250

**FYNAT, A. L.**  
 Interferometer-polarimeter  
 [NASA-CASE-NPO-11239] c14 N73-12446  
 Forward-scatter polarimeter for determining the gaseous depolarization factor in the presence of polluting polydispersed particles  
 [NASA-CASE-NPO-13756-1] c35 N76-14434  
 High resolution Fourier interferometer-spectrophotopolarimeter  
 [NASA-CASE-NPO-13604-1] c35 N76-31490  
 Frequency-scanning particle size spectrometer  
 [NASA-CASE-NPO-13606-2] c35 N80-18364

**G**

**GAALMA, S. D.**  
 CCD correlated quadruple sampling processor  
 [NASA-CASE-NPO-14426-1] c33 N79-17134  
 CCD correlated quadruple sampling processor  
 [NASA-CASE-NPO-14426-1] c33 N81-27396

**GABROVIC, L. J.**  
 Bismuth-lead coatings for gas bearings used in atmospheric environments and vacuum chambers  
 Patent  
 [NASA-CASE-XGS-02011] c15 N71-20739

**GADDIS, D. H.**  
 Inorganic solid film lubricants Patent  
 [NASA-CASE-XMF-03988] c15 N71-21403

**GADDIS, J. L.**  
 Method of forming dynamic membrane on stainless steel support  
 [NASA-CASE-MSC-18172-1] c26 N80-19237

**GADDDY, B. H.**  
 Optimum performance spacecraft solar cell system  
 [NASA-CASE-GSC-10669-1] c03 N72-20031

**GADE, D. W.**  
 Temperature regulation circuit Patent  
 [NASA-CASE-XNP-02792] c14 N71-28958

**GAIANO, G.**  
 Fast scan control for deflection type mass spectrometers  
 [NASA-CASE-LAR-11428-1] c35 N74-34857

**GANN, B. P.**  
 Analytical test apparatus and method for determining oxide content of alkali metal Patent  
 [NASA-CASE-XLE-01997] c06 N71-23527  
 Gels as battery separators for soluble electrode cells  
 [NASA-CASE-LEW-12364-1] c44 N77-22606  
 Zirconium carbide as an electrocatalyst for the chromous/chromic redox couple  
 [NASA-CASE-LEW-13246-1] c25 N81-26203

**GAISER, E. E.**  
 Color television systems using a single gun color cathode ray tube Patent  
 [NASA-CASE-ERC-10098] c09 N71-28618

**GALE, G. P.**  
 Flow rate switch  
 [NASA-CASE-NPO-10722] c09 N72-20199

**GALLAGHER, H. E.**  
 Construction and method of arranging a plurality of ion engines to form a cluster Patent  
 [NASA-CASE-XNP-02923] c28 N71-23081  
 High efficiency ionizer assembly Patent  
 [NASA-CASE-XNP-01954] c28 N71-28850

**GALLO, A. J.**  
 Rapid sync acquisition system Patent  
 [NASA-CASE-NPO-10214] c10 N71-26577

**GALLOWAY, C. H.**  
 A gas-to-hydraulic power converter  
 [NASA-CASE-MSC-18794-1] c37 N81-24445

**GANGULI, P. S.**  
 Coal desulfurization process  
 [NASA-CASE-NPO-13937-1] c44 N78-31527

**GARAVAGLIA, A. P.**  
 Shoulder harness and lap belt restraint system  
 [NASA-CASE-ARC-10519-2] c05 N75-25915

**GARBA, J. A.**  
 Pressure seal Patent  
 [NASA-CASE-NPO-10796] c15 N71-27068

**GARD, L. H.**  
 Computerized system for translating a torch head  
 [NASA-CASE-MFS-23620-1] c37 N79-10421

**GARDNER, D. E.**  
 Wire grid forming apparatus Patent  
 [NASA-CASE-XLE-00023] c15 N70-33330

**GARDNER, J. N.**  
 Technique of elbow bending small jacketed transfer lines Patent  
 [NASA-CASE-XNP-10475] c15 N71-24679

**GARDNER, H. R.**  
 Heating and cooling system  
 [NASA-CASE-LAR-12393-1] c39 N80-25693

**GARDNER, H. S.**  
 Differential pressure cell Patent  
 [NASA-CASE-XAC-00042] c14 N70-34816

**GARDOS, M. H.**  
 Refractory porcelain enamel passive control coating for high temperature alloys  
 [NASA-CASE-MFS-22324-1] c27 N75-27160

**GARFEIN, A.**  
 Pressure sensitive transducers Patent  
 [NASA-CASE-ERC-10087] c14 N71-27334  
 Electricity measurement devices employing liquid crystalline materials  
 [NASA-CASE-ERC-10275] c26 N72-25680  
 Semiconductor transducer device  
 [NASA-CASE-ERC-10087-2] c14 N72-31446

**GARRIRE, E. M.**  
 Optical frequency waveguide Patent  
 [NASA-CASE-HQN-10541-1] c07 N71-26291  
 Laser machining apparatus Patent  
 [NASA-CASE-HQN-10541-2] c15 N71-27135  
 Optical frequency waveguide and transmission system Patent  
 [NASA-CASE-HQN-10541-4] c16 N71-27183  
 Optical frequency waveguide and transmission system  
 [NASA-CASE-HQN-10541-3] c23 N72-23695

**GARRIRE, G.**  
 X-ray position detector  
 [NASA-CASE-NPO-12087-1] c74 N81-19898



GARNER, H. D.  
 Jet shoes  
 [NASA-CASE-XLA-08491] c05 N69-21380  
 Dynamic precession damper for spin stabilized  
 vehicles Patent  
 [NASA-CASE-XLA-01989] c21 N70-34295  
 Attitude orientation of spin-stabilized space  
 vehicles Patent  
 [NASA-CASE-XLA-00281] c21 N70-36943  
 Fluid pressure amplifier and system  
 [NASA-CASE-LAR-10868-1] c33 N74-11050  
 Magnetic heading reference  
 [NASA-CASE-LAR-11387-1] c04 N76-20114  
 Magnetic heading reference  
 [NASA-CASE-LAR-11387-2] c04 N77-19056

GARRAHAN, H. M.  
 Solid state pulse generator with constant output  
 width, for variable input width, in nanosecond  
 range Patent  
 [NASA-CASE-XGS-03427] c10 N71-23029  
 Resettable monostable pulse generator Patent  
 [NASA-CASE-GSC-11139] c09 N71-27016

GARREN, J. F., JR.  
 Mechanical stability augmentation system Patent  
 [NASA-CASE-XLA-06339] c02 N71-13422  
 Filtering technique based on high-frequency  
 plant modeling for high-gain control  
 [NASA-CASE-LAR-12215-1] c08 N79-23097

GARWOOD, D. C.  
 Ionization vacuum gauge Patent  
 [NASA-CASE-XNF-00646] c14 N70-35666

GARY, B. L.  
 CAT altitude avoidance system  
 [NASA-CASE-NPO-15351-1] c47 N81-16677

GASTON, D. H.  
 Masking device Patent  
 [NASA-CASE-XNF-02092] c15 N70-42033

GASTON, R. P., JR.  
 Landing gear Patent  
 [NASA-CASE-XMF-01174] c02 N70-41589

GATES, D. W.  
 Stabilized zinc oxide coating compositions Patent  
 [NASA-CASE-XMF-07770-2] c18 N71-26772  
 Synthesis of zinc titanate pigment and coatings  
 containing the same  
 [NASA-CASE-MFS-13532] c18 N72-17532  
 Method of preparing zinc orthotitanate pigment  
 [NASA-CASE-MFS-23345-1] c27 N77-30237

GATES, J. D.  
 Self-erecting reflector Patent  
 [NASA-CASE-XGS-09190] c31 N71-16102

GATES, L. E., JR.  
 Method for fiberizing ceramic materials Patent  
 [NASA-CASE-XNF-00597] c18 N71-23088

GATEWOOD, J. R.  
 Thin film temperature sensor and method of  
 making same  
 [NASA-CASE-NPO-11775] c26 N72-28761

GATLIN, J. A.  
 Cartwheel satellite synchronization system Patent  
 [NASA-CASE-XGS-05579] c31 N71-15676  
 Gravity gradient attitude control system Patent  
 [NASA-CASE-GSC-10555-1] c21 N71-27324  
 Sampled data controller Patent  
 [NASA-CASE-GSC-10554-1] c08 N71-29033

GATTI, A.  
 Catalyst for growth of boron carbide single  
 crystal whiskers  
 [NASA-CASE-XHQ-03903] c15 N69-21922

GAUSE, R. L.  
 Restraint system for ergometer  
 [NASA-CASE-MFS-21046-1] c14 N73-27377  
 Ergometer  
 [NASA-CASE-MFS-21109-1] c05 N73-27941  
 Tilting table for ergometer and for other  
 biomedical devices  
 [NASA-CASE-MFS-21010-1] c05 N73-30078  
 Manual actuator  
 [NASA-CASE-MFS-21481-1] c37 N74-18127  
 Conductive elastomeric extensometer  
 [NASA-CASE-MFS-21049-1] c52 N74-27864  
 Ergometer calibrator  
 [NASA-CASE-MFS-21045-1] c35 N75-15932

GAUTHIER, H. E.  
 Method for analyzing radiation sensitivity of  
 integrated circuits  
 [NASA-CASE-NPO-14350-1] c33 N80-14332

GAVALAS, G. R.  
 Coal desulfurization process  
 [NASA-CASE-NFO-13937-1] c44 N78-31527

GAVIRA, H. E.  
 Failsafe multiple transformer circuit  
 configuration  
 [NASA-CASE-NFO-11078] c09 N72-25262

GAVERILLIS, T. G.  
 Turnstile and flared cone OHP antenna  
 [NASA-CASE-LAR-10970-1] c33 N76-14372

GDULA, W. G.  
 Recovery of radiation damaged solar cells  
 through thermal annealing  
 [NASA-CASE-XGS-04047-2] c03 N72-11062

GEBBEN, V. D.  
 Circuit for detecting initial systole and  
 diastolic notch  
 [NASA-CASE-LEW-11581-1] c54 N75-13531

GEDBILL, H. A.  
 Method of protecting the surface of a substrate  
 [NASA-CASE-LEW-11696-1] c37 N75-13261  
 Duplex aluminized coatings  
 [NASA-CASE-LEW-11696-2] c26 N75-19408

GEE, S. W.  
 Terminal guidance system  
 [NASA-CASE-PRC-10049-1] c04 N74-13420

GEHRING, W. E.  
 Apparatus for purging systems handling toxic,  
 corrosive, noxious and other fluids Patent  
 [NASA-CASE-XMS-01905] c12 N71-21089

GEIDEMAN, W. A., JR.  
 Electric arc light source having undercut  
 recessed anode  
 [NASA-CASE-ARC-10266-1] c33 N75-29318

GEIER, D. J.  
 Shock absorbing support and restraint means Patent  
 [NASA-CASE-XMS-01240] c05 N70-35152

GEIPEL, D. H.  
 Omnidirectional acceleration device Patent  
 [NASA-CASE-HQN-10780] c14 N71-30265

GEISE, P. E., JR.  
 FM/CW radar system  
 [NASA-CASE-MFS-22234-1] c32 N79-10264

GELB, L. L.  
 Method of repairing discontinuity in fiberglass  
 structures  
 [NASA-CASE-LAR-10416-1] c24 N74-30001

GELDERLOOS, H. C.  
 Reconfiguring redundancy management  
 [NASA-CASE-MSC-18498-1] c60 N80-30050

GELES, R.  
 Wide angle long eye relief eyepiece Patent  
 [NASA-CASE-XMS-06056-1] c23 N71-24857

GENTER, R. E.  
 Electronically resettable fuse Patent  
 [NASA-CASE-XGS-11177] c09 N71-27001

GEORGE, T. R., JR.  
 Device for installing rocket engines  
 [NASA-CASE-MFS-19220-1] c20 N76-22296

GERDTS, J. C.  
 Concentric differential gearing arrangement  
 [NASA-CASE-ARC-10462-1] c37 N74-27901

GERINGER, H. J.  
 Induction furnace with perforated tungsten foil  
 shielding Patent  
 [NASA-CASE-XLE-04026] c14 N71-23267

GERMANN, E. P., JR.  
 Radiation direction detector including means for  
 compensating for photocell aging Patent  
 [NASA-CASE-XLA-00183] c14 N70-40239

GERTSMAN, L. W.  
 Foldable conduit Patent  
 [NASA-CASE-XLE-00620] c32 N70-41579

GETCHELL, D. E.  
 Pressure garment joint Patent  
 [NASA-CASE-XMS-09636] c05 N71-12344

GETTELMAN, C. C.  
 High powered arc electrodes  
 [NASA-CASE-LEW-11162-1] c33 N74-12913

GIACCONI, R.  
 X-ray reflection collimator adapted to focus  
 X-radiation directly on a detector Patent  
 [NASA-CASE-XHQ-04106] c14 N70-40240

GIANFATASIO, A.  
 Adaptive polarization separation  
 [NASA-CASE-LAR-12196-1] c33 N81-26358

GIANDOMENICO, A.  
 Millimeter wave radiometer for radio astronomy  
 Patent  
 [NASA-CASE-XNF-09832] c30 N71-23723

High-torque open-end wrench  
[NASA-CASE-NPO-13541-1] c37 N79-14383

GIANNINI, G. E.  
Combination automatic-starting electrical plasma torch and gas shutoff valve  
[NASA-CASE-XLE-10717] c37 N75-25426

GIBSON, F. W.  
Contour surveying system Patent  
[NASA-CASE-XLA-08646] c14 N71-17586

Pressure operated electrical switch responsive to a pressure decrease after a pressure increase  
[NASA-CASE-LAR-10137-1] c09 N72-22204

GIPFIN, C. E.  
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] c35 N77-14406

GILBERT, G. J.  
Apparatus for ballasting high frequency transistors  
[NASA-CASE-IGS-05003] c09 N69-24318

GILBREATH, W. P.  
Electrical conductivity cell and method for fabricating the same  
[NASA-CASE-ARC-10810-1] c33 N76-15339

GILCHRIST, C. E.  
Signal-to-noise ratio estimating by taking ratio of mean and standard deviation of integrated signal samples Patent  
[NASA-CASE-XNP-05254] c07 N71-2C791

GILDS, R. M. F.  
Dye penetrant for surfaces subsequently contacted by liquid oxygen Patent  
[NASA-CASE-XMP-02221] c18 N71-27170

GILKISON, C. A.  
Linear accelerator frequency control system Patent  
[NASA-CASE-XGS-05441] c10 N71-22962

GILL, W. L.  
Burn rate testing apparatus  
[NASA-CASE-XMS-09690] c33 N72-25913

GILLESPIE, W. E., JR.  
Infrared scanner Patent  
[NASA-CASE-XLA-00120] c21 N70-33181

Passive communication satellite Patent  
[NASA-CASE-XLA-00210] c30 N70-40309

Alleviation of divergence during rocket launch Patent  
[NASA-CASE-XLA-00256] c31 N71-15663

Method of making an inflatable panel Patent  
[NASA-CASE-XLA-03497] c15 N71-23052

GILLETTE, R. B.  
Plasma cleaning device  
[NASA-CASE-MFS-22906-1] c75 N78-27913

GILLEY, G. C.  
Shared memory for a fault-tolerant computer  
[NASA-CASE-NPO-13139-1] c60 N76-21914

GILLEY, F. J.  
Material fatigue testing system  
[NASA-CASE-MFS-20673] c14 N73-20476

GILLIGAN, J. E.  
Method of preparing zinc orthotitanate pigment  
[NASA-CASE-MFS-23345-1] c27 N77-30237

GILLMORE, W. F.  
Method and apparatus for high resolution spectral analysis  
[NASA-CASE-NPO-10748] c08 N72-20177

GILMAN, M. H.  
Flanged major modular assembly jig  
[NASA-CASE-MSC-19372-1] c39 N76-31562

GILREATH, H. C.  
Omnidirectional microwave spacecraft antenna Patent  
[NASA-CASE-XLA-03114] c09 N71-22888

GILWEE, H. J., JR.  
Honeycomb-laminate composite structure  
[NASA-CASE-ARC-10913-1] c24 N78-15180

GIB, B.  
High acceleration cable deployment system  
[NASA-CASE-ARC-11256-1] c37 N79-23432

GIB, W.  
Apparatus and method for control of a solid fueled rocket vehicle Patent  
[NASA-CASE-XNP-00217] c28 N70-38181

GIBER, J. D.  
Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-1] c33 N80-20487

Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-2] c44 N81-29524

GINSBURG, A.  
Supercharged topping rocket propellant feed system  
[NASA-CASE-XLE-02062-1] c20 N80-14188

GIORGINI, E. A.  
Self-contained breathing apparatus  
[NASA-CASE-MSC-14733-1] c54 N76-24900

GIOVANNETTI, A., JR.  
High-temperature, high-pressure spherical segment valve Patent  
[NASA-CASE-XAC-00074] c15 N70-34817

GIRALA, A. S.  
Open type urine receptacle  
[NASA-CASE-MSC-12324-1] c05 N72-22093

Open ended ratchet type tubing cutter  
[NASA-CASE-MSC-18538-1] c37 N80-22703

GLASER, F. E.  
Apparatus for measuring thermal conductivity Patent  
[NASA-CASE-XGS-01052] c14 N71-15992

GLASSEY, E. A.  
Line following servosystem Patent  
[NASA-CASE-XAC-00001] c15 N71-28952

GLAWE, G. E.  
Enthalpy and stagnation temperature determination of a high temperature laminar flow gas stream Patent  
[NASA-CASE-XLE-00266] c14 N70-34156

Sensing probe  
[NASA-CASE-LEW-10281-1] c14 N72-17327

GLEKAS, L. P.  
Compact solar still Patent  
[NASA-CASE-XMS-04533] c15 N71-23086

GLENN, C. G.  
Manual actuator  
[NASA-CASE-MFS-21481-1] c37 N74-18127

Conductive elastomeric extensometer  
[NASA-CASE-MFS-21049-1] c52 N74-27864

GLENN, D. C.  
Method of lubricating rolling element bearings Patent  
[NASA-CASE-XLE-09527] c15 N71-17688

Rolling element bearings Patent  
[NASA-CASE-XLE-09527-2] c15 N71-26189

GLOBUS, R. H.  
Process of forming particles in a cryogenic path Patent  
[NASA-CASE-NPO-10250] c23 N71-16212

GLOMB, W. L.  
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] c07 N71-19773

Tracking receiver Patent  
[NASA-CASE-XGS-08679] c10 N71-21473

GLORIA, H. E.  
Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-1] c27 N74-21156

Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c27 N76-32315

GOERING, B. S.  
Open tube guideway for high speed air cushioned vehicles  
[NASA-CASE-LAR-10256-1] c85 N74-34672

GOETZ, A. F. H.  
Multispectral imaging and analysis system  
[NASA-CASE-NPO-13691-1] c43 N79-17288

GOETZ, C.  
Quartz ball valve  
[NASA-CASE-NPO-14473-1] c37 N80-23654

GOLD, H.  
Autonotive gas turbine fuel control  
[NASA-CASE-LEW-12785-1] c37 N78-24545

GOLD, H. S.  
Gas turbine engine fuel control  
[NASA-CASE-LEW-11187-1] c28 N73-19793

GOLDBERG, G. I.  
Reaction wheel scanner Patent  
[NASA-CASE-XGS-02629] c14 N71-21082

GOLDBERG, J.  
Automatic fault correction system for parallel signal channels Patent  
[NASA-CASE-XNP-03263] c09 N71-18843

GOLDEN, D. P., JR.  
Contourograph system for monitoring electrocardiograms  
[NASA-CASE-MSC-13407-1] c10 N72-20225  
Apparatus and method for processing Korotkov sounds  
[NASA-CASE-MSC-13999-1] c52 N74-26626

GOLDMAN, G. C.  
High powered arc electrodes  
[NASA-CASE-LEW-11162-1] c33 N74-12913

GOLDOWSKY, H. P.  
Linear magnetic bearings  
[NASA-CASE-GSC-12582-1] c37 N81-16469

GOLDSBERY, R. E.  
Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-1] c27 N74-21156  
Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c27 N76-32315

GOLDSCHMIED, F. E.  
Shear modulated fluid amplifier Patent  
[NASA-CASE-MFS-10412] c12 N71-17578

GOLDSMITH, J. V.  
Solar battery with interconnecting means for plural cells Patent  
[NASA-CASE-XNP-06506] c03 N71-11050  
Solid state matrices  
[NASA-CASE-NPO-10591] c03 N72-22041  
Solar cell panels with light transmitting plate  
[NASA-CASE-NPO-10747] c03 N72-22042

GOLDSTEIN, A. W.  
Supersonic fan blading  
[NASA-CASE-LEW-11402-1] c07 N74-28226

GOLDSTEIN, C. S.  
Dynamic capacitor having a peripherally driven element and system incorporating the same  
[NASA-CASE-XNP-02899-1] c33 N79-21265

GOLDSTEIN, H. E.  
Silica reusable surface insulation  
[NASA-CASE-ARC-10721-1] c27 N76-22376  
Reaction cured glass and glass coatings  
[NASA-CASE-ARC-11051-1] c27 N78-32260  
Fibrous refractory composite insulation  
[NASA-CASE-ARC-11169-1] c24 N79-24062  
Adjustable high emittance gap filler  
[NASA-CASE-ARC-11310-1] c27 N80-23454

GOLDSTEIN, I.  
Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c36 N75-15028

GOLDSTEIN, R.  
Optical gyroscope system  
[NASA-CASE-NPO-14258-1] c35 N81-33448

GOLDSTEIN, R. H.  
Correlation function apparatus Patent  
[NASA-CASE-XNP-00746] c07 N71-21476  
Method and apparatus for mapping planets  
[NASA-CASE-NPO-11001] c07 N72-21118  
Binary coded sequential acquisition ranging system  
[NASA-CASE-NPO-11194] c08 N72-25209  
Apparatus for deriving synchronizing pulses from pulses in a single channel PCM communications system  
[NASA-CASE-NPO-11302-1] c07 N73-13149  
Method and apparatus for a single channel digital communications system  
[NASA-CASE-NPO-11302-2] c32 N74-10132  
Digital demodulator-correlator  
[NASA-CASE-NPO-13982-1] c32 N79-14267

GONZALEZ-SANABRIA, O. D.  
Alkaline battery containing a separator of a cross-linked copolymer of vinyl alcohol and unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c44 N81-29531

GOODLOE, R. E.  
Telephone multiline signaling using common signal pair  
[NASA-CASE-KSC-11023-1] c32 N79-23310

GOODRICH, J. A.  
Locking device for turbine rotor blades Patent  
[NASA-CASE-XNP-00816] c28 N71-28928

GOODWIN, F. E.  
Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c35 N77-27366

GOODWIN, R. A.  
Spectroscope equipment using a slender cylindrical reflector as a substitute for a slit Patent  
[NASA-CASE-XGS-08269] c23 N71-26206

GOODYER, H. J.  
Stagnation pressure probe  
[NASA-CASE-LAR-11139-1] c35 N74-32878

GOOKIN, R. E.  
System for synchronizing synthesizers of communication systems  
[NASA-CASE-GSC-12148-1] c32 N79-20296

GORADIA, C. P.  
High voltage planar multijunction  
[NASA-CASE-LEW-13400-1] c44 N81-16528  
High voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c44 N81-16529

GORDON, B. L.  
Television noise reduction device  
[NASA-CASE-MSC-12607-1] c32 N75-21485

GORDON, W. A.  
Arc electrode of graphite with ball tip Patent  
[NASA-CASE-XLE-04788] c09 N71-22987

GORELICK, D.  
Arterial pulse wave pressure transducer  
[NASA-CASE-GSC-11531-1] c52 N74-27566

GORSTEIN, H.  
Two color horizon sensor  
[NASA-CASE-ERC-10174] c14 N72-25409

GROSS, W. C.  
High pulse rate high resolution optical radar system  
[NASA-CASE-NPO-11426] c07 N73-26119  
Optical gyroscope system  
[NASA-CASE-NPO-14258-1] c35 N81-33448

GOULD, C. W.  
Printed circuit board with bellows rivet connection Patent  
[NASA-CASE-XNP-05082] c15 N70-41960

GOULD, J. M.  
Static inverters which sum a plurality of waves Patent  
[NASA-CASE-XMF-00663] c08 N71-18752  
Acquisition and tracking system for optical radar  
[NASA-CASE-MFS-20125] c16 N72-13437

GOULD, W. I., JR.  
Millimeter wave antenna system Patent Application  
[NASA-CASE-GSC-10949-1] c07 N71-28965

GRAAB, J. W.  
Analytical test apparatus and method for determining oxide content of alkali metal Patent  
[NASA-CASE-XLE-01997] c06 N71-23527

GRABOWSKI, J. P.  
Target acquisition antenna  
[NASA-CASE-GSC-10064-1] c10 N72-22235

GRAFF, J.  
Amino acid analysis  
[NASA-CASE-NPO-12130-1] c25 N75-14844

GRAFSTEIN, D.  
Fluidic-thermochromic display device Patent  
[NASA-CASE-ERC-10031] c12 N71-18603

GRAHAM, A. B.  
Propulsive lateral control nozzle  
[NASA-CASE-LAR-12136-1] c08 N81-33210

GRAHAM, O. L.  
Color television system  
[NASA-CASE-MSC-12146-1] c07 N72-17109

GRAHAM, R. W.  
Liquid storage tank venting device for zero gravity environment Patent  
[NASA-CASE-XLE-01449] c15 N70-41646  
Curved film cooling admission tube  
[NASA-CASE-LEW-13174-1] c34 N81-12363

GRAN, A. A.  
Venting device for pressurized space suit helmet Patent  
[NASA-CASE-XMS-09652-1] c05 N71-26333

GRANA, D. C.  
Remote water monitoring system  
[NASA-CASE-LAR-11973-1] c35 N78-27384  
Natural turbulence electrical power generator  
[NASA-CASE-LAR-11551-1] c44 N80-29834  
Apparatus and process for microbial detection and enumeration  
[NASA-CASE-LAR-12709-1] c51 N81-29727

GRANATA, R. L.  
Sidereal frequency generator Patent  
[NASA-CASE-XGS-02610] c14 N71-23174

GRANT, D. J.  
Passively regulated water electrolysis rocket engine Patent  
[NASA-CASE-XGS-08729] c28 N71-14044

Precision thrust gage Patent  
[NASA-CASE-XGS-02319] c14 N71-22965

Fluid flow meter with comparator reference means Patent  
[NASA-CASE-XGS-01331] c14 N71-22996

GRANT, G. R.  
Dual wavelength scanning Doppler velocimeter  
[NASA-CASE-ABC-10637-1] c35 N75-16783

GRANT, H. H.  
Spacecraft attitude sensor  
[NASA-CASE-GSC-10890-1] c21 N73-30640

GRANTHAM, W. L.  
Means for measuring the electron density gradients of the plasma sheath formed around a space vehicle Patent  
[NASA-CASE-XLA-06232] c25 N71-20563

Antenna design for surface wave suppression Patent  
[NASA-CASE-XLA-10772] c07 N71-28980

GRAY, C. E.  
Optical characteristics measuring apparatus Patent  
[NASA-CASE-YNP-08840] c23 N71-16365

GRAY, D. L.  
Solar cell angular position transducer  
[NASA-CASE-LAR-11999-1] c44 N80-16552

GRAY, D. T.  
Three-axis adjustable loading structure  
[NASA-CASE-FRC-10051-1] c35 N74-13129

GRAY, J. L.  
Automatic lightning detection and photographic system  
[NASA-CASE-KSC-10728-1] c14 N73-32319

GRAY, H. C.  
Fire extinguishing apparatus having a slidably mass for a penetrator nozzle  
[NASA-CASE-KSC-11064-1] c31 N81-14137

GRAY, V. H.  
Boiler for generating high quality vapor Patent  
[NASA-CASE-XLE-00785] c33 N71-16104

Ablative system  
[NASA-CASE-LEW-10359] c33 N72-25911

Ablative system  
[NASA-CASE-LEW-10359-2] c33 N73-25952

Space vehicle with artificial gravity and earth-like environment  
[NASA-CASE-LEW-11101-1] c31 N73-32750

GRAYSON, J. H.  
Voltage-current characteristic simulator Patent  
[NASA-CASE-XMS-01554] c10 N71-1C578

GREEN, V. J.  
Inductive liquid level detection system Patent  
[NASA-CASE-XLE-01609] c14 N71-1C500

GREEN, F. J.  
Variable ratio mixed-mode bilateral master-slave control system for shuttle remote manipulator system  
[NASA-CASE-MSC-14245-1] c18 N75-27041

GREEN, A. T.  
Method and apparatus for nondestructive testing of pressure vessels  
[NASA-CASE-NPO-12142-1] c38 N76-28563

GREEN, C. W., JR.  
Rocket injector head  
[NASA-CASE-XHP-04592-1] c20 N79-21125

GREEN, R. D.  
Linear sawtooth voltage-wave generator employing transistor timing circuit having capacitor-zener diode combination feedback Patent  
[NASA-CASE-XMS-01315] c09 N70-41675

GREEN, K. A.  
Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector  
[NASA-CASE-NPO-13568-1] c32 N76-21365

Multifrequency broadband polarized horn antenna  
[NASA-CASE-NPO-14588-1] c32 N81-25278

GREEN, R. G.  
Traversing probe Patent  
[NASA-CASE-XPR-02007] c12 N71-24692

Layout tool Patent  
[NASA-CASE-FRC-10005] c15 N71-26145

Method and apparatus for attaching physiological monitoring electrodes Patent  
[NASA-CASE-XPR-07658-1] c05 N71-26293

GREEN, R. R.  
Serial digital decoder Patent  
[NASA-CASE-NPO-10150] c08 N71-24650

Apparatus for deriving synchronizing pulses from pulses in a single channel PCM communications system  
[NASA-CASE-NPO-11302-1] c07 N73-13149

Method and apparatus for a single channel digital communications system  
[NASA-CASE-NPO-11302-2] c32 N74-1C132

GREEN, W. L.  
Mass measuring system Patent  
[NASA-CASE-XMS-03371] c05 N70-42000

GREENBERG, J.  
Combined electrolysis device and fuel cell and method of operation Patent  
[NASA-CASE-XLE-01645] c03 N71-20904

Heat activated cell with alkali anode and alkali salt electrolyte Patent  
[NASA-CASE-LEW-11358] c03 N71-26084

Heat activated cell Patent  
[NASA-CASE-LEW-11359] c03 N71-28579

Method of making emf cell  
[NASA-CASE-LEW-11359-2] c03 N72-20034

GREENLEAF, J. E.  
Thermistor holder for skin temperature measurements  
[NASA-CASE-ABC-10855-1] c52 N77-10780

Sweat collection capsule  
[NASA-CASE-ABC-11031-1] c52 N81-29763

GREENWOOD, T. D.  
Thermoset-thermoplastic aromatic polyamides  
[NASA-CASE-LAR-12723-1] c27 N81-15107

GREENWOOD, T. L.  
Seismic displacement transducer Patent  
[NASA-CASE-XMF-00479] c14 N70-34794

Condition and condition duration indicator Patent  
[NASA-CASE-XMF-01097] c10 N71-16058

GREGORY, J. W.  
Rocket motor system Patent  
[NASA-CASE-XLE-00323] c28 N70-38505

Combustion chamber Patent  
[NASA-CASE-XLE-04857] c28 N71-23968

Rocket thrust throttling system  
[NASA-CASE-LEW-10374-1] c28 N73-13773

GREGORY, T. J.  
Rotating launch device for a remotely piloted aircraft  
[NASA-CASE-ARC-10979-1] c09 N77-19076

GRIEVE, S. H.  
Apparatus for testing wiring harness by vibration generating means  
[NASA-CASE-MSC-15158-1] c14 N72-17325

GRIFFIN, C. R.  
Antenna deployment mechanism for use with a spacecraft  
[NASA-CASE-GSC-12331-1] c18 N80-14183

GRIFFIN, F. D.  
Device for determining the accuracy of the flare on a flared tube  
[NASA-CASE-XKS-03495] c14 N69-39785

Optical monitor panel Patent  
[NASA-CASE-XKS-03509] c14 N71-23175

GRIFFIN, R. H.  
Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-MFS-21394-1] c34 N74-27744

GRIFFIN, W. S.  
Fluid jet amplifier  
[NASA-CASE-XLE-03512] c12 N69-21466

Fluid jet amplifier Patent  
[NASA-CASE-XLE-09341] c12 N71-28741

GRIFFITH, G. E.  
High intensity heat and light unit Patent  
[NASA-CASE-XLA-00141] c09 N70-33312

GRINER, D. E.  
System for the measurement of ultra-low stray light levels  
[NASA-CASE-MFS-23513-1] c74 N79-11865

GRISAFFE, S. J.  
Method of making a diffusion bonded refractory coating Patent  
[NASA-CASE-XLE-01604-2] c15 N71-15610

Nickel aluminide coated low alloy stainless steel  
[NASA-CASE-LEW-11267-1] c17 N73-32414

Method of protecting the surface of a substrate  
[NASA-CASE-LEW-11696-1] c37 N75-13261

Duplex aluminized coatings  
[NASA-CASE-LEW-11696-2] c26 N75-19408

Fused silicide coatings containing discrete particles for protecting niobium alloys  
[NASA-CASE-LEW-11179-1] c27 N76-16229

GRISWOLD, R. H., JR.  
Dual output variable pitch turbofan actuation

system  
[NASA-CASE-LEW-12419-1] c07 N77-14025

**GROBMAN, J.**  
Electric propulsion engine test chamber Patent  
[NASA-CASE-XLE-00252] c11 N70-34844

**GROON, N. J.**  
Electromagnetic mirror drive system  
[NASA-CASE-XLA-03724] c14 N69-27461  
Variable pulse width multiplier Patent  
[NASA-CASE-XLA-02850] c09 N71-20447  
Annular momentum control device used for  
stabilization of space vehicles and the like  
[NASA-CASE-LAR-11051-1] c15 N76-14158  
Magnetic suspension and pointing system  
[NASA-CASE-LAR-11889-2] c37 N78-27424  
Magnetic suspension and pointing system  
[NASA-CASE-LAR-11889-1] c35 N79-26372  
Bim inertial measuring system  
[NASA-CASE-LAR-12052-1] c18 N81-29152

**GROSE, W. L.**  
Combustion detector  
[NASA-CASE-LAR-10739-1] c14 N73-16484

**GROSS, C.**  
Method of temperature compensating semiconductor  
strain gages Patent  
[NASA-CASE-XLA-04555-1] c14 N71-25892  
Infrared detectors  
[NASA-CASE-LAR-10728-1] c14 N73-12445  
Electronically scanned pressure sensor module  
with in SITU calibration capability  
[NASA-CASE-LAR-12230-1] c35 N79-14347  
A self-correcting electronically scanned  
pressure sensor  
[NASA-CASE-LAR-12686-1] c09 N81-27121

**GROSS, W. J.**  
Method of fabricating an object with a thin wall  
having a precisely shaped slit  
[NASA-CASE-LAR-10409-1] c31 N74-21059

**GROTH, W. G.**  
Optical inspection apparatus Patent  
[NASA-CASE-XMF-00462] c14 N70-34298

**GROVE, C. H.**  
Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c33 N79-10337

**GROVES, W. O.**  
Method for the preparation of inorganic single  
crystal and polycrystalline electronic materials  
[NASA-CASE-XLE-02545-1] c76 N79-21910

**GRUBBS, T. H.**  
Discrete local altitude sensing device Patent  
[NASA-CASE-XMS-03792] c14 N70-41812  
Line cutter Patent  
[NASA-CASE-XMS-04072] c15 N70-42017  
Tension measurement device Patent  
[NASA-CASE-XMS-04545] c15 N71-22878  
Winch having cable position and load indicators  
Patent  
[NASA-CASE-MSC-12052-1] c15 N71-24599

**GRUBER, C. L.**  
Method and apparatus for optical modulating a  
light signal Patent  
[NASA-CASE-GSC-10216-1] c23 N71-26722

**GRUBER, R. P.**  
Closed Loop solar array-ion thruster system with  
power control circuitry  
[NASA-CASE-LEW-12780-1] c20 N79-20179  
Self-reconfiguring solar cell system  
[NASA-CASE-LEW-12586-1] c44 N80-14472

**GRUNBAUM, B. W.**  
Automatic multiple-sample applicator and  
electrophoresis apparatus  
[NASA-CASE-ARC-10991-1] c25 N78-14104  
Microelectrophoretic apparatus and process  
[NASA-CASE-ARC-11121-1] c25 N79-14169

**GRUNBERGER, P. J.**  
High speed, glitch-free digital to analog  
converter  
[NASA-CASE-GSC-12319-1] c60 N79-32852

**GRUNTHAMER, P. J.**  
Photoelectron spectrometer with means for  
stabilizing sample surface potential  
[NASA-CASE-NPO-13772-1] c35 N78-10429

**GUILLOTTE, R. J.**  
Infrared scanner Patent  
[NASA-CASE-XLA-00120] c21 N70-33181

**GUISINGER, J. E.**  
Starting circuit for vapor lamps and the like  
Patent  
[NASA-CASE-XNP-01058] c09 N71-12540

Variable frequency nuclear magnetic resonance  
spectrometer Patent  
[NASA-CASE-XNP-09830] c14 N71-26266  
High voltage transistor amplifier with constant  
current load  
[NASA-CASE-NPO-11023] c09 N72-17155  
Thermomagnetic recording and magneto-optic  
playback system having constant intensity  
laser beam control  
[NASA-CASE-NPO-11317-2] c36 N74-13205  
Magneto-optic detection system with noise  
cancellation  
[NASA-CASE-NPO-11954-1] c35 N78-29421  
Thermomagnetic recording and magnetic-optic  
playback system  
[NASA-CASE-NPO-10872-1] c35 N79-16246  
Manganese bismuth films with narrow transfer  
characteristics for Curie-point switching  
[NASA-CASE-NPO-11336-1] c76 N79-16678

**GUISE, L. R.**  
Solid medium thermal engine  
[NASA-CASE-ARC-10461-1] c44 N74-33379

**GUNGLE, B. L.**  
Self-sealing, unbonded, rocket motor nozzle  
closure Patent  
[NASA-CASE-XLA-02651] c28 N70-41967

**GUNTER, W. D., JR.**  
Multiple pass reimaging optical system  
[NASA-CASE-ARC-10194-1] c23 N73-20741  
Dual wavelength scanning Doppler velocimeter  
[NASA-CASE-ARC-10637-1] c35 N75-16783  
Pseudo-backscatter laser Doppler velocimeter  
employing antiparallel-reflector in the  
forward direction  
[NASA-CASE-ARC-10970-1] c36 N77-25501

**GUPTA, A.**  
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] c74 N81-17887

**GUTLER, C. A.**  
Ablation sensor  
[NASA-CASE-XLA-01781] c14 N69-39975  
Pressurized cell micrometeoroid detector Patent  
[NASA-CASE-XLA-00936] c14 N71-14996  
Dual measurement ablation sensor  
[NASA-CASE-LAR-10105-1] c34 N74-15652

**GUSSOW, S. S.**  
Pseudo-noise test set for communication system  
evaluation  
[NASA-CASE-MFS-22671-1] c35 N75-21582  
Method of and means for testing a tape  
record/playback system  
[NASA-CASE-MFS-22671-2] c35 N77-17426

**GUSTAFSON, G. I.**  
Apparatus for measuring thermal conductivity  
Patent  
[NASA-CASE-XGS-01052] c14 N71-15992

**GUSTINCIC, J. J.**  
Microwave limb sounder  
[NASA-CASE-NPO-14544-1] c74 N79-34014

**GUTSHALL, R. L.**  
Star scanner  
[NASA-CASE-GSC-11569-1] c89 N74-30886

**GUY, J. T., SR.**  
Disk pack cleaning table Patent Application  
[NASA-CASE-LAR-10590-1] c15 N70-26819

**GYORGAK, C. A.**  
Process for applying a protective coating for  
salt bath brazing Patent  
[NASA-CASE-XLE-00046] c15 N70-33311  
Protective device for machine and metalworking  
tools Patent  
[NASA-CASE-XLE-01092] c15 N71-22797  
Extrusion die for refractory metals Patent  
[NASA-CASE-XLE-06773] c15 N71-23817

## H

**HABBAL, H. A.**  
Analog signal integration and reconstruction  
system Patent  
[NASA-CASE-NFO-10344] c10 N71-26544  
System for quantizing graphic displays  
[NASA-CASE-NFO-10745] c08 N72-22164

**HABRA, J. H.**  
Multiple varactor frequency doubler Patent  
[NASA-CASE-XMF-04958-1] c10 N71-26414

HADEK, V.  
Apparatus and method for measuring the Seebeck coefficient and resistivity of materials [NASA-CASE-NPO-11749] c14 N73-28486  
Durable antistatic coating for polymethylmethacrylate [NASA-CASE-NPO-13867-1] c27 N78-14164

HADLAND, W. O.  
Control device Patent [NASA-CASE-XAC-10019] c15 N71-23809  
Two degree inverted flexure [NASA-CASE-ARC-10345-1] c15 N73-12488

HADLEY, B. C., JR.  
High field CdS detector for infrared radiation [NASA-CASE-LAR-11027-1] c35 N74-18088

HADT, W. F.  
Shaft seal assembly for high speed and high pressure applications [NASA-CASE-LEW-11873-1] c37 N79-22475

HADY, W. F.  
High speed, self-acting shaft seal [NASA-CASE-LEW-11274-1] c37 N75-21631

HAEHNER, C. L.  
Peen plating [NASA-CASE-GSC-11163-1] c15 N73-32360  
Static coefficient test method and apparatus [NASA-CASE-GSC-11893-1] c35 N76-31489

HAERTHER, L. W.  
Chassis unit insert tightening-extract device [NASA-CASE-XMS-01077-1] c37 N79-33467

HARUSSERMAN, W.  
Velocity measurement system [NASA-CASE-MFS-23363-1] c35 N78-32396  
Magnetic field control [NASA-CASE-MFS-23828-1] c33 N80-17359

HAPLE, R. S.  
Digital plus analog output encoder [NASA-CASE-GSC-12115-1] c62 N76-31946

HAGIHARA, P. S.  
Frequency to analog converter Patent [NASA-CASE-XNP-07040] c08 N71-12500

HAGOOD, G. J., JR.  
Function generator for synthesizing complex vibration mode patterns [NASA-CASE-LAR-10310-1] c10 N73-20253

HAINES, B. F.  
Visual examination apparatus [NASA-CASE-ARC-10329-1] c05 N73-26072  
Visual examination apparatus [US-PATENT-BE-28,921] c52 N76-30793  
Optical instrument employing reticle having preselected visual response pattern formed thereon [NASA-CASE-ARC-10576-1] c74 N77-22950

HALEY, C. T.  
Clock setter [NASA-CASE-LAR-11458-1] c35 N76-16392

HALEY, P. C.  
Cavity radiometer Patent [NASA-CASE-XNP-08961] c14 N71-24809  
Plural output optometric sample cell and analysis system [NASA-CASE-NPO-10233-1] c74 N78-33913

HALL, A. C.  
Helmet weight simulator [NASA-CASE-LAR-12320-1] c54 N81-27806

HALL, D. F.  
Apparatus for measuring electric field strength on the surface of a model vehicle Patent [NASA-CASE-XLE-02038] c09 N71-16086

HALL, E. D.  
Spectroscope equipment using a slender cylindrical reflector as a substitute for a slit Patent [NASA-CASE-IGS-08269] c23 N71-26206

HALL, E. H.  
Method for determining presence of O<sub>2</sub> in magnesium oxide [NASA-CASE-NPO-10774] c06 N72-17095

HALL, J. B., JR.  
Surface roughness detector Patent [NASA-CASE-XLA-00203] c14 N70-34161  
Liquid waste feed system [NASA-CASE-LAR-10365-1] c05 N72-27102  
Automatic liquid inventory collecting and dispensing unit [NASA-CASE-LAR-11071-1] c35 N75-19611

HALL, J. F., JR.  
Illumination system including a virtual light source Patent [NASA-CASE-HQN-10781] c23 N71-30292

HALL, J. B.  
High powered arc electrodes [NASA-CASE-LEW-11162-1] c33 N74-12913

HALLAM, K. L.  
Image tube [NASA-CASE-GSC-11602-1] c33 N74-21850

HALLBERG, P. C.  
Turn on transient limiter Patent [NASA-CASE-GSC-10413] c10 N71-26531  
Method and apparatus for slicing crystals [NASA-CASE-GSC-12291-1] c76 N80-18951  
Crystal cleaving machine [NASA-CASE-GSC-12584-1] c76 N80-32246

HALLOCK, J. H.  
Multiple hologram recording and readout system Patent [NASA-CASE-ERC-10151] c16 N71-29131

HALPHEE, G.  
Frangible electrochemical cell [NASA-CASE-XGS-10010] c03 N72-15986

HAMERHESH, C. L.  
Ambient cure polyimide foams [NASA-CASE-ARC-11170-1] c27 N79-11215

HAMLET, J. F.  
Automatic quadrature control and measuring system [NASA-CASE-MFS-21660-1] c35 N74-21017  
LC-oscillator with automatic stabilized amplitude via bias current control [NASA-CASE-MFS-21698-1] c33 N74-26732

HAMMACK, J. B.  
Space capsule Patent [NASA-CASE-XLA-00149] c31 N70-37938  
Space capsule Patent [NASA-CASE-XLA-01332] c31 N71-15664

HAMMOND, A. D.  
Variable sweep aircraft Patent [NASA-CASE-XLA-03659] c02 N71-11041

HANCHEY, K. K.  
Device for preventing high voltage arcing in electron beam welding Patent [NASA-CASE-XMF-08522] c15 N71-19486

HAND, P. J.  
Temperature compensated digital inertial sensor [NASA-CASE-NPO-13044-1] c35 N74-15094

HANGEB, R. T.  
Method and apparatus for fabricating improved solar cell modules [NASA-CASE-NPO-14416-1] c44 N81-14389

HANKINSON, T. W. E.  
Fatigue-resistant shear pin [NASA-CASE-XLA-09122] c15 N69-27505

HANNA, H. F.  
Dual polarity full wave dc motor drive Patent [NASA-CASE-XNP-07477] c09 N71-26092  
Event sequence detector [NASA-CASE-NFO-11703-1] c10 N73-32144  
High isolation RF signal selection switches [NASA-CASE-NPO-13081-1] c33 N74-22814

HANSEN, D. O.  
Particle parameter analyzing system [NASA-CASE-XLE-06094] c33 N78-17293

HANSEN, G. B., JR.  
Automatic vehicle location system [NASA-CASE-NFO-11850-1] c32 N74-12912  
Vehicle locating system utilizing AM broadcasting station carriers [NASA-CASE-NPO-13217-1] c32 N75-26194

HANSEN, I. G.  
Flow angle sensor and read out system Patent [NASA-CASE-XLE-04503] c14 N71-24864  
Low level signal limiter [NASA-CASE-XLE-04791] c32 N74-22096

HANSEN, S.  
Thrust dynamometer Patent [NASA-CASE-XLE-00702] c14 N70-40203  
Method of making screen by casting Patent [NASA-CASE-XLE-00953] c15 N71-15966  
Fluid flow control valve Patent [NASA-CASE-XLE-00703] c15 N71-15967  
Thrust dynamometer Patent [NASA-CASE-XLE-05260] c14 N71-20429

HANSON, M. P.  
Turbo-machine blade vibration damper Patent [NASA-CASE-XLE-00155] c28 N71-29154

HANSON, P. W.  
Lift balancing device [NASA-CASE-LAR-10348-1] c11 N73-12264

**HANSON, B. H.**  
 Tensile strength testing device Patent  
 [NASA-CASE-XNP-05634] c15 N71-24834  
 Hydroforming techniques using epoxy molds Patent  
 [NASA-CASE-XLE-05641-1] c15 N71-26346

**HANST, P. L.**  
 Repetitively pulsed, wavelength selective laser  
 Patent  
 [NASA-CASE-ERC-10178] c16 N71-24832

**HAG, K. E.**  
 A method for the deposition of beta-silicon  
 carbide by isoeptitaxy  
 [NASA-CASE-ERC-10120] c26 N69-33482

**HARADA, Y.**  
 Method of preparing zinc orthotitanate pigment  
 [NASA-CASE-MFS-23345-1] c27 N77-30237

**HARALSON, H. S.**  
 Ultrasonic scanning system for in-place  
 inspection of brazed tube joints  
 [NASA-CASE-MFS-20767-1] c38 N74-15130

**HARAWAY, W. M., JR.**  
 Thermal protection ablation spray system Patent  
 [NASA-CASE-XLA-04251] c18 N71-26100  
 Bonding method in the manufacture of continuous  
 regression rate sensor devices  
 [NASA-CASE-LAR-10337-1] c24 N75-3C260  
 Vacuum pressure molding technique  
 [NASA-CASE-LAR-10073-1] c37 N76-24575

**HARD, T. M.**  
 Optical systems having spatially invariant outputs  
 [NASA-CASE-ERC-10248] c14 N72-17323

**HARDGROVE, W. P.**  
 Omni-directional anisotropic molecular trap Patent  
 [NASA-CASE-XGS-00783] c30 N71-17788

**HARDY, J. C.**  
 Omnidirectional joint Patent  
 [NASA-CASE-XMS-09635] c05 N71-24623  
 Restraining mechanism  
 [NASA-CASE-MSC-13054] c54 N78-17677

**HARMAN, J. H., III**  
 Pulse activated pclarographic hydrogen detector  
 Patent  
 [NASA-CASE-IMF-06531] c14 N71-17575

**HARMS, V. W.**  
 Apparatus for automatically stabilizing the  
 attitude of a nonguided vehicle  
 [NASA-CASE-ARC-10134] c30 N72-17873

**HAROULES, G. G.**  
 Method and means for providing an absolute power  
 measurement capability Patent  
 [NASA-CASE-ERC-11020] c14 N71-26774  
 Clear air turbulence detector  
 [NASA-CASE-ERC-10081] c14 N72-28437  
 Method and apparatus for measuring solar  
 activity and atmospheric radiation effects  
 [NASA-CASE-ERC-10276] c14 N73-26432

**HARPER, C. A.**  
 Thermal conductive connection and method of  
 making same Patent  
 [NASA-CASE-XMS-02087] c09 N70-41717

**HARPER, P. M., SR.**  
 Improved tire/wheel concept  
 [NASA-CASE-LAR-11695-2] c37 N80-18402  
 Tire/wheel concept  
 [NASA-CASE-LAR-11695-2] c37 N81-24443

**HARRAP, V.**  
 Integrated circuit including field effect  
 transistor and cermet resistor  
 [NASA-CASE-GSC-10835-1] c09 N72-33205

**HARRIGILL, H. T., JR.**  
 Regulated high efficiency, lightweight  
 capacitor-diode multiplier dc to dc converter  
 [NASA-CASE-LBW-12791-1] c33 N78-32341

**HARRIS, D. H.**  
 Recorder using selective noise filter  
 [NASA-CASE-ERC-10112] c07 N72-21119

**HARRIS, B. F.**  
 Method for fabricating a mass spectrometer inlet  
 leak  
 [NASA-CASE-GSC-12077-1] c35 N77-24455

**HARRIS, B. P.**  
 Holding fixture for a hot stamping press  
 [NASA-CASE-GSC-12619-1] c37 N81-16470

**HARRIS, B. V., JR.**  
 Supersonic aircraft Patent  
 [NASA-CASE-XLA-04451] c02 N71-12243

**HARRISON, D. R.**  
 Transducer circuit and catheter transducer Patent  
 [NASA-CASE-ARC-10132-1] c09 N71-24597

Diode-quad bridge circuit means  
 [NASA-CASE-ARC-10364-3] c33 N75-19520  
 Diode-quad bridge circuit means  
 [NASA-CASE-ARC-10364-2] c33 N75-25041

**HARRISON, E. S.**  
 Polymeric foams from cross-linkable  
 poly-n-arylenebenzimidazoles  
 [NASA-CASE-ARC-11008-1] c27 N78-31232

**HARRISON, E., JR.**  
 Universal connectors for joining stringers  
 [NASA-CASE-LAR-12744-1] c37 N81-31551

**HARRISON, P. L.**  
 Life raft stabilizer  
 [NASA-CASE-HSC-12393-1] c02 N73-26006

**HARRISON, B. G., JR.**  
 Pressure variable capacitor  
 [NASA-CASE-IMP-09752] c14 N69-21541  
 Temperature telemetric transmitter Patent  
 [NASA-CASE-NFO-10649] c07 N71-24840

**HARSTAD, K. G.**  
 Isotope separation using metallic vapor lasers  
 [NASA-CASE-NFO-13550-1] c36 N77-26477

**HARTENSTEIN, B. G.**  
 Accelerometer with FM output Patent  
 [NASA-CASE-XLA-00492] c14 N70-34799  
 Variable time constant smoothing circuit Patent  
 [NASA-CASE-XGS-01983] c10 N70-41964

**HARTING, D. B.**  
 Strain gage Patent Application  
 [NASA-CASE-FRC-10053] c14 N70-35587

**HARTMANN, H. J.**  
 Supercharged topping rocket propellant feed system  
 [NASA-CASE-XLE-02062-1] c20 N80-14188

**HARTOP, R.**  
 Waveguide cooling system  
 [NASA-CASE-NFO-15401-1] c33 N81-29344

**HARTOP, R. W.**  
 Reflex feed system for dual frequency antenna  
 with frequency cutoff means  
 [NASA-CASE-NFO-14022-1] c32 N78-31321

**HARVEY, G. A.**  
 Maksutov spectrograph Patent  
 [NASA-CASE-XLA-10402] c14 N71-29041  
 Apparatus for photographing meteors  
 [NASA-CASE-LAR-10226-1] c14 N73-19419

**HARVEY, W. D.**  
 Heat sensing instrument Patent  
 [NASA-CASE-XLA-01551] c14 N71-22989

**HARWELL, E. J.**  
 Nonflammable coating compositions  
 [NASA-CASE-MFS-20486-2] c27 N74-17283

**HASBACH, W. A.**  
 Solid state matrices  
 [NASA-CASE-NFO-10591] c03 N72-22041

**HASKELL, E. B.**  
 Optical process for producing classification  
 maps from multispectral data  
 [NASA-CASE-MSC-14472-1] c43 N77-10584  
 Interactive color display for multispectral  
 imagery using correlation clustering  
 [NASA-CASE-MSC-16253-1] c32 N79-20297

**HASSON, D. F.**  
 Space and atmospheric reentry vehicle Patent  
 [NASA-CASE-XGS-00260] c31 N70-37924

**HATAKEYAMA, L. F.**  
 Method and system for ejecting fairing sections  
 from a rocket vehicle  
 [NASA-CASE-GSC-10590-1] c31 N73-14853

**HATCH, J. E.**  
 Energy conversion apparatus Patent  
 [NASA-CASE-XLE-00212] c03 N70-34134

**HATCHER, H. H.**  
 Electromagnetic mirror drive system  
 [NASA-CASE-XLA-03724] c14 N69-27461  
 Infrared scanner Patent  
 [NASA-CASE-XLA-00120] c21 N70-33181  
 Automatic balancing device Patent  
 [NASA-CASE-LAR-10774] c10 N71-13545  
 Attitude sensor for space vehicles Patent  
 [NASA-CASE-XLA-00793] c21 N71-22880

**HATFIELD, J. J.**  
 Integrated time shared instrumentation display  
 Patent  
 [NASA-CASE-XLA-01952] c08 N71-12507

**HATHAWAY, M. E.**  
 Frangible tube energy dissipation Patent  
 [NASA-CASE-XLA-00754] c15 N70-34850

**HAUGE, G.**  
 Low distortion automatic phase control circuit

[NASA-CASE-MFS-21671-1] c33 N74-22885

**HAURY, V. E.**  
Hydrazinium nitroformate propellant stabilized with nitroguanidine  
[NASA-CASE-NPO-12000] c27 N72-25699  
Hydrazinium nitroformate propellant with saturated polymeric hydrocarbon binder  
[NASA-CASE-NPO-12015] c27 N73-16764

**HAUSER, J. A.**  
High pressure gas filter system Patent  
[NASA-CASE-MFS-12806] c14 N71-17588  
High pressure helium purifier Patent  
[NASA-CASE-XMP-06888] c15 N71-24044

**HAVENS, D. E.**  
Meter for use in detecting tension in straps having predetermined elastic characteristics  
[NASA-CASE-MFS-22189-1] c35 N75-19615

**HAWKINS, C. A.**  
System for the measurement of ultra-low stray light levels  
[NASA-CASE-MFS-23513-1] c74 N79-11865

**HAWLEY, J. J.**  
Method of erasing target material of a vidicon tube or the like Patent  
[NASA-CASE-XNP-06028] c09 N71-23189

**HAWLEY, W. W.**  
Omnidirectional acceleration device Patent  
[NASA-CASE-BQN-10780] c14 N71-30265

**HAYDEN, E. E.**  
Magnetic counter Patent  
[NASA-CASE-XNP-08836] c09 N71-12515

**HAYNES, D. P.**  
Remote water monitoring system  
[NASA-CASE-LAR-11973-1] c35 N78-27384

**HAYNES, J. L.**  
Ultrasonic scanning system for in-place inspection of brazed tube joints  
[NASA-CASE-MFS-20767-1] c38 N74-15130

**HAYNIE, C. C.**  
Variable contour securing system  
[NASA-CASE-MSC-16270-1] c37 N78-27423  
Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c26 N80-28492

**HAYNIG, C. C.**  
Apparatus for positioning modular components on a vertical or overhead surface  
[NASA-CASE-LAR-11465-1] c37 N76-21554

**HAYNOS, J. G.**  
Interconnection of solar cells Patent  
[NASA-CASE-XGS-01475] c03 N71-11058  
Frangible electrochemical cell  
[NASA-CASE-XGS-10010] c03 N72-15986

**HAYS, L. G.**  
Fluid phase analyzer Patent  
[NASA-CASE-NPO-10691] c14 N71-26199  
Two phase flow system with discrete impinging two-phase jets  
[NASA-CASE-NPO-11556] c12 N72-25292  
Observation window for a gas confining chamber  
[NASA-CASE-NPO-10890] c11 N73-12265  
Flow control valve  
[NASA-CASE-NPO-11951-1] c37 N74-21065

**HEARN, C. P.**  
Wideband VCO with high phase stability Patent  
[NASA-CASE-XLA-03893] c10 N71-27271  
Multichannel logarithmic RF level detector  
[NASA-CASE-LAR-11021-1] c32 N76-14321  
Phase modulating with odd and even finite power series of a modulating signal  
[NASA-CASE-LAR-11607-1] c32 N77-14292

**HEBERLIG, J. C.**  
Survival couch Patent  
[NASA-CASE-XLA-00118] c05 N70-33285

**HECHT, R.**  
Apparatus for absolute pressure measurement  
[NASA-CASE-LAR-10000] c14 N73-30394

**HECKELMAN, J. D.**  
Multialarm summary alarm Patent  
[NASA-CASE-XLE-03061-1] c10 N71-24798

**HECKLER, C. E.**  
Mercury capillary interrupter Patent  
[NASA-CASE-INP-02251] c12 N71-20896  
Method for making conductors for ferrite memory arrays  
[NASA-CASE-LAR-10994-1] c24 N75-13032

**HEDGEPEATH, J. M.**  
Foldable beam  
[NASA-CASE-LAR-12077-1] c31 N81-25259

**HEDLUND, R. C.**  
Precision rectifier with FET switching means Patent  
[NASA-CASE-ARC-10101-1] c09 N71-33109  
Self-tuning bandpass filter  
[NASA-CASE-ARC-10264-1] c09 N73-20231

**HEER, E.**  
Pressure seal Patent  
[NASA-CASE-NFO-10796] c15 N71-27068

**HEFFERMAN, J. T.**  
Surface finishing  
[NASA-CASE-MSC-12631-3] c27 N81-14077

**HEFFERMAN, J. T.**  
Surface finishing  
[NASA-CASE-MSC-12631-1] c24 N77-28225

**HEPLINGER, L. O.**  
Spatial filter for Q-switched lasers  
[NASA-CASE-LEW-12164-1] c36 N77-32478  
Microbalance  
[NASA-CASE-MSC-11242] c35 N78-17358

**HEIDMANN, M. F.**  
Injector for bipropellant rocket engines Patent  
[NASA-CASE-XMF-00148] c28 N70-38710  
Instrument for the quantitative measurement of radiation at multiple wave lengths Patent  
[NASA-CASE-XLE-00211] c14 N70-41946  
Control of transverse instability in rocket combustors Patent  
[NASA-CASE-XLE-04603] c33 N71-21507  
Burning rate control of solid propellants Patent  
[NASA-CASE-XLE-03494] c27 N71-21819

**HEIDT, M. F.**  
Ultrastable calibrated light source  
[NASA-CASE-MSC-12293-1] c14 N72-27411

**HEIER, W. C.**  
Method for molding compounds Patent  
[NASA-CASE-XLA-01091] c15 N71-10672  
Evacuated displacement compression molding  
[NASA-CASE-LAR-10782-1] c31 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] c31 N74-18124  
Method of laminating structural members  
[NASA-CASE-XLA-11028-1] c24 N74-27035  
Molding apparatus  
[NASA-CASE-LAR-10489-2] c31 N74-32920  
Evacuated, displacement compression mold  
[NASA-CASE-LAR-10782-2] c31 N75-13111  
Molded composite pyrogen igniter for rocket motors  
[NASA-CASE-LAR-12018-1] c20 N78-24275

**HEIMBUCH, A. H.**  
Chromato-fluorographic drug detector  
[NASA-CASE-ARC-10633-1] c25 N74-26947

**HEIMBERG, G. J.**  
Extensometer frame  
[NASA-CASE-XLA-10322] c15 N72-17452

**HEIN, L. A.**  
Mechanical thermal motor  
[NASA-CASE-MFS-23062-1] c37 N77-12402  
Spherical bearing  
[NASA-CASE-MFS-23447-1] c37 N79-11404  
Amplified wind turbine apparatus  
[NASA-CASE-MFS-23830-1] c44 N80-21831

**HEINDL, J. C.**  
Fluid lubricant system Patent  
[NASA-CASE-XNP-03972] c15 N71-23048

**HEINEMANN, K.**  
Method of forming aperture plate for electron microscope  
[NASA-CASE-ABC-10448-2] c74 N75-12732  
Electron microscope aperture system  
[NASA-CASE-ABC-10448-3] c35 N77-14408

**HEINEY, O. K.**  
Self-obturator, gas operated launcher  
[NASA-CASE-NPO-11013] c11 N72-22247

**HEISHAN, E. M.**  
Tube dimpling tool Patent  
[NASA-CASE-XMS-06876] c15 N71-21536  
Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c26 N80-28492

**HELBERT, W. B., JR.**  
Method of repairing discontinuity in fiberglass structures  
[NASA-CASE-LAR-10416-1] c24 N74-30001

**HELLBAUM, E. F.**  
Logic AND gate for fluid circuits Patent  
[NASA-CASE-XLA-07391] c12 N71-17579



Technique of duplicating fragile core  
[NASA-CASE-XLA-07829] c15 N72-16329

Fluid pressure amplifier and system  
[NASA-CASE-LAR-10868-1] c33 N74-11050

HELLER, J. A.  
Apparatus and method for reducing thermal stress  
in a turbine rotor  
[NASA-CASE-LEW-12232-1] c07 N79-16057

HELLMANN, H. F.  
Apparatus for purging systems handling toxic,  
corrosive, noxious and other fluids Patent  
[NASA-CASE-XMS-01905] c12 N71-21089

HELMS, C. H.  
Prosthetic urinary sphincter  
[NASA-CASE-MFS-23717-1] c52 N81-25660

HENDEL, F. J.  
Thermoplastic rubber comprising ethylene-vinyl  
acetate copolymer, asphalt and fluxing oil  
[NASA-CASE-NFO-08835-1] c27 N78-35228

HENDERSON, M. E.  
Gas chromatograph injection system  
[NASA-CASE-ARC-10344-2] c35 N75-26334

HENDRICKS, H. D.  
Method of detecting oxygen in a gas  
[NASA-CASE-LAR-10668-1] c06 N73-16106

HENLEY, W. H.  
Method of fabricating an object with a thin wall  
having a precisely shaped slit  
[NASA-CASE-LAR-10409-1] c31 N74-21059

HENNIGAN, T. J.  
Apparatus for measuring swelling characteristics  
of membranes  
[NASA-CASE-XGS-03865] c14 N69-21363

Prevention of pressure build-up in  
electrochemical cells Patent  
[NASA-CASE-XGS-01419] c03 N70-41864

Non-magnetic battery case Patent  
[NASA-CASE-XGS-00886] c03 N71-11053

Method and apparatus for battery charge control  
Patent  
[NASA-CASE-XGS-05432] c03 N71-15438

Sealing device for an electrochemical cell Patent  
[NASA-CASE-XGS-02630] c03 N71-22974

Sealed electrochemical cell provided with a  
flexible casing Patent  
[NASA-CASE-XGS-01513] c03 N71-23336

HENRY, A. W.  
Dicyanoacetylene polymers Patent  
[NASA-CASE-XNP-03250] c06 N71-23500

HENRY, B. Z., JR.  
Variable geometry manned orbital vehicle Patent  
[NASA-CASE-XLA-03691] c31 N71-15674

HENRY, V. P.  
Systems and methods for determining radio  
frequency interference  
[NASA-CASE-GSC-12150-1] c32 N79-11265

HEPPNER, J. P.  
Wide range linear fluxgate magnetometer Patent  
[NASA-CASE-XGS-01587] c14 N71-15962

HEBBELL, T. P.  
Gas purged dry box glove Patent  
[NASA-CASE-XLE-02531] c05 N71-23080

Method of producing refractory composites  
containing tantalum carbide, hafnium carbide,  
and hafnium boride Patent  
[NASA-CASE-XLE-03940] c18 N71-26153

Refractory metal base alloy composites  
[NASA-CASE-XLE-03940-2] c17 N72-28536

HEBMAN, C. F.  
Differential pulse code modulation  
[NASA-CASE-MSC-12506-1] c32 N77-12239

HEBMANN, A. H.  
Method of using photovoltaic cell using  
poly-N-vinylcarbazole complex Patent  
[NASA-CASE-NPO-10373] c03 N71-18698

HEBMESEYER, C. R.  
Method and apparatus for quadriphase-shift-key  
and linear phase modulation  
[NASA-CASE-NPO-14444-1] c33 N81-15192

HEROLD, C. P.  
Quick attach and release fluid coupling assembly  
Patent  
[NASA-CASE-XKS-01985] c15 N71-10782

HEBB, B. W.  
A support technique for vertically oriented  
launch vehicles  
[NASA-CASE-XLA-02704] c11 N69-21540

HEBBMANN, A. L.  
Locking device with rolling detents Patent  
[NASA-CASE-XNP-01371] c15 N70-41829

HEBRON, B. G.  
Power control circuit  
[NASA-CASE-XNP-02713] c10 N69-39888

HESLIN, T. H.  
Inorganic spark chamber frame and method of  
making the same  
[NASA-CASE-GSC-12354-1] c35 N80-20565

HESPERHIDE, W. H.  
Variable direction force coupler  
[NASA-CASE-MFS-20317] c15 N73-13463

HESS, D. A.  
Passive propellant system  
[NASA-CASE-MFS-23642-2] c20 N78-27176

Passive propellant system  
[NASA-CASE-MFS-23642-1] c20 N80-10278

HESS, R. V.  
A technique for breaking ice in the path of a ship  
[NASA-CASE-LAR-10815-1] c16 N72-22520

HESS, R. W.  
Contour surveying system Patent  
[NASA-CASE-XLA-08646] c14 N71-17586

HESTER, H. B.  
Current regulating voltage divider  
[NASA-CASE-MFS-20935] c09 N71-34212

HETTCOAT, J. P.  
Thruster maintenance system Patent  
[NASA-CASE-MFS-20325] c28 N71-27095

HEWES, D. E.  
Rotating space station simulator Patent  
[NASA-CASE-XLA-03127] c11 N71-10776

Reduced gravity simulator Patent  
[NASA-CASE-XLA-01787] c11 N71-16028

HEYMAN, J. S.  
Ultrasonic calibration device  
[NASA-CASE-LAR-11435-1] c35 N76-15432

CW ultrasonic bolt tensioning monitor  
[NASA-CASE-LAR-12016-1] c39 N78-15512

Pseudo continuous wave instrument  
[NASA-CASE-LAR-12260-1] c35 N79-10390

Liquid-immersible electrostatic ultrasonic  
transducer  
[NASA-CASE-LAR-12465-1] c35 N80-18363

CDS solid state phase insensitive ultrasonic  
transducer  
[NASA-CASE-LAR-12304-1] c35 N80-20559

Frequency tracked pulse technique for ultrasonic  
analysis  
[NASA-CASE-LAR-12697-1] c32 N80-26571

Acoustic tooth cleaner  
[NASA-CASE-LAR-12471-1] c52 N81-12724

Pulsed phase locked loop strain monitor  
[NASA-CASE-LAR-12772-1] c33 N81-15195

HEYSER, H. C.  
Temperature control system with a pulse width  
modulated bridge  
[NASA-CASE-NFO-11304] c14 N73-26430

Method for shaping and aiming narrow beams  
[NASA-CASE-NPO-14632-1] c32 N80-12256

HEYSON, H. H.  
Variable geometry wind tunnels  
[NASA-CASE-XLA-07430] c11 N72-22246

HIEDA, L. S.  
Controller for computer control of brushless dc  
motors  
[NASA-CASE-NPO-13970-1] c33 N81-20352

HIGA, W. H.  
Refrigeration apparatus  
[NASA-CASE-NPO-10309] c15 N69-23190

Refrigeration apparatus Patent  
[NASA-CASE-XNP-08877] c15 N71-23025

Stirling cycle engine and refrigeration systems  
[NASA-CASE-NPO-13613-1] c37 N76-29590

Centrifugal-reciprocating compressor  
[NASA-CASE-NPO-14597-1] c37 N79-23431

HIGBY, R. P.  
Electronic background suppression method and  
apparatus for a field scanning sensor  
[NASA-CASE-XGS-05211] c07 N69-39980

HIGH, R. W.  
Meteoroid capture cell construction  
[NASA-CASE-MSC-12423-1] c91 N76-30131

HILBERT, E. E.  
Data multiplexer using tree switching  
configuration  
[NASA-CASE-NFO-11333] c08 N72-22162

Flexible computer accessed telemetry  
[NASA-CASE-NFO-11358] c07 N72-25172

Space communication system for compressed data with a concatenated Reed-Solomon-Viterbi coding channel  
[NASA-CASE-NPO-13545-1] c32 N77-12240

HILBORN, E. H.  
Method and means for an improved electron beam scanning system Patent  
[NASA-CASE-ERC-10552] c09 N71-12539  
Fluidic-thermochronic display device Patent  
[NASA-CASE-ERC-10031] c12 N71-14603  
Plasma fluidic hybrid display Patent  
[NASA-CASE-ERC-10100] c09 N71-33519

HILDEBRANDT, A. F.  
Helium refining by superfluidity Patent  
[NASA-CASE-XNP-00733] c06 N70-34946  
Continuous magnetic flux pump  
[NASA-CASE-XNP-01187] c15 N73-28516  
Superconductive magnetic-field-trapping device  
[NASA-CASE-XNP-01185] c26 N73-24710  
Magnetic-flux pump  
[NASA-CASE-XNP-01188] c15 N73-32361

HILKEB, W. R.  
Folding structure fabricated of rigid panels  
[NASA-CASE-XHQ-02146] c18 N75-27040

HILL, E. K.  
Ultrasonic scanner for radial and flat panels  
[NASA-CASE-MFS-20335-1] c35 N74-16415

HILL, O. E.  
Burst diaphragm flow initiator Patent  
[NASA-CASE-MFS-12915] c11 N71-17600  
Wind tunnel test section  
[NASA-CASE-MFS-20509] c11 N72-17183

HILL, P. E.  
Heat protection apparatus Patent  
[NASA-CASE-XLA-00892] c33 N71-17897  
Kinesthetic control simulator  
[NASA-CASE-LAR-10276-1] c09 N75-15662

HILL, W. E.  
Sprayable low density ablator and application process  
[NASA-CASE-MFS-23506-1] c24 N78-24290

HILLBERG, E. T.  
Load relieving device Patent  
[NASA-CASE-XMS-06329-1] c15 N71-20441

HILLBORN, E. H.  
Color television systems using a single gun color cathode ray tube Patent  
[NASA-CASE-ZRC-10098] c09 N71-28618

HILLIS, D. A.  
Drift compensation circuit for analog to digital converter Patent  
[NASA-CASE-XNP-04780] c08 N71-15687

HILLMAN, C. E., JR.  
Snap-in compressible biomedical electrode  
[NASA-CASE-MSC-14623-1] c52 N77-28717

HILLMAN, J. J.  
Thermal compensator for closed-cycle helium refrigerator  
[NASA-CASE-GSC-12168-1] c31 N79-17029

HILTON, G. E.  
Position location and data collection system and method Patent  
[NASA-CASE-GSC-10083-1] c30 N71-16090

HIMMELRIGHT, E. H.  
High-temperature, high-pressure spherical segment valve Patent  
[NASA-CASE-IAC-00074] c15 N70-34817

HIRAYAMA, C.  
Glass-to-metal seals comprising relatively high expansion metals  
[NASA-CASE-LEW-10698-1] c37 N74-21063

HIRSHFIELD, S. E.  
Gas liquefaction and dispensing apparatus Patent  
[NASA-CASE-NPO-10070] c15 N71-27372  
Novel polymers and method of preparing same  
[NASA-CASE-NPO-10998-1] c06 N73-32029

HITCHMAN, M. J.  
Automatic real-time pair-feeding system for animals  
[NASA-CASE-ARC-10302-1] c51 N74-15778

HOBART, H. F.  
Liquid flow sight assembly Patent  
[NASA-CASE-XLE-02958] c14 N70-42074

HOBBS, A. J.  
Method and apparatus for determining the contents of contained gas samples  
[NASA-CASE-GSC-10903-1] c14 N73-12444

HOBLEN, L. E.  
Unfurlable structure including coiled strips thrust launched upon tension release Patent  
[NASA-CASE-HQN-00937] c07 N71-28979

HOCHHAIR, E. S.  
Gyrator employing field effect transistors  
[NASA-CASE-MFS-21433] c09 N73-20232  
Integrated P-channel MOS gyrator  
[NASA-CASE-MFS-22343-1] c33 N74-34638  
Integrable power gyrator  
[NASA-CASE-MFS-22342-1] c33 N75-30428

HODDER, D. T.  
Apparatus for remote handling of materials  
[NASA-CASE-LAR-10634-1] c37 N74-18123

HODGE, P. E.  
Corrosion resistant thermal barrier coating  
[NASA-CASE-LEW-13088-1] c26 N81-25188

HODGES, D. H.  
Hingeless helicopter rotor with improved stability  
[NASA-CASE-ARC-10807-1] c05 N77-17029

HOFFLER, G. W.  
Apparatus and method for processing Korotkov sounds  
[NASA-CASE-MSC-13999-1] c52 N74-26626

HOFFMAN, C. A.  
Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-1] c24 N81-17170  
Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-2] c24 N81-26179

HOFFMAN, D. G.  
Light detection instrument Patent  
[NASA-CASE-XGS-05534] c23 N71-16355

HOFFMAN, E. L.  
Flexible foam erectable space structures Patent  
[NASA-CASE-XLA-00686] c31 N70-34135

HOFFMAN, H. C.  
Gravity gradient attitude control system Patent  
[NASA-CASE-GSC-10555-1] c21 N71-27324  
Active nutation controller  
[NASA-CASE-GSC-12273-1] c35 N80-21719  
Method of and apparatus for damping nutation motion with minimum spin axis attitude disturbance  
[NASA-CASE-GSC-12551-1] c18 N81-12156

HOFFMAN, I. S.  
Impact energy absorber Patent  
[NASA-CASE-XLA-01530] c14 N71-23092  
Self-supporting strain transducer  
[NASA-CASE-LAR-11263-1] c35 N75-33369  
Miniature biaxial strain transducer  
[NASA-CASE-LAR-11648-1] c35 N77-14407

HOFFMAN, L. A.  
Compensating bandwidth switching transients in an amplifier circuit Patent  
[NASA-CASE-XNF-01107] c10 N71-28859

HOFFMAN, T. E.  
Tunable cavity resonator with ramp shaped supports  
[NASA-CASE-HQN-10790-1] c36 N74-11313

HOHL, F.  
Volumetric direct nuclear pumped laser  
[NASA-CASE-LAR-12183-1] c36 N79-18307  
Large volume multiple path nuclear pumped laser  
[NASA-CASE-LAR-12592-1] c36 N79-26385  
Solar driven liquid metal MHD power generator  
[NASA-CASE-LAR-12495-1] c44 N81-32609

HOKLO, K. H.  
Welding blades to rotors  
[NASA-CASE-LEW-10533-1] c15 N73-28515

HOLDEN, L. E.  
Microwave integrated circuit for Josephson voltage standards  
[NASA-CASE-MFS-23845-1] c33 N81-17348

HOLDEN, G. E.  
Balanced bellows spirometer  
[NASA-CASE-IAR-01547] c05 N69-21473

HOLDERER, O. C.  
Electric arc driven wind tunnel Patent  
[NASA-CASE-XNF-00411] c11 N70-36913

HOLDERMAN, L. E.  
Germanium coated microbridge and method  
[NASA-CASE-MFS-23274-1] c33 N78-13320

HOLDREN, E. T., III  
Radar calibration sphere  
[NASA-CASE-XLA-11154] c07 N72-21117

HOLES, J. K.  
Digital second-order phase-locked loop  
[NASA-CASE-NPO-11905-1] c33 N74-12887

HOLESKI, D. E.  
Apparatus for absorbing and measuring power Patent

[NASA-CASE-XLE-0C720] c14 N70-40201  
**HOLKO, K. H.**  
 Enhanced diffusion welding  
 [NASA-CASE-LEW-11388-1] c15 N73-32358  
 Apparatus for welding blades to rotors  
 [NASA-CASE-LEW-10533-2] c37 N74-11300  
 Diffusion welding in air  
 [NASA-CASE-LEW-11387-1] c37 N74-1E128  
 Diffusion welding  
 [NASA-CASE-LEW-11388-2] c37 N74-21055

**HOLLAHAN, J. R.**  
 Method of preparing water purification membranes  
 [NASA-CASE-ARC-10643-1] c25 N75-12087  
 Abrasion resistant coatings for plastic surfaces  
 [NASA-CASE-ARC-10915-3] c24 N77-24200

**HOLLAND, L. R.**  
 Apparatus and method for heating a material in a transparent ampoule  
 [NASA-CASE-MFS-25436-1] c76 N81-30012

**HOLLAND, V. B.**  
 Signal conditioning circuit apparatus  
 [NASA-CASE-ARC-10348-1] c33 N75-19518

**HOLLANDER, J.**  
 Polyurethanes of fluorine containing polycarbonates  
 [NASA-CASE-MFS-10512] c06 N73-30099  
 Highly fluorinated polymers  
 [NASA-CASE-MFS-11492] c06 N73-30102

**HOLLANHAN, J. B., JR.**  
 Oxygen post-treatment of plastic surface coated with plasma polymerized silicon-containing monomers  
 [NASA-CASE-ARC-10915-2] c27 N79-18052

**HOLLEMAN, E. C.**  
 Three axis controller Patent  
 [NASA-CASE-XFB-00181] c21 N70-33279

**HOLLENBAUGH, R. C.**  
 Position location system and method Patent  
 [NASA-CASE-GSC-10087-2] c21 N71-13958  
 Position location and data collection system and method Patent  
 [NASA-CASE-GSC-10083-1] c30 N71-16090  
 Traffic control system and method Patent  
 [NASA-CASE-GSC-10067-1] c02 N71-19287  
 Position location system and method  
 [NASA-CASE-GSC-10087-3] c07 N72-12080  
 Doppler compensation by shifting transmitted object frequency within limits  
 [NASA-CASE-GSC-10087-4] c07 N73-20174

**HOLLEY, L. D.**  
 Automatic lightning detection and photographic system  
 [NASA-CASE-KSC-10728-1] c14 N73-32319  
 Microcomputerized electric field meter diagnostic and calibration system  
 [NASA-CASE-KSC-11035-1] c35 N78-26411  
 Digital automatic gain amplifier  
 [NASA-CASE-KSC-11068-1] c33 N79-22373

**HOLLIDAY, M. L.**  
 Precision alignment apparatus for cutting a workpiece  
 [NASA-CASE-LAR-11658-1] c37 N77-14478

**HOLLIS, B. R.**  
 Liquid immersion apparatus for minute articles  
 [NASA-CASE-MFS-25363-1] c31 N80-32585

**HOLLIS, B. R., JR.**  
 Multilevel metallization method for fabricating a metal oxide semiconductor device  
 [NASA-CASE-MFS-23541-1] c76 N79-14906  
 Method of construction of a multi-cell solar array  
 [NASA-CASE-MFS-23540-1] c44 N79-26475

**HOLMAN, E. V.**  
 Latching mechanism Patent  
 [NASA-CASE-XMS-03745] c15 N71-21076

**HOLMES, B. K.**  
 Inflatable transpiration cooled nozzle  
 [NASA-CASE-MFS-20619] c28 N72-11708

**HOLMES, B. K.**  
 Velocity limiting safety system Patent  
 [NASA-CASE-XLA-07473] c15 N71-24895

**HOLMES, J. P.**  
 Oceanic wave measurement system  
 [NASA-CASE-MFS-23662-1] c48 N80-1E667

**HOLMES, L., JR.**  
 Ruler for making navigational computations  
 [NASA-CASE-XNP-01458] c04 N78-17031

**HOLMES, B. P.**  
 Catalyst cartridge for carbon dioxide reduction unit  
 [NASA-CASE-LAR-10551-1] c25 N74-12813  
 Heat exchanger  
 [NASA-CASE-MFS-22991-1] c34 N77-10463

**HOLMES, S. J.**  
 Ultraviolet filter  
 [NASA-CASE-XNP-02340] c23 N69-24332

**HOLMES, T. H.**  
 Vibration damping system Patent  
 [NASA-CASE-XMS-01620] c23 N71-15673

**HOLMES, W. T.**  
 Lifting body Patent Application  
 [NASA-CASE-FRC-10063] c01 N71-12217

**HOLMSTROM, P. B.**  
 Shielded cathode mode bulk effect devices  
 [NASA-CASE-ERC-10119] c26 N72-21701

**HOLONWACH, J.**  
 Sound-suppressing structure with thermal relief  
 [NASA-CASE-LEW-12658-1] c71 N79-14871

**HOLT, H. H.**  
 Transient-compensated SCR inverter  
 [NASA-CASE-XLA-08507] c09 N69-39984  
 SCR blocking pulse gate amplifier Patent  
 [NASA-CASE-XLA-07497] c09 N71-12514

**HOLT, J. W.**  
 Improved attachment system for silica tiles  
 [NASA-CASE-MSC-18741-1] c16 N81-16110

**HOLT, H. I.**  
 Scan converting video tape recorder  
 [NASA-CASE-NFO-10166-1] c07 N73-22076  
 Scan converting video tape recorder  
 [NASA-CASE-NFO-10166-2] c35 N76-16391  
 Electromagnetic transducer recording head having a laminated core section and tapered gap  
 [NASA-CASE-NFO-10711-1] c35 N77-21392

**HOLTEE, R. P.**  
 Coating process  
 [NASA-CASE-XNF-06508] c18 N69-39895

**HOLWAY, H. P.**  
 Model launcher for wind tunnels Patent  
 [NASA-CASE-XNF-03578] c11 N71-23030  
 Mobile sampler for use in acquiring samples of terrestrial atmospheric gasses  
 [NASA-CASE-NFO-15220-1] c35 N81-24414

**HOMKES, R. J.**  
 Multiparameter vision testing apparatus  
 [NASA-CASE-MSC-13601-2] c54 N75-27759

**HONEY, R. W.**  
 Optimum predetection diversity receiving system Patent  
 [NASA-CASE-XGS-00740] c07 N71-23098

**HONEYCUTT, L., III**  
 Thermal shock and erosion resistant tantalum carbide ceramic material  
 [NASA-CASE-LAR-11902-1] c27 N78-17206

**HONG, J. P.**  
 Real time analysis of voiced sounds  
 [NASA-CASE-NFO-13465-1] c32 N76-31372  
 System and method for character recognition  
 [NASA-CASE-NFO-11337-1] c74 N81-19896

**HONG, S. D.**  
 Double-beam optical method and apparatus for measuring thermal diffusivity and other molecular dynamic processes in utilizing the transient thermal lens effect  
 [NASA-CASE-NFO-14657-1] c74 N81-17887

**HONNELL, M. A.**  
 Automatic frequency control for FM transmitter  
 [NASA-CASE-MFS-21540-1] c32 N74-19790  
 Isolated output system for a class D switching-mode amplifier  
 [NASA-CASE-MFS-21616-1] c33 N75-30429  
 Frequency modulated oscillator  
 [NASA-CASE-MFS-23181-1] c33 N77-17351

**HOOD, R. T.**  
 Hall current measuring apparatus having a series resistor for temperature compensation Patent  
 [NASA-CASE-XAC-01662] c14 N71-23037

**HOOD, W. R.**  
 Detection of the transitional layer between laminar and turbulent flow areas on a wing surface  
 [NASA-CASE-LAR-12261-1] c02 N80-20224

**HOOP, J. H.**  
 Method and apparatus for nondestructive testing  
 [NASA-CASE-MFS-21233-1] c38 N74-15395  
 Ultrasonic bone densitometer  
 [NASA-CASE-MFS-20994-1] c35 N75-12271

**HOOPER, C. D.**  
 Extensometer Patent

[NASA-CASE-XMF-04680] c15 N71-19489  
**HOOPER, R. B.**  
 Collimator of multiple plates with axially aligned identical random arrays of apertures [NASA-CASE-MFS-20546-2] c14 N73-30389  
 Automatic lightning detection and photographic system [NASA-CASE-KSC-10728-1] c14 N73-32319  
 Three mirror glancing incidence system for X-ray telescope [NASA-CASE-MFS-21372-1] c74 N74-27866  
 Multiplate focusing collimator [NASA-CASE-MFS-20932-1] c35 N75-19616  
 Extended range X-ray telescope [NASA-CASE-MFS-25282-1] c89 N81-34122  
**HOOPER, R. J.**  
 Extrusion die for refractory metals Patent [NASA-CASE-XLE-06773] c15 N71-23817  
**HOPKINS, P. M.**  
 Differential phase shift keyed communication system [NASA-CASE-MSC-14065-1] c32 N74-26654  
 Differential phase shift keyed signal resolver [NASA-CASE-MSC-14066-1] c33 N74-27705  
 Apparatus and method for stabilized phase detection for binary signal tracking loops [NASA-CASE-MSC-16461-1] c33 N79-11313  
**HOPKINS, V.**  
 Inorganic solid film lubricants Patent [NASA-CASE-XMP-03988] c15 N71-21403  
**HOPPING, R. L.**  
 Landing gear Patent [NASA-CASE-XMF-01174] c02 N70-41589  
**HORNE, W. B.**  
 Aircraft wheel spray drag alleviator Patent [NASA-CASE-XLA-01583] c02 N70-36825  
**HORNER, J. L.**  
 Optical noise suppression device and method [NASA-CASE-MSC-12640-1] c74 N76-31998  
**HORTON, D. B.**  
 Instrument support with precise lateral adjustment Patent [NASA-CASE-XMF-00480] c14 N70-35898  
**HORTON, J. C.**  
 Method of making impurity-type semiconductor electrical contacts Patent [NASA-CASE-XMF-01016] c26 N71-17818  
**HORTOR, R. L.**  
 Method and apparatus for mapping planets [NASA-CASE-NPO-11001] c07 N72-21118  
**HOSETHIEM, R. H.**  
 Adaptive tracking notch filter system Patent [NASA-CASE-XMF-01892] c10 N71-22986  
**HOTZ, G. M.**  
 Soil penetrometer [NASA-CASE-XNP-05530] c14 N73-32321  
 Burrowing apparatus [NASA-CASE-XNP-07169] c15 N73-32362  
**HOUCK, W. F.**  
 Voltage dropout sensor Patent [NASA-CASE-KSC-10020] c10 N71-27338  
 Ripple indicator [NASA-CASE-KSC-10162] c09 N72-11225  
 Signal conditioner test set [NASA-CASE-KSC-10750-1] c35 N75-12270  
**HOUSEMAN, J.**  
 Hydrogen rich gas generator [NASA-CASE-NPO-13342-1] c37 N76-16446  
 Hydrogen-rich gas generator [NASA-CASE-NPO-13464-1] c44 N76-18642  
 Hydrogen rich gas generator [NASA-CASE-NPO-13342-2] c44 N76-29700  
 Hydrogen rich gas generator [NASA-CASE-NPO-13464-2] c44 N76-25704  
 Hydrogen-rich gas generator [NASA-CASE-NPO-13560-1] c44 N77-10636  
 Combustion engine [NASA-CASE-NPO-13671-1] c37 N77-31497  
 Start up system for hydrogen generator used with an internal combustion engine [NASA-CASE-NPO-13849-1] c28 N80-10374  
**HOWARD, E. A.**  
 Soil penetrometer [NASA-CASE-XNP-05530] c14 N73-32321  
 Burrowing apparatus [NASA-CASE-XNP-07169] c15 N73-32362  
**HOWARD, P. S.**  
 Zero gravity shadow shield aligner [NASA-CASE-KSC-10622-1] c31 N72-21893  
 Geysering inhibitor for vertical cryogenic transfer pipe [NASA-CASE-KSC-10615] c15 N73-12486  
 Floating baffle to improve efficiency of liquid transfer from tanks [NASA-CASE-KSC-10639] c15 N73-26472  
 Zero gravity liquid transfer screen [NASA-CASE-KSC-10626] c14 N73-27378  
**HOWARD, J. C.**  
 Means for suppressing or attenuating bending motion of elastic bodies Patent [NASA-CASE-XAC-05632] c32 N71-23971  
 G-load measuring and indicator apparatus [NASA-CASE-AEC-10806] c06 N74-27872  
 G-load measuring and indicator apparatus [NASA-CASE-AEC-10806-1] c35 N75-29381  
**HOWARD, P. W.**  
 Apparatus for reducing aerodynamic noise in a wind tunnel [NASA-CASE-MFS-23099-1] c09 N76-23273  
**HOWARD, W. D.**  
 Method and device for detecting voids in low density material Patent [NASA-CASE-MFS-20044] c14 N71-28993  
**HOWARD, W. H.**  
 Skeletal stressing method and apparatus Patent [NASA-CASE-AEC-10100-1] c05 N71-24738  
 Programmable physiological infusion [NASA-CASE-AEC-10447-1] c52 N74-22771  
 Tread drum for animals [NASA-CASE-ARC-10917-1] c51 N78-27733  
**HOWARTH, J. T.**  
 Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant [NASA-CASE-MSC-14331-1] c27 N76-24405  
 Flame retardant spandex type polyurethanes [NASA-CASE-MSC-14331-2] c27 N78-17213  
 Process for spinning flame retardant elastomeric compositions [NASA-CASE-MSC-14331-3] c27 N78-32262  
**HOWE, R. D.**  
 Ozonation of cooling tower waters [NASA-CASE-NPO-14340-1] c45 N80-14579  
**HOWE, T. L.**  
 Strain gauge ambiguity sensor for segmented mirror active optical system [NASA-CASE-MFS-20506-1] c35 N75-12273  
**HOWELL, J. R.**  
 Device for directionally controlling electromagnetic radiation Patent [NASA-CASE-XLE-01716] c09 N70-40234  
**HOWELL, W. B.**  
 Fringe counter for interferometers Patent [NASA-CASE-LAR-10204] c14 N71-27215  
 Star image motion compensator [NASA-CASE-LAR-10523-1] c14 N72-22444  
**HOWELL, W. L.**  
 Fluid thrust control system [NASA-CASE-XMF-05964-1] c20 N79-21124  
**HOWLAND, B. T.**  
 High pressure air valve Patent [NASA-CASE-MSC-11010] c15 N71-19485  
**HOYT, R. P.**  
 In situ transfer standard for ultrahigh vacuum gage calibration [NASA-CASE-LAR-10862-1] c35 N74-15092  
**BRACH, P. J.**  
 Capacitor and method of making same Patent [NASA-CASE-LEW-10364-1] c09 N71-13522  
**BRASTAR, J. A., SR.**  
 Apparatus for and method of compensating dynamic unbalance [NASA-CASE-GSC-12550-1] c37 N81-22358  
**BRON, E. L.**  
 Load current sensor for a series pulse width modulated power supply [NASA-CASE-GSC-10656-1] c09 N72-25249  
**HRUBY, R. J.**  
 Microwave flaw detector Patent [NASA-CASE-ABC-10009-1] c15 N71-17822  
 Transient video signal recording with expanded playback Patent [NASA-CASE-ABC-10003-1] c09 N71-25866  
 Method and apparatus for swept-frequency impedance measurements of welds [NASA-CASE-AEC-10176-1] c15 N72-21464  
 Coaxial inverted geometry transistor having buried emitter

[NASA-CASE-ARC-10330-1] c09 N73-32112  
Twin-capacitive shaft angle encoder with analog  
output signal  
[NASA-CASE-ARC-10897-1] c33 N77-31404

**HRYNIEWIECKI, E.**  
Vehicle for use in planetary exploration  
[NASA-CASE-NPO-11366] c11 N73-26238

**HSU, G. C.**  
Aldehyde-containing urea-absorbing polysaccharides  
[NASA-CASE-NPO-13620-1] c27 N77-30236  
Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c44 N78-31527  
Surfactant-assisted liquefaction of particulate  
carbonaceous substances  
[NASA-CASE-NPO-13904-1] c25 N79-11152  
Coal desulfurization  
[NASA-CASE-NPO-14272-1] c25 N81-33246

**HSU, L. C.**  
Trimerization of aromatic nitriles  
[NASA-CASE-LEW-12053-1] c27 N78-15276  
In situ self cross-linking of polyvinyl alcohol  
battery separators  
[NASA-CASE-LEW-12972-1] c44 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] c27 N79-28307  
Method of cross-linking polyvinyl alcohol and  
other water soluble resins  
[NASA-CASE-LEW-13103-1] c27 N80-32516  
In-situ cross linking of polyvinyl alcohol  
[NASA-CASE-LEW-13135-2] c27 N81-24257  
Cross-linked polyvinyl alcohol and method of  
making same  
[NASA-CASE-LEW-13504-1] c27 N81-27279  
Polyvinyl alcohol battery separator containing  
inert filler  
[NASA-CASE-LEW-13556-1] c44 N81-27615  
Cross-linked polyvinyl alcohol and method of  
making same  
[NASA-CASE-LEW-13101-2] c23 N81-29160  
Alkaline battery containing a separator of a  
cross-linked copolymer of vinyl alcohol and  
unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c44 N81-29531

**HSU, Y.-Y.**  
Slug flow magnetohydrodynamic generator  
[NASA-CASE-XLE-02083] c03 N69-35983

**HUANG, M. Y.**  
Self-calibrating threshold detector  
[NASA-CASE-MS-C-16370-1] c35 N81-19427

**HUBBARD, W. P.**  
Digital demodulator-correlator  
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**J**

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## K

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KAISEB, J. A., JR.  
Scannable beam forming interferometer antenna array system  
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KALFAYAN, S. H.  
Epoxy-aziridine polymer product Patent  
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Strain gage mounting assembly  
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Coal desulfurization process  
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KALKBRENNER, R. W.  
Heat transfer device  
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KALLINS, C.  
Rotary actuator  
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KAMI, S.  
Gas regulator Patent  
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KAMINSKAS, R. A.  
Penetrating radiation system for detecting the amount of liquid in a tank Patent  
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KAMMEBEYER, K.  
Mixture separation cell Patent  
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KAMPINSKY, A.  
Method and apparatus for determining electromagnetic characteristics of large surface area passive reflectors Patent  
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Apparatus providing a directive field pattern and attitude sensing of a spin stabilized satellite Patent  
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KANABUS, R. W.  
Apparatus and method of inserting a microelectrode in body tissue or the like using vibration means  
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KANBER, H.  
Acoustic driving of rotor  
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KANE, J. O.  
Thermal barrier pressure seal  
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KANE, T. R.  
Spacecraft attitude control method and apparatus  
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KAPUSTKA, R. E.  
Method and apparatus for conditioning of nickel-cadmium batteries  
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KARIGAN, G. H.  
Accumulator  
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KARIOTIS, A. H.  
Compression test assembly  
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KARSH, I.  
Tape guidance system and apparatus for the provision thereof Patent  
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Incremental tape recorder and data rate converter Patent  
[NASA-CASE-YNP-02778] c08 N71-22710

KASPARECK, W. E.  
Precision stepping drive Patent  
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Fine adjustment mount  
[NASA-CASE-MFS-20249] c15 N72-11386

Adjustable force probe  
[NASA-CASE-MFS-20760] c14 N72-33377

KAST, H. B.  
Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12830-1] c07 N77-23106

Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12321-1] c37 N78-10467

KASTAN, H.  
Absorptive splitter for closely spaced supersonic engine air inlets Patent  
[NASA-CASE-XLA-02865] c28 N71-15563

KASTNER, S. O.  
Diffractoid grating configuration for X-ray and ultraviolet focusing  
[NASA-CASE-GSC-12357-1] c74 N80-21140

KATON, H. S.  
Multi-feed cone Cassegrain antenna Patent  
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KATVALA, V. W.  
Reaction cured glass and glass coatings  
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Spray coating apparatus having a rotatable workpiece holder  
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KATZ, L.  
Force measuring instrument Patent  
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Optimum predetection diversity receiving system Patent  
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Apparatus for obtaining isotropic irradiation of a specimen  
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Method and apparatus for supercooling and solidifying substances  
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Temperature reducing coating for metals subject to flame exposure Patent  
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KATZBERG, S. J.  
Automatic focus control for facsimile cameras  
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Spectrometer integrated with a facsimile camera  
[NASA-CASE-LAR-11207-1] c35 N75-19613

Device for measuring the contour of a surface  
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KATZIN, I.  
Breakaway connector  
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KAUFMAN, H. R.  
Ion thruster cathode  
[NASA-CASE-XLE-07087] c06 N69-39889

Ion rocket Patent  
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Electrostatic ion engine having a permanent magnetic circuit Patent  
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Electrostatic ion rocket engine Patent  
[NASA-CASE-XLE-02066] c28 N71-15661

Ion beam deflector Patent  
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KAUFMAN, J. W.  
Maxometers (peak wind speed anemometers)  
[NASA-CASE-MFS-20916] c14 N73-25460

Wind wheel electric power generator  
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KAUFMAN, W. B.  
High current electrical lead  
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KAUFMANN, J. J.  
Lead-oxygen dc power supply system having a closed loop oxygen and water system  
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KAVAYA, M. J.  
Stark effect spectrophone for continuous absorption spectra monitoring  
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KAZAROFF, J. H.  
Heat exchanger and method of making  
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Heat exchanger and method of making  
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Heat exchanger and method of making  
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KAZHOFF, A. I.  
Method of making a cermet Patent  
[NASA-CASE-LEW-10219-1] c18 N71-28729

KAZOKAS, G. P.  
Vacuum leak detector  
[NASA-CASE-LAR-11237-1] c35 N75-19612

KEAFER, L. S., JR.  
Transmitting and reflecting diffuser  
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Transmitting and reflecting diffuser  
[NASA-CASE-LAR-10385-3] c74 N78-15879

KEARNS, W. J.  
Mount for thermal control system Patent  
[NASA-CASE-NFO-10138] c33 N71-16357

KEATHLEY, W. H.  
Energy absorbing structure Patent Application  
[NASA-CASE-MSC-12279-1] c15 N70-35679  
Low onset rate energy absorber  
[NASA-CASE-MSC-12279] c15 N72-17450

KEATING, J. H.  
Method and apparatus for attaching physiological  
monitoring electrodes Patent  
[NASA-CASE-XPR-07658-1] c05 N71-26293

KEEPER, J. H.  
Phonocardiogram simulator Patent  
[NASA-CASE-XKS-10804] c05 N71-24606

KEENE, W. H.  
Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c36 N75-15028  
Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c35 N77-10493

KEETON, A. R.  
Sodium storage and injection system  
[NASA-CASE-NPO-14384-1] c37 N80-10494

KEHLET, A. B.  
Parachute glider Patent  
[NASA-CASE-XLA-00898] c02 N70-36804  
Space and atmospheric reentry vehicle Patent  
[NASA-CASE-IGS-00260] c31 N70-37924  
Space capsule Patent  
[NASA-CASE-XLA-00149] c31 N70-37938  
Space capsule Patent  
[NASA-CASE-XLA-01332] c31 N71-15664

KELBAUGH, B. H.  
Automatic instrument for chemical processing to  
detect microorganism in biological samples by  
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[NASA-CASE-GSC-11169-2] c05 N73-32011

KELLER, E. E.  
Heat exchanger  
[NASA-CASE-MFS-22991-1] c34 N77-10463

KELLER, G. C.  
Plural beam antenna  
[NASA-CASE-GSC-11013-1] c09 N73-19234

KELLER, O. P.  
Pressure regulating system Patent  
[NASA-CASE-XNP-00450] c15 N70-38603

KELLEY, J. R.  
Mechanical stability augmentation system Patent  
[NASA-CASE-XLA-06339] c02 N71-13422

KELLEY, W. W.  
Pitch attitude stabilization system utilizing  
engine pressure ratio feedback signals  
[NASA-CASE-LAR-12562-1] c08 N81-26152

KELLS, M. C.  
Device for measuring pressure Patent  
[NASA-CASE-XAC-04458] c14 N71-24232

KELLY, D. L.  
Multistage aerospace craft  
[NASA-CASE-XMP-02263] c05 N74-10907

KELLY, H. H.  
Heat pipe honeycomb panel  
[NASA-CASE-LAR-12637-1] c34 N81-12362

KELLY, W. L., IV  
Spectrometer integrated with a facsimile camera  
[NASA-CASE-LAR-11207-1] c35 N75-19613  
Device for measuring the contour of a surface  
[NASA-CASE-LAR-11869-1] c74 N78-27904

KELLY, W. W.  
Velocity vector control system augmented with  
direct lift control  
[NASA-CASE-LAR-12268-1] c08 N81-24106

KELSEY, E. L.  
Transient-compensated SCR inverter  
[NASA-CASE-XLA-08507] c09 N69-39984  
SCR blocking pulse gate amplifier Patent  
[NASA-CASE-XLA-07497] c09 N71-12514

KEMP, K. L.  
Pneumatic mirror support system  
[NASA-CASE-XLA-03271] c11 N69-24321

KEMP, B. F.  
Apparatus for field strength measurement of a  
space vehicle Patent  
[NASA-CASE-XLE-00820] c14 N71-16014

KEMP, B. H.  
Thin-walled pressure vessel Patent  
[NASA-CASE-XLE-04677] c15 N71-10577

KENDALL, J. H.  
Resolution enhanced sound detecting apparatus  
[NASA-CASE-NPO-14134-1] c71 N79-23753

KENDALL, J. H., JR.  
Method of forming frozen spheres in a force-free  
drop tower  
[NASA-CASE-NPO-14845-1] c31 N81-16328

KENDALL, J. H., SR.  
Conically shaped cavity radiometer with a dual  
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[NASA-CASE-XNP-09701] c14 N71-26475  
Black body cavity radiometer Patent  
[NASA-CASE-NPO-10810] c14 N71-27323  
Pressure letdown method and device for coal  
conversion systems  
[NASA-CASE-NPO-15100-1] c28 N81-33306

KENDRICK, W. F.  
Ablative resin Patent  
[NASA-CASE-XLE-05913] c33 N71-14032  
Reinforced structural plastics  
[NASA-CASE-LEW-10199-1] c27 N74-23125

KENNEDY, B. W.  
Electrical connector Patent Application  
[NASA-CASE-MFS-14741] c09 N70-20737  
Filter system for control of outgas  
contamination in vacuum Patent  
[NASA-CASE-MFS-14711] c15 N71-26185  
Method of making shielded flat cable Patent  
[NASA-CASE-MFS-13687] c09 N71-28691  
Shielded flat cable  
[NASA-CASE-MFS-13687-2] c09 N72-22198  
Polyimide resin-fiberglass cloth laminates for  
printed circuit boards  
[NASA-CASE-MFS-20408] c18 N73-12604  
Integrated circuit package with lead structure  
and method of preparing the same  
[NASA-CASE-MFS-21374-1] c33 N74-12951

KENNEDY, A. J., III  
Space suit  
[NASA-CASE-MSC-12609-1] c05 N73-32012

KENNEY, B. L.  
Geneva mechanism  
[NASA-CASE-NPO-13281-1] c37 N75-13266

KENT, W. D.  
Heat sterilizable patient ventilator  
[NASA-CASE-NPO-13313-1] c54 N75-27761

KENYON, G. C.  
Flight craft Patent  
[NASA-CASE-XAC-02058] c02 N71-16087

KEPLER, C. E.  
Tertiary flow injection thrust vectoring system  
Patent  
[NASA-CASE-MFS-20831] c28 N71-29153

KEBLEY, J. J.  
Portable appliance security apparatus  
[NASA-CASE-GSC-12399-1] c33 N81-25299

KERLEY, J. J., JR.  
Apparatus for vibrational testing of articles  
[NASA-CASE-GSC-11302-1] c14 N73-13416

KERN, C. V.  
Deformable vehicle wheel Patent  
[NASA-CASE-MFS-20400] c31 N71-18611

KERN, J. D.  
Magnetic recording head and method of making  
same Patent  
[NASA-CASE-GSC-10097-1] c08 N71-27210

KERNODLE, B. H.  
Inherent redundancy electric heater  
[NASA-CASE-MFS-21462-1] c33 N74-14935

KERR, J. H.  
Traffic survey system  
[NASA-CASE-MFS-22631-1] c66 N76-19888

KERSEY, E. D., JR.  
Angular displacement indicating gas bearing  
support system Patent  
[NASA-CASE-XLA-09346] c15 N71-28740

KERSLAKE, W. E.  
Ion thruster cathode  
[NASA-CASE-XLE-07087] c06 N69-39889  
Electronic cathode having a brush-like structure  
and a relatively thick oxide emissive coating  
Patent  
[NASA-CASE-XLE-04501] c09 N71-23190

KERSTEN, L.  
Wrist joint assembly  
[NASA-CASE-MFS-23311-1] c54 N78-17676

KERWIN, W. J.  
Nonmagnetic thermal motor for a magnetometer  
[NASA-CASE-XAR-03786] c09 N69-21313  
Demodulation system Patent  
[NASA-CASE-XAC-04030] c10 N71-19472  
Transducer circuit and catheter transducer Patent  
[NASA-CASE-ARC-10132-1] c09 N71-24597  
Active RC networks  
[NASA-CASE-ARC-10042-2] c10 N72-11256

RC networks and amplifiers employing the same  
[NASA-CASE-XAC-05462-2] c10 N72-17171

Active RC networks  
[NASA-CASE-ARC-10020] c10 N72-17172

Multiloop RC active filter apparatus having low  
parameter sensitivity with low amplifier gain  
[NASA-CASE-ARC-10192] c09 N72-21245

Integrated structure vacuum tube  
[NASA-CASE-ARC-10445-1] c31 N76-31365

KESSEL, J. E.  
Plural recorder system  
[NASA-CASE-XMS-06949] c09 N69-21467

KESSINGER, R. L.  
Hearing aid malfunction detection system  
[NASA-CASE-MSC-14916-1] c33 N78-1C375

KEY, C. F.  
Nonflammable coating compositions  
[NASA-CASE-MFS-20486-2] c27 N74-17283

KEYMONT, B. J.  
Technique for control of free-flight rocket  
vehicles Patent  
[NASA-CASE-XLA-00937] c31 N71-17691

KHANNA, S. M.  
Direct current transformer  
[NASA-CASE-MFS-23659-1] c33 N79-17133

KIBBE, R. K.  
Load cell protection device Patent  
[NASA-CASE-XMS-06782] c32 N71-15974

KICHAH, R. A.  
Inrush current limiter  
[NASA-CASE-GSC-11789-1] c33 N77-14333

KIERRE, P. J., JR.  
Thermal conductive connection and method of  
making same Patent  
[NASA-CASE-XMS-02087] c09 N70-41717

KIKIN, G. H.  
Multiducted electromagnetic pump Patent  
[NASA-CASE-NPO-10755] c15 N71-27084

Shell side liquid metal boiler  
[NASA-CASE-NPO-16831] c33 N72-2C915

KILLALEA, W. P.  
Clamping assembly for inertial components Patent  
[NASA-CASE-XMS-02184] c15 N71-2C813

KIN, C.  
Arterial pulse wave pressure transducer  
[NASA-CASE-GSC-11531-1] c52 N74-27566

KIN, H. H.  
A multichannel photoionization chamber for  
absorption analysis Patent  
[NASA-CASE-ERC-10044-1] c14 N71-27090

KIN, K. H.  
Means for growing ribbon crystals without  
subjecting the crystals to thermal  
shock-induced strains  
[NASA-CASE-NPO-14298-1] c76 N80-32244

KINBALL, E. B.  
Apparatus for remote handling of materials  
[NASA-CASE-LAR-10634-1] c37 N74-1E123

KINHARD, W. H.  
Particle detection apparatus Patent  
[NASA-CASE-XLA-00135] c14 N70-33322

Gas actuated bolt disconnect Patent  
[NASA-CASE-XLA-00326] c03 N70-34667

Micrometeoroid velocity measuring device Patent  
[NASA-CASE-XLA-00495] c14 N70-41332

Micrometeoroid penetration measuring device Patent  
[NASA-CASE-XLA-00941] c14 N71-23240

Deployable pressurized cell structure for a  
micrometeoroid detector  
[NASA-CASE-LAR-10295-1] c35 N74-21062

Particulate and aerosol detector  
[NASA-CASE-LAR-11434-1] c35 N76-22509

KINELL, D. K.  
Four phase logic systems  
[NASA-CASE-MSC-14240-1] c33 N75-14957

KING, C. B.  
Method of obtaining permanent record of surface  
flow phenomena Patent  
[NASA-CASE-XLA-01353] c14 N70-41366

Method and apparatus for bonding a plastics  
sleeve onto a metallic body Patent  
[NASA-CASE-XLA-01262] c15 N71-21404

Dielectric molding apparatus Patent  
[NASA-CASE-LAR-10121-1] c15 N71-26721

Butt welder for fine gauge tungsten/rhenium  
thermocouple wire  
[NASA-CASE-LAR-10103-1] c15 N73-14468

KING, H. J.  
Gas regulator Patent  
[NASA-CASE-NPO-10298] c12 N71-17661

KING, H. H.  
Method of making impurity-type semiconductor  
electrical contacts Patent  
[NASA-CASE-XMF-01016] c26 N71-17818

Sprayable low density ablator and application  
process  
[NASA-CASE-MFS-23506-1] c24 N78-24290

KING, R. B.  
Preparation of high purity copper fluoride  
[NASA-CASE-LEW-10794-1] c06 N72-17093

KING, R. F.  
Anthropomorphic master/slave manipulator system  
[NASA-CASE-ARC-10756-1] c54 N77-32721

KING, R. W.  
Method and apparatus for making a heat  
insulating and ablative structure Patent  
[NASA-CASE-XMS-02009] c33 N71-20834

High acceleration cable deployment system  
[NASA-CASE-ARC-11256-1] c37 N79-23432

KING, W. L.  
Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c74 N77-26942

KINKEL, J. F.  
Data transfer system Patent  
[NASA-CASE-NPO-12107] c08 N71-27255

KINNHARD, K. P.  
Laser Doppler system for measuring three  
dimensional vector velocity Patent  
[NASA-CASE-MFS-20386] c21 N71-19212

KINO, G. S.  
Traveling wave solid state amplifier utilizing a  
semiconductor with negative differential  
mobility  
[NASA-CASE-HQN-10069] c33 N75-27251

KINSEL, R. C.  
Signal multiplexer  
[NASA-CASE-XGS-01110] c07 N69-24334

KINZLER, J. A.  
Emergency escape system Patent  
[NASA-CASE-MSC-12086-1] c05 N71-12345

Surface finishing  
[NASA-CASE-MSC-12631-1] c24 N77-28225

Surface finishing  
[NASA-CASE-MSC-12631-3] c27 N81-14077

Structural members, method and apparatus  
[NASA-CASE-MSC-16217-1] c31 N81-27323

KIRBY, C. A.  
Translatory shock absorber for attitude sensors  
[NASA-CASE-MFS-22905-1] c19 N76-22284

KIRCHMAN, E. J.  
Accelerometer with FM output Patent  
[NASA-CASE-XLA-00492] c14 N70-34799

KIRSTEN, C. C.  
Solar-powered pump  
[NASA-CASE-NPO-13567-1] c44 N76-29701

KIS, G.  
Optical alignment system Patent  
[NASA-CASE-XNP-02029] c14 N70-41955

KISSEL, R. B.  
Tetherline system for orbiting satellites  
[NASA-CASE-MFS-23564-1] c15 N78-25119

Contour measurement system  
[NASA-CASE-MFS-23726-1] c43 N79-26439

KISSELL, R. R.  
Rateometer  
[NASA-CASE-MFS-20418] c14 N73-24473

KISEKO, W.  
Portable superclean air column device Patent  
[NASA-CASE-XMF-03212] c15 N71-22721

KITTEL, P.  
Refrigerator module, system and process  
[NASA-CASE-ARC-11263-1] c31 N81-27328

KITTS, W. T.  
Cryogenic connector for vacuum use Patent  
[NASA-CASE-IGS-02441] c15 N70-41629

KLECHKE, E. W.  
Nickel aluminide coated low alloy stainless steel  
[NASA-CASE-LEW-11267-1] c17 N73-32414

KLEIN, E.  
Ion-exchange hollow fibers  
[NASA-CASE-NPO-13309-1] c25 N81-19244

KLEIN, E. L.  
Apparatus for inspecting microfilm Patent  
[NASA-CASE-MFS-20240] c14 N71-26788

KLEIN, H. G.  
Electrolytically regenerative hydrogen-oxygen  
fuel cell Patent  
[NASA-CASE-XLE-04526] c03 N71-11052

**KLEINBERG, L. L.**  
Stable amplifier having a stable quiescent point  
Patent  
[NASA-CASE-XGS-02812] c09 N71-19466  
Complementary regenerative switch Patent  
[NASA-CASE-XGS-02751] c09 N71-23015  
Monostable multivibrator  
[NASA-CASE-GSC-10082-1] c10 N72-20221  
Active tuned circuit  
[NASA-CASE-GSC-11340-1] c10 N72-33230  
Ultra-stable oscillator with complementary  
transistors  
[NASA-CASE-GSC-11513-1] c33 N74-20862  
Inductorless narrow-band filter/amplifier  
[NASA-CASE-GSC-12410-1] c33 N79-24260  
JFET oscillator  
[NASA-CASE-GSC-12555-1] c33 N80-26601

**KLEINROCK, L.**  
Data compression system  
[NASA-CASE-XNP-09785] c08 N69-21928  
Method and apparatus for data compression by a  
decreasing slope threshold test  
[NASA-CASE-NPO-10769] c08 N72-11171

**KLINA, S. J.**  
High temperature cobalt-base alloy Patent  
[NASA-CASE-XLE-00726] c17 N71-15644

**KLINE, A. J.**  
Capacitance multiplier and filter synthesizing  
network  
[NASA-CASE-NPO-11948-1] c33 N74-32712

**KLINE, A. J., JR.**  
Automatic frequency discriminators and control  
for a phase-lock loop providing frequency  
preset capabilities Patent  
[NASA-CASE-XMP-08665] c10 N71-19467

**KLINGMAN, E. E., III**  
Apparatus for calibrating an image dissector tube  
[NASA-CASE-MFS-22208-1] c33 N75-26244  
Electronic optical transfer function analyzer  
[NASA-CASE-MFS-21672-1] c74 N76-15935

**KLISCH, J. A.**  
Combustion products generating and metering device  
[NASA-CASE-GSC-11095-1] c14 N72-10375

**KLOC, I.**  
Penetrometer  
[NASA-CASE-NPO-11103-1] c35 N77-27367

**KNAUER, W.**  
Ion thruster  
[NASA-CASE-LEW-10770-1] c28 N72-22770

**KNECHTEL, E. D.**  
Two force component measuring device Patent  
[NASA-CASE-XAC-04886-1] c14 N71-20439  
Floating two force component measuring device  
Patent  
[NASA-CASE-XAC-04885] c14 N71-23790

**KNOELL, A. C.**  
Method of adhering bone to a rigid substrate  
using a graphite fiber reinforced bone cement  
[NASA-CASE-NPO-13764-1] c27 N78-17215  
Vehicular impact absorption system  
[NASA-CASE-NPO-14014-1] c37 N79-10420

**KNOOS, S. P.**  
Shock tube bypass piston tunnel  
[NASA-CASE-NPO-12109] c11 N72-22245

**KO, W. L.**  
Superplastically formed diffusion bonded  
metallic structure  
[NASA-CASE-FRC-11026-1] c39 N79-25424

**KOBAYASHI, H. S.**  
Pulse code modulated signal synchronizer  
[NASA-CASE-MSC-12462-1] c32 N74-20809  
Pulse code modulated signal synchronizer  
[NASA-CASE-MSC-12494-1] c32 N74-20810  
Receiving and tracking phase modulated signals  
[NASA-CASE-MSC-16170-2] c32 N81-16338  
Doppler radar having phase modulation of both  
transmitted and reflected return signals  
[NASA-CASE-MSC-18675-1] c32 N81-29312

**KOBAYASHI, H. S.**  
Bit error rate measurement above and below bit  
rate tracking threshold  
[NASA-CASE-MSC-12743-1] c32 N79-10263

**KOCH, E. F.**  
Expulsion bladder-equipped storage tank  
structure Patent  
[NASA-CASE-XNP-00612] c11 N70-38182  
Combined pressure regulator and shutoff valve  
[NASA-CASE-NPO-13201-1] c37 N75-15050

**KOCH, E. F.**  
CRT blanking and brightness control circuit  
[NASA-CASE-KSC-10647-1] c10 N72-31273

**KOCH, M. G.**  
Multispectral scanner optical system  
[NASA-CASE-MSC-18255-1] c74 N80-33210

**KOCZELA, L. J.**  
Adaptive voting computer system  
[NASA-CASE-MSC-13932-1] c62 N74-14920

**KODIS, B. D.**  
Clear air turbulence detector  
[NASA-CASE-ERC-10081] c14 N72-28437

**KOEPF, G. A.**  
Laser apparatus  
[NASA-CASE-GSC-12237-1] c36 N80-14384  
Off-axis coherently pumped laser  
[NASA-CASE-GSC-12592-1] c36 N81-12407

**KOJIMA, G. K.**  
Miniature implantable ultrasonic echosonometer  
[NASA-CASE-ARC-11035-1] c52 N79-18580

**KOLBLY, B. B.**  
High power microwave power divider Patent  
[NASA-CASE-NPO-11031] c07 N71-33606  
System for controlling the operation of a  
variable signal device  
[NASA-CASE-NPO-11064] c07 N72-11150

**KOLBY, B. B.**  
Direct reading inductance meter  
[NASA-CASE-NPO-13792-1] c35 N77-32455

**KOLIYAD, K. M.**  
Copper doped polycrystalline silicon solar cell  
[NASA-CASE-NFO-14670-1] c44 N81-19558

**KOLOBOFF, G. J.**  
Amplitude steered array  
[NASA-CASE-GSC-11446-1] c33 N74-20860

**KOLSTEE, H. M.**  
Radiator deployment actuator Patent  
[NASA-CASE-MSC-11817-1] c15 N71-26611

**KONIGSBERG, E.**  
Accelerometer telemetry system  
[NASA-CASE-ARC-10849-1] c17 N76-29347

**KOPELSON, S.**  
Rate augmented digital to analog converter Patent  
[NASA-CASE-XLA-07828] c08 N71-27057

**KOPETSKI, P. J.**  
Ring counter  
[NASA-CASE-XGS-03095] c09 N69-27463

**KOPIA, L. P.**  
Transmitting and reflecting diffuser  
[NASA-CASE-LAR-10385-2] c70 N74-13436  
Transmitting and reflecting diffuser  
[NASA-CASE-LAR-10385-3] c74 N78-15879

**KORABOWSKI, J. J.**  
Pressure garment joint Patent  
[NASA-CASE-XMS-09636] c05 N71-12344  
Method of forming a root cord restrained  
convolute section  
[NASA-CASE-MSC-12398] c05 N72-20098

**KORDIS, E. E.**  
High intensity heat and light unit Patent  
[NASA-CASE-XLA-00141] c09 N70-33312

**KORNFIELD, D. M.**  
Process for preparation of large-particle-size  
monodisperse latexes  
[NASA-CASE-MFS-25000-1] c25 N81-19242

**KORSCH, D. G.**  
Anastigmatic three-mirror telescope  
[NASA-CASE-MFS-23675-1] c89 N79-10969

**KORUS, R. A.**  
Process for the preparation of fluorine  
containing crosslinked elastomeric  
polytriazine and product so produced  
[NASA-CASE-ARC-11248-1] c27 N81-17259

**KORVIN, W.**  
Self-erecting reflector Patent  
[NASA-CASE-XGS-09190] c31 N71-16102  
Tracking antenna system Patent  
[NASA-CASE-GSC-10553-1] c07 N71-19854  
Antenna array at focal plane of reflector with  
coupling network for beam switching Patent  
[NASA-CASE-GSC-10220-1] c07 N71-27233

**KOSCHNEDEB, L. A.**  
Bi-polar phase detector and corrector for split  
phase PCM data signals Patent  
[NASA-CASE-XGS-01590] c07 N71-12392

**KOSMAHL, H. G.**  
Linear magnetic brake with two windings Patent  
[NASA-CASE-XLE-05079] c15 N71-17652

Electrostatic collector for charged particles  
[NASA-CASE-LEW-11192-1] c09 N73-13208

Electron beam controller  
[NASA-CASE-LEW-11617-1] c33 N74-10195

Multistage depressed collector for dual node operation  
[NASA-CASE-LEW-13282-1] c33 N79-32463

Gyrottron transmitting tube  
[NASA-CASE-LEW-13429-1] c33 N81-16384

Ladder supported ring bar circuit  
[NASA-CASE-LEW-13570-1] c33 N81-24348

KOSMO, J. J.  
Extravehicular tunnel suit system Patent  
[NASA-CASE-MSC-12243-1] c05 N71-24728

KOTHE, E.  
Helmet feedport  
[NASA-CASE-XMS-09653] c54 N78-17680

KOURTIDES, D. A.  
Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-2] c24 N78-27184

Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-1] c24 N79-16915

Resin composition, process for producing the same, product produced therefrom and process for producing said product  
[NASA-CASE-ARC-11331-1] c27 N81-31363

KOVELL, S. P.  
Method for etching copper Patent  
[NASA-CASE-IGS-06306] c17 N71-16044

KOYBAYASHI, H. S.  
Unbalanced quadruphase demodulator  
[NASA-CASE-MSC-14840-1] c32 N77-24331

KOZIOL, J. S., JR.  
Aircraft control system  
[NASA-CASE-ERC-10439] c02 N73-19004

KRAMER, F.  
Device for suppressing sound and heat produced by high-velocity exhaust jets Patent  
[NASA-CASE-XMP-01813] c28 N70-41582

KRAMER, J. S.  
Apparatus for determining thermophysical properties of test specimens  
[NASA-CASE-LAR-11883-1] c09 N77-27131

KRAMER, M.  
Electronic amplifier with power supply switching Patent  
[NASA-CASE-XMS-00945] c09 N71-10798

Power supply Patent  
[NASA-CASE-XMS-02159] c10 N71-22961

KRASIN, F. E.  
Discriminator aided phase lock acquisition for suppressed carrier signals  
[NASA-CASE-NPO-14311-1] c32 N79-14276

KRATZER, E. H.  
Preparation of perfluorinated imidoamidoximes  
[NASA-CASE-ARC-11267-1] c23 N80-26386

Preparation of perfluorinated 1,2,4-oxadiazoles  
[NASA-CASE-ARC-11267-2] c25 N80-26407

KRAUSE, F. E.  
Passive optical wind and turbulence detection system Patent  
[NASA-CASE-XMP-14032] c20 N71-16340

KRAUSE, I. A.  
Satellite interlace synchronization system  
[NASA-CASE-GSC-10390-1] c07 N72-11149

KRAUSE, L. E.  
Enthalpy and stagnation temperature determination of a high temperature laminar flow gas stream Patent  
[NASA-CASE-XLE-00266] c14 N70-34156

Sensing probe  
[NASA-CASE-LEW-10281-1] c14 N72-17327

KRAUSE, M. C.  
Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c35 N77-10493

Wind measurement system  
[NASA-CASE-MFS-23362-1] c47 N77-10753

KRAUSE, S. J.  
Method and device for determining battery state of charge Patent  
[NASA-CASE-NPO-10194] c03 N71-20407

KRAUSEHAAR, W. L.  
Coaxial anode wire for gas radiation counters  
[NASA-CASE-GSC-11492-1] c35 N74-26949

KRAY, W. P.  
Synthesis of multifunction triaryltrifluoroethanes  
[NASA-CASE-ARC-11097-1] c23 N78-22154

Synthesis of multifunction triaryltrifluoroethanes  
[NASA-CASE-ARC-11097-2] c23 N78-22155

KREISMAN, W. S.  
Inflation system for balloon type satellites Patent  
[NASA-CASE-IGS-03351] c31 N71-16081

Bakeable McLeod gauge  
[NASA-CASE-IGS-01293-1] c35 N79-33450

KRIEVE, W. P.  
High-voltage cable Patent  
[NASA-CASE-XNP-00738] c09 N70-38201

KROPP, C. J.  
Determination of spot weld quality Patent  
[NASA-CASE-XNP-02588] c15 N71-18613

KRESEK, A., JR.  
Optical torque meter Patent  
[NASA-CASE-XLE-00503] c14 N70-34818

KRUPNICE, A. C.  
Method for detecting hydrogen gas  
[NASA-CASE-XMP-03873] c06 N69-39733

Inorganic thermal control coatings  
[NASA-CASE-MFS-20011] c18 N72-22566

Nonflammable coating compositions  
[NASA-CASE-MFS-20486-2] c27 N74-17283

Stainless steel panel for selective absorption of solar energy and the method of producing said panel  
[NASA-CASE-MFS-23518-2] c44 N77-31611

Method for making an aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-1] c44 N79-11469

Aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-3] c44 N80-16452

KUBACKI, R. H.  
Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
[NASA-CASE-ARC-11057-1] c27 N78-31233

Process for producing a well-adhered durable optical coating on an optical plastic substrate  
[NASA-CASE-ARC-11039-1] c74 N78-32854

KUBICA, A. J.  
Decomposition unit Patent  
[NASA-CASE-XMS-00583] c28 N70-38504

KUBICZ, A. P.  
Signal path series step biased multidevice high efficiency amplifier Patent  
[NASA-CASE-GSC-10668-1] c07 N71-28430

Power responsive overload sensing circuit Patent  
[NASA-CASE-GSC-10667-1] c10 N71-33129

Infinite range electronics gain control circuit  
[NASA-CASE-GSC-10786-1] c10 N72-28241

KUBIK, C. F.  
Method and construction for protecting heat sensitive bodies from thermal radiation and convective heat Patent  
[NASA-CASE-XNP-01310] c33 N71-28852

KUBIK, J. S.  
Device for preventing high voltage arcing in electron beam welding Patent  
[NASA-CASE-XMP-08522] c15 N71-19486

KUBOKAWA, C. C.  
Fastener apparatus Patent  
[NASA-CASE-ARC-10140-1] c15 N71-17653

KUEBLER, M. E.  
Method and means for damping nutation in a satellite Patent  
[NASA-CASE-XMP-00442] c31 N71-10747

KUBENZLY, J. D.  
Low thrust monopropellant engine  
[NASA-CASE-GSC-12194-2] c20 N79-15151

KUGATH, D. A.  
Remote manipulator system  
[NASA-CASE-MFS-22022-1] c37 N76-15460

KUHN, R. F., JR.  
Universal restrainer and joint Patent  
[NASA-CASE-XNP-02278] c15 N71-28951

Internally supported flexible duct joint  
[NASA-CASE-MFS-19193-1] c37 N75-19686

KUHNS, P. H.  
Generator for a space power system Patent  
[NASA-CASE-XLE-04250] c09 N71-20446

KUPPERIAN, J. E., JR.  
Low friction magnetic recording tape Patent  
[NASA-CASE-IGS-00373] c23 N71-15978

KURAL, M. H.  
Strain arrestor plate for fused silica tile

[NASA-CASE-MSC-14182-1] c27 N76-14264  
**KURIGER, W. L.**  
 Short range laser obstacle detector  
 [NASA-CASE-NPO-11856-1] c36 N74-15145

**KURPLE, W.**  
 Bit error rate measurement above and below bit  
 rate tracking threshold  
 [NASA-CASE-MSC-12743-1] c32 N79-14263

**KURTZ, R. L.**  
 Hybrid holographic system using reflected and  
 transmitted object beams simultaneously Patent  
 [NASA-CASE-MFS-20074] c16 N71-15565  
 Multiple image storing system for high speed  
 projectile hlography  
 [NASA-CASE-MFS-20596] c14 N72-17324  
 Real time moving scene holographic camera system  
 [NASA-CASE-MFS-21087-1] c35 N74-17153  
 Holographic system for nondestructive testing  
 [NASA-CASE-MFS-21704-1] c35 N75-25124  
 Real time, large volume, moving scene  
 holographic camera system  
 [NASA-CASE-MFS-22537-1] c35 N75-27328  
 Holographic motion picture camera with Doppler  
 shift compensation  
 [NASA-CASE-MFS-22517-1] c35 N76-18402  
 Projection system for display of parallax and  
 perspective  
 [NASA-CASE-MFS-23194-1] c35 N78-17357  
 Hybrid holographic non-destructive test system  
 [NASA-CASE-MFS-23114-1] c38 N78-32447

**KURVIN, C. W.**  
 Remote platform power conserving system  
 [NASA-CASE-GSC-11182-1] c15 N75-13007

**KURYLO, M. J., III**  
 Ultraviolet atomic emission detector  
 [NASA-CASE-HQN-10756-1] c14 N72-25428

**KURZHALS, P. R.**  
 Spacecraft experiment pointing and attitude  
 control system Patent  
 [NASA-CASE-XLA-05464] c21 N71-14132  
 Attitude control and damping system for  
 spacecraft Patent  
 [NASA-CASE-XLA-02551] c21 N71-21708

**KUSHIDA, R. O.**  
 Hydrogen rich gas generator  
 [NASA-CASE-NPO-13342-1] c37 N76-16446  
 Hydrogen rich gas generator  
 [NASA-CASE-NPO-13342-2] c44 N76-29700

**KNONG, H.**  
 The 1,2,4-oxadiazole elastomers  
 [NASA-CASE-ARC-11253-1] c27 N81-17262

**KNONGS, H.**  
 Bifunctional monomers having terminal oxime and  
 cyano or amidine groups  
 [NASA-CASE-ARC-11253-3] c27 N81-24256

**L**

**LA RUSSA, F. J.**  
 Array phasing device Patent  
 [NASA-CASE-ERC-10046] c10 N71-1E722

**LA VIGNA, T. A.**  
 Buck boost voltage regulation circuit Patent  
 [NASA-CASE-GSC-10735-1] c10 N71-26085

**LACEY, R. E.**  
 Infusible silazane polymer and process for  
 producing same  
 [NASA-CASE-XMF-02526-1] c27 N79-21190

**LACKNER, H. G.**  
 Method and apparatus of simulating zero gravity  
 conditions Patent  
 [NASA-CASE-MFS-12750] c27 N71-16223  
 Method and apparatus for checking the stability  
 of a setup for making reflection type holograms  
 [NASA-CASE-MFS-21455-1] c35 N74-15146

**LACY, L. L.**  
 Containerless high temperature calorimeter  
 apparatus  
 [NASA-CASE-MFS-23923-1] c35 N81-19426  
 Method and apparatus for supercooling and  
 solidifying substances  
 [NASA-CASE-MFS-25242-1] c35 N81-24413

**LAPLAMB, D. T.**  
 Pseudonoise code tracking loop  
 [NASA-CASE-MSC-18035-1] c32 N81-15179

**LAIACONA, P. P.**  
 Bonding of reinforced Teflon to metals  
 [NASA-CASE-MFS-20482] c15 N72-22492

Method of preparing graphite reinforced aluminum  
 composite  
 [NASA-CASE-MFS-21077-1] c24 N75-28135

**LAINÉ, D. D.**  
 Electromechanical actuator  
 [NASA-CASE-XNP-05975] c15 N69-23185

**LAMAR, J. E.**  
 Vortex-lift roll-control device  
 [NASA-CASE-LAR-11868-2] c08 N79-14108

**LAMB, R. E.**  
 Hypersonic reentry vehicle Patent  
 [NASA-CASE-XMS-04142] c31 N70-41631

**LAMBSON, K. H.**  
 Pressure control valve  
 [NASA-CASE-ARC-11251-1] c37 N81-17433  
 Spine immobilization apparatus  
 [NASA-CASE-ARC-11167-1] c52 N81-25662

**LAMPERT, H. H.**  
 Bismuth-lead coatings for gas bearings used in  
 atmospheric environments and vacuum chambers  
 Patent  
 [NASA-CASE-XGS-02011] c15 N71-20739

**LAMPSON, H. L.**  
 Resistive anode image converter  
 [NASA-CASE-HQN-10876-1] c33 N76-27473

**LANDAUER, F. E.**  
 Means for generating a sync signal in an FM  
 communication system Patent  
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**LANDAUER, F. E., JR.**  
 Multispectral imaging and analysis system  
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**LANDEL, R. F.**  
 Method for controlling vapor content of a gas  
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 Parallel-plate viscometer with double diaphragm  
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 Preparation of alkali metal dispersions  
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**LANDES, H. S.**  
 Active microwave irises and windows  
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 Thin film microwave iris  
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**LANE, J. H.**  
 Wide range dynamic pressure sensor  
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**LANEY, C. C., JR.**  
 Micrometeoroid velocity measuring device Patent  
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 Micrometeoroid penetration measuring device Patent  
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**LANFORD, W. E.**  
 Folding apparatus Patent  
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 Reflector space satellite Patent  
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**LANG, R.**  
 Venting device for pressurized space suit helmet  
 Patent  
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 Protective garment ventilation system  
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**LANGR, O. R.**  
 Continuous detonation reaction engine Patent  
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**LANGR, R. A.**  
 Wideband heterodyne receiver for laser  
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**LANGHUIR, R. V.**  
 Quadrupole mass filter with means to generate a  
 noise spectrum exclusive of the resonant  
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 stable ions  
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**LANSING, F. L.**  
 A stable density-stratification solar pond  
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**LANSING, J. C., JR.**  
 Method and apparatus for optically monitoring  
 the angular position of a rotating mirror  
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**LANTZ, R.**  
 Gaseous control system for nuclear reactors

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LARK, R. F.  
Hybrid composite laminate structures  
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LARNER, J. W.  
Conforming polisher for aspheric surface of  
revolution Patent  
[NASA-CASE-XGS-02884] c15 N71-22705

LARSON, L. L.  
Coaxial injector for reaction motors  
[NASA-CASE-NPO-11095] c15 N72-25455

LARSON, T. P.  
Filter regeneration systems  
[NASA-CASE-MSC-14273-1] c34 N75-33342

LATHAM, E. A.  
The engine air intake system  
[NASA-CASE-ARC-10761-1] c07 N77-18154  
Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c07 N80-32392

LATTO, W. T., JR.  
Small rocket engine Patent  
[NASA-CASE-XLE-00685] c28 N70-41992

LAU, K. Y.  
A fiber optic transmission line stabilization  
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LAUB, J. B.  
Attitude control for spacecraft Patent  
[NASA-CASE-XNP-00294] c21 N70-36938  
Slit regulated gas journal bearing Patent  
[NASA-CASE-XNP-00476] c15 N70-38620

LAUDENSLAGER, J. B.  
Pulse switching for high energy lasers  
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LAUDERDALE, W. B.  
Method and apparatus for securing to a  
spacecraft Patent  
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LAUDENSLAGER, J. B.  
Charge transfer reaction laser with  
preionization means  
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LAUE, E. G.  
Irradiance measuring device  
[NASA-CASE-NPO-11493] c14 N73-12447  
Wind sensor  
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Passive intrusion detection system  
[NASA-CASE-NPO-13804-1] c33 N80-23559  
Cloud cover sensor  
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LAUE, H. H.  
Driving lamps by induction  
[NASA-CASE-MFS-21214-1] c09 N73-30181

LAUE, J. H.  
Multi-mission module Patent  
[NASA-CASE-XMF-01543] c31 N71-17730

LAUGHLIN, C. R., JR.  
Position location system and method Patent  
[NASA-CASE-GSC-10087-2] c21 N71-13958  
Position location and data collection system and  
method Patent  
[NASA-CASE-GSC-10083-1] c30 N71-16090  
Traffic control system and method Patent  
[NASA-CASE-GSC-10087-1] c02 N71-19287  
Diversity receiving system with diversity phase  
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[NASA-CASE-XGS-01222] c10 N71-20841  
Position location system and method  
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Doppler compensation by shifting transmitted  
object frequency within limits  
[NASA-CASE-GSC-10087-4] c07 N73-20174

LAUNAN, E. A.  
Hydrogen-fueled engine  
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LAURENCE, J. C.  
Method of fabricating a twisted composite  
superconductor  
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LAURIE, R. O.  
Adjustable mount for a trihedral mirror Patent  
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LAVERGNE, B. C.  
Position location and data collection system and  
method Patent  
[NASA-CASE-GSC-10083-1] c30 N71-16090

LAWHITE, E.  
Drying apparatus for photographic sheet material  
[NASA-CASE-GSC-11074-1] c14 N73-28489

LAWING, P. L.  
Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c15 N78-32168  
Cooling system for high speed aircraft  
[NASA-CASE-LAR-12406-1] c05 N81-26114

LAWRENCE, E. D.  
Variable frequency oscillator with temperature  
compensation Patent  
[NASA-CASE-XNP-03916] c09 N71-28810

LAWRENCE, T. R.  
Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c35 N77-10493  
Wind measurement system  
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LAWSON, A. G.  
Modified spiral wound retaining ring  
[NASA-CASE-LAR-12361-1] c37 N81-12422

LAWSON, B. D.  
Assembly for recovering a capsule Patent  
[NASA-CASE-XMF-00641] c31 N70-36410  
Space capsule ejection assembly Patent  
[NASA-CASE-XMF-03169] c31 N71-15675  
Mount for continuously orienting a collector  
dish in a system adapted to perform both  
diurnal and seasonal solar tracking  
[NASA-CASE-MFS-23267-1] c35 N77-20401

LAWSON, D. D.  
Polymeric electrolytic hygrometer  
[NASA-CASE-NPO-13948-1] c35 N78-25391  
Dual membrane hollow fiber fuel cell and method  
of operating same  
[NASA-CASE-NPO-13732-1] c44 N79-10513  
Potential heat exchange fluids for use in  
sulfuric acid vaporizers  
[NASA-CASE-NPO-15015-1] c25 N80-23394

LAYLAND, J. W.  
Communications link for computers  
[NASA-CASE-NPO-11161] c08 N72-25207  
Digital demodulator-correlator  
[NASA-CASE-NPO-13982-1] c32 N79-14267

LE BEL, P. J.  
Ablation sensor Patent  
[NASA-CASE-XLA-01794] c33 N71-21586

LE DOUX, F. H.  
Bacteriostatic conformal coating and methods of  
application Patent  
[NASA-CASE-GSC-10007] c18 N71-16046

LE VAY, K. H.  
Holder for crystal resonators Patent  
[NASA-CASE-XNF-03637] c15 N71-21311

LEATHERWOOD, J. D.  
Active vibration isolator for flexible bodies  
Patent  
[NASA-CASE-LAR-10106-1] c15 N71-27169

LEATHERWOOD, J. B.  
Hide quality meter  
[NASA-CASE-LAR-12882-1] c54 N81-31848

LEAVY, W. A.  
Switching mechanism with energy storage means  
Patent  
[NASA-CASE-XGS-00473] c03 N70-38713  
Antenna deployment mechanism for use with a  
spacecraft  
[NASA-CASE-GSC-12331-1] c18 N80-14183

LEBLANC, L. P.  
Thermocouple, multiple junction reference oven  
[NASA-CASE-PRC-10112-1] c35 N81-26431

LEDBETTER, F. E.  
Method of bonding plasticized elastomer to metal  
and article produced thereby  
[NASA-CASE-MFS-25181-1] c27 N81-16238

LEE, C. E.  
Trigonometric vehicle guidance assembly which  
aligns the three perpendicular axes of two  
three-axes systems Patent  
[NASA-CASE-XMF-00684] c21 N71-21688

LEE, D. A.  
Hermetically sealed explosive release mechanism  
Patent  
[NASA-CASE-XGS-00824] c15 N71-16078

LEE, D. H.  
Ignition means for monopropellant Patent  
[NASA-CASE-XNP-00876] c28 N70-41311

LEE, J. H.  
Solar driven liquid metal MHD power generator  
[NASA-CASE-LAR-12495-1] c44 N81-32609

LEE, J. S.  
High voltage transistor circuit Patent



[NASA-CASE-XNP-06937] c09 N71-19516

LEE, M. C.  
Dual resonant cavity absorption cell Patent  
[NASA-CASE-LAR-10305] c14 N71-26137  
Acoustic suspension system  
[NASA-CASE-NPO-15435-1] c71 N81-27887

LEE, B. D.  
Telemetry actuated switch  
[NASA-CASE-ARC-10105] c09 N72-17153  
Metallic intrusion detector system  
[NASA-CASE-ARC-10265-1] c10 N72-28240  
Intruder detection system  
[NASA-CASE-ARC-10097-2] c07 N73-25160  
Ultrasonic biomedical measuring and recording apparatus  
[NASA-CASE-ARC-10597-1] c52 N74-20726  
Bio-isolated dc operational amplifier  
[NASA-CASE-ARC-10596-1] c33 N74-21851  
Reference apparatus for medical ultrasonic transducer  
[NASA-CASE-ARC-10753-1] c54 N75-27760  
Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-1] c52 N76-33835  
Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-2] c52 N79-26771  
Intrusion detection method and apparatus  
[NASA-CASE-ARC-11317-1] c35 N81-19430

LEE, S. H.  
Method and apparatus for producing an image from a transparent object  
[NASA-CASE-GSC-11989-1] c74 N77-28932

LEE, S. Y.  
Physical correction filter for improving the optical quality of an image  
[NASA-CASE-HQN-10542-1] c74 N75-25706

LEE, W. S.  
Surface finishing  
[NASA-CASE-MSC-12631-1] c24 N77-28225  
Surface finishing  
[NASA-CASE-MSC-12631-3] c27 N81-14077

LEEB, W. E.  
Method and apparatus for splitting a beam of energy  
[NASA-CASE-GSC-12083-1] c73 N78-32848

LEEPER, H. A.  
High efficiency multifrequency feed  
[NASA-CASE-GSC-11909] c32 N74-20863

LEES, W. L.  
Field ionization electrodes Patent  
[NASA-CASE-BRC-10013] c09 N71-26678  
Method and apparatus for limiting field emission current  
[NASA-CASE-BRC-10015-2] c10 N72-27246

LEFFKE, W. O.  
Flexibly connected support and skin Patent  
[NASA-CASE-XLA-01027] c31 N71-24035

LEPTWICH, R. F.  
Multi-lobar scan horizon sensor Patent  
[NASA-CASE-XGS-00809] c21 N70-35427

LEGER, L. J.  
Method and device for detection of surface discontinuities or defects  
[NASA-CASE-MSC-14187-1] c35 N74-32879  
Thermal insulation attaching means  
[NASA-CASE-MSC-12619-2] c27 N79-12221

LEHMANN, E. H.  
Fluid thrust control system  
[NASA-CASE-XNP-05964-1] c20 N79-21124

LEIBECKI, H. F.  
Electrically conductive fluorocarbon polymer  
[NASA-CASE-XLB-06774-2] c06 N72-25150

LEIBERT, C. H.  
Thermal barrier coating system  
[NASA-CASE-LEW-12554-1] c34 N78-18355

LEIBOWITZ, L. P.  
Annular arc accelerator shock tube  
[NASA-CASE-NPO-13528-1] c09 N77-10071

LEININGER, D. B.  
Telephone multiline signaling using common signal pair  
[NASA-CASE-KSC-11023-1] c32 N79-23310

LEIPOLD, M. H.  
Method of controlling defect orientation in silicon crystal ribbon growth  
[NASA-CASE-NPO-13918-1] c76 N79-11920

LEISEB, D. B.  
Silica reusable surface insulation  
[NASA-CASE-ARC-10721-1] c27 N76-22376

Reaction cured glass and glass coatings  
[NASA-CASE-ARC-11051-1] c27 N78-32260  
Fibrous refractory composite insulation  
[NASA-CASE-ARC-11169-1] c24 N79-24062  
Adjustable high emittance gap filler  
[NASA-CASE-ARC-11310-1] c27 N80-23454

LEISS, A.  
Air frame drag balance Patent  
[NASA-CASE-XLA-00113] c14 N70-33386

LENCOR, M. E.  
Attaching of strain gages to substrates  
[NASA-CASE-PRC-10093-1] c35 N80-20560

LENOS, F. B.  
Metallic hot wire anemometer  
[NASA-CASE-ARC-10911-1] c35 N77-20400

LENSON, P. H.  
Broadband modified turnstile antenna Patent  
[NASA-CASE-NSC-12209] c09 N71-24842

LENETT, S. D.  
Receiving and tracking phase modulated signals  
[NASA-CASE-NSC-16170-2] c32 N81-16338

LENNON, C. L.  
Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c33 N79-11315  
Lightning discharge identification system  
[NASA-CASE-KSC-11099-1] c33 N79-25313

LENT, W. E.  
Method for fiberizing ceramic materials Patent  
[NASA-CASE-XNP-00597] c18 N71-23088

LEON, H. A.  
Stirring apparatus for plural test tubes Patent  
[NASA-CASE-IAC-06956] c15 N71-21177  
Automatic real-time pair-feeding system for animals  
[NASA-CASE-ARC-10302-1] c51 N74-15778

LEONARD, B. T.  
Alignment apparatus using a laser having a gravitationally sensitive cavity reflector  
[NASA-CASE-ARC-10444-1] c16 N73-33397

LEPP, D. R.  
Phototropic composition of matter  
[NASA-CASE-XGS-03736] c14 N72-22443

LEBNER, H. B.  
Method of carbonizing polyacrylonitrile fibers and resulting product  
[NASA-CASE-ARC-11261-1] c24 N81-29164

LEBNER, T.  
Modulator for tone and binary signals  
[NASA-CASE-GSC-11743-1] c32 N75-24981

LESH, J. E.  
Multiple rate digital command detection system with range clean-up capability  
[NASA-CASE-NPO-13753-1] c32 N77-20289

LESKO, J. G., JR.  
Programmable telemetry system Patent  
[NASA-CASE-GSC-10131-1] c07 N71-24624

LESNIEWSKI, R. J.  
Variable digital processor including a register for shifting and rotating bits in either direction Patent  
[NASA-CASE-GSC-10186] c08 N71-33110  
Data processor with conditionally supplied clock signals  
[NASA-CASE-GSC-10975-1] c08 N73-13187

LESSLEY, H. L.  
Rotating shaft seal Patent  
[NASA-CASE-XNP-02862-1] c15 N71-26294

LESSMANN, G. G.  
Bimetallic junctions  
[NASA-CASE-LEW-11573-1] c26 N77-28265

LEVIN, H.  
Refractory porcelain enamel passive control coating for high temperature alloys  
[NASA-CASE-MFS-22324-1] c27 N75-27160  
Thermal reactor and process  
[NASA-CASE-NPO-14369-1] c25 N80-20338

LEVIN, K. L.  
Lunar landing flight research vehicle Patent  
[NASA-CASE-XPR-00929] c31 N70-34966

LEVINE, H. W.  
Atomic hydrogen maser with bulb temperature control to remove wall shift in maser output frequency  
[NASA-CASE-HQN-10654-1] c16 N73-13489  
Tunable cavity resonator with ramp shaped supports  
[NASA-CASE-HQN-10790-1] c36 N74-11313

LEVINE, S. B.  
Fused silicide coatings containing discrete particles for protecting niobium alloys

[NASA-CASE-LEW-11179-1] c27 N76-16229  
Corrosion resistant thermal barrier coating  
[NASA-CASE-LEW-13088-1] c26 N81-25188

LEWIS, M.  
Conforming polisher for aspheric surface of  
revolution Patent  
[NASA-CASE-XGS-02884] c15 N71-22705

LEWIS, C. A.  
Distributed-switch Dicke radiometers  
[NASA-CASE-GSC-12219-1] c35 N80-18359

LEWY, G. S.  
Multi-feed cone Cassegrain antenna Patent  
[NASA-CASE-NPO-10539] c07 N71-11285

LEWICKI, G. W.  
High voltage transistor amplifier with constant  
current load  
[NASA-CASE-NPO-11023] c09 N72-17155  
Thermomagnetic recording and magneto-optic  
playback system having constant intensity  
laser beam control  
[NASA-CASE-NPO-11317-2] c36 N74-13205  
Use of thin film light detector  
[NASA-CASE-NPO-11432-2] c35 N74-15090  
Stored charge transistor  
[NASA-CASE-NPO-11156-2] c33 N75-31331  
Magneto-optic detection system with noise  
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[NASA-CASE-NPO-11954-1] c35 N78-29421  
Thermomagnetic recording and magnetic-optic  
playback system  
[NASA-CASE-NPO-10872-1] c35 N79-16246  
Manganese bismuth films with narrow transfer  
characteristics for Curie-point switching  
[NASA-CASE-NPO-11336-1] c76 N79-16678

LEWIS, B. F.  
Photoelectron spectrometer with means for  
stabilizing sample surface potential  
[NASA-CASE-NPO-13772-1] c35 N78-10429

LEWIS, B. W.  
Process for applying black coating to metals  
Patent  
[NASA-CASE-XLA-06199] c15 N71-24875  
Barium release system  
[NASA-CASE-LAR-10670-1] c06 N73-30097  
Rocket having barium release system to create  
ion clouds in the upper atmosphere  
[NASA-CASE-LAR-10670-2] c15 N74-27360

LEWIS, D. J.  
Mandrel for shaping solid propellant rocket fuel  
into a motor casing Patent  
[NASA-CASE-XLA-00304] c27 N70-34783  
Solid propellant rocket motor and method of  
making same  
[NASA-CASE-XLA-1349] c20 N77-17143

LEWIS, G. W.  
Subminiature insertable force transducer  
[NASA-CASE-NPO-13423-1] c33 N75-31329  
Miniature muscle displacement transducer  
[NASA-CASE-NPO-13519-1] c33 N76-19338  
Myocardium wall thickness transducer and  
measuring method  
[NASA-CASE-NPO-13644-1] c52 N76-29895  
Catheter tip force transducer for cardiovascular  
research  
[NASA-CASE-NPO-13643-1] c52 N76-29896  
Simultaneous muscle force and displacement  
transducer  
[NASA-CASE-NPO-14212-1] c52 N80-27072  
Multifunctional transducer  
[NASA-CASE-NPO-14329-1] c52 N81-20703

LEWIS, J. R.  
Automatic transponder  
[NASA-CASE-GSC-12075-1] c32 N77-31350

LEWIS, R.  
High temperature ferromagnetic cobalt-base alloy  
Patent  
[NASA-CASE-XLE-03629] c17 N71-23248

LEWIS, T. L.  
Acoustical transducer calibrating system and  
apparatus  
[NASA-CASE-FRC-10060-1] c14 N73-27379

LEWY, L. L.  
Analog-to-digital converter  
[NASA-CASE-XNP-00477] c08 N73-28045

LI, S. P.  
Induced junction solar cell and method of  
fabrication  
[NASA-CASE-NPO-13786-1] c44 N80-29835

LIBBEY, C. E.  
Flexible wing deployment device Patent  
[NASA-CASE-XLA-01220] c02 N70-41863

LIBBY, J. H.  
Ultra-long monostable multivibrator employing  
bistable semiconductor switch to allow  
charging of timing circuit Patent  
[NASA-CASE-XGS-00381] c09 N70-34819  
Reversible ring counter employing cascaded  
single SCR stages Patent  
[NASA-CASE-XGS-01473] c09 N71-10673

LIBBY, W. F.  
Continuous plasma light source  
[NASA-CASE-XNP-04167-2] c25 N72-24753  
Continuous plasma laser  
[NASA-CASE-XNP-04167-3] c36 N77-19416

LIBBOTTI, J.  
Valving device for automatic refilling in  
cryogenic liquid systems  
[NASA-CASE-NPO-11177] c15 N72-17453

LIEBERMAN, S.  
Resonant infrasonic gauging apparatus  
[NASA-CASE-MSC-11847-1] c14 N72-11363

LIGHT, D. J.  
Fixture for supporting articles during vibration  
tests  
[NASA-CASE-MFS-20523] c14 N72-27412

