NASA Technical Memorandum 58273

Scientific and Technical Papers Presented or Published by JSC Authors in 1985

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Scientific and Technical Papers Presented or Published by JSC Authors in 1985

Compiled by Management Services Division Lyndon B. Johnson Space Center Houston, Texas



and Space Administration

Scientific and Technical Information Branch

FOREWORD

This bibliography of scientific and technical papers is the first in a series to be published annually in compliance with the National Aeronautics and Space Act of 1958 which requires "the widest practicable and appropriate dissemination of information about the Agency's programs and the results thereof."

The purpose of the series is to provide to the technical community a compendium of current JSC research and technological developments.

Comments concerning this publication or suggestions for future annual bibliographies should be addressed to the Documentation Management Branch, JM2, Lyndon B. Johnson Space Center, Houston, Texas, 77058; FTS 525-6267 or 713/483-6267.

Carolyn L Huntoon

Carolyn **L.** Huntoon Associate Director

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CONTENTS

INTRODUCTION	1
OFFICE OF THE DIRECTOR	3
FLIGHT CREW OPERATIONS DIRECTORATE	5
MISSION OPERATIONS DIRECTORATE	7
Structures and Mechanics Division	9 10 12 13 16 17 18 20 23
MISSION SUPPORT DIRECTORATE	25
SPACE STATION PROJECTS OFFICE	27
SAFETY, RELIABILITY, AND QUALITY ASSURANCE OFFICE	29
SPACE STATION PROGRAM OFFICE	31
WHITE SANDS TEST FACILITY	33
Man-Systems Division	35 35 36 43 64 65
TITLE INDEX	67
AUTHOR INDEX	89
SUBJECT INDEX	99

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Page

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INTRODUCTION

This listing of the Johnson Space Center's scientific and technical publications and presentations is arranged alphabetically by first author within the organization of that author's affiliation at the time the request for approval was initiated. Organizational groupings are made by directorate or major office, then if number of entries warrants, by division or suboffice. Organizations are listed by 1985 designations. The citations are based primarily on JSC authorship, with contractors, grantees, and independent collaborators included for coauthored papers.

Types of papers included are NASA formal series reports, journal articles, presentations given at professional society meetings and seminars, papers published in conference proceedings and other collective works, and workshop results. Dates are confined largely to calendar year 1985, except those few cases in which a published version of a 1985 presentation had already appeared in early 1986 or in which a 1984 presentation was not published until 1985.

Information presented herein is based chiefly on that supplied by authors first on forms requesting approval and later on review of this listing, copies of which were distributed to all directorates and offices involved. Additional information was obtained from literature searches in the NASA Scientific and Technical Aerospace Reports (STAR), International Aerospace Abstracts (IAA), and available professional publications cited.

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- Loftus, Joseph P., Jr.; Roberts, Barney B.; and Duke, Michael B.: Technology for Manned Mars Flight. Presented at the AIAA Planetary Society "Steps to Mars" Conference, July 16, 1985, Washington, D.C.
- 3. Loftus, Joseph P., Jr.; and Brasher, Warren L.: Beyond Low Earth Orbit - An Overview of Orbit-to-Orbit Stages. Presented at the 36th International Astronautical Congress, October 7-12, 1985, Stockholm, Sweden.
- 4. Loftus, Joseph P., Jr.: An Historical Overview of NASA Manned Spacecraft and Their Crew Stations. British Interplanetary Society Journal, Volume 38, August 1985, pp. 354-370.
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- 4. Henize, Karl G.: Spacelab 2 A Preview. Sky and Telescope, Volume 70, July 1985, pp. 5-6.
- Thornton, William. E., M.D., et al: Electronstagmography and Audio Potentials Space Flight. Laryrgoscope, Volume 95, No. 8, August 1985.

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- 2. Moser, Thomas L.: Keynote Lecture. Presented at the Fourth International Conference on Structural Safety and Reliability (ICOSSAR '85), May 27-29, 1985, Kobe, Japan.