LIGHTSEY, G. R.  
Preparation of polyimides from mixtures of  
monomeric diamines and esters of  
polycarboxylic acids  
[NASA-CASE-LEW-11325-1] c06 N73-27980

LILLEY, A. E.  
Clear air turbulence detector  
[NASA-CASE-ERC-10081] c14 N72-28437

LIN, L. Y.  
Signal processing apparatus for multiplex  
transmission Patent  
[NASA-CASE-NPO-10388] c07 N71-24622

LINDBERG, J. G.  
Method and apparatus for varying thermal  
conductivity Patent  
[NASA-CASE-XNP-05524] c33 N71-24876

LINDBERG, R. A.  
High temperature beryllium oxide capacitor  
[NASA-CASE-LEW-11938-1] c33 N76-15373  
Bimetallic junctions  
[NASA-CASE-LEW-11573-1] c26 N77-28265

LINDERPELT, H. E.  
An airlock  
[NASA-CASE-MFS-20922] c31 N72-20840  
Airlock  
[NASA-CASE-MFS-20922-1] c18 N74-22136

LINDSEY, J. P., III  
Flexible blade antenna Patent  
[NASA-CASE-MSC-12101] c09 N71-18720

LINDSEY, R. S., JR.  
Pulse stretcher for narrow pulses  
[NASA-CASE-MSC-14130-1] c33 N74-32711  
Random pulse generator  
[NASA-CASE-MSC-14131-1] c33 N75-19515

LINDSEY, W. C.  
Transition tracking bit synchronization system  
[NASA-CASE-NPO-10844] c07 N72-20140  
Data-aided carrier tracking loops  
[NASA-CASE-NPO-11282] c10 N73-16205  
Coherent receiver employing nonlinear coherence  
detection for carrier tracking  
[NASA-CASE-NPO-11921-1] c32 N74-30523

LINDSEY, W. F.  
Stereo photomicrography system  
[NASA-CASE-LAR-10176-1] c14 N72-20380

LINEBACK, L. D.  
Thermal shock resistant hafnia ceramic material  
[NASA-CASE-LAR-10894-1] c18 N73-14584

LINFORD, R. H. F.  
Flame detector operable in presence of proton  
radiation  
[NASA-CASE-MFS-21577-1] c19 N74-29410

LING, S. C.  
Flux sensing device using a tubular core with  
toroidal gating coil and solenoidal output  
coil wound thereon Patent  
[NASA-CASE-XGS-01881] c09 N70-40123

LINGLE, J. T.  
Frequency control network for a current feedback  
oscillator Patent  
[NASA-CASE-GSC-10041-1] c10 N71-19418

Static inverter Patent  
[NASA-CASE-XGS-05289] c09 N71-19470

LIPANOVICH, M. I.  
Medical subject monitoring systems  
[NASA-CASE-MSC-14180-1] c52 N76-14757

LIPKE, D. W.  
Doppler frequency spread correction device for  
multiplex transmissions  
[NASA-CASE-XGS-02749] c07 N69-39978

LIPKIS, R. B.  
Electromagnetic radiation energy arrangement  
[NASA-CASE-WOO-00428-1] c32 N79-19186

LIPONA, F. C.  
Television signal scan rate conversion system  
Patent  
[NASA-CASE-XMS-07168] c07 N71-11300  
Burst synchronization detection system Patent  
[NASA-CASE-XMS-05605-1] c10 N71-19468  
Data storage, image tube type  
[NASA-CASE-MSC-14053-1] c60 N74-12888  
System for producing chroma signals  
[NASA-CASE-MSC-14683-1] c74 N77-18893

LIPPITT, M. W., JR.  
Electrode for biological recording  
[NASA-CASE-XMS-02872] c05 N69-21925  
Instrument for use in performing a controlled  
Valsalva maneuver Patent  
[NASA-CASE-XMS-01615] c05 N70-41329

LIPSHITZ, A.  
Modified face seal for positive film stiffness  
[NASA-CASE-LEW-12989-1] c37 N80-12414

LISAGOB, W. B.  
Controlled glass bead peening Patent  
[NASA-CASE-XLA-07390] c15 N71-18616  
Fixture for environmental exposure of structural  
materials under compression  
[NASA-CASE-LAR-12602-1] c35 N81-19429

LISLE, R. V.  
Lightning current measuring systems  
[NASA-CASE-KSC-10807-1] c33 N75-26246  
Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c34 N81-26402

LISOVICZ, E. J.  
High contrast cathode ray tube  
[NASA-CASE-ERC-10468] c09 N72-20206

LIST, W. F.  
Solid state television camera system Patent  
[NASA-CASE-XMF-06092] c07 N71-24612  
Phototransistor imaging system  
[NASA-CASE-MFS-20809] c23 N73-13660

LISTER, J. L.  
Thermally conductive polymers  
[NASA-CASE-GSC-11304-1] c06 N72-21105

LITANT, I.  
Apparatus and method for separating a  
semiconductor wafer Patent  
[NASA-CASE-ERC-10138] c26 N71-14354  
Method for detecting leaks in hermetically  
sealed containers Patent  
[NASA-CASE-ERC-10045] c15 N71-24910

LITCHFORD, G. B.  
Altitude measuring system  
[NASA-CASE-ERC-10412-1] c09 N73-12211

LITTLE, R. E.  
Method of making pressure tight seal for super  
alloy  
[NASA-CASE-LAR-10170-1] c37 N74-11301

LITTLEJOHN, D. P.  
High power-high voltage waterload Patent  
[NASA-CASE-XNP-05381] c09 N71-20842

LIU, C. C.  
Method and device for the detection of phenol  
and related compounds  
[NASA-CASE-LEW-12513-1] c25 N79-22235

LIU, F. F.  
Respiratory analysis system and method  
[NASA-CASE-MSC-13436-1] c05 N73-32015

LIVERMORE, S. P.  
Lightning current detector  
[NASA-CASE-KSC-11057-1] c33 N79-14305

LLOYD, W. B.  
Bearing and gimbal lock mechanism and spiral  
flex lead module Patent  
[NASA-CASE-GSC-10556-1] c31 N71-26537

LOCH, F. J.  
Frequency modulation demodulator threshold  
extension device Patent  
[NASA-CASE-MSC-12165-1] c07 N71-33696

LOCKARD, M. L.  
Leak detector Patent  
[NASA-CASE-LAR-10323-1] c12 N71-17573

LOCKMAN, C. S.  
Method and apparatus for nondestructive testing  
of pressure vessels  
[NASA-CASE-NPO-12142-1] c38 N76-28563

LOCKWOOD, V. E.  
Landing arrangement for aerial vehicles Patent  
[NASA-CASE-XLA-00142] c02 N70-33286  
Landing arrangement for aerial vehicle Patent  
[NASA-CASE-XLA-00806] c02 N70-34858  
Landing arrangement for aerospace vehicle Patent  
[NASA-CASE-XLA-00805] c31 N70-38010

LOFFIN, L. E., JR.  
Wind tunnel airstream oscillating apparatus Patent  
[NASA-CASE-XLA-00112] c11 N70-33287

LOGAN, W. B.  
Method of preparing zinc orthotitanate pigment  
[NASA-CASE-MFS-23345-1] c27 N77-30237

LOH, G. B.  
Medical subject monitoring systems  
[NASA-CASE-MSC-14180-1] c52 N76-14757

LOHR, J. J.  
Variable stiffness polymeric damper  
[NASA-CASE-XAC-11225] c14 N69-27486

LOKEBSON, D. C.  
Voltage to frequency converter Patent  
[NASA-CASE-GSC-10022-1] c10 N71-25882  
X-Y alphanumeric character generator for  
oscilloscopes  
[NASA-CASE-GSC-11582-1] c33 N75-19517  
Speech analyzer  
[NASA-CASE-GSC-11898-1] c32 N77-30309

LOMBARDI, F.  
Hermetic seal for a shaft  
[NASA-CASE-NPO-15115-1] c37 N80-25660  
Head for high speed spinner having a vacuum chuck  
[NASA-CASE-NFO-15227-1] c37 N81-33482

LONBORG, J. O.  
Attitude control for spacecraft Patent  
[NASA-CASE-XNP-02982] c31 N70-41855

LONG, E. B., JR.  
Thermoluminescent aerosol analysis  
[NASA-CASE-LAR-12046-1] c25 N78-15210

LONG, H. R.  
Precipitation detector Patent  
[NASA-CASE-XLA-02619] c10 N71-26334

LONG, W. C.  
Technique for extending the frequency range of  
digital dividers  
[NASA-CASE-LAR-10730-1] c33 N74-10223  
Non-destructive method for applying and removing  
instrumentation on helicopter rotor blades  
[NASA-CASE-LAR-11201-1] c35 N78-24515

LONGYEAR, W. D.  
Omnidirectional acceleration device Patent  
[NASA-CASE-BQN-10780] c14 N71-30265

LOOK, G. F.  
Foam generator Patent  
[NASA-CASE-XLA-00838] c03 N70-36778

LOOP, R. W.  
Absolute focus lock for microscopes  
[NASA-CASE-LAR-10184] c14 N72-22445

LOOSE, J. D.  
Steady state thermal radiometers  
[NASA-CASE-MFS-21108-1] c34 N74-27861

LOPEZ, A. E.  
Three-axis finger tip controller for switches  
Patent  
[NASA-CASE-XAC-02405] c09 N71-16089

LORD, H. C., III  
Analysis of hydrogen-deuterium mixtures  
[NASA-CASE-NPO-11322] c06 N72-25146

LORELL, K. B.  
High temperature lens construction Patent  
[NASA-CASE-XNP-04111] c14 N71-15622  
All sky pointing attitude control system  
[NASA-CASE-ABC-10716-1] c35 N77-20399

LOTSCHEUTE, P. X.  
Stretcher Patent  
[NASA-CASE-XMP-06589] c05 N71-23159

LOTT, D. B.  
Method of fabricating a photovoltaic module of a  
substantially transparent construction  
[NASA-CASE-NPO-14303-1] c44 N80-18550

LOUGHEAD, A. G.  
Linear differential pressure sensor Patent  
[NASA-CASE-XMP-01974] c14 N71-22752

LOUGHHEAD, T. E.  
 Satellite retrieval system  
 [NASA-CASE-MFS-25403-1] c18 N81-24164

LOUNSBERRY, E. D.  
 Jet shoes  
 [NASA-CASE-XLA-08491] c05 N69-21380

LOVALL, D. D.  
 Electric field measuring and display system  
 [NASA-CASE-KSC-10731-1] c33 N74-27862

LOVELL, J. S.  
 Portable breathing system  
 [NASA-CASE-MSC-16182-1] c54 N80-10799

LOVELL, E. B.  
 Process for preparing liquid metal electrical  
 contact device  
 [NASA-CASE-LEW-11978-1] c33 N77-26385

Liquid metal slip ring  
 [NASA-CASE-LEW-12277-2] c33 N78-25323

LOVELOCK, J. E.  
 Atmospheric sampling devices  
 [NASA-CASE-NPO-11373] c13 N72-25323

LOVINGBER, D. E.  
 Voice operated controller Patent  
 [NASA-CASE-XLA-04063] c31 N71-33160

LONE, E. G.  
 Continuous turning slip ring assembly Patent  
 [NASA-CASE-XMF-01049] c15 N71-23049

LOWEN, I. B.  
 Spacecraft attitude detection system by stellar  
 reference Patent  
 [NASA-CASE-IGS-03431] c21 N71-15642

Roll alignment detector  
 [NASA-CASE-GSC-10514-1] c14 N72-20379

LOWERY, J. R.  
 Panel for selectively absorbing solar thermal  
 energy and the method of producing said panel  
 [NASA-CASE-MFS-22562-1] c44 N76-14595

LOWRY, J. G.  
 Jet aircraft configuration Patent  
 [NASA-CASE-XLA-00087] c02 N70-33332

Variable-span aircraft Patent  
 [NASA-CASE-XLA-00166] c02 N70-34178

LOY, C. A.  
 Tank construction for space vehicles Patent  
 [NASA-CASE-XMF-01899] c31 N70-41948

LOYD, C.  
 System for maintaining a motor at a  
 predetermined speed utilizing digital feedback  
 means Patent  
 [NASA-CASE-XMF-06892] c09 N71-24805

RC rate generator for slow speed measurement  
 Patent  
 [NASA-CASE-XMF-02966] c10 N71-24863

LUBONITZ, H. E.  
 Ablative resin Patent  
 [NASA-CASE-XLE-05913] c33 N71-14032

Reinforced structural plastics  
 [NASA-CASE-LEW-10199-1] c27 N74-23125

LUCAS, C. E.  
 Analog to digital converter  
 [NASA-CASE-NPO-13385-1] c33 N76-18345

LUCERO, D. P.  
 Method for detecting hydrogen gas  
 [NASA-CASE-XMF-03873] c06 N69-39733

LUCHT, R. A.  
 A technique for breaking ice in the path of a ship  
 [NASA-CASE-LAR-10815-1] c16 N72-22520

LUCY, M. H.  
 Molded composite pyrogen igniter for rocket motors  
 [NASA-CASE-LAR-12018-1] c20 N78-24275

LUDWIG, A. C.  
 Dual waveguide mode source having control means  
 for adjusting the relative amplitude of two  
 modes Patent  
 [NASA-CASE-XNP-03134] c07 N71-10676

Singly-curved reflector for use in high-gain  
 antennas  
 [NASA-CASE-NPO-11361] c07 N72-32169

Dual frequency microwave reflex feed  
 [NASA-CASE-NPO-13091-1] c09 N73-12214

Low loss dichroic plate  
 [NASA-CASE-NPO-13171-1] c32 N74-11000

LUDWIG, L. P.  
 Foil seal  
 [NASA-CASE-XLE-05130] c15 N69-21362

Foil seal Patent  
 [NASA-CASE-XLE-05130-2] c15 N71-19570

Spiral groove seal  
 [NASA-CASE-XLE-10326-2] c15 N72-29488

Spiral groove seal  
 [NASA-CASE-LEW-10326-3] c37 N74-10474

Spiral groove seal  
 [NASA-CASE-XLE-10326-4] c37 N74-15125

High speed, self-acting shaft seal  
 [NASA-CASE-LEW-11274-1] c37 N75-21631

Fluid seal for rotating shafts  
 [NASA-CASE-LEW-11676-1] c37 N76-22541

Counter pumping debris excluder and separator  
 [NASA-CASE-LEW-11855-1] c07 N78-25090

Composite seal for turbomachinery  
 [NASA-CASE-LEW-12131-1] c37 N79-18318

Shaft seal assembly for high speed and high  
 pressure applications  
 [NASA-CASE-LEW-11873-1] c37 N79-22475

Composite seal for turbomachinery  
 [NASA-CASE-LEW-12131-2] c37 N80-26658

Circumferential shaft seal  
 [NASA-CASE-LEW-12119-1] c37 N80-28711

Multiple plate hydrostatic viscous damper  
 [NASA-CASE-LEW-12445-1] c37 N81-22360

Circumferential shaft seal  
 [NASA-CASE-LEW-12119-2] c37 N81-26447

LUEBBERS, S. S.  
 Thermionic tantalum emitter doped with oxygen  
 Patent Application  
 [NASA-CASE-NPO-11138] c03 N70-34646

Thermionic diode switch Patent  
 [NASA-CASE-NPO-10404] c03 N71-12255

LUEBBING, G. W.  
 Blade retainer assembly  
 [NASA-CASE-LEW-12608-1] c07 N77-27116

LUM, H.  
 Sampling video compression system  
 [NASA-CASE-ARC-10984-1] c32 N77-24328

LUNCE, R. S.  
 Medical subject monitoring systems  
 [NASA-CASE-MSC-14180-1] c52 N76-14757

LUND, G. F.  
 Pocket ECG electrode  
 [NASA-CASE-ARC-11258-1] c52 N80-33081

Subcutaneous electrode structure  
 [NASA-CASE-ARC-11117-1] c52 N81-14612

LUND, W. C.  
 Heated porous plug microthruster  
 [NASA-CASE-GSC-10640-1] c28 N72-18766

LUNDQUIST, J. R.  
 Preparation of high purity copper fluoride  
 [NASA-CASE-LEW-10794-1] c06 N72-17093

LUSHBAUGH, W. A.  
 Data compression system  
 [NASA-CASE-XNP-09785] c08 N69-21928

Data compressor Patent  
 [NASA-CASE-XNP-04067] c08 N71-22707

Error correcting method and apparatus Patent  
 [NASA-CASE-XNP-02748] c08 N71-22749

Comparator for the comparison of two binary  
 numbers Patent  
 [NASA-CASE-XNP-04819] c08 N71-23295

Parallel generation of the check bits of a PN  
 sequence Patent  
 [NASA-CASE-XNP-04623] c10 N71-26103

Versatile arithmetic unit for high speed  
 sequential decoder  
 [NASA-CASE-NFO-11371] c08 N73-12177

LUTES, G. F.  
 A fiber optic transmission line stabilization  
 apparatus and method  
 [NASA-CASE-NPO-15036-1] c74 N80-34250

Precise HF timing signal distribution to remote  
 stations  
 [NASA-CASE-NPO-14749-1] c32 N81-14186

LUTES, G. F., JR.  
 Broadband stable power multiplier Patent  
 [NASA-CASE-XNP-10854] c10 N71-26331

Cascaded complementary pair broadband transistor  
 amplifiers Patent  
 [NASA-CASE-NPO-10003] c10 N71-26415

Low phase noise digital frequency divider  
 [NASA-CASE-NPO-11569] c10 N73-26229

LUTNACK, E.  
 A method for producing a solidified body of  
 silicon  
 [NASA-CASE-NPO-15250-1] c25 N81-16174

LUTZ, E. B.  
 Operational integrator Patent  
 [NASA-CASE-NPO-10230] c09 N71-12520

LYLAND, J. W.  
 Versatile arithmetic unit for high speed

sequential decoder  
[NASA-CASE-NPO-11371] c08 N73-12177

LYNCH, E. J.  
Three-axis adjustable loading structure  
[NASA-CASE-FRC-10051-1] c35 N74-13129

LYNCH, T. L.  
Pulsed excitation voltage circuit for transducers  
[NASA-CASE-FRC-10036] c09 N72-22200

LYON, W. E.  
Optical range finder having nonoverlapping  
complete images  
[NASA-CASE-MS-12105-1] c14 N72-21409

## M

MA, L. E.  
Digital numerically controlled oscillator  
[NASA-CASE-MSC-16747-1] c33 N81-17349

MACCORNELL, J. E.  
Ultra stable frequency distribution system  
[NASA-CASE-NPO-13836-1] c32 N78-15323

MACCONOCHIE, I. O.  
Excessive temperature warning system Patent  
[NASA-CASE-XLA-01926] c14 N71-15620

Miniature spectrally selective dosimeter  
[NASA-CASE-LAR-12469-1] c35 N81-12388

MACDAVID, K. S.  
Thermocouple installation  
[NASA-CASE-NPO-13540-1] c35 N77-14409

MACDORAN, P. F.  
System for real-time crustal deformation  
monitoring  
[NASA-CASE-NPO-14124-1] c46 N80-14603

Interferometric locating system  
[NASA-CASE-NPO-14173-1] c04 N80-32359

MACFADDER, J. A.  
Rotating mandrel for assembly of inflatable  
devices Patent  
[NASA-CASE-XLA-04143] c15 N71-17687

MACGLASHAN, W. F.  
Power control for hot gas engines  
[NASA-CASE-NPO-14220-1] c37 N81-14318

MACGLASHAN, W. F., JR.  
Belleville spring assembly with elastic guides  
[NASA-CASE-XNP-05452] c15 N69-27504

High pressure four-way valve Patent  
[NASA-CASE-XNP-00214] c15 N70-36908

Multiple Belleville spring assembly Patent  
[NASA-CASE-XNP-00840] c15 N70-38225

Pressure regulating system Patent  
[NASA-CASE-XNP-00450] c15 N70-36603

Ejection unit Patent  
[NASA-CASE-XNP-00676] c15 N70-38996

Reinforcing means for diaphragms Patent  
[NASA-CASE-XNP-01962] c32 N70-41370

High pressure filter Patent  
[NASA-CASE-XNP-00732] c28 N70-41447

Antiflutter ball check valve Patent  
[NASA-CASE-XNP-01152] c15 N70-41811

High pressure regulator valve Patent  
[NASA-CASE-XNP-00710] c15 N71-10778

Filler valve Patent  
[NASA-CASE-XNP-01747] c15 N71-23024

MACKAY, C. A.  
Quick disconnect latch and handle combination  
Patent  
[NASA-CASE-MFS-11132] c15 N71-17649

MACLEOD, W. H.  
Bacterial contamination monitor  
[NASA-CASE-GSC-10879-1] c14 N72-25413

MACVRIGH, G. E.  
Analog spatial maneuver computer  
[NASA-CASE-GSC-10880-1] c08 N72-11172

MADDOX, J. E.  
Air bearing  
[NASA-CASE-WLP-10002] c15 N72-17451

MADRY, J. E.  
Satellite appendage tie down cord Patent  
[NASA-CASE-XGS-02554] c31 N71-21064

Redundant actuating mechanism Patent  
[NASA-CASE-XGS-08718] c15 N71-24600

Rotary electric device  
[NASA-CASE-GSC-12138-1] c33 N79-20314

MADISON, I. B.  
Aerodynamic spike nozzle Patent  
[NASA-CASE-XGS-01143] c31 N71-15647

MADSEN, B.  
Apparatus and method for skin packaging articles  
[NASA-CASE-MFS-20855] c15 N73-27405

MAHAN, J. C.  
Device for preventing high voltage arcing in  
electron beam welding Patent  
[NASA-CASE-IMF-08522] c15 N71-19486

MAIDEN, D. L.  
Flow velocity and directional instrument  
[NASA-CASE-LAR-10855-1] c14 N73-13415

Two dimensional wedge/translating shroud nozzle  
[NASA-CASE-LAR-11919-1] c07 N78-27121

MAILLOUX, R. J.  
Array phasing device Patent  
[NASA-CASE-ERC-10046] c10 N71-18722

Circularly polarized antenna  
[NASA-CASE-ERC-10214] c09 N72-31235

Phase control circuits using frequency  
multiplications for phased array antennas  
[NASA-CASE-ERC-10285] c10 N73-16206

MAJOR, C. J.  
Mixture separation cell Patent  
[NASA-CASE-XMS-02952] c18 N71-20742

MALLING, L. E.  
Digital television camera control system Patent  
[NASA-CASE-XNP-01472] c14 N70-41807

Reduced bandwidth video communication system  
utilizing sampling techniques Patent  
[NASA-CASE-XNP-02791] c07 N71-23026

MALBERG, J. E.  
Waveform simulator Patent  
[NASA-CASE-NPO-10251] c10 N71-27365

MALONE, L. B.  
Emergency lunar communications system  
[NASA-CASE-MFS-21042] c07 N72-25171

MARATT, S. L.  
Audio frequency marker system  
[NASA-CASE-NPO-11147] c14 N72-27408

MANDL, C. H.  
Azimuth laying system Patent  
[NASA-CASE-XNP-01669] c21 N71-23289

MANDELKORN, J.  
Method of making a silicon semiconductor device  
Patent  
[NASA-CASE-XLE-02792] c26 N71-10607

Method of making electrical contact on silicon  
solar cell and resultant product Patent  
[NASA-CASE-XLE-04787] c03 N71-20492

Gd or Sm doped silicon semiconductor composition  
Patent  
[NASA-CASE-XLE-10715] c26 N71-23292

Silicon solar cell with cover glass bonded to  
cell by metal pattern Patent  
[NASA-CASE-XLE-08569] c03 N71-23449

Semiconductor material and method of making same  
Patent  
[NASA-CASE-XLE-02798] c26 N71-23654

Method of attaching a cover glass to a silicon  
solar cell Patent  
[NASA-CASE-XLE-08569-2] c03 N71-24681

MANDELL, A.  
Condition sensor system and method  
[NASA-CASE-HSC-14805-1] c54 N78-32720

MANGION, C.  
System for preconditioning a combustible vapor  
[NASA-CASE-NPO-12072] c28 N72-22772

MANGOLD, D. W.  
Medical subject monitoring systems  
[NASA-CASE-HSC-14180-1] c52 N76-14757

MANE, C. E.  
Rotary target V-block  
[NASA-CASE-LAR-12007-2] c74 N79-25876

MANN, W. A.  
Compact artificial hand  
[NASA-CASE-NPO-13906-1] c54 N79-24652

MANNING, C. E.  
Thermal shock and erosion resistant tantalum  
carbide ceramic material  
[NASA-CASE-LAR-11902-1] c27 N78-17206

MANNING, C. E., JR.  
Controlled glass head peening Patent  
[NASA-CASE-XLA-07390] c15 N71-18616

Thermal shock resistant hafnia ceramic material  
[NASA-CASE-LAR-10894-1] c18 N73-14584

MAROLI, R.  
Aircraft-mounted crash-activated transmitter  
device  
[NASA-CASE-MFS-16609-3] c03 N76-32140

MANSOUR, E. M.  
Servo-controlled intravital microscope system  
[NASA-CASE-NPO-13214-1] c35 N75-25123

**MANTLER, R. L.**  
 Rocket propellant injector Patent  
 [NASA-CASE-XLE-00103] c28 N70-33241

**MANUS, B. A.**  
 Active microwave irises and windows  
 [NASA-CASE-LAR-10513-1] c07 N72-25170  
 Thin film microwave iris  
 [NASA-CASE-LAR-10511-1] c09 N72-29172  
 Logarithmic circuit with wide dynamic range  
 [NASA-CASE-GSC-12145-1] c33 N78-32339

**MARZO, H. A.**  
 Cross-linked polyvinyl alcohol and method of making same  
 [NASA-CASE-LEW-13504-1] c27 N81-27279  
 Polyvinyl alcohol battery separator containing inert filler  
 [NASA-CASE-LEW-13556-1] c44 N81-27615

**MARPLE, W. E.**  
 Analytical test apparatus and method for determining oxide content of alkali metal Patent  
 [NASA-CASE-XLE-01997] c06 N71-23527

**MARPLES, H. E.**  
 Light intensity modulator controller Patent  
 [NASA-CASE-XMS-04300] c09 N71-19479

**MARAK, R. J.**  
 Life raft stabilizer  
 [NASA-CASE-MSC-12393-1] c02 N73-26006

**MARCELL, G. V.**  
 Method and apparatus for preparing multiconductor cable with flat conductors  
 [NASA-CASE-MPS-10946-1] c31 N79-21226  
 Edge coating of flat wires  
 [NASA-CASE-XMP-05757-1] c31 N79-21227

**MARCUS, D. C., JR.**  
 Hypersonic airbreathing missile  
 [NASA-CASE-LAR-12264-1] c15 N78-32168

**MARCUS, B. D.**  
 Flat-plate heat pipe  
 [NASA-CASE-GSC-11998-1] c34 N77-32413

**MARCUS, H. L.**  
 Laser extensometer  
 [NASA-CASE-MPS-19259-1] c36 N78-14380

**MAREK, C. J.**  
 Fuel combustor  
 [NASA-CASE-LEW-12137-1] c25 N78-10224  
 Supercritical fuel injection system  
 [NASA-CASE-LEW-12990-1] c07 N81-29129

**MARGOLIS, J. S.**  
 Method and apparatus for Doppler frequency modulation of radiation  
 [NASA-CASE-NPO-14524-1] c32 N80-24510  
 Coherently pulsed laser source  
 [NASA-CASE-NPO-15111-1] c36 N80-24602  
 Stark cell optoacoustic detection of constituent gases in sample  
 [NASA-CASE-NPO-14143-1] c25 N81-14015

**MARGOSIAN, P. H.**  
 Electrostatic thruster with improved insulators Patent  
 [NASA-CASE-XLE-01902] c28 N71-10574  
 Single grid accelerator for an ion thruster  
 [NASA-CASE-XLE-10453-2] c28 N73-27699

**MARGRAF, H. J.**  
 High pressure four-way valve Patent  
 [NASA-CASE-XNP-00214] c15 N70-36908

**MARLEY, R. A.**  
 Self-adjusting multisegment, deployable, natural circulation radiator Patent  
 [NASA-CASE-XHQ-03673] c33 N71-29046

**MARLOW, H. O.**  
 Method of making a carnet Patent  
 [NASA-CASE-LEW-10219-1] c18 N71-28729

**MARLOW, B. E.**  
 System for enhancing tool-exchange capabilities of a portable wrench  
 [NASA-CASE-MPS-22283-1] c37 N75-33395  
 Remotely operable articulated manipulator  
 [NASA-CASE-MPS-22707-1] c37 N76-15457

**MAROPIS, H.**  
 Methods and apparatus employing vibratory energy for wrenching Patent  
 [NASA-CASE-MPS-20586] c15 N71-17686

**MARREKLE, H. A.**  
 Process for preparation of dianilinosilanes Patent  
 [NASA-CASE-XMP-06409] c06 N71-23230

**MARROWL, H. A., JR.**  
 Pressure garment joint Patent  
 [NASA-CASE-XMS-09636] c05 N71-12344

Omnidirectional joint Patent  
 [NASA-CASE-XMS-09635] c05 N71-24623  
 Foreshortened convolute section for a pressurized suit Patent  
 [NASA-CASE-XMS-09637-1] c05 N71-24730  
 Method of forming a root cord restrained convolute section  
 [NASA-CASE-MSC-12398] c05 N72-20098  
 Restraint torso for a pressurized suit  
 [NASA-CASE-MSC-12397-1] c05 N72-25119

**MARSH, H. E., JR.**  
 Trifunctional alcohol  
 [NASA-CASE-NPO-10714] c06 N69-31244  
 Novel polycarboxylic prepolymeric materials and polymers thereof Patent  
 [NASA-CASE-NPO-10596] c06 N71-25929  
 Aldehyde-containing urea-absorbing polysaccharides  
 [NASA-CASE-NPO-13620-1] c27 N77-30236  
 Oil and fat absorbing polymers  
 [NASA-CASE-NPO-11609-2] c27 N77-31308  
 Solid propellant motor  
 [NASA-CASE-NPO-11458A] c20 N78-32179

**MARSH, H. W.**  
 Fluid pressure balanced seal  
 [NASA-CASE-IGS-01286-1] c37 N79-33469

**MARSHALL, J. H.**  
 Baseline stabilization system for ionization detector Patent  
 [NASA-CASE-INP-03128] c10 N70-41991

**MARSHALL, T. H., JR.**  
 Nuclear mass flowmeter  
 [NASA-CASE-MPS-20485] c14 N72-11365

**MARSIK, S. J.**  
 Selective nickel deposition  
 [NASA-CASE-LEW-10965-1] c15 N72-25452  
 Production of pure metals  
 [NASA-CASE-LEW-10906-1] c25 N74-30502  
 Process for making anhydrous metal halides  
 [NASA-CASE-LEW-11860-1] c37 N76-18458

**MARTEL, R. J.**  
 Amplitude steered array  
 [NASA-CASE-GSC-11446-1] c33 N74-20860

**MARTIN, J. A.**  
 Orbiter/launch system  
 [NASA-CASE-LAR-12250-1] c14 N81-26161

**MARTIN, J. W.**  
 Dynamic Doppler simulator Patent  
 [NASA-CASE-XMS-05454-1] c07 N71-12391

**MARTIN, H. C.**  
 Segmented back-up bar Patent  
 [NASA-CASE-XMP-00640] c15 N70-39924  
 Portable alignment tool Patent  
 [NASA-CASE-XMP-01452] c15 N70-41371

**MARTIN, R. B.**  
 Color perception tester  
 [NASA-CASE-KSC-10278] c05 N72-16015

**MARTIN, S. C.**  
 Correlation type phase detector  
 [NASA-CASE-GSC-11744-1] c33 N75-26243

**MARTIN, W. L.**  
 Phase-locked loop with sideband rejecting properties Patent  
 [NASA-CASE-XNP-02723] c07 N70-41680  
 Method of resolving clock synchronization error and means therefor Patent  
 [NASA-CASE-XMP-08875] c10 N71-23099  
 Communications link for computers  
 [NASA-CASE-NPO-11161] c08 N72-25207  
 Binary coded sequential acquisition ranging system  
 [NASA-CASE-NPO-11194] c08 N72-25209  
 Digital video display system using cathode ray tube  
 [NASA-CASE-NPO-11342] c09 N72-25248  
 Digital demodulator-correlator  
 [NASA-CASE-NPO-13982-1] c32 N79-14267

**MARTINAGE, L. H.**  
 Power supply Patent  
 [NASA-CASE-XMS-02159] c10 N71-22961

**MARTINECK, H. G.**  
 Electrical connector for flat cables Patent  
 [NASA-CASE-XMP-00324] c09 N70-34596  
 Printed cable connector Patent  
 [NASA-CASE-XMP-00369] c09 N70-36494  
 Method of making a molded connector Patent  
 [NASA-CASE-XMP-03498] c15 N71-15986  
 Electrical connector  
 [NASA-CASE-MPS-20757] c09 N72-28225

**MARTUCCI, V. J.**  
 Tuning arrangement for an electron discharge

device or the like Patent  
[NASA-CASE-XNP-09771] c09 N71-24841

MARTZ, E. L.  
Externally pressurized fluid bearing Patent  
[NASA-CASE-XMF-00515] c15 N70-34664

MARVIN, I. E.  
Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c07 N81-19116

MARZEE, R. A.  
Tool for use in lifting pin supported objects  
[NASA-CASE-NPO-13157-1] c37 N74-32918

MASCY, A. C.  
Deep space monitor communication satellite  
system Patent  
[NASA-CASE-XAC-06029-1] c31 N71-24813

MASEK, T. D.  
Electron bombardment ion engine Patent  
[NASA-CASE-XNP-04124] c28 N71-21822

Feed system for an ion thruster  
[NASA-CASE-NPO-10737] c28 N72-11709

MASESIAN, J.  
Temperature sensitive capacitor device  
[NASA-CASE-XNP-09750] c14 N69-39937

Thin film capacitive bolometer and temperature  
sensor Patent  
[NASA-CASE-NPO-10607] c09 N71-27232

Thin film temperature sensor and method of  
making same  
[NASA-CASE-NPO-11775] c26 N72-28761

Use of thin film light detector  
[NASA-CASE-NPO-11432-2] c35 N74-15090

Deep trap, laser activated image converting system  
[NASA-CASE-NPO-13131-1] c36 N75-19652

Stored charge transistor  
[NASA-CASE-NPO-11156-2] c33 N75-31331

Method and apparatus for measurement of trap  
density and energy distribution in dielectric  
films  
[NASA-CASE-NPO-13443-1] c76 N76-26994

Chemical vapor deposition reactor  
[NASA-CASE-NPO-13650-1] c25 N79-28253

Induced junction solar cell and method of  
fabrication  
[NASA-CASE-NPO-13786-1] c44 N80-29835

MASLOWSKI, E. A.  
Method of making an insulation foil  
[NASA-CASE-LEW-11484-1] c24 N75-33181

MASON, J. W.  
Microcomputerized electric field meter  
diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c35 N76-28411

MASON, R. J.  
Collapsible reflector Patent  
[NASA-CASE-XMS-03454] c09 N71-20658

MASON, R. B.  
Radial module space station Patent  
[NASA-CASE-XMS-01906] c31 N70-41373

MASSUCCO, A. A.  
Non-flammable elastomeric fiber from a  
fluorinated elastomer and containing an  
halogenated flame retardant  
[NASA-CASE-MSC-14331-1] c27 N76-24405

Flame retardant spandex type polyurethanes  
[NASA-CASE-MSC-14331-2] c27 N78-17213

Process for spinning flame retardant elastomeric  
compositions  
[NASA-CASE-MSC-14331-3] c27 N78-32262

MATEER, G. C.  
Flow separation detector  
[NASA-CASE-ARC-11046-1] c35 N78-14364

MATHUR, P. P.  
Program for computer aided reliability estimation  
[NASA-CASE-NPO-13086-1] c15 N73-12495

MATSUHIRO, D. S.  
Shoulder harness and lap belt restraint system  
[NASA-CASE-ARC-10519-2] c05 N75-25915

MATSUMOTO, I.  
Sampling video compression system  
[NASA-CASE-ARC-10984-1] c32 N77-24328

MATTAUCH, R. J.  
Infrared detectors  
[NASA-CASE-LAR-10728-1] c14 N73-12445

MATTHEWS, P. R., JR.  
Lightweight, variable solidity knitted parachute  
fabric  
[NASA-CASE-LAR-10776-1] c02 N74-10034

MATZEE, H. J.  
Apparatus for measuring semiconductor device  
resistance  
[NASA-CASE-NPO-14424-1] c33 N80-32650

MAULDIN, D. G.  
Contourograph system for monitoring  
electrocardiograms  
[NASA-CASE-MSC-13407-1] c10 N72-20225

MAXWELL, H. G.  
Method of adhering bone to a rigid substrate  
using a graphite fiber reinforced bone cement  
[NASA-CASE-NPO-13764-1] c27 N78-17215

MAXWELL, H. S.  
Spacecraft attitude detection system by stellar  
reference Patent  
[NASA-CASE-XGS-03431] c21 N71-15642

Programmable telemetry system Patent  
[NASA-CASE-GSC-10131-1] c07 N71-24624

Plural beam antenna  
[NASA-CASE-GSC-11013-1] c09 N73-19234

MAXWELL, H. W.  
Helical coaxial resonator RF filter  
[NASA-CASE-XGS-02816] c07 N69-24323

MAXWELL, R. F., JR.  
Electronic background suppression method and  
apparatus for a field scanning sensor  
[NASA-CASE-XGS-05211] c07 N69-39980

MAXWELL, W. A.  
Process of casting heavy slips Patent  
[NASA-CASE-XLE-00106] c15 N71-16076

MAY, C. E.  
Selective nickel deposition  
[NASA-CASE-LEW-10965-1] c15 N72-25452

Production of pure metals  
[NASA-CASE-LEW-10906-1] c25 N74-30502

Process for making anhydrous metal halides  
[NASA-CASE-LEW-11860-1] c37 N76-18458

Method of cross-linking polyvinyl alcohol and  
other water soluble resins  
[NASA-CASE-LEW-13103-1] c27 N80-32516

MAYALL, S. D.  
Frictionless universal joint Patent  
[NASA-CASE-NPO-10646] c15 N71-28467

MAYER, L. A.  
Chelate-modified polymers for atmospheric gas  
chromatography  
[NASA-CASE-ARC-11154-1] c25 N80-23383

MAYNARD, O. E.  
Radial module space station Patent  
[NASA-CASE-XMS-01906] c31 N70-41373

MAYNE, E. C.  
Shock absorbing mount for electrical components  
[NASA-CASE-NPO-13253-1] c37 N75-18573

MAYO, E. E.  
Hypersonic reentry vehicle Patent  
[NASA-CASE-XMS-04142] c31 N70-41631

MAYO, J. W.  
Connector - Electrical  
[NASA-CASE-XLA-01288] c09 N69-21470

Tubular coupling having frangible connecting means  
[NASA-CASE-XLA-02854] c15 N69-27490

Missile stage separation indicator and stage  
initiator Patent  
[NASA-CASE-XLA-00791] c03 N70-39930

Detector panels-micrometeoroid impact Patent  
[NASA-CASE-XLA-05906] c31 N71-16221

MAYO, R. F.  
Electric-arc heater Patent  
[NASA-CASE-XLA-00330] c33 N70-34540

MAZARIS, G. A.  
Application of semiconductor diffusants to solar  
cells by screen printing  
[NASA-CASE-LEW-12775-1] c44 N79-11468

MAZER, I.  
Analog-to-digital conversion system Patent  
[NASA-CASE-XAC-00404] c08 N70-40125

MAZIQUE, J.  
A cervix-to-rectum measuring device in a  
radiation applicator for use in the treatment  
of cervical cancer  
[NASA-CASE-GSC-12081-2] c52 N77-26796

MAZUR, J. T.  
Telescoping columns  
[NASA-CASE-LAR-12195-1] c31 N81-27324

MCAPPEE, D. F.  
Bi-polar phase detector and corrector for split  
phase PCM data signals Patent  
[NASA-CASE-XGS-01590] c07 N71-12392

Radio frequency coaxial high pass filter Patent  
[NASA-CASE-XGS-01418] c09 N71-23573

MCALIBANDRE, B. T.  
Laser head for simultaneous optical pumping of

several dye lasers  
[NASA-CASE-LAR-11341-1] c36 N75-15655

MCBRAYER, B. O.  
Soft frame adjustable eyeglasses Patent  
[NASA-CASE-XMS-06064] c05 N71-23096

MCBRYAR  
Ion-exchange membrane with platinum electrode  
assembly Patent  
[NASA-CASE-XMS-02063] c03 N71-29044

MCBRYAR, H.  
Reconstituted asbestos matrix  
[NASA-CASE-MSC-12568-1] c24 N76-14204

MCCAIG, J. C.  
Electric arc welding Patent  
[NASA-CASE-XMP-00392] c15 N70-34814

MCCALLUM, J.  
Porus electrode comprising a bonded stack of  
pieces of corrugated metal foil  
[NASA-CASE-GSC-11368-1] c09 N73-32108

MCCAMPBELL, W. B.  
Electric arc welding Patent  
[NASA-CASE-XMP-00392] c15 N70-34814

Weld control system using thermocouple wire Patent  
[NASA-CASE-MFS-06074] c15 N71-20393

RC rate generator for slow speed measurement  
Patent  
[NASA-CASE-XMP-02966] c10 N71-24863

A dc motor speed control system Patent  
[NASA-CASE-MFS-14610] c09 N71-28886

MCCANDLESS, L. C.  
Method of making reinforced composite structure  
[NASA-CASE-LEW-12619-1] c24 N77-15171

MCCANN, D. B.  
Phototransistor  
[NASA-CASE-MFS-20407] c09 N73-15235

Time delay and integration detectors using  
charge transfer devices  
[NASA-CASE-GSC-12324-1] c33 N81-33403

MCCANN, R. J.  
Device for handling heavy loads  
[NASA-CASE-XNP-04969] c11 N69-27466

MCCARTHY, D. B.  
Automatic level control circuit  
[NASA-CASE-KSC-11170-1] c33 N81-29347

MCCARTY, J. L.  
Lunar penetrometer Patent  
[NASA-CASE-XLA-00934] c14 N71-22765

MCCAUL, P. F.  
Sidereal frequency generator Patent  
[NASA-CASE-XGS-02610] c14 N71-23174

MCCHESEBAY, J. F., JR.  
High voltage distributor  
[NASA-CASE-GSC-11849-1] c33 N76-16332

MCCHESEBAY, J. B.  
Modulator for tone and binary signals  
[NASA-CASE-GSC-11743-1] c32 N75-24981

MCCLEESE, D. J.  
Method and apparatus for Doppler frequency  
modulation of radiation  
[NASA-CASE-NPO-14524-1] c32 N80-24510

MCCLENNAN, J. O.  
High speed shutter  
[NASA-CASE-ARC-10516-1] c70 N74-21300

Photomultiplier circuit including means for  
rapidly reducing the sensitivity thereof  
[NASA-CASE-ARC-10593-1] c33 N74-27682

MCCLOWRY, W. B.  
The 2 deg/90 deg laboratory scattering photometer  
[NASA-CASE-GSC-12088-1] c74 N78-13874

MCCLONG, C. E.  
Antenna grout replacement system  
[NASA-CASE-NPO-15205-1] c37 N81-19457

MCCLORE, J. C.  
Preparation of monotectic alloys having a  
controlled microstructure by directional  
solidification under dopant-induced interface  
breakdown  
[NASA-CASE-MFS-23816-1] c26 N80-23419

MCCLORE, S. B.  
Method and apparatus for holding two separate  
metal pieces together for welding  
[NASA-CASE-GSC-12318-1] c37 N80-23654

MCCONAUGHY, B. T.  
Star scanner  
[NASA-CASE-GSC-11569-1] c89 N74-30886

MCCONNELL, J. C.  
Method of plating copper on aluminum Patent  
[NASA-CASE-XLA-08966-1] c17 N71-25903

MCCORHACK, W.  
Single action separation mechanism Patent  
[NASA-CASE-XLA-00168] c15 N71-22874

MCCORNICK, C. T., JR.  
Automatic signal range selector for metering  
devices Patent  
[NASA-CASE-XMS-06497] c14 N71-26244

MCCRAW, D. L.  
Emergency escape system Patent  
[NASA-CASE-MSC-12086-1] c05 N71-12345

MCCREIA, P. E.  
Indexing microwave switch Patent  
[NASA-CASE-XNP-06507] c09 N71-23548

Support assembly for cryogenically coolable  
low-noise choke waveguide  
[NASA-CASE-NFO-14253-1] c32 N80-32605

MCCREARY, R. A.  
Parallel motion suspension device Patent  
[NASA-CASE-XNP-01567] c15 N70-41310

MCCREIGHT, L. B.  
Electrophoretic sample insertion  
[NASA-CASE-MFS-21395-1] c25 N74-26948

Apparatus for conducting flow electrophoresis in  
the substantial absence of gravity  
[NASA-CASE-MFS-21394-1] c34 N74-27744

MCCUSKER, T. J.  
Foldable solar concentrator Patent  
[NASA-CASE-XLA-04622] c03 N70-41580

MCDANIELS, D. L.  
Reinforced metallic composites Patent  
[NASA-CASE-XLE-02428] c17 N70-33288

Method of making fiber reinforced metallic  
composites Patent  
[NASA-CASE-XLE-00231] c17 N70-38198

Reinforced metallic composites Patent  
[NASA-CASE-XLE-00228] c17 N70-38490

MCDARIS, B. A.  
Emergency escape system Patent  
[NASA-CASE-IRS-07814] c15 N71-27067

MCDAVID, L. S.  
Specific wavelength colorimeter  
[NASA-CASE-MSC-14081-1] c35 N74-27860

MCDERROND, D. K.  
Synchronous counter Patent  
[NASA-CASE-XGS-02440] c08 N71-19432

MCDVITT, F. B.  
Laser coolant and ultraviolet filter  
[NASA-CASE-MFS-20180] c16 N72-12440

MCDONALD, G. E.  
Nuclear fuel elements  
[NASA-CASE-XLE-00209] c22 N73-32528

Selective coating for solar panels  
[NASA-CASE-LEW-12159-1] c44 N78-19599

Method for depositing an oxide coating  
[NASA-CASE-LEW-13131-1] c26 N81-24230

Method of forming oxide coatings  
[NASA-CASE-LEW-13132-1] c44 N81-27616

MCDONALD, R. T.  
Gas low pressure low flow rate metering system  
Patent  
[NASA-CASE-PRC-10022] c12 N71-26546

Respiration monitor  
[NASA-CASE-PRC-10012] c14 N72-17329

MCDUGAL, A. B.  
Force-balanced, throttle valve Patent  
[NASA-CASE-NPO-10808] c15 N71-27432

Quick disconnect coupling  
[NASA-CASE-NPO-11202] c15 N72-25450

Rotary actuator  
[NASA-CASE-NFO-10680] c31 N73-14855

Disconnect unit  
[NASA-CASE-NPO-11330] c33 N73-26958

Zero torque gear head wrench  
[NASA-CASE-NFO-13059-1] c37 N76-20480

Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c37 N81-17432

Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c37 N81-25370

MCKERLEAN, E. A.  
Bonding method in the manufacture of continuous  
regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c24 N75-30260

MCFADIN, I. B.  
Platinum resistance thermometer circuit  
[NASA-CASE-MSC-12327-1] c35 N77-27368

MCGANNON, W. J.  
Ophthalmic method and apparatus  
[NASA-CASE-LEW-11669-1] c05 N73-27062



Ophthalmic liquifaction pump  
[NASA-CASE-LEW-12051-1] c52 N75-33640

Intra-ocular pressure normalization technique  
and equipment  
[NASA-CASE-LEW-12723-1] c52 N80-18690

**MCGHEE, J. R.**  
Frangible tube energy dissipation Patent  
[NASA-CASE-XLA-00754] c15 N70-34850

Omnidirectional multiple impact landing system  
Patent  
[NASA-CASE-XLA-09881] c31 N71-16085

**MCGINNESS, H. D.**  
An improved suspension system for a wheel  
rolling on a flat track  
[NASA-CASE-NPO-14395-1] c37 N79-12446

**MCGOUGH, J. T.**  
Emergency escape system Patent  
[NASA-CASE-XKS-07814] c15 N71-27067

**MCHAFFIE, D. J.**  
Extensible cable support Patent  
[NASA-CASE-XMF-07587] c15 N71-18701

**MCHATTON, A. D.**  
Canister closing device Patent  
[NASA-CASE-XLA-01446] c15 N71-21528

Traveling sealer for contoured table Patent  
[NASA-CASE-XLA-01494] c15 N71-24164

Amplifying ribbon extensometer  
[NASA-CASE-LAR-11825-1] c35 N77-22449

Nozzle extraction process and handlemeter for  
measuring handle  
[NASA-CASE-LAR-12147-1] c31 N79-11246

**MCHENNY, T. F.**  
Miniature carbon dioxide sensor and methods  
[NASA-CASE-MS-C-13332-1] c14 N72-21408

**MCHUGH, D. P.**  
Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c07 N78-18067

**MCINTOSH, M. J.**  
Process for the leaching of AP from propellant  
[NASA-CASE-NPO-14109-1] c28 N80-23471

**MCKAY, R. A.**  
Combuster  
[NASA-CASE-NPO-13958-1] c25 N79-11151

**MCKEE, C. W.**  
Fluid control apparatus and method  
[NASA-CASE-LAR-11110-1] c34 N75-26282

**MCKENNA, J. P., JR.**  
Fault tolerant clock apparatus utilizing a  
controlled minority of clock elements  
[NASA-CASE-MS-C-12531-1] c35 N75-30504

**MCKENNA, E. T.**  
Automatic character skew and spacing checking  
network  
[NASA-CASE-GSC-11925-1] c33 N76-18353

**MCKENZIE, B. L.**  
Diatomic infrared gasdynamic laser  
[NASA-CASE-ARC-10370-1] c36 N75-31426

**MCKEOWN, D.**  
Method for attaching a fused-quartz mirror to a  
conductive metal substrate  
[NASA-CASE-MFS-23405-1] c26 N77-29260

**MCKEVITT, P. X.**  
Swirling flow nozzle Patent  
[NASA-CASE-XNP-03692] c28 N71-24321

**MCKINNEY, R. L.**  
Self-calibrating displacement transducer Patent  
[NASA-CASE-XLA-00781] c09 N71-22999

**MCKINNON, R. A.**  
External liquid-spray cooling of turbine blades  
Patent  
[NASA-CASE-XLE-00037] c28 N70-33372

**MCLAIN, J. H.**  
Air bearing Patent  
[NASA-CASE-XMF-01887] c15 N71-10617

**MCLAUGHLIN, J. H.**  
Horizon sensor with a plurality of fixedly  
positioned radiation compensated radiation  
sensitive detectors Patent  
[NASA-CASE-XNP-06957] c14 N71-21088

Light position locating system Patent  
[NASA-CASE-XNP-01059] c23 N71-21821

**MCLEAN, F. B.**  
Supersonic aircraft Patent  
[NASA-CASE-XLA-04451] c02 N71-12243

**MCLYMAN, C. W. T.**  
Inverter oscillator with voltage feedback  
[NASA-CASE-NPO-10760] c09 N72-25254

Banded transformer cores  
[NASA-CASE-NPO-11966-1] c33 N74-17928

**MCLYMAN, W. T.**  
Phase substitution of spare converter for a  
failed one of parallel phase staggered  
converters  
[NASA-CASE-NPO-13812-1] c33 N77-30365

Elimination of current spikes in buck power  
converters  
[NASA-CASE-NPO-14505-1] c33 N81-19393

Push-pull converter with energy saving circuit  
for protecting switching transistors from peak  
power stress  
[NASA-CASE-NPO-14316-1] c33 N81-33404

**MCHASTEE, L. E.**  
Meteoroid detector  
[NASA-CASE-LAR-10483-1] c14 N73-32327

**MCHEAR, H. F.**  
Vapor phase growth of groups 3-5 compounds by  
hydrogen chloride transport of the elements  
[NASA-CASE-LAR-11144-1] c25 N75-26043

**MCHUTT, W. C.**  
Dual latching solenoid valve Patent  
[NASA-CASE-XMS-05890] c09 N71-23191

**MCDONALD, A. D.**  
Thin film gauge  
[NASA-CASE-NPO-10617-1] c35 N74-22095

**MCSTAY, J. J.**  
Apparatus including a plurality of spaced  
transformers for locating short circuits in  
cables  
[NASA-CASE-KSC-10899-1] c33 N79-18193

**MCWILLIAMS, I. G.**  
Compact spectroradiometer  
[NASA-CASE-HQN-10683] c14 N71-34389

Two color horizon sensor  
[NASA-CASE-ERC-10174] c14 N72-25409

**MEAD, D. C.**  
Variable frequency oscillator with temperature  
compensation Patent  
[NASA-CASE-XNP-03916] c09 N71-28810

**MEADOR, T. G., JR.**  
Light shield and cooling apparatus  
[NASA-CASE-LAR-10089-1] c34 N74-23066

**MEALY, G. E.**  
Electrostatic thruster with improved insulators  
Patent  
[NASA-CASE-XLE-01902] c28 N71-10574

High voltage divider system Patent  
[NASA-CASE-XLE-02008] c09 N71-21583

**MEDCALF, W. A.**  
Gas filter mounting structure  
[NASA-CASE-MS-C-12297] c14 N72-23457

**MEGIE, G. J.**  
Tunable injection-locked pulsed CO2 laser  
[NASA-CASE-NPO-14984-1] c36 N81-15350

**MEINTEL, A. J., JR.**  
Combined optical attitude and altitude  
indicating instrument Patent  
[NASA-CASE-XLA-01907] c14 N71-23268

**MEISENHOLDER, G. W.**  
Photosensitive device to detect bearing  
deviation Patent  
[NASA-CASE-XNP-00438] c21 N70-35089

Roll attitude star sensor system Patent  
[NASA-CASE-XNP-01307] c21 N70-41856

**MEISSINGER, H. F.**  
Method of and device for determining the  
characteristics and flux distribution of  
micrometeorites  
[NASA-CASE-NPO-12127-1] c91 N74-13130

**MELAMED, I.**  
Angular velocity and acceleration measuring  
apparatus  
[NASA-CASE-ERC-10292] c14 N72-25410

**MELFI, L. T., JR.**  
Gas analyzer for bi-gaseous mixtures Patent  
[NASA-CASE-XLA-01131] c14 N71-10774

Ionization vacuum gauge with all but the end of  
the ion collector shielded Patent  
[NASA-CASE-XLA-07424] c14 N71-18482

**MELLARS, B.**  
Sideband heterodyne receiver for laser  
communication system  
[NASA-CASE-GSC-12053-1] c32 N77-28346

**MELUGIS, J. F.**  
Technique for recovery of voice data from heat  
damaged magnetic tape  
[NASA-CASE-MS-C-14219-1] c32 N74-27612

**MELVILLE, R. D. S.**  
Stark-effect modulation of CO2 laser with NH2D

[NASA-CASE-NPO-11945-1] c36 876-18427

**MENEFEE, R. O.**  
Three-axis controller Patent  
[NASA-CASE-XAC-01404] c05 870-41581  
Proportional controller Patent  
[NASA-CASE-XAC-03392] c03 870-41954

**MENEGES, R. J.**  
Precipitation detector Patent  
[NASA-CASE-XLA-02619] c10 871-26334  
Dielectric molding apparatus Patent  
[NASA-CASE-LAR-10121-1] c15 871-26721

**MENICHELLI, V. J.**  
Optically detonated explosive device  
[NASA-CASE-NPO-11743-1] c28 874-27425  
Electroexplosive device  
[NASA-CASE-NPO-13858-1] c28 879-11231

**MERTZER, C. A.**  
Horn antenna having V-shaped corrugated slots  
[NASA-CASE-LAR-11112-1] c32 876-15330

**MENZIES, R. T.**  
Monitoring atmospheric pollutants with a heterodyne radimeter transmitter-receiver  
[NASA-CASE-NPO-11919-1] c35 874-11284  
Fluorescence detector for monitoring atmospheric pollutants  
[NASA-CASE-NPO-13231-1] c45 875-27585  
Tunable injection-locked pulsed CO2 laser  
[NASA-CASE-NPO-14904-1] c36 881-15350

**MERRAV, S. J.**  
Autonomous navigation system  
[NASA-CASE-ABC-11257-1] c04 881-21047

**MERLEN, M. M.**  
Horizon sensor with a plurality of fixedly positioned radiation compensated radiation sensitive detectors Patent  
[NASA-CASE-INP-06957] c14 871-21088

**MERRBAUM, S.**  
Multifunctional transducer  
[NASA-CASE-NPO-14329-1] c52 881-20703

**MERRICK, V. K.**  
Stabilization of gravity oriented satellites Patent  
[NASA-CASE-XAC-01591] c31 871-17729

**MERRILL, J. T., IV**  
Apparatus for applying simulator g-forces to an area of an aircraft simulator pilot  
[NASA-CASE-LAR-10550-1] c09 874-30597

**MESSINGO, S. V.**  
Apparatus for positioning modular components on a vertical or overhead surface  
[NASA-CASE-LAR-11465-1] c37 876-21554

**MESSNER, A.**  
System for generating timing and control signals  
[NASA-CASE-NPO-13125-1] c33 875-19519

**MESZAROS, G.**  
Recovery of radiation damaged solar cells through thermal annealing  
[NASA-CASE-XGS-04047-2] c03 872-11062

**METCALFE, A. G.**  
Silicide coatings for refractory metals Patent  
[NASA-CASE-XLE-10910] c18 871-29040

**METZGER, A. E.**  
Dual purpose optical instrument capable of simultaneously acting as spectrometer and diffractometer  
[NASA-CASE-INP-05231] c14 873-28491

**METZLER, A. J.**  
Black-body furnace Patent  
[NASA-CASE-XLE-01399] c33 871-15625

**MEYER, A. J., JR.**  
Modification and improvements to cooled blades Patent  
[NASA-CASE-XLE-00092] c15 870-33264  
Aerial capsule emergency separation device Patent  
[NASA-CASE-XLA-00115] c03 870-33343  
Space capsule Patent  
[NASA-CASE-XLA-00149] c31 870-37938  
Vehicle parachute and equipment jettison system Patent  
[NASA-CASE-XLA-00195] c02 870-38009  
Attrition structures Patent  
[NASA-CASE-IMS-01816] c33 871-15623  
Space capsule Patent  
[NASA-CASE-XLA-01332] c31 871-15664

**MEYER, J. A.**  
Altitude sensing device  
[NASA-CASE-IMS-01994-1] c14 872-17326

**MEYER, J. F.**  
Time-division multiplexer Patent

[NASA-CASE-INP-00431] c09 870-38998

**MEYER, K. A.**  
High-temperature, high-pressure spherical segment valve Patent  
[NASA-CASE-XAC-00074] c15 870-34817

**MEYER, T. B.**  
Method of producing silicon  
[NASA-CASE-NPO-14382-1] c31 880-18231

**MICALB, F. J.**  
Process for preparation of large-particle-size monodisperse latexes  
[NASA-CASE-NFS-25000-1] c25 881-19242

**MICHAEL, J. E.**  
Connector - Electrical  
[NASA-CASE-XLA-01288] c09 869-21470  
Missile stage separation indicator and stage initiator Patent  
[NASA-CASE-XLA-00791] c03 870-39930

**MICHAUD, E. B.**  
Urine collection device  
[NASA-CASE-HSC-16433-1] c52 878-27750  
Urine collection device  
[NASA-CASE-HSC-16433-1] c52 881-24711  
Urine collection apparatus  
[NASA-CASE-HSC-18381-1] c52 881-28740

**MICHEL, R. E.**  
Convoluting device for forming convolutions and the like Patent  
[NASA-CASE-INP-05297] c15 871-23811

**MICKA, R. Z.**  
Cross correlation anomaly detection system  
[NASA-CASE-NPO-13283] c38 878-17395  
Automatic visual inspection system for microelectronics  
[NASA-CASE-NPO-13282] c38 878-17396

**MICKELSEN, W. R.**  
High-vacuum condenser tank for ion rocket tests Patent  
[NASA-CASE-XLE-00168] c11 870-33278

**MIDDLETON, J. H.**  
Technique for extending the frequency range of digital dividers  
[NASA-CASE-LAR-10730-1] c33 874-10223

**MIDDLETON, O.**  
Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c44 879-24431

**MIDDLETON, B. L.**  
Cryogenic thermal insulation Patent  
[NASA-CASE-XMP-05046] c33 871-28892

**MIDDLETON, W. D.**  
Supersonic aircraft Patent  
[NASA-CASE-XLA-04451] c02 871-12243

**MIEBTSCHIN, J. L.**  
Radio frequency filter device  
[NASA-CASE-XLA-02609] c09 872-25256

**MINSZAN, D. P.**  
Frequency shift keying apparatus Patent  
[NASA-CASE-XGS-01537] c07 871-23405

**MIKULAS, M. H., JR.**  
Composite sandwich lattice structure  
[NASA-CASE-LAR-11898-1] c24 878-10214  
Method of making a composite sandwich lattice structure  
[NASA-CASE-LAR-11898-2] c24 878-17149

**MILDICE, J. W.**  
Light radiation direction indicator with a baffle of two parallel grids  
[NASA-CASE-INP-03930] c14 869-24331

**MILES, P. A.**  
Clear air turbulence detector  
[NASA-CASE-NFS-21244-1] c36 875-15028

**MILES, R. T.**  
Oceanic wave measurement system  
[NASA-CASE-NFS-23862-1] c48 880-18667

**MILKULLA, V.**  
Method for making a hot wire anemometer and product thereof  
[NASA-CASE-ABC-10900-1] c35 877-24454

**MILLER, A. J.**  
Binary to binary coded decimal converter  
[NASA-CASE-GSC-12044-1] c60 878-17691

**MILLER, B. A.**  
Self stabilizing sonic inlet  
[NASA-CASE-LEW-11890-1] c05 879-24976

**MILLER, C. E.**  
Densitometer Patent  
[NASA-CASE-XLE-00688] c14 870-41330

**MILLER, C. G.**  
Dispensing targets for ion beam particle

generators  
[NASA-CASE-NPO-13112-1] c73 N74-26767

Sampler of gas borne particles  
[NASA-CASE-NPO-13396-1] c35 N76-18401

Indicator providing continuous indication of the presence of a specific pollutant in air  
[NASA-CASE-NPO-13474-1] c45 N76-21742

Cryostat system for temperatures on the order of 2 deg K or less  
[NASA-CASE-NPO-13459-1] c31 N77-10229

Compact, high intensity arc lamp with internal magnetic field producing means  
[NASA-CASE-NPO-11510-1] c33 N77-21315

Depressurization of arc lamps  
[NASA-CASE-NPO-10790-1] c33 N77-21316

Arc control in compact arc lamps  
[NASA-CASE-NPO-10870-1] c33 N77-22386

Low to high temperature energy conversion system  
[NASA-CASE-NPO-13510-1] c44 N77-32581

Three-dimensional tracking solar energy concentrator and method for making same  
[NASA-CASE-NPO-13736-1] c44 N77-32583

Portable linear-focused solar thermal energy collecting system  
[NASA-CASE-NPO-13734-1] c44 N78-10554

Purging means and method for Xenon arc lamps  
[NASA-CASE-NPO-11978] c31 N78-17238

Low cost solar energy collection system  
[NASA-CASE-NPO-13579-1] c44 N78-17460

Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c31 N78-24387

Solar pond  
[NASA-CASE-NPO-13581-2] c44 N78-31525

Primary reflector for solar energy collection systems  
[NASA-CASE-NPO-13579-4] c44 N79-14529

Primary reflector for solar energy collection systems and method of making same  
[NASA-CASE-NPO-13579-3] c44 N79-24432

Solar energy collection system  
[NASA-CASE-NPO-13579-2] c44 N79-24433

Multiple anode arc lamp system  
[NASA-CASE-NPO-10857-1] c33 N80-14330

Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c43 N81-26509

**MILLER, D. P.**  
Controllers Patent  
[NASA-CASE-XMS-07487] c15 N71-23255

**MILLER, H. B.**  
Compensating radiometer  
[NASA-CASE-XLA-04556] c14 N69-27484

Heat sensing instrument Patent  
[NASA-CASE-XLA-01551] c14 N71-22989

Spherical measurement device  
[NASA-CASE-XLA-06683] c14 N72-28436

**MILLER, J. A., JR.**  
Method of forming difunctional polyisobutylene  
[NASA-CASE-NPO-10893] c27 N73-22710

**MILLER, J. C.**  
Apparatus for detecting the amount of material in a resonant cavity container Patent  
[NASA-CASE-XNP-02500] c18 N71-27397

**MILLER, J. E.**  
Satellite interlace synchronization system  
[NASA-CASE-GSC-10390-1] c07 N72-11149

**MILLER, J. G.**  
Ultrasonic calibration device  
[NASA-CASE-LAR-11435-1] c35 N76-15432

**MILLER, J. L.**  
Boring bar drive mechanism Patent  
[NASA-CASE-XLA-03661] c15 N71-33518

**MILLER, F. C.**  
Low temperature aluminum alloy Patent  
[NASA-CASE-XMP-02786] c17 N71-20743

**MILLER, R. A.**  
Corrosion resistant thermal barrier coating  
[NASA-CASE-LEW-13088-1] c26 N81-25188

**MILLER, R. E.**  
Photocapacitive image converter  
[NASA-CASE-LAR-12513-1] c33 N80-28635

**MILLIGAN, G. C.**  
Digital memory sense amplifying means Patent  
[NASA-CASE-XNP-01012] c08 N71-28925

**MILLIKEN, D. B.**  
Film feed camera having a detent means Patent  
[NASA-CASE-LAR-10686] c14 N71-28935

**MILLIKEN, J. F.**  
Linear differential pressure sensor Patent  
[NASA-CASE-XMP-01974] c14 N71-22752

**MILLS, M. K.**  
Tracking antenna system Patent  
[NASA-CASE-GSC-10553-1] c07 N71-19854

Antenna array at focal plane of reflector with coupling network for beam switching Patent  
[NASA-CASE-GSC-10220-1] c07 N71-27233

**MILLS, S. M.**  
Transient-compensated SCR inverter  
[NASA-CASE-XLA-08507] c09 N69-39984

Apparatus for microbiological sampling  
[NASA-CASE-LAR-11069-1] c35 N75-12272

Automatic inoculating apparatus  
[NASA-CASE-LAR-11074-1] c51 N75-13502

Automatic microbial transfer device  
[NASA-CASE-LAR-11354-1] c35 N75-27330

Measurement of gas production of microorganisms  
[NASA-CASE-LAR-11326-1] c35 N75-33368

Automated single-slide staining device  
[NASA-CASE-LAR-11649-1] c51 N77-27677

**MILLY, J. J.**  
Satellite despin device Patent  
[NASA-CASE-XMP-08523] c31 N71-20396

**MINKIN, H. L.**  
Liquid flow sight assembly Patent  
[NASA-CASE-XLE-02998] c14 N70-42074

**MINOTT, E. O.**  
Retrodirective optical system  
[NASA-CASE-XGS-04480] c16 N69-27491

Retrodirective modulator Patent  
[NASA-CASE-GSC-10062] c14 N71-15605

Interferometric angle monitor  
[NASA-CASE-GSC-12614-1] c35 N81-12386

Multiprism collimator  
[NASA-CASE-GSC-12608-1] c35 N81-12387

**MINTER, E. J.**  
Method of peening and portable peening gun  
[NASA-CASE-MPS-23047-1] c37 N76-18454

**MINTON, F. B.**  
Window defect planar mapping technique  
[NASA-CASE-MSC-19442-1] c74 N77-10899

**MINTON, U. O.**  
Window defect planar mapping technique  
[NASA-CASE-MSC-19442-1] c74 N77-10899

**MIRTICH, H. J.**  
Modification of the electrical and optical properties of polymers  
[NASA-CASE-LEW-13027-1] c27 N80-24437

**MIRTICH, H. J., JR.**  
Hydrogen hollow cathode ion source  
[NASA-CASE-LEW-12940-1] c72 N80-33186

**MISBEWENTINO, R.**  
Displacement probes with self-contained exciting medium  
[NASA-CASE-LAR-11690-1] c35 N80-14371

**MITCHELL, D. E.**  
Borescope with variable angle scope  
[NASA-CASE-MFS-15162] c14 N72-32452

**MITCHELL, F. B.**  
Attitude control for spacecraft Patent  
[NASA-CASE-XNP-00294] c21 N70-36938

**MITCHELL, G. A.**  
Airflow control system for supersonic inlets  
[NASA-CASE-LEW-11188-1] c02 N74-20646

**MITCHELL, H. M.**  
Method and apparatus for detection and location of microleaks Patent  
[NASA-CASE-XMP-02307] c14 N71-10779

**MITCHELL, V. M.**  
Digital cardiometer system Patent  
[NASA-CASE-XMS-02399] c05 N71-22896

**MITCHEM, L. L., JR.**  
Collapsible loop antenna for space vehicle Patent  
[NASA-CASE-XMP-00437] c07 N70-40202

**MIYSON, J. S.**  
Ring wing tension vehicle Patent  
[NASA-CASE-XLA-04901] c31 N71-24315

**MOACHIN, J.**  
Ionen membrane separator  
[NASA-CASE-NPO-11091] c18 N72-22567

Method of making hollow elastomeric bodies  
[NASA-CASE-NPO-13535-1] c37 N76-31524

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] c74 N81-17887

**MOECKEL, E. E.**  
Electro-thermal rocket Patent  
[NASA-CASE-XLE-00267] c28 N70-33356

**MORDE, L. W.**  
 Wide range analog-to-digital converter with a variable gain amplifier  
 [NASA-CASE-NPO-11018] c08 N72-21200  
 Digital control and information system  
 [NASA-CASE-NPO-11016] c08 N72-31226

**MORN, W. K.**  
 Self-cycling fluid heater  
 [NASA-CASE-MSC-15567-1] c33 N73-16918

**MOFFITT, P. L.**  
 Image magnification adapter for cameras Patent  
 [NASA-CASE-XMF-03844-1] c14 N71-26474

**MOGAVEERO, L. E.**  
 System and method for tracking a signal source  
 [NASA-CASE-HQN-10880-1] c17 N78-17140

**MONDT, J. P.**  
 Nuclear thermionic converter  
 [NASA-CASE-NPO-13121-1] c73 N77-18891

**MONFORD, L. G., JR.**  
 Radiometric temperature reference Patent  
 [NASA-CASE-MSC-13276-1] c14 N71-27058  
 Multifunction audio digitizer  
 [NASA-CASE-MSC-13855-1] c35 N74-17885  
 Digital communication system  
 [NASA-CASE-MSC-13912-1] c32 N74-30524  
 Binary concatenated coding system  
 [NASA-CASE-MSC-14082-1] c60 N76-23850

**MONSON, D. J.**  
 Dual-beam skin friction interferometer  
 [NASA-CASE-ARC-11354-1] c36 N81-29415

**MONTEITH, J. H.**  
 Flow velocity and directional instrument  
 [NASA-CASE-LAR-10855-1] c14 N73-13415

**MONTRITH, L. K.**  
 Particulate and aerosol detector  
 [NASA-CASE-LAR-11434-1] c35 N76-22509

**MONTGOMERY, L. C.**  
 Process for preparing sterile solid propellants Patent  
 [NASA-CASE-XNP-01749] c27 N70-41897  
 Processing for producing a sterilized instrument Patent  
 [NASA-CASE-XNP-09763] c14 N71-20461

**MONTGOMERY, L. D.**  
 Readout electrode assembly for measuring biological impedance  
 [NASA-CASE-ARC-10816-1] c35 N76-24525

**MONTOYA, L. C.**  
 System for use in conducting wake investigation for a wing in flight  
 [NASA-CASE-FRC-11024-1] c02 N80-28300  
 Skin friction measuring device for aircraft  
 [NASA-CASE-FRC-11029-1] c06 N81-17057

**MOODY, D. L., JR.**  
 Readout electrode assembly for measuring biological impedance  
 [NASA-CASE-ARC-10816-1] c35 N76-24525

**MOONEY, V.**  
 Prosthesis coupling  
 [NASA-CASE-KSC-11069-1] c52 N79-26772

**MOORE, C. D.**  
 Waveform simulator Patent  
 [NASA-CASE-NPO-10251] c10 N71-27365

**MOORE, H. D.**  
 Reversible ring counter employing cascaded single SCR stages Patent  
 [NASA-CASE-XGS-01473] c09 N71-10673

**MOORE, R. C.**  
 Open loop digital frequency multiplier  
 [NASA-CASE-MSC-12709-1] c33 N77-24375

**MOORE, R. L.**  
 Trigonometric vehicle guidance assembly which aligns the three perpendicular axes of two three-axes systems Patent  
 [NASA-CASE-XMF-00684] c21 N71-21688  
 Rotary actuator  
 [NASA-CASE-NPO-10680] c31 N73-14855

**MOORE, T. J.**  
 Welding blades to rotors  
 [NASA-CASE-LEW-10533-1] c15 N73-28515  
 Enhanced diffusion welding  
 [NASA-CASE-LEW-11388-1] c15 N73-32358  
 Production of hollow components for rolling element bearings by diffusion welding  
 [NASA-CASE-LEW-11026-1] c15 N73-33383  
 Apparatus for welding blades to rotors  
 [NASA-CASE-LEW-10533-2] c37 N74-11300  
 Diffusion welding in air  
 [NASA-CASE-LEW-11387-1] c37 N74-16128

**MOORE, W. A.**  
 Journal bearings  
 [NASA-CASE-LEW-11076-1] c37 N74-21061  
 Journal Bearings  
 [NASA-CASE-LEW-11076-2] c37 N74-32921  
 Lubricated journal bearing  
 [NASA-CASE-LEW-11076-3] c37 N75-30562  
 Fluid journal bearings  
 [NASA-CASE-LEW-11076-4] c37 N76-15461

**MORAN, J. A.**  
 Hydraulic transformer Patent  
 [NASA-CASE-MFS-20830] c15 N71-30028

**MORDECAI, T. T.**  
 Method of recording a gas flow pattern Patent  
 [NASA-CASE-XMF-01779] c12 N71-20815

**MORCROFT, J. H.**  
 Incremental motion drive system Patent  
 [NASA-CASE-XNP-08897] c15 N71-17694

**MORELLI, P. A.**  
 Process for preparing sterile solid propellants Patent  
 [NASA-CASE-XNP-01749] c27 N70-41897  
 Processing for producing a sterilized instrument Patent  
 [NASA-CASE-XNP-09763] c14 N71-20461

**MOREMAN, G. S., III**  
 Deformable bearing seat  
 [NASA-CASE-LEW-12527-1] c37 N77-32500  
 Bearing seat usable in a gas turbine engine  
 [NASA-CASE-LEW-12477-1] c37 N77-32501

**MORGAN, I. T., JR.**  
 Translatory shock absorber for attitude sensors  
 [NASA-CASE-MFS-22905-1] c19 N76-22284

**MORGAN, J. E.**  
 Condition sensor system and method  
 [NASA-CASE-MSC-14805-1] c54 N78-32720

**MORGAN, L. E.**  
 Serial data correlator/code translator  
 [NASA-CASE-KSC-11025-1] c32 N79-28383

**MORGAN, W. C.**  
 Thin-walled pressure vessel Patent  
 [NASA-CASE-XLE-04677] c15 N71-10577

**MORISSETTE, S.**  
 Junction range finder  
 [NASA-CASE-KSC-10108] c14 N73-25461

**MORRELL, G.**  
 Method for continuous variation of propellant flow and thrust in propulsive devices Patent  
 [NASA-CASE-XLE-00177] c28 N70-40367

**MORRIS, D. E.**  
 Silphenylenesiloxane polymers having in-chain perfluoroalkyl groups  
 [NASA-CASE-MFS-20979] c06 N72-25151  
 Polymerizable disilanolols having in-chain perfluoroalkyl groups  
 [NASA-CASE-MFS-20979-2] c06 N73-32030

**MORRIS, J. F.**  
 Probes having ring and primary sensor at same potential to prevent collection of stray wall currents in ionized gases  
 [NASA-CASE-XLE-00690] c25 N69-39884  
 Thermocouples of tantalum and rhenium alloys for more stable vacuum-high temperature performance  
 [NASA-CASE-LEW-12050-1] c35 N77-32454  
 Cesium thermionic converters having improved electrodes  
 [NASA-CASE-LEW-12038-3] c44 N78-25555  
 Thermocouples of molybdenum and iridium alloys for more stable vacuum-high temperature performance  
 [NASA-CASE-LEW-12174-2] c35 N79-14346  
 Improved thermionic energy converters  
 [NASA-CASE-LEW-12443-1] c44 N81-19561  
 Heat pipes containing alkali metal working fluid  
 [NASA-CASE-LEW-12253-1] c34 N81-22310

**MORRIS, J. H.**  
 Difference circuit Patent  
 [NASA-CASE-XNP-08274] c10 N71-13537

**MORRIS, P. W.**  
 Coal-shale interface detection system  
 [NASA-CASE-MFS-23720-2] c43 N80-14423

**MORRISON, H. D.**  
 Anti-fog composition  
 [NASA-CASE-MSC-13530-2] c23 N75-14834

**MORSE, C. P.**  
 Method and device for cooling Patent  
 [NASA-CASE-HQN-00938] c33 N71-29053

**MORTENSEN, L. O.**  
 Impact monitoring apparatus

[NASA-CASE-MSC-15626-1] c14 N72-25411  
**MOSEB, B. G.**  
 Zeta potential flowmeter Patent  
 [NASA-CASE-XNP-06509] c14 N71-23226  
 Method for controlling vapor content of a gas  
 [NASA-CASE-NPO-10633] c03 N72-28025  
 Polymeric compositions and their method of  
 manufacture  
 [NASA-CASE-NPO-10424-1] c27 N81-24258

**MOSEB, J. C.**  
 Electronic checkout system for space vehicles  
 Patent  
 [NASA-CASE-XKS-08012-2] c31 N71-15566

**MOSIER, B.**  
 Pressed disc type sensing electrodes with ion-  
 screening means Patent  
 [NASA-CASE-XMS-04212-1] c05 N71-12346  
 Plated electrodes Patent  
 [NASA-CASE-XMS-04213-1] c09 N71-26002  
 Method of making a perspiration resistant  
 biopotential electrode  
 [NASA-CASE-MSC-90153-2] c05 N72-25120

**MOSIER, J. R.**  
 Decontamination of petroleum products Patent  
 [NASA-CASE-XNP-03835] c06 N71-23499

**MOSSOLANI, D. L.**  
 Rotary leveling base platform  
 [NASA-CASE-ARC-10981-1] c37 N78-27425

**MOUNTVALA, A. J.**  
 Lightweight refractory insulation and method of  
 preparing the same Patent  
 [NASA-CASE-XMF-05279] c18 N71-16124

**MOYER, K. W.**  
 Redundant actuating mechanism Patent  
 [NASA-CASE-XGS-06718] c15 N71-24600  
 Delayed simultaneous release mechanism  
 [NASA-CASE-GSC-10814-1] c03 N73-20039

**MOYERS, C. V.**  
 System for sterilizing objects  
 [NASA-CASE-KSC-11085-1] c54 N81-24724

**MROZ, T. S.**  
 Direct heating surface combustor  
 [NASA-CASE-LEW-11877-1] c34 N78-27357

**MUEHTER, P. P.**  
 Heat sterilizable patient ventilator  
 [NASA-CASE-NPO-13313-1] c54 N75-27761

**MUELLER, R. I.**  
 Method for forming a solar array strip  
 [NASA-CASE-NPO-13652-3] c44 N80-14474

**MUELLER, R. L.**  
 Solar array strip and a method for forming the  
 same  
 [NASA-CASE-NPO-13652-1] c44 N79-17314  
 Bonding machine for forming a solar array strip  
 [NASA-CASE-NPO-13652-2] c44 N79-24431

**MUELLER, W. A.**  
 Aldehyde-containing urea-absorbing polysaccharides  
 [NASA-CASE-NPO-13620-1] c27 N77-30236  
 Dialysis system  
 [NASA-CASE-NPO-14101-1] c52 N80-14687

**MUGLER, S. W.**  
 Precipitation detector Patent  
 [NASA-CASE-XLA-02619] c10 N71-26334

**MULHERR, J. E., JR.**  
 Recorder using selective noise filter  
 [NASA-CASE-ERC-10112] c07 N72-21119

**MULLEN, D. L.**  
 Matched thermistors for microwave power meters  
 Patent  
 [NASA-CASE-NPO-10348] c10 N71-12554  
 Broadband microwave waveguide window Patent  
 [NASA-CASE-XNP-08880] c09 N71-24808

**MULLEN, L. O.**  
 Electrical insulating layer process  
 [NASA-CASE-LEW-10489-1] c15 N72-25447

**MULLER, K.**  
 Electric arc light source having undercut  
 recessed anode  
 [NASA-CASE-ARC-10266-1] c33 N75-25318

**MULLER, E. M.**  
 Method and apparatus for measuring web material  
 wound on a reel  
 [NASA-CASE-GSC-11902-1] c38 N77-17495

**MULLIKEN, E. F.**  
 Method of repairing discontinuity in fiberglass  
 structures  
 [NASA-CASE-LAR-10416-1] c24 N74-3C001

**MUMOLA, P. B.**  
 Laser head for simultaneous optical pumping of  
 several dye lasers  
 [NASA-CASE-LAR-11341-1] c36 N75-19655

**MUNFORD, J. A.**  
 Laser measuring system for incremental assemblies  
 [NASA-CASE-GSC-12321-1] c36 N80-18380

**MUNOZ, E. M.**  
 High efficiency multivibrator Patent  
 [NASA-CASE-IAC-00942] c10 N71-16042  
 Nonlinear analog-to-digital converter Patent  
 [NASA-CASE-XAC-04031] c08 N71-18594  
 Demodulation system Patent  
 [NASA-CASE-XAC-04030] c10 N71-19472  
 Phase quadrature-plural channel data  
 transmission system Patent  
 [NASA-CASE-IAC-06302] c08 N71-19763  
 Continuous Fourier transform method and apparatus  
 [NASA-CASE-ARC-10466-1] c60 N75-13539

**MUNSON, E. E.**  
 Turnstile slot antenna  
 [NASA-CASE-GSC-11428-1] c32 N74-20864

**MURACA, R. F.**  
 Apparatus for testing polymeric materials Patent  
 [NASA-CASE-XNP-09699] c06 N71-24607  
 Procedure and apparatus for determination of  
 water in nitrogen tetroxide  
 [NASA-CASE-NPO-10234] c06 N72-17094

**MURCH, R. M.**  
 Metal containing polymers from cyclic tetrameric  
 phenylphosphonitrimides Patent  
 [NASA-CASE-HQM-10364] c06 N71-27363

**MURPHY, A. J.**  
 Optically actuated two position mechanical mover  
 [NASA-CASE-NFO-13105-1] c37 N74-21060

**MURPHY, D. W.**  
 Frangible link  
 [NASA-CASE-MSC-11849-1] c15 N72-22488  
 Pressure limiting propellant actuating system  
 [NASA-CASE-MSC-18179-1] c20 N80-18097

**MURPHY, F. L.**  
 Bimetallic power controlled actuator  
 [NASA-CASE-XNP-09776] c09 N69-39929

**MURPHY, J. P.**  
 All sky pointing attitude control system  
 [NASA-CASE-ARC-10716-1] c35 N77-20399  
 High acceleration cable deployment system  
 [NASA-CASE-ARC-11256-1] c37 N79-23432

**MURPHY, W. J.**  
 Barium release system  
 [NASA-CASE-LAR-10670-1] c06 N73-30097  
 Rocket having barium release system to create  
 ion clouds in the upper atmosphere  
 [NASA-CASE-LAR-10670-2] c15 N74-27360

**MURTY, M. V. R. K.**  
 Concave grating spectrometer Patent  
 [NASA-CASE-XGS-01036] c14 N70-40003

**MUSICK, R. O.**  
 Two-axis controller Patent  
 [NASA-CASE-XFR-04104] c03 N70-42073

**MUSSETT, E. W.**  
 Device for separating occupant from an ejection  
 seat Patent  
 [NASA-CASE-XMS-04625] c05 N71-20718

**MYERS, D. A.**  
 Portable environmental control system Patent  
 [NASA-CASE-XMS-09632-1] c05 N71-11203

**MYERS, I. T.**  
 Regulated high efficiency, lightweight  
 capacitor-diode multiplier dc to dc converter  
 [NASA-CASE-LEW-12791-1] c33 N78-32341

**MYERS, W. M.**  
 Duct coupling for single-handed operation Patent  
 [NASA-CASE-MFS-20395] c15 N71-24903  
 Mechanical thermal motor  
 [NASA-CASE-MFS-23062-1] c37 N77-12402  
 Spherical bearing  
 [NASA-CASE-MFS-23447-1] c37 N79-11404  
 Amplified wind turbine apparatus  
 [NASA-CASE-MFS-23830-1] c44 N80-21831

N

**NAESETH, E. L.**  
 Aeroflexible structures  
 [NASA-CASE-XLA-06095] c01 N69-39981

**NAGAO, S.**  
 Overload protection system for power inverter  
 [NASA-CASE-NFO-13872-1] c33 N78-10377  
 Module failure isolation circuit for paralleled  
 inverters

[NASA-CASE-NPO-14000-1] c33 N79-24254  
Circuit for automatic load sharing in parallel  
converter modules

[NASA-CASE-NPO-14056-1] c33 N79-24257  
Base drive for paralleled inverter systems

[NASA-CASE-NPO-14163-1] c33 N81-14220  
Redundant operation of counter modules

[NASA-CASE-NPO-14162-1] c60 N81-15706  
Low current linearization of magnetic amplifier  
for dc transducer

[NASA-CASE-NPO-14617-1] c33 N81-24338  
NAGLE, W. J.  
Multi-cell battery protection system

[NASA-CASE-LEW-12039-1] c44 N78-14625  
Toroidal cell and battery

[NASA-CASE-LEW-12918-1] c44 N81-24521  
Additive for zinc electrodes

[NASA-CASE-LEW-13286-1] c44 N81-27597  
NAIDITCH, S.  
Method of producing crystalline materials

[NASA-CASE-NPO-10440] c15 N72-21466  
NAIMBE, J.  
High visibility air sea rescue panel

[NASA-CASE-MSC-12564-2] c03 N76-25070  
NAKADA, H. P.  
Time of flight mass spectrometer with feedback  
means from the detector to the low source and  
a specific counter Patent

[NASA-CASE-XNP-01056] c14 N71-23041  
NAKAMURA, H. H.  
Lightweight refractory insulation and method of  
preparing the same Patent

[NASA-CASE-XMP-05279] c18 N71-16124  
NAKANISHI, S.  
Ion thruster cathode Patent Application

[NASA-CASE-LEW-10814-1] c28 N70-35422  
Plasma device feed system Patent

[NASA-CASE-XLE-02902] c25 N71-21694  
Ion thruster accelerator system Patent

[NASA-CASE-LEW-10106-1] c28 N71-26642  
Propellant feed isolator Patent

[NASA-CASE-LEW-10210-1] c28 N71-26781  
Single grid accelerator for an ion thruster

[NASA-CASE-XLE-10453-2] c28 N73-27699  
NAKICR, H. B.  
Apparatus for scanning the surface of a  
cylindrical body

[NASA-CASE-NPO-11861-1] c36 N74-20009  
Digital servo control of random sound test  
excitation

[NASA-CASE-NPO-11623-1] c71 N74-31148  
NANCE, H. H.  
A dc motor speed control system Patent

[NASA-CASE-MFS-14610] c09 N71-28886  
NAPLES, J. F.  
Method for forming plastic materials Patent

[NASA-CASE-XMS-05516] c15 N71-17803  
NARASIMHAN, K. V.  
System for detecting substructure microfractures  
and method therefore

[NASA-CASE-NPO-14192-1] c39 N80-10507  
System for plotting subsoil structure and method  
therefor

[NASA-CASE-NPO-14191-1] c31 N80-32584  
NASH, D. O.  
Sound-suppressing structure with thermal relief

[NASA-CASE-LEW-12658-1] c71 N79-14871  
NASON, G. H.  
Flexible blade antenna Patent

[NASA-CASE-MSC-12101] c09 N71-16720  
NASUTI, A. J.  
Test fixture for pellet-like electrical elements

[NASA-CASE-XNP-06032] c09 N69-21926  
Support structure for irradiated elements Patent

[NASA-CASE-XNP-06031] c15 N71-15606  
NATHAN, E.  
System for plotting subsoil structure and method  
therefor

[NASA-CASE-NPO-14191-1] c31 N80-32584  
NAUMANN, E. C.  
Fatigue testing device Patent

[NASA-CASE-XLA-02131] c32 N70-42003  
Automatic fatigue test temperature programmer  
Patent

[NASA-CASE-XLA-02059] c33 N71-24276  
Arbitrarily shaped model survey system Patent

[NASA-CASE-LAR-10098] c32 N71-26681  
Function generator for synthesizing complex  
vibration mode patterns

[NASA-CASE-LAR-10310-1] c10 N73-20253  
NAUMANN, E. J.  
Liquid aerosol dispenser

[NASA-CASE-MFS-20829] c12 N72-21310  
Carbon monoxide monitor

[NASA-CASE-MFS-22060-1] c35 N75-29380  
NEAL, P. F.  
Emergency escape system Patent

[NASA-CASE-XKS-07814] c15 N71-27067  
NEALY, J. E.  
Combustion detector

[NASA-CASE-LAR-10739-1] c14 N73-16484  
NELSON, B.  
Deflective rod switch with elastic support and  
sealing means Patent

[NASA-CASE-XNP-09808] c09 N71-12518  
NELSON, B. H.  
Optical machine tool alignment indicator Patent

[NASA-CASE-XAC-09489-1] c15 N71-26673  
NELSON, C. A.  
Flipflop interrogator and bi-polar current  
driver Patent

[NASA-CASE-IGS-03058] c10 N71-19547  
NELSON, C. H.  
Ablation sensor

[NASA-CASE-XLA-01781] c14 N69-39975  
Reentry communication by material addition Patent

[NASA-CASE-XLA-01552] c07 N71-11284  
NELSON, D. E.  
Convoluting device for forming convolutions and  
the like Patent

[NASA-CASE-XNP-05297] c15 N71-23811  
NELSON, E. F.  
Safety-type locking pin

[NASA-CASE-MFS-18495] c15 N72-11385  
NELSON, H. H.  
Telemetry word forming unit

[NASA-CASE-XNP-09225] c09 N69-24333  
NELSON, W. J.  
Slosh alleviator Patent

[NASA-CASE-XLA-05749] c15 N71-19569  
NERHEIM, H. H.  
Inert gas metallic vapor laser

[NASA-CASE-NPO-13449-1] c36 N75-32441  
NEBBY, D. T.  
Hole cutter

[NASA-CASE-MFS-22649-1] c37 N75-25186  
NEBCOBB, A. L., JR.  
Electromagnetic mirror drive system

[NASA-CASE-XLA-03724] c14 N69-27461  
Ac power amplifier Patent Application

[NASA-CASE-LAR-10218-1] c09 N70-34559  
Variable duration pulse integrator Patent

[NASA-CASE-XLA-01219] c10 N71-23084  
Variable width pulse integrator Patent

[NASA-CASE-XLA-03356] c10 N71-23315  
Attitude sensor

[NASA-CASE-LAR-10586-1] c19 N74-15089  
NEBCOMB, J. F.  
Null device for hand controller Patent

[NASA-CASE-XLA-01808] c15 N71-20740  
NEBCOMB, W. L.  
Quick release separation mechanism Patent

[NASA-CASE-XLA-01441] c15 N70-41679  
NEBCOMBE, C. A.  
Method for making a heat insulating and ablative  
structure

[NASA-CASE-XMS-01108] c15 N69-24322  
NEWMAN, D. F.  
Test stand system for vacuum chambers

[NASA-CASE-MFS-21362] c11 N73-20267  
NEWMAN, J. B.  
Catalyst bed removing tool Patent

[NASA-CASE-IFR-00811] c15 N70-36901  
NEWMAN, J. H.  
New polymers of perfluorobutadiene and method of  
manufacture Patent application

[NASA-CASE-NPO-10863] c06 N70-11251  
Polymers of perfluorobutadiene and method of  
manufacture

[NASA-CASE-NPO-10863-2] c06 N72-25152  
NICHOLS, F. W.  
Method and apparatus for fabricating improved  
solar cell modules

[NASA-CASE-NPO-14416-1] c44 N81-14389  
NICHOLS, G. B.  
Apparatus for controlling the velocity of an  
electromechanical drive for interferometers  
and the like Patent.

[NASA-CASE-IGS-03532] c14 N71-17627  
 Apparatus for phase stability determination Patent  
 [NASA-CASE-IGS-01118] c10 N71-23662

NICHOLS, G. H.  
 Aircraft canopy lock  
 [NASA-CASE-FRC-11065-1] c05 N81-24047

NICHOLS, J. J.  
 Force measuring instrument Patent  
 [NASA-CASE-IXF-00456] c14 N70-34705

NICHOLS, M. E.  
 Nacelle afterbody for jet engines Patent  
 [NASA-CASE-XLA-10450] c28 N71-21493  
 Dual cycle aircraft turbine engine  
 [NASA-CASE-LAR-11310-1] c07 N77-28118

NICKLAS, J. C.  
 Attitude control for spacecraft Patent  
 [NASA-CASE-IXF-02982] c31 N70-41855  
 Solar vane actuator Patent  
 [NASA-CASE-IXF-05535] c14 N71-23040

NICOL, W. S.  
 Vapor deposition apparatus  
 [NASA-CASE-HQN-10462] c25 N75-29192

NIEDRA, J. M.  
 Pulse coupling circuit  
 [NASA-CASE-LEW-10433-1] c09 N72-22197

NIEDZWIECKI, R. W.  
 Swirl can primary combustor  
 [NASA-CASE-LEW-11326-1] c23 N73-30665  
 Controlled separation combustor  
 [NASA-CASE-LEW-11593-1] c20 N76-14190

NIELSON, T. L.  
 Technique of elbow bending small jacketed  
 transfer lines Patent  
 [NASA-CASE-IXF-10475] c15 N71-24679

NIER, A. O.  
 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] c35 N77-14406

NIESSEN, F. E.  
 Filtering technique based on high-frequency  
 plant modeling for high-gain control  
 [NASA-CASE-LAR-12215-1] c08 N79-23097

NISEN, D. B.  
 Containerless high temperature calorimeter  
 apparatus  
 [NASA-CASE-MFS-23923-1] c35 N81-19426  
 Method and apparatus for supercooling and  
 solidifying substances  
 [NASA-CASE-MFS-25242-1] c35 N81-24413

NISSIN, E.  
 Suppression of flutter  
 [NASA-CASE-LAR-10682-1] c02 N73-26004

NISWANDER, J. K.  
 Memory-based frame synchronizer  
 [NASA-CASE-GSC-12430-1] c32 N80-20453  
 Memory-based parallel data output controller  
 [NASA-CASE-GSC-12447-1] c60 N80-21987

NITTA, H.  
 High-temperature, high-pressure spherical  
 segment valve Patent  
 [NASA-CASE-XAC-00074] c15 N70-34817

NIXON, D. L.  
 Parabolic reflector horn feed with spillover  
 correction Patent  
 [NASA-CASE-IXF-00540] c09 N70-35382  
 Indexing microwave switch Patent  
 [NASA-CASE-IXF-06507] c09 N71-23548  
 Rotary vane attenuator wherein rotor has  
 orthogonally disposed resistive and dielectric  
 cards  
 [NASA-CASE-NPO-11418-1] c14 N73-13420

NOBLE, R. M.  
 Solenoid construction Patent  
 [NASA-CASE-IXF-01951] c09 N70-41929

NOLA, F. J.  
 Positive dc to positive dc converter Patent  
 [NASA-CASE-IXF-14301] c09 N71-23188  
 Positive dc to negative dc converter Patent  
 [NASA-CASE-IXF-08217] c03 N71-23239  
 Transistor servo system including a unique  
 differential amplifier circuit Patent  
 [NASA-CASE-IXF-05195] c10 N71-24861  
 Brushless direct current tachometer Patent  
 [NASA-CASE-MFS-20385] c09 N71-24904  
 Redundant speed control for brushless Hall  
 effect motor  
 [NASA-CASE-MFS-20207-1] c09 N73-32107

Induction motor control system with voltage  
 controlled oscillator circuit  
 [NASA-CASE-MFS-21465-1] c10 N73-32145  
 Variable frequency inverter for ac induction  
 motors with torque, speed and braking control  
 [NASA-CASE-MFS-22088-1] c33 N75-15874  
 Tachometer  
 [NASA-CASE-MFS-23175-1] c35 N77-30436  
 Power factor control system for AC induction  
 motors  
 [NASA-CASE-MFS-23280-1] c33 N78-10376  
 Three phase power factor controller  
 [NASA-CASE-MFS-25535-1] c33 N81-12330  
 Electrical power generating system  
 [NASA-CASE-MFS-24368-3] c33 N81-22280  
 Power factor control system for ac induction  
 motors  
 [NASA-CASE-MFS-23988-1] c33 N81-27395

NORD, D. B.  
 Method of joining aluminum to stainless steel  
 Patent  
 [NASA-CASE-MFS-07369] c15 N71-20443

NORDEN, E. E.  
 Hybrid holographic system using reflected and  
 transmitted object beams simultaneously Patent  
 [NASA-CASE-MFS-20074] c16 N71-15565  
 Holographic thin film analyzer  
 [NASA-CASE-MFS-20823-1] c16 N73-30476

NOREEN, S. J.  
 Spherical shield Patent  
 [NASA-CASE-IXF-01855] c15 N71-28937

NORGEEN, C. T.  
 Colloid propulsion method and apparatus Patent  
 [NASA-CASE-XLE-00817] c28 N70-33265  
 Gas turbine combustor Patent  
 [NASA-CASE-LEW-10286-1] c28 N71-28915

NORR, C. L.  
 Sight switch using an infrared source and sensor  
 Patent  
 [NASA-CASE-IXF-03934] c09 N71-22985

NORMAN, R. H.  
 Vibration isolation system using compression  
 springs  
 [NASA-CASE-NPO-11012] c15 N72-11391  
 Expansible support means  
 [NASA-CASE-NPO-11059] c15 N72-17454  
 Zero torque gear head wrench  
 [NASA-CASE-NPO-13059-1] c37 N76-20480

NORTON, R. H.  
 Thruster maintenance system Patent  
 [NASA-CASE-MFS-20325] c28 N71-27095  
 Self-recording portable soil penetrometer  
 [NASA-CASE-MFS-20774] c14 N73-19420  
 Interferometer  
 [NASA-CASE-NPO-14448-1] c74 N81-29963

NORWOOD, J., JR.  
 Magnetically controlled plasma accelerator Patent  
 [NASA-CASE-XLA-00327] c25 N71-29184

NOSSEN, E. J.  
 Frequency measurement by coincidence detection  
 with standard frequency  
 [NASA-CASE-MSC-14649-1] c33 N76-16331

NOVOTNY, J. E.  
 Ultrastable calibrated light source  
 [NASA-CASE-MSC-12293-1] c14 N72-27411

NUSBAUM, W. J.  
 Apparatus for absorbing and measuring power Patent  
 [NASA-CASE-XLR-00720] c14 N70-40201

OAKLEY, E. C.  
 RF-source resistance meters  
 [NASA-CASE-NPO-11291-1] c14 N73-30388

OBERSCHLIDT, M.  
 Flow test device  
 [NASA-CASE-IXS-04917] c14 N69-24257

OBLEB, H. D.  
 Air conditioning system and component therefore  
 distributing air flow from opposite directions  
 [NASA-CASE-GSC-11445-1] c31 N74-27902  
 Apparatus for supplying conditioned air at a  
 substantially constant temperature and humidity  
 [NASA-CASE-GSC-12191-1] c31 N80-32583  
 Variable speed drive  
 [NASA-CASE-GSC-12643-1] c37 N81-24447

OBRAH, J. P.  
 Process for the preparation of  
 polycarboranylphosphazenes

[NASA-CASE-ARC-11176-2] c27 N81-27271  
**OBRIEN, D. E., III**  
 Technique for recovery of voice data from heat  
 damaged magnetic tape  
 [NASA-CASE-MSC-14219-1] c32 N74-27612

**OBRIEN, J. P.**  
 Carboranylchlorotriphosphazenes and their polymers  
 [NASA-CASE-ARC-11176-1] c27 N80-21533

**OCONEHEE, B. J.**  
 Failure detection and control means for improved  
 drift performance of a gimbaled platform system  
 [NASA-CASE-MFS-23551-1] c04 N76-26175

**OCONEHEE, E. W.**  
 Condensate removal device for heat exchanger  
 [NASA-CASE-MSC-14143-1] c77 N75-20139

**OCONEHEE, J. W.**  
 Fastener stretcher  
 [NASA-CASE-GSC-11149-1] c15 N73-30457

**ODELL, H. G.**  
 Dual latching solenoid valve Patent  
 [NASA-CASE-XMS-05890] c09 N71-23191

**ODONHILL, P. E.**  
 Corrosion resistant beryllium Patent  
 [NASA-CASE-LEW-10327] c17 N71-33408

**ODONHILL, T. J.**  
 Spherically-shaped rocket motor Patent  
 [NASA-CASE-IMG-01897] c28 N70-35381

**OEHTEL, G. K.**  
 Fast opening diaphragm Patent  
 [NASA-CASE-XLA-03660] c15 N71-21060

Measurement of time differences between luminous  
 events Patent  
 [NASA-CASE-XLA-01987] c23 N71-23976

**OFARRELL, H. W.**  
 Solar cell module assembly jig  
 [NASA-CASE-XGS-00829-1] c44 N79-19447

**OFFIK, W. G.**  
 Emergency escape system Patent  
 [NASA-CASE-IXS-02342] c05 N71-11199

**OGDEN, H. F.**  
 Aerodynamic measuring device Patent  
 [NASA-CASE-XLA-00481] c14 N70-36824

Check valve assembly for a probe Patent  
 [NASA-CASE-XLA-00128] c15 N70-37925

**OGDEN, H. R.**  
 Low temperature aluminum alloy Patent  
 [NASA-CASE-XMP-02786] c17 N71-20743

**OGLE, J. S.**  
 Whole body measurement systems  
 [NASA-CASE-MSC-13972-1] c52 N74-10975

**OHLSON, J. E.**  
 System for interference signal nulling by  
 polarization adjustment  
 [NASA-CASE-NPO-13140-1] c32 N75-24982

Conical scan tracking system employing a large  
 antenna  
 [NASA-CASE-NPO-14009-1] c32 N79-13214

**OKANE, J. H.**  
 Pressure suit tie-down mechanism Patent  
 [NASA-CASE-XMS-00784] c05 N71-12335

**OKBAN, B. C.**  
 High-Q bandpass resonators utilizing bandstop  
 resonator pairs  
 [NASA-CASE-GSC-10990-1] c09 N73-26195

**OKREPE, W. J.**  
 Head-up attitude display  
 [NASA-CASE-ERC-10392] c21 N73-14692

**OKELLY, K. P.**  
 Method of fluxless brazing and diffusion bonding  
 of aluminum containing components  
 [NASA-CASE-MSC-14435-1] c37 N76-18455

**OLCOTT, J. W.**  
 Integrated lift/drag controller for aircraft  
 [NASA-CASE-ARC-10456-1] c05 N75-12930

**OLDBRIDGE, R. E.**  
 Reinforced metallic composites Patent  
 [NASA-CASE-XLE-02428] c17 N70-33288

Method of making fiber reinforced metallic  
 composites Patent  
 [NASA-CASE-XLE-00231] c17 N70-38198

Tantalum modified ferritic iron base alloys  
 [NASA-CASE-LEW-12095-1] c26 N78-18182

**OLIVER, G. D.**  
 Scanning nozzle plating system  
 [NASA-CASE-NPO-11758-1] c31 N74-23065

**OLIVER, E. E.**  
 Multiple reflection conical microwave antenna  
 [NASA-CASE-NPO-11661] c07 N73-14130

**OLIVER, R. L.**  
 Apparatus for applying cover slides  
 [NASA-CASE-NPO-10575] c03 N72-25019

**OLLENDORF, S.**  
 Structural heat pipe  
 [NASA-CASE-GSC-11619-1] c34 N75-12222

Thermal control canister  
 [NASA-CASE-GSC-12253-1] c34 N79-31523

**OLLING, E. H.**  
 Radial module space station Patent  
 [NASA-CASE-XMS-01906] c31 N70-41373

**OLSKASKY, M. J.**  
 Laser camera and diffusion filter therefore Patent  
 [NASA-CASE-NPO-10417] c16 N71-33410

**OLSEN, W. A., JR.**  
 Reduced gravity liquid configuration simulator  
 [NASA-CASE-XLE-02624] c12 N69-39988

Hot wire liquid level detector for cryogenic  
 fluids Patent  
 [NASA-CASE-XLE-00454] c23 N71-17802

**OLSON, B. T.**  
 Inlet deflector for jet engines Patent  
 [NASA-CASE-XLE-00388] c28 N70-34788

**OLTMANS, D. A.**  
 Matched thermistors for microwave power meters  
 Patent  
 [NASA-CASE-NPO-10348] c10 N71-12554

**ONEILL, B. L.**  
 Particulate and aerosol detector  
 [NASA-CASE-LAR-11434-1] c35 N76-22509

**ONEILL, B. W.**  
 Monostable multivibrator with complementary NOR  
 gates Patent  
 [NASA-CASE-MSC-13492-1] c10 N71-28860

Peak holding circuit for extremely narrow pulses  
 [NASA-CASE-MSC-14129-1] c33 N75-18479

**ORAN, W. A.**  
 Method and apparatus for shaping and enhancing  
 acoustical levitation forces  
 [NASA-CASE-MFS-25050-1] c71 N81-15767

Containerless melting and rapid solidification  
 apparatus and method  
 [NASA-CASE-MFS-25305-1] c35 N81-16427

**OREILLY, W. J.**  
 Portable environmental control system Patent  
 [NASA-CASE-XMS-09632-1] c05 N71-11203

**OREN, V. C.**  
 Fastener stretcher  
 [NASA-CASE-GSC-11149-1] c15 N73-30457

**ORILLION, A. G.**  
 Personal propulsion unit Patent  
 [NASA-CASE-MFS-20130] c28 N71-27585

**ORLIK, F. W.**  
 Pressure seal Patent  
 [NASA-CASE-NPO-10796] c15 N71-27068

**ORLOFF, K. L.**  
 Combined dual scatter, local oscillator laser  
 Doppler velocimeter  
 [NASA-CASE-ARC-10642-1] c36 N76-14447

Rhomboid prism pair for rotating the plane of  
 parallel light beams  
 [NASA-CASE-ARC-11311-1] c74 N81-16882

**ORRISTON, B. A.**  
 Hingeless helicopter rotor with improved stability  
 [NASA-CASE-ARC-10807-1] c05 N77-17029

**ORRINE, J. W.**  
 Method and apparatus for detecting gross leaks  
 Patent  
 [NASA-CASE-ERC-10033] c14 N71-26672

**OROURKE, T. E., JR.**  
 Sealing member and combination thereof and  
 method of producing said sealing member Patent  
 [NASA-CASE-XMS-01625] c15 N71-23022

**ORTH, H. W.**  
 Process for producing dispersion strengthened  
 nickel with aluminum Patent  
 [NASA-CASE-XLE-06969] c17 N71-24142

Method for alleviating thermal stress damage in  
 laminates  
 [NASA-CASE-LEW-12493-1] c24 N81-17170

Method for alleviating thermal stress damage in  
 laminates  
 [NASA-CASE-LEW-12493-2] c24 N81-26179

**OSBERG, J. V.**  
 Miniature muscle displacement transducer  
 [NASA-CASE-NPO-13519-1] c33 N76-19338

**OSMUNDSON, J.**  
 Dually mode locked Nd:YAG laser  
 [NASA-CASE-GSC-11746-1] c36 N75-19654



OSTROFF, A. J.  
Star image motion compensator  
[NASA-CASE-LAR-10523-1] c14 N72-22444

OSTROFF, J.  
Rotary actuator  
[NASA-CASE-NPO-10244] c15 N72-26371

OSULLIVAN, W. J., JR.  
Method and apparatus for shock protection Patent  
[NASA-CASE-XLA-00482] c15 N70-36409  
Self supporting space vehicle Patent  
[NASA-CASE-XLA-00117] c31 N71-17680  
Thermal control wall panel Patent  
[NASA-CASE-XLA-01243] c33 N71-22792  
Thermal control panel Patent  
[NASA-CASE-XLA-07728] c33 N71-22890

OTHMAN, T. E.  
Safety-type locking pin  
[NASA-CASE-MFS-18495] c15 N72-11385

OTOSHI, T. Y.  
Rotary vane attenuator wherein rotor has  
orthogonally disposed resistive and dielectric  
cards  
[NASA-CASE-NPO-11418-1] c14 N73-13420

OTTO, G. H.  
Synthesis of superconducting compounds by  
explosive compaction of powders  
[NASA-CASE-MFS-20861-1] c18 N73-32437

OUTLAW, B. A.  
In situ transfer standard for ultrahigh vacuum  
gage calibration  
[NASA-CASE-LAR-10862-1] c35 N74-15092

OWEN, R. B.  
Collimated beam manifold and method for using  
the same  
[NASA-CASE-MFS-25312-1] c74 N80-34251  
Dual laser optical system and method for  
studying fluid flow  
[NASA-CASE-MFS-25315-1] c36 N81-19440

OWENS, L. J.  
Magnetic electrical connectors for biomedical  
percuteaneous implants  
[NASA-CASE-KSC-11030-1] c52 N77-25772  
Rotational joint assembly for the prosthetic leg  
[NASA-CASE-KSC-11004-1] c54 N77-30749  
Ocean thermal plant  
[NASA-CASE-KSC-11034-1] c44 N78-32542  
Illumination control apparatus for compensating  
solar light  
[NASA-CASE-KSC-11010-1] c74 N79-12890  
Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c52 N79-26772

**P**

PACALA, T. J.  
Charge transfer reaction laser with  
preionization means  
[NASA-CASE-NPO-13945-1] c36 N78-27402  
Pulse switching for high energy lasers  
[NASA-CASE-NPO-14556-1] c36 N79-21336

PAGE, G. D., JR.  
Sun direction detection system  
[NASA-CASE-NPO-13722-1] c74 N77-22951

PACIOREK, K. J. L.  
Heat resistant polymers of oxidized  
styrylphosphine  
[NASA-CASE-MSC-14903-1] c27 N78-32256  
Compound oxidized styrylphosphine  
[NASA-CASE-MSC-14903-2] c27 N80-10358  
Heat resistant polymers of oxidized  
styrylphosphine  
[NASA-CASE-MSC-14903-3] c27 N80-24438  
Preparation of perfluorinated imidoylamidoximes  
[NASA-CASE-ARC-11267-1] c23 N80-26386  
Preparation of perfluorinated 1,2,4-oxadiazoles  
[NASA-CASE-ARC-11267-2] c25 N80-26407

PACKARD, B. D.  
Semiconductor surface protection material  
[NASA-CASE-ERC-10339-1] c18 N73-30532

PACKER, P. H.  
Adjustable securing base  
[NASA-CASE-MSC-19666-1] c37 N78-17383  
Variable contour securing system  
[NASA-CASE-MSC-16270-1] c37 N78-27423

PADILLA, D.  
Method and apparatus for fluffing, separating,  
and cleaning fibers  
[NASA-CASE-LAR-11224-1] c37 N76-18456

PAGEL, L. L.  
Cooling system for high speed aircraft  
[NASA-CASE-LAR-12406-1] c05 N81-26114

PAIK, S. F.  
Parametric microwave noise generator Patent  
[NASA-CASE-XEB-11019] c09 N71-23598

PAIK, H. W.  
Apparatus for recovering matter adhered to a  
host surface  
[NASA-CASE-NPO-11213] c15 N73-20514

PAINTER, J. H.  
Anti-multipath digital signal detector  
[NASA-CASE-LAR-11827-1] c32 N77-10392

PALANDATI, C. F., JR.  
Prevention of pressure build-up in  
electrochemical cells Patent  
[NASA-CASE-IGS-01419] c03 N70-41864

PALMER, E. I.  
Apparatus for testing a pressure responsive  
instrument Patent  
[NASA-CASE-XMF-04134] c14 N71-23755

PALSINGH, S.  
Anti-gravity device  
[NASA-CASE-MFS-22758-1] c70 N75-26789

PAN, F. H.  
A dc-coupled noninverting one-shot Patent  
[NASA-CASE-XNF-09450] c10 N71-18723

PAOLINI, J. J.  
Full flow with shut off and selective drainage  
control valve Patent application  
[NASA-CASE-ERC-10208] c15 N70-10867

PAPPELL, S. S.  
Low viscosity magnetic fluid obtained by the  
colloidal suspension of magnetic particles  
Patent  
[NASA-CASE-XLE-01512] c12 N70-40124  
Liquid storage tank venting device for zero  
gravity environment Patent  
[NASA-CASE-XLE-01449] c15 N70-41646  
Capacitor and method of making same Patent  
[NASA-CASE-LEW-10364-1] c09 N71-13522  
Fluid dispensing apparatus and method Patent  
[NASA-CASE-XLB-01182] c27 N71-15635  
Curved film cooling admission tube  
[NASA-CASE-LEW-13174-1] c34 N81-12363

PARDOE, C. T.  
Telemetry synchronizer  
[NASA-CASE-GSC-11868-1] c17 N76-22245

PARISCHE, F.  
Resistive anode image converter  
[NASA-CASE-HQN-10876-1] c33 N76-27473

PARK, J. J.  
Method of making tubes Patent  
[NASA-CASE-IGS-04175] c15 N71-18579

PARKER, D. L.  
Apparatus for use in examining the lattice of a  
semiconductor wafer by X-ray diffraction  
[NASA-CASE-MFS-23315-1] c76 N78-24950

PARKER, G. L.  
Elimination of frequency shift in a multiplex  
communication system Patent  
[NASA-CASE-XNF-01306] c07 N71-20814  
High speed phase detector Patent  
[NASA-CASE-XNF-01306-2] c09 N71-24596  
Optical binocular scanning apparatus  
[NASA-CASE-NPO-11002] c14 N72-22441  
Hydraulic drain means for servo-systems  
[NASA-CASE-NPO-10316-1] c37 N77-22479

PARKER, J. A.  
Intumescent paints Patent  
[NASA-CASE-ARC-10099-1] c18 N71-15469  
Modified polyurethane foams for fuel-fire Patent  
[NASA-CASE-ARC-10098-1] c06 N71-24739  
Flexible fire retardant foam  
[NASA-CASE-ARC-10180-1] c28 N72-20767  
Intumescent composition, foamed product prepared  
therewith, and process for making same  
[NASA-CASE-ARC-10304-1] c18 N73-26572  
Flexible fire retardant polyisocyanate modified  
neoprene foam  
[NASA-CASE-ARC-10180-1] c27 N74-12814  
Chromato-fluorographic drug detector  
[NASA-CASE-ARC-10633-1] c25 N74-26947  
Intumescent composition, foamed product prepared  
therewith and process for making same  
[NASA-CASE-ARC-10304-2] c27 N74-27037  
Fiber modified polyurethane foam for ballistic  
protection  
[NASA-CASE-ARC-10714-1] c27 N76-15310

Transparent fire resistant polymeric structures  
[NASA-CASE-ABC-10813-1] c27 N76-16230

Honeycomb-laminate composite structure  
[NASA-CASE-ABC-10913-1] c24 N78-15180

Low density bismaleimide-carbon microballoon  
composites  
[NASA-CASE-ABC-11040-2] c24 N78-27184

Low density bismaleimide-carbon microballoon  
composites  
[NASA-CASE-ABC-11040-1] c24 N79-16915

Phosphorus-containing bisimide resins  
[NASA-CASE-ABC-11321-1] c27 N81-27272

Resin composition, process for producing the  
same, product produced therefrom and process  
for producing said product  
[NASA-CASE-ABC-11331-1] c27 N81-31363

Phosphorus-containing imide resins  
[NASA-CASE-ABC-11368-1] c27 N81-31364

PARKER, L. C.  
Safe-arm initiator Patent  
[NASA-CASE-LAR-10372] c09 N71-18599

PARKER, O. J.  
Despin weight release Patent  
[NASA-CASE-ILA-00679] c15 N70-38601

Spacecraft separation system for spinning  
vehicles and/or payloads Patent  
[NASA-CASE-ILA-02132] c31 N71-10582

Flared tube strainer  
[NASA-CASE-ILA-05056] c15 N72-11389

PARKER, E. J.  
Method of improving the reliability of a rolling  
element system Patent  
[NASA-CASE-XLE-02999] c15 N71-16052

Low mass rolling element for bearings  
[NASA-CASE-LEW-11087-1] c15 N73-30458

Method of making rolling element bearings  
[NASA-CASE-LEW-11087-2] c37 N74-15128

Hollow rolling element bearings  
[NASA-CASE-LEW-11087-3] c37 N74-21064

PARNLEY, H. T.  
Aerodynamic protection for space flight vehicles  
Patent  
[NASA-CASE-IHP-02507] c31 N71-17679

PARR, R. A.  
Preparation of monotectic alloys having a  
controlled microstructure by directional  
solidification under dopant-induced interface  
breakdown  
[NASA-CASE-MFS-23816-1] c26 N80-23419

PARRA, G. T.  
Angle detector  
[NASA-CASE-ABC-11036-1] c35 N78-32395

PARSONS, W. B.  
Electronic checkout system for space vehicles  
Patent  
[NASA-CASE-XKS-08012-2] c31 N71-15566

Percutaneous connector device  
[NASA-CASE-KSC-10849-1] c52 N77-14738

PARTHASARATHY, S. P.  
System and method for obtaining wide screen  
Schlieren photographs  
[NASA-CASE-NPO-14174-1] c74 N79-20856

System for detecting substructure microfractures  
and method therefore  
[NASA-CASE-NPO-14192-1] c39 N80-10507

System for plotting subsoil structure and method  
therefor  
[NASA-CASE-NPO-14191-1] c31 N80-32584

PARTSCH, V. H.  
Purge device for thrust engines Patent  
[NASA-CASE-XHS-04826] c28 N71-28849

PASCIUTTI, E. B.  
Protection for energy conversion systems  
[NASA-CASE-IGS-04808] c03 N69-25146

Inverter with means for base current shaping for  
sweeping charge carriers from base region Patent  
[NASA-CASE-IGS-06226] c10 N71-25950

A dc to ac to dc converter having transistor  
synchronous rectifiers  
[NASA-CASE-GSC-11126-1] c09 N72-25253

PASIKER, E. P.  
GaAs solar detector using manganese as a doping  
agent Patent  
[NASA-CASE-XHP-01328] c26 N71-18064

PASSMAN, H. H.  
Heat conductive resiliently compressible  
structure for space electronics package  
modules Patent  
[NASA-CASE-MSC-12389] c33 N71-29052

PATE, W. B.  
Color perception tester  
[NASA-CASE-KSC-10278] c05 N72-16015

PATEL, B. C.  
A method and technique for installing  
light-weight fragile, high-temperature fiber  
insulation  
[NASA-CASE-MSC-16934-2] c37 N81-16468

PATON, W. J.  
Flammability test chamber Patent  
[NASA-CASE-KSC-10126] c11 N71-24985

PATTEE, H. E.  
Attaching of strain gages to substrates  
[NASA-CASE-FBC-10093-1] c35 N80-20560

PATTEN, C. W.  
Method and apparatus for attaching physiological  
monitoring electrodes Patent  
[NASA-CASE-IFR-07658-1] c05 N71-26293

PATTERSON, J. C., JR.  
Wingtip vortex dissipator for aircraft  
[NASA-CASE-LAR-11645-1] c02 N77-10001

Wingtip vortex turbine  
[NASA-CASE-LAR-12544-1] c07 N81-27096

PATTERSON, W. J.  
Synthesis of siloxane-containing epoxy polymers  
Patent  
[NASA-CASE-MFS-13994-1] c06 N71-11240

Siloxane containing epoxide compounds  
[NASA-CASE-MFS-13994-2] c06 N72-25148

Silphenylenesiloxane polymers having in-chain  
perfluoroalkyl groups  
[NASA-CASE-MFS-20979] c06 N72-25151

Polymerizable disilanolols having in-chain  
perfluoroalkyl groups  
[NASA-CASE-MFS-20979-2] c06 N73-32030

PAULI, F. A.  
Attitude controls for VTOL aircraft Patent  
[NASA-CASE-IAC-08972] c02 N71-20570

PAULOVICH, J.  
Apparatus for measuring current flow Patent  
[NASA-CASE-XGS-02439] c14 N71-19431

Coulometer and third electrode battery charging  
circuit Patent  
[NASA-CASE-GSC-10487-1] c03 N71-24719

Non-contacting power transfer device  
[NASA-CASE-GSC-12595-1] c33 N81-12331

Buck/boost regulator  
[NASA-CASE-GSC-12360-1] c33 N81-19392

PAULL, S.  
Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00458] c09 N70-38604

Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00131] c09 N70-38995

PAVLICS, F.  
Resilient wheel Patent  
[NASA-CASE-MFS-13929] c15 N71-27091

PAWLIK, E. V.  
Plasma device feed system Patent  
[NASA-CASE-XLE-02902] c25 N71-21694

Ion thruster with a combination keeper electrode  
and electron baffle  
[NASA-CASE-NFO-11880] c28 N73-24783

Sandblasting nozzle  
[NASA-CASE-NPO-13823-1] c37 N81-25371

PEARSON, A. O.  
Measurement of gas production of microorganisms  
[NASA-CASE-LAR-11326-1] c35 N75-33368

PECHMAN, A.  
Two-component ceramic coating for silica  
insulation  
[NASA-CASE-MSC-14270-1] c27 N76-22377

Three-component ceramic coating for silica  
insulation  
[NASA-CASE-MSC-14270-2] c27 N76-23426

PECK, S. B.  
Voltage feed through apparatus having reduced  
partial discharge  
[NASA-CASE-GSC-12347-1] c33 N80-18286

PECKHAM, V. A., JR.  
Sample collecting impact bit Patent  
[NASA-CASE-XHP-01412] c15 N70-42034

PEDERSON, C. W.  
Low distortion automatic phase control circuit  
[NASA-CASE-MFS-21671-1] c33 N74-22885

PERLGRUB, H. L.  
Shell side liquid metal boiler  
[NASA-CASE-NFO-10831] c33 N72-20915

PEER, C. B.  
Connector strips-positive, negative and T tabs

[NASA-CASE-XGS-01395] c03 N69-21539  
**PEGDEN, C. D.**  
 Multiple in-line docking capability for rotating space stations  
 [NASA-CASE-MFS-20855-1] c15 N77-10112  
**PELCHAT, G. M.**  
 Adaptive polarization separation  
 [NASA-CASE-LAR-12196-1] c33 N81-26358  
**PELLEBRIN, C. J., JR.**  
 Two axis fluxgate magnetometer Patent  
 [NASA-CASE-GSC-10441-1] c14 N71-27325  
**PENQUE, H. J.**  
 Varactor high level mixer  
 [NASA-CASE-XGS-02171] c09 N69-24324  
**PEOPLES, J. A.**  
 Multiway vortex valve system Patent  
 [NASA-CASE-XMP-04709] c15 N71-15609  
**PERKINS, G. S.**  
 Detenting servomotor Patent  
 [NASA-CASE-XNP-06936] c15 N71-24695  
 Ball screw linear actuator  
 [NASA-CASE-NPO-11222] c15 N72-25456  
 Sun tracking solar energy collector  
 [NASA-CASE-NPO-13921-1] c44 N79-14526  
 Sandblasting nozzle  
 [NASA-CASE-NPO-13823-1] c37 N81-25371  
**PERKINS, H.**  
 System for imposing directional stability on a rocket-propelled vehicle  
 [NASA-CASE-MFS-21311-1] c20 N76-21275  
**PERKINS, P. J., JR.**  
 Cryogenic insulation system Patent  
 [NASA-CASE-XLE-04222] c23 N71-22881  
 Insulation system Patent  
 [NASA-CASE-XLE-02647] c18 N71-23658  
**PERLMAN, M.**  
 Linear three-tap feedback shift register Patent  
 [NASA-CASE-NPO-10351] c08 N71-12503  
 Binary sequence detector Patent  
 [NASA-CASE-XNP-05415] c08 N71-12505  
 Digital function generator  
 [NASA-CASE-NPO-11104] c08 N72-22165  
 Feedback shift register with states decomposed into cycles of equal length  
 [NASA-CASE-NPO-11082] c08 N72-22167  
 Pseudonoise sequence generators with three tap linear feedback shift registers  
 [NASA-CASE-NPO-11406] c08 N73-12175  
 A n-ary linear feedback shift register with binary logic  
 [NASA-CASE-NPO-11868] c10 N73-20254  
 System for generating timing and control signals  
 [NASA-CASE-NPO-13125-1] c33 N75-19519  
 Nonlinear nonsingular feedback shift registers  
 [NASA-CASE-NPO-13451-1] c33 N76-14373  
**PERLMUTTER, M.**  
 Device for directionally controlling electromagnetic radiation Patent  
 [NASA-CASE-XLE-01716] c09 N70-40234  
**PERRY, C. L.**  
 Metabolic analyzer  
 [NASA-CASE-MFS-21415-1] c52 N74-20728  
**PERRY, G. D.**  
 Zero gravity apparatus Patent  
 [NASA-CASE-XMP-06515] c14 N71-23227  
**PERRY, J. C.**  
 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] c33 N81-14221  
**PERRY, W. E.**  
 Optical conversion method  
 [NASA-CASE-MSC-12618-1] c74 N78-17865  
**PERSON, J. K.**  
 Bonding machine for forming a solar array strip  
 [NASA-CASE-NPO-13652-2] c44 N79-24431  
**PESEK, C. F.**  
 Clamping assembly for inertial components Patent  
 [NASA-CASE-XMS-02184] c15 N71-20813  
 Circuit board package with wedge shaped covers  
 [NASA-CASE-MFS-21919-1] c10 N73-25243  
**PESMAN, G. J.**  
 Shock absorbing support and restraint means Patent  
 [NASA-CASE-XMS-01240] c05 N70-35152  
**PETERS, D. A.**  
 Hingeless helicopter rotor with improved stability  
 [NASA-CASE-ARC-10807-1] c05 N77-17029  
**PETERS, H. E.**  
 Atomic standard with variable storage volume  
 [NASA-CASE-GSC-11895-1] c35 N76-15436  
**PETERS, L., JR.**  
 Horn antenna having V-shaped corrugated slots  
 [NASA-CASE-LAR-11112-1] c32 N76-15330  
**PETERS, P. H.**  
 Germanium coated microbridge and method  
 [NASA-CASE-MFS-23274-1] c33 N78-13320  
**PETERS, R. L.**  
 CRT blanking and brightness control circuit  
 [NASA-CASE-KSC-10647-1] c10 N72-31273  
**PETERS, R. W.**  
 Two component bearing Patent  
 [NASA-CASE-XLA-00013] c15 N71-29136  
**PETERSEN, G. E.**  
 Potential heat exchange fluids for use in sulfuric acid vaporizers  
 [NASA-CASE-NFO-15015-1] c25 N80-23394  
 Enhancement of in vitro Guayule propagation  
 [NASA-CASE-NPO-15213-1] c51 N81-29728  
**PETERSEN, H. L.**  
 Four phase logic systems  
 [NASA-CASE-MSC-14240-1] c33 N75-14957  
**PETERSEN, H. W.**  
 Adjustable mount for a trihedral mirror Patent  
 [NASA-CASE-XNP-08907] c23 N71-29123  
**PETERSON, E. W.**  
 Canopus detector including automotive gain control of photomultiplier tube Patent  
 [NASA-CASE-XNP-03914] c21 N71-10771  
**PETERSON, M. C.**  
 Ultraviolet atomic emission detector  
 [NASA-CASE-RQN-10756-1] c14 N72-25428  
**PETERSON, M. E., JR.**  
 Shrink-fit gas valve Patent  
 [NASA-CASE-XGS-00587] c15 N70-35087  
**PETERSON, P. D.**  
 Portable environmental control system Patent  
 [NASA-CASE-XMS-09632-1] c05 N71-11203  
**PETERSON, S. T.**  
 Meteoroid detector  
 [NASA-CASE-LAR-10483-1] c14 N73-32327  
**PETERSON, V. S.**  
 Flov angle sensor and read out system Patent  
 [NASA-CASE-XLE-04503] c14 N71-24864  
 Solid state remote circuit selector switch  
 [NASA-CASE-LEW-10387] c09 N72-22201  
 Low level signal limiter  
 [NASA-CASE-XLE-04791] c32 N74-22096  
 Fine particulate capture device  
 [NASA-CASE-LEW-11583-1] c35 N79-17192  
**PETERSON, W. A.**  
 Folded traveling wave maser structure Patent  
 [NASA-CASE-XMP-05219] c16 N71-15550  
 Superconducting magnet Patent  
 [NASA-CASE-XNP-06503] c23 N71-29049  
**PETERSON, W. D.**  
 Automatic frequency discriminators and control for a phase-lock loop providing frequency preset capabilities Patent  
 [NASA-CASE-XMP-08665] c10 N71-19467  
**PETRESSEN, R. E.**  
 Medical subject monitoring systems  
 [NASA-CASE-MSC-14180-1] c52 N76-14757  
**PETRASEK, D. W.**  
 Reinforced metallic composites Patent  
 [NASA-CASE-XLE-02428] c17 N70-33288  
 Method of making fiber reinforced metallic composites Patent  
 [NASA-CASE-XLE-00231] c17 N70-38198  
 Reinforced metallic composites Patent  
 [NASA-CASE-XLE-00228] c17 N70-38490  
 Method of making fiber composites  
 [NASA-CASE-LEW-10424-2-2] c18 N72-25539  
**PETRICK, E. M.**  
 Variable thrust ion engine utilizing thermally decomposable solid fuel Patent  
 [NASA-CASE-XMP-00923] c28 N70-36802  
**PETTY, S. M.**  
 Maser amplifier slow wave structure  
 [NASA-CASE-NFO-15211-1] c36 N81-24425  
**PETYNIA, W. W.**  
 Space and atmospheric reentry vehicle Patent  
 [NASA-CASE-XGS-00260] c31 N70-37924  
 Space vehicle system  
 [NASA-CASE-MSC-12561-1] c18 N76-17185  
**PETYON, J.**  
 Wideband heterodyne receiver for laser

communication system  
[NASA-CASE-GSC-12053-1] c32 N77-28346

PEZDINTZ, G. F.  
Method and apparatus for shock protection Patent  
[NASA-CASE-XLA-00482] c15 N70-36409

Imidazopyrrolone/imide copolymers Patent  
[NASA-CASE-XLA-08802] c06 N71-11238

Dosimeter for high levels of absorbed radiation  
Patent  
[NASA-CASE-XLA-03645] c14 N71-20430

Solid state thermal control polymer coating  
Patent  
[NASA-CASE-XLA-01745] c33 N71-28903

PFAPP, H.  
Swivel support for gas bearings Patent  
[NASA-CASE-XMP-07808] c15 N71-23812

PPIFFNER, H. J.  
Bootstrap unloader Patent  
[NASA-CASE-XNP-09768] c09 N71-12516

PFLEGER, H. O.  
Spherical shield Patent  
[NASA-CASE-XNP-01855] c15 N71-28937

PHILIPP, W. H.  
Selective nickel deposition  
[NASA-CASE-LEW-10965-1] c15 N72-25452

Production of pure metals  
[NASA-CASE-LEW-10906-1] c25 N74-30502

Process for making anhydrous metal halides  
[NASA-CASE-LEW-11860-1] c37 N76-18458

In situ self cross-linking of polyvinyl alcohol  
battery separators  
[NASA-CASE-LEW-12972-1] c44 N79-25481

In-situ cross linking of polyvinyl alcohol  
[NASA-CASE-LEW-13135-2] c27 N81-24257

Cross-linked polyvinyl alcohol and method of  
making same  
[NASA-CASE-LEW-13101-2] c23 N81-29160

Alkaline battery containing a separator of a  
cross-linked copolymer of vinyl alcohol and  
unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c44 N81-29531

PHILIPS, A. R.  
Technique of duplicating fragile core  
[NASA-CASE-XLA-07829] c15 N72-16329

PHILLIPP, W. H.  
Method of cross-linking polyvinyl alcohol and  
other water soluble resins  
[NASA-CASE-LEW-13103-1] c27 N80-32516

PHILLIPS, B. L. S.  
File card marker Patent  
[NASA-CASE-XLA-02705] c08 N71-15908

PHILLIPS, E. C., JR.  
Method of forming a wick for a heat pipe  
[NASA-CASE-NPO-13391-1] c34 N76-27515

PHILLIPS, W. H.  
Variable-geometry winged reentry vehicle Patent  
[NASA-CASE-XLA-00241] c31 N70-37986

Station keeping of a gravity gradient stabilized  
satellite Patent  
[NASA-CASE-XLA-03132] c31 N71-22969

Rim inertial measuring system  
[NASA-CASE-LAR-12052-1] c18 N81-29152

Solar powered aircraft  
[NASA-CASE-LAR-12615-1] c05 N81-32138

PHILLIPS, W. H.  
Shell side liquid metal boiler  
[NASA-CASE-NPO-10831] c33 N72-20915

Cermet composition and method of fabrication  
[NASA-CASE-NPO-13120-1] c27 N76-15311

High temperature oxidation resistant cermet  
compositions  
[NASA-CASE-NPO-13666-1] c27 N77-13217

Nuclear thermionic converter  
[NASA-CASE-NPO-13121-1] c73 N77-18891

High temperature resistant cermet and ceramic  
compositions  
[NASA-CASE-NPO-13690-1] c27 N78-19302

High temperature resistant cermet and ceramic  
compositions  
[NASA-CASE-NPO-13690-2] c27 N79-14213

Sandblasting nozzle  
[NASA-CASE-NPO-13823-1] c37 N81-25371

PHILIGER, G. A., JR.  
Separation simulator Patent  
[NASA-CASE-XKS-04631] c10 N71-23663

Internal work light Patent  
[NASA-CASE-XKS-05932] c09 N71-26787

Universal environment package with sectional  
component housing  
[NASA-CASE-KSC-10031] c15 N72-22486

Pressurized lighting system  
[NASA-CASE-KSC-10644] c09 N72-27227

PIASECKI, L. E.  
Apparatus and method for control of a solid  
fueled rocket vehicle Patent  
[NASA-CASE-XNP-00217] c28 N70-38181

PICCIOLO, G. L.  
Flavin coenzyme assay  
[NASA-CASE-GSC-10565-1] c06 N72-25149

Method of detecting and counting bacteria in  
body fluids  
[NASA-CASE-GSC-11092-2] c04 N73-27052

Automatic instrument for chemical processing to  
detect microorganisms in biological samples by  
measuring light reactions  
[NASA-CASE-GSC-11169-2] c05 N73-32011

Method of detecting and counting bacteria  
[NASA-CASE-GSC-11917-2] c51 N76-29891

Application of luciferase assay for ATP to  
antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c51 N77-22794

Rapid, quantitative determination of bacteria in  
water  
[NASA-CASE-GSC-12158-1] c51 N78-22585

Determination of antimicrobial susceptibilities  
on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c52 N79-14750

PIERCE, R. E.  
Propellant grain for rocket motors Patent  
[NASA-CASE-IGS-03556] c27 N70-35534

PILLA, F. E. C.  
Charge injection method and apparatus of  
producing large area electrets  
[NASA-CASE-MFS-23186-2] c24 N78-25137

PINCKNEY, E. R.  
System for monitoring the presence of neutrals  
in a stream of ions Patent  
[NASA-CASE-XNP-02592] c24 N71-20518

PINCKNEY, S. Z.  
Static pressure probe  
[NASA-CASE-LAR-11552-1] c35 N76-14429

PINCUS, B. E.  
Scanning aspect sensor employing an apertured  
disc and a commutator  
[NASA-CASE-XGS-08266] c14 N69-27432

PINKEL, I. I.  
Reduced gravity liquid configuration simulator  
[NASA-CASE-XLE-02624] c12 N69-39988

PINSON, G. T.  
Guide for a typewriter  
[NASA-CASE-MFS-15218-1] c37 N77-19457

PIPPEN, D. L.  
High voltage pulse generator Patent  
[NASA-CASE-MSC-12178-1] c09 N71-13518

PITELLI, E. E.  
Transverse piezoresistance and pinch effect  
electromechanical transducers Patent  
[NASA-CASE-ERC-10088] c26 N71-25490

PITTS, D. E.  
Method for manufacturing mirrors in zero gravity  
environment  
[NASA-CASE-MSC-12611-1] c12 N76-15189

PITTS, F. L.  
Electronic strain-level counter  
[NASA-CASE-LAR-10756-1] c32 N73-26910

PITTS, W. C.  
Two force component measuring device Patent  
[NASA-CASE-XAC-04886-1] c14 N71-20439

PIVIBOTTO, T. J.  
Inert gas metallic vapor laser  
[NASA-CASE-NFO-13449-1] c36 N75-32441

High power metallic halide laser  
[NASA-CASE-NPO-14782-1] c36 N80-18381

Method and apparatus for convection control of  
metallic halide vapor density in a metallic  
halide laser  
[NASA-CASE-NPO-15021-1] c36 N80-20574

PIZZECI, D. E.  
Connector  
[NASA-CASE-LAR-11709-1] c37 N76-27567

PLAKAS, C. J.  
Firefly pump-metering system  
[NASA-CASE-GSC-10218-1] c15 N72-21465

FLANODON, J. A., JR.  
Conically shaped cavity radiometer with a dual  
purpose cone winding Patent  
[NASA-CASE-XNP-09701] c14 N71-26475

PLANOWSKI, S. C. Traversing probe Patent [NASA-CASE-XFR-02007]	c12	N71-24692
PLATT, P. K. Cryogenic connector for vacuum use Patent [NASA-CASE-IGS-02441]	c15	N70-41629
PLAZEK, D. J. Instrument for measuring torsional creep and recovery Patent [NASA-CASE-XLE-01481]	c14	N71-10781
PLEASANTS, J. E. Inflatable support structure Patent [NASA-CASE-XLA-01731]	c32	N71-21045
Vortex breech high pressure gas generator [NASA-CASE-LAR-10549-1]	c31	N73-13898
PLITT, K. F. Spacecraft battery seals [NASA-CASE-IGS-03864]	c15	N69-24320
PODGOBSKI, T. J. Method of forming shrink-fit compression seal [NASA-CASE-LAR-11563-1]	c37	N77-23482
POESCHEL, E. L. Ion thruster [NASA-CASE-LEW-10770-1]	c28	N72-22770
POGORZELSKI, F. S. Apparatus for welding sheet material [NASA-CASE-XMS-01330]	c37	N75-27376
POHL, R. G. Two-step rocket engine bipropellant valve Patent [NASA-CASE-XMS-04890-1]	c15	N70-22192
POHL, J. G. Three-dimensional tracking solar energy concentrator and method for making same [NASA-CASE-NPO-13736-1]	c44	N77-32583
Portable linear-focused solar thermal energy collecting system [NASA-CASE-NPO-13734-1]	c44	N78-10554
POHM, A. V. Magnetometer with a miniature transducer and automatic scanning [NASA-CASE-LAR-11617-2]	c35	N78-32397
POLBANUS, E. C. Variable sweep wing configuration Patent [NASA-CASE-XLA-00230]	c02	N70-33255
Variable sweep aircraft wing Patent [NASA-CASE-XLA-00350]	c02	N70-38011
Variable sweep aircraft Patent [NASA-CASE-XLA-03659]	c02	N71-11041
POLHEMUS, J. L. Condition sensor system and method [NASA-CASE-MSC-14805-1]	c54	N78-32720
Pulse transducer with artifact signal attenuator [NASA-CASE-FRC-11012-1]	c52	N80-23969
POLLACK, I. Etching of aluminum for bonding Patent [NASA-CASE-XMF-02303]	c17	N71-23828
Dye penetrant for surfaces subsequently contacted by liquid oxygen Patent [NASA-CASE-XMF-02221]	c18	N71-27170
POLLACK, J. L. High powered arc electrodes [NASA-CASE-LEW-11162-1]	c33	N74-12913
POLLARD, E. A. Rescue litter flotation assembly Patent [NASA-CASE-XMS-04170]	c05	N71-22748
POLLOCK, G. E. Gas chromatograph injection system [NASA-CASE-ARC-10344-2]	c35	N75-26334
POLSTORFF, H. K. Simulator method and apparatus for practicing the mating of an observer-controlled object with a target [NASA-CASE-MFS-23052-2]	c74	N79-13855
POOL, S. L. Medical subject monitoring systems [NASA-CASE-MSC-14180-1]	c52	N76-14757
POOLE, B. D., JR. Miniature spectrally selective dosimeter [NASA-CASE-LAR-12469-1]	c35	N81-12388
POPE, A. H. Zero gravity separator Patent [NASA-CASE-XLB-00586]	c15	N71-15968
POPE, J. H. Miniature ingestible telemeter devices to measure deep-body temperature [NASA-CASE-ARC-10583-1]	c52	N76-25894
PORE, S. L. Low gravity phase separator [NASA-CASE-MSC-14773-1]	c35	N78-12390
POPICK, H. Laser apparatus for removing material from rotating objects Patent [NASA-CASE-MFS-11279]	c16	N71-20400
POPIBSKI, Z. Automotive absorption air conditioner utilizing solar and motor waste heat [NASA-CASE-NPO-15183]	c44	N80-29843
POPMA, D. C. Recovery of potable water from human wastes in below-G conditions Patent [NASA-CASE-XLA-03213]	c05	N71-11207
PORADEK, J. C. Process for conditioning tanned sharkskin and articles made therefrom Patent [NASA-CASE-XMS-09691-1]	c18	N71-15545
Simultaneous treatment of SO2 containing stack gases and waste water [NASA-CASE-MSC-16258-1]	c45	N79-12584
PORTER, E. E. Spray coating apparatus having a rotatable workpiece holder [NASA-CASE-ARC-11110-1]	c37	N78-32434
PORTER, E. E. Liquid rocket system Patent [NASA-CASE-XNP-00610]	c28	N70-36910
Zero gravity starting means for liquid propellant motors Patent [NASA-CASE-XNP-01390]	c28	N70-41275
Force-balanced, throttle valve Patent [NASA-CASE-NPO-10808]	c15	N71-27432
PORTER, W. A. Apparatus for use in examining the lattice of a semiconductor wafer by X-ray diffraction [NASA-CASE-MFS-23315-1]	c76	N78-24950
PORTNOY, W. A. Insulated electrocardiographic electrodes [NASA-CASE-MSC-14339-1]	c05	N75-24716
POSCHENRIEDER, W. P. Analytical photoionization mass spectrometer with an argon gas filter between the light source and monochrometer Patent [NASA-CASE-LAR-10180-1]	c06	N71-13461
POSEY, D. L. Static pressure orifice system testing method and apparatus [NASA-CASE-LAR-12269-1]	c35	N80-18358
POSHKUS, A. C. An improved synthesis of 2, 4, 8, 10-tetroxaspiro (5.5)undecane [NASA-CASE-ARC-11243-1]	c27	N79-30375
Improved synthesis of polyformals [NASA-CASE-ARC-11244-1]	c27	N79-30376
An improved synthesis of 2,4,8,10-tetroxaspiro (5.5) undecane [NASA-CASE-ARC-11243-2]	c23	N80-31472
POSNER, E. C. Phase-locked loop with sideband rejecting properties Patent [NASA-CASE-XNP-02723]	c07	N70-41680
Data compressor Patent [NASA-CASE-XNP-04067]	c08	N71-22707
Apparatus for deriving synchronizing pulses from pulses in a single channel PCM communications system [NASA-CASE-NPO-11302-1]	c07	N73-13149
Method and apparatus for a single channel digital communications system [NASA-CASE-NPO-11302-2]	c32	N74-10132
POSTMA, E. W. Thrust measurement [NASA-CASE-XMS-05731]	c35	N75-29382
POTATE, W. B. Multiparameter vision testing apparatus [NASA-CASE-MSC-13601-2]	c54	N75-27759
POTTER, A. E., JR. Multispectral imaging system [NASA-CASE-MSC-12404-1]	c23	N73-13661
POTTER, L. B. Thermocouple installation [NASA-CASE-NPO-13540-1]	c35	N77-14409
POTTER, H. H. Method and apparatus for battery charge control Patent [NASA-CASE-IGS-05432]	c03	N71-19438
POTTER, P. D. Cassegrainian antenna subreflector flange for suppressing ground noise Patent [NASA-CASE-XNP-00683]	c09	N70-35425

Dual mode horn antenna Patent [NASA-CASE-XNP-01057]	c07 N71-15907	[NASA-CASE-MSC-14557-1]	c32 N76-16249
Dichroic plate [NASA-CASE-NPO-13506-1]	c35 N76-15435	PROEMSHY, J. H. Method for making a heat insulating and ablative structure [NASA-CASE-XMS-01108]	c15 N69-24322
POUCHOT, W. D. Self-adjusting multisegment, deployable, natural circulation radiator Patent [NASA-CASE-XHQ-03673]	c33 N71-29046	PROFFIT, R. L. Hydrogen fire detection system with logic circuit to analyze the spectrum of temporal variations of the optical spectrum [NASA-CASE-MFS-13130]	c10 N72-17173
POVINELLI, L. A. Burning rate control of solid propellants Patent [NASA-CASE-XLE-03494]	c27 N71-21819	PROGAR, D. J. Process for applying black coating to metals Patent [NASA-CASE-XLA-06199]	c15 N71-24875
POWELL, C. A., JR. Instrument for measuring the dynamic behavior of liquids Patent [NASA-CASE-XLA-05541]	c12 N71-26387	Polyimide adhesives [NASA-CASE-LAR-11397-1]	c27 N75-29263
POWELL, J. A. Process for fabricating SiC semiconductor devices [NASA-CASE-LEW-12094-1]	c76 N76-25049	Polyimide adhesives [NASA-CASE-LAR-12181-1]	c27 N78-17205
POWELL, J. D. Iodine generator for reclaimed water purification [NASA-CASE-MSC-14632-1]	c54 N78-14784	PROK, G. B. Apparatus for making a metal slurry product Patent [NASA-CASE-XLE-00010]	c15 N70-33382
POWELL, W. B. Thermocouple installation [NASA-CASE-NPO-13540-1]	c35 N77-14409	PROKOPIUS, P. B. Flow measuring apparatus [NASA-CASE-LEW-12078-1]	c35 N75-30503
POWELL, W. R., JR. Target acquisition antenna [NASA-CASE-GSC-10064-1]	c10 N72-22235	PRUETT, B. J. Apparatus for testing a pressure responsive instrument Patent [NASA-CASE-XMF-04134]	c14 N71-23755
POWELL, J. L. Ion beam thruster shield [NASA-CASE-LEW-12082-1]	c20 N77-10148	PRUETT, E. C. Satellite retrieval system [NASA-CASE-MFS-25403-1]	c18 N81-24164
POWERS, E. I. Thermal control system for a spacecraft modular housing [NASA-CASE-GSC-11018-1]	c31 N73-36829	PRYOR, D. E. Inflatable transpiration cooled nozzle [NASA-CASE-MFS-20619]	c28 N72-11708
POZSONY, E. R. Apparatus and method for skin packaging articles [NASA-CASE-MFS-20855]	c15 N73-27405	PRYOR, P. P., JR. Computerized system for translating a torch head [NASA-CASE-MFS-23620-1]	c37 N79-10421
PRASTROFEB, W. P. Controlled overspray spray nozzle [NASA-CASE-MFS-25139-1]	c34 N80-20528	PRZYBYSEWSKI, J. S. Method and apparatus for sputtering utilizing an apertured electrode and a pulsed substrate bias [NASA-CASE-LEW-10920-1]	c17 N73-24569
PRESCOTT, W. A. Liquid-gas separation system Patent [NASA-CASE-XMS-01624]	c15 N70-40062	PSARRAS, T. Perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups [NASA-CASE-ARC-11241-1]	c25 N81-14016
PRESLRY, L. L. Measurement of plasma temperature and density using radiation absorption [NASA-CASE-ARC-10598-1]	c75 N74-30156	PUCCHINELLI, A. A. Three-axis controller Patent [NASA-CASE-XAC-01404]	c05 N70-41581
PRESTON, G. H. Electronic checkout system for space vehicles Patent [NASA-CASE-YKS-08012-2]	c31 N71-15566	Transfer valve Patent [NASA-CASE-XAC-01158]	c15 N71-23051
PRESTON, G. H. Satellite communication system Patent [NASA-CASE-INP-02389]	c07 N71-28900	PUCILLO, G. L. Integrated thermoelectric generator/space antenna combination [NASA-CASE-XER-09521]	c09 N72-12136
PRICE, A. G. Attitude sensor [NASA-CASE-LAR-10586-1]	c19 N74-15089	PULLING, B. C. Space suit [NASA-CASE-MSC-12609-1]	c05 N73-32012
PRICE, H. W. Gravity gradient attitude control system Patent [NASA-CASE-GSC-10555-1]	c21 N71-27324	PURCELL, T. H., JR. Electric storage battery [NASA-CASE-NFO-11021]	c03 N72-20032
PRICE, P. Apparatus for establishing flow of a fluid mass having a known velocity [NASA-CASE-MFS-21424-1]	c34 N74-27730	PURGOLD, G. C. Automated syringe sampler [NASA-CASE-LAR-12308-1]	c35 N81-29407
PRICE, S. B. Surface roughness detector Patent [NASA-CASE-XLA-00203]	c14 N70-34161	PUTNAM, D. P. Electrolytic cell structure [NASA-CASE-LAR-11042-1]	c33 N75-27252
PRIDE, J. D., JR. Remote controlled tubular disconnect Patent [NASA-CASE-XLA-01396]	c03 N71-12259		
PRIBBE, G. W. Relief container [NASA-CASE-IMS-06761]	c05 N69-23192		
PRIOLETTI, J. A. Inductive liquid level detection system Patent [NASA-CASE-XLE-01609]	c14 N71-10500		
PRITCHARD, E. B. Orbital and entry tracking accessory for globes [NASA-CASE-LAR-10626-1]	c19 N74-21015		
PRITCHARD, H. O. Reduction of nitric oxide emissions from a combustor [NASA-CASE-ARC-10814-2]	c07 N80-26298		
PROCH, G. E. Digital transmitter for data bus communications system [NASA-CASE-MSC-14558-1]	c32 N75-21486		
Low distortion receiver for bi-level baseband PCM waveforms			
		QUATTRONE, P. D. Exposure system for animals Patent	

[NASA-CASE-XAC-05333] c11 N71-22875  
**QUINN, R. B.**  
 Maser for frequencies in the 7-20 GHz range  
 [NASA-CASE-NPO-11437] c16 N72-28521  
 Dielectric-loaded waveguide circulator for  
 cryogenically cooled and cascaded maser  
 waveguide structures  
 [NASA-CASE-NPO-14254-1] c36 N80-18372  
 Maser amplifier slow wave structure  
 [NASA-CASE-NPO-15211-1] c36 N81-24425

**R**

**RADNOSKY, M. I.**  
 Life raft Patent  
 [NASA-CASE-XMS-00863] c05 N70-34857  
 Shock absorbing support and restraint means Patent  
 [NASA-CASE-XMS-01240] c05 N70-35152  
 Life preserver Patent  
 [NASA-CASE-XMS-00864] c05 N70-36493  
 Inflatable radar reflector unit Patent  
 [NASA-CASE-XMS-00893] c07 N70-40063  
 Life raft stabilizer  
 [NASA-CASE-MSC-12393-1] c02 N73-26006  
 High visibility air sea rescue panel  
 [NASA-CASE-MSC-12564-2] c03 N78-25070

**RAGGIO, C. W., JR.**  
 Steerable solid propellant rocket motor Patent  
 [NASA-CASE-XNP-00234] c28 N70-38645

**RAIBERT, H.**  
 Tactile sensing system  
 [NASA-CASE-NPO-15094-1] c33 N81-16386

**RAINEY, R. W.**  
 High speed flight vehicle control Patent  
 [NASA-CASE-XLA-08967] c02 N71-27088

**RAINWATER, L. L.**  
 Collapsible antenna boom and transmission line  
 Patent  
 [NASA-CASE-MFS-20068] c07 N71-27191

**RANEY, R. L.**  
 Depositing semiconductor films utilizing a  
 thermal gradient  
 [NASA-CASE-XKS-04614] c15 N69-21460  
 Active microwave irises and windows  
 [NASA-CASE-LAR-10513-1] c07 N72-25170  
 Thin film microwave iris  
 [NASA-CASE-LAR-10511-1] c09 N72-25172

**RAMBE, F. B.**  
 Flexible conductive disc electrode Patent  
 [NASA-CASE-FRC-10029] c09 N71-24618  
 Method of removing insulated material from  
 insulated wires  
 [NASA-CASE-FRC-10038] c15 N72-20444  
 Method of making dry electrodes  
 [NASA-CASE-FRC-10029-2] c05 N72-25121