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- 3. Feiveson, Alan H.; Chhikara, R. S.: Analysis of Leaf Area Estimates Made From Allometric Regression Models. Presented at the University of Houston-Clear Lake Conference, November 14-15, 1985, Houston, Texas.
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- Cerimele, C. J.; and Gamble, J. D.: A Simplified Guidance Algorithm for Lifting Aeroassist Orbital Transfer Vehicles. AIAA Paper 85-0348. Presented at the AIAA 23rd Aerospace Sciences Meeting, January 14-17, 1985, Reno, Nevada.
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- 6. Davidson, Shayla; Richards, William F.; and Long, Stuart A.: Dual-Band Reactively Loaded Microstrip Antenna. Published in the IEEE Transactions on Antennas and Propagation, May 1985.
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- 11. Erwin, Harry O.: Laser Docking System. Presented at the Satellite Services Workshop, November 6, 1985, Houston, Texas.
- 12. Grady, Jane L.: Optical Communications Thru the Shuttle Window. Presented at the AIAA Conference, May 10, 1985, Houston, Texas.
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- 19. Nitschke, Harold A.: Shuttle Imaging Radar Antenna Technology. Presented at the IEEE Radar '85 Conference, May 9, 1985, Washington, D.C.
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- 3. Griffin, John W.: Orbital Fluid Resupply Tanker Development. Presented at the 1985 SAE Aerospace Technology Conference and Exposition, October 14-17, 1985, Long Beach, California.
- 4. Griffin, John W.: Orbital Fluid Resupply. Presented at the Satellite Services Workshop II, November 6-8, 1985, NASA-JSC.
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- Kroll, Kenneth R.: U.S. Gravity Utilization of Tethers Activity. Presented at the Applications of Tethers in Space Workshop, October 13, 1985, Venice, Italy.
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- 9. Taeuber, Ralph J.: Space Station Propulsion Requirements. Presented at the ASME Winter Annual Meeting, December 12-13, 1985, New Orleans, Louisiana.

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- 7. Leger, L. J.: Effects of the Low Earth Orbital Environment on Spacecraft Materials. Presented at the Third European Symposium on Spacecraft Materials in Space Environment, October 1-4, 1985, Noordwijk, The Netherlands.
- Leger, L. J.; Jacobs, S.; Ehlers, H. K. F.; and Miller, E.: Shuttle On-Orbit Contamination and Environmental Effects. Space Shuttle Technical Conference, NASA CP-2342, Part 2, January 1985, pp. 1082-1094.
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- 24. Wade, Donald C.; and Hamilton, David A.: Space Shuttle Payload Design and Development. Presented at the Spacecraft Structures Conference, December 3-6, 1985, Toulouse, France.
- 25. West, Walter: Illustration of the Use of Modal Assurance Criterion to Detect Structural Changes in an Orbiter Test Specimen. Presented at the 4th International Modal Analysis Conference, February 3-6, 1985, Schenectady, New York.
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- 3. Simanton, Donald F.: Improve Decision Processes of Management Through Centralized Communication Linkages. Presented at the R&D Productivity Conference, September, 1985, Houston, Texas.

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- 2. Germany, Daniel M.: Johnson Space Center Work Package 2 Phase B Activities. Presented at the AIAA Third Annual Aerospace Technology Symposium, November 7-8, 1985, New Orleans, Louisiana.
- 3. Mancuso, Thomas G.: Initiation of the Next Step: The Acquisition of a Space Station Program. Presented at the 22nd Space Congress, April 23-26, 1985, Cocoa Beach, Florida.
- 4. Mandell, Humboldt C.: Space Station, The First Step. Presented at Case for Mars 2, July 10, 1984, Boulder, Colorado. (Published January 1985)
- 5. Mandell, Humboldt C.: Management Lessons Learned from the Space Shuttle Program. NASA JSC, August 1985.
- 6. Pixley, Paul T.: Space Station Challenges for Navigation. Presented at the Institute of Navigation Meeting, Spring 1985.

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- Campos, Carlos S.: Evaluating Alternative Manufacturing Flows for the Space Station Common Module Using Simulation. Presented at the 1985 R&D Productivity Conference, September 10, 1985, Houston, Texas.
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- 3. Benz, Frank J.; and Stoltzfus, Joel: Ignition of Metals by Frictional Heating. Presented at the ASTM G-4 Committee: Compatibility and Sensitivity of Materials in Oxygen Enriched Atmospheres Conference, April 23-24, 1985, Washington, D.C.
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- 5. Koontz, Steven L.; and Smith, Irwin D.: The Effect of Metal Cleaning Methods on the Corrosion Rate and Surface Chemistry of Type 304 Stainless Steel in MON-3 Oxidizer. Presented at JANNAF: Propellant Characterization Subcommittee Meeting, October 28-31, 1985, Houston, Texas.
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TITLE INDEX