**RAMOHALI, K. B. R.**  
 Silicone containing solid propellant  
 [NASA-CASE-NPO-14477-1] c28 N80-28536

**RANDALL, J. C.**  
 Attitude control for spacecraft Patent  
 [NASA-CASE-XNP-02982] c31 N70-41855

**RANEY, J. P.**  
 Buoyant anti-slosh system Patent  
 [NASA-CASE-XLA-04605] c32 N71-16106

**RAO, D. M.**  
 Aerodynamic side-force alleviator means  
 [NASA-CASE-LAR-12326-1] c02 N81-14968  
 Leading edge vortex flaps for drag reduction  
 [NASA-CASE-LAR-12750-1] c02 N81-19016

**RAPOSA, F. L.**  
 Parasitic suppressing circuit  
 [NASA-CASE-ERC-10403-1] c10 N73-26228  
 Transformer regulated self-stabilizing chopper  
 [NASA-CASE-XGS-09186] c33 N78-17295

**RAPOZA, E. J.**  
 Reversible current control apparatus Patent  
 [NASA-CASE-XLA-09371] c10 N71-16724

**RASMUSSEN, H. P.**  
 Transparent switchboard  
 [NASA-CASE-MSC-13746-1] c10 N73-32143

**RASQUIN, J. R.**  
 Angular measurement system Patent  
 [NASA-CASE-XMF-00447] c14 N70-33179  
 Electro-optical alignment control system Patent  
 [NASA-CASE-XMF-00908] c14 N70-40238  
 Laser coolant and ultraviolet filter  
 [NASA-CASE-MFS-20180] c16 N72-12440  
 Underwater space suit pressure control regulator  
 [NASA-CASE-MFS-20332] c05 N72-20097

Apparatus for making diamonds  
 [NASA-CASE-MFS-20698] c15 N72-20446  
 High temperature furnace for melting  
 materials in space  
 [NASA-CASE-MFS-20710] c11 N72-23215  
 Process for making diamonds  
 [NASA-CASE-MFS-20698-2] c15 N73-19457  
 Underwater space suit pressure control regulator  
 [NASA-CASE-MFS-20332-2] c05 N73-25125  
 Digital computing cardiometer  
 [NASA-CASE-MFS-20284-1] c52 N74-12778

**RASSWILLER, G. G.**  
 Adaptive polarization separation  
 [NASA-CASE-LAR-12196-1] c33 N81-26358

**RATAJCZAK, A. F.**  
 Solar cell shingle  
 [NASA-CASE-LEW-12587-1] c44 N77-31601

**RATCLIFF, L. P.**  
 Latch mechanism  
 [NASA-CASE-MSC-12549-1] c37 N74-27903

**RATZ, T. J.**  
 Method and apparatus for supercooling and  
 solidifying substances  
 [NASA-CASE-MFS-25242-1] c35 N81-24413

**RAVAS, R. J.**  
 Transistor drive regulator Patent  
 [NASA-CASE-LEW-10233] c10 N71-27126

**RAVENHALL, R.**  
 Platform for a swing root turbomachinery blade  
 [NASA-CASE-LEW-12312-1] c07 N77-32148  
 Impact absorbing blade mounts for variable pitch  
 blades  
 [NASA-CASE-LEW-12313-1] c37 N78-10468

**RAWSON, J.**  
 Display research collision warning system  
 [NASA-CASE-HQN-10703] c21 N73-13643

**RAY, W. L.**  
 Remote fire stack igniter  
 [NASA-CASE-MFS-21675-1] c25 N74-33378

**RAYBORE, G., H.**  
 A low energy electron magnetometer  
 [NASA-CASE-LAR-12706-1] c35 N81-19428

**RAYLE, W. D.**  
 Electric propulsion engine test chamber Patent  
 [NASA-CASE-XLE-00252] c11 N70-34844

**READ, F. G.**  
 Backpack carrier Patent  
 [NASA-CASE-LAR-10056] c05 N71-12351

**READ, W. S.**  
 Silent emergency alarm system for schools and  
 the like  
 [NASA-CASE-NPO-11307-1] c10 N73-30205  
 Tool for use in lifting pin supported objects  
 [NASA-CASE-NPO-13157-1] c37 N74-32918

**READER, A. F.**  
 Method and apparatus for making curved  
 reflectors Patent  
 [NASA-CASE-XLE-08917] c15 N71-15597  
 Apparatus for making curved reflectors Patent  
 [NASA-CASE-XLE-08917-2] c15 N71-24836

**READER, P. D.**  
 Ion thruster cathode  
 [NASA-CASE-XLE-07087] c06 N69-39889  
 Electrostatic ion engine having a permanent  
 magnetic circuit Patent  
 [NASA-CASE-XLE-01124] c28 N71-14043  
 Electrostatic ion rocket engine Patent  
 [NASA-CASE-XLE-02066] c28 N71-15661

**REAM, L. W.**  
 Diesel engine catalytic combustor system  
 [NASA-CASE-LEW-12995-1] c37 N80-26659

**RECHTER, H. L.**  
 Lightweight refractory insulation and method of  
 preparing the same Patent  
 [NASA-CASE-XMF-05279] c18 N71-16124

**REDDING, A. H.**  
 Self-adjusting multisegment, deployable, natural  
 circulation radiator Patent  
 [NASA-CASE-XHQ-03673] c33 N71-29046

**REDMON, J. W.**  
 Air bearing assembly for curved surfaces  
 [NASA-CASE-MFS-20423] c15 N72-11388

**REECE, O. Y.**  
 Low temperature flexure fatigue cryostat Patent  
 [NASA-CASE-XMF-02964] c14 N71-17659  
 Horizontal cryostat for fatigue testing Patent  
 [NASA-CASE-XMF-10968] c14 N71-24234  
 Synthesis of superconducting compounds by  
 explosive compaction of powders

[NASA-CASE-MFS-20861-1] c18 N73-32437

REED, A. E.  
High power-high voltage waterload Patent  
[NASA-CASE-XNP-05381] c09 N71-26842

REED, J. H., JR.  
Instrument for use in performing a controlled  
Valsalva maneuver Patent  
[NASA-CASE-XMS-01615] c05 N70-41329

REED, L.  
Method of forming ceramic to metal seal Patent  
[NASA-CASE-XNP-01263-2] c15 N71-26312

REED, B. D.  
Improved Sun-sensing guidance system for  
high-altitude aircraft  
[NASA-CASE-FRC-11052-1] c04 N80-20249  
Method for observing the features characterizing  
the surface of a land mass  
[NASA-CASE-FRC-11013-1] c43 N81-17499

REED, W. A., III  
Decoupler pylon: wing/store flutter suppressor  
[NASA-CASE-LAR-12468-1] c08 N80-22359

REED, W. H., III  
Test unit free-flight suspension system Patent  
[NASA-CASE-XLA-00939] c11 N71-15926  
Viscous-pendulum-damper Patent  
[NASA-CASE-XLA-02079] c12 N71-16894  
Viscous pendulum damper Patent  
[NASA-CASE-LAR-10274-1] c14 N71-17626  
Suspended mass impact damper Patent  
[NASA-CASE-LAR-10193-1] c15 N71-27146

REESE, P. B.  
Pressure limiting propellant actuating system  
[NASA-CASE-MSC-18179-1] c20 N80-18097

REGNIER, W. W.  
Passive propellant system  
[NASA-CASE-MFS-23642-2] c20 N78-27176  
Passive propellant system  
[NASA-CASE-MFS-23642-1] c20 N80-10278

REHAGE, J. R.  
Pulse counting circuit which simultaneously  
indicates the occurrence of the nth pulse Patent  
[NASA-CASE-XMP-00906] c09 N70-41655

REIBER, J. H. C.  
Contour detector and data acquisition system for  
the left ventricular outline  
[NASA-CASE-ARC-10985-1] c52 N79-10724

REID, H. J. E., JR.  
Dynamic precession damper for spin stabilized  
vehicles Patent  
[NASA-CASE-XLA-01989] c21 N70-34295  
Attitude orientation of spin-stabilized space  
vehicles Patent  
[NASA-CASE-XLA-00281] c21 N70-36943

REID, H., JR.  
Pulse width inverter Patent  
[NASA-CASE-MFS-10068] c10 N71-25139  
Induction motor control system with voltage  
controlled oscillator circuit  
[NASA-CASE-MFS-21465-1] c10 N73-32145  
Coal-shale interface detection system  
[NASA-CASE-MFS-23720-2] c43 N80-14423  
Coal-shale interface detector  
[NASA-CASE-MFS-23720-1] c43 N80-23711

REID, H. A.  
Zirconium carbide as an electrocatalyst for the  
chromous/chromic redox couple  
[NASA-CASE-LEW-13246-1] c25 N81-26203

REID, H. S.  
Conical scan tracking system employing a large  
antenna  
[NASA-CASE-NPO-14009-1] c32 N79-13214

REID, H.  
Spacecraft docking and alignment system  
[NASA-CASE-MSC-12559-1] c18 N76-14186

REID, W. J.  
Digital frequency discriminator Patent  
[NASA-CASE-MFS-14322] c08 N71-18692

REILLY, M. B.  
Satellite personal communications system  
[NASA-CASE-NPO-14480-1] c32 N80-20448

REILLY, T. H.  
Medical diagnosis system and method with  
multispectral imaging  
[NASA-CASE-NPO-14402-1] c52 N81-27783

REINHARDT, G.  
Gas purged dry box glove Patent  
[NASA-CASE-XLR-02531] c05 N71-23080

REINHARDT, V. S.  
Time domain phase measuring apparatus  
[NASA-CASE-GSC-12228-1] c33 N79-10338  
External bulb variable volume maser  
[NASA-CASE-GSC-12334-1] c36 N79-14362  
High stability buffered phase comparator  
[NASA-CASE-GSC-12645-1] c33 N81-31482  
High stability amplifier  
[NASA-CASE-GSC-12646-1] c33 N81-32391

REINHOLD, H. W.  
Circuit breaker utilizing magnetic latching  
relays Patent  
[NASA-CASE-MSC-11277] c09 N71-29008

REINISCH, E. F.  
Ultraviolet and thermally stable polymer  
compositions  
[NASA-CASE-ARC-10592-1] c27 N74-21156  
Ultraviolet and thermally stable polymer  
compositions  
[NASA-CASE-ARC-10592-2] c27 N76-32315

REINITZ, K.  
Extended area semiconductor radiation detectors  
and a novel readout arrangement Patent  
[NASA-CASE-IGS-03230] c14 N71-23401

REISS, D. A.  
Method and apparatus for shaping and enhancing  
acoustical levitation forces  
[NASA-CASE-MFS-25050-1] c71 N81-15767

REIBAU, A.  
Method of using photovoltaic cell using  
poly-N-vinylcarbazole complex Patent  
[NASA-CASE-NPO-10373] c03 N71-18698  
Dicyanoacetylene polymers Patent  
[NASA-CASE-XNP-03250] c06 N71-23500  
Heat detection and compositions and devices  
therefor  
[NASA-CASE-NPO-10764-1] c14 N73-14428  
Preparation of alkali metal dispersions  
[NASA-CASE-XNP-08876] c17 N73-28573  
Heat detection and compositions and devices  
therefor  
[NASA-CASE-NPO-10764-2] c35 N75-25122  
Durable antistatic coating for  
polymethylmethacrylate  
[NASA-CASE-NPO-13867-1] c27 N78-14164  
Nuclear alkylated pyridine aldehyde polymers and  
conductive compositions thereof  
[NASA-CASE-NPO-10557] c27 N78-17214  
Pressure transducer  
[NASA-CASE-NPO-11150] c35 N78-17359  
Membrane consisting of polyquaternary amine ion  
exchange polymer network interpenetrating the  
chains of thermoplastic matrix polymer  
[NASA-CASE-NPO-14001-1] c27 N81-14076  
Viscoelastic cationic polymers containing the  
urethane linkage  
[NASA-CASE-NPO-10830-1] c27 N81-15104  
Insoluble polyelectrolyte and ion-exchange  
hollow fiber impregnated therewith  
[NASA-CASE-NPO-13530-1] c25 N81-17187  
Ion-exchange hollow fibers  
[NASA-CASE-NPO-13309-1] c25 N81-19244

REMPER, B. C.  
Optically pumped resonance magnetometer for  
determining vectoral components in a spatial  
coordinate system Patent  
[NASA-CASE-IGS-04879] c14 N71-20428

REMPFER, P. S.  
Aircraft control system  
[NASA-CASE-ERC-10439] c02 N73-19004

RENNER, W.  
Bacteria detection instrument and method  
[NASA-CASE-GSC-11533-1] c14 N73-13435

RENNIE, P. A.  
Automated clinical system for chromosome analysis  
[NASA-CASE-NPO-13913-1] c52 N79-12694

RESWICK, J. B.  
Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c52 N79-26772

REYNOLDS, H. I.  
Edge coating of flat wires  
[NASA-CASE-XMP-05757-1] c31 N79-21227

REYNOLDS, J. H.  
Device and method for determining X ray  
reflection efficiency of optical surfaces  
[NASA-CASE-MFS-20243] c23 N73-13662

REYNOLDS, R. K.  
Hydrogen-fueled engine  
[NASA-CASE-NPO-13763-1] c44 N78-33526

REYNOLDS, W. E.  
Circuit breaker utilizing magnetic latching



relays Patent  
[NASA-CASE-HSC-11277] c09 N71-29008

RHEIN, R. A.  
Curable liquid hydrocarbon prepolymers  
containing hydroxyl groups and process for  
producing same  
[NASA-CASE-NPO-13137-1] c27 N80-32514  
Prepolymer dianhydrides  
[NASA-CASE-NPO-13899-1] c27 N80-32515

RHO, J. H.  
Automated fluid chemical analyzer Patent  
[NASA-CASE-INP-09451] c06 N71-26754

RHODES, D. B.  
Optical scanner  
[NASA-CASE-LAR-11711-1] c74 N78-17866  
Scanning afocal laser velocimeter projection  
lens system  
[NASA-CASE-LAR-12328-1] c74 N80-12866

RHODES, L. L.  
Latching mechanism Patent  
[NASA-CASE-HSC-15474-1] c15 N71-26162

RHODES, M. D.  
Composite sandwich lattice structure  
[NASA-CASE-LAR-11898-1] c24 N78-10214  
Method of making a composite sandwich lattice  
structure  
[NASA-CASE-LAR-11898-2] c24 N78-17149

RHODES, P. H.  
Electrophoresis device  
[NASA-CASE-HFS-25426-1] c25 N81-29179

RIAZ, M.  
Constant frequency output two stage induction  
machine systems Patent  
[NASA-CASE-ERC-10065] c09 N71-27364

RIBARICH, J. J.  
Guidance and maneuver analyzer Patent  
[NASA-CASE-INP-09572] c14 N71-15621

RICCITELLO, S. E.  
Polymeric foams from cross-linkable  
poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c27 N78-31232

RICCITELLO, S. E.  
Modified polyurethane foams for fuel-fire Patent  
[NASA-CASE-ARC-10098-1] c06 N71-24739  
Flexible fire retardant foam  
[NASA-CASE-ARC-10180-1] c28 N72-20767  
Intumescent composition, foamed product prepared  
therewith, and process for making same  
[NASA-CASE-ARC-10304-1] c18 N73-26572  
Flexible fire retardant polyisocyanate modified  
neoprene foam  
[NASA-CASE-ARC-10180-1] c27 N74-12814  
Intumescent composition, foamed product prepared  
therewith and process for making same  
[NASA-CASE-ARC-10304-2] c27 N74-27037  
Intumescent coatings containing  
4,4'-dinitrosulfanilide  
[NASA-CASE-ARC-11042-1] c24 N78-14096  
Intumescent-ablator coatings using endothermic  
fillers  
[NASA-CASE-ARC-11043-1] c24 N78-27180  
Ambient cure polyimide foams  
[NASA-CASE-ARC-11170-1] c27 N79-11215  
Fire protection covering for small diameter  
missiles  
[NASA-CASE-ARC-11104-1] c15 N79-26100  
Catalysts for polyimide foams from aromatic  
isocyanates and aromatic dianhydrides  
[NASA-CASE-ARC-11107-1] c25 N80-16116

RICE, R. F.  
Data compression system  
[NASA-CASE-NPO-11243] c07 N72-20154  
Space communication system for compressed data  
with a concatenated Reed-Solomon-Viterbi  
coding channel  
[NASA-CASE-NPO-13545-1] c32 N77-12240

RICE, R. R.  
Cryogenic storage system Patent  
[NASA-CASE-XMS-04390] c31 N70-41871

RICE, R. B.  
Extrusion can  
[NASA-CASE-NPO-10812] c15 N73-13464

RICE, S. H.  
Method of treating the surface of a glass member  
[NASA-CASE-GSC-12110-1] c27 N77-32308  
Method of forming a sharp edge on an optical  
device  
[NASA-CASE-GSC-12348-1] c74 N80-24149

Method for milling and drilling glass  
[NASA-CASE-GSC-12636-1] c37 N80-29705

RICE, W. J.  
Indicated mean-effective pressure instrument  
[NASA-CASE-LEW-12661-1] c35 N79-14345

RICH, E., JR.  
Bacterial contamination monitor  
[NASA-CASE-GSC-10879-1] c14 N72-25413  
Protein sterilization method of firefly  
luciferase using reduced pressure and  
molecular sieves  
[NASA-CASE-GSC-10225-1] c06 N73-27086

RICHARD, C. E.  
Low cycle fatigue testing machine  
[NASA-CASE-LAR-10270-1] c32 N72-25877

RICHARD, R. B.  
Angular accelerometer Patent  
[NASA-CASE-XMS-05936] c14 N70-41682

RICHARDS, R. B.  
Method for detecting pollutants  
[NASA-CASE-LAR-11405-1] c45 N76-31714

RICHARDS, W. E.  
Method and apparatus for optical modulating a  
light signal Patent  
[NASA-CASE-GSC-10216-1] c23 N71-26722

RICHARDSON, E. W.  
Method for measuring cutaneous sensory perception  
[NASA-CASE-HSC-13609-1] c05 N72-25122

RICHLEY, E. A.  
Rocket engine Patent  
[NASA-CASE-ILE-00342] c28 N70-37980

RICHMOND, J. C.  
Ellipsoidal mirror reflectometer including means  
for averaging the radiation reflected from the  
sample Patent  
[NASA-CASE-XGS-05291] c23 N71-16341

RICHTER, C. G.  
Formed metal ribbon wrap Patent  
[NASA-CASE-ILE-00164] c15 N70-36411

RICHTER, H. L.  
Reversible motion drive system Patent  
[NASA-CASE-NFO-10173] c15 N71-24696

RICHTER, I. A.  
Dual digital video switcher  
[NASA-CASE-KSC-10782-1] c33 N75-30431

RICHTER, B.  
An improved solid electrolyte cell  
[NASA-CASE-NPO-15269-1] c33 N81-16385

RICKETTS, R. H.  
Aeroelastic instability stoppers for wind-tunnel  
models  
[NASA-CASE-LAR-12720-1] c09 N81-31229  
Aeroelastic instability stoppers for wind-tunnel  
models  
[NASA-CASE-LAR-12458-1] c09 N81-31230

RIEBB, J. H.  
Landing arrangement for aerial vehicles Patent  
[NASA-CASE-ILA-00142] c02 N70-33286  
Jet aircraft configuration Patent  
[NASA-CASE-XLA-00087] c02 N70-33332  
Landing arrangement for aerial vehicle Patent  
[NASA-CASE-ILA-00806] c02 N70-34858  
Landing arrangement for aerospace vehicle Patent  
[NASA-CASE-ILA-00805] c31 N70-38010  
Control system for rocket vehicles Patent  
[NASA-CASE-ILA-01163] c21 N71-15582

RIEBLING, R. W.  
Force-balanced, throttle valve Patent  
[NASA-CASE-NPO-10808] c15 N71-27432  
Bipropellant injector  
[NASA-CASE-INP-09461] c28 N72-23809

RIEKER, L. L.  
Cross-linked polyvinyl alcohol and method of  
making same  
[NASA-CASE-LEW-13504-1] c27 N81-27279

RILEY, J. F.  
Compact solar still Patent  
[NASA-CASE-XMS-04533] c15 N71-23086

RILEY, T. J.  
Nickel-base alloy Patent  
[NASA-CASE-ILE-00283] c17 N70-36616

RINHARD, G. A.  
Tumbler system to provide random motion  
[NASA-CASE-XGS-02437] c15 N69-21472

RINDNER, W.  
Voltage tunable Gunn-type microwave generator  
Patent  
[NASA-CASE-XER-07894] c09 N71-18721

Transverse piezoresistance and pinch effect electromechanical transducers Patent [NASA-CASE-ERC-10088] c26 N71-25490

Pressure sensitive transducers Patent [NASA-CASE-ERC-10087] c14 N71-27334

Gunn-type solid state devices [NASA-CASE-YER-07895] c26 N72-25679

Electricity measurement devices employing liquid crystalline materials [NASA-CASE-ERC-10275] c26 N72-25680

Semiconductor transducer device [NASA-CASE-ERC-10087-2] c14 N72-31446

RINEHART, D.  
Space suit [NASA-CASE-MSC-12609-1] c05 N73-32012

RINGELMAN, J. F.  
Regulated power supply Patent [NASA-CASE-YMS-01991] c09 N71-21449

RIPPI, R. B.  
Linear phase demodulator including a phase locked loop with auxiliary feedback loop [NASA-CASE-GSC-12018-1] c33 N77-14334

RITCHIE, D. G.  
Soil particles separator, collector and viewer Patent [NASA-CASE-INP-09770] c15 N71-20440

Material handling device Patent [NASA-CASE-INP-09770-3] c11 N71-27036

Screen particle separator [NASA-CASE-INP-09770-2] c15 N72-22483

RITCHIE, D. W.  
Solar battery with interconnecting means for plural cells Patent [NASA-CASE-INP-06506] c03 N71-11050

RITCHIE, V. S.  
Aerodynamic measuring device Patent [NASA-CASE-XLA-00481] c14 N70-36824

Check valve assembly for a probe Patent [NASA-CASE-XLA-00128] c15 N70-37925

RITTER, D. L.  
Foldable construction block [NASA-CASE-MSC-12233-2] c32 N73-13921

RLOFF, K. L.  
Dual wavelength scanning Doppler velocimeter [NASA-CASE-ARC-10637-1] c35 N75-16783

ROACH, J. E.  
Casting propellant in rocket engine [NASA-CASE-LAR-11995-1] c28 N77-10213

ROBBINS, H. J.  
Attitude control system for sounding rockets Patent [NASA-CASE-XGS-01654] c31 N71-24750

ROBELEN, D. B.  
Deploy/release system [NASA-CASE-LAR-11575-1] c02 N76-16014

ROBERTS, D. B.  
Apparatus for testing wiring harness by vibration generating means [NASA-CASE-MSC-15158-1] c14 N72-17325

ROBERTS, D. L.  
Laser apparatus for removing material from rotating objects Patent [NASA-CASE-MFS-11279] c16 N71-20400

ROBERTS, E. J.  
Cryogenic feedthrough [NASA-CASE-LAR-10031] c15 N72-22484

ROBERTS, M. L.  
Stainless steel panel for selective absorption of solar energy and the method of producing said panel [NASA-CASE-MFS-23518-2] c44 N77-31611

Method for making an aluminum or copper substrate panel for selective absorption of solar energy [NASA-CASE-MFS-23518-1] c44 N79-11469

Aluminum or copper substrate panel for selective absorption of solar energy [NASA-CASE-MFS-23518-3] c44 N80-16452

ROBERTS, V. W.  
Silent emergency alarm system for schools and the like [NASA-CASE-NPO-11307-1] c10 N73-30205

ROBERTSON, A. J.  
Aircraft control system [NASA-CASE-ERC-10439] c02 N73-15004

ROBERTSON, J. B.  
High field CdS detector for infrared radiation [NASA-CASE-LAR-11027-1] c35 N74-18088

ROBERTSON, K. B., III  
Satellite retrieval system [NASA-CASE-MFS-25403-1] c18 N81-24164

ROBERTSON, W. L.  
Two-axis controller Patent [NASA-CASE-XFR-04104] c03 N70-42073

ROBILLARD, G.  
Apparatus and method for control of a solid fueled rocket vehicle Patent [NASA-CASE-INP-00217] c28 N70-38181

ROBINS, A. H.  
Supersonic aircraft Patent [NASA-CASE-XLA-04451] c02 N71-12243

ROBINSON, G. P.  
Heat flux sensor assembly [NASA-CASE-YMS-05909-1] c14 N69-27459

ROBINSON, M.  
Solid state chemical source for ammonia beam maser Patent [NASA-CASE-IGS-01504] c16 N70-41578

ROBINSON, M. B.  
Method and apparatus for supercooling and solidifying substances [NASA-CASE-MFS-25242-1] c35 N81-24413

ROBINSON, R. K.  
Fuselage structure using advanced technology metal matrix fiber reinforced composites [NASA-CASE-LAR-11688-1] c05 N78-18045

ROBINSON, W. J., JR.  
Microwave power transmission system wherein level of transmitted power is controlled by reflections from receiver [NASA-CASE-MFS-21470-1] c44 N74-19870

ROBSON, P. B.  
Traveling wave solid state amplifier utilizing a semiconductor with negative differential mobility [NASA-CASE-HCN-10069] c33 N75-27251

ROCHOW, S. E.  
Hydroxy terminated perfluoro ethers Patent [NASA-CASE-NFO-10768] c06 N71-27254

Perfluoro polyether acyl fluorides [NASA-CASE-NFO-10765] c06 N72-20121

Polyurethane resins from hydroxy terminated perfluoro ethers [NASA-CASE-NFO-10768-2] c06 N72-27144

Highly fluorinated polyurethanes [NASA-CASE-NFO-10767-2] c06 N72-27151

Highly fluorinated polyurethanes [NASA-CASE-NFO-10767-1] c06 N73-33076

RODNER, W. H.  
Solar cell mounting Patent [NASA-CASE-INP-00826] c03 N71-20895

RODRIGUEZ, G. B.  
Buck/boost regulator [NASA-CASE-GSC-12360-1] c33 N81-19392

ROEDER, E. E.  
Brazing alloy binder [NASA-CASE-INP-05868] c26 N75-27125

Brazing alloy composition [NASA-CASE-INP-06053] c26 N75-27126

Brazing alloy [NASA-CASE-INP-03878] c26 N75-27127

ROESKE, P. W.  
Inductive liquid level detection system Patent [NASA-CASE-XLB-01609] c14 N71-10500

ROGALLO, F. H.  
Aeroflexible structures [NASA-CASE-XLA-06095] c01 N69-39981

Jet aircraft configuration Patent [NASA-CASE-XLA-00087] c02 N70-33332

Control for flexible parawing Patent [NASA-CASE-XLA-06958] c02 N71-11038

ROGALLO, V. L.  
Propeller blade loading control Patent [NASA-CASE-XAC-00139] c02 N70-34856

Null-type vacuum microbalance Patent [NASA-CASE-XAC-00472] c15 N70-40180

Thermo-protective device for balances Patent [NASA-CASE-XAC-00648] c14 N70-40400

Force transducer Patent [NASA-CASE-XAC-01101] c14 N70-41957

ROGERS, F. O.  
Synthesis of zinc titanate pigment and coatings containing the same [NASA-CASE-MFS-13532] c18 N72-17532

ROGERS, J. B.  
Pneumatic load compensating or controlling system [NASA-CASE-ARC-10907-1] c37 N75-32465

Smoke generator  
[NASA-CASE-ARC-10905-1] c37 N77-13418

ROGOWSKI, R. S.  
Method for detecting pollutants  
[NASA-CASE-LAR-11405-1] c45 N76-31714

Thermoluminescent aerosol analysis  
[NASA-CASE-LAR-12046-1] c25 N78-15210

ROLF, E.  
Laser Doppler system for measuring three dimensional vector velocity Patent  
[NASA-CASE-MFS-20386] c21 N71-15212

ROLIK, G. P.  
Solar cell panels with light transmitting plate  
[NASA-CASE-NPO-10747] c03 N72-22042

ROLLER, R. P.  
Demodulator for carrier transducers  
[NASA-CASE-NUC-10107-1] c33 N74-17930

ROLLINS, G. H.  
System for calibrating pressure transducer  
[NASA-CASE-LAR-10910-1] c35 N74-13132

ROLLINS, J. B.  
Externally supported internally stabilized flexible duct joint  
[NASA-CASE-MFS-19194-1] c37 N76-14460

ROM, P. E.  
Gas core nuclear reactor Patent  
[NASA-CASE-LEW-10250-1] c22 N71-2E759

ROMAN, J. A.  
Biomedical electrode arrangement Patent  
[NASA-CASE-XFR-10856] c05 N71-11189

Method and apparatus for attaching physiological monitoring electrodes Patent  
[NASA-CASE-XFR-07658-1] c05 N71-26293

Gas low pressure low flow rate metering system Patent  
[NASA-CASE-FRC-10022] c12 N71-26546

Respiration monitor  
[NASA-CASE-FRC-10012] c14 N72-17329

ROMAN, R. F.  
Hydrogen hollow cathode ion source  
[NASA-CASE-LEW-12940-1] c72 N80-33186

ROMANCZYK, K. C.  
Fringe counter for interferometers Patent  
[NASA-CASE-LAR-10204] c14 N71-27215

ROMMEL, M. A.  
Hydrogen leak detection device Patent  
[NASA-CASE-MFS-11537] c14 N71-20442

ROMVARY, E., JR.  
Intermittent type silica gel adsorption refrigerator Patent  
[NASA-CASE-XNP-00920] c15 N71-15906

RONEY, B. B.  
Evacuation valve  
[NASA-CASE-LAR-10061-1] c15 N72-31483

ROOT, G. L.  
Valve seat  
[NASA-CASE-NPO-10606] c15 N72-25451

ROSALES, L. A.  
Control valve and co-axial variable injector Patent  
[NASA-CASE-XNP-09702] c15 N71-17654

Multiple orifice throttle valve Patent  
[NASA-CASE-XNP-09698] c15 N71-18580

ROSE, S. D.  
Coal-rock interface detector  
[NASA-CASE-MFS-23725-1] c43 N79-31706

ROSEN, H. A.  
Varactor high level mixer  
[NASA-CASE-IGS-02171] c09 N69-24324

Apparatus for changing the orientation and velocity of a spinning body traversing a path Patent  
[NASA-CASE-HQN-00936] c31 N71-29050

ROSEN, L.  
Focused image holography with extended sources Patent  
[NASA-CASE-ERC-10019] c16 N71-15551

Recording and reconstructing focused image holograms Patent  
[NASA-CASE-ERC-10017] c16 N71-15567

Method and means for recording and reconstructing holograms without use of a reference beam Patent  
[NASA-CASE-ERC-10020] c16 N71-2E154

ROSENBAUM, B. J.  
Flow test device  
[NASA-CASE-XMS-04917] c14 N69-24257

ROSENBLUM, L.  
Split welding chamber Patent  
[NASA-CASE-LEW-11531] c15 N71-14932

Analytical test apparatus and method for determining oxide content of alkali metal Patent  
[NASA-CASE-XLE-01997] c06 N71-23527

ROSENGREN, L. G.  
Method and apparatus for background signal reduction in opto-acoustic absorption measurement  
[NASA-CASE-NPO-13683-1] c35 N77-14411

ROSIER, W. B.  
Portable device for use in starting air-start-units for aircraft and having cable lead testing capability  
[NASA-CASE-FRC-10113-1] c33 N80-26599

ROSH, A. D.  
Zero gravity separator Patent  
[NASA-CASE-XLE-00586] c15 N71-15968

ROSH, S.  
Wide angle long eye relief eyepiece Patent  
[NASA-CASE-XMS-06056-1] c23 N71-24857

Hitchey-Chretien Telescope  
[NASA-CASE-GSC-11487-1] c14 N73-30393

ROSINSKI, W. K.  
Adjustable force probe  
[NASA-CASE-MFS-20760] c14 N72-33377

ROSITANO, S. A.  
Visual examination apparatus  
[NASA-CASE-ARC-10329-1] c05 N73-26072

Visual examination apparatus  
[US-PATENT-RE-28,921] c52 N76-30793

ROSS, L. O.  
Preparation of heterocyclic block copolymer omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c27 N79-22300

ROSSEN, R. W.  
Polyimide foam for the thermal insulation and fire protection  
[NASA-CASE-ARC-10464-1] c27 N74-12812

Fiber modified polyurethane foam for ballistic protection  
[NASA-CASE-ARC-10714-1] c27 N76-15310

Synthesis of multifunction triaryltrifluoroethanes  
[NASA-CASE-ARC-11097-1] c23 N78-22154

Synthesis of multifunction triaryltrifluoroethanes  
[NASA-CASE-ARC-11097-2] c23 N78-22155

Preparation of heterocyclic block copolymer omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c27 N79-22300

Preparation of perfluorinated imidoamidoximes  
[NASA-CASE-ARC-11267-1] c23 N80-26386

Preparation of perfluorinated 1,2,4-oxadiazoles  
[NASA-CASE-ARC-11267-2] c25 N80-26407

Perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups  
[NASA-CASE-ARC-11241-1] c25 N81-14016

Process for the preparation of fluorine containing crosslinked elastomeric polytriazine and product so produced  
[NASA-CASE-ARC-11248-1] c27 N81-17259

The 1,2,4-oxadiazole elastomers  
[NASA-CASE-ARC-11253-1] c27 N81-17262

Bifunctional monomers having terminal oxime and cyano or amidine groups  
[NASA-CASE-ARC-11253-3] c27 N81-24256

ROSSI, B. B.  
X-ray reflection collimator adapted to focus X-radiation directly on a detector Patent  
[NASA-CASE-XHQ-04106] c14 N70-40240

ROSSON, V. J.  
Apparatus for measuring conductivity and velocity of plasma utilizing a plurality of sensing coils positioned in the plasma Patent  
[NASA-CASE-XAC-05695] c25 N71-16073

ROTH, H.  
Voltage tunable Gunn-type microwave generator Patent  
[NASA-CASE-XER-07894] c09 N71-18721

Gunn-type solid state devices  
[NASA-CASE-XER-07895] c26 N72-25679

ROTHMAN, A.  
Supporting and protecting device Patent  
[NASA-CASE-XMP-00580] c11 N70-35383

ROUDEBUSH, W. H.  
Gas turbine combustor Patent  
[NASA-CASE-LEW-10286-1] c28 N71-28915

BOUGHTON, H. A.  
Method and apparatus for vibration analysis utilizing the Mossbauer effect  
[NASA-CASE-XMP-05882] c35 N75-27329

ROUSEY, H. J.  
System for generating timing and control signals  
[NASA-CASE-NPO-13125-1] c33 N75-19519

ROUTH, D. E.  
Multilevel metallization method for fabricating  
a metal oxide semiconductor device  
[NASA-CASE-MFS-23541-1] c76 N75-14906  
Method of construction of a multi-cell solar array  
[NASA-CASE-MFS-23540-1] c44 N79-26475

ROUZZE, L. E.  
Segmented superconducting magnet for a broadband  
traveling wave maser Patent  
[NASA-CASE-IGS-10518] c16 N71-26554

ROWE, H. E.  
Dually mode locked Nd:YAG laser  
[NASA-CASE-GSC-11746-1] c36 N75-15654

ROWLAND, C. W.  
Apparatus for ejection of an instrument cover  
[NASA-CASE-XMP-04132] c15 N69-27502  
Laser communication system for controlling  
several functions at a location remote to the  
laser  
[NASA-CASE-LAR-10311-1] c16 N73-16536

ROWLEY, P. D.  
Measurement of plasma temperature and density  
using radiation absorption  
[NASA-CASE-ARC-10598-1] c75 N74-30156

ROY, H. L.  
Cosmic dust analyzer  
[NASA-CASE-MSC-13802-2] c35 N76-15431  
Particle parameter analyzing system  
[NASA-CASE-XLB-06694] c33 N78-17293  
Apparatus for handling micron size range  
particulate material  
[NASA-CASE-NPO-10151] c37 N78-17386

ROY, U.  
Synthesis of superconducting compounds by  
explosive compaction of powders  
[NASA-CASE-MFS-20861-1] c18 N73-32437

ROZAS, P.  
Doppler radar having phase modulation of both  
transmitted and reflected return signals  
[NASA-CASE-MSC-16675-1] c32 N81-29312

ROBERT, K. F.  
Method of obtaining permanent record of surface  
flow phenomena Patent  
[NASA-CASE-XLA-01353] c14 N70-41366  
Quick release connector Patent  
[NASA-CASE-XLA-01141] c15 N71-13789

RUBIN, B.  
Process for the preparation of brushite crystals  
[NASA-CASE-BRC-10338] c04 N72-33072

RUBIN, D. C.  
Electricity measurement devices employing liquid  
crystalline materials  
[NASA-CASE-BRC-10275] c26 N72-25680

RUBIN, I.  
Hexagon solar power panel  
[NASA-CASE-NPO-12148-1] c44 N78-27515

RUDDOCK, K. A.  
Optically pumped resonance magnetometer for  
determining vectoral components in a spatial  
coordinate system Patent  
[NASA-CASE-IGS-04879] c14 N71-20428

RUDERMAN, I. W.  
Metabolic rate meter and method  
[NASA-CASE-MSC-12239-1] c52 N79-21750

RUDMAN, A. A.  
Coupling device for moving vehicles  
[NASA-CASE-GSC-12322-1] c37 N80-14398  
Device for coupling a first vehicle to a second  
vehicle  
[NASA-CASE-GSC-12429-1] c37 N81-14320

RUDNICK, I.  
Acoustic driving of rotor  
[NASA-CASE-NPO-14005-1] c71 N79-20827

RUEHR, W. C.  
Curved centerline air intake for a gas turbine  
engine  
[NASA-CASE-LRW-13201-1] c07 N81-14999

RUEHR, L. E.  
Determining distance to lightning strokes from a  
single station  
[NASA-CASE-KSC-10698] c07 N73-20175  
Rocket borne instrument to measure electric  
fields inside electrified clouds  
[NASA-CASE-KSC-10730-1] c14 N73-32318

RUIZ, W. V.  
Precision heat forming of tetrafluoroethylene  
tubing  
[NASA-CASE-MSC-18430-1] c31 N80-17292

RUMBLE, C. V.  
Means for accommodating large overstrain in lead  
wires  
[NASA-CASE-LAR-10168-1] c33 N74-22865

RUMMEL, J. A.  
Metabolic analyzer  
[NASA-CASE-MFS-21415-1] c52 N74-20728

RUMBLE, D. B.  
Automatic force measuring system Patent  
[NASA-CASE-XLA-02605] c14 N71-10773  
Low mass truss structure  
[NASA-CASE-LAR-10546-1] c11 N72-25287

RUNDELL, D. J.  
Variable mixer propulsion cycle  
[NASA-CASE-LRW-12917-1] c07 N78-18067

RUPE, J. E.  
Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-1] c37 N76-16446  
System for minimizing internal combustion engine  
pollution emission  
[NASA-CASE-NPO-13402-1] c37 N76-18457  
Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-2] c44 N76-29700

RUPNIK, D. B.  
Switching circuit Patent  
[NASA-CASE-YNP-06505] c10 N71-24799

RUPP, C. C.  
Attitude control system  
[NASA-CASE-MFS-22787-1] c15 N77-10113  
Tetherline system for orbiting satellites  
[NASA-CASE-MFS-23564-1] c15 N78-25119

RUPPE, E. F.  
Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c26 N80-28492

RUSSELL, C. H.  
Analog to digital converter tester Patent  
[NASA-CASE-XLA-06713] c14 N71-28991

RUSSELL, G. B.  
Inert gas metallic vapor laser  
[NASA-CASE-NPO-13449-1] c36 N75-32441  
Isotope separation using metallic vapor lasers  
[NASA-CASE-NPO-13550-1] c36 N77-26477

RUSSELL, J. H., III  
Event recorder Patent  
[NASA-CASE-XLA-01832] c14 N71-21006  
Ablation sensor Patent  
[NASA-CASE-XLA-01791] c14 N71-22991

RUSSELL, L. D.  
High intensity radiant energy pulse source  
having means for opening shutter when light  
flux has reached a desired level  
[NASA-CASE-ARC-10178-1] c09 N72-17152  
Thermoelectric radiometer utilizing polymer film  
[NASA-CASE-ARC-10138-1] c14 N72-24477

RUSSELL, W. E.  
Method and apparatus for making curved  
reflectors Patent  
[NASA-CASE-XLE-08917] c15 N71-15597  
Apparatus for making curved reflectors Patent  
[NASA-CASE-XLE-08917-2] c15 N71-24836

RUST, R.  
Solenoid construction Patent  
[NASA-CASE-XNP-01951] c09 N70-41929

RYAN, C. B.  
Quadrature demodulation  
[NASA-CASE-GSC-12137-1] c33 N78-32338

RYAN, P. B.  
Solar photolysis of water  
[NASA-CASE-NPO-13675-1] c44 N77-32580  
Solar photolysis of water  
[NASA-CASE-NPO-14126-1] c44 N79-11470  
Continuous coal processing method  
[NASA-CASE-NPO-13758-2] c31 N81-15154

## S

SABAROFF, S.  
Broadband frequency discriminator Patent  
[NASA-CASE-NPO-10096] c07 N71-24583  
Systems and methods for determining radio  
frequency interference  
[NASA-CASE-GSC-12150-1] c32 N79-11265

SABELMAN, E. E.  
Pump for delivering heated fluids  
[NASA-CASE-NPO-11417] c15 N73-24513  
Ferofluidic solenoid  
[NASA-CASE-NPO-11738-1] c09 N73-30185

SABOL, A. P.  
Crossed-field MHD plasma generator/ accelerator Patent  
[NASA-CASE-XLA-03374] c25 N71-15562  
Self-repeating plasma generator having communicating annular and linear arc discharge passages Patent  
[NASA-CASE-XLA-03103] c25 N71-21693  
Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds  
[NASA-CASE-LAR-10612-1] c12 N73-26144  
Heat exchanger system and method  
[NASA-CASE-LAR-10799-2] c34 N76-17317  
Solar hydrogen generator  
[NASA-CASE-LAR-11361-1] c44 N77-22607

SACKS, B. H.  
Magnetically actuated tuning method for Gunn oscillators  
[NASA-CASE-NPO-12106] c09 N73-15235

SADHUKHAN, P.  
Process for preparing higher oxides of the alkali and alkaline earth metals  
[NASA-CASE-ARC-16992-1] c26 N78-32229

SAFFREN, M. M.  
Material suspension within an acoustically excited resonant chamber  
[NASA-CASE-NPO-13263-1] c12 N75-24774  
Heat operated cryogenic electrical generator  
[NASA-CASE-NPO-13303-1] c20 N75-24837  
Doped Josephson tunneling junction for use in a sensitive IR detector  
[NASA-CASE-NPO-13348-1] c33 N75-31332  
Magnetometer using superconducting rotating body  
[NASA-CASE-NPO-13388-1] c35 N76-16390  
Method and apparatus for generating coherent radiation in the ultra-violet region and above by use of distributed feedback  
[NASA-CASE-NPO-13346-1] c36 N76-29575  
Apparatus for photon excited catalysis  
[NASA-CASE-NPO-13566-1] c25 N77-32255

SAHINKAYA, Y.  
Optimal control system for an electric motor driven vehicle  
[NASA-CASE-NPO-11210] c11 N72-20244

SAINSBURY-CARTER, J. B.  
Bonded joint and method  
[NASA-CASE-LAR-10900-1] c37 N74-23064

SAINTCLAIR, T. L.  
Polyimide adhesives  
[NASA-CASE-LAR-11397-1] c27 N75-29263

SAKELLARIS, P. C.  
Automatic fluid dispenser  
[NASA-CASE-ARC-16820-1] c35 N78-19466

SALAMA, A. M.  
Method of mitigating titanium impurities effects in p-type silicon material for solar cells  
[NASA-CASE-NPO-14635-1] c44 N80-24741  
Improving the efficiency of silicon solar cells containing chromium  
[NASA-CASE-NPO-15179-1] c44 N80-32850

SALRHEE, C. T.  
Impact absorbing blade mounts for variable pitch blades  
[NASA-CASE-LEW-12313-1] c37 N78-10468

SALISBURY, J. K., JR.  
Controller arm for a remotely related slave arm  
[NASA-CASE-ARC-11052-1] c37 N79-28551

SALMBS, S.  
Radiation direction detector including means for compensating for photocell aging Patent  
[NASA-CASE-XLA-00183] c14 N70-4C239  
Spacecraft separation system for spinning vehicles and/or payloads Patent  
[NASA-CASE-XLA-02132] c31 N71-1C582

SALONON, P. M.  
Programmable scan/read circuitry for charge coupled device imaging detectors  
[NASA-CASE-NPO-15345-1] c33 N81-27403

SALTER, W. E.  
Pseudo-noise test set for communication system evaluation  
[NASA-CASE-MPS-22671-1] c35 N75-21582  
Method of and means for testing a tape record/playback system  
[NASA-CASE-MPS-22671-2] c35 N77-17426

SALTZMAN, E. J.  
Traversing probe Patent  
[NASA-CASE-IPR-02007] c12 N71-24692

Improved low-drag ground vehicle particularly suited for use in safely transporting livestock  
[NASA-CASE-FRC-11058-1] c85 N80-33312

SALVINSKI, E. J.  
Electrohydrodynamic control valve Patent  
[NASA-CASE-NPO-10416] c12 N71-27332  
Ultrasonically bonded valve assembly  
[NASA-CASE-NPO-13360-1] c37 N75-25185

SAMFIELD, E.  
Inflatable tether Patent  
[NASA-CASE-XMS-10993] c15 N71-28936

SAMONSKI, P. H., JR.  
Liquid-gas separator for zero gravity environment Patent  
[NASA-CASE-XMS-01492] c05 N70-41297

SAHSON, J. A. B.  
Analytical photoionization mass spectrometer with an argon gas filter between the light source and monochromator Patent  
[NASA-CASE-LAR-10180-1] c06 N71-13461

SAMSON, R.  
Sealed cabinetry Patent  
[NASA-CASE-MSC-12168-1] c09 N71-18600

SAN MIGUEL, A.  
Means and method of measuring viscoelastic strain Patent  
[NASA-CASE-YNP-01153] c32 N71-17645  
Miniature stress transducer Patent  
[NASA-CASE-YNP-02983] c14 N71-21091

SANDBORN, V. A.  
Particle beam measurement apparatus using beam kinetic energy to change the heat sensitive resistance of the detection probe Patent  
[NASA-CASE-XLE-00243] c14 N70-38602  
Apparatus for increasing ion engine beam density Patent  
[NASA-CASE-XLE-00519] c28 N70-41576

SANDER, R. C.  
Transient video signal recording with expanded playback Patent  
[NASA-CASE-ARC-10003-1] c09 N71-25866

SANDERS, B. W.  
Airflow control system for supersonic inlets  
[NASA-CASE-LEW-11188-1] c02 N74-20646

SANDFORD, H. C.  
Solar cell angular position transducer  
[NASA-CASE-LAR-11999-1] c44 N80-18552

SANDBOCK, G. D.  
High temperature cobalt-base alloy Patent  
[NASA-CASE-XLE-02991] c17 N71-16025  
High temperature ferromagnetic cobalt-base alloy Patent  
[NASA-CASE-XLE-03629] c17 N71-23248  
Cobalt-base alloy  
[NASA-CASE-LEW-10436-1] c17 N73-32415

SANDSTROM, D. B.  
Fabrication of single crystal film semiconductor devices  
[NASA-CASE-ERC-10222] c09 N72-22199

SANTAPPIA, D.  
Dually mode locked Nd:YAG laser  
[NASA-CASE-GSC-11746-1] c36 N75-19654

SARBOLOUKI, M. E.  
Photomechanical transducer  
[NASA-CASE-NPO-14363-1] c39 N81-25400  
Asymmetric polyimide separation membrane and method  
[NASA-CASE-NPO-15431-1] c25 N81-29178

SARGISSON, D. F.  
Gas turbine engine with convertible accessories  
[NASA-CASE-LEW-12390-1] c07 N78-17056  
Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-2] c07 N78-18066  
Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-3] c07 N79-14096

SARVER, G. L., III  
Solar power satellite system  
[NASA-CASE-HCN-10949-1] c44 N81-16530

SATER, B. L.  
Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c37 N81-19455

SAUER, L. S.  
Hybrid lubrication system and bearing Patent  
[NASA-CASE-YNP-01641] c15 N71-22997

SAUER, E. L.  
Automatic biowaste sampling  
[NASA-CASE-MSC-14640-1] c54 N76-14804

SAUER, T. H.  
Parallel-plate viscometer with double diaphragm

suspension  
[NASA-CASE-NPO-11387] c14 N73-14429

SAUERS, D. G.  
Measuring device Patent  
[NASA-CASE-XMS-01546] c14 N70-40233

Lightweight electrically-powered flexible thermal laminate  
[NASA-CASE-MSC-12662-1] c33 N79-12331

SAUNDERS, A. A., JR.  
Method and apparatus for rapid thrust increases in a turbofan engine  
[NASA-CASE-LEW-12971-1] c07 N80-18039

Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c07 N81-19116

SAUNDERS, A. R.  
A technique for breaking ice in the path of a ship  
[NASA-CASE-LAR-10815-1] c16 N72-22520

SAUNDERS, W. T.  
Method of producing porous tungsten ionizers for ion rocket engines Patent  
[NASA-CASE-XLB-00455] c28 N70-38197

SAUTER, R. J.  
Foot pedal operated fluid type exercising device  
[NASA-CASE-MSC-11561-1] c05 N73-32014

SAWKO, P. H.  
Polymeric vehicles as carriers for sulfonic acid salt of nitrosubstituted aromatic amines  
[NASA-CASE-ARC-10325] c06 N72-25147

Intumescent paint containing nitrile rubber  
[NASA-CASE-ARC-10196-1] c18 N73-13562

Transparent fire resistant polymeric structures  
[NASA-CASE-ARC-10813-1] c27 N76-16230

Intumescent coatings containing 4,4'-dinitrosulfanilide  
[NASA-CASE-ARC-11042-1] c24 N78-14096

Intumescent-ablator coatings using endothermic fillers  
[NASA-CASE-ARC-11043-1] c24 N78-27180

Ambient cure polyimide foams  
[NASA-CASE-ARC-11170-1] c27 N79-11215

Fire protection covering for small diameter missiles  
[NASA-CASE-ARC-11104-1] c15 N79-26100

Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides  
[NASA-CASE-ARC-11107-1] c25 N80-16116

Structural wood panels with improved fire resistance  
[NASA-CASE-ARC-11174-1] c24 N81-13999

SAWYER, C. D.  
Control for nuclear thermionic power source  
[NASA-CASE-NPO-13114-2] c73 N78-28913

SAWYER, D. E.  
Semiconductor-ferroelectric memory device  
[NASA-CASE-ERC-10307] c08 N72-21198

Fabrication of single crystal film semiconductor devices  
[NASA-CASE-ERC-10222] c09 N72-22199

SAWYER, J. T.  
Leak detector  
[NASA-CASE-MFS-21761-1] c35 N75-15931

SAWYER, R. V.  
Electrical servo actuator bracket  
[NASA-CASE-FRC-11044-1] c37 N81-33483

SAWYER, R. W.  
Computer circuit card puller  
[NASA-CASE-FRC-11042-1] c37 N80-20589

SCAPICCHIO, A. J.  
Apparatus and method for separating a semiconductor wafer Patent  
[NASA-CASE-ERC-10138] c26 N71-14354

SCHACH, H.  
Apparatus for controlling the temperature of balloon-borne equipment  
[NASA-CASE-GSC-11620-1] c34 N74-23039

SCHACHT, W. F.  
Water cooled contactor for anode in carbon arc mechanism  
[NASA-CASE-XMS-03700] c15 N69-24266

SCHACHTER, M. M.  
Apparatus for producing three-dimensional recordings of fluorescence spectra. Patent  
[NASA-CASE-XGS-01231] c14 N70-41676

SCHAEFER, D. H.  
Binary magnetic memory device Patent  
[NASA-CASE-XGS-00174] c08 N70-34743

Logarithmic converter Patent  
[NASA-CASE-XLA-00471] c08 N70-34778

Full binary adder Patent  
[NASA-CASE-XGS-00689] c08 N70-34787

Ripple add and ripple subtract binary counters Patent  
[NASA-CASE-XGS-04766] c08 N71-18602

Computing apparatus Patent  
[NASA-CASE-XGS-04765] c08 N71-18693

Signal detection and tracking apparatus Patent  
[NASA-CASE-XGS-03502] c10 N71-20852

Two-dimensional radiant energy array computers and computing devices  
[NASA-CASE-GSC-11839-1] c60 N77-14751

Memory device for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-2] c60 N78-10709

SCHAEFER, G. J.  
Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c32 N81-27341

SCHAEER, G. B.  
Method of making porous conductive supports for electrodes  
[NASA-CASE-GSC-11367-1] c44 N74-19692

SCHAFFNER, G. L.  
Multivibrator circuit with means to prevent false triggering from supply voltage fluctuations Patent  
[NASA-CASE-ARC-10137-1] c09 N71-28468

SCHAFFERT, J. C.  
Ultra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit Patent  
[NASA-CASE-XGS-00381] c09 N70-34819

SCHALLER, W. C.  
Apparatus for vibrational testing of articles  
[NASA-CASE-GSC-11302-1] c14 N73-13416

SCHAPPERT, G. T.  
Method and apparatus for wavelength tuning of liquid lasers  
[NASA-CASE-EBC-10187] c16 N69-31343

SCHAUS, R. B.  
Thermobulb mount Patent  
[NASA-CASE-NPO-10158] c33 N71-16356

SCHREIBER, H.  
Metering gun for dispensing precisely measured charges of fluid  
[NASA-CASE-MFS-21163-1] c54 N74-17853

SCHREIBLEY, D. W.  
Flexible formulated plastic separators for alkaline batteries  
[NASA-CASE-LEW-12363-4] c44 N80-18555

SCHRELL, J. T.  
Cryogenic thermal insulation Patent  
[NASA-CASE-XMF-05046] c33 N71-28892

SCHER, H. P.  
Spacecraft attitude control method and apparatus  
[NASA-CASE-HQN-10439] c21 N72-21624

SCHER, S. H.  
Hot air balloon deceleration and recovery system Patent  
[NASA-CASE-XLA-06824-2] c02 N71-11037

SCHIFFNER, G.  
Power supply for carbon dioxide lasers  
[NASA-CASE-GSC-11222-1] c16 N73-32391

SCHILLER, J. G.  
Method and device for the detection of phenol and related compounds  
[NASA-CASE-LEW-12513-1] c25 N79-22235

SCHINDLER, R. A.  
Interferometer direction sensor Patent  
[NASA-CASE-NPO-10320] c14 N71-17655

Interferometer servo system Patent  
[NASA-CASE-NPO-10300] c14 N71-17662

Single reflector interference spectrometer and drive system therefor  
[NASA-CASE-NPO-11932-1] c35 N74-23040

Interferometer mirror tilt correcting system  
[NASA-CASE-NPO-13687-1] c35 N78-18391

Over-under double-pass interferometer  
[NASA-CASE-NPO-13999-1] c35 N78-18395

Apparatus for providing a servo drive signal in a high-speed stepping interferometer  
[NASA-CASE-NPO-13569-2] c35 N79-14348

Velocity servo for continuous scan Fourier interference spectrometer  
[NASA-CASE-NPO-14093-1] c35 N80-20563

Interferometer  
[NASA-CASE-NPO-14448-1] c74 N81-29963

SCHLESINGER, F. W.  
Optical alignment system Patent  
[NASA-CASE-XNP-02029] c14 N70-41955

SCHLOSS, A. L.  
Solid state switch  
[NASA-CASE-XNP-09228] c09 N69-27500

SCHMIDT, E. E.  
Caterpillar micro positioner  
[NASA-CASE-GSC-10780-1] c14 N72-16283

SCHMIDT, H. W.  
Conical valve plug Patent  
[NASA-CASE-XLE-00715] c15 N70-34859  
Fluid coupling Patent  
[NASA-CASE-XLE-00397] c15 N76-36492

SCHMIDT, K. C.  
Radiation and particle detector and amplifier  
[NASA-CASE-NPO-12128-1] c14 N73-32317

SCHMIDT, L. F.  
Photosensitive device to detect bearing deviation Patent  
[NASA-CASE-XNP-00438] c21 N70-35089  
Light sensor  
[NASA-CASE-NPO-11311] c14 N72-25414  
Sun direction detection system  
[NASA-CASE-NPO-13722-1] c74 N77-22951

SCHMIDT, R.  
Reactance control system Patent  
[NASA-CASE-XMP-01598] c21 N71-15583

SCHMIDT, R. F.  
Monopulse system with an electronic scanner  
[NASA-CASE-IGS-05582] c07 N69-27460  
Electronic scanning of 2-channel monopulse patterns Patent  
[NASA-CASE-GSC-10299-1] c09 N71-24804  
Dish antenna having switchable beamwidth  
[NASA-CASE-GSC-11760-1] c33 N75-19516  
Single frequency, two feed dish antenna having switchable beamwidth  
[NASA-CASE-GSC-11968-1] c32 N76-15329  
Variable beamwidth antenna  
[NASA-CASE-GSC-11862-1] c32 N76-18295  
Switchable beamwidth monopulse method and system  
[NASA-CASE-GSC-11924-1] c33 N76-27472

SCHMIDT, W. G.  
Ammonium perchlorate composite propellant containing an organic transitional metal chelate catalytic additive Patent  
[NASA-CASE-LAR-10173-1] c27 N71-14090

SCHMITT, A. L.  
Sun angle calculator  
[NASA-CASE-MSC-12617-1] c35 N76-29552

SCHMITZ, B. W.  
Trajectory-correction propulsion system Patent  
[NASA-CASE-XNP-01104] c28 N70-35931

SCHMITZ, F. H.  
Acoustically swept rotor  
[NASA-CASE-ARC-11106-1] c05 N80-14107

SCHNEIDER, R. T.  
Non-equilibrium radiation nuclear reactor  
[NASA-CASE-HQN-10841-1] c73 N78-19920  
Safety flywheel  
[NASA-CASE-HQN-10888-1] c44 N79-14527

SCHNEIDER, W. C.  
Auger attachment method for insulation  
[NASA-CASE-MSC-12615-1] c37 N76-19437  
Diced tile thermal protection for spacecraft  
[NASA-CASE-MSC-16366-1] c24 N79-23142

SCHNITZER, E.  
Inflatable honeycomb Patent  
[NASA-CASE-XLA-00204] c32 N70-36536  
Manned space station Patent  
[NASA-CASE-XLA-00258] c31 N70-36676  
Method of making inflatable honeycomb Patent  
[NASA-CASE-XLA-03492] c15 N71-22713

SCHNOPPER, H. W.  
Dual purpose optical instrument capable of simultaneously acting as spectrometer and diffractometer  
[NASA-CASE-XNP-05231] c14 N73-28491

SCHOEN, A. H.  
Honeycomb panels formed of minimal surface periodic tubule layers  
[NASA-CASE-ERC-10364] c18 N72-25540  
Honeycomb core structures of minimal surface tubule sections  
[NASA-CASE-ERC-10363] c18 N72-25541  
Expandable space frames  
[NASA-CASE-ERC-10365-1] c31 N73-32749

SCHOLL, J. A.  
Method of forming shapes from planar sheets of thermosetting materials  
[NASA-CASE-NPO-11036] c15 N72-24522

SCHONBURG, C.  
Densification of porous refractory substrates  
[NASA-CASE-MSC-18737-1] c25 N81-29180  
Method of repairing surface damage to porous refractory substrates  
[NASA-CASE-MSC-18736-1] c27 N81-29231

SCHORUM, S. W.  
High speed binary to decimal conversion system Patent  
[NASA-CASE-IGS-01230] c08 N71-19544

SCHRADE, J. H.  
Multiple input radio receiver Patent  
[NASA-CASE-XLA-00901] c07 N71-10775  
Cooperative Doppler radar system Patent  
[NASA-CASE-LAR-10403] c21 N71-11766  
Apparatus for aiding a pilot in avoiding a midair collision between aircraft  
[NASA-CASE-LAR-10717-1] c21 N73-30641

SCHREDER, K. D.  
Broadband stable power multiplier Patent  
[NASA-CASE-XNP-10854] c10 N71-26331

SCHUBERT, F. H.  
Iodine generator for reclaimed water purification  
[NASA-CASE-MSC-14632-1] c54 N78-14784

SCHUBERT, W. W.  
Enhancement of in vitro Guayule propagation  
[NASA-CASE-NPO-15213-1] c51 N81-29728

SCHUEBER, F. H.  
Sprayable low density ablator and application process  
[NASA-CASE-MFS-23506-1] c24 N78-24290

SCHULLER, F. T.  
Journal bearings  
[NASA-CASE-LEW-11076-1] c37 N74-21061  
Journal Bearings  
[NASA-CASE-LEW-11076-2] c37 N74-32921  
Lubricated journal bearing  
[NASA-CASE-LEW-11076-3] c37 N75-30562  
Fluid journal bearings  
[NASA-CASE-LEW-11076-4] c37 N76-15461

SCHULTE, D. F.  
Heat pipes to reduce engine exhaust emissions  
[NASA-CASE-LEW-12590-1] c25 N81-19245

SCHUMACHER, L. L.  
Wide angle sun sensor  
[NASA-CASE-NPO-13327-1] c35 N75-23910

SCHUSTER, D. H.  
Antenna beam-shaping apparatus Patent  
[NASA-CASE-XNP-00611] c09 N70-35219  
Parabolic reflector horn feed with spillover correction Patent  
[NASA-CASE-XNP-00540] c09 N70-35382  
Insertion loss measuring apparatus having transformer means connected across a pair of bolometers Patent  
[NASA-CASE-XNP-01193] c10 N71-16057

SCHUSTER, H. A.  
Solid state television camera system Patent  
[NASA-CASE-XMP-06092] c07 N71-24612

SCHUTT, J. B.  
Alkali-metal silicate protective coating  
[NASA-CASE-IGS-04119] c18 N69-39979  
Fire resistant coating composition Patent  
[NASA-CASE-GSC-10072] c18 N71-14014  
Method for etching copper Patent  
[NASA-CASE-IGS-06306] c17 N71-16044  
Alkali metal silicate protective coating Patent  
[NASA-CASE-IGS-04799] c18 N71-24183  
Phototropic composition of matter  
[NASA-CASE-IGS-03736] c14 N72-22443  
Potassium silicate zinc coatings  
[NASA-CASE-GSC-10361-1] c18 N72-23581  
Ultraviolet light reflective coating  
[NASA-CASE-GSC-11786-1] c24 N76-24363  
Remote sensing of vegetation and soil using microwave ellipsometry  
[NASA-CASE-GSC-11976-1] c43 N78-10529  
Alkali-metal silicate binders and methods of manufacture  
[NASA-CASE-GSC-12303-1] c24 N79-31347

SCHUTZBERGER, L. A.  
Apparatus for reducing aerodynamic noise in a wind tunnel  
[NASA-CASE-MFS-23099-1] c09 N76-23273

SCHWAB, W. B.  
 Closed loop spray cooling apparatus  
 [NASA-CASE-LEW-11981-1] c31 N78-17237  
 Closed loop spray cooling apparatus  
 [NASA-CASE-LEW-11981-2] c34 N79-20336

SCHWABTZ, I. B.  
 Abating exhaust noises in jet engines  
 [NASA-CASE-ARC-10712-1] c07 N74-33218

SCHWABZ, F. C.  
 Saturation current protection apparatus for  
 saturable core transformers Patent  
 [NASA-CASE-ERC-10075] c09 N71-24800  
 Unsaturating saturable core transformer Patent  
 [NASA-CASE-ERC-10125] c09 N71-24893  
 Saturation current protection apparatus for  
 saturable core transformers  
 [NASA-CASE-ERC-10075-2] c09 N72-22196  
 Load-insensitive electrical device  
 [NASA-CASE-XER-11046] c09 N72-22203  
 Analog Signal to Discrete Time Interval  
 Converter (ASDTIC)  
 [NASA-CASE-ERC-10048] c09 N72-25251  
 Controllable load insensitive power converters  
 [NASA-CASE-ERC-10268] c09 N72-25252  
 Load insensitive electrical device  
 [NASA-CASE-XER-11046-2] c33 N74-22864

SCHWINGHAMER, R. J.  
 Angular measurement system Patent  
 [NASA-CASE-XMF-00447] c14 N70-33179  
 Space vehicle electrical system Patent  
 [NASA-CASE-XMF-00517] c03 N70-34157  
 Electrical discharge apparatus for forming Patent  
 [NASA-CASE-XMF-00375] c15 N70-34249  
 Electro-optical alignment control system Patent  
 [NASA-CASE-XMF-00908] c14 N70-40238  
 Method and apparatus for precision sizing and  
 joining of large diameter tubes Patent  
 [NASA-CASE-XMF-05114] c15 N71-17650  
 Magnetomotive metal working device Patent  
 [NASA-CASE-XMF-03793] c15 N71-24833  
 Method and apparatus for precision sizing and  
 joining of large diameter tubes Patent  
 [NASA-CASE-XMF-05114-3] c15 N71-24865  
 Method and apparatus for precision sizing and  
 joining of large diameter tubes Patent  
 [NASA-CASE-XMF-05114-2] c15 N71-26148

SCHWUTKE, G. H.  
 Growth of silicon carbide crystals on a seed  
 while pulling silicon crystals from a melt  
 [NASA-CASE-NPO-13969-1] c76 N79-23798

SCIACCA, T. P.  
 Device for measuring electron-beam intensities  
 and for subjecting materials to electron  
 irradiation in an electron microscope  
 [NASA-CASE-XGS-01725] c14 N69-35982

SCOGINS, J. B.  
 Meteorological balloon Patent  
 [NASA-CASE-XMF-04163] c02 N71-23007

SCOPELIANOS, A. G.  
 Process for the preparation of  
 polycarboranylphosphazenes  
 [NASA-CASE-ARC-11176-2] c27 N81-27271

SCOTT, C. B.  
 Magnifying scratch gage force transducer  
 [NASA-CASE-LAR-10496-1] c14 N72-22437

SCOTT, C. B.  
 Inflatable transpiration cooled nozzle  
 [NASA-CASE-MFS-20619] c28 N72-11708

SCOTT, D. B.  
 Electrical self-aligning connector  
 [NASA-CASE-MFS-25211-1] c33 N80-32651  
 Solar tracking system  
 [NASA-CASE-MFS-23999-1] c44 N81-24520

SCOTT, R. P.  
 Burrowing apparatus  
 [NASA-CASE-XNP-07169] c15 N73-32362

SCOTT, R. B.  
 Solar cell including second surface mirrors Patent  
 [NASA-CASE-NPO-10109] c03 N71-11049

SCOTT, S. G.  
 Nonmagnetic thermal motor for a magnetometer  
 [NASA-CASE-XAR-03786] c09 N69-21313

SCOTT, W. L.  
 Tactile sensing means for prosthetic limbs  
 [NASA-CASE-MFS-16570-1] c05 N73-32013

SCOB, J.  
 Multiple circuit switch apparatus with improved  
 pivot actuator structure Patent  
 [NASA-CASE-XAC-03777] c10 N71-15909

SCROOP, F. B.  
 Relief container  
 [NASA-CASE-XMS-06761] c05 N69-23192

SCUDDER, L. R.  
 Application of semiconductor diffusants to solar  
 cells by screen printing  
 [NASA-CASE-LEW-12775-1] c44 N79-11468

SCULLY, P. T.  
 Collapsible reflector Patent  
 [NASA-CASE-XMS-03454] c09 N71-20658

SEA, R. G.  
 Junction range finder  
 [NASA-CASE-KSC-10108] c14 N73-25461

SEAMAN, C. B.  
 Method and apparatus for Doppler frequency  
 modulation of radiation  
 [NASA-CASE-NFO-14524-1] c32 N80-24510

SEATON, A. F.  
 Phase multiplying electronic scanning system  
 Patent  
 [NASA-CASE-NPO-10302] c10 N71-26142  
 Virtual wall slot circularly polarized planar  
 array antenna  
 [NASA-CASE-NPO-10301] c07 N72-11148  
 Conical reflector antenna  
 [NASA-CASE-NPO-10303] c07 N72-22127

SEATON, S. L.  
 Electrostatic plasma modulator for space vehicle  
 re-entry communication Patent  
 [NASA-CASE-XLA-01400] c07 N70-41331  
 Means for communicating through a layer of  
 ionized gases Patent  
 [NASA-CASE-XLA-01127] c07 N70-41372  
 Method for measuring the characteristics of a  
 gas Patent  
 [NASA-CASE-XLA-03375] c16 N71-24074  
 Laser calibrator Patent  
 [NASA-CASE-XLA-03410] c16 N71-25914

SEAY, B. P., JR.  
 Burst synchronization detection system Patent  
 [NASA-CASE-XMS-05605-1] c10 N71-19468

SEBACHER, D. I.  
 Solar hydrogen generator  
 [NASA-CASE-LAR-11361-1] c44 N77-22607

SECKEL, E.  
 Integrated lift/drag controller for aircraft  
 [NASA-CASE-ARC-10456-1] c05 N75-12930

SECRETAN, L.  
 Rotary bead dropper and selector for testing  
 micrometeorite detectors Patent  
 [NASA-CASE-XGS-03304] c09 N71-22988

SEEGMILLER, H. L. B.  
 Inertia diaphragm pressure transducer Patent  
 [NASA-CASE-XAC-02981] c14 N71-21072

SEIDEL, B. L.  
 Antenna feed system for receiving circular  
 polarization and transmitting linear  
 polarization  
 [NASA-CASE-NFO-14362-1] c32 N80-16261

SEIDENBERG, B.  
 Method and apparatus for determining the  
 contents of contained gas samples  
 [NASA-CASE-GSC-10903-1] c14 N73-12444  
 Low outgassing polydimethylsiloxane material and  
 preparation thereof  
 [NASA-CASE-GSC-11358-1] c06 N73-26100

SEILER, E. E.  
 Method for leakage testing of tanks Patent  
 [NASA-CASE-XMF-02392] c32 N71-24285

SEITZ, T. E.  
 Heat activated cell with alkali anode and alkali  
 salt electrolyte Patent  
 [NASA-CASE-LEW-11358] c03 N71-26084

SEITZINGER, V. F.  
 Unfired-ceramic flame-resistant insulation and  
 method of making the same Patent  
 [NASA-CASE-XMF-01030] c18 N70-41583  
 Ceramic insulation for radiant heating  
 environments and method of preparing the same  
 Patent  
 [NASA-CASE-MFS-14253] c33 N71-24858

SELCOK, H. K.  
 Solar energy collection system  
 [NASA-CASE-NPO-13810-1] c44 N77-32582  
 Non-tracking solar energy collector system  
 [NASA-CASE-NPO-13813-1] c44 N78-31526  
 Non-tracking solar energy collector system  
 [NASA-CASE-NPO-13817-1] c44 N79-11471



Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c44 N81-17518

SELLEN, J. H., JR.  
Apparatus for field strength measurement of a space vehicle Patent  
[NASA-CASE-XLE-00820] c14 N71-16014  
Apparatus for measuring electric field strength on the surface of a model vehicle Patent  
[NASA-CASE-XLE-02038] c09 N71-16086

SENNOTT, J. W.  
Navigation system and method  
[NASA-CASE-GSC-12508-1] c04 N81-26085

SENSEBY, H. H.  
Fire extinguishing apparatus having a slidable mass for a penetrator nozzle  
[NASA-CASE-KSC-11064-1] c31 N81-14137

SERAFINI, T. T.  
Preparation of polyimides from mixtures of monomeric diamines and esters of polycarboxylic acids  
[NASA-CASE-LEW-11325-1] c06 N73-27980  
Low temperature cross linking polyimides  
[NASA-CASE-LEW-12876-1] c27 N80-26447  
Curing agent for polyepoxides and epoxy resins and composites cured therewith  
[NASA-CASE-LEW-13226-1] c27 N81-17260  
Composition and method for making polyimide resin-reinforced fabric  
[NASA-CASE-LEW-12933-1] c27 N81-19296

SEWARD, H. H.  
Compact spectroradiometer  
[NASA-CASE-HQN-10683] c14 N71-34389  
Two color horizon sensor  
[NASA-CASE-ERC-10174] c14 N72-25409

SEYFFERT, H. B.  
Controlled glass bead peening Patent  
[NASA-CASE-XLA-07390] c15 N71-18616

SEYL, J. W.  
Dynamic Doppler simulator Patent  
[NASA-CASE-XMS-05454-1] c07 N71-12391

SHADY, D. L.  
Device for tensioning test specimens within an hermetically sealed chamber  
[NASA-CASE-MFS-23281-1] c35 N77-22450

SHAFFER, D. H.  
Analog to digital converter for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-3] c60 N77-32731

SHAFFER, J. I.  
Solid propellant rocket motor nozzle  
[NASA-CASE-NPO-11458] c28 N72-23810  
Solid propellant rocket motor  
[NASA-CASE-NPO-11559] c28 N73-24784  
Preparing oxidizer coated metal fuel particles  
[NASA-CASE-NPO-11975-1] c28 N74-33209  
Solid propellant motor  
[NASA-CASE-NPO-11458A] c20 N78-32179

SHAFPER, C. V.  
Active RC networks  
[NASA-CASE-ARC-10042-2] c10 N72-11256  
Multiloop RC active filter apparatus having low parameter sensitivity with low amplifier gain  
[NASA-CASE-ARC-10192] c09 N72-21245

SHAI, C. H.  
Alkali-metal silicate protective coating  
[NASA-CASE-XGS-04119] c18 N69-35979  
Alkali metal silicate protective coating Patent  
[NASA-CASE-XGS-04799] c18 N71-24183

SHAI, H. C.  
Electrically conductive thermal control coatings  
[NASA-CASE-GSC-12207-1] c24 N79-14156

SHALHOUB, I. M.  
The 1,2,4-oxadiazole elastomers  
[NASA-CASE-ARC-11253-1] c27 N81-17262  
Bifunctional monomers having terminal oxime and cyano or amidine groups  
[NASA-CASE-ARC-11253-3] c27 N81-24256

SHALTENS, B. K.  
Method and apparatus for sputtering utilizing an apertured electrode and a pulsed substrate bias  
[NASA-CASE-LEW-10920-1] c17 N73-24569

SHANKAR, N. K.  
Ultrastable calibrated light source  
[NASA-CASE-MSC-12293-1] c14 N72-27411

SHANKS, G. C.  
Compression test fixture  
[NASA-CASE-MSC-18723-1] c39 N81-24470

SHANNON, R. L.  
Plasma cleaning device  
[NASA-CASE-MFS-22906-1] c75 N78-27913

SHAPIRO, H.  
Omni-directional anisotropic molecular trap Patent  
[NASA-CASE-XGS-00783] c30 N71-17788  
Trap for preventing diffusion pump backstreaming  
[NASA-CASE-GSC-10518-1] c15 N72-22489

SHARMA, H.  
Optical crystal temperature gauge with fiber optic connections  
[NASA-CASE-MSC-18627-1] c74 N81-15818  
Apparatus for fiber optic liquid level sensing  
[NASA-CASE-MSC-18674-1] c74 N81-24907

SHARPE, H. B.  
Stainless steel panel for selective absorption of solar energy and the method of producing said panel  
[NASA-CASE-MFS-23518-2] c44 N77-31611  
Sprayable low density ablator and application process  
[NASA-CASE-MFS-23506-1] c24 N78-24290  
Method for making an aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-1] c44 N79-11469  
Aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-3] c44 N80-16452  
Cork-resin ablative insulation for complex surfaces and method for applying the same  
[NASA-CASE-MFS-23626-1] c24 N80-26388

SHATAZSKY, B.  
Tape guidance system and apparatus for the provision thereof Patent  
[NASA-CASE-XNP-09453] c08 N71-19420

SHATTUCK, R. D.  
Protection of serially connected solar cells against open circuits by the use of shunting diode Patent  
[NASA-CASE-XLE-04535] c03 N71-23354

SHAW, C. S.  
Exhaust flow deflector  
[NASA-CASE-LAR-11570-1] c34 N76-18364

SHAW, D. S.  
Metric half-span model support system  
[NASA-CASE-LAR-12441-1] c09 N80-24334

SHAW, G. C.  
Process for the leaching of AP from propellant  
[NASA-CASE-NFO-14109-1] c28 N80-23471  
Recovery of aluminum from composite propellants  
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Monopulse tracking system Patent  
[NASA-CASE-XGS-01155] c10 N71-21483

SHELTON, B. D.  
Electron beam instrument for measuring electric fields Patent  
[NASA-CASE-IMP-10289] c14 N71-23699

SHEPARD, C. E.  
Electric arc apparatus Patent  
[NASA-CASE-XAC-01677] c09 N71-20816

SHEPARD, L. F.  
Space suit  
[NASA-CASE-MSC-12609-1] c05 N73-32012

SHEPARD, M. P., JR.  
Solar cell module  
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SHEPARD, S. K.  
Peak polarity selector Patent  
[NASA-CASE-FRC-10010] c10 N71-24862

SHER, A.  
Photocapacitive image converter  
[NASA-CASE-LAR-12513-1] c33 N80-28635

SHERBURNIE, A. E.  
Capacitive tank gaging apparatus being independent of liquid distribution  
[NASA-CASE-MFS-21629] c14 N72-22442

SHERPEY, J. E.  
Bonded elastomeric seal for electrochemical cells Patent  
[NASA-CASE-XGS-02631] c03 N71-23006

Frangible electrochemical cell  
[NASA-CASE-XGS-10010] c03 N72-15986

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SHERMAN, A.  
Annular slit colloid thruster Patent  
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SHERWIN, E. J.  
Bonding thermoelectric elements to nonmagnetic refractory metal electrodes  
[NASA-CASE-XGS-04554] c15 N69-35786

SHETH, S.  
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Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
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SHEWMAKE, G. A.  
Life raft Patent  
[NASA-CASE-XMS-00863] c05 N70-34857

Life preserver Patent  
[NASA-CASE-XMS-00864] c05 N70-36493

Inflatable radar reflector unit Patent  
[NASA-CASE-XMS-00893] c07 N70-40063

Rescue litter flotation assembly Patent  
[NASA-CASE-XMS-04170] c05 N71-22748

SHIBBER, B.  
Prestressed refractory structure Patent  
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SHIGEMOTO, F. H.  
Laser fluid velocity detector Patent  
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SHILLINGER, G. L., JR.  
Spring operated accelerator and constant force spring mechanism therefor  
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Recorder/processor apparatus  
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SHIMA, B.  
Multitarget sequential sputtering apparatus  
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SHIMADA, K.  
Thermionic diode switch Patent  
[NASA-CASE-NFO-10404] c03 N71-12255

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[NASA-CASE-NFO-10412] c09 N71-28421

Thermal to electrical power conversion system with solid-state switches with Seebeck effect compensation  
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SHIMANSKY, B. A.  
Safety shield for vacuum/pressure chamber viewing port  
[NASA-CASE-GSC-12513-1] c31 N81-19343

SHIMIZU, H.  
Non-invasive method and apparatus for measuring pressure within a pliable vessel  
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SHIMODA, K.  
Method and apparatus for stabilizing a gaseous optical maser Patent  
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SHIRA, C. S.  
Method of heat treating age-hardenable alloys  
[NASA-CASE-IMP-01311] c26 N75-29236

SHIRE, L. I.  
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[NASA-CASE-LEW-11877-1] c34 N78-27357

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Electromigration process for the purification of molten silicon during crystal growth  
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SHLOSINGER, A. P.  
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[NASA-CASE-ARC-10198] c34 N78-17336

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[NASA-CASE-ARC-10199] c34 N78-17337

SHORE, P. W.  
Doppler radar having phase modulation of both transmitted and reflected return signals  
[NASA-CASE-MSC-18675-1] c32 N81-29312

SHORES, P. W.  
Position determination systems  
[NASA-CASE-MSC-12593-1] c17 N76-21250

SHORTBRIDGE, S. E.  
Switching circuit employing regeneratively connected complementary transistors Patent  
[NASA-CASE-IMP-02654] c10 N70-42032

SHRIVER, C. B.  
Method of making a filament-wound container Patent  
[NASA-CASE-XLE-03803-2] c15 N71-17651

Filament wound container Patent  
[NASA-CASE-XLE-03803] c15 N71-23816

Panelized high performance multilayer insulation Patent  
[NASA-CASE-MFS-14023] c33 N71-25351

SHRIVER, C. L.  
Multichannel logarithmic RF level detector  
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SHRIVER, E. I.  
Apparatus for determining the deflection of an electron beam impinging on a target Patent  
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Shock wave convergence apparatus  
[NASA-CASE-MFS-20890] c14 N72-22439

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[NASA-CASE-MFS-22287-1] c75 N76-14931

Self-energized plasma compressor  
[NASA-CASE-MFS-22145-2] c75 N76-17951

Charge injection method and apparatus of producing large area electrets  
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Semiconductor projectile impact detector  
[NASA-CASE-MFS-23008-1] c35 N78-18390

Charge injection method and apparatus of producing large area electrets  
[NASA-CASE-HFS-23186-2] c24 N78-25137

SHROCK, C. G.  
Determination of antimicrobial susceptibilities on infected urines without isolation  
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SHUBE, E. E.  
Nose cone mounted heat resistant antenna Patent  
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SHULMAN, A. R.  
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SHUMATE, M. S.  
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Differential optoacoustic absorption detector  
[NASA-CASE-NPO-13759-1] c74 N78-17867  
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Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c25 N81-14015

SHUMKA, A.  
Space-charge-limited solid-state triode  
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SHURE, L. I.  
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SHUTE, D. I.  
Reference apparatus for medical ultrasonic transducer  
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Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
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[NASA-CASE-MSC-14331-2] c27 N78-17213  
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[NASA-CASE-MSC-14331-3] c27 N78-32262

SIDORAK, L. G.  
Solar cell shingle  
[NASA-CASE-LEW-125E7-1] c44 N77-31601

SIEBERT, C. J.  
Flexible/rigidifiable cable assembly  
[NASA-CASE-MSC-13512-1] c15 N72-22485

SIEGEL, B.  
Resonant infrasonic gauging apparatus  
[NASA-CASE-MSC-11847-1] c14 N72-11363

SIEGMAN, A. E.  
Laser system with an antiresonant optical ring  
[NASA-CASE-HQN-10844-1] c36 N75-19653

SIEBRADSKI, L. M.  
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] c35 N77-14406

SIEWERS, M. W.  
A general logic structure for custom LSI circuits  
[NASA-CASE-NPO-14410-1] c33 N79-25314  
High-speed data link for moderate distances and noisy environments  
[NASA-CASE-NPO-14152-1] c32 N80-18252

SIRBERT, R. D.  
Fine particulate capture device  
[NASA-CASE-LEW-11583-1] c35 N79-17192

SIGFRED, J.  
Length controlled stabilized mode-lock Nd:YAG laser  
[NASA-CASE-GSC-11571-1] c36 N77-25499

SIGNORELLI, R. A.  
Reinforced metallic composites Patent  
[NASA-CASE-XLE-02428] c17 N70-33288  
Method of making fiber reinforced metallic composites Patent  
[NASA-CASE-XLE-00231] c17 N70-38198

Method of making fiber composites  
[NASA-CASE-LEW-10424-2-2] c18 N72-25539

SIKORA, P. P.  
High temperature testing apparatus Patent  
[NASA-CASE-XLE-00335] c14 N70-35368

SIKORRA, D. J.  
Apparatus for overcurrent protection of a push-pull amplifier Patent  
[NASA-CASE-MSC-12033-1] c09 N71-13531

SILVER, B. H.  
Means and method of measuring viscoelastic strain Patent  
[NASA-CASE-XNP-01153] c32 N71-17645  
Miniature stress transducer Patent  
[NASA-CASE-XNP-02983] c14 N71-21091  
Apparatus for remote measurement of displacement of marks on a specimen undergoing a tensile test  
[NASA-CASE-NPO-10778] c14 N72-11364  
Subminiature insertable force transducer  
[NASA-CASE-NFO-13423-1] c33 N75-31329  
Strain gage mounting assembly  
[NASA-CASE-NPO-13170-1] c35 N76-14430  
Miniature muscle displacement transducer  
[NASA-CASE-NPO-13519-1] c33 N76-19338  
Myocardium wall thickness transducer and measuring method  
[NASA-CASE-NFO-13644-1] c52 N76-29895  
Catheter tip force transducer for cardiovascular research  
[NASA-CASE-NFO-13643-1] c52 N76-29896

SILVERMAN, J. R.  
Programmable telemetry system Patent  
[NASA-CASE-GSC-10131-1] c07 N71-24624

SILVERTSON, W. E., JR.  
Logical function generator  
[NASA-CASE-XLA-05099] c09 N73-13209

SIMAS, V. R.  
Optimum predetection diversity receiving system Patent  
[NASA-CASE-IGS-00740] c07 N71-23098

SIMMONDS, M. E.  
Self-contained breathing apparatus  
[NASA-CASE-MSC-14733-1] c54 N76-24900

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Atmospheric sampling devices  
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Electrolytic gas operated actuator  
[NASA-CASE-NFO-11369] c15 N73-13467  
Compact hydrogenator  
[NASA-CASE-NPO-11682-1] c35 N74-15127

SIMMONS, G. M.  
Preparing oxidizer coated metal fuel particles  
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SIMMONS, W. H.  
Indexed keyed connection Patent  
[NASA-CASE-XMS-02532] c15 N70-41808

SIMON, M. K.  
Data-aided carrier tracking loops  
[NASA-CASE-NFO-11282] c10 N73-16205  
Decision feedback loop for tracking a polyphase modulated carrier  
[NASA-CASE-NPO-13103-1] c32 N74-20811  
Coherent receiver employing nonlinear coherence detection for carrier tracking  
[NASA-CASE-NPO-11921-1] c32 N74-30523

SIMON, S. L.  
Temperature reducing coating for metals subject to flame exposure Patent  
[NASA-CASE-XLE-00035] c33 N71-29151

SIMPKINS, L. G.  
Television multiplexing system  
[NASA-CASE-KSC-10654-1] c07 N73-30115

SIMPSON, J. G.  
Solar concentrator  
[NASA-CASE-NFS-23727-1] c44 N80-14473

SIMPSON, W. E.  
Radiator deployment actuator Patent  
[NASA-CASE-MSC-11817-1] c15 N71-26611

SIMPSON, W. G.  
Space environmental work simulator Patent  
[NASA-CASE-XMF-07488] c11 N71-18773  
Stud-bonding gun  
[NASA-CASE-NFS-20299] c15 N72-11392  
Mixing insert for foam dispensing apparatus  
[NASA-CASE-HFS-20607-1] c37 N76-19436  
Sprayable low density ablator and application process  
[NASA-CASE-NFS-23506-1] c24 N78-24290

Cork-resin ablative insulation for complex surfaces and method for applying the same  
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SIMS, C. B.  
Multi axes vibration fixtures  
[NASA-CASE-MFS-20242] c14 N73-19421

SINCLAIR, A. B.  
Ablation sensor Patent  
[NASA-CASE-XLA-01791] c14 N71-22991  
Laser communication system for controlling several functions at a location remote to the laser  
[NASA-CASE-LAR-10311-1] c16 N73-16536  
Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c35 N75-15014

SINGER, S.  
Nuclear alkylated pyridine aldehyde polymers and conductive compositions thereof  
[NASA-CASE-NPO-10557] c27 N78-17214

SINGH, J. J.  
Mossbauer spectrometer-radiation detector  
[NASA-CASE-LAR-11155-1] c35 N74-15091  
A low energy electron magnetometer  
[NASA-CASE-LAR-12706-1] c35 N81-19428

SIOMAN, K. B.  
Heat sealable, flame and abrasion resistant coated fabric  
[NASA-CASE-MSC-18382-1] c27 N80-24440

SIROCKY, F. J.  
Apparatus for transferring cryogenic liquids Patent  
[NASA-CASE-XLB-00345] c15 N70-38020

SIVERTSON, W. E., JR.  
Adaptive compression of communication signals Patent  
[NASA-CASE-XLA-03076] c07 N71-11266  
Rate data encoder  
[NASA-CASE-LAR-10128-1] c08 N73-20217  
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[NASA-CASE-LAR-11390-1] c32 N77-21267  
Radar target for remotely sensing hydrological phenomena  
[NASA-CASE-LAR-12344-1] c43 N80-18498

SIVITER, J. H., JR.  
Micrometeoroid penetration measuring device Patent  
[NASA-CASE-XLA-00941] c14 N71-23240

SIVLEY, J. B.  
Phase locked phase modulator including a voltage controlled oscillator Patent  
[NASA-CASE-XNP-05382] c10 N71-23544

SIZEHORE, K. O.  
Method and apparatus for battery charge control Patent  
[NASA-CASE-XGS-05432] c03 N71-19438

SLATER, R. J.  
Traveling sealer for contoured table Patent  
[NASA-CASE-XLA-01494] c15 N71-24164

SLAYDEN, M. D.  
Pulse amplitude and width detector Patent  
[NASA-CASE-XNP-06519] c09 N71-12519  
Pulse rise time and amplitude detector Patent  
[NASA-CASE-XNP-08804] c09 N71-24717

SLEEHAN, W. C., JR.  
Control for flexible parawing Patent  
[NASA-CASE-XLA-06958] c02 N71-11038

SLERP, B. S.  
Particulate and solar radiation stable coating for spacecraft  
[NASA-CASE-LAR-10805-2] c34 N77-18382

SLIPER, L. W., JR.  
Solar cell and circuit array and process for nullifying magnetic fields Patent  
[NASA-CASE-XGS-03390] c03 N71-23187

SLINBY, H. B.  
Bonded solid lubricant coating Patent  
[NASA-CASE-XMS-00259] c18 N70-36400  
Method of making self lubricating fluoride-metal composite materials Patent  
[NASA-CASE-XLB-08511-2] c18 N71-16105  
Self-lubricating fluoride metal composite materials Patent  
[NASA-CASE-XLB-08511] c18 N71-23710  
Bearing material  
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[NASA-CASE-LBW-11930-4] c24 N79-17916  
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SLOWIKOWSKI, D. P.  
Digital pulse width selection circuit Patent  
[NASA-CASE-XLA-07788] c09 N71-29139

SMALL, J. G.  
Means for visually indicating flight paths of vehicles between the Earth, Venus, and Mercury Patent  
[NASA-CASE-XNP-00708] c14 N70-35394

SMALL, F. J.  
Orbiter/launch system  
[NASA-CASE-LAR-12250-1] c14 N81-26161

SMILOWITZ, E.  
Programmable scan/read circuitry for charge coupled device imaging detectors  
[NASA-CASE-NPO-15345-1] c33 N81-27403

SMITH, A. B.  
Method of forming thin window drifted silicon charged particle detector Patent  
[NASA-CASE-XLE-00808] c24 N71-10560

SMITH, C.  
Counter and shift register Patent  
[NASA-CASE-XNP-01753] c08 N71-22897

SMITH, D.  
Brazing alloy Patent  
[NASA-CASE-XNP-03063] c17 N71-23365

SMITH, D. L.  
Hall effect transducer  
[NASA-CASE-LAR-10620-1] c09 N72-25255

SMITH, E. B.  
Curved centerline air intake for a gas turbine engine  
[NASA-CASE-LEW-13201-1] c07 N81-14999

SMITH, E. W.  
Barium release system  
[NASA-CASE-LAR-10670-1] c06 N73-30097  
Rocket having barium release system to create ion clouds in the upper atmosphere  
[NASA-CASE-LAR-10670-2] c15 N74-27360

SMITH, H. A.  
Spherical tank gauge Patent  
[NASA-CASE-XMS-06236] c14 N71-21007  
Emergency space-suit helmet  
[NASA-CASE-MSC-10954-1] c54 N78-18761

SMITH, H. E.  
Digital computing cardiometer  
[NASA-CASE-MFS-20284-1] c52 N74-12778

SMITH, H. J.  
Variable resistance constant tension and lubrication device  
[NASA-CASE-KSC-10723-1] c37 N75-13265

SMITH, J. A.  
Thermal insulation protection means  
[NASA-CASE-MSC-12737-1] c24 N79-25142

SMITH, J. G.  
Satellite personal communications system  
[NASA-CASE-NPO-14480-1] c32 N80-20448

SMITH, J. P.  
Energy management system for glider type vehicle Patent  
[NASA-CASE-XPR-00756] c02 N71-13421

SMITH, J. R., JR.  
Balanced bellows spirometer  
[NASA-CASE-XAR-01547] c05 N69-21473  
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[NASA-CASE-XAC-00435] c09 N70-35440  
Transfer valve Patent  
[NASA-CASE-XAC-01158] c15 N71-23051  
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] c04 N71-23185

SMITH, J. W.  
Apparatus for damping operator induced oscillations of a controlled system  
[NASA-CASE-FRC-11041-1] c33 N80-20488

SMITH, L.  
Low gravity phase separator  
[NASA-CASE-MSC-14773-1] c35 N78-12390

SMITH, L. G.  
Ionospheric battery Patent  
[NASA-CASE-XGS-01593] c03 N70-35408

SMITH, L. H., JR.  
Reverse pitch fan with divided splitter  
[NASA-CASE-LBW-12760-1] c07 N77-17059

SMITH, L. S.  
Polarity sensitive circuit Patent  
[NASA-CASE-XNP-00952] c10 N71-23271

SMITH, H.  
Silica reusable surface insulation  
[NASA-CASE-ARC-10721-1] c27 N76-22376  
Spray coating apparatus having a rotatable  
workpiece holder  
[NASA-CASE-ARC-11110-1] c37 N78-32434  
Fibrous refractory composite insulation  
[NASA-CASE-ARC-11169-1] c24 N79-24062  
Adjustable high emittance gap filler  
[NASA-CASE-ARC-11310-1] c27 N80-23454

SMITH, H. J.  
Calibrating pressure switch  
[NASA-CASE-XNF-04494-1] c33 N79-33392

SMITH, R. W.  
Compact solar still Patent  
[NASA-CASE-XMS-04533] c15 N71-23086

SMITH, T. B., III  
Display research collision warning system  
[NASA-CASE-HQN-10703] c21 N73-13643

SMITH, W. O.  
Star tracking reticles and process for the  
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[NASA-CASE-GSC-11188-1] c14 N73-32320  
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[NASA-CASE-GSC-11188-3] c74 N74-20008

SMITH, W. R.  
Production of high purity I-123  
[NASA-CASE-LEW-10518-1] c24 N72-33681

SMITH, W. W.  
Trajectory-correction propulsion system Patent  
[NASA-CASE-XNP-01104] c28 N70-39931

SHOOP, G. F.  
Low gravity phase separator  
[NASA-CASE-HSC-14773-1] c35 N78-12390

SHYLIB, B. E.  
Liquid-gas separator for zero gravity  
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[NASA-CASE-XMS-01492] c05 N70-41297

SHYLY, B. M.  
Differential pressure control  
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Prosthetic urinary sphincter  
[NASA-CASE-MFS-23717-1] c52 N81-25660

SHERDEN, B. J.  
Gas turbine combustion apparatus Patent  
[NASA-CASE-XLE-103477-1] c28 N71-20330

SHODDY, L. G.  
Insert facing tool  
[NASA-CASE-MFS-21485-1] c37 N74-25968

SNYDER, J. A.  
Injector for use in high voltage isolators for  
liquid feed lines  
[NASA-CASE-NPO-11377] c15 N73-27406

SNYDER, L. M.  
Particle detection apparatus including a  
ballistic pendulum Patent  
[NASA-CASE-XMS-04201] c14 N71-22990

SNYDER, R. S.  
Method of crystallization  
[NASA-CASE-MFS-23001-1] c76 N77-32919  
Electrophoresis device  
[NASA-CASE-MFS-25426-1] c25 N81-29179

SODD, V. J.  
Production of high purity I-123  
[NASA-CASE-LEW-10518-1] c24 N72-33681

SOFFEN, G. A.  
Automated fluid chemical analyzer Patent  
[NASA-CASE-XNP-09451] c06 N71-26754

SOHL, G.  
Focussing system for an ion source having  
apertured electrodes Patent  
[NASA-CASE-XNP-03332] c09 N71-14618  
Ion engine casing construction and method of  
making same Patent  
[NASA-CASE-XNP-06942] c28 N71-23293

SOINI, H. E.  
Apparatus for measuring thermal conductivity  
Patent  
[NASA-CASE-XGS-01052] c14 N71-15992

SOKOLOWSKI, D. E.  
Heat exchanger  
[NASA-CASE-LEW-12252-1] c34 N79-13288

SOLOMON, G.  
Error correcting method and apparatus Patent  
[NASA-CASE-XNP-02748] c08 N71-22749

SOLTIS, D. G.  
Method of making membranes  
[NASA-CASE-XNP-04264] c03 N69-21337  
Flexible formulated plastic separators for  
alkaline batteries  
[NASA-CASE-LEW-12363-4] c44 N80-18555  
Additive for zinc electrodes  
[NASA-CASE-LEW-13286-1] c44 N81-27597

SOROANO, B. B.  
Durable antistatic coating for  
polymethylmethacrylate  
[NASA-CASE-NFO-13867-1] c27 N78-14164

SONNENSCHNEIN, C. M.  
Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c36 N75-15028  
Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c35 N77-10493

SONNENSCHNEIN, G.  
Method for attaching a fused-quartz mirror to a  
conductive metal substrate  
[NASA-CASE-MFS-23405-1] c26 N77-29260

SOPELIANOS, A. G.  
Carboranicyclotriphosphazenes and their polymers  
[NASA-CASE-ARC-11176-1] c27 N80-21533

SOBENSEN, C. E.  
Electric arc device for heating gases Patent  
[NASA-CASE-XAC-00319] c25 N70-41628

SOBENSEN, H. E.  
Wind tunnel flow generation section  
[NASA-CASE-AEC-10710-1] c09 N75-12969  
The engine air intake system  
[NASA-CASE-ARC-10761-1] c07 N77-18154  
Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c07 N80-32392

SOTER, E. J.  
Modification of one man life raft  
[NASA-CASE-LAR-10241-1] c54 N74-14845

SOTERLUND, A. W., JR.  
Single action separation mechanism Patent  
[NASA-CASE-XLA-00188] c15 N71-22874

SOURS, W. F.  
Minimech self-deploying boom mechanism  
[NASA-CASE-GSC-10566-1] c15 N72-18477

SOVEY, J. S.  
Modification of the electrical and optical  
properties of polymers  
[NASA-CASE-LEW-13027-1] c27 N80-24437  
Hydrogen hollow cathode ion source  
[NASA-CASE-LEW-12940-1] c72 N80-33186  
Texturing polymer surfaces by transfer casting  
[NASA-CASE-LEW-13120-1] c31 N81-16327  
Thermal barrier coating system having improved  
adhesion  
[NASA-CASE-LEW-13359-1] c27 N81-24265  
Ion sputter textured graphite  
[NASA-CASE-LEW-12919-1] c24 N81-27198

SOVA, W. W.  
Inflatable transpiration cooled nozzle  
[NASA-CASE-MFS-20619] c28 N72-11708

SPADY, A. A., JR.  
Backpack carrier Patent  
[NASA-CASE-LAR-10056] c05 N71-12351  
Reduced gravity simulator Patent  
[NASA-CASE-XLA-01787] c11 N71-16028

SPAIN, I. L.  
Hall effect magnetometer  
[NASA-CASE-LEW-11632-2] c35 N75-13213

SPALVINS, T.  
Deposition of alloy films  
[NASA-CASE-LEW-11262-1] c27 N74-13270

SPANG, B. A., III  
Apparatus for sensor failure detection and  
correction in a gas turbine engine control  
system  
[NASA-CASE-LEW-12907-2] c07 N81-19115

SPARKS, R. H.  
Fifth wheel  
[NASA-CASE-FRC-10081-1] c37 N77-14477

SPEARMAN, H. L.  
Translating horizontal tail Patent  
[NASA-CASE-XLA-08801-1] c02 N71-11043

SPEISER, R. C.  
Focussing system for an ion source having  
apertured electrodes Patent  
[NASA-CASE-XNP-03332] c09 N71-10618

SPENCER, B., JR.  
Variable geometry manned orbital vehicle Patent  
[NASA-CASE-XLA-03691] c31 N71-15674

SPENCER, D. J.  
Data compression system with a minimum time  
delay unit Patent

[NASA-CASE-YNP-08832] c08 N71-12506  
**SPENCER, J. L.**  
 Electronic strain-level counter  
 [NASA-CASE-LAR-10756-1] c32 N73-26510  
**SPENCER, P. E.**  
 Radiation direction detector including means for  
 compensating for photocell aging Patent  
 [NASA-CASE-XLA-00183] c14 N70-40239  
**SPENCER, R. L.**  
 Thickness measuring and injection device Patent  
 [NASA-CASE-MFS-20261] c14 N71-27005  
 Ultrasonic scanner for radial and flat panels  
 [NASA-CASE-MFS-20335-1] c35 N74-10415  
**SPENCER, R. S.**  
 Method of treating the surface of a glass member  
 [NASA-CASE-GSC-12110-1] c27 N77-32308  
 Safety shield for vacuum/pressure chamber  
 viewing port  
 [NASA-CASE-GSC-12513-1] c31 N81-19343  
**SPIER, R. A.**  
 Portable milling tool Patent  
 [NASA-CASE-IMF-03511] c15 N71-22799  
 Restraint system for ergometer  
 [NASA-CASE-MFS-21046-1] c14 N73-27377  
 Tilting table for ergometer and for other  
 biomedical devices  
 [NASA-CASE-MFS-21010-1] c05 N73-30078  
 Vee-notching device  
 [NASA-CASE-MFS-20730-1] c39 N74-13131  
**SPIES, R.**  
 Observation window for a gas confining chamber  
 [NASA-CASE-NPO-10890] c11 N73-12265  
**SPITZ, L. A.**  
 Process for the preparation of calcium superoxide  
 [NASA-CASE-ARC-11053-1] c25 N79-10162  
 Use of glow discharge in fluidized beds  
 [NASA-CASE-ARC-11245-1] c33 N80-11326  
**SPITZER, C. R.**  
 Evaporant holder  
 [NASA-CASE-XLA-03105] c15 N69-27483  
 Exposure interlock for oscilloscope cameras  
 [NASA-CASE-LAR-10319-1] c14 N73-32322  
**SPITZIG, W. A.**  
 Method of making a diffusion bonded refractory  
 coating Patent  
 [NASA-CASE-XLE-01604-2] c15 N71-15610  
**SPRECCACE, R. P.**  
 Method of forming a wick for a heat pipe  
 [NASA-CASE-NPO-13391-1] c34 N76-27515  
**SPRINGER, L. E.**  
 Digital data reformatter/deserializer  
 [NASA-CASE-NPO-13676-1] c60 N79-20751  
**SPRINGETT, J. C.**  
 Phase-shift data transmission system having a  
 pseudo-noise SYNC code modulated with the data  
 in a single channel Patent  
 [NASA-CASE-YNP-00911] c08 N70-41961  
 Audio system with means for reducing noise effects  
 [NASA-CASE-NPO-11631] c10 N73-12244  
**SPRINGFIELD, C. L.**  
 Flammability test chamber Patent  
 [NASA-CASE-KSC-10126] c11 N71-24985  
 Autoignition test cell Patent  
 [NASA-CASE-KSC-10198] c11 N71-28629  
**SPROSS, P. R.**  
 Biological isolation garment Patent  
 [NASA-CASE-MSC-12206-1] c05 N71-17599  
**SPUCK, W. H., III**  
 Borehole geological assessment  
 [NASA-CASE-NPO-14231-1] c46 N80-10709  
**SQUILLARI, W.**  
 System for stabilizing torque between a balloon  
 and gondola  
 [NASA-CASE-GSC-11077-1] c02 N73-13008  
**SQUYERS, H. P.**  
 Uniform variable light source  
 [NASA-CASE-NPO-11429-1] c74 N77-21941  
**ST. CLAIR, A. E.**  
 Crystalline polyimides  
 [NASA-CASE-LAR-12099-1] c27 N80-16158  
 Electrically conductive palladium containing  
 polyimide films  
 [NASA-CASE-LAR-12705-1] c33 N80-24549  
 Process for preparing high temperature polyimide  
 film laminates  
 [NASA-CASE-LAR-12742-1] c24 N81-12174  
**ST. CLAIR, T. L.**  
 Crystalline polyimides  
 [NASA-CASE-LAR-12099-1] c27 N80-16158  
 Process for preparing high temperature polyimide  
 film laminates  
 [NASA-CASE-LAR-12742-1] c24 N81-12174  
 Method for preparing addition type polyimide  
 prepregs  
 [NASA-CASE-LAR-12054-2] c27 N81-14078  
 Thermoset-thermoplastic aromatic polyamides  
 [NASA-CASE-LAR-12723-1] c27 N81-15107  
 Tackifier for addition polyimides containing  
 monoethylphthalate  
 [NASA-CASE-LAR-12642-1] c27 N81-29229  
**STABLEY, S. D.**  
 Quick attach and release fluid coupling assembly  
 Patent  
 [NASA-CASE-YKS-01985] c15 N71-10782  
**STAINBACK, J. D.**  
 Exposure interlock for oscilloscope cameras  
 [NASA-CASE-LAR-10319-1] c14 N73-32322  
**STALEY, H. W.**  
 Pulse amplitude and width detector Patent  
 [NASA-CASE-IMF-06519] c09 N71-12519  
 Pulse rise time and amplitude detector Patent  
 [NASA-CASE-IMI-08804] c09 N71-24717  
**STALEY, R. W.**  
 Exposure system for animals Patent  
 [NASA-CASE-YAC-05333] c11 N71-22875  
**STALLCOP, J. B.**  
 Measurement of plasma temperature and density  
 using radiation absorption  
 [NASA-CASE-ARC-10598-1] c75 N74-30156  
**STALOFF, C.**  
 Frequency shift keyed demodulator Patent  
 [NASA-CASE-XGS-02889] c07 N71-11282  
**STAMPS, J. C.**  
 Television noise reduction device  
 [NASA-CASE-MSC-12607-1] c32 N75-21485  
**STANGE, W. C.**  
 Cyclical bi-directional rotary actuator  
 [NASA-CASE-GSC-11883-1] c37 N77-19458  
 Actuator mechanism  
 [NASA-CASE-GSC-11883-2] c37 N78-31426  
**STANLEY, A. G.**  
 Method for analyzing radiation sensitivity of  
 integrated circuits  
 [NASA-CASE-NEO-14350-1] c33 N80-14332  
**STARK, K. W.**  
 Endless tape cartridge Patent  
 [NASA-CASE-XGS-00769] c14 N70-41647  
 Endless tape transport mechanism Patent  
 [NASA-CASE-XGS-01223] c07 N71-10609  
 Annular slit colloid thruster Patent  
 [NASA-CASE-GSC-10709-1] c28 N71-25213  
 Micro-pound extended range thrust stand Patent  
 [NASA-CASE-GSC-10710-1] c28 N71-27094  
**STARK, H. W.**  
 Solid propellant liner Patent  
 [NASA-CASE-YNP-09744] c27 N71-16392  
**STARKEY, D. J.**  
 Torsional disconnect unit  
 [NASA-CASE-NEO-10704] c15 N72-20445  
**STARNER, E. R.**  
 Frequency measurement by coincidence detection  
 with standard frequency  
 [NASA-CASE-MSC-14649-1] c33 N76-16331  
**STATTEL, R. J.**  
 Memory-based frame synchronizer  
 [NASA-CASE-GSC-12430-1] c32 N80-20453  
 Memory-based parallel data output controller  
 [NASA-CASE-GSC-12447-1] c60 N80-21987  
**STCLAIR, T. L.**  
 Polyimide adhesives  
 [NASA-CASE-LAR-12181-1] c27 N78-17205  
**STCLAIRE, T. L.**  
 Mixed diamines for lower melting addition  
 polyimide preparation and utilization  
 [NASA-CASE-LAR-12054-1] c27 N79-33316  
**STECURA, S.**  
 Thermal barrier coating system  
 [NASA-CASE-LEW-12554-1] c34 N78-18355  
**STERLE, R. E.**  
 Satellite aided vehicle avoidance system Patent  
 [NASA-CASE-ERC-10090] c21 N71-24948  
 Satellite aided vehicle avoidance system  
 [NASA-CASE-ERC-10419-1] c03 N75-30132  
**STERLE, R. E.**  
 Method and apparatus for nondestructive testing  
 of pressure vessels  
 [NASA-CASE-NPO-12142-1] c38 N76-28563

STEENHAGEN, G.  
Expansible support means  
[NASA-CASE-NPO-11059] c15 N72-17454

STEBBEN, J.  
Relief valve  
[NASA-CASE-XMS-05894-1] c15 N69-21924

STEIN, R. J.  
Continuous detonation reaction engine Patent  
[NASA-CASE-XMF-06926] c28 N71-22983  
Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c43 N79-25443

STEIN, R. M.  
A system for concurrently delivering a stream of powdered fuel and a stream of powdered oxidizer to a combustion chamber for a reaction motor  
[NASA-CASE-MFS-23904-1] c20 N79-13077

STEIN, S.  
Injector-valve device Patent  
[NASA-CASE-XLE-00303] c15 N70-36535  
Rocket engine injector Patent  
[NASA-CASE-XLE-00111] c28 N70-38199  
Rocket engine injector Patent  
[NASA-CASE-XLE-03157] c28 N71-24736

STEINBERG, R.  
Molecular beam velocity selector Patent  
[NASA-CASE-XLE-01533] c11 N71-10777  
Method of forming metal hydride films  
[NASA-CASE-LEW-12083-1] c37 N78-13436

STEINMETZ, C. P.  
Energy limiter for hydraulic actuators Patent  
[NASA-CASE-ARC-10131-1] c15 N71-27754

STELBEN, J. J.  
Recorder/processor apparatus  
[NASA-CASE-GSC-11553-1] c35 N74-15831

STELL, R. E.  
In situ transfer standard for ultrahigh vacuum gage calibration  
[NASA-CASE-LAR-10862-1] c35 N74-15092

STELLA, A. J.  
Electrical connector pin with wiping action  
[NASA-CASE-XMF-04238] c09 N69-35734

STELTS, P. D.  
Low heat leak connector for cryogenic system  
[NASA-CASE-XLE-02367-1] c31 N79-21225

STELZLIED, C. T.  
Reflectometer for receiver input impedance match measurement Patent  
[NASA-CASE-XNP-10843] c07 N71-11267  
Multi-feed cone Cassegrain antenna Patent  
[NASA-CASE-NPO-10539] c07 N71-11285  
Matched thermistors for microwave power meters Patent  
[NASA-CASE-NPO-10348] c10 N71-12554  
Broadband microwave waveguide window Patent  
[NASA-CASE-XNP-08880] c09 N71-24808  
Rotary vane attenuator wherein rotor has orthogonally disposed resistive and dielectric cards  
[NASA-CASE-NPO-11418-1] c14 N73-13420

STENGARD, E. O.  
Toggle mechanism for pinching metal tubes  
[NASA-CASE-GSC-12274-1] c37 N79-28550

STENGL, E. F.  
Wind velocity probing device and method Patent  
[NASA-CASE-XLA-02081] c20 N71-16281

STENLUND, S. J.  
Rotating mandrel for assembly of inflatable devices Patent  
[NASA-CASE-XLA-04143] c15 N71-17687  
Traveling sealer for contoured table Patent  
[NASA-CASE-XLA-01494] c15 N71-24164

STEPHANS, J. B.  
Low cost solar energy collection system  
[NASA-CASE-NPO-13579-1] c44 N78-17460

STEPHENS, D. G.  
Flexible ring slosh damping baffle Patent  
[NASA-CASE-LAR-10317-1] c32 N71-16103  
Instrument for measuring the dynamic behavior of liquids Patent  
[NASA-CASE-XLA-05541] c12 N71-26387  
Active vibration isolator for flexible bodies Patent  
[NASA-CASE-LAR-10106-1] c15 N71-27169  
Ride quality meter  
[NASA-CASE-LAR-12882-1] c54 N81-31848

STEPHENS, D. L.  
Automatic closed circuit television arc guidance control Patent

[NASA-CASE-MFS-13046] c07 N71-19433

STEPHENS, J. B.  
Microbalance including crystal oscillators for measuring contaminants in a gas system Patent  
[NASA-CASE-NPO-10144] c14 N71-17701  
Space simulator Patent  
[NASA-CASE-NPO-10141] c11 N71-24964  
Sampler of gas borne particles  
[NASA-CASE-NPO-13396-1] c35 N76-18401  
Wind sensor  
[NASA-CASE-NPO-13462-1] c35 N76-24524  
Cryostat system for temperatures on the order of 2 deg K or less  
[NASA-CASE-NPO-13459-1] c31 N77-10229  
Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c31 N78-24387  
Solar pond  
[NASA-CASE-NPO-13581-2] c44 N78-31525  
Primary reflector for solar energy collection systems  
[NASA-CASE-NPO-13579-4] c44 N79-14529  
Primary reflector for solar energy collection systems and method of making same  
[NASA-CASE-NPO-13579-3] c44 N79-24432  
Solar energy collection system  
[NASA-CASE-NPO-13579-2] c44 N79-24433  
Low cost cryostat  
[NASA-CASE-NPO-14513-1] c35 N81-14287  
Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c43 N81-26509

STEPHENS, J. E.  
High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-1] c26 N77-24254  
Process for making a high toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-2] c26 N79-22271  
High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-3] c26 N80-32484

STERN, H.  
Reversible current control apparatus Patent  
[NASA-CASE-XLA-09371] c10 N71-18724

STERRETT, J. E.  
Laser grating interferometer Patent  
[NASA-CASE-XLA-04295] c16 N71-24170

STETSON, A. R.  
Silicide coatings for refractory metals Patent  
[NASA-CASE-XLE-10910] c18 N71-29040

STEUDEL, E. M.  
Controlled caging and uncaging mechanism  
[NASA-CASE-GSC-11063-1] c37 N77-27400

STEVENS, H. L.  
Surface conforming thermal/pressure seal  
[NASA-CASE-MSC-18422-1] c37 N80-14400

STEVENS, H. R.  
Portable electrophoresis apparatus using minimum electrolyte  
[NASA-CASE-NPO-13274-1] c25 N79-10163

STEVENSON, L. E.  
Aircraft control system  
[NASA-CASE-ERC-10439] c02 N73-19004

STEWART, C. H.  
Family of frequency to amplitude converters  
[NASA-CASE-MSC-12395] c09 N72-25257  
Apparatus for statistical time-series analysis of electrical signals  
[NASA-CASE-MSC-12428-1] c10 N73-25240

STEWART, D. A.  
Adjustable high emittance gap filler  
[NASA-CASE-ARC-11310-1] c27 N80-23454

STEWART, R. B.  
Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds  
[NASA-CASE-LAR-10612-1] c12 N73-28144

STEWART, W. L.  
Multistage multiple-reentry turbine Patent  
[NASA-CASE-XLE-00170] c15 N70-36412  
Multistage multiple-reentry turbine Patent  
[NASA-CASE-XLE-00085] c28 N70-39895  
Supercharged topping rocket propellant feed system  
[NASA-CASE-XLE-02062-1] c20 N80-14188

STICKLE, J. W.  
Direct lift control system Patent  
[NASA-CASE-LAR-10249-1] c02 N71-26110

STIFFLER, J. J.  
Error correcting method and apparatus Patent  
[NASA-CASE-XNP-02748] c08 N71-22749  
Encoder/decoder system for a rapidly synchronizable binary code Patent

[NASA-CASE-NPO-10342] c10 N71-33407  
**STIGBERG, J. D.**  
 Signal conditioner test set  
 [NASA-CASE-KSC-10750-1] c35 N75-12270

**STINE, H. A.**  
 Electric arc apparatus Patent  
 [NASA-CASE-XAC-01677] c09 N71-20816

**STIRN, R. J.**  
 High voltage, high current Schottky barrier  
 solar cell  
 [NASA-CASE-NPO-13482-1] c44 N78-13526  
 Schottky barrier cell and method of fabricating it  
 [NASA-CASE-NPO-13689-4] c44 N81-26553  
 Schottky barrier solar cell  
 [NASA-CASE-NPO-13689-2] c44 N81-29525

**STJOHN, R. H.**  
 Walking boot assembly  
 [NASA-CASE-ARC-11101-1] c54 N78-17675

**STOCKARD, R. E.**  
 Semiconductor p-n junction stress and strain  
 sensor  
 [NASA-CASE-XLA-04980] c09 N69-27422  
 Method of making semiconductor p-n junction  
 stress and strain sensor  
 [NASA-CASE-XLA-04980-2] c14 N72-28438

**STOCKER, P. J.**  
 Laser extensometer  
 [NASA-CASE-NFS-19259-1] c36 N78-14380

**STOCKTON, R. J.**  
 Microwave switching power divider  
 [NASA-CASE-GSC-12420-1] c33 N80-21670

**STOKES, C. S.**  
 Barium release system  
 [NASA-CASE-LAR-10670-1] c06 N73-30097  
 Rocket having barium release system to create  
 ion clouds in the upper atmosphere  
 [NASA-CASE-LAR-10670-2] c15 N74-27360

**STOKES, H. C.**  
 Multispectral scanner optical system  
 [NASA-CASE-MSC-18255-1] c74 N80-33210

**STOLLER, P. W.**  
 Reversible motion drive system Patent  
 [NASA-CASE-NPO-10173] c15 N71-24696

**STONE, F. A.**  
 Synchronous servo loop control system Patent  
 [NASA-CASE-XNP-03744] c10 N71-20448

**STONE, L. P.**  
 Articulated multiple couch assembly Patent  
 [NASA-CASE-MSC-11253] c05 N71-12343

**STONE, R. W., JR.**  
 G conditioning suit Patent  
 [NASA-CASE-XLA-02898] c05 N71-20268

**STONE, S. B.**  
 Fluid sample collector Patent  
 [NASA-CASE-XMS-06767-1] c14 N71-20435

**STORY, A. W.**  
 System for indicating direction of intruder  
 aircraft  
 [NASA-CASE-ERC-10226-1] c14 N73-16483  
 Display system  
 [NASA-CASE-ERC-10350] c14 N73-20474

**STOTLER, C. L., JR.**  
 Integrated gas turbine engine-nacelle  
 [NASA-CASE-LEW-12389-2] c07 N78-18066  
 Integrated gas turbine engine-nacelle  
 [NASA-CASE-LEW-12389-3] c07 N79-14096

**STRAIGHT, D. H.**  
 Rocket motor system Patent  
 [NASA-CASE-XLB-00323] c28 N70-38505  
 Gas turbine exhaust nozzle  
 [NASA-CASE-LEW-11569-1] c07 N74-15453

**STRAND, L. D.**  
 Solid propellant rocket motor  
 [NASA-CASE-NPO-11559] c28 N73-24784  
 Nitramine propellants  
 [NASA-CASE-NPO-14103-1] c28 N78-31255

**STRANGE, H. G.**  
 Position sensing device employing misaligned  
 magnetic field generating and detecting  
 apparatus Patent  
 [NASA-CASE-XGS-07514] c23 N71-16099  
 Self-regulating proportionally controlled  
 heating apparatus and technique  
 [NASA-CASE-GSC-11752-1] c77 N75-20140

**STRASS, H. K.**  
 Motion picture camera for optical pyrometry Patent  
 [NASA-CASE-XLA-00062] c14 N70-33254  
 Light intensity modulator controller Patent  
 [NASA-CASE-XMS-04300] c09 N71-15479

**STREED, E. B.**  
 Solar cell Patent  
 [NASA-CASE-ARC-10050] c03 N71-33409

**STRINGHAM, R. S.**  
 Ultra-violet process for producing flame  
 resistant polyamides and products produced  
 thereby  
 [NASA-CASE-MSC-16074-1] c27 N80-26446

**STRON, T. H.**  
 Spiral groove seal  
 [NASA-CASE-XLB-10326-2] c15 N72-29488  
 Spiral groove seal  
 [NASA-CASE-XLB-10326-4] c37 N74-15125

**STRONG, I. J.**  
 Stirring apparatus for plural test tubes Patent  
 [NASA-CASE-XAC-06956] c15 N71-21177

**STRONG, J. P., III**  
 Two-dimensional radiant energy array computers  
 and computing devices  
 [NASA-CASE-GSC-11839-1] c60 N77-14751  
 Analog to digital converter for two-dimensional  
 radiant energy array computers  
 [NASA-CASE-GSC-11839-3] c60 N77-32731  
 Memory device for two-dimensional radiant energy  
 array computers  
 [NASA-CASE-GSC-11839-2] c60 N78-10709

**STROUB, R. H.**  
 Constant lift rotor for a heavier than air craft  
 [NASA-CASE-ARC-11045-1] c05 N79-17847

**STROUBAL, G.**  
 Thermal insulation protection means  
 [NASA-CASE-MSC-12737-1] c24 N79-25142

**STROUP, E. R.**  
 Electrochemical coulometer and method of forming  
 same Patent  
 [NASA-CASE-XGS-05434] c03 N71-20491

**STRULL, G.**  
 Solid state television camera system Patent  
 [NASA-CASE-XMF-06092] c07 N71-24612

**STRUTHOFF, G. L.**  
 Dual acting slit control mechanism  
 [NASA-CASE-LAR-11370-1] c35 N80-28686

**STUART, J. I.**  
 Automated fluid chemical analyzer Patent  
 [NASA-CASE-XNP-09451] c06 N71-26754

**STUART, J. W.**  
 Fire resistant coating composition Patent  
 [NASA-CASE-GSC-10072] c18 N71-14014  
 Diffuse reflective coating  
 [NASA-CASE-GSC-11214-1] c06 N73-13128

**STUCKEY, J. H.**  
 Panelized high performance multilayer insulation  
 Patent  
 [NASA-CASE-MFS-14023] c33 N71-25351  
 Cryogenic thermal insulation Patent  
 [NASA-CASE-XMF-05046] c33 N71-28892

**STUDENICK, D. E.**  
 System for stabilizing torque between a balloon  
 and gondola  
 [NASA-CASE-GSC-11077-1] c02 N73-13008  
 Fluid sampling device  
 [NASA-CASE-GSC-12143-1] c35 N77-32456

**STUDER, P. A.**  
 Electronic beam switching commutator Patent  
 [NASA-CASE-XGS-01451] c09 N71-10677  
 Direct current motor with stationary armature  
 and field Patent  
 [NASA-CASE-XGS-05290] c09 N71-25999  
 Helical recorder arrangement for multiple  
 channel recording on both sides of the tape  
 [NASA-CASE-GSC-10614-1] c09 N72-11224  
 Electric motive machine including magnetic bearing  
 [NASA-CASE-XGS-07805] c15 N72-33476  
 Magnetic bearing  
 [NASA-CASE-GSC-11079-1] c37 N75-18574  
 Magnetic bearing system  
 [NASA-CASE-GSC-11978-1] c37 N77-17464  
 Three phase full wave dc motor decoder  
 [NASA-CASE-GSC-11824-1] c33 N77-26386  
 Energy storage apparatus  
 [NASA-CASE-GSC-12030-1] c44 N78-24608  
 A linear magnetic motor/generator  
 [NASA-CASE-GSC-12518-1] c33 N80-19424  
 Non-contacting power transfer device  
 [NASA-CASE-GSC-12595-1] c33 N81-12331  
 Linear magnetic bearing  
 [NASA-CASE-GSC-12517-1] c33 N81-22279

**STUMP, C. W.**  
 Apparatus for measuring an aircraft's speed and



height  
[NASA-CASE-LAR-12275-1] c35 N79-18296  
Film advance indicator  
[NASA-CASE-LAR-12474-1] c35 N80-31774

STUMP, R. C., JR.  
Hydroxy terminated perfluoro ethers Patent  
[NASA-CASE-NPO-10768] c06 N71-27254  
Perfluoro polyether acyl fluorides  
[NASA-CASE-NPO-10765] c06 N72-20121  
Polyurethane resins from hydroxy terminated  
perfluoro ethers  
[NASA-CASE-NPO-10768-2] c06 N72-27144  
Highly fluorinated polyurethanes  
[NASA-CASE-NPO-10767-2] c06 N72-27151  
Highly fluorinated polyurethanes  
[NASA-CASE-NPO-10767-1] c06 N73-33076

STURGIS, A. C.  
Multiparameter vision testing apparatus  
[NASA-CASE-MSC-13601-2] c54 N75-27759

STURM, R. G.  
Self-recording portable soil penetrometer  
[NASA-CASE-MFS-20774] c14 N73-19420

STURMAN, J. C.  
Pulsed differential comparator circuit Patent  
[NASA-CASE-XLE-03804] c10 N71-19471

STYLES, C. H.  
Spherical solid-propellant rocket motor Patent  
[NASA-CASE-XLA-00105] c28 N70-33331

SUDEY, J.  
Low speed phaselock speed control system  
[NASA-CASE-GSC-11127-1] c09 N75-24758

SULLIVAN, D. B.  
Electrical insulating layer process  
[NASA-CASE-LEW-10489-1] c15 N72-25447

SULLIVAN, R. H.  
Ablation article and method  
[NASA-CASE-LAR-10439-1] c33 N73-27796

SULLIVAN, J. L.  
Self-contained breathing apparatus  
[NASA-CASE-MSC-14733-1] c54 N76-24900

SULLIVAN, T. E.  
Waveguide mixer  
[NASA-CASE-ERC-10179] c07 N72-20141

SUMIDA, J. T.  
Miniature multichannel biotelemeter system  
[NASA-CASE-NPO-13065-1] c52 N74-26625

SUMMERFIELD, D. G.  
Wind tunnel model and method  
[NASA-CASE-LAR-10812-1] c09 N74-17955

SUMMERS, R. H.  
Geneva mechanism  
[NASA-CASE-NPO-13281-1] c37 N75-13266

SUTLIFF, J. D.  
Wing deployment method and apparatus Patent  
[NASA-CASE-XMS-00907] c02 N70-41630

SWAIN, R. J.  
Induction heating gun  
[NASA-CASE-LAR-12540-1] c37 N80-11468  
One step dual purpose joining technique  
[NASA-CASE-LAR-12595-1] c37 N80-11469

SWAIN, R. L.  
Spherical solid-propellant rocket motor Patent  
[NASA-CASE-XLA-00105] c28 N70-33331

SWANN, R. T.  
Sandwich panel construction Patent  
[NASA-CASE-XLA-00349] c33 N70-37979  
Dielectric molding apparatus Patent  
[NASA-CASE-LAR-10121-1] c15 N71-26721

SWARTZ, P. F.  
Micro-fluid exchange coupling apparatus  
[NASA-CASE-ABC-11114-1] c51 N81-14605

SWEAT, J. C.  
Emergency escape system Patent  
[NASA-CASE-XKS-07814] c15 N71-27067

SWEET, G. R.  
Compensating radiometer  
[NASA-CASE-XLA-04556] c14 N69-27484  
Spherical measurement device  
[NASA-CASE-XLA-06683] c14 N72-28436

SWETTE, L. L.  
Electrocatalyst for oxygen reduction  
[NASA-CASE-BQN-10537-1] c06 N72-10138

SWINGLE, R. L.  
Compact solar still Patent  
[NASA-CASE-XMS-04533] c15 N71-23086

SWIRSKI, B. D.  
Method of fabricating an object with a thin wall  
having a precisely shaped slit  
[NASA-CASE-LAR-10409-1] c31 N74-21659

SWORDS, B. B.  
Adjustable force probe  
[NASA-CASE-MFS-20760] c14 N72-33377

SYDNOR, R. L.  
Ultra stable frequency distribution system  
[NASA-CASE-NPO-13836-1] c32 N78-15323

SYVERTSON, C. A.  
Flight craft Patent  
[NASA-CASE-XAC-02058] c02 N71-16087

SZBHALSKI, B.  
Computer circuit card puller  
[NASA-CASE-FRC-11042-1] c37 N80-20589

## T

TADDEO, F. V.  
Pulse generating circuit employing switch means  
on ends of delay line for alternately charging  
and discharging same Patent  
[NASA-CASE-XNP-00745] c10 N71-28960

TALBOT, R. H.  
Protection for energy conversion systems  
[NASA-CASE-XGS-04808] c03 N69-25146  
Inverter with means for base current shaping for  
sweeping charge carriers from base region Patent  
[NASA-CASE-XGS-06226] c10 N71-25950

TALLEY, D. H.  
Response analyzers for sensors Patent  
[NASA-CASE-MFS-11204] c14 N71-29134

TARPLEY, J. L.  
Static coefficient test method and apparatus  
[NASA-CASE-GSC-11893-1] c35 N76-31489

TASHBAE, P. W.  
System for depositing thin films  
[NASA-CASE-MFS-20775-1] c31 N75-12161

TAUB, W. H.  
Radial module space station Patent  
[NASA-CASE-XMS-01906] c31 N70-41373  
Space vehicle system  
[NASA-CASE-MSC-12561-1] c18 N76-17185

TAUSWORTHE, R. C.  
Filter for third order phase locked loops  
[NASA-CASE-NPO-11941-1] c10 N73-27171  
Phase conjugation method and apparatus for an  
active retrodirective antenna array  
[NASA-CASE-NPO-13641-1] c32 N79-24210

TAYLOR, C. J.  
High resolution developing of photosensitive  
resists Patent  
[NASA-CASE-XGS-04993] c14 N71-17574

TAYLOR, L. L.  
Flexible composite membrane Patent  
[NASA-CASE-XNP-08837] c18 N71-16210

TAYLOR, L. T.  
Electrically conductive palladium containing  
polyimide films  
[NASA-CASE-LAR-12705-1] c33 N80-24549

TAYLOR, L. V.  
Plural position switch status and operativeness  
checker Patent  
[NASA-CASE-XLA-08799] c10 N71-27272

TAYLOR, R. A.  
Digital computing cardiometer  
[NASA-CASE-MFS-20284-1] c52 N74-12778

TAYLOR, R. C.  
Multi axis vibration fixtures  
[NASA-CASE-MFS-20242] c14 N73-19421

TAYLOR, R. E.  
Automatic acquisition system for phase-lock loop  
[NASA-CASE-IGS-04994] c09 N69-21543  
Polarization diversity monopulse tracking  
receiver Patent  
[NASA-CASE-IGS-03501] c09 N71-20864  
Electromagnetic polarization systems and methods  
Patent  
[NASA-CASE-GSC-10021-1] c09 N71-24595  
Method and automated apparatus for detecting  
coliform organisms  
[NASA-CASE-MSC-16777-1] c51 N80-27067  
Navigation system and method  
[NASA-CASE-GSC-12508-1] c04 N81-26085

TAYLOR, T. I.  
Metabolic rate meter and method  
[NASA-CASE-MSC-12239-1] c52 N79-21750

TCHEREBEV, D. I.  
Variable frequency nuclear magnetic resonance  
spectrometer Patent  
[NASA-CASE-XNP-09830] c14 N71-26266

**TE POEL, H. E.**  
 Television signal scan rate conversion system Patent  
 [NASA-CASE-XMS-07168] c07 N71-11300

**TEGHELLA, C. E.**  
 Digital second-order phase-locked loop  
 [NASA-CASE-NPO-11905-1] c33 N74-12887

**TRITELBAUM, S.**  
 Frequency shift keyed demodulator Patent  
 [NASA-CASE-XGS-02889] c07 N71-11282

**TELFER, T. A.**  
 Method of determining bond quality of power transistors attached to substrates  
 [NASA-CASE-MFS-21931-1] c37 N75-26372

**TEMPLE, H. E.**  
 Means for growing ribbon crystals without subjecting the crystals to thermal shock-induced strains  
 [NASA-CASE-NPO-14298-1] c76 N80-32244  
 Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
 [NASA-CASE-NPO-14297-1] c33 N81-19389

**TENER, W. H.**  
 Cryogenic liquid sensor  
 [NASA-CASE-NPO-10619-1] c35 N77-21393

**TENG, R. W.**  
 Collapsible pistons  
 [NASA-CASE-MSC-13789-1] c11 N73-32152

**TENOSO, H. J.**  
 Water system virus detection  
 [NASA-CASE-MSC-16098-1] c51 N79-16693

**TEPPER, E. H.**  
 Regenerable device for scrubbing breathable air of CO<sub>2</sub> and moisture without special heat exchanger equipment  
 [NASA-CASE-MSC-14771-1] c54 N77-32722

**TERP, L. S.**  
 Gas compression apparatus  
 [NASA-CASE-MSC-14757-1] c35 N78-10428

**TERRAY, A.**  
 Method of making an apertured casting  
 [NASA-CASE-LEW-11169-1] c37 N76-23570

**TERSELIC, E. A.**  
 Split welding chamber Patent  
 [NASA-CASE-LEW-11531] c15 N71-14932

**TESINSKY, J. S.**  
 Flexible pile thermal barrier insulator  
 [NASA-CASE-MSC-19568-1] c34 N78-25350

**TETSUKA, G. H.**  
 Single or joint amplitude distribution analyzer Patent  
 [NASA-CASE-XNP-01383] c09 N71-10659

**THALEE, S.**  
 Voltage regulator Patent  
 [NASA-CASE-ERC-10113] c09 N71-27053  
 Current dependent filter inductance  
 [NASA-CASE-ERC-10139] c09 N72-17154

**THALLER, L. H.**  
 Combined electrolysis device and fuel cell and method of operation Patent  
 [NASA-CASE-XLE-01645] c03 N71-20904  
 Electrically rechargeable REDOX flow cell  
 [NASA-CASE-LEW-12220-1] c44 N77-14581  
 Electrochemical cell for rebalancing REDOX flow system  
 [NASA-CASE-LEW-13150-1] c44 N79-26474

**THATCHER, C. S.**  
 Precision heat forming of tetrafluoroethylene tubing  
 [NASA-CASE-MSC-18430-1] c31 N80-17292

**THEAKSTON, H. A.**  
 Floating nut retention system  
 [NASA-CASE-MSC-16938-1] c37 N80-23653

**THIBODAUX, J. G., JR.**  
 Spherical solid-propellant rocket motor Patent  
 [NASA-CASE-XLA-00105] c28 N70-33331  
 Mandrel for shaping solid propellant rocket fuel into a motor casing Patent  
 [NASA-CASE-XLA-00304] c27 N70-34783  
 Method of making a solid propellant rocket motor Patent  
 [NASA-CASE-XLA-04126] c28 N71-26779  
 Solid propellant rocket motor and method of making same  
 [NASA-CASE-XLA-1349] c20 N77-17143

**THIEL, A. H.**  
 Aligning and positioning device Patent  
 [NASA-CASE-XMS-04178] c15 N71-22798

**THIELE, C.**  
 Space simulator Patent  
 [NASA-CASE-XNP-00459] c11 N70-38675

**THIELE, C. L.**  
 Thermal energy transformer  
 [NASA-CASE-NPO-14058-1] c44 N79-18443

**THOLE, J. M.**  
 Inflation system for balloon type satellites Patent  
 [NASA-CASE-XGS-03351] c31 N71-16081

**THOM, K.**  
 Magnetically controlled plasma accelerator Patent  
 [NASA-CASE-XLA-00327] c25 N71-29184  
 Non-equilibrium radiation nuclear reactor  
 [NASA-CASE-HQN-10841-1] c73 N78-19920

**THOMAS, D. P., JR.**  
 Jet shoes  
 [NASA-CASE-XLA-08491] c05 N69-21380  
 One hand backpack harness  
 [NASA-CASE-LAR-10102-1] c05 N72-23085  
 Kinesthetic control simulator  
 [NASA-CASE-LAR-10276-1] c09 N75-15662  
 Fluid velocity measuring device  
 [NASA-CASE-LAR-11729-1] c34 N79-12359

**THOMAS, H. H.**  
 Electronic motor control system Patent  
 [NASA-CASE-XMP-01129] c09 N70-38712

**THOMAS, H. E.**  
 Optical communications system Patent  
 [NASA-CASE-XLA-01090] c07 N71-12389  
 Optical communications system Patent  
 [NASA-CASE-XLA-01090] c16 N71-28963

**THOMAS, M. L.**  
 Optical alignment device  
 [NASA-CASE-ARC-10932-1] c74 N76-22993

**THOMAS, R. D.**  
 Thermocouple tape  
 [NASA-CASE-LEW-11072-1] c14 N73-24472  
 Thermocouple tape  
 [NASA-CASE-LEW-11072-2] c35 N76-15434  
 Multi-cell battery protection system  
 [NASA-CASE-LEW-12039-1] c44 N78-14625

**THOMAS, R. E.**  
 Rapid, quantitative determination of bacteria in water  
 [NASA-CASE-GSC-12158-1] c51 N78-22585  
 Method and apparatus for eliminating luminol interference material  
 [NASA-CASE-MSC-16260-1] c51 N80-16714

**THOMASON, H. E.**  
 Trigonometric vehicle guidance assembly which aligns the three perpendicular axes of two three-axes systems Patent  
 [NASA-CASE-XMP-00684] c21 N71-21688  
 Azimuth laying system Patent  
 [NASA-CASE-XMP-01669] c21 N71-23289

**THOMPSON, G. D., JR.**  
 Cascaded complementary pair broadband transistor amplifiers Patent  
 [NASA-CASE-NPO-10003] c10 N71-26415

**THOMPSON, J. R., JR.**  
 Inflatable transpiration cooled nozzle  
 [NASA-CASE-MFS-20619] c28 N72-11708

**THOMPSON, E. B.**  
 Length mode piezoelectric ultrasonic transducer for inspection of solid objects  
 [NASA-CASE-MSC-19672-1] c38 N79-14398

**THOMPSON, E. E.**  
 On-film optical recording of camera lens settings  
 [NASA-CASE-MSC-12363-1] c14 N73-26431

**THOMPSON, S. W.**  
 Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control  
 [NASA-CASE-NPO-14474-1] c26 N80-14229

**THOMPSON, W. W.**  
 Inhibited solid propellant composition containing beryllium hydride  
 [NASA-CASE-NPO-10866-1] c28 N79-14228

**THOMPSON, A. E.**  
 Pulsed energy power system Patent  
 [NASA-CASE-MSC-13112] c03 N71-11057

**THOMPSON, J. A. L.**  
 Wind measurement system  
 [NASA-CASE-MFS-23362-1] c47 N77-10753

**THORNTON, G. E.**  
 Hole cutter  
 [NASA-CASE-MFS-22649-1] c37 N75-25186

**THORNTON, W. E.**  
 Kinesimetric method and apparatus

[NASA-CASE-MSC-18929-1] c54 N81-15699  
**THORNWALL, J. C.**  
 Regulated dc to dc converter  
 [NASA-CASE-XGS-03429] c03 N69-21330  
 Pulse-type magnetic core memory element circuit  
 with blocking oscillator feedback Patent  
 [NASA-CASE-XGS-03303] c08 N71-18595  
 Stepping motor control circuit Patent  
 [NASA-CASE-GSC-10366-1] c10 N71-18772

**THORPE, R. S.**  
 Reinforced structural plastics  
 [NASA-CASE-LEW-10199-1] c27 N74-23125

**THYS, P. C.**  
 Droplet monitoring probe  
 [NASA-CASE-NPO-10985] c14 N73-20478

**TIBBITTS, W. C.**  
 Apparatus and method for protecting a  
 photographic device Patent  
 [NASA-CASE-NPO-10174] c14 N71-18465

**TICKNER, E. G.**  
 Liquid cooled brassiere and method of diagnosing  
 malignant tumors therewith  
 [NASA-CASE-AEC-11007-1] c52 N77-14736

**TIERHANN, H. W.**  
 Optical torqueometer Patent  
 [NASA-CASE-XLE-00503] c14 N70-34818

**TILLER, H. G.**  
 Device for measuring bearing preload  
 [NASA-CASE-MFS-20434] c11 N72-25288

**TIMM, J. D.**  
 Counter Patent  
 [NASA-CASE-XNP-06234] c10 N71-27137

**TIMOR, U.**  
 Multichannel telemetry system  
 [NASA-CASE-NPO-11572] c07 N73-16121  
 Receiver with an improved phase lock loop in a  
 multichannel telemetry system with suppressed  
 carrier  
 [NASA-CASE-NPO-11593-1] c07 N73-28012

**TINLING, B. E.**  
 Stabilization of gravity oriented satellites  
 Patent  
 [NASA-CASE-XAC-01591] c31 N71-17729

**TISCHLER, R. F.**  
 Probes having ring and primary sensor at same  
 potential to prevent collection of stray wall  
 currents in ionized gases  
 [NASA-CASE-XLE-00690] c25 N69-35884

**TISDALE, B. P., SR.**  
 Velocity vector control system augmented with  
 direct lift control  
 [NASA-CASE-LAR-12268-1] c08 N81-24106

**TITLE, A. H.**  
 Partial polarizer filter  
 [NASA-CASE-GSC-12225-1] c74 N79-14891

**TITUS, L. E.**  
 Wide power range microwave feedback controller  
 [NASA-CASE-GSC-12146-1] c33 N78-32340

**TOBIAS, B. A.**  
 Thermostatic actuator  
 [NASA-CASE-NPO-10637] c15 N72-12409  
 Thermal motor  
 [NASA-CASE-NPO-11283] c09 N72-25260

**TOCK, R. H.**  
 Mixture separation cell Patent  
 [NASA-CASE-XMS-02952] c18 N71-20742

**TODD, H. H.**  
 Method of producing refractory bodies having  
 controlled porosity Patent  
 [NASA-CASE-LEW-10393-1] c17 N71-15468  
 Shock tube powder dispersing apparatus Patent  
 [NASA-CASE-XLE-04946] c17 N71-24911

**TOFT, A. E.**  
 Star tracking reticles and process for the  
 production thereof  
 [NASA-CASE-GSC-11188-2] c21 N73-19630  
 Star tracking reticles  
 [NASA-CASE-GSC-11188-1] c14 N73-32320  
 Formation of star tracking reticles  
 [NASA-CASE-GSC-11188-3] c74 N74-20008

**TOLL, T. A.**  
 Variable sweep wing aircraft Patent  
 [NASA-CASE-ILA-00221] c02 N70-33266

**TOLSOB, B. A.**  
 Cable stabilizer for open shaft cable operated  
 elevators  
 [NASA-CASE-KSC-10513] c15 N72-25453

**TOM, H. Y.**  
 Ionene membrane separator  
 [NASA-CASE-NPO-11091] c18 N72-22567

**TOMBRELLO, T. A.**  
 Method and means for helium/hydrogen ratio  
 measurement by alpha scattering  
 [NASA-CASE-NPO-14079-1] c25 N80-20334

**TOMLINSON, H. H.**  
 Fuselage structure using advanced technology  
 metal matrix fiber reinforced composites  
 [NASA-CASE-LAR-11688-1] c05 N78-18045

**TOMLINSON, L. E.**  
 Temperature sensitive flow regulator Patent  
 [NASA-CASE-MFS-14259] c15 N71-19213

**TONGIER, H., JR.**  
 Absolute focus lock for microscopes  
 [NASA-CASE-LAR-10184] c14 N72-22445

**TOOLE, P. C.**  
 High speed direct binary-to-binary coded decimal  
 converter  
 [NASA-CASE-KSC-10326] c08 N72-21197  
 High speed direct binary to binary coded decimal  
 converter and scaler  
 [NASA-CASE-KSC-10595] c08 N73-12176  
 Compact-bi-phase pulse coded modulation decoder  
 [NASA-CASE-KSC-10834-1] c33 N76-14371  
 Telephone multiline signaling using common  
 signal pair  
 [NASA-CASE-KSC-11023-1] c32 N79-23310  
 Automatic level control circuit  
 [NASA-CASE-KSC-11170-1] c33 N81-29347

**TOOTS, J.**  
 Microwave integrated circuit for Josephson  
 voltage standards  
 [NASA-CASE-MFS-23845-1] c33 N81-17348

**TOPITS, A., JR.**  
 High impact pressure regulator Patent  
 [NASA-CASE-NPO-10175] c14 N71-18625  
 Apparatus for forming drive belts  
 [NASA-CASE-NPO-13205-1] c31 N74-32917

**TORBETT, H. A.**  
 Liquid-immersible electrostatic ultrasonic  
 transducer  
 [NASA-CASE-LAR-12465-1] c35 N80-18363

**TORNEY, F. L., JR.**  
 Ultrahigh vacuum gauge having two collector  
 electrodes  
 [NASA-CASE-LAR-02743] c14 N73-32324

**TOTH, L. E.**  
 Belleville spring assembly with elastic guides  
 [NASA-CASE-XNP-09452] c15 N69-27504

**TOWNES, C. H.**  
 Optical frequency waveguide Patent  
 [NASA-CASE-HQN-10541-1] c07 N71-26291  
 Laser machining apparatus Patent  
 [NASA-CASE-HQN-10541-2] c15 N71-27135  
 Optical frequency waveguide and transmission  
 system Patent  
 [NASA-CASE-HQN-10541-4] c16 N71-27183  
 Optical frequency waveguide and transmission  
 system  
 [NASA-CASE-HQN-10541-3] c23 N72-23695

**TOWNSEND, H. E.**  
 Digital telemetry system Patent  
 [NASA-CASE-XGS-01812] c07 N71-23001

**TOY, H. S.**  
 New polymers of perfluorobutadiene and method of  
 manufacture Patent application  
 [NASA-CASE-NPO-10863] c06 N70-11251  
 Method of polymerizing perfluorobutadiene Patent  
 application  
 [NASA-CASE-NPO-10447] c06 N70-11252  
 Reaction of fluorine with polyperfluoropolyenes  
 [NASA-CASE-NPO-10862] c06 N72-22107  
 Polymers of perfluorobutadiene and method of  
 manufacture  
 [NASA-CASE-NPO-10863-2] c06 N72-25152  
 Utilization of oxygen difluoride for syntheses  
 of fluoropolymers  
 [NASA-CASE-NPO-12061-1] c27 N76-16228  
 Vitra-violet process for producing flame  
 resistant polyamides and products produced  
 thereby  
 [NASA-CASE-MSC-16074-1] c27 N80-26446

**TRADEP, A. G.**  
 Subgravity simulator Patent  
 [NASA-CASE-XMS-04798] c11 N71-21474  
 Pneumatic amplifier Patent  
 [NASA-CASE-MSC-12121-1] c15 N71-27147

**TRAVIS, B. W.**  
 Satellite appendage tie down cord Patent

[NASA-CASE-IGS-02554] c31 N71-21064

**TRELBASE, R. B.**  
Hydraulic casting of liquid polymers Patent  
[NASA-CASE-XNP-07659] c06 N71-22975

**TRENT, R. C.**  
Method of manufacturing semiconductor devices  
using refractory dielectrics  
[NASA-CASE-XER-08476-1] c26 N72-17820

**TRENT, R. L.**  
Location identification system  
[NASA-CASE-BEC-10324] c07 N72-25173

**TRIMBLE, D. W.**  
Combinational logic for generating gate drive  
signals for phase control rectifiers  
[NASA-CASE-MFS-25208-1] c33 N81-27402

**TRIMPI, E. L.**  
Combustion detector  
[NASA-CASE-LAR-10739-1] c14 N73-16484

**TRINH, E.**  
System for monitoring physical characteristics  
of fluids  
[NASA-CASE-NPO-15400-1] c34 N81-24384

**TRIOLO, J. J.**  
Apparatus for controlling the temperature of  
balloon-borne equipment  
[NASA-CASE-GSC-11620-1] c34 N74-23039

**TRIPP, C. E.**  
Booster tank system Patent  
[NASA-CASE-MSC-12390] c27 N71-29155

**TRISCHLER, F. D.**  
Polyurethanes of fluorine containing  
polycarbonates  
[NASA-CASE-MFS-10512] c06 N73-30099  
Polyurethanes from fluoralkyl propyleneglycol  
polyethers  
[NASA-CASE-MFS-10506] c06 N73-30100  
Fluorohydroxy ethers  
[NASA-CASE-MFS-10507] c06 N73-30101  
Highly fluorinated polymers  
[NASA-CASE-MFS-11492] c06 N73-30102  
Fluorine containing polyurethane  
[NASA-CASE-MFS-10509] c06 N73-30103  
Fluorine-containing polyformals  
[NASA-CASE-XMF-06900-1] c27 N79-21191

**TROST, R. F.**  
Data compression system with a minimum time  
delay unit Patent  
[NASA-CASE-XNP-08832] c08 N71-12506

**TROUT, O. F., JR.**  
Heat protection apparatus Patent  
[NASA-CASE-XLA-00892] c33 N71-17897

**TROWBRIDGE, D. L.**  
Independent gain and bandwidth control of a  
traveling wave maser  
[NASA-CASE-NPO-13801-1] c36 N78-18410  
Swept group delay measurement  
[NASA-CASE-NPO-13909-1] c33 N78-25319  
Maser amplifier slow wave structure  
[NASA-CASE-NPO-15211-1] c36 N81-24425

**TRUBERT, H. R.**  
Collapsible structure for an antenna reflector  
[NASA-CASE-NPO-11751] c07 N73-24176

**TRUSCH, B. B.**  
Condensate removal device for heat exchanger  
[NASA-CASE-MSC-14143-1] c77 N75-20139

**TRUSSRELL, D. H.**  
High intensity heat and light unit Patent  
[NASA-CASE-XLA-00141] c09 N70-33312

**TSCHIRCH, R. F.**  
Heat sealable, flame and abrasion resistant  
coated fabric  
[NASA-CASE-MSC-18382-1] c27 N80-24440

**TSCHUNKO, H. F. A.**  
Optical mirror apparatus Patent  
[NASA-CASE-BEC-10001] c23 N71-24868  
Electromechanical control actuator system Patent  
[NASA-CASE-BEC-10022] c15 N71-26635  
Optical system support apparatus  
[NASA-CASE-XER-07896-2] c23 N72-22673

**TSUDA, G. I.**  
High efficiency multifrequency feed  
[NASA-CASE-GSC-11909] c32 N74-20863

**TSUO, Y. H.**  
Photocapacitive image converter  
[NASA-CASE-LAR-12513-1] c33 N80-28635

**TSUTSUMI, K.**  
Hydraulic drive mechanism Patent  
[NASA-CASE-XMS-03252] c15 N71-10658

**TUBBS, H. E.**  
Continuous detonation reaction engine Patent  
[NASA-CASE-XMF-06926] c28 N71-22983

**TUCKER, C. E., JR.**  
Mobile sampler for use in acquiring samples of  
terrestrial atmospheric gasses  
[NASA-CASE-NPO-15220-1] c35 N81-24414

**TUCKER, E. E.**  
Coupling device  
[NASA-CASE-XMS-07846-1] c09 N69-21927  
Space suit heat exchanger Patent  
[NASA-CASE-XMS-09571] c05 N71-19439  
Extravehicular tunnel suit system Patent  
[NASA-CASE-MSC-12243-1] c05 N71-24728

**TUGGLE, R. H., JR.**  
Apparatus for assembling space structure  
[NASA-CASE-MFS-23579-1] c18 N79-11108

**TUMULTY, W. T., JR.**  
Minimech self-deploying boom mechanism  
[NASA-CASE-GSC-10566-1] c15 N72-18477

**TUNG, Y.**  
Liquid waste feed system  
[NASA-CASE-LAR-10365-1] c05 N72-27102

**TURK, R. E.**  
Fabrication of controlled-porosity metals Patent  
[NASA-CASE-XNP-04339] c17 N71-29137

**TURLEY, A. P.**  
Time delay and integration detectors using  
charge transfer devices  
[NASA-CASE-GSC-12324-1] c33 N81-33403

**TURNAGE, J. E.**  
Flame detector operable in presence of proton  
radiation  
[NASA-CASE-MFS-21577-1] c19 N74-29410

**TURNER, G. B.**  
Driver for solar cell I-V characteristic plots  
[NASA-CASE-NFO-14096-1] c44 N80-18551

**TURNER, J. W.**  
Measurement system  
[NASA-CASE-MFS-20658-1] c14 N73-30386

**TURNER, R. C.**  
Thermocouple assembly Patent  
[NASA-CASE-XNP-01659] c14 N71-23039

**TURNER, R. E.**  
Anemometer with braking mechanism Patent  
[NASA-CASE-XMF-05224] c14 N71-23726  
Maxometers (peak wind speed anemometers)  
[NASA-CASE-MFS-20916] c14 N73-25460

**TURNER, T. B.**  
Double hinged flap Patent  
[NASA-CASE-XLA-01290] c02 N70-42016

**TUTTLE, S. A.**  
Application of luciferase assay for ATP to  
antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c51 N77-22794

**TVEITAN, W.**  
Data compression system  
[NASA-CASE-XNP-09785] c08 N69-21928

**TWARD, E.**  
A cycling Joule Thomson refrigerator  
[NASA-CASE-NPO-15251-1] c31 N81-19344

**TYAGI, B. C.**  
High field CdS detector for infrared radiation  
[NASA-CASE-LAR-11027-1] c35 N74-18088  
Vapor phase growth of groups 3-5 compounds by  
hydrogen chloride transport of the elements  
[NASA-CASE-LAR-11144-1] c25 N75-26043

**TYCE, H.**  
Apparatus for simulating optical transmission  
links  
[NASA-CASE-GSC-11877-1] c74 N76-18913

**TYLER, A. L.**  
Helical recorder arrangement for multiple  
channel recording on both sides of the tape  
[NASA-CASE-GSC-10614-1] c09 N72-11224  
System for stabilizing torque between a balloon  
and gondola  
[NASA-CASE-GSC-11077-1] c02 N73-13008

**U**

**UBBE, P. W.**  
Tape recorder Patent  
[NASA-CASE-IGS-08259] c14 N71-23698

**ULRICH, B. B.**  
Aircraft-mounted crash-activated transmitter  
device  
[NASA-CASE-MFS-16609-3] c03 N76-32140

ULRICH, D. R.  
Screened circuit capacitors  
[NASA-CASE-LAR-10294-1] c26 N72-28762

ULRICH, G. R.  
Latching device  
[NASA-CASE-MFS-21606-1] c37 N75-19685

UNDERWOOD, J. H.  
Collimator of multiple plates with axially  
aligned identical random arrays of apertures  
[NASA-CASE-MFS-20546-2] c14 N73-30389

Multiplate focusing collimator  
[NASA-CASE-MFS-20932-1] c35 N75-19616

UPDIKE, O. L.  
Apparatus for measuring a sorbate dispersed in a  
fluid stream  
[NASA-CASE-ARC-10896-1] c35 N78-19465

UPTON, D. T.  
Camera arrangement  
[NASA-CASE-GSC-12032-2] c35 N76-19408

URBAN, E. W.  
Direct current transformer  
[NASA-CASE-MFS-23659-1] c33 N79-17133

URSEY, B. C.  
Collapsible nozzle extension for rocket engines  
Patent  
[NASA-CASE-MFS-11497] c28 N71-16224

**V**

VALENTIJN, N. P.  
Roll-up solar array Patent  
[NASA-CASE-NPO-10188] c03 N71-20273

Deployable solar cell array  
[NASA-CASE-NPO-10883] c31 N72-22874

VALINSKY, J. P.  
Device for monitoring a change in mass in  
varying gravimetric environments  
[NASA-CASE-MFS-21556-1] c35 N74-26945

VALLOTTON, W. C.  
Anthropomorphic master/slave manipulator system  
[NASA-CASE-ARC-10756-1] c54 N77-32721

Mechanical energy storage device for hip  
disarticulation  
[NASA-CASE-ARC-10916-1] c52 N78-10686

VANALSTYNE, E. H.  
Spacecraft Patent  
[NASA-CASE-MSC-13047-1] c31 N71-25434

VANARMAN, D. E.  
Pneumatic system for controlling and actuating  
pneumatic cyclic devices  
[NASA-CASE-XMS-04843] c03 N69-21469

VANATTA, L. C.  
Circularly polarized antenna  
[NASA-CASE-ERC-10214] c09 N72-31235

VANAUBEN, H.  
Reinforced polyquinoxaline gasket and method of  
preparing the same  
[NASA-CASE-MFS-21364-1] c37 N74-18126

VANDERHOFF, J. W.  
Process for preparation of large-particle-size  
monodisperse latexes  
[NASA-CASE-MFS-25000-1] c25 N81-19242

VANDEBIET, E. K.  
Magnetic power switch Patent  
[NASA-CASE-NPO-10242] c09 N71-24803

VANGO, S. P.  
Liquid junction and method of fabricating the  
same Patent Application  
[NASA-CASE-NPO-10682] c15 N70-34699

Flexible composite membrane Patent  
[NASA-CASE-XNP-08837] c18 N71-16210

VANNUCCI, E. D.  
Curing agent for polyepoxides and epoxy resins  
and composites cured therewith  
[NASA-CASE-LEW-13226-1] c27 N81-17260

VANO, A. E.  
Quick attach mechanism Patent  
[NASA-CASE-XFR-05421] c15 N71-22994

VANOENUN, D. G.  
Electric arc light source having undercut  
recessed anode  
[NASA-CASE-ARC-10266-1] c33 N75-29318

VANSCHOIACK, H. H. E.  
High impedance measuring apparatus Patent  
[NASA-CASE-XMS-08589-1] c09 N71-20569

VANTUYLBRUSCH, W.  
Millimeter wave radiometer for radio astronomy  
Patent  
[NASA-CASE-XNP-09832] c30 N71-23723

VARGO, D. J.  
Ophthalmic method and apparatus  
[NASA-CASE-LEW-11669-1] c05 N73-27062

VARNA, I. K.  
Phosphorus-containing bisimide resins  
[NASA-CASE-ARC-11321-1] c27 N81-27272

Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c27 N81-31364

VARSI, G.  
Seismic vibration source  
[NASA-CASE-NPO-14112-1] c46 N79-22679

VARY, A.  
Triode thermionic energy converter  
[NASA-CASE-XLE-01015] c03 N69-39898

High temperature heat source Patent  
[NASA-CASE-XLE-00490] c33 N70-34545

Radiant heater having formed filaments Patent  
[NASA-CASE-XLE-00387] c33 N70-34812

Inductive liquid level detection system Patent  
[NASA-CASE-XLE-01609] c14 N71-10500

Capillary radiator Patent  
[NASA-CASE-XLE-03307] c33 N71-14035

Thermionic converter with current augmented by  
self induced magnetic field Patent  
[NASA-CASE-XLE-01903] c22 N71-23599

Cyclic switch Patent  
[NASA-CASE-LEW-10155-1] c09 N71-29035

VAUGHAN, G. R.  
Phase locked phase modulator including a voltage  
controlled oscillator Patent  
[NASA-CASE-XNP-05382] c10 N71-23544

VAUGHAN, O. H.  
Emergency lunar communications system  
[NASA-CASE-MFS-21042] c07 N72-25171

VAUGHAN, R. L.  
Electrolytic cell structure  
[NASA-CASE-LAR-11042-1] c33 N75-27252

VAUGHAN, R. W.  
Capillary flow weld-bonding  
[NASA-CASE-LAR-11726-1] c37 N76-27568

Weld-bonded titanium structures  
[NASA-CASE-LAR-11549-1] c37 N77-11397

VAUSE, B.  
Acoustically swept rotor  
[NASA-CASE-ARC-11106-1] c05 N80-14107

VEBRENCAMP, J. E.  
Electromagnetic radiation energy arrangement  
[NASA-CASE-WOO-00428-1] c32 N79-19186

VEIKINS, O.  
Apparatus for establishing flow of a fluid mass  
having a known velocity  
[NASA-CASE-MFS-21424-1] c34 N74-27730

VELLETTE, L. J.  
Angular position and velocity sensing apparatus  
Patent  
[NASA-CASE-IGS-05680] c14 N71-17585

Bidirectional step torque filter with zero  
backlash characteristic Patent  
[NASA-CASE-IGS-04227] c15 N71-21744

Control apparatus for applying pulses of  
selectively predetermined duration to a  
sequence of loads Patent  
[NASA-CASE-IGS-04224] c10 N71-26418

Synchronous dc direct drive system Patent  
[NASA-CASE-GSC-10065-1] c10 N71-27136

Axially and radially controllable magnetic bearing  
[NASA-CASE-GSC-11551-1] c37 N76-18459

VELLEND, H.  
Application of luciferase assay for ATP to  
antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c51 N77-22794

Determination of antimicrobial susceptibilities  
on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c52 N79-14750

VERMILLION, C. H.  
Facsimile video remodulation network  
[NASA-CASE-GSC-10185-1] c07 N72-12081

VERMILLION, C. H.  
Resistance soldering apparatus  
[NASA-CASE-GSC-10913] c15 N72-22491

VERNIKOS, J.  
Indoneth acin-antihistamine combination for  
gastric ulceration control  
[NASA-CASE-ARC-11118-2] c52 N81-14613

VESSOT, R. P. C.  
Atomic hydrogen maser with bulb temperature  
control to remove wall shift in maser output  
frequency  
[NASA-CASE-HQN-10654-1] c16 N73-13489

Tunable cavity resonator with ramp shaped supports  
[NASA-CASE-HQN-16790-1] c36 N74-11313

VICK, A. E.  
Method of obtaining permanent record of surface  
flow phenomena Patent  
[NASA-CASE-XLA-01353] c14 N70-41366

VICK, H. A.  
Blood pressure measuring system for separating  
and separately recording dc signal and an ac  
signal Patent  
[NASA-CASE-XMS-06061] c05 N71-23317

VICKERS, J. H.  
Portable electrophoresis apparatus using minimum  
electrolyte  
[NASA-CASE-NPO-13274-1] c25 N79-10163

VICKERS, J. H. P.  
Intermittent type silica gel adsorption  
refrigerator Patent  
[NASA-CASE-XNP-00920] c15 N71-15906

VIEHMANN, W.  
Fluorescent radiation converter  
[NASA-CASE-GSC-12528-1] c74 N81-24900

VIIKINSALO, S. J.  
Helmet latching and attaching ring  
[NASA-CASE-XMS-04670] c54 N78-17678

VILLARREAL, S.  
Receiving and tracking phase modulated signals  
[NASA-CASE-MSC-16170-2] c32 N81-16338

VINAL, A. W.  
Redundant memory organization Patent  
[NASA-CASE-GSC-10564] c10 N71-25135

VINCENT, J. S.  
Method of forming thin window drifted silicon  
charged particle detector Patent  
[NASA-CASE-XLE-00808] c24 N71-10560

VINE, J.  
Magnifying image intensifier  
[NASA-CASE-GSC-12010-1] c74 N78-18905

VIVIAN, H. C.  
Photosensitive device to detect bearing  
deviation Patent  
[NASA-CASE-XNP-00438] c21 N70-35089  
Space vehicle attitude control Patent  
[NASA-CASE-XNP-00465] c21 N70-35395  
Renodulator filter Patent  
[NASA-CASE-NPO-10198] c09 N71-24806

VODICKA, V. W.  
Magnetic recording head and method of making  
same Patent  
[NASA-CASE-GSC-10097-1] c08 N71-27210

VOGELY, A. W.  
Cable arrangement for rigid tethering Patent  
[NASA-CASE-XLA-02332] c32 N71-17609  
Combined optical attitude and altitude  
indicating instrument Patent  
[NASA-CASE-XLA-01907] c14 N71-23268

VOLK, G. G.  
Portable device for use in starting  
air-start-units for aircraft and having cable  
lead testing capability  
[NASA-CASE-FRC-10113-1] c33 N80-26599

VOLKOFF, J. J.  
Electro-optical scanning apparatus Patent;  
Application  
[NASA-CASE-NPO-11106] c14 N70-34697

VOLPE, P. A.  
Sun tracker with rotatable plane-parallel plate  
and two photocells Patent  
[NASA-CASE-YGS-01159] c21 N71-10678  
Attitude control system Patent  
[NASA-CASE-YGS-04393] c21 N71-14159  
Star scanner  
[NASA-CASE-GSC-11569-1] c89 N74-30886

VONFRAGENAU, G. L.  
Support apparatus for dynamic testing Patent  
[NASA-CASE-INP-01772] c11 N70-41677  
Hydraulic support for dynamic testing Patent  
[NASA-CASE-INP-03248] c11 N71-10604  
Space vehicle  
[NASA-CASE-MPS-22734-1] c18 N75-19329  
Translatory shock absorber for attitude sensors  
[NASA-CASE-MPS-22905-1] c19 N76-22284  
Attitude control system  
[NASA-CASE-MPS-22787-1] c15 N71-10113

VONROOS, O. H.  
Method and apparatus for measuring minority  
carrier lifetimes and bulk diffusion length in  
P-N junction solar cells  
[NASA-CASE-NPO-14100-1] c44 N79-12541

VONTIENSENHAUSEN, G.  
Beam connector apparatus and assembly  
[NASA-CASE-MPS-25134-1] c31 N81-12283

VONTIENSENHAUSEN, G. F.  
Energy absorbing device Patent  
[NASA-CASE-XMP-10040] c15 N71-22877

VORHABER, K. H.  
System for producing chroma signals  
[NASA-CASE-MSC-14683-1] c74 N77-18893

VORKINK, H. G.  
Variable frequency nuclear magnetic resonance  
spectrometer Patent  
[NASA-CASE-INP-09830] c14 N71-26266

VORREITER, J. H.  
Cryogenic container compound suspension strap  
[NASA-CASE-ARC-11157-1] c37 N80-18393

VRANAS, T.  
Impact energy absorber Patent  
[NASA-CASE-XLA-01530] c14 N71-23092  
High temperature strain gage calibration fixture  
[NASA-CASE-LAR-11500-1] c35 N76-24523  
Hot foil transducer skin friction sensor  
[NASA-CASE-LAR-12321-1] c35 N81-12390

VUKELICH, E. K.  
Method and device for detecting voids in low  
density material Patent  
[NASA-CASE-MPS-20044] c14 N71-28993

VYUKAL, H. C.  
Universal pilot restraint suit and body support  
therefor Patent  
[NASA-CASE-XAC-00405] c05 N70-41819  
Hard space suit Patent  
[NASA-CASE-XAC-07043] c05 N71-23161  
Locomotion and restraint aid Patent  
[NASA-CASE-ARC-10153] c05 N71-28619  
Space suit having improved waist and torso  
movement  
[NASA-CASE-ARC-10275-1] c05 N72-22092  
Anthropomorphic master/slave manipulator system  
[NASA-CASE-ARC-10756-1] c54 N77-32721  
Walking boot assembly  
[NASA-CASE-ARC-11101-1] c54 N78-17675  
Spacesuit mobility joints  
[NASA-CASE-ARC-11058-1] c54 N78-31735  
Spacesuit torso closure  
[NASA-CASE-ARC-11100-1] c54 N78-31736  
Cooling system for removing metabolic heat from  
an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c54 N78-32721  
Spacesuit mobility knee joints  
[NASA-CASE-ARC-11058-2] c54 N79-24651  
Pressure suit joint analyzer  
[NASA-CASE-ARC-11314-1] c54 N80-30043  
Spine immobilization apparatus  
[NASA-CASE-ARC-11167-1] c52 N81-25662

## W

WADE, O. W.  
Method and apparatus for tensile testing of  
metal foil  
[NASA-CASE-LAR-10208-1] c35 N76-18400

WAGES, C. G.  
Ultrasonic scanning system for in-place  
inspection of brazed tube joints  
[NASA-CASE-MPS-20767-1] c38 N74-15130

WAGNER, A. P.  
Inverter ratio failure detector  
[NASA-CASE-NPO-13160-1] c35 N74-18090

WAGNER, C. A.  
Rotating raster generator  
[NASA-CASE-FRC-10071-1] c32 N74-20813  
Smoothing filter for digital to analog conversion  
[NASA-CASE-FRC-11025-1] c60 N80-17723

WAGNER, H. E.  
Collapsible loop antenna for space vehicle Patent  
[NASA-CASE-INP-00437] c07 N70-40202

WAKELYN, H. T.  
Production of high purity silicon carbide Patent  
[NASA-CASE-XLA-00158] c26 N70-36805  
Apparatus for producing high purity silicon  
carbide crystals Patent  
[NASA-CASE-XLA-02057] c26 N70-40015  
Method of coating carbonaceous base to prevent  
oxidation destruction and coated base Patent  
[NASA-CASE-XLA-00284] c15 N71-16075  
Method of coating carbonaceous base to prevent  
oxidation destruction and coated base Patent  
[NASA-CASE-XLA-00302] c15 N71-16077

Thermal control coating Patent  
[NASA-CASE-XLA-01995] c18 N71-23047

WALD, D.  
Differential temperature transducer Patent  
[NASA-CASE-XAC-00812] c14 N71-15598

WALKER, D. J.  
Flame detector operable in presence of proton radiation  
[NASA-CASE-MFS-21577-1] c19 N74-29410

WALKER, H. J.  
An annular wing  
[NASA-CASE-PRC-11007-2] c02 N79-24959

WALKER, H. M.  
Space environmental work simulator Patent  
[NASA-CASE-XMF-07488] c11 N71-18773

Cork-resin ablative insulation for complex surfaces and method for applying the same  
[NASA-CASE-MFS-23626-1] c24 N80-26388

WALKER, M. L.  
Lightweight reflector assembly  
[NASA-CASE-NPO-13707-1] c74 N77-28933

WALL, R. J.  
Automated clinical system for chromosome analysis  
[NASA-CASE-NPO-13913-1] c52 N79-12694

WALL, W. A., JR.  
Apparatus for welding torch angle and seam tracking control Patent  
[NASA-CASE-XMF-03287] c15 N71-15607

Automatic closed circuit television arc guidance control Patent  
[NASA-CASE-MFS-13046] c07 N71-19433

Automatic welding speed controller Patent  
[NASA-CASE-XMF-01730] c15 N71-23050

Welding skate with computerized control Patent  
[NASA-CASE-XMF-07069] c15 N71-23815

Internal flare angle gauge Patent  
[NASA-CASE-XMF-04415] c14 N71-24693

Computerized system for translating a torch head  
[NASA-CASE-MFS-23620-1] c37 N79-10421

WALLACE, C. J.  
Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NPO-14001-1] c27 N81-14076

WALLACE, E. D.  
Apparatus for tensile testing Patent  
[NASA-CASE-XKS-06250] c14 N71-15600

Valve seat with resilient support member Patent  
[NASA-CASE-XKS-02582] c15 N71-21234

Weld preparation machine Patent  
[NASA-CASE-XKS-07953] c15 N71-26134

WALLACE, G. R.  
Pseudo-noise test set for communication system evaluation  
[NASA-CASE-MFS-22671-1] c35 N75-21582

Method of and means for testing a tape record/playback system  
[NASA-CASE-MFS-22671-2] c35 N77-17426

WALLINGFORD, W. H.  
Differential phase shift keyed communication system  
[NASA-CASE-MSC-14065-1] c32 N74-26654

Differential phase shift keyed signal resolver  
[NASA-CASE-MSC-14066-1] c33 N74-27705

WALLIO, H. A.  
Electric-arc heater Patent  
[NASA-CASE-XLA-00330] c33 N70-34540

WALLIS, D. E.  
Low-frequency radio navigation system  
[NASA-CASE-NPO-15264-1] c04 N81-22036

WALLSON, B. E.  
Mechanical end joint system for structural column elements  
[NASA-CASE-LAR-12482-1] c37 N80-22704

WALSH, J. M.  
Specific wavelength colorimeter  
[NASA-CASE-MSC-14061-1] c35 N74-27860

WALSH, J. V.  
Pressure letdown method and device for coal conversion systems  
[NASA-CASE-NPO-15100-1] c28 N81-33306

WALSH, T. C.  
Vibration damping system Patent  
[NASA-CASE-XMS-01620] c23 N71-15673

WALSH, T. J.  
Apparatus for making a metal slurry product Patent  
[NASA-CASE-XLE-00010] c15 N70-33382

WALSH, T. H.  
Interferometric rotation sensor  
[NASA-CASE-ARC-10278-1] c14 N73-25463

WALTER, H. O.  
Method of crystallization  
[NASA-CASE-MFS-23001-1] c76 N77-32919

WALTERS, R. M.  
Telespectrograph Patent  
[NASA-CASE-XLA-03273] c14 N71-18699

WALTON, T. S.  
Electronic checkout system for space vehicles Patent  
[NASA-CASE-XKS-08012-2] c31 N71-15566

WANG, D. S.  
Installing fiber insulation  
[NASA-CASE-MSC-16973-1] c37 N81-14317

WANG, G. Y.  
A synchronous binary array divider  
[NASA-CASE-ERC-10180-1] c60 N74-20836

WANG, T. G.  
Material suspension within an acoustically excited resonant chamber  
[NASA-CASE-NPO-13263-1] c12 N75-24774

Heat operated cryogenic electrical generator  
[NASA-CASE-NPO-13303-1] c20 N75-24837

Acoustic energy shaping  
[NASA-CASE-NPO-13802-1] c71 N78-10837

Acoustic driving of rotor  
[NASA-CASE-NPO-14005-1] c71 N79-20827

System for monitoring physical characteristics of fluids  
[NASA-CASE-NPO-15400-1] c34 N81-24384

Method and apparatus for producing concentric hollow spheres  
[NASA-CASE-NPO-14596-1] c31 N81-33319

WANGER, R. P.  
Apparatus for sensor failure detection and correction in a gas turbine engine control system  
[NASA-CASE-LEW-12907-2] c07 N81-19115

WARD, D. R.  
Automatically deploying nozzle exit cone extension Patent  
[NASA-CASE-XLE-01640] c31 N71-15637

WARD, J. P.  
Variable geometry rotor system  
[NASA-CASE-LAR-10557] c02 N72-11018

WARD, J. O.  
Digital automatic gain amplifier  
[NASA-CASE-KSC-11008-1] c33 N79-22373

WARD, W. D.  
Vapor liquid separator Patent  
[NASA-CASE-XMF-04042] c15 N71-23023

WARRENTINE, D. K.  
Automatic battery charger Patent  
[NASA-CASE-XNP-04758] c03 N71-24605

WARNECK, P.  
Analytical photoionization mass spectrometer with an argon gas filter between the light source and monochromator Patent  
[NASA-CASE-LAR-10180-1] c06 N71-13461

WARREN, A. D.  
Installing fiber insulation  
[NASA-CASE-MSC-16973-1] c37 N81-14317

WARREN, A. P.  
Assembly for recovering a capsule Patent  
[NASA-CASE-XMF-00641] c31 N70-36410

Space capsule ejection assembly Patent  
[NASA-CASE-XMF-03169] c31 N71-15675

Method and apparatus for securing to a spacecraft Patent  
[NASA-CASE-MFS-11133] c31 N71-16222

WATERS, W. J.  
Nickel-base alloy Patent  
[NASA-CASE-XLE-00283] c17 N70-36616

Nickel-base alloy containing Mo-W-Al-Cr-Ta-Zr-C-Nb-B Patent  
[NASA-CASE-XLE-02082] c17 N71-16026

Nickel base alloy  
[NASA-CASE-LEW-10874-1] c17 N72-22535

Method of forming superalloys  
[NASA-CASE-LEW-10805-1] c15 N73-13465

Method of heat treating a formed powder product material  
[NASA-CASE-LEW-10805-3] c26 N74-10521

Method of forming articles of manufacture from superalloy powders  
[NASA-CASE-LEW-10805-2] c37 N74-13179

Nickel base alloy  
[NASA-CASE-LEW-12270-1] c26 N77-32280

**WATSON, J. D.**  
 Tumbler system to provide random motion  
 [NASA-CASE-XGS-02437] c15 N69-21472

**WATSON, J. E.**  
 High temperature spark plug Patent  
 [NASA-CASE-XLE-00660] c28 N70-39925

**WATSON, H. D.**  
 Payload/burned-out motor case separation system  
 Patent  
 [NASA-CASE-XLA-05369] c31 N71-15687

**WATSON, V. E.**  
 Electric arc apparatus Patent  
 [NASA-CASE-IAC-01677] c09 N71-20816

**WAYLAND, H. J.**  
 Servo-controlled intravital microscope system  
 [NASA-CASE-NPO-13214-1] c35 N75-25123

**WEAR, J. D.**  
 Rocket engine Patent  
 [NASA-CASE-XLE-00342] c28 N70-37980

**WEATHERS, G. D.**  
 Pseudo-noise test set for communication system  
 evaluation  
 [NASA-CASE-MFS-22671-1] c35 N75-21582  
 Method of and means for testing a tape  
 record/playback system  
 [NASA-CASE-MFS-22671-2] c35 N77-17426

**WEAVER, L. B.**  
 Multiple in-line docking capability for rotating  
 space stations  
 [NASA-CASE-MFS-20855-1] c15 N77-10112

**WEAVER, O.**  
 Charge injection method and apparatus of  
 producing large area electrets  
 [NASA-CASE-MFS-23186-1] c33 N76-23483  
 Charge injection method and apparatus of  
 producing large area electrets  
 [NASA-CASE-MFS-23186-2] c24 N78-25137

**WEBB, D. D.**  
 Sprayable low density ablator and application  
 process  
 [NASA-CASE-MFS-23506-1] c24 N78-24290

**WEBB, D. L.**  
 Video sync processor Patent  
 [NASA-CASE-KSC-10002] c10 N71-25865  
 Electronic video editor  
 [NASA-CASE-KSC-10003] c10 N73-13235

**WEBB, J. A., JR.**  
 Circuit for detecting initial systole and  
 diastolic notch  
 [NASA-CASE-LEW-11581-1] c54 N75-13531

**WEBB, J. B.**  
 Delayed simultaneous release mechanism  
 [NASA-CASE-GSC-10814-1] c03 N73-20039

**WEBBON, B.**  
 Pressure suit joint analyzer  
 [NASA-CASE-ARC-11314-1] c54 N80-30043

**WEBBON, B. H.**  
 Tubular sublimatory evaporator heat sink  
 [NASA-CASE-ARC-10912-1] c34 N77-19353  
 Spacesuit torso closure  
 [NASA-CASE-ARC-11100-1] c54 N78-31736  
 Cooling system for removing metabolic heat from  
 an hermetically sealed spacesuit  
 [NASA-CASE-ARC-11059-1] c54 N78-32721

**WEBER, G. E.**  
 Method of making reinforced composite structure  
 [NASA-CASE-LEW-12619-1] c24 N77-19171

**WEBER, G. J.**  
 Multiple circuit protector device  
 [NASA-CASE-XMS-02744] c33 N75-27249  
 Fused switch  
 [NASA-CASE-XMS-01244-1] c33 N79-33393

**WEBER, L.**  
 Prevention of hydrogen embrittlement of high  
 strength steel by hydrazine compositions  
 [NASA-CASE-NPO-12122-1] c24 N76-14203

**WEBER, H. J.**  
 Venting vapor apparatus Patent  
 [NASA-CASE-XLE-00288] c15 N70-34247  
 Supersonic-combustion rocket  
 [NASA-CASE-LEW-11058-1] c20 N74-13502

**WEBSTER, J. A.**  
 Perfluoro alkylene dioxy-bis-(4-phthalic  
 anhydrides and  
 oxy-bis-(perfluoroalkyleneoxyphthalic  
 anhydrides  
 [NASA-CASE-MFS-22356-1] c23 N75-30256  
 Polyimides of ether-linked aryl tetracarboxylic  
 dianhydrides  
 [NASA-CASE-MFS-22355-1] c23 N76-15268

**WEBSTER, L. D.**  
 Sidelooking laser altimeter for a flight simulator  
 [NASA-CASE-ARC-11312-1] c36 N81-19439

**WEETON, J. H.**  
 Reinforced metallic composites Patent  
 [NASA-CASE-XLE-02428] c17 N70-33288  
 Method of making fiber reinforced metallic  
 composites Patent  
 [NASA-CASE-XLE-00231] c17 N70-38198  
 Reinforced metallic composites Patent  
 [NASA-CASE-XLE-00228] c17 N70-38490  
 Method for producing fiber reinforced metallic  
 composites Patent  
 [NASA-CASE-XLE-03925] c18 N71-22894  
 Process for producing dispersion strengthened  
 nickel with aluminum Patent  
 [NASA-CASE-XLE-06969] c17 N71-24142  
 Method of producing refractory composites  
 containing tantalum carbide, hafnium carbide,  
 and hafnium boride Patent  
 [NASA-CASE-XLE-03940] c18 N71-26153  
 Method of making fiber composites  
 [NASA-CASE-LEW-10424-2-2] c18 N72-25539  
 Refractory metal base alloy composites  
 [NASA-CASE-XLE-03940-2] c17 N72-28536  
 Method for alleviating thermal stress damage in  
 laminates  
 [NASA-CASE-LEW-12493-1] c24 N81-17170  
 Method for alleviating thermal stress damage in  
 laminates  
 [NASA-CASE-LEW-12493-2] c24 N81-26179

**WEIDENHAMER, J. H.**  
 Isolation coupling arrangement for a torque  
 measuring system  
 [NASA-CASE-XLA-04897] c15 N72-22482

**WEIDMAN, D. J.**  
 High intensity heat and light unit Patent  
 [NASA-CASE-XLA-00141] c09 N70-33312

**WEIDNER, J. P.**  
 Orbiter/launch system  
 [NASA-CASE-LAR-12250-1] c14 N81-26161

**WEIGAND, A. J.**  
 Texturing polymer surfaces by transfer casting  
 [NASA-CASE-LEW-13120-1] c31 N81-16327

**WEINGART, J. H.**  
 Stacked solar cell arrays  
 [NASA-CASE-NPO-11771] c03 N73-20040

**WEINSTEIN, L.**  
 Application of luciferase assay for ATP to  
 antimicrobial drug susceptibility  
 [NASA-CASE-GSC-12039-1] c51 N77-22794  
 Determination of antimicrobial susceptibilities  
 on infected urines without isolation  
 [NASA-CASE-GSC-12046-1] c52 N79-14750

**WEINSTEIN, M.**  
 Bonding thermoelectric elements to nonmagnetic  
 refractory metal electrodes  
 [NASA-CASE-XGS-04554] c15 N69-39786  
 Segmenting lead telluride-silicon germanium  
 thermoelements Patent  
 [NASA-CASE-XGS-05718] c26 N71-16037

**WEISS, P. P.**  
 Acquisition and tracking system for optical radar  
 [NASA-CASE-MFS-20125] c16 N72-13437

**WEISS, S.**  
 Pretreatment method for anti-wettable materials  
 [NASA-CASE-XMS-03537] c15 N69-21471

**WEITZEL, D. F.**  
 Propellant tank pressurization system Patent  
 [NASA-CASE-INP-00650] c27 N71-28929

**WEITZEL, D. H.**  
 Resilience testing device Patent  
 [NASA-CASE-XLA-08254] c14 N71-26161

**WELCH, W. A.**  
 Gas filter mounting structure  
 [NASA-CASE-MSC-12297] c14 N72-23457

**WELLING, C. E.**  
 Thermally activated foaming compositions Patent  
 [NASA-CASE-LAR-10373-1] c18 N71-26155

**WELLMAN, J. B.**  
 Gas flow control device  
 [NASA-CASE-NPO-11479] c15 N73-13462

**WELLS, A. P.**  
 Water system virus detection  
 [NASA-CASE-MSC-16098-1] c51 N79-10693

**WELLS, B. R.**  
 Apparatus for ejection of an instrument cover  
 [NASA-CASE-XMP-04132] c15 N69-27502



WELLS, F. E.  
Positive displacement flowmeter Patent  
[NASA-CASE-IMP-02822] c14 N70-41994  
Remote control manipulator for zero gravity  
environment  
[NASA-CASE-MFS-14405] c15 N72-28495

WELLS, W. H.  
Rotable accurate reflector system for telescopes  
Patent  
[NASA-CASE-NPO-10468] c23 N71-33229

WELLS, W. L.  
Electric-arc heater Patent  
[NASA-CASE-XLA-00330] c33 N70-34540

WENDT, A. J.  
Rotating mandrel for assembly of inflatable  
devices Patent  
[NASA-CASE-XLA-04143] c15 N71-17687

WENZEL, G. E.  
Amplifier drift tester  
[NASA-CASE-XMS-05562-1] c09 N69-39986

WERNER, E. A.  
Method and apparatus for making curved  
reflectors Patent  
[NASA-CASE-XLE-08917] c15 N71-15597  
Apparatus for making curved reflectors Patent  
[NASA-CASE-XLF-08917-2] c15 N71-24836

WESSELSKI, C. J.  
Energy absorbing structure Patent Application  
[NASA-CASE-MSC-12279-1] c15 N70-35679  
Low onset rate energy absorber  
[NASA-CASE-MSC-12279] c15 N72-17450

WEST, R. L.  
Device for handling printed circuit cards Patent  
[NASA-CASE-MFS-20453] c15 N71-29133

WEST, R. W., JR.  
Method and apparatus for making a heat  
insulating and ablative structure Patent  
[NASA-CASE-XMS-02009] c33 N71-26834

WESTBROOK, R. H.  
Electrode construction Patent  
[NASA-CASE-ARC-10043-1] c05 N71-11193

WESTER, G. W.  
The dc-to-dc converters employing  
staggered-phase power switches with two-loop  
control  
[NASA-CASE-NPO-13512-1] c33 N77-10428  
Phase substitution of spare converter for a  
failed one of parallel phase staggered  
converters  
[NASA-CASE-NPO-13812-1] c33 N77-30365

WESTON, K. C.  
Heat shield Patent  
[NASA-CASE-XMS-00486] c33 N70-33344

WESTPHAL, J. A.  
Method and apparatus for aligning a laser beam  
projector Patent  
[NASA-CASE-NPO-11087] c23 N71-25125

WETMORE, J. W.  
Aircraft instrument Patent  
[NASA-CASE-XLA-00487] c14 N70-40157

WETZLER, D. G.  
Thrust-isolating mounting  
[NASA-CASE-MFS-21680-1] c18 N74-27397

WEYLER, G. H., JR.  
Rotatable mass for a flywheel  
[NASA-CASE-MFS-23051-1] c37 N79-10422  
Method of manufacture of bonded fiber flywheel  
[NASA-CASE-MFS-23674-1] c24 N81-29163

WEZNER, F. S.  
Collapsible reflector Patent  
[NASA-CASE-XMS-03454] c09 N71-20658

WHEATLEY, D. G.  
Hermetic sealed vibration damper Patent  
[NASA-CASE-MSC-10959] c15 N71-26243

WHEBLEB, D. E.  
Improved refractory coatings and method of  
producing the same  
[NASA-CASE-LEW-13169-1] c26 N80-14232

WHEBLER, R. K.  
Method and apparatus for stable silicon dioxide  
layers on silicon grown in silicon nitride  
ambient  
[NASA-CASE-ERC-10073-1] c24 N74-15769

WHEBLER, S.  
Wind tunnel microphone structure Patent  
[NASA-CASE-XNP-00250] c11 N71-26779

WHEBLER, S. B.  
Fluid containers and resealable septum therefor  
Patent  
[NASA-CASE-NPO-10123] c15 N71-24835

WHIPPEN, E. L.  
Grain refinement control in TIG arc welding  
[NASA-CASE-MSC-19095-1] c37 N75-19683

WHIPPLE, D. W.  
Microcircuit negative cutter  
[NASA-CASE-XLA-09843] c15 N72-27485

WHIPPLE, E. C., JR.  
Method and apparatus for determining satellite  
orientation utilizing spatial energy sources  
Patent  
[NASA-CASE-XGS-00466] c21 N70-34297

WHISENANT, J. T.  
Inspection gage for boss Patent  
[NASA-CASE-XMP-04966] c14 N71-17658

WHITACRE, H. E.  
Quick release hook tape Patent  
[NASA-CASE-XMS-10660-1] c15 N71-25975  
Scientific experiment flexible mount  
[NASA-CASE-MSC-12372-1] c31 N72-25842

WHITCOMB, E. T.  
Airfoil shape for flight at subsonic speeds  
[NASA-CASE-LAR-10585-1] c02 N76-22154

WHITE, A. R.  
Scientific experiment flexible mount  
[NASA-CASE-MSC-12372-1] c31 N72-25842

WHITE, E. C.  
Method of making pressurized panel Patent  
[NASA-CASE-XLA-08916] c15 N71-29018  
Pressurized panel  
[NASA-CASE-XLA-08916-2] c14 N73-28487  
Lightweight, variable solidity knitted parachute  
fabric  
[NASA-CASE-LAR-10776-1] c02 N74-10034

WHITE, F. A.  
Coincidence apparatus for detecting particles  
[NASA-CASE-XLA-07813] c14 N72-17328  
A low energy electron magnetometer  
[NASA-CASE-LAR-12706-1] c35 N81-19428

WHITE, J. A.  
Magnetically centered liquid column float Patent  
[NASA-CASE-XAC-00030] c14 N70-34820

WHITE, M. H.  
Time delay and integration detectors using  
charge transfer devices  
[NASA-CASE-GSC-12324-1] c33 N81-33403

WHITE, P. E.  
Solar tracking system  
[NASA-CASE-MFS-23999-1] c44 N81-24520

WHITE, W. F.  
Dual resonant cavity absorption cell Patent  
[NASA-CASE-LAR-10305] c14 N71-26137  
Resonant waveguide stark cell  
[NASA-CASE-LAR-11352-1] c33 N75-26245

WHITE, W. T.  
Method of bonding plasticized elastomer to metal  
and article produced thereby  
[NASA-CASE-MFS-25181-1] c27 N81-16238

WHITEHEAD, A. B.  
Method and means for helium/hydrogen ratio  
measurement by alpha scattering.  
[NASA-CASE-NPO-14079-1] c25 N80-20334

WHITEHEAD, C. W.  
Apparatus for inserting and removing specimens  
from high temperature vacuum furnaces  
[NASA-CASE-LAR-10841-1] c31 N74-27900

WHITFIELD, C. E.  
Selective plating of etched circuits without  
removing previous plating Patent  
[NASA-CASE-XGS-03120] c15 N71-24047

WHITMORE, F. C.  
Continuous magnetic flux pump  
[NASA-CASE-XNP-01187] c15 N73-28516  
Superconductive magnetic-field-trapping device  
[NASA-CASE-XNP-01185] c26 N73-28710  
Magnetic-flux pump  
[NASA-CASE-XNP-01188] c15 N73-32361

WHITT, W. D.  
General purpose rocket furnace  
[NASA-CASE-MFS-23460-1] c12 N79-26075

WHITTEN, D. E.  
Dual stage check valve  
[NASA-CASE-MSC-13587-1] c15 N73-30459

WHITTEBERGER, J. D.  
Zirconium modified nickel-copper alloy  
[NASA-CASE-LEW-12245-1] c26 N77-20201

WIBERG, R. E.  
Combustion products generating and metering device  
[NASA-CASE-GSC-11095-1] c14 N72-10375

**WIEBE, R. R.**  
 Automatic thermal switch Patent  
 [NASA-CASE-INP-03796] c23 N71-15467  
 Helium refrigerator and method for  
 decontaminating the refrigerator  
 [NASA-CASE-NPO-10634] c23 N72-25619  
 Refrigerated coaxial coupling  
 [NASA-CASE-NPO-13504-1] c33 N75-30430  
 Helium refrigerator  
 [NASA-CASE-NPO-13435-1] c31 N76-14284  
 Multistation refrigeration system  
 [NASA-CASE-NPO-13839-1] c31 N78-25256

**WIECH, B. E.**  
 Zeta potential flowmeter Patent  
 [NASA-CASE-INP-06509] c14 N71-23226

**WIKER, G. A.**  
 Compact artificial hand  
 [NASA-CASE-NPO-13906-1] c54 N79-24652

**WILEM, R. T.**  
 Natural turbulence electrical power generator  
 [NASA-CASE-LAR-11551-1] c44 N80-29834

**WILEY, F. L.**  
 Temperature regulation circuit Patent  
 [NASA-CASE-INP-02792] c14 N71-28958

**WILEY, P. H.**  
 Logarithmic circuit with wide dynamic range  
 [NASA-CASE-GSC-12445-1] c33 N78-32339

**WILGUS, D. S.**  
 Adaptive voting computer system  
 [NASA-CASE-MSC-13932-1] c62 N74-14920

**WILHELM, H. E.**  
 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] c25 N78-25148

**WILHITE, W. F.**  
 Micropacked column for a chromatographic system  
 [NASA-CASE-INP-04816] c06 N69-39936

**WILKEY, J. W., JR.**  
 Velocity package Patent  
 [NASA-CASE-XLA-01339] c31 N71-15692

**WILKINS, J. R.**  
 Apparatus for microbiological sampling  
 [NASA-CASE-LAR-11069-1] c35 N75-12272  
 Automatic inoculating apparatus  
 [NASA-CASE-LAR-11074-1] c51 N75-13502  
 Automatic microbial transfer device  
 [NASA-CASE-LAR-11354-1] c35 N75-27330  
 Measurement of gas production of microorganisms  
 [NASA-CASE-LAR-11326-1] c35 N75-33368  
 Automated single-slide staining device  
 [NASA-CASE-LAR-11649-1] c51 N77-27677  
 Electrochemical detection device  
 [NASA-CASE-LAR-11922-1] c25 N79-24073  
 Indirect microbial detection  
 [NASA-CASE-LAR-12520-1] c51 N81-28698  
 Apparatus and process for microbial detection  
 and enumeration  
 [NASA-CASE-LAR-12709-1] c51 N81-29727

**WILL, H. A.**  
 Process for fabricating SiC semiconductor devices  
 [NASA-CASE-LEW-12094-1] c76 N76-25049

**WILL, R. B.**  
 Attitude control and damping system for  
 spacecraft Patent  
 [NASA-CASE-XLA-02551] c21 N71-21708

**WILLIAMS, B. A.**  
 Thermistor holder for skin temperature  
 measurements  
 [NASA-CASE-ARC-10855-1] c52 N77-10780  
 Liquid cooled brassiere and method of diagnosing  
 malignant tumors therewith  
 [NASA-CASE-ARC-11007-1] c52 N77-14736  
 Cooling system for removing metabolic heat from  
 an hermetically sealed spacesuit  
 [NASA-CASE-ARC-11059-1] c54 N78-32721

**WILLIAMS, D. D.**  
 Apparatus for changing the orientation and  
 velocity of a spinning body traversing a path  
 Patent  
 [NASA-CASE-HQB-00936] c31 N71-29050

**WILLIAMS, D. B.**  
 Low temperature aluminum alloy Patent  
 [NASA-CASE-INP-02786] c17 N71-20743

**WILLIAMS, E. F.**  
 Automatic liquid inventory collecting and  
 dispensing unit  
 [NASA-CASE-LAR-11071-1] c35 N75-15611

**WILLIAMS, J. G.**  
 Light regulator  
 [NASA-CASE-LAR-10836-1] c26 N72-27784  
 Light intensity strain analysis  
 [NASA-CASE-LAR-10765-1] c32 N73-20740

**WILLIAMS, J. R.**  
 Holographic thin film analyzer  
 [NASA-CASE-MFS-20823-1] c16 N73-30476

**WILLIAMS, L. A.**  
 Apparatus for electrolytically tapered or  
 contoured cavities  
 [NASA-CASE-INP-08835-1] c37 N80-14395

**WILLIAMS, L. A., JR.**  
 Fluid velocity measuring device  
 [NASA-CASE-LAR-11729-1] c34 N79-12359

**WILLIAMS, H. D.**  
 Measurement of time differences between luminous  
 events Patent  
 [NASA-CASE-XLA-01987] c23 N71-23976  
 Volumetric direct nuclear pumped laser  
 [NASA-CASE-LAR-12183-1] c36 N79-18307

**WILLIAMS, H. L.**  
 Non-destructive method for applying and removing  
 instrumentation on helicopter rotor blades  
 [NASA-CASE-LAR-11201-1] c35 N78-24515

**WILLIAMS, S. R.**  
 Bidirectional step torque filter with zero  
 backlash characteristic Patent  
 [NASA-CASE-XGS-04227] c15 N71-21744

**WILLIAMS, T. E.**  
 System for and method of freezing biological  
 tissue  
 [NASA-CASE-GSC-12173-1] c51 N79-10694

**WILLIAMS, W. F.**  
 System for interference signal nulling by  
 polarization adjustment  
 [NASA-CASE-NPO-13140-1] c32 N75-24982  
 Dual band combiner for horn antenna  
 [NASA-CASE-NPO-14519-1] c32 N80-23524

**WILLIS, A. E.**  
 Static inverters which sum a plurality of waves  
 Patent  
 [NASA-CASE-INP-00663] c08 N71-18752

**WILLNER, E.**  
 Inverter oscillator with voltage feedback  
 [NASA-CASE-NPO-10760] c09 N72-25254

**WILNER, B. E.**  
 Electrolytically regenerative hydrogen-oxygen  
 fuel cell Patent  
 [NASA-CASE-XLB-04526] c03 N71-11052

**WILSON, A. H.**  
 Vehicular impact absorption system  
 [NASA-CASE-NPO-14014-1] c37 N79-10420

**WILSON, D. J.**  
 Wind measurement system  
 [NASA-CASE-MFS-23362-1] c47 N77-10753

**WILSON, E. H.**  
 Wind tunnel  
 [NASA-CASE-LAR-10135-1] c09 N79-21083

**WILSON, I. J.**  
 Method of producing complex aluminum alloy parts  
 of high temper, and products thereof  
 [NASA-CASE-MSC-19693-1] c26 N78-24333

**WILSON, J. C.**  
 Exhaust flow deflector  
 [NASA-CASE-LAR-11570-1] c34 N76-18364

**WILSON, L. E.**  
 Phase modulating with odd and even finite power  
 series of a modulating signal  
 [NASA-CASE-LAR-11607-1] c32 N77-14292

**WILSON, H. L.**  
 Nondestructive spot test method for titanium and  
 titanium alloys  
 [NASA-CASE-LAR-10539-1] c17 N73-12547  
 Nondestructive spot test method for magnesium  
 and magnesium alloys  
 [NASA-CASE-LAR-10953-1] c17 N73-27446

**WILSON, H. E., JR.**  
 Space simulator Patent  
 [NASA-CASE-INP-00459] c11 N70-38675

**WILSON, R. E.**  
 Automatic pump Patent  
 [NASA-CASE-INP-04731] c15 N71-24042

**WILSON, R. L.**  
 Twin-capacitive shaft angle encoder with analog  
 output signal  
 [NASA-CASE-ARC-10897-1] c33 N77-31404

**WILSON, T. G.**  
 Regulated dc-to-dc converter for voltage step-up

or step-down with input-output isolation  
[NASA-CASE-HQN-10792-1] c33 N74-11049

WILSON, T. L.  
Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c34 N81-26402

WILSON, W. A.  
Methods and apparatus employing vibratory energy  
for wrenching Patent  
[NASA-CASE-MFS-20586] c15 N71-17686

WILSON, W. O.  
Rocket chamber leak test fixture  
[NASA-CASE-XFR-09479] c14 N69-27503

WINBER, R. T.  
Silicide coatings for refractory metals Patent  
[NASA-CASE-XLE-10910] c18 N71-29040

WINBLADE, R. L.  
Energy management system for glider type vehicle  
Patent  
[NASA-CASE-XFR-00756] c02 N71-13421

WING, L. D.  
Automatic thermal switch  
[NASA-CASE-GSC-12415-1] c34 N80-18338  
Automatic thermal switch  
[NASA-CASE-GSC-12553-1] c33 N80-21671

WINGFIELD, G. A.  
Resonant waveguide stark cell  
[NASA-CASE-LAR-11352-1] c33 N75-26245

WINIARSKI, F. J.  
Wabble gear drive mechanism  
[NASA-CASE-WOO-00625] c37 N78-17385

WINITZ, H.  
Amino acid analysis  
[NASA-CASE-NPO-12130-1] c25 N75-14844  
Reduction of blood serum cholesterol  
[NASA-CASE-NPO-12119-1] c52 N75-15270

WINKELSPERIN, R. A.  
Noninterruptable digital counting system Patent  
[NASA-CASE-XNP-09759] c08 N71-24891  
Controlled oscillator system with a time  
dependent output frequency  
[NASA-CASE-NPO-11962-1] c33 N74-10194  
Baseband signal combiner for large aperture  
antenna array  
[NASA-CASE-NPO-14641-1] c32 N81-29308

WINKLER, C. E.  
Static inverters which sum a plurality of waves  
Patent  
[NASA-CASE-XMP-00663] c08 N71-16752

WINKLER, H. E.  
Electrophotolysis oxidation system for  
measurement of organic concentration in water  
[NASA-CASE-MSC-16497-1] c25 N79-23167  
Biomedical flow sensor  
[NASA-CASE-MSC-18761-1] c52 N81-24717

WINKLER, T.  
AC logic flip-flop circuits Patent  
[NASA-CASE-XGS-00823] c10 N71-15910

WINE, L. E.  
Ellipsograph for pantograph Patent  
[NASA-CASE-XLA-03102] c14 N71-21079  
Lathe tool bit and holder for machining  
fiberglass materials  
[NASA-CASE-XLA-10470] c15 N72-21489  
Liquid waste feed system  
[NASA-CASE-LAR-10365-1] c05 N72-27102

WINTUCKY, E. G.  
Ion sputter textured graphite  
[NASA-CASE-LEW-12919-1] c24 N81-27198

WIRTH, H. H.  
Selective data segment monitoring system  
[NASA-CASE-ARC-10899-1] c60 N77-19760

WISANDER, D. W.  
Laser surface fusion of plasma sprayed ceramic  
turbine seals  
[NASA-CASE-LEW-13269-1] c27 N81-22190

WISE, R. C.  
Space suit  
[NASA-CASE-MSC-12609-1] c05 N73-32012

WISE, T. E.  
Microwave dichroic plate  
[NASA-CASE-GSC-12171-1] c33 N79-28416

WITBERG, W. K.  
Dual laser optical system and method for  
studying fluid flow  
[NASA-CASE-MFS-25315-1] c36 N81-19440  
Method of and apparatus for double-exposure  
holographic interferometry  
[NASA-CASE-MFS-25405-1] c35 N81-27459

WITTE, R. S.  
Gas ion laser construction for electrically  
isolating the pressure gauge thereof  
[NASA-CASE-MFS-22597] c36 N78-17366

WITTMANN, A. E.  
Method of coating circuit paths on printed  
circuit boards with solder Patent  
[NASA-CASE-XMP-01599] c09 N71-20705

WITROCK, E. P.  
Metal shearing energy absorber  
[NASA-CASE-HQN-10638-1] c15 N73-30460

WITZKE, W. E.  
Apparatus for making a metal slurry product Patent  
[NASA-CASE-XLE-00010] c15 N70-33382  
High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-1] c26 N77-24254  
Process for making a high toughness-high  
strength iron alloy  
[NASA-CASE-LEW-12542-2] c26 N79-22271  
High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-3] c26 N80-32484

WOBIG, O. A.  
Fluid power transmission Patent  
[NASA-CASE-XMS-01445] c12 N71-16031  
Apparatus for machining geometric cones Patent  
[NASA-CASE-XMS-04292] c15 N71-22722

WOELLER, F. H.  
Chelate-modified polymers for atmospheric gas  
chromatography  
[NASA-CASE-ARC-11154-1] c25 N80-23383

WOJASINSKI, E. J.  
Lightning tracking system  
[NASA-CASE-KSC-10729-1] c09 N73-32110  
Automatic lightning detection and photographic  
system  
[NASA-CASE-KSC-10728-1] c14 N73-32319  
Electric field measuring and display system  
[NASA-CASE-KSC-10731-1] c33 N74-27862  
Lightning current measuring systems  
[NASA-CASE-KSC-10807-1] c33 N75-26246  
Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c33 N79-10337

WOLCZOK, J. H.  
Wideband heterodyne receiver for laser  
communication system  
[NASA-CASE-GSC-12053-1] c32 N77-28346

WOLF, C. B.  
Method of producing silicon  
[NASA-CASE-NPO-14382-1] c31 N80-18231

WOLF, F. T.  
Air bearing  
[NASA-CASE-WLP-10002] c15 N72-17451

WOLFE, J. F.  
Thermoset-thermoplastic aromatic polyamides  
[NASA-CASE-LAR-12723-1] c27 N81-15107

WOLFF, J. H.  
High speed binary to decimal conversion system  
Patent  
[NASA-CASE-XGS-01230] c08 N71-19544

WOLLER, J. A.  
Evacuation port seal Patent  
[NASA-CASE-XMP-03290] c15 N71-23256

WOLOWICZ, C. H.  
Free wing assembly for an aircraft  
[NASA-CASE-FRC-10092-1] c05 N79-12061

WOLTHUIS, R. A.  
Contourograph system for monitoring  
electrocardiograms  
[NASA-CASE-MSC-13407-1] c10 N72-20225  
Apparatus and method for processing Korotkov  
sounds  
[NASA-CASE-MSC-13999-1] c52 N74-26626

WONG, R. Y.  
Plurality of photosensitive cells on a  
pyramidal base for planetary trackers  
[NASA-CASE-XNP-04180] c07 N69-39736  
Apparatus for absorbing and measuring power Patent  
[NASA-CASE-XLE-00720] c14 N70-40201  
Television signal processing system Patent  
[NASA-CASE-NPO-10140] c07 N71-24742  
Video signal enhancement system with dynamic  
range compression and modulation index  
expansion Patent  
[NASA-CASE-NFO-10343] c07 N71-27341

WONG, W. J.  
Phase protection system for ac power lines  
[NASA-CASE-MSC-17832-1] c33 N74-14956

WOO, K. E.  
High impact antenna Patent

[NASA-CASE-NPO-10231] c07 N71-26101  
Multi-purpose antenna employing dish reflector  
with plural coaxial horn feeds  
[NASA-CASE-NPO-11264] c07 N72-25174  
**WOOD, B. T.**  
Low loss dichroic plate  
[NASA-CASE-NPO-13171-1] c32 N74-11000  
**WOOD, A. D.**  
Transient heat transfer gauge Patent  
[NASA-CASE-XNP-09802] c33 N71-15641  
**WOOD, C. E.**  
Gas ion laser construction for electrically  
isolating the pressure gauge thereof  
[NASA-CASE-MFS-22597] c36 N78-17366  
**WOOD, G. E.**  
Simultaneous acquisition of tracking data from  
two stations  
[NASA-CASE-NPO-13292-1] c32 N75-15854  
**WOOD, G. E., JR.**  
Gas analyzer for bi-gaseous mixtures Patent  
[NASA-CASE-XLA-01131] c14 N71-10774  
**WOOD, G. P.**  
Plasma accelerator Patent  
[NASA-CASE-XLA-00675] c25 N70-33267  
**WOOD, J. W.**  
Broadband video process with very high input  
impedance  
[NASA-CASE-NPO-10199] c09 N72-17156  
**WOOD, K. E.**  
High temperature penetrator assembly with  
bayonet plug and ramp-activated lock  
[NASA-CASE-MSC-18526-1] c35 N80-19468  
Apparatus for accurately preloading auger  
attachment means for frangible protective  
material  
[NASA-CASE-MSC-18791-1] c37 N81-24446  
**WOOD, L. L.**  
Continuous plasma light source  
[NASA-CASE-XNP-04167-2] c25 N72-24753  
Continuous plasma laser  
[NASA-CASE-XNP-04167-3] c36 N77-19416  
**WOOD, P. C.**  
Process for the preparation of calcium superoxide  
[NASA-CASE-ARC-11053-1] c25 N79-10162  
Use of glow discharge in fluidized beds  
[NASA-CASE-ARC-11245-1] c33 N80-11326  
**WOOD, R. A.**  
Low temperature aluminum alloy Patent  
[NASA-CASE-XMP-02786] c17 N71-20743  
**WOOD, R. C.**  
Apparatus for sampling particulates in gases  
[NASA-CASE-HQN-10037-1] c14 N73-27376  
**WOODBURY, R. C.**  
Noise limiter Patent  
[NASA-CASE-NPO-10169] c10 N71-24844  
Gated compressor, distortionless signal limiter  
[NASA-CASE-NPO-11826-1] c32 N74-19788  
Apparatus for scanning the surface of a  
cylindrical body  
[NASA-CASE-NPO-11861-1] c36 N74-20009  
**WOODGATE, B. E.**  
Method and apparatus for slicing crystals  
[NASA-CASE-GSC-12291-1] c76 N80-18951  
**WOODIE, P. E.**  
Thermal conductive connection and method of  
making same Patent  
[NASA-CASE-XMS-02087] c09 N70-41717  
**WOODS, G. J.**  
Electronic checkout system for space vehicles  
Patent  
[NASA-CASE-IKS-08012-2] c31 N71-15566  
**WOODS, G. M., JR.**  
Instrument for measuring potentials on two  
dimensional electric field plots Patent  
[NASA-CASE-XLA-08493] c10 N71-15421  
A low energy electron magnetometer  
[NASA-CASE-LAR-12706-1] c35 N81-19428  
**WOODS, J. M.**  
Powerplexer  
[NASA-CASE-MSC-12396-1] c03 N73-31588  
**WOOLFSOW, M. G.**  
Linear sawtooth voltage-wave generator employing  
transistor timing circuit having  
capacitor-zener diode combination feedback  
Patent  
[NASA-CASE-XMS-01315] c09 N70-41675  
Pulse modulator providing fast rise and fall  
times Patent  
[NASA-CASE-XMS-04919] c09 N71-23270  
Multiple slope sweep generator Patent  
[NASA-CASE-XMS-03542] c09 N71-28926  
**WOOLLAN, J. A.**  
Hall effect magnetometer  
[NASA-CASE-LEW-11632-2] c35 N75-13213  
Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-1] c28 N78-24365  
Atomic hydrogen storage  
[NASA-CASE-LEW-12081-2] c28 N80-20402  
Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c28 N81-14103  
**WORNON, D. E.**  
Leading edge curvature based on convective  
heating Patent  
[NASA-CASE-XLA-01486] c01 N71-23497  
**WORTHMAN, J. J.**  
Semiconductor p-n junction stress and strain  
sensor  
[NASA-CASE-XLA-04980] c09 N69-27422  
Method of making semiconductor p-n junction  
stress and strain sensor  
[NASA-CASE-XLA-04980-2] c14 N72-28438  
Particulate and aerosol detector  
[NASA-CASE-LAR-11434-1] c35 N76-22509  
**WRIGHT, D. B.**  
Method for measuring cutaneous sensory perception  
[NASA-CASE-MSC-13609-1] c05 N72-25122  
**WRIGHT, D. E.**  
Penetrating radiation system for detecting the  
amount of liquid in a tank Patent  
[NASA-CASE-MSC-12280] c27 N71-16348  
**WRIGHT, E. E., JR.**  
System for sterilizing objects  
[NASA-CASE-KSC-11085-1] c54 N81-24724  
**WRIGHT, L. M.**  
Vibrophonocardiograph Patent  
[NASA-CASE-XPR-07172] c05 N71-27234  
**WRIGHT, W. H.**  
Voltage regulator with plural parallel power  
source sections Patent  
[NASA-CASE-GSC-10891-1] c10 N71-26626  
Shunt regulation electric power system  
[NASA-CASE-GSC-10135] c33 N78-17296  
**WRINKLE, W. W.**  
Apparatus for remote handling of materials  
[NASA-CASE-LAR-10634-1] c37 N74-18123  
**WU, V. C.**  
Apparatus for determining changes in limb volume  
[NASA-CASE-MSC-18759-1] c52 N81-24716  
**WUENSCHER, H. F.**  
Recoverable rocket vehicle Patent  
[NASA-CASE-XMF-00389] c31 N70-34176  
Serpentuator Patent  
[NASA-CASE-XMP-05344] c31 N71-16345  
Space manufacturing machine Patent  
[NASA-CASE-MFS-20410] c15 N71-19214  
Method of making foamed materials in  
zero gravity  
[NASA-CASE-XMF-09902] c15 N72-11387  
Hermetically sealed elbow actuator  
[NASA-CASE-MFS-14710] c09 N72-22195  
**WUERKER, B. F.**  
Spatial filter for Q-switched lasers  
[NASA-CASE-LEW-12164-1] c36 N77-32478  
Microbalance  
[NASA-CASE-MSC-11242] c35 N78-17358  
**WYBLE, C. W.**  
Thermal conductive connection and method of  
making same Patent  
[NASA-CASE-XMS-02087] c09 N70-41717  
**WYDRVEN, T.**  
Preparation of dielectric coating of variable  
dielectric constant by plasma polymerization  
[NASA-CASE-ARC-10892-2] c27 N79-14214  
Use of glow discharge in fluidized beds  
[NASA-CASE-ARC-11245-1] c33 N80-11326  
**WYDRVEN, T. J.**  
Process for the preparation of calcium superoxide  
[NASA-CASE-ARC-11053-1] c25 N79-10162  
Electric discharge for treatment of trace  
contaminants  
[NASA-CASE-ARC-10975-1] c33 N79-15245  
Oxygen post-treatment of plastic surface coated  
with plasma polymerized silicon-containing  
monomers  
[NASA-CASE-ARC-10915-2] c27 N79-18052  
Reverse osmosis membrane of high urea rejection  
properties  
[NASA-CASE-ARC-10980-1] c27 N80-23452

**HYDEVEN, T. J., JR.**  
 Method of preparing water purification membranes  
 [NASA-CASE-ARC-10643-1] c25 N75-12087  
 Abrasion resistant coatings for plastic surfaces  
 [NASA-CASE-ARC-10915-3] c24 N77-24200

**HYLIE, G. H.**  
 Sealed battery gas manifold construction Patent  
 [NASA-CASE-XNP-03378] c03 N71-11051

**HYMAN, C. L.**  
 Acquisition and tracking system for optical radar  
 [NASA-CASE-MFS-20125] c16 N72-13437  
 Strain gauge ambiguity sensor for segmented  
 mirror active optical system  
 [NASA-CASE-MFS-20506-1] c35 N75-12273  
 System for the measurement of ultra-low stray  
 light levels  
 [NASA-CASE-MFS-23513-1] c74 N79-11865

**HYMVERN, B. A.**  
 Iodine generator for reclaimed water purification  
 [NASA-CASE-MSC-14632-1] c54 N78-14784

**HYSOCKI, J. J.**  
 Radiation resistant silicon semiconductor  
 devices Patent  
 [NASA-CASE-XGS-07801] c09 N71-12513

**Y**

**YAGER, S. P.**  
 Piping arrangement through a double chamber  
 structure  
 [NASA-CASE-XNP-08882] c15 N69-39935

**YAMAKAWA, K. A.**  
 A method for producing a solidified body of  
 silicon  
 [NASA-CASE-NPO-15250-1] c25 N81-16174

**YANAGITA, H.**  
 Rhomboid prism pair for rotating the plane of  
 parallel light beams  
 [NASA-CASE-ARC-11311-1] c74 N81-16882

**YANG, C. Y.**  
 Zirconium carbide as an electrocatalyst for the  
 chromous/chromic redox couple  
 [NASA-CASE-LEW-13246-1] c25 N81-26203

**YANG, L. C.**  
 Optically actuated two position mechanical mover  
 [NASA-CASE-NPO-13105-1] c37 N74-21060  
 Optically detonated explosive device  
 [NASA-CASE-NPO-11743-1] c28 N74-27425  
 Compact pulsed laser having improved heat  
 conductance  
 [NASA-CASE-NPO-13147-1] c36 N77-25502  
 Seismic vibrational source  
 [NASA-CASE-NPO-14112-1] c46 N79-22679  
 Underwater seismic source  
 [NASA-CASE-NPO-14255-1] c46 N79-23555  
 Portable heatable container  
 [NASA-CASE-NPO-14237-1] c44 N80-20808  
 Method and device for destructive detection of a  
 substance  
 [NASA-CASE-NPO-14940-1] c35 N80-21723

**YANG, P. H.**  
 Fluid power transmitting gas bearing Patent  
 [NASA-CASE-ERC-10097] c15 N71-28465

**YASUI, R. K.**  
 Solar cell submodule Patent  
 [NASA-CASE-XNP-05821] c03 N71-11056  
 Solar cell matrix Patent  
 [NASA-CASE-NPO-10821] c03 N71-19545  
 Solar cell matrix  
 [NASA-CASE-NPO-11190] c03 N71-34044  
 Stacked solar cell arrays  
 [NASA-CASE-NPO-11771] c03 N73-20040  
 Solar cell grid patterns  
 [NASA-CASE-NPO-13087-2] c44 N76-31666  
 Solar array strip and a method for forming the  
 same  
 [NASA-CASE-NPO-13652-1] c44 N79-17314  
 Bonding machine for forming a solar array strip  
 [NASA-CASE-NPO-13652-2] c44 N79-24431  
 Method for forming a solar array strip  
 [NASA-CASE-NPO-13652-3] c44 N80-14474

**YEAGER, P. R.**  
 Gas analyzer for bi-gaseous mixtures Patent  
 [NASA-CASE-XLA-01131] c14 N71-10774  
 Thermopile vacuum gage tube simulator Patent  
 [NASA-CASE-XLA-02758] c14 N71-18481  
 Fast scan control for deflection type mass  
 spectrometers  
 [NASA-CASE-LAR-11428-1] c35 N74-34857

**YEH, C.**  
 Fiber distributed feedback laser  
 [NASA-CASE-NPO-13531-1] c36 N76-24553

**YEH, Y. C. H.**  
 Schottky barrier cell and method of fabricating it  
 [NASA-CASE-NPO-13689-4] c44 N81-26553  
 Schottky barrier solar cell  
 [NASA-CASE-NPO-13689-2] c44 N81-29525

**YEH, H. C.**  
 Superconducting gyrocon for high power high  
 efficiency microwave generator/amplifier  
 application  
 [NASA-CASE-NPO-14975-1] c33 N80-29584

**YEH, S. P. S.**  
 Ion-exchange hollow fibers  
 [NASA-CASE-NPO-13309-1] c25 N81-19244

**YIH, L. I.**  
 Low intensity X-ray and gamma-ray imaging device  
 [NASA-CASE-GSC-12263-1] c74 N79-20857  
 Low intensity X-ray and gamma-ray imaging  
 spectrometer  
 [NASA-CASE-GSC-12587-1] c35 N80-29635

**YOSHINO, S. Y.**  
 Bonding or repairing process  
 [NASA-CASE-MSC-12357] c15 N73-12489

**YOST, V. H.**  
 Apparatus for welding torch angle and seam  
 tracking control Patent  
 [NASA-CASE-XNP-03287] c15 N71-15607

**YOST, W. T.**  
 Liquid-immersible electrostatic ultrasonic  
 transducer  
 [NASA-CASE-LAR-12465-1] c35 N80-18363

**YOUNG, A. L.**  
 Control valve and co-axial variable injector  
 Patent  
 [NASA-CASE-XNP-09702] c15 N71-17654  
 Semitoroidal diaphragm cavitating valve Patent  
 [NASA-CASE-XNP-09704] c12 N71-18615

**YOUNG, D. B.**  
 Skeletal stressing method and apparatus Patent  
 [NASA-CASE-ARC-10100-1] c05 N71-24738  
 Programmable physiological infusion  
 [NASA-CASE-ARC-10447-1] c52 N74-22771

**YOUNG, R.**  
 Radio frequency shielded enclosure Patent  
 [NASA-CASE-XNF-09422] c07 N71-19436

**YOUNG, L. R.**  
 Display research collision warning system  
 [NASA-CASE-HQN-10703] c21 N73-13643  
 Adaptive polarization separation  
 [NASA-CASE-LAR-12196-1] c33 N81-26358

**YOUNG, R. H.**  
 Ac power amplifier Patent Application  
 [NASA-CASE-LAR-10218-1] c09 N70-34559  
 Automatic balancing device Patent  
 [NASA-CASE-LAR-10774] c10 N71-13545  
 Independent power generator  
 [NASA-CASE-LAR-11208-1] c44 N78-32539  
 Electrochemical detection device  
 [NASA-CASE-LAR-11922-1] c25 N79-24073

**YOUNG, S. G.**  
 A silicon-slurry/aluminide coating  
 [NASA-CASE-LEW-13343-1] c24 N80-26389

**YOUNG, W. J.**  
 Phonocardiograph transducer Patent  
 [NASA-CASE-XNS-05365] c14 N71-22993

**YOUNG, W. R.**  
 Apparatus for measuring an aircraft's speed and  
 height  
 [NASA-CASE-LAR-12275-1] c35 N79-18296

**YOUNGBLUTH, O., JR.**  
 Method and apparatus for mapping the sensitivity  
 of the face of a photodetector specifically a  
 PNT  
 [NASA-CASE-LAR-10320-1] c09 N72-23172  
 Versatile LDV burst simulator  
 [NASA-CASE-LAR-11859-1] c35 N79-14349

**YOUNGBANS, J. L.**  
 Curved centerline air intake for a gas turbine  
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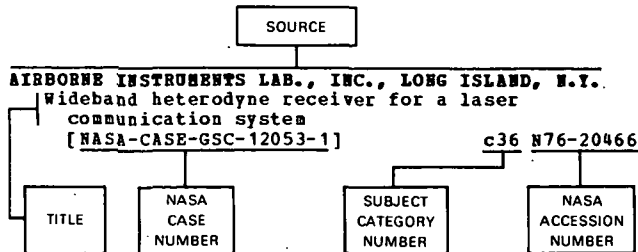
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- [NASA-CASE-HQN-10876-1] c33 N76-27473  
Low gravity phase separator
- [NASA-CASE-MSC-14773-1] c35 N78-12390  
Automatic multiple-sample applicator and electrophoresis apparatus
- [NASA-CASE-ARC-10991-1] c25 N78-14104  
Process for preparing higher oxides of the alkali and alkaline earth metals
- [NASA-CASE-ARC-10992-1] c26 N78-32229  
Microelectrophoretic apparatus and process
- [NASA-CASE-ARC-11121-1] c25 N79-14169  
**CALIFORNIA UNIV., LOS ANGELES.**  
Continuous plasma light source
- [NASA-CASE-XNP-04167-2] c25 N72-24753  
Continuous plasma laser
- [NASA-CASE-XNP-04167-3] c36 N77-19416  
**CATHOLIC UNIV. OF AMERICA, WASHINGTON, D.C.**  
Electromagnetic wave energy converter
- [NASA-CASE-GSC-11394-1] c09 N73-32109  
**CHANCE VOUGHT CORP., DALLAS, TEX.**  
Coupling for linear shaped charge Patent
- [NASA-CASE-XLA-00189] c33 N70-36846  
Spin forming tubular elbows Patent
- [NASA-CASE-XMF-01083] c15 N71-22723  
Single action separation mechanism Patent
- [NASA-CASE-XLA-00188] c15 N71-22874  
**CHRYSLER CORP., DETROIT, MICH.**  
Ceramic insulation for radiant heating environments and method of preparing the same Patent
- [NASA-CASE-MFS-14253] c33 N71-24858  
Constant temperature heat sink for calorimeters Patent
- [NASA-CASE-XMF-04208] c33 N71-29051  
**CHRYSLER CORP., HUNTSVILLE, ALA.**  
Apparatus for ejection of an instrument cover
- [NASA-CASE-XMF-04132] c15 N69-27502  
**CLEMSON UNIV., S.C.**  
Method of forming dynamic membrane on stainless steel support
- [NASA-CASE-MSC-18172-1] c26 N80-19237  
**COLLINS RADIO CO., CEDAR RAPIDS, IOWA.**  
Power responsive overload sensing circuit Patent
- [NASA-CASE-GSC-10667-1] c10 N71-33129  
Chassis unit insert tightening-extract device
- [NASA-CASE-XMS-01077-1] c37 N79-33467  
**COLLINS RADIO CO., DALLAS, TEX.**  
Signal path series step biased multidevice high efficiency amplifier Patent
- [NASA-CASE-GSC-10668-1] c07 N71-28430  
Heat conductive resiliently compressible structure for space electronics package modules Patent
- [NASA-CASE-MSC-12389] c33 N71-29052  
Infinite range electronics gain control circuit
- [NASA-CASE-GSC-10786-1] c10 N72-28241  
**COLORADO STATE UNIV., FORT COLLINS.**  
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] c25 N78-25148  
**COMPREHENSIVE DESIGNERS, INC., SHERMAN OAKS, CALIF.**  
Vehicle for use in planetary exploration
- [NASA-CASE-NPO-11366] c11 N73-26238  
**COMPUTER CONTROL CO., INC., FRAMINGHAM, MASS.**  
Test fixture for pellet-like electrical elements
- [NASA-CASE-XNP-06032] c09 N69-21926  
Support structure for irradiated elements Patent
- [NASA-CASE-XNP-06031] c15 N71-15606  
Counter Patent
- [NASA-CASE-XNP-06234] c10 N71-27137  
**COMPUTER SCIENCES CORP., FALLS CHURCH, VA.**  
Oceanic wave measurement system
- [NASA-CASE-MFS-23862-1] c48 N80-18667  
**CONRAC CORP., PASADENA, CALIF.**  
Penetrating radiation system for detecting the amount of liquid in a tank Patent
- [NASA-CASE-MSC-12280] c27 N71-16348  
**CORNELL UNIV., ITHACA, N. Y.**  
Flux sensing device using a tubular core with toroidal gating coil and solenoidal output coil wound thereon Patent
- [NASA-CASE-XGS-01881] c09 N70-40123  
**CRANE CO., BUBBANK, CALIF.**  
Hydraulic transformer Patent
- [NASA-CASE-MFS-20830] c15 N71-30028  
**CURTISS-WRIGHT CORP., WOOD-RIDGE, N.J.**  
Gas turbine combustion apparatus Patent
- [NASA-CASE-XLE-103477-1] c28 N71-20330  
**CUTLER-HAMMER, INC., MELVILLE, N.Y.**  
Wideband heterodyne receiver for laser communication system
- [NASA-CASE-GSC-12053-1] c32 N77-28346
- D**
- DELAWARE UNIV., NEWARK.**  
High field QDS detector for infrared radiation
- [NASA-CASE-LAR-11027-1] c35 N74-18088  
**DENVER UNIV., COLO.**  
Metal shearing energy absorber

[NASA-CASE-HQN-10638-1] c15 N73-30460  
 DEPARTMENT OF TRANSPORTATION, CAMBRIDGE, MASS.  
 Optical noise suppression device and method  
 [NASA-CASE-MSC-12640-1] c74 N76-31998  
**DORNE AND HARGOLIN, INC., BOHEMIA, N.Y.**  
 Nose cone mounted heat resistant antenna Patent  
 [NASA-CASE-XMS-04312] c07 N71-22984  
**DOUGLAS AIRCRAFT CO., INC., SANTA MONICA, CALIF.**  
 Recoverable single stage spacecraft booster Patent  
 [NASA-CASE-XMF-01973] c31 N70-41588  
 Switching circuit employing regeneratively  
 connected complementary transistors Patent  
 [NASA-CASE-YNP-02654] c10 N70-42032  
 Split nut separation system Patent  
 [NASA-CASE-YNP-06914] c15 N71-21489  
 Artificial gravity spin deployment system Patent  
 [NASA-CASE-YNP-02595] c31 N71-21881  
 Portable superclean air column device Patent  
 [NASA-CASE-XMF-03212] c15 N71-22721  
 Energy absorption device Patent  
 [NASA-CASE-YNP-01848] c15 N71-28959  
 Collapsible pistons  
 [NASA-CASE-MSC-13789-1] c11 N73-32152  
**DUKE UNIV., DURHAM, N. C.**  
 Regulated dc-to-dc converter for voltage step-up  
 or step-down with input-output isolation  
 [NASA-CASE-HQN-10792-1] c33 N74-11049  
**DUMONT ELECTRON TUBES, CLIFTON, N. J.**  
 High contrast cathode ray tube  
 [NASA-CASE-ERC-10468] c09 N72-2C206

## E

**ECHO SCIENCE CORP., MOUNTAIN VIEW, CALIF.**  
 Dynamic capacitor having a peripherally driven  
 element and system incorporating the same  
 [NASA-CASE-YNP-02899-1] c33 N79-21265  
**EITEL-MCCULLOUGH, INC., SAN CARLOS, CALIF.**  
 Method of forming ceramic to metal seal Patent  
 [NASA-CASE-YNP-01263-2] c15 N71-26312  
**ELECTRAC, INC., ANAHEIM, CALIF.**  
 Optimum predetection diversity receiving system  
 Patent  
 [NASA-CASE-IGS-00740] c07 N71-23098  
**ELECTRIC STORAGE BATTERY CO., RALPHIGH, N.C.**  
 Electric battery and method for operating same  
 Patent  
 [NASA-CASE-IGS-01674] c03 N71-29129  
 Storage battery comprising negative plates of a  
 wedge shaped configuration  
 [NASA-CASE-NPO-11806-1] c44 N74-15693  
**ELECTRIC STORAGE BATTERY CO., YARDLEY, PA.**  
 Electric storage battery  
 [NASA-CASE-NPO-11021] c03 N72-20032  
**ELECTRO-OPTICAL SYSTEMS, INC., PASADENA, CALIF.**  
 Focussing system for an ion source having  
 apertured electrodes Patent  
 [NASA-CASE-YNP-03332] c09 N71-10618  
 Electrolytically regenerative hydrogen-oxygen  
 fuel cell Patent  
 [NASA-CASE-XLE-04526] c03 N71-11052  
 Method of producing refractory bodies having  
 controlled porosity Patent  
 [NASA-CASE-LEW-10393-1] c17 N71-15468  
 Soil particles separator, collector and viewer  
 Patent  
 [NASA-CASE-YNP-09770] c15 N71-20440  
 Particle detection apparatus including a  
 ballistic pendulum Patent  
 [NASA-CASE-XMS-04201] c14 N71-22990  
 Polarity sensitive circuit Patent  
 [NASA-CASE-YNP-00952] c10 N71-23271  
 Ion engine casing construction and method of  
 making same Patent  
 [NASA-CASE-YNP-06942] c28 N71-23293  
 Material handling device Patent  
 [NASA-CASE-YNP-09770-3] c11 N71-27036  
 Screen particle separator  
 [NASA-CASE-YNP-09770-2] c15 N72-22483  
**ELECTRONIC IMAGE SYSTEMS CORP., CAMBRIDGE, MASS.**  
 Drying apparatus for photographic sheet material  
 [NASA-CASE-GSC-11074-1] c14 N73-28489  
**ESSEX CORP., ALEXANDRIA, VA.**  
 Satellite retrieval system  
 [NASA-CASE-MFS-25403-1] c18 N81-24164  
**EVAN KNIGHT CORP., EAST WATICK, MASS.**  
 Method and means for providing an absolute power  
 measurement capability Patent  
 [NASA-CASE-ERC-11020] c14 N71-26774

## F

**FAIRCHILD HILLER CORP., GERMANTOWN, MD.**  
 Two axis fluxgate magnetometer Patent  
 [NASA-CASE-GSC-10441-1] c14 N71-27325  
 Space simulation and radiative property testing  
 system and method Patent  
 [NASA-CASE-MFS-20096] c14 N71-30026  
 Thermal control system for a spacecraft modular  
 housing  
 [NASA-CASE-GSC-11018-1] c31 N73-30829  
**FAIRCHILD REPUBLIC CO., FARMINGDALE, N. Y.**  
 Surface conforming thermal/pressure seal  
 [NASA-CASE-MSC-18422-1] c37 N80-14400  
**PARADAY LABS., INC., LA JOLLA, CALIF.**  
 Method for attaching a fused-quartz mirror to a  
 conductive metal substrate  
 [NASA-CASE-MFS-23405-1] c26 N77-29260  
**FEDERAL-MOGUL CORP., LOS ALAMITOS, CALIF.**  
 Hydraulic casting of liquid polymers Patent  
 [NASA-CASE-YNP-07659] c06 N71-22975  
**FLORIDA UNIV., GAINESVILLE.**  
 Safety flywheel  
 [NASA-CASE-HQN-10888-1] c44 N79-14527  
**FMC CORP., NEW YORK.**  
 Decomposition unit Patent  
 [NASA-CASE-XMS-00583] c28 N70-38504  
**FOOTHILL COLLEGE, LOS ALTOS HILLS, CALIF.**  
 Electrical conductivity cell and method for  
 fabricating the same  
 [NASA-CASE-ARC-10810-1] c33 N76-19339  
**FORD MOTOR CO., DEARBORN, MICH.**  
 Omnidirectional acceleration device Patent  
 [NASA-CASE-HQN-10780] c14 N71-30265

## G

**GARRETT CORP., LOS ANGELES, CALIF.**  
 Belief valve  
 [NASA-CASE-XMS-05894-1] c15 N69-21924  
 Portable environmental control system Patent  
 [NASA-CASE-XMS-09632-1] c05 N71-11203  
 Dual latching solenoid valve Patent  
 [NASA-CASE-XMS-05890] c09 N71-23191  
 Water management system and an electrolytic cell  
 therefor Patent  
 [NASA-CASE-MSC-10960-1] c03 N71-24718  
 Low cycle fatigue testing machine  
 [NASA-CASE-LAR-10270-1] c32 N72-25877  
 Process for separation of dissolved hydrogen  
 from water by use of palladium and process for  
 coating palladium with palladium black  
 [NASA-CASE-MSC-13335-1] c06 N72-31140  
 Flexible joint for pressurizable garment  
 [NASA-CASE-MSC-11072] c54 N74-32546  
 Gas compression apparatus  
 [NASA-CASE-MSC-14757-1] c35 N78-10428  
 Wind tunnel  
 [NASA-CASE-LAR-10135-1] c09 N79-21083  
 Water separator  
 [NASA-CASE-XMS-01295-1] c37 N79-21345  
 Combinational logic for generating gate drive  
 signals for phase control rectifiers  
 [NASA-CASE-MFS-25208-1] c33 N81-27402  
**GARRETT CORP., TORRANCE, CALIF.**  
 Adaptive reference voltage generator for firing  
 angle control of line-commutated inverters  
 [NASA-CASE-MFS-25215-1] c33 N81-31481  
**GCA CORP., BEDFORD, MASS.**  
 Analytical photoionization mass spectrometer  
 with an argon gas filter between the light  
 source and monochromator Patent  
 [NASA-CASE-LAR-10180-1] c06 N71-13461  
**GENERAL DYNAMICS/ASTRONAUTICS, SAN DIEGO, CALIF.**  
 Determination of spot weld quality Patent  
 [NASA-CASE-YNP-02588] c15 N71-18613  
 Pressure transducer calibrator Patent  
 [NASA-CASE-YNP-01660] c14 N71-23036  
 Plating nickel on aluminum castings Patent  
 [NASA-CASE-YNP-04148] c17 N71-24830  
**GENERAL DYNAMICS/CONVAIR, SAN DIEGO, CALIF.**  
 Signal generator  
 [NASA-CASE-YNP-05612] c09 N69-21468  
 Separation nut Patent  
 [NASA-CASE-XGS-01971] c15 N71-15922  
 Zero gravity separator Patent  
 [NASA-CASE-XLE-00586] c15 N71-15968

Catalyst cartridge for carbon dioxide reduction unit [NASA-CASE-LAR-10551-1]	c25 N74-12813	Reaction tester [NASA-CASE-MSC-13604-1]	c05 N73-13114
Heat exchanger [NASA-CASE-MFS-22991-1]	c34 N77-10463	Air conditioned suit [NASA-CASE-LAR-10076-1]	c05 N73-20137
<b>GENERAL DYNAMICS CORP., SAN DIEGO, CALIF.</b>		Compton scatter attenuation gamma ray spectrometer [NASA-CASE-MFS-21441-1]	c14 N73-30392
Light radiation direction indicator with a baffle of two parallel grids [NASA-CASE-XNP-03930]	c14 N69-24331	Inverter ratio failure detector [NASA-CASE-NPO-13160-1]	c35 N74-18090
Method and apparatus for attaching physiological monitoring electrodes Patent [NASA-CASE-XPR-07658-1]	c05 N71-26293	Electrophoretic sample insertion [NASA-CASE-MFS-21395-1]	c25 N74-26948
Driving lamps by induction [NASA-CASE-MFS-21214-1]	c09 N73-30181	Apparatus for conducting flow electrophoresis in the substantial absence of gravity [NASA-CASE-MFS-21394-1]	c34 N74-27744
<b>GENERAL ELECTRIC CO., CINCINNATI, OHIO.</b>		Multiparameter vision testing apparatus [NASA-CASE-MSC-13601-2]	c54 N75-27759
Dual output variable pitch turbofan actuation system [NASA-CASE-LEW-12419-1]	c07 N77-14025	Automatic bio-waste sampling [NASA-CASE-MSC-14640-1]	c54 N76-14804
Reverse pitch fan with divided splitter [NASA-CASE-LEW-12760-1]	c07 N77-17059	Solar cell module [NASA-CASE-NPO-14467-1]	c44 N79-31753
Leading edge protection for composite blades [NASA-CASE-LEW-12550-1]	c24 N77-15170	Voltage feed through apparatus having reduced partial discharge [NASA-CASE-GSC-12347-1]	c33 N80-18286
Oil cooling system for a gas turbine engine [NASA-CASE-LEW-12830-1]	c07 N77-13106	<b>GENERAL ELECTRIC CO., PLEASANTON, CALIF.</b>	
Blade retainer assembly [NASA-CASE-LEW-12608-1]	c07 N77-27116	Method of making a cermet Patent [NASA-CASE-LEW-10219-1]	c18 N71-28729
Platform for a swing root turbomachinery blade [NASA-CASE-LEW-12312-1]	c07 N77-32148	<b>GENERAL ELECTRIC CO., SCHENECTADY, N. Y.</b>	
Deformable bearing seat [NASA-CASE-LEW-12527-1]	c37 N77-32500	Superconductive accelerometer Patent [NASA-CASE-XMF-01099]	c14 N71-15969
Bearing seat usable in a gas turbine engine [NASA-CASE-LEW-12477-1]	c37 N77-32501	Remote manipulator system [NASA-CASE-MFS-22022-1]	c37 N76-15460
Oil cooling system for a gas turbine engine [NASA-CASE-LEW-12321-1]	c37 N78-10467	Automatic transponder [NASA-CASE-GSC-12075-1]	c32 N77-31350
Impact absorbing blade mounts for variable pitch blades [NASA-CASE-LEW-12313-1]	c37 N78-10468	Directionally solidified eutectic gamma plus beta nickel-base superalloys [NASA-CASE-LEW-12906-1]	c26 N77-32279
Variable thrust nozzle for quiet turbofan engine and method of operating same [NASA-CASE-LEW-12317-1]	c07 N78-17055	<b>GENERAL ELECTRIC CO., UTICA, N. Y.</b>	
Gas turbine engine with convertible accessories [NASA-CASE-LEW-12390-1]	c07 N78-17056	Method of determining bond quality of power transistors attached to substrates [NASA-CASE-MFS-21931-1]	c37 N75-26372
Variable cycle gas turbine engines [NASA-CASE-LEW-12916-1]	c37 N78-17384	<b>GENERAL MOTORS CORP., DETROIT, MICH.</b>	
Gas turbine engine with recirculating bleed [NASA-CASE-LEW-12452-1]	c07 N78-25089	Hermetic sealed vibration damper Patent [NASA-CASE-MSC-10959]	c15 N71-26243
Redundant disc [NASA-CASE-LEW-12496-1]	c07 N78-33101	<b>GENERAL MOTORS CORP., MILWAUKEE, WIS.</b>	
Fuel delivery system including heat exchanger means [NASA-CASE-LEW-12793-1]	c37 N79-11403	Adjustable tension wire guide Patent [NASA-CASE-XMS-02383]	c15 N71-15918
Integrated gas turbine engine-nacelle [NASA-CASE-LEW-12389-3]	c07 N79-14096	<b>GENERAL MOTORS CORP., SANTA BARBARA, CALIF.</b>	
Variable area exhaust nozzle [NASA-CASE-LEW-12378-1]	c07 N79-14097	Resilient wheel Patent [NASA-CASE-MFS-13929]	c15 N71-27091
Sound-suppressing structure with thermal relief [NASA-CASE-LEW-12658-1]	c71 N79-14871	<b>GENERAL PRECISION, INC., LITTLE FALLS, N.J.</b>	
Method and apparatus for rapid thrust increases in a turbofan engine [NASA-CASE-LEW-12971-1]	c07 N80-18039	Reversible current control apparatus Patent [NASA-CASE-XLA-09371]	c10 N71-18724
Curved centerline air intake for a gas turbine engine [NASA-CASE-LEW-13201-1]	c07 N81-14999	<b>GENERAL PRECISION, INC., SUNNYVALE, CALIF.</b>	
Apparatus for sensor failure detection and correction in a gas turbine engine control system [NASA-CASE-LEW-12907-2]	c07 N81-19115	Broadband video process with very high input impedance [NASA-CASE-NFO-10199]	c09 N72-17156
Integrated control system for a gas turbine engine [NASA-CASE-LEW-12594-2]	c07 N81-15116	<b>GENERAL PRECISION SYSTEMS, INC., LITTLE FALLS, N.J.</b>	
<b>GENERAL ELECTRIC CO., CLEVELAND, OHIO.</b>		Fluidic-thermochromic display device Patent [NASA-CASE-BEC-10031]	c12 N71-18603
Variable mixer propulsion cycle [NASA-CASE-LEW-12917-1]	c07 N78-18067	<b>GENERAL TECHNOLOGIES CORP., RESTON, VA.</b>	
<b>GENERAL ELECTRIC CO., PHILADELPHIA, PA.</b>		Method of making reinforced composite structure [NASA-CASE-LEW-12619-1]	c24 N77-19171
Catalyst for growth of boron carbide single crystal whiskers [NASA-CASE-XHQ-03903]	c15 N69-21922	<b>GEOPHYSICS CORP. OF AMERICA, BEDFORD, MASS.</b>	
Didymium hydrate additive to nickel hydroxide electrodes Patent [NASA-CASE-XGS-03505]	c03 N71-16608	Inflation system for balloon type satellites Patent [NASA-CASE-XGS-03351]	c31 N71-16081
Bismuth-lead coatings for gas bearings used in atmospheric environments and vacuum chambers Patent [NASA-CASE-XGS-02011]	c15 N71-20739	Bakeable McLeod gauge [NASA-CASE-XGS-01293-1]	c35 N79-33450
Automatic control of liquid cooling garment by cutaneous and external auditory meatus temperatures [NASA-CASE-MSC-13917-1]	c05 N72-15098	<b>GEOPHYSICS CORP. OF AMERICA, BOSTON, MASS.</b>	
Method for measuring cutaneous sensory perception [NASA-CASE-MSC-13609-1]	c05 N72-25122	Ionospheric battery Patent [NASA-CASE-XGS-01593]	c03 N70-35408
		<b>GEORGE WASHINGTON DIV., WASHINGTON, D.C.</b>	
		Bacteria detection instrument and method [NASA-CASE-GSC-11533-1]	c14 N73-13435
		Arterial pulse wave pressure transducer [NASA-CASE-GSC-11531-1]	c52 N74-27566
		<b>GIANNINI SCIENTIFIC CORP., SANTA ANA, CALIF.</b>	
		Electric arc light source having undercut recessed anode [NASA-CASE-ARC-10266-1]	c33 N75-29318
		Combination automatic-starting electrical plasma torch and gas shutoff valve [NASA-CASE-XLE-10717]	c37 N75-29426
		<b>GINER, INC., WALTHAM, MASS.</b>	
		Catalyst surfaces for the chromous/chromic redox couple [NASA-CASE-LEW-13148-1]	c33 N80-20487
		Catalyst surfaces for the chromous/chromic redox couple [NASA-CASE-LEW-13148-2]	c44 N81-29524

## GLOBE-UNION, INC., MILWAUKEE, WIS.

Method of coating solar cell with borosilicate glass and resultant product  
[NASA-CASE-GSC-11514-1] c03 N72-24037

GOODYEAR AEROSPACE CORP., AKRON, OHIO.  
Foldable solar concentrator Patent  
[NASA-CASE-XLA-04622] c03 N70-41580

Method of making a filament-wound container Patent  
[NASA-CASE-XLE-03803-2] c15 N71-17651

Filament wound container Patent  
[NASA-CASE-XLE-03803] c15 N71-23816

Panelized high performance multilayer insulation Patent  
[NASA-CASE-MFS-14023] c33 N71-25351

Thermally activated foaming compositions Patent  
[NASA-CASE-LAR-10373-1] c18 N71-26155

Compression test assembly  
[NASA-CASE-LAR-10440-1] c14 N73-32323

Deployable flexible tunnel  
[NASA-CASE-MFS-22636-1] c37 N76-22540

GRACE (W. R.) AND CO., CLARKSVILLE, MD.  
Metal containing polymers from cyclic tetrameric phenylphosphonitrilamides Patent  
[NASA-CASE-HQN-10364] c06 N71-27363

GRUMMAN AIRCRAFT ENGINEERING CORP., BETHPAGE, N. Y.  
Sealed cabinetry Patent  
[NASA-CASE-MSC-12168-1] c09 N71-18600

Out of tolerance warning alarm system for plurality of monitored circuits Patent  
[NASA-CASE-XMS-10984-1] c10 N71-19417

GULF GENERAL ATOMIC, SAN DIEGO, CALIF.  
Waveform simulator Patent  
[NASA-CASE-NPO-10251] c10 N71-27365

GULTON INDUSTRIES, INC., ALBUQUERQUE, N.MEX.  
Analog-to-digital converter  
[NASA-CASE-MSC-13110-1] c08 N72-22163

GUSTINCIC (J. J.) CONSULTING ENGINEER, MARINA DEL REY, CALIF.  
Microwave limb sounder  
[NASA-CASE-NPO-14544-1] c74 N79-34014

## H

## HAMILTON STANDARD, WINDSOR LOCKS, CONN.

Venting device for pressurized space suit helmet Patent  
[NASA-CASE-XMS-09652-1] c05 N71-26333

Regenerable device for scrubbing breathable air of CO<sub>2</sub> and moisture without special heat exchanger equipment  
[NASA-CASE-MSC-14771-1] c54 N77-32722

Cell and method for electrolysis of water and anode  
[NASA-CASE-MSC-16394-1] c28 N81-24280

HAMILTON STANDARD DIV., UNITED AIRCRAFT CORP., WINDSOR LOCKS, CONN.  
Condensate removal device for heat exchanger  
[NASA-CASE-MSC-14143-1] c77 N75-20139

HARRIS CORP., MELBOURNE, FLA.  
Adaptive polarization separation  
[NASA-CASE-LAR-12196-1] c33 N81-26358

Telescoping columns  
[NASA-CASE-LAR-12195-1] c31 N81-27324

HAYES INTERNATIONAL CORP., BIRMINGHAM, ALA.  
Space craft soft landing system Patent  
[NASA-CASE-XMF-02108] c31 N70-36845

Device for preventing high voltage arcing in electron beam welding Patent  
[NASA-CASE-XMP-08522] c15 N71-19486

HAYES INTERNATIONAL CORP., HUNTSVILLE, ALA.  
Method and apparatus for cryogenic wire stripping Patent  
[NASA-CASE-MFS-10340] c15 N71-17628

Self-balancing strain gage transducer Patent  
[NASA-CASE-MFS-12827] c14 N71-17656

Automatic closed circuit television arc guidance control Patent  
[NASA-CASE-MFS-13046] c07 N71-19433

HAZLETON LABS., FALLS CHURCH, VA.  
Use of the enzyme hexokinase for the reduction of inherent light levels  
[NASA-CASE-XGS-05533] c04 N69-27487

Light detection instrument Patent  
[NASA-CASE-XGS-05534] c23 N71-16355

Lyophilized reaction mixtures Patent  
[NASA-CASE-XGS-05532] c06 N71-17705

Firefly pump-metering system  
[NASA-CASE-GSC-10218-1] c15 N72-21465

## HERCULES, INC., WILMINGTON, DEL.

Method of repairing discontinuity in fiberglass structures  
[NASA-CASE-LAR-10416-1] c24 N74-30001

HOFFMAN ELECTRONICS CORP., EL MONTE, CALIF.  
Method for producing a solar cell having an integral protective covering  
[NASA-CASE-XGS-04531] c03 N69-24267

HONEYWELL, INC., HOPKINS, MINN.  
Frequency control network for a current feedback oscillator Patent  
[NASA-CASE-GSC-10041-1] c10 N71-19418

HONEYWELL, INC., MINNEAPOLIS, MINN.  
Bus voltage compensation circuit for controlling direct current motor  
[NASA-CASE-XMS-04215-1] c09 N69-39987

Apparatus for overcurrent protection of a push-pull amplifier Patent  
[NASA-CASE-MSC-12033-1] c09 N71-13531

Static inverter Patent  
[NASA-CASE-XGS-05289] c09 N71-19470

High impedance measuring apparatus Patent  
[NASA-CASE-XMS-08589-1] c09 N71-20569

Clamping assembly for inertial components Patent  
[NASA-CASE-XMS-02184] c15 N71-20813

Piezoelectric pump Patent  
[NASA-CASE-XNP-05429] c26 N71-21824

Controllers Patent  
[NASA-CASE-XMS-07487] c15 N71-23255

Convoluting device for forming convolutions and the like Patent  
[NASA-CASE-XNP-05297] c15 N71-23811

Failure sensing and protection circuit for converter networks Patent  
[NASA-CASE-GSC-10114-1] c10 N71-27366

Voice operated controller Patent  
[NASA-CASE-XLA-04063] c31 N71-33160

Load current sensor for a series pulse width modulated power supply  
[NASA-CASE-GSC-10656-1] c09 N72-25249

Radiant source tracker independent of nonconstant irradiance  
[NASA-CASE-NPO-11686] c14 N73-25462

Optical instruments  
[NASA-CASE-MSC-14096-1] c74 N74-15095

Method of forming shrink-fit compression seal  
[NASA-CASE-LAR-11563-1] c37 N77-23482

HONEYWELL, INC., ST. PETERSBURG, FLA.  
Reconfiguring redundancy management  
[NASA-CASE-MSC-18498-1] c60 N80-30050

HOUSTON UNIV., TEX.  
Analysis of volatile organic compounds  
[NASA-CASE-MSC-14428-1] c23 N77-17161

HOWARD UNIV., WASHINGTON, D. C.  
Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-1] c54 N76-22914

A cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c52 N77-26796

Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c52 N81-25661

HUGHES AIRCRAFT CO., CULVER CITY, CALIF.  
Varactor high level mixer  
[NASA-CASE-XGS-02171] c09 N69-24324

Thermally operated valve Patent  
[NASA-CASE-XLE-00815] c15 N70-35407

Thrust dynamometer Patent  
[NASA-CASE-XLE-00702] c14 N70-40203

Solid state chemical source for ammonia beam maser Patent  
[NASA-CASE-XGS-01504] c16 N70-41578

Canopus detector including automotive gain control of photomultiplier tube Patent  
[NASA-CASE-XNP-03914] c21 N71-10771

Horn feed having overlapping apertures Patent  
[NASA-CASE-GSC-10452] c07 N71-12396

Deflective rod switch with elastic support and sealing means Patent  
[NASA-CASE-XNP-09808] c09 N71-12518

Guidance and maneuver analyzer Patent  
[NASA-CASE-XNP-09572] c14 N71-15621

Method of making screen by casting Patent  
[NASA-CASE-XLE-00953] c15 N71-15966

Fluid flow control valve Patent  
[NASA-CASE-XLE-00703] c15 N71-15967

Low noise single aperture multimode monopulse antenna feed system Patent  
[NASA-CASE-XNP-01735] c07 N71-22750

- Multilayer porous ionizer Patent  
[NASA-CASE-XNP-04338] c17 N71-23046
- Construction and method of arranging a plurality of ion engines to form a cluster Patent  
[NASA-CASE-XNP-02923] c28 N71-23081
- Method for fiberizing ceramic materials Patent  
[NASA-CASE-XNP-00597] c18 N71-23088
- Inorganic thermal control pigment Patent  
[NASA-CASE-XNP-02139] c18 N71-24184
- Triaxial antenna Patent  
[NASA-CASE-XGS-02290] c07 N71-28809
- Variable frequency oscillator with temperature compensation Patent  
[NASA-CASE-XNP-03916] c09 N71-28810
- High efficiency ionizer assembly Patent  
[NASA-CASE-XNP-01954] c28 N71-28850
- Apparatus for changing the orientation and velocity of a spinning body traversing a path Patent  
[NASA-CASE-HQN-00936] c31 N71-29050
- Fabrication of controlled-porosity metals Patent  
[NASA-CASE-XNP-04339] c17 N71-29137
- Ion thruster  
[NASA-CASE-LEW-10770-1] c28 N72-22770
- Refractory porcelain enamel passive control coating for high temperature alloys  
[NASA-CASE-MFS-22324-1] c27 N75-27160
- HUGHES AIRCRAFT CO., LOS ANGELES, CALIF.**
- Power control circuit  
[NASA-CASE-XNP-02713] c10 N69-35888
- Thermal switch Patent  
[NASA-CASE-XNP-00463] c33 N70-36847
- Double optic system for ion engine Patent  
[NASA-CASE-XNP-02839] c28 N70-41922
- Sample collecting impact bit Patent  
[NASA-CASE-XNP-01412] c15 N70-42034
- Bootstrap unloader Patent  
[NASA-CASE-XNP-09768] c09 N71-12516
- Difference circuit Patent  
[NASA-CASE-XNP-08274] c10 N71-13537
- Gas regulator Patent  
[NASA-CASE-NPO-10298] c12 N71-17661
- A dc-coupled noninverting one-shot Patent  
[NASA-CASE-XNP-09450] c10 N71-18723
- Phase demodulation system with two phase locked loops Patent  
[NASA-CASE-XNP-00777] c10 N71-19469
- High voltage transistor circuit Patent  
[NASA-CASE-XNP-06937] c09 N71-19516
- Drift compensation circuit for analog to digital converter Patent  
[NASA-CASE-XNP-04780] c08 N71-19687
- System for monitoring the presence of neutrals in a stream of ions Patent  
[NASA-CASE-XNP-02592] c24 N71-20518
- Broadband frequency discriminator Patent  
[NASA-CASE-NPO-10096] c07 N71-24583
- Flexible, repairable, pottable material for electrical connectors Patent  
[NASA-CASE-XGS-05180] c18 N71-25881
- Phase multiplying electronic scanning system Patent  
[NASA-CASE-NPO-10302] c10 N71-26142
- Narrow bandwidth video Patent  
[NASA-CASE-XMS-06740-1] c07 N71-26579
- Solar panel fabrication Patent  
[NASA-CASE-XNP-03413] c03 N71-26726
- Method for removing oxygen impurities from cesium Patent  
[NASA-CASE-XNP-04262-2] c17 N71-26773
- Virtual wall slot circularly polarized planar array antenna  
[NASA-CASE-NPO-10301] c07 N72-11148
- Conical reflector antenna  
[NASA-CASE-NPO-10303] c07 N72-22127
- Injector for use in high voltage isolators for liquid feed lines  
[NASA-CASE-NPO-11377] c15 N73-27406
- High efficiency multifrequency feed  
[NASA-CASE-GSC-11909] c32 N74-26863
- Thiophenyl ether disiloxanes and trisiloxanes useful as lubricant fluids  
[NASA-CASE-MFS-22411-1] c37 N74-21058
- Method and apparatus for optically monitoring the angular position of a rotating mirror  
[NASA-CASE-GSC-11353-1] c74 N74-21304
- Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c74 N77-26942
- Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c35 N77-27366
- Wide power range microwave feedback controller  
[NASA-CASE-GSC-12146-1] c33 N78-32340
- System for synchronizing synthesizers of communication systems  
[NASA-CASE-GSC-12148-1] c32 N79-20296
- Pseudonoise code tracking loop  
[NASA-CASE-MSC-18035-1] c32 N81-15179
- Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c32 N81-27341
- HUGHES RESEARCH LABS., MALIBU, CALIF.**
- Thrust dynamometer Patent  
[NASA-CASE-XLE-05260] c14 N71-20429
- IIT RESEARCH INST., CHICAGO, ILL.**
- Spectral method for monitoring atmospheric contamination of inert-gas welding shields Patent  
[NASA-CASE-XNF-02039] c15 N71-15871
- Lightweight refractory insulation and method of preparing the same Patent  
[NASA-CASE-XMF-05279] c18 N71-16124
- Stabilized zinc oxide coating compositions Patent  
[NASA-CASE-XMF-07770-2] c18 N71-26772
- Synthesis of zinc titanate pigment and coatings containing the same  
[NASA-CASE-MFS-13532] c18 N72-17532
- Junction range finder  
[NASA-CASE-KSC-10108] c14 N73-25461
- Method of preparing zinc orthotitanate pigment  
[NASA-CASE-MFS-23345-1] c27 N77-30237
- IMAGE INFORMATION, INC., DANBURY, CONN.**
- Recorder/processor apparatus  
[NASA-CASE-GSC-11553-1] c35 N74-15831
- INCA ENGINEERING CORP., SAN GABRIEL, CALIF.**
- Apparatus for establishing flow of a fluid mass having a known velocity  
[NASA-CASE-MFS-21424-1] c34 N74-27730
- INSTITUTE FOR RESEARCH, INC., HOUSTON, TEX.**
- Method of making a perspiration resistant biopotential electrode  
[NASA-CASE-MSC-90153-2] c05 N72-25120
- INSTITUTE OF RESEARCH AND INSTRUMENTATION, HOUSTON, TEX.**
- Pressed disc type sensing electrodes with ion-screening means Patent  
[NASA-CASE-XMS-04212-1] c05 N71-12346
- INTERNATIONAL BUSINESS MACHINES CORP., HOPEWELL JUNCTION, N. Y.**
- Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt  
[NASA-CASE-NPO-13969-1] c76 N79-23798
- INTERNATIONAL BUSINESS MACHINES CORP., NEW YORK.**
- Electrical connector pin with wiping action  
[NASA-CASE-XMF-04238] c09 N69-39734
- Tool attachment for spreading loose elements away from work Patent  
[NASA-CASE-XMF-02107] c15 N71-10809
- Redundant memory organization Patent  
[NASA-CASE-GSC-10564] c10 N71-29135
- INTERNATIONAL BUSINESS MACHINES CORP., Poughkeepsie, N.Y.**
- Method of growing a ribbon crystal particularly suited for facilitating automated control of ribbon width  
[NASA-CASE-NPO-14295-1] c76 N80-32245
- INTERNATIONAL HARVESTER CO., SAN DIEGO, CALIF.**
- Silicide coatings for refractory metals Patent  
[NASA-CASE-XLE-10910] c18 N71-29040
- INTERNATIONAL LATEX CORP., DOVER, DEL.**
- Space suit  
[NASA-CASE-MSC-12609-1] c05 N73-32012
- ISONET CORP., PALISADES PARK, N.J.**
- Metabolic rate meter and method  
[NASA-CASE-MSC-12239-1] c52 N79-21750
- ITT CORP., HUTLEY, N.J.**
- 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] c07 N71-19773
- Tracking receiver Patent  
[NASA-CASE-XGS-08679] c10 N71-21473
- Satellite interlace synchronization system  
[NASA-CASE-GSC-10390-1] c07 N72-11149

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**JAMES AND ASSOCIATES, LANCASTER, CALIF.**

A system for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation

[NASA-CASE-PRC-11005-1] c06 N79-24988

**JET PROPULSION LAB., CALIFORNIA INST. OF TECH., PASADENA.**

Pressure variable capacitor

[NASA-CASE-XNP-09752] c14 N69-21541

Rock drill for recovering samples

[NASA-CASE-XNP-07478] c14 N69-21923

Data compression system

[NASA-CASE-XNP-09785] c08 N69-21928

Magnetohydrodynamic induction machine

[NASA-CASE-XNP-07481] c25 N69-21929

Electromechanical actuator

[NASA-CASE-XNP-05975] c15 N69-23185

Refrigeration apparatus

[NASA-CASE-NPO-10309] c15 N69-23190

Direct radiation cooling of the collector of linear beam tubes

[NASA-CASE-XNP-09227] c15 N69-24319

Excitation and detection circuitry for a flux responsive magnetic head

[NASA-CASE-XNP-04183] c09 N69-24329

Telemetry word forming unit

[NASA-CASE-XNP-09225] c09 N69-24333

Solid state switch

[NASA-CASE-XNP-09228] c09 N69-27500

Belleville spring assembly with elastic guides

[NASA-CASE-XNP-09452] c15 N69-27504

Trifunctional alcohol

[NASA-CASE-NPO-10714] c06 N69-31244

Plurality of photosensitive cells on a pyramidal base for planetary trackers

[NASA-CASE-XNP-04180] c07 N69-35736

Coating process

[NASA-CASE-XNP-06508] c18 N69-39895

Bi-metallic power controlled actuator

[NASA-CASE-XNP-09776] c09 N69-35929

Piping arrangement through a double chamber structure

[NASA-CASE-XNP-08882] c15 N69-39935

Micropacked column for a chromatographic system

[NASA-CASE-XNP-04816] c06 N69-39936

Temperature sensitive capacitor device

[NASA-CASE-XNP-09750] c14 N69-39937

Thermionic tantalum emitter doped with oxygen

Patent Application [NASA-CASE-NPO-11138] c03 N70-34646

Data handling system based on source significance, storage availability and data received from the source

Patent Application [NASA-CASE-XNP-04162-1] c08 N70-34675

Electro-optical scanning apparatus

Patent Application [NASA-CASE-NPO-11106] c14 N70-34697

Liquid junction and method of fabricating the same

Patent Application [NASA-CASE-NPO-10682] c15 N70-34699

Helium refining by superfluidity

Patent [NASA-CASE-XNP-00733] c06 N70-34946

Means and methods of depositing thin films on substrates

Patent [NASA-CASE-XNP-00595] c15 N70-34967

Photosensitive device to detect bearing deviation

Patent [NASA-CASE-XNP-00438] c21 N70-35089

Antenna beam-shaping apparatus

Patent [NASA-CASE-XNP-00611] c09 N70-35219

Temperature-compensating means for cavity resonator of amplifier

Patent [NASA-CASE-XNP-00449] c14 N70-35220

Parabolic reflector horn feed with spillover correction

Patent [NASA-CASE-XNP-00540] c09 N70-35382

Means for visually indicating flight paths of vehicles between the Earth, Venus, and Mercury

Patent [NASA-CASE-XNP-00708] c14 N70-35394

Space vehicle attitude control

Patent [NASA-CASE-XNP-00465] c21 N70-35395

Binary to binary-coded-decimal converter

Patent [NASA-CASE-XNP-00432] c08 N70-35423

Cassegrainian antenna subreflector flange for suppressing ground noise Patent [NASA-CASE-XNP-00683] c09 N70-35425

Ionization vacuum gauge Patent [NASA-CASE-XNP-00646] c14 N70-35666

Two-fluid magnetohydrodynamic system and method for thermal-electric power conversion Patent [NASA-CASE-XNP-00644] c03 N70-36803

Mechanical coordinate converter Patent [NASA-CASE-XNP-00614] c14 N70-36907

High pressure four-way valve Patent [NASA-CASE-XNP-00214] c15 N70-36908

Liquid rocket system Patent [NASA-CASE-XNP-00610] c28 N70-36910

Radar ranging receiver Patent [NASA-CASE-XNP-00748] c07 N70-36911

Attitude control for spacecraft Patent [NASA-CASE-XNP-00294] c21 N70-36938

Elastic universal joint Patent [NASA-CASE-XNP-00416] c15 N70-36947

Apparatus and method for control of a solid fueled rocket vehicle Patent [NASA-CASE-XNP-00217] c28 N70-38181

Expulsion bladder-equipped storage tank structure Patent [NASA-CASE-XNP-00612] c11 N70-38182

High-voltage cable Patent [NASA-CASE-XNP-00738] c09 N70-38201

Umbilical separator for rockets Patent [NASA-CASE-XNP-00425] c11 N70-38202

Multiple Belleville spring assembly Patent [NASA-CASE-XNP-00840] c15 N70-38225

Ignition system for monopropellant combustion devices Patent [NASA-CASE-XNP-00249] c28 N70-38249

Pressure regulating system Patent [NASA-CASE-XNP-00450] c15 N70-38603

Slit regulated gas journal bearing Patent [NASA-CASE-XNP-00476] c15 N70-38620

Steerable solid propellant rocket motor Patent [NASA-CASE-XNP-00234] c28 N70-38645

Space simulator Patent [NASA-CASE-XNP-00459] c11 N70-38675

Ejection unit Patent [NASA-CASE-XNP-00676] c15 N70-38996

Time-division multiplexer Patent [NASA-CASE-XNP-00431] c09 N70-38998

Trajectory-correction propulsion system Patent [NASA-CASE-XNP-01104] c28 N70-39931

Electrically-operated rotary shutter Patent [NASA-CASE-XNP-00637] c14 N70-40273

Zero gravity starting means for liquid propellant motors Patent [NASA-CASE-XNP-01390] c28 N70-41275

Parallel motion suspension device Patent [NASA-CASE-XNP-01567] c15 N70-41310

Ignition means for monopropellant Patent [NASA-CASE-XNP-00876] c28 N70-41311

Reinforcing means for diaphragms Patent [NASA-CASE-XNP-01962] c32 N70-41370

High pressure filter Patent [NASA-CASE-XNP-00732] c28 N70-41447

Phase-locked loop with sideband rejecting properties Patent [NASA-CASE-XNP-02723] c07 N70-41680

Digital television camera control system Patent [NASA-CASE-XNP-01472] c14 N70-41807

Antiflutter ball check valve Patent [NASA-CASE-XNP-01152] c15 N70-41811

Roll attitude star sensor system Patent [NASA-CASE-XNP-01307] c21 N70-41856

Process for preparing sterile solid propellants Patent [NASA-CASE-XNP-01749] c27 N70-41897

Solenoid construction Patent [NASA-CASE-XNP-01951] c09 N70-41929

Closed loop ranging system Patent [NASA-CASE-XNP-01501] c21 N70-41930

Printed circuit board with bellows rivet connection Patent [NASA-CASE-XNP-05082] c15 N70-41960

Phase-shift data transmission system having a pseudo-noise SYNC code modulated with the data in a single channel Patent [NASA-CASE-XNP-00911] c08 N70-41961

Baseline stabilization system for ionization detector Patent [NASA-CASE-XNP-03128] c10 N70-41991

Single or joint amplitude distribution analyzer Patent  
[NASA-CASE-XNP-01383] c09 N71-10659

Dual waveguide mode source having control means for adjusting the relative amplitude of two modes Patent  
[NASA-CASE-XNP-03134] c07 N71-10676

Method for determining the state of charge of batteries by the use of tracers Patent  
[NASA-CASE-XNP-01464] c03 N71-10728

High pressure regulator valve Patent  
[NASA-CASE-XNP-00710] c15 N71-10778

Solar battery with interconnecting means for plural cells Patent  
[NASA-CASE-XNP-06506] c03 N71-11050

Sealed battery gas manifold construction Patent  
[NASA-CASE-XNP-03378] c03 N71-11051

Solar cell submodule Patent  
[NASA-CASE-XNP-05821] c03 N71-11056

Reflectometer for receiver input impedance match measurement Patent  
[NASA-CASE-XNP-10843] c07 N71-11267

Means for generating a sync signal in an FM communication system Patent  
[NASA-CASE-XNP-10830] c07 N71-11281

Multi-faceted cone Cassegrain antenna Patent  
[NASA-CASE-NPO-10539] c07 N71-11285

Thermionic diode switch Patent  
[NASA-CASE-NPO-10404] c03 N71-12255

Anti-backlash circuit for hydraulic drive system Patent  
[NASA-CASE-XNP-01020] c03 N71-12260

Binary number sorter Patent  
[NASA-CASE-NPO-10112] c08 N71-12502

Linear three-tap feedback shift register Patent  
[NASA-CASE-NPO-10351] c08 N71-12503

Binary sequence detector Patent  
[NASA-CASE-XNP-05415] c08 N71-12505

Data compression system with a minimum time delay unit Patent  
[NASA-CASE-XNP-08832] c08 N71-12506

Magnetic counter Patent  
[NASA-CASE-XNP-08836] c09 N71-12515

Operational integrator Patent  
[NASA-CASE-NPO-10230] c09 N71-12520

Starting circuit for vapor lamps and the like Patent  
[NASA-CASE-XNP-01058] c09 N71-12540

Matched thermistors for microwave power meters Patent  
[NASA-CASE-NPO-10348] c10 N71-12554

Micro current measuring device using plural logarithmic response heated filamentary type diodes Patent  
[NASA-CASE-XNP-00384] c09 N71-13530

Automatic thermal switch Patent  
[NASA-CASE-XNP-03796] c23 N71-15467

Photoelectric energy spectrometer Patent  
[NASA-CASE-XNP-04161] c14 N71-15599

Anti-glare improvement for optical imaging systems Patent  
[NASA-CASE-NPO-10337] c14 N71-15604

Fluid flow restrictor Patent  
[NASA-CASE-NPO-10117] c15 N71-15608

High temperature lens construction Patent  
[NASA-CASE-XNP-04111] c14 N71-15622

Solder flux which leaves corrosion-resistant coating Patent  
[NASA-CASE-XNP-03459-2] c18 N71-15688

Intermittent type silica gel adsorption refrigerator Patent  
[NASA-CASE-XNP-00920] c15 N71-15906

Dual mode horn antenna Patent  
[NASA-CASE-XNP-01057] c07 N71-15907

Means for controlling rupture of shock tube diaphragm Patent  
[NASA-CASE-XAC-00731] c11 N71-15960

Insertion loss measuring apparatus having transformer means connected across a pair of bolometers Patent  
[NASA-CASE-XNP-01193] c10 N71-16057

Polarimeter for transient measurement Patent  
[NASA-CASE-XNP-08883] c23 N71-16101

Flexible composite membrane Patent  
[NASA-CASE-XNP-08837] c18 N71-16210

Mount for thermal control system Patent  
[NASA-CASE-NPO-10138] c33 N71-16357

Optical characteristics measuring apparatus Patent  
[NASA-CASE-XNP-08840] c23 N71-16365

Parallel plate viscometer Patent  
[NASA-CASE-XNP-09462] c14 N71-17584

Means and method of measuring viscoelastic strain Patent  
[NASA-CASE-XNP-01153] c32 N71-17645

Interferometer direction sensor Patent  
[NASA-CASE-NPO-10320] c14 N71-17655

Interferometer servo system Patent  
[NASA-CASE-NPO-10300] c14 N71-17662

Electrical spot terminal assembly Patent  
[NASA-CASE-NPO-10034] c15 N71-17685

Sealed separable connection Patent  
[NASA-CASE-NPO-10064] c15 N71-17693

Incremental motion drive system Patent  
[NASA-CASE-XNP-08897] c15 N71-17694

Microbalance including crystal oscillators for measuring contaminants in a gas system Patent  
[NASA-CASE-NPO-10144] c14 N71-17701

Apparatus and method for protecting a photographic device Patent  
[NASA-CASE-NPO-10174] c14 N71-18465

Banging system Patent  
[NASA-CASE-NPO-10066] c09 N71-18598

High impact pressure regulator Patent  
[NASA-CASE-NPO-10175] c14 N71-18625

Magnetic core current steering commutator Patent  
[NASA-CASE-NPO-10201] c08 N71-18694

Method of using photovoltaic cell using poly-N-vinylcarbazole complex Patent  
[NASA-CASE-NPO-10373] c03 N71-18698

A dc-coupled noninverting one-shot Patent  
[NASA-CASE-XNP-09450] c10 N71-18723

Automatic fault correction system for parallel signal channels Patent  
[NASA-CASE-XNP-03263] c09 N71-18843

Data compression processor Patent  
[NASA-CASE-NPO-10068] c08 N71-19288

Tape guidance system and apparatus for the provision thereof Patent  
[NASA-CASE-XNP-09453] c08 N71-19420

High voltage transistor circuit Patent  
[NASA-CASE-XNP-06937] c09 N71-19516

Solar cell matrix Patent  
[NASA-CASE-NPO-10821] c03 N71-19545

Electrical switching device Patent  
[NASA-CASE-NPO-10037] c09 N71-19610

Drift compensation circuit for analog to digital converter Patent  
[NASA-CASE-XNP-04780] c08 N71-19687

Roll-up solar array Patent  
[NASA-CASE-NPO-10188] c03 N71-20273

Method and device for determining battery state of charge Patent  
[NASA-CASE-NPO-10194] c03 N71-20407

Soil particles separator, collector and viewer Patent  
[NASA-CASE-XNP-09770] c15 N71-20440

Transmission line thermal short Patent  
[NASA-CASE-XNP-09775] c09 N71-20445

Synchronous servo loop control system Patent  
[NASA-CASE-XNP-03744] c10 N71-20448

Processing for producing a sterilized instrument Patent  
[NASA-CASE-XNP-09763] c14 N71-20461

Signal-to-noise ratio estimating by taking ratio of mean and standard deviation of integrated signal samples Patent  
[NASA-CASE-XNP-05254] c07 N71-20791

Elimination of frequency shift in a multiplex communication system Patent  
[NASA-CASE-XNP-01306] c07 N71-20814

High power-high voltage waterload Patent  
[NASA-CASE-XNP-05381] c09 N71-20842

Coaxial cable connector Patent  
[NASA-CASE-XNP-04732] c09 N71-20851

Soldering with solder flux which leaves corrosion resistant coating Patent  
[NASA-CASE-XNP-03459] c15 N71-21078

Miniature stress transducer Patent  
[NASA-CASE-XNP-02983] c14 N71-21091

Holder for crystal resonators Patent  
[NASA-CASE-XNP-03637] c15 N71-21311

Correlation function apparatus Patent  
[NASA-CASE-XNP-00746] c07 N71-21476

Split nut separation system Patent  
[NASA-CASE-XNP-06914] c15 N71-21489

Light position locating system Patent  
[NASA-CASE-XNP-01059] c23 N71-21821



Electron bombardment ion engine Patent		Fluid containers and resealable septum therefor Patent	
[NASA-CASE-XNP-04124]	c28 N71-21822	[NASA-CASE-NPO-10123]	c15 N71-24835
Data compressor Patent		Temperature telemetric transmitter Patent	
[NASA-CASE-XNP-04067]	c08 N71-22707	[NASA-CASE-NPO-10649]	c07 N71-24840
Error correcting method and apparatus Patent		Tuning arrangement for an electron discharge device or the like Patent	
[NASA-CASE-XNP-02748]	c08 N71-22749	[NASA-CASE-XNP-09771]	c09 N71-24841
Counter and shift register Patent		Noise limiter Patent	
[NASA-CASE-XNP-01753]	c08 N71-22897	[NASA-CASE-NPO-10169]	c10 N71-24844
Friction measuring apparatus Patent		Noninterruptable digital counting system Patent	
[NASA-CASE-XNP-08680]	c14 N71-22995	[NASA-CASE-XNP-09759]	c08 N71-24891
Hybrid lubrication system and bearing Patent		Drive circuit for minimizing power consumption in inductive load Patent	
[NASA-CASE-XNP-01641]	c15 N71-22997	[NASA-CASE-NPO-10716]	c09 N71-24892
Filler valve Patent		Space simulator Patent	
[NASA-CASE-XNP-01747]	c15 N71-23024	[NASA-CASE-NPO-10141]	c11 N71-24964
Refrigeration apparatus Patent		Process for reducing secondary electron emission Patent	
[NASA-CASE-XNP-08877]	c15 N71-23025	[NASA-CASE-XNP-09469]	c24 N71-25555
Reduced bandwidth video communication system utilizing sampling techniques Patent		Minimal logic block encoder Patent	
[NASA-CASE-XNP-02791]	c07 N71-23026	[NASA-CASE-NPO-10595]	c10 N71-25917
Model launcher for wind tunnels Patent		Novel polycarboxylic prepolymeric materials and polymers thereof Patent	
[NASA-CASE-XNP-03578]	c11 N71-23030	[NASA-CASE-NPO-10596]	c06 N71-25929
Drive circuit utilizing two cores Patent		Current steering switch Patent	
[NASA-CASE-XNP-01318]	c10 N71-23033	[NASA-CASE-XNP-08567]	c09 N71-26000
Solar vane actuator Patent		Dual polarity full wave dc motor drive Patent	
[NASA-CASE-XNP-05535]	c14 N71-23040	[NASA-CASE-XNP-07477]	c09 N71-26092
Time of flight mass spectrometer with feedback means from the detector to the low source and a specific counter Patent		High impact antenna Patent	
[NASA-CASE-XNP-01056]	c14 N71-23041	[NASA-CASE-NPO-10231]	c07 N71-26101
Connector internal force gauge Patent		Video communication system and apparatus Patent	
[NASA-CASE-XNP-03918]	c14 N71-23087	[NASA-CASE-XNP-06611]	c07 N71-26102
Circulator having quarter wavelength resonant post and parametric amplifier circuits utilizing the same Patent		Parallel generation of the check bits of a PN sequence Patent	
[NASA-CASE-XNP-02140]	c09 N71-23097	[NASA-CASE-XNP-04623]	c10 N71-26103
Method of resolving clock synchronization error and means therefor Patent		Phase multiplying electronic scanning system Patent	
[NASA-CASE-XNP-08875]	c10 N71-23099	[NASA-CASE-NPO-10302]	c10 N71-26142
Impact testing machine Patent		Electron beam tube containing a multiple cathode array employing indexing means for cathode substitution Patent	
[NASA-CASE-XNP-04817]	c14 N71-23225	[NASA-CASE-NPO-10625]	c09 N71-26182
Zeta potential flowmeter Patent		Fluid phase analyzer Patent	
[NASA-CASE-XNP-06509]	c14 N71-23226	[NASA-CASE-NPO-10691]	c14 N71-26199
Comparator for the comparison of two binary numbers Patent		Variable frequency nuclear magnetic resonance spectrometer Patent	
[NASA-CASE-XNP-04819]	c08 N71-23295	[NASA-CASE-XNP-09830]	c14 N71-26266
Decontamination of petroleum products Patent		Time synchronization system utilizing moon reflected coded signals Patent	
[NASA-CASE-XNP-03835]	c06 N71-23499	[NASA-CASE-NPO-10143]	c10 N71-26326
Dicyanoacetylene polymers Patent		Broadband stable power multiplier Patent	
[NASA-CASE-XNP-03250]	c06 N71-23500	[NASA-CASE-XNP-10854]	c10 N71-26331
Indexing microwave switch Patent		Cascaded complementary pair broadband transistor amplifiers Patent	
[NASA-CASE-XNP-06507]	c09 N71-23548	[NASA-CASE-NPO-10003]	c10 N71-26415
Millimeter wave radiometer for radio astronomy Patent		Digital memory in which the driving of each word location is controlled by a switch core Patent	
[NASA-CASE-XNP-09832]	c30 N71-23723	[NASA-CASE-XNP-01466]	c10 N71-26434
Radiant energy intensity measurement system Patent		Conically shaped cavity radiometer with a dual purpose cone winding Patent	
[NASA-CASE-XNP-06510]	c14 N71-23797	[NASA-CASE-XNP-09701]	c14 N71-26475
High speed phase detector Patent		Analog signal integration and reconstruction system Patent	
[NASA-CASE-XNP-01306-2]	c09 N71-24596	[NASA-CASE-NPO-10344]	c10 N71-26544
Apparatus for testing polymeric materials Patent		Rapid sync acquisition system Patent	
[NASA-CASE-XNP-05699]	c06 N71-24607	[NASA-CASE-NPO-10214]	c10 N71-26577
Digital synchronizer Patent		Cryogenic cooling system Patent	
[NASA-CASE-NPO-10851]	c07 N71-24613	[NASA-CASE-NPO-10467]	c23 N71-26654
Signal processing apparatus for multiplex transmission Patent		Vacuum evaporator with electromagnetic ion steering Patent	
[NASA-CASE-NPO-10388]	c07 N71-24622	[NASA-CASE-NPO-10331]	c09 N71-26701
Self-testing and repairing computer Patent		Automated fluid chemical analyzer Patent	
[NASA-CASE-NPO-10567]	c08 N71-24633	[NASA-CASE-XNP-09451]	c06 N71-26754
Serial digital decoder Patent		Material handling device Patent	
[NASA-CASE-NPO-10150]	c08 N71-24650	[NASA-CASE-XNP-09770-3]	c11 N71-27036
Detenting servomotor Patent		Pressure seal Patent	
[NASA-CASE-XNP-06936]	c15 N71-24695	[NASA-CASE-NPO-10796]	c15 N71-27068
Reversible motion drive system Patent		Multiducted electromagnetic pump Patent	
[NASA-CASE-NPO-10173]	c15 N71-24696	[NASA-CASE-NPO-10755]	c15 N71-27084
Decoder system Patent		Peak acceleration limiter for vibrational tester Patent	
[NASA-CASE-NPO-10118]	c07 N71-24741	[NASA-CASE-NPO-10556]	c14 N71-27185
Television signal processing system Patent		Thin film capacitive bolometer and temperature sensor Patent	
[NASA-CASE-NPO-10140]	c07 N71-24742	[NASA-CASE-NPO-10607]	c09 N71-27232
Switching circuit Patent		Black body cavity radiometer Patent	
[NASA-CASE-XNP-06505]	c10 N71-24799	[NASA-CASE-NPO-10810]	c14 N71-27323
Magnetic power switch Patent			
[NASA-CASE-NPO-10242]	c09 N71-24803		
Remodulator filter Patent			
[NASA-CASE-NPO-10198]	c09 N71-24806		
Broadband microwave waveguide window Patent			
[NASA-CASE-XNP-08880]	c09 N71-24808		
Cavity radiometer Patent			
[NASA-CASE-XNP-08961]	c14 N71-24809		
High-gain, broadband traveling wave maser Patent			
[NASA-CASE-NPO-10548]	c16 N71-24831		

Video signal enhancement system with dynamic range compression and modulation index expansion Patent [NASA-CASE-NPO-10343]	c07 N71-27341	Wide band doubler and sine wave quadrature generator [NASA-CASE-NPO-11133]	c10 N72-20223
Force-balanced, throttle valve Patent [NASA-CASE-NPO-10808]	c15 N71-27432	Signal phase estimator [NASA-CASE-NPO-11203]	c10 N72-20224
Cavity emitter for thermionic converter Patent [NASA-CASE-NPO-10412]	c09 N71-28421	Optimal control system for an electric motor driven vehicle [NASA-CASE-NPO-11210]	c11 N72-20244
Frictionless universal joint Patent [NASA-CASE-NPO-10646]	c15 N71-28467	Impact energy absorbing system utilizing fractureable material [NASA-CASE-NPO-10671]	c15 N72-20443
Epoxy-aziridine polymer product Patent [NASA-CASE-NPO-10701]	c06 N71-28620	Torsional disconnect unit [NASA-CASE-NPO-10704]	c15 N72-20445
Fluid impervious barrier including liquid metal alloy and method of making same Patent [NASA-CASE-NXP-08881]	c17 N71-28747	Solid propellant rocket motor [NASA-CASE-NXP-03282]	c28 N72-20758
Wind tunnel microphone structure Patent [NASA-CASE-NXP-00250]	c11 N71-28779	Shell side liquid metal boiler [NASA-CASE-NPO-10831]	c33 N72-20915
Trialkyl-dihalotantalum and niobium compounds Patent [NASA-CASE-NXP-04023]	c06 N71-28808	Method and apparatus for mapping planets [NASA-CASE-NPO-11001]	c07 N72-21118
Digital memory sense amplifying means Patent [NASA-CASE-NXP-01012]	c08 N71-28925	Current steering commutator [NASA-CASE-NPO-10743]	c08 N72-21199
Digital filter for reducing sampling jitter in digital control systems Patent [NASA-CASE-NPO-11088]	c08 N71-29034	Automated equipotential plotter [NASA-CASE-NPO-11134]	c09 N72-21246
Method and apparatus for aligning a laser beam projector Patent [NASA-CASE-NPO-11087]	c23 N71-29125	Pressure transducer [NASA-CASE-NPO-10832]	c14 N72-21405
Rotable accurate reflector system for telescopes Patent [NASA-CASE-NPO-10468]	c23 N71-33229	Positioning mechanism [NASA-CASE-NPO-10679]	c15 N72-21462
Encoder/decoder system for a rapidly synchronizable binary code Patent [NASA-CASE-NPO-10342]	c10 N71-33407	Solid state matrices [NASA-CASE-NPO-10591]	c03 N72-22041
High power microwave power divider Patent [NASA-CASE-NPO-11031]	c07 N71-33606	Solar cell panels with light transmitting plate [NASA-CASE-NPO-10747]	c03 N72-22042
A dc servosystem including an ac motor Patent [NASA-CASE-NPO-10700]	c07 N71-33613	Data multiplexer using tree switching configuration [NASA-CASE-NPO-11333]	c08 N72-22162
Solar cell matrix [NASA-CASE-NPO-11190]	c03 N71-34044	System for quantizing graphic displays [NASA-CASE-NPO-10745]	c08 N72-22164
Manually actuated heat pump [NASA-CASE-NPO-10677]	c05 N72-11084	Digital function generator [NASA-CASE-NPO-11104]	c08 N72-22165
Virtual wall slot circularly polarized planar array antenna [NASA-CASE-NPO-10301]	c07 N72-11148	Analog-to-digital converter analyzing system [NASA-CASE-NPO-10560]	c08 N72-22166
System for controlling the operation of a variable signal device [NASA-CASE-NPO-11064]	c07 N72-11150	Feedback shift register with states decomposed into cycles of equal length [NASA-CASE-NPO-11082]	c08 N72-22167
Method and apparatus for data compression by a decreasing slope threshold test [NASA-CASE-NPO-10769]	c08 N72-11171	Self-obturing, gas operated launcher [NASA-CASE-NPO-11013]	c11 N72-22247
Apparatus for remote measurement of displacement of marks on a specimen undergoing a tensile test [NASA-CASE-NPO-10778]	c14 N72-11364	Optical binocular scanning apparatus [NASA-CASE-NPO-11002]	c14 N72-22441
Vibration isolation system using compression springs [NASA-CASE-NPO-11012]	c15 N72-11391	Ionene membrane separator [NASA-CASE-NPO-11091]	c18 N72-22567
Feed system for an ion thruster [NASA-CASE-NPO-10737]	c28 N72-11709	Deployable solar cell array [NASA-CASE-NPO-10883]	c31 N72-22874
Thermostatic actuator [NASA-CASE-NPO-10637]	c15 N72-12409	Thermal to electrical power conversion system with solid-state switches with Seebeck effect compensation [NASA-CASE-NPO-11388]	c03 N72-23048
High voltage transistor amplifier with constant current load [NASA-CASE-NPO-11023]	c09 N72-17155	Optical frequency waveguide and transmission system [NASA-CASE-NQN-10541-3]	c23 N72-23695
Reference voltage switching unit [NASA-CASE-NPO-11253]	c09 N72-17157	Bipropellant injector [NASA-CASE-NXP-09461]	c28 N72-23809
Valving device for automatic refilling in cryogenic liquid systems [NASA-CASE-NPO-11177]	c15 N72-17453	Solid propellant rocket motor nozzle [NASA-CASE-NPO-11458]	c28 N72-23810
Expansible support means [NASA-CASE-NPO-11059]	c15 N72-17454	Analysis of hydrogen-deuterium mixtures [NASA-CASE-NPO-11322]	c06 N72-25146
Breakaway connector [NASA-CASE-NPO-11140]	c15 N72-17455	Flexible computer accessed telemetry [NASA-CASE-NPO-11358]	c07 N72-25172
Modular encoder [NASA-CASE-NPO-10629]	c08 N72-18184	Multi-purpose antenna employing dish reflector with plural coaxial horn feeds [NASA-CASE-NPO-11264]	c07 N72-25174
Transition tracking bit synchronization system [NASA-CASE-NPO-10844]	c07 N72-20140	Communications link for computers [NASA-CASE-NPO-11161]	c08 N72-25207
Data compression system [NASA-CASE-NPO-11243]	c07 N72-20154	Method and apparatus for frequency-division multiplex communications by digital phase shift of carrier [NASA-CASE-NPO-11338]	c08 N72-25208
Digital quasi-exponential function generator [NASA-CASE-NPO-11130]	c08 N72-20176	Binary coded sequential acquisition ranging system [NASA-CASE-NPO-11194]	c08 N72-25209
Method and apparatus for high resolution spectral analysis [NASA-CASE-NPO-10748]	c08 N72-20177	MOD 2 sequential function generator for multibit binary sequence [NASA-CASE-NPO-10636]	c08 N72-25210
Flow rate switch [NASA-CASE-NPO-10722]	c09 N72-20199	Digital video display system using cathode ray tube [NASA-CASE-NPO-11342]	c09 N72-25248
Electrical connector [NASA-CASE-NPO-10694]	c09 N72-20200	Inverter oscillator with voltage feedback [NASA-CASE-NPO-10760]	c09 N72-25254
		Thermal motor [NASA-CASE-NPO-11283]	c09 N72-25260
		Two phase flow system with discrete impinging two-phase jets	

[NASA-CASE-NPO-11556]	c12 N72-25292	Stacked solar cell arrays	
Atmospheric sampling devices		[NASA-CASE-NPO-11771]	c03 N73-20040
[NASA-CASE-NPO-11373]	c13 N72-25323	A-m-ary linear feedback shift register with	
Light sensor		binary logic	
[NASA-CASE-NPO-11311]	c14 N72-25414	[NASA-CASE-NPO-11868]	c10 N73-20254
Quick disconnect coupling		Apparatus for recovering matter adhered to a	
[NASA-CASE-NPO-11202]	c15 N72-25450	host surface	
Coaxial injector for reaction motors		[NASA-CASE-NPO-11213]	c15 N73-20514
[NASA-CASE-NPO-11095]	c15 N72-25455	Scan converting video tape recorder	
Ball screw linear actuator		[NASA-CASE-NPO-10166-1]	c07 N73-22076
[NASA-CASE-NPO-11222]	c15 N72-25456	Collapsible structure for an antenna reflector	
Helium refrigerator and method for		[NASA-CASE-NPO-11751]	c07 N73-24176
decontaminating the refrigerator		Pump for delivering heated fluids	
[NASA-CASE-NPO-10634]	c23 N72-25619	[NASA-CASE-NPO-11417]	c15 N73-24513
Uninsulated in-core thermionic diode		Ion thruster with a combination keeper electrode	
[NASA-CASE-NPO-10542]	c09 N72-27228	and electron baffle	
Audio frequency marker system		[NASA-CASE-NPO-11880]	c28 N73-24783
[NASA-CASE-NPO-11147]	c14 N72-27408	Solid propellant rocket motor	
Light direction sensor		[NASA-CASE-NPO-11559]	c28 N73-24784
[NASA-CASE-NPO-11201]	c14 N72-27409	Code regenerative clean-up loop transponder for	
Adjustable support		a mu-type ranging system	
[NASA-CASE-NPO-10721]	c15 N72-27484	[NASA-CASE-NPO-11707]	c07 N73-25161
Method for controlling vapor content of a gas		Numerical computer peripheral interactive device	
[NASA-CASE-NPO-10633]	c03 N72-28025	with manual controls	
Maser for frequencies in the 7-20 GHz range		[NASA-CASE-NPO-11497]	c08 N73-25206
[NASA-CASE-NPO-11437]	c16 N72-28521	Radiant source tracker independent of	
Thin film temperature sensor and method of		nonconstant irradiance	
making same		[NASA-CASE-NPO-11686]	c14 N73-25462
[NASA-CASE-NPO-11775]	c26 N72-26761	Two carrier communication system with single	
Circularly polarized antenna		transmitter	
[NASA-CASE-NPO-10214]	c09 N72-31235	[NASA-CASE-NPO-11548]	c07 N73-26118
Singly-curved reflector for use in high-gain		High pulse rate high resolution optical radar	
antennas		system	
[NASA-CASE-NPO-11361]	c07 N72-32169	[NASA-CASE-NPO-11426]	c07 N73-26119
Digital slope threshold data compressor		Counting digital filters	
[NASA-CASE-NPO-11630]	c08 N72-33172	[NASA-CASE-NPO-11821-1]	c08 N73-26175
Continuously variable voltage controlled phase		Automated attendance accounting system	
shifter		[NASA-CASE-NPO-11456]	c08 N73-26176
[NASA-CASE-NPO-11129]	c09 N72-33204	Low phase noise digital frequency divider	
Pseudonoise sequence generators with three tap		[NASA-CASE-NPO-11569]	c10 N73-26229
linear feedback shift registers		Vehicle for use in planetary exploration	
[NASA-CASE-NPO-11406]	c08 N73-12175	[NASA-CASE-NPO-11366]	c11 N73-26238
Versatile arithmetic unit for high speed		Temperature control system with a pulse width	
sequential decoder		modulated bridge	
[NASA-CASE-NPO-11371]	c08 N73-12177	[NASA-CASE-NPO-11304]	c14 N73-26430
Dual frequency microwave reflex feed		Disconnect unit	
[NASA-CASE-NPO-13091-1]	c09 N73-12214	[NASA-CASE-NPO-11330]	c33 N73-26958
Audio system with means for reducing noise effects		Filter for third order phase locked loops	
[NASA-CASE-NPO-11631]	c10 N73-12244	[NASA-CASE-NPO-11941-1]	c10 N73-27171
Interferometer-polarimeter		Receiver with an improved phase lock loop in a	
[NASA-CASE-NPO-11239]	c14 N73-12446	multichannel telemetry system with suppressed	
Irradiance measuring device		carrier	
[NASA-CASE-NPO-11493]	c14 N73-12447	[NASA-CASE-NPO-11593-1]	c07 N73-28012
Program for computer aided reliability estimation		Analog-to-digital converter	
[NASA-CASE-NPO-13086-1]	c15 N73-12495	[NASA-CASE-NPO-00477]	c08 N73-28045
Apparatus for deriving synchronizing pulses from		Pseudonoise (PN) synchronization of data system	
pulses in a single channel PCM communications		with derivation of clock frequency from	
system		received signal for clocking receiver PN	
[NASA-CASE-NPO-11302-1]	c07 N73-13149	generator	
Rotary vane attenuator wherein rotor has		[NASA-CASE-NPO-03623]	c09 N73-28084
orthogonally disposed resistive and dielectric		Apparatus and method for measuring the Seebeck	
cards		coefficient and resistivity of materials	
[NASA-CASE-NPO-11418-1]	c14 N73-13420	[NASA-CASE-NPO-11749]	c14 N73-28486
Gas flow control device		Dual purpose optical instrument capable of	
[NASA-CASE-NPO-11479]	c15 N73-13462	simultaneously acting as spectrometer and	
Electrolytic gas operated actuator		diffractometer	
[NASA-CASE-NPO-11369]	c15 N73-13467	[NASA-CASE-NPO-05231]	c14 N73-28491
Dual purpose momentum wheels for spacecraft with		Continuous magnetic flux pump	
magnetic recording		[NASA-CASE-NPO-01187]	c15 N73-28516
[NASA-CASE-NPO-11481]	c21 N73-13644	Preparation of alkali metal dispersions	
Multiple reflection conical microwave antenna		[NASA-CASE-NPO-08876]	c17 N73-28573
[NASA-CASE-NPO-11661]	c07 N73-14130	Superconductive magnetic-field-trapping device	
Cyclically operable optical shutter		[NASA-CASE-NPO-01185]	c26 N73-28710
[NASA-CASE-NPO-10758]	c14 N73-14427	Automatic carrier acquisition system	
Heat detection and compositions and devices		[NASA-CASE-NPO-11628-1]	c07 N73-30113
therefor		Ferrofluidic solenoid	
[NASA-CASE-NPO-10764-1]	c14 N73-14428	[NASA-CASE-NPO-11738-1]	c09 N73-30185
Parallel-plate viscometer with double diaphragm		Silent emergency alarm system for schools and	
suspension		the like	
[NASA-CASE-NPO-11387]	c14 N73-14429	[NASA-CASE-NPO-11307-1]	c10 N73-30205
Rotary actuator		RF-source resistance meters	
[NASA-CASE-NPO-10680]	c31 N73-14855	[NASA-CASE-NPO-11291-1]	c14 N73-30388
Magnetically actuated tuning method for Gunn		Event sequence detector	
oscillators		[NASA-CASE-NPO-11703-1]	c10 N73-32144
[NASA-CASE-NPO-12106]	c09 N73-15235	Soil penetrometer	
Multichannel telemetry system		[NASA-CASE-NPO-05530]	c14 N73-32321
[NASA-CASE-NPO-11572]	c07 N73-16121	Quadrupole mass filter with means to generate a	
Data-aided carrier tracking loops		noise spectrum exclusive of the resonant	
[NASA-CASE-NPO-11282]	c10 N73-16205	frequency of the desired ions to deflect	

stable ions [NASA-CASE-XNP-04231]	c14 N73-32325	Method of producing a storage bulb for an atomic hydrogen maser [NASA-CASE-NPO-13050-1]	c36 N75-15029
Magnetic-flux pump [NASA-CASE-XNP-01188]	c15 N73-32361	Combined pressure regulator and shutoff valve [NASA-CASE-NPO-13201-1]	c37 N75-15050
Burrowing apparatus [NASA-CASE-XNP-07169]	c15 N73-32362	Simultaneous acquisition of tracking data from two stations [NASA-CASE-NPO-13292-1]	c32 N75-15854
Electrostatically controlled heat shutter [NASA-CASE-NPO-11942-1]	c33 N73-32818	Shock absorbing mount for electrical components [NASA-CASE-NPO-13253-1]	c37 N75-18573
Method and apparatus for a single channel digital communications system [NASA-CASE-NPO-11302-2]	c32 N74-1C132	System for generating timing and control signals [NASA-CASE-NPO-13125-1]	c33 N75-19519
Controlled oscillator system with a time dependent output frequency [NASA-CASE-NPO-11962-1]	c33 N74-10194	Motor run-up system [NASA-CASE-NPO-13374-1]	c33 N75-19524
Low loss dichroic plate [NASA-CASE-NPO-13171-1]	c32 N74-11000	Deep trap, laser activated image converting system [NASA-CASE-NPO-13131-1]	c36 N75-19652
Image data rate converter having a drum with a fixed head and a rotatable head [NASA-CASE-NPO-11659-1]	c35 N74-11283	Multitarget sequential sputtering apparatus [NASA-CASE-NPO-13345-1]	c37 N75-19684
Monitoring atmospheric pollutants with a heterodyne radiometer transmitter-receiver [NASA-CASE-NPO-11919-1]	c35 N74-11284	Wide angle sun sensor [NASA-CASE-NPO-13327-1]	c35 N75-23910
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Automatic vehicle location system [NASA-CASE-NPO-11850-1]	c32 N74-12912	Heat operated cryogenic electrical generator [NASA-CASE-NPO-13303-1]	c20 N75-24837
Thermomagnetic recording and magneto-optic playback system having constant intensity laser beam control [NASA-CASE-NPO-11317-2]	c36 N74-13205	System for interference signal nulling by polarization adjustment [NASA-CASE-NPO-13140-1]	c32 N75-24982
Use of thin film light detector [NASA-CASE-NPO-11432-2]	c35 N74-15090	Heat detection and compositions and devices therefor [NASA-CASE-NPO-10764-2]	c35 N75-25122
Temperature compensated digital inertial sensor [NASA-CASE-NPO-13044-1]	c35 N74-15094	Servo-controlled intravital microscope system [NASA-CASE-NPO-13214-1]	c35 N75-25123
Compact hydrogenator [NASA-CASE-NPO-11682-1]	c35 N74-15127	Vehicle locating system utilizing AM broadcasting station carriers [NASA-CASE-NPO-13217-1]	c32 N75-26194
Short range laser obstacle detector [NASA-CASE-NPO-11856-1]	c36 N74-15145	Asynchronous, multiplexing, single line transmission and recovery data system [NASA-CASE-NPO-13321-1]	c32 N75-26195
System for stabilizing cable phase delay utilizing a coaxial cable under pressure [NASA-CASE-NPO-13138-1]	c33 N74-17927	Fluorescence detector for monitoring atmospheric pollutants [NASA-CASE-NPO-13231-1]	c45 N75-27585
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Gated compressor, distortionless signal limiter [NASA-CASE-NPO-11820-1]	c32 N74-19788	Heat sterilizable patient ventilator [NASA-CASE-NPO-13313-1]	c54 N75-27761
Apparatus for scanning the surface of a cylindrical body [NASA-CASE-NPO-11861-1]	c36 N74-20009	Refrigerated coaxial coupling [NASA-CASE-NPO-13504-1]	c33 N75-30430
Decision feedback loop for tracking a polyphase modulated carrier [NASA-CASE-NPO-13103-1]	c32 N74-20811	Electric power generation system directory from laser power [NASA-CASE-NPO-13308-1]	c36 N75-30524
Optically actuated two position mechanical mover [NASA-CASE-NPO-13105-1]	c37 N74-21060	Subminiature insertable force transducer [NASA-CASE-NPO-13423-1]	c33 N75-31329
Thin film gauge [NASA-CASE-NPO-10617-1]	c35 N74-22095	Symmetrical odd-modulus frequency divider [NASA-CASE-NPO-13426-1]	c33 N75-31330
High isolation RF signal selection switches [NASA-CASE-NPO-13081-1]	c33 N74-22814	Stored charge transistor [NASA-CASE-NPO-11156-2]	c33 N75-31331
Single reflector interference spectrometer and drive system therefor [NASA-CASE-NPO-11932-1]	c35 N74-23040	Doped Josephson tunneling junction for use in a sensitive IR detector [NASA-CASE-NPO-13348-1]	c33 N75-31332
Scanning nozzle plating system [NASA-CASE-NPO-11758-1]	c31 N74-23065	Acoustically controlled distributed feedback laser [NASA-CASE-NPO-13175-1]	c36 N75-31427
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Miniature multichannel biotelemetry system [NASA-CASE-NPO-13065-1]	c52 N74-26625	Nonlinear nonsingular feedback shift registers [NASA-CASE-NPO-13451-1]	c33 N76-14373
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Optically detonated explosive device [NASA-CASE-NPO-11743-1]	c28 N74-27425	Forward-scatter polarimeter for determining the gaseous depolarization factor in the presence of polluting polydispersed particles [NASA-CASE-NPO-13756-1]	c35 N76-14434
Coherent receiver employing nonlinear coherence detection for carrier tracking [NASA-CASE-NPO-11921-1]	c32 N74-30523	Thermostatically controlled non-tracking type solar energy concentrator [NASA-CASE-NPO-13497-1]	c44 N76-14602
Digital servo control of random sound test excitation [NASA-CASE-NPO-11623-1]	c71 N74-31148	Multi-computer multiple data path hardware exchange system [NASA-CASE-NPO-13422-1]	c60 N76-14818
Apparatus for forming drive belts [NASA-CASE-NPO-13205-1]	c31 N74-32917	Cermet composition and method of fabrication [NASA-CASE-NPO-13120-1]	c27 N76-15311
Tool for use in lifting pin supported objects [NASA-CASE-NPO-13157-1]	c37 N74-32918	Dichroic plate [NASA-CASE-NPO-13506-1]	c35 N76-15435
Preparing oxidizer coated metal fuel particles [NASA-CASE-NPO-11975-1]	c28 N74-33209	Magnetometer using superconducting rotating body [NASA-CASE-NPO-13388-1]	c35 N76-16390
Geneva mechanism [NASA-CASE-NPO-13281-1]	c37 N75-13266	Scan converting video tape recorder [NASA-CASE-NPO-10166-2]	c35 N76-16391

Hydrogen rich gas generator  
 [NASA-CASE-NPO-13342-1] c37 N76-16446  
 Automated system for identifying traces of  
 organic chemical compounds in aqueous solutions  
 [NASA-CASE-NPO-13063-1] c25 N76-18245  
 Analog to digital converter  
 [NASA-CASE-NPO-13385-1] c33 N76-18345  
 Sampler of gas borne particles  
 [NASA-CASE-NPO-13396-1] c35 N76-18401  
 Stark-effect modulation of CO2 laser with NH2D  
 [NASA-CASE-NPO-11945-1] c36 N76-18427  
 Diffused waveguiding capillary tube with  
 distributed feedback for a gas laser  
 [NASA-CASE-NPO-13544-1] c36 N76-18428  
 System for minimizing internal combustion engine  
 pollution emission  
 [NASA-CASE-NPO-13402-1] c37 N76-18457  
 Hydrogen-bromine secondary battery  
 [NASA-CASE-NPO-13237-1] c44 N76-18641  
 Hydrogen-rich gas generator  
 [NASA-CASE-NPO-13464-1] c44 N76-18642  
 Zinc-halide battery with molten electrolyte  
 [NASA-CASE-NPO-11961-1] c44 N76-18643  
 Priority interrupt system  
 [NASA-CASE-NPO-13067-1] c60 N76-18800  
 Miniature muscle displacement transducer  
 [NASA-CASE-NPO-13519-1] c33 N76-19338  
 Zero torque gear head wrench  
 [NASA-CASE-NPO-13059-1] c37 N76-20480  
 Method and apparatus for measurement of trap  
 density and energy distribution in dielectric  
 films  
 [NASA-CASE-NPO-13443-1] c76 N76-20994  
 Indicator providing continuous indication of the  
 presence of a specific pollutant in air  
 [NASA-CASE-NPO-13474-1] c45 N76-21742  
 Shared memory for a fault-tolerant computer  
 [NASA-CASE-NPO-13139-1] c60 N76-21914  
 Wind sensor  
 [NASA-CASE-NPO-13462-1] c35 N76-24524  
 Fiber distributed feedback laser  
 [NASA-CASE-NPO-13531-1] c36 N76-24553  
 Method and apparatus for generating coherent  
 radiation in the ultra-violet region and above  
 by use of distributed feedback  
 [NASA-CASE-NPO-13346-1] c36 N76-29575  
 Stirling cycle engine and refrigeration systems  
 [NASA-CASE-NPO-13613-1] c37 N76-29590  
 Hydrogen rich gas generator  
 [NASA-CASE-NPO-13342-2] c44 N76-29700  
 Solar-powered pump  
 [NASA-CASE-NPO-13567-1] c44 N76-29701  
 Hydrogen rich gas generator  
 [NASA-CASE-NPO-13464-2] c44 N76-29704  
 Myocardium wall thickness transducer and  
 measuring method  
 [NASA-CASE-NPO-13644-1] c52 N76-29895  
 Catheter tip force transducer for cardiovascular  
 research  
 [NASA-CASE-NPO-13643-1] c52 N76-29896  
 Real time analysis of voiced sounds  
 [NASA-CASE-NPO-13465-1] c32 N76-31372  
 High resolution Fourier  
 interferometer-spectropolarimeter  
 [NASA-CASE-NPO-13604-1] c35 N76-31490  
 Reflected-wave maser  
 [NASA-CASE-NPO-13490-1] c36 N76-31512  
 Method of making hollow elastomeric bodies  
 [NASA-CASE-NPO-13535-1] c37 N76-31524  
 Solar cell grid patterns  
 [NASA-CASE-NPO-13087-2] c44 N76-31666  
 Furlable antenna  
 [NASA-CASE-NPO-13553-1] c33 N76-32457  
 Annular arc accelerator shock tube  
 [NASA-CASE-NPO-13528-1] c09 N77-10071  
 Cryostat system for temperatures on the order of  
 2 deg K or less  
 [NASA-CASE-NPO-13459-1] c31 N77-10229  
 The dc-to-dc converters employing  
 staggered-phase power switches with two-loop  
 control  
 [NASA-CASE-NPO-13512-1] c33 N77-10428  
 Ion and electron detector for use in an ICR  
 spectrometer  
 [NASA-CASE-NPO-13479-1] c35 N77-10492  
 Hydrogen-rich gas generator  
 [NASA-CASE-NPO-13560-1] c44 N77-10636  
 Space communication system for compressed data  
 with a concatenated Reed-Solomon-Viterbi  
 coding channel  
 [NASA-CASE-NPO-13545-1] c32 N77-12240  
 Computer interface system  
 [NASA-CASE-NPO-13428-1] c60 N77-12721  
 High temperature oxidation resistant cermet  
 compositions  
 [NASA-CASE-NPO-13666-1] c27 N77-13217  
 Frequency discriminator and phase detector circuit  
 [NASA-CASE-NPO-11515-1] c33 N77-13315  
 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] c35 N77-14406  
 Thermocouple installation  
 [NASA-CASE-NPO-13540-1] c35 N77-14409  
 Method and apparatus for background signal  
 reduction in opto-acoustic absorption  
 measurement  
 [NASA-CASE-NPO-13683-1] c35 N77-14411  
 Nuclear thermionic converter  
 [NASA-CASE-NPO-13121-1] c73 N77-18891  
 Multiple rate digital command detection system  
 with range clean-up capability  
 [NASA-CASE-NPO-13753-1] c32 N77-20289  
 Charge storage diode modulators and demodulators  
 [NASA-CASE-NPO-10189-1] c33 N77-21314  
 Compact, high intensity arc lamp with internal  
 magnetic field producing means  
 [NASA-CASE-NPO-11510-1] c33 N77-21315  
 Depressurization of arc lamps  
 [NASA-CASE-NPO-10790-1] c33 N77-21316  
 Electromagnetic transducer recording head having  
 a laminated core section and tapered gap  
 [NASA-CASE-NPO-10711-1] c35 N77-21392  
 Cryogenic liquid sensor  
 [NASA-CASE-NPO-10619-1] c35 N77-21393  
 Uniform variable light source  
 [NASA-CASE-NPO-11429-1] c74 N77-21941  
 Arc control in compact arc lamps  
 [NASA-CASE-NPO-10870-1] c33 N77-22386  
 Hydraulic drain means for servo-systems  
 [NASA-CASE-NPO-10316-1] c37 N77-22479  
 Automated multi-level vehicle parking system  
 [NASA-CASE-NPO-13058-1] c37 N77-22480  
 Sun direction detection system  
 [NASA-CASE-NPO-13722-1] c74 N77-22951  
 Isotope separation using metallic vapor lasers  
 [NASA-CASE-NPO-13550-1] c36 N77-26477  
 Distributed feedback acoustic surface wave  
 oscillator  
 [NASA-CASE-NPO-13673-1] c71 N77-26919  
 Penetrometer  
 [NASA-CASE-NPO-11103-1] c35 N77-27367  
 Lightweight reflector assembly  
 [NASA-CASE-NPO-13707-1] c74 N77-28933  
 Aldehyde-containing urea-absorbing polysaccharides  
 [NASA-CASE-NPO-13620-1] c27 N77-30236  
 Phase substitution of spare converter for a  
 failed one of parallel phase staggered  
 converters  
 [NASA-CASE-NPO-13812-1] c33 N77-30365  
 Oil and fat absorbing polymers  
 [NASA-CASE-NPO-11609-2] c27 N77-31308  
 Combustion engine  
 [NASA-CASE-NPO-13671-1] c37 N77-31497  
 Apparatus for photon excited catalysis  
 [NASA-CASE-NPO-13566-1] c25 N77-32255  
 Charge-coupled device data processor for an  
 airborne imaging radar system  
 [NASA-CASE-NPO-13587-1] c32 N77-32342  
 Direct reading inductance meter  
 [NASA-CASE-NPO-13792-1] c35 N77-32455  
 Solar photolysis of water  
 [NASA-CASE-NPO-13675-1] c44 N77-32580  
 Low to high temperature energy conversion system  
 [NASA-CASE-NPO-13510-1] c44 N77-32581  
 Solar energy collection system  
 [NASA-CASE-NPO-13810-1] c44 N77-32582  
 Three-dimensional tracking solar energy  
 concentrator and method for making same  
 [NASA-CASE-NPO-13736-1] c44 N77-32583  
 Overload protection system for power inverter  
 [NASA-CASE-NPO-13872-1] c33 N78-10377  
 Photoelectron spectrometer with means for  
 stabilizing sample surface potential  
 [NASA-CASE-NPO-13772-1] c35 N78-10429  
 Machine for use in monitoring fatigue life for a  
 plurality of elastomeric specimens  
 [NASA-CASE-NPO-13731-1] c39 N78-10493