Title	Page	Entry
Accelerated River Delta Aggradation Along Northwestern Madagascar	48	48
Accurate Stratospheric Particle Size Distributions from a Flat-Plate Collection Surface	62	172
Accurate Stratospheric Particle Size Distributions from Two Separate Flat-Plate Collection Surfaces: Can We See Variations with Time?	62	174
Acoustic Emission Monitoring of Space Shuttle Tiles	20	2
Advanced Geological Exploration Supported by a Lunar Base: A Traverse Across the Imbrium-Procellarum Region of the Moon	46	30
Advanced Metabolic Support in Space	. 41	49
Aerodynamic Flight Testing of the Space Shuttle Orbiter	12	3
Age of the Mulcahy Lake Intrusion, Northwest Ontario, and Implications for the Evolution of Greenstone Granite Terrains	55	110
Agglutinate Melting Mechanisms: Experimentally Shocked Feldspars	58	139
Alkalic Basalts from the Geronimo Volcanic Field: Petrologic and Geochemical Data Bearing on Their Petrogenesis	45	19
Alteration in Archean Anorthosites	55	108
Analysis of Leaf Area Estimates Made from Allometric Regression Models	10	3
Analysis of Micrometeorite Material Captured by the Solar Max Satellite	52	83
Apollo 16 Impact Melt Splashes: Implications from the Host Rocks	58	136
Application of Space Shuttle Technology and Experience to Concepts for Space Station Crew Equipment Modular Storage System	64	9
Application of Thematic Mapper Data to Corn and Soybean Development Stage Estimation	43	8
Applied Manned Systems Interface Modeling	64	3

•

Page	Entry
48	50
41	48
51	78
10	6
65	4
65	1
50	69
3	3
44	12
36	1
37	9
40	40
62	171
57	127
36	3
36	6
40	41
40	42
64	7
36	7
41	47
	48 41 51 10 65 65 50 3 44 36 37 40 62 57 36 36 40 40 40 40 64 36

,

t,

Title	Page	Entry
Changes in Orthostatic Heart Rate and Heart Size in Humans as a Function of Space Flight Duration	37	8
Chemical Signatures at the Cretaceous-Tertiary Boundary Within a Single Manganese Nodule	45	20
Chemistry and Petrology of Apollo 12 Drive Tube 12027	59	144
Chronology and Petrogenesis of a 1.8g Lunar Granitic Clast: 14321, 1062	58	138
Chronology of Breccia Formation on Meteorite Parent Bodies	45	22
Circulating Red Blood Cell Disappearance in Microgravity	38	25
Clay Minerals in Meteorites: Preliminary Identification by Analysis of Goodness-of-Fit to Calculated Structural Formulas	47	41
Clinopyroxene REE Distribution Coefficients for Shergottites: REE Content of the Sherogotty/Zagami Melts	53	91
Collisional Balance of the Meteoritic Complex	63	176
Collisional Fragmentation of Granodiorite Targets by Multiple Impact Events	49	55
Communications and Tracking Aboard the Space Station	15	21
Communications and Tracking: The Keys to Space Station Utilization	14	20
Comparative Study of Suits and SAIL Canopy Reflectance Models	44	10
Comparative Study of Various Charge-Up Neutralization Systems	52	82
Comparison of Petrology, Grain Sizes, and Surface Maturity Parameters for Apollo 15 Regolith Breccias and Soils	45	24
A Comparison of Shuttle Solid Rocket Effluent with Aluminum-Rich Stratospheric Particles	60	154
Components for Chemical Mixing Models of Apollo 16 Impact Melt Splashes (IMS's)	54	105
Composition of Agglutinitic Glass	52	84

Title	Page	Entry
Compositional Domains of Apollo 16 Impact Melt Splashes (IMS's)	54	106
Compositional Homogeneity/Heteogeneity of Apollo 16 Impact Melt Splashes: How Many Impacts?	58	135
Computational Methods for Hypersonic Viscous Flow Over Finite Ellipsoid-Cones at Incidence	21	10
A Consideration of Atomic Oxygen Interactions with Space Station	21	9
Contamination Effects During Rendezvous and Proximity Operations	12	5
A Continuum Between Interplanetary Dust and CI/CM Meteorites	57	128
Contribution of Explosion and Future Collision Fragments to the Orbital Debris Environment	50	67
Cooling Histories of Chondrules	52	85
Correlation of Predicted and Measured Sonic Boom Characteristics From the Reentry of STS-1 Orbiter	27	1
Cosmogenic He and Ne in Chondrites: Monitors of Spatial Gradients in the Cosmic Ray Flux?	55	115
Crop Characteristics Research: Growth and Reflectance Analysis	43	6
A Cruciform Chromite in an Agglutinate in Lunar Soil 15271	52	86
Data Systems Environment for Space Station and Beyond	25	1
Decreases in Red Cell Mass Found After Space Flight	39	28
The Depth of the Mare Basalt Source Region	44	13
The Design and Qualification of the Manned Maneuvering Unit Vibration Isolation System	20	1
Design Concepts of a Proposed Earth Observatory for the Shuttle and Space Station	62	170
Design Evolution of the Orbiter Reaction Control Subsystem	19	10