Portable linear-focused solar thermal energy collecting system [NASA-CASE-NPO-13734-1]	c44 N78-10554	Hydrogen-fueled engine [NASA-CASE-NPO-13763-1]	c44 N78-33526
Acoustic energy shaping [NASA-CASE-NPO-13802-1]	c71 N78-10837	Flural output optometric sample cell and analysis system [NASA-CASE-NPO-10233-1]	c74 N78-33913
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Durable antistatic coating for polymethylmethacrylate [NASA-CASE-NPO-13867-1]	c27 N78-14164	Automatic communication signal monitoring system [NASA-CASE-NPO-13941-1]	c32 N79-10262
Ultra stable frequency distribution system [NASA-CASE-NPO-13836-1]	c32 N78-15323	Surface roughness measuring system [NASA-CASE-NPO-13862-1]	c35 N79-10391
Selective image area control of X-ray film exposure density [NASA-CASE-NPO-13808-1]	c35 N78-15461	Vehicular impact absorption system [NASA-CASE-NPO-14014-1]	c37 N79-10420
Motion restraining device [NASA-CASE-NPO-13619-1]	c37 N78-16369	Dual membrane hollow fiber fuel cell and method of operating same [NASA-CASE-NPO-13732-1]	c44 N79-10513
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Method of adhering bone to a rigid substrate using a graphite fiber reinforced bone cement [NASA-CASE-NPO-13764-1]	c27 N78-17215	Surfactant-assisted liquefaction of particulate carbonaceous substances [NASA-CASE-NPO-13904-1]	c25 N79-11152
Purging means and method for Xenon arc lamps [NASA-CASE-NPO-11978]	c31 N78-17238	Electroexplosive device [NASA-CASE-NPO-13858-1]	c28 N79-11231
Pressure transducer [NASA-CASE-NPO-11150]	c35 N78-17359	Space-charge-limited solid-state triode [NASA-CASE-NPO-13064-1]	c33 N79-11314
Cross correlation anomaly detection system [NASA-CASE-NPO-13283]	c38 N78-17395	Plasma igniter for internal combustion engine [NASA-CASE-NPO-13828-1]	c37 N79-11405
Automatic visual inspection system for microelectronics [NASA-CASE-NPO-13282]	c38 N78-17396	Non-tracking solar energy collector system [NASA-CASE-NPO-13817-1]	c44 N79-11471
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Differential optoacoustic absorption detector [NASA-CASE-NPO-13759-1]	c74 N78-17867	An improved suspension system for a wheel rolling on a flat track [NASA-CASE-NPO-14395-1]	c37 N79-12446
Clutter free synthetic aperture radar correlator [NASA-CASE-NPO-14035-1]	c32 N78-18266	Method and apparatus for measuring minority carrier lifetimes and bulk diffusion length in P-N junction solar cells [NASA-CASE-NPO-14100-1]	c44 N79-12541
Interferometer mirror tilt correcting system [NASA-CASE-NPO-13687-1]	c35 N78-18391	Automated clinical system for chromosome analysis [NASA-CASE-NPO-13913-1]	c52 N79-12694
Over-under double-pass interferometer [NASA-CASE-NPO-13999-1]	c35 N78-18395	Conical scan tracking system employing a large antenna [NASA-CASE-NPO-14009-1]	c32 N79-13214
Independent gain and bandwidth control of a traveling wave maser [NASA-CASE-NPO-13801-1]	c36 N78-18410	Stabilization of He2(a 3 Sigma u+ molecules in liquid helium by optical pumping for vacuum UV laser 6 [NASA-CASE-NPO-13993-1]	c72 N79-13826
High temperature resistant cermet and ceramic compositions [NASA-CASE-NPO-13690-1]	c27 N78-19302	High temperature resistant cermet and ceramic compositions [NASA-CASE-NPO-13690-2]	c27 N79-14213
Microwave power converter [NASA-CASE-NPO-14068-1]	c44 N78-19609	Inhibited solid propellant composition containing beryllium hydride [NASA-CASE-NPO-10866-1]	c28 N79-14228
Underground mineral extraction [NASA-CASE-NPO-14140-1]	c31 N78-24387	Digital demodulator-correlator [NASA-CASE-NPO-13982-1]	c32 N79-14267
Thin conformal antenna array for microwave power conversions [NASA-CASE-NPO-13886-1]	c32 N78-24391	Azimuth correlator for real-time synthetic aperture radar image processing [NASA-CASE-NPO-14019-1]	c32 N79-14268
Multistation refrigeration system [NASA-CASE-NPO-13839-1]	c31 N78-25256	Discriminator aided phase lock acquisition for suppressed carrier signals [NASA-CASE-NPO-14311-1]	c32 N79-14276
Swept group delay measurement [NASA-CASE-NPO-13909-1]	c33 N78-25319	Apparatus for providing a servo drive signal in a high-speed stepping interferometer [NASA-CASE-NPO-13569-2]	c35 N79-14348
Polymeric electrolytic hygrometer [NASA-CASE-NPO-13948-1]	c35 N78-25391	High-torque open-end wrench [NASA-CASE-NPO-13541-1]	c37 N79-14383
Charge transfer reaction laser with preionization means [NASA-CASE-NPO-13945-1]	c36 N78-27402	Sun tracking solar energy collector [NASA-CASE-NPO-13921-1]	c44 N79-14526
RF beam center location method and apparatus for power transmission system [NASA-CASE-NPO-13821-1]	c44 N78-28594	Primary reflector for solar energy collection systems [NASA-CASE-NPO-13579-4]	c44 N79-14529
Control for nuclear thermionic power source [NASA-CASE-NPO-13114-2]	c73 N78-28913	Gas diffusion liquid storage bag and method of use for storing blood [NASA-CASE-NPO-13930-1]	c52 N79-14749
Magneto-optic detection system with noise cancellation [NASA-CASE-NPO-11954-1]	c35 N78-29421	Coupling apparatus for ultrasonic medical diagnostic system [NASA-CASE-NPO-13935-1]	c52 N79-14751
Nitramine propellants [NASA-CASE-NPO-14103-1]	c28 N78-31255	Thermomagnetic recording and magnetic-optic playback system [NASA-CASE-NPO-10872-1]	c35 N79-16246
Reflex feed system for dual frequency antenna with frequency cutoff means [NASA-CASE-NPO-14022-1]	c32 N78-31321	Manganese bismuth films with narrow transfer characteristics for Curie-point switching [NASA-CASE-NPO-11336-1]	c76 N79-16678
Solar pond [NASA-CASE-NPO-13581-2]	c44 N78-31525	CCD correlated quadruple sampling processor [NASA-CASE-NPO-14426-1]	c33 N79-17134
Non-tracking solar energy collector system [NASA-CASE-NPO-13813-1]	c44 N78-31526	Multispectral imaging and analysis system [NASA-CASE-NPO-13691-1]	c43 N79-17288
Coal desulfurization process [NASA-CASE-NPO-13937-1]	c44 N78-31527		
Solid propellant motor [NASA-CASE-NPO-11458A]	c20 N78-32179		
Thermoplastic rubber comprising ethylene-vinyl acetate copolymer, asphalt and fluxing oil [NASA-CASE-NPO-08835-1]	c27 N78-33228		

Solar array strip and a method for forming the same		Method for forming a solar array strip	
[NASA-CASE-NPO-13652-1]	c44 N79-17314	[NASA-CASE-NPO-13652-3]	c44 N80-14474
Process for purification of waste water produced by a Kraft process pulp and paper mill		Ozonation of cooling tower waters	
[NASA-CASE-NPO-13847-2]	c85 N79-17747	[NASA-CASE-NPO-14340-1]	c45 N80-14579
Thermal energy transformer		System for real-time crustal deformation monitoring	
[NASA-CASE-NPO-14053-1]	c44 N79-18443	[NASA-CASE-NPO-14124-1]	c46 N80-14603
Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths		Dialysis system	
[NASA-CASE-NPO-14525-1]	c32 N79-19195	[NASA-CASE-NPO-14101-1]	c52 N80-14687
Method and turbine for extracting kinetic energy from a stream of two-phase fluid		High resolution threshold photoelectron spectroscopy by electron attachment	
[NASA-CASE-NPO-14130-1]	c34 N79-20335	[NASA-CASE-NPO-14078-1]	c72 N80-14877
Terminal guidance sensor system		Strong thin membrane structure	
[NASA-CASE-NPO-14521-1]	c54 N79-20746	[NASA-CASE-NPO-14021-2]	c27 N80-16163
Digital data reformatter/deserializer		Antenna feed system for receiving circular polarization and transmitting linear polarization	
[NASA-CASE-NPO-13676-1]	c60 N79-20751	[NASA-CASE-NPO-14362-1]	c32 N80-16261
Acoustic driving of rotor		Paraday rotation measurement method and apparatus	
[NASA-CASE-NPO-14005-1]	c71 N79-20827	[NASA-CASE-NPO-14839-1]	c35 N80-16313
System and method for obtaining wide screen Schlieren photographs		High-speed data link for moderate distances and noisy environments	
[NASA-CASE-NPO-14174-1]	c74 N79-20856	[NASA-CASE-NPO-14152-1]	c32 N80-18252
Pulse switching for high energy lasers		Radio frequency arraying method for receivers	
[NASA-CASE-NPO-14556-1]	c36 N79-21336	[NASA-CASE-NPO-14328-1]	c32 N80-18253
Seismic vibration source		High power RF coaxial switch	
[NASA-CASE-NPO-14112-1]	c46 N79-22679	[NASA-CASE-NPO-14229-1]	c33 N80-18285
Centrifugal-reciprocating compressor		Microwave power transmission beam safety system	
[NASA-CASE-NPO-14597-1]	c37 N79-23431	[NASA-CASE-NPO-14224-1]	c33 N80-18287
Underwater seismic source		Viscosity measuring instrument	
[NASA-CASE-NPO-14255-1]	c46 N79-23555	[NASA-CASE-NPO-14501-1]	c35 N80-18357
Resolution enhanced sound detecting apparatus		Frequency-scanning particle size spectrometer	
[NASA-CASE-NPO-14134-1]	c71 N79-23753	[NASA-CASE-NPO-13606-2]	c35 N80-18364
Phase conjugation method and apparatus for an active retrodirective antenna array		Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures	
[NASA-CASE-NPO-13641-1]	c32 N79-24210	[NASA-CASE-NPO-14254-1]	c36 N80-18372
Module failure isolation circuit for paralleled inverters		High power metallic halide laser	
[NASA-CASE-NPO-14000-1]	c33 N79-24254	[NASA-CASE-NPO-14782-1]	c36 N80-18381
Circuit for automatic load sharing in parallel converter modules		Driver for solar cell I-V characteristic plots	
[NASA-CASE-NPO-14056-1]	c33 N79-24257	[NASA-CASE-NPO-14096-1]	c44 N80-18551
Bonding machine for forming a solar array strip		Method and means for helium/hydrogen ratio measurement by alpha scattering	
[NASA-CASE-NPO-13652-2]	c44 N79-24431	[NASA-CASE-NPO-14079-1]	c25 N80-20334
Primary reflector for solar energy collection systems and method of making same		Thermal reactor and process	
[NASA-CASE-NPO-13579-3]	c44 N79-24432	[NASA-CASE-NPO-14369-1]	c25 N80-20338
Solar energy collection system		Satellite personal communications system	
[NASA-CASE-NPO-13579-2]	c44 N79-24433	[NASA-CASE-NPO-14480-1]	c32 N80-20448
Compact artificial hand		Velocity servo for continuous scan Fourier interference spectrometer	
[NASA-CASE-NPO-13906-1]	c54 N79-24652	[NASA-CASE-NPO-14093-1]	c35 N80-20563
A general logic structure for custom LSI circuits		Method and apparatus for convection control of metallic halide vapor density in a metallic halide laser	
[NASA-CASE-NPO-14410-1]	c33 N79-25314	[NASA-CASE-NPO-15021-1]	c36 N80-20574
Double-sided solar cell package		Portable heatable container	
[NASA-CASE-NPO-14199-1]	c44 N79-25482	[NASA-CASE-NPO-14237-1]	c44 N80-20808
Echo tracker/range finder for radars and sonars		Method and device for destructive detection of a substance	
[NASA-CASE-NPO-14361-1]	c32 N79-26253	[NASA-CASE-NPO-14940-1]	c35 N80-21723
Apparatus and method of inserting a microelectrode in body tissue or the like using vibration means		Potential heat exchange fluids for use in sulfuric acid vaporizers	
[NASA-CASE-NPO-13910-1]	c52 N79-27836	[NASA-CASE-NPO-15015-1]	c25 N80-23394
Chemical vapor deposition reactor		Dual band combiner for horn antenna	
[NASA-CASE-NPO-13650-1]	c25 N79-28253	[NASA-CASE-NPO-14519-1]	c32 N80-23524
High performance ammonium nitrate propellant		Passive intrusion detection system	
[NASA-CASE-NPO-14260-1]	c28 N79-28342	[NASA-CASE-NPO-13804-1]	c33 N80-23559
Biocontamination and particulate detection system		Constant magnification optical tracking system	
[NASA-CASE-NPO-13953-1]	c35 N79-28527	[NASA-CASE-NPO-14813-1]	c74 N80-24152
Multi-channel rotating optical interface for data transmission		Method and apparatus for Doppler frequency modulation of radiation	
[NASA-CASE-NPO-14066-1]	c74 N79-34011	[NASA-CASE-NPO-14524-1]	c32 N80-24510
Start up system for hydrogen generator used with an internal combustion engine		Coherently pulsed laser source	
[NASA-CASE-NPO-13849-1]	c28 N80-10374	[NASA-CASE-NPO-15111-1]	c36 N80-24602
System for detecting substructure microfractures and method therefore		Method of mitigating titanium impurities effects in p-type silicon material for solar cells	
[NASA-CASE-NPO-14192-1]	c39 N80-10507	[NASA-CASE-NPO-14635-1]	c44 N80-24741
Borehole geological assessment		Solar-heated fluidized bed gasification system	
[NASA-CASE-NPO-14231-1]	c46 N80-10709	[NASA-CASE-NPO-15071-1]	c44 N80-24747
Method for shaping and aiming narrow beams		Geological assessment probe	
[NASA-CASE-NPO-14632-1]	c32 N80-12256	[NASA-CASE-NPO-14558-1]	c46 N80-24906
Electromagnetic power absorber		Hermetic seal for a shaft	
[NASA-CASE-NPO-13830-1]	c32 N80-14281	[NASA-CASE-NPO-15115-1]	c37 N80-25660
Multiple anode arc lamp system		Cooled echelle grating spectrometer	
[NASA-CASE-NPO-10857-1]	c33 N80-14330	[NASA-CASE-NPO-14372-1]	c35 N80-26635
Method for analyzing radiation sensitivity of integrated circuits		Improved method for driving two-phase turbines with enhanced efficiency	
[NASA-CASE-NPO-14350-1]	c33 N80-14332	[NASA-CASE-NPO-15037-1]	c37 N80-26660

Cloud cover sensor [NASA-CASE-NPO-14936-1]	c47 N80-26992	An improved solid electrolyte cell [NASA-CASE-NPO-15269-1]	c33 N81-16385
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Interferometric locating system [NASA-CASE-NPO-14173-1]	c04 N80-32359	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]	c74 N81-17887
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Method of forming frozen spheres in a force-free drop tower [NASA-CASE-NPO-14845-1]	c31 N81-16328	Hot gas engine with dual crankshafts [NASA-CASE-NPO-14221-1]	c37 N81-25370
		Sandblasting nozzle [NASA-CASE-NPO-13823-1]	c37 N81-25371
		Photomechanical transducer [NASA-CASE-NPO-14363-1]	c39 N81-25400
		Underground mineral extraction [NASA-CASE-NPO-14140-1]	c43 N81-26509
		Schottky barrier cell and method of fabricating it [NASA-CASE-NPO-13689-4]	c44 N81-26553



System for moving a probe to follow movements of tissue  
 [NASA-CASE-NPO-15197-1] c52 N81-26697  
 CCD correlated quadruple sampling processor  
 [NASA-CASE-NPO-14426-1] c33 N81-27396  
 Programmable scan/read circuitry for charge coupled device imaging detectors  
 [NASA-CASE-NPO-15345-1] c33 N81-27403  
 Terminal guidance sensor system  
 [NASA-CASE-NPO-14521-1] c37 N81-27519  
 A stable density-stratification solar pond  
 [NASA-CASE-NPO-15419-1] c44 N81-27599  
 Medical diagnosis system and method with multispectral imaging  
 [NASA-CASE-NPO-14402-1] c52 N81-27783  
 High-speed multiplexing of keyboard data inputs  
 [NASA-CASE-NPO-14554-1] c60 N81-27814  
 Asymmetric polyimide separation membrane and method  
 [NASA-CASE-NPO-15431-1] c25 N81-29178  
 Waveguide cooling system  
 [NASA-CASE-NPO-15401-1] c33 N81-29344  
 Enhancement of in vitro Guayule propagation  
 [NASA-CASE-NPO-15213-1] c51 N81-29728  
 Coal desulfurization  
 [NASA-CASE-NPO-14272-1] c25 N81-33246  
 Pressure letdown method and device for coal conversion systems  
 [NASA-CASE-NPO-15100-1] c28 N81-33306  
 Method and apparatus for producing concentric hollow spheres  
 [NASA-CASE-NPO-14596-1] c31 N81-33319  
 Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
 [NASA-CASE-NPO-14316-1] c33 N81-33404  
 Optical gyroscope system  
 [NASA-CASE-NPO-14258-1] c35 N81-33448  
 Method and apparatus for precision control of radiometer  
 [NASA-CASE-NPO-15398-1] c35 N81-33449  
 Head for high speed spinner having a vacuum chuck  
 [NASA-CASE-NPO-15227-1] c37 N81-33482

## K

**KELSEY-HAYES CO., ROMULUS, MICH.**  
 Variable thrust ion engine utilizing thermally decomposable solid fuel Patent  
 [NASA-CASE-XMF-00923] c28 N70-36802  
**KELTEC INDUSTRIES, INC., ALEXANDRIA, VA.**  
 Unfurlable structure including coiled strips thrust launched upon tension release Patent  
 [NASA-CASE-HQN-00937] c07 N71-28979  
**KENTUCKY UNIV., LEXINGTON.**  
 Apparatus for determining changes in limb volume  
 [NASA-CASE-MSC-16759-1] c52 N81-24716  
**KINELOGIC CORP., PASADENA, CALIF.**  
 Excitation and detection circuitry for a flux responsive magnetic head  
 [NASA-CASE-XNP-04183] c09 N69-24329  
 Tape guidance system and apparatus for the provision thereof Patent  
 [NASA-CASE-XNP-09453] c08 N71-19420  
 Incremental tape recorder and data rate converter Patent  
 [NASA-CASE-XNP-02778] c08 N71-22710  
**KOLLSMAN INSTRUMENT CORP., ELMBURST, N. Y.**  
 Wide angle long eye relief eyepiece Patent  
 [NASA-CASE-IMS-06056-1] c23 N71-24857  
**KOLLSMAN INSTRUMENT CORP., SYOSSET, N. Y.**  
 Digital modulator and demodulator Patent  
 [NASA-CASE-ERC-10041] c08 N71-29138  
 Ritchey-Chretien Telescope  
 [NASA-CASE-GSC-11487-1] c14 N73-30393  
**KOHIGSBERG INSTRUMENTS, INC., PASADENA, CALIF.**  
 Accelerometer telemetry system  
 [NASA-CASE-ARC-10849-1] c17 N76-29347  
**KORAD CORP., NEW YORK.**  
 Laser apparatus for removing material from rotating objects Patent  
 [NASA-CASE-MFS-11279] c16 N71-20400

## L

**LIFE SYSTEMS, INC., BEACHWOOD, OHIO.**  
 Iodine generator for reclaimed water purification  
 [NASA-CASE-MSC-14632-1] c54 N78-14784

**LING-TEMCO-VOUGHT, INC., DALLAS, TEX.**  
 Latch/ejector unit Patent  
 [NASA-CASE-XLA-03538] c15 N71-24897  
**LITTLE (ARTHUR D.), INC., CAMBRIDGE, MASS.**  
 Apparatus for measuring thermal conductivity Patent  
 [NASA-CASE-XGS-01052] c14 N71-15992  
 Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
 [NASA-CASE-MSC-14331-1] c27 N76-24405  
 Flame retardant spandex type polyurethanes  
 [NASA-CASE-MSC-14331-2] c27 N78-17213  
 Process for spinning flame retardant elastomeric compositions  
 [NASA-CASE-MSC-14331-3] c27 N78-32262  
 Heat sealable, flame and abrasion resistant coated fabric  
 [NASA-CASE-MSC-18382-1] c27 N80-24440  
**LITTON INDUSTRIES, BEVERLY HILLS, CALIF.**  
 Life support system  
 [NASA-CASE-MSC-12411-1] c05 N72-20096  
**LITTON INDUSTRIES, COLLEGE PARK, MD.**  
 Shrink-fit gas valve Patent  
 [NASA-CASE-XGS-00587] c15 N70-35087  
**LITTON INDUSTRIES, SAN CARLOS, CALIF.**  
 Very high intensity light source using a cathode ray tube  
 [NASA-CASE-XNP-01296] c33 N75-27250  
**LITTON SYSTEMS, INC., MINNEAPOLIS, MINN.**  
 Apparatus for sampling particulates in gases  
 [NASA-CASE-HQN-10037-1] c14 N73-27376  
**LOCKHEED AIRCRAFT CORP., BURBANK, CALIF.**  
 Aerodynamic protection for space flight vehicles Patent  
 [NASA-CASE-XNP-02507] c31 N71-17679  
**LOCKHEED-CALIFORNIA CO., BURBANK.**  
 Absorptive splitter for closely spaced supersonic engine air inlets Patent  
 [NASA-CASE-XLA-02865] c28 N71-15563  
 Multistage aerospace craft  
 [NASA-CASE-XMF-02263] c05 N74-10907  
**LOCKHEED ELECTRONICS CO., HOUSTON, TEX.**  
 Television signal scan rate conversion system Patent  
 [NASA-CASE-XMS-07168] c07 N71-11300  
 Burst synchronization detection system Patent  
 [NASA-CASE-XMS-05605-1] c10 N71-19468  
 Automatic signal range selector for metering devices Patent  
 [NASA-CASE-XMS-06497] c14 N71-26244  
 Monostable multivibrator with complementary NOR gates Patent  
 [NASA-CASE-MSC-13492-1] c10 N71-28860  
 Ultrastable calibrated light source  
 [NASA-CASE-MSC-12293-1] c14 N72-27411  
 Data storage, image tube type  
 [NASA-CASE-MSC-14053-1] c60 N74-12888  
 Differential phase shift keyed communication system  
 [NASA-CASE-MSC-14065-1] c32 N74-26654  
 Differential phase shift keyed signal resolver  
 [NASA-CASE-MSC-14066-1] c33 N74-27705  
 Method and apparatus for decoding compatible convolutional codes  
 [NASA-CASE-MSC-14070-1] c32 N74-32598  
 Pulse stretcher for narrow pulses  
 [NASA-CASE-MSC-14130-1] c33 N74-32711  
 Peak holding circuit for extremely narrow pulses  
 [NASA-CASE-MSC-14129-1] c33 N75-18479  
 Random pulse generator  
 [NASA-CASE-MSC-14131-1] c33 N75-19515  
 Digital transmitter for data bus communications system  
 [NASA-CASE-MSC-14558-1] c32 N75-21486  
 Low distortion receiver for bi-level baseband PCM waveforms  
 [NASA-CASE-MSC-14557-1] c32 N76-16249  
 System for producing chroma signals  
 [NASA-CASE-MSC-14683-1] c74 N77-18893  
 Secure communication system  
 [NASA-CASE-MSC-16462-1] c32 N78-25274  
 Phased array antenna control  
 [NASA-CASE-MSC-14939-1] c32 N79-11264  
 Apparatus and method for stabilized phase detection for binary signal tracking loops  
 [NASA-CASE-MSC-16461-1] c33 N79-11313  
 Multiple band circularly polarized microstrip antenna

[NASA-CASE-MSC-18334-1] c32 N80-32604  
 Multispectral scanner optical system  
 [NASA-CASE-MSC-18255-1] c74 N80-33210  
**LOCKHEED MISSILES AND SPACE CO., Sunnyvale, Calif.**  
 Device for handling heavy loads  
 [NASA-CASE-XNP-04969] c11 N69-27466  
 Transient heat transfer gauge Patent  
 [NASA-CASE-XNP-09802] c33 N71-15641  
 Dual solid cryogenics for spacecraft refrigeration  
 Patent  
 [NASA-CASE-GSC-10188-1] c23 N71-24725  
 Apparatus for detecting the amount of material  
 in a resonant cavity container Patent  
 [NASA-CASE-XNP-02500] c18 N71-27397  
 Emergency earth orbital escape device  
 [NASA-CASE-MSC-13281] c31 N72-18859  
 Solar energy powered heliotope  
 [NASA-CASE-GSC-10945-1] c21 N72-31637  
 Coaxial inverted geometry transistor having  
 buried emitter  
 [NASA-CASE-ARC-10330-1] c09 N73-32112  
 Whole body measurement systems  
 [NASA-CASE-MSC-13972-1] c52 N74-10975  
 Four phase logic systems  
 [NASA-CASE-MSC-14240-1] c33 N75-14957  
 Strain arrestor plate for fused silica tile  
 [NASA-CASE-MSC-14182-1] c27 N76-14264  
 Medical subject monitoring systems  
 [NASA-CASE-MSC-14180-1] c52 N76-14757  
 Two-component ceramic coating for silica  
 insulation  
 [NASA-CASE-MSC-14270-1] c27 N76-22377  
 Optical alignment device  
 [NASA-CASE-ARC-10932-1] c74 N76-22993  
 Three-component ceramic coating for silica  
 insulation  
 [NASA-CASE-MSC-14270-2] c27 N76-23426  
 Process of forming catalytic surfaces for wet  
 oxidation reactions  
 [NASA-CASE-MSC-14851-1] c25 N78-10225  
 Partial polarizer filter  
 [NASA-CASE-GSC-12225-1] c74 N79-14891  
 Method of fabricating a photovoltaic module of a  
 substantially transparent construction  
 [NASA-CASE-NPO-14303-1] c44 N80-18550  
**LOCKHEED PROPULSION CO., BEDLANDS, CALIF.**  
 Propellant grain for rocket motors Patent  
 [NASA-CASE-XGS-03556] c27 N70-35534  
**LTV AEROSPACE CORP., DALLAS, TEX.**  
 Method of fluxless brazing and diffusion bonding  
 of aluminum containing components  
 [NASA-CASE-MSC-14435-1] c37 N76-18455

**M**

**MACON-RUST CO., LEXINGTON, KY.**  
 Stretcher Patent  
 [NASA-CASE-XMP-06589] c05 N71-23159  
**MARLBOROUGH CORP., JAMESTOWN, N. Y.**  
 Drilled ball bearing with one piece  
 anti-tipping cage assembly  
 [NASA-CASE-LEW-11925-1] c37 N75-31446  
**MARQUARDT CORP., VAN NUYS, CALIF.**  
 Fuel injection pump for internal combustion  
 engines Patent  
 [NASA-CASE-MSC-12139-1] c28 N71-14058  
 Multislit film cooled pyrolytic graphite rocket  
 nozzle Patent  
 [NASA-CASE-XNP-04389] c28 N71-20942  
 Tube sealing device Patent  
 [NASA-CASE-NPO-10431] c15 N71-29132  
**MARTIN MARIETTA AEROSPACE, DENVER, COLO.**  
 Method and apparatus for tensile testing of  
 metal foil  
 [NASA-CASE-LAR-10208-1] c35 N76-18400  
 Pulse transducer with artifact signal attenuator  
 [NASA-CASE-PRC-11012-1] c52 N80-23969  
 Urine collection apparatus  
 [NASA-CASE-MSC-18381-1] c52 N81-28740  
**MARTIN MARIETTA CORP., BALTIMORE, MD.**  
 Landing gear Patent  
 [NASA-CASE-XMP-01174] c02 N70-41589  
 Emergency escape system Patent  
 [NASA-CASE-IKS-02342] c05 N71-11199  
**MARTIN MARIETTA CORP., DENVER, COLO.**  
 Flexible/rigidifiable cable assembly  
 [NASA-CASE-MSC-13512-1] c15 N72-22485  
 Derivation of a tangent function using an  
 integrated circuit four-quadrant multiplier  
 [NASA-CASE-MSC-13907-1] c10 N73-26230  
 Low distortion automatic phase control circuit  
 [NASA-CASE-MPS-21671-1] c33 N74-22885  
 Variable ratio mixed-mode bilateral master-slave  
 control system for shuttle remote manipulator  
 system  
 [NASA-CASE-MSC-14245-1] c18 N75-27041  
 Filter regeneration systems  
 [NASA-CASE-MSC-14273-1] c34 N75-33342  
 Turnstile and flared cone UHF antenna  
 [NASA-CASE-LAR-10970-1] c33 N76-14372  
 Method and apparatus for fluffing, separating,  
 and cleaning fibers  
 [NASA-CASE-LAR-11224-1] c37 N76-18456  
 Hearing aid malfunction detection system  
 [NASA-CASE-MSC-14916-1] c33 N78-10375  
 Urine collection device  
 [NASA-CASE-MSC-16433-1] c52 N78-27750  
 Positive isolation disconnect  
 [NASA-CASE-MSC-16043-1] c37 N79-11402  
 Urine collection device  
 [NASA-CASE-MSC-16433-1] c52 N81-24711  
**MARYLAND UNIV., COLLEGE PARK.**  
 Method and apparatus for optical modulating a  
 light signal Patent  
 [NASA-CASE-GSC-10216-1] c23 N71-26722  
**MASSACHUSETTS INST. OF TECH., CAMBRIDGE.**  
 Pretreatment method for anti-vettable materials  
 [NASA-CASE-XMS-03537] c15 N69-21471  
 Hydraulic drive mechanism Patent  
 [NASA-CASE-XMS-03252] c15 N71-10658  
 Electronic amplifier with power supply switching  
 Patent  
 [NASA-CASE-XMS-00945] c09 N71-10798  
 Method and apparatus for stabilizing a gaseous  
 optical maser Patent  
 [NASA-CASE-XGS-03644] c16 N71-18614  
 Power supply Patent  
 [NASA-CASE-XMS-02159] c10 N71-22961  
 Optical frequency waveguide Patent  
 [NASA-CASE-HQN-10541-1] c07 N71-26291  
 Laser machining apparatus Patent  
 [NASA-CASE-HQN-10541-2] c15 N71-27135  
 Optical frequency waveguide and transmission  
 system Patent  
 [NASA-CASE-HQN-10541-4] c16 N71-27183  
 Compact spectroradiometer  
 [NASA-CASE-HQN-10683] c14 N71-34389  
 Optical frequency waveguide and transmission  
 system  
 [NASA-CASE-HQN-10541-3] c23 N72-23695  
 Display research collision warning system  
 [NASA-CASE-HQN-10703] c21 N73-13643  
 Transparent switchboard  
 [NASA-CASE-MSC-13746-1] c10 N73-32143  
 Vapor deposition apparatus  
 [NASA-CASE-HQN-10462] c25 N75-29192  
 Fault tolerant clock apparatus utilizing a  
 controlled minority of clock elements  
 [NASA-CASE-MSC-12531-1] c35 N75-30504  
 Solar power satellite system  
 [NASA-CASE-HQN-10949-1] c44 N81-16530  
**MB ASSOCIATES, SAN RAMON, CALIF.**  
 Hypervelocity gun  
 [NASA-CASE-XLE-03186-1] c09 N79-21084  
**MCDONNELL AIRCRAFT CO., ST. LOUIS, MO.**  
 Method for making a heat insulating and ablative  
 structure  
 [NASA-CASE-XMS-01108] c15 N69-24322  
 Heat flux sensor assembly  
 [NASA-CASE-XMS-05909-1] c14 N69-27459  
 Apparatus for purging systems handling toxic,  
 corrosive, noxious and other fluids Patent  
 [NASA-CASE-XMS-01905] c12 N71-21089  
 Power supply circuit Patent  
 [NASA-CASE-XMS-00913] c10 N71-23543  
 Multiple circuit protector device  
 [NASA-CASE-XMS-02744] c33 N75-27249  
 Apparatus for welding sheet material  
 [NASA-CASE-XMS-01330] c37 N75-27376  
 Fused switch  
 [NASA-CASE-XMS-01244-1] c33 N79-33393  
 Cooling system for high speed aircraft  
 [NASA-CASE-LAR-12406-1] c05 N81-26114  
**MCDONNELL-DOUGLAS AERONAUTICS CO., HUNTINGTON  
 BEACH, CALIF.**  
 Heat transfer device  
 [NASA-CASE-MPS-22938-1] c34 N76-18374

## MCDONNELL-DOUGLAS ASTRONAUTICS CO., SANTA MONICA, CALIF.

New polymers of perfluorobutadiene and method of manufacture Patent application  
[NASA-CASE-NPO-10863] c06 N70-11251  
Method of polymerizing perfluorobutadiene Patent application  
[NASA-CASE-NPO-10447] c06 N70-11252

MCDONNELL-DOUGLAS ASTRONAUTICS CO., ST. LOUIS, MO.  
Passive propellant system  
[NASA-CASE-MFS-23642-2] c20 N78-27176

MCDONNELL-DOUGLAS CORP., HUNTINGTON BEACH, CALIF.  
Variable direction force coupler  
[NASA-CASE-MFS-20317] c15 N73-13463  
Potable water dispenser  
[NASA-CASE-MFS-21115-1] c54 N74-12779  
Metering gun for dispensing precisely measured charges of fluid  
[NASA-CASE-MFS-21163-1] c54 N74-17853  
Airlock  
[NASA-CASE-MFS-20922-1] c18 N74-22136  
Device for monitoring a change in mass in varying gravimetric environments  
[NASA-CASE-MFS-21556-1] c35 N74-26945  
Thrust-isolating mounting  
[NASA-CASE-MFS-21680-1] c18 N74-27397  
Device for measuring tensile forces  
[NASA-CASE-MFS-21728-1] c35 N74-27865  
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[NASA-CASE-MFS-21577-1] c19 N74-29410  
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[NASA-CASE-MFS-22073-1] c33 N75-13139  
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[NASA-CASE-MFS-22189-1] c35 N75-19615  
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[NASA-CASE-MFS-21606-1] c37 N75-15685  
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[NASA-CASE-MFS-21488-1] c14 N75-24794

MCDONNELL-DOUGLAS CORP., LONG BEACH, CALIF.  
Compression test fixture  
[NASA-CASE-MSC-18723-1] c39 N81-24470

MCDONNELL-DOUGLAS CORP., NEWPORT BEACH, CALIF.  
Method of making membranes  
[NASA-CASE-XNP-04264] c03 N69-21337

MCDONNELL-DOUGLAS CORP., SANTA MONICA, CALIF.  
Rocket nozzle test method Patent  
[NASA-CASE-NPO-10311] c31 N71-15643  
Reaction of fluorine with polyperfluoropolyenes  
[NASA-CASE-NPO-10862] c06 N72-22107  
Polymers of perfluorobutadiene and method of manufacture  
[NASA-CASE-NPO-10863-2] c06 N72-25152  
Electrolytic cell structure  
[NASA-CASE-LAR-11042-1] c33 N75-27252  
Prevention of hydrogen embrittlement of high strength steel by hydrazine compositions  
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Utilization of oxygen difluoride for syntheses of fluoropolymers  
[NASA-CASE-NPO-12061-1] c27 N76-16228

MCDONNELL-DOUGLAS CORP., ST. LOUIS, MO.  
Thermally conductive polymers  
[NASA-CASE-GSC-11304-1] c06 N72-21105  
Passive propellant system  
[NASA-CASE-MFS-23642-1] c20 N80-10278

MEDICAL SCIENCES RESEARCH FOUNDATION, SAN FRANCISCO, CALIF.  
Reduction of blood serum cholesterol  
[NASA-CASE-NPO-12119-1] c52 N75-15270

MELLOW INST., PITTSBURGH, PA.  
Instrument for measuring torsional creep and recovery Patent  
[NASA-CASE-XLE-01481] c14 N71-10781

MELPAR, INC., FALLS CHURCH, VA.  
Television simulation for aircraft and space flight Patent  
[NASA-CASE-YFR-03107] c09 N71-19449  
Compact solar still Patent  
[NASA-CASE-XNS-04533] c15 N71-23086

METCOB, INC., SALEM, MASS.  
Tuning arrangement for an electron discharge device or the like Patent  
[NASA-CASE-XNP-09771] c09 N71-24841

METHODIST HOSPITAL, HOUSTON, TEX.  
Snap-in compressible biomedical electrode

[NASA-CASE-HSC-14623-1] c52 N77-28717

MICROWAVE ELECTRONICS CORP., PALO ALTO, CALIF.  
Folded traveling wave maser structure Patent  
[NASA-CASE-XNP-05219] c16 N71-15550  
Superconducting magnet Patent  
[NASA-CASE-XNP-06503] c23 N71-29049

MICROWAVE RESEARCH CORP., NORTH ANDOVER, MASS.  
Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector  
[NASA-CASE-NPO-13568-1] c32 N76-21365  
Multifrequency broadband polarized horn antenna  
[NASA-CASE-NPO-14588-1] c32 N81-25278

MIDWEST RESEARCH INST., KANSAS CITY, MO.  
Preparation of ordered poly(arylenesiloxane)/polymers  
[NASA-CASE-XNP-10753] c06 N71-11237  
Inorganic solid film lubricants Patent  
[NASA-CASE-XMP-03988] c15 N71-21403  
Fluorinated esters of polycarboxylic acids  
[NASA-CASE-MFS-21040-1] c06 N73-30098

MILLIKEN (D. B.) CO., ARCADIA, CALIF.  
Film feed camera having a detent means Patent  
[NASA-CASE-LAR-10686] c14 N71-28935

MINNEAPOLIS-HONEYWELL REGULATOR CO., MINN.  
Microelectronic module package Patent  
[NASA-CASE-XMS-02182] c10 N71-28783

MISSISSIPPI METHODIST REHABILITATION CENTER, JACKSON.  
Universal connectors for joining stringers  
[NASA-CASE-LAR-12744-1] c37 N81-31551

MODERN MACHINE AND TOOL CO., NEWPORT NEWS, VA.  
Means for accommodating large overstrain in lead wires  
[NASA-CASE-LAR-10168-1] c33 N74-22865

MONSANTO CO., ST. LOUIS, MO.  
Method for the preparation of inorganic single crystal and polycrystalline electronic materials  
[NASA-CASE-XLE-02545-1] c76 N79-21910

MONSANTO RESEARCH CORP., DAYTON, OHIO.  
Perfluoro alkylene dioxy-bis-(4-phthalic anhydrides and oxy-bis-(perfluoroalkyleneoxyphthalic anhydrides  
[NASA-CASE-MFS-22356-1] c23 N75-30256  
Polyimides of ether-linked aryl tetracarboxylic dianhydrides  
[NASA-CASE-MFS-22355-1] c23 N76-15268

MOTOROLA, INC., PHOENIX, ARIZ.  
Automatic frequency discriminators and control for a phase-lock loop providing frequency preset capabilities Patent  
[NASA-CASE-XMP-08665] c10 N71-19467  
Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c26 N80-14229  
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[NASA-CASE-NPO-14473-1] c37 N80-23654  
Method and apparatus for quadriphase-shift-key and linear phase modulation  
[NASA-CASE-NPO-14444-1] c33 N81-15192  
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[NASA-CASE-NPO-14435-1] c33 N81-33405

MOTOROLA, INC., SCOTTSDALE, ARIZ.  
Sealed cabinetry Patent  
[NASA-CASE-HSC-12168-1] c09 N71-18600  
Digital frequency discriminator Patent  
[NASA-CASE-MFS-14322] c08 N71-18692  
Phase modulator Patent  
[NASA-CASE-HSC-13201-1] c07 N71-28429  
Capacitance multiplier and filter synthesizing network  
[NASA-CASE-NPO-11948-1] c33 N74-32712  
Quadrature demodulation  
[NASA-CASE-GSC-12137-1] c33 N78-32338

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NATIONAL ACADEMY OF SCIENCES - NATIONAL RESEARCH COUNCIL, ARLINGTON, VA.  
An improved synthesis of 2, 4, 8, 10-tetroxaspiro (5,5)undecane  
[NASA-CASE-ABC-11243-1] c27 N79-30375  
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NATIONAL ACADEMY OF SCIENCES - NATIONAL RESEARCH COUNCIL, WASHINGTON, D. C.  
Gyrator employing field effect transistors  
[NASA-CASE-MFS-21433] c09 N73-20232

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 [NASA-CASE-LAR-10682-1] c02 N73-26004  
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 [NASA-CASE-LAR-11027-1] c35 N74-18088  
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 [NASA-CASE-MFS-22040-1] c35 N74-26946  
 Stagnation pressure probe  
 [NASA-CASE-LAR-11139-1] c35 N74-32878  
 Integrated P-channel MOS gyrator  
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 Impact position detector for outer space  
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 Integrable power gyrator  
 [NASA-CASE-MFS-22342-1] c33 N75-30428  
 Two stage light gas-plasma projectile  
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 [NASA-CASE-MFS-22287-1] c75 N76-14931  
 Micrometeoroid velocity and trajectory  
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 [NASA-CASE-GSC-11892-1] c35 N76-15433  
 Moving particle composition analyzer  
 [NASA-CASE-GSC-11889-1] c35 N76-16393  
 Self-energized plasma compressor  
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 Charge injection method and apparatus of  
 producing large area electrets  
 [NASA-CASE-MFS-23186-1] c33 N76-23483  
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 [NASA-CASE-ARC-10816-1] c35 N76-24525  
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 [NASA-CASE-ARC-10448-3] c35 N77-14408  
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 [NASA-CASE-ARC-10900-1] c35 N77-24454  
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 Method and apparatus for splitting a beam of  
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 [NASA-CASE-GSC-12083-1] c73 N78-32848  
 Cantilever mounted resilient pad gas bearing  
 [NASA-CASE-LEW-12569-1] c37 N79-10418  
 Massively parallel processor computer  
 [NASA-CASE-GSC-12223-1] c60 N79-27864  
 Shock isolator for operating a diode laser on a  
 closed-cycle refrigerator  
 [NASA-CASE-GSC-12297-1] c37 N79-26549  
 An improved synthesis of 2,4,8,10-tetroxaspiro  
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 [NASA-CASE-ARC-11243-2] c23 N80-31472  
 Pocket ECG electrode  
 [NASA-CASE-ARC-11258-1] c52 N80-33081  
 Subcutaneous electrode structure  
 [NASA-CASE-ARC-11117-1] c52 N81-14612  
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 [NASA-CASE-MFS-23845-1] c33 N81-17348  
 Autonomous navigation system  
 [NASA-CASE-ARC-11257-1] c04 N81-21047  
 Phosphorus-containing bisimide resins  
 [NASA-CASE-ARC-11321-1] c27 N81-27272  
**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION,  
 WASHINGTON, D. C.**  
 Optical spin compensator  
 [NASA-CASE-IGS-02401] c14 N69-27485  
 Waveguide mixer  
 [NASA-CASE-ERC-10179] c07 N72-20141  
 Semiconductor-ferroelectric memory device  
 [NASA-CASE-ERC-10307] c08 N72-21198  
 Shielded cathode mode bulk effect devices  
 [NASA-CASE-ERC-10119] c26 N72-21701  
 Fabrication of single crystal film semiconductor  
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 [NASA-CASE-ERC-10222] c09 N72-22199  
 Two color horizon sensor  
 [NASA-CASE-ERC-10174] c14 N72-25409  
 Ultraviolet atomic emission detector  
 [NASA-CASE-HQN-10756-1] c14 N72-25428  
 Optical pump and driver system for lasers  
 [NASA-CASE-ERC-10283] c16 N72-25485  
 Clear air turbulence detector  
 [NASA-CASE-ERC-10081] c14 N72-28437  
 Head-up attitude display  
 [NASA-CASE-ERC-10392] c21 N73-14692  
 System for indicating direction of intruder  
 aircraft  
 [NASA-CASE-ERC-10226-1] c14 N73-16483  
 Aircraft control system  
 [NASA-CASE-ERC-10439] c02 N73-19004  
 Display system  
 [NASA-CASE-ERC-10350] c14 N73-20474  
 Method and apparatus for measuring solar  
 activity and atmospheric radiation effects  
 [NASA-CASE-ERC-10276] c14 N73-26432  
 Doppler shift system  
 [NASA-CASE-HQN-10740-1] c72 N74-19310  
 Auditory display for the blind  
 [NASA-CASE-HQN-10832-1] c71 N74-21014  
 Laser system with an antiresonant optical ring  
 [NASA-CASE-HQN-10844-1] c36 N75-19653  
 Physical correction filter for improving the  
 optical quality of an image  
 [NASA-CASE-HQN-10542-1] c74 N75-25706  
 Folding structure fabricated of rigid panels  
 [NASA-CASE-XHQ-02146] c18 N75-27040  
 Traveling wave solid state amplifier utilizing a  
 semiconductor with negative differential  
 mobility  
 [NASA-CASE-HQN-10069] c33 N75-27251  
 Vapor deposition apparatus  
 [NASA-CASE-HQN-10462] c25 N75-29192  
 Resistive anode image converter  
 [NASA-CASE-HQN-10876-1] c33 N76-27473  
 Rechargeable battery which combats shape change  
 of the zinc anode  
 [NASA-CASE-HQN-10862-1] c44 N76-29699  
 System and method for tracking a signal source  
 [NASA-CASE-HQN-10880-1] c17 N78-17140  
 Non-equilibrium radiation nuclear reactor  
 [NASA-CASE-HQN-10841-1] c73 N78-19920  
 Cooling system for removing metabolic heat from  
 an hermetically sealed spacesuit  
 [NASA-CASE-ARC-11059-1] c54 N78-32721  
 Safety flywheel  
 [NASA-CASE-HQN-10888-1] c44 N79-14527  
 Flow diverter valve and flow diversion method  
 [NASA-CASE-HQN-00573-1] c37 N79-33468  
 Solar power satellite system  
 [NASA-CASE-HQN-10949-1] c44 N81-16530  
**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION. AMES  
 RESEARCH CENTER, HOFFETT FIELD, CALIF.**  
 Nonmagnetic thermal motor for a magnetometer  
 [NASA-CASE-XAR-03786] c09 N69-21313  
 Balanced bellows spirometer  
 [NASA-CASE-XAR-01547] c05 N69-21473  
 Cryogenic apparatus for measuring the intensity  
 of magnetic fields  
 [NASA-CASE-XAC-02407] c14 N69-27423  
 Variable stiffness polymeric damper  
 [NASA-CASE-XAC-11225] c14 N69-27486  
 Shock-layer radiation measurement  
 [NASA-CASE-XAC-02970] c14 N69-39896  
 Protective circuit of the spark gap type  
 [NASA-CASE-XAC-08981] c09 N69-39897  
 Apparatus for coupling a plurality of ungrounded  
 circuits to a grounded circuit Patent  
 [NASA-CASE-XAC-00086] c09 N70-33182  
 Two-plane balance Patent  
 [NASA-CASE-XAC-00073] c14 N70-34813  
 Centrifuge mounted motion simulator Patent  
 [NASA-CASE-XAC-00399] c11 N70-34815  
 Differential pressure cell Patent  
 [NASA-CASE-XAC-00042] c14 N70-34816  
 High-temperature, high-pressure spherical  
 segment valve Patent  
 [NASA-CASE-XAC-00074] c15 N70-34817  
 Magnetically centered liquid column float Patent  
 [NASA-CASE-XAC-00030] c14 N70-34820  
 Propeller blade loading control Patent  
 [NASA-CASE-XAC-00139] c02 N70-34856

Temperature compensated solid state differential amplifier Patent  
 [NASA-CASE-XAC-00435] c09 N70-35440

High speed low level electrical stepping switch Patent  
 [NASA-CASE-XAC-00060] c09 N70-39915

Analog-to-digital conversion system Patent  
 [NASA-CASE-XAC-00404] c08 N70-4C125

Null-type vacuum microbalance Patent  
 [NASA-CASE-XAC-00472] c15 N70-40180

Thermo-protective device for balances Patent  
 [NASA-CASE-XAC-00648] c14 N70-40400

Three-axis controller Patent  
 [NASA-CASE-XAC-01404] c05 N70-41581

Electric arc device for heating gases Patent  
 [NASA-CASE-XAC-00319] c25 N70-41628

Dynamic sensor Patent  
 [NASA-CASE-XAC-02877] c14 N70-41681

Universal pilot restraint suit and body support therefor Patent  
 [NASA-CASE-XAC-00405] c05 N70-41819

Proportional controller Patent  
 [NASA-CASE-XAC-03392] c03 N70-41954

Force transducer Patent  
 [NASA-CASE-XAC-01101] c14 N70-41957

Electrode construction Patent  
 [NASA-CASE-ARC-10043-1] c05 N71-11193

Telemeter adaptable for implanting in an animal Patent  
 [NASA-CASE-XAC-05706] c05 N71-12342

Gyrator type circuit Patent  
 [NASA-CASE-XAC-10608-1] c09 N71-12517

Ultraviolet resonance lamp Patent  
 [NASA-CASE-ARC-10030] c09 N71-12521

Differential temperature transducer Patent  
 [NASA-CASE-XAC-00812] c14 N71-15598

Multiple circuit switch apparatus with improved pivot actuator switch structure Patent  
 [NASA-CASE-XAC-03777] c10 N71-15909

Method of planetary atmospheric investigation using a split-trajectory dual flyby mode Patent  
 [NASA-CASE-XAC-08494] c30 N71-15990

High efficiency multivibrator Patent  
 [NASA-CASE-XAC-00942] c10 N71-16042

Apparatus for measuring conductivity and velocity of plasma utilizing a plurality of sensing coils positioned in the plasma Patent  
 [NASA-CASE-XAC-05695] c25 N71-16073

Flight craft Patent  
 [NASA-CASE-XAC-02058] c02 N71-16087

Three-axis finger tip controller for switches Patent  
 [NASA-CASE-XAC-02405] c09 N71-16089

Electrostatic charged particle analyzer having deflection members shaped according to the periodic voltage applied thereto Patent  
 [NASA-CASE-XAC-05506-1] c24 N71-16095

Inertial reference apparatus Patent  
 [NASA-CASE-XAC-03107] c23 N71-16098

Fastener apparatus Patent  
 [NASA-CASE-ARC-10140-1] c15 N71-17653

Stabilization of gravity oriented satellites Patent  
 [NASA-CASE-XAC-01591] c31 N71-17729

Microwave flaw detector Patent  
 [NASA-CASE-ARC-10009-1] c15 N71-17822

Hypervelocity gun Patent  
 [NASA-CASE-XAC-05902] c11 N71-18578

Nonlinear analog-to-digital converter Patent  
 [NASA-CASE-XAC-04031] c08 N71-18594

Demodulation system Patent  
 [NASA-CASE-XAC-04030] c10 N71-19472

Phase quadrature-plural channel data transmission system Patent  
 [NASA-CASE-XAC-06302] c08 N71-19763

Two force component measuring device Patent  
 [NASA-CASE-XAC-04886-1] c14 N71-20439

Attitude controls for VTOL aircraft Patent  
 [NASA-CASE-XAC-08972] c02 N71-20570

Electric arc apparatus Patent  
 [NASA-CASE-XAC-01677] c09 N71-20816

Inertia diaphragm pressure transducer Patent  
 [NASA-CASE-XAC-02981] c14 N71-21072

Stirring apparatus for plural test tubes Patent  
 [NASA-CASE-XAC-06956] c15 N71-21177

Exposure system for animals Patent  
 [NASA-CASE-XAC-05333] c11 N71-22875

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] c09 N71-23021

Hall current measuring apparatus having a series resistor for temperature compensation Patent  
 [NASA-CASE-XAC-01662] c14 N71-23037

Transfer valve Patent  
 [NASA-CASE-XAC-01158] c15 N71-23051

Hard space suit Patent  
 [NASA-CASE-XAC-07043] c05 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  
 [NASA-CASE-XAC-05422] c04 N71-23185

Feedback integrator with grounded capacitor Patent  
 [NASA-CASE-XAC-10607] c10 N71-23669

Floating two force component measuring device Patent  
 [NASA-CASE-XAC-04885] c14 N71-23790

Control device Patent  
 [NASA-CASE-XAC-10019] c15 N71-23809

Means for suppressing or attenuating bending motion of elastic bodies Patent  
 [NASA-CASE-XAC-05632] c32 N71-23971

Device for measuring pressure Patent  
 [NASA-CASE-XAC-04458] c14 N71-24232

Transducer circuit and catheter transducer Patent  
 [NASA-CASE-ARC-10132-1] c09 N71-24597

Skeletal stressing method and apparatus Patent  
 [NASA-CASE-ARC-10100-1] c05 N71-24738

Modified polyurethane foams for fuel-fire Patent  
 [NASA-CASE-ARC-10098-1] c06 N71-24739

Deep space monitor communication satellite system Patent  
 [NASA-CASE-XAC-06029-1] c31 N71-24813

Laser fluid velocity detector Patent  
 [NASA-CASE-XAC-10770-1] c16 N71-24828

Transient video signal recording with expanded playback Patent  
 [NASA-CASE-ARC-10003-1] c09 N71-25866

Thermally cycled magnetometer Patent  
 [NASA-CASE-XAC-03740] c14 N71-26135

Optical machine tool alignment indicator Patent  
 [NASA-CASE-XAC-09489-1] c15 N71-26673

Energy limiter for hydraulic actuators Patent  
 [NASA-CASE-ARC-10131-1] c15 N71-27754

Multivibrator circuit with means to prevent false triggering from supply voltage fluctuations Patent  
 [NASA-CASE-ARC-10137-1] c09 N71-28468

Locomotion and restraint aid Patent  
 [NASA-CASE-ARC-10153] c05 N71-28619

Line following servosystem Patent  
 [NASA-CASE-XAC-00001] c15 N71-28952

Mechanically limited, electrically operated hydraulic valve system for aircraft controls Patent  
 [NASA-CASE-XAC-00048] c02 N71-29128

Precision rectifier with FET switching means Patent  
 [NASA-CASE-ARC-10101-1] c09 N71-33109

Solar cell Patent  
 [NASA-CASE-ARC-10050] c03 N71-33409

Phase shift circuit apparatus  
 [NASA-CASE-ARC-10269-1] c10 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] c09 N72-17152

Telemetry actuated switch  
 [NASA-CASE-ARC-10105] c09 N72-17153

Active RC networks  
 [NASA-CASE-ARC-10020] c10 N72-17172

Apparatus for automatically stabilizing the attitude of a nonguided vehicle  
 [NASA-CASE-ARC-10134] c30 N72-17873

Flexible fire retardant foam  
 [NASA-CASE-ARC-10180-1] c28 N72-20767

Method and apparatus for swept-frequency impedance measurements of welds  
 [NASA-CASE-ARC-10176-1] c15 N72-21464

Space suit having improved waist and torso movement  
 [NASA-CASE-ARC-10275-1] c05 N72-22092

RF controlled solid state switch  
 [NASA-CASE-ARC-10136-1] c09 N72-22202

Wide range dynamic pressure sensor  
 [NASA-CASE-ARC-10263-1] c14 N72-22438

Method and apparatus for measuring the damping characteristics of a structure  
[NASA-CASE-ARC-10154-1] c14 N72-22440

Magnetic position detection method and apparatus  
[NASA-CASE-ARC-10179-1] c21 N72-22619

Fluidic proportional thruster system  
[NASA-CASE-ARC-10106-1] c28 N72-22769

Thermoelectric radiometer utilizing polymer film  
[NASA-CASE-ARC-10138-1] c14 N72-24477

Polymeric vehicles as carriers for sulfonic acid salt of nitrosubstituted aromatic amines  
[NASA-CASE-ARC-10325] c06 N72-25147

Stereoscopic television system and apparatus  
[NASA-CASE-ARC-10160-1] c23 N72-27728

Metallic intrusion detector system  
[NASA-CASE-ARC-10265-1] c10 N72-28240

Apparatus for ionization analysis  
[NASA-CASE-ARC-10017-1] c14 N72-29464

Nondispersive gas analyzing method and apparatus wherein radiation is serially passed through a reference and unknown gas  
[NASA-CASE-ARC-10308-1] c06 N72-31141

Two degree inverted flexure  
[NASA-CASE-ARC-10345-1] c15 N73-12488

Intumescent paint containing nitrile rubber  
[NASA-CASE-ARC-10196-1] c18 N73-13562

Temperature compensated light source using a light emitting diode  
[NASA-CASE-ARC-10467-1] c09 N73-14214

Self-tuning bandpass filter  
[NASA-CASE-ARC-10264-1] c09 N73-20231

Micrometeoroid analyzer  
[NASA-CASE-ARC-10443-1] c14 N73-20477

Multiple pass reimaging optical system  
[NASA-CASE-ARC-10194-1] c23 N73-20741

Intruder detection system  
[NASA-CASE-ARC-10097-2] c07 N73-25160

Interferometric rotation sensor  
[NASA-CASE-ARC-10278-1] c14 N73-25463

Dual-fuselage aircraft having yawable wing and horizontal stabilizer  
[NASA-CASE-ARC-10470-1] c02 N73-26005

Temperature controller for a fluid cooled garment  
[NASA-CASE-ARC-10599-1] c05 N73-26071

Visual examination apparatus  
[NASA-CASE-ARC-10329-1] c05 N73-26072

Intumescent composition, foamed product prepared therewith, and process for making same  
[NASA-CASE-ARC-10304-1] c18 N73-26572

Infrared tunable laser  
[NASA-CASE-ARC-10463-1] c09 N73-32111

Low power electromagnetic flowmeter providing accurate zero set  
[NASA-CASE-ARC-10362-1] c14 N73-32326

Hand-held photomicroscope  
[NASA-CASE-ARC-10468-1] c14 N73-33361

Alignment apparatus using a laser having a gravitationally sensitive cavity reflector  
[NASA-CASE-ARC-10444-1] c16 N73-33397

Polyimide foam for the thermal insulation and fire protection  
[NASA-CASE-ARC-10464-1] c27 N74-12812

Flexible fire retardant polyisocyanate modified neoprene foam  
[NASA-CASE-ARC-10180-1] c27 N74-12814

Heater-mixer for stored fluids  
[NASA-CASE-ARC-10442-1] c35 N74-15093

Bimetallic fluid displacement apparatus  
[NASA-CASE-ARC-10441-1] c35 N74-15126

Automatic real-time pair-feeding system for animals  
[NASA-CASE-ARC-10302-1] c51 N74-15778

Overvoltage protection network  
[NASA-CASE-ARC-10197-1] c33 N74-17929

Ultrasonic biomedical measuring and recording apparatus  
[NASA-CASE-ARC-10597-1] c52 N74-20726

Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-1] c27 N74-21156

High speed shutter  
[NASA-CASE-ARC-10516-1] c70 N74-21300

Bio-isolated dc operational amplifier  
[NASA-CASE-ARC-10596-1] c33 N74-21851

Programmable physiological infusion  
[NASA-CASE-ARC-10447-1] c52 N74-22771

Chrono-fluorographic drug detector  
[NASA-CASE-ARC-10633-1] c25 N74-26947

Intumescent composition, foamed product prepared therewith and process for making same  
[NASA-CASE-ARC-10304-2] c27 N74-27037

Photomultiplier circuit including means for rapidly reducing the sensitivity thereof  
[NASA-CASE-ARC-10593-1] c33 N74-27682

G-load measuring and indicator apparatus  
[NASA-CASE-ARC-10806] c06 N74-27872

Concentric differential gearing arrangement  
[NASA-CASE-ARC-10462-1] c37 N74-27901

Measurement of plasma temperature and density using radiation absorption  
[NASA-CASE-ARC-10598-1] c75 N74-30156

Abating exhaust noises in jet engines  
[NASA-CASE-ARC-10712-1] c07 N74-33218

Solid medium thermal engine  
[NASA-CASE-ARC-10461-1] c44 N74-33379

Automated analysis of oxidative metabolites  
[NASA-CASE-ARC-10469-1] c25 N75-12086

Method of preparing water purification membranes  
[NASA-CASE-ARC-10643-1] c25 N75-12087

Method of forming aperture plate for electron microscope  
[NASA-CASE-ARC-10448-2] c74 N75-12732

Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c05 N75-12930

Wind tunnel flow generation section  
[NASA-CASE-ARC-10710-1] c09 N75-12969

Continuous Fourier transform method and apparatus  
[NASA-CASE-ARC-10466-1] c60 N75-13539

Dual wavelength scanning Doppler velocimeter  
[NASA-CASE-ARC-10637-1] c35 N75-16783

Signal conditioning circuit apparatus  
[NASA-CASE-ARC-10348-1] c33 N75-19518

Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-3] c33 N75-19520

Reversed cowl flap inlet thrust augmentor  
[NASA-CASE-ARC-10754-1] c07 N75-24736

Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-2] c33 N75-25041

Rotary plant growth accelerating apparatus  
[NASA-CASE-ARC-10722-1] c51 N75-25503

Shoulder harness and lap belt restraint system  
[NASA-CASE-ARC-10519-2] c05 N75-25915

Gas chromatograph injection system  
[NASA-CASE-ARC-10344-2] c35 N75-26334

Reference apparatus for medical ultrasonic transducer  
[NASA-CASE-ARC-10753-1] c54 N75-27760

Electric arc light source having undercut recessed anode  
[NASA-CASE-ARC-10266-1] c33 N75-29318

G-load measuring and indicator apparatus  
[NASA-CASE-ARC-10806-1] c35 N75-29381

NDIR gas analyzer based on absorption modulation ratios for known and unknown samples  
[NASA-CASE-ARC-10802-1] c35 N75-30502

Diatonic infrared gasdynamic laser  
[NASA-CASE-ARC-10370-1] c36 N75-31426

Pneumatic load compensating or controlling system  
[NASA-CASE-ARC-10907-1] c37 N75-32465

Combined dual scatter, local oscillator laser Doppler velocimeter  
[NASA-CASE-ARC-10642-1] c36 N76-14447

Fiber modified polyurethane foam for ballistic protection  
[NASA-CASE-ARC-10714-1] c27 N76-15310

Transparent fire resistant polymeric structures  
[NASA-CASE-ARC-10813-1] c27 N76-16230

Noise suppressor for turbo fan jet engines  
[NASA-CASE-ARC-10812-1] c07 N76-18131

Modulated hydrogen ion flame detector  
[NASA-CASE-ARC-10322-1] c35 N76-18403

Electrical conductivity cell and method for fabricating the same  
[NASA-CASE-ARC-10810-1] c33 N76-19339

Method and apparatus for compensating reflection losses in a path length modulated absorption-absorption trace gas detector  
[NASA-CASE-ARC-10631-1] c74 N76-20958

Trielectrode capacitive pressure transducer  
[NASA-CASE-ARC-10711-2] c33 N76-21390

Nulling device for detection of trace gases by NDIR absorption  
[NASA-CASE-ARC-10760-1] c25 N76-22323

Silica reusable surface insulation  
[NASA-CASE-ARC-10721-1] c27 N76-22376

Optical alignment device  
[NASA-CASE-ARC-10932-1] c74 N76-22993

Vehicle simulator binocular multiplanar visual display system [NASA-CASE-ARC-10808-1]	c09 N76-24280	Automatic multiple-sample applicator and electrophoresis apparatus [NASA-CASE-ARC-10991-1]	c25 N78-14104
Readout electrode assembly for measuring biological impedance [NASA-CASE-ARC-10816-1]	c35 N76-24525	Flow separation detector [NASA-CASE-ARC-11046-1]	c35 N78-14364
System for measuring Reynolds in a turbulently flowing fluid [NASA-CASE-ARC-10755-2]	c34 N76-27517	Honeycomb-laminate composite structure [NASA-CASE-ARC-10913-1]	c24 N78-15180
Oblique-wing supersonic aircraft [NASA-CASE-ARC-10470-3]	c05 N76-25217	Heat pipe with dual working fluids [NASA-CASE-ARC-10198]	c34 N78-17336
Accelerometer telemetry system [NASA-CASE-ARC-10849-1]	c17 N76-29347	Multi-chamber controllable heat pipe [NASA-CASE-ARC-10199]	c34 N78-17337
Miniature ingestible telemeter devices to measure deep-body temperature [NASA-CASE-ARC-10583-1]	c52 N76-25894	Walking boot assembly [NASA-CASE-ARC-11101-1]	c54 N78-17675
Visual examination apparatus [US-PATENT-BE-28,921]	c52 N76-30793	Full color hybrid display for aircraft simulators [NASA-CASE-ARC-10903-1]	c09 N78-18083
Integrated structure vacuum tube [NASA-CASE-ARC-10445-1]	c31 N76-31365	Apparatus for measuring a sorbate dispersed in a fluid stream [NASA-CASE-ARC-10896-1]	c35 N78-19465
Ultraviolet and thermally stable polymer compositions [NASA-CASE-ARC-10592-2]	c27 N76-32315	Automatic fluid dispenser [NASA-CASE-ARC-10820-1]	c35 N78-19466
Bioomedical ultrasonoscope [NASA-CASE-ARC-10994-1]	c52 N76-33835	Synthesis of multifunction triaryltrifluoroethanes [NASA-CASE-ARC-11097-1]	c23 N78-22154
Thermistor holder for skin temperature measurements [NASA-CASE-ARC-10855-1]	c52 N77-10780	Synthesis of multifunction triaryltrifluoroethanes [NASA-CASE-ARC-11097-2]	c23 N78-22155
Spectrally balanced chromatic landing approach lighting system [NASA-CASE-ARC-10990-1]	c04 N77-12031	Intumescent-ablator coatings using endothermic fillers [NASA-CASE-ARC-11043-1]	c24 N78-27180
Smoke generator [NASA-CASE-ARC-10905-1]	c37 N77-13418	Low density bismaleimide-carbon microballoon composites [NASA-CASE-ARC-11040-2]	c24 N78-27184
Electron microscope aperture system [NASA-CASE-ARC-10448-3]	c35 N77-14408	Rotary leveling base platform [NASA-CASE-ARC-10981-1]	c37 N78-27425
Liquid cooled brassiere and method of diagnosing malignant tumors therewith [NASA-CASE-ARC-11007-1]	c52 N77-14736	Tread drum for animals [NASA-CASE-ARC-10917-1]	c51 N78-27733
Hingeless helicopter rotor with improved stability [NASA-CASE-ARC-10807-1]	c05 N77-17029	Polymeric foams from cross-linkable poly-n-arylenbenzimidazole [NASA-CASE-ARC-11008-1]	c27 N78-31232
The engine air intake system [NASA-CASE-ARC-10761-1]	c07 N77-18154	Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge [NASA-CASE-ARC-11057-1]	c27 N78-31233
Spring operated accelerator and constant force spring mechanism therefor [NASA-CASE-ARC-10898-1]	c35 N77-18417	Spacesuit mobility joints [NASA-CASE-ARC-11058-1]	c54 N78-31735
Rotating launch device for a remotely piloted aircraft [NASA-CASE-ARC-10979-1]	c09 N77-19076	Spacesuit torso closure [NASA-CASE-ARC-11100-1]	c54 N78-31736
Tubular sublimatory evaporator heat sink [NASA-CASE-ARC-10912-1]	c34 N77-19353	Process for preparing higher oxides of the alkali and alkaline earth metals [NASA-CASE-ARC-10992-1]	c26 N78-32229
Selective data segment monitoring system [NASA-CASE-ARC-10899-1]	c60 N77-19760	Reaction cured glass and glass coatings [NASA-CASE-ARC-11051-1]	c27 N78-32260
All sky pointing attitude control system [NASA-CASE-ARC-10716-1]	c35 N77-20399	Angle detector [NASA-CASE-ARC-11036-1]	c35 N78-32395
Metallic hot wire anemometer [NASA-CASE-ARC-10911-1]	c35 N77-20400	Spray coating apparatus having a rotatable workpiece holder [NASA-CASE-ARC-11110-1]	c37 N78-32434
Optical instrument employing reticle having preselected visual response pattern formed thereon [NASA-CASE-ARC-10976-1]	c74 N77-22950	Process for producing a well-adhered durable optical coating on an optical plastic substrate [NASA-CASE-ARC-11039-1]	c74 N78-32854
Abrasion resistant coatings for plastic surfaces [NASA-CASE-ARC-10915-3]	c24 N77-24200	Process for the preparation of calcium superoxide [NASA-CASE-ARC-11053-1]	c25 N79-10162
Sampling video compression system [NASA-CASE-ARC-10984-1]	c32 N77-24328	Contour detector and data acquisition system for the left ventricular outline [NASA-CASE-ARC-10985-1]	c52 N79-10724
Method for making a hot wire anemometer and product thereof [NASA-CASE-ARC-10900-1]	c35 N77-24454	Ambient cure polyimide foams [NASA-CASE-ARC-11170-1]	c27 N79-11215
Pseudo-backscatter laser Doppler velocimeter employing antiparallel-reflector in the forward direction [NASA-CASE-ARC-10970-1]	c36 N77-25501	Microelectrophoretic apparatus and process [NASA-CASE-ARC-11121-1]	c25 N79-14169
System for measuring three fluctuating velocity components in a turbulently flowing fluid [NASA-CASE-ARC-10974-1]	c34 N77-27345	Preparation of dielectric coating of variable dielectric constant by plasma polymerization [NASA-CASE-ARC-10892-2]	c27 N79-14214
Twin-capacitive shaft angle encoder with analog output signal [NASA-CASE-ARC-10897-1]	c33 N77-31404	Electric discharge for treatment of trace contaminants [NASA-CASE-ARC-10975-1]	c33 N79-15245
Anthropomorphic master/slave manipulator system [NASA-CASE-ARC-10756-1]	c54 N77-32721	Low density bismaleimide-carbon microballoon composites [NASA-CASE-ARC-11040-1]	c24 N79-16915
Mechanical energy storage device for hip disarticulation [NASA-CASE-ARC-10916-1]	c52 N78-10686	Constant lift rotor for a heavier than air craft [NASA-CASE-ARC-11045-1]	c05 N79-17847
Optically selective, acoustically resonant gas detecting transducer [NASA-CASE-ARC-10639-1]	c35 N78-13400	Oxygen post-treatment of plastic surface coated with plasma polymerized silicon-containing monomers [NASA-CASE-ARC-10915-2]	c27 N79-18052
Intumescent coatings containing 4,4'-dinitrosulfanilide [NASA-CASE-ARC-11042-1]	c24 N78-14096	Miniature implantable ultrasonic echosonometer [NASA-CASE-ARC-11035-1]	c52 N79-18580
		Preparation of heterocyclic block copolymer omega-dianidoximes [NASA-CASE-ARC-11060-1]	c27 N79-22300
		High acceleration cable deployment system [NASA-CASE-ARC-11256-1]	c37 N79-23432

Fibrous refractory composite insulation  
[NASA-CASE-ARC-11169-1] c24 N79-24062

Spacesuit mobility knee joints  
[NASA-CASE-ARC-11058-2] c54 N79-24651

Fire protection covering for small diameter missiles  
[NASA-CASE-ARC-11104-1] c15 N79-26100

Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-2] c52 N79-26771

Controller arm for a remotely related slave arm  
[NASA-CASE-ARC-11052-1] c37 N79-28551

An improved synthesis of 2, 4, 8, 10-tetroxaspiro (5.5)undecane  
[NASA-CASE-ARC-11243-1] c27 N79-30375

Improved synthesis of polyformals  
[NASA-CASE-ARC-11244-1] c27 N79-30376

Electrical short locator  
[NASA-CASE-ARC-11116-1] c33 N79-31498

Environmental fog/rain visual display system for aircraft simulators  
[NASA-CASE-ARC-11158-1] c09 N79-33220

Use of glow discharge in fluidized beds  
[NASA-CASE-ARC-11245-1] c33 N80-11326

Acoustically swept rotor  
[NASA-CASE-ARC-11106-1] c05 N80-14107

Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides  
[NASA-CASE-ARC-11107-1] c25 N80-16116

Cryogenic container compound suspension strap  
[NASA-CASE-ARC-11157-1] c37 N80-16393

Induction powered biological radiosonde  
[NASA-CASE-ARC-11120-1] c52 N80-18691

Carboranylcyclotriphosphazenes and their polymers  
[NASA-CASE-ARC-11176-1] c27 N80-21533

Method for making patterns for resin matrix composites  
[NASA-CASE-ARC-11246-1] c24 N80-22410

Chelate-modified polymers for atmospheric gas chromatography  
[NASA-CASE-ARC-11154-1] c25 N80-23383

Reverse osmosis membrane of high urea rejection properties  
[NASA-CASE-ARC-10980-1] c27 N80-23452

Adjustable high emittance gap filler  
[NASA-CASE-ARC-11310-1] c27 N80-23454

Reduction of nitric oxide emissions from a combustor  
[NASA-CASE-ARC-10814-2] c07 N80-26298

Preparation of perfluorinated imidoylamidoximes  
[NASA-CASE-ARC-11267-1] c23 N80-26386

Preparation of perfluorinated 1,2,4-oxadiazoles  
[NASA-CASE-ARC-11267-2] c25 N80-26407

Pressure suit joint analyzer  
[NASA-CASE-ARC-11314-1] c54 N80-30043

An improved synthesis of 2,4,8,10-tetroxaspiro (5.5) undecane  
[NASA-CASE-ARC-11243-2] c23 N80-31472

Synthesis of dawsonites  
[NASA-CASE-ARC-113261-1] c25 N80-31490

Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c07 N80-32392

Pocket ECG electrode  
[NASA-CASE-ARC-11258-1] c52 N80-33081

Structural wood panels with improved fire resistance  
[NASA-CASE-ARC-11174-1] c24 N81-13999

Perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups  
[NASA-CASE-ARC-11241-1] c25 N81-14016

Micro-fluid exchange coupling apparatus  
[NASA-CASE-ARC-11114-1] c51 N81-14605

Subcutaneous electrode structure  
[NASA-CASE-ARC-11117-1] c52 N81-14612

Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-2] c52 N81-14613

Rhomboid prism pair for rotating the plane of parallel light beams  
[NASA-CASE-ARC-11311-1] c74 N81-16882

Process for the preparation of fluorine containing crosslinked elastomeric polytriazine and product so produced  
[NASA-CASE-ARC-11248-1] c27 N81-17259

The 1,2,4-oxadiazole elastomers  
[NASA-CASE-ARC-11253-1] c27 N81-17262

Pressure control valve  
[NASA-CASE-ARC-11251-1] c37 N81-17433

Intrusion detection method and apparatus  
[NASA-CASE-ARC-11317-1] c35 N81-19430

Sidelooking laser altimeter for a flight simulator  
[NASA-CASE-ARC-11312-1] c36 N81-19439

Autonomous navigation system  
[NASA-CASE-ARC-11257-1] c04 N81-21047

Bifunctional monomers having terminal oxime and cyano or amidine groups  
[NASA-CASE-ARC-11253-3] c27 N81-24256

Spine immobilization apparatus  
[NASA-CASE-ARC-11167-1] c52 N81-25662

Process for the preparation of polycarboranylphosphazenes  
[NASA-CASE-ARC-11176-2] c27 N81-27271

Phosphorus-containing bisimide resins  
[NASA-CASE-ARC-11321-1] c27 N81-27272

Refrigerator module, system and process  
[NASA-CASE-ARC-11263-1] c31 N81-27328

Method of carbonizing polyacrylonitrile fibers and resulting product  
[NASA-CASE-ARC-11261-1] c24 N81-29164

Dual-beam skin friction interferometer  
[NASA-CASE-ARC-11354-1] c36 N81-29415

Sweat collection capsule  
[NASA-CASE-ARC-11031-1] c52 N81-29763

Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-1] c52 N81-29764

Resin composition, process for producing the same, product produced therefrom and process for producing said product  
[NASA-CASE-ARC-11331-1] c27 N81-31363

Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c27 N81-31364

Non-invasive method and apparatus for measuring pressure within a pliable vessel  
[NASA-CASE-ARC-11264-1] c52 N81-33804

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION. HUGH L. DRYDEN FLIGHT RESEARCH CENTER, EDWARDS, CALIF.**

Fifth wheel  
[NASA-CASE-FRC-10081-1] c37 N77-14477

Window comparator  
[NASA-CASE-FRC-10090-1] c33 N78-18308

Wire stripper  
[NASA-CASE-FRC-10111-1] c37 N79-10419

Free wing assembly for an aircraft  
[NASA-CASE-FRC-10092-1] c05 N79-12061

Voltage regulator for battery power source  
[NASA-CASE-FRC-10116-1] c33 N79-23345

An annular wing  
[NASA-CASE-FRC-11007-2] c02 N79-24959

A system for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-FRC-11005-1] c06 N79-24988

Superplastically formed diffusion bonded metallic structure  
[NASA-CASE-FRC-11026-1] c39 N79-25424

Power converter  
[NASA-CASE-FRC-11014-1] c33 N79-27395

Smoothing filter for digital to analog conversion  
[NASA-CASE-FRC-11025-1] c60 N80-17723

Air speed and attitude probe  
[NASA-CASE-FRC-11009-1] c06 N80-18036

Improved Sun-sensing guidance system for high-altitude aircraft  
[NASA-CASE-FRC-11052-1] c04 N80-20249

Apparatus for damping operator induced oscillations of a controlled system  
[NASA-CASE-FRC-11041-1] c33 N80-20488

Attaching of strain gages to substrates  
[NASA-CASE-FRC-10093-1] c35 N80-20560

Computer circuit card puller  
[NASA-CASE-FRC-11042-1] c37 N80-20589

Pulse transducer with artifact signal attenuator  
[NASA-CASE-FRC-11012-1] c52 N80-23969

Portable device for use in starting air-start-units for aircraft and having cable lead testing capability  
[NASA-CASE-FRC-10113-1] c33 N80-26599

System for use in conducting wake investigation for a wing in flight  
[NASA-CASE-FRC-11024-1] c02 N80-28300

Active notch filter network with variable notch depth, width and frequency  
[NASA-CASE-FRC-11055-1] c33 N80-29583

Multiple pure tone elimination strut assembly  
[NASA-CASE-FRC-11062-1] c07 N80-32393

Improved low-drag ground vehicle particularly suited for use in safely transporting livestock



[NASA-CASE-FRC-11058-1] c85 N80-33312  
Skin friction measuring device for aircraft

[NASA-CASE-FRC-11029-1] c06 N81-17057  
Method for observing the features characterizing the surface of a land mass

[NASA-CASE-FRC-11013-1] c43 N81-17499  
Aircraft body-axis rotation measurement system

[NASA-CASE-FRC-11043-1] c06 N81-22048  
Aircraft canopy lock

[NASA-CASE-FRC-11065-1] c05 N81-24047  
Thermocouple, multiple junction reference oven

[NASA-CASE-FRC-10112-1] c35 N81-26431  
Electrical servo actuator bracket

[NASA-CASE-FRC-11044-1] c37 N81-33483

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.  
ELECTRONICS RESEARCH CENTER, CAMBRIDGE, MASS.**

Method and apparatus for wavelength tuning of liquid lasers

[NASA-CASE-ERC-10187] c16 N69-31343  
A method for the deposition of beta-silicon carbide by isoeptaxy

[NASA-CASE-ERC-10120] c26 N69-33482  
Full flow with shut off and selective drainage control valve Patent application

[NASA-CASE-ERC-10208] c15 N70-10867  
A method for selective gold diffusion of monolithic silicon devices and/or circuits Patent application

[NASA-CASE-ERC-10072] c09 N70-11148  
Method and means for an improved electron beam scanning system Patent

[NASA-CASE-ERC-10552] c09 N71-12539  
Apparatus and method for separating a semiconductor wafer Patent

[NASA-CASE-ERC-10138] c26 N71-14354  
Focused image holography with extended sources Patent

[NASA-CASE-ERC-10019] c16 N71-15551  
Recording and reconstructing focused image holograms Patent

[NASA-CASE-ERC-10017] c16 N71-15567  
Sorption vacuum trap Patent

[NASA-CASE-XER-09519] c14 N71-18483  
Voltage tunable Gunn-type microwave generator Patent

[NASA-CASE-XER-07894] c09 N71-16721  
Array phasing device Patent

[NASA-CASE-ERC-10046] c10 N71-16722  
Parametric microwave noise generator Patent

[NASA-CASE-XER-11019] c09 N71-23598  
Saturation current protection apparatus for saturable core transformers Patent

[NASA-CASE-ERC-10075] c09 N71-24800  
Repetitively pulsed, wavelength selective laser Patent

[NASA-CASE-ERC-10178] c16 N71-24832  
Optical mirror apparatus Patent

[NASA-CASE-ERC-10001] c23 N71-24868  
Unsaturation saturable core transformer Patent

[NASA-CASE-ERC-10125] c09 N71-24893  
Leak detector wherein a probe is monitored with ultraviolet radiation Patent

[NASA-CASE-ERC-10034] c15 N71-24896  
Method for detecting leaks in hermetically sealed containers Patent

[NASA-CASE-ERC-10045] c15 N71-24910  
Satellite aided vehicle avoidance system Patent

[NASA-CASE-ERC-10090] c21 N71-24948  
Transverse piezoresistance and pinch effect electromechanical transducers Patent

[NASA-CASE-ERC-10088] c26 N71-25490  
A solid state acoustic variable time delay line Patent

[NASA-CASE-ERC-10032] c10 N71-25900  
Method and means for recording and reconstructing holograms without use of a reference beam Patent

[NASA-CASE-ERC-10020] c16 N71-26154  
Electromechanical control actuator system Patent

[NASA-CASE-ERC-10022] c15 N71-26635  
Method and apparatus for detecting gross leaks Patent

[NASA-CASE-ERC-10033] c14 N71-26672  
Field ionization electrodes Patent

[NASA-CASE-ERC-10013] c09 N71-26678  
Voltage regulator Patent

[NASA-CASE-ERC-10113] c09 N71-27053  
A multichannel photoionization chamber for absorption analysis Patent

[NASA-CASE-ERC-10044-1] c14 N71-27090  
Pressure sensitive transducers Patent

[NASA-CASE-ERC-10087] c14 N71-27334  
Constant frequency output two stage induction machine systems Patent

[NASA-CASE-ERC-10065] c09 N71-27364  
Fluid power transmitting gas bearing Patent

[NASA-CASE-ERC-10097] c15 N71-28465  
Color television systems using a single gun color cathode ray tube Patent

[NASA-CASE-ERC-10098] c09 N71-28618  
Ion microprobe mass spectrometer for analyzing fluid materials Patent

[NASA-CASE-ERC-10014] c14 N71-28863  
Orifice gross leak tester Patent

[NASA-CASE-ERC-10150] c14 N71-28992  
Device for measuring light scattering wherein the measuring beam is successively reflected between a pair of parallel reflectors Patent

[NASA-CASE-XER-11203] c14 N71-28994  
Quasi-optical microwave component Patent

[NASA-CASE-ERC-10011] c07 N71-29065  
Multiple hologram recording and readout system Patent

[NASA-CASE-ERC-10151] c16 N71-29131  
Plasma fluidic hybrid display Patent

[NASA-CASE-ERC-10100] c09 N71-33519  
Optical systems having spatially invariant outputs

[NASA-CASE-ERC-10248] c14 N72-17323  
Method of detecting impending saturation of magnetic cores

[NASA-CASE-ERC-10089] c23 N72-17747  
Logarithmic function generator utilizing an exponentially varying signal in an inverse manner

[NASA-CASE-ERC-10267] c09 N72-23173  
Method and apparatus for limiting field emission current

[NASA-CASE-ERC-10015-2] c10 N72-27246

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.  
FLIGHT RESEARCH CENTER, EDWARDS, CALIF.**

Rocket chamber leak test fixture

[NASA-CASE-XFR-09479] c14 N69-27503  
Three axis controller Patent

[NASA-CASE-XFR-00181] c21 N70-33279  
Catalyst bed removing tool Patent

[NASA-CASE-XFR-00811] c15 N70-36901  
Two-axis controller Patent

[NASA-CASE-XFR-04104] c03 N70-42073  
Controlled visibility device for an aircraft Patent

[NASA-CASE-XFR-04147] c11 N71-10748  
Biomedical electrode arrangement Patent

[NASA-CASE-XFR-10856] c05 N71-11189  
Lifting body Patent Application

[NASA-CASE-FRC-10063] c01 N71-12217  
Energy management system for glider type vehicle Patent

[NASA-CASE-XFR-00756] c02 N71-13421  
Quick attach mechanism Patent

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Heat flux measuring system Patent

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[NASA-CASE-XFR-05302] c15 N71-23254  
Traversing probe Patent

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[NASA-CASE-FRC-10005] c15 N71-26145  
Pulsed excitation voltage circuit for transducers

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Acoustical transducer calibrating system and apparatus

[NASA-CASE-FRC-10060-1] c14 N73-27379  
Three-axis adjustable loading structure

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Terminal guidance system

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Full wave modulator-demodulator amplifier apparatus

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Rotating raster generator

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GODDARD INST. FOR SPACE STUDIES, NEW YORK.**

Application of luciferase assay for ATP to antimicrobial drug susceptibility

[NASA-CASE-GSC-12039-1] c51 N77-22794

Method for fabricating a mass spectrometer inlet leak  
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Length controlled stabilized mode-lock ND:YAG laser  
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Three phase full wave dc motor decoder  
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A cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c52 N77-26796

Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c74 N77-26942

Opto-mechanical subsystem with temperature compensation through isothermal design  
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[NASA-CASE-GSC-11063-1] c37 N77-27400

Wideband heterodyne receiver for laser communication system  
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Method and apparatus for producing an image from a transparent object  
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Pseudo noise code and data transmission method and apparatus  
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Fluid sampling device  
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Analog to digital converter for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-3] c60 N77-32731

Remote sensing of vegetation and soil using microwave ellipsometry  
[NASA-CASE-GSC-11976-1] c43 N78-10529

Memory device for two-dimensional radiant energy array computers  
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Regulated dc to dc converter  
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Apparatus for measuring swelling characteristics of membranes  
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Tumbler system to provide random motion  
[NASA-CASE-XGS-02437] c15 N69-21472

Automatic acquisition system for phase-lock loop  
[NASA-CASE-XGS-04994] c09 N69-21543

Low power drain semi-conductor circuit  
[NASA-CASE-XGS-04999] c09 N69-24317

Spacecraft battery seals  
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Scanning aspect sensor employing an apertured disc and a commutator  
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Monopulse system with an electronic scanner  
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Ring counter  
[NASA-CASE-XGS-03095] c09 N69-27463

Retrodirective optical system  
[NASA-CASE-XGS-04480] c16 N69-27491

Time division multiplex system  
[NASA-CASE-XGS-05918] c07 N69-35974

Doppler frequency spread correction device for multiplex transmissions  
[NASA-CASE-XGS-02749] c07 N69-39978

Alkali-metal silicate protective coating  
[NASA-CASE-XGS-04119] c18 N69-39979

Device for measuring electron-beam intensities and for subjecting materials to electron irradiation in an electron microscope  
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Light sensitive digital aspect sensor Patent  
[NASA-CASE-XGS-00359] c14 N70-34158

Method and apparatus for determining satellite orientation utilizing spatial energy sources Patent  
[NASA-CASE-XGS-00466] c21 N70-34297

Binary magnetic memory device Patent  
[NASA-CASE-XGS-00174] c08 N70-34743

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[NASA-CASE-XGS-00689] c08 N70-34787

Ultra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit Patent  
[NASA-CASE-XGS-00381] c09 N70-34819

Space and atmospheric reentry vehicle Patent  
[NASA-CASE-XGS-00260] c31 N70-37924

Variable frequency magnetic multivibrator Patent  
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Switching mechanism with energy storage means Patent  
[NASA-CASE-XGS-00473] c03 N70-38713

Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00131] c09 N70-38995

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[NASA-CASE-XGS-00619] c30 N70-40016

Folding boom assembly Patent  
[NASA-CASE-XGS-00938] c32 N70-41367

Cryogenic connector for vacuum use Patent  
[NASA-CASE-XGS-02441] c15 N70-41629

Endless tape cartridge Patent  
[NASA-CASE-XGS-00769] c14 N70-41647

Apparatus for producing three-dimensional recordings of fluorescence spectra Patent  
[NASA-CASE-XGS-01231] c14 N70-41676

Method and apparatus for determining electromagnetic characteristics of large surface area passive reflectors Patent  
[NASA-CASE-XGS-02608] c07 N70-41678

Prevention of pressure build-up in electrochemical cells Patent  
[NASA-CASE-XGS-01419] c03 N70-41864

Variable time constant smoothing circuit Patent  
[NASA-CASE-XGS-01983] c10 N70-41964

Endless tape transport mechanism Patent  
[NASA-CASE-XGS-01223] c07 N71-10609

Reversible ring counter employing cascaded single SCR stages Patent  
[NASA-CASE-XGS-01473] c09 N71-10673

Electronic beam switching commutator Patent  
[NASA-CASE-XGS-01451] c09 N71-10677

Sun tracker with rotatable plane-parallel plate and two photocells Patent  
[NASA-CASE-XGS-01159] c21 N71-10678

Non-magnetic battery case Patent  
[NASA-CASE-XGS-00886] c03 N71-11053

Interconnection of solar cells Patent  
[NASA-CASE-XGS-01475] c03 N71-11058

Frequency shift keyed demodulator Patent  
[NASA-CASE-XGS-02889] c07 N71-11282

Bi-polar phase detector and corrector for split phase PCM data signals Patent  
[NASA-CASE-XGS-01590] c07 N71-12392

Data processor having multiple sections activated at different times by selective power coupling to the sections Patent  
[NASA-CASE-XGS-04767] c08 N71-12494

Position location system and method Patent  
[NASA-CASE-GSC-10087-2] c21 N71-13958

Fire resistant coating composition Patent  
[NASA-CASE-GSC-10072] c18 N71-14014

Passively regulated water electrolysis rocket engine Patent  
[NASA-CASE-XGS-08729] c28 N71-14044

Attitude control system Patent  
[NASA-CASE-XGS-04393] c21 N71-14159

Retrodirective modulator Patent  
[NASA-CASE-GSC-10062] c14 N71-15605

Spacecraft attitude detection system by stellar reference Patent  
[NASA-CASE-XGS-03431] c21 N71-15642

Cartwheel satellite synchronization system Patent  
[NASA-CASE-XGS-05579] c31 N71-15676

Wide range linear fluxgate magnetometer Patent  
[NASA-CASE-XGS-01587] c14 N71-15962

Low friction magnetic recording tape Patent  
[NASA-CASE-XGS-00373] c23 N71-15978

Method for etching copper Patent  
[NASA-CASE-XGS-06306] c17 N71-16044

Bacteriostatic conformal coating and methods of application Patent  
[NASA-CASE-GSC-10007] c18 N71-16046

Serrodyne frequency converter re-entrant amplifier system Patent  
[NASA-CASE-XGS-01022] c07 N71-16088

Position location and data collection system and method Patent  
[NASA-CASE-GSC-10083-1] c30 N71-16090

Position sensing device employing misaligned magnetic field generating and detecting apparatus Patent  
[NASA-CASE-XGS-07514] c23 N71-16099

Optical tracker having overlapping reticles on parallel axes Patent  
[NASA-CASE-XGS-05715] c23 N71-16100

Self-erecting reflector Patent  
[NASA-CASE-XGS-09190] c31 N71-16102

Dust particle injector for hypervelocity accelerators Patent  
[NASA-CASE-XGS-06628] c24 N71-16213

Ellipsoidal mirror reflectometer including means for averaging the radiation reflected from the sample Patent  
[NASA-CASE-XGS-05291] c23 N71-16341

Angular position and velocity sensing apparatus Patent  
[NASA-CASE-XGS-05680] c14 N71-17585

Apparatus for controlling the velocity of an electromechanical drive for interferometers and the like Patent  
[NASA-CASE-XGS-03532] c14 N71-17627

Omni-directional anisotropic molecular trap Patent  
[NASA-CASE-XGS-00783] c30 N71-17788

Method of making tubes Patent  
[NASA-CASE-XGS-04175] c15 N71-18579

Pulse-type magnetic core memory element circuit with blocking oscillator feedback Patent  
[NASA-CASE-XGS-03303] c08 N71-18595

Ripple add and ripple subtract binary counters Patent  
[NASA-CASE-XGS-04766] c08 N71-18602

Computing apparatus Patent  
[NASA-CASE-XGS-04765] c08 N71-18693

Stepping motor control circuit Patent  
[NASA-CASE-GSC-10366-1] c10 N71-18772

Traffic control system and method Patent  
[NASA-CASE-GSC-10087-1] c02 N71-19287

Apparatus for measuring current flow Patent  
[NASA-CASE-XGS-02439] c14 N71-19431

Synchronous counter Patent  
[NASA-CASE-XGS-02440] c08 N71-19432

Wide range data compression system Patent  
[NASA-CASE-XGS-02612] c08 N71-19435

Apparatus for computing square roots Patent  
[NASA-CASE-XGS-04768] c08 N71-19437

Method and apparatus for battery charge control Patent  
[NASA-CASE-XGS-05432] c03 N71-19438

Stable amplifier having a stable quiescent point Patent  
[NASA-CASE-XGS-02812] c09 N71-19466

Tracking antenna system Patent  
[NASA-CASE-GSC-10553-1] c07 N71-19854

Electrochemical coulometer and method of forming same Patent  
[NASA-CASE-XGS-05434] c03 N71-20491

Display for binary characters Patent  
[NASA-CASE-XGS-04987] c08 N71-20571

Amplifier clamping circuit for horizon scanner Patent  
[NASA-CASE-XGS-01784] c10 N71-20782

Diversity receiving system with diversity phase lock Patent  
[NASA-CASE-XGS-01222] c10 N71-20841

Signal detection and tracking apparatus Patent  
[NASA-CASE-XGS-03502] c10 N71-20852

Polarization diversity monopulse tracking receiver Patent  
[NASA-CASE-XGS-03501] c09 N71-20864

System for recording and reproducing pulse code modulated data Patent  
[NASA-CASE-XGS-01021] c08 N71-21042

Satellite appendage tie down cord Patent  
[NASA-CASE-XGS-02554] c31 N71-21064

Reaction wheel scanner Patent  
[NASA-CASE-XGS-02629] c14 N71-21082

Nonmagnetic, explosive actuated indexing device Patent  
[NASA-CASE-XGS-02422] c15 N71-21529

Bidirectional step torque filter with zero backlash characteristic Patent  
[NASA-CASE-XGS-04227] c15 N71-21744

Conforming polisher for aspheric surface of revolution Patent  
[NASA-CASE-XGS-02884] c15 N71-22705

Precision thrust gage Patent  
[NASA-CASE-XGS-02319] c14 N71-22965

Sealing device for an electrochemical cell Patent  
[NASA-CASE-XGS-02630] c03 N71-22974

Rotary bead dropper and selector for testing micrometeorite detectors Patent  
[NASA-CASE-XGS-03304] c09 N71-22988

Moment of inertia test fixture Patent  
[NASA-CASE-XGS-01023] c14 N71-22992

Fluid flow meter with comparator reference means Patent  
[NASA-CASE-XGS-01331] c14 N71-22996

Foamed in place ceramic refractory insulating material Patent  
[NASA-CASE-XGS-02435] c18 N71-22998

Digital telemetry system Patent  
[NASA-CASE-XGS-01812] c07 N71-23001

Bonded elastomeric seal for electrochemical cells Patent  
[NASA-CASE-XGS-02631] c03 N71-23006

Apparatus providing a directive field pattern and attitude sensing of a spin stabilized satellite Patent  
[NASA-CASE-XGS-02607] c31 N71-23009

Complementary regenerative switch Patent  
[NASA-CASE-XGS-02751] c09 N71-23015

Solid state pulse generator with constant output width, for variable input width, in nanosecond range Patent  
[NASA-CASE-XGS-03427] c10 N71-23029

Sidereal frequency generator Patent  
[NASA-CASE-XGS-02610] c14 N71-23174

Solar cell and circuit array and process for nullifying magnetic fields Patent  
[NASA-CASE-XGS-03390] c03 N71-23187

Passive synchronized spike generator with high input impedance and low output impedance and capacitor power supply Patent  
[NASA-CASE-XGS-03632] c09 N71-23311

Sealed electrochemical cell provided with a flexible casing Patent  
[NASA-CASE-XGS-01513] c03 N71-23336

Digitally controlled frequency synthesizer Patent  
[NASA-CASE-XGS-02317] c09 N71-23525

Radio frequency coaxial high pass filter Patent  
[NASA-CASE-XGS-01418] c09 N71-23573

Apparatus for phase stability determination Patent  
[NASA-CASE-XGS-01118] c10 N71-23662

Tape recorder Patent  
[NASA-CASE-XGS-08259] c14 N71-23698

Balance torque meter Patent  
[NASA-CASE-XGS-01013] c14 N71-23725

Mechanical actuator Patent  
[NASA-CASE-XGS-04548] c15 N71-24045

Selective plating of etched circuits without removing previous plating Patent  
[NASA-CASE-XGS-03120] c15 N71-24047

Alkali metal silicate protective coating Patent  
[NASA-CASE-XGS-04799] c18 N71-24183

Strain gauge measuring techniques Patent  
[NASA-CASE-XGS-04478] c14 N71-24233

Electromagnetic polarization systems and methods Patent  
[NASA-CASE-GSC-10021-1] c09 N71-24595

Redundant actuating mechanism Patent  
[NASA-CASE-XGS-08718] c15 N71-24600

Satellite communication system and method Patent  
[NASA-CASE-GSC-10118-1] c07 N71-24621

Programmable telemetry system Patent  
[NASA-CASE-GSC-10131-1] c07 N71-24624

Coulometer and third electrode battery charging circuit Patent  
[NASA-CASE-GSC-10487-1] c03 N71-24719

Electronic scanning of 2-channel monopulse patterns Patent  
[NASA-CASE-GSC-10299-1] c09 N71-24804

Annular slit colloid thruster Patent  
[NASA-CASE-GSC-10709-1] c28 N71-25213

Voltage to frequency converter Patent  
[NASA-CASE-GSC-10022-1] c10 N71-25882

Direct current motor with stationary armature and field Patent  
[NASA-CASE-XGS-05290] c09 N71-25999

Buck boost voltage regulation circuit Patent  
[NASA-CASE-GSC-10735-1] c10 N71-26085

Adaptive system and method for signal generation Patent  
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Control apparatus for applying pulses of selectively predetermined duration to a sequence of loads Patent [NASA-CASE-XGS-04224]	c10 N71-26418	Tungsten contacts on silicon substrates [NASA-CASE-GSC-10695-1]	c09 N72-25259
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 [NASA-CASE-MSC-12205-1] c07 N71-27056

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 [NASA-CASE-MSC-13276-1] c14 N71-27058

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 [NASA-CASE-XLA-00284] c15 N71-16075  
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 [NASA-CASE-XLA-05881] c31 N71-16085  
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 [NASA-CASE-LAR-10317-1] c32 N71-16103  
 Buoyant anti-slosh system Patent  
 [NASA-CASE-XLA-04605] c32 N71-16106  
 Detector panels-micrometeoroid impact Patent  
 [NASA-CASE-XLA-05906] c31 N71-16221  
 Wind velocity probing device and method Patent  
 [NASA-CASE-XLA-02081] c20 N71-16281  
 Vibrating structure displacement measuring  
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 [NASA-CASE-XLA-03135] c32 N71-16428  
 Viscous-pendulum-damper Patent  
 [NASA-CASE-XLA-02079] c12 N71-16894  
 Leak detector Patent  
 [NASA-CASE-LAR-10323-1] c12 N71-17573  
 Logic AND gate for fluid circuits Patent  
 [NASA-CASE-XLA-07391] c12 N71-17579  
 Contour surveying system Patent  
 [NASA-CASE-XLA-08646] c14 N71-17586  
 Cable arrangement for rigid tethering Patent  
 [NASA-CASE-XLA-02332] c32 N71-17609  
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 [NASA-CASE-XLA-00377] c33 N71-17610  
 Viscous pendulum damper Patent  
 [NASA-CASE-LAR-10274-1] c14 N71-17626  
 Self supporting space vehicle Patent  
 [NASA-CASE-XLA-00117] c31 N71-17680  
 Technique for control of free-flight rocket  
 vehicles Patent  
 [NASA-CASE-XLA-00937] c31 N71-17691  
 Hydraulic grip Patent  
 [NASA-CASE-XLA-05100] c15 N71-17696  
 Heat protection apparatus Patent  
 [NASA-CASE-XLA-00892] c33 N71-17897  
 Thermopile vacuum gage tube simulator Patent  
 [NASA-CASE-XLA-02758] c14 N71-18481  
 Ionization vacuum gauge with all but the end of  
 the ion collector shielded Patent  
 [NASA-CASE-XLA-07424] c14 N71-18482  
 Safe-arm initiator Patent  
 [NASA-CASE-LAR-10372] c09 N71-18599  
 Controlled glass bead peening Patent  
 [NASA-CASE-XLA-07390] c15 N71-18616  
 Exclusive-Or digital logic module Patent  
 [NASA-CASE-XLA-07732] c08 N71-18751

Slosh alleviator Patent  
 [NASA-CASE-XLA-05749] c15 N71-19569  
 G conditioning suit Patent  
 [NASA-CASE-XLA-02898] c05 N71-20268  
 Dosimeter for high levels of absorbed radiation  
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 [NASA-CASE-XLA-03645] c14 N71-20430  
 Flow field simulation Patent  
 [NASA-CASE-LAR-11138] c12 N71-20436  
 Variable pulse width multiplier Patent  
 [NASA-CASE-XLA-02850] c09 N71-20447  
 Means for measuring the electron density  
 gradients of the plasma sheath formed around a  
 space vehicle Patent  
 [NASA-CASE-XLA-06232] c25 N71-20563  
 Null device for hand controller Patent  
 [NASA-CASE-XLA-01808] c15 N71-20740  
 Event recorder Patent  
 [NASA-CASE-XLA-01832] c14 N71-21006  
 Inflatable support structure Patent  
 [NASA-CASE-XLA-01731] c32 N71-21045  
 Fast opening diaphragm Patent  
 [NASA-CASE-XLA-03660] c15 N71-21060  
 Ellipsograph for pantograph Patent  
 [NASA-CASE-XLA-03102] c14 N71-21079  
 Random function tracer Patent  
 [NASA-CASE-XLA-01401] c15 N71-21179  
 Method and apparatus for bonding a plastics  
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 [NASA-CASE-XLA-01262] c15 N71-21404  
 Hypersonic test facility Patent  
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 Multilegged support system Patent  
 [NASA-CASE-XLA-01326] c11 N71-21481  
 Nacelle afterbody for jet engines Patent  
 [NASA-CASE-XLA-10450] c28 N71-21493  
 Canister closing device Patent  
 [NASA-CASE-XLA-01446] c15 N71-21528  
 Ablation sensor Patent  
 [NASA-CASE-XLA-01794] c33 N71-21586  
 Self-repeating plasma generator having  
 communicating annular and linear arc discharge  
 passages Patent  
 [NASA-CASE-XLA-03103] c25 N71-21693  
 Attitude control and damping system for  
 spacecraft Patent  
 [NASA-CASE-XLA-02551] c21 N71-21708  
 Method of making inflatable honeycomb Patent  
 [NASA-CASE-XLA-03492] c15 N71-22713  
 Lunar penetrometer Patent  
 [NASA-CASE-XLA-00934] c14 N71-22765  
 Thermal control wall panel Patent  
 [NASA-CASE-XLA-01243] c33 N71-22792  
 Attitude sensor for space vehicles Patent  
 [NASA-CASE-XLA-00793] c21 N71-22880  
 Omnidirectional microwave spacecraft antenna  
 Patent  
 [NASA-CASE-XLA-03114] c09 N71-22888  
 Thermal control panel Patent  
 [NASA-CASE-XLA-07728] c33 N71-22890  
 Spacecraft airlock Patent  
 [NASA-CASE-XLA-02050] c31 N71-22968  
 Station keeping of a gravity gradient stabilized  
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 [NASA-CASE-XLA-03132] c31 N71-22969  
 Semi-linear ball bearing Patent  
 [NASA-CASE-XLA-02809] c15 N71-22982  
 Heat sensing instrument Patent  
 [NASA-CASE-XLA-01551] c14 N71-22989  
 Ablation sensor Patent  
 [NASA-CASE-XLA-01791] c14 N71-22991  
 Self-calibrating displacement transducer Patent  
 [NASA-CASE-XLA-00781] c09 N71-22999  
 Lateral displacement system for separated rocket  
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 [NASA-CASE-XLA-04804] c31 N71-23008  
 Thermal control coating Patent  
 [NASA-CASE-XLA-01995] c18 N71-23047  
 Method of making an inflatable panel Patent  
 [NASA-CASE-XLA-03497] c15 N71-23052  
 Variable duration pulse integrator Patent  
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Zero gravity liquid mixer [NASA-CASE-LAR-10195-1]	c15 N73-19458	Reefing system [NASA-CASE-LAR-10129-2]	c37 N74-20063
Rate data encoder [NASA-CASE-LAR-10128-1]	c08 N73-20217	A synchronous binary array divider [NASA-CASE-ERC-10180-1]	c60 N74-20836
Function generator for synthesizing complex vibration mode patterns [NASA-CASE-LAR-10310-1]	c10 N73-20253	Orbital and entry tracking accessory for globes [NASA-CASE-LAR-10626-1]	c19 N74-21015
Infrared horizon locator [NASA-CASE-LAR-10726-1]	c14 N73-20475	Digital controller for a Baum folding machine [NASA-CASE-LAR-10688-1]	c37 N74-21056
Light intensity strain analysis [NASA-CASE-LAR-10765-1]	c32 N73-20740	Totally confined explosive welding [NASA-CASE-LAR-10941-1]	c37 N74-21057
Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds [NASA-CASE-LAR-10578-1]	c12 N73-25262	Method of fabricating an object with a thin wall having a precisely shaped slit [NASA-CASE-LAR-10409-1]	c31 N74-21059
Cable restraint [NASA-CASE-LAR-10129-1]	c15 N73-25512	Deployable pressurized cell structure for a micrometeoroid detector [NASA-CASE-LAR-10295-1]	c35 N74-21062
Electronic strain-level counter [NASA-CASE-LAR-10756-1]	c32 N73-26910	Means for accommodating large overstrain in lead wires [NASA-CASE-LAR-10168-1]	c33 N74-22865
Nondestructive spot test method for magnesium and magnesium alloys [NASA-CASE-LAR-10953-1]	c17 N73-27446	Bonded joint and method [NASA-CASE-LAR-10900-1]	c37 N74-23064
Ablation article and method [NASA-CASE-LAR-10439-1]	c33 N73-27796	Light shield and cooling apparatus [NASA-CASE-LAR-10089-1]	c34 N74-23066
Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds [NASA-CASE-LAR-10612-1]	c12 N73-28144	Method of laminating structural members [NASA-CASE-XLA-11028-1]	c24 N74-27035
Pressurized panel [NASA-CASE-XLA-08916-2]	c14 N73-28487	Rocket having barium release system to create ion clouds in the upper atmosphere [NASA-CASE-LAR-10670-2]	c15 N74-27360
Apparatus for aiding a pilot in avoiding a midair collision between aircraft [NASA-CASE-LAR-10717-1]	c21 N73-30641	Apparatus for inserting and removing specimens from high temperature vacuum furnaces [NASA-CASE-LAR-10841-1]	c31 N74-27900
Exposure interlock for oscilloscope cameras [NASA-CASE-LAR-10319-1]	c14 N73-32322	Grinding arrangement for ball nose milling cutters [NASA-CASE-LAR-10450-1]	c37 N74-27905
Meteoroid detector [NASA-CASE-LAR-10483-1]	c14 N73-32327	Method of repairing discontinuity in fiberglass structures [NASA-CASE-LAR-10416-1]	c24 N74-30001
Lightweight, variable solidity knitted parachute fabric [NASA-CASE-LAR-10776-1]	c02 N74-10034	Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft [NASA-CASE-LAR-10753-1]	c08 N74-30421
Technique for extending the frequency range of digital dividers [NASA-CASE-LAR-10730-1]	c33 N74-10223	Apparatus for applying simulator g-forces to an arm of an aircraft simulator pilot [NASA-CASE-LAR-10550-1]	c09 N74-30597
Fluid pressure amplifier and system [NASA-CASE-LAR-10868-1]	c33 N74-11050	Centrifugal lyophobic separator [NASA-CASE-LAR-10194-1]	c34 N74-30608

Variably positioned guide vanes for aerodynamic chocking [NASA-CASE-LAR-10642-1]	c07 N74-31270	Ultrasonic calibration device [NASA-CASE-LAR-11435-1]	c35 N76-15432
Noise suppressor [NASA-CASE-LAR-11141-1]	c07 N74-32418	Deploy/release system [NASA-CASE-LAR-11575-1]	c02 N76-16014
Measuring probe position recorder [NASA-CASE-LAR-10806-1]	c35 N74-32877	Clock setter [NASA-CASE-LAR-11458-1]	c35 N76-16392
Stagnation pressure probe [NASA-CASE-LAR-11139-1]	c35 N74-32878	Heat exchanger system and method [NASA-CASE-LAR-10799-2]	c34 N76-17317
Holding apparatus [NASA-CASE-LAR-10489-2]	c31 N74-32920	Stack plume visualization system [NASA-CASE-LAR-11675-1]	c45 N76-17656
Remote fire stack igniter [NASA-CASE-MFS-21675-1]	c25 N74-33378	Cascade plug nozzle [NASA-CASE-LAR-11674-1]	c07 N76-18117
Open tube guideway for high speed air cushioned vehicles [NASA-CASE-LAR-10256-1]	c85 N74-34672	Exhaust flow deflector [NASA-CASE-LAR-11570-1]	c34 N76-18364
Fast scan control for deflection type mass spectrometers [NASA-CASE-LAR-11428-1]	c35 N74-34857	Method and apparatus for tensile testing of metal foil [NASA-CASE-LAR-10208-1]	c35 N76-18400
Apparatus for microbiological sampling [NASA-CASE-LAR-11069-1]	c35 N75-12272	Method and apparatus for fluffing, separating, and cleaning fibers [NASA-CASE-LAR-11224-1]	c37 N76-18456
Method of making an explosively welded scarf joint [NASA-CASE-LAR-11211-1]	c37 N75-12326	Therapeutic hand exerciser [NASA-CASE-LAR-11667-1]	c52 N76-19785
Determining particle density using known material Hugoniot curves [NASA-CASE-LAR-11059-1]	c76 N75-12810	Magnetic heading reference [NASA-CASE-LAR-11387-1]	c04 N76-20114
Method for making conductors for ferrite memory arrays [NASA-CASE-LAR-10994-1]	c24 N75-13032	Apparatus for positioning modular components on a vertical or overhead surface [NASA-CASE-LAR-11465-1]	c37 N76-21554
Evacuated, displacement compression mold [NASA-CASE-LAR-10782-2]	c31 N75-13111	Airfoil shape for flight at subsonic speeds [NASA-CASE-LAR-10585-1]	c02 N76-22154
Automatic inoculating apparatus [NASA-CASE-LAR-11074-1]	c51 N75-13502	Particulate and aerosol detector [NASA-CASE-LAR-11434-1]	c35 N76-22509
Automatic focus control for facsimile cameras [NASA-CASE-LAR-11213-1]	c35 N75-15014	Air removal device [NASA-CASE-XLA-8914-2]	c34 N76-23522
Kinesthetic control simulator [NASA-CASE-LAR-10276-1]	c09 N75-15662	High temperature strain gage calibration fixture [NASA-CASE-LAR-11500-1]	c35 N76-24523
Electrostatic measurement system [NASA-CASE-MFS-22129-1]	c33 N75-18477	Vacuum pressure molding technique [NASA-CASE-LAR-10073-1]	c37 N76-24575
Automatic liquid inventory collecting and dispensing unit [NASA-CASE-LAR-11071-1]	c35 N75-19611	Instrumentation for measuring aircraft noise and sonic boom [NASA-CASE-LAR-11476-1]	c07 N76-27232
Vacuum leak detector [NASA-CASE-LAR-11237-1]	c35 N75-19612	Connector [NASA-CASE-LAR-11709-1]	c37 N76-27567
Spectrometer integrated with a facsimile camera [NASA-CASE-LAR-11207-1]	c35 N75-15613	Capillary flow weld-bonding [NASA-CASE-LAR-11726-1]	c37 N76-27568
Instrumentation for measurement of aircraft noise and sonic boom [NASA-CASE-LAR-11173-1]	c35 N75-19614	Detector absorptivity measuring method and apparatus [NASA-CASE-LAR-10907-1]	c35 N76-29551
Laser head for simultaneous optical pumping of several dye lasers [NASA-CASE-LAR-11341-1]	c36 N75-19655	Method for detecting pollutants [NASA-CASE-LAR-11405-1]	c45 N76-31714
High lift aircraft [NASA-CASE-LAR-11252-1]	c05 N75-25914	Wingtip vortex dissipator for aircraft [NASA-CASE-LAR-11645-1]	c02 N77-10001
Vapor phase growth of groups 3-5 compounds by hydrogen chloride transport of the elements [NASA-CASE-LAR-11144-1]	c25 N75-26043	Casting propellant in rocket engine [NASA-CASE-LAR-11995-1]	c28 N77-10213
Resonant waveguide stark cell [NASA-CASE-LAR-11352-1]	c33 N75-26245	Anti-multipath digital signal detector [NASA-CASE-LAR-11827-1]	c32 N77-10392
Fluid control apparatus and method [NASA-CASE-LAR-11110-1]	c34 N75-26282	Weld-bonded titanium structures [NASA-CASE-LAR-11549-1]	c37 N77-11397
Electrolytic cell structure [NASA-CASE-LAR-11042-1]	c33 N75-27252	Phase modulating with odd and even finite power series of a modulating signal [NASA-CASE-LAR-11607-1]	c32 N77-14292
Automatic microbial transfer device [NASA-CASE-LAR-11354-1]	c35 N75-27330	Miniature biaxial strain transducer [NASA-CASE-LAR-11648-1]	c35 N77-14407
Polyimide adhesives [NASA-CASE-LAR-11397-1]	c27 N75-29263	Precision alignment apparatus for cutting a workpiece [NASA-CASE-LAR-11658-1]	c37 N77-14478
Bonding method in the manufacture of continuous regression rate sensor devices [NASA-CASE-LAR-10337-1]	c24 N75-30260	Solid propellant rocket motor and method of making same [NASA-CASE-XLA-1349]	c20 N77-17143
Meteoroid impact position locator aid for manned space station [NASA-CASE-LAR-10629-1]	c35 N75-33367	Particulate and solar radiation stable coating for spacecraft [NASA-CASE-LAR-10805-2]	c34 N77-18382
Measurement of gas production of microorganisms [NASA-CASE-LAR-11326-1]	c35 N75-33368	Magnetic heading reference [NASA-CASE-LAR-11387-2]	c04 N77-19056
Self-supporting strain transducer [NASA-CASE-LAR-11263-1]	c35 N75-33369	Binocular device for displaying numerical information in field of view [NASA-CASE-LAR-11782-1]	c74 N77-20882
Annular momentum control device used for stabilization of space vehicles and the like [NASA-CASE-LAR-11051-1]	c15 N76-14158	Method of locating persons in distress [NASA-CASE-LAR-11390-1]	c32 N77-21267
Multichannel logarithmic RF level detector [NASA-CASE-LAR-11021-1]	c32 N76-14321	Amplifying ribbon extensometer [NASA-CASE-LAR-11825-1]	c35 N77-22449
Turnstile and flared cone UHF antenna [NASA-CASE-LAR-10970-1]	c33 N76-14372	Method of forming shrink-fit compression seal [NASA-CASE-LAR-11563-1]	c37 N77-23482
Static pressure probe [NASA-CASE-LAR-11552-1]	c35 N76-14429	Vortex generator for controlling the dispersion of effluents in a flowing liquid [NASA-CASE-LAR-12045-1]	c34 N77-24423
Horn antenna having V-shaped corrugated slots [NASA-CASE-LAR-11112-1]	c32 N76-15330	Process for control of cell division [NASA-CASE-LAR-10773-3]	c51 N77-25769
		Electro-mechanical sine/cosine generator [NASA-CASE-LAR-11389-1]	c33 N77-26387



Apparatus for determining thermophysical properties of test specimens [NASA-CASE-LAR-11883-1]	c09 N77-27131	Fatigue failure load indicator [NASA-CASE-LAR-12027-1]	c39 N79-22537
Automated single-slide staining device [NASA-CASE-LAR-11649-1]	c51 N77-27677	Filtering technique based on high-frequency plant modeling for high-gain control [NASA-CASE-LAR-12215-1]	c08 N79-23097
Dual cycle aircraft turbine engine [NASA-CASE-LAR-11310-1]	c07 N77-28118	Electrochemical detection device [NASA-CASE-LAR-11922-1]	c25 N79-24073
Composite sandwich lattice structure [NASA-CASE-LAR-11898-1]	c24 N78-10214	High-temperature microphone system [NASA-CASE-LAR-12375-1]	c32 N79-24203
Differential sound level meter [NASA-CASE-LAR-12106-1]	c71 N78-14867	Helicopter rotor airfoil [NASA-CASE-LAR-12396-1]	c02 N79-24958
Thermoluminescent aerosol analysis [NASA-CASE-LAR-12046-1]	c25 N78-15210	Rotary target V-block [NASA-CASE-LAR-12007-2]	c74 N79-25876
CW ultrasonic bolt tensioning monitor [NASA-CASE-LAR-12016-1]	c39 N78-15512	Magnetic suspension and pointing system [NASA-CASE-LAR-11889-1]	c35 N79-26372
Solar heating system [NASA-CASE-LAR-12009-1]	c44 N78-15560	Large volume multiple path nuclear pumped laser [NASA-CASE-LAR-12592-1]	c36 N79-26385
Transmitting and reflecting diffuser [NASA-CASE-LAR-10385-3]	c74 N78-15879	Solar engine [NASA-CASE-LAR-12148-1]	c44 N79-29608
TV fatigue crack monitoring system [NASA-CASE-LAR-11490-1]	c39 N78-16387	Seat cushion to provide realistic acceleration cues to aircraft simulator pilot [NASA-CASE-LAR-12149-2]	c09 N79-31228
Method of making a composite sandwich lattice structure [NASA-CASE-LAR-11898-2]	c24 N78-17149	Mixed diamines for lower melting addition polyimide preparation and utilization [NASA-CASE-LAR-12054-1]	c27 N79-33316
Composite lamination method [NASA-CASE-LAR-12019-1]	c24 N78-17150	A hydraulic actuator mechanism to control aircraft spoiler movements through dual input commands [NASA-CASE-LAR-12412-1]	c05 N80-11065
Polyimide adhesives [NASA-CASE-LAR-12181-1]	c27 N78-17205	Induction heating gun [NASA-CASE-LAR-12540-1]	c37 N80-11468
Thermal shock and erosion resistant tantalum carbide ceramic material [NASA-CASE-LAR-11902-1]	c27 N78-17206	One step dual purpose joining technique [NASA-CASE-LAR-12595-1]	c37 N80-11469
Optical scanner [NASA-CASE-LAR-11711-1]	c74 N78-17866	Multiwall thermal protection system [NASA-CASE-LAR-12620-1]	c24 N80-12117
Fuselage structure using advanced technology metal matrix fiber reinforced composites [NASA-CASE-LAR-11688-1]	c05 N78-18045	Scanning afocal laser velocimeter projection lens system [NASA-CASE-LAR-12328-1]	c74 N80-12866
Molded composite pyrogen igniter for rocket motors [NASA-CASE-LAR-12018-1]	c20 N78-24275	Displacement probes with self-contained exciting medium [NASA-CASE-LAR-11690-1]	c35 N80-14371
Non-destructive method for applying and removing instrumentation on helicopter rotor blades [NASA-CASE-LAR-11201-1]	c35 N78-24515	Means for controlling aerodynamically induced twist [NASA-CASE-LAR-12175-1]	c05 N80-16055
Two dimensional wedge/translating shroud nozzle [NASA-CASE-LAR-11919-1]	c07 N78-27121	Crystalline polyimides [NASA-CASE-LAR-12099-1]	c27 N80-16158
Remote water monitoring system [NASA-CASE-LAR-11973-1]	c35 N78-27384	Laser Doppler velocity simulator [NASA-CASE-LAR-12176-1]	c36 N80-16321
Magnetic suspension and pointing system [NASA-CASE-LAR-11889-2]	c37 N78-27424	Continuous self-locking spiral wound seal [NASA-CASE-LAR-12315-1]	c37 N80-16339
Device for measuring the contour of a surface [NASA-CASE-LAR-11869-1]	c74 N78-27904	Static pressure orifice system testing method and apparatus [NASA-CASE-LAR-12269-1]	c35 N80-18358
Supersonic transport [NASA-CASE-LAR-11932-1]	c05 N78-32086	Liquid-immersible electrostatic ultrasonic transducer [NASA-CASE-LAR-12465-1]	c35 N80-18363
Hypersonic airbreathing missile [NASA-CASE-LAR-12264-1]	c15 N78-32168	Moving body velocity arresting line [NASA-CASE-LAR-12372-1]	c37 N80-18399
Process for preparing thermoplastic aromatic polyimides [NASA-CASE-LAR-11828-1]	c27 N78-32261	Improved tire/wheel concept [NASA-CASE-LAR-11695-2]	c37 N80-18402
Magnetometer with a miniature transducer and automatic scanning [NASA-CASE-LAR-11617-2]	c35 N78-32397	Radar target for remotely sensing hydrological phenomena [NASA-CASE-LAR-12344-1]	c43 N80-18498
Independent power generator [NASA-CASE-LAR-11208-1]	c44 N78-32539	Solar cell angular position transducer [NASA-CASE-LAR-11999-1]	c44 N80-18552
Pseudo continuous wave instrument [NASA-CASE-LAR-12260-1]	c35 N79-1C390	Detection of the transitional layer between laminar and turbulent flow areas on a wing surface [NASA-CASE-LAR-12261-1]	c02 N80-20224
Nozzle extraction process and handlemeter for measuring handle [NASA-CASE-LAR-12147-1]	c31 N79-11246	CDS solid state phase insensitive ultrasonic transducer [NASA-CASE-LAR-12304-1]	c35 N80-20559
Fluid velocity measuring device [NASA-CASE-LAR-11729-1]	c34 N79-12359	Combined solar collector and energy storage system [NASA-CASE-LAR-12205-1]	c44 N80-20810
Totally confined explosive welding [NASA-CASE-LAR-10941-2]	c37 N79-13364	Noncontacting method for measuring angular deflection [NASA-CASE-LAR-12178-1]	c74 N80-21138
Vortex-lift roll-control device [NASA-CASE-LAR-11868-2]	c08 N79-14108	Decoupler pylon: Wing/store flutter suppressor [NASA-CASE-LAR-12468-1]	c08 N80-22359
Electronically scanned pressure sensor module with in SITU calibration capability [NASA-CASE-LAR-12230-1]	c35 N79-14347	An image readout device with electrically variable spatial resolution [NASA-CASE-LAR-12633-1]	c35 N80-22661
Versatile LDV burst simulator [NASA-CASE-LAR-11859-1]	c35 N79-14349	Mechanical end joint system for structural column elements [NASA-CASE-LAR-12482-1]	c37 N80-22704
Locking redundant link [NASA-CASE-LAR-11900-1]	c37 N79-14382	Metric half-span model support system [NASA-CASE-LAR-12441-1]	c09 N80-24334
Chromatically corrected virtual image display [NASA-CASE-LAR-12251-1]	c74 N79-14892	Electrically conductive palladium containing polyimide films	
Apparatus for measuring an aircraft's speed and height [NASA-CASE-LAR-12275-1]	c35 N79-1E296		
Volumetric direct nuclear pumped laser [NASA-CASE-LAR-12183-1]	c36 N79-16307		
Wind tunnel [NASA-CASE-LAR-10135-1]	c09 N79-21083		

[NASA-CASE-LAR-12705-1]	c33 N80-24549	Wingtip vortex turbine	
Heating and cooling system		[NASA-CASE-LAR-12544-1]	c07 N81-27096
[NASA-CASE-LAR-12393-1]	c39 N80-25693	A self-correcting electronically scanned pressure sensor	
Frequency tracked pulse technique for ultrasonic analysis		[NASA-CASE-LAR-12686-1]	c09 N81-27121
[NASA-CASE-LAR-12697-1]	c32 N80-26571	Telescoping columns	
Chromatically corrected virtual image visual display		[NASA-CASE-LAR-12195-1]	c31 N81-27324
[NASA-CASE-LAR-12251-1]	c74 N80-27185	Helmet weight simulator	
Heat treat fixture and method of heat treating		[NASA-CASE-LAR-12320-1]	c54 N81-27806
[NASA-CASE-LAR-11821-1]	c26 N80-28492	Indirect microbial detection	
Photocapacitive image converter		[NASA-CASE-LAR-12520-1]	c51 N81-28698
[NASA-CASE-LAR-12513-1]	c33 N80-28635	Explosively activated egress area	
Dual acting slit control mechanism		[NASA-CASE-LAR-12624-1]	c03 N81-29107
[NASA-CASE-LAR-11370-1]	c35 N80-28686	A rectangular rod-wall sound shield	
Visible and infrared polarization ratio spectroradiometer		[NASA-CASE-LAR-12883-1]	c09 N81-29138
[NASA-CASE-LAR-12285-1]	c35 N80-28687	Rim inertial measuring system	
Collapsible corrugated horn antenna		[NASA-CASE-LAR-12052-1]	c18 N81-29152
[NASA-CASE-LAR-11745-1]	c32 N80-29539	Tackifier for addition polyimides containing monoethylphthalate	
Natural turbulence electrical power generator		[NASA-CASE-LAR-12642-1]	c27 N81-29229
[NASA-CASE-LAR-11551-1]	c44 N80-29834	Automated syringe sampler	
Digital demodulator		[NASA-CASE-LAR-12308-1]	c35 N81-29407
[NASA-CASE-LAR-12659-1]	c33 N80-31731	Apparatus and process for microbial detection and enumeration	
Film advance indicator		[NASA-CASE-LAR-12709-1]	c51 N81-29727
[NASA-CASE-LAR-12474-1]	c35 N80-31774	Low X-ray absorption aneurism clips	
Process for preparing high temperature polyimide film laminates		[NASA-CASE-LAR-12650-1]	c52 N81-29768
[NASA-CASE-LAR-12742-1]	c24 N81-12174	Aeroelastic instability stoppers for wind-tunnel models	
Heat pipe honeycomb panel		[NASA-CASE-LAR-12720-1]	c09 N81-31229
[NASA-CASE-LAR-12637-1]	c34 N81-12362	Aeroelastic instability stoppers for wind-tunnel models	
Miniature spectrally selective dosimeter		[NASA-CASE-LAR-12458-1]	c09 N81-31230
[NASA-CASE-LAR-12469-1]	c35 N81-12388	Unequal split microwave power divider	
Pyroelectric detector arrays		[NASA-CASE-LAR-12889-1]	c33 N81-31483
[NASA-CASE-LAR-12363-1]	c35 N81-12389	An instrument for determining coincidence and elapse time between independent sources of random sequential events	
Hot foil transducer skin friction sensor		[NASA-CASE-LAR-12531-1]	c35 N81-31529
[NASA-CASE-LAR-12321-1]	c35 N81-12390	Universal connectors for joining stringers	
Modified spiral wound retaining ring		[NASA-CASE-LAR-12744-1]	c37 N81-31551
[NASA-CASE-LAR-12361-1]	c37 N81-12422	Ride quality meter	
Acoustic tooth cleaner		[NASA-CASE-LAR-12882-1]	c54 N81-31848
[NASA-CASE-LAR-12471-1]	c52 N81-12724	Solar powered aircraft	
Partial interlaminar separation system for composites		[NASA-CASE-LAR-12615-1]	c05 N81-32138
[NASA-CASE-LAR-12065-1]	c24 N81-14000	Solar driven liquid metal MHD power generator	
Method for preparing addition type polyimide prepregs		[NASA-CASE-LAR-12495-1]	c44 N81-32609
[NASA-CASE-LAR-12054-2]	c27 N81-14078	Propulsive lateral control nozzle	
Method and tool for machining a transverse slot about a bore		[NASA-CASE-LAR-12136-1]	c08 N81-33210
[NASA-CASE-LAR-11855-1]	c37 N81-14319	Method of making a partial interlaminar separation composite system	
Aerodynamic side-force alleviator means		[NASA-CASE-LAR-12065-2]	c24 N81-33235
[NASA-CASE-LAR-12326-1]	c02 N81-14968	<b>NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.</b>	
Thermoset-thermoplastic aromatic polyamides		<b>LEWIS RESEARCH CENTER, CLEVELAND, OHIO.</b>	
[NASA-CASE-LAR-12723-1]	c27 N81-15107	Foil seal	
Pulsed phase locked loop strain monitor		[NASA-CASE-XLR-05130]	c15 N69-21362
[NASA-CASE-LAR-12772-1]	c33 N81-15195	Fluid jet amplifier	
Leading edge vortex flaps for drag reduction		[NASA-CASE-XLE-03512]	c12 N69-21466
[NASA-CASE-LAR-12750-1]	c02 N81-19016	Electrode and insulator with shielded dielectric junction	
Compensating linkage for main rotor control		[NASA-CASE-XLE-03778]	c09 N69-21542
[NASA-CASE-LAR-11797-1]	c05 N81-19087	Thin window, drifted silicon, charged particle detector	
Thrust augmented spin recovery device		[NASA-CASE-XLE-10529]	c14 N69-23191
[NASA-CASE-LAR-11970-2]	c08 N81-19130	Probes having ring and primary sensor at same potential to prevent collection of stray wall currents in ionized gases	
A low energy electron magnetometer		[NASA-CASE-XLE-00690]	c25 N69-39884
[NASA-CASE-LAR-12706-1]	c35 N81-19428	Ion thruster cathode	
Fixture for environmental exposure of structural materials under compression		[NASA-CASE-XLE-07087]	c06 N69-39889
[NASA-CASE-LAR-12602-1]	c35 N81-19429	Superconducting alternator	
Velocity vector control system augmented with direct lift control		[NASA-CASE-XLE-02824]	c03 N69-39890
[NASA-CASE-LAR-12268-1]	c08 N81-24106	Triode thermionic energy converter	
Direction sensitive laser velocimeter		[NASA-CASE-XLE-01015]	c03 N69-39898
[NASA-CASE-LAR-12177-1]	c36 N81-24422	Slug flow magnetohydrodynamic generator	
Tire/wheel concept		[NASA-CASE-XLE-02083]	c03 N69-39983
[NASA-CASE-LAR-11695-2]	c37 N81-24443	Reduced gravity liquid configuration simulator	
Heat pipe cooled probe		[NASA-CASE-XLE-02624]	c12 N69-39988
[NASA-CASE-LAR-12588-1]	c44 N81-24525	Transpiration cooled turbine blade manufactured from wires Patent	
Lightweight structural columns		[NASA-CASE-XLE-00020]	c15 N70-33226
[NASA-CASE-LAR-12095-1]	c31 N81-25258	Rocket propellant injector Patent	
Foldable beam		[NASA-CASE-XLE-00103]	c28 N70-33241
[NASA-CASE-LAR-12077-1]	c31 N81-25259	Modification and improvements to cooled blades Patent	
Cooling system for high speed aircraft		[NASA-CASE-XLE-00092]	c15 N70-33264
[NASA-CASE-LAR-12406-1]	c05 N81-26114	Colloid propulsion method and apparatus Patent	
Pitch attitude stabilization system utilizing engine pressure ratio feedback signals		[NASA-CASE-XLE-00817]	c28 N70-33265
[NASA-CASE-LAR-12562-1]	c08 N81-26152		
Orbiter/launch system			
[NASA-CASE-LAR-12250-1]	c14 N81-26161		
Adaptive polarization separation			
[NASA-CASE-LAR-12196-1]	c33 N81-26358		

High-vacuum condenser tank for ion rocket tests Patent			Method of making fiber reinforced metallic composites Patent		
[NASA-CASE-XLE-00168]	c11	N70-33278	[NASA-CASE-XLE-00231]	c17	N70-38198
High temperature nickel-base alloy Patent			Rocket engine injector Patent		
[NASA-CASE-XLE-00151]	c17	N70-33283	[NASA-CASE-XLE-00111]	c28	N70-38199
Annular rocket motor and nozzle configuration Patent			Reinforced metallic composites Patent		
[NASA-CASE-XLE-00078]	c28	N70-35284	[NASA-CASE-XLE-00228]	c17	N70-38490
Reinforced metallic composites Patent			Rocket motor system Patent		
[NASA-CASE-XLE-02428]	c17	N70-35288	[NASA-CASE-XLE-00323]	c28	N70-38505
Process for applying a protective coating for salt bath brazing Patent			Particle beam measurement apparatus using beam kinetic energy to change the heat sensitive resistance of the detection probe Patent		
[NASA-CASE-XLE-00046]	c15	N70-33311	[NASA-CASE-XLE-00243]	c14	N70-38602
Wire grid forming apparatus Patent			Penshape exhaust nozzle for supersonic engine Patent		
[NASA-CASE-XLE-00023]	c15	N70-33330	[NASA-CASE-XLE-00057]	c28	N70-38711
Electro-thermal rocket Patent			Multi-stage multiple-reentry turbine Patent		
[NASA-CASE-XLE-00267]	c28	N70-33356	[NASA-CASE-XLE-00085]	c28	N70-39895
External liquid-spray cooling of turbine blades Patent			Gas lubricant compositions Patent		
[NASA-CASE-XLE-00037]	c28	N70-33372	[NASA-CASE-XLE-00353]	c18	N70-39897
Apparatus for igniting solid propellants Patent			Telescoping-spike supersonic inlet for aircraft engines Patent		
[NASA-CASE-XLE-00207]	c28	N70-33375	[NASA-CASE-XLE-00005]	c28	N70-39899
Flexible seal for valves Patent			High temperature spark plug Patent		
[NASA-CASE-XLE-00101]	c15	N70-33376	[NASA-CASE-XLE-00660]	c28	N70-39925
Apparatus for making a metal slurry product Patent			Low viscosity magnetic fluid obtained by the colloidal suspension of magnetic particles Patent		
[NASA-CASE-XLE-00010]	c15	N70-33382	[NASA-CASE-XLE-01512]	c12	N70-40124
Energy conversion apparatus Patent			Apparatus for absorbing and measuring power Patent		
[NASA-CASE-XLE-00212]	c03	N70-34134	[NASA-CASE-XLE-00720]	c14	N70-40201
Enthalpy and stagnation temperature determination of a high temperature laminar flow gas stream Patent			Device for directionally controlling electromagnetic radiation Patent		
[NASA-CASE-XLE-00266]	c14	N70-34156	[NASA-CASE-XLE-01716]	c09	N70-40234
Electrothermal rockets having improved heat exchangers Patent			Method for continuous variation of propellant flow and thrust in propulsive devices Patent		
[NASA-CASE-XLE-01783]	c28	N70-34175	[NASA-CASE-XLE-00177]	c28	N70-40367
Venting vapor apparatus Patent			Apparatus for increasing ion engine beam density Patent		
[NASA-CASE-XLE-00288]	c15	N70-34247	[NASA-CASE-XLE-00519]	c28	N70-41576
Thrust vector control apparatus Patent			Foldable conduit Patent		
[NASA-CASE-XLE-00208]	c28	N70-34294	[NASA-CASE-XLE-00620]	c32	N70-41579
High temperature heat source Patent			Liquid storage tank venting device for zero gravity environment Patent		
[NASA-CASE-XLE-00490]	c33	N70-34545	[NASA-CASE-XLE-01449]	c15	N70-41646
Inlet deflector for jet engines Patent			Method of making a regeneratively cooled combustion chamber Patent		
[NASA-CASE-XLE-00388]	c28	N70-34788	[NASA-CASE-XLE-00150]	c28	N70-41818
Radiant heater having formed filaments Patent			Instrument for the quantitative measurement of radiation at multiple wave lengths Patent		
[NASA-CASE-XLE-00387]	c33	N70-34812	[NASA-CASE-XLE-00011]	c14	N70-41946
Optical torque meter Patent			Small rocket engine Patent		
[NASA-CASE-XLE-00503]	c14	N70-34818	[NASA-CASE-XLE-00685]	c28	N70-41992
Electric propulsion engine test chamber Patent			Apparatus for positioning and loading a test specimen Patent		
[NASA-CASE-XLE-00252]	c11	N70-34844	[NASA-CASE-XLE-01300]	c15	N70-41993
Conical valve plug Patent			Liquid flow sight assembly Patent		
[NASA-CASE-XLE-00715]	c15	N70-34859	[NASA-CASE-XLE-02998]	c14	N70-42074
Channel-type shell construction for rocket engines and the like Patent			Inductive liquid level detection system Patent		
[NASA-CASE-XLE-00144]	c28	N70-34860	[NASA-CASE-XLE-01609]	c14	N71-10500
Non-reusable kinetic energy absorber Patent			Method of forming thin window drifted silicon charged particle detector Patent		
[NASA-CASE-XLE-00810]	c15	N70-34861	[NASA-CASE-XLE-00808]	c24	N71-10560
High temperature testing apparatus Patent			Electrostatic thruster with improved insulators Patent		
[NASA-CASE-XLE-00335]	c14	N70-35368	[NASA-CASE-XLE-01902]	c28	N71-10574
Ion thruster cathode Patent Application			Thin-walled pressure vessel Patent		
[NASA-CASE-LEW-10814-1]	c28	N70-35422	[NASA-CASE-XLE-04677]	c15	N71-10577
Formed metal ribbon wrap Patent			Method of making a silicon semiconductor device Patent		
[NASA-CASE-XLE-00164]	c15	N70-36411	[NASA-CASE-XLE-02792]	c26	N71-10607
Multi-stage multiple-reentry turbine Patent			Metallic film diffusion for boundary lubrication Patent		
[NASA-CASE-XLE-00170]	c15	N70-36412	[NASA-CASE-XLE-01765]	c18	N71-10772
Fluid coupling Patent			Molecular beam velocity selector Patent		
[NASA-CASE-XLE-00397]	c15	N70-36492	[NASA-CASE-XLE-01533]	c11	N71-10777
Injector-valve device Patent			Meteoroid sensing apparatus having a coincidence network connected to a pair of capacitors Patent		
[NASA-CASE-XLE-00303]	c15	N70-36535	[NASA-CASE-XLE-01246]	c14	N71-10797
Nickel-base alloy Patent			Capacitor and method of making same Patent		
[NASA-CASE-XLE-00283]	c17	N70-36616	[NASA-CASE-LEW-10364-1]	c09	N71-13522
Apparatus having coaxial capacitor structure for measuring fluid density Patent			Capillary radiator Patent		
[NASA-CASE-XLE-00143]	c14	N70-36618	[NASA-CASE-XLE-03307]	c33	N71-14035
Rocket thrust chamber Patent			Electrostatic ion engine having a permanent magnetic circuit Patent		
[NASA-CASE-XLE-00145]	c28	N70-36806	[NASA-CASE-XLE-01124]	c28	N71-14043
Ion rocket Patent			Split welding chamber Patent		
[NASA-CASE-XLE-00376]	c28	N70-37245	[NASA-CASE-LEW-11531]	c15	N71-14932
Annular supersonic decelerator or drogue Patent					
[NASA-CASE-XLE-00222]	c02	N70-37939			
Rocket engine Patent					
[NASA-CASE-XLE-00342]	c28	N70-37980			
Variable sweep aircraft wing Patent					
[NASA-CASE-XLA-00350]	c02	N70-38011			
Apparatus for transferring cryogenic liquids Patent					
[NASA-CASE-XLE-00345]	c15	N70-38020			
Method of producing porous tungsten ionizers for ion rocket engines Patent					
[NASA-CASE-XLE-00455]	c28	N70-38197			

Method and apparatus for making curved reflectors Patent [NASA-CASE-XLE-08917]	c15 N71-15597	Automatic recording McLeod gauge Patent [NASA-CASE-XLE-03280]	c14 N71-23093
Method of making a diffusion bonded refractory coating Patent [NASA-CASE-XLE-01604-2]	c15 N71-15610	Electronic cathode having a brush-like structure and a relatively thick oxide emissive coating Patent [NASA-CASE-XLE-04501]	c09 N71-23190
Black-body furnace Patent [NASA-CASE-XLE-01399]	c33 N71-15625	High temperature ferromagnetic cobalt-base alloy Patent [NASA-CASE-XLE-03629]	c17 N71-23248
Method of igniting solid propellants Patent [NASA-CASE-XLE-01988]	c27 N71-15634	Induction furnace with perforated tungsten foil shielding Patent [NASA-CASE-XLE-04026]	c14 N71-23267
Fluid dispensing apparatus and method Patent [NASA-CASE-XLE-01182]	c27 N71-15635	Gd or Sm doped silicon semiconductor composition Patent [NASA-CASE-XLE-10715]	c26 N71-23292
Automatically deploying nozzle exit cone extension Patent [NASA-CASE-XLE-01640]	c31 N71-15637	Protection of serially connected solar cells against open circuits by the use of shunting diode Patent [NASA-CASE-XLE-04535]	c03 N71-23354
High temperature cobalt-base alloy Patent [NASA-CASE-XLE-00726]	c17 N71-15644	Superconducting alternator Patent [NASA-CASE-XLE-02823]	c09 N71-23443
Method of making a rocket motor casing Patent [NASA-CASE-XLE-00409]	c28 N71-15658	Silicon solar cell with cover glass bonded to cell by metal pattern Patent [NASA-CASE-XLE-08569]	c03 N71-23449
Rocket motor casing Patent [NASA-CASE-XLE-05689]	c28 N71-15659	Analytical test apparatus and method for determining oxide content of alkali metal Patent [NASA-CASE-XLE-01997]	c06 N71-23527
Electrostatic ion rocket engine Patent [NASA-CASE-XLE-02066]	c28 N71-15661	Thermionic converter with current augmented by self induced magnetic field Patent [NASA-CASE-XLE-01903]	c22 N71-23599
High temperature cobalt-base alloy Patent [NASA-CASE-XLE-02991]	c17 N71-16025	Semiconductor material and method of making same Patent [NASA-CASE-XLE-02798]	c26 N71-23654
Nickel-base alloy containing Mo-W-Al-Cr-Ta-Zr-C-Nb-B Patent [NASA-CASE-XLE-02082]	c17 N71-16026	Insulation system Patent [NASA-CASE-XLE-02647]	c18 N71-23658
Method of improving the reliability of a rolling element system Patent [NASA-CASE-XLE-02999]	c15 N71-16052	Self-lubricating fluoride metal composite materials Patent [NASA-CASE-XLE-08511]	c18 N71-23710
Process of casting heavy slips Patent [NASA-CASE-XLE-00106]	c15 N71-16076	Alloys for bearings Patent [NASA-CASE-XLE-05033]	c15 N71-23810
Boiler for generating high quality vapor Patent [NASA-CASE-XLE-00785]	c33 N71-16104	Extrusion die for refractory metals Patent [NASA-CASE-XLE-06773]	c15 N71-23817
Method of making self lubricating fluoride-metal composite materials Patent [NASA-CASE-XLE-08511-2]	c18 N71-16105	Combustion chamber Patent [NASA-CASE-XLE-04857]	c28 N71-23968
Thrust and direction control apparatus Patent [NASA-CASE-XLE-03583]	c31 N71-17629	Metallic film diffusion for boundary lubrication Patent [NASA-CASE-XLE-10337]	c15 N71-24046
Linear magnetic brake with two windings Patent [NASA-CASE-XLE-05079]	c15 N71-17652	Process for producing dispersion strengthened nickel with aluminum Patent [NASA-CASE-XLE-06969]	c17 N71-24142
Method of lubricating rolling element bearings Patent [NASA-CASE-XLE-09527]	c15 N71-17688	Thermal radiation shielding Patent [NASA-CASE-XLE-03432]	c33 N71-24145
Hot wire liquid level detector for cryogenic fluids Patent [NASA-CASE-XLE-00454]	c23 N71-17802	Method of attaching a cover glass to a silicon solar cell Patent [NASA-CASE-XLE-08569-2]	c03 N71-24681
Pulsed differential comparator circuit Patent [NASA-CASE-XLE-03804]	c10 N71-19471	Rocket engine injector Patent [NASA-CASE-XLE-03157]	c28 N71-24736
Foil seal Patent [NASA-CASE-XLE-05130-2]	c15 N71-19570	Multialarm summary alarm Patent [NASA-CASE-XLE-03061-1]	c10 N71-24798
Generator for a space power system Patent [NASA-CASE-XLE-04250]	c09 N71-20446	Apparatus for making curved reflectors Patent [NASA-CASE-XLE-08917-2]	c15 N71-24836
Method of making electrical contact on silicon solar cell and resultant product Patent [NASA-CASE-XLE-04787]	c03 N71-20492	Flow angle sensor and read out system Patent [NASA-CASE-XLE-04503]	c14 N71-24864
Small plasma probe Patent [NASA-CASE-XLE-02578]	c25 N71-20747	Shock tube powder dispersing apparatus Patent [NASA-CASE-XLE-04946]	c17 N71-24911
Combined electrolysis device and fuel cell and method of operation Patent [NASA-CASE-XLE-01645]	c03 N71-20904	Pneumatic oscillator Patent [NASA-CASE-XLE-10345-1]	c10 N71-25899
Pressure monitoring with a plurality of ionization gauges controlled at a central location Patent [NASA-CASE-XLE-00787]	c14 N71-21090	Heat activated cell with alkali anode and alkali salt electrolyte Patent [NASA-CASE-XLE-11358]	c03 N71-26084
Control of transverse instability in rocket combustors Patent [NASA-CASE-XLE-04603]	c33 N71-21507	Method of producing refractory composites containing tantalum carbide, hafnium carbide, and hafnium boride Patent [NASA-CASE-XLE-03940]	c18 N71-26153
High voltage divider system Patent [NASA-CASE-XLE-02008]	c09 N71-21583	Ion beam deflector Patent [NASA-CASE-XLE-10689-1]	c28 N71-26173
Plasma device feed system Patent [NASA-CASE-XLE-02902]	c25 N71-21694	Rolling element bearings Patent [NASA-CASE-XLE-09527-2]	c15 N71-26189
Burning rate control of solid propellants Patent [NASA-CASE-XLE-03494]	c27 N71-21819	Ion thruster accelerator system Patent [NASA-CASE-XLE-10106-1]	c28 N71-26642
Protective device for machine and metalworking tools Patent [NASA-CASE-XLE-01092]	c15 N71-22797	Propellant feed isolator Patent [NASA-CASE-XLE-10210-1]	c28 N71-26781
Cryogenic insulation system Patent [NASA-CASE-XLE-04222]	c23 N71-22881	Heat activated cell Patent [NASA-CASE-XLE-11359]	c03 N71-28579
Method for producing fiber reinforced metallic composites Patent [NASA-CASE-XLE-03925]	c18 N71-22894	Process for glass coating an ion accelerator grid Patent [NASA-CASE-XLE-10278-1]	c15 N71-28582
Thermal shock apparatus Patent [NASA-CASE-XLE-02024]	c14 N71-22964	Fluid jet amplifier Patent [NASA-CASE-XLE-09341]	c12 N71-28741
Arc electrode of graphite with ball tip Patent [NASA-CASE-XLE-04788]	c09 N71-22987		
Gas purged dry box glove Patent [NASA-CASE-XLE-02531]	c05 N71-23080		

Gas core nuclear reactor Patent [NASA-CASE-LEW-10250-1]	c22 N71-28759	Gas turbine engine fuel control [NASA-CASE-LEW-11187-1]	c28 N73-19793
Gas turbine combustor Patent [NASA-CASE-LEW-10286-1]	c28 N71-28915	Thermocouple tape [NASA-CASE-LEW-11072-1]	c14 N73-24472
Cyclic switch Patent [NASA-CASE-LEW-10155-1]	c09 N71-29035	Method and apparatus for sputtering utilizing an apertured electrode and a pulsed substrate bias [NASA-CASE-LEW-10920-1]	c17 N73-24569
Temperature reducing coating for metals subject to flame exposure Patent [NASA-CASE-XLE-00035]	c33 N71-29151	Magneto-plasma-dynamic arc thruster [NASA-CASE-LEW-11180-1]	c25 N73-25760
Liquid spray cooling method Patent [NASA-CASE-XLE-00027]	c33 N71-29152	Ablative system [NASA-CASE-LEW-10359-2]	c33 N73-25952
Turbo-machine blade vibration damper Patent [NASA-CASE-XLE-00155]	c28 N71-29154	Parasitic suppressing circuit [NASA-CASE-ZRC-10403-1]	c10 N73-26228
Corrosion resistant beryllium Patent [NASA-CASE-LEW-10327]	c17 N71-33408	Twisted multifilament superconductor [NASA-CASE-LEW-11726-1]	c26 N73-26752
Integrated thermoelectric generator/space antenna combination [NASA-CASE-XER-09521]	c09 N72-12136	Ophthalmic method and apparatus [NASA-CASE-LEW-11669-1]	c05 N73-27062
Sensing probe [NASA-CASE-LEW-10281-1]	c14 N72-17327	Single grid accelerator for an ion thruster [NASA-CASE-XLE-10453-2]	c28 N73-27699
Method of making emf cell [NASA-CASE-LEW-11359-2]	c03 N72-20034	Preparation of polyimides from mixtures of monomeric diamines and esters of polycarboxylic acids [NASA-CASE-LEW-11325-1]	c06 N73-27980
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Switching regulator [NASA-CASE-LEW-11005-1]	c09 N72-21243	Welding blades to rotors [NASA-CASE-LEW-10533-1]	c15 N73-28515
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Solid state remote circuit selector switch [NASA-CASE-LEW-10387]	c09 N72-22201	Enhanced diffusion welding [NASA-CASE-LEW-11388-1]	c15 N73-32358
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High current electrical lead [NASA-CASE-LEW-10950-1]	c33 N74-27683	Dual output variable pitch turbofan actuation system [NASA-CASE-LEW-12419-1]	c07 N77-14025
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Trimerization of aromatic nitriles  
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Variable thrust nozzle for quiet turbofan engine  
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Gas turbine engine with convertible accessories  
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[NASA-CASE-LEW-11981-1] c31 N78-17237