Title	Page	Entry
Design Study of an Integrated Aerobraking Orbital Transfer Vehicle	22	19
Determination of Biophysical Properties for Vegetated Canopies Using a Helicopter C-Band Scatterometer	56	119
Determination of Minor Element Distribution in Synthetic Olivine by Election Channelling	51	75
Determination of Optical Penetration Depths From Reflectance and Transmittance Measurements on Albite Powders	54 .	103
Determination of _Y -Carboxyglutamic Acid by Paired-Ion Reverse Phase High Performance Liquid Chromatography	37	10
The Development and Application of Aerodynamic Uncertainties and Flight Test Verification for the Space Shuttle Orbiter	20	7
Development of the NASA/FLAGRO Computer Program	20	4
Development Status of Regenerable Solid Amine CO2 Control Systems	10	2
Devitrification and Thermoluminescence Properties of Type 3 Chondrites	51	74
Direct Integrated Solar Heating (DISH) Concept for a Manned Space Station	18	7
Direct Solar Heating for Space Station Application	58	141
Disaggregation of Regolith Breccias	52	87
Discovery of Sodium in the Atmosphere of Mercury	56	122
Displacement, Ablation, and Meteorite Concentrations at the Allan Hills Icefield	43	1
Display Comparison for Six-Degree-of-Freedom Force/Torque Control	64	2
Dual Band Microstrip Antennas with Monolithic Reactive Loading	13	7
Dual Band Reactively Loaded Microstrip Antenna	13	6

Title	Page	Entry
Dynamic Crystallization Experiments on Chondrule Melts of Porphyritic Olivine Composition	51	72 77
Earth Orbital Debris	49	57
Echocardiographic Evaluation of Space Shuttle Crewmembers	36	5
Echocardiographic Investigation of the Hemodynamics of Weightlessness	36	4
The Effect of Astemizole on the Vestibular Ocular Reflex	35	4
Effect of Hydration on Nitrogen Washout in Humans	42	57
The Effect of Metal Cleaning Methods on the Corrosion Rate and Surface Chemistry of Type 304 Stainless Steel in MON-3 Oxidizer	33	5
Effect of Microbial Fouling on Dynamic Column Capacities of Activated Charcoal and Ion Exchange Resins	39	30
The Effect of Multiple Simulated Extravehicular Activity (EVA) Decompressions Over a 72-Hour Period on Symptom and Bubble Incidence	42	56
Effect of Operant Behavior of Rats from Inhaling Sublethal Levels of Pyrolysates from a Polyimide and a Polyurethane Foam	39	33
Effects of Nonequilibrium and Wall Catalysis on Shuttle Heat Transfer	21	18
The Effects of Particulates from Solid Rocket Motors Fired in Space	50	65
Effects of Phase and Amplitude Errors Upon Image Resolution for Discrete Element Arrays	13	1
Effects of the Low Earth Orbital Environment on Spacecraft Materials	20	. 7
Electrochemical CO2 Concentration for the Space Station Program	10	4
Electronstagmography and Audio Potentials Space Flight	5	5

!

Title	Page	Entry
An Empirical Evaluation of Direct, Menu, and Hybrid Computer Command Modes in the Context of Proposed Space Station Requirements	64	1
Endrocrine and Fluid Metabolism in Males and Females of Different Ages After Bedrest, Acceleration, and Lower Body Negative Pressure	40	36
Energy Storage for a Space Station Solar Dynamic Power System	18	2
Engineering in the Anthropometric Measurement Lab	64	8
Environment Definition, Large Particles	49	58
Estimation of Biophysical Properties of Forest Canopies Through Inversion of Microwave Scatterometer Data	56	121
Estimation of Leaf Area Index and Biomass in a Boreal Forest Using Helicopter-Acquired C-Band Scatterometer and Optical Reflectance Data	56	120
Euler Solutions Using Implicit Multigrid Techniques	21	11
Eutectic Crystallization of Feldspar	51	76
Evaluating Alternative Manufacturing Flows for the Space Station Common Module Using Simulation	31	2
Evolution of the Astronaut's Role	3	5
Evolving Technology and Engineering at NASA Johnson Space Center	9	1
Examination of Returned Solar-Max Surfaces for Impacting Orbital Debris and Meteoroids	50	68
An Experimental Investigation of Agglutinate Melting Mechanisms: Shocked Mixtures of Sodium and Potassium Feldspars	58	140
Experimental Regolith Evolution: Differential Comminution of Plagioclase, Pyroxene and Olivine	49	54
An Expert System for Fault Management and Automatic Shutdown Avoidance in a Regenerative Life Support Subsystem	65	6

Title	Page	Entry
An Expert Systems Approach to Automated Fault Diagnostics	10	5
Explorer 46 Meteoroid Bumper Experiment: Earth Orbital Debris Interpretation	49	5 9
Explosive Decomposition of Hydrazine Due to Rapid Gas Compression	33	1
Explosive Volcanism: Inception, Evolution, and Hazards	61	165
Fault Detection in the Space Shuttle Orbiter Body Flap using the Modal Assurance Criterion	22	26
Fe/Mg Kg for Olivine/Liquid in Chondrules: Effect of Cooling Rate	51	73
Feasibility of Expert Systems To Enhance Space Station Subsystem Controllers	65	7
A Finite Difference Method for Solving Unsteady Viscous Flow Problems	21	12
The Fisher Linear Classifier	· 7	2
Flow Cytometry of Human Embryonic Kidney Cells: A Light Scattering Approach	39	31
Fluid and Electrolyte Control in Simulated and Actual Spaceflight	40	35
Forecast Requirements for Shuttle Post-Launch Operations	61	161
A Fracture Mechanics Study of the Turbine Wheel in the Space Shuttle Auxiliary Power Unit	20	5
A Frequency Domain Stability Analysis of a Phase Plane Control System	17	2
Future Uses of Machine Intelligence and Robotics for the Space Station	65	5
The General Perception Problem	17	1
Geochemical Variations within the Lower Volcanic Cycle of the Archean Wawa Greenstone Belt	59	147
Geochronology and Petrogenesis of VHK Basalts	45	25

Title	Page	Entry
Geography and Glaciology of Selected Blue Ice Regions in Antarctica	_ 43	2
Granulite Xenoliths from the Geronimo Volcanic Field, Southeastern Arizona: Evidence for a Heterogeneous Proterozoic Lower Crust Beneath the Southwestern United States	49	56
Hafnium, Zirconium, and Rare Earth Element Partition Coefficients between Ilmenite and Liquid	53	92
Hematological Changes Following Repetitive Decompressions Simulating EVA	38	24
High Stress Shallow Moonquakes: Evidence for an Initially Totally Molten Moon	44	16
High-Flying Training Manuals	53	97
High-Temperature Controlled Redox Crystallization Studies	61	162
An Historical Overview of NASA Manned Spacecraft and Their Crew Stations	3	4
Honeycomb Panel Heat Pipe Development for Space Radiators	11	12
The Human Cardiovascular System in the Absence of Gravity	36	2
Human Factors Issues in Space Station Architecture	40	37
Hunting for Meteorites in Antarctica	43	3
Hypervelocity Impact Investigations and Meteoroid Shielding Experience Related to Apollo and Skylab	46	33
Hypervelocity Impacts on Skylab 4/Apollo Windows	46	32
Ignition of Metals by a Strong Promoter	33	2
Ignition of Metals by Frictional Heating	33	3
Ignition of Metals by Impact of High Velocity Particles	33	4
Illustration of the Use of Modal Assurance Criterion to Detect Structural Changes in an Orbiter Test Specimen	22	25

/

Title	Page	Entry
Ilmenite Partitioning Revisited: Confirmation of Zr Results for High-Ti Mare Basalts	53	93
Impact Cratering Experiments in Cold Rock, II: Collisional Fragmentation	59	146
Impact Experiments in Cold Rock Targets, I: Cratering	59	145
Impact Experiments in H2O Ice, I: Cratering	46	28
Impact Experiments in H2O Ice, II: Collisional Disruption	46	29
Impact Melting of the Cachari Eucrite 3.0 Gy Ago	45	26
Impactite and Tektite Glasses From Lonar Crater, India	45 55	21 111
Impacts on Explorer 46 from an Earth Orbiting Population	49	60
Improve Decision Processes of Management Through Centralized Communication Linkages	25	3
Inclusion of Specular Reflectance in Vegetative Canopy Models	57	126
Increase in Whole-Body Peripheral Vascular Resistance During Three Hours of Air or Oxygen Prebreathing	37	14
Increasing Productivity in Flight with Voice Commanding	14	16
Inertial Energy Storage for Advanced Space Station Applications	59	143
Infared Spectra of Mg-SiO Smokes: Comparison with Analytical Electron Microscope Studies	57	129
Influence of the Meteoritic Component on the Composition of Apollo 16 Impact Melt Splashes (IMS's)	54	107
Initial Development and Performance Evaluation of a Process for Formation of Dense Carbon by Pyrolysis of Methane	, 10	1