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Magnetic heat pumping  
[NASA-CASE-LEW-12508-1] c34 N78-17335

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[NASA-CASE-LEW-12916-1] c37 N78-17384

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[NASA-CASE-LEW-12389-2] c07 N78-18066

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[NASA-CASE-LEW-12917-1] c07 N78-18067

Tantalum modified ferritic iron base alloys  
[NASA-CASE-LEW-12095-1] c26 N78-18182

Directionally solidified eutectic gamma-gamma  
nickel-base superalloys  
[NASA-CASE-LEW-12905-1] c26 N78-18183

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[NASA-CASE-LEW-12785-1] c37 N78-24545

Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c07 N78-25089

Counter pumping debris excluder and separator  
[NASA-CASE-LEW-11855-1] c07 N78-25090

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] c25 N78-25148

Formulated plastic separators for soluble  
electrode cells  
[NASA-CASE-LEW-12358-2] c25 N78-25149

Liquid metal slip ring  
[NASA-CASE-LEW-12277-2] c33 N78-25323

Flow compensating pressure regulator  
[NASA-CASE-LEW-12718-1] c34 N78-25351

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[NASA-CASE-LEW-12552-1] c44 N78-25527

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[NASA-CASE-LEW-12541-1] c44 N78-25529

Inorganic-organic separators for alkaline  
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Solar cell system having alternating current  
output  
[NASA-CASE-LEW-12806-1] c44 N78-25553

Cesium thermionic converters having improved  
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[NASA-CASE-LEW-11877-1] c34 N78-27357

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capacitor-diode multiplier dc to dc converter  
[NASA-CASE-LEW-12791-1] c33 N78-32341

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[NASA-CASE-LEW-12232-1] c07 N79-1C057

Traveling wave tube circuit  
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Cantilever mounted resilient pad gas bearing  
[NASA-CASE-LEW-12569-1] c37 N79-10418

Fuel delivery system including heat exchanger  
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[NASA-CASE-LEW-12793-1] c37 N79-11403

Solar cells having integral collector grids  
[NASA-CASE-LEW-12819-1] c44 N79-11467

Application of semiconductor diffusants to solar  
cells by screen printing  
[NASA-CASE-LEW-12775-1] c44 N79-11468

Solar cell collector and method for producing same  
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Heat exchanger  
[NASA-CASE-LEW-12252-1] c34 N79-13288

Heat exchanger and method of making  
[NASA-CASE-LEW-12441-1] c34 N79-13289

Cam-operated pitch-change apparatus  
[NASA-CASE-LEW-13050-1] c07 N79-14095

Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-3] c07 N79-14096

Variable area exhaust nozzle  
[NASA-CASE-LEW-12378-1] c07 N79-14097

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Thermocouples of molybdenum and iridium alloys  
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performance  
[NASA-CASE-LEW-12174-2] c35 N79-14346

Back wall solar cell  
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Sound-suppressing structure with thermal relief  
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[NASA-CASE-LEW-11930-4] c24 N79-17916

Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-1] c37 N79-18318

Method for fabricating solar cells having  
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[NASA-CASE-LEW-12819-2] c44 N79-18444

Closed loop solar array-ion thruster system with  
power control circuitry  
[NASA-CASE-LEW-12780-1] c20 N79-20179

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[NASA-CASE-LEW-11981-2] c34 N79-20336

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Low heat leak connector for cryogenic system  
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crystal and polycrystalline electronic materials  
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Method and device for the detection of phenol  
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strength ion alloy  
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Shaft seal assembly for high speed and high  
pressure applications  
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[NASA-CASE-LEW-11890-1] c05 N79-24976

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[NASA-CASE-LEW-12972-1] c44 N79-25481

Electrochemical cell for rebalancing REDOX flow  
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Catalytic trimerization of aromatic nitriles and  
triaryl-s-triazine ring cross-linked high  
temperature resistant polymers and copolymers  
made thereby  
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Multistage depressed collector for dual node  
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Modified face seal for positive film stiffness  
[NASA-CASE-LEW-12989-1] c37 N80-12414

Supercharged topping rocket propellant feed system  
[NASA-CASE-XLE-02062-1] c20 N80-14188

Improved refractory coatings and method of  
producing the same  
[NASA-CASE-LEW-13169-1] c26 N80-14232

Self-reconfiguring solar cell system  
[NASA-CASE-LEW-12586-1] c44 N80-14472

Intra-ocular pressure normalization technique  
and equipment  
[NASA-CASE-LEW-12955-1] c52 N80-14684

Method and apparatus for rapid thrust increases in a turbofan engine  
[NASA-CASE-LEW-12971-1] c07 N80-18039

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Flexible formulated plastic separators for alkaline batteries  
[NASA-CASE-LEW-12363-4] c44 N80-18555

Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12723-1] c52 N80-18690

Coupled cavity traveling wave tube with velocity tapering  
[NASA-CASE-LEW-12296-1] c33 N80-19425

Atomic hydrogen storage  
[NASA-CASE-LEW-12081-2] c28 N80-20402

Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-1] c33 N80-20487

Modification of the electrical and optical properties of polymers  
[NASA-CASE-LEW-13027-1] c27 N80-24437

Heat exchanger and method of making  
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Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-1] c37 N80-24619

A silicon-slurry/aluminide coating  
[NASA-CASE-LEW-13343-1] c24 N80-26389

Low temperature cross linking polyimides  
[NASA-CASE-LEW-12876-1] c27 N80-26447

Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-2] c37 N80-26658

Diesel engine catalytic combustor system  
[NASA-CASE-LEW-12995-1] c37 N80-26659

Circumferential shaft seal  
[NASA-CASE-LEW-12119-1] c37 N80-28711

Castable high temperature refractory materials  
[NASA-CASE-LEW-13080-1] c27 N80-29496

Free-piston regenerative hot gas hydraulic engine  
[NASA-CASE-LEW-12274-1] c37 N80-31790

High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-3] c26 N80-32484

Method of cross-linking polyvinyl alcohol and other water soluble resins  
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Hydrogen hollow cathode ion source  
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Method of making bearing material  
[NASA-CASE-LEW-11930-3] c24 N80-33482

NiCrAl ternary alloy having improved cyclic oxidation resistance  
[NASA-CASE-LEW-13339-1] c26 N81-12211

Curved film cooling admission tube  
[NASA-CASE-LEW-13174-1] c34 N81-12363

Solar cell system having alternating current output  
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Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c28 N81-14103

Curved centerline air intake for a gas turbine engine  
[NASA-CASE-LEW-13201-1] c07 N81-14999

Improved refractory coatings  
[NASA-CASE-LEW-13169-2] c26 N81-16209

Texturing polymer surfaces by transfer casting  
[NASA-CASE-LEW-13120-1] c31 N81-16327

Mechanical bonding of metal  
[NASA-CASE-LEW-12941-1] c31 N81-16329

Gyrotron transmitting tube  
[NASA-CASE-LEW-13429-1] c33 N81-16384

High voltage planar multijunction  
[NASA-CASE-LEW-13400-1] c44 N81-16528

High voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c44 N81-16529

Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-1] c24 N81-17170

Curing agent for polyepoxides and epoxy resins and composites cured therewith  
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Apparatus for sensor failure detection and correction in a gas turbine engine control system  
[NASA-CASE-LEW-12907-2] c07 N81-19115

Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c07 N81-19116

Heat pipes to reduce engine exhaust emissions  
[NASA-CASE-LEW-12590-1] c25 N81-19245

Composition and method for making polyimide resin-reinforced fabric  
[NASA-CASE-LEW-12933-1] c27 N81-19296

Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c37 N81-19455

Improved thermionic energy converters  
[NASA-CASE-LEW-12443-1] c44 N81-19561

Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c27 N81-22190

Heat pipes containing alkali metal working fluid  
[NASA-CASE-LEW-12253-1] c34 N81-22310

Multiple plate hydrostatic viscous damper  
[NASA-CASE-LEW-12445-1] c37 N81-22360

Advanced inorganic separators for alkaline batteries and method of making same  
[NASA-CASE-LEW-13171-1] c44 N81-22466

Method for depositing an oxide coating  
[NASA-CASE-LEW-13131-1] c26 N81-24230

In-situ cross linking of polyvinyl alcohol  
[NASA-CASE-LEW-13135-2] c27 N81-24257

Thermal barrier coating system having improved adhesion  
[NASA-CASE-LEW-13359-1] c27 N81-24265

Ladder supported ring bar circuit  
[NASA-CASE-LEW-13570-1] c33 N81-24348

Self-stabilizing radial face seal  
[NASA-CASE-LEW-12991-1] c37 N81-24442

Heat exchanger and method of making  
[NASA-CASE-LEW-12441-3] c44 N81-24519

Toroidal cell and battery  
[NASA-CASE-LEW-12918-1] c44 N81-24521

Corrosion resistant thermal barrier coating  
[NASA-CASE-LEW-13088-1] c26 N81-25188

Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-2] c24 N81-26179

Zirconium carbide as an electrocatalyst for the chromous/chromic redox couple  
[NASA-CASE-LEW-13246-1] c25 N81-26203

Circumferential shaft seal  
[NASA-CASE-LEW-12119-2] c37 N81-26447

Ion sputter textured graphite  
[NASA-CASE-LEW-12919-1] c24 N81-27198

Cross-linked polyvinyl alcohol and method of making same  
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Additive for zinc electrodes  
[NASA-CASE-LEW-13286-1] c44 N81-27597

Heat transparent high intensity high efficiency solar cell  
[NASA-CASE-LEW-12892-1] c44 N81-27598

Polyvinyl alcohol battery separator containing inert filler  
[NASA-CASE-LEW-13556-1] c44 N81-27615

Method of forming oxide coatings  
[NASA-CASE-LEW-13132-1] c44 N81-27616

Ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-1] c52 N81-27786

Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c07 N81-29129

Cross-linked polyvinyl alcohol and method of making same  
[NASA-CASE-LEW-13101-2] c23 N81-29160

Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-2] c44 N81-29524

Alkaline battery containing a separator of a cross-linked copolymer of vinyl alcohol and unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c44 N81-29531

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.  
MANNED SPACECRAFT CENTER, CAPE CANAVERAL, FLA.**

Electrode for biological recording  
[NASA-CASE-XMS-02872] c05 N69-21925

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.  
MANNED SPACECRAFT CENTER, LANGLEY STATION, VA.**

Plural recorder system  
[NASA-CASE-XMS-06949] c09 N69-21467

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.  
MARSHALL SPACE FLIGHT CENTER, HUNTSVILLE, ALA.**

Electrical feed-through connection for printed circuit boards and printed cable  
[NASA-CASE-XMF-01483] c14 N69-27431

Method for detecting hydrogen gas  
[NASA-CASE-XMF-03873] c06 N69-39733

Electrical connector Patent Application  
[NASA-CASE-MFS-14741] c09 N70-20737



Angular measurement system Patent [NASA-CASE-XMF-00447]	c14 N70-33179	Method and means for damping nutation in a satellite Patent [NASA-CASE-XMF-00442]	c31 N71-10747
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Attitude and propellant flow control system and method Patent [NASA-CASE-XMF-00185]	c21 N70-34539	Reactance control system Patent [NASA-CASE-XMF-01598]	c21 N71-15583
Electrical connector for flat cables Patent [NASA-CASE-XMF-00324]	c09 N70-34596	Apparatus for welding torch angle and seam tracking control Patent [NASA-CASE-XMF-03287]	c15 N71-15607
Externally pressurized fluid bearing Patent [NASA-CASE-XMF-00515]	c15 N70-34664	Multivay vortex valve system Patent [NASA-CASE-XMF-04709]	c15 N71-15609
Force measuring instrument Patent [NASA-CASE-XMF-00456]	c14 N70-34705	Injector assembly for liquid fueled rocket engines Patent [NASA-CASE-XMF-00968]	c28 N71-15660
Seismic displacement transducer Patent [NASA-CASE-XMF-00479]	c14 N70-34794	Space capsule ejection assembly Patent [NASA-CASE-XMF-03169]	c31 N71-15675
Electric arc welding Patent [NASA-CASE-XMF-00392]	c15 N70-34814	Air cushion lift pad Patent [NASA-CASE-MFS-14685]	c31 N71-15689
Assembly for recovering a capsule Patent [NASA-CASE-XMF-00641]	c31 N70-36410	Method of making a molded connector Patent [NASA-CASE-XMF-03498]	c15 N71-15986
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Storage container for electronic devices Patent  
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Real time, large volume, moving scene holographic camera system [NASA-CASE-MFS-22537-1]	c35 N75-27328	Lead-oxygen dc power supply system having a closed loop oxygen and water system [NASA-CASE-MFS-23059-1]	c44 N76-27664
Method and apparatus for vibration analysis utilizing the Mossbauer effect [NASA-CASE-MFP-05882]	c35 N75-27329	Thermal energy storage system [NASA-CASE-MFS-23167-1]	c44 N76-31667
Method of preparing graphite reinforced alumina composite [NASA-CASE-MFS-21077-1]	c24 N75-28135	Aircraft-mounted crash-activated transmitter device [NASA-CASE-MFS-16609-3]	c03 N76-32140
Carbon monoxide monitor [NASA-CASE-MFS-22060-1]	c35 N75-29380	Multiple in-line docking capability for rotating space stations [NASA-CASE-MFS-20855-1]	c15 N77-10112
Perfluoro alkylene dioxy-bis-(4-phthalic anhydrides and oxy-bis-(perfluoroalkyleneoxyphthalic anhydrides [NASA-CASE-MFS-22356-1]	c23 N75-30256	Attitude control system [NASA-CASE-MFS-22787-1]	c15 N77-10113

Heat exchanger [NASA-CASE-MFS-22991-1]	c34	N77-10463	Secure communication system [NASA-CASE-MSC-16462-1]	c32	N78-25274
Focused laser Doppler velocimeter [NASA-CASE-MFS-23178-1]	c35	N77-10493	Method and apparatus for conditioning of nickel-cadmium batteries [NASA-CASE-MFS-23270-1]	c44	N78-25531
Photovoltaic cell array [NASA-CASE-MFS-22458-1]	c44	N77-10635	Passive propellant system [NASA-CASE-MFS-23642-2]	c20	N78-27176
Wind measurement system [NASA-CASE-MFS-23362-1]	c47	N77-10753	Field effect transistor and method of construction thereof [NASA-CASE-MFS-23312-1]	c33	N78-27326
Mechanical thermal motor [NASA-CASE-MFS-23062-1]	c37	N77-12402	Plasma cleaning device [NASA-CASE-MFS-22906-1]	c75	N78-27913
Solid-state current transformer [NASA-CASE-MFS-22560-1]	c33	N77-14335	Process for spinning flame retardant elastomeric compositions [NASA-CASE-MSC-14331-3]	c27	N78-32262
Actuator device for artificial leg [NASA-CASE-MFS-23225-1]	c52	N77-14735	Velocity measurement system [NASA-CASE-MFS-23363-1]	c35	N78-32396
Frequency modulated oscillator [NASA-CASE-MFS-23181-1]	c33	N77-17351	Hybrid holographic non-destructive test system [NASA-CASE-MFS-23114-1]	c38	N78-32447
Method of and means for testing a tape record/playback system [NASA-CASE-MFS-22671-2]	c35	N77-17426	FM/CW radar system [NASA-CASE-MFS-22234-1]	c32	N79-10264
Notch filter [NASA-CASE-MFS-23303-1]	c32	N77-16307	Method of obtaining intensified image from developed photographic films and plates [NASA-CASE-MFS-23461-1]	c35	N79-10389
Guide for a typewriter [NASA-CASE-MFS-15218-1]	c37	N77-19457	Computerized system for translating a torch head [NASA-CASE-MFS-23620-1]	c37	N79-10421
Mount for continuously orienting a collector dish in a system adapted to perform both diurnal and seasonal solar tracking [NASA-CASE-MFS-23267-1]	c35	N77-20401	Rotatable mass for a flywheel [NASA-CASE-MFS-23051-1]	c37	N79-10422
Emergency descent device [NASA-CASE-MFS-23074-1]	c54	N77-21844	Water system virus detection [NASA-CASE-MSC-16098-1]	c51	N79-10693
Device for tensioning test specimens within an hermetically sealed chamber [NASA-CASE-MFS-23281-1]	c35	N77-22450	Anastigmatic three-mirror telescope [NASA-CASE-MFS-23675-1]	c89	N79-10969
Combined docking and grasping device [NASA-CASE-MFS-23088-1]	c37	N77-23483	Apparatus for assembling space structure [NASA-CASE-MFS-23579-1]	c18	N79-11108
Method of growing composites of the type exhibiting the Soret effect [NASA-CASE-MFS-22926-1]	c24	N77-27187	Spherical bearing [NASA-CASE-MFS-23447-1]	c37	N79-11404
Method for measuring biaxial stress in a body subjected to stress inducing loads [NASA-CASE-MFS-23299-1]	c39	N77-28511	Method for making an aluminum or copper substrate panel for selective absorption of solar energy [NASA-CASE-MFS-23518-1]	c44	N79-11469
Method for attaching a fused-quartz mirror to a conductive metal substrate [NASA-CASE-MFS-23405-1]	c26	N77-29260	System for the measurement of ultra-low stray light levels [NASA-CASE-MFS-23513-1]	c74	N79-11865
Method of preparing zinc orthotitanate pigment [NASA-CASE-MFS-23345-1]	c27	N77-30237	A system for concurrently delivering a stream of powdered fuel and a stream of powdered oxidizer to a combustion chamber for a reaction motor [NASA-CASE-MFS-23904-1]	c20	N79-13077
Accumulator [NASA-CASE-MFS-19287-1]	c34	N77-30399	Simulator method and apparatus for practicing the mating of an observer-controlled object with a target [NASA-CASE-MFS-23052-2]	c74	N79-13855
Tachometer [NASA-CASE-MFS-23175-1]	c35	N77-30436	Multilevel metallization method for fabricating a metal oxide semiconductor device [NASA-CASE-MFS-23541-1]	c76	N79-14906
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Stainless steel panel for selective absorption of solar energy and the method of producing said panel [NASA-CASE-MFS-23518-2]	c44	N77-31611	Method of making a rocket nozzle [NASA-CASE-MFP-06884-1]	c20	N79-21123
Method of crystallization [NASA-CASE-MFS-23001-1]	c76	N77-32919	Fluid thrust control system [NASA-CASE-MFP-05964-1]	c20	N79-21124
Power factor control system for AC induction motors [NASA-CASE-MFS-23280-1]	c33	N78-10376	Rocket injector head [NASA-CASE-MFP-04592-1]	c20	N79-21125
Germanium coated microbridge and method [NASA-CASE-MFS-23274-1]	c33	N78-13320	Infusible silazane polymer and process for producing same [NASA-CASE-MFP-02526-1]	c27	N79-21190
Laser extensometer [NASA-CASE-MFS-19259-1]	c36	N78-14380	Fluorine-containing polyformals [NASA-CASE-MFP-06900-1]	c27	N79-21191
Method of and means for testing a glancing-incidence mirror system of an X-ray telescope [NASA-CASE-MFS-22409-2]	c74	N78-15880	Method and apparatus for preparing multiconductor cable with flat conductors [NASA-CASE-MFS-10946-1]	c31	N79-21226
Projection system for display of parallax and perspective [NASA-CASE-MFS-23194-1]	c35	N78-17357	Edge coating of flat wires [NASA-CASE-MFP-05757-1]	c31	N79-21227
Gas ion laser construction for electrically isolating the pressure gauge thereof [NASA-CASE-MFS-22597]	c36	N78-17366	Stable superconducting magnet [NASA-CASE-MFP-05373-1]	c33	N79-21264
Wrist joint assembly [NASA-CASE-MFS-23311-1]	c54	N78-17676	Retractable environmental seal [NASA-CASE-MFS-23646-1]	c37	N79-22474
Semiconductor projectile impact detector [NASA-CASE-MFS-23008-1]	c35	N78-18390	Horizontally mounted solar collector [NASA-CASE-MFS-23349-1]	c44	N79-23481
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[NASA-CASE-NPO-13758-2] c31 N81-15154

Method and apparatus for quadriphase-shift-key and linear phase modulation  
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An electro-optical Doppler tracker means and method for optical correlation of synthetic aperture radar data  
[NASA-CASE-NPO-14998-1] c33 N81-15194

Tunable injection-locked pulsed CO2 laser  
[NASA-CASE-NPO-14984-1] c36 N81-15350

Speed control device for a heavy duty shaft  
[NASA-CASE-NPO-14170-1] c37 N81-15364

Redundant operation of counter modules  
[NASA-CASE-NPO-14162-1] c60 N81-15706

A method for producing a solidified body of silicon  
[NASA-CASE-NPO-15250-1] c25 N81-16174

Method of forming frozen spheres in a force-free drop tower  
[NASA-CASE-NPO-14845-1] c31 N81-16328

An improved solid electrolyte cell  
[NASA-CASE-NPO-15269-1] c33 N81-16385

Tactile sensing system  
[NASA-CASE-NPO-15094-1] c33 N81-16386

CAT altitude avoidance system  
[NASA-CASE-NPO-15351-1] c47 N81-16677

Insoluble polyelectrolyte and ion-exchange hollow fiber impregnated therewith  
[NASA-CASE-NPO-13530-1] c25 N81-17187

Molten salt pyrolysis of latex  
[NASA-CASE-NPO-14315-1] c27 N81-17261

Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c37 N81-17432

Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c44 N81-17518

System for forming a quadriparted image comprising angularly related fields of view of a three dimensional object  
[NASA-CASE-NPO-14219-1] c74 N81-17886

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] c74 N81-17887

Interferometer  
[NASA-CASE-NPO-14502-1] c74 N81-17888

Fiberglass/epoxy composite automotive door structure including a glass-reinforced intrusion strip  
[NASA-CASE-NPO-15057-1] c24 N81-19230

Ion-exchange hollow fibers  
[NASA-CASE-NPO-13309-1] c25 N81-19244

A cycling Joule Thomson refrigerator  
[NASA-CASE-NPO-15251-1] c31 N81-19344

Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c33 N81-19389

Elimination of current spikes in buck power converters  
[NASA-CASE-NPO-14505-1] c33 N81-19393

Antenna grout replacement system  
[NASA-CASE-NPO-15205-1] c37 N81-19457

Copper doped polycrystalline silicon solar cell  
[NASA-CASE-NPO-14670-1] c44 N81-19558

System and method for character recognition  
[NASA-CASE-NPO-11337-1] c74 N81-19896

X-ray position detector  
[NASA-CASE-NPO-12087-1] c74 N81-19898

Optical signature generating and correlating apparatus

[NASA-CASE-NPO-15226-1]	c74 N81-15899	PN lock indicator for dithered PN code tracking loop	
Electromigration process for the purification of molten silicon during crystal growth		[NASA-CASE-NFO-14435-1]	c33 N81-33405
[NASA-CASE-NPO-14831-1]	c76 N81-19944	Optical gyroscope system	
Controller for computer control of brushless dc motors		[NASA-CASE-NPO-14258-1]	c35 N81-33448
[NASA-CASE-NPO-13970-1]	c33 N81-20352	Method and apparatus for precision control of radiometer	
Multifunctional transducer		[NASA-CASE-NFO-15398-1]	c35 N81-33449
[NASA-CASE-NPO-14329-1]	c52 N81-20703	Head for high speed spinner having a vacuum chuck	
Low-frequency radio navigation system		[NASA-CASE-NPO-15227-1]	c37 N81-33482
[NASA-CASE-NPO-15264-1]	c04 N81-22036	<b>NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.</b>	
Focal plane array optical proximity sensor		<b>WESTERN OPERATIONS OFFICE, SANTA MONICA, CALIF.</b>	
[NASA-CASE-NPO-15155-1]	c74 N81-22894	Automatic pump Patent	
Polymeric compositions and their method of manufacture		[NASA-CASE-XNP-04731]	c15 N71-24042
[NASA-CASE-NPO-10424-1]	c27 N81-24258	<b>NATIONAL BUREAU OF STANDARDS, BOULDER, COLO.</b>	
Low current linearization of magnetic amplifier for dc transducer		Densitometer Patent	
[NASA-CASE-NPO-14617-1]	c33 N81-24338	[NASA-CASE-XLE-00688]	c14 N70-41330
System for monitoring physical characteristics of fluids		<b>NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, BOULDER, COLO.</b>	
[NASA-CASE-NPO-15400-1]	c34 N81-24384	Determining distance to lightning strokes from a single station	
Mobile sampler for use in acquiring samples of terrestrial atmospheric gasses		[NASA-CASE-KSC-10698]	c07 N73-20175
[NASA-CASE-NPO-15220-1]	c35 N81-24414	<b>NATIONAL RESEARCH CORP., CAMBRIDGE, MASS.</b>	
Maser amplifier slow wave structure		Gauge calibration by diffusion	
[NASA-CASE-NPO-15211-1]	c36 N81-24425	[NASA-CASE-XGS-07752]	c14 N73-30390
Resonant isolator for maser amplifier		Ultrahigh vacuum measuring ionization gauge	
[NASA-CASE-NPO-15201-1]	c36 N81-24426	[NASA-CASE-XLA-05087]	c14 N73-30391
Stark effect spectrophone for continuous absorption spectra monitoring		Apparatus for absolute pressure measurement	
[NASA-CASE-NPO-15102-1]	c25 N81-25159	[NASA-CASE-LAR-10000]	c14 N73-30394
Multifrequency broadband polarized horn antenna		Ultrahigh vacuum gauge having two collector electrodes	
[NASA-CASE-NPO-14588-1]	c32 N81-25278	[NASA-CASE-LAR-02743]	c14 N73-32324
Hot gas engine with dual crankshafts		Rock sampling	
[NASA-CASE-NPO-14221-1]	c37 N81-25370	[NASA-CASE-XNP-10007-1]	c46 N74-23068
Sandblasting nozzle		Rock sampling	
[NASA-CASE-NPO-13823-1]	c37 N81-25371	[NASA-CASE-XNP-09755]	c46 N74-23069
Photomechanical transducer		<b>NATIONAL SCIENCE FOUNDATION, WASHINGTON, D. C.</b>	
[NASA-CASE-NPO-14363-1]	c39 N81-25400	Laser apparatus	
Underground mineral extraction		[NASA-CASE-GSC-12237-1]	c36 N80-14384
[NASA-CASE-NPO-14140-1]	c43 N81-26509	<b>NEW ENGLAND MEDICAL CENTER HOSPITALS, BOSTON, MASS.</b>	
Schottky barrier cell and method of fabricating it		Determination of antimicrobial susceptibilities on infected urines without isolation	
[NASA-CASE-NPO-13689-4]	c44 N81-26553	[NASA-CASE-GSC-12046-1]	c52 N79-14750
System for moving a probe to follow movements of tissue		<b>NORTH AMERICAN AVIATION, INC., CANOGA PARK, CALIF.</b>	
[NASA-CASE-NPO-15197-1]	c52 N81-26697	Method of joining aluminum to stainless steel	
CCD correlated quadruple sampling processor		Patent	
[NASA-CASE-NPO-14426-1]	c33 N81-27396	[NASA-CASE-NFS-07369]	c15 N71-20443
Programmable scan/read circuitry for charge coupled device imaging detectors		Propellant mass distribution metering apparatus	
[NASA-CASE-NPO-15345-1]	c33 N81-27403	Patent	
Terminal guidance sensor system		[NASA-CASE-NFO-10185]	c10 N71-26339
[NASA-CASE-NPO-14521-1]	c37 N81-27519	Safety-type locking pin	
A stable density-stratification solar pond		[NASA-CASE-NFS-18495]	c15 N72-11385
[NASA-CASE-NPO-15419-1]	c44 N81-27599	Hydrogen fire detection system with logic circuit to analyze the spectrum of temporal variations of the optical spectrum	
Medical diagnosis system and method with multispectral imaging		[NASA-CASE-NFS-13130]	c10 N72-17173
[NASA-CASE-NPO-14402-1]	c52 N81-27783	<b>NORTH AMERICAN AVIATION, INC., DOWNBY, CALIF.</b>	
High-speed multiplexing of keyboard data inputs		Heat shield oven	
[NASA-CASE-NPO-14554-1]	c60 N81-27814	[NASA-CASE-XMS-04318]	c15 N69-27871
Acoustic suspension system		Extensible cable support Patent	
[NASA-CASE-NPO-15435-1]	c71 N81-27887	[NASA-CASE-XMR-07587]	c15 N71-16701
Asymmetric polyimide separation membrane and method		High pressure air valve Patent	
[NASA-CASE-NPO-15431-1]	c25 N81-25178	[NASA-CASE-NSC-11010]	c15 N71-19485
Baseband signal combiner for large aperture antenna array		Load relieving device Patent	
[NASA-CASE-NPO-14641-1]	c32 N81-29308	[NASA-CASE-XMS-06329-1]	c15 N71-20441
Waveguide cooling system		Optical projector system Patent	
[NASA-CASE-NPO-15401-1]	c33 N81-29344	[NASA-CASE-XNP-03853]	c23 N71-21882
Schottky barrier solar cell		Brazing alloy Patent	
[NASA-CASE-NPO-13689-2]	c44 N81-29525	[NASA-CASE-XNP-03063]	c17 N71-23365
Enhancement of in vitro Guayule propagation		Vibrophonocardiograph Patent	
[NASA-CASE-NPO-15213-1]	c51 N81-29728	[NASA-CASE-XFB-07172]	c05 N71-27234
Interferometer		<b>NORTH AMERICAN AVIATION, INC., EL SEGUNDO, CALIF.</b>	
[NASA-CASE-NPO-14448-1]	c74 N81-29963	Aerodynamic spike nozzle Patent	
Coal desulfurization		[NASA-CASE-XGS-01143]	c31 N71-15647
[NASA-CASE-NPO-14272-1]	c25 N81-33246	Expanding center probe and drogue Patent	
Pressure letdown method and device for coal conversion systems		[NASA-CASE-XMS-03613]	c31 N71-16346
[NASA-CASE-NPO-15100-1]	c28 N81-33306	Radio frequency shielded enclosure Patent	
Method and apparatus for producing concentric hollow spheres		[NASA-CASE-XMF-09422]	c07 N71-19436
[NASA-CASE-NPO-14596-1]	c31 N81-33319	High impedance measuring apparatus Patent	
Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress		[NASA-CASE-XMS-08589-1]	c09 N71-20569
[NASA-CASE-NPO-14316-1]	c33 N81-33404	Latching mechanism Patent	
		[NASA-CASE-XMS-03745]	c15 N71-21076
		Tube dimpling tool Patent	
		[NASA-CASE-XMS-06876]	c15 N71-21536
		Positive locking check valve Patent	
		[NASA-CASE-XMS-09310]	c15 N71-22706
		Etching of aluminum for bonding Patent	
		[NASA-CASE-XMF-02303]	c17 N71-23828

Method and apparatus for varying thermal conductivity Patent  
[NASA-CASE-XNP-05524] c33 N71-24876

Purge device for thrust engines Patent  
[NASA-CASE-XNS-04826] c28 N71-28849

Method and construction for protecting heat sensitive bodies from thermal radiation and convective heat Patent  
[NASA-CASE-XNP-01310] c33 N71-28852

Propellant tank pressurization system Patent  
[NASA-CASE-XNP-00650] c27 N71-28929

Spherical shield Patent  
[NASA-CASE-XNP-01855] c15 N71-28937

Universal restrainer and joint Patent  
[NASA-CASE-XNP-02278] c15 N71-28951

Method and device for cooling Patent  
[NASA-CASE-HCN-00938] c33 N71-29053

**NORTH AMERICAN AVIATION, INC., LOS ANGELES, CALIF.**  
Method and system for respiration analysis Patent  
[NASA-CASE-XPR-08403] c05 N71-11202

**NORTH AMERICAN AVIATION, INC., TORRANCE, CALIF.**  
Method and apparatus for detection and location of microleaks Patent  
[NASA-CASE-XMP-02307] c14 N71-10779

**NORTH AMERICAN AVIATION, INC., WOODLAND HILLS, CALIF.**  
Fluid pressure balanced seal  
[NASA-CASE-XGS-01286-1] c37 N79-33469

**NORTH AMERICAN PHILIPS CO., INC., FARRINGTON, N.Y.**  
Linear magnetic bearings  
[NASA-CASE-GSC-12582-1] c37 N81-16469

**NORTH AMERICAN ROCKWELL CORP., CANOGA PARK, CALIF.**  
Noncontaminating swabs  
[NASA-CASE-MFS-18100] c15 N72-11390

Observation window for a gas confining chamber  
[NASA-CASE-NPO-10890] c11 N73-12265

Droplet monitoring probe  
[NASA-CASE-NPO-10985] c14 N73-20478

Circuit board package with wedge shaped covers  
[NASA-CASE-MFS-21919-1] c10 N73-25243

Heat flow calorimeter  
[NASA-CASE-GSC-11434-1] c34 N74-27859

**NORTH AMERICAN ROCKWELL CORP., DOWNEY, CALIF.**  
Spacecraft Patent  
[NASA-CASE-MSC-13047-1] c31 N71-25434

Latching mechanism Patent  
[NASA-CASE-MSC-15474-1] c15 N71-26162

Dye penetrant for surfaces subsequently contacted by liquid oxygen Patent  
[NASA-CASE-XMP-02221] c18 N71-27170

Frangible link  
[NASA-CASE-MSC-11849-1] c15 N72-22488

Impact monitoring apparatus  
[NASA-CASE-MSC-15626-1] c14 N72-25411

Bonding or repairing process  
[NASA-CASE-MSC-12357] c15 N73-12489

Self-cycling fluid heater  
[NASA-CASE-MSC-15567-1] c33 N73-16918

Phase protection system for ac power lines  
[NASA-CASE-MSC-17832-1] c33 N74-14956

Apparatus for remote handling of materials  
[NASA-CASE-LAR-10634-1] c37 N74-18123

Grain refinement control in TIG arc welding  
[NASA-CASE-MSC-19095-1] c37 N75-19683

**NORTH AMERICAN ROCKWELL CORP., EL SEGUNDO, CALIF.**  
Apparatus for testing wiring harness by vibration generating means  
[NASA-CASE-MSC-15158-1] c14 N72-17325

**NORTH AMERICAN ROCKWELL CORP., LOS ANGELES, CALIF.**  
Tactile sensing means for prosthetic limbs  
[NASA-CASE-MFS-16570-1] c05 N73-32013

**NORTH CAROLINA STATE UNIV., RALEIGH.**  
Thermal shock resistant hafnia ceramic material  
[NASA-CASE-LAR-10894-1] c18 N73-14584

Thermal shock and erosion resistant tantalum carbide ceramic material  
[NASA-CASE-LAR-11902-1] c27 N78-17206

**NORTHEASTERN UNIV., BOSTON, MASS.**  
Pulse-width modulation multiplier Patent  
[NASA-CASE-XEB-09213] c07 N71-12390

**NORTHEOP CORP., HAWTHORNE, CALIF.**  
Shock tube bypass piston tunnel  
[NASA-CASE-NPO-12109] c11 N72-22245

Folding structure fabricated of rigid panels  
[NASA-CASE-XHQ-02146] c18 N75-27040

**NORTHEOP ELECTRONICS, PALOS VERDES PENINSULA, CALIF.**  
Method of making dry electrodes  
[NASA-CASE-FRC-10029-2] c05 N72-25121

Valve seat  
[NASA-CASE-NPO-10606] c15 N72-25451

**NORTHEOP SPACE LABS., HAWTHORNE, CALIF.**  
Method of evaluating moisture barrier properties of encapsulating materials Patent  
[NASA-CASE-NPO-10051] c18 N71-24934

**NORTHEOPICS, PALOS VERDES PENINSULA, CALIF.**  
Flexible conductive disc electrode Patent  
[NASA-CASE-FRC-10029] c09 N71-24618

Gas low pressure low flow rate metering system Patent  
[NASA-CASE-FRC-10022] c12 N71-26546

Method of removing insulated material from insulated wires  
[NASA-CASE-FRC-10038] c15 N72-20444

**NOTRE DAME UNIV., IND.**  
Synthesis of polymeric schiff bases by schiff-base exchange reactions Patent  
[NASA-CASE-XMF-08651] c06 N71-11236

Direct synthesis of polymeric schiff bases from two amines and two aldehydes Patent  
[NASA-CASE-XMP-08655] c06 N71-11239

Azine polymers and process for preparing the same Patent  
[NASA-CASE-XMP-08656] c06 N71-11242

Synthesis of polymeric schiff bases by reaction of acetals and amine compounds Patent  
[NASA-CASE-XMF-08652] c06 N71-11243

Aromatic diamine-aromatic dialdehyde high molecular weight Schiff base polymers prepared in a monofunctional Schiff base Patent  
[NASA-CASE-XMP-03074] c06 N71-24740

## O

**OAKLAND UNIV., ROCHESTER, MICH.**  
Optical process for producing classification maps from multispectral data  
[NASA-CASE-MSC-14472-1] c43 N77-10584

Interactive color display for multispectral imagery using correlation clustering  
[NASA-CASE-MSC-16253-1] c32 N79-20297

**OCCIDENTAL RESEARCH CORP., LA VERNE, CALIF.**  
Process for preparing higher oxides of the alkali and alkaline earth metals  
[NASA-CASE-ARC-10992-1] c26 N78-32229

**OHIO STATE UNIV., COLUMBUS.**  
Horn antenna having V-shaped corrugated slots  
[NASA-CASE-LAR-11112-1] c32 N76-15330

Distributed-switch Dicke radiometers  
[NASA-CASE-GSC-12219-1] c35 N80-18359

**OLD DOMINION UNIV., NORFOLK, VA.**  
Instrumentation for measuring aircraft noise and sonic boom  
[NASA-CASE-LAR-11476-1] c07 N76-27232

Differential sound level meter  
[NASA-CASE-LAR-12106-1] c71 N78-14867

High-temperature microphone system  
[NASA-CASE-LAR-12375-1] c32 N79-24203

Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c02 N81-14968

Leading edge vortex flaps for drag reduction  
[NASA-CASE-LAR-12750-1] c02 N81-19016

**OREGON UNIV., PORTLAND.**  
Method for separating biological cells  
[NASA-CASE-MFS-23883-1] c51 N80-16715

**ORGANON DIAGNOSTICS, EL MONTE, CALIF.**  
Water system virus detection  
[NASA-CASE-MSC-16098-1] c51 N79-10693

## P

**PACKARD-BELL ELECTRONICS CORP., NEWBURY PARK, CALIF.**  
Optical alignment system Patent  
[NASA-CASE-XNP-02029] c14 N70-41955

**PANAUORA CORP., PENNSAUKEN, N. J.**  
Method of forming transparent films of ZnO  
[NASA-CASE-FRC-10019] c15 N73-12487

**PCR, INC., GAINESVILLE, FLA.**  
Perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups  
[NASA-CASE-ARC-11241-1] c25 N81-14016

**PENINSULAR CHEMRESEARCH, INC., GAINESVILLE, FLA.**  
Hydroxy terminated perfluoro ethers Patent  
[NASA-CASE-NPO-10768] c06 N71-27254

Perfluoro polyether acyl fluorides  
[NASA-CASE-NPO-10765] c06 N72-20121

Polyurethane resins from hydroxy terminated perfluoro ethers  
[NASA-CASE-NPO-10768-2] c06 N72-27144

Highly fluorinated polyurethanes  
[NASA-CASE-NPO-10767-2] c06 N72-27151

Highly fluorinated polyurethanes  
[NASA-CASE-NPO-10767-1] c06 N73-33076

PENNSYLVANIA STATE UNIV., UNIVERSITY PARK.  
Process for the preparation of  
polycarboranylphosphazenes  
[NASA-CASE-ARC-11176-2] c27 N81-27271

PHILCO-FORD CORP., HOUSTON, TEX.  
Frequency modulation demodulator threshold  
extension device Patent  
[NASA-CASE-MSC-12165-1] c07 N71-33696

PHILCO-FORD CORP., NEWPORT BEACH, CALIF.  
Mechanically extendible telescoping boom  
[NASA-CASE-NPO-11118] c03 N72-25021

PHILCO-FORD CORP., PALO ALTO, CALIF.  
Composite antenna feed  
[NASA-CASE-GSC-11046-1] c07 N73-26013

Amplitude steered array  
[NASA-CASE-GSC-11446-1] c33 N74-20860

PHOENIX CORP., MCLEAN, VA.  
External bulb variable volume maser  
[NASA-CASE-GSC-12334-1] c36 N79-14362

Off-axis coherently pumped laser  
[NASA-CASE-GSC-12592-1] c36 N81-12407

PITTSBURG UNIV., PA.  
Method and device for the detection of phenol  
and related compounds  
[NASA-CASE-LEN-12513-1] c25 N79-22235

PLANNING RESEARCH CORP., MCLEAN, VA.  
Telephone multiline signaling using common  
signal pair  
[NASA-CASE-KSC-11023-1] c32 N79-23310

PRATT AND WHITNEY AIRCRAFT, EAST HARTFORD, CONN.  
Liquid-gas separation system Patent  
[NASA-CASE-XMS-01624] c15 N70-40062

Vibration damping system Patent  
[NASA-CASE-XMS-01620] c23 N71-15673

Vapor pressure measuring system and method Patent  
[NASA-CASE-XMS-01618] c14 N71-20741

Sealing member and combination thereof and  
method of producing said sealing member Patent  
[NASA-CASE-XMS-01625] c15 N71-23022

## Q

QUANTUM DYNAMICS, TARZANA, CALIF.  
Respiratory analysis system and method  
[NASA-CASE-MSC-13436-1] c05 N73-32015

## R

RADIATION, INC., MELBOURNE, FLA.  
Remote platform power conserving system  
[NASA-CASE-GSC-11182-1] c15 N75-13007

RADIATION INSTRUMENT DEVELOPMENT LAB., INC.,  
MELROSE PARK, ILL.  
High speed binary to decimal conversion system  
Patent  
[NASA-CASE-IGS-01230] c08 N71-19544

RADIATION SYSTEMS, INC., MCLEAN, VA.  
Monopulse tracking system Patent  
[NASA-CASE-IGS-01155] c10 N71-21483

RADIO CORP. OF AMERICA, LANCASTER, PA.  
Bonding graphite with fused silver chloride  
[NASA-CASE-IGS-00963] c15 N69-39735

RADIO CORP. OF AMERICA, NEW YORK.  
Water cooled contactor for anode in carbon arc  
mechanism  
[NASA-CASE-XMS-03700] c15 N69-24266

Apparatus for ballasting high frequency  
transistors  
[NASA-CASE-IGS-05003] c09 N69-24318

Helical coaxial resonator RF filter  
[NASA-CASE-XGS-02816] c07 N69-24323

Radiation resistant silicon semiconductor  
devices Patent  
[NASA-CASE-IGS-07801] c09 N71-12513

GaAs solar detector using manganese as a doping  
agent Patent  
[NASA-CASE-INP-01328] c26 N71-18064

Thermocouple assembly Patent  
[NASA-CASE-INP-01659] c14 N71-23039

Method of erasing target material of a vidicon  
tube or the like Patent  
[NASA-CASE-INP-06028] c09 N71-23189

Transient augmentation circuit for pulse  
amplifiers Patent  
[NASA-CASE-INP-01068] c10 N71-28739

RADIO CORP. OF AMERICA, PRINCETON, N. J.  
Connector strips-positive, negative and T tabs  
[NASA-CASE-IGS-01395] c03 N69-21539

Solar cell including second surface mirrors Patent  
[NASA-CASE-NPO-10109] c03 N71-11049

Collapsible reflector Patent  
[NASA-CASE-XMS-03454] c09 N71-20658

Simple method of making photovoltaic junctions.  
Patent  
[NASA-CASE-INP-01960] c09 N71-23027

Method of electrolytically binding a layer of  
semiconductors together Patent  
[NASA-CASE-INP-01959] c26 N71-23043

Method and apparatus for distillation of liquids  
Patent  
[NASA-CASE-INP-08124] c15 N71-27184

Maximum power point tracker Patent  
[NASA-CASE-GSC-10376-1] c14 N71-27407

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] c26 N71-29156

Radial heat flux transformer  
[NASA-CASE-NPO-10828] c33 N72-17948

Target acquisition antenna  
[NASA-CASE-GSC-10064-1] c10 N72-22235

Method for distillation of liquids  
[NASA-CASE-XNP-08124-2] c06 N73-13129

Hermetically sealed semiconductor  
[NASA-CASE-GSC-10791-1] c15 N73-14469

Thermal flux transfer system  
[NASA-CASE-NPO-12070-1] c28 N73-32606

Rotary solenoid shutter drive assembly and  
rotary inertia damper and stop plate assembly  
[NASA-CASE-GSC-11560-1] c33 N74-20861

Frequency measurement by coincidence detection  
with standard frequency  
[NASA-CASE-MSC-14649-1] c33 N76-16331

RAND CORP., SANTA MONICA, CALIF.  
Satellite communication system Patent  
[NASA-CASE-INP-02389] c07 N71-28900

RAYMOND ENGINEERING LAB., INC., MIDDLETOWN, CONN.  
Synchronous servo loop control system Patent  
[NASA-CASE-INP-03744] c10 N71-20448

RAYTHEON CO., SUDBURY, MASS.  
Laser Doppler system for measuring three  
dimensional vector velocity Patent  
[NASA-CASE-MFS-20386] c21 N71-19212

Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c36 N75-15028

RCA CORP., PRINCETON, N. J.  
Means for growing ribbon crystals without  
subjecting the crystals to thermal  
shock-induced strains  
[NASA-CASE-NFO-14298-1] c76 N80-32244

Apparatus for use in the production of  
ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NFO-14297-1] c33 N81-19389

RCA LABS., PRINCETON, N. J.  
Solar cell with improved N-region contact and  
method of forming the same  
[NASA-CASE-NFO-14205-1] c44 N79-31752

RCA SERVICE CO., INC., CAMDEN, N. J.  
Apparatus for inspecting microfilm Patent  
[NASA-CASE-MFS-20240] c14 N71-26788

RENSSELAER POLYTECHNIC INST., TROY, N. Y.  
Coincidence apparatus for detecting particles  
[NASA-CASE-XLA-07813] c14 N72-17328

Dual acting slit control mechanism  
[NASA-CASE-LAR-11370-1] c35 N80-28686

RESEARCH TRIANGLE INST., DURHAM, N. C.  
Semiconductor p-n junction stress and strain  
sensor  
[NASA-CASE-XLA-04980] c09 N69-27422

ROCHESTER UNIV., N. Y.  
Concave grating spectrometer Patent  
[NASA-CASE-IGS-01036] c14 N70-40003

ROCKETDYNE, CANOGA PARK, CALIF.  
Frequency to analog converter Patent  
[NASA-CASE-INP-07040] c08 N71-12500

Load cell protection device Patent  
[NASA-CASE-XMS-06782] c32 N71-15974

Thermobulb mount Patent  
[NASA-CASE-NFO-10158] c33 N71-16356

Laminar flow enhancement Patent  
[NASA-CASE-NPO-10122] c12 N71-17631

Temperature sensitive flow regulator Patent  
[NASA-CASE-MFS-14259] c15 N71-19213

Hydrogen leak detection device Patent  
[NASA-CASE-MFS-11537] c14 N71-20442

Technique of elbow bending small jacketed transfer lines Patent  
[NASA-CASE-XNP-10475] c15 N71-24679

Gas liquefaction and dispensing apparatus Patent  
[NASA-CASE-NPO-10070] c15 N71-27372

Locking device for turbine rotor blades Patent  
[NASA-CASE-XNP-00816] c28 N71-28928

Laser camera and diffusion filter therefore Patent  
[NASA-CASE-NPO-10417] c16 N71-33410

Hydrazinium nitroformate propellant stabilized with nitroguanidine  
[NASA-CASE-NPO-12000] c27 N72-25699

Hydrazinium nitroformate propellant with saturated polymeric hydrocarbon binder  
[NASA-CASE-NPO-12015] c27 N73-16764

Novel polymers and method of preparing same  
[NASA-CASE-NPO-10998-1] c06 N73-32029

Internally supported flexible duct joint  
[NASA-CASE-MFS-19193-1] c37 N75-15686

Method of heat treating age-hardenable alloys  
[NASA-CASE-XNP-01311] c26 N75-29236

Thrust measurement  
[NASA-CASE-XMS-05731] c35 N75-29382

Device for installing rocket engines  
[NASA-CASE-MFS-19220-1] c20 N76-22296

**ROCKWELL INTERNATIONAL CORP., CANOGA PARK, CALIF.**

Brazing alloy binder  
[NASA-CASE-XMP-05868] c26 N75-27125

Brazing alloy composition  
[NASA-CASE-XMP-06053] c26 N75-27126

Brazing alloy  
[NASA-CASE-XNP-03878] c26 N75-27127

Method and apparatus for vibration analysis utilizing the Mossbauer effect  
[NASA-CASE-XMP-05882] c35 N75-27329

Externally supported internally stabilized flexible duct joint  
[NASA-CASE-MFS-19194-1] c37 N76-14460

Accumulator  
[NASA-CASE-MFS-19287-1] c34 N77-30399

Laser extensometer  
[NASA-CASE-MFS-19259-1] c36 N78-14380

Stable superconducting magnet  
[NASA-CASE-XMP-05373-1] c33 N79-21264

**ROCKWELL INTERNATIONAL CORP., DOWNEY, CALIF.**

Apparatus for positioning modular components on a vertical or overhead surface  
[NASA-CASE-LAR-11465-1] c37 N76-21554

Flanged major modular assembly jig  
[NASA-CASE-MSC-19372-1] c39 N76-31562

Aircraft-mounted crash-activated transmitter device  
[NASA-CASE-MFS-16609-3] c03 N76-32140

Window defect planar mapping technique  
[NASA-CASE-MSC-19442-1] c74 N77-10899

Mechanical sequencer  
[NASA-CASE-MSC-19536-1] c37 N77-22482

Non-floating universal joint  
[NASA-CASE-MSC-19546-1] c37 N77-25536

Load regulating latch  
[NASA-CASE-MSC-19535-1] c37 N77-32499

Adjustable securing base  
[NASA-CASE-MSC-19666-1] c37 N78-17383

Method of producing complex aluminum alloy parts of high temper, and products thereof  
[NASA-CASE-MSC-19693-1] c26 N78-24333

Flexible pile thermal barrier insulator  
[NASA-CASE-MSC-19568-1] c34 N78-25350

Variable contour securing system  
[NASA-CASE-MSC-16270-1] c37 N78-27423

Multi-purpose wind tunnel reaction control model block  
[NASA-CASE-MSC-19706-1] c09 N78-31129

Sequencing device utilizing planetary gear set  
[NASA-CASE-MSC-19514-1] c37 N79-20377

System for automatically switching transformer coupled lines  
[NASA-CASE-MSC-16697-1] c33 N79-28415

Precision heat forming of tetrafluoroethylene tubing  
[NASA-CASE-MSC-18430-1] c31 N80-17292

Pressure limiting propellant actuating system  
[NASA-CASE-MSC-18179-1] c20 N80-18097

High temperature penetrator assembly with bayonet plug and ramp-activated lock  
[NASA-CASE-MSC-18526-1] c35 N80-19468

Floating nut retention system  
[NASA-CASE-MSC-16938-1] c37 N80-23653

Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c26 N80-28492

Complementary cross-slot phased array antenna  
[NASA-CASE-MSC-18532-1] c32 N80-29543

Coaxial phased array antenna  
[NASA-CASE-MSC-16800-1] c32 N81-14187

Installing fiber insulation  
[NASA-CASE-MSC-16973-1] c37 N81-14317

Thermal barrier pressure seal  
[NASA-CASE-MSC-18134-1] c37 N81-15363

A method and technique for installing light-weight fragile, high-temperature fiber insulation  
[NASA-CASE-MSC-16934-2] c37 N81-16468

Apparatus for accurately preloading auger attachment means for frangible protective material  
[NASA-CASE-MSC-18791-1] c37 N81-24446

**ROCKWELL INTERNATIONAL CORP., LOS ANGELES, CALIF.**

Length mode piezoelectric ultrasonic transducer for inspection of solid objects  
[NASA-CASE-MSC-19672-1] c38 N79-14398

**ROPH CORP., CHULA VISTA, CALIF.**

Method of forming shapes from planar sheets of thermosetting materials  
[NASA-CASE-NPO-11036] c15 N72-24522

**ROYAL AIRCRAFT ESTABLISHMENT, FARNBOROUGH (ENGLAND).**

Garments for controlling the temperature of the body Patent  
[NASA-CASE-XMS-10269] c05 N71-24147

**RYAN AERONAUTICAL CO., SAN DIEGO, CALIF.**

Wing deployment method and apparatus Patent  
[NASA-CASE-XMS-00907] c02 N70-41630

Masking device Patent  
[NASA-CASE-XNP-02092] c15 N70-42033

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**SAN JOSE STATE UNIV., CALIF.**

Chelate-modified polymers for atmospheric gas chromatography  
[NASA-CASE-ARC-11154-1] c25 N80-23383

Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-2] c52 N81-14613

Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-1] c52 N81-29764

**SANDERS ASSOCIATES, INC., NASHUA, N. H.**

Increasing efficiency of switching type regulator circuits Patent  
[NASA-CASE-XMS-09352] c09 N71-23316

**SANTA BARBARA RESEARCH CENTER, GOLETA, CALIF.**

Camera arrangement  
[NASA-CASE-GSC-12032-2] c35 N76-19408

**SANTA CLARA UNIV., CALIF.**

Reversed cowl flap inlet thrust augmentor  
[NASA-CASE-ARC-10754-1] c07 N75-24736

Noise suppressor for turbo fan jet engines  
[NASA-CASE-ARC-10812-1] c07 N76-18131

System for measuring Reynolds in a turbulently flowing fluid  
[NASA-CASE-ARC-10755-2] c34 N76-27517

System for measuring three fluctuating velocity components in a turbulently flowing fluid  
[NASA-CASE-ARC-10974-1] c34 N77-27345

**SCHJELDAHL (G. T.) CO., NORTHFIELD, MINN.**

Rotating mandrel for assembly of inflatable devices Patent  
[NASA-CASE-XLA-04143] c15 N71-17687

Traveling sealer for contoured table Patent  
[NASA-CASE-XLA-01494] c15 N71-24164

**SCIENCE APPLICATIONS, INC., LA JOLLA, CALIF.**

Vitro-violet process for producing flame resistant polyamides and products produced thereby  
[NASA-CASE-MSC-16074-1] c27 N80-26446

**SCOTT AVIATION CORP., LANCASTER, N. Y.**

Self-contained breathing apparatus  
[NASA-CASE-MSC-14733-1] c54 N76-24900

**SERV-AIR, INC., EDWARDS, CALIF.**

Portable device for use in starting air-start-units for aircraft and having cable lead testing capability  
[NASA-CASE-PBC-10113-1] c33 N80-26599

**SERV-AIR, INC., HOUSTON, TEX.**

Stator rotor tools

[NASA-CASE-MSC-16000-1] c37 N78-24544  
**SHELDahl CO., NORTHFIELD, MINN.**  
 Method and apparatus for preparing  
 multiconductor cable with flat conductors  
 [NASA-CASE-MFS-10946-1] c31 N79-21226  
 Edge coating of flat wires  
 [NASA-CASE-XMF-05757-1] c31 N79-21227  
**SIKORSKY AIRCRAFT, STRATFORD, CONN.**  
 Locking redundant link  
 [NASA-CASE-LAR-11900-1] c37 N79-14382  
**SINGER-GENERAL PRECISION, INC., BINGHAMTON, N. Y.**  
 CRT blanking and brightness control circuit  
 [NASA-CASE-RSC-10647-1] c10 N72-31273  
**SMITH ELECTRONICS, INC., CLEVELAND, OHIO.**  
 Phase detector assembly Patent  
 [NASA-CASE-XMP-00701] c09 N70-40272  
**SMITHSONIAN ASTROPHYSICAL OBSERVATORY, CAMBRIDGE,  
 MASS.**  
 Atomic hydrogen maser with bulb temperature  
 control to remove wall shift in maser output  
 frequency  
 [NASA-CASE-HQN-10654-1] c16 N73-13489  
 Tunable cavity resonator with ramp shaped supports  
 [NASA-CASE-HQN-10790-1] c36 N74-11313  
**SOLID STATE RADIATIONS, INC., LOS ANGELES, CALIF.**  
 Biomedical radiation detecting probe Patent  
 [NASA-CASE-XMS-01177] c05 N71-19440  
**SOUTHERN METHODIST UNIV., DALLAS, TEX.**  
 Process for utilizing low-cost graphite  
 substrates for polycrystalline solar cells  
 [NASA-CASE-GSC-12022-2] c44 N78-24609  
**SOUTHERN RESEARCH INST., BIRMINGHAM, ALA.**  
 Infusible silazane polymer and process for  
 producing same  
 [NASA-CASE-XMP-02526-1] c27 N79-21190  
**SPACE SCIENCES, INC., WALTHAM, MASS.**  
 Doppler shift system  
 [NASA-CASE-HQN-10740-1] c72 N74-19310  
**SPACE TECHNOLOGY LABS., INC., REDONDO BEACH, CALIF.**  
 AC logic flip-flop circuits Patent  
 [NASA-CASE-XGS-00823] c10 N71-15910  
 Apparatus for field strength measurement of a  
 space vehicle Patent  
 [NASA-CASE-XLE-00820] c14 N71-16014  
 Hermetically sealed explosive release mechanism  
 Patent  
 [NASA-CASE-XGS-00824] c15 N71-16078  
 Apparatus for measuring electric field strength  
 on the surface of a model vehicle Patent  
 [NASA-CASE-XLE-02038] c09 N71-16086  
 Solar cell mounting Patent  
 [NASA-CASE-XNP-00826] c03 N71-21895  
 Prestressed refractory structure Patent  
 [NASA-CASE-XNP-02888] c18 N71-21068  
 Linear accelerator frequency control system Patent  
 [NASA-CASE-XGS-05441] c10 N71-22962  
 Fluid lubricant system Patent  
 [NASA-CASE-XNP-03972] c15 N71-23048  
 Compensating bandwidth switching transients in  
 an amplifier circuit Patent  
 [NASA-CASE-XNP-01107] c10 N71-28859  
**SPACE LABS, INC., VAN NUYS, CALIF.**  
 Peak polarity selector Patent  
 [NASA-CASE-PRC-10010] c10 N71-24862  
 Respiration monitor  
 [NASA-CASE-PRC-10012] c14 N72-17329  
**SPACO, INC., HUNTSVILLE, ALA.**  
 Sight switch using an infrared source and sensor  
 Patent  
 [NASA-CASE-XMF-03934] c09 N71-22985  
 Method and device for detecting voids in low  
 density material Patent  
 [NASA-CASE-MFS-20044] c14 N71-28993  
**SPECTRA-PHYSICS, INC., MOUNTAIN VIEW, CALIF.**  
 Optically pumped resonance magnetometer for  
 determining vectoral components in a spatial  
 coordinate system Patent  
 [NASA-CASE-IGS-04879] c14 N71-20428  
**SPECTROLAB, INC., SYLMAR, CALIF.**  
 Ultraviolet filter  
 [NASA-CASE-XNP-02340] c23 N69-24332  
 Central spar and module joint Patent  
 [NASA-CASE-XNP-02341] c15 N71-21531  
 Apparatus for applying cover slides  
 [NASA-CASE-NPO-10575] c03 N72-25019  
**SPERRY GYROSCOPE CO., GREAT NECK, N. Y.**  
 Automatic gain control system  
 [NASA-CASE-XMS-05307] c09 N69-24330

**SPERRY RAND CORP., BLUE BELL, PA.**  
 Flipflop interrogator and bi-polar current  
 driver Patent  
 [NASA-CASE-XGS-03058] c10 N71-19547  
**SPERRY RAND CORP., HUNTSVILLE, ALA.**  
 Optical tracking mount Patent  
 [NASA-CASE-MFS-14017] c14 N71-26627  
 Collapsible antenna boom and transmission line  
 Patent  
 [NASA-CASE-MFS-20068] c07 N71-27191  
 Device for handling printed circuit cards Patent  
 [NASA-CASE-MFS-20453] c15 N71-29133  
 Frequency division multiplex technique  
 [NASA-CASE-RSC-10521] c07 N73-20176  
 Device for configuring multiple leads  
 [NASA-CASE-MFS-22133-1] c33 N74-26977  
 System for enhancing tool-exchange capabilities  
 of a portable wrench  
 [NASA-CASE-MFS-22283-1] c37 N75-33395  
 Remotely operable articulated manipulator  
 [NASA-CASE-MFS-22707-1] c37 N76-15457  
 Photovoltaic cell array  
 [NASA-CASE-MFS-22458-1] c44 N77-10635  
 Notch filter  
 [NASA-CASE-MFS-23303-1] c32 N77-18307  
 FM/CW radar system  
 [NASA-CASE-MFS-22234-1] c32 N79-10264  
 Anastigmatic three-mirror telescope  
 [NASA-CASE-MFS-23675-1] c89 N79-10969  
**SPERRY RAND CORP., PHOENIX, ARIZ.**  
 Isolation coupling arrangement for a torque  
 measuring system  
 [NASA-CASE-XLA-04897] c15 N72-22482  
**STANFORD RESEARCH INST., MENLO PARK, CALIF.**  
 Automatic fault correction system for parallel  
 signal channels Patent  
 [NASA-CASE-XMP-03263] c09 N71-18843  
 Mercury capillary interrupter Patent  
 [NASA-CASE-XNP-02251] c12 N71-20896  
 Magnetic power switch Patent  
 [NASA-CASE-NPO-10242] c09 N71-24803  
 Procedure and apparatus for determination of  
 water in nitrogen tetroxide  
 [NASA-CASE-NPO-10234] c06 N72-17094  
**STANFORD UNIV., CALIF.**  
 Active RC networks  
 [NASA-CASE-ARC-10042-2] c10 N72-11256  
 Multiloop RC active filter apparatus having low  
 parameter sensitivity with low amplifier gain  
 [NASA-CASE-ARC-10192] c09 N72-21245  
 Spacecraft attitude control method and apparatus  
 [NASA-CASE-HQN-10439] c21 N72-21624  
 Laser system with an antiresonant optical ring  
 [NASA-CASE-HQN-10844-1] c36 N75-19653  
 Traveling wave solid state amplifier utilizing a  
 semiconductor with negative differential  
 mobility  
 [NASA-CASE-HQN-10069] c33 N75-27251  
 Reaction cured glass and glass coatings  
 [NASA-CASE-ARC-11051-1] c27 N78-32260  
 Fibrous refractory composite insulation  
 [NASA-CASE-ARC-11169-1] c24 N79-24062  
 Controller arm for a remotely related slave arm  
 [NASA-CASE-ARC-11052-1] c37 N79-28551  
**STANFORD UNIV., PALO ALTO, CALIF.**  
 RC networks and amplifiers employing the same  
 [NASA-CASE-XAC-05462-2] c10 N72-17171  
**STATE UNIV. OF IOWA, IOWA CITY.**  
 Mixture separation cell Patent  
 [NASA-CASE-XMS-02952] c18 N71-20742  
**SILVANIA ELECTRONIC SYSTEMS-CENTRAL, WILLIAMSVILLE,  
 N. Y.**  
 Acquisition and tracking system for optical radar  
 [NASA-CASE-MFS-20125] c16 N72-13437  
 Altitude sensing device  
 [NASA-CASE-XMS-01994-1] c14 N72-17326

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**TAAG DESIGNS, INC., COLLEGE PARK, MD.**  
 Recovery of radiation damaged solar cells  
 through thermal annealing  
 [NASA-CASE-XGS-04047-2] c03 N72-11062  
 Phototropic composition of matter  
 [NASA-CASE-IGS-03736] c14 N72-22443  
**TAFT BROADCASTING CORP., HOUSTON, TEX.**  
 Television noise reduction device  
 [NASA-CASE-MSC-12607-1] c32 N75-21485



TALLADEGA COLL., ALA.  
Synthesis of multifunction triaryltrifluoroethanes  
[NASA-CASE-ARC-11097-1] c23 N78-22154  
Synthesis of multifunction triaryltrifluoroethanes  
[NASA-CASE-ARC-11097-2] c23 N78-22155

TAMARACK SCIENTIFIC CO., INC., ORANGE, CALIF.  
Detector absorptivity measuring method and apparatus  
[NASA-CASE-LAR-10907-1] c35 N76-29551

TECHNICOLOR, INC., PARAMUS, N.J.  
Automatic lightning detection and photographic system  
[NASA-CASE-KSC-10728-1] c14 N73-32319

TECHNIDYNE, INC., WEST CHESTER, PA.  
Methods and apparatus employing vibratory energy for wrenching Patent  
[NASA-CASE-MFS-20586] c15 N71-17686

TECHNION - ISRAEL INST. OF TECH., HAIFA.  
Modified face seal for positive film stiffness  
[NASA-CASE-LBN-12989-1] c37 N80-12414

TECHNION RESEARCH AND DEVELOPMENT FOUNDATION LTD., HAIFA (ISRAEL).  
Self-stabilizing radial face seal  
[NASA-CASE-LBN-12991-1] c37 N81-24442

TECHNOLOGY, INC., HOUSTON, TEX.  
Apparatus and method for processing Korotkov sounds  
[NASA-CASE-MSC-13999-1] c52 N74-26626

TECHNOLOGY, INC., SAN ANTONIO, TEX.  
Contourograph system for monitoring electrocardiograms  
[NASA-CASE-MSC-13407-1] c10 N72-2C225  
Modification of the physical properties of freeze-dried rice  
[NASA-CASE-MSC-13540-1] c05 N72-33096

TELEDYNE BROWN ENGINEERING, HUNTSVILLE, ALA.  
Self-recording portable soil penetrometer  
[NASA-CASE-MFS-20774] c14 N73-15420

TEMPLE UNIV. RESEARCH INST., PHILADELPHIA, PA.  
Barium release system  
[NASA-CASE-LAR-10670-1] c06 N73-3C097  
Rocket having barium release system to create ion clouds in the upper atmosphere  
[NASA-CASE-LAR-10670-2] c15 N74-27360

TEXAS A&M UNIV., COLLEGE STATION.  
Apparatus for use in examining the lattice of a semiconductor wafer by X-ray diffraction  
[NASA-CASE-MFS-23315-1] c76 N78-24950

TEXAS INSTRUMENTS, INC., DALLAS.  
Integrated circuit including field effect transistor and cermet resistor  
[NASA-CASE-GSC-10835-1] c09 N72-33205  
Apparatus for measuring semiconductor device resistance  
[NASA-CASE-NPO-14424-1] c33 N80-32650

TEXAS TECHNOLOGICAL UNIV., LUBBOCK.  
Insulated electrocardiographic electrodes  
[NASA-CASE-MSC-14339-1] c05 N75-24716

THIokol CHEMICAL CORP., BRISTOL, PA.  
Casting propellant in rocket engine  
[NASA-CASE-LAR-11995-1] c28 N77-10213

THIokol CORP., BRIGHAM CITY, UTAH.  
Process for the leaching of AP from propellant  
[NASA-CASE-NPO-14109-1] c28 N80-23471  
Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c28 N81-15119

THOMPSON RAO WOODBRIDGE, INC., CLEVELAND, OHIO.  
Electromagnetic radiation energy arrangement  
[NASA-CASE-WOO-00428-1] c32 N79-15186

TISDALE (HENRY F., SR.), TREASURE ISLAND, FLA.  
Velocity vector control system augmented with direct lift control  
[NASA-CASE-LAR-12268-1] c08 N81-24106

TRANS-SONICS, INC., LEXINGTON, MASS.  
Capacitive tank gaging apparatus being independent of liquid distribution  
[NASA-CASE-MFS-21629] c14 N72-22442

TRIDENT ENGINEERING ASSOCIATES, INC., ANNAPOLIS, MD.  
Spectroscope equipment using a slender cylindrical reflector as a substitute for a slit Patent  
[NASA-CASE-IGS-08269] c23 N71-26206

TRW DEFENSE AND SPACE SYSTEMS GROUP, REDONDO BEACH, CALIF.  
Optical crystal temperature gauge with fiber optic connections  
[NASA-CASE-MSC-18627-1] c74 N81-15818

TRW EQUIPMENT LABS., CLEVELAND, OHIO.  
Pulsed energy power system Patent  
[NASA-CASE-MSC-13112] c03 N71-11057

TRW, INC., REDONDO BEACH, CALIF.  
Method of and device for determining the characteristics and flux distribution of micrometeorites  
[NASA-CASE-NPO-12127-1] c91 N74-13130  
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[NASA-CASE-LEW-10199-1] c27 N74-23125  
Capillary flow weld-bonding  
[NASA-CASE-LAR-11726-1] c37 N76-27568  
Ruler for making navigational computations  
[NASA-CASE-XNP-01458] c04 N78-17031  
Particle parameter analyzing system  
[NASA-CASE-XLE-06094] c33 N78-17293  
Temperature compensated current source  
[NASA-CASE-MSC-11235] c33 N78-17294  
Shunt regulation electric power system  
[NASA-CASE-GSC-10135] c33 N78-17296  
Heat pipe with dual working fluids  
[NASA-CASE-ARC-10198] c34 N78-17336  
Multi-chamber controllable heat pipe  
[NASA-CASE-ARC-10199] c34 N78-17337  
Microbalance  
[NASA-CASE-MSC-11242] c35 N78-17358  
Gas ion laser construction for electrically isolating the pressure gauge thereof  
[NASA-CASE-MFS-22597] c36 N78-17366  
Wobble gear drive mechanism  
[NASA-CASE-WOO-00625] c37 N78-17385  
Apparatus for handling micron size range particulate material  
[NASA-CASE-NFO-10151] c37 N78-17386  
Solar cell module assembly jig  
[NASA-CASE-XGS-00829-1] c44 N79-19447  
Apparatus for fiber optic liquid level sensing  
[NASA-CASE-MSC-18674-1] c74 N81-24907

TRW SYSTEMS, REDONDO BEACH, CALIF.  
Electromechanical actuator  
[NASA-CASE-XNP-05975] c15 N69-23185  
Control valve and co-axial variable injector Patent  
[NASA-CASE-XNP-09702] c15 N71-17654  
Multiple orifice throttle valve Patent  
[NASA-CASE-XNP-09698] c15 N71-18580  
Semitoroidal diaphragm cavitating valve Patent  
[NASA-CASE-XNP-09704] c12 N71-18615  
Electrohydrodynamic control valve Patent  
[NASA-CASE-NPO-10416] c12 N71-27332

TRW SYSTEMS GROUP, REDONDO BEACH, CALIF.  
Ablative resin Patent  
[NASA-CASE-XLE-05913] c33 N71-14032  
Passive gaging mechanism Patent  
[NASA-CASE-GSC-10306-1] c15 N71-24694  
Multiple varactor frequency doubler Patent  
[NASA-CASE-XMF-04958-1] c10 N71-26414  
Booster tank system Patent  
[NASA-CASE-MSC-12390] c27 N71-29155  
Resonant infrasonic gauging apparatus  
[NASA-CASE-MSC-11847-1] c14 N72-11363  
Wide range analog-to-digital converter with a variable gain amplifier  
[NASA-CASE-NPO-11018] c08 N72-21200  
System for preconditioning a combustible vapor  
[NASA-CASE-NPO-12072] c28 N72-22772  
Fail-safe multiple transformer circuit configuration  
[NASA-CASE-NPO-11078] c09 N72-25262  
Digital control and information system  
[NASA-CASE-NFC-11016] c08 N72-31226  
Ultrasonically bonded valve assembly  
[NASA-CASE-NPO-13360-1] c37 N75-25185  
Cosmic dust analyzer  
[NASA-CASE-MSC-13802-2] c35 N76-15431  
Weld-bonded titanium structures  
[NASA-CASE-LAR-11549-1] c37 N77-11397  
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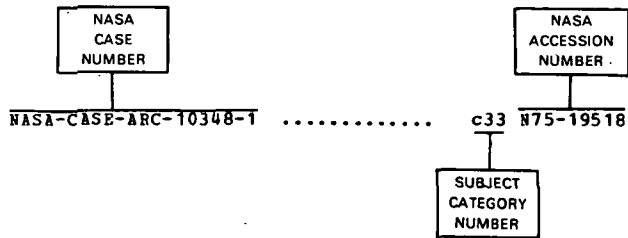
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NASA-CASE-LEW-12364-1	.....	C44 N77-22606	NASA-CASE-LEW-13171-1	.....	C44 N81-22466
NASA-CASE-LEW-12378-1	.....	C07 N79-14097	NASA-CASE-LEW-13174-1	.....	C34 N81-12363
NASA-CASE-LEW-12389-2	.....	C07 N78-18066	NASA-CASE-LEW-13201-1	.....	C07 N81-14999
NASA-CASE-LEW-12389-3	.....	C07 N79-14096	NASA-CASE-LEW-13226-1	.....	C27 N81-17260
NASA-CASE-LEW-12390-1	.....	C07 N78-17056	NASA-CASE-LEW-13246-1	.....	C25 N81-26203
NASA-CASE-LEW-12419-1	.....	C07 N77-14025	NASA-CASE-LEW-13268-1	.....	C37 N80-24619
NASA-CASE-LEW-12441-1	.....	C34 N79-13289	NASA-CASE-LEW-13269-1	.....	C27 N81-22190
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NASA-CASE-LEW-12441-3	.....	C44 N81-24519	NASA-CASE-LEW-13286-1	.....	C44 N81-22597
NASA-CASE-LEW-12443-1	.....	C44 N81-19561	NASA-CASE-LEW-13339-1	.....	C26 N81-12211
NASA-CASE-LEW-12444-1	.....	C33 N77-28385	NASA-CASE-LEW-13343-1	.....	C24 N80-26389
NASA-CASE-LEW-12445-1	.....	C37 N81-22360	NASA-CASE-LEW-13359-1	.....	C27 N81-24265
NASA-CASE-LEW-12452-1	.....	C07 N78-25089	NASA-CASE-LEW-13400-1	.....	C44 N81-16528
NASA-CASE-LEW-12465-1	.....	C25 N78-25148	NASA-CASE-LEW-13401-1	.....	C44 N81-16529
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NASA-CASE-LEW-12493-1	.....	C24 N81-17170	NASA-CASE-LEW-13504-1	.....	C27 N81-27279
NASA-CASE-LEW-12493-2	.....	C24 N81-26179	NASA-CASE-LEW-13556-1	.....	C44 N81-27615
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NASA-CASE-LEW-12508-1	.....	C34 N78-17335	NASA-CASE-LEW-23169-2	.....	C26 N81-16209
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NASA-CASE-LEW-12527-1	.....	C37 N77-32500	NASA-CASE-MFS-07369	.....	C15 N71-20443
NASA-CASE-LEW-12541-1	.....	C44 N78-25529	NASA-CASE-MFS-10068	.....	C10 N71-25139
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NASA-CASE-LEW-12552-2	.....	C44 N79-11472	NASA-CASE-MFS-10512	.....	C06 N73-30099
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NASA-CASE-LEW-12586-1	.....	C44 N80-14472	NASA-CASE-MFS-11132	.....	C15 N71-17649
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NASA-CASE-LEW-12590-1	.....	C25 N81-19245	NASA-CASE-MFS-11204	.....	C14 N71-29134
NASA-CASE-LEW-12594-2	.....	C07 N81-19116	NASA-CASE-MFS-11279	.....	C16 N71-20400
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NASA-CASE-LEW-12619-1	.....	C24 N77-19171	NASA-CASE-MFS-11497	.....	C28 N71-16224
NASA-CASE-LEW-12649-1	.....	C44 N78-25530	NASA-CASE-MFS-11537	.....	C14 N71-20442
NASA-CASE-LEW-12658-1	.....	C71 N79-14671	NASA-CASE-MFS-12750	.....	C27 N71-16223
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NASA-CASE-LEW-12718-1	.....	C34 N78-25351	NASA-CASE-MFS-12827	.....	C14 N71-17656
NASA-CASE-LEW-12723-1	.....	C52 N80-18690	NASA-CASE-MFS-12915	.....	C11 N71-17600
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NASA-CASE-LEW-12780-1	.....	C20 N79-20179	NASA-CASE-MFS-13532	.....	C18 N72-17532
NASA-CASE-LEW-12785-1	.....	C37 N78-24545	NASA-CASE-MFS-13686	.....	C15 N71-18132
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NASA-CASE-NPO-13247-1	c76	N79-16678	NASA-CASE-NPO-13671-1	c37	N77-31497
NASA-CASE-NPO-13253-1	c37	N75-18573	NASA-CASE-NPO-13673-1	c71	N77-26191
NASA-CASE-NPO-13263-1	c12	N75-24774	NASA-CASE-NPO-13675-1	c44	N77-32580
NASA-CASE-NPO-13274-1	c25	N79-10163	NASA-CASE-NPO-13676-1	c60	N79-20751
NASA-CASE-NPO-13281-1	c37	N75-13266	NASA-CASE-NPO-13683-1	c35	N77-14411
NASA-CASE-NPO-13282	c38	N78-17396	NASA-CASE-NPO-13687-1	c35	N78-18391
NASA-CASE-NPO-13283	c38	N78-17395	NASA-CASE-NPO-13689-2	c44	N81-29525
NASA-CASE-NPO-13292-1	c32	N75-15854	NASA-CASE-NPO-13689-4	c44	N81-26553
NASA-CASE-NPO-13303-1	c20	N75-24637	NASA-CASE-NPO-13690-1	c27	N78-19302
NASA-CASE-NPO-13308-1	c36	N75-30524	NASA-CASE-NPO-13690-2	c27	N79-14213
NASA-CASE-NPO-13309-1	c25	N81-19244	NASA-CASE-NPO-13691-1	c43	N79-17288
NASA-CASE-NPO-13313-1	c54	N75-27761	NASA-CASE-NPO-13707-1	c74	N77-28933
NASA-CASE-NPO-13321-1	c32	N75-26195	NASA-CASE-NPO-13722-1	c74	N77-22951
NASA-CASE-NPO-13327-1	c35	N75-23910	NASA-CASE-NPO-13731-1	c39	N78-10493
NASA-CASE-NPO-13342-1	c37	N76-16446	NASA-CASE-NPO-13732-1	c44	N79-10513
NASA-CASE-NPO-13342-2	c44	N76-29700	NASA-CASE-NPO-13734-1	c44	N78-10554
NASA-CASE-NPO-13345-1	c37	N75-19684	NASA-CASE-NPO-13736-1	c44	N77-32583
NASA-CASE-NPO-13346-1	c36	N76-29575	NASA-CASE-NPO-13753-1	c32	N77-20289
NASA-CASE-NPO-13348-1	c33	N75-31332	NASA-CASE-NPO-13756-1	c35	N76-14434
NASA-CASE-NPO-13360-1	c37	N75-25185	NASA-CASE-NPO-13758-2	c31	N81-15154
NASA-CASE-NPO-13374-1	c33	N75-19524	NASA-CASE-NPO-13759-1	c74	N78-17867
NASA-CASE-NPO-13385-1	c33	N76-18345	NASA-CASE-NPO-13763-1	c44	N78-33526
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NASA-CASE-NPO-13388-1	c35	N76-16390	NASA-CASE-NPO-13772-1	c35	N78-10429
NASA-CASE-NPO-13391-1	c34	N76-27515	NASA-CASE-NPO-13786-1	c44	N80-29835
NASA-CASE-NPO-13396-1	c35	N76-18401	NASA-CASE-NPO-13792-1	c35	N77-32455
NASA-CASE-NPO-13402-1	c37	N76-18457	NASA-CASE-NPO-13801-1	c36	N78-18410
NASA-CASE-NPO-13422-1	c60	N76-14818	NASA-CASE-NPO-13802-1	c71	N78-10837
NASA-CASE-NPO-13423-1	c33	N75-31329	NASA-CASE-NPO-13804-1	c33	N80-23559
NASA-CASE-NPO-13426-1	c33	N75-31330	NASA-CASE-NPO-13808-1	c35	N78-15461
NASA-CASE-NPO-13428-1	c60	N77-12721	NASA-CASE-NPO-13810-1	c44	N77-32582
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NASA-CASE-NPO-13436-1	c37	N76-20480	NASA-CASE-NPO-13813-1	c44	N78-31526
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NASA-CASE-NPO-13464-1	c44	N76-18642	NASA-CASE-NPO-13839-1	c31	N78-25256
NASA-CASE-NPO-13464-2	c44	N76-29704	NASA-CASE-NPO-13847-2	c85	N79-17747

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NASA-CASE-NPO-13858-1	c28	N79-11231	NASA-CASE-NFO-14297-1	c33	N81-19389
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NASA-CASE-NPO-13872-1	c33	N78-10377	NASA-CASE-NFO-14311-1	c32	N79-14276
NASA-CASE-NPO-13886-1	c32	N78-24391	NASA-CASE-NFO-14315-1	c27	N81-17261
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NASA-CASE-NPO-13904-1	c25	N79-11152	NASA-CASE-NFO-14324-1	c72	N80-27163
NASA-CASE-NPO-13906-1	c54	N79-24652	NASA-CASE-NFO-14328-1	c32	N80-18253
NASA-CASE-NPO-13907-1	c28	N80-10374	NASA-CASE-NFO-14329-1	c52	N81-20703
NASA-CASE-NPO-13909-1	c33	N78-25319	NASA-CASE-NFO-14340-1	c45	N80-14579
NASA-CASE-NPO-13910-1	c52	N79-27836	NASA-CASE-NFO-14350-1	c33	N80-14332
NASA-CASE-NPO-13913-1	c52	N79-12694	NASA-CASE-NFO-14361-1	c32	N79-26253
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NASA-CASE-NPO-13937-1	c44	N78-31527	NASA-CASE-NFO-14382-1	c31	N80-18231
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NASA-CASE-NPO-13948-1	c35	N78-25391	NASA-CASE-NFO-14395-1	c37	N79-12446
NASA-CASE-NPO-13953-1	c35	N79-28527	NASA-CASE-NFO-14402-1	c52	N81-27783
NASA-CASE-NPO-13958-1	c25	N79-11151	NASA-CASE-NFO-14406-1	c37	N80-29703
NASA-CASE-NPO-13969-1	c76	N79-23798	NASA-CASE-NFO-14410-1	c33	N79-25314
NASA-CASE-NPO-13970-1	c33	N81-20352	NASA-CASE-NFO-14416-1	c44	N81-14389
NASA-CASE-NPO-13982-1	c32	N79-14267	NASA-CASE-NFO-14424-1	c33	N80-32650
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NASA-CASE-NPO-14000-1	c33	N79-24254	NASA-CASE-NFO-14430-1	c33	N80-32650
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NASA-CASE-NPO-14005-1	c71	N79-20827	NASA-CASE-NFO-14444-1	c33	N81-15192
NASA-CASE-NPO-14009-1	c32	N79-13214	NASA-CASE-NFO-14448-1	c74	N81-29963
NASA-CASE-NPO-14014-1	c37	N79-10420	NASA-CASE-NFO-14467-1	c44	N79-31753
NASA-CASE-NPO-14019-1	c32	N79-14268	NASA-CASE-NFO-14473-1	c37	N80-23654
NASA-CASE-NPO-14021-2	c27	N80-16163	NASA-CASE-NFO-14474-1	c26	N80-14229
NASA-CASE-NPO-14022-1	c32	N78-31321	NASA-CASE-NFO-14477-1	c28	N80-28536
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NASA-CASE-NPO-14078-1	c72	N80-14677	NASA-CASE-NFO-14519-1	c32	N80-23524
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NASA-CASE-NPO-14092-1	c52	N80-16725	NASA-CASE-NFO-14521-1	c37	N81-27519
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NASA-CASE-NPO-14254-1	c36	N80-18372	NASA-CASE-NFO-15021-1	c36	N80-20574
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NASA-CASE-NPO-15066-1	c33	880-33679	NASA-CASE-YAC-06302	c08	871-19763
NASA-CASE-NPO-15071-1	c44	880-24747	NASA-CASE-YAC-06956	c15	871-21177
NASA-CASE-NPO-15094-1	c33	881-16386	NASA-CASE-YAC-07043	c05	871-23161
NASA-CASE-NPO-15100-1	c28	881-33306	NASA-CASE-YAC-08494	c30	871-15990
NASA-CASE-NPO-15102-1	c25	881-25159	NASA-CASE-YAC-08972	c02	871-20570
NASA-CASE-NPO-15111-1	c36	880-24602	NASA-CASE-YAC-08981	c09	869-39897
NASA-CASE-NPO-15115-1	c37	880-25660	NASA-CASE-YAC-09489-1	c15	871-26673
NASA-CASE-NPO-15155-1	c74	881-22894	NASA-CASE-YAC-10019	c15	871-23809
NASA-CASE-NPO-15179-1	c44	880-32850	NASA-CASE-YAC-10607	c10	871-23669
NASA-CASE-NPO-15183	c44	880-29843	NASA-CASE-YAC-10608-1	c09	871-12517
NASA-CASE-NPO-15197-1	c52	881-26697	NASA-CASE-YAC-10768	c09	871-18830
NASA-CASE-NPO-15201-1	c36	881-24426	NASA-CASE-YAC-10770-1	c16	871-24828
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NASA-CASE-NPO-15250-1	c25	881-16174	NASA-CASE-XER-07895	c26	872-25679
NASA-CASE-NPO-15251-1	c31	881-19344	NASA-CASE-XER-07896-2	c23	872-22673
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NASA-CASE-NPO-15264-1	c04	881-22036	NASA-CASE-XER-09213	c07	871-12390
NASA-CASE-NPO-15269-1	c33	881-16385	NASA-CASE-XER-09519	c14	871-18483
NASA-CASE-NPO-15345-1	c33	881-27403	NASA-CASE-XER-09521	c09	872-12136
NASA-CASE-NPO-15351-1	c47	881-16677	NASA-CASE-XER-11019	c09	871-23598
NASA-CASE-NPO-15398-1	c35	881-33449	NASA-CASE-XER-11046	c09	872-22203
NASA-CASE-NPO-15400-1	c34	881-24384	NASA-CASE-XER-11046-2	c33	874-22864
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NASA-CASE-NPO-15435-1	c71	881-27687	NASA-CASE-XFR-00756	c02	871-13421
			NASA-CASE-XFR-00811	c15	870-36901
NASA-CASE-NUC-10107-1	c33	874-17930	NASA-CASE-XFR-00929	c31	870-34966
			NASA-CASE-XFR-02007	c12	871-24692
NASA-CASE-WLP-10002	c15	872-17451	NASA-CASE-XFR-03107	c09	871-19449
			NASA-CASE-XFR-03802	c33	871-23085
NASA-CASE-WOO-00428-1	c32	879-19186	NASA-CASE-XFR-04104	c03	870-42073
NASA-CASE-WOO-00625	c37	878-17385	NASA-CASE-XFR-04147	c11	871-10748
			NASA-CASE-XFR-05302	c15	871-23254
NASA-CASE-XAC-00001	c15	871-28952	NASA-CASE-XFR-05421	c15	871-22994
NASA-CASE-XAC-00030	c14	870-34820	NASA-CASE-XFR-05637	c09	871-19480
NASA-CASE-XAC-00042	c14	870-34816	NASA-CASE-XFR-07172	c05	871-27234
NASA-CASE-XAC-00048	c02	871-29128	NASA-CASE-XFR-07658-1	c05	871-26293
NASA-CASE-XAC-00060	c09	870-39915	NASA-CASE-XFR-08403	c05	871-11202
NASA-CASE-XAC-00073	c14	870-34813	NASA-CASE-XFR-09479	c14	869-27503
NASA-CASE-XAC-00074	c15	870-34817	NASA-CASE-XFR-10856	c05	871-11189
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NASA-CASE-XAC-00319	c25	870-41628	NASA-CASE-XGS-00174	c08	870-34743
NASA-CASE-XAC-00399	c11	870-34815	NASA-CASE-XGS-00260	c31	870-37924
NASA-CASE-XAC-00404	c08	870-40125	NASA-CASE-XGS-00359	c14	870-34158
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NASA-CASE-XAC-00435	c09	870-35440	NASA-CASE-XGS-00381	c09	870-34819
NASA-CASE-XAC-00472	c15	870-40180	NASA-CASE-XGS-00458	c09	870-38604
NASA-CASE-XAC-00648	c14	870-40400	NASA-CASE-XGS-00466	c21	870-34297
NASA-CASE-XAC-00731	c11	871-15960	NASA-CASE-XGS-00473	c03	870-38713
NASA-CASE-XAC-00812	c14	871-15598	NASA-CASE-XGS-00587	c15	870-35087
NASA-CASE-XAC-00942	c10	871-16042	NASA-CASE-XGS-00619	c30	870-40016
NASA-CASE-XAC-01101	c14	870-41957	NASA-CASE-XGS-00689	c08	870-34787
NASA-CASE-XAC-01158	c15	871-23051	NASA-CASE-XGS-00740	c07	871-23098
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NASA-CASE-XAC-01591	c31	871-17729	NASA-CASE-XGS-00783	c30	871-17788
NASA-CASE-XAC-01662	c14	871-23037	NASA-CASE-XGS-00809	c21	870-35427
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NASA-CASE-XAC-03107	c23	871-16098	NASA-CASE-XGS-01022	c07	871-16088
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NASA-CASE-XAC-03740	c14	871-26135	NASA-CASE-XGS-01036	c14	870-40003
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NASA-CASE-XAC-04031	c08	871-18594	NASA-CASE-XGS-01118	c10	871-23662
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NASA-CASE-XGS-02317	c09 N71-23525	NASA-CASE-XGS-07752	c14 N73-30390
NASA-CASE-XGS-02319	c14 N71-22965	NASA-CASE-XGS-07801	c09 N71-12513
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NASA-CASE-XGS-02435	c18 N71-22998	NASA-CASE-XGS-08266	c14 N69-27432
NASA-CASE-XGS-02437	c15 N69-21472	NASA-CASE-XGS-08269	c23 N71-26206
NASA-CASE-XGS-02439	c14 N71-19431	NASA-CASE-XGS-08679	c10 N71-21473
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NASA-CASE-XGS-02441	c15 N70-41629	NASA-CASE-XGS-08729	c28 N71-14044
NASA-CASE-XGS-02554	c31 N71-21064	NASA-CASE-XGS-09186	c33 N78-17295
NASA-CASE-XGS-02607	c31 N71-23009	NASA-CASE-XGS-09190	c31 N71-16102
NASA-CASE-XGS-02608	c07 N70-41678	NASA-CASE-XGS-10010	c03 N72-15986
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NASA-CASE-XGS-02631	c03 N71-23006	NASA-CASE-YHQ-01897	c28 N70-35381
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NASA-CASE-XGS-02816	c07 N69-24323	NASA-CASE-YHQ-04106	c14 N70-40240
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NASA-CASE-XGS-03058	c10 N71-19547	NASA-CASE-YKS-02342	c05 N71-11199
NASA-CASE-XGS-03095	c09 N69-27463	NASA-CASE-YKS-02582	c15 N71-21234
NASA-CASE-XGS-03120	c15 N71-24047	NASA-CASE-YKS-03338	c15 N71-24043
NASA-CASE-XGS-03230	c14 N71-23401	NASA-CASE-YKS-03381	c09 N71-22796
NASA-CASE-XGS-03303	c08 N71-18595	NASA-CASE-YKS-03495	c14 N69-39785
NASA-CASE-XGS-03304	c09 N71-22988	NASA-CASE-YKS-03509	c14 N71-23175
NASA-CASE-XGS-03351	c31 N71-16081	NASA-CASE-YKS-04614	c15 N69-21460
NASA-CASE-XGS-03390	c03 N71-23187	NASA-CASE-YKS-04631	c10 N71-23663
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NASA-CASE-XGS-03429	c03 N69-21330	NASA-CASE-YKS-06167	c08 N71-24890
NASA-CASE-XGS-03431	c21 N71-15642	NASA-CASE-YKS-06250	c14 N71-15600
NASA-CASE-XGS-03501	c09 N71-20864	NASA-CASE-YKS-07814	c15 N71-27067
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NASA-CASE-XGS-03505	c03 N71-10608	NASA-CASE-YKS-08012-2	c31 N71-15566
NASA-CASE-XGS-03532	c14 N71-17627	NASA-CASE-YKS-08485	c07 N71-19493
NASA-CASE-XGS-03556	c27 N70-35534	NASA-CASE-YKS-09340	c07 N71-24614
NASA-CASE-XGS-03632	c09 N71-23311	NASA-CASE-YKS-09348	c09 N71-13521
NASA-CASE-XGS-03644	c16 N71-18614	NASA-CASE-YKS-10543	c07 N71-26292
NASA-CASE-XGS-03736	c14 N72-22443	NASA-CASE-YKS-10804	c05 N71-24606
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NASA-CASE-XGS-04173	c19 N71-26674	NASA-CASE-XLA-00013	c15 N71-29136
NASA-CASE-XGS-04175	c15 N71-18579	NASA-CASE-XLA-00062	c14 N70-33254
NASA-CASE-XGS-04224	c10 N71-26418	NASA-CASE-XLA-00087	c02 N70-33332
NASA-CASE-XGS-04227	c15 N71-21744	NASA-CASE-XLA-00100	c14 N70-36807
NASA-CASE-XGS-04393	c21 N71-14159	NASA-CASE-XLA-00105	c28 N70-33331
NASA-CASE-XGS-04478	c14 N71-24233	NASA-CASE-XLA-00112	c11 N70-33287
NASA-CASE-XGS-04480	c16 N69-27491	NASA-CASE-XLA-00113	c14 N70-33386
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NASA-CASE-XGS-04799	c18 N71-24183	NASA-CASE-XLA-00137	c15 N70-33180
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NASA-CASE-XGS-04879	c14 N71-20428	NASA-CASE-XLA-00141	c09 N70-33312
NASA-CASE-XGS-04987	c08 N71-20571	NASA-CASE-XLA-00142	c02 N70-33286
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US-PATENT-APPL-SN-830458 .....	c46 N79-23555	US-PATENT-APPL-SN-848418 .....	c43 N79-26439
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US-PATENT-APPL-SN-831631 .....	c32 N79-20297	US-PATENT-APPL-SN-848776 .....	c07 N72-22127
US-PATENT-APPL-SN-831632 .....	c07 N80-26298	US-PATENT-APPL-SN-848793 .....	c43 N79-31706
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US-PATENT-APPL-SN-835059 .....	c09 N71-26133	US-PATENT-APPL-SN-850504 .....	c52 N81-29764
US-PATENT-APPL-SN-835060 .....	c02 N71-26110	US-PATENT-APPL-SN-850507 .....	c25 N79-14169
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US-PATENT-APPL-SN-835152 .....	c28 N70-38199	US-PATENT-APPL-SN-850587 .....	c08 N72-21199
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US-PATENT-APPL-SN-838337 .....	c31 N79-17029	US-PATENT-APPL-SN-855364 .....	c52 N81-27783
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US-PATENT-APPL-SN-840176 .....	c28 N71-27095	US-PATENT-APPL-SN-856460 .....	c25 N79-24073
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US-PATENT-APPL-SN-844243 .....	c37 N75-29426	US-PATENT-APPL-SN-858766 .....	c27 N79-14213
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US-PATENT-APPL-SN-845807 .....	c15 N72-11391	US-PATENT-APPL-SN-860406 .....	c24 N79-17916
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US-PATENT-APPL-SN-845974 .....	c33 N71-25353	US-PATENT-APPL-SN-860750 .....	c08 N72-22165
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US-PATENT-APPL-SN-867842	.....	c23	N72-27728	US-PATENT-APPL-SN-889438	.....	c15	N72-18477
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US-PATENT-CLASS-48-117	c44 N76-18642	US-PATENT-CLASS-55-66	c25 N80-23383
US-PATENT-CLASS-48-117	c44 N77-10636	US-PATENT-CLASS-55-67	c23 N77-17161
US-PATENT-CLASS-48-117	c28 N80-10374	US-PATENT-CLASS-55-67	c25 N80-23383
US-PATENT-CLASS-48-197R	c44 N76-29704	US-PATENT-CLASS-55-68	c25 N80-23383
US-PATENT-CLASS-48-197R	c44 N77-10636	US-PATENT-CLASS-55-72	c25 N80-23383
US-PATENT-CLASS-48-212	c44 N77-10636	US-PATENT-CLASS-55-73	c45 N79-12584

US-PATENT-CLASS-55-74	c23	N77-17161	US-PATENT-CLASS-60-35.55	c28	N70-38711
US-PATENT-CLASS-55-75	c15	N71-26185	US-PATENT-CLASS-60-35.55	c21	N71-15582
US-PATENT-CLASS-55-100	c35	N78-12390	US-PATENT-CLASS-60-35.55	c15	N71-28951
US-PATENT-CLASS-55-100	c25	N78-25148	US-PATENT-CLASS-60-35.60	c28	N71-15659
US-PATENT-CLASS-55-101	c25	N78-25148	US-PATENT-CLASS-60-36	c15	N72-33477
US-PATENT-CLASS-55-118	c35	N79-17192	US-PATENT-CLASS-60-37	c15	N73-13467
US-PATENT-CLASS-55-122	c35	N79-17192	US-PATENT-CLASS-60-39.03	c07	N77-23106
US-PATENT-CLASS-55-127	c35	N79-17192	US-PATENT-CLASS-60-39.03	c07	N80-18039
US-PATENT-CLASS-55-155	c35	N79-17192	US-PATENT-CLASS-60-39.06	c07	N80-26298
US-PATENT-CLASS-55-158	c18	N71-20742	US-PATENT-CLASS-60-39.06	c07	N81-29129
US-PATENT-CLASS-55-158	c44	N77-22607	US-PATENT-CLASS-60-39.07	c44	N78-32539
US-PATENT-CLASS-55-159	c34	N74-30608	US-PATENT-CLASS-60-39.14	c44	N78-32539
US-PATENT-CLASS-55-159	c37	N79-21345	US-PATENT-CLASS-60-39.14	c07	N79-10057
US-PATENT-CLASS-55-160	c15	N71-15968	US-PATENT-CLASS-60-39.23	c20	N76-14190
US-PATENT-CLASS-55-179	c14	N71-17588	US-PATENT-CLASS-60-39.24	c07	N81-19115
US-PATENT-CLASS-55-179	c54	N77-32722	US-PATENT-CLASS-60-39.27	c07	N80-18039
US-PATENT-CLASS-55-197	c23	N77-17161	US-PATENT-CLASS-60-39.28R	c28	N73-19793
US-PATENT-CLASS-55-199	c34	N74-30608	US-PATENT-CLASS-60-39.28R	c07	N77-23106
US-PATENT-CLASS-55-204	c15	N71-23023	US-PATENT-CLASS-60-39.28R	c37	N78-10467
US-PATENT-CLASS-55-208	c14	N71-18483	US-PATENT-CLASS-60-39.28R	c37	N78-24545
US-PATENT-CLASS-55-241	c35	N79-17192	US-PATENT-CLASS-60-39.28R	c37	N79-11403
US-PATENT-CLASS-55-242	c35	N79-17192	US-PATENT-CLASS-60-39.29	c20	N76-14190
US-PATENT-CLASS-55-261	c35	N76-18401	US-PATENT-CLASS-60-39.29	c35	N76-14431
US-PATENT-CLASS-55-269	c54	N77-32722	US-PATENT-CLASS-60-39.31	c07	N78-18066
US-PATENT-CLASS-55-306	c28	N70-34788	US-PATENT-CLASS-60-39.31	c07	N79-14096
US-PATENT-CLASS-55-360	c35	N79-17192	US-PATENT-CLASS-60-39.33	c44	N78-32539
US-PATENT-CLASS-55-386	c35	N75-26334	US-PATENT-CLASS-60-39.36	c28	N71-20330
US-PATENT-CLASS-55-400	c11	N71-10777	US-PATENT-CLASS-60-39.36	c28	N71-28915
US-PATENT-CLASS-55-407	c35	N79-17192	US-PATENT-CLASS-60-39.46	c27	N71-15635
US-PATENT-CLASS-55-408	c15	N70-40062	US-PATENT-CLASS-60-39.46	c15	N74-27360
US-PATENT-CLASS-55-418	c15	N71-22721	US-PATENT-CLASS-60-39.47	c27	N71-16392
US-PATENT-CLASS-55-446	c15	N72-22489	US-PATENT-CLASS-60-39.48	c28	N70-38199
US-PATENT-CLASS-55-464	c15	N72-22489	US-PATENT-CLASS-60-39.48	c28	N70-39931
US-PATENT-CLASS-55-493	c14	N72-23457	US-PATENT-CLASS-60-39.48	c27	N71-28929
US-PATENT-CLASS-55-498	c14	N72-23457	US-PATENT-CLASS-60-39.51R	c25	N78-10224
US-PATENT-CLASS-55-502	c14	N72-23457	US-PATENT-CLASS-60-39.52	c07	N78-25089
US-PATENT-CLASS-55-510	c25	N74-12813	US-PATENT-CLASS-60-39.65	c28	N71-28915
US-PATENT-CLASS-55-518	c25	N74-12813	US-PATENT-CLASS-60-39.65	c23	N73-30665
US-PATENT-CLASS-55-521	c14	N72-23457	US-PATENT-CLASS-60-39.65	c34	N78-27357
US-PATENT-CLASS-55-523	c34	N76-27515	US-PATENT-CLASS-60-39.66	c15	N70-36411
US-PATENT-CLASS-55-526	c34	N76-27515	US-PATENT-CLASS-60-39.66	c23	N73-30665
US-PATENT-CLASS-58-24	c10	N71-26326	US-PATENT-CLASS-60-39.66	c07	N77-23106
US-PATENT-CLASS-60.39.08	c37	N79-11403	US-PATENT-CLASS-60-39.66	c37	N78-10467
US-PATENT-CLASS-60-1	c15	N72-33477	US-PATENT-CLASS-60-39.66	c37	N79-11403
US-PATENT-CLASS-60-1	c15	N73-13467	US-PATENT-CLASS-60-39.69R	c34	N78-27357
US-PATENT-CLASS-60-23	c09	N71-26182	US-PATENT-CLASS-60-39.72	c23	N73-30665
US-PATENT-CLASS-60-23	c15	N72-12409	US-PATENT-CLASS-60-39.74	c28	N70-33241
US-PATENT-CLASS-60-23	c21	N72-31637	US-PATENT-CLASS-60-39.74	c28	N72-17843
US-PATENT-CLASS-60-23	c15	N73-13467	US-PATENT-CLASS-60-39.74	c20	N79-21125
US-PATENT-CLASS-60-25	c15	N73-24513	US-PATENT-CLASS-60-39.74A	c15	N72-25455
US-PATENT-CLASS-60-25	c37	N74-21060	US-PATENT-CLASS-60-39.74R	c23	N73-30665
US-PATENT-CLASS-60-26	c21	N72-31637	US-PATENT-CLASS-60-39.74R	c20	N76-14190
US-PATENT-CLASS-60-26	c03	N73-20040	US-PATENT-CLASS-60-39.82E	c20	N78-24275
US-PATENT-CLASS-60-35.3	c28	N70-33265	US-PATENT-CLASS-60-39-48	c28	N72-11709
US-PATENT-CLASS-60-35.3	c28	N70-40367	US-PATENT-CLASS-60-51	c15	N71-27754
US-PATENT-CLASS-60-35.5	c28	N70-33356	US-PATENT-CLASS-60-53	c37	N77-22479
US-PATENT-CLASS-60-35.5	c28	N70-34175	US-PATENT-CLASS-60-54.5	c15	N71-10658
US-PATENT-CLASS-60-35.5	c28	N70-36802	US-PATENT-CLASS-60-97	c03	N71-12260
US-PATENT-CLASS-60-35.5	c21	N70-36938	US-PATENT-CLASS-60-108	c33	N71-16104
US-PATENT-CLASS-60-35.5	c25	N70-36946	US-PATENT-CLASS-60-200	c28	N71-14044
US-PATENT-CLASS-60-35.5	c28	N70-37245	US-PATENT-CLASS-60-200A	c33	N72-25911
US-PATENT-CLASS-60-35.5	c28	N70-37580	US-PATENT-CLASS-60-200A	c33	N73-25952
US-PATENT-CLASS-60-35.5	c28	N71-14043	US-PATENT-CLASS-60-200A	c27	N78-17206
US-PATENT-CLASS-60-35.5	c28	N71-15661	US-PATENT-CLASS-60-202	c28	N70-41922
US-PATENT-CLASS-60-35.6	c28	N70-33284	US-PATENT-CLASS-60-202	c28	N71-16574
US-PATENT-CLASS-60-35.6	c28	N70-33331	US-PATENT-CLASS-60-202	c25	N71-21694
US-PATENT-CLASS-60-35.6	c28	N70-33374	US-PATENT-CLASS-60-202	c28	N71-21822
US-PATENT-CLASS-60-35.6	c28	N70-33375	US-PATENT-CLASS-60-202	c28	N71-23081
US-PATENT-CLASS-60-35.6	c28	N70-34860	US-PATENT-CLASS-60-202	c28	N71-23293
US-PATENT-CLASS-60-35.6	c28	N70-35381	US-PATENT-CLASS-60-202	c28	N71-25213
US-PATENT-CLASS-60-35.6	c27	N70-35534	US-PATENT-CLASS-60-202	c28	N71-26173
US-PATENT-CLASS-60-35.6	c15	N70-36535	US-PATENT-CLASS-60-202	c28	N71-26642
US-PATENT-CLASS-60-35.6	c28	N70-36806	US-PATENT-CLASS-60-202	c28	N71-26781
US-PATENT-CLASS-60-35.6	c28	N70-36910	US-PATENT-CLASS-60-202	c28	N72-11709
US-PATENT-CLASS-60-35.6	c28	N70-38249	US-PATENT-CLASS-60-202	c28	N72-22770
US-PATENT-CLASS-60-35.6	c28	N70-38504	US-PATENT-CLASS-60-202	c28	N72-22771
US-PATENT-CLASS-60-35.6	c28	N70-38505	US-PATENT-CLASS-60-202	c28	N73-24783
US-PATENT-CLASS-60-35.6	c28	N70-38710	US-PATENT-CLASS-60-202	c25	N73-25760
US-PATENT-CLASS-60-35.6	c28	N70-39899	US-PATENT-CLASS-60-202	c28	N73-27699
US-PATENT-CLASS-60-35.6	c33	N71-15623	US-PATENT-CLASS-60-202	c20	N77-10148
US-PATENT-CLASS-60-35.6	c27	N71-15634	US-PATENT-CLASS-60-202	c20	N77-20162
US-PATENT-CLASS-60-35.6	c31	N71-15637	US-PATENT-CLASS-60-203	c20	N80-14188
US-PATENT-CLASS-60-35.6	c31	N71-15647	US-PATENT-CLASS-60-204	c07	N78-17055
US-PATENT-CLASS-60-35.6	c28	N71-15660	US-PATENT-CLASS-60-204	c07	N78-18067
US-PATENT-CLASS-60-35.6	c14	N71-27186	US-PATENT-CLASS-60-204	c44	N81-24519
US-PATENT-CLASS-60-35.54	c28	N70-34294	US-PATENT-CLASS-60-211	c28	N73-13773
US-PATENT-CLASS-60-35.54	c28	N70-38645	US-PATENT-CLASS-60-214	c15	N74-27360
US-PATENT-CLASS-60-35.54	c28	N71-29153	US-PATENT-CLASS-60-215	c06	N73-30097
US-PATENT-CLASS-60-35.55	c28	N70-34162	US-PATENT-CLASS-60-215	c15	N74-27360

US-PATENT-CLASS-60-217	c12	N71-17631	US-PATENT-CLASS-60-574	c35	N78-10428
US-PATENT-CLASS-60-225	c28	N71-10780	US-PATENT-CLASS-60-606	c28	N80-10374
US-PATENT-CLASS-60-226A	c07	N77-17659	US-PATENT-CLASS-60-632	c20	N80-18097
US-PATENT-CLASS-60-226A	c07	N79-14096	US-PATENT-CLASS-60-641	c44	N75-32581
US-PATENT-CLASS-60-226A	c07	N79-14097	US-PATENT-CLASS-60-641	c44	N77-32582
US-PATENT-CLASS-60-226E	c07	N77-14025	US-PATENT-CLASS-60-641	c44	N78-17460
US-PATENT-CLASS-60-226E	c07	N77-28118	US-PATENT-CLASS-60-641	c44	N78-32542
US-PATENT-CLASS-60-226E	c07	N78-17055	US-PATENT-CLASS-60-641	c44	N79-18443
US-PATENT-CLASS-60-226E	c07	N78-17056	US-PATENT-CLASS-60-641	c44	N81-17516
US-PATENT-CLASS-60-226E	c07	N78-18066	US-PATENT-CLASS-60-645	c34	N79-20335
US-PATENT-CLASS-60-226E	c07	N78-25089	US-PATENT-CLASS-60-649	c34	N79-20335
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US-PATENT-CLASS-60-226E	c07	N81-19116	US-PATENT-CLASS-60-659	c44	N76-31667
US-PATENT-CLASS-60-228	c07	N77-17659	US-PATENT-CLASS-60-671	c44	N78-32542
US-PATENT-CLASS-60-230	c07	N78-27121	US-PATENT-CLASS-60-721	c71	N79-20827
US-PATENT-CLASS-60-236	c07	N81-19116	US-PATENT-CLASS-60-726	c07	N81-29129
US-PATENT-CLASS-60-238	c07	N81-19116	US-PATENT-CLASS-60-730	c05	N81-26114
US-PATENT-CLASS-60-239	c07	N81-19116	US-PATENT-CLASS-60-733	c07	N80-26298
US-PATENT-CLASS-60-240	c28	N71-24736	US-PATENT-CLASS-60-737	c07	N81-29129
US-PATENT-CLASS-60-240	c28	N73-13773	US-PATENT-CLASS-60-746	c07	N80-26298
US-PATENT-CLASS-60-240	c07	N80-18039	US-PATENT-CLASS-60-836	c24	N78-14096
US-PATENT-CLASS-60-243	c33	N71-21507	US-PATENT-CLASS-61-83	c18	N74-22136
US-PATENT-CLASS-60-243	c15	N71-27432	US-PATENT-CLASS-62-DIG.5	c05	N81-26114
US-PATENT-CLASS-60-243	c28	N73-13773	US-PATENT-CLASS-62-2	c15	N71-15906
US-PATENT-CLASS-60-243	c20	N79-21124	US-PATENT-CLASS-62-3	c20	N75-24637
US-PATENT-CLASS-60-251	c28	N70-41311	US-PATENT-CLASS-62-3	c34	N78-17335
US-PATENT-CLASS-60-251	c27	N71-21819	US-PATENT-CLASS-62-4	c44	N77-32581
US-PATENT-CLASS-60-254	c28	N72-20758	US-PATENT-CLASS-62-4	c44	N78-17460
US-PATENT-CLASS-60-254	c28	N73-24784	US-PATENT-CLASS-62-6	c15	N69-23190
US-PATENT-CLASS-60-256	c28	N73-24784	US-PATENT-CLASS-62-6	c23	N71-15467
US-PATENT-CLASS-60-257	c31	N70-41948	US-PATENT-CLASS-62-6	c15	N71-23025
US-PATENT-CLASS-60-258	c15	N70-22192	US-PATENT-CLASS-62-6	c23	N72-25619
US-PATENT-CLASS-60-258	c28	N71-22583	US-PATENT-CLASS-62-6	c37	N76-29590
US-PATENT-CLASS-60-258	c28	N71-28849	US-PATENT-CLASS-62-6	c44	N76-29701
US-PATENT-CLASS-60-258	c28	N72-17843	US-PATENT-CLASS-62-7	c15	N73-12486
US-PATENT-CLASS-60-258	c15	N72-25455	US-PATENT-CLASS-62-12	c28	N81-14103
US-PATENT-CLASS-60-258	c20	N74-13502	US-PATENT-CLASS-62-15	c06	N70-34946
US-PATENT-CLASS-60-259	c28	N70-41275	US-PATENT-CLASS-62-18	c28	N81-14103
US-PATENT-CLASS-60-259	c20	N74-13502	US-PATENT-CLASS-62-40	c15	N71-24044
US-PATENT-CLASS-60-259	c34	N77-30399	US-PATENT-CLASS-62-40	c28	N81-14103
US-PATENT-CLASS-60-259	c20	N80-14188	US-PATENT-CLASS-62-45	c15	N70-33323
US-PATENT-CLASS-60-259	c05	N81-26114	US-PATENT-CLASS-62-45	c31	N70-41871
US-PATENT-CLASS-60-260	c28	N70-41992	US-PATENT-CLASS-62-45	c33	N71-25351
US-PATENT-CLASS-60-260	c28	N72-18766	US-PATENT-CLASS-62-45	c33	N71-28892
US-PATENT-CLASS-60-261	c37	N78-17384	US-PATENT-CLASS-62-45	c15	N73-12486
US-PATENT-CLASS-60-262	c37	N78-17384	US-PATENT-CLASS-62-45	c35	N74-15093
US-PATENT-CLASS-60-262	c07	N78-18067	US-PATENT-CLASS-62-47	c28	N81-14103
US-PATENT-CLASS-60-263	c28	N71-24321	US-PATENT-CLASS-62-48	c28	N78-24365
US-PATENT-CLASS-60-263	c07	N77-28118	US-PATENT-CLASS-62-49	c31	N76-14284
US-PATENT-CLASS-60-264	c07	N80-32392	US-PATENT-CLASS-62-50	c15	N70-34247
US-PATENT-CLASS-60-265	c28	N71-20942	US-PATENT-CLASS-62-50	c35	N78-12390
US-PATENT-CLASS-60-265	c33	N72-25911	US-PATENT-CLASS-62-51	c15	N72-17453
US-PATENT-CLASS-60-265	c33	N73-25952	US-PATENT-CLASS-62-55	c15	N70-38020
US-PATENT-CLASS-60-265	c20	N76-14191	US-PATENT-CLASS-62-55	c34	N77-30399
US-PATENT-CLASS-60-266	c33	N71-28852	US-PATENT-CLASS-62-55.5	c11	N71-24964
US-PATENT-CLASS-60-266	c28	N72-23810	US-PATENT-CLASS-62-55.5	c15	N72-22484
US-PATENT-CLASS-60-267	c33	N71-29053	US-PATENT-CLASS-62-56	c05	N72-11084
US-PATENT-CLASS-60-267	c33	N72-25911	US-PATENT-CLASS-62-78	c51	N79-10694
US-PATENT-CLASS-60-267	c33	N73-25952	US-PATENT-CLASS-62-80	c23	N72-25619
US-PATENT-CLASS-60-267	c28	N73-32606	US-PATENT-CLASS-62-85	c23	N72-25619
US-PATENT-CLASS-60-267	c20	N76-14191	US-PATENT-CLASS-62-89	c05	N73-26071
US-PATENT-CLASS-60-267	c34	N79-13288	US-PATENT-CLASS-62-93	c15	N69-21465
US-PATENT-CLASS-60-267	c34	N79-13289	US-PATENT-CLASS-62-93	c03	N72-28025
US-PATENT-CLASS-60-267	c34	N80-24573	US-PATENT-CLASS-62-93	c77	N75-20139
US-PATENT-CLASS-60-267	c44	N81-24519	US-PATENT-CLASS-62-100	c34	N77-19353
US-PATENT-CLASS-60-267	c05	N81-26114	US-PATENT-CLASS-62-100	c28	N78-24365
US-PATENT-CLASS-60-271	c28	N72-11708	US-PATENT-CLASS-62-121	c34	N77-19353
US-PATENT-CLASS-60-271	c28	N72-23810	US-PATENT-CLASS-62-129	c31	N76-14284
US-PATENT-CLASS-60-271	c07	N78-17055	US-PATENT-CLASS-62-176	c05	N73-26071
US-PATENT-CLASS-60-271	c37	N78-17384	US-PATENT-CLASS-62-207	c05	N73-26071
US-PATENT-CLASS-60-291	c31	N73-13698	US-PATENT-CLASS-62-209	c05	N73-26071
US-PATENT-CLASS-60-300	c28	N80-10374	US-PATENT-CLASS-62-217	c31	N77-10229
US-PATENT-CLASS-60-316	c34	N76-18364	US-PATENT-CLASS-62-259	c05	N73-20137
US-PATENT-CLASS-60-508	c44	N79-18443	US-PATENT-CLASS-62-259	c05	N73-26071
US-PATENT-CLASS-60-516	c20	N75-24637	US-PATENT-CLASS-62-259	c54	N78-32721
US-PATENT-CLASS-60-517	c44	N76-29701	US-PATENT-CLASS-62-268	c14	N71-20427
US-PATENT-CLASS-60-517	c37	N81-25370	US-PATENT-CLASS-62-268	c34	N79-20336
US-PATENT-CLASS-60-518	c37	N81-14218	US-PATENT-CLASS-62-269	c34	N77-19353
US-PATENT-CLASS-60-518	c37	N81-17432	US-PATENT-CLASS-62-285	c77	N75-20139
US-PATENT-CLASS-60-520	c37	N80-31790	US-PATENT-CLASS-62-288	c77	N75-20139
US-PATENT-CLASS-60-524	c44	N81-17518	US-PATENT-CLASS-62-289	c77	N75-20139
US-PATENT-CLASS-60-525	c37	N81-25370	US-PATENT-CLASS-62-290	c77	N75-20139
US-PATENT-CLASS-60-527	c44	N74-33379	US-PATENT-CLASS-62-315	c34	N77-19353
US-PATENT-CLASS-60-527	c37	N77-12402	US-PATENT-CLASS-62-317	c77	N75-20139
US-PATENT-CLASS-60-527	c37	N77-19458	US-PATENT-CLASS-62-376	c31	N78-17237
US-PATENT-CLASS-60-527	c37	N78-31426	US-PATENT-CLASS-62-376	c34	N79-20336
US-PATENT-CLASS-60-530	c20	N75-24637	US-PATENT-CLASS-62-384	c23	N71-24725
US-PATENT-CLASS-60-560	c35	N78-10428	US-PATENT-CLASS-62-467	c33	N70-37979
US-PATENT-CLASS-60-572	c44	N79-18443	US-PATENT-CLASS-62-467	c33	N71-17697

US-PATENT-CLASS-62-467	.....	C05 N72-11084	US-PATENT-CLASS-73-12	.....	C14 N72-16282
US-PATENT-CLASS-62-467	.....	C33 N72-25911	US-PATENT-CLASS-73-12	.....	C14 N72-25411
US-PATENT-CLASS-62-467	.....	C33 N73-25952	US-PATENT-CLASS-73-12	.....	C14 N73-32327
US-PATENT-CLASS-62-467	.....	C20 N75-24837	US-PATENT-CLASS-73-12	.....	C35 N74-21062
US-PATENT-CLASS-62-475	.....	C23 N72-25619	US-PATENT-CLASS-73-12	.....	C35 N75-33367
US-PATENT-CLASS-62-514	.....	C23 N71-26654	US-PATENT-CLASS-73-12	.....	C75 N76-14931
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US-PATENT-CLASS-73-194	c14	N70-41994	US-PATENT-CLASS-73-432	c30	N71-17788
US-PATENT-CLASS-73-194	c14	N71-23226	US-PATENT-CLASS-73-432	c14	N71-23227
US-PATENT-CLASS-73-194	c12	N71-26546	US-PATENT-CLASS-73-432	c10	N71-26339
US-PATENT-CLASS-73-194A	c14	N72-17329	US-PATENT-CLASS-73-432	c11	N71-28629
US-PATENT-CLASS-73-194E	c14	N73-20478	US-PATENT-CLASS-73-432	c14	N71-30026
US-PATENT-CLASS-73-194E	c05	N73-32015	US-PATENT-CLASS-73-432	c35	N74-21062
US-PATENT-CLASS-73-194EM	c14	N73-32326	US-PATENT-CLASS-73-432ES	c76	N75-12810
US-PATENT-CLASS-73-194EM	c35	N74-21618	US-PATENT-CLASS-73-432ES	c35	N75-33367
US-PATENT-CLASS-73-194F	c14	N72-11365	US-PATENT-CLASS-73-432PS	c35	N78-18390
US-PATENT-CLASS-73-194M	c05	N73-32015	US-PATENT-CLASS-73-432R	c33	N73-27796
US-PATENT-CLASS-73-194M	c35	N75-30503	US-PATENT-CLASS-73-432R	c14	N73-28487
US-PATENT-CLASS-73-194R	c34	N76-27517	US-PATENT-CLASS-73-432R	c91	N76-30131
US-PATENT-CLASS-73-194VS	c34	N79-12359	US-PATENT-CLASS-73-432R	c35	N77-19385
US-PATENT-CLASS-73-195	c35	N75-30503	US-PATENT-CLASS-73-432R	c35	N78-18390
US-PATENT-CLASS-73-198	c14	N69-24257	US-PATENT-CLASS-73-432SD	c11	N72-27262
US-PATENT-CLASS-73-198	c14	N72-17327	US-PATENT-CLASS-73-432SD	c11	N73-20267
US-PATENT-CLASS-73-204	c12	N71-17569	US-PATENT-CLASS-73-432SD	c35	N77-18417
US-PATENT-CLASS-73-204	c35	N76-24524	US-PATENT-CLASS-73-456	c35	N78-24515
US-PATENT-CLASS-73-204	c35	N77-20400	US-PATENT-CLASS-73-490	c04	N81-21047
US-PATENT-CLASS-73-205L	c02	N80-20224	US-PATENT-CLASS-73-492	c14	N72-25411
US-PATENT-CLASS-73-212	c14	N70-36824	US-PATENT-CLASS-73-493	c17	N76-29347
US-PATENT-CLASS-73-212	c14	N73-13415	US-PATENT-CLASS-73-497	c14	N71-30265
US-PATENT-CLASS-73-212	c35	N76-14429	US-PATENT-CLASS-73-497	c35	N74-15094
US-PATENT-CLASS-73-212	c06	N80-18C36	US-PATENT-CLASS-73-504	c04	N81-21047
US-PATENT-CLASS-73-221	c35	N75-19611	US-PATENT-CLASS-73-505	c23	N71-16098
US-PATENT-CLASS-73-228	c34	N77-27345	US-PATENT-CLASS-73-505	c12	N75-24774
US-PATENT-CLASS-73-290	c14	N71-10500	US-PATENT-CLASS-73-505	c71	N78-10837
US-PATENT-CLASS-73-290	c14	N71-21007	US-PATENT-CLASS-73-505	c71	N79-20827
US-PATENT-CLASS-73-290B	c14	N72-11363	US-PATENT-CLASS-73-505	c71	N81-15767
US-PATENT-CLASS-73-295	c23	N71-17802	US-PATENT-CLASS-73-510	c18	N81-29152
US-PATENT-CLASS-73-295	c31	N76-14284	US-PATENT-CLASS-73-515	c14	N72-25410
US-PATENT-CLASS-73-301	c12	N71-26387	US-PATENT-CLASS-73-517	c11	N70-38196
US-PATENT-CLASS-73-304	c14	N72-22442	US-PATENT-CLASS-73-517	c14	N70-41682
US-PATENT-CLASS-73-304C	c14	N71-29134	US-PATENT-CLASS-73-517	c14	N71-15969
US-PATENT-CLASS-73-336.5	c35	N78-25391	US-PATENT-CLASS-73-517B	c35	N74-15094
US-PATENT-CLASS-73-339	c33	N73-27796	US-PATENT-CLASS-73-517B	c17	N76-29347
US-PATENT-CLASS-73-341	c14	N71-15598	US-PATENT-CLASS-73-521	c14	N72-25410
US-PATENT-CLASS-73-343	c33	N71-16356	US-PATENT-CLASS-73-557	c35	N75-19614
US-PATENT-CLASS-73-343	c11	N71-21475	US-PATENT-CLASS-73-557	c07	N76-27232
US-PATENT-CLASS-73-343R	c52	N77-10780	US-PATENT-CLASS-73-579	c39	N78-15512
US-PATENT-CLASS-73-343R	c35	N80-18357	US-PATENT-CLASS-73-579	c35	N79-10390
US-PATENT-CLASS-73-355	c14	N71-27323	US-PATENT-CLASS-73-589	c35	N79-10390
US-PATENT-CLASS-73-355	c14	N72-28437	US-PATENT-CLASS-73-603	c38	N78-32447
US-PATENT-CLASS-73-355R	c14	N72-24477	US-PATENT-CLASS-73-626	c52	N79-26771
US-PATENT-CLASS-73-355R	c35	N80-18359	US-PATENT-CLASS-73-630	c39	N78-15512
US-PATENT-CLASS-73-356	c35	N75-25122	US-PATENT-CLASS-73-632	c38	N79-14398
US-PATENT-CLASS-73-361	c35	N81-26431	US-PATENT-CLASS-73-633	c52	N79-14751
US-PATENT-CLASS-73-362AR	c35	N77-27368	US-PATENT-CLASS-73-641	c38	N79-14398
US-PATENT-CLASS-73-379	c05	N73-27941	US-PATENT-CLASS-73-644	c38	N79-14398
US-PATENT-CLASS-73-379	c05	N73-30078	US-PATENT-CLASS-73-644	c52	N79-14751
US-PATENT-CLASS-73-379	c35	N75-15932	US-PATENT-CLASS-73-646	c71	N78-14867
US-PATENT-CLASS-73-382	c10	N71-13537	US-PATENT-CLASS-73-647	c32	N79-24203
US-PATENT-CLASS-73-382	c14	N71-17587	US-PATENT-CLASS-73-655	c35	N80-14371
US-PATENT-CLASS-73-384	c15	N70-37925	US-PATENT-CLASS-73-661	c35	N80-14371
US-PATENT-CLASS-73-388	c35	N74-32478	US-PATENT-CLASS-73-683.31	c35	N81-29407
US-PATENT-CLASS-73-389	c12	N71-24692	US-PATENT-CLASS-73-684.52	c35	N81-29407
US-PATENT-CLASS-73-398	c14	N70-34816	US-PATENT-CLASS-73-714	c35	N79-14347
US-PATENT-CLASS-73-398	c14	N71-21072	US-PATENT-CLASS-73-714	c34	N79-24285
US-PATENT-CLASS-73-398	c09	N71-24597	US-PATENT-CLASS-73-721	c35	N79-14347
US-PATENT-CLASS-73-398	c14	N73-30394	US-PATENT-CLASS-73-724	c32	N79-24203
US-PATENT-CLASS-73-398AR	c52	N74-27566	US-PATENT-CLASS-73-724	c52	N80-18691
US-PATENT-CLASS-73-398AR	c52	N76-29896	US-PATENT-CLASS-73-756	c35	N78-24515
US-PATENT-CLASS-73-398C	c14	N72-22438	US-PATENT-CLASS-73-756	c35	N79-14347
US-PATENT-CLASS-73-398C	c33	N76-21390	US-PATENT-CLASS-73-770	c39	N79-22537
US-PATENT-CLASS-73-399	c37	N76-18454	US-PATENT-CLASS-73-781	c52	N80-27072
US-PATENT-CLASS-73-400	c14	N71-23693	US-PATENT-CLASS-73-810	c39	N79-22537
US-PATENT-CLASS-73-400	c14	N71-24232	US-PATENT-CLASS-73-861	c34	N81-26402
US-PATENT-CLASS-73-400	c35	N79-33450	US-PATENT-CLASS-73-861.65	c02	N80-28300
US-PATENT-CLASS-73-401	c14	N70-34820	US-PATENT-CLASS-73-861.66	c02	N80-28300
US-PATENT-CLASS-73-419	c14	N71-22752	US-PATENT-CLASS-74-2	c15	N71-24600
US-PATENT-CLASS-73-420	c35	N74-13132	US-PATENT-CLASS-74-2	c31	N73-14855
US-PATENT-CLASS-73-421.5	c14	N73-12444	US-PATENT-CLASS-74-5.5	c35	N74-28097
US-PATENT-CLASS-73-421.5R	c13	N72-25323	US-PATENT-CLASS-74-5.6	c35	N74-15094
US-PATENT-CLASS-73-421.5R	c14	N73-30395	US-PATENT-CLASS-74-5.7	c35	N74-18323
US-PATENT-CLASS-73-421.5R	c52	N74-20728	US-PATENT-CLASS-74-5.7	c15	N76-14158
US-PATENT-CLASS-73-421.5R	c35	N76-18401	US-PATENT-CLASS-74-5.12	c31	N71-26537
US-PATENT-CLASS-73-421.5R	c35	N77-32456	US-PATENT-CLASS-74-5.22	c21	N73-13644
US-PATENT-CLASS-73-421R	c54	N76-14604	US-PATENT-CLASS-74-5.34	c04	N76-26175
US-PATENT-CLASS-73-422	c14	N71-20435	US-PATENT-CLASS-74-5.47	c21	N71-23289
US-PATENT-CLASS-73-422GC	c13	N72-25323	US-PATENT-CLASS-74-5F	c15	N73-12488

US-PATENT-CLASS-74-18.2	c11 N71-27036	US-PATENT-CLASS-75-171	c17 N71-16026
US-PATENT-CLASS-74-63	c15 N71-17692	US-PATENT-CLASS-75-171	c17 N73-32415
US-PATENT-CLASS-74-81	c37 N78-16369	US-PATENT-CLASS-75-172	c17 N71-23365
US-PATENT-CLASS-74-83	c37 N78-16369	US-PATENT-CLASS-75-173	c26 N75-27126
US-PATENT-CLASS-74-89	c37 N81-33483	US-PATENT-CLASS-75-173	c26 N75-27127
US-PATENT-CLASS-74-89.15	c15 N71-26635	US-PATENT-CLASS-75-178B	c04 N76-20114
US-PATENT-CLASS-74-89.15	c15 N72-21462	US-PATENT-CLASS-75-178B	c26 N80-23419
US-PATENT-CLASS-74-89.18	c15 N71-23609	US-PATENT-CLASS-75-200	c26 N74-10521
US-PATENT-CLASS-74-96	c37 N77-22482	US-PATENT-CLASS-75-200	c37 N74-13179
US-PATENT-CLASS-74-100	c15 N71-24045	US-PATENT-CLASS-75-200	c24 N75-13032
US-PATENT-CLASS-74-100B	c37 N78-31426	US-PATENT-CLASS-75-200	c37 N75-26371
US-PATENT-CLASS-74-105	c09 N72-22195	US-PATENT-CLASS-75-200	c24 N80-33482
US-PATENT-CLASS-74-126	c15 N71-21529	US-PATENT-CLASS-75-202	c17 N71-15468
US-PATENT-CLASS-74-217B	c37 N74-23070	US-PATENT-CLASS-75-203	c27 N79-14213
US-PATENT-CLASS-74-384	c37 N76-15457	US-PATENT-CLASS-75-204	c18 N71-22894
US-PATENT-CLASS-74-385	c67 N78-17056	US-PATENT-CLASS-75-205	c27 N79-14213
US-PATENT-CLASS-74-409	c15 N71-21744	US-PATENT-CLASS-75-206	c15 N72-25448
US-PATENT-CLASS-74-417	c07 N78-17056	US-PATENT-CLASS-75-206	c27 N79-14213
US-PATENT-CLASS-74-417	c37 N81-14318	US-PATENT-CLASS-75-208	c18 N72-25539
US-PATENT-CLASS-74-417	c37 N81-17432	US-PATENT-CLASS-75-208B	c37 N75-26371
US-PATENT-CLASS-74-424.8	c15 N71-26635	US-PATENT-CLASS-75-211	c18 N72-25539
US-PATENT-CLASS-74-424.8VA	c37 N75-15050	US-PATENT-CLASS-75-212	c37 N75-26371
US-PATENT-CLASS-74-425	c37 N80-32716	US-PATENT-CLASS-75-212	c27 N79-14213
US-PATENT-CLASS-74-436	c37 N75-13266	US-PATENT-CLASS-75-213	c15 N72-25448
US-PATENT-CLASS-74-468	c15 N71-24584	US-PATENT-CLASS-75-213	c37 N74-13179
US-PATENT-CLASS-74-469	c15 N72-21463	US-PATENT-CLASS-75-214	c37 N74-13179
US-PATENT-CLASS-74-469	c15 N72-28495	US-PATENT-CLASS-75-214	c37 N75-26371
US-PATENT-CLASS-74-471	c05 N70-41581	US-PATENT-CLASS-75-222	c28 N70-38197
US-PATENT-CLASS-74-471	c03 N70-42073	US-PATENT-CLASS-75-222	c37 N75-26371
US-PATENT-CLASS-74-471	c15 N71-20740	US-PATENT-CLASS-75-222	c24 N80-33482
US-PATENT-CLASS-74-471XY	c54 N75-27760	US-PATENT-CLASS-75-225	c34 N76-27515
US-PATENT-CLASS-74-480B	c05 N75-12930	US-PATENT-CLASS-75-226	c18 N72-25539
US-PATENT-CLASS-74-501B	c15 N72-22485	US-PATENT-CLASS-75-226	c26 N74-10521
US-PATENT-CLASS-74-515E	c54 N78-17676	US-PATENT-CLASS-75-226	c37 N74-13179
US-PATENT-CLASS-74-519	c03 N70-41954	US-PATENT-CLASS-75-226	c27 N79-14213
US-PATENT-CLASS-74-519	c05 N81-19087	US-PATENT-CLASS-75-229	c27 N78-17206
US-PATENT-CLASS-74-572	c07 N78-33101	US-PATENT-CLASS-75-239	c27 N78-17206
US-PATENT-CLASS-74-572	c37 N79-10422	US-PATENT-CLASS-75-241	c27 N78-17206
US-PATENT-CLASS-74-572	c44 N79-14527	US-PATENT-CLASS-77.5AQ	c27 N81-15104
US-PATENT-CLASS-74-572	c24 N81-29163	US-PATENT-CLASS-77.5CH	c27 N81-15104
US-PATENT-CLASS-74-586	c37 N79-14382	US-PATENT-CLASS-78-1	c15 N70-33330
US-PATENT-CLASS-74-594.6	c37 N74-18127	US-PATENT-CLASS-81-3R	c15 N71-29133
US-PATENT-CLASS-74-594.7	c37 N74-18127	US-PATENT-CLASS-81-9.5B	c37 N79-10419
US-PATENT-CLASS-74-661	c37 N80-32716	US-PATENT-CLASS-81-56	c37 N76-20480
US-PATENT-CLASS-74-665B	c37 N76-15457	US-PATENT-CLASS-81-57.31	c37 N76-20480
US-PATENT-CLASS-74-665C	c37 N80-32716	US-PATENT-CLASS-81-57.38	c15 N73-30457
US-PATENT-CLASS-74-674	c37 N79-20377	US-PATENT-CLASS-81-63.1	c15 N71-17805
US-PATENT-CLASS-74-675	c37 N74-27901	US-PATENT-CLASS-81-90B	c37 N79-14383
US-PATENT-CLASS-74-705	c37 N79-20377	US-PATENT-CLASS-81-119	c37 N79-14383
US-PATENT-CLASS-74-710	c37 N74-27901	US-PATENT-CLASS-81-180B	c37 N79-14383
US-PATENT-CLASS-74-764	c37 N79-20377	US-PATENT-CLASS-82-1.2	c37 N81-14319
US-PATENT-CLASS-74-800	c37 N78-17385	US-PATENT-CLASS-82-1C	c37 N81-14319
US-PATENT-CLASS-74-820	c37 N75-13266	US-PATENT-CLASS-82-14	c15 N71-22722
US-PATENT-CLASS-75-.5E	c17 N72-22530	US-PATENT-CLASS-82-24B	c14 N72-16283
US-PATENT-CLASS-75-DIG.1	c18 N72-25539	US-PATENT-CLASS-82-36B	c37 N81-14319
US-PATENT-CLASS-75-DIG.1	c37 N75-26371	US-PATENT-CLASS-83-8	c15 N72-27485
US-PATENT-CLASS-75-0.5BB	c15 N72-25448	US-PATENT-CLASS-83-152	c76 N80-18951
US-PATENT-CLASS-75-20F	c15 N72-11387	US-PATENT-CLASS-83-451	c37 N77-14478
US-PATENT-CLASS-75-25	c28 N81-15119	US-PATENT-CLASS-83-452	c39 N74-13131
US-PATENT-CLASS-75-63	c15 N71-27184	US-PATENT-CLASS-83-467	c15 N71-22798
US-PATENT-CLASS-75-65B	c24 N77-27187	US-PATENT-CLASS-83-467B	c37 N77-14478
US-PATENT-CLASS-75-66	c17 N71-26773	US-PATENT-CLASS-83-522	c15 N72-27485
US-PATENT-CLASS-75-66	c06 N73-13129	US-PATENT-CLASS-83-562	c15 N72-27485
US-PATENT-CLASS-75-66	c17 N73-28573	US-PATENT-CLASS-83-563	c15 N72-27485
US-PATENT-CLASS-75-122.7	c37 N77-19458	US-PATENT-CLASS-83-588	c15 N72-27485
US-PATENT-CLASS-75-124	c26 N78-18182	US-PATENT-CLASS-83-602	c39 N74-13131
US-PATENT-CLASS-75-124	c26 N80-32484	US-PATENT-CLASS-83-820	c37 N80-29703
US-PATENT-CLASS-75-126D	c26 N78-18182	US-PATENT-CLASS-83-870	c76 N80-18951
US-PATENT-CLASS-75-126F	c26 N78-18182	US-PATENT-CLASS-83-917	c39 N74-13131
US-PATENT-CLASS-75-128G	c26 N78-18182	US-PATENT-CLASS-85-1	c15 N72-22488
US-PATENT-CLASS-75-128T	c26 N78-18182	US-PATENT-CLASS-85-3	c15 N71-17653
US-PATENT-CLASS-75-134D	c76 N79-16678	US-PATENT-CLASS-85-5B	c15 N72-11385
US-PATENT-CLASS-75-135	c18 N73-32437	US-PATENT-CLASS-85-7	c15 N71-23254
US-PATENT-CLASS-75-135	c24 N77-27187	US-PATENT-CLASS-85-33	c15 N71-15922
US-PATENT-CLASS-75-135	c26 N80-23419	US-PATENT-CLASS-85-33	c15 N71-21489
US-PATENT-CLASS-75-138	c26 N80-23419	US-PATENT-CLASS-86-1	c28 N71-26779
US-PATENT-CLASS-75-139	c24 N77-27187	US-PATENT-CLASS-86-1R	c28 N77-10213
US-PATENT-CLASS-75-142	c17 N71-20743	US-PATENT-CLASS-86-1R	c20 N77-17143
US-PATENT-CLASS-75-170	c17 N71-15644	US-PATENT-CLASS-86-20.2	c28 N71-26779
US-PATENT-CLASS-75-170	c17 N71-16025	US-PATENT-CLASS-86-20E	c20 N77-17143
US-PATENT-CLASS-75-170	c17 N71-23248	US-PATENT-CLASS-88-1	c21 N70-35427
US-PATENT-CLASS-75-170	c17 N72-22535	US-PATENT-CLASS-88-1	c21 N71-22880
US-PATENT-CLASS-75-170	c37 N77-19458	US-PATENT-CLASS-88-14	c14 N70-34298
US-PATENT-CLASS-75-170	c26 N77-20201	US-PATENT-CLASS-88-14	c14 N70-40003
US-PATENT-CLASS-75-170	c26 N77-32279	US-PATENT-CLASS-88-14	c14 N70-41946
US-PATENT-CLASS-75-170	c26 N77-32280	US-PATENT-CLASS-88-14	c14 N70-41955
US-PATENT-CLASS-75-170	c26 N78-18183	US-PATENT-CLASS-88-14	c09 N71-22999
US-PATENT-CLASS-75-171	c17 N70-33283	US-PATENT-CLASS-88-16	c14 N70-33254
US-PATENT-CLASS-75-171	c17 N70-36616	US-PATENT-CLASS-88-24	c23 N71-21882

US-PATENT-CLASS-89-1	c03	N70-34667	US-PATENT-CLASS-102-49.7	c20	N78-24275
US-PATENT-CLASS-89-1	c15	N71-16078	US-PATENT-CLASS-102-49.8	c28	N73-24784
US-PATENT-CLASS-89-1.5	c31	N71-15675	US-PATENT-CLASS-102-50	c31	N71-24750
US-PATENT-CLASS-89-1.5	c15	N71-24600	US-PATENT-CLASS-102-56R	c02	N81-14968
US-PATENT-CLASS-89-1.7	c11	N70-38202	US-PATENT-CLASS-102-70.2	c09	N71-18599
US-PATENT-CLASS-89-1.7	c30	N70-40353	US-PATENT-CLASS-102-70.2A	c28	N74-27425
US-PATENT-CLASS-89-1.7	c03	N71-12258	US-PATENT-CLASS-102-70.2R	c19	N74-15089
US-PATENT-CLASS-89-1.7	c03	N71-12259	US-PATENT-CLASS-102-70.2R	c28	N74-27425
US-PATENT-CLASS-89-1.801	c20	N76-22296	US-PATENT-CLASS-102-70R	c20	N78-24275
US-PATENT-CLASS-89-1.806	c15	N71-24043	US-PATENT-CLASS-102-90	c15	N74-27360
US-PATENT-CLASS-89-1.811	c15	N72-17455	US-PATENT-CLASS-102-92.1	c02	N81-14968
US-PATENT-CLASS-89-8	c11	N71-18578	US-PATENT-CLASS-102-95	c11	N73-32152
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US-PATENT-CLASS-89-8	c75	N76-14531	US-PATENT-CLASS-102-101	c28	N71-26779
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US-PATENT-CLASS-90-11	c15	N71-33518	US-PATENT-CLASS-102-105	c33	N72-25911
US-PATENT-CLASS-90-12	c15	N71-22799	US-PATENT-CLASS-102-105	c33	N73-25952
US-PATENT-CLASS-90-12.5	c37	N74-25968	US-PATENT-CLASS-102-105	c27	N74-27037
US-PATENT-CLASS-91-186	c05	N73-32014	US-PATENT-CLASS-102-105	c24	N79-25142
US-PATENT-CLASS-91-325	c37	N81-32510	US-PATENT-CLASS-103.5R	c04	N73-27052
US-PATENT-CLASS-91-341R	c37	N81-32510	US-PATENT-CLASS-103-1	c26	N71-21824
US-PATENT-CLASS-91-361	c15	N71-27754	US-PATENT-CLASS-103-37	c28	N71-14058
US-PATENT-CLASS-91-363A	c15	N73-13466	US-PATENT-CLASS-103-48	c15	N71-24042
US-PATENT-CLASS-91-390	c15	N71-27147	US-PATENT-CLASS-104-1	c05	N71-28619
US-PATENT-CLASS-91-390	c15	N71-27754	US-PATENT-CLASS-104-23FS	c85	N74-34672
US-PATENT-CLASS-91-410	c37	N81-32510	US-PATENT-CLASS-104-138R	c85	N74-34672
US-PATENT-CLASS-91-448	c15	N71-27754	US-PATENT-CLASS-104-139	c05	N71-28619
US-PATENT-CLASS-91-448	c15	N73-13466	US-PATENT-CLASS-105-161	c43	N79-26439
US-PATENT-CLASS-91-461	c15	N71-27147	US-PATENT-CLASS-106-1	c44	N79-31752
US-PATENT-CLASS-92-49	c14	N73-13418	US-PATENT-CLASS-106-1.2	c44	N79-31752
US-PATENT-CLASS-92-94	c32	N70-41370	US-PATENT-CLASS-106-13	c23	N75-14834
US-PATENT-CLASS-92-130R	c37	N81-33483	US-PATENT-CLASS-106-15	c18	N71-14014
US-PATENT-CLASS-93-1	c15	N70-33180	US-PATENT-CLASS-106-15	c18	N71-15469
US-PATENT-CLASS-94.9N	c27	N81-15104	US-PATENT-CLASS-106-15FP	c27	N74-27037
US-PATENT-CLASS-95-1.1	c14	N72-18411	US-PATENT-CLASS-106-15FP	c27	N76-24405
US-PATENT-CLASS-95-1.1	c14	N73-26431	US-PATENT-CLASS-106-15FP	c24	N78-15180
US-PATENT-CLASS-95-11	c14	N71-18465	US-PATENT-CLASS-106-15R	c23	N75-14834
US-PATENT-CLASS-95-11	c16	N71-33410	US-PATENT-CLASS-106-39	c26	N72-28762
US-PATENT-CLASS-95-11	c14	N73-32319	US-PATENT-CLASS-106-39.5	c27	N78-19302
US-PATENT-CLASS-95-11.5	c14	N73-32319	US-PATENT-CLASS-106-39R	c18	N73-14584
US-PATENT-CLASS-95-11.5R	c14	N73-19419	US-PATENT-CLASS-106-40	c18	N71-22998
US-PATENT-CLASS-95-11R	c14	N73-19419	US-PATENT-CLASS-106-43	c27	N78-17206
US-PATENT-CLASS-95-12	c14	N73-33361	US-PATENT-CLASS-106-43	c37	N81-25371
US-PATENT-CLASS-95-12.5	c31	N72-25842	US-PATENT-CLASS-106-46	c26	N72-28762
US-PATENT-CLASS-95-12.5	c14	N73-14427	US-PATENT-CLASS-106-48	c27	N75-27160
US-PATENT-CLASS-95-18	c14	N72-20380	US-PATENT-CLASS-106-48	c27	N78-32260
US-PATENT-CLASS-95-42	c14	N73-32322	US-PATENT-CLASS-106-52	c37	N74-21063
US-PATENT-CLASS-95-44	c14	N71-26474	US-PATENT-CLASS-106-54	c27	N75-27160
US-PATENT-CLASS-95-53	c15	N71-21060	US-PATENT-CLASS-106-54	c27	N76-22377
US-PATENT-CLASS-95-53EA	c33	N74-20861	US-PATENT-CLASS-106-54	c27	N76-23426
US-PATENT-CLASS-95-58	c14	N70-40273	US-PATENT-CLASS-106-54	c27	N78-32260
US-PATENT-CLASS-95-59	c14	N73-14427	US-PATENT-CLASS-106-55	c18	N73-14584
US-PATENT-CLASS-95-89R	c35	N74-15831	US-PATENT-CLASS-106-58	c18	N73-14584
US-PATENT-CLASS-96-27R	c35	N79-10389	US-PATENT-CLASS-106-63	c27	N78-19302
US-PATENT-CLASS-96-36.2	c06	N72-21094	US-PATENT-CLASS-106-65	c27	N78-19302
US-PATENT-CLASS-96-36.2	c15	N72-25452	US-PATENT-CLASS-106-73.5	c27	N78-19302
US-PATENT-CLASS-96-38.3	c35	N74-26946	US-PATENT-CLASS-106-74	c18	N69-39979
US-PATENT-CLASS-96-49	c14	N71-17574	US-PATENT-CLASS-106-74	c24	N79-31347
US-PATENT-CLASS-96-60R	c35	N79-10389	US-PATENT-CLASS-106-84	c18	N71-24183
US-PATENT-CLASS-96-79	c35	N74-26946	US-PATENT-CLASS-106-84	c18	N71-24184
US-PATENT-CLASS-96-87A	c27	N78-14164	US-PATENT-CLASS-106-84	c18	N72-25566
US-PATENT-CLASS-96-90PC	c14	N72-22443	US-PATENT-CLASS-106-84	c18	N72-23581
US-PATENT-CLASS-98-1	c54	N78-17679	US-PATENT-CLASS-106-84	c24	N79-14156
US-PATENT-CLASS-98-1.5	c44	N78-32539	US-PATENT-CLASS-106-84	c24	N79-31347
US-PATENT-CLASS-98-39	c31	N74-27902	US-PATENT-CLASS-106-88	c18	N71-16124
US-PATENT-CLASS-99-80FS	c05	N72-33096	US-PATENT-CLASS-106-209	c05	N72-25120
US-PATENT-CLASS-100-8	c33	N74-17928	US-PATENT-CLASS-106-286	c18	N72-25566
US-PATENT-CLASS-100-299	c15	N72-20446	US-PATENT-CLASS-106-287SB	c23	N75-14834
US-PATENT-CLASS-102-21.6	c46	N79-22679	US-PATENT-CLASS-106-288B	c18	N72-25566
US-PATENT-CLASS-102-28EB	c28	N74-27425	US-PATENT-CLASS-106-292	c18	N72-17532
US-PATENT-CLASS-102-28R	c28	N79-11231	US-PATENT-CLASS-106-292	c27	N77-30237
US-PATENT-CLASS-102-34.4	c07	N72-25171	US-PATENT-CLASS-106-296	c18	N71-26772
US-PATENT-CLASS-102-39	c20	N78-24275	US-PATENT-CLASS-106-296	c27	N77-30237
US-PATENT-CLASS-102-49	c33	N70-36846	US-PATENT-CLASS-106-296	c24	N79-14156
US-PATENT-CLASS-102-49	c28	N70-38181	US-PATENT-CLASS-106-299	c18	N72-17532
US-PATENT-CLASS-102-49	c03	N70-39930	US-PATENT-CLASS-106-299	c27	N77-30237
US-PATENT-CLASS-102-49	c15	N70-41679	US-PATENT-CLASS-106-306	c24	N76-24363
US-PATENT-CLASS-102-49	c28	N70-41967	US-PATENT-CLASS-108-136	c09	N75-12968
US-PATENT-CLASS-102-49	c31	N71-10582	US-PATENT-CLASS-109-49.5	c31	N81-19343
US-PATENT-CLASS-102-49	c15	N71-13789	US-PATENT-CLASS-109-58.5	c31	N81-19343
US-PATENT-CLASS-102-49	c31	N71-15692	US-PATENT-CLASS-110-218	c31	N81-15154
US-PATENT-CLASS-102-49	c31	N71-17730	US-PATENT-CLASS-110-229	c31	N81-15154
US-PATENT-CLASS-102-49.3	c20	N77-17143	US-PATENT-CLASS-110-232	c31	N81-15154
US-PATENT-CLASS-102-49.5	c31	N71-15687	US-PATENT-CLASS-110-343	c31	N81-15154
US-PATENT-CLASS-102-49.5	c15	N71-22874	US-PATENT-CLASS-110-347	c31	N81-15154
US-PATENT-CLASS-102-49.5	c31	N71-23008	US-PATENT-CLASS-112-402	c18	N71-26285
US-PATENT-CLASS-102-49.5	c31	N73-14853	US-PATENT-CLASS-113-116	c15	N71-15597
US-PATENT-CLASS-102-49.7	c28	N73-24784	US-PATENT-CLASS-114-16.6	c37	N76-22540