Title	Page	Entry
Initiation of the Next Step: The Acquisition of a Space Station Program	27	3
The Interplanetary Micrometeoroid Flux and Lunar Primary and Secondary Microcraters	62	177
Interpreting Images Requires Imagination	61	166
Iron Kinetics During Exposure to Microgravity	38	26
Isotope Analysis of Crystalline Impact Melt Rocks from Apollo 16 Stations 11 and 13, North Ray Crater	57	125
Isotopic Provenance of Aluminous Mare Basalts from the Fra Mauro Formation	47	36
Johnson Space Center Work Package 2 Phase B Activities	27	2
The JSC Microbiology Program, An Overview	41	45
The JSC Toxicology Program: An Overview	37	12
Keynote Lecture	9	2
Ku-Band - The First Year of Operation	14	14
LAMPS, A Computer Model for Describing Large Amplitude Fluid Motion	12	2
Large Format Camera (LFC) Maiden Voyage	64	4
Large Volcanic Debris Avalanche Deposits in the Central Andes	61	168
Laser and Electro-Optical Technology at NASA	14	10
Laser and RF Systems for Space Proximity Operations	14	18
Laser Docking System	14	11
Lava Tubes: Potential Shelters for Habitats	48	51
The Long Term Increase of Baseline and Reflexly Augmented Levels of Human Vagal-Cardiac Nervous Activity Induced by Scopolamine	37	15
Low-Gravity Impact Experiments: Progress Toward a Facility Definition	46	27

.

Title	Page	Entry
Low-Temperature Aqueous and Hydrothermal Activity in a Proto-Planetary Body	57	130
Lunar and Martian Operations	53	98
Lunar Base Concepts	54	99
Lunar Bases and Space Activities of the 21st Century	54	100
Lunar Bases and Space Activities of the 21st Century	47	37
Lunar Zircon and the Closure Age of the Lunar Crust	54	102
Machine Vision for a Robotic Application	65	3
Management Lessons Learned from the Space Shuttle Program	27	5
The Manned Maneuvering Unit: A Nice Flying Machine	11	14
Mapping of Vegetation, Leaf Area Index and Primary Productivity in Boundary Waters Canoe Area Using Landsat Data	43	7
Mare Basalt Genesis: Trace Elements and Isotopic Ratios	44	14
Mars Sample Return: A Planet in Our Future	44	17
"Martian" Volatiles in Shergottite EETA79001: Possible Significance of Secondary Minerals	47	42
Martian Weathering Products: Response to Climate Changes and Effects on Volatile Inventories	47	43
Mass Extinctions and Cosmic Collisions: A Lunar Test	48	52
Material Reactions with the Low Earth Orbital Environment: Accurate Reaction Rate Measurements	22	21
Materials Test Laboratory Activities at the NASA - JSC White Sands Test Facility	33	6
Measurements	56	123
Mercury: Absence of Crystalline Fe ²⁺ in the Regolith	60	154
Metabolic Support for a Lunar Base	41	50

Title	Page	Entry
Metallized Graphite Epoxy and Metal Matrix Composite Fabrication for Space Station Antennas	13	4
Meteorite Concentration Mechanisms in AntarcticaHow Complete Is The Picture?	43	4
Meteorites From Mars: SNC's and the Shergotty Consortium	53	94
A Method for Screening of Plant Species for Space Use	38	19
Methods for the Repetitive Measurement of Multiple Hematological Parameters in the Individual Rat	41	44
Microbeam Analyses of Stratospheric Particles	52	81
Microbeam Analysis of Stratospheric Particles	51	7 9
Microbiological Monitoring During the Spacelab 3 Mission	38	18
Micrometeorite Material Returned From Space A Progress Report on the Analysis of Solar Max Impact Craters	52	88
The Microstructure of Cylindrical Tochilinites from Cornwall, Pennsylvania, and the Jacupiranga Mine, Sao Paulo, Brazil	62	173
Mineralogy and Origin of "White Matrix" in the Tieschitz (H3) Chondrite	47	44
Mineralogy of Chondritic Porous Aggregates: Current Status	53	89
Minor Phases, Fe-Rich Pyroxene, and Shergotty Chronology	53	95
A Model for Diagenesis in Proto-Planetary Bodies	57	131
A Model for Relating a Pristine Eucrite Lava to Ordinary Eucrites by an Impact Event	60	152
A Model for Trace Element Partitioning: Orthopyroxene and Melt	53	96
Modeling	63	178
Monolithic Design of Dual-Band Microstrip Antennas Using Reactive Loading	13	8

.