US-PATENT-CLASS-114-66.5	c12 N70-33305	US-PATENT-CLASS-117-237	c76 N79-16678
US-PATENT-CLASS-114-122	c02 N73-26006	US-PATENT-CLASS-117-239	c76 N79-16678
US-PATENT-CLASS-115-103.5	c51 N75-13502	US-PATENT-CLASS-117-240	c76 N79-16678
US-PATENT-CLASS-116-114.5	c35 N75-25122	US-PATENT-CLASS-118-6	c51 N77-27677
US-PATENT-CLASS-116-114AB	c14 N72-25411	US-PATENT-CLASS-118-7	c51 N77-27677
US-PATENT-CLASS-116-114AB	c35 N75-33367	US-PATENT-CLASS-118-9	c51 N77-27677
US-PATENT-CLASS-116-117	c14 N70-42074	US-PATENT-CLASS-118-11	c15 N71-17647
US-PATENT-CLASS-117-2R	c32 N74-27612	US-PATENT-CLASS-118-43	c25 N75-29192
US-PATENT-CLASS-117-6	c14 N71-20461	US-PATENT-CLASS-118-48	c25 N75-26043
US-PATENT-CLASS-117-6	c27 N81-15104	US-PATENT-CLASS-118-49	c25 N79-28253
US-PATENT-CLASS-117-8.5	c24 N75-33181	US-PATENT-CLASS-118-49.1	c15 N72-32487
US-PATENT-CLASS-117-16R	c15 N72-25452	US-PATENT-CLASS-118-49.1	c31 N75-12161
US-PATENT-CLASS-117-21	c18 N69-39895	US-PATENT-CLASS-118-49.5	c25 N75-26043
US-PATENT-CLASS-117-33.3	c70 N74-13436	US-PATENT-CLASS-118-50	c09 N71-26701
US-PATENT-CLASS-117-35	c32 N79-19186	US-PATENT-CLASS-118-50	c37 N78-17383
US-PATENT-CLASS-117-35R	c06 N73-13128	US-PATENT-CLASS-118-52	c37 N81-33482
US-PATENT-CLASS-117-37	c15 N72-25452	US-PATENT-CLASS-118-308	c37 N81-33482
US-PATENT-CLASS-117-38	c24 N75-33181	US-PATENT-CLASS-118-313	c17 N71-24911
US-PATENT-CLASS-117-43	c51 N79-21227	US-PATENT-CLASS-118-500	c51 N77-27677
US-PATENT-CLASS-117-45	c74 N74-20008	US-PATENT-CLASS-119-15	c37 N78-17383
US-PATENT-CLASS-117-46	c15 N71-16077	US-PATENT-CLASS-119-17	c11 N71-22875
US-PATENT-CLASS-117-46FS	c24 N75-33181	US-PATENT-CLASS-119-18	c51 N81-32829
US-PATENT-CLASS-117-47R	c15 N72-25452	US-PATENT-CLASS-119-29	c51 N81-32829
US-PATENT-CLASS-117-50	c15 N71-15610	US-PATENT-CLASS-119-51.5	c51 N78-27733
US-PATENT-CLASS-117-62	c15 N72-25447	US-PATENT-CLASS-119-51.11	c51 N74-15778
US-PATENT-CLASS-117-62	c15 N72-25452	US-PATENT-CLASS-119-51.13	c35 N78-19466
US-PATENT-CLASS-117-65.2	c18 N71-10772	US-PATENT-CLASS-119-51R	c51 N74-15778
US-PATENT-CLASS-117-66	c15 N73-32360	US-PATENT-CLASS-119-52AF	c51 N74-15778
US-PATENT-CLASS-117-69	c18 N70-36400	US-PATENT-CLASS-119-54	c51 N74-15778
US-PATENT-CLASS-117-69	c15 N71-16075	US-PATENT-CLASS-119-72.5	c35 N78-19466
US-PATENT-CLASS-117-72	c35 N75-25122	US-PATENT-CLASS-119-96	c05 N71-28619
US-PATENT-CLASS-117-93.1GD	c25 N75-12087	US-PATENT-CLASS-121-38	c15 N70-35409
US-PATENT-CLASS-117-93.3	c15 N72-25452	US-PATENT-CLASS-121-38	c02 N71-29128
US-PATENT-CLASS-117-93.3	c37 N75-15992	US-PATENT-CLASS-122-32	c33 N72-20915
US-PATENT-CLASS-117-93.16D	c15 N72-25447	US-PATENT-CLASS-123-DIG.8	c37 N77-31497
US-PATENT-CLASS-117-95	c24 N74-19769	US-PATENT-CLASS-123-DIG.12	c37 N76-18457
US-PATENT-CLASS-117-95	c36 N75-15029	US-PATENT-CLASS-123-DIG.12	c44 N78-33526
US-PATENT-CLASS-117-97	c36 N75-15029	US-PATENT-CLASS-123-DIG.12	c28 N80-10374
US-PATENT-CLASS-117-104	c18 N71-26100	US-PATENT-CLASS-123-1A	c44 N78-29700
US-PATENT-CLASS-117-105	c15 N73-32360	US-PATENT-CLASS-123-1A	c44 N78-33526
US-PATENT-CLASS-117-105.2	c37 N74-11301	US-PATENT-CLASS-123-3	c44 N76-18642
US-PATENT-CLASS-117-105.2	c24 N75-33181	US-PATENT-CLASS-123-3	c44 N76-29700
US-PATENT-CLASS-117-105.5	c15 N73-32360	US-PATENT-CLASS-123-3	c44 N77-10636
US-PATENT-CLASS-117-106	c33 N71-14032	US-PATENT-CLASS-123-3	c37 N77-31497
US-PATENT-CLASS-117-106A	c70 N74-13436	US-PATENT-CLASS-123-3	c44 N78-33526
US-PATENT-CLASS-117-106A	c37 N75-15992	US-PATENT-CLASS-123-3	c28 N80-10374
US-PATENT-CLASS-117-106A	c25 N75-26043	US-PATENT-CLASS-123-37	c37 N77-31497
US-PATENT-CLASS-117-107	c15 N72-25447	US-PATENT-CLASS-123-41.33	c07 N77-23106
US-PATENT-CLASS-117-107	c76 N79-16678	US-PATENT-CLASS-123-41.33	c37 N78-10467
US-PATENT-CLASS-117-107.2	c25 N75-26043	US-PATENT-CLASS-123-59E	c37 N77-31497
US-PATENT-CLASS-117-119	c18 N71-16105	US-PATENT-CLASS-123-89A	c37 N76-18457
US-PATENT-CLASS-117-119	c76 N79-16678	US-PATENT-CLASS-123-102	c11 N72-20244
US-PATENT-CLASS-117-124C	c15 N72-25452	US-PATENT-CLASS-123-119A	c37 N77-31497
US-PATENT-CLASS-117-124F	c23 N75-14834	US-PATENT-CLASS-123-119E	c37 N76-18457
US-PATENT-CLASS-117-126GM	c37 N75-26371	US-PATENT-CLASS-123-120	c37 N76-18457
US-PATENT-CLASS-117-126GR	c27 N74-23125	US-PATENT-CLASS-123-121	c37 N76-18457
US-PATENT-CLASS-117-126R	c37 N75-26371	US-PATENT-CLASS-123-122AB	c28 N72-22772
US-PATENT-CLASS-117-129	c37 N74-21063	US-PATENT-CLASS-123-122AB	c37 N77-31497
US-PATENT-CLASS-117-129	c27 N75-27160	US-PATENT-CLASS-123-122E	c07 N77-23106
US-PATENT-CLASS-117-130R	c15 N73-32360	US-PATENT-CLASS-123-122E	c37 N78-10467
US-PATENT-CLASS-117-132	c06 N72-25150	US-PATENT-CLASS-123-148CB	c33 N77-28385
US-PATENT-CLASS-117-132B	c27 N74-23125	US-PATENT-CLASS-123-148DC	c37 N79-11405
US-PATENT-CLASS-117-135.5	c23 N75-14834	US-PATENT-CLASS-123-148E	c33 N77-28385
US-PATENT-CLASS-117-138.8R	c15 N73-32360	US-PATENT-CLASS-123-148E	c37 N79-11405
US-PATENT-CLASS-117-151	c15 N73-32360	US-PATENT-CLASS-123-179R	c28 N80-10374
US-PATENT-CLASS-117-152	c15 N72-25452	US-PATENT-CLASS-124-1	c75 N76-17951
US-PATENT-CLASS-117-160R	c15 N73-32360	US-PATENT-CLASS-124-6	c09 N77-19076
US-PATENT-CLASS-117-161	c06 N72-25150	US-PATENT-CLASS-124-11R	c75 N76-17951
US-PATENT-CLASS-117-161P	c06 N73-27980	US-PATENT-CLASS-125-1	c46 N74-23069
US-PATENT-CLASS-117-161UA	c25 N75-12087	US-PATENT-CLASS-125-3	c46 N74-23069
US-PATENT-CLASS-117-161UN	c06 N73-27980	US-PATENT-CLASS-125-21	c37 N80-29703
US-PATENT-CLASS-117-161UN	c27 N74-23125	US-PATENT-CLASS-125-23B	c76 N80-18951
US-PATENT-CLASS-117-161UN	c25 N75-12087	US-PATENT-CLASS-126-91A	c25 N79-11151
US-PATENT-CLASS-117-161UZ	c25 N75-12087	US-PATENT-CLASS-126-263	c44 N77-32581
US-PATENT-CLASS-117-200	c09 N72-25259	US-PATENT-CLASS-126-263	c44 N78-17460
US-PATENT-CLASS-117-201	c15 N69-21460	US-PATENT-CLASS-126-263	c44 N80-20808
US-PATENT-CLASS-117-201	c18 N71-16046	US-PATENT-CLASS-126-270	c09 N70-40234
US-PATENT-CLASS-117-201	c03 N72-24037	US-PATENT-CLASS-126-270	c03 N70-41580
US-PATENT-CLASS-117-201	c25 N75-26043	US-PATENT-CLASS-126-270	c34 N74-23039
US-PATENT-CLASS-117-211	c15 N72-25447	US-PATENT-CLASS-126-270	c44 N76-14595
US-PATENT-CLASS-117-212	c09 N71-20705	US-PATENT-CLASS-126-270	c44 N76-23675
US-PATENT-CLASS-117-212	c15 N71-29032	US-PATENT-CLASS-126-270	c44 N76-24696
US-PATENT-CLASS-117-212	c26 N72-28762	US-PATENT-CLASS-126-270	c35 N77-20401
US-PATENT-CLASS-117-217	c15 N72-25447	US-PATENT-CLASS-126-270	c44 N77-32582
US-PATENT-CLASS-117-217	c26 N72-28762	US-PATENT-CLASS-126-270	c44 N78-15560
US-PATENT-CLASS-117-224	c15 N71-28582	US-PATENT-CLASS-126-270	c44 N78-15599
US-PATENT-CLASS-117-228	c06 N73-27980	US-PATENT-CLASS-126-270	c44 N78-31526
US-PATENT-CLASS-117-234	c76 N79-16678	US-PATENT-CLASS-126-270	c44 N79-11471
US-PATENT-CLASS-117-235	c76 N79-16678		

US-PATENT-CLASS-126-270	.....	c44 N79-14526	US-PATENT-CLASS-128-2.06B	.....	c05 N75-24716
US-PATENT-CLASS-126-270	.....	c44 N79-23481	US-PATENT-CLASS-128-2.06E	.....	c52 N76-29896
US-PATENT-CLASS-126-270	.....	c44 N79-24432	US-PATENT-CLASS-128-2.06F	.....	c52 N74-12778
US-PATENT-CLASS-126-271	.....	c44 N75-32581	US-PATENT-CLASS-128-2.06G	.....	c05 N73-27941
US-PATENT-CLASS-126-271	.....	c44 N76-14602	US-PATENT-CLASS-128-2.06H	.....	c52 N76-14757
US-PATENT-CLASS-126-271	.....	c44 N76-22657	US-PATENT-CLASS-128-2.07	.....	c05 N73-32015
US-PATENT-CLASS-126-271	.....	c44 N76-24696	US-PATENT-CLASS-128-2.07	.....	c52 N74-20728
US-PATENT-CLASS-126-271	.....	c35 N77-20401	US-PATENT-CLASS-128-2.08	.....	c05 N69-21473
US-PATENT-CLASS-126-271	.....	c44 N77-32582	US-PATENT-CLASS-128-2.08	.....	c05 N73-32015
US-PATENT-CLASS-126-271	.....	c44 N78-10554	US-PATENT-CLASS-128-2.08	.....	c52 N74-20728
US-PATENT-CLASS-126-271	.....	c44 N78-17460	US-PATENT-CLASS-128-2F	.....	c54 N76-14804
US-PATENT-CLASS-126-271	.....	c44 N78-31525	US-PATENT-CLASS-128-2H	.....	c52 N76-14757
US-PATENT-CLASS-126-271	.....	c44 N78-31526	US-PATENT-CLASS-128-2H	.....	c52 N76-29894
US-PATENT-CLASS-126-271	.....	c44 N79-11471	US-PATENT-CLASS-128-2H	.....	c52 N77-10780
US-PATENT-CLASS-126-271	.....	c44 N79-14526	US-PATENT-CLASS-128-2H	.....	c52 N77-14736
US-PATENT-CLASS-126-271	.....	c44 N79-14529	US-PATENT-CLASS-128-2H	.....	c05 N72-25122
US-PATENT-CLASS-126-271	.....	c44 N79-18443	US-PATENT-CLASS-128-2H	.....	c05 N73-13114
US-PATENT-CLASS-126-271	.....	c44 N79-23481	US-PATENT-CLASS-128-2P	.....	c52 N76-29894
US-PATENT-CLASS-126-271	.....	c44 N79-24433	US-PATENT-CLASS-128-2R	.....	c09 N72-22202
US-PATENT-CLASS-126-400	.....	c44 N78-15560	US-PATENT-CLASS-128-2R	.....	c52 N79-12694
US-PATENT-CLASS-126-400	.....	c44 N79-24433	US-PATENT-CLASS-128-2S	.....	c52 N74-10975
US-PATENT-CLASS-126-417	.....	c44 N80-16452	US-PATENT-CLASS-128-2S	.....	c52 N77-27864
US-PATENT-CLASS-126-419	.....	c44 N80-20810	US-PATENT-CLASS-128-2S	.....	c33 N75-31329
US-PATENT-CLASS-126-419	.....	c44 N81-17518	US-PATENT-CLASS-128-2S	.....	c33 N76-19338
US-PATENT-CLASS-126-434	.....	c44 N80-20810	US-PATENT-CLASS-128-2S	.....	c52 N76-29895
US-PATENT-CLASS-126-437	.....	c44 N80-20810	US-PATENT-CLASS-128-2S	.....	c52 N76-29896
US-PATENT-CLASS-126-438	.....	c44 N80-14473	US-PATENT-CLASS-128-2V	.....	c52 N76-20726
US-PATENT-CLASS-126-442	.....	c44 N80-14473	US-PATENT-CLASS-128-2V	.....	c35 N75-12271
US-PATENT-CLASS-126-901	.....	c44 N80-16452	US-PATENT-CLASS-128-2V	.....	c54 N75-27760
US-PATENT-CLASS-128.2.06E	.....	c05 N75-24716	US-PATENT-CLASS-128-2V	.....	c52 N79-14751
US-PATENT-CLASS-128.2.07	.....	c52 N79-21750	US-PATENT-CLASS-128-2V	.....	c52 N79-18580
US-PATENT-CLASS-128-DIG.4	.....	c05 N72-27103	US-PATENT-CLASS-128-6	.....	c52 N80-16725
US-PATENT-CLASS-128-DIG.4	.....	c05 N75-24716	US-PATENT-CLASS-128-24	.....	c05 N71-24738
US-PATENT-CLASS-128-DIG.4	.....	c35 N76-24525	US-PATENT-CLASS-128-24A	.....	c05 N73-27062
US-PATENT-CLASS-128-DIG.4	.....	c52 N77-28717	US-PATENT-CLASS-128-24A	.....	c54 N75-27760
US-PATENT-CLASS-128-DIG.6	.....	c51 N81-14605	US-PATENT-CLASS-128-25	.....	c05 N71-24738
US-PATENT-CLASS-128-DIG.9	.....	c52 N80-16725	US-PATENT-CLASS-128-25R	.....	c37 N74-18127
US-PATENT-CLASS-128-DIG.9	.....	c51 N81-14605	US-PATENT-CLASS-128-26	.....	c52 N76-19785
US-PATENT-CLASS-128-DIG.12	.....	c37 N77-28487	US-PATENT-CLASS-128-29	.....	c05 N70-39922
US-PATENT-CLASS-128-DIG.12	.....	c51 N81-14605	US-PATENT-CLASS-128-80F	.....	c52 N81-25661
US-PATENT-CLASS-128-DIG.16	.....	c51 N81-14605	US-PATENT-CLASS-128-89R	.....	c52 N81-25662
US-PATENT-CLASS-128-DIG.20	.....	c52 N76-19785	US-PATENT-CLASS-128-92C	.....	c27 N78-17215
US-PATENT-CLASS-128-DIG.20	.....	c37 N81-17433	US-PATENT-CLASS-128-92G	.....	c27 N78-17215
US-PATENT-CLASS-128-DIG.25	.....	c52 N81-25660	US-PATENT-CLASS-128-142.2	.....	c54 N76-24900
US-PATENT-CLASS-128-DIG.26	.....	c51 N81-14605	US-PATENT-CLASS-128-142.5	.....	c05 N71-11190
US-PATENT-CLASS-128-1	.....	c05 N70-41619	US-PATENT-CLASS-128-142.5	.....	c05 N71-11203
US-PATENT-CLASS-128-1	.....	c05 N71-20268	US-PATENT-CLASS-128-142.5	.....	c05 N71-17599
US-PATENT-CLASS-128-1A	.....	c05 N73-32012	US-PATENT-CLASS-128-142.5	.....	c05 N72-20096
US-PATENT-CLASS-128-1B	.....	c52 N77-25772	US-PATENT-CLASS-128-142.5	.....	c05 N73-25125
US-PATENT-CLASS-128-1R	.....	c52 N77-28716	US-PATENT-CLASS-128-142.7	.....	c54 N78-32721
US-PATENT-CLASS-128-1R	.....	c52 N81-25660	US-PATENT-CLASS-128-142R	.....	c54 N80-10799
US-PATENT-CLASS-128-2	.....	c05 N73-27062	US-PATENT-CLASS-128-145.8	.....	c54 N75-27761
US-PATENT-CLASS-128-2.1	.....	c05 N71-11193	US-PATENT-CLASS-128-191R	.....	c25 N74-12813
US-PATENT-CLASS-128-2.1	.....	c05 N71-12346	US-PATENT-CLASS-128-191R	.....	c54 N80-10799
US-PATENT-CLASS-128-2.1	.....	c05 N71-24729	US-PATENT-CLASS-128-203	.....	c54 N76-24900
US-PATENT-CLASS-128-2.1	.....	c09 N71-26002	US-PATENT-CLASS-128-204.18	.....	c51 N81-14605
US-PATENT-CLASS-128-2.1	.....	c05 N72-25120	US-PATENT-CLASS-128-206F	.....	c14 N73-24473
US-PATENT-CLASS-128-2.1A	.....	c09 N72-17153	US-PATENT-CLASS-128-207.14	.....	c51 N81-14605
US-PATENT-CLASS-128-2.1A	.....	c09 N72-22202	US-PATENT-CLASS-128-207.28	.....	c51 N81-14605
US-PATENT-CLASS-128-2.1A	.....	c52 N74-26625	US-PATENT-CLASS-128-212	.....	c54 N80-10799
US-PATENT-CLASS-128-2.1A	.....	c52 N76-14757	US-PATENT-CLASS-128-214D	.....	c52 N79-14749
US-PATENT-CLASS-128-2.1A	.....	c52 N76-29894	US-PATENT-CLASS-128-214E	.....	c52 N74-22771
US-PATENT-CLASS-128-2.1A	.....	c52 N79-18580	US-PATENT-CLASS-128-214F	.....	c37 N77-28487
US-PATENT-CLASS-128-2.1E	.....	c05 N72-27103	US-PATENT-CLASS-128-230	.....	c52 N75-33640
US-PATENT-CLASS-128-2.1E	.....	c35 N76-24525	US-PATENT-CLASS-128-236	.....	c51 N81-14605
US-PATENT-CLASS-128-2.1E	.....	c52 N77-28717	US-PATENT-CLASS-128-272	.....	c15 N71-24835
US-PATENT-CLASS-128-2.1R	.....	c05 N73-26072	US-PATENT-CLASS-128-272	.....	c52 N79-14749
US-PATENT-CLASS-128-2.1Z	.....	c35 N76-24525	US-PATENT-CLASS-128-275	.....	c15 N71-24835
US-PATENT-CLASS-128-2.05	.....	c05 N70-41329	US-PATENT-CLASS-128-275	.....	c52 N81-29763
US-PATENT-CLASS-128-2.05	.....	c04 N71-23185	US-PATENT-CLASS-128-276	.....	c52 N80-14684
US-PATENT-CLASS-128-2.05	.....	c05 N71-27234	US-PATENT-CLASS-128-276	.....	c52 N80-18690
US-PATENT-CLASS-128-2.05A	.....	c52 N74-26626	US-PATENT-CLASS-128-283	.....	c05 N69-23192
US-PATENT-CLASS-128-2.05A	.....	c54 N75-13531	US-PATENT-CLASS-128-295	.....	c05 N72-22093
US-PATENT-CLASS-128-2.05E	.....	c52 N74-27566	US-PATENT-CLASS-128-295	.....	c52 N81-24711
US-PATENT-CLASS-128-2.05E	.....	c52 N76-29896	US-PATENT-CLASS-128-295	.....	c52 N81-28740
US-PATENT-CLASS-128-2.05F	.....	c14 N73-32326	US-PATENT-CLASS-128-303R	.....	c52 N77-28716
US-PATENT-CLASS-128-2.05F	.....	c54 N75-13531	US-PATENT-CLASS-128-305	.....	c05 N73-27062
US-PATENT-CLASS-128-2.05R	.....	c05 N73-27941	US-PATENT-CLASS-128-305	.....	c52 N75-33640
US-PATENT-CLASS-128-2.05R	.....	c52 N76-29895	US-PATENT-CLASS-128-305	.....	c52 N78-14773
US-PATENT-CLASS-128-2.05R	.....	c52 N79-10724	US-PATENT-CLASS-128-329B	.....	c52 N79-27836
US-PATENT-CLASS-128-2.05S	.....	c52 N74-26626	US-PATENT-CLASS-128-346	.....	c52 N81-25660
US-PATENT-CLASS-128-2.05T	.....	c52 N74-12778	US-PATENT-CLASS-128-348	.....	c52 N80-16725
US-PATENT-CLASS-128-2.05V	.....	c35 N76-24525	US-PATENT-CLASS-128-379	.....	c52 N77-14736
US-PATENT-CLASS-128-2.05Z	.....	c54 N75-27760	US-PATENT-CLASS-128-400	.....	c52 N77-14736
US-PATENT-CLASS-128-2.06	.....	c52 N79-18580	US-PATENT-CLASS-128-402	.....	c05 N72-20096
US-PATENT-CLASS-128-2.06	.....	c05 N69-21925	US-PATENT-CLASS-128-402	.....	c52 N77-14736
US-PATENT-CLASS-128-2.06	.....	c05 N71-22896	US-PATENT-CLASS-128-410	.....	c52 N77-28717
US-PATENT-CLASS-128-2.06	.....	c09 N71-24618	US-PATENT-CLASS-128-417	.....	c05 N72-25120
US-PATENT-CLASS-128-2.06	.....	c05 N71-26293	US-PATENT-CLASS-128-417	.....	c05 N72-27103

US-PATENT-CLASS-128-418	c52	N76-29896	US-PATENT-CLASS-136-89PC	c44	N79-31753
US-PATENT-CLASS-128-418	c52	N77-14738	US-PATENT-CLASS-136-89SG	c44	N78-24609
US-PATENT-CLASS-128-419P	c52	N76-29896	US-PATENT-CLASS-136-89SG	c44	N80-24741
US-PATENT-CLASS-128-639	c52	N79-27836	US-PATENT-CLASS-136-89SJ	c44	N78-13526
US-PATENT-CLASS-128-642	c52	N80-27072	US-PATENT-CLASS-136-89SJ	c44	N79-11467
US-PATENT-CLASS-128-642	c52	N81-14612	US-PATENT-CLASS-136-89SJ	c44	N79-14528
US-PATENT-CLASS-128-642	c52	N81-20703	US-PATENT-CLASS-136-89SJ	c44	N79-25482
US-PATENT-CLASS-128-660	c52	N79-26771	US-PATENT-CLASS-136-90	c44	N76-14601
US-PATENT-CLASS-128-665	c52	N81-27783	US-PATENT-CLASS-136-100R	c03	N72-20034
US-PATENT-CLASS-128-666	c52	N80-23969	US-PATENT-CLASS-136-114	c44	N76-14601
US-PATENT-CLASS-128-690	c52	N80-23569	US-PATENT-CLASS-136-132	c03	N71-11053
US-PATENT-CLASS-128-748	c52	N80-18691	US-PATENT-CLASS-136-132	c03	N71-22974
US-PATENT-CLASS-128-760	c52	N80-18690	US-PATENT-CLASS-136-133	c15	N69-24320
US-PATENT-CLASS-128-760	c52	N81-29763	US-PATENT-CLASS-136-133	c03	N71-23006
US-PATENT-CLASS-128-761	c52	N81-24711	US-PATENT-CLASS-136-133	c03	N72-15986
US-PATENT-CLASS-128-774	c52	N80-27072	US-PATENT-CLASS-136-135	c03	N72-15986
US-PATENT-CLASS-128-774	c52	N81-20703	US-PATENT-CLASS-136-143	c44	N76-29699
US-PATENT-CLASS-128-782	c52	N80-27072	US-PATENT-CLASS-136-146	c03	N69-21337
US-PATENT-CLASS-128-903	c52	N80-18691	US-PATENT-CLASS-136-146	c24	N76-14204
US-PATENT-CLASS-129-16.7	c08	N71-15908	US-PATENT-CLASS-136-148	c24	N76-14204
US-PATENT-CLASS-134-17	c43	N81-26509	US-PATENT-CLASS-136-162	c44	N76-14601
US-PATENT-CLASS-134-21	c37	N76-18456	US-PATENT-CLASS-136-166	c03	N71-23336
US-PATENT-CLASS-134-37	c37	N76-18456	US-PATENT-CLASS-136-166	c03	N72-20032
US-PATENT-CLASS-135-1	c32	N70-36536	US-PATENT-CLASS-136-170	c03	N71-11051
US-PATENT-CLASS-136-6	c03	N71-26084	US-PATENT-CLASS-136-175	c03	N72-20034
US-PATENT-CLASS-136-6	c03	N72-15986	US-PATENT-CLASS-136-179	c03	N70-41864
US-PATENT-CLASS-136-6LF	c44	N76-18643	US-PATENT-CLASS-136-182	c03	N71-10728
US-PATENT-CLASS-136-20	c44	N74-19693	US-PATENT-CLASS-136-182	c03	N71-20407
US-PATENT-CLASS-136-24	c09	N73-32108	US-PATENT-CLASS-136-182	c03	N71-20491
US-PATENT-CLASS-136-28	c03	N71-10608	US-PATENT-CLASS-136-182	c44	N74-27519
US-PATENT-CLASS-136-30	c44	N74-19693	US-PATENT-CLASS-136-182	c44	N76-14601
US-PATENT-CLASS-136-30	c44	N76-18643	US-PATENT-CLASS-136-202	c09	N72-12136
US-PATENT-CLASS-136-30	c44	N76-29699	US-PATENT-CLASS-136-202	c03	N72-26031
US-PATENT-CLASS-136-36	c44	N74-19692	US-PATENT-CLASS-136-202	c44	N76-16612
US-PATENT-CLASS-136-79	c03	N72-20032	US-PATENT-CLASS-136-202	c35	N77-32454
US-PATENT-CLASS-136-81	c03	N72-20032	US-PATENT-CLASS-136-202	c35	N79-14346
US-PATENT-CLASS-136-83	c03	N71-28579	US-PATENT-CLASS-136-206	c03	N72-11062
US-PATENT-CLASS-136-83R	c03	N72-20034	US-PATENT-CLASS-136-206	c09	N72-12136
US-PATENT-CLASS-136-83R	c44	N76-18641	US-PATENT-CLASS-136-206	c44	N76-14595
US-PATENT-CLASS-136-86	c03	N71-11052	US-PATENT-CLASS-136-206	c44	N76-31666
US-PATENT-CLASS-136-86	c03	N71-20904	US-PATENT-CLASS-136-210	c44	N76-16612
US-PATENT-CLASS-136-86	c15	N71-23022	US-PATENT-CLASS-136-211	c35	N76-15434
US-PATENT-CLASS-136-86	c03	N71-29044	US-PATENT-CLASS-136-212	c35	N76-15434
US-PATENT-CLASS-136-86A	c44	N76-27664	US-PATENT-CLASS-136-213	c14	N69-27459
US-PATENT-CLASS-136-86S	c44	N76-18641	US-PATENT-CLASS-136-213	c34	N74-27861
US-PATENT-CLASS-136-89	c03	N69-24267	US-PATENT-CLASS-136-224	c14	N73-12447
US-PATENT-CLASS-136-89	c03	N71-11049	US-PATENT-CLASS-136-225	c14	N73-24472
US-PATENT-CLASS-136-89	c03	N71-11050	US-PATENT-CLASS-136-225	c35	N76-15434
US-PATENT-CLASS-136-89	c03	N71-11056	US-PATENT-CLASS-136-227	c09	N72-12136
US-PATENT-CLASS-136-89	c03	N71-18698	US-PATENT-CLASS-136-228	c33	N71-15568
US-PATENT-CLASS-136-89	c03	N71-19545	US-PATENT-CLASS-136-230	c14	N71-23039
US-PATENT-CLASS-136-89	c03	N71-20492	US-PATENT-CLASS-136-230	c34	N74-27861
US-PATENT-CLASS-136-89	c03	N71-20895	US-PATENT-CLASS-136-232	c35	N77-14409
US-PATENT-CLASS-136-89	c26	N71-23043	US-PATENT-CLASS-136-233	c14	N72-27410
US-PATENT-CLASS-136-89	c03	N71-23187	US-PATENT-CLASS-136-233	c14	N73-13417
US-PATENT-CLASS-136-89	c03	N71-23449	US-PATENT-CLASS-136-233	c34	N74-27861
US-PATENT-CLASS-136-89	c03	N71-33409	US-PATENT-CLASS-136-233	c35	N77-14409
US-PATENT-CLASS-136-89	c03	N72-20031	US-PATENT-CLASS-136-236	c35	N79-14346
US-PATENT-CLASS-136-89	c03	N72-22042	US-PATENT-CLASS-136-236R	c35	N77-32454
US-PATENT-CLASS-136-89	c31	N72-22674	US-PATENT-CLASS-136-240	c35	N77-32454
US-PATENT-CLASS-136-89	c03	N72-24037	US-PATENT-CLASS-136-249	c44	N81-12542
US-PATENT-CLASS-136-89	c09	N72-25259	US-PATENT-CLASS-136-255	c44	N81-29525
US-PATENT-CLASS-136-89	c03	N72-27053	US-PATENT-CLASS-136-258	c44	N81-19558
US-PATENT-CLASS-136-89	c09	N73-32109	US-PATENT-CLASS-136-258	c44	N81-29525
US-PATENT-CLASS-136-89	c44	N74-14784	US-PATENT-CLASS-136-262	c44	N81-29525
US-PATENT-CLASS-136-89	c44	N76-14600	US-PATENT-CLASS-136-291	c44	N81-12542
US-PATENT-CLASS-136-89	c44	N76-28635	US-PATENT-CLASS-137-DIG.9	c54	N76-24900
US-PATENT-CLASS-136-89	c44	N76-31666	US-PATENT-CLASS-137-1	c12	N70-38997
US-PATENT-CLASS-136-89	c44	N77-10635	US-PATENT-CLASS-137-1	c15	N73-27406
US-PATENT-CLASS-136-89	c44	N77-14580	US-PATENT-CLASS-137-13	c15	N71-15967
US-PATENT-CLASS-136-89	c44	N77-19571	US-PATENT-CLASS-137-13	c15	N72-33477
US-PATENT-CLASS-136-89	c44	N75-11468	US-PATENT-CLASS-137-14	c37	N79-33468
US-PATENT-CLASS-136-89AC	c44	N77-31601	US-PATENT-CLASS-137-15.1	c02	N74-20646
US-PATENT-CLASS-136-89CA	c44	N75-25482	US-PATENT-CLASS-137-15.1	c07	N74-31270
US-PATENT-CLASS-136-89CC	c44	N78-25527	US-PATENT-CLASS-137-15.1	c07	N75-24736
US-PATENT-CLASS-136-89CC	c44	N78-25529	US-PATENT-CLASS-137-15.1	c07	N77-18154
US-PATENT-CLASS-136-89CC	c44	N79-11467	US-PATENT-CLASS-137-15.1	c07	N79-14096
US-PATENT-CLASS-136-89CC	c44	N79-17314	US-PATENT-CLASS-137-15.1	c05	N79-24976
US-PATENT-CLASS-136-89CC	c44	N79-25482	US-PATENT-CLASS-137-15.1	c07	N81-14999
US-PATENT-CLASS-136-89CC	c44	N79-31752	US-PATENT-CLASS-137-15.2	c02	N74-20646
US-PATENT-CLASS-136-89H	c44	N78-25528	US-PATENT-CLASS-137-15.2	c35	N76-14431
US-PATENT-CLASS-136-89H	c44	N78-25529	US-PATENT-CLASS-137-81	c05	N72-20097
US-PATENT-CLASS-136-89P	c44	N77-31601	US-PATENT-CLASS-137-81	c14	N73-13418
US-PATENT-CLASS-136-89P	c44	N78-25528	US-PATENT-CLASS-137-81.5	c12	N69-21466
US-PATENT-CLASS-136-89P	c44	N78-25529	US-PATENT-CLASS-137-81.5	c15	N71-15609
US-PATENT-CLASS-136-89P	c44	N78-27515	US-PATENT-CLASS-137-81.5	c12	N71-17578
US-PATENT-CLASS-136-89P	c44	N79-17314	US-PATENT-CLASS-137-81.5	c12	N71-17579
US-PATENT-CLASS-136-89P	c44	N80-14474	US-PATENT-CLASS-137-81.5	c10	N71-25899
US-PATENT-CLASS-136-89PC	c44	N79-25482	US-PATENT-CLASS-137-81.5	c12	N71-27332

US-PATENT-CLASS-137-81.5	c12	N71-28741	US-PATENT-CLASS-140-124	c15	N71-10809
US-PATENT-CLASS-137-81.5	c28	N72-22772	US-PATENT-CLASS-141-4	c35	N78-10428
US-PATENT-CLASS-137-81.5	c15	N72-33477	US-PATENT-CLASS-141-5	c33	N71-20834
US-PATENT-CLASS-137-81.5	c15	N73-13462	US-PATENT-CLASS-141-23	c15	N72-21465
US-PATENT-CLASS-137-81.5	c28	N73-13773	US-PATENT-CLASS-141-91	c12	N71-21089
US-PATENT-CLASS-137-101	c07	N77-23106	US-PATENT-CLASS-141-197	c35	N78-10428
US-PATENT-CLASS-137-104	c37	N78-10467	US-PATENT-CLASS-141-258	c14	N71-27005
US-PATENT-CLASS-137-110	c54	N76-24900	US-PATENT-CLASS-148-1.5	c26	N71-10607
US-PATENT-CLASS-137-154	c15	N73-27406	US-PATENT-CLASS-148-1.5	c26	N71-23654
US-PATENT-CLASS-137-177	c20	N80-10278	US-PATENT-CLASS-148-1.5	c76	N74-20329
US-PATENT-CLASS-137-197	c15	N70-41646	US-PATENT-CLASS-148-1.5	c44	N80-29835
US-PATENT-CLASS-137-197	c35	N78-12390	US-PATENT-CLASS-148-1.5	c33	N81-26360
US-PATENT-CLASS-137-207	c34	N77-30399	US-PATENT-CLASS-148-2	c26	N77-20201
US-PATENT-CLASS-137-209	c34	N77-30399	US-PATENT-CLASS-148-2	c26	N79-22271
US-PATENT-CLASS-137-209	c20	N80-10278	US-PATENT-CLASS-148-6	c18	N71-29040
US-PATENT-CLASS-137-340	c15	N70-34817	US-PATENT-CLASS-148-6	c76	N79-16678
US-PATENT-CLASS-137-340	c15	N70-35087	US-PATENT-CLASS-148-6.3	c17	N71-33408
US-PATENT-CLASS-137-341	c12	N71-17661	US-PATENT-CLASS-148-6.3	c44	N79-18444
US-PATENT-CLASS-137-375	c37	N80-23654	US-PATENT-CLASS-148-6.11	c15	N71-24875
US-PATENT-CLASS-137-397	c15	N73-26472	US-PATENT-CLASS-148-6.16	c18	N71-23047
US-PATENT-CLASS-137-469	c05	N72-20097	US-PATENT-CLASS-148-6.20	c17	N71-23828
US-PATENT-CLASS-137-484.2	c34	N78-25351	US-PATENT-CLASS-148-11.5R	c15	N73-13465
US-PATENT-CLASS-137-487.5	c14	N73-13418	US-PATENT-CLASS-148-12.4	c26	N79-22271
US-PATENT-CLASS-137-491	c15	N69-21924	US-PATENT-CLASS-148-12.7A	c26	N78-24333
US-PATENT-CLASS-137-493	c52	N81-25660	US-PATENT-CLASS-148-12.7M	c26	N77-20201
US-PATENT-CLASS-137-495	c15	N70-38603	US-PATENT-CLASS-148-12F	c26	N79-22271
US-PATENT-CLASS-137-496	c15	N71-22706	US-PATENT-CLASS-148-13	c14	N71-25892
US-PATENT-CLASS-137-501	c34	N78-25351	US-PATENT-CLASS-148-20.3	c26	N77-20201
US-PATENT-CLASS-137-505.12	c14	N71-18625	US-PATENT-CLASS-148-32	c26	N77-32279
US-PATENT-CLASS-137-505.16	c34	N78-25351	US-PATENT-CLASS-148-32	c26	N78-18183
US-PATENT-CLASS-137-505.25	c37	N78-25426	US-PATENT-CLASS-148-32	c26	N80-23419
US-PATENT-CLASS-137-505.38	c37	N75-15050	US-PATENT-CLASS-148-32.5	c17	N72-22535
US-PATENT-CLASS-137-505.42	c37	N75-15050	US-PATENT-CLASS-148-32.5	c26	N77-20201
US-PATENT-CLASS-137-515.3	c37	N76-14463	US-PATENT-CLASS-148-32.5	c26	N77-32280
US-PATENT-CLASS-137-516.27	c15	N73-30459	US-PATENT-CLASS-148-32.5	c26	N78-18183
US-PATENT-CLASS-137-535	c15	N73-30459	US-PATENT-CLASS-148-121	c76	N79-16678
US-PATENT-CLASS-137-535	c05	N73-32014	US-PATENT-CLASS-148-125	c26	N78-24333
US-PATENT-CLASS-137-538	c05	N73-25125	US-PATENT-CLASS-148-126	c17	N71-24142
US-PATENT-CLASS-137-539	c15	N70-41811	US-PATENT-CLASS-148-126	c18	N71-26153
US-PATENT-CLASS-137-549	c37	N81-17433	US-PATENT-CLASS-148-126	c18	N71-28729
US-PATENT-CLASS-137-550	c37	N76-14463	US-PATENT-CLASS-148-126	c26	N74-10521
US-PATENT-CLASS-137-554	c09	N71-23191	US-PATENT-CLASS-148-127	c26	N75-29236
US-PATENT-CLASS-137-559	c11	N73-12265	US-PATENT-CLASS-148-131	c26	N80-28492
US-PATENT-CLASS-137-574	c20	N80-10278	US-PATENT-CLASS-148-162	c26	N77-20201
US-PATENT-CLASS-137-576	c20	N80-10278	US-PATENT-CLASS-148-174	c26	N71-29156
US-PATENT-CLASS-137-582	c32	N71-16103	US-PATENT-CLASS-148-174	c44	N76-28635
US-PATENT-CLASS-137-582	c32	N71-16106	US-PATENT-CLASS-148-174	c44	N78-24609
US-PATENT-CLASS-137-582	c15	N71-19569	US-PATENT-CLASS-148-175	c25	N75-26043
US-PATENT-CLASS-137-582	c15	N73-26472	US-PATENT-CLASS-148-175	c76	N76-25049
US-PATENT-CLASS-137-590	c20	N80-10278	US-PATENT-CLASS-148-175	c44	N76-28635
US-PATENT-CLASS-137-594	c12	N71-18615	US-PATENT-CLASS-148-187	c26	N72-17820
US-PATENT-CLASS-137-604	c15	N73-27406	US-PATENT-CLASS-148-187	c14	N72-28438
US-PATENT-CLASS-137-608	c15	N73-13462	US-PATENT-CLASS-148-187	c33	N81-26360
US-PATENT-CLASS-137-614	c15	N70-36492	US-PATENT-CLASS-148-188	c24	N71-10560
US-PATENT-CLASS-137-614.06	c37	N79-11402	US-PATENT-CLASS-148-188	c09	N71-12513
US-PATENT-CLASS-137-615	c12	N71-16031	US-PATENT-CLASS-148-188	c44	N79-11468
US-PATENT-CLASS-137-624.11	c35	N78-19466	US-PATENT-CLASS-149-1	c23	N71-16212
US-PATENT-CLASS-137-624.14	c03	N69-21469	US-PATENT-CLASS-149-1	c06	N73-30097
US-PATENT-CLASS-137-625.3	c37	N78-25426	US-PATENT-CLASS-149-1	c28	N80-20402
US-PATENT-CLASS-137-625.4	c37	N80-23654	US-PATENT-CLASS-149-1	c28	N81-14103
US-PATENT-CLASS-137-625.5	c15	N71-23051	US-PATENT-CLASS-149-2	c12	N70-40124
US-PATENT-CLASS-137-625.38	c37	N78-25426	US-PATENT-CLASS-149-15	c44	N80-20808
US-PATENT-CLASS-137-625.69	c15	N70-36908	US-PATENT-CLASS-149-17	c28	N74-33209
US-PATENT-CLASS-137-628	c37	N74-21065	US-PATENT-CLASS-149-19	c27	N71-14090
US-PATENT-CLASS-137-637.05	c37	N79-11402	US-PATENT-CLASS-149-19	c27	N72-25699
US-PATENT-CLASS-137-819	c33	N74-11050	US-PATENT-CLASS-149-19	c27	N73-16764
US-PATENT-CLASS-137-833	c33	N74-11050	US-PATENT-CLASS-149-19.2	c28	N80-28536
US-PATENT-CLASS-137-840	c33	N74-11050	US-PATENT-CLASS-149-19.4	c28	N78-31255
US-PATENT-CLASS-137-886	c37	N81-17433	US-PATENT-CLASS-149-19.4	c20	N78-32179
US-PATENT-CLASS-137-887	c37	N81-17433	US-PATENT-CLASS-149-19.4	c28	N79-28342
US-PATENT-CLASS-138-8R	c27	N81-15104	US-PATENT-CLASS-149-19.8	c28	N78-31255
US-PATENT-CLASS-138-4	c15	N71-18580	US-PATENT-CLASS-149-19.9	c28	N79-14228
US-PATENT-CLASS-138-33	c52	N80-16725	US-PATENT-CLASS-149-19.9	c28	N79-28342
US-PATENT-CLASS-138-42	c15	N71-15608	US-PATENT-CLASS-149-19.9	c28	N80-28536
US-PATENT-CLASS-138-43	c15	N71-19213	US-PATENT-CLASS-149-19.92	c28	N79-14228
US-PATENT-CLASS-138-45	c15	N71-18580	US-PATENT-CLASS-149-20	c27	N72-25699
US-PATENT-CLASS-138-45	c15	N73-13462	US-PATENT-CLASS-149-20	c28	N79-14228
US-PATENT-CLASS-138-46	c12	N71-18615	US-PATENT-CLASS-149-20	c28	N79-28342
US-PATENT-CLASS-138-96R	c37	N79-22474	US-PATENT-CLASS-149-20	c28	N80-28536
US-PATENT-CLASS-138-103	c52	N80-16725	US-PATENT-CLASS-149-36	c27	N72-25699
US-PATENT-CLASS-138-113	c34	N75-12222	US-PATENT-CLASS-149-36	c27	N73-16764
US-PATENT-CLASS-138-114	c34	N75-12222	US-PATENT-CLASS-149-36	c06	N73-30097
US-PATENT-CLASS-138-119	c32	N70-41579	US-PATENT-CLASS-149-36	c24	N76-14203
US-PATENT-CLASS-138-133	c52	N80-16725	US-PATENT-CLASS-149-37	c44	N80-20808
US-PATENT-CLASS-138-148	c34	N75-12222	US-PATENT-CLASS-149-42	c20	N78-32179
US-PATENT-CLASS-138-178	c15	N72-20445	US-PATENT-CLASS-149-43	c20	N78-32179
US-PATENT-CLASS-139-425R	c28	N72-11708	US-PATENT-CLASS-149-44	c20	N78-32179
US-PATENT-CLASS-140-105	c15	N72-12408	US-PATENT-CLASS-149-60	c28	N74-33209
US-PATENT-CLASS-140-123	c15	N71-15918	US-PATENT-CLASS-149-76	c28	N74-33209

US-PATENT-CLASS-149-76	.....	C20	N78-32179	US-PATENT-CLASS-156-285	.....	C24	N81-29163
US-PATENT-CLASS-149-83	.....	C20	N78-32179	US-PATENT-CLASS-156-285	.....	C24	N81-33235
US-PATENT-CLASS-149-85	.....	C20	N78-32179	US-PATENT-CLASS-156-286	.....	C37	N76-21554
US-PATENT-CLASS-149-88	.....	C28	N78-31255	US-PATENT-CLASS-156-286	.....	C37	N76-24575
US-PATENT-CLASS-149-92	.....	C27	N72-25699	US-PATENT-CLASS-156-286	.....	C24	N78-17150
US-PATENT-CLASS-149-92	.....	C28	N78-31255	US-PATENT-CLASS-156-289	.....	C24	N78-17149
US-PATENT-CLASS-149-93	.....	C28	N78-31255	US-PATENT-CLASS-156-289	.....	C24	N78-17150
US-PATENT-CLASS-149-105	.....	C28	N78-31255	US-PATENT-CLASS-156-290	.....	C24	N81-33235
US-PATENT-CLASS-149-108.4	.....	C28	N80-23471	US-PATENT-CLASS-156-292	.....	C27	N80-32516
US-PATENT-CLASS-149-108.4	.....	C28	N81-15119	US-PATENT-CLASS-156-292	.....	C24	N81-17170
US-PATENT-CLASS-149-109	.....	C27	N70-41897	US-PATENT-CLASS-156-294	.....	C37	N81-14317
US-PATENT-CLASS-149-111	.....	C28	N78-31255	US-PATENT-CLASS-156-294	.....	C24	N81-29163
US-PATENT-CLASS-150-1	.....	C52	N79-14749	US-PATENT-CLASS-156-295	.....	C27	N81-14077
US-PATENT-CLASS-150-11	.....	C37	N61-14317	US-PATENT-CLASS-156-300	.....	C24	N78-17150
US-PATENT-CLASS-151-41.76	.....	C37	N80-23653	US-PATENT-CLASS-156-303	.....	C44	N80-18550
US-PATENT-CLASS-152-11	.....	C31	N71-18611	US-PATENT-CLASS-156-306	.....	C24	N78-17150
US-PATENT-CLASS-152-225	.....	C15	N71-27091	US-PATENT-CLASS-156-308	.....	C05	N72-25121
US-PATENT-CLASS-152-250	.....	C15	N71-27091	US-PATENT-CLASS-156-309	.....	C31	N74-18089
US-PATENT-CLASS-152-330RF	.....	C37	N81-24443	US-PATENT-CLASS-156-309	.....	C27	N78-17205
US-PATENT-CLASS-152-353G	.....	C37	N81-24443	US-PATENT-CLASS-156-311	.....	C24	N78-17150
US-PATENT-CLASS-152-353B	.....	C37	N81-24443	US-PATENT-CLASS-156-312	.....	C44	N80-18550
US-PATENT-CLASS-152-379.4	.....	C37	N81-24443	US-PATENT-CLASS-156-320	.....	C15	N72-11392
US-PATENT-CLASS-156-DIG.6-8	.....	C76	N79-23798	US-PATENT-CLASS-156-323	.....	C27	N81-14077
US-PATENT-CLASS-156-DIG.62	.....	C76	N77-32519	US-PATENT-CLASS-156-330	.....	C24	N81-14000
US-PATENT-CLASS-156-DIG.64	.....	C76	N79-11920	US-PATENT-CLASS-156-331	.....	C37	N74-18126
US-PATENT-CLASS-156-DIG.64	.....	C44	N80-24741	US-PATENT-CLASS-156-331	.....	C27	N78-17205
US-PATENT-CLASS-156-DIG.64	.....	C76	N80-32245	US-PATENT-CLASS-156-331	.....	C24	N79-16915
US-PATENT-CLASS-156-DIG.65	.....	C76	N79-11920	US-PATENT-CLASS-156-331	.....	C27	N81-14077
US-PATENT-CLASS-156-DIG.88	.....	C76	N79-11920	US-PATENT-CLASS-156-344	.....	C28	N81-14103
US-PATENT-CLASS-156-DIG.88	.....	C76	N80-32245	US-PATENT-CLASS-156-345	.....	C15	N70-42033
US-PATENT-CLASS-156-DIG.96	.....	C76	N80-32244	US-PATENT-CLASS-156-382	.....	C37	N76-21554
US-PATENT-CLASS-156-DIG.96	.....	C33	N81-19389	US-PATENT-CLASS-156-510	.....	C15	N71-17687
US-PATENT-CLASS-156-3	.....	C17	N71-16044	US-PATENT-CLASS-156-510	.....	C03	N72-25019
US-PATENT-CLASS-156-3	.....	C15	N71-21404	US-PATENT-CLASS-156-545	.....	C15	N71-24164
US-PATENT-CLASS-156-3	.....	C15	N71-24047	US-PATENT-CLASS-156-556	.....	C37	N76-21554
US-PATENT-CLASS-156-3	.....	C06	N72-21094	US-PATENT-CLASS-156-601	.....	C76	N77-32919
US-PATENT-CLASS-156-7	.....	C74	N75-12732	US-PATENT-CLASS-156-601	.....	C76	N80-32245
US-PATENT-CLASS-156-16	.....	C74	N75-12732	US-PATENT-CLASS-156-605	.....	C44	N80-24741
US-PATENT-CLASS-156-17	.....	C76	N79-21910	US-PATENT-CLASS-156-608	.....	C76	N79-11920
US-PATENT-CLASS-156-18	.....	C26	N73-26752	US-PATENT-CLASS-156-608	.....	C33	N81-19389
US-PATENT-CLASS-156-18	.....	C74	N75-12732	US-PATENT-CLASS-156-610	.....	C76	N76-25049
US-PATENT-CLASS-156-52	.....	C31	N79-21226	US-PATENT-CLASS-156-612	.....	C76	N76-25049
US-PATENT-CLASS-156-60	.....	C15	N71-22713	US-PATENT-CLASS-156-612	.....	C44	N76-28635
US-PATENT-CLASS-156-66	.....	C15	N72-11392	US-PATENT-CLASS-156-613	.....	C76	N76-25049
US-PATENT-CLASS-156-74	.....	C24	N81-29163	US-PATENT-CLASS-156-613	.....	C44	N76-28635
US-PATENT-CLASS-156-84	.....	C15	N72-16330	US-PATENT-CLASS-156-614	.....	C44	N76-28635
US-PATENT-CLASS-156-86	.....	C15	N72-16330	US-PATENT-CLASS-156-617SP	.....	C76	N79-11920
US-PATENT-CLASS-156-89	.....	C37	N75-15992	US-PATENT-CLASS-156-617SP	.....	C76	N79-23798
US-PATENT-CLASS-156-89	.....	C24	N79-25143	US-PATENT-CLASS-156-617SP	.....	C44	N80-24741
US-PATENT-CLASS-156-94	.....	C32	N74-27612	US-PATENT-CLASS-156-617SP	.....	C76	N80-32245
US-PATENT-CLASS-156-94	.....	C24	N74-30001	US-PATENT-CLASS-156-619	.....	C76	N77-32919
US-PATENT-CLASS-156-99	.....	C37	N75-15992	US-PATENT-CLASS-156-620	.....	C76	N77-32919
US-PATENT-CLASS-156-104	.....	C44	N80-18550	US-PATENT-CLASS-156-633	.....	C44	N78-25529
US-PATENT-CLASS-156-154	.....	C24	N78-17150	US-PATENT-CLASS-156-645	.....	C27	N77-32308
US-PATENT-CLASS-156-154	.....	C27	N81-14077	US-PATENT-CLASS-156-647	.....	C33	N81-26360
US-PATENT-CLASS-156-160	.....	C27	N81-14077	US-PATENT-CLASS-156-648	.....	C33	N81-26360
US-PATENT-CLASS-156-161	.....	C24	N81-29163	US-PATENT-CLASS-156-649	.....	C33	N81-26360
US-PATENT-CLASS-156-163	.....	C27	N81-14077	US-PATENT-CLASS-156-663	.....	C27	N77-32308
US-PATENT-CLASS-156-165	.....	C24	N81-29163	US-PATENT-CLASS-161-7	.....	C18	N72-25540
US-PATENT-CLASS-156-172	.....	C15	N71-17651	US-PATENT-CLASS-161-7	.....	C18	N72-25541
US-PATENT-CLASS-156-212	.....	C03	N71-26726	US-PATENT-CLASS-161-42	.....	C37	N74-18126
US-PATENT-CLASS-156-212	.....	C24	N80-26388	US-PATENT-CLASS-161-43	.....	C37	N74-18126
US-PATENT-CLASS-156-212	.....	C27	N81-14077	US-PATENT-CLASS-161-67	.....	C33	N72-17947
US-PATENT-CLASS-156-213	.....	C24	N80-26388	US-PATENT-CLASS-161-68	.....	C18	N71-21651
US-PATENT-CLASS-156-218	.....	C54	N74-32546	US-PATENT-CLASS-161-68	.....	C18	N72-25540
US-PATENT-CLASS-156-229	.....	C24	N77-28225	US-PATENT-CLASS-161-68	.....	C18	N72-25541
US-PATENT-CLASS-156-242	.....	C15	N69-24322	US-PATENT-CLASS-161-69	.....	C33	N71-24858
US-PATENT-CLASS-156-242	.....	C37	N76-24575	US-PATENT-CLASS-161-89	.....	C17	N71-28747
US-PATENT-CLASS-156-242	.....	C24	N81-33235	US-PATENT-CLASS-161-92	.....	C37	N75-26371
US-PATENT-CLASS-156-245	.....	C31	N74-18089	US-PATENT-CLASS-161-93	.....	C18	N73-12604
US-PATENT-CLASS-156-245	.....	C24	N78-17149	US-PATENT-CLASS-161-93	.....	C37	N74-18126
US-PATENT-CLASS-156-245	.....	C24	N81-33235	US-PATENT-CLASS-161-93	.....	C37	N75-26371
US-PATENT-CLASS-156-247	.....	C31	N74-18089	US-PATENT-CLASS-161-115	.....	C18	N70-41583
US-PATENT-CLASS-156-250	.....	C03	N72-25019	US-PATENT-CLASS-161-116	.....	C37	N74-23064
US-PATENT-CLASS-156-252	.....	C24	N81-33235	US-PATENT-CLASS-161-127	.....	C18	N72-25540
US-PATENT-CLASS-156-264	.....	C05	N72-25121	US-PATENT-CLASS-161-127	.....	C18	N72-25541
US-PATENT-CLASS-156-264	.....	C24	N78-17150	US-PATENT-CLASS-161-161	.....	C33	N71-25351
US-PATENT-CLASS-156-264	.....	C24	N81-33235	US-PATENT-CLASS-161-182	.....	C15	N69-39735
US-PATENT-CLASS-156-267	.....	C27	N81-14077	US-PATENT-CLASS-161-182	.....	C37	N74-18126
US-PATENT-CLASS-156-272	.....	C27	N80-32516	US-PATENT-CLASS-161-189	.....	C23	N71-15978
US-PATENT-CLASS-156-278	.....	C44	N80-18550	US-PATENT-CLASS-161-192	.....	C37	N74-18126
US-PATENT-CLASS-156-285	.....	C15	N71-23052	US-PATENT-CLASS-161-196	.....	C37	N74-21063
US-PATENT-CLASS-156-285	.....	C18	N73-30532	US-PATENT-CLASS-161-214	.....	C06	N73-27980
US-PATENT-CLASS-156-285	.....	C31	N74-18089	US-PATENT-CLASS-161-227	.....	C06	N73-27980
US-PATENT-CLASS-156-285	.....	C24	N74-27035	US-PATENT-CLASS-162-14	.....	C85	N79-17747
US-PATENT-CLASS-156-285	.....	C24	N78-17149	US-PATENT-CLASS-162-29	.....	C85	N79-17747
US-PATENT-CLASS-156-285	.....	C24	N78-17150	US-PATENT-CLASS-162-102	.....	C24	N76-14204
US-PATENT-CLASS-156-285	.....	C44	N80-18550	US-PATENT-CLASS-162-153	.....	C24	N76-14204
US-PATENT-CLASS-156-285	.....	C24	N80-26388	US-PATENT-CLASS-162-222	.....	C24	N76-14204



US-PATENT-CLASS-162-228	C24 N76-14204	US-PATENT-CLASS-169-28	C12 N72-21310
US-PATENT-CLASS-164-60	C24 N77-27187	US-PATENT-CLASS-169-36	C12 N72-21310
US-PATENT-CLASS-164-105	C20 N79-21123	US-PATENT-CLASS-169-62	C31 N81-14137
US-PATENT-CLASS-164-132	C37 N76-23570	US-PATENT-CLASS-169-70	C31 N81-14137
US-PATENT-CLASS-165-1	C09 N70-41717	US-PATENT-CLASS-173-131	C15 N73-13463
US-PATENT-CLASS-165-1	C34 N75-12222	US-PATENT-CLASS-173-132	C37 N76-18454
US-PATENT-CLASS-165-2	C33 N71-24676	US-PATENT-CLASS-174-DIG.6	C26 N73-26752
US-PATENT-CLASS-165-2	C35 N74-15093	US-PATENT-CLASS-174-DIG.6	C26 N73-32571
US-PATENT-CLASS-165-2	C44 N77-32581	US-PATENT-CLASS-174-DIG.8	C33 N74-22865
US-PATENT-CLASS-165-2	C44 N78-17460	US-PATENT-CLASS-174-15C	C33 N74-27683
US-PATENT-CLASS-165-2	C51 N79-10694	US-PATENT-CLASS-174-15CA	C31 N79-17029
US-PATENT-CLASS-165-3	C03 N72-28025	US-PATENT-CLASS-174-18	C09 N69-21542
US-PATENT-CLASS-165-10	C44 N76-31667	US-PATENT-CLASS-174-28	C07 N71-27191
US-PATENT-CLASS-165-12	C33 N71-24276	US-PATENT-CLASS-174-28	C33 N74-27683
US-PATENT-CLASS-165-16	C31 N80-32583	US-PATENT-CLASS-174-35	C07 N71-19436
US-PATENT-CLASS-165-20	C03 N72-28025	US-PATENT-CLASS-174-36	C09 N72-22198
US-PATENT-CLASS-165-30	C51 N79-10694	US-PATENT-CLASS-174-52S	C15 N73-14469
US-PATENT-CLASS-165-30	C31 N79-17029	US-PATENT-CLASS-174-68.5	C15 N70-41960
US-PATENT-CLASS-165-32	C31 N73-30629	US-PATENT-CLASS-174-69	C33 N74-22865
US-PATENT-CLASS-165-32	C33 N73-32818	US-PATENT-CLASS-174-70R	C33 N74-22865
US-PATENT-CLASS-165-32	C34 N78-17337	US-PATENT-CLASS-174-72	C03 N69-21539
US-PATENT-CLASS-165-32	C34 N79-31523	US-PATENT-CLASS-174-73R	C33 N80-18286
US-PATENT-CLASS-165-32	C44 N80-20810	US-PATENT-CLASS-174-84	C15 N72-17455
US-PATENT-CLASS-165-44	C15 N71-26611	US-PATENT-CLASS-174-106R	C09 N72-22198
US-PATENT-CLASS-165-46	C05 N71-19439	US-PATENT-CLASS-174-110.3	C14 N71-27186
US-PATENT-CLASS-165-46	C05 N71-24147	US-PATENT-CLASS-174-111	C33 N74-27683
US-PATENT-CLASS-165-46	C05 N73-20137	US-PATENT-CLASS-174-115	C09 N70-38201
US-PATENT-CLASS-165-46	C05 N73-26071	US-PATENT-CLASS-174-117FF	C09 N72-22198
US-PATENT-CLASS-165-47	C33 N71-29052	US-PATENT-CLASS-174-126CP	C26 N73-32571
US-PATENT-CLASS-165-47	C31 N73-30629	US-PATENT-CLASS-174-142	C33 N80-18286
US-PATENT-CLASS-165-47	C34 N75-12222	US-PATENT-CLASS-174-145	C33 N76-16332
US-PATENT-CLASS-165-86	C15 N71-26611	US-PATENT-CLASS-174-148	C33 N76-16332
US-PATENT-CLASS-165-86	C33 N71-29046	US-PATENT-CLASS-175-1	C46 N79-22679
US-PATENT-CLASS-165-96	C33 N70-36847	US-PATENT-CLASS-175-26	C15 N73-32362
US-PATENT-CLASS-165-96	C33 N71-22890	US-PATENT-CLASS-175-78	C46 N80-10709
US-PATENT-CLASS-165-96	C31 N73-30829	US-PATENT-CLASS-175-310	C15 N70-42034
US-PATENT-CLASS-165-96	C33 N73-32818	US-PATENT-CLASS-175-323	C14 N69-21923
US-PATENT-CLASS-165-96	C34 N78-17337	US-PATENT-CLASS-176-3	C75 N75-13625
US-PATENT-CLASS-165-104	C33 N71-25353	US-PATENT-CLASS-176-11	C24 N72-33681
US-PATENT-CLASS-165-104.14	C05 N81-26114	US-PATENT-CLASS-176-11	C25 N76-27383
US-PATENT-CLASS-165-105	C09 N71-24607	US-PATENT-CLASS-176-11	C25 N76-29379
US-PATENT-CLASS-165-105	C33 N71-25353	US-PATENT-CLASS-176-11	C25 N78-27226
US-PATENT-CLASS-165-105	C33 N72-17948	US-PATENT-CLASS-176-14	C25 N76-29379
US-PATENT-CLASS-165-105	C31 N73-30629	US-PATENT-CLASS-176-16	C25 N76-27383
US-PATENT-CLASS-165-105	C28 N73-32606	US-PATENT-CLASS-176-16	C25 N76-29379
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US-PATENT-CLASS-165-105	C34 N75-12222	US-PATENT-CLASS-176-22	C73 N78-28913
US-PATENT-CLASS-165-105	C44 N75-32581	US-PATENT-CLASS-176-33	C73 N78-28913
US-PATENT-CLASS-165-105	C44 N76-16612	US-PATENT-CLASS-176-39	C73 N78-19920
US-PATENT-CLASS-165-105	C34 N76-17317	US-PATENT-CLASS-176-39	C73 N78-28913
US-PATENT-CLASS-165-105	C34 N76-27515	US-PATENT-CLASS-176-45	C22 N71-28759
US-PATENT-CLASS-165-105	C34 N77-32413	US-PATENT-CLASS-176-86G	C22 N72-20597
US-PATENT-CLASS-165-105	C25 N78-10224	US-PATENT-CLASS-176-169	C22 N73-32528
US-PATENT-CLASS-165-105	C34 N78-17336	US-PATENT-CLASS-177-1	C35 N77-19385
US-PATENT-CLASS-165-105	C34 N78-17337	US-PATENT-CLASS-177-200	C35 N74-26945
US-PATENT-CLASS-165-105	C44 N79-18443	US-PATENT-CLASS-177-208	C35 N77-19385
US-PATENT-CLASS-165-105	C37 N79-28549	US-PATENT-CLASS-177-210	C14 N71-10773
US-PATENT-CLASS-165-105	C34 N79-31523	US-PATENT-CLASS-177-211	C35 N74-26945
US-PATENT-CLASS-165-105	C35 N81-14287	US-PATENT-CLASS-177-246	C35 N74-26945
US-PATENT-CLASS-165-106	C33 N73-32818	US-PATENT-CLASS-178-DIG.1	C36 N74-20009
US-PATENT-CLASS-165-106	C34 N76-17317	US-PATENT-CLASS-178-DIG.1	C33 N75-30431
US-PATENT-CLASS-165-107	C09 N71-24607	US-PATENT-CLASS-178-DIG.1	C45 N76-17656
US-PATENT-CLASS-165-107	C44 N77-32581	US-PATENT-CLASS-178-DIG.6	C10 N73-13235
US-PATENT-CLASS-165-109	C35 N74-15093	US-PATENT-CLASS-178-DIG.8	C14 N72-25412
US-PATENT-CLASS-165-110	C77 N75-20139	US-PATENT-CLASS-178-DIG.8	C45 N76-17656
US-PATENT-CLASS-165-111	C77 N75-20139	US-PATENT-CLASS-178-DIG.12	C07 N72-12081
US-PATENT-CLASS-165-133	C33 N71-16277	US-PATENT-CLASS-178-DIG.12	C32 N75-21485
US-PATENT-CLASS-165-133	C33 N71-25353	US-PATENT-CLASS-178-DIG.20	C23 N72-27728
US-PATENT-CLASS-165-133	C33 N72-20915	US-PATENT-CLASS-178-DIG.20	C35 N75-19613
US-PATENT-CLASS-165-133	C44 N76-23675	US-PATENT-CLASS-178-DIG.20	C18 N76-14186
US-PATENT-CLASS-165-134	C34 N78-17336	US-PATENT-CLASS-178-DIG.21	C16 N72-13437
US-PATENT-CLASS-165-138	C09 N71-24807	US-PATENT-CLASS-178-DIG.23	C07 N73-30115
US-PATENT-CLASS-165-141	C28 N73-32606	US-PATENT-CLASS-178-DIG.25	C74 N75-25706
US-PATENT-CLASS-165-146	C34 N79-13289	US-PATENT-CLASS-178-DIG.28	C08 N72-22164
US-PATENT-CLASS-165-155	C33 N72-20915	US-PATENT-CLASS-178-DIG.29	C35 N75-25123
US-PATENT-CLASS-165-158	C33 N72-20915	US-PATENT-CLASS-178-DIG.32	C71 N74-21014
US-PATENT-CLASS-165-161	C33 N72-20915	US-PATENT-CLASS-178-DIG.35	C09 N76-24280
US-PATENT-CLASS-165-164	C34 N77-10463	US-PATENT-CLASS-178-DIG.36	C08 N72-22164
US-PATENT-CLASS-165-166	C54 N77-32722	US-PATENT-CLASS-178-5.2R	C09 N71-28618
US-PATENT-CLASS-165-169	C34 N75-13288	US-PATENT-CLASS-178-5.2R	C07 N72-17109
US-PATENT-CLASS-165-169	C34 N79-13289	US-PATENT-CLASS-178-5.4	C07 N72-17109
US-PATENT-CLASS-165-170	C34 N77-10463	US-PATENT-CLASS-178-5.8R	C71 N74-21014
US-PATENT-CLASS-165-174	C33 N72-20915	US-PATENT-CLASS-178-6	C07 N71-19433
US-PATENT-CLASS-165-185	C28 N73-32606	US-PATENT-CLASS-178-6	C09 N71-19449
US-PATENT-CLASS-166-63	C46 N79-22679	US-PATENT-CLASS-178-6	C07 N71-23026
US-PATENT-CLASS-166-77	C43 N81-26509	US-PATENT-CLASS-178-6	C07 N71-26579
US-PATENT-CLASS-166-222	C43 N81-26509	US-PATENT-CLASS-178-6	C07 N72-12081
US-PATENT-CLASS-166-248	C43 N78-14452	US-PATENT-CLASS-178-6	C16 N72-13437
US-PATENT-CLASS-166-259	C43 N78-14452	US-PATENT-CLASS-178-6	C10 N73-13235

US-PATENT-CLASS-178-6	c36 N74-20009	US-PATENT-CLASS-179-15A	c07 N73-26118
US-PATENT-CLASS-178-6.5	c23 N72-27728	US-PATENT-CLASS-179-15AN	c07 N73-16121
US-PATENT-CLASS-178-6.6	c07 N71-11300	US-PATENT-CLASS-179-15AT	c32 N74-30524
US-PATENT-CLASS-178-6.6	c07 N71-26102	US-PATENT-CLASS-179-15BA	c60 N77-12721
US-PATENT-CLASS-178-6.6DD	c07 N73-30115	US-PATENT-CLASS-179-15BA	c32 N80-18252
US-PATENT-CLASS-178-6.6DD	c35 N74-11283	US-PATENT-CLASS-179-15BC	c08 N72-25208
US-PATENT-CLASS-178-6.7	c07 N72-17109	US-PATENT-CLASS-179-15BC	c07 N73-16121
US-PATENT-CLASS-178-6.7B	c35 N74-15831	US-PATENT-CLASS-179-15BC	c32 N74-30523
US-PATENT-CLASS-178-6.8	c08 N72-22164	US-PATENT-CLASS-179-15BC	c33 N75-26243
US-PATENT-CLASS-178-6.8	c14 N72-25412	US-PATENT-CLASS-179-15BL	c08 N72-22162
US-PATENT-CLASS-178-6.8	c07 N73-30115	US-PATENT-CLASS-179-15BM	c07 N73-26118
US-PATENT-CLASS-178-6.8	c33 N75-30431	US-PATENT-CLASS-179-15BS	c10 N71-33407
US-PATENT-CLASS-178-6.8	c45 N76-17656	US-PATENT-CLASS-179-15BS	c07 N72-20140
US-PATENT-CLASS-178-7.1	c07 N71-24612	US-PATENT-CLASS-179-15BS	c07 N73-30115
US-PATENT-CLASS-178-7.1	c07 N71-27341	US-PATENT-CLASS-179-15BS	c32 N75-26195
US-PATENT-CLASS-178-7.1	c09 N72-17156	US-PATENT-CLASS-179-15BS	c60 N77-19760
US-PATENT-CLASS-178-7.1	c32 N74-19790	US-PATENT-CLASS-179-15BV	c07 N72-25172
US-PATENT-CLASS-178-7.1	c36 N75-19652	US-PATENT-CLASS-179-15BY	c32 N74-30524
US-PATENT-CLASS-178-7.2	c14 N70-41607	US-PATENT-CLASS-179-15PD	c08 N72-25208
US-PATENT-CLASS-178-7.2	c71 N74-21014	US-PATENT-CLASS-179-15PS	c07 N73-28012
US-PATENT-CLASS-178-7.2	c35 N75-25123	US-PATENT-CLASS-179-27CA	c32 N79-23310
US-PATENT-CLASS-178-7.2B	c08 N72-22164	US-PATENT-CLASS-179-78	c33 N81-27397
US-PATENT-CLASS-178-7.3	c07 N71-27341	US-PATENT-CLASS-179-84VF	c32 N79-23310
US-PATENT-CLASS-178-7.3	c07 N72-12C81	US-PATENT-CLASS-179-91B	c74 N78-14889
US-PATENT-CLASS-178-7.5E	c10 N72-31273	US-PATENT-CLASS-179-100.2	c09 N69-24329
US-PATENT-CLASS-178-7.6	c36 N74-20009	US-PATENT-CLASS-179-100.2	c09 N71-25866
US-PATENT-CLASS-178-7.7	c09 N71-12539	US-PATENT-CLASS-179-100.2	c08 N71-27210
US-PATENT-CLASS-178-7.7	c32 N74-20813	US-PATENT-CLASS-179-100.2A	c08 N71-27255
US-PATENT-CLASS-178-7.89	c09 N76-24280	US-PATENT-CLASS-179-100.2A	c21 N73-13644
US-PATENT-CLASS-178-7.92	c14 N72-25414	US-PATENT-CLASS-179-100.2A	c32 N74-27612
US-PATENT-CLASS-178-15	c33 N75-19517	US-PATENT-CLASS-179-100.2B	c32 N74-27612
US-PATENT-CLASS-178-18	c10 N73-32143	US-PATENT-CLASS-179-100.2C	c35 N77-21392
US-PATENT-CLASS-178-50	c08 N72-18184	US-PATENT-CLASS-179-100.2CH	c36 N74-13205
US-PATENT-CLASS-178-50	c08 N72-25208	US-PATENT-CLASS-179-100.2CH	c35 N78-29421
US-PATENT-CLASS-178-52	c08 N72-22162	US-PATENT-CLASS-179-100.2CH	c35 N79-16246
US-PATENT-CLASS-178-54CF	c09 N71-28618	US-PATENT-CLASS-179-100.2K	c07 N72-21119
US-PATENT-CLASS-178-54PE	c09 N71-28618	US-PATENT-CLASS-179-100.2HD	c35 N74-11283
US-PATENT-CLASS-178-58A	c32 N75-21486	US-PATENT-CLASS-179-100.2T	c35 N74-11283
US-PATENT-CLASS-178-58R	c32 N80-18252	US-PATENT-CLASS-179-100-2CA	c09 N72-11224
US-PATENT-CLASS-178-66	c09 N71-25866	US-PATENT-CLASS-179-100-2MD	c09 N72-11224
US-PATENT-CLASS-178-66	c08 N72-18184	US-PATENT-CLASS-179-107E	c33 N78-10375
US-PATENT-CLASS-178-66B	c32 N75-24981	US-PATENT-CLASS-179-175.1A	c14 N73-27379
US-PATENT-CLASS-178-67	c08 N70-41961	US-PATENT-CLASS-179-175.1A	c33 N78-10375
US-PATENT-CLASS-178-67	c32 N74-26654	US-PATENT-CLASS-180-6.5	c11 N73-26238
US-PATENT-CLASS-178-69.1	c32 N78-15323	US-PATENT-CLASS-180-7B	c11 N73-26238
US-PATENT-CLASS-178-69.4B	c32 N74-10132	US-PATENT-CLASS-180-8A	c11 N73-26238
US-PATENT-CLASS-178-69.5	c07 N71-11281	US-PATENT-CLASS-180-9.2B	c11 N73-26238
US-PATENT-CLASS-178-69.5	c10 N71-19468	US-PATENT-CLASS-180-9.5	c11 N73-26238
US-PATENT-CLASS-178-69.5	c10 N71-25865	US-PATENT-CLASS-180-41	c11 N73-26238
US-PATENT-CLASS-178-69.5	c10 N71-33407	US-PATENT-CLASS-180-79.3	c37 N74-18125
US-PATENT-CLASS-178-69.5	c07 N72-25173	US-PATENT-CLASS-180-105E	c11 N72-20244
US-PATENT-CLASS-178-69.5	c07 N73-13149	US-PATENT-CLASS-180-118	c31 N71-15689
US-PATENT-CLASS-178-69.5	c69 N73-28084	US-PATENT-CLASS-180-121	c31 N71-15689
US-PATENT-CLASS-178-69.5	c17 N76-22245	US-PATENT-CLASS-180-125	c15 N72-17451
US-PATENT-CLASS-178-69.5B	c07 N72-20140	US-PATENT-CLASS-180-127	c15 N72-17451
US-PATENT-CLASS-178-69.5B	c32 N75-26195	US-PATENT-CLASS-181.5B	c71 N74-31148
US-PATENT-CLASS-178-69.5B	c33 N76-14371	US-PATENT-CLASS-181-.5	c11 N71-28779
US-PATENT-CLASS-178-69.5B	c60 N77-19760	US-PATENT-CLASS-181-33C	c07 N74-32418
US-PATENT-CLASS-178-69A	c35 N75-21582	US-PATENT-CLASS-181-33P	c07 N74-32418
US-PATENT-CLASS-178-69C	c32 N76-16249	US-PATENT-CLASS-181-33H	c07 N74-32418
US-PATENT-CLASS-178-79	c32 N75-21486	US-PATENT-CLASS-181-33HB	c07 N74-27490
US-PATENT-CLASS-178-88	c07 N71-12392	US-PATENT-CLASS-181-33HC	c07 N74-33218
US-PATENT-CLASS-178-88	c33 N74-12887	US-PATENT-CLASS-181-33HC	c07 N76-18117
US-PATENT-CLASS-178-88	c32 N74-20609	US-PATENT-CLASS-181-33L	c07 N74-32418
US-PATENT-CLASS-178-88	c33 N74-27705	US-PATENT-CLASS-181-42	c07 N74-32418
US-PATENT-CLASS-178-88	c33 N76-14371	US-PATENT-CLASS-181-43	c07 N74-15453
US-PATENT-CLASS-178-88	c32 N76-16249	US-PATENT-CLASS-181-52	c28 N70-41582
US-PATENT-CLASS-178-88	c32 N77-10392	US-PATENT-CLASS-181-102	c39 N80-10507
US-PATENT-CLASS-178-88	c32 N77-24331	US-PATENT-CLASS-181-102	c31 N80-32584
US-PATENT-CLASS-179-1	c07 N71-26181	US-PATENT-CLASS-181-105	c39 N80-10507
US-PATENT-CLASS-179-1	c31 N71-33160	US-PATENT-CLASS-181-106	c46 N79-22679
US-PATENT-CLASS-179-1DM	c71 N79-23753	US-PATENT-CLASS-181-115	c46 N79-23555
US-PATENT-CLASS-179-1HF	c71 N79-23753	US-PATENT-CLASS-181-117	c46 N79-22679
US-PATENT-CLASS-179-1HN	c32 N79-23310	US-PATENT-CLASS-181-120	c46 N79-23555
US-PATENT-CLASS-179-1P	c10 N73-12244	US-PATENT-CLASS-181-148	c71 N79-23753
US-PATENT-CLASS-179-1B	c07 N71-33108	US-PATENT-CLASS-181-190	c71 N79-14871
US-PATENT-CLASS-179-1SA	c10 N73-25240	US-PATENT-CLASS-181-213	c71 N79-14871
US-PATENT-CLASS-179-1SA	c32 N76-31372	US-PATENT-CLASS-181-214	c07 N81-14999
US-PATENT-CLASS-179-1SA	c32 N77-30309	US-PATENT-CLASS-181-222	c71 N79-14871
US-PATENT-CLASS-179-1SE	c32 N77-30309	US-PATENT-CLASS-181-293	c71 N79-14871
US-PATENT-CLASS-179-1VC	c07 N71-33108	US-PATENT-CLASS-182-5	c15 N73-25512
US-PATENT-CLASS-179-15	c07 N69-39978	US-PATENT-CLASS-182-10	c15 N71-27067
US-PATENT-CLASS-179-15	c07 N71-20614	US-PATENT-CLASS-182-62.5	c31 N81-27324
US-PATENT-CLASS-179-15	c07 N71-24621	US-PATENT-CLASS-182-178	c39 N76-31562
US-PATENT-CLASS-179-15	c07 N71-24622	US-PATENT-CLASS-182-191	c05 N71-11199
US-PATENT-CLASS-179-15	c08 N72-18184	US-PATENT-CLASS-184-1	c15 N71-23048
US-PATENT-CLASS-179-15.55B	c08 N72-11171	US-PATENT-CLASS-185-38	c37 N78-16369
US-PATENT-CLASS-179-15.55B	c08 N72-33172	US-PATENT-CLASS-187-1	c15 N72-25453
US-PATENT-CLASS-179-15A	c08 N72-22162	US-PATENT-CLASS-187-7.1	c07 N71-24742

US-PATENT-CLASS-187-20	c15 N72-25453	US-PATENT-CLASS-200-304	c33 N80-18285
US-PATENT-CLASS-187-95	c15 N72-25453	US-PATENT-CLASS-201-8	c27 N81-17261
US-PATENT-CLASS-188-1	c15 N70-34661	US-PATENT-CLASS-201-10	c27 N81-17261
US-PATENT-CLASS-188-1	c15 N70-38601	US-PATENT-CLASS-201-17	c44 N78-31527
US-PATENT-CLASS-188-1	c15 N70-40354	US-PATENT-CLASS-201-17	c25 N81-33246
US-PATENT-CLASS-188-1	c14 N71-17626	US-PATENT-CLASS-201-25	c27 N81-17261
US-PATENT-CLASS-188-1	c15 N71-22677	US-PATENT-CLASS-202-118	c31 N81-15154
US-PATENT-CLASS-188-1	c14 N71-23492	US-PATENT-CLASS-202-182	c05 N71-11207
US-PATENT-CLASS-188-1	c15 N71-26243	US-PATENT-CLASS-202-234	c15 N71-23086
US-PATENT-CLASS-188-1	c15 N71-27146	US-PATENT-CLASS-204-DIG. 11	c25 N77-32255
US-PATENT-CLASS-188-1	c15 N71-27169	US-PATENT-CLASS-204-1T	c25 N79-22235
US-PATENT-CLASS-188-1B	c15 N72-20443	US-PATENT-CLASS-204-1T	c51 N81-28698
US-PATENT-CLASS-188-1B	c19 N76-22284	US-PATENT-CLASS-204-2.1	c44 N81-29524
US-PATENT-CLASS-188-1C	c15 N72-17450	US-PATENT-CLASS-204-9	c20 N74-32919
US-PATENT-CLASS-188-1C	c15 N72-20443	US-PATENT-CLASS-204-9	c24 N77-19171
US-PATENT-CLASS-188-1C	c15 N73-30460	US-PATENT-CLASS-204-16	c24 N77-19171
US-PATENT-CLASS-188-1C	c11 N73-32452	US-PATENT-CLASS-204-20	c18 N71-16210
US-PATENT-CLASS-188-1C	c37 N79-10420	US-PATENT-CLASS-204-30	c09 N71-28691
US-PATENT-CLASS-188-65.1	c15 N73-25512	US-PATENT-CLASS-204-32	c44 N79-11469
US-PATENT-CLASS-188-65.5	c15 N71-27067	US-PATENT-CLASS-204-32A	c33 N77-26385
US-PATENT-CLASS-188-87	c12 N71-16894	US-PATENT-CLASS-204-32R	c44 N76-14595
US-PATENT-CLASS-188-88	c15 N71-26611	US-PATENT-CLASS-204-33	c17 N71-25903
US-PATENT-CLASS-188-103	c15 N71-27146	US-PATENT-CLASS-204-33	c44 N76-14595
US-PATENT-CLASS-188-129	c15 N72-17450	US-PATENT-CLASS-204-33	c44 N79-11469
US-PATENT-CLASS-188-134	c37 N81-15364	US-PATENT-CLASS-204-37	c33 N71-29151
US-PATENT-CLASS-188-151A	c44 N79-14527	US-PATENT-CLASS-204-37B	c44 N79-11469
US-PATENT-CLASS-188-163	c37 N74-26576	US-PATENT-CLASS-204-38	c17 N71-24830
US-PATENT-CLASS-188-171	c37 N74-26976	US-PATENT-CLASS-204-38A	c44 N76-14595
US-PATENT-CLASS-188-180	c37 N81-15364	US-PATENT-CLASS-204-38B	c44 N79-11469
US-PATENT-CLASS-188-184	c37 N81-15364	US-PATENT-CLASS-204-40	c44 N76-14595
US-PATENT-CLASS-188-266	c15 N73-25513	US-PATENT-CLASS-204-40	c24 N77-19171
US-PATENT-CLASS-188-268	c15 N72-20443	US-PATENT-CLASS-204-42	c44 N76-14595
US-PATENT-CLASS-188-269	c44 N79-14527	US-PATENT-CLASS-204-49	c15 N72-25452
US-PATENT-CLASS-188-291	c54 N77-21844	US-PATENT-CLASS-204-49	c44 N76-14595
US-PATENT-CLASS-189-36	c15 N70-36947	US-PATENT-CLASS-204-59	c15 N72-21466
US-PATENT-CLASS-192-43.1	c15 N71-17805	US-PATENT-CLASS-204-129	c28 N81-24280
US-PATENT-CLASS-195-1.8	c51 N77-25769	US-PATENT-CLASS-204-130	c15 N72-21466
US-PATENT-CLASS-195-1.8	c51 N79-10694	US-PATENT-CLASS-204-157.1H	c25 N74-30502
US-PATENT-CLASS-195-1.8	c52 N79-14749	US-PATENT-CLASS-204-157.1H	c37 N76-18458
US-PATENT-CLASS-195-28N	c06 N72-25149	US-PATENT-CLASS-204-157.1E	c25 N77-32255
US-PATENT-CLASS-195-66R	c06 N73-27086	US-PATENT-CLASS-204-157.1R	c44 N77-32580
US-PATENT-CLASS-195-68	c04 N69-27487	US-PATENT-CLASS-204-157.1R	c44 N79-11470
US-PATENT-CLASS-195-99	c06 N71-17705	US-PATENT-CLASS-204-157.1BAG	c15 N72-25452
US-PATENT-CLASS-195-103.5K	c51 N77-22794	US-PATENT-CLASS-204-158R	c25 N77-32255
US-PATENT-CLASS-195-103.5K	c52 N79-14750	US-PATENT-CLASS-204-159.11	c27 N80-32516
US-PATENT-CLASS-195-103.5L	c52 N79-14750	US-PATENT-CLASS-204-159.14	c27 N80-32516
US-PATENT-CLASS-195-103.5R	c06 N72-25149	US-PATENT-CLASS-204-159.15	c27 N80-26446
US-PATENT-CLASS-195-103.5B	c25 N75-12686	US-PATENT-CLASS-204-159.19	c27 N80-26446
US-PATENT-CLASS-195-103.5R	c35 N75-27330	US-PATENT-CLASS-204-162R	c25 N77-32255
US-PATENT-CLASS-195-103.5R	c35 N75-33368	US-PATENT-CLASS-204-164	c26 N78-32229
US-PATENT-CLASS-195-103.5R	c51 N76-29891	US-PATENT-CLASS-204-168	c24 N71-25555
US-PATENT-CLASS-195-103.5B	c51 N77-22794	US-PATENT-CLASS-204-171	c27 N80-23452
US-PATENT-CLASS-195-103.5R	c25 N79-22235	US-PATENT-CLASS-204-175	c26 N78-32229
US-PATENT-CLASS-195-120	c51 N75-13502	US-PATENT-CLASS-204-177	c25 N75-12087
US-PATENT-CLASS-195-120	c35 N75-27330	US-PATENT-CLASS-204-180G	c25 N78-14104
US-PATENT-CLASS-195-127	c15 N72-21465	US-PATENT-CLASS-204-180G	c25 N79-14169
US-PATENT-CLASS-195-127	c11 N72-25284	US-PATENT-CLASS-204-180G	c37 N80-14397
US-PATENT-CLASS-195-127	c14 N72-25413	US-PATENT-CLASS-204-180P	c54 N78-14784
US-PATENT-CLASS-195-127	c15 N73-20514	US-PATENT-CLASS-204-180R	c25 N74-26948
US-PATENT-CLASS-195-127	c05 N73-32011	US-PATENT-CLASS-204-180R	c34 N74-27744
US-PATENT-CLASS-195-127	c35 N75-12272	US-PATENT-CLASS-204-180R	c51 N80-16715
US-PATENT-CLASS-195-127	c51 N75-13502	US-PATENT-CLASS-204-180S	c25 N79-10163
US-PATENT-CLASS-195-127	c35 N75-27330	US-PATENT-CLASS-204-180S	c25 N79-14169
US-PATENT-CLASS-195-127	c25 N79-22235	US-PATENT-CLASS-204-192	c15 N73-12487
US-PATENT-CLASS-195-127	c25 N79-24673	US-PATENT-CLASS-204-192	c17 N73-24569
US-PATENT-CLASS-195-141	c35 N75-27330	US-PATENT-CLASS-204-192	c27 N74-13270
US-PATENT-CLASS-197-188	c37 N77-19457	US-PATENT-CLASS-204-192	c20 N74-31269
US-PATENT-CLASS-197-190	c37 N77-19457	US-PATENT-CLASS-204-192	c37 N75-19684
US-PATENT-CLASS-198-847	c37 N80-32717	US-PATENT-CLASS-204-192	c44 N77-14580
US-PATENT-CLASS-198-848	c37 N80-32717	US-PATENT-CLASS-204-192C	c76 N79-14906
US-PATENT-CLASS-200-6	c10 N71-15909	US-PATENT-CLASS-204-192E	c37 N81-19455
US-PATENT-CLASS-200-6	c09 N71-16089	US-PATENT-CLASS-204-195	c14 N71-17575
US-PATENT-CLASS-200-19	c09 N70-39915	US-PATENT-CLASS-204-195B	c25 N79-24073
US-PATENT-CLASS-200-39	c03 N70-38713	US-PATENT-CLASS-204-195B	c51 N80-27067
US-PATENT-CLASS-200-46	c74 N79-12890	US-PATENT-CLASS-204-195B	c51 N81-28698
US-PATENT-CLASS-200-61	c74 N79-12890	US-PATENT-CLASS-204-195R	c33 N76-19339
US-PATENT-CLASS-200-61.42	c09 N71-12518	US-PATENT-CLASS-204-195W	c35 N78-25391
US-PATENT-CLASS-200-61.45	c14 N70-41812	US-PATENT-CLASS-204-222	c31 N74-23065
US-PATENT-CLASS-200-64	c15 N72-17455	US-PATENT-CLASS-204-224	c37 N80-14395
US-PATENT-CLASS-200-81.9H	c09 N72-20199	US-PATENT-CLASS-204-242	c33 N75-27252
US-PATENT-CLASS-200-81B	c09 N72-22204	US-PATENT-CLASS-204-252	c28 N81-24280
US-PATENT-CLASS-200-82	c10 N71-23663	US-PATENT-CLASS-204-263	c14 N71-28933
US-PATENT-CLASS-200-82C	c09 N72-22204	US-PATENT-CLASS-204-266	c28 N81-24280
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US-PATENT-CLASS-200-83N	c35 N75-15931	US-PATENT-CLASS-204-279	c33 N75-27252
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US-PATENT-CLASS-250-495	c74 N75-12732	US-PATENT-CLASS-252-359A	c37 N77-13418
US-PATENT-CLASS-250-496	c73 N75-30E76	US-PATENT-CLASS-252-364	c28 N81-15119
US-PATENT-CLASS-250-498	c52 N77-14737	US-PATENT-CLASS-252-373	c44 N76-29704
US-PATENT-CLASS-250-499	c73 N74-26767	US-PATENT-CLASS-252-373	c44 N77-10636
US-PATENT-CLASS-250-499	c72 N76-15860	US-PATENT-CLASS-252-408	c14 N73-14428
US-PATENT-CLASS-250-499	c37 N78-13436	US-PATENT-CLASS-252-431N	c06 N73-32029
US-PATENT-CLASS-250-500	c72 N76-15860	US-PATENT-CLASS-252-431R	c06 N73-32029
US-PATENT-CLASS-250-505	c74 N74-27866	US-PATENT-CLASS-252-472	c25 N78-10225
US-PATENT-CLASS-250-505	c35 N75-19616	US-PATENT-CLASS-252-514	c05 N72-25120
US-PATENT-CLASS-250-508	c35 N75-19616	US-PATENT-CLASS-252-514	c44 N79-31752
US-PATENT-CLASS-250-510	c35 N75-19616	US-PATENT-CLASS-252-518	c24 N79-14156
US-PATENT-CLASS-250-511	c74 N74-27866	US-PATENT-CLASS-252-549	c23 N75-14834
US-PATENT-CLASS-250-513	c35 N80-28686	US-PATENT-CLASS-253	c25 N79-28253
US-PATENT-CLASS-250-518	c14 N73-30392	US-PATENT-CLASS-253-39.1	c33 N71-29152
US-PATENT-CLASS-250-527	c37 N76-18458	US-PATENT-CLASS-253-39.15	c15 N70-33226
US-PATENT-CLASS-250-527	c25 N77-32255	US-PATENT-CLASS-253-39.15	c15 N70-33264
US-PATENT-CLASS-250-527	c44 N77-32580	US-PATENT-CLASS-253-39.15	c28 N70-33372
US-PATENT-CLASS-250-527	c44 N79-11470	US-PATENT-CLASS-253-66	c15 N70-36412
US-PATENT-CLASS-250-528	c25 N78-25148	US-PATENT-CLASS-253-66	c28 N70-39895
US-PATENT-CLASS-250-531	c25 N78-25148	US-PATENT-CLASS-253-77	c28 N71-28928
US-PATENT-CLASS-250-531	c33 N79-15245	US-PATENT-CLASS-253-77	c28 N71-29154
US-PATENT-CLASS-250-540	c33 N79-15245	US-PATENT-CLASS-253-317	c44 N77-22606
US-PATENT-CLASS-250-541	c33 N79-15245	US-PATENT-CLASS-254-29A	c15 N73-30457
US-PATENT-CLASS-250-551	c74 N79-34011	US-PATENT-CLASS-254-93B	c35 N74-13129
US-PATENT-CLASS-250-563	c38 N78-17396	US-PATENT-CLASS-254-93R	c20 N76-22296
US-PATENT-CLASS-250-566	c74 N75-25706	US-PATENT-CLASS-254-124	c20 N76-22296
US-PATENT-CLASS-250-571	c36 N78-14380	US-PATENT-CLASS-254-150	c15 N71-24599
US-PATENT-CLASS-250-572	c38 N78-17395	US-PATENT-CLASS-254-156	c15 N73-25512
US-PATENT-CLASS-250-572	c38 N76-17396	US-PATENT-CLASS-254-158	c54 N77-21844
US-PATENT-CLASS-250-573	c74 N76-20958	US-PATENT-CLASS-254-173	c15 N71-24599
US-PATENT-CLASS-250-574	c45 N76-21742	US-PATENT-CLASS-254-186	c15 N71-24599
US-PATENT-CLASS-250-574	c36 N77-25501	US-PATENT-CLASS-254-190	c15 N72-25453
US-PATENT-CLASS-250-576	c35 N74-27860	US-PATENT-CLASS-256-1	c37 N79-10420
US-PATENT-CLASS-250-578	c36 N75-19652	US-PATENT-CLASS-256-13.1	c37 N79-10420
US-PATENT-CLASS-251-7	c37 N79-28550	US-PATENT-CLASS-259-DIG.18	c35 N74-15093
US-PATENT-CLASS-251-11	c15 N70-35407	US-PATENT-CLASS-259-4	c15 N73-19458
US-PATENT-CLASS-251-31	c15 N71-19485	US-PATENT-CLASS-259-4AC	c37 N76-19436
US-PATENT-CLASS-251-61	c15 N71-10778	US-PATENT-CLASS-259-60	c35 N74-15093
US-PATENT-CLASS-251-61.1	c12 N71-18615	US-PATENT-CLASS-259-71	c15 N71-21177
US-PATENT-CLASS-251-86	c15 N72-31483	US-PATENT-CLASS-259-72	c37 N74-18123
US-PATENT-CLASS-251-86	c37 N80-23654	US-PATENT-CLASS-259-98	c35 N74-15126
US-PATENT-CLASS-251-118	c15 N71-18580	US-PATENT-CLASS-259/4R	c34 N77-24423
US-PATENT-CLASS-251-120	c37 N74-21065	US-PATENT-CLASS-260.46.5B	c27 N74-21156
US-PATENT-CLASS-251-121	c15 N71-18580	US-PATENT-CLASS-260-DIG.15	c27 N78-14164
US-PATENT-CLASS-251-122	c15 N73-13462	US-PATENT-CLASS-260-DIG.24	c27 N74-27037
US-PATENT-CLASS-251-122	c37 N74-21065	US-PATENT-CLASS-260-DIG.24	c27 N76-24405
US-PATENT-CLASS-251-127	c12 N71-18615	US-PATENT-CLASS-260-DIG.29	c27 N80-24438
US-PATENT-CLASS-251-129	c15 N72-20442	US-PATENT-CLASS-260-2	c06 N71-11243
US-PATENT-CLASS-251-138	c37 N80-23654	US-PATENT-CLASS-260-2	c06 N71-20717
US-PATENT-CLASS-251-148	c15 N71-23024	US-PATENT-CLASS-260-2	c06 N71-20905
US-PATENT-CLASS-251-149.6	c37 N76-14463	US-PATENT-CLASS-260-2	c06 N71-27363
US-PATENT-CLASS-251-149.9	c37 N79-11402	US-PATENT-CLASS-260-2	c06 N73-30102
US-PATENT-CLASS-251-172	c15 N71-21234	US-PATENT-CLASS-260-2	c27 N79-21190
US-PATENT-CLASS-251-172	c37 N79-33469	US-PATENT-CLASS-260-2.1	c25 N81-17187
US-PATENT-CLASS-251-173	c15 N70-33376	US-PATENT-CLASS-260-2.1E	c18 N72-22567
US-PATENT-CLASS-251-210	c37 N74-21065	US-PATENT-CLASS-260-2.1E	c27 N81-14076
US-PATENT-CLASS-251-216	c37 N81-17433	US-PATENT-CLASS-260-2.1E	c25 N81-19244
US-PATENT-CLASS-251-331	c15 N72-31483	US-PATENT-CLASS-260-2.2R	c25 N81-17187
US-PATENT-CLASS-251-333	c15 N70-34659	US-PATENT-CLASS-260-2.2R	c25 N81-19244

US-PATENT-CLASS-260-2.5	.....	C06	N71-11242	US-PATENT-CLASS-260-63R	.....	C27	N78-32261
US-PATENT-CLASS-260-2.5	.....	C06	N71-24739	US-PATENT-CLASS-260-65	.....	C06	N73-27980
US-PATENT-CLASS-260-2.5	.....	C06	N71-25929	US-PATENT-CLASS-260-65	.....	C27	N78-32261
US-PATENT-CLASS-260-2.5	.....	C18	N71-26155	US-PATENT-CLASS-260-67	.....	C27	N78-17214
US-PATENT-CLASS-260-2.5	.....	C06	N72-25150	US-PATENT-CLASS-260-67	.....	C27	N79-21191
US-PATENT-CLASS-260-2.5A	.....	C27	N77-31308	US-PATENT-CLASS-260-72.5	.....	C06	N71-11236
US-PATENT-CLASS-260-2.5AK	.....	C27	N76-15310	US-PATENT-CLASS-260-72.5	.....	C06	N71-11239
US-PATENT-CLASS-260-2.5AK	.....	C24	N78-24290	US-PATENT-CLASS-260-72.5	.....	C06	N71-24740
US-PATENT-CLASS-260-2.5AM	.....	C27	N74-12812	US-PATENT-CLASS-260-75NH	.....	C27	N78-17213
US-PATENT-CLASS-260-2.5AM	.....	C27	N77-31308	US-PATENT-CLASS-260-75NH	.....	C27	N78-17213
US-PATENT-CLASS-260-2.5AP	.....	C24	N78-24290	US-PATENT-CLASS-260-75NT	.....	C27	N78-17213
US-PATENT-CLASS-260-2.5AY	.....	C27	N77-31308	US-PATENT-CLASS-260-77.5	.....	C06	N73-30099
US-PATENT-CLASS-260-2.5B	.....	C24	N78-24290	US-PATENT-CLASS-260-77.5	.....	C06	N73-30100
US-PATENT-CLASS-260-2.5BE	.....	C24	N78-24290	US-PATENT-CLASS-260-77.5	.....	C06	N73-30103
US-PATENT-CLASS-260-2.5EP	.....	C24	N78-24290	US-PATENT-CLASS-260-77.5AM	.....	C27	N78-17213
US-PATENT-CLASS-260-2.5F	.....	C18	N73-13562	US-PATENT-CLASS-260-77.5AM	.....	C27	N78-17213
US-PATENT-CLASS-260-2.5FP	.....	C06	N72-25147	US-PATENT-CLASS-260-77.5AP	.....	C06	N72-27144
US-PATENT-CLASS-260-2.5FP	.....	C27	N74-27037	US-PATENT-CLASS-260-77.5AP	.....	C06	N73-33076
US-PATENT-CLASS-260-2.5FP	.....	C24	N78-24290	US-PATENT-CLASS-260-77.5AP	.....	C27	N77-31308
US-PATENT-CLASS-260-2.5L	.....	C27	N74-12814	US-PATENT-CLASS-260-77.5AP	.....	C27	N78-17213
US-PATENT-CLASS-260-2.5N	.....	C24	N78-15180	US-PATENT-CLASS-260-77.5AT	.....	C27	N78-17213
US-PATENT-CLASS-260-2.5N	.....	C27	N78-31232	US-PATENT-CLASS-260-77.5AT	.....	C27	N78-17213
US-PATENT-CLASS-260-2.5R	.....	C27	N74-27037	US-PATENT-CLASS-260-78	.....	C06	N71-11235
US-PATENT-CLASS-260-2.5R	.....	C24	N78-15180	US-PATENT-CLASS-260-78	.....	C06	N71-11238
US-PATENT-CLASS-260-2F	.....	C27	N78-32256	US-PATENT-CLASS-260-78.41	.....	C27	N78-31232
US-PATENT-CLASS-260-2R	.....	C37	N74-18126	US-PATENT-CLASS-260-78TF	.....	C06	N73-27980
US-PATENT-CLASS-260-2R	.....	C27	N74-27037	US-PATENT-CLASS-260-78TF	.....	C27	N74-23125
US-PATENT-CLASS-260-2R	.....	C27	N78-15276	US-PATENT-CLASS-260-78TF	.....	C23	N75-30256
US-PATENT-CLASS-260-17.2	.....	C24	N80-26388	US-PATENT-CLASS-260-78TF	.....	C23	N76-15268
US-PATENT-CLASS-260-17.2	.....	C24	N81-13999	US-PATENT-CLASS-260-78TF	.....	C27	N78-32261
US-PATENT-CLASS-260-17.4UC	.....	C23	N81-29160	US-PATENT-CLASS-260-78UA	.....	C06	N73-27980
US-PATENT-CLASS-260-17A	.....	C27	N81-14076	US-PATENT-CLASS-260-85.5	.....	C06	N71-23500
US-PATENT-CLASS-260-18S	.....	C06	N72-25151	US-PATENT-CLASS-260-92.1	.....	C06	N72-25150
US-PATENT-CLASS-260-28.5	.....	C27	N78-33228	US-PATENT-CLASS-260-92.1	.....	C06	N72-25152
US-PATENT-CLASS-260-29.1R	.....	C24	N78-24290	US-PATENT-CLASS-260-92.1	.....	C27	N76-16228
US-PATENT-CLASS-260-29.6	.....	C26	N75-27125	US-PATENT-CLASS-260-92.1	.....	C27	N76-24405
US-PATENT-CLASS-260-29.6RB	.....	C25	N81-19242	US-PATENT-CLASS-260-93.5A	.....	C06	N73-32029
US-PATENT-CLASS-260-29.6S	.....	C27	N74-17283	US-PATENT-CLASS-260-93.5S	.....	C06	N73-32029
US-PATENT-CLASS-260-30.2	.....	C06	N73-27980	US-PATENT-CLASS-260-94.2M	.....	C06	N73-32029
US-PATENT-CLASS-260-30.4N	.....	C27	N78-17205	US-PATENT-CLASS-260-94.2R	.....	C06	N73-32029
US-PATENT-CLASS-260-30.8DS	.....	C06	N73-27580	US-PATENT-CLASS-260-94.7R	.....	C06	N73-32029
US-PATENT-CLASS-260-32.2R	.....	C27	N78-17205	US-PATENT-CLASS-260-94.8	.....	C27	N73-22710
US-PATENT-CLASS-260-32.6N	.....	C06	N73-27580	US-PATENT-CLASS-260-96D	.....	C28	N81-15119
US-PATENT-CLASS-260-32.6N	.....	C23	N76-15268	US-PATENT-CLASS-260-211.5	.....	C06	N72-25149
US-PATENT-CLASS-260-32.6NT	.....	C27	N78-17205	US-PATENT-CLASS-260-240G	.....	C27	N76-32315
US-PATENT-CLASS-260-32.8N	.....	C23	N76-15268	US-PATENT-CLASS-260-307G	.....	C27	N79-22300
US-PATENT-CLASS-260-33.4R	.....	C06	N73-27980	US-PATENT-CLASS-260-326N	.....	C27	N81-17260
US-PATENT-CLASS-260-33.4R	.....	C27	N78-17205	US-PATENT-CLASS-260-326S	.....	C27	N81-17260
US-PATENT-CLASS-260-33.4R	.....	C27	N81-19296	US-PATENT-CLASS-260-346.3	.....	C23	N75-30256
US-PATENT-CLASS-260-33.6EP	.....	C24	N78-27180	US-PATENT-CLASS-260-346.3	.....	C23	N76-15268
US-PATENT-CLASS-260-33.6PQ	.....	C24	N78-27180	US-PATENT-CLASS-260-346.3	.....	C27	N80-32515
US-PATENT-CLASS-260-33.6R	.....	C06	N73-27980	US-PATENT-CLASS-260-348SC	.....	C06	N72-25148
US-PATENT-CLASS-260-33.6UB	.....	C27	N81-15104	US-PATENT-CLASS-260-396N	.....	C27	N74-27037
US-PATENT-CLASS-260-33.8EF	.....	C24	N78-27180	US-PATENT-CLASS-260-404.5	.....	C18	N71-15688
US-PATENT-CLASS-260-33.8P	.....	C27	N76-24405	US-PATENT-CLASS-260-429	.....	C06	N71-28808
US-PATENT-CLASS-260-33.8P	.....	C25	N81-14016	US-PATENT-CLASS-260-448.2	.....	C06	N71-23230
US-PATENT-CLASS-260-33.8UA	.....	C24	N78-27180	US-PATENT-CLASS-260-448.2D	.....	C06	N72-25151
US-PATENT-CLASS-260-37	.....	C18	N71-25881	US-PATENT-CLASS-260-448.2D	.....	C06	N73-32030
US-PATENT-CLASS-260-37	.....	C27	N81-24258	US-PATENT-CLASS-260-448.2N	.....	C37	N74-21058
US-PATENT-CLASS-260-37EP	.....	C24	N78-24290	US-PATENT-CLASS-260-465.5R	.....	C27	N81-24256
US-PATENT-CLASS-260-37EP	.....	C24	N78-27180	US-PATENT-CLASS-260-485F	.....	C06	N73-30098
US-PATENT-CLASS-260-37EP	.....	C15	N79-26100	US-PATENT-CLASS-260-520	.....	C23	N75-30256
US-PATENT-CLASS-260-37EP	.....	C27	N81-17260	US-PATENT-CLASS-260-535H	.....	C06	N72-27144
US-PATENT-CLASS-260-37N	.....	C27	N79-28307	US-PATENT-CLASS-260-544F	.....	C06	N72-20121
US-PATENT-CLASS-260-42	.....	C27	N79-28307	US-PATENT-CLASS-260-551F	.....	C27	N78-32256
US-PATENT-CLASS-260-42.17	.....	C27	N78-17215	US-PATENT-CLASS-260-566B	.....	C27	N76-32315
US-PATENT-CLASS-260-42.43	.....	C24	N78-27180	US-PATENT-CLASS-260-567.6M	.....	C06	N73-32029
US-PATENT-CLASS-260-45.7	.....	C27	N76-24405	US-PATENT-CLASS-260-571	.....	C23	N76-15268
US-PATENT-CLASS-260-45.7R	.....	C24	N78-27180	US-PATENT-CLASS-260-606-5P	.....	C27	N78-32256
US-PATENT-CLASS-260-45.9R	.....	C24	N78-27180	US-PATENT-CLASS-260-615	.....	C06	N71-27254
US-PATENT-CLASS-260-45.75W	.....	C24	N78-27180	US-PATENT-CLASS-260-615	.....	C06	N73-30101
US-PATENT-CLASS-260-45.85N	.....	C24	N78-27180	US-PATENT-CLASS-260-830S	.....	C15	N79-26100
US-PATENT-CLASS-260-46.5	.....	C06	N71-11237	US-PATENT-CLASS-260-858	.....	C27	N81-14076
US-PATENT-CLASS-260-46.5	.....	C06	N71-11240	US-PATENT-CLASS-260-877	.....	C06	N72-22107
US-PATENT-CLASS-260-46.5E	.....	C06	N72-25151	US-PATENT-CLASS-260-879	.....	C27	N76-16228
US-PATENT-CLASS-260-46.5G	.....	C06	N72-25151	US-PATENT-CLASS-260-886	.....	C27	N81-14076
US-PATENT-CLASS-260-46.5P	.....	C06	N72-25151	US-PATENT-CLASS-260-895	.....	C27	N81-14076
US-PATENT-CLASS-260-46.5R	.....	C06	N73-26100	US-PATENT-CLASS-260-898	.....	C27	N81-14076
US-PATENT-CLASS-260-47	.....	C06	N71-28620	US-PATENT-CLASS-260-900	.....	C27	N76-16228
US-PATENT-CLASS-260-47	.....	C06	N71-28807	US-PATENT-CLASS-260-901	.....	C27	N81-14076
US-PATENT-CLASS-260-47CP	.....	C06	N73-27580	US-PATENT-CLASS-260-926	.....	C27	N80-10358
US-PATENT-CLASS-260-47CP	.....	C23	N76-15268	US-PATENT-CLASS-260-959	.....	C27	N78-32256
US-PATENT-CLASS-260-47CP	.....	C27	N78-31232	US-PATENT-CLASS-260-8900	.....	C27	N81-14076
US-PATENT-CLASS-260-47CP	.....	C27	N78-32261	US-PATENT-CLASS-261-DIG.75	.....	C34	N77-24423
US-PATENT-CLASS-260-47OP	.....	C06	N73-32029	US-PATENT-CLASS-261-28	.....	C07	N81-29129
US-PATENT-CLASS-260-49	.....	C27	N78-32261	US-PATENT-CLASS-261-79A	.....	C54	N81-24724
US-PATENT-CLASS-260-53	.....	C27	N79-28307	US-PATENT-CLASS-261-118	.....	C31	N80-18231
US-PATENT-CLASS-260-63N	.....	C27	N78-31232	US-PATENT-CLASS-261-123	.....	C34	N77-24423
US-PATENT-CLASS-260-63N	.....	C27	N78-32261	US-PATENT-CLASS-261-145	.....	C28	N72-22772

US-PATENT-CLASS-263-48	c15 N69-27483	US-PATENT-CLASS-264-510	c44 N79-24432
US-PATENT-CLASS-264-DIG.36	c18 N73-14584	US-PATENT-CLASS-264-516	c44 N79-24432
US-PATENT-CLASS-264-DIG.44	c15 N72-16329	US-PATENT-CLASS-266-19	c15 N70-33382
US-PATENT-CLASS-264-1	c44 N79-24432	US-PATENT-CLASS-266-24	c17 N72-28535
US-PATENT-CLASS-264-3	c28 N71-26779	US-PATENT-CLASS-266-119	c26 N80-28492
US-PATENT-CLASS-264-3R	c28 N77-10213	US-PATENT-CLASS-266-249	c26 N80-28492
US-PATENT-CLASS-264-3R	c20 N77-17143	US-PATENT-CLASS-266-274	c26 N80-28492
US-PATENT-CLASS-264-5	c31 N81-33319	US-PATENT-CLASS-267-1	c15 N69-27504
US-PATENT-CLASS-264-9	c31 N81-33319	US-PATENT-CLASS-267-1	c15 N70-38225
US-PATENT-CLASS-264-22	c15 N72-20446	US-PATENT-CLASS-267-64	c15 N71-21530
US-PATENT-CLASS-264-22	c14 N72-22439	US-PATENT-CLASS-267-166	c34 N74-18552
US-PATENT-CLASS-264-22	c25 N75-12087	US-PATENT-CLASS-269-21	c37 N76-21554
US-PATENT-CLASS-264-22	c27 N80-32516	US-PATENT-CLASS-269-21	c37 N78-17383
US-PATENT-CLASS-264-23	c71 N78-10E37	US-PATENT-CLASS-269-21	c37 N78-27423
US-PATENT-CLASS-264-23	c31 N81-15154	US-PATENT-CLASS-269-21	c76 N80-18951
US-PATENT-CLASS-264-24	c31 N81-33319	US-PATENT-CLASS-269-21	c37 N81-33482
US-PATENT-CLASS-264-27	c26 N71-17818	US-PATENT-CLASS-269-48.1	c39 N74-13131
US-PATENT-CLASS-264-28	c15 N73-12489	US-PATENT-CLASS-269-153	c44 N79-19447
US-PATENT-CLASS-264-33	c44 N75-24432	US-PATENT-CLASS-269-156	c37 N80-14398
US-PATENT-CLASS-264-34	c44 N79-24432	US-PATENT-CLASS-269-266	c37 N78-27423
US-PATENT-CLASS-264-35	c44 N79-24432	US-PATENT-CLASS-269-287	c37 N80-23655
US-PATENT-CLASS-264-36	c15 N73-12489	US-PATENT-CLASS-272-DIG.1	c05 N73-32014
US-PATENT-CLASS-264-36	c32 N74-27612	US-PATENT-CLASS-272-DIG.4	c05 N73-32014
US-PATENT-CLASS-264-40	c15 N73-12489	US-PATENT-CLASS-272-DIG.5	c05 N73-32014
US-PATENT-CLASS-264-40.4	c35 N80-18357	US-PATENT-CLASS-272-1R	c09 N75-15662
US-PATENT-CLASS-264-41	c25 N81-19244	US-PATENT-CLASS-272-57A	c09 N75-15662
US-PATENT-CLASS-264-60	c27 N76-22376	US-PATENT-CLASS-272-70	c05 N71-28619
US-PATENT-CLASS-264-60	c27 N79-14213	US-PATENT-CLASS-272-73	c14 N73-27377
US-PATENT-CLASS-264-63	c27 N76-22376	US-PATENT-CLASS-272-73	c05 N73-27991
US-PATENT-CLASS-264-65	c18 N73-14584	US-PATENT-CLASS-272-73	c37 N74-18127
US-PATENT-CLASS-264-66	c27 N76-22376	US-PATENT-CLASS-272-79C	c05 N73-32014
US-PATENT-CLASS-264-70	c44 N79-24432	US-PATENT-CLASS-272-80	c37 N74-18127
US-PATENT-CLASS-264-71	c44 N79-24432	US-PATENT-CLASS-273-1R	c05 N73-13114
US-PATENT-CLASS-264-90	c24 N78-17150	US-PATENT-CLASS-274-4R	c09 N72-11224
US-PATENT-CLASS-264-92	c15 N71-17603	US-PATENT-CLASS-277-4	c37 N76-22541
US-PATENT-CLASS-264-92	c15 N72-24522	US-PATENT-CLASS-277-13	c15 N71-26294
US-PATENT-CLASS-264-102	c15 N71-10672	US-PATENT-CLASS-277-25	c15 N69-21362
US-PATENT-CLASS-264-102	c15 N73-12489	US-PATENT-CLASS-277-25	c15 N71-19570
US-PATENT-CLASS-264-102	c31 N74-14133	US-PATENT-CLASS-277-25	c15 N72-29488
US-PATENT-CLASS-264-102	c31 N74-18124	US-PATENT-CLASS-277-25	c37 N74-10474
US-PATENT-CLASS-264-102	c37 N76-24575	US-PATENT-CLASS-277-25	c07 N78-25090
US-PATENT-CLASS-264-102	c15 N79-26100	US-PATENT-CLASS-277-27	c15 N72-29488
US-PATENT-CLASS-264-104	c05 N72-25120	US-PATENT-CLASS-277-27	c37 N74-10474
US-PATENT-CLASS-264-104	c27 N81-24257	US-PATENT-CLASS-277-27	c37 N74-15125
US-PATENT-CLASS-264-104	c23 N81-29160	US-PATENT-CLASS-277-27	c37 N75-21631
US-PATENT-CLASS-264-105	c27 N81-24257	US-PATENT-CLASS-277-40	c37 N75-21631
US-PATENT-CLASS-264-111	c17 N71-29137	US-PATENT-CLASS-277-41	c37 N76-22541
US-PATENT-CLASS-264-118	c24 N80-26388	US-PATENT-CLASS-277-62	c37 N79-22475
US-PATENT-CLASS-264-119	c24 N80-26388	US-PATENT-CLASS-277-74	c15 N72-29488
US-PATENT-CLASS-264-124	c24 N80-26388	US-PATENT-CLASS-277-74	c37 N76-22541
US-PATENT-CLASS-264-129	c37 N76-31524	US-PATENT-CLASS-277-91	c37 N74-15125
US-PATENT-CLASS-264-130	c27 N78-32262	US-PATENT-CLASS-277-93R	c37 N76-22541
US-PATENT-CLASS-264-135	c37 N74-18126	US-PATENT-CLASS-277-96	c37 N74-10474
US-PATENT-CLASS-264-136	c37 N74-18126	US-PATENT-CLASS-277-96	c37 N81-24442
US-PATENT-CLASS-264-137	c27 N79-33316	US-PATENT-CLASS-277-96.1	c37 N79-22475
US-PATENT-CLASS-264-137	c27 N81-14078	US-PATENT-CLASS-277-134	c37 N75-21631
US-PATENT-CLASS-264-137	c27 N81-29229	US-PATENT-CLASS-277-134	c07 N78-25090
US-PATENT-CLASS-264-145	c15 N79-26100	US-PATENT-CLASS-277-153	c37 N80-28711
US-PATENT-CLASS-264-151	c15 N79-26100	US-PATENT-CLASS-277-153	c37 N81-26447
US-PATENT-CLASS-264-157	c24 N78-17150	US-PATENT-CLASS-277-181	c37 N81-15363
US-PATENT-CLASS-264-161	c37 N76-31524	US-PATENT-CLASS-277-192	c37 N79-22474
US-PATENT-CLASS-264-175	c15 N79-26100	US-PATENT-CLASS-277-193	c37 N80-28711
US-PATENT-CLASS-264-184	c27 N78-32262	US-PATENT-CLASS-277-193	c37 N81-26447
US-PATENT-CLASS-264-211	c27 N78-32262	US-PATENT-CLASS-277-224	c37 N80-28711
US-PATENT-CLASS-264-212	c27 N80-32516	US-PATENT-CLASS-277-229	c37 N81-15363
US-PATENT-CLASS-264-217	c25 N75-12C87	US-PATENT-CLASS-279-1R	c37 N75-33395
US-PATENT-CLASS-264-219	c37 N76-31524	US-PATENT-CLASS-279-3	c37 N78-17383
US-PATENT-CLASS-264-221	c15 N72-16329	US-PATENT-CLASS-279-89	c37 N75-33395
US-PATENT-CLASS-264-225	c15 N72-16329	US-PATENT-CLASS-279-107	c37 N75-33395
US-PATENT-CLASS-264-227	c15 N72-16329	US-PATENT-CLASS-280-150SB	c05 N75-25915
US-PATENT-CLASS-264-229	c24 N81-29163	US-PATENT-CLASS-280-432	c37 N77-10477
US-PATENT-CLASS-264-231	c24 N81-29163	US-PATENT-CLASS-285-DIG.21	c15 N72-25450
US-PATENT-CLASS-264-236	c27 N78-32262	US-PATENT-CLASS-285-DIG.21	c33 N73-26958
US-PATENT-CLASS-264-236	c15 N79-26100	US-PATENT-CLASS-285-3	c15 N69-27490
US-PATENT-CLASS-264-257	c37 N74-18126	US-PATENT-CLASS-285-3	c15 N72-25450
US-PATENT-CLASS-264-258	c24 N81-29163	US-PATENT-CLASS-285-18	c15 N72-20445
US-PATENT-CLASS-264-259	c24 N81-29163	US-PATENT-CLASS-285-24	c15 N71-10782
US-PATENT-CLASS-264-267	c37 N76-24575	US-PATENT-CLASS-285-27	c15 N70-41808
US-PATENT-CLASS-264-294	c31 N74-13177	US-PATENT-CLASS-285-33	c15 N72-25450
US-PATENT-CLASS-264-304	c37 N76-31524	US-PATENT-CLASS-285-38	c15 N71-24903
US-PATENT-CLASS-264-305	c37 N76-31524	US-PATENT-CLASS-285-45	c15 N71-28937
US-PATENT-CLASS-264-308	c37 N76-31524	US-PATENT-CLASS-285-114	c37 N75-19686
US-PATENT-CLASS-264-310	c37 N76-31524	US-PATENT-CLASS-285-192	c20 N78-24275
US-PATENT-CLASS-264-311	c24 N81-29163	US-PATENT-CLASS-285-226	c37 N75-19686
US-PATENT-CLASS-264-318	c37 N76-31524	US-PATENT-CLASS-285-226	c37 N76-14460
US-PATENT-CLASS-264-331	c27 N76-16230	US-PATENT-CLASS-285-235	c58 N78-31735
US-PATENT-CLASS-264-332	c37 N81-25371	US-PATENT-CLASS-285-235	c54 N79-24651
US-PATENT-CLASS-264-334	c37 N76-31524	US-PATENT-CLASS-285-265	c37 N76-14460
US-PATENT-CLASS-264-345	c71 N78-10E37	US-PATENT-CLASS-285-314	c15 N71-24903

US-PATENT-CLASS-285-316	c15 N72-25450	US-PATENT-CLASS-307-118	c09 N72-27227
US-PATENT-CLASS-285-316	c33 N73-26958	US-PATENT-CLASS-307-119	c33 N79-28415
US-PATENT-CLASS-285-317	c15 N71-24503	US-PATENT-CLASS-307-126	c14 N71-27407
US-PATENT-CLASS-285-326	c37 N79-11402	US-PATENT-CLASS-307-127	c33 N74-14956
US-PATENT-CLASS-285-331	c15 N70-41629	US-PATENT-CLASS-307-136	c09 N69-27500
US-PATENT-CLASS-285-345	c15 N72-20445	US-PATENT-CLASS-307-141.8	c03 N72-25020
US-PATENT-CLASS-285-359	c37 N79-11402	US-PATENT-CLASS-307-149	c09 N71-13486
US-PATENT-CLASS-285-406	c15 N71-24503	US-PATENT-CLASS-307-149	c54 N75-12616
US-PATENT-CLASS-285-410	c05 N72-11085	US-PATENT-CLASS-307-151	c32 N78-24391
US-PATENT-CLASS-287-54A	c11 N72-25287	US-PATENT-CLASS-307-157	c16 N73-32391
US-PATENT-CLASS-287-85R	c15 N73-12488	US-PATENT-CLASS-307-204	c35 N75-30504
US-PATENT-CLASS-287-92	c31 N73-32749	US-PATENT-CLASS-307-205	c33 N75-14957
US-PATENT-CLASS-287-119	c15 N70-41829	US-PATENT-CLASS-307-206	c10 N72-22236
US-PATENT-CLASS-287-189.36	c15 N71-10799	US-PATENT-CLASS-307-207	c08 N71-29034
US-PATENT-CLASS-287-189.365	c15 N71-26312	US-PATENT-CLASS-307-207	c09 N73-13209
US-PATENT-CLASS-290-40	c03 N71-11057	US-PATENT-CLASS-307-208	c33 N75-14957
US-PATENT-CLASS-290-52	c37 N77-32500	US-PATENT-CLASS-307-211	c35 N75-30504
US-PATENT-CLASS-290-52	c37 N77-32501	US-PATENT-CLASS-307-215	c10 N71-28860
US-PATENT-CLASS-290-53	c44 N80-29834	US-PATENT-CLASS-307-215	c09 N71-29139
US-PATENT-CLASS-292-DIG. 14	c37 N75-19685	US-PATENT-CLASS-307-215	c10 N72-22236
US-PATENT-CLASS-292-108	c37 N75-19685	US-PATENT-CLASS-307-215	c09 N73-13209
US-PATENT-CLASS-292-110	c37 N77-32499	US-PATENT-CLASS-307-215	c33 N74-22814
US-PATENT-CLASS-292-122	c37 N75-19685	US-PATENT-CLASS-307-216	c08 N71-18751
US-PATENT-CLASS-294-1B	c35 N76-16392	US-PATENT-CLASS-307-219	c35 N75-30504
US-PATENT-CLASS-294-15	c15 N71-29133	US-PATENT-CLASS-307-219	c60 N81-15706
US-PATENT-CLASS-294-19R	c35 N76-16392	US-PATENT-CLASS-307-220	c10 N73-26229
US-PATENT-CLASS-294-83	c15 N71-24897	US-PATENT-CLASS-307-221R	c10 N73-20254
US-PATENT-CLASS-294-86.33	c37 N75-33395	US-PATENT-CLASS-307-221R	c33 N76-14373
US-PATENT-CLASS-294-86R	c37 N80-14398	US-PATENT-CLASS-307-222	c09 N69-27463
US-PATENT-CLASS-294-86R	c37 N81-27519	US-PATENT-CLASS-307-222	c08 N71-29034
US-PATENT-CLASS-294-93	c54 N81-26718	US-PATENT-CLASS-307-223	c09 N72-17157
US-PATENT-CLASS-294-106	c37 N81-14320	US-PATENT-CLASS-307-223B	c09 N72-22201
US-PATENT-CLASS-294-113	c37 N80-14398	US-PATENT-CLASS-307-225R	c33 N74-10223
US-PATENT-CLASS-294-116	c37 N75-33395	US-PATENT-CLASS-307-225R	c33 N75-31330
US-PATENT-CLASS-297-68	c05 N71-12343	US-PATENT-CLASS-307-225R	c33 N77-24375
US-PATENT-CLASS-297-68	c05 N72-11085	US-PATENT-CLASS-307-225R	c60 N81-15706
US-PATENT-CLASS-297-216	c05 N70-35152	US-PATENT-CLASS-307-227	c09 N72-17157
US-PATENT-CLASS-297-232	c05 N72-11085	US-PATENT-CLASS-307-227	c33 N75-19522
US-PATENT-CLASS-297-385	c05 N71-12341	US-PATENT-CLASS-307-229	c09 N71-12520
US-PATENT-CLASS-297-385	c05 N75-25915	US-PATENT-CLASS-307-229	c09 N72-23173
US-PATENT-CLASS-297-386	c15 N73-30460	US-PATENT-CLASS-307-229	c33 N75-18479
US-PATENT-CLASS-297-388	c05 N75-25915	US-PATENT-CLASS-307-229	c33 N77-17354
US-PATENT-CLASS-297-389	c05 N75-25915	US-PATENT-CLASS-307-229	c33 N78-32339
US-PATENT-CLASS-299-1	c43 N79-26439	US-PATENT-CLASS-307-230	c10 N72-16172
US-PATENT-CLASS-299-13	c43 N81-26509	US-PATENT-CLASS-307-230	c09 N72-21245
US-PATENT-CLASS-299-17	c43 N81-26509	US-PATENT-CLASS-307-230	c09 N73-20232
US-PATENT-CLASS-299-20	c43 N81-26509	US-PATENT-CLASS-307-230	c33 N74-32712
US-PATENT-CLASS-299-67	c46 N74-23068	US-PATENT-CLASS-307-230	c33 N77-17354
US-PATENT-CLASS-299-86	c46 N74-23069	US-PATENT-CLASS-307-230	c33 N78-32339
US-PATENT-CLASS-301-5P	c37 N74-18125	US-PATENT-CLASS-307-231	c09 N72-22202
US-PATENT-CLASS-301-82	c33 N79-10339	US-PATENT-CLASS-307-232	c33 N77-21314
US-PATENT-CLASS-302-66	c25 N79-11152	US-PATENT-CLASS-307-232	c33 N79-11313
US-PATENT-CLASS-303-92	c44 N79-14527	US-PATENT-CLASS-307-233	c09 N72-25257
US-PATENT-CLASS-305-35EB	c11 N73-26238	US-PATENT-CLASS-307-233	c10 N73-26229
US-PATENT-CLASS-305-39	c11 N73-26238	US-PATENT-CLASS-307-233	c33 N77-13315
US-PATENT-CLASS-307-18	c03 N73-31588	US-PATENT-CLASS-307-233R	c32 N79-10262
US-PATENT-CLASS-307-18	c33 N74-34638	US-PATENT-CLASS-307-233R	c33 N81-17348
US-PATENT-CLASS-307-28	c03 N73-31588	US-PATENT-CLASS-307-234	c10 N71-23315
US-PATENT-CLASS-307-29	c03 N73-31588	US-PATENT-CLASS-307-234	c09 N71-27016
US-PATENT-CLASS-307-35	c33 N74-34638	US-PATENT-CLASS-307-234	c08 N71-29138
US-PATENT-CLASS-307-38	c03 N73-31988	US-PATENT-CLASS-307-235	c10 N71-19471
US-PATENT-CLASS-307-53	c10 N71-26626	US-PATENT-CLASS-307-235	c09 N71-23545
US-PATENT-CLASS-307-53	c33 N78-17296	US-PATENT-CLASS-307-235	c10 N71-24862
US-PATENT-CLASS-307-63	c44 N80-14472	US-PATENT-CLASS-307-235R	c33 N75-18479
US-PATENT-CLASS-307-64	c33 N77-30365	US-PATENT-CLASS-307-237	c09 N72-22200
US-PATENT-CLASS-307-66	c44 N80-14472	US-PATENT-CLASS-307-237	c32 N74-19788
US-PATENT-CLASS-307-69	c33 N78-17296	US-PATENT-CLASS-307-238	c33 N75-31331
US-PATENT-CLASS-307-81	c09 N72-17157	US-PATENT-CLASS-307-238	c33 N77-21314
US-PATENT-CLASS-307-82	c33 N79-24254	US-PATENT-CLASS-307-241	c09 N72-22201
US-PATENT-CLASS-307-83	c09 N72-25262	US-PATENT-CLASS-307-242	c10 N73-13235
US-PATENT-CLASS-307-88	c08 N70-34743	US-PATENT-CLASS-307-243	c09 N71-12516
US-PATENT-CLASS-307-88	c09 N70-38604	US-PATENT-CLASS-307-243	c08 N72-22162
US-PATENT-CLASS-307-88	c09 N71-24803	US-PATENT-CLASS-307-243	c33 N74-22814
US-PATENT-CLASS-307-88	c09 N71-26000	US-PATENT-CLASS-307-246	c09 N71-27016
US-PATENT-CLASS-307-88.3	c09 N72-25258	US-PATENT-CLASS-307-247	c09 N71-29139
US-PATENT-CLASS-307-88.5	c09 N70-34819	US-PATENT-CLASS-307-247	c09 N72-22202
US-PATENT-CLASS-307-88.5	c09 N70-40272	US-PATENT-CLASS-307-251	c09 N71-33109
US-PATENT-CLASS-307-88.5	c09 N70-41675	US-PATENT-CLASS-307-251	c08 N72-22162
US-PATENT-CLASS-307-88.5	c10 N70-42032	US-PATENT-CLASS-307-252	c10 N69-39888
US-PATENT-CLASS-307-88.5	c09 N71-10673	US-PATENT-CLASS-307-252	c09 N71-12514
US-PATENT-CLASS-307-88.5	c10 N71-15510	US-PATENT-CLASS-307-252P	c09 N72-17153
US-PATENT-CLASS-307-88.5	c10 N71-16042	US-PATENT-CLASS-307-252J	c09 N72-17153
US-PATENT-CLASS-307-88.5	c10 N71-28739	US-PATENT-CLASS-307-252J	c09 N72-22201
US-PATENT-CLASS-307-88MP	c09 N72-22197	US-PATENT-CLASS-307-252K	c09 N72-22201
US-PATENT-CLASS-307-92	c09 N72-27227	US-PATENT-CLASS-307-252L	c33 N74-27682
US-PATENT-CLASS-307-98	c33 N79-28415	US-PATENT-CLASS-307-252N	c09 N72-23171
US-PATENT-CLASS-307-103	c09 N72-25262	US-PATENT-CLASS-307-252Q	c33 N74-27682
US-PATENT-CLASS-307-104	c09 N71-24892	US-PATENT-CLASS-307-252R	c09 N72-23171
US-PATENT-CLASS-307-106	c09 N69-21468	US-PATENT-CLASS-307-252UA	c33 N81-27395

US-PATENT-CLASS-307-253	.....	c10	H71-27126	US-PATENT-CLASS-308-2A	.....	c15	H72-26371
US-PATENT-CLASS-307-254	.....	c10	H71-24799	US-PATENT-CLASS-308-2A	.....	c15	H73-12488
US-PATENT-CLASS-307-254	.....	c09	H72-22200	US-PATENT-CLASS-308-5	.....	c15	H71-10617
US-PATENT-CLASS-307-257	.....	c09	H72-21247	US-PATENT-CLASS-308-5	.....	c15	H72-11388
US-PATENT-CLASS-307-259	.....	c09	H72-21247	US-PATENT-CLASS-308-5	.....	c15	H72-17451
US-PATENT-CLASS-307-259	.....	c09	H72-23171	US-PATENT-CLASS-308-5R	.....	c37	H77-28486
US-PATENT-CLASS-307-259	.....	c10	H73-13235	US-PATENT-CLASS-308-5R	.....	c37	H79-10418
US-PATENT-CLASS-307-260	.....	c09	H71-23311	US-PATENT-CLASS-308-9	.....	c15	H70-34664
US-PATENT-CLASS-307-260	.....	c05	H71-23317	US-PATENT-CLASS-308-9	.....	c15	H70-38620
US-PATENT-CLASS-307-260	.....	c33	H75-19515	US-PATENT-CLASS-308-9	.....	c15	H70-39896
US-PATENT-CLASS-307-261	.....	c09	H71-33109	US-PATENT-CLASS-308-9	.....	c15	H71-20739
US-PATENT-CLASS-307-261	.....	c09	H72-25251	US-PATENT-CLASS-308-9	.....	c14	H71-26627
US-PATENT-CLASS-307-262	.....	c10	H72-16172	US-PATENT-CLASS-308-9	.....	c15	H72-17451
US-PATENT-CLASS-307-262	.....	c09	H72-22197	US-PATENT-CLASS-308-9	.....	c15	H73-32359
US-PATENT-CLASS-307-262	.....	c09	H72-33204	US-PATENT-CLASS-308-9	.....	c37	H76-15461
US-PATENT-CLASS-307-263	.....	c09	H71-23270	US-PATENT-CLASS-308-9	.....	c37	H77-28486
US-PATENT-CLASS-307-263	.....	c09	H71-28926	US-PATENT-CLASS-308-9	.....	c37	H79-10418
US-PATENT-CLASS-307-265	.....	c09	H69-39987	US-PATENT-CLASS-308-10	.....	c15	H71-22997
US-PATENT-CLASS-307-265	.....	c10	H71-23029	US-PATENT-CLASS-308-10	.....	c15	H72-33476
US-PATENT-CLASS-307-265	.....	c09	H71-28468	US-PATENT-CLASS-308-10	.....	c35	H74-18323
US-PATENT-CLASS-307-265	.....	c10	H71-28660	US-PATENT-CLASS-308-10	.....	c37	H75-18574
US-PATENT-CLASS-307-265	.....	c08	H71-29138	US-PATENT-CLASS-308-10	.....	c37	H76-18459
US-PATENT-CLASS-307-265	.....	c09	H71-29139	US-PATENT-CLASS-308-10	.....	c37	H77-17464
US-PATENT-CLASS-307-265	.....	c33	H76-18308	US-PATENT-CLASS-308-10	.....	c44	H78-24608
US-PATENT-CLASS-307-267	.....	c09	H71-20447	US-PATENT-CLASS-308-10	.....	c37	H78-27424
US-PATENT-CLASS-307-267	.....	c33	H74-32711	US-PATENT-CLASS-308-10	.....	c35	H79-26372
US-PATENT-CLASS-307-267	.....	c33	H75-18479	US-PATENT-CLASS-308-10	.....	c71	H81-15767
US-PATENT-CLASS-307-268	.....	c09	H69-24317	US-PATENT-CLASS-308-35	.....	c15	H73-32359
US-PATENT-CLASS-307-269	.....	c60	H81-15706	US-PATENT-CLASS-308-72	.....	c37	H76-15461
US-PATENT-CLASS-307-270	.....	c33	H76-17294	US-PATENT-CLASS-308-72	.....	c37	H77-32500
US-PATENT-CLASS-307-271	.....	c10	H73-32145	US-PATENT-CLASS-308-72	.....	c37	H79-11404
US-PATENT-CLASS-307-273	.....	c10	H71-18723	US-PATENT-CLASS-308-73	.....	c37	H74-21061
US-PATENT-CLASS-307-273	.....	c09	H71-27016	US-PATENT-CLASS-308-73	.....	c37	H75-30562
US-PATENT-CLASS-307-273	.....	c09	H71-28468	US-PATENT-CLASS-308-73	.....	c37	H76-15461
US-PATENT-CLASS-307-273	.....	c10	H71-28660	US-PATENT-CLASS-308-73	.....	c37	H77-28486
US-PATENT-CLASS-307-273	.....	c09	H71-29139	US-PATENT-CLASS-308-78	.....	c24	H79-17916
US-PATENT-CLASS-307-273	.....	c10	H72-20221	US-PATENT-CLASS-308-87R	.....	c24	H79-17916
US-PATENT-CLASS-307-280	.....	c33	H77-21314	US-PATENT-CLASS-308-121	.....	c37	H74-32921
US-PATENT-CLASS-307-284	.....	c09	H72-22201	US-PATENT-CLASS-308-121	.....	c37	H75-30562
US-PATENT-CLASS-307-288	.....	c09	H71-23015	US-PATENT-CLASS-308-121	.....	c37	H79-10418
US-PATENT-CLASS-307-288	.....	c09	H71-28468	US-PATENT-CLASS-308-122	.....	c37	H76-15461
US-PATENT-CLASS-307-288	.....	c10	H72-20221	US-PATENT-CLASS-308-160	.....	c37	H76-15461
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US-PATENT-CLASS-307-289	.....	c10	H71-19547	US-PATENT-CLASS-308-160	.....	c37	H79-10418
US-PATENT-CLASS-307-290	.....	c33	H74-22814	US-PATENT-CLASS-308-163	.....	c37	H76-29588
US-PATENT-CLASS-307-291	.....	c60	H81-15706	US-PATENT-CLASS-308-163	.....	c37	H79-10418
US-PATENT-CLASS-307-294	.....	c09	H71-29139	US-PATENT-CLASS-308-168	.....	c24	H79-17916
US-PATENT-CLASS-307-295	.....	c10	H72-17171	US-PATENT-CLASS-308-170	.....	c15	H71-28465
US-PATENT-CLASS-307-295	.....	c10	H72-20223	US-PATENT-CLASS-308-170	.....	c37	H76-29588
US-PATENT-CLASS-307-295	.....	c09	H72-21245	US-PATENT-CLASS-308-171	.....	c24	H79-17916
US-PATENT-CLASS-307-295	.....	c09	H72-33204	US-PATENT-CLASS-308-172	.....	c37	H79-10418
US-PATENT-CLASS-307-295	.....	c33	H74-34638	US-PATENT-CLASS-308-174	.....	c54	H75-12616
US-PATENT-CLASS-307-295	.....	c33	H77-13315	US-PATENT-CLASS-308-176	.....	c15	H71-22982
US-PATENT-CLASS-307-296	.....	c08	H71-12494	US-PATENT-CLASS-308-177	.....	c15	H71-29136
US-PATENT-CLASS-307-296	.....	c07	H71-28430	US-PATENT-CLASS-308-187	.....	c15	H71-26189
US-PATENT-CLASS-307-297	.....	c33	H78-17294	US-PATENT-CLASS-308-188	.....	c15	H73-30458
US-PATENT-CLASS-307-299	.....	c08	H72-21198	US-PATENT-CLASS-308-188	.....	c37	H74-21064
US-PATENT-CLASS-307-299	.....	c26	H72-21701	US-PATENT-CLASS-308-191	.....	c37	H74-21064
US-PATENT-CLASS-307-300	.....	c10	H71-27126	US-PATENT-CLASS-308-191	.....	c37	H75-31446
US-PATENT-CLASS-307-303	.....	c08	H72-21198	US-PATENT-CLASS-308-193	.....	c15	H73-30458
US-PATENT-CLASS-307-304	.....	c09	H72-22201	US-PATENT-CLASS-308-194	.....	c37	H79-11404
US-PATENT-CLASS-307-304	.....	c09	H73-20232	US-PATENT-CLASS-308-195	.....	c15	H72-22490
US-PATENT-CLASS-307-304	.....	c33	H74-34638	US-PATENT-CLASS-308-195	.....	c37	H75-31446
US-PATENT-CLASS-307-305	.....	c09	H72-23171	US-PATENT-CLASS-308-195	.....	c37	H77-32500
US-PATENT-CLASS-307-306	.....	c33	H76-13320	US-PATENT-CLASS-308-195	.....	c37	H77-32501
US-PATENT-CLASS-307-306	.....	c33	H81-17348	US-PATENT-CLASS-308-201	.....	c37	H75-31446
US-PATENT-CLASS-307-308	.....	c14	H73-28488	US-PATENT-CLASS-310-2	.....	c03	H72-23048
US-PATENT-CLASS-307-309	.....	c35	H75-13213	US-PATENT-CLASS-310-4	.....	c09	H69-21313
US-PATENT-CLASS-307-310	.....	c09	H73-14214	US-PATENT-CLASS-310-4	.....	c03	H69-39898
US-PATENT-CLASS-307-311	.....	c14	H72-18411	US-PATENT-CLASS-310-4	.....	c09	H69-39929
US-PATENT-CLASS-307-311	.....	c08	H72-21198	US-PATENT-CLASS-310-4	.....	c03	H70-34134
US-PATENT-CLASS-307-311	.....	c09	H73-14214	US-PATENT-CLASS-310-4	.....	c03	H71-11055
US-PATENT-CLASS-307-313	.....	c10	H72-20221	US-PATENT-CLASS-310-4	.....	c22	H71-23599
US-PATENT-CLASS-307-317	.....	c09	H72-22200	US-PATENT-CLASS-310-4	.....	c09	H71-24807
US-PATENT-CLASS-307-317	.....	c09	H72-22201	US-PATENT-CLASS-310-4	.....	c33	H71-27862
US-PATENT-CLASS-307-321	.....	c33	H75-19520	US-PATENT-CLASS-310-4	.....	c09	H71-28421
US-PATENT-CLASS-307-321	.....	c33	H75-25041	US-PATENT-CLASS-310-4	.....	c09	H72-25260
US-PATENT-CLASS-307-322	.....	c10	H72-22236	US-PATENT-CLASS-310-4	.....	c09	H72-27228
US-PATENT-CLASS-307-323	.....	c10	H72-22236	US-PATENT-CLASS-310-4	.....	c20	H75-24837
US-PATENT-CLASS-307-350	.....	c33	H78-18308	US-PATENT-CLASS-310-4	.....	c36	H75-30524
US-PATENT-CLASS-307-352	.....	c33	H81-27396	US-PATENT-CLASS-310-4	.....	c44	H76-16612
US-PATENT-CLASS-307-353	.....	c33	H81-27396	US-PATENT-CLASS-310-4A	.....	c37	H77-19458
US-PATENT-CLASS-307-360	.....	c33	H76-18308	US-PATENT-CLASS-310-4R	.....	c33	H74-27683
US-PATENT-CLASS-308-DIG.1	.....	c15	H72-17451	US-PATENT-CLASS-310-4R	.....	c73	H77-18891
US-PATENT-CLASS-308-DIG.1	.....	c37	H79-10418	US-PATENT-CLASS-310-5	.....	c03	H70-35408
US-PATENT-CLASS-308-DIG.8	.....	c24	H79-17516	US-PATENT-CLASS-310-8.2	.....	c35	H76-15432
US-PATENT-CLASS-308-DIG.9	.....	c24	H79-17916	US-PATENT-CLASS-310-8.5	.....	c14	H71-22993
US-PATENT-CLASS-308-1	.....	c31	H71-26537	US-PATENT-CLASS-310-9.1	.....	c15	H71-21311
US-PATENT-CLASS-308-2	.....	c15	H71-23812	US-PATENT-CLASS-310-10	.....	c03	H69-39890

US-PATENT-CLASS-310-10	c09	N71-23443	US-PATENT-CLASS-313-175	c31	N78-17238
US-PATENT-CLASS-310-10	c09	N71-24904	US-PATENT-CLASS-313-176	c31	N78-17238
US-PATENT-CLASS-310-10	c09	N72-25255	US-PATENT-CLASS-313-180	c33	N77-21316
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US-PATENT-CLASS-310-11	c25	N69-21929	US-PATENT-CLASS-313-182	c33	N77-22386
US-PATENT-CLASS-310-11	c03	N69-39583	US-PATENT-CLASS-313-184	c33	N77-21315
US-PATENT-CLASS-310-11	c03	N70-36803	US-PATENT-CLASS-313-184	c33	N77-21316
US-PATENT-CLASS-310-11	c14	N72-22439	US-PATENT-CLASS-313-184	c31	N78-17238
US-PATENT-CLASS-310-11	c12	N72-25292	US-PATENT-CLASS-313-186	c25	N72-24753
US-PATENT-CLASS-310-11	c35	N74-21018	US-PATENT-CLASS-313-209	c33	N74-12913
US-PATENT-CLASS-310-11	c36	N75-32441	US-PATENT-CLASS-313-212	c25	N72-24753
US-PATENT-CLASS-310-15	c09	N72-25255	US-PATENT-CLASS-313-217	c28	N73-27699
US-PATENT-CLASS-310-20	c71	N79-20827	US-PATENT-CLASS-313-217	c33	N74-12913
US-PATENT-CLASS-310-26	c71	N79-20827	US-PATENT-CLASS-313-218	c28	N73-27699
US-PATENT-CLASS-310-30	c44	N80-29834	US-PATENT-CLASS-313-224	c25	N72-24753
US-PATENT-CLASS-310-40	c20	N75-24837	US-PATENT-CLASS-313-224	c33	N74-12913
US-PATENT-CLASS-310-42	c14	N72-22439	US-PATENT-CLASS-313-224	c33	N77-21315
US-PATENT-CLASS-310-46	c33	N79-20314	US-PATENT-CLASS-313-224	c31	N78-17238
US-PATENT-CLASS-310-51	c15	N71-27169	US-PATENT-CLASS-313-230	c28	N71-28850
US-PATENT-CLASS-310-52	c20	N75-24837	US-PATENT-CLASS-313-230	c28	N73-27699
US-PATENT-CLASS-310-54	c09	N71-20446	US-PATENT-CLASS-313-230	c20	N77-20162
US-PATENT-CLASS-310-68	c15	N72-25456	US-PATENT-CLASS-313-231	c06	N69-39889
US-PATENT-CLASS-310-80	c15	N72-25456	US-PATENT-CLASS-313-231	c09	N71-23190
US-PATENT-CLASS-310-82	c33	N79-20314	US-PATENT-CLASS-313-231	c09	N71-33519
US-PATENT-CLASS-310-83	c15	N72-25456	US-PATENT-CLASS-313-231	c25	N72-24753
US-PATENT-CLASS-310-93	c15	N71-17652	US-PATENT-CLASS-313-231	c25	N72-32688
US-PATENT-CLASS-310-101	c15	N71-24696	US-PATENT-CLASS-313-231	c28	N72-24783
US-PATENT-CLASS-310-111	c33	N77-26387	US-PATENT-CLASS-313-231	c25	N73-25760
US-PATENT-CLASS-310-153	c44	N78-24608	US-PATENT-CLASS-313-231.3	c20	N77-20162
US-PATENT-CLASS-310-154	c44	N78-24608	US-PATENT-CLASS-313-231.3	c75	N78-27913
US-PATENT-CLASS-310-168	c09	N71-25999	US-PATENT-CLASS-313-231.4	c20	N77-10148
US-PATENT-CLASS-310-168	c33	N77-26387	US-PATENT-CLASS-313-231.4	c72	N80-33186
US-PATENT-CLASS-310-178	c44	N78-24608	US-PATENT-CLASS-313-236	c09	N71-26182
US-PATENT-CLASS-310-231	c33	N79-20314	US-PATENT-CLASS-313-237	c09	N71-26182
US-PATENT-CLASS-310-254	c09	N71-25999	US-PATENT-CLASS-313-240	c20	N77-10148
US-PATENT-CLASS-310-269	c44	N78-24608	US-PATENT-CLASS-313-250	c31	N76-31365
US-PATENT-CLASS-310-306	c33	N80-18287	US-PATENT-CLASS-313-271	c25	N71-20747
US-PATENT-CLASS-310-311	c35	N80-20559	US-PATENT-CLASS-313-306	c31	N76-31365
US-PATENT-CLASS-310-319	c33	N80-23559	US-PATENT-CLASS-313-309	c10	N72-27246
US-PATENT-CLASS-310-322	c71	N79-20827	US-PATENT-CLASS-313-309	c31	N76-31365
US-PATENT-CLASS-310-326	c38	N79-14398	US-PATENT-CLASS-313-311	c73	N77-18891
US-PATENT-CLASS-310-327	c35	N80-20559	US-PATENT-CLASS-313-336	c10	N72-27246
US-PATENT-CLASS-310-334	c71	N79-20827	US-PATENT-CLASS-313-338	c31	N76-31365
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US-PATENT-CLASS-310-336	c38	N79-14398	US-PATENT-CLASS-313-352	c09	N71-22987
US-PATENT-CLASS-310-360	c35	N80-20559	US-PATENT-CLASS-313-355	c28	N73-27699
US-PATENT-CLASS-311-37	c35	N75-29380	US-PATENT-CLASS-313-356	c14	N72-29464
US-PATENT-CLASS-312-1	c05	N71-23080	US-PATENT-CLASS-313-360	c20	N77-20162
US-PATENT-CLASS-312-1	c05	N73-20137	US-PATENT-CLASS-313-361	c20	N77-10148
US-PATENT-CLASS-312-1	c37	N74-20063	US-PATENT-CLASS-313-362	c72	N80-27163
US-PATENT-CLASS-312-209	c37	N74-18123	US-PATENT-CLASS-313-362	c72	N80-33186
US-PATENT-CLASS-312-257	c31	N72-22874	US-PATENT-CLASS-313-363	c72	N80-27163
US-PATENT-CLASS-312-256	c09	N71-18600	US-PATENT-CLASS-313-442	c74	N78-18905
US-PATENT-CLASS-312-319	c37	N79-33467	US-PATENT-CLASS-314-129	c15	N69-24266
US-PATENT-CLASS-313-DIG.8	c28	N73-24783	US-PATENT-CLASS-315-DIG.2	c16	N73-32391
US-PATENT-CLASS-313-7	c14	N71-18482	US-PATENT-CLASS-315-3.5	c09	N73-13208
US-PATENT-CLASS-313-7	c14	N73-32324	US-PATENT-CLASS-315-3.5	c33	N79-10339
US-PATENT-CLASS-313-11.5	c28	N70-39925	US-PATENT-CLASS-315-3.6	c33	N79-10339
US-PATENT-CLASS-313-22	c09	N71-26787	US-PATENT-CLASS-315-5.35	c33	N74-10195
US-PATENT-CLASS-313-22	c31	N78-17237	US-PATENT-CLASS-315-5.38	c09	N73-13208
US-PATENT-CLASS-313-22	c31	N78-25256	US-PATENT-CLASS-315-5.38	c33	N74-10195
US-PATENT-CLASS-313-22	c34	N75-20336	US-PATENT-CLASS-315-10	c33	N74-21850
US-PATENT-CLASS-313-32	c33	N74-12913	US-PATENT-CLASS-315-10	c33	N75-26244
US-PATENT-CLASS-313-32	c33	N77-21315	US-PATENT-CLASS-315-11	c33	N74-21850
US-PATENT-CLASS-313-35	c34	N79-20336	US-PATENT-CLASS-315-12	c33	N74-21850
US-PATENT-CLASS-313-44	c15	N69-24319	US-PATENT-CLASS-315-18	c32	N74-20813
US-PATENT-CLASS-313-60	c33	N77-22386	US-PATENT-CLASS-315-18	c33	N75-19517
US-PATENT-CLASS-313-61S	c73	N74-26767	US-PATENT-CLASS-315-22	c10	N72-20225
US-PATENT-CLASS-313-61S	c37	N78-13436	US-PATENT-CLASS-315-22	c32	N74-20813
US-PATENT-CLASS-313-63	c28	N70-41576	US-PATENT-CLASS-315-22	c33	N78-17293
US-PATENT-CLASS-313-63	c09	N71-10618	US-PATENT-CLASS-315-22R	c10	N72-31273
US-PATENT-CLASS-313-63	c28	N71-26781	US-PATENT-CLASS-315-24	c08	N71-20571
US-PATENT-CLASS-313-63	c28	N73-24783	US-PATENT-CLASS-315-25	c10	N72-20225
US-PATENT-CLASS-313-63	c28	N73-27699	US-PATENT-CLASS-315-26	c09	N71-23189
US-PATENT-CLASS-313-63	c75	N75-13625	US-PATENT-CLASS-315-30	c33	N75-27250
US-PATENT-CLASS-313-93	c35	N74-26949	US-PATENT-CLASS-315-30R	c10	N72-31273
US-PATENT-CLASS-313-94	c33	N76-31409	US-PATENT-CLASS-315-36	c10	N72-27246
US-PATENT-CLASS-313-94	c74	N78-18905	US-PATENT-CLASS-315-101	c16	N73-32391
US-PATENT-CLASS-313-104	c14	N73-32317	US-PATENT-CLASS-315-108	c09	N71-33519
US-PATENT-CLASS-313-109.5	c09	N71-33519	US-PATENT-CLASS-315-108	c33	N77-21316
US-PATENT-CLASS-313-110	c09	N71-12521	US-PATENT-CLASS-315-108	c36	N78-17366
US-PATENT-CLASS-313-146	c33	N77-22386	US-PATENT-CLASS-315-110	c33	N77-21316
US-PATENT-CLASS-313-153	c33	N74-12913	US-PATENT-CLASS-315-111	c25	N70-33267
US-PATENT-CLASS-313-156	c25	N70-34661	US-PATENT-CLASS-315-111	c25	N70-41628
US-PATENT-CLASS-313-156	c72	N80-27163	US-PATENT-CLASS-315-111	c25	N71-15562
US-PATENT-CLASS-313-161	c25	N73-25760	US-PATENT-CLASS-315-111	c24	N71-16213
US-PATENT-CLASS-313-161	c09	N73-30181	US-PATENT-CLASS-315-111	c25	N71-21693
US-PATENT-CLASS-313-161	c33	N77-21315	US-PATENT-CLASS-315-111	c28	N71-26781
US-PATENT-CLASS-313-175	c33	N77-21316	US-PATENT-CLASS-315-111	c25	N71-29184