Title	Page	Entry
The Mulcahy Lake Gabbro and Related Intrusions	55	109
Multi-Source Verification of the Desiccation of Lake Chad, Africa	48	49
Multiple Comparisons in Designs With Repeated Measures	35	2
NASA In-House Antenna Design	13	5
The NASA Johnson Space Center Impact Facilities	48	53
NASA/JSC Orbital Debris Study: Debris Model	50	66
New Commercial Opportunities for the Space Station	31	4
New Multiwire Gamma Camera with a Unique Short-Lived Isotope Tantalum-178	39	32
The 1985 August 20 Neptune Occultation Observed From CTIO	60	155 157
Nine-Year Microflora Study of an Isolator-Main- tained Immunodeficient Child	42	55
Non-Contact Sensors for Space Station Applications	13	9
NORAD's PARCS Small Satellite Tests (1976 and 1978)	49	61
Numerical Procedure for Three-Dimensional Hypersonic Viscous Flow	21	13
Numerical Procedure for Three-Dimensional Hyper- sonic Viscous Flow Over Aerobrake Configuration	21	14
Nutrition in Space Flight: Some Thoughts	39	27
Observations of Sodium on Mercury	57	124
1 km Left-Lateral Offset Detected by Large Format Camera on Kunlun Fault, Tibet	61	160
On Dust Particles in the Jovian System	63	179
On Statistical Analysis of a Type of Data With Magnitude and Direction	35	1
Operational Bioinstrumentation System: ECG Monitoring for Space Shuttle Missions	40	39

Title	Page	Entry
Operational Development of Small Plant Growth Systems	41	53
Optical Communications Thru the Shuttle Window	14	12
Optical Detection of Large Meteoroids in Space	63	180
Optical Spectroscopy of the Filamentary Halo That Surrounds AD148937 and NGR6164-65	5	3
Optimization of Antenna Surfaces for Conformal Arrays	13	2
Orbital Debris Issues	49	62
Orbital Fluid Resupply	18	4
Orbital Fluid Resupply Tanker Development	18	3
The Orbiter Camera Payload System's Large Format Camera and Attitude Reference System	64	5
Origin of HREE-Depleted Archean Dacites: A Case Study from the Wawa (Michipicoten) Greenstone Belt, Ontario	59	148
Origins and Significance of Weathering Effects in Antarctic Meteorites	48	45
Otolith Tilt-Translation Reinterpretation Following Prolonged Weightlessness – Implications for Preflight Training	35	3
Oxygen Extraction From Lunar Materials	61	163
Panel for Space Station Medical Sciences Concepts	40	38
The Parallel Line Assay: Multifunctional Software for Biomedical Applications	42	54
Particle Size, Number, Composition and Velocity from Solid Rocket Motors	21	16
Performance and Endurance Testing of a Prototype Carbon Dioxide and Humidity Control Subsystem For Space Shuttle Extended Mission Capability	10	7
Petrogenesis and Tectonic Significance of Proterozoic Mafic Dikes, St. Francois Mountains, Missouri	59	149

•

Title	Page	Entry	
Petrogenesis of Calcic Plagioclase Megacrysts in Archean Rocks	56	117	
Pharmacokinetics of Scopolamine in Normal Subjects	41	46	
Physical Parameters of Near-Earth Asteroid 1982 DV	61	159	
Physiologic Adaptation to Space: Space Adaptation Syndrome	35	6	
Physiological Considerations for EVA in the Space Station Era	38	23	
A Physiological Evaluation of Space Shuttle Extravehicular Activities	38	22	
Plagioclase Composition and the Mare Basalt Component of Core 64001/2	53	90	
Planetary Exploration in the 1990's: Implications for Nonterrestrial Resources	47	38	
Plans for a 1996 Mars Sample Return Mission	44	18	
Poorly Graphitized Carbon as a New Cosmo- thermometer for Primitive Extraterrestrial Materials	57	132	
A Poorly Graphitized Carbon Contaminant in Studies of Extraterrestrial Materials	57	133	
Practical Analysis Systems for Recovered Spacecraft Water	11	9	
Prediction of Space Motion Sickness	38	20	
Prediction of Susceptibility to Space Motion Sickness	38	21	
A Probable Occurrence of Well Preserved Meteorite Ablation Material from the Upper Jurassic of Poland	62	175	
Proceedings of the Workshop on Food Service and Nutrition for the Space Station	41	51	
Productivity Increase Through Implementation of CAD/CAE Workstation	13	3	

.

Title	Page	Entry	
Properties of Electrophoretic Fractions of Human Embryonic Kidney Cells Separated on Space Shuttle Flight STS-8	~ 40	44	
Proposed Preliminary Design CriteriaModel Environment for the 1990's	50	63	
Rb-Sr and Sm-Nd Internal Isochron Ages of a Subophitic Basalt Clast From the Y75011 Eucrite	55	114	
Rb-Sr Internal Isochron Age of a Subophitic Basalt Clast from the Y75011 Eucrite	44	11	
Recent Shuttle EVA Operations and Experience	11	15	
Regolith Breccias from Apollo 15 and 16: Petrology, Rare Gases, and FMR Maturity	45	23	
Regulation of Hematopoiesis in Rats Exposed to Antiorthostatic, Hypokinetic/Hypodynamia, I – Model Description	37	16	
Reinterpretation of Otolith Input as a Primary Factor in Space Motion Sickness	35	5	
Remote Sensing for Crop Identification: State of the Art	44	9	
A Representative Space Station Expert System for Maintenance Scheduling	64	6	
Return to the Moon	54	101	
Rhyolitic Components of the Michipicoten Greenstone Belt, Ontario: Evidence for Late Archean Intracontinental Rifts or Convergent Plate Margins in the Canadian Shield?	60	150	
The Role of Boron in Monitoring the Leaching of Borosilicate Glass Waste Forms	58	134	
Salivary Concentrations for Clinical Drug Monitoring of Scopolamine	37	11	
Segmentacion Volcano-Tectonica de los Andes Septentrionales	48	46	
Selection Effects Against Small Comets	63	181	

Title	Page	Entry
A Sensitivity Analysis of the Shuttle Orbiter Heating	22	27
Shuttle Crews Record Shrinking Lake Chad	62	169
Shuttle Imaging Radar Antenna Technology	14	19
Shuttle Ku-Band Communications/Radar Technical Concepts	14	15
Shuttle On-Orbit Contamination and Environmental Effects	20	8
A Simple Microgravity Table for the Orbiter or Space Station	31	3
A Simplified Guidance Algorithm for Lifting Aeroassist Orbital Transfer Vehicles	12	4
Sm-Nd and Rb-Sr Isotope Systematics of an Archean Anorthosite and Related Rocks from the Superior Province of the Canadian Shield	43	5
The Space Age: An Ongoing Revolution in Technology	5	1
Space Debris, Asteroids, and Satellite Orbits	50	64
Space: Exploration-Exploitation and the Role of Man	3	1
Space Heat Rejection Radiators: Meteoroid/Debris Consideration	11	10
Space Motion Sickness	35	7
Space Salvage - A Report on Shuttle Mission STS 51-A	5	2
Space Shuttle Electrical Power Generation and Reactant Supply System	18	8
Space Shuttle Flight Operations - Training, Planning, Accomplishments	7	3
The Space Shuttle Orbiter Molecular Environment Induced by the Supplemental Flash Evaporator System	20	. 3

Title	Page	Entry
Space Shuttle Payload Design and Development	22	23 24
Space Shuttle Photography: A New and Inexpensive Tool for Geologic Mapping in Africa	61	167
Space Shuttle Structural Loads Response to Ascent Wind Profiles	22	20
Space Station Challenges for Navigation	27	6
Space Station Crew Workload: Station Operations and Customer Accommodations	7	4
Space Station: Lasers and Electro-Optics	14	13
Space Station Operations, Operational Control Zones	25	2
A Space Station Plume Model as Updated by an On-Orbit Plume Impingement Experiment	12	1
Space Station Program and Related Communication Systems Overview	31	1
Space Station Propulsion Requirements	18	9
Space Station, The First Step	27	4
Space Station Thermal Management System Development-Status and Plans	11	11
Spacecraft Food Service	41	52
Spacelab I Hematology Experiment (INS103): Influence of Space Flight on Erythrokinetics		
in Man	39	34
Spacelab 2 - A Preview	5	4
The Spatial Evolution of Energetic Electrons and Plasma Waves During the Steady State Beam Plasma Discharge	50	71
Spectral and Other Physicochemical Properties of Submicron Powders of Hematite (alpha-Fe2O3), Maghemite (gamma-Fe2O3), Magnetite (Fe3O4), Geothite (alpha-FeOOH), and Lepidocrocite		
(gamma-FeOOH)	54	104
Spectral Characteristics of Experimental Regoliths	56	118

. •

Title	Page	Entry
Spectral Studies of Possible Sources of Near-Earth Asteroids - CCD Reflectance Spectra	60 60	156 158
Standardized Hydrazine Coupling Development	18	5
Statistical Comparison of Pooled Nitrogen Washout Data of Various Altitude Decompression Response Groups	38	17
STS Retrieval of Satellites	7	1
STS-8 Atomic Oxygen Effects Experiment	22	22
STS-8 Orbiter Mission Window Pitting and Possible Association with El Chichon Eruption of March-April 1982	46	34
Sulfur in Achondritic