US-PATENT-CLASS-315-111	c09	N71-33519	US-PATENT-CLASS-317-158	c15	N73-32361
US-PATENT-CLASS-315-111	c25	N72-24753	US-PATENT-CLASS-317-230	c09	N71-27232
US-PATENT-CLASS-315-111	c25	N72-32688	US-PATENT-CLASS-317-230	c26	N72-28761
US-PATENT-CLASS-315-111	c14	N73-30391	US-PATENT-CLASS-317-231	c09	N71-27232
US-PATENT-CLASS-315-111	c75	N75-13625	US-PATENT-CLASS-317-234	c14	N69-23191
US-PATENT-CLASS-315-111	c33	N75-29318	US-PATENT-CLASS-317-234	c09	N69-27422
US-PATENT-CLASS-315-111	c37	N75-29426	US-PATENT-CLASS-317-234	c26	N71-18064
US-PATENT-CLASS-315-111.2	c75	N78-27513	US-PATENT-CLASS-317-234A	c15	N73-14469
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US-PATENT-CLASS-315-111.3	c20	N77-20162	US-PATENT-CLASS-317-234E	c33	N74-12951
US-PATENT-CLASS-315-111.6	c75	N76-14931	US-PATENT-CLASS-317-234F	c33	N74-12951
US-PATENT-CLASS-315-111.6	c20	N77-20162	US-PATENT-CLASS-317-234G	c14	N72-31446
US-PATENT-CLASS-315-135	c09	N72-25250	US-PATENT-CLASS-317-234G	c15	N73-14469
US-PATENT-CLASS-315-145	c33	N80-14330	US-PATENT-CLASS-317-234G	c09	N73-27150
US-PATENT-CLASS-315-151	c14	N72-27411	US-PATENT-CLASS-317-234J	c26	N72-25679
US-PATENT-CLASS-315-153	c14	N73-16483	US-PATENT-CLASS-317-234L	c09	N73-27150
US-PATENT-CLASS-315-153	c74	N79-12890	US-PATENT-CLASS-317-234H	c09	N73-27150
US-PATENT-CLASS-315-156	c14	N72-27411	US-PATENT-CLASS-317-234H	c33	N74-12951
US-PATENT-CLASS-315-158	c14	N72-27411	US-PATENT-CLASS-317-234N	c09	N73-27150
US-PATENT-CLASS-315-160	c09	N71-12540	US-PATENT-CLASS-317-234N	c33	N74-12951
US-PATENT-CLASS-315-169B	c23	N73-13660	US-PATENT-CLASS-317-234R	c09	N73-27150
US-PATENT-CLASS-315-169R	c36	N75-19652	US-PATENT-CLASS-317-234R	c33	N74-12951
US-PATENT-CLASS-315-169TV	c23	N73-13660	US-PATENT-CLASS-317-234V	c26	N72-21701
US-PATENT-CLASS-315-176	c33	N77-28385	US-PATENT-CLASS-317-234V	c09	N73-15235
US-PATENT-CLASS-315-209CD	c37	N79-11405	US-PATENT-CLASS-317-235	c09	N69-24318
US-PATENT-CLASS-315-209SC	c37	N79-11405	US-PATENT-CLASS-317-235	c09	N72-33205
US-PATENT-CLASS-315-211	c33	N74-20859	US-PATENT-CLASS-317-235A	c26	N72-25679
US-PATENT-CLASS-315-228	c33	N74-20859	US-PATENT-CLASS-317-235A	c09	N72-33205
US-PATENT-CLASS-315-241	c09	N71-13518	US-PATENT-CLASS-317-235AG	c09	N73-15235
US-PATENT-CLASS-315-241A	c37	N79-11405	US-PATENT-CLASS-317-235AJ	c26	N72-25679
US-PATENT-CLASS-315-248	c09	N73-30181	US-PATENT-CLASS-317-235AJ	c09	N72-33205
US-PATENT-CLASS-315-258	c16	N73-32391	US-PATENT-CLASS-317-235AN	c09	N73-19235
US-PATENT-CLASS-315-260	c33	N80-14330	US-PATENT-CLASS-317-235H	c35	N75-13213
US-PATENT-CLASS-315-257	c14	N72-27411	US-PATENT-CLASS-317-235K	c09	N73-15235
US-PATENT-CLASS-315-307	c14	N72-27411	US-PATENT-CLASS-317-235N	c14	N72-31446
US-PATENT-CLASS-315-310	c14	N72-27411	US-PATENT-CLASS-317-235N	c09	N73-19235
US-PATENT-CLASS-315-311	c14	N72-27411	US-PATENT-CLASS-317-235N	c35	N74-15090
US-PATENT-CLASS-315-324	c09	N73-30181	US-PATENT-CLASS-317-235R	c26	N72-21701
US-PATENT-CLASS-315-326	c25	N72-24753	US-PATENT-CLASS-317-235R	c26	N72-25679
US-PATENT-CLASS-315-334	c33	N80-14330	US-PATENT-CLASS-317-235R	c14	N72-31446
US-PATENT-CLASS-315-344	c33	N77-21315	US-PATENT-CLASS-317-235R	c09	N73-19235
US-PATENT-CLASS-315-349	c09	N72-25250	US-PATENT-CLASS-317-235R	c09	N73-32112
US-PATENT-CLASS-315-356	c16	N73-32391	US-PATENT-CLASS-317-235T	c09	N73-19235
US-PATENT-CLASS-315-358	c25	N72-24753	US-PATENT-CLASS-317-235UA	c09	N73-19235
US-PATENT-CLASS-315-367	c33	N75-26244	US-PATENT-CLASS-317-235WN	c09	N73-32112
US-PATENT-CLASS-315-369	c33	N75-26244	US-PATENT-CLASS-317-238	c09	N71-27232
US-PATENT-CLASS-315-387	c33	N75-26244	US-PATENT-CLASS-317-245	c33	N79-21265
US-PATENT-CLASS-317-DIG.3	c10	N71-26334	US-PATENT-CLASS-317-246	c14	N69-21541
US-PATENT-CLASS-317-DIG.6	c10	N73-26228	US-PATENT-CLASS-317-246	c33	N76-21390
US-PATENT-CLASS-317-2D	c33	N77-10429	US-PATENT-CLASS-317-246	c35	N76-22509
US-PATENT-CLASS-317-9	c09	N71-22796	US-PATENT-CLASS-317-247	c14	N72-24477
US-PATENT-CLASS-317-9	c09	N71-27001	US-PATENT-CLASS-317-258	c09	N71-13522
US-PATENT-CLASS-317-16	c09	N69-39897	US-PATENT-CLASS-317-258	c33	N76-15373
US-PATENT-CLASS-317-16	c33	N74-17929	US-PATENT-CLASS-317-261	c26	N72-28761
US-PATENT-CLASS-317-20	c10	N71-26531	US-PATENT-CLASS-317-261	c33	N76-15373
US-PATENT-CLASS-317-31	c09	N71-12526	US-PATENT-CLASS-318-15	c37	N80-32716
US-PATENT-CLASS-317-31	c10	N71-23543	US-PATENT-CLASS-318-20, 105	c08	N71-27057
US-PATENT-CLASS-317-31	c33	N74-17929	US-PATENT-CLASS-318-22	c15	N71-17694
US-PATENT-CLASS-317-31	c33	N77-14333	US-PATENT-CLASS-318-31	c15	N71-28952
US-PATENT-CLASS-317-33	c10	N71-26531	US-PATENT-CLASS-318-116	c71	N79-20827
US-PATENT-CLASS-317-33	c09	N71-27001	US-PATENT-CLASS-318-137	c33	N75-19524
US-PATENT-CLASS-317-33	c10	N71-27366	US-PATENT-CLASS-318-138	c09	N71-10677
US-PATENT-CLASS-317-33	c09	N71-29008	US-PATENT-CLASS-318-138	c14	N71-17585
US-PATENT-CLASS-317-33SC	c33	N74-14956	US-PATENT-CLASS-318-138	c10	N71-18772
US-PATENT-CLASS-317-43	c33	N74-14956	US-PATENT-CLASS-318-138	c09	N71-25999
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US-PATENT-CLASS-331-17	c33	N74-10194	US-PATENT-CLASS-331-111	c09	N72-21247
US-PATENT-CLASS-331-18	c10	N71-26374	US-PATENT-CLASS-331-113	c09	N70-38995
US-PATENT-CLASS-331-18	c33	N74-10194	US-PATENT-CLASS-331-113	c10	N71-19418
US-PATENT-CLASS-331-18	c33	N75-25040	US-PATENT-CLASS-331-113	c09	N71-19470
US-PATENT-CLASS-331-23	c09	N72-21247	US-PATENT-CLASS-331-113	c10	N71-25882
US-PATENT-CLASS-331-23	c33	N77-14334	US-PATENT-CLASS-331-113	c10	N71-25950
US-PATENT-CLASS-331-23	c33	N79-11313	US-PATENT-CLASS-331-113A	c09	N71-28810
US-PATENT-CLASS-331-25	c10	N73-27171	US-PATENT-CLASS-331-113A	c09	N72-25253
US-PATENT-CLASS-331-25	c33	N75-25040	US-PATENT-CLASS-331-113A	c09	N72-25254
US-PATENT-CLASS-331-27	c33	N79-11313	US-PATENT-CLASS-331-114	c33	N74-11049
US-PATENT-CLASS-331-30	c09	N72-21247	US-PATENT-CLASS-331-115	c33	N77-17351
US-PATENT-CLASS-331-34	c07	N72-11150	US-PATENT-CLASS-331-115	c10	N72-33230
US-PATENT-CLASS-331-36C	c33	N77-14334	US-PATENT-CLASS-331-115	c33	N74-20862
US-PATENT-CLASS-331-44	c14	N72-27408	US-PATENT-CLASS-331-116R	c10	N72-33230
US-PATENT-CLASS-331-45	c10	N73-16206	US-PATENT-CLASS-331-116R	c33	N74-20862
US-PATENT-CLASS-331-48	c33	N81-17349	US-PATENT-CLASS-331-117	c10	N71-27271
US-PATENT-CLASS-331-62	c33	N74-11049	US-PATENT-CLASS-331-117	c09	N72-22203
US-PATENT-CLASS-331-64	c33	N78-32338	US-PATENT-CLASS-331-117R	c33	N74-26732
US-PATENT-CLASS-331-65	c35	N75-29380	US-PATENT-CLASS-331-135	c10	N73-32145
US-PATENT-CLASS-331-65	c33	N80-23559	US-PATENT-CLASS-331-159	c33	N74-20862
US-PATENT-CLASS-331-66	c07	N72-11150	US-PATENT-CLASS-331-177	c10	N71-27271
US-PATENT-CLASS-331-78	c09	N71-23598	US-PATENT-CLASS-331-177R	c09	N73-15235
US-PATENT-CLASS-331-78	c08	N73-12175	US-PATENT-CLASS-331-177V	c33	N77-17351
US-PATENT-CLASS-331-78	c33	N75-19515	US-PATENT-CLASS-331-178	c33	N74-10194
US-PATENT-CLASS-331-90	c09	N73-15235	US-PATENT-CLASS-331-183	c33	N74-26732
US-PATENT-CLASS-331-94	c16	N70-41578	US-PATENT-CLASS-332-1	c10	N71-23084
US-PATENT-CLASS-331-94	c16	N72-28521	US-PATENT-CLASS-332-2	c35	N75-19614
US-PATENT-CLASS-331-94	c16	N73-13489	US-PATENT-CLASS-332-7.5	c36	N75-15029
US-PATENT-CLASS-331-94	c35	N76-15436	US-PATENT-CLASS-332-7.5	c36	N78-18410
US-PATENT-CLASS-331-94	c36	N76-31512	US-PATENT-CLASS-332-7.51	c16	N72-25485
US-PATENT-CLASS-331-94	c36	N79-14362	US-PATENT-CLASS-332-7.51	c07	N73-26119
US-PATENT-CLASS-331-94	c36	N80-18372	US-PATENT-CLASS-332-7.51	c33	N74-20859
US-PATENT-CLASS-331-94.5	c16	N71-18614	US-PATENT-CLASS-332-7.51	c36	N76-18427
US-PATENT-CLASS-331-94.5	c16	N71-24832	US-PATENT-CLASS-332-9	c07	N71-12390
US-PATENT-CLASS-331-94.5	c23	N71-26722	US-PATENT-CLASS-332-9R	c08	N71-29138
US-PATENT-CLASS-331-94.5	c15	N71-27135	US-PATENT-CLASS-332-10	c08	N71-29138
US-PATENT-CLASS-331-94.5	c23	N71-29125	US-PATENT-CLASS-332-11D	c35	N74-17885
US-PATENT-CLASS-331-94.5	c16	N71-33410	US-PATENT-CLASS-332-16	c33	N77-21314
US-PATENT-CLASS-331-94.5	c16	N72-12440	US-PATENT-CLASS-332-18	c33	N77-17351
US-PATENT-CLASS-331-94.5	c25	N72-24753	US-PATENT-CLASS-332-19	c10	N71-23544
US-PATENT-CLASS-331-94.5	c16	N72-25485	US-PATENT-CLASS-332-21	c08	N72-25208
US-PATENT-CLASS-331-94.5	c07	N73-26119	US-PATENT-CLASS-332-22	c32	N77-14292
US-PATENT-CLASS-331-94.5	c09	N73-32111	US-PATENT-CLASS-332-22	c33	N81-15192
US-PATENT-CLASS-331-94.5	c16	N73-32391	US-PATENT-CLASS-332-23B	c32	N77-14292
US-PATENT-CLASS-331-94.5	c36	N76-18427	US-PATENT-CLASS-332-23R	c33	N81-15192
US-PATENT-CLASS-331-94.5A	c16	N73-33397	US-PATENT-CLASS-332-29	c07	N71-28429
US-PATENT-CLASS-331-94.5A	c36	N75-27364	US-PATENT-CLASS-332-30	c10	N71-27271
US-PATENT-CLASS-331-94.5C	c36	N75-31427	US-PATENT-CLASS-332-30	c07	N71-28429
US-PATENT-CLASS-331-94.5C	c36	N76-18428	US-PATENT-CLASS-332-30	c33	N77-21314
US-PATENT-CLASS-331-94.5C	c36	N76-24553	US-PATENT-CLASS-332-30V	c33	N77-14334
US-PATENT-CLASS-331-94.5C	c36	N76-29575	US-PATENT-CLASS-332-30V	c33	N77-17351
US-PATENT-CLASS-331-94.5C	c36	N80-14384	US-PATENT-CLASS-332-31	c08	N71-12500
US-PATENT-CLASS-331-94.5D	c33	N74-20859	US-PATENT-CLASS-332-31	c26	N72-21701
US-PATENT-CLASS-331-94.5D	c36	N77-19416	US-PATENT-CLASS-332-47	c33	N75-19520
US-PATENT-CLASS-331-94.5D	c36	N77-25502	US-PATENT-CLASS-332-51W	c07	N72-20141
US-PATENT-CLASS-331-94.5D	c35	N77-27366	US-PATENT-CLASS-332-52	c33	N77-21314
US-PATENT-CLASS-331-94.5G	c36	N75-31426	US-PATENT-CLASS-332-751	c36	N80-16321
US-PATENT-CLASS-331-94.5G	c36	N77-19416	US-PATENT-CLASS-333-6	c07	N71-33606
US-PATENT-CLASS-331-94.5G	c36	N78-17366	US-PATENT-CLASS-333-7	c07	N71-33606
US-PATENT-CLASS-331-94.5G	c36	N78-27402	US-PATENT-CLASS-333-7	c07	N72-25170
US-PATENT-CLASS-331-94.5G	c36	N79-18307	US-PATENT-CLASS-333-8	c07	N69-24334
US-PATENT-CLASS-331-94.5K	c36	N74-15145	US-PATENT-CLASS-333-12	c32	N80-32605
US-PATENT-CLASS-331-94.5L	c72	N79-13826	US-PATENT-CLASS-333-12	c33	N81-27397
US-PATENT-CLASS-331-94.5M	c36	N75-19654	US-PATENT-CLASS-333-14	c32	N74-19788
US-PATENT-CLASS-331-94.5P	c36	N75-19655	US-PATENT-CLASS-333-16	c33	N74-17927
US-PATENT-CLASS-331-94.5P	c36	N75-31426	US-PATENT-CLASS-333-17	c44	N74-19870
US-PATENT-CLASS-331-94.5P	c36	N77-25502	US-PATENT-CLASS-333-17R	c33	N78-32340
US-PATENT-CLASS-331-94.5P	c36	N78-27402	US-PATENT-CLASS-333-18	c33	N74-17927
US-PATENT-CLASS-331-94.5P	c72	N79-13826	US-PATENT-CLASS-333-18	c32	N76-21366
US-PATENT-CLASS-331-94.5P	c36	N79-18307	US-PATENT-CLASS-333-21	c07	N71-10676
US-PATENT-CLASS-331-94.5P	c36	N80-14384	US-PATENT-CLASS-333-21A	c07	N71-33606
US-PATENT-CLASS-331-94.5PE	c36	N75-32441	US-PATENT-CLASS-333-21R	c33	N75-30430
US-PATENT-CLASS-331-94.5PE	c36	N77-19416	US-PATENT-CLASS-333-24R	c09	N72-29172
US-PATENT-CLASS-331-94.5PE	c36	N78-27402	US-PATENT-CLASS-333-24R	c36	N80-18372
US-PATENT-CLASS-331-94.5PE	c72	N79-13826	US-PATENT-CLASS-333-30	c10	N71-25900
US-PATENT-CLASS-331-94.5S	c36	N74-15145	US-PATENT-CLASS-333-70CR	c10	N72-17171
US-PATENT-CLASS-331-94.5S	c36	N77-25499	US-PATENT-CLASS-333-70R	c32	N77-18307
US-PATENT-CLASS-331-94.5T	c35	N77-27366	US-PATENT-CLASS-333-72	c10	N71-25900
US-PATENT-CLASS-331-94.5T	c36	N78-17366	US-PATENT-CLASS-333-72	c71	N77-26919
US-PATENT-CLASS-331-94.5G	c36	N75-32441	US-PATENT-CLASS-333-73	c07	N69-24323
US-PATENT-CLASS-331-107	c09	N71-18721	US-PATENT-CLASS-333-73	c09	N71-23573
US-PATENT-CLASS-331-107	c26	N72-21701	US-PATENT-CLASS-333-73R	c09	N73-26195

US-PATENT-CLASS-333-73S	C09 N73-26195	US-PATENT-CLASS-339-5	C15 N71-23049
US-PATENT-CLASS-333-73W	C07 N72-20141	US-PATENT-CLASS-339-17	C14 N69-27431
US-PATENT-CLASS-333-75	C32 N77-18307	US-PATENT-CLASS-339-17	C15 N71-17685
US-PATENT-CLASS-333-76	C32 N77-18307	US-PATENT-CLASS-339-17	C09 N71-26133
US-PATENT-CLASS-333-79	C10 N70-41964	US-PATENT-CLASS-339-17M	C37 N76-27567
US-PATENT-CLASS-333-79	C09 N72-25256	US-PATENT-CLASS-339-17R	C15 N71-29133
US-PATENT-CLASS-333-80	C09 N71-12517	US-PATENT-CLASS-339-18C	C37 N76-27567
US-PATENT-CLASS-333-80	C09 N72-21245	US-PATENT-CLASS-339-45M	C15 N72-25450
US-PATENT-CLASS-333-80R	C33 N74-32712	US-PATENT-CLASS-339-46	C15 N72-17455
US-PATENT-CLASS-333-80T	C10 N72-33230	US-PATENT-CLASS-339-75MP	C09 N72-28225
US-PATENT-CLASS-333-81	C07 N71-29065	US-PATENT-CLASS-339-91	C09 N69-21927
US-PATENT-CLASS-333-81B	C14 N73-13420	US-PATENT-CLASS-339-91B	C15 N72-25450
US-PATENT-CLASS-333-81R	C07 N72-25170	US-PATENT-CLASS-339-94M	C09 N72-28225
US-PATENT-CLASS-333-81R	C33 N76-32340	US-PATENT-CLASS-339-95	C09 N69-39734
US-PATENT-CLASS-333-81R	C32 N80-14281	US-PATENT-CLASS-339-143C	C33 N76-16332
US-PATENT-CLASS-333-82A	C09 N73-26195	US-PATENT-CLASS-339-143B	C09 N72-25256
US-PATENT-CLASS-333-82B	C32 N77-18307	US-PATENT-CLASS-339-147R	C09 N72-25256
US-PATENT-CLASS-333-83	C09 N71-24841	US-PATENT-CLASS-339-150	C09 N69-21470
US-PATENT-CLASS-333-83BT	C33 N75-30430	US-PATENT-CLASS-339-176	C09 N70-34596
US-PATENT-CLASS-333-83R	C36 N74-11313	US-PATENT-CLASS-339-176	C09 N70-36494
US-PATENT-CLASS-333-84M	C09 N73-26195	US-PATENT-CLASS-339-176M	C15 N72-17455
US-PATENT-CLASS-333-95	C07 N71-27191	US-PATENT-CLASS-339-176MP	C09 N72-28225
US-PATENT-CLASS-333-96	C09 N71-20445	US-PATENT-CLASS-339-177	C09 N71-20851
US-PATENT-CLASS-333-96	C07 N71-27191	US-PATENT-CLASS-339-198R	C33 N76-16332
US-PATENT-CLASS-333-97	C07 N69-27462	US-PATENT-CLASS-339-218M	C09 N72-28225
US-PATENT-CLASS-333-97R	C36 N74-11313	US-PATENT-CLASS-339-242	C33 N76-16332
US-PATENT-CLASS-333-98	C09 N71-23548	US-PATENT-CLASS-339-252R	C52 N77-14738
US-PATENT-CLASS-333-98	C09 N71-24808	US-PATENT-CLASS-339-275R	C33 N76-16332
US-PATENT-CLASS-333-98P	C07 N72-25170	US-PATENT-CLASS-339-275T	C09 N72-20200
US-PATENT-CLASS-333-98P	C09 N72-29172	US-PATENT-CLASS-339-276T	C09 N72-20200
US-PATENT-CLASS-333-98R	C07 N72-25170	US-PATENT-CLASS-339-278M	C15 N72-17455
US-PATENT-CLASS-333-98R	C09 N72-29172	US-PATENT-CLASS-339-12R	C52 N77-25772
US-PATENT-CLASS-333-98R	C14 N73-13420	US-PATENT-CLASS-340-5C	C14 N73-27379
US-PATENT-CLASS-333-98R	C33 N75-30430	US-PATENT-CLASS-340-5H	C32 N77-21267
US-PATENT-CLASS-333-98S	C07 N72-25170	US-PATENT-CLASS-340-5R	C35 N74-16135
US-PATENT-CLASS-333-99S	C32 N80-32605	US-PATENT-CLASS-340-8LP	C71 N79-23753
US-PATENT-CLASS-333-204	C33 N81-17348	US-PATENT-CLASS-340-8R	C35 N74-16135
US-PATENT-CLASS-333-252	C32 N80-32605	US-PATENT-CLASS-340-12R	C35 N74-16135
US-PATENT-CLASS-333-262	C33 N80-18285	US-PATENT-CLASS-340-12R	C46 N79-23555
US-PATENT-CLASS-335-205	C09 N72-20199	US-PATENT-CLASS-340-15.5GC	C14 N73-26432
US-PATENT-CLASS-335-216	C16 N71-28554	US-PATENT-CLASS-340-25	C14 N73-16483
US-PATENT-CLASS-335-216	C23 N71-29049	US-PATENT-CLASS-340-26	C21 N72-22619
US-PATENT-CLASS-335-216	C26 N73-32571	US-PATENT-CLASS-340-27AT	C21 N73-14692
US-PATENT-CLASS-335-216	C20 N75-24837	US-PATENT-CLASS-340-27NA	C21 N73-13643
US-PATENT-CLASS-335-216	C33 N79-21264	US-PATENT-CLASS-340-27R	C14 N73-16483
US-PATENT-CLASS-335-296	C09 N73-30185	US-PATENT-CLASS-340-27R	C14 N73-20474
US-PATENT-CLASS-335-297	C09 N73-30185	US-PATENT-CLASS-340-27SS	C35 N78-14364
US-PATENT-CLASS-335-300	C09 N70-41929	US-PATENT-CLASS-340-33	C21 N73-13643
US-PATENT-CLASS-336-DIG.1	C26 N73-26752	US-PATENT-CLASS-340-38E	C66 N76-19888
US-PATENT-CLASS-336-DIG.1	C33 N79-17133	US-PATENT-CLASS-340-57	C14 N71-15620
US-PATENT-CLASS-336-60	C09 N72-27226	US-PATENT-CLASS-340-97	C21 N73-13643
US-PATENT-CLASS-336-178	C09 N72-17154	US-PATENT-CLASS-340-146.1	C09 N71-18843
US-PATENT-CLASS-336-198	C09 N72-27226	US-PATENT-CLASS-340-146.1	C08 N71-22749
US-PATENT-CLASS-336-200	C26 N73-26752	US-PATENT-CLASS-340-146.1	C10 N71-26103
US-PATENT-CLASS-336-210	C33 N74-17928	US-PATENT-CLASS-340-146.1	C08 N71-27255
US-PATENT-CLASS-336-220	C09 N72-27226	US-PATENT-CLASS-340-146.1	C08 N72-22167
US-PATENT-CLASS-337	C25 N79-28253	US-PATENT-CLASS-340-146.1	C08 N72-25207
US-PATENT-CLASS-337-75	C15 N72-12409	US-PATENT-CLASS-340-146.1	C07 N73-13149
US-PATENT-CLASS-337-114	C09 N71-29035	US-PATENT-CLASS-340-146.1A1	C08 N72-25210
US-PATENT-CLASS-337-121	C09 N71-29035	US-PATENT-CLASS-340-146.1A1	C08 N73-12175
US-PATENT-CLASS-337-334	C37 N77-19458	US-PATENT-CLASS-340-146.1A1	C32 N77-12240
US-PATENT-CLASS-337-354	C15 N72-12409	US-PATENT-CLASS-340-146.1AQ	C08 N73-12177
US-PATENT-CLASS-337-359	C15 N72-12409	US-PATENT-CLASS-340-146.1AQ	C32 N74-32598
US-PATENT-CLASS-338-2	C33 N75-31329	US-PATENT-CLASS-340-146.1AQ	C32 N77-12240
US-PATENT-CLASS-338-2	C35 N80-20560	US-PATENT-CLASS-340-146.1AV	C08 N73-12177
US-PATENT-CLASS-338-2	C52 N80-27072	US-PATENT-CLASS-340-146.1AV	C32 N77-12240
US-PATENT-CLASS-338-5	C32 N71-15574	US-PATENT-CLASS-340-146.1AX	C32 N79-10263
US-PATENT-CLASS-338-5	C52 N74-27864	US-PATENT-CLASS-340-146.1C	C07 N73-20176
US-PATENT-CLASS-338-6	C35 N76-14430	US-PATENT-CLASS-340-146.1E	C32 N79-10263
US-PATENT-CLASS-338-6	C52 N76-29695	US-PATENT-CLASS-340-146.2	C08 N71-12505
US-PATENT-CLASS-338-13	C24 N75-30260	US-PATENT-CLASS-340-146.2	C08 N71-23295
US-PATENT-CLASS-338-18	C35 N79-33449	US-PATENT-CLASS-340-146.3H	C74 N81-19896
US-PATENT-CLASS-338-25	C35 N77-21393	US-PATENT-CLASS-340-146.3F	C43 N77-10584
US-PATENT-CLASS-338-28	C35 N77-20400	US-PATENT-CLASS-340-146.3J	C43 N77-10584
US-PATENT-CLASS-338-28	C35 N77-24454	US-PATENT-CLASS-340-146.3S	C74 N81-19896
US-PATENT-CLASS-338-32S	C33 N78-13320	US-PATENT-CLASS-340-146.3Y	C74 N81-19896
US-PATENT-CLASS-338-36	C35 N78-17359	US-PATENT-CLASS-340-147	C09 N70-33182
US-PATENT-CLASS-338-64	C09 N71-21583	US-PATENT-CLASS-340-147	C09 N70-38998
US-PATENT-CLASS-338-75	C37 N75-13265	US-PATENT-CLASS-340-147C	C60 N76-14818
US-PATENT-CLASS-338-82	C09 N71-20842	US-PATENT-CLASS-340-147R	C07 N73-20176
US-PATENT-CLASS-338-89	C35 N74-32677	US-PATENT-CLASS-340-147R	C60 N76-14818
US-PATENT-CLASS-338-97	C37 N75-13265	US-PATENT-CLASS-340-147SY	C17 N76-22245
US-PATENT-CLASS-338-99	C35 N76-17359	US-PATENT-CLASS-340-150	C10 N71-27272
US-PATENT-CLASS-338-100	C35 N76-17359	US-PATENT-CLASS-340-151	C33 N74-27862
US-PATENT-CLASS-338-114	C52 N74-27864	US-PATENT-CLASS-340-163	C07 N73-20176
US-PATENT-CLASS-338-162	C37 N75-13265	US-PATENT-CLASS-340-164	C10 N71-27272
US-PATENT-CLASS-338-229	C35 N77-24454	US-PATENT-CLASS-340-166	C10 N71-27272
US-PATENT-CLASS-338-283	C24 N75-30260	US-PATENT-CLASS-340-166	C10 N73-32144
US-PATENT-CLASS-338-320	C33 N74-14535	US-PATENT-CLASS-340-167	C07 N72-25173

US-PATENT-CLASS-340-171	c09	N72-22202	US-PATENT-CLASS-340-248	c10	N71-27338
US-PATENT-CLASS-340-171	c16	N73-16536	US-PATENT-CLASS-340-258	c10	N72-28240
US-PATENT-CLASS-340-172.5	c08	N69-21928	US-PATENT-CLASS-340-258R	c07	N73-25160
US-PATENT-CLASS-340-172.5	c09	N69-24333	US-PATENT-CLASS-340-262	c54	N78-32720
US-PATENT-CLASS-340-172.5	c08	N71-12502	US-PATENT-CLASS-340-271	c35	N77-30436
US-PATENT-CLASS-340-172.5	c08	N71-12506	US-PATENT-CLASS-340-277	c10	N73-30205
US-PATENT-CLASS-340-172.5	c31	N71-15566	US-PATENT-CLASS-340-279	c05	N72-16015
US-PATENT-CLASS-340-172.5	c08	N71-19288	US-PATENT-CLASS-340-279	c10	N73-30205
US-PATENT-CLASS-340-172.5	c08	N71-22707	US-PATENT-CLASS-340-279	c54	N78-32720
US-PATENT-CLASS-340-172.5	c08	N71-22710	US-PATENT-CLASS-340-285	c14	N71-25901
US-PATENT-CLASS-340-172.5	c07	N71-24624	US-PATENT-CLASS-340-285	c54	N78-32720
US-PATENT-CLASS-340-172.5	c08	N71-27255	US-PATENT-CLASS-340-309.1	c54	N78-32720
US-PATENT-CLASS-340-172.5	c07	N72-25172	US-PATENT-CLASS-340-309.4	c33	N81-14221
US-PATENT-CLASS-340-172.5	c08	N72-25207	US-PATENT-CLASS-340-310A	c33	N81-14221
US-PATENT-CLASS-340-172.5	c09	N72-25248	US-PATENT-CLASS-340-310R	c33	N81-14221
US-PATENT-CLASS-340-172.5	c08	N73-13187	US-PATENT-CLASS-340-324	c08	N71-12507
US-PATENT-CLASS-340-172.5	c08	N73-26176	US-PATENT-CLASS-340-324	c09	N71-33519
US-PATENT-CLASS-340-172.5	c60	N76-18800	US-PATENT-CLASS-340-324A	c09	N72-25248
US-PATENT-CLASS-340-172.5	c60	N76-21514	US-PATENT-CLASS-340-324AD	c33	N75-19517
US-PATENT-CLASS-340-172.5	c60	N77-12721	US-PATENT-CLASS-340-324R	c26	N72-25680
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US-PATENT-CLASS-343-797	.....	c07	N73-28013	US-PATENT-CLASS-350-1	.....	c74	N78-15879
US-PATENT-CLASS-343-797	.....	c32	N74-20863	US-PATENT-CLASS-350-2	.....	c23	N71-30027
US-PATENT-CLASS-343-797	.....	c33	N76-14372	US-PATENT-CLASS-350-3.5	.....	c16	N71-15551
US-PATENT-CLASS-343-797	.....	c32	N81-14187	US-PATENT-CLASS-350-3.5	.....	c16	N71-15565
US-PATENT-CLASS-343-799	.....	c07	N71-27233	US-PATENT-CLASS-350-3.5	.....	c16	N71-15567
US-PATENT-CLASS-343-803	.....	c07	N73-28613	US-PATENT-CLASS-350-3.5	.....	c16	N71-26154
US-PATENT-CLASS-343-823	.....	c07	N71-28979	US-PATENT-CLASS-350-3.5	.....	c16	N71-29131
US-PATENT-CLASS-343-830	.....	c32	N80-32604	US-PATENT-CLASS-350-3.5	.....	c14	N72-17324
US-PATENT-CLASS-343-833	.....	c31	N70-34135	US-PATENT-CLASS-350-3.5	.....	c16	N73-30476
US-PATENT-CLASS-343-837	.....	c07	N72-32169	US-PATENT-CLASS-350-3.5	.....	c35	N74-15146
US-PATENT-CLASS-343-837	.....	c07	N73-14130	US-PATENT-CLASS-350-3.5	.....	c35	N74-17153
US-PATENT-CLASS-343-837	.....	c33	N75-19516	US-PATENT-CLASS-350-3.5	.....	c35	N74-26946
US-PATENT-CLASS-343-837	.....	c32	N76-15329	US-PATENT-CLASS-350-3.5	.....	c35	N75-25124
US-PATENT-CLASS-343-837	.....	c32	N76-18295	US-PATENT-CLASS-350-3.5	.....	c35	N75-27328
US-PATENT-CLASS-343-837	.....	c32	N78-31321	US-PATENT-CLASS-350-3.5	.....	c35	N76-18402
US-PATENT-CLASS-343-839	.....	c09	N73-19234	US-PATENT-CLASS-350-3.5	.....	c35	N78-17357
US-PATENT-CLASS-343-840	.....	c07	N71-27233	US-PATENT-CLASS-350-3.5	.....	c38	N78-32447
US-PATENT-CLASS-343-840	.....	c09	N72-12136	US-PATENT-CLASS-350-6	.....	c14	N69-27461
US-PATENT-CLASS-343-840	.....	c07	N72-32169	US-PATENT-CLASS-350-6	.....	c36	N74-15145
US-PATENT-CLASS-343-840	.....	c32	N76-18295	US-PATENT-CLASS-350-6.5	.....	c32	N80-24510
US-PATENT-CLASS-343-844	.....	c32	N79-11264	US-PATENT-CLASS-350-6.6	.....	c32	N80-24510
US-PATENT-CLASS-343-844	.....	c32	N80-28578	US-PATENT-CLASS-350-7	.....	c74	N74-15095
US-PATENT-CLASS-343-846	.....	c33	N76-14372	US-PATENT-CLASS-350-16	.....	c14	N72-22444
US-PATENT-CLASS-343-853	.....	c07	N72-11148	US-PATENT-CLASS-350-19	.....	c14	N72-22441
US-PATENT-CLASS-343-853	.....	c07	N72-22127	US-PATENT-CLASS-350-23	.....	c14	N72-22441
US-PATENT-CLASS-343-853	.....	c07	N72-25174	US-PATENT-CLASS-350-25	.....	c74	N80-21138
US-PATENT-CLASS-343-853	.....	c09	N72-31235	US-PATENT-CLASS-350-26	.....	c14	N72-22441
US-PATENT-CLASS-343-853	.....	c10	N73-16206	US-PATENT-CLASS-350-35	.....	c14	N72-22441
US-PATENT-CLASS-343-853	.....	c32	N74-20863	US-PATENT-CLASS-350-36	.....	c14	N72-22441
US-PATENT-CLASS-343-853	.....	c32	N74-20864	US-PATENT-CLASS-350-49	.....	c14	N72-22441
US-PATENT-CLASS-343-854	.....	c07	N69-27460	US-PATENT-CLASS-350-52	.....	c14	N72-22441
US-PATENT-CLASS-343-854	.....	c07	N71-27233	US-PATENT-CLASS-350-52	.....	c14	N72-22444
US-PATENT-CLASS-343-854	.....	c09	N73-19234	US-PATENT-CLASS-350-55	.....	c23	N71-33229
US-PATENT-CLASS-343-854	.....	c33	N74-20660	US-PATENT-CLASS-350-55	.....	c14	N73-30393
US-PATENT-CLASS-343-854	.....	c33	N76-27472	US-PATENT-CLASS-350-55	.....	c23	N73-30666
US-PATENT-CLASS-343-854	.....	c32	N79-11264	US-PATENT-CLASS-350-55	.....	c89	N79-10969
US-PATENT-CLASS-343-854	.....	c32	N80-28578	US-PATENT-CLASS-350-55	.....	c74	N80-33210
US-PATENT-CLASS-343-872	.....	c07	N71-28580	US-PATENT-CLASS-350-58	.....	c14	N71-15604
US-PATENT-CLASS-343-873	.....	c07	N71-19493	US-PATENT-CLASS-350-79	.....	c14	N72-32452
US-PATENT-CLASS-343-873	.....	c09	N72-25247	US-PATENT-CLASS-350-86	.....	c14	N72-22445
US-PATENT-CLASS-343-876	.....	c32	N76-15329	US-PATENT-CLASS-350-96	.....	c07	N71-26291
US-PATENT-CLASS-343-880	.....	c07	N73-26117	US-PATENT-CLASS-350-96.25	.....	c33	N81-29342
US-PATENT-CLASS-343-880	.....	c18	N80-14183	US-PATENT-CLASS-350-96B	.....	c60	N77-14751
US-PATENT-CLASS-343-882	.....	c33	N76-32457	US-PATENT-CLASS-350-96B	.....	c60	N77-32731
US-PATENT-CLASS-343-883	.....	c07	N73-26117	US-PATENT-CLASS-350-96B	.....	c60	N78-10709
US-PATENT-CLASS-343-883	.....	c18	N80-14183	US-PATENT-CLASS-350-96BG	.....	c36	N75-31427
US-PATENT-CLASS-343-884	.....	c07	N71-27191	US-PATENT-CLASS-350-96WG	.....	c36	N76-18428
US-PATENT-CLASS-343-889	.....	c07	N73-26117	US-PATENT-CLASS-350-96WG	.....	c36	N76-24553
US-PATENT-CLASS-343-893	.....	c09	N72-21244	US-PATENT-CLASS-350-100	.....	c36	N77-25501
US-PATENT-CLASS-343-893	.....	c07	N73-28013	US-PATENT-CLASS-350-102	.....	c23	N71-29123
US-PATENT-CLASS-343-895	.....	c09	N73-19234	US-PATENT-CLASS-350-102	.....	c36	N77-25501
US-PATENT-CLASS-343-895	.....	c07	N73-26117	US-PATENT-CLASS-350-138	.....	c23	N72-27728
US-PATENT-CLASS-343-895	.....	c32	N80-23524	US-PATENT-CLASS-350-145	.....	c74	N77-20882
US-PATENT-CLASS-343-909	.....	c32	N74-11000	US-PATENT-CLASS-350-147	.....	c14	N72-27409
US-PATENT-CLASS-343-909	.....	c35	N76-15435	US-PATENT-CLASS-350-150	.....	c26	N72-25680
US-PATENT-CLASS-343-909	.....	c33	N79-28416	US-PATENT-CLASS-350-150	.....	c36	N76-18427
US-PATENT-CLASS-343-909	.....	c32	N80-14281	US-PATENT-CLASS-350-151	.....	c36	N74-13205
US-PATENT-CLASS-343-912	.....	c07	N72-21117	US-PATENT-CLASS-350-151	.....	c35	N78-29421
US-PATENT-CLASS-343-912	.....	c07	N72-22127	US-PATENT-CLASS-350-157	.....	c74	N79-14891
US-PATENT-CLASS-343-912	.....	c32	N76-18295	US-PATENT-CLASS-350-159	.....	c74	N78-17865
US-PATENT-CLASS-343-915	.....	c31	N71-16102	US-PATENT-CLASS-350-160	.....	c36	N76-18427
US-PATENT-CLASS-343-915	.....	c09	N71-20658	US-PATENT-CLASS-350-160R	.....	c14	N72-25410
US-PATENT-CLASS-343-915	.....	c07	N72-32169	US-PATENT-CLASS-350-160R	.....	c26	N72-25680
US-PATENT-CLASS-343-915	.....	c07	N73-14130	US-PATENT-CLASS-350-161	.....	c26	N72-27784
US-PATENT-CLASS-343-915	.....	c07	N73-24176	US-PATENT-CLASS-350-161	.....	c36	N75-31427

US-PATENT-CLASS-350-162	c14 N72-17323	US-PATENT-CLASS-351-166	c74 N78-32854
US-PATENT-CLASS-350-162R	c74 N80-21140	US-PATENT-CLASS-352-84	c16 N71-33410
US-PATENT-CLASS-350-162SF	c23 N73-30666	US-PATENT-CLASS-352-84	c14 N72-18411
US-PATENT-CLASS-350-162SF	c74 N76-31598	US-PATENT-CLASS-352-169	c14 N73-14427
US-PATENT-CLASS-350-162SF	c74 N77-28932	US-PATENT-CLASS-353-54	c34 N74-23066
US-PATENT-CLASS-350-162SF	c36 N77-32478	US-PATENT-CLASS-353-61	c34 N74-23066
US-PATENT-CLASS-350-165	c27 N78-31233	US-PATENT-CLASS-354-77	c74 N79-20856
US-PATENT-CLASS-350-170	c73 N78-32848	US-PATENT-CLASS-354-118	c74 N81-17886
US-PATENT-CLASS-350-171	c23 N72-23695	US-PATENT-CLASS-354-234	c33 N74-20861
US-PATENT-CLASS-350-173	c73 N78-32848	US-PATENT-CLASS-354-234	c70 N74-21300
US-PATENT-CLASS-350-174	c74 N77-20882	US-PATENT-CLASS-355-18	c14 N73-33361
US-PATENT-CLASS-350-174	c73 N78-32848	US-PATENT-CLASS-356-4	c14 N72-17326
US-PATENT-CLASS-350-175E	c74 N80-27185	US-PATENT-CLASS-356-4	c07 N73-26119
US-PATENT-CLASS-350-175FS	c14 N72-25414	US-PATENT-CLASS-356-4	c36 N74-15145
US-PATENT-CLASS-350-175NG	c27 N78-31233	US-PATENT-CLASS-356-4	c35 N75-15014
US-PATENT-CLASS-350-189	c23 N71-24857	US-PATENT-CLASS-356-5	c07 N73-26119
US-PATENT-CLASS-350-199	c14 N73-30393	US-PATENT-CLASS-356-5	c36 N74-15145
US-PATENT-CLASS-350-202	c23 N73-20741	US-PATENT-CLASS-356-5	c36 N75-15028
US-PATENT-CLASS-350-202	c74 N77-28932	US-PATENT-CLASS-356-17	c14 N72-21409
US-PATENT-CLASS-350-203	c14 N72-25409	US-PATENT-CLASS-356-18	c14 N72-21409
US-PATENT-CLASS-350-204	c14 N73-30393	US-PATENT-CLASS-356-28	c21 N71-19212
US-PATENT-CLASS-350-204	c74 N78-17866	US-PATENT-CLASS-356-28	c16 N71-24828
US-PATENT-CLASS-350-211	c44 N76-14602	US-PATENT-CLASS-356-28	c72 N74-19310
US-PATENT-CLASS-350-213	c14 N71-15622	US-PATENT-CLASS-356-28	c36 N75-15028
US-PATENT-CLASS-350-226	c74 N80-27185	US-PATENT-CLASS-356-28	c35 N75-16783
US-PATENT-CLASS-350-236	c74 N74-15095	US-PATENT-CLASS-356-28	c36 N76-14447
US-PATENT-CLASS-350-253	c35 N77-27366	US-PATENT-CLASS-356-28	c36 N77-25501
US-PATENT-CLASS-350-269	c33 N74-20861	US-PATENT-CLASS-356-28	c74 N78-17866
US-PATENT-CLASS-350-270	c70 N74-21300	US-PATENT-CLASS-356-28	c35 N79-18296
US-PATENT-CLASS-350-275	c09 N71-19479	US-PATENT-CLASS-356-28	c36 N80-16321
US-PATENT-CLASS-350-285	c14 N71-15605	US-PATENT-CLASS-356-28.5	c32 N80-24510
US-PATENT-CLASS-350-285	c14 N71-17662	US-PATENT-CLASS-356-28.5	c36 N81-24422
US-PATENT-CLASS-350-285	c19 N71-26674	US-PATENT-CLASS-356-32	c14 N72-11364
US-PATENT-CLASS-350-285	c15 N72-11386	US-PATENT-CLASS-356-32	c32 N73-20740
US-PATENT-CLASS-350-285	c16 N73-33397	US-PATENT-CLASS-356-32	c39 N81-25400
US-PATENT-CLASS-350-285	c74 N74-15095	US-PATENT-CLASS-356-36	c23 N71-16365
US-PATENT-CLASS-350-285	c74 N80-21138	US-PATENT-CLASS-356-37	c45 N76-21742
US-PATENT-CLASS-350-286	c07 N71-29065	US-PATENT-CLASS-356-43	c74 N74-15095
US-PATENT-CLASS-350-286	c73 N78-32848	US-PATENT-CLASS-356-43	c75 N74-30156
US-PATENT-CLASS-350-287	c15 N72-11386	US-PATENT-CLASS-356-51	c06 N72-31141
US-PATENT-CLASS-350-288	c23 N71-29123	US-PATENT-CLASS-356-51	c35 N75-30502
US-PATENT-CLASS-350-288	c12 N76-15189	US-PATENT-CLASS-356-71	c66 N76-19888
US-PATENT-CLASS-350-288	c74 N77-28933	US-PATENT-CLASS-356-72	c14 N71-23268
US-PATENT-CLASS-350-288	c44 N79-11471	US-PATENT-CLASS-356-72	c33 N73-27796
US-PATENT-CLASS-350-288	c44 N79-24433	US-PATENT-CLASS-356-72	c38 N78-32447
US-PATENT-CLASS-350-292	c35 N75-12273	US-PATENT-CLASS-356-72	c74 N80-33210
US-PATENT-CLASS-350-292	c44 N79-14529	US-PATENT-CLASS-356-73	c75 N74-30156
US-PATENT-CLASS-350-292	c44 N79-24432	US-PATENT-CLASS-356-73	c38 N78-32447
US-PATENT-CLASS-350-293	c16 N73-16536	US-PATENT-CLASS-356-74	c30 N71-15990
US-PATENT-CLASS-350-293	c12 N76-15189	US-PATENT-CLASS-356-76	c23 N71-26206
US-PATENT-CLASS-350-293	c44 N76-24696	US-PATENT-CLASS-356-76	c14 N71-29041
US-PATENT-CLASS-350-293	c44 N78-10554	US-PATENT-CLASS-356-83	c35 N75-19613
US-PATENT-CLASS-350-293	c44 N79-14529	US-PATENT-CLASS-356-85	c37 N74-18123
US-PATENT-CLASS-350-294	c89 N79-10969	US-PATENT-CLASS-356-85	c75 N74-30156
US-PATENT-CLASS-350-294	c44 N79-24432	US-PATENT-CLASS-356-87	c75 N74-30156
US-PATENT-CLASS-350-294	c32 N80-24510	US-PATENT-CLASS-356-96	c35 N75-19613
US-PATENT-CLASS-350-255	c44 N77-32583	US-PATENT-CLASS-356-97	c35 N77-14411
US-PATENT-CLASS-350-295	c44 N80-14473	US-PATENT-CLASS-356-103	c14 N71-28994
US-PATENT-CLASS-350-296	c44 N79-24432	US-PATENT-CLASS-356-103	c36 N75-15028
US-PATENT-CLASS-350-296	c44 N80-14473	US-PATENT-CLASS-356-103	c74 N78-13874
US-PATENT-CLASS-350-299	c74 N74-21304	US-PATENT-CLASS-356-104	c16 N71-24074
US-PATENT-CLASS-350-299	c44 N76-24696	US-PATENT-CLASS-356-104	c74 N78-13874
US-PATENT-CLASS-350-299	c74 N77-28932	US-PATENT-CLASS-356-106	c14 N71-17627
US-PATENT-CLASS-350-299	c44 N78-10554	US-PATENT-CLASS-356-106	c14 N71-17655
US-PATENT-CLASS-350-299	c44 N78-31526	US-PATENT-CLASS-356-106	c14 N71-27215
US-PATENT-CLASS-350-299	c44 N79-11471	US-PATENT-CLASS-356-106	c14 N73-12446
US-PATENT-CLASS-350-299	c44 N79-24433	US-PATENT-CLASS-356-106	c35 N74-15146
US-PATENT-CLASS-350-301	c74 N81-17866	US-PATENT-CLASS-356-106LR	c36 N75-19653
US-PATENT-CLASS-350-310	c11 N69-24321	US-PATENT-CLASS-356-106R	c72 N74-19310
US-PATENT-CLASS-350-310	c23 N71-24868	US-PATENT-CLASS-356-106R	c36 N76-14447
US-PATENT-CLASS-350-310	c23 N71-29123	US-PATENT-CLASS-356-106R	c35 N77-10493
US-PATENT-CLASS-350-310	c23 N71-33229	US-PATENT-CLASS-356-106R	c47 N77-10753
US-PATENT-CLASS-350-310	c23 N72-22673	US-PATENT-CLASS-356-106S	c23 N73-13661
US-PATENT-CLASS-350-310	c74 N77-28933	US-PATENT-CLASS-356-106S	c35 N76-31490
US-PATENT-CLASS-350-311	c74 N75-25706	US-PATENT-CLASS-356-106S	c35 N78-18391
US-PATENT-CLASS-350-312	c16 N72-12440	US-PATENT-CLASS-356-107	c16 N71-24170
US-PATENT-CLASS-350-320	c74 N77-28933	US-PATENT-CLASS-356-108	c26 N73-26751
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US-PATENT-CLASS-350-320	c73 N78-32848	US-PATENT-CLASS-356-109	c16 N73-30476
US-PATENT-CLASS-350-320	c44 N75-14529	US-PATENT-CLASS-356-110	c14 N73-25463
US-PATENT-CLASS-350-359	c36 N80-16321	US-PATENT-CLASS-356-110	c35 N78-18391
US-PATENT-CLASS-350-370	c35 N81-33448	US-PATENT-CLASS-356-112	c72 N74-19310
US-PATENT-CLASS-351-23	c05 N73-26072	US-PATENT-CLASS-356-113	c14 N72-17323
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US-PATENT-CLASS-351-36	c52 N76-30793	US-PATENT-CLASS-356-120	c74 N78-27904
US-PATENT-CLASS-351-38	c54 N75-27759	US-PATENT-CLASS-356-123	c74 N76-19935

US-PATENT-CLASS-356-124	c74 N76-19935	US-PATENT-CLASS-356-346	c74 N81-29963
US-PATENT-CLASS-356-124	c74 N79-11865	US-PATENT-CLASS-356-350	c35 N81-33448
US-PATENT-CLASS-356-129	c74 N79-20856	US-PATENT-CLASS-356-351	c35 N81-33448
US-PATENT-CLASS-356-138	c14 N72-20379	US-PATENT-CLASS-356-352	c74 N81-17888
US-PATENT-CLASS-356-138	c16 N73-33397	US-PATENT-CLASS-356-356	c36 N81-24422
US-PATENT-CLASS-356-141	c14 N72-27409	US-PATENT-CLASS-356-358	c74 N81-17888
US-PATENT-CLASS-356-141	c14 N73-28490	US-PATENT-CLASS-356-358	c36 N81-24422
US-PATENT-CLASS-356-141	c36 N74-21091	US-PATENT-CLASS-356-369	c35 N80-28687
US-PATENT-CLASS-356-141	c89 N74-30886	US-PATENT-CLASS-356-404	c35 N79-28527
US-PATENT-CLASS-356-141	c74 N77-22951	US-PATENT-CLASS-356-406	c52 N81-27783
US-PATENT-CLASS-356-147	c89 N74-30886	US-PATENT-CLASS-356-407	c43 N79-17288
US-PATENT-CLASS-356-148	c16 N73-33397	US-PATENT-CLASS-356-407	c52 N81-27783
US-PATENT-CLASS-356-150	c15 N71-28740	US-PATENT-CLASS-356-416	c43 N79-17288
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US-PATENT-CLASS-356-152	c74 N80-21138	US-PATENT-CLASS-357-15	c44 N79-11467
US-PATENT-CLASS-356-152	c37 N81-27519	US-PATENT-CLASS-357-15	c44 N81-29525
US-PATENT-CLASS-356-153	c15 N71-28740	US-PATENT-CLASS-357-16	c44 N78-13526
US-PATENT-CLASS-356-153	c23 N71-29125	US-PATENT-CLASS-357-16	c44 N79-11467
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US-PATENT-CLASS-356-154	c15 N71-26673	US-PATENT-CLASS-357-23	c76 N75-25730
US-PATENT-CLASS-356-159	c36 N78-14380	US-PATENT-CLASS-357-23	c33 N79-12321
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US-PATENT-CLASS-356-161	c26 N73-26751	US-PATENT-CLASS-357-24	c33 N75-31331
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US-PATENT-CLASS-356-167	c14 N72-11364	US-PATENT-CLASS-357-30	c44 N78-24609
US-PATENT-CLASS-356-167	c66 N76-19888	US-PATENT-CLASS-357-30	c44 N78-25527
US-PATENT-CLASS-356-167	c74 N78-27904	US-PATENT-CLASS-357-30	c44 N79-11467
US-PATENT-CLASS-356-169	c60 N78-10709	US-PATENT-CLASS-357-30	c44 N79-14528
US-PATENT-CLASS-356-171	c74 N77-22950	US-PATENT-CLASS-357-30	c44 N79-31752
US-PATENT-CLASS-356-172	c16 N73-33397	US-PATENT-CLASS-357-30	c44 N80-29835
US-PATENT-CLASS-356-172	c36 N74-21091	US-PATENT-CLASS-357-30	c44 N81-19558
US-PATENT-CLASS-356-172	c74 N77-22951	US-PATENT-CLASS-357-30	c44 N81-29525
US-PATENT-CLASS-356-180	c35 N74-27860	US-PATENT-CLASS-357-41	c33 N79-12321
US-PATENT-CLASS-356-186	c35 N75-19613	US-PATENT-CLASS-357-42	c76 N75-25730
US-PATENT-CLASS-356-189	c35 N75-19613	US-PATENT-CLASS-357-45	c33 N79-12321
US-PATENT-CLASS-356-197	c37 N74-18123	US-PATENT-CLASS-357-45	c44 N79-26475
US-PATENT-CLASS-356-199	c36 N78-14380	US-PATENT-CLASS-357-52	c76 N75-25730
US-PATENT-CLASS-356-201	c75 N74-30156	US-PATENT-CLASS-357-52	c44 N80-29835
US-PATENT-CLASS-356-201	c35 N77-14411	US-PATENT-CLASS-357-54	c76 N75-25730
US-PATENT-CLASS-356-202	c26 N73-26751	US-PATENT-CLASS-357-55	c33 N79-12321
US-PATENT-CLASS-356-203	c14 N71-26788	US-PATENT-CLASS-357-55	c33 N81-26360
US-PATENT-CLASS-356-204	c35 N77-14411	US-PATENT-CLASS-357-59	c44 N76-28635
US-PATENT-CLASS-356-204	c74 N78-17867	US-PATENT-CLASS-357-59	c44 N78-24609
US-PATENT-CLASS-356-207	c45 N76-17656	US-PATENT-CLASS-357-59	c44 N81-19558
US-PATENT-CLASS-356-208	c74 N78-33513	US-PATENT-CLASS-357-60	c33 N81-26360
US-PATENT-CLASS-356-209	c23 N71-16341	US-PATENT-CLASS-357-63	c33 N76-31409
US-PATENT-CLASS-356-209	c14 N71-28993	US-PATENT-CLASS-357-63	c44 N81-19558
US-PATENT-CLASS-356-209	c14 N72-17323	US-PATENT-CLASS-357-65	c44 N78-25527
US-PATENT-CLASS-356-209	c35 N76-31490	US-PATENT-CLASS-357-65	c44 N79-11467
US-PATENT-CLASS-356-210	c74 N79-11665	US-PATENT-CLASS-357-65	c44 N79-31752
US-PATENT-CLASS-356-212	c35 N77-31465	US-PATENT-CLASS-357-67	c44 N78-25527
US-PATENT-CLASS-356-213	c39 N81-25400	US-PATENT-CLASS-357-67	c44 N79-11467
US-PATENT-CLASS-356-216	c74 N74-15095	US-PATENT-CLASS-357-67	c44 N79-31752
US-PATENT-CLASS-356-216	c35 N80-18359	US-PATENT-CLASS-357-73	c33 N78-13320
US-PATENT-CLASS-356-216	c39 N81-25400	US-PATENT-CLASS-357-74	c37 N79-28549
US-PATENT-CLASS-356-222	c03 N72-20033	US-PATENT-CLASS-357-79	c37 N79-28549
US-PATENT-CLASS-356-234	c39 N81-25400	US-PATENT-CLASS-357-81	c37 N79-28549
US-PATENT-CLASS-356-236	c74 N77-21941	US-PATENT-CLASS-357-82	c37 N79-28549
US-PATENT-CLASS-356-237	c74 N77-10899	US-PATENT-CLASS-357-83	c37 N79-28549
US-PATENT-CLASS-356-237	c38 N78-17395	US-PATENT-CLASS-357-91	c76 N75-25730
US-PATENT-CLASS-356-237	c38 N78-17396	US-PATENT-CLASS-357-91	c33 N78-27326
US-PATENT-CLASS-356-237	c35 N79-28527	US-PATENT-CLASS-357-91	c44 N80-29835
US-PATENT-CLASS-356-239	c74 N77-10899	US-PATENT-CLASS-357-91	c33 N81-26360
US-PATENT-CLASS-356-241	c14 N72-32452	US-PATENT-CLASS-358-36	c32 N75-21485
US-PATENT-CLASS-356-243	c36 N80-16321	US-PATENT-CLASS-358-41	c74 N78-17865
US-PATENT-CLASS-356-244	c14 N72-17323	US-PATENT-CLASS-358-44	c74 N77-18893
US-PATENT-CLASS-356-244	c35 N76-31490	US-PATENT-CLASS-358-55	c74 N78-17865
US-PATENT-CLASS-356-244	c35 N80-28667	US-PATENT-CLASS-358-81	c32 N79-20297
US-PATENT-CLASS-356-246	c35 N74-27860	US-PATENT-CLASS-358-96	c52 N79-10724
US-PATENT-CLASS-356-246	c74 N78-17867	US-PATENT-CLASS-358-104	c09 N78-18083
US-PATENT-CLASS-356-248	c14 N72-22444	US-PATENT-CLASS-358-104	c74 N79-13855
US-PATENT-CLASS-356-300	c43 N79-17288	US-PATENT-CLASS-358-106	c39 N78-16387
US-PATENT-CLASS-356-328	c35 N80-26635	US-PATENT-CLASS-358-107	c35 N79-18296
US-PATENT-CLASS-356-334	c74 N80-21140	US-PATENT-CLASS-358-109	c32 N79-20297
US-PATENT-CLASS-356-345	c74 N81-17888	US-PATENT-CLASS-358-109	c33 N81-33403
US-PATENT-CLASS-356-345	c74 N81-29963	US-PATENT-CLASS-358-111	c52 N79-10724
US-PATENT-CLASS-356-346	c35 N80-20563	US-PATENT-CLASS-358-133	c32 N77-24328

US-PATENT-CLASS-358-138	c32 N77-24328	US-PATENT-CLASS-375-107	c32 N81-14186
US-PATENT-CLASS-358-142	c74 N78-14889	US-PATENT-CLASS-375-115	c32 N81-15179
US-PATENT-CLASS-358-213	c33 N81-33403	US-PATENT-CLASS-403-28	c27 N76-14264
US-PATENT-CLASS-358-225	c74 N78-17865	US-PATENT-CLASS-403-105	c37 N79-14382
US-PATENT-CLASS-360-9	c35 N76-16391	US-PATENT-CLASS-403-171	c31 N81-25258
US-PATENT-CLASS-360-10	c35 N76-16391	US-PATENT-CLASS-403-179	c27 N76-14264
US-PATENT-CLASS-360-25	c35 N77-17426	US-PATENT-CLASS-403-273	c37 N77-23482
US-PATENT-CLASS-360-26	c33 N76-18353	US-PATENT-CLASS-405-229	c44 N79-24432
US-PATENT-CLASS-360-31	c35 N77-17426	US-PATENT-CLASS-405-263	c44 N79-24432
US-PATENT-CLASS-360-35	c35 N76-16391	US-PATENT-CLASS-407-85	c37 N81-14319
US-PATENT-CLASS-360-51	c33 N76-18353	US-PATENT-CLASS-407-117	c37 N81-14319
US-PATENT-CLASS-360-101	c35 N76-16391	US-PATENT-CLASS-408-1R	c37 N81-14319
US-PATENT-CLASS-361-56	c33 N81-27397	US-PATENT-CLASS-408-80	c37 N74-25968
US-PATENT-CLASS-361-91	c33 N81-27397	US-PATENT-CLASS-408-111	c37 N74-25968
US-PATENT-CLASS-361-170	c33 N79-28415	US-PATENT-CLASS-408-112	c37 N75-25186
US-PATENT-CLASS-361-334	c35 N81-26431	US-PATENT-CLASS-408-137	c15 N71-33518
US-PATENT-CLASS-361-395	c32 N78-24391	US-PATENT-CLASS-408-186	c37 N75-25186
US-PATENT-CLASS-362-11	c74 N81-17886	US-PATENT-CLASS-408-193	c37 N75-25186
US-PATENT-CLASS-362-241	c74 N81-17886	US-PATENT-CLASS-408-195	c37 N75-25186
US-PATENT-CLASS-362-269	c17 N78-17140	US-PATENT-CLASS-414-1	c37 N80-14398
US-PATENT-CLASS-363-16	c33 N78-32341	US-PATENT-CLASS-414-1	c37 N81-14320
US-PATENT-CLASS-363-21	c33 N81-19392	US-PATENT-CLASS-414-4	c37 N79-28551
US-PATENT-CLASS-363-21	c33 N81-19393	US-PATENT-CLASS-414-4	c54 N81-26718
US-PATENT-CLASS-363-24	c33 N81-33404	US-PATENT-CLASS-414-6	c54 N79-24652
US-PATENT-CLASS-363-27	c44 N81-12542	US-PATENT-CLASS-414-730	c37 N81-27519
US-PATENT-CLASS-363-36	c33 N81-19393	US-PATENT-CLASS-414-735	c54 N81-26718
US-PATENT-CLASS-363-40	c33 N81-19393	US-PATENT-CLASS-414-744A	c54 N81-26718
US-PATENT-CLASS-363-47	c33 N81-19393	US-PATENT-CLASS-415-1	c34 N79-20335
US-PATENT-CLASS-363-53	c33 N77-30365	US-PATENT-CLASS-415-2	c44 N80-21828
US-PATENT-CLASS-363-56	c33 N79-24254	US-PATENT-CLASS-415-9	c44 N79-14527
US-PATENT-CLASS-363-56	c33 N81-14220	US-PATENT-CLASS-415-101	c44 N80-21828
US-PATENT-CLASS-363-56	c33 N81-33404	US-PATENT-CLASS-415-115	c07 N79-10057
US-PATENT-CLASS-363-57	c33 N78-10377	US-PATENT-CLASS-415-116	c07 N79-10057
US-PATENT-CLASS-363-60	c33 N78-32341	US-PATENT-CLASS-415-143	c34 N79-20335
US-PATENT-CLASS-363-60	c44 N81-12542	US-PATENT-CLASS-415-145	c07 N77-28118
US-PATENT-CLASS-363-70	c33 N77-30365	US-PATENT-CLASS-415-174	c37 N79-18318
US-PATENT-CLASS-363-71	c33 N79-24254	US-PATENT-CLASS-415-174	c37 N80-26658
US-PATENT-CLASS-363-71	c33 N79-24257	US-PATENT-CLASS-415-180	c07 N77-23106
US-PATENT-CLASS-363-71	c33 N81-14220	US-PATENT-CLASS-415-180	c37 N78-10467
US-PATENT-CLASS-363-78	c33 N81-14220	US-PATENT-CLASS-415-181	c07 N74-28226
US-PATENT-CLASS-363-89	c33 N78-10377	US-PATENT-CLASS-415-181	c07 N74-31270
US-PATENT-CLASS-363-95	c33 N79-24257	US-PATENT-CLASS-415-196	c37 N80-26658
US-PATENT-CLASS-363-97	c33 N79-24254	US-PATENT-CLASS-415-199	c05 N80-14107
US-PATENT-CLASS-363-101	c33 N78-32341	US-PATENT-CLASS-415-200	c07 N79-14096
US-PATENT-CLASS-363-101	c33 N81-19392	US-PATENT-CLASS-415-200	c37 N79-18318
US-PATENT-CLASS-363-134	c33 N79-24257	US-PATENT-CLASS-415-201	c07 N79-14096
US-PATENT-CLASS-363-147	c44 N81-12542	US-PATENT-CLASS-416-2	c44 N79-14527
US-PATENT-CLASS-364-106	c67 N81-19115	US-PATENT-CLASS-416-25	c05 N75-12930
US-PATENT-CLASS-364-120	c52 N79-12694	US-PATENT-CLASS-416-51	c05 N79-17847
US-PATENT-CLASS-364-200	c62 N81-24779	US-PATENT-CLASS-416-61	c35 N78-24515
US-PATENT-CLASS-364-200	c60 N81-27814	US-PATENT-CLASS-416-61	c37 N79-14382
US-PATENT-CLASS-364-300	c52 N79-12694	US-PATENT-CLASS-416-88	c05 N79-17847
US-PATENT-CLASS-364-415	c52 N79-12694	US-PATENT-CLASS-416-89	c05 N79-17847
US-PATENT-CLASS-364-417	c52 N75-10724	US-PATENT-CLASS-416-104	c05 N77-17029
US-PATENT-CLASS-364-431	c07 N81-19115	US-PATENT-CLASS-416-114	c05 N81-19087
US-PATENT-CLASS-364-434	c08 N79-23697	US-PATENT-CLASS-416-115	c02 N72-11018
US-PATENT-CLASS-364-434	c08 N81-24106	US-PATENT-CLASS-416-121	c02 N72-11018
US-PATENT-CLASS-364-453	c18 N81-29152	US-PATENT-CLASS-416-127	c02 N72-11018
US-PATENT-CLASS-364-458	c32 N79-14267	US-PATENT-CLASS-416-130	c02 N72-11018
US-PATENT-CLASS-364-510	c34 N81-26402	US-PATENT-CLASS-416-132R	c05 N79-17847
US-PATENT-CLASS-364-514	c33 N81-33405	US-PATENT-CLASS-416-135	c07 N77-32148
US-PATENT-CLASS-364-560	c43 N79-26439	US-PATENT-CLASS-416-135	c37 N78-10468
US-PATENT-CLASS-364-566	c18 N81-29152	US-PATENT-CLASS-416-138	c05 N77-17029
US-PATENT-CLASS-364-571	c34 N81-26402	US-PATENT-CLASS-416-138	c05 N79-17847
US-PATENT-CLASS-364-604	c32 N79-14267	US-PATENT-CLASS-416-141	c05 N77-17029
US-PATENT-CLASS-364-713	c32 N79-20297	US-PATENT-CLASS-416-141	c37 N78-10468
US-PATENT-CLASS-364-728	c32 N79-14267	US-PATENT-CLASS-416-144	c35 N78-24515
US-PATENT-CLASS-364-900	c52 N79-12694	US-PATENT-CLASS-416-149	c02 N72-11018
US-PATENT-CLASS-364-900	c60 N79-20751	US-PATENT-CLASS-416-153	c07 N77-14025
US-PATENT-CLASS-364-900	c60 N81-27814	US-PATENT-CLASS-416-157B	c07 N79-14095
US-PATENT-CLASS-365-120	c33 N81-29342	US-PATENT-CLASS-416-160	c07 N77-14025
US-PATENT-CLASS-367-26	c39 N80-10507	US-PATENT-CLASS-416-160	c07 N79-14095
US-PATENT-CLASS-367-27	c31 N80-32584	US-PATENT-CLASS-416-162	c07 N77-14025
US-PATENT-CLASS-367-36	c31 N80-32584	US-PATENT-CLASS-416-162	c07 N79-14095
US-PATENT-CLASS-367-57	c31 N80-32584	US-PATENT-CLASS-416-165	c07 N77-14025
US-PATENT-CLASS-368-47	c33 N81-14221	US-PATENT-CLASS-416-167	c07 N77-14025
US-PATENT-CLASS-370-58	c60 N81-27814	US-PATENT-CLASS-416-167	c07 N79-14095
US-PATENT-CLASS-370-85	c33 N81-14221	US-PATENT-CLASS-416-190	c07 N77-32148
US-PATENT-CLASS-371-20	c33 N81-26359	US-PATENT-CLASS-416-193A	c07 N77-32148
US-PATENT-CLASS-371-25	c33 N81-26359	US-PATENT-CLASS-416-200	c02 N72-11018
US-PATENT-CLASS-375-1	c32 N81-15179	US-PATENT-CLASS-416-214A	c07 N78-33101
US-PATENT-CLASS-375-1	c35 N81-19427	US-PATENT-CLASS-416-220R	c07 N77-27116
US-PATENT-CLASS-375-1	c33 N81-33405	US-PATENT-CLASS-416-220R	c37 N78-10468
US-PATENT-CLASS-375-34	c35 N81-19427	US-PATENT-CLASS-416-221	c07 N77-27116
US-PATENT-CLASS-375-54	c33 N81-15192	US-PATENT-CLASS-416-223	c07 N74-28226
US-PATENT-CLASS-375-58	c32 N81-15179	US-PATENT-CLASS-416-224	c24 N77-19170
US-PATENT-CLASS-375-67	c33 N81-15192	US-PATENT-CLASS-416-228	c05 N80-14107
US-PATENT-CLASS-375-99	c35 N81-19427	US-PATENT-CLASS-416-230	c24 N77-19170
US-PATENT-CLASS-375-104	c35 N81-19427	US-PATENT-CLASS-416-237	c07 N74-28226

US-PATENT-CLASS-416-238	c05 N80-14107	US-PATENT-CLASS-425-113	c15 N73-13464
US-PATENT-CLASS-416-241A	c07 N77-32148	US-PATENT-CLASS-425-128	c31 N74-32920
US-PATENT-CLASS-416-244A	c07 N78-33101	US-PATENT-CLASS-425-133	c15 N73-13464
US-PATENT-CLASS-416-248	c37 N78-10468	US-PATENT-CLASS-425-176	c15 N73-13464
US-PATENT-CLASS-416-500	c05 N81-19087	US-PATENT-CLASS-425-378R	c31 N81-15154
US-PATENT-CLASS-417-36	c35 N75-19611	US-PATENT-CLASS-425-405R	c31 N75-13111
US-PATENT-CLASS-417-50	c15 N71-27084	US-PATENT-CLASS-425-415	c31 N74-32920
US-PATENT-CLASS-417-52	c37 N74-27904	US-PATENT-CLASS-425-438	c31 N75-13111
US-PATENT-CLASS-417-88	c44 N78-32539	US-PATENT-CLASS-425-468	c31 N75-13111
US-PATENT-CLASS-417-138	c35 N75-19611	US-PATENT-CLASS-427-4	c51 N77-27677
US-PATENT-CLASS-417-141	c44 N76-29701	US-PATENT-CLASS-427-34	c34 N78-18355
US-PATENT-CLASS-417-152	c15 N72-22489	US-PATENT-CLASS-427-34	c24 N79-17916
US-PATENT-CLASS-417-207	c44 N76-29701	US-PATENT-CLASS-427-38	c74 N78-32854
US-PATENT-CLASS-417-209	c34 N76-17317	US-PATENT-CLASS-427-38	c27 N80-24437
US-PATENT-CLASS-417-209	c44 N76-29701	US-PATENT-CLASS-427-40	c27 N78-31233
US-PATENT-CLASS-417-225	c35 N78-10428	US-PATENT-CLASS-427-40	c27 N79-18052
US-PATENT-CLASS-417-379	c44 N76-29701	US-PATENT-CLASS-427-40	c27 N80-24437
US-PATENT-CLASS-417-383	c37 N80-31790	US-PATENT-CLASS-427-41	c27 N78-31233
US-PATENT-CLASS-417-391	c15 N73-24513	US-PATENT-CLASS-427-41	c74 N78-32854
US-PATENT-CLASS-417-395	c35 N75-19611	US-PATENT-CLASS-427-41	c27 N79-14214
US-PATENT-CLASS-417-470	c35 N74-15126	US-PATENT-CLASS-427-41	c27 N79-18052
US-PATENT-CLASS-417-471	c35 N74-15126	US-PATENT-CLASS-427-41	c27 N80-23452
US-PATENT-CLASS-422-3	c54 N81-24724	US-PATENT-CLASS-427-44	c74 N78-32854
US-PATENT-CLASS-422-9	c45 N80-14579	US-PATENT-CLASS-427-44	c27 N80-32516
US-PATENT-CLASS-422-27	c54 N81-24724	US-PATENT-CLASS-427-47	c44 N77-32583
US-PATENT-CLASS-422-30	c54 N81-24724	US-PATENT-CLASS-427-75	c44 N78-25527
US-PATENT-CLASS-422-34	c54 N81-24724	US-PATENT-CLASS-427-75	c44 N79-11468
US-PATENT-CLASS-422-41	c52 N79-14749	US-PATENT-CLASS-427-75	c44 N79-11472
US-PATENT-CLASS-422-48	c52 N79-14749	US-PATENT-CLASS-427-84	c44 N79-11472
US-PATENT-CLASS-422-52	c51 N80-16714	US-PATENT-CLASS-427-86	c44 N76-28635
US-PATENT-CLASS-422-68	c51 N80-27067	US-PATENT-CLASS-427-86	c44 N78-24609
US-PATENT-CLASS-422-109	c54 N81-24724	US-PATENT-CLASS-427-88	c44 N79-31752
US-PATENT-CLASS-422-167	c37 N80-10494	US-PATENT-CLASS-427-95	c25 N79-28253
US-PATENT-CLASS-422-199	c37 N80-10494	US-PATENT-CLASS-427-113	c44 N76-28635
US-PATENT-CLASS-422-208	c37 N80-10494	US-PATENT-CLASS-427-113	c44 N78-24609
US-PATENT-CLASS-422-224	c31 N80-18231	US-PATENT-CLASS-427-123	c44 N79-11472
US-PATENT-CLASS-422-235	c37 N80-10494	US-PATENT-CLASS-427-124	c37 N78-13436
US-PATENT-CLASS-422-242	c37 N80-10494	US-PATENT-CLASS-427-126	c37 N78-13436
US-PATENT-CLASS-422-246	c76 N80-32244	US-PATENT-CLASS-427-126	c44 N79-11472
US-PATENT-CLASS-422-246	c33 N81-19389	US-PATENT-CLASS-427-130	c44 N77-32583
US-PATENT-CLASS-422-249	c33 N81-19389	US-PATENT-CLASS-427-160	c34 N77-18382
US-PATENT-CLASS-423-1	c28 N81-15119	US-PATENT-CLASS-427-160	c44 N78-19599
US-PATENT-CLASS-423-33-5	c25 N79-28253	US-PATENT-CLASS-427-162	c12 N76-15189
US-PATENT-CLASS-423-131	c28 N81-15119	US-PATENT-CLASS-427-164	c27 N78-14164
US-PATENT-CLASS-423-149	c26 N80-14229	US-PATENT-CLASS-427-164	c27 N78-31233
US-PATENT-CLASS-423-231	c25 N74-12813	US-PATENT-CLASS-427-164	c74 N78-32854
US-PATENT-CLASS-423-242	c45 N79-12584	US-PATENT-CLASS-427-164	c27 N80-24437
US-PATENT-CLASS-423-249	c25 N76-27383	US-PATENT-CLASS-427-196	c27 N76-16229
US-PATENT-CLASS-423-293	c26 N80-14229	US-PATENT-CLASS-427-203	c27 N76-16229
US-PATENT-CLASS-423-345	c76 N76-25049	US-PATENT-CLASS-427-204	c27 N76-16229
US-PATENT-CLASS-423-345	c76 N79-23798	US-PATENT-CLASS-427-205	c27 N78-32260
US-PATENT-CLASS-423-346	c76 N76-25049	US-PATENT-CLASS-427-215	c27 N81-19296
US-PATENT-CLASS-423-348	c26 N80-14229	US-PATENT-CLASS-427-221	c25 N78-10225
US-PATENT-CLASS-423-350	c37 N80-10494	US-PATENT-CLASS-427-229	c37 N76-31524
US-PATENT-CLASS-423-350	c31 N80-18231	US-PATENT-CLASS-427-230	c37 N81-33482
US-PATENT-CLASS-423-352	c36 N76-18427	US-PATENT-CLASS-427-240	c27 N80-23452
US-PATENT-CLASS-423-407	c24 N76-14203	US-PATENT-CLASS-427-245	c44 N76-28635
US-PATENT-CLASS-423-417	c26 N80-14229	US-PATENT-CLASS-427-248	c37 N78-13436
US-PATENT-CLASS-423-446	c15 N73-19457	US-PATENT-CLASS-427-248E	c44 N78-24609
US-PATENT-CLASS-423-579	c46 N74-13011	US-PATENT-CLASS-427-248J	c44 N78-24609
US-PATENT-CLASS-423-581	c25 N79-10162	US-PATENT-CLASS-427-249	c44 N76-28635
US-PATENT-CLASS-423-582	c26 N78-32229	US-PATENT-CLASS-427-249	c44 N78-24609
US-PATENT-CLASS-423-583	c26 N78-32229	US-PATENT-CLASS-427-250	c12 N76-15189
US-PATENT-CLASS-423-625	c15 N73-19457	US-PATENT-CLASS-427-250	c44 N76-28635
US-PATENT-CLASS-423-625	c26 N80-14229	US-PATENT-CLASS-427-250	c37 N78-13436
US-PATENT-CLASS-423-644	c36 N76-18427	US-PATENT-CLASS-427-255	c37 N78-13436
US-PATENT-CLASS-423-648R	c44 N77-22607	US-PATENT-CLASS-427-261	c44 N78-25527
US-PATENT-CLASS-423-648R	c28 N78-24365	US-PATENT-CLASS-427-261	c44 N79-11472
US-PATENT-CLASS-423-648R	c28 N80-20402	US-PATENT-CLASS-427-270	c27 N76-16229
US-PATENT-CLASS-423-650	c28 N81-14103	US-PATENT-CLASS-427-275	c27 N76-16229
US-PATENT-CLASS-423-650	c44 N76-18642	US-PATENT-CLASS-427-287	c27 N76-16229
US-PATENT-CLASS-423-650	c44 N76-29700	US-PATENT-CLASS-427-292	c24 N79-17916
US-PATENT-CLASS-423-650	c44 N76-29704	US-PATENT-CLASS-427-294	c27 N79-14214
US-PATENT-CLASS-423-650	c44 N77-10636	US-PATENT-CLASS-427-302	c74 N78-32854
US-PATENT-CLASS-423-650	c28 N80-10374	US-PATENT-CLASS-427-322	c34 N77-18382
US-PATENT-CLASS-423-658.5	c28 N81-15119	US-PATENT-CLASS-427-322	c74 N78-32854
US-PATENT-CLASS-424-3	c51 N77-27677	US-PATENT-CLASS-427-327	c24 N79-17916
US-PATENT-CLASS-424-12	c25 N79-14169	US-PATENT-CLASS-427-328	c24 N79-17916
US-PATENT-CLASS-424-12	c51 N80-16715	US-PATENT-CLASS-427-343	c44 N79-11472
US-PATENT-CLASS-424-180	c52 N75-15270	US-PATENT-CLASS-427-350	c24 N79-25142
US-PATENT-CLASS-424-247	c52 N81-29764	US-PATENT-CLASS-427-355	c24 N79-17916
US-PATENT-CLASS-424-267	c52 N81-29764	US-PATENT-CLASS-427-372A	c24 N79-25142
US-PATENT-CLASS-424-274	c52 N81-14613	US-PATENT-CLASS-427-376	c27 N76-22377
US-PATENT-CLASS-424-274	c52 N81-29764	US-PATENT-CLASS-427-376	c27 N76-23426
US-PATENT-CLASS-425-DIG. 43	c31 N75-13111	US-PATENT-CLASS-427-376A	c27 N78-32260
US-PATENT-CLASS-425-6	c31 N81-33319	US-PATENT-CLASS-427-376B	c27 N78-32260
US-PATENT-CLASS-425-28B	c31 N74-32917	US-PATENT-CLASS-427-376B	c24 N79-17916
US-PATENT-CLASS-425-35	c31 N74-32917	US-PATENT-CLASS-427-376C	c24 N79-17916
US-PATENT-CLASS-425-77	c15 N72-20446	US-PATENT-CLASS-427-379	c27 N76-22377

US-PATENT-CLASS-427-379	c27	N76-23426	US-PATENT-CLASS-428-408	c27	N81-27272
US-PATENT-CLASS-427-379	c27	N78-32260	US-PATENT-CLASS-428-411	c27	N78-14164
US-PATENT-CLASS-427-379	c27	N81-19296	US-PATENT-CLASS-428-411	c27	N78-31233
US-PATENT-CLASS-427-380	c27	N76-22377	US-PATENT-CLASS-428-411	c27	N79-14214
US-PATENT-CLASS-427-380	c27	N76-23426	US-PATENT-CLASS-428-412	c27	N76-16230
US-PATENT-CLASS-427-380	c27	N78-32260	US-PATENT-CLASS-428-412	c27	N78-31233
US-PATENT-CLASS-427-385.5	c27	N81-14078	US-PATENT-CLASS-428-412	c74	N78-32854
US-PATENT-CLASS-427-385B	c44	N78-25530	US-PATENT-CLASS-428-412	c27	N79-18052
US-PATENT-CLASS-427-385C	c44	N78-25530	US-PATENT-CLASS-428-413	c27	N76-16230
US-PATENT-CLASS-427-386	c24	N78-27180	US-PATENT-CLASS-428-413	c15	N79-26100
US-PATENT-CLASS-427-387	c74	N78-32854	US-PATENT-CLASS-428-413	c24	N81-14000
US-PATENT-CLASS-427-388A	c24	N78-27180	US-PATENT-CLASS-428-414	c15	N79-26100
US-PATENT-CLASS-427-398A	c44	N79-11472	US-PATENT-CLASS-428-416	c27	N76-14264
US-PATENT-CLASS-427-399	c44	N79-11472	US-PATENT-CLASS-428-418	c24	N77-27188
US-PATENT-CLASS-427-402	c27	N76-22377	US-PATENT-CLASS-428-418	c15	N79-26100
US-PATENT-CLASS-427-402	c27	N76-23426	US-PATENT-CLASS-428-421	c34	N77-18382
US-PATENT-CLASS-427-405	c34	N78-18355	US-PATENT-CLASS-428-421	c15	N79-26100
US-PATENT-CLASS-427-419A	c34	N78-18355	US-PATENT-CLASS-428-421	c27	N80-24437
US-PATENT-CLASS-427-423	c34	N78-18355	US-PATENT-CLASS-428-422	c27	N78-31233
US-PATENT-CLASS-427-426	c27	N76-15310	US-PATENT-CLASS-428-425	c24	N77-28225
US-PATENT-CLASS-427-427	c24	N78-24290	US-PATENT-CLASS-428-426	c74	N78-15879
US-PATENT-CLASS-427-429	c27	N81-14078	US-PATENT-CLASS-428-427	c27	N78-32260
US-PATENT-CLASS-428-35	c34	N77-18382	US-PATENT-CLASS-428-428	c27	N76-22377
US-PATENT-CLASS-428-71	c24	N78-15180	US-PATENT-CLASS-428-428	c27	N76-23426
US-PATENT-CLASS-428-73	c24	N78-10214	US-PATENT-CLASS-428-428	c74	N78-15879
US-PATENT-CLASS-428-73	c24	N78-15180	US-PATENT-CLASS-428-428	c27	N78-32260
US-PATENT-CLASS-428-73	c24	N79-16915	US-PATENT-CLASS-428-446	c27	N78-32260
US-PATENT-CLASS-428-77	c27	N76-14264	US-PATENT-CLASS-428-447	c27	N76-14264
US-PATENT-CLASS-428-77	c27	N79-12221	US-PATENT-CLASS-428-447	c27	N76-16230
US-PATENT-CLASS-428-93	c34	N78-25350	US-PATENT-CLASS-428-447	c27	N78-31233
US-PATENT-CLASS-428-94	c34	N78-25350	US-PATENT-CLASS-428-447	c74	N78-32854
US-PATENT-CLASS-428-95	c34	N78-25350	US-PATENT-CLASS-428-447	c27	N79-12221
US-PATENT-CLASS-428-96	c34	N78-25350	US-PATENT-CLASS-428-447	c27	N79-18052
US-PATENT-CLASS-428-97	c34	N78-25350	US-PATENT-CLASS-428-447	c24	N79-25142
US-PATENT-CLASS-428-109	c27	N76-14264	US-PATENT-CLASS-428-450	c27	N76-16229
US-PATENT-CLASS-428-109	c33	N79-12331	US-PATENT-CLASS-428-450	c27	N76-22377
US-PATENT-CLASS-428-113	c24	N81-14000	US-PATENT-CLASS-428-450	c27	N76-23426
US-PATENT-CLASS-428-114	c24	N81-13999	US-PATENT-CLASS-428-450	c27	N79-12221
US-PATENT-CLASS-428-114	c24	N81-14000	US-PATENT-CLASS-428-451	c27	N79-18052
US-PATENT-CLASS-428-116	c24	N78-10214	US-PATENT-CLASS-428-457	c27	N76-16229
US-PATENT-CLASS-428-116	c24	N78-17149	US-PATENT-CLASS-428-457	c24	N77-27188
US-PATENT-CLASS-428-117	c37	N76-24575	US-PATENT-CLASS-428-457	c24	N77-28225
US-PATENT-CLASS-428-117	c24	N78-15180	US-PATENT-CLASS-428-458	c24	N77-28225
US-PATENT-CLASS-428-117	c24	N79-16915	US-PATENT-CLASS-428-458	c24	N79-16915
US-PATENT-CLASS-428-119	c24	N79-16915	US-PATENT-CLASS-428-461	c34	N77-18382
US-PATENT-CLASS-428-133	c37	N79-10422	US-PATENT-CLASS-428-469	c27	N76-16229
US-PATENT-CLASS-428-137	c24	N79-25142	US-PATENT-CLASS-428-471	c26	N81-25188
US-PATENT-CLASS-428-138	c24	N78-10214	US-PATENT-CLASS-428-473.5	c27	N81-14078
US-PATENT-CLASS-428-139	c23	N81-29160	US-PATENT-CLASS-428-473.5	c27	N81-29229
US-PATENT-CLASS-428-140	c24	N81-14000	US-PATENT-CLASS-428-474	c34	N77-18382
US-PATENT-CLASS-428-141	c24	N77-28225	US-PATENT-CLASS-428-474	c27	N79-33316
US-PATENT-CLASS-428-161	c24	N77-28225	US-PATENT-CLASS-428-474	c27	N80-24437
US-PATENT-CLASS-428-189	c27	N79-12221	US-PATENT-CLASS-428-480	c24	N81-14000
US-PATENT-CLASS-428-212	c27	N76-14264	US-PATENT-CLASS-428-500	c27	N80-32516
US-PATENT-CLASS-428-212	c27	N79-12221	US-PATENT-CLASS-428-515	c27	N78-31233
US-PATENT-CLASS-428-214	c27	N76-14264	US-PATENT-CLASS-428-522	c27	N78-14164
US-PATENT-CLASS-428-220	c15	N79-26100	US-PATENT-CLASS-428-523	c27	N78-31233
US-PATENT-CLASS-428-247	c33	N79-12331	US-PATENT-CLASS-428-528	c24	N81-13999
US-PATENT-CLASS-428-258	c33	N79-12331	US-PATENT-CLASS-428-538	c27	N76-22377
US-PATENT-CLASS-428-259	c33	N79-12331	US-PATENT-CLASS-428-538	c27	N76-23426
US-PATENT-CLASS-428-260	c27	N81-27272	US-PATENT-CLASS-428-538	c27	N78-31233
US-PATENT-CLASS-428-280	c27	N79-12221	US-PATENT-CLASS-428-539	c27	N76-16229
US-PATENT-CLASS-428-282	c24	N79-25142	US-PATENT-CLASS-428-541	c24	N81-13999
US-PATENT-CLASS-428-285	c27	N79-12221	US-PATENT-CLASS-428-629	c44	N80-16452
US-PATENT-CLASS-428-286	c27	N79-12221	US-PATENT-CLASS-428-632	c26	N81-25188
US-PATENT-CLASS-428-290	c24	N78-15180	US-PATENT-CLASS-428-633	c34	N78-18355
US-PATENT-CLASS-428-290	c24	N79-25142	US-PATENT-CLASS-428-650	c44	N80-16452
US-PATENT-CLASS-428-294	c24	N78-17150	US-PATENT-CLASS-428-652	c34	N78-18355
US-PATENT-CLASS-428-301	c24	N77-27188	US-PATENT-CLASS-428-652	c44	N78-19599
US-PATENT-CLASS-428-302	c24	N78-17150	US-PATENT-CLASS-428-658	c44	N80-16452
US-PATENT-CLASS-428-303	c27	N76-15310	US-PATENT-CLASS-428-667	c34	N78-18355
US-PATENT-CLASS-428-312	c27	N78-32260	US-PATENT-CLASS-428-667	c44	N78-19599
US-PATENT-CLASS-428-313	c24	N78-27180	US-PATENT-CLASS-428-675	c44	N80-16452
US-PATENT-CLASS-428-325	c27	N78-32260	US-PATENT-CLASS-428-678	c26	N81-25188
US-PATENT-CLASS-428-328	c24	N77-27188	US-PATENT-CLASS-428-679	c44	N78-19599
US-PATENT-CLASS-428-331	c27	N78-32260	US-PATENT-CLASS-428-679	c26	N81-25188
US-PATENT-CLASS-428-332	c27	N76-22377	US-PATENT-CLASS-428-680	c44	N80-16452
US-PATENT-CLASS-428-332	c27	N76-23426	US-PATENT-CLASS-428-680	c26	N81-25188
US-PATENT-CLASS-428-332	c24	N78-27180	US-PATENT-CLASS-428-902	c24	N77-27188
US-PATENT-CLASS-428-332	c27	N79-12221	US-PATENT-CLASS-428-902	c24	N78-10214
US-PATENT-CLASS-428-332	c24	N79-25142	US-PATENT-CLASS-428-902	c24	N78-17149
US-PATENT-CLASS-428-334	c74	N78-15879	US-PATENT-CLASS-428-902	c24	N81-14000
US-PATENT-CLASS-428-336	c74	N78-15879	US-PATENT-CLASS-428-902	c31	N81-25258
US-PATENT-CLASS-428-341	c27	N78-32260	US-PATENT-CLASS-428-902	c27	N81-27272
US-PATENT-CLASS-428-366	c24	N79-24062	US-PATENT-CLASS-428-911	c27	N76-16230
US-PATENT-CLASS-428-367	c27	N81-27272	US-PATENT-CLASS-428-911	c24	N77-27188
US-PATENT-CLASS-428-368	c24	N77-27188	US-PATENT-CLASS-428-913	c34	N78-25350
US-PATENT-CLASS-428-375	c24	N79-16915	US-PATENT-CLASS-428-920	c27	N76-16230
US-PATENT-CLASS-428-406	c27	N78-32260	US-PATENT-CLASS-428-920	c27	N76-22377

US-PATENT-CLASS-428-920	c27	N76-23426	US-PATENT-CLASS-455-619	c32	N81-14186
US-PATENT-CLASS-428-920	c24	N78-15180	US-PATENT-CLASS-467-28	c39	N80-10507
US-PATENT-CLASS-428-920	c27	N78-32260	US-PATENT-CLASS-474-205	c37	N80-32717
US-PATENT-CLASS-428-920	c27	N79-12221	US-PATENT-CLASS-521-27	c27	N81-14076
US-PATENT-CLASS-428-920	c24	N79-25142	US-PATENT-CLASS-521-32	c27	N81-14076
US-PATENT-CLASS-428-920	c15	N79-26100	US-PATENT-CLASS-521-55	c25	N80-23383
US-PATENT-CLASS-428-920	c27	N81-27272	US-PATENT-CLASS-521-62	c27	N81-14076
US-PATENT-CLASS-428-921	c27	N76-16230	US-PATENT-CLASS-521-124	c25	N80-16116
US-PATENT-CLASS-428-921	c24	N78-27180	US-PATENT-CLASS-521-125	c25	N80-16116
US-PATENT-CLASS-428-921	c24	N81-13999	US-PATENT-CLASS-521-127	c25	N80-16116
US-PATENT-CLASS-428-922	c27	N78-14164	US-PATENT-CLASS-521-146	c25	N80-23383
US-PATENT-CLASS-429-13	c44	N79-10513	US-PATENT-CLASS-521-157	c25	N80-16116
US-PATENT-CLASS-429-15	c44	N79-26474	US-PATENT-CLASS-521-918	c25	N80-23383
US-PATENT-CLASS-429-23	c44	N77-14581	US-PATENT-CLASS-525-4	c25	N80-23383
US-PATENT-CLASS-429-27	c27	N81-24257	US-PATENT-CLASS-525-56	c23	N81-29160
US-PATENT-CLASS-429-27	c23	N81-29160	US-PATENT-CLASS-525-61	c27	N81-24257
US-PATENT-CLASS-429-28	c27	N81-24257	US-PATENT-CLASS-525-61	c23	N81-29160
US-PATENT-CLASS-429-28	c23	N81-29160	US-PATENT-CLASS-525-326	c27	N80-24438
US-PATENT-CLASS-429-33	c44	N79-17313	US-PATENT-CLASS-525-336	c27	N80-24438
US-PATENT-CLASS-429-34	c44	N77-14581	US-PATENT-CLASS-525-340	c27	N80-24438
US-PATENT-CLASS-429-41	c44	N79-10513	US-PATENT-CLASS-525-374	c27	N80-24438
US-PATENT-CLASS-429-42	c44	N79-10513	US-PATENT-CLASS-525-375	c27	N80-24438
US-PATENT-CLASS-429-94	c44	N81-24521	US-PATENT-CLASS-525-384	c28	N81-15119
US-PATENT-CLASS-429-101	c44	N79-17313	US-PATENT-CLASS-525-426	c27	N80-26446
US-PATENT-CLASS-429-101	c44	N79-26474	US-PATENT-CLASS-526-1	c27	N76-24405
US-PATENT-CLASS-429-101	c33	N80-20487	US-PATENT-CLASS-526-7	c44	N79-25481
US-PATENT-CLASS-429-105	c44	N77-22606	US-PATENT-CLASS-526-9	c44	N79-25481
US-PATENT-CLASS-429-105	c33	N80-20487	US-PATENT-CLASS-526-13	c27	N78-32256
US-PATENT-CLASS-429-107	c44	N77-22606	US-PATENT-CLASS-526-23	c27	N78-32256
US-PATENT-CLASS-429-107	c33	N80-20487	US-PATENT-CLASS-526-27	c27	N78-32256
US-PATENT-CLASS-429-109	c33	N80-20487	US-PATENT-CLASS-526-49	c27	N78-32256
US-PATENT-CLASS-429-120	c44	N81-24521	US-PATENT-CLASS-526-50	c27	N78-32256
US-PATENT-CLASS-429-139	c27	N80-32516	US-PATENT-CLASS-526-88	c25	N81-19242
US-PATENT-CLASS-429-139	c27	N81-24257	US-PATENT-CLASS-526-193	c27	N78-15276
US-PATENT-CLASS-429-160	c44	N81-24521	US-PATENT-CLASS-526-201	c25	N81-19242
US-PATENT-CLASS-429-164	c44	N81-24521	US-PATENT-CLASS-526-225	c27	N78-15276
US-PATENT-CLASS-429-190	c44	N77-22606	US-PATENT-CLASS-526-255	c27	N76-24405
US-PATENT-CLASS-429-249	c27	N81-24257	US-PATENT-CLASS-526-261	c27	N80-24438
US-PATENT-CLASS-429-249	c23	N81-29160	US-PATENT-CLASS-526-262	c27	N81-27272
US-PATENT-CLASS-429-253	c44	N79-25481	US-PATENT-CLASS-526-275	c27	N78-32256
US-PATENT-CLASS-429-253	c27	N81-24257	US-PATENT-CLASS-526-275	c27	N80-24438
US-PATENT-CLASS-429-253	c23	N81-29160	US-PATENT-CLASS-526-276	c27	N78-32256
US-PATENT-CLASS-429-254	c44	N78-25530	US-PATENT-CLASS-526-276	c27	N80-24438
US-PATENT-CLASS-430-271	c27	N81-25209	US-PATENT-CLASS-526-278	c27	N78-32256
US-PATENT-CLASS-430-325	c27	N81-25209	US-PATENT-CLASS-526-278	c27	N80-24438
US-PATENT-CLASS-430-329	c27	N81-25209	US-PATENT-CLASS-526-914	c28	N81-15119
US-PATENT-CLASS-430-330	c27	N81-25209	US-PATENT-CLASS-528-4	c27	N81-27271
US-PATENT-CLASS-431-2	c07	N81-29129	US-PATENT-CLASS-528-6	c27	N81-27271
US-PATENT-CLASS-431-4	c44	N76-29704	US-PATENT-CLASS-528-73	c25	N80-16116
US-PATENT-CLASS-431-7	c34	N78-27357	US-PATENT-CLASS-528-118	c27	N81-17260
US-PATENT-CLASS-431-9	c23	N73-30665	US-PATENT-CLASS-528-126	c27	N79-28307
US-PATENT-CLASS-431-10	c34	N78-27357	US-PATENT-CLASS-528-127	c27	N79-28307
US-PATENT-CLASS-431-10	c25	N79-11151	US-PATENT-CLASS-528-128	c27	N79-28307
US-PATENT-CLASS-431-11	c44	N77-10636	US-PATENT-CLASS-528-168	c27	N81-27271
US-PATENT-CLASS-431-41	c44	N77-10636	US-PATENT-CLASS-528-207	c27	N80-16158
US-PATENT-CLASS-431-116	c44	N77-10636	US-PATENT-CLASS-528-208	c27	N80-16158
US-PATENT-CLASS-431-158	c25	N78-10224	US-PATENT-CLASS-528-221	c27	N79-28307
US-PATENT-CLASS-431-162	c44	N77-10636	US-PATENT-CLASS-528-222	c27	N81-29229
US-PATENT-CLASS-431-163	c44	N76-29704	US-PATENT-CLASS-528-223	c27	N79-28307
US-PATENT-CLASS-431-170	c44	N77-10636	US-PATENT-CLASS-528-225	c27	N79-28307
US-PATENT-CLASS-431-173	c23	N73-30665	US-PATENT-CLASS-528-227	c27	N79-28307
US-PATENT-CLASS-431-202	c25	N74-33378	US-PATENT-CLASS-528-228	c27	N81-27272
US-PATENT-CLASS-431-208	c25	N79-11151	US-PATENT-CLASS-528-229	c27	N79-28307
US-PATENT-CLASS-431-210	c44	N76-29704	US-PATENT-CLASS-528-229	c27	N79-33316
US-PATENT-CLASS-431-328	c34	N78-27357	US-PATENT-CLASS-528-229	c27	N81-29229
US-PATENT-CLASS-431-352	c28	N71-28915	US-PATENT-CLASS-528-310	c27	N81-17262
US-PATENT-CLASS-431-352	c25	N78-10224	US-PATENT-CLASS-528-310	c27	N81-24256
US-PATENT-CLASS-432-29	c25	N79-11151	US-PATENT-CLASS-528-322	c27	N81-17260
US-PATENT-CLASS-432-223	c25	N79-11151	US-PATENT-CLASS-528-331	c27	N79-28307
US-PATENT-CLASS-432-264	c33	N81-19389	US-PATENT-CLASS-528-336	c27	N79-28307
US-PATENT-CLASS-434-59	c54	N81-27067	US-PATENT-CLASS-528-337	c27	N79-28307
US-PATENT-CLASS-435-3	c51	N80-27067	US-PATENT-CLASS-528-338	c27	N79-28307
US-PATENT-CLASS-435-5	c51	N81-28698	US-PATENT-CLASS-528-342	c27	N79-28307
US-PATENT-CLASS-435-32	c51	N80-27067	US-PATENT-CLASS-528-353	c27	N81-19296
US-PATENT-CLASS-435-34	c51	N80-16714	US-PATENT-CLASS-528-362	c25	N81-14016
US-PATENT-CLASS-435-34	c51	N80-27067	US-PATENT-CLASS-528-362	c27	N81-17259
US-PATENT-CLASS-435-34	c51	N81-28698	US-PATENT-CLASS-528-362	c27	N81-17262
US-PATENT-CLASS-435-38	c51	N80-27067	US-PATENT-CLASS-528-399	c27	N81-27271
US-PATENT-CLASS-435-39	c51	N80-27067	US-PATENT-CLASS-528-401	c27	N79-22300
US-PATENT-CLASS-435-289	c51	N80-27067	US-PATENT-CLASS-528-401	c25	N81-14016
US-PATENT-CLASS-435-290	c51	N80-27067	US-PATENT-CLASS-528-401	c27	N81-17259
US-PATENT-CLASS-435-291	c51	N80-27067	US-PATENT-CLASS-528-401	c27	N81-17262
US-PATENT-CLASS-435-291	c51	N81-28698	US-PATENT-CLASS-528-422	c27	N79-22300
US-PATENT-CLASS-435-311	c51	N80-27067	US-PATENT-CLASS-528-422	c25	N81-14016
US-PATENT-CLASS-435-316	c51	N80-27067	US-PATENT-CLASS-528-422	c27	N81-17259
US-PATENT-CLASS-455-51	c32	N81-14186	US-PATENT-CLASS-528-422	c27	N81-17262
US-PATENT-CLASS-455-71	c32	N81-14186	US-PATENT-CLASS-528-423	c27	N81-17259
US-PATENT-CLASS-455-102	c33	N81-15192	US-PATENT-CLASS-528-481	c27	N80-24438
US-PATENT-CLASS-455-278	c32	N81-29308	US-PATENT-CLASS-536-56	c27	N77-30236

US-PATENT-CLASS-536-58	c27	N77-30236	US-PATENT-3,093,346	c31	N70-37938
US-PATENT-CLASS-536-84	c27	N77-30236	US-PATENT-3,098,630	c02	N70-37939
US-PATENT-CLASS-536-105	c27	N77-30236	US-PATENT-3,100,294	c09	N70-38998
US-PATENT-CLASS-536-536-85	c27	N77-30236	US-PATENT-3,100,990	c14	N70-34813
US-PATENT-CLASS-538-117	c27	N81-17260	US-PATENT-3,102,948	c15	N70-34814
US-PATENT-CLASS-544-193	c27	N78-15276	US-PATENT-3,104,079	c31	N70-37986
US-PATENT-CLASS-544-193	c27	N79-28307	US-PATENT-3,104,082	c02	N70-38011
US-PATENT-CLASS-544-155	c27	N78-32256	US-PATENT-3,105,515	c15	N70-38603
US-PATENT-CLASS-564-229	c27	N81-24256	US-PATENT-3,106,603	c09	N70-38201
US-PATENT-CLASS-568-852	c27	N80-32514	US-PATENT-3,108,171	c33	N70-34812
US-PATENT-CLASS-568-861	c27	N80-32514	US-PATENT-3,110,318	c12	N70-38997
US-PATENT-CLASS-788-704	c36	N79-18307	US-PATENT-3,112,672	c11	N70-38202
US-PATENT-CLASS-859R	c27	N81-15104	US-PATENT-3,115,630	c31	N70-37981
US-PATENT-CLASS-2041-195B	c25	N79-22235	US-PATENT-3,118,100	c03	N71-29129
US-PATENT-CLASS-6554	c35	N77-24455	US-PATENT-3,119,086	c35	N79-33449
US-PATENT-CLASS-6564	c35	N77-24455	US-PATENT-3,119,232	c28	N70-37980
US-PATENT-DES-228,688	c05	N74-10907	US-PATENT-3,120,101	c28	N70-34860
US-PATENT-RE-26,548	c07	N71-12389	US-PATENT-3,120,361	c31	N70-38010
US-PATENT-RE-28,921	c52	N76-30793	US-PATENT-3,120,738	c28	N70-38249
US-PATENT-2,837,706	c15	N71-28952	US-PATENT-3,121,309	c28	N70-35381
US-PATENT-2,898,889	c02	N71-29128	US-PATENT-3,122,000	c15	N70-38020
US-PATENT-2,903,307	c15	N71-29136	US-PATENT-3,122,098	c28	N70-38181
US-PATENT-2,926,123	c33	N71-29151	US-PATENT-3,122,885	c28	N70-38710
US-PATENT-2,934,331	c15	N70-33382	US-PATENT-3,123,248	c11	N70-38182
US-PATENT-2,940,259	c28	N70-33241	US-PATENT-3,123,418	c37	N79-33467
US-PATENT-2,944,316	c15	N71-16076	US-PATENT-3,123,692	c33	N79-33393
US-PATENT-2,945,667	c15	N70-33376	US-PATENT-3,127,157	c15	N70-38225
US-PATENT-2,956,772	c33	N71-29152	US-PATENT-3,128,389	c09	N70-38604
US-PATENT-2,960,002	c14	N70-41946	US-PATENT-3,128,845	c15	N70-38601
US-PATENT-2,971,837	c17	N70-33283	US-PATENT-3,130,940	c33	N70-33344
US-PATENT-2,974,925	c28	N70-33372	US-PATENT-3,131,040	c37	N79-21345
US-PATENT-2,984,735	c11	N70-33329	US-PATENT-3,132,342	c07	N70-38200
US-PATENT-2,991,671	c15	N70-33330	US-PATENT-3,132,476	c28	N70-34294
US-PATENT-2,991,961	c02	N70-33332	US-PATENT-3,132,479	c15	N71-28951
US-PATENT-2,996,212	c31	N71-17680	US-PATENT-3,132,903	c15	N70-38620
US-PATENT-2,997,274	c28	N71-29154	US-PATENT-3,134,389	c37	N79-33468
US-PATENT-3,001,363	c28	N70-33331	US-PATENT-3,135,089	c28	N70-38504
US-PATENT-3,001,395	c14	N70-33386	US-PATENT-3,135,090	c28	N70-38505
US-PATENT-3,001,739	c03	N70-33343	US-PATENT-3,136,123	c28	N70-38199
US-PATENT-3,004,189	c37	N75-29426	US-PATENT-3,136,837	c17	N70-38198
US-PATENT-3,004,735	c14	N70-33322	US-PATENT-3,139,725	c28	N70-38645
US-PATENT-3,005,081	c09	N70-33312	US-PATENT-3,140,728	c15	N70-36908
US-PATENT-3,005,339	c11	N70-33287	US-PATENT-3,141,340	c11	N70-38196
US-PATENT-3,008,229	c15	N70-33311	US-PATENT-3,141,769	c28	N70-38197
US-PATENT-3,010,372	c15	N70-33180	US-PATENT-3,141,932	c03	N70-38713
US-PATENT-3,011,760	c15	N70-33226	US-PATENT-3,143,321	c15	N70-34850
US-PATENT-3,012,400	c28	N70-33374	US-PATENT-3,143,651	c14	N70-40240
US-PATENT-3,012,407	c15	N70-33323	US-PATENT-3,144,219	c31	N70-38676
US-PATENT-3,016,693	c28	N70-33356	US-PATENT-3,144,999	c02	N70-34856
US-PATENT-3,016,863	c12	N70-33305	US-PATENT-3,145,874	c11	N71-15960
US-PATENT-3,022,672	c14	N70-34816	US-PATENT-3,147,422	c09	N70-38712
US-PATENT-3,024,659	c14	N70-34820	US-PATENT-3,149,897	c09	N70-36494
US-PATENT-3,028,122	c02	N70-33286	US-PATENT-3,150,329	c09	N70-38995
US-PATENT-3,028,126	c21	N70-33279	US-PATENT-3,150,387	c03	N70-36778
US-PATENT-3,028,128	c31	N70-33242	US-PATENT-3,152,344	c05	N70-36493
US-PATENT-3,035,333	c28	N70-41618	US-PATENT-3,155,992	c05	N70-34857
US-PATENT-3,038,077	c21	N70-33181	US-PATENT-3,156,090	c28	N70-37245
US-PATENT-3,038,175	c05	N70-33285	US-PATENT-3,157,529	c18	N70-36400
US-PATENT-3,041,587	c14	N70-33179	US-PATENT-3,158,172	c15	N70-34817
US-PATENT-3,041,924	c14	N70-33254	US-PATENT-3,158,336	c31	N70-36410
US-PATENT-3,045,424	c28	N70-40367	US-PATENT-3,158,764	c03	N70-36803
US-PATENT-3,049,876	c28	N70-33284	US-PATENT-3,159,967	c28	N70-36802
US-PATENT-3,053,484	c02	N70-33255	US-PATENT-3,160,825	c14	N70-35220
US-PATENT-3,057,597	c15	N70-33264	US-PATENT-3,160,950	c15	N70-36409
US-PATENT-3,059,220	c09	N70-33182	US-PATENT-3,162,012	c15	N70-36411
US-PATENT-3,063,291	c11	N70-33278	US-PATENT-3,163,935	c14	N70-36907
US-PATENT-3,064,928	c02	N70-33266	US-PATENT-3,164,222	c15	N70-34861
US-PATENT-3,067,573	c28	N70-39899	US-PATENT-3,164,369	c15	N70-36412
US-PATENT-3,068,658	c15	N70-34247	US-PATENT-3,165,356	c05	N70-35152
US-PATENT-3,069,123	c14	N70-39898	US-PATENT-3,166,834	c15	N70-36901
US-PATENT-3,070,330	c21	N70-34539	US-PATENT-3,167,426	c17	N70-36616
US-PATENT-3,070,349	c28	N70-39895	US-PATENT-3,168,827	c14	N70-36807
US-PATENT-3,070,407	c15	N70-39896	US-PATENT-3,169,001	c02	N70-36825
US-PATENT-3,072,574	c18	N70-39897	US-PATENT-3,169,613	c15	N70-36947
US-PATENT-3,076,065	c09	N70-39915	US-PATENT-3,169,725	c31	N70-34296
US-PATENT-3,077,599	c07	N70-40202	US-PATENT-3,170,286	c15	N70-36535
US-PATENT-3,079,113	c02	N70-38009	US-PATENT-3,170,290	c28	N70-36910
US-PATENT-3,080,711	c28	N70-38711	US-PATENT-3,170,295	c27	N71-28929
US-PATENT-3,083,611	c21	N70-35427	US-PATENT-3,170,324	c14	N70-36824
US-PATENT-3,084,421	c17	N70-38490	US-PATENT-3,170,471	c32	N70-36536
US-PATENT-3,085,165	c09	N70-34819	US-PATENT-3,170,486	c15	N70-36492
US-PATENT-3,087,692	c02	N70-34178	US-PATENT-3,170,605	c15	N70-38996
US-PATENT-3,088,441	c15	N70-35409	US-PATENT-3,170,657	c02	N70-34858
US-PATENT-3,090,212	c33	N70-37979	US-PATENT-3,170,660	c02	N70-36804
US-PATENT-3,090,580	c31	N70-37924	US-PATENT-3,170,773	c17	N70-33288
US-PATENT-3,093,000	c15	N70-37925	US-PATENT-3,171,060	c25	N70-33267
			US-PATENT-3,171,081	c14	N70-35666
			US-PATENT-3,172,097	c08	N70-35423
			US-PATENT-3,173,246	c28	N70-33265



US-PATENT-3,173,251	.....	c28 N70-33375	US-PATENT-3,221,547	.....	c14 N70-40201
US-PATENT-3,173,801	.....	c32 N79-19186	US-PATENT-3,221,549	.....	c14 N70-40157
US-PATENT-3,174,278	.....	c25 N70-36946	US-PATENT-3,223,374	.....	c15 N70-40156
US-PATENT-3,174,279	.....	c28 N70-36806	US-PATENT-3,224,001	.....	c07 N70-40063
US-PATENT-3,174,827	.....	c26 N70-36805	US-PATENT-3,224,173	.....	c15 N70-40062
US-PATENT-3,175,789	.....	c31 N70-36654	US-PATENT-3,224,263	.....	c15 N70-40160
US-PATENT-3,176,222	.....	c14 N70-36618	US-PATENT-3,224,336	.....	c30 N70-40353
US-PATENT-3,176,499	.....	c14 N70-35368	US-PATENT-3,224,337	.....	c09 N79-21084
US-PATENT-3,176,933	.....	c33 N70-36617	US-PATENT-3,228,492	.....	c15 N70-40354
US-PATENT-3,177,933	.....	c33 N70-36647	US-PATENT-3,228,558	.....	c14 N70-40233
US-PATENT-3,178,883	.....	c21 N70-36538	US-PATENT-3,229,099	.....	c14 N70-40238
US-PATENT-3,180,264	.....	c33 N70-36846	US-PATENT-3,229,102	.....	c14 N70-40239
US-PATENT-3,180,587	.....	c21 N70-36943	US-PATENT-3,229,139	.....	c28 N70-39925
US-PATENT-3,181,821	.....	c31 N70-36645	US-PATENT-3,229,155	.....	c25 N70-41628
US-PATENT-3,182,496	.....	c11 N70-36913	US-PATENT-3,229,463	.....	c28 N70-39931
US-PATENT-3,183,506	.....	c07 N70-36911	US-PATENT-3,229,568	.....	c14 N70-40003
US-PATENT-3,185,023	.....	c14 N70-34298	US-PATENT-3,229,636	.....	c03 N70-39930
US-PATENT-3,187,583	.....	c11 N70-38675	US-PATENT-3,229,682	.....	c09 N70-40234
US-PATENT-3,188,472	.....	c21 N70-34297	US-PATENT-3,229,689	.....	c05 N70-39922
US-PATENT-3,188,844	.....	c15 N70-34249	US-PATENT-3,229,884	.....	c15 N70-39924
US-PATENT-3,189,299	.....	c21 N70-34295	US-PATENT-3,229,905	.....	c04 N78-17031
US-PATENT-3,189,535	.....	c15 N70-34567	US-PATENT-3,229,930	.....	c30 N70-40016
US-PATENT-3,189,726	.....	c33 N70-34545	US-PATENT-3,230,053	.....	c26 N70-40015
US-PATENT-3,189,784	.....	c33 N75-27250	US-PATENT-3,233,862	.....	c37 N79-33469
US-PATENT-3,189,794	.....	c09 N70-34502	US-PATENT-3,236,066	.....	c15 N71-28959
US-PATENT-3,189,864	.....	c09 N70-34596	US-PATENT-3,237,253	.....	c15 N71-15966
US-PATENT-3,190,124	.....	c35 N79-33450	US-PATENT-3,238,345	.....	c11 N71-15925
US-PATENT-3,191,316	.....	c31 N70-34966	US-PATENT-3,238,413	.....	c25 N71-29184
US-PATENT-3,191,379	.....	c27 N70-35534	US-PATENT-3,238,715	.....	c28 N71-14043
US-PATENT-3,191,907	.....	c15 N70-34559	US-PATENT-3,238,730	.....	c03 N71-12260
US-PATENT-3,192,730	.....	c06 N70-34946	US-PATENT-3,238,774	.....	c14 N71-14996
US-PATENT-3,193,883	.....	c27 N70-34783	US-PATENT-3,238,777	.....	c14 N71-15598
US-PATENT-3,194,060	.....	c14 N70-34794	US-PATENT-3,239,660	.....	c23 N71-30292
US-PATENT-3,194,525	.....	c11 N70-35383	US-PATENT-3,242,716	.....	c14 N71-15992
US-PATENT-3,194,951	.....	c08 N70-34778	US-PATENT-3,243,154	.....	c23 N71-15673
US-PATENT-3,196,261	.....	c08 N70-34787	US-PATENT-3,243,791	.....	c07 N71-11298
US-PATENT-3,196,362	.....	c09 N70-35440	US-PATENT-3,244,943	.....	c15 N73-28516
US-PATENT-3,196,557	.....	c11 N70-34815	US-PATENT-3,249,012	.....	c03 N71-12258
US-PATENT-3,196,558	.....	c14 N70-35394	US-PATENT-3,249,013	.....	c03 N71-12259
US-PATENT-3,196,598	.....	c28 N70-34788	US-PATENT-3,251,053	.....	c08 N71-12501
US-PATENT-3,196,675	.....	c14 N70-34818	US-PATENT-3,252,100	.....	c10 N71-28960
US-PATENT-3,196,690	.....	c11 N70-34786	US-PATENT-3,254,395	.....	c28 N71-15658
US-PATENT-3,197,616	.....	c14 N71-28558	US-PATENT-3,254,487	.....	c28 N71-15659
US-PATENT-3,198,955	.....	c08 N70-34743	US-PATENT-3,257,780	.....	c15 N71-15968
US-PATENT-3,198,994	.....	c26 N73-28710	US-PATENT-3,258,582	.....	c02 N71-13421
US-PATENT-3,199,340	.....	c14 N70-34799	US-PATENT-3,258,687	.....	c14 N71-15962
US-PATENT-3,199,343	.....	c11 N70-34844	US-PATENT-3,258,831	.....	c15 N71-15986
US-PATENT-3,199,931	.....	c15 N70-34664	US-PATENT-3,258,912	.....	c27 N71-15634
US-PATENT-3,200,706	.....	c03 N70-34667	US-PATENT-3,258,918	.....	c27 N71-15635
US-PATENT-3,201,560	.....	c33 N70-34540	US-PATENT-3,260,055	.....	c23 N71-15467
US-PATENT-3,201,635	.....	c25 N70-34661	US-PATENT-3,260,204	.....	c31 N71-15692
US-PATENT-3,201,980	.....	c14 N70-40203	US-PATENT-3,260,326	.....	c11 N71-28779
US-PATENT-3,202,381	.....	c31 N70-34176	US-PATENT-3,261,210	.....	c14 N71-15969
US-PATENT-3,202,398	.....	c28 N71-28928	US-PATENT-3,262,025	.....	c15 N73-32361
US-PATENT-3,202,844	.....	c03 N70-34134	US-PATENT-3,262,186	.....	c15 N71-16052
US-PATENT-3,202,915	.....	c14 N70-38602	US-PATENT-3,262,262	.....	c28 N71-15661
US-PATENT-3,202,998	.....	c31 N70-34135	US-PATENT-3,262,351	.....	c15 N71-15922
US-PATENT-3,204,447	.....	c14 N70-34156	US-PATENT-3,262,365	.....	c31 N71-15675
US-PATENT-3,204,889	.....	c03 N70-34157	US-PATENT-3,262,395	.....	c15 N71-30028
US-PATENT-3,205,361	.....	c14 N70-34158	US-PATENT-3,262,518	.....	c05 N71-11199
US-PATENT-3,205,362	.....	c21 N70-35089	US-PATENT-3,262,655	.....	c31 N71-15663
US-PATENT-3,205,381	.....	c03 N70-35408	US-PATENT-3,262,694	.....	c44 N79-19447
US-PATENT-3,206,141	.....	c21 N70-35395	US-PATENT-3,263,016	.....	c33 N71-15625
US-PATENT-3,206,897	.....	c18 N75-27440	US-PATENT-3,263,171	.....	c09 N71-13530
US-PATENT-3,208,215	.....	c28 N70-34162	US-PATENT-3,263,610	.....	c15 N71-13789
US-PATENT-3,208,272	.....	c14 N70-34161	US-PATENT-3,264,135	.....	c15 N71-16075
US-PATENT-3,208,694	.....	c02 N70-34160	US-PATENT-3,270,441	.....	c11 N71-16028
US-PATENT-3,208,707	.....	c31 N70-34159	US-PATENT-3,270,499	.....	c28 N71-15660
US-PATENT-3,209,360	.....	c09 N70-35219	US-PATENT-3,270,501	.....	c31 N71-15647
US-PATENT-3,209,361	.....	c09 N70-35425	US-PATENT-3,270,503	.....	c33 N71-15623
US-PATENT-3,210,927	.....	c28 N70-34175	US-PATENT-3,270,504	.....	c31 N71-15637
US-PATENT-3,211,169	.....	c15 N70-35087	US-PATENT-3,270,505	.....	c21 N71-15582
US-PATENT-3,211,414	.....	c15 N70-35407	US-PATENT-3,270,512	.....	c15 N71-15906
US-PATENT-3,212,096	.....	c09 N70-35382	US-PATENT-3,270,565	.....	c14 N71-30265
US-PATENT-3,212,259	.....	c28 N71-29153	US-PATENT-3,270,756	.....	c15 N71-15967
US-PATENT-3,212,325	.....	c14 N70-34705	US-PATENT-3,270,802	.....	c33 N71-24876
US-PATENT-3,212,564	.....	c33 N71-29052	US-PATENT-3,270,835	.....	c28 N70-41582
US-PATENT-3,215,313	.....	c31 N79-21225	US-PATENT-3,270,908	.....	c31 N71-15664
US-PATENT-3,215,572	.....	c12 N70-40124	US-PATENT-3,270,985	.....	c21 N71-15583
US-PATENT-3,215,842	.....	c16 N71-28563	US-PATENT-3,270,986	.....	c05 N71-12336
US-PATENT-3,216,007	.....	c08 N70-40125	US-PATENT-3,270,988	.....	c01 N71-13410
US-PATENT-3,217,624	.....	c14 N70-40273	US-PATENT-3,270,989	.....	c02 N71-11041
US-PATENT-3,218,479	.....	c09 N70-40272	US-PATENT-3,270,990	.....	c28 N71-15563
US-PATENT-3,218,547	.....	c09 N70-40123	US-PATENT-3,271,140	.....	c17 N71-15644
US-PATENT-3,218,850	.....	c14 N70-40400	US-PATENT-3,271,181	.....	c15 N71-16077
US-PATENT-3,219,250	.....	c15 N70-40204	US-PATENT-3,271,532	.....	c09 N71-16089
US-PATENT-3,219,365	.....	c15 N71-28937	US-PATENT-3,271,558	.....	c15 N71-15871
US-PATENT-3,219,997	.....	c08 N73-28645	US-PATENT-3,271,594	.....	c10 N71-28739
US-PATENT-3,220,004	.....	c30 N70-40309	US-PATENT-3,271,620	.....	c09 N71-12540

US-PATENT-3,271,637	.....	c26 N71-18064	.....	US-PATENT-3,302,023	.....	c14 N70-41676
US-PATENT-3,271,649	.....	c10 N71-16030	.....	US-PATENT-3,302,040	.....	c09 N70-41675
US-PATENT-3,273,094	.....	c23 N71-29049	.....	US-PATENT-3,302,569	.....	c15 N70-41679
US-PATENT-3,273,355	.....	c33 N71-17897	.....	US-PATENT-3,302,633	.....	c05 N70-41819
US-PATENT-3,273,381	.....	c32 N71-17645	.....	US-PATENT-3,302,662	.....	c15 N70-41811
US-PATENT-3,273,388	.....	c09 N71-16086	.....	US-PATENT-3,302,960	.....	c15 N70-41829
US-PATENT-3,273,392	.....	c23 N71-17802	.....	US-PATENT-3,303,304	.....	c14 N70-41812
US-PATENT-3,273,399	.....	c12 N71-24692	.....	US-PATENT-3,304,028	.....	c31 N70-41855
US-PATENT-3,274,304	.....	c26 N71-17818	.....	US-PATENT-3,304,718	.....	c28 N70-41922
US-PATENT-3,275,794	.....	c37 N75-27376	.....	US-PATENT-3,304,724	.....	c31 N70-41948
US-PATENT-3,276,251	.....	c11 N71-15926	.....	US-PATENT-3,304,729	.....	c31 N70-41871
US-PATENT-3,276,376	.....	c31 N71-17629	.....	US-PATENT-3,304,768	.....	c32 N70-42003
US-PATENT-3,276,602	.....	c32 N71-17609	.....	US-PATENT-3,304,773	.....	c14 N70-41957
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US-PATENT-3,276,722	.....	c02 N71-16087	.....	US-PATENT-3,304,865	.....	c28 N70-41967
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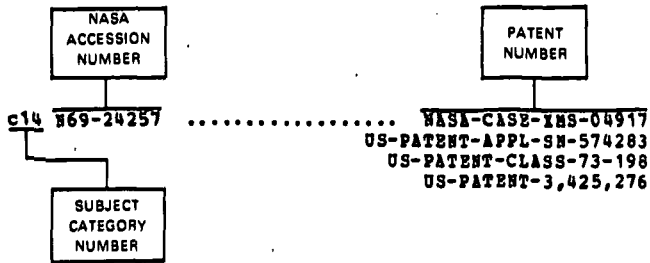
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### Section 2

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c08 N73-25206	NASA-CASE-NPO-11497 US-PATENT-APPL-SN-155565 US-PATENT-CLASS-235-10.2 US-PATENT-CLASS-235-92CV US-PATENT-CLASS-235-92DN US-PATENT-CLASS-235-92EA US-PATENT-CLASS-235-92EB US-PATENT-CLASS-235-92E US-PATENT-CLASS-235-151.27 US-PATENT-3,729,129	c02 N73-26006 NASA-CASE-MSC-12393-1 US-PATENT-APPL-SN-203405 US-PATENT-CLASS-9-2A US-PATENT-CLASS-9-3 US-PATENT-CLASS-9-11A US-PATENT-CLASS-114-122 US-PATENT-3,736,607
c10 N73-25240	NASA-CASE-MSC-12428-1 US-PATENT-APPL-SN-170681 US-PATENT-CLASS-179-15A US-PATENT-CLASS-235-151.31 US-PATENT-CLASS-324-77E US-PATENT-CLASS-324-78J US-PATENT-3,732,405	c05 N73-26071 NASA-CASE-ARC-10599-1 US-PATENT-APPL-SN-247481 US-PATENT-CLASS-2-2.1 US-PATENT-CLASS-62-89 US-PATENT-CLASS-62-176 US-PATENT-CLASS-62-207
c10 N73-25241	NASA-CASE-GSC-11239-1	

	US-PATENT-CLASS-62-209		US-PATENT-CLASS-95-1.1
	US-PATENT-CLASS-62-259		US-PATENT-3,736,849
	US-PATENT-CLASS-165-46	c14 N73-26432	NASA-CASE-ERC-10276
	US-PATENT-3,736,764		US-PATENT-APPL-SN-24155
c05 N73-26072	NASA-CASE-ARC-10329-1		US-PATENT-CLASS-250-209
	US-PATENT-APPL-SN-159857		US-PATENT-CLASS-340-15.56C
	US-PATENT-CLASS-128-2.1B		US-PATENT-CLASS-343-100ME
	US-PATENT-CLASS-351-23		US-PATENT-3,737,905
	US-PATENT-CLASS-351-30	c15 N73-26472	NASA-CASE-KSC-10639
	US-PATENT-CLASS-351-36		US-PATENT-APPL-SN-181023
	US-PATENT-3,737,217		US-PATENT-CLASS-137-397
c06 N73-26100	NASA-CASE-GSC-11358-1		US-PATENT-CLASS-137-582
	US-PATENT-APPL-SN-226551		US-PATENT-3,736,956
	US-PATENT-CLASS-260-46.5E	c18 N73-26572	NASA-CASE-ARC-10304-1
	US-PATENT-3,733,350		US-PATENT-APPL-SN-140946
c07 N73-26117	NASA-CASE-KSC-10392		US-PATENT-CLASS-252-8.1
	US-PATENT-APPL-SN-181024		US-PATENT-3,730,891
	US-PATENT-CLASS-343-880	c26 N73-26751	NASA-CASE-MPS-20675
	US-PATENT-CLASS-343-883		US-PATENT-APPL-SN-200085
	US-PATENT-CLASS-343-889		US-PATENT-CLASS-250-219TB
	US-PATENT-CLASS-343-895		US-PATENT-CLASS-356-10E
	US-PATENT-3,737,912		US-PATENT-CLASS-356-16.1
c07 N73-26118	NASA-CASE-NPO-11548		US-PATENT-CLASS-356-202
	US-PATENT-APPL-SN-151411	c26 N73-26752	US-PATENT-3,737,237
	US-PATENT-CLASS-119-15A		NASA-CASE-LEW-11726-1
	US-PATENT-CLASS-179-15BM		US-PATENT-APPL-SN-280031
	US-PATENT-CLASS-325-40		US-PATENT-CLASS-29-599
	US-PATENT-CLASS-343-204		US-PATENT-CLASS-156-16
	US-PATENT-3,737,776		US-PATENT-CLASS-174-DIG.6
c07 N73-26119	NASA-CASE-NPO-11426		US-PATENT-CLASS-336-DIG.1
	US-PATENT-APPL-SN-89210		US-PATENT-CLASS-336-200
	US-PATENT-CLASS-250-199		US-PATENT-3,737,824
	US-PATENT-CLASS-331-94.5	c31 N73-26876	NASA-CASE-MPS-20863
	US-PATENT-CLASS-332-7.51		US-PATENT-APPL-SN-159966
	US-PATENT-CLASS-356-4		US-PATENT-CLASS-244-1SD
	US-PATENT-CLASS-356-5		US-PATENT-CLASS-244-137P
	US-PATENT-3,737,231		US-PATENT-3,737,117
c08 N73-26175	NASA-CASE-NPO-11821-1	c32 N73-26910	NASA-CASE-LAR-10756-1
	US-PATENT-APPL-SN-236285		US-PATENT-APPL-SN-160859
	US-PATENT-CLASS-235-152		US-PATENT-CLASS-73-67.3
	US-PATENT-CLASS-235-164		US-PATENT-CLASS-73-88.5B
	US-PATENT-CLASS-328-167		US-PATENT-CLASS-73-91
	US-PATENT-3,732,409		US-PATENT-CLASS-235-92MT
c08 N73-26176	NASA-CASE-NPO-11456		US-PATENT-3,733,424
	US-PATENT-APPL-SN-153543	c33 N73-26958	NASA-CASE-NPC-11330
	US-PATENT-CLASS-340-172.5		US-PATENT-APPL-SN-118269
	US-PATENT-3,740,725		US-PATENT-CLASS-285-DIG.21
c09 N73-26195	NASA-CASE-GSC-10990-1		US-PATENT-CLASS-285-316
	US-PATENT-APPL-SN-53329		US-PATENT-3,737,181
	US-PATENT-CLASS-333-73R	c04 N73-27052	NASA-CASE-GSC-11092-2
	US-PATENT-CLASS-333-73S		US-PATENT-APPL-SN-60950
	US-PATENT-CLASS-333-82A		US-PATENT-APPL-SN-139250
	US-PATENT-CLASS-333-84M		US-PATENT-CLASS-103.5E
	US-PATENT-3,737,815		US-PATENT-3,745,09C
c10 N73-26228	NASA-CASE-ERC-10403-1	c05 N73-27062	NASA-CASE-LEW-11669-1
	US-PATENT-APPL-SN-253405		US-PATENT-APPL-SN-198885
	US-PATENT-CLASS-317-EIG.6		US-PATENT-CLASS-32-2E
	US-PATENT-CLASS-321-11		US-PATENT-CLASS-32-5E
	US-PATENT-CLASS-321-45C		US-PATENT-CLASS-128-2
	US-PATENT-3,737,757		US-PATENT-CLASS-128-24A
c10 N73-26229	NASA-CASE-NPO-11569		US-PATENT-CLASS-128-305
	US-PATENT-APPL-SN-199957		US-PATENT-3,736,93E
	US-PATENT-CLASS-307-220	c06 N73-27086	NASA-CASE-GSC-10225-1
	US-PATENT-CLASS-307-233		US-PATENT-APPL-SN-710621
	US-PATENT-3,737,676		US-PATENT-CLASS-195-66E
c10 N73-26230	NASA-CASE-MSC-13907-1		US-PATENT-3,745,089
	US-PATENT-APPL-SN-254177	c09 N73-27150	NASA-CASE-ERC-10224-2
	US-PATENT-CLASS-235-186		US-PATENT-APPL-SN-221833
	US-PATENT-CLASS-235-194		US-PATENT-APPL-SN-868775
	US-PATENT-CLASS-235-197		US-PATENT-CLASS-29-580
	US-PATENT-3,737,639		US-PATENT-CLASS-317-234G
c11 N73-26238	NASA-CASE-NPO-11366		US-PATENT-CLASS-317-234I
	US-PATENT-APPL-SN-144139		US-PATENT-CLASS-317-234M
	US-PATENT-CLASS-180-6.5		US-PATENT-CLASS-317-234N
	US-PATENT-CLASS-180-7B		US-PATENT-CLASS-317-234E
	US-PATENT-CLASS-180-8A		US-PATENT-3,742,316
	US-PATENT-CLASS-180-9.2E	c10 N73-27171	NASA-CASE-NPO-11941-1
	US-PATENT-CLASS-180-9.5		US-PATENT-APPL-SN-241614
	US-PATENT-CLASS-180-41		US-PATENT-CLASS-330-70CE
	US-PATENT-CLASS-305-35EB		US-PATENT-CLASS-331-17
	US-PATENT-CLASS-305-39		US-PATENT-CLASS-331-25
	US-PATENT-3,730,287		US-PATENT-3,740,671
c14 N73-26430	NASA-CASE-NPO-11304	c14 N73-27376	NASA-CASE-HQN-10037-1
	US-PATENT-APPL-SN-1C1214		US-PATENT-APPL-SN-235957
	US-PATENT-CLASS-219-50		US-PATENT-CLASS-73-28
	US-PATENT-CLASS-219-499		US-PATENT-3,741,001
	US-PATENT-3,733,463	c14 N73-27377	NASA-CASE-MPS-21046-1
c14 N73-26431	NASA-CASE-MSC-12363-1		US-PATENT-APPL-SN-156725
	US-PATENT-APPL-SN-125236		US-PATENT-CLASS-35-12C

	US-PATENT-CLASS-272-73	c09 N73-28083	NASA-CASE-GSC-11215-1
	US-PATENT-3,744,794		US-PATENT-APPL-SN-114873
c14 N73-27378	NASA-CASE-KSC-10626		US-PATENT-CLASS-29-628
	US-PATENT-APPL-SN-180963		US-PATENT-CLASS-29-629
	US-PATENT-CLASS-222-414		US-PATENT-CLASS-29-630
	US-PATENT-CLASS-244-15S		US-PATENT-CLASS-29-630A
	US-PATENT-CLASS-244-135		US-PATENT-3,744,128
	US-PATENT-3,744,738	c09 N73-28084	NASA-CASE-XNP-03623
c14 N73-27379	NASA-CASE-PRC-10060-1		US-PATENT-APPL-SN-471154
	US-PATENT-APPL-SN-189290		US-PATENT-CLASS-178-69.5
	US-PATENT-CLASS-73-1DV		US-PATENT-3,402,265
	US-PATENT-CLASS-179-175.1A	c12 N73-28144	NASA-CASE-LAR-10612-1
	US-PATENT-CLASS-340-5C		US-PATENT-APPL-SN-233173
	US-PATENT-3,744,294		US-PATENT-CLASS-73-147
c15 N73-27405	NASA-CASE-MPS-20855		US-PATENT-3,744,305
	US-PATENT-APPL-SN-127647	c14 N73-28486	NASA-CASE-NPO-11749
	US-PATENT-CLASS-53-22A		US-PATENT-APPL-SN-175267
	US-PATENT-CLASS-53-112A		US-PATENT-CLASS-73-15R
	US-PATENT-CLASS-219-348		US-PATENT-CLASS-324-52
	US-PATENT-3,745,739		US-PATENT-3,737,762
c15 N73-27406	NASA-CASE-NPO-11377	c14 N73-28487	NASA-CASE-XLA-089162
	US-PATENT-APPL-SN-187262		US-PATENT-APPL-SN-97472
	US-PATENT-CLASS-137-1		US-PATENT-APPL-SN-777765
	US-PATENT-CLASS-137-154		US-PATENT-CLASS-73-170R
	US-PATENT-CLASS-137-604		US-PATENT-CLASS-73-432R
	US-PATENT-3,744,510		US-PATENT-3,744,320
c17 N73-27446	NASA-CASE-LAR-10953-1	c14 N73-28488	NASA-CASE-LEW-11159-1
	US-PATENT-APPL-SN-163152		US-PATENT-APPL-SN-104346
	US-PATENT-CLASS-23-230R		US-PATENT-CLASS-250-336
	US-PATENT-3,744,972		US-PATENT-CLASS-307-306
c28 N73-27699	NASA-CASE-XLR-10453-2		US-PATENT-3,745,357
	US-PATENT-APPL-SN-180473	c14 N73-28489	NASA-CASE-GSC-11074-1
	US-PATENT-APPL-SN-758540		US-PATENT-APPL-SN-198362
	US-PATENT-CLASS-60-202		US-PATENT-CLASS-34-155
	US-PATENT-CLASS-313-63		US-PATENT-CLASS-34-160
	US-PATENT-CLASS-313-217		US-PATENT-CLASS-34-162
	US-PATENT-CLASS-313-218		US-PATENT-3,744,148
	US-PATENT-CLASS-313-230	c14 N73-28490	NASA-CASE-GSC-11444-1
	US-PATENT-CLASS-313-355		US-PATENT-APPL-SN-229128
	US-PATENT-3,744,247		US-PATENT-CLASS-250-203R
c33 N73-27796	NASA-CASE-LAR-10439-1		US-PATENT-CLASS-250-209
	US-PATENT-APPL-SN-182033		US-PATENT-CLASS-250-214R
	US-PATENT-CLASS-73-86		US-PATENT-CLASS-356-141
	US-PATENT-CLASS-73-339		US-PATENT-3,744,913
	US-PATENT-CLASS-73-432R	c14 N73-28491	NASA-CASE-XNP-05231
	US-PATENT-CLASS-356-72		US-PATENT-APPL-SN-524746
	US-PATENT-3,745,816		US-PATENT-CLASS-250-51.5
c05 N73-27941	NASA-CASE-MPS-21109-1		US-PATENT-3,440,419
	US-PATENT-APPL-SN-202769	c15 N73-28515	NASA-CASE-LEW-10533-1
	US-PATENT-CLASS-73-379		US-PATENT-APPL-SN-13465E
	US-PATENT-CLASS-128-2.05R		US-PATENT-CLASS-27-498
	US-PATENT-CLASS-128-2.06R		US-PATENT-CLASS-29-497.5
	US-PATENT-CLASS-272-73		US-PATENT-CLASS-219-62
	US-PATENT-3,744,480		US-PATENT-CLASS-219-107
c06 N73-27980	NASA-CASE-LEW-11325-1		US-PATENT-3,745,308
	US-PATENT-APPL-SN-184960	c15 N73-28516	NASA-CASE-XNP-01187
	US-PATENT-CLASS-117-161P		US-PATENT-APPL-SN-155598
	US-PATENT-CLASS-117-161UN		US-PATENT-CLASS-317-158
	US-PATENT-CLASS-117-228		US-PATENT-3,244,943
	US-PATENT-CLASS-161-214	c17 N73-28573	NASA-CASE-XNP-08876
	US-PATENT-CLASS-161-227		US-PATENT-APPL-SN-527331
	US-PATENT-CLASS-260-30.2		US-PATENT-CLASS-75-66
	US-PATENT-CLASS-260-30.8DS		US-PATENT-3,419,384
	US-PATENT-CLASS-260-32.6N	c26 N73-28710	NASA-CASE-XNP-01185
	US-PATENT-CLASS-260-33.4R		US-PATENT-APPL-SN-155595
	US-PATENT-CLASS-260-33.6R		US-PATENT-CLASS-317-158
	US-PATENT-CLASS-260-47CP		US-PATENT-3,198,994
	US-PATENT-CLASS-260-65	c05 N73-30078	NASA-CASE-MPS-21010-1
	US-PATENT-CLASS-260-78TF		US-PATENT-APPL-SN-251609
	US-PATENT-CLASS-260-780A		US-PATENT-CLASS-73-379
	US-PATENT-3,745,149		US-PATENT-3,750,479
c07 N73-28012	NASA-CASE-NPO-11593-1	c06 N73-30097	NASA-CASE-LAR-10670-1
	US-PATENT-APPL-SN-172807		US-PATENT-APPL-SN-59692
	US-PATENT-CLASS-179-15FS		US-PATENT-CLASS-60-215
	US-PATENT-CLASS-325-419		US-PATENT-CLASS-149-1
	US-PATENT-CLASS-329-122		US-PATENT-CLASS-149-36
	US-PATENT-3,745,255		US-PATENT-CLASS-252-301.4
c07 N73-28013	NASA-CASE-GSC-11046-1		US-PATENT-CLASS-252-305
	US-PATENT-APPL-SN-182399		US-PATENT-3,751,913
	US-PATENT-CLASS-343-725	c06 N73-30098	NASA-CASE-MPS-21040-1
	US-PATENT-CLASS-343-729		US-PATENT-APPL-SN-183240
	US-PATENT-CLASS-343-797		US-PATENT-CLASS-260-485F
	US-PATENT-CLASS-343-803		US-PATENT-3,752,847
	US-PATENT-CLASS-343-893	c06 N73-30099	NASA-CASE-MPS-10512
	US-PATENT-3,747,111		US-PATENT-APPL-SN-606027
c08 N73-28045	NASA-CASE-XNP-00477		US-PATENT-CLASS-260-77.5
	US-PATENT-APPL-SN-175497		US-PATENT-3,463,761
	US-PATENT-CLASS-340-347	c06 N73-30100	NASA-CASE-MPS-10506
	US-PATENT-3,219,997		US-PATENT-APPL-SN-606036

c06 N73-30101	US-PATENT-CLASS-260-77.5 US-PATENT-3,463,762 NASA-CASE-MFS-10507 US-PATENT-APPL-SN-605994 US-PATENT-CLASS-260-615 US-PATENT-3,452,103 NASA-CASE-MFS-11492 US-PATENT-APPL-SN-707440 US-PATENT-CLASS-260-2 US-PATENT-3,577,356 NASA-CASE-MFS-10509 US-PATENT-APPL-SN-605964 US-PATENT-CLASS-260-77.5 US-PATENT-3,475,384	c14 N73-30394	NASA-CASE-LAR-10000 US-PATENT-APPL-SN-613235 US-PATENT-CLASS-73-398 US-PATENT-3,446,075
c06 N73-30102	US-PATENT-CLASS-260-615 US-PATENT-3,452,103 NASA-CASE-MFS-11492 US-PATENT-APPL-SN-707440 US-PATENT-CLASS-260-2 US-PATENT-3,577,356 NASA-CASE-MFS-10509 US-PATENT-APPL-SN-605964 US-PATENT-CLASS-260-77.5 US-PATENT-3,475,384	c14 N73-30395	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 NASA-CASE-GSC-11149-1 US-PATENT-APPL-SN-152849 US-PATENT-CLASS-29-452 US-PATENT-CLASS-81-57.3E US-PATENT-CLASS-254-29A US-PATENT-3,749,362
c06 N73-30103	US-PATENT-CLASS-260-77.5 US-PATENT-3,475,384 NASA-CASE-NFO-11628-1 US-PATENT-APPL-SN-207211 US-PATENT-CLASS-325-420 US-PATENT-CLASS-325-422 US-PATENT-CLASS-325-420 US-PATENT-3,746,998	c15 N73-30457	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 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
c07 N73-30113	US-PATENT-3,475,384 NASA-CASE-NFO-11628-1 US-PATENT-APPL-SN-207211 US-PATENT-CLASS-325-420 US-PATENT-CLASS-325-422 US-PATENT-CLASS-325-420 US-PATENT-3,746,998	c15 N73-30458	US-PATENT-CLASS-308-188 US-PATENT-CLASS-308-193 US-PATENT-3,751,123 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
c07 N73-30115	US-PATENT-3,475,384 NASA-CASE-NFO-11628-1 US-PATENT-APPL-SN-207211 US-PATENT-CLASS-325-420 US-PATENT-CLASS-325-422 US-PATENT-CLASS-325-420 US-PATENT-3,746,998	c15 N73-30459	US-PATENT-CLASS-308-188 US-PATENT-CLASS-308-193 US-PATENT-3,751,123 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
c08 N73-30135	US-PATENT-3,749,831 NASA-CASE-NPC-10817-1 US-PATENT-APPL-SN-82649 US-PATENT-CLASS-250-229 US-PATENT-CLASS-250-237R US-PATENT-CLASS-250-239 US-PATENT-3,745,352	c15 N73-30460	US-PATENT-CLASS-137-535 US-PATENT-3,749,123 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
c09 N73-30181	US-PATENT-3,745,352 NASA-CASE-MFS-21214-1 US-PATENT-APPL-SN-235269 US-PATENT-CLASS-313-161 US-PATENT-CLASS-315-248 US-PATENT-CLASS-315-324 US-PATENT-3,745,410	c16 N73-30476	US-PATENT-CLASS-297-386 US-PATENT-3,749,205 NASA-CASE-MFS-20823-1 US-PATENT-APPL-SN-175981 US-PATENT-CLASS-350-3.5 US-PATENT-CLASS-356-10E US-PATENT-CLASS-356-109 US-PATENT-3,744,912
c09 N73-30185	US-PATENT-3,745,410 NASA-CASE-NPO-11738-1 US-PATENT-APPL-SN-235295 US-PATENT-CLASS-335-296 US-PATENT-CLASS-335-297 US-PATENT-3,750,067	c18 N73-30532	US-PATENT-CLASS-356-109 US-PATENT-3,744,912 NASA-CASE-ERC-10339-1 US-PATENT-APPL-SN-43883 US-PATENT-CLASS-156-285 US-PATENT-3,745,082
c10 N73-30205	US-PATENT-3,750,067 NASA-CASE-NFO-11307-1 US-PATENT-APPL-SN-169671 US-PATENT-CLASS-340-277 US-PATENT-CLASS-340-279 US-PATENT-3,750,131	c21 N73-30640	US-PATENT-CLASS-156-285 US-PATENT-3,745,082 NASA-CASE-GSC-10890-1 US-PATENT-APPL-SN-111998 US-PATENT-CLASS-244-1SA US-PATENT-CLASS-250-203R US-PATENT-CLASS-250-209 US-PATENT-CLASS-250-236 US-PATENT-3,752,993
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	US-PATENT-APPL-SN-907479	c32 N80-26571	NASA-CASE-LAB-12697-1
	US-PATENT-CLASS-260-DIG.29		US-PATENT-APPL-SN-158183
	US-PATENT-CLASS-525-326	c33 N80-26599	NASA-CASE-FRC-10113-1
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	US-PATENT-CLASS-525-340		US-PATENT-CLASS-324-51
	US-PATENT-CLASS-525-374		US-PATENT-4,204,154
	US-PATENT-CLASS-525-375	c33 N80-26601	NASA-CASE-GSC-12555-1
	US-PATENT-CLASS-526-261		US-PATENT-APPL-SN-153240
	US-PATENT-CLASS-526-275	c35 N80-26635	NASA-CASE-NFC-14372-1
	US-PATENT-CLASS-526-276		US-PATENT-APPL-SN-646333
	US-PATENT-CLASS-526-278		US-PATENT-APPL-SN-956525
	US-PATENT-CLASS-528-481		US-PATENT-CLASS-250-338
	US-PATENT-4,200,721		US-PATENT-CLASS-250-352
c27 N80-24440	NASA-CASE-MSC-18382-1		US-PATENT-CLASS-250-353
	US-PATENT-APPL-SN-145107		US-PATENT-CLASS-356-328
c32 N80-24510	NASA-CASE-NPO-14524-1		US-PATENT-4,205,229
	NASA-CASE-NPO-14527-1	c37 N80-26658	NASA-CASE-LEW-12131-2
	US-PATENT-APPL-SN-957452		US-PATENT-APPL-SN-861290
	US-PATENT-CLASS-350-6.5		US-PATENT-APPL-SN-931090
	US-PATENT-CLASS-350-6.6		US-PATENT-CLASS-415-174
	US-PATENT-CLASS-350-294		US-PATENT-CLASS-415-196
	US-PATENT-CLASS-356-28.5		US-PATENT-4,135,851
	US-PATENT-4,201,468		US-PATENT-4,207,024
c33 N80-24549	NASA-CASE-LAB-12705-1	c37 N80-26659	NASA-CASE-LEW-12995-1
	US-PATENT-APPL-SN-135058		US-PATENT-APPL-SN-157150
c34 N80-24573	NASA-CASE-LEW-12441-2	c37 N80-26660	NASA-CASE-NPO-15037-1
	US-PATENT-APPL-SN-559846		US-PATENT-APPL-SN-161257
	US-PATENT-APPL-SN-856462	c47 N80-26992	NASA-CASE-NPO-14936-1
	US-PATENT-CLASS-60-267		US-PATENT-APPL-SN-163837
	US-PATENT-CLASS-239-127.1	c51 N80-27067	NASA-CASE-MSC-16777-1
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c37 N80-24619	NASA-CASE-LEW-13268-1		US-PATENT-CLASS-422-68
	US-PATENT-APPL-SN-145209		US-PATENT-CLASS-435-3
c44 N80-24741	NASA-CASE-NPO-14635-1		US-PATENT-CLASS-435-32
	US-PATENT-APPL-SN-008212		US-PATENT-CLASS-435-34
	US-PATENT-CLASS-136-895G		US-PATENT-CLASS-435-3E
	US-PATENT-CLASS-156-DIG.64		US-PATENT-CLASS-435-39
	US-PATENT-CLASS-156-605		US-PATENT-CLASS-435-289
	US-PATENT-CLASS-156-617SP		US-PATENT-CLASS-435-290
	US-PATENT-CLASS-252-62.3E		US-PATENT-CLASS-435-291
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	US-PATENT-4,196,619		US-PATENT-CLASS-73-781
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	US-PATENT-APPL-SN-145208	c52 N80-27073	NASA-CASE-GSC-12560-1
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	US-PATENT-CLASS-250-427		US-PATENT-4,090,213
	US-PATENT-CLASS-313-156	c44 N80-29843	NASA-CASE-NPO-15183
	US-PATENT-CLASS-313-362		US-PATENT-APPL-SN-173519
	US-PATENT-CLASS-313-363	c54 N80-30043	NASA-CASE-ARC-11314-1
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c74 N80-27185	NASA-CASE-LAR-12251-1	c60 N80-30050	NASA-CASE-MSC-18498-1
	US-PATENT-APPL-SN-953389		US-PATENT-APPL-SN-173518
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	US-PATENT-CLASS-350-226		US-PATENT-APPL-SN-183707
	US-PATENT-4,206,970	c25 N80-31490	NASA-CASE-ARC-113261-1
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	US-PATENT-APPL-SN-015983	c33 N80-31731	NASA-CASE-LAR-12659-1
	US-PATENT-CLASS-73-180		US-PATENT-APPL-SN-171926
	US-PATENT-CLASS-73-182	c35 N80-31774	NASA-CASE-LAR-12474-1
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	US-PATENT-4,212,199		US-PATENT-APPL-SN-950876
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	US-PATENT-APPL-SN-023501		US-PATENT-CLASS-417-383
	US-PATENT-CLASS-148-131	c76 N80-32244	US-PATENT-4,215,548
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	US-PATENT-4,212,690		US-PATENT-CLASS-422-246
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	US-PATENT-4,210,474		US-PATENT-CLASS-156-601
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	US-PATENT-APPL-SN-161256		US-PATENT-4,215,345
c35 N80-28686	NASA-CASE-LAR-11370-1	c07 N80-32392	NASA-CASE-ARC-10977-1
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	US-PATENT-4,212,477		US-PATENT-CLASS-568-852
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	US-PATENT-APPL-SN-171927		US-PATENT-CLASS-204-159.11
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c37 N80-29703	NASA-CASE-NFC-14406-1		US-PATENT-CLASS-264-212
	US-PATENT-APPL-SN-951828		US-PATENT-CLASS-427-44
	US-PATENT-CLASS-83-820		US-PATENT-CLASS-428-500
	US-PATENT-CLASS-125-21		US-PATENT-CLASS-429-139
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	US-PATENT-APPL-SN-173520		US-PATENT-CLASS-236-13
c44 N80-29834	NASA-CASE-LAR-11551-1		US-PATENT-CLASS-236-44C
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	US-PATENT-APPL-SN-696374		US-PATENT-CLASS-367-27
	US-PATENT-CLASS-148-1.5		US-PATENT-CLASS-367-36
	US-PATENT-CLASS-357-30		US-PATENT-CLASS-367-57
	US-PATENT-CLASS-357-52		US-PATENT-4,214,226

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c37	N80-32716	NASA-CASE-MFS-23777-1 US-PATENT-APPL-SN-931217 US-PATENT-CLASS-74-425 US-PATENT-CLASS-74-661 US-PATENT-CLASS-74-665C US-PATENT-CLASS-318-15 US-PATENT-4,215,592	c52	N81-12724	NASA-CASE-LAR-12471-1 US-PATENT-APPL-SN-178193
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c31	N81-12283	NASA-CASE-MFS-25134-1 US-PATENT-APPL-SN-195226			
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c35	N81-12387	NASA-CASE-GSC-12608-1 US-PATENT-APPL-SN-195228			

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	US-PATENT-CLASS-44-7R		US-PATENT-CLASS-128-DIG.9
	US-PATENT-CLASS-55-2		US-PATENT-CLASS-128-DIG.12
	US-PATENT-CLASS-62-12		US-PATENT-CLASS-128-DIG.16
	US-PATENT-CLASS-62-18		US-PATENT-CLASS-128-DIG.26
	US-PATENT-CLASS-62-40		US-PATENT-CLASS-128-204.18
	US-PATENT-CLASS-62-47		US-PATENT-CLASS-128-207.14
	US-PATENT-CLASS-149-1		US-PATENT-CLASS-128-207.28
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	US-PATENT-4,234,971		US-PATENT-CLASS-244-130
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	US-PATENT-APPL-SN-953313	c07 N81-14999	NASA-CASE-LEW-13201-1
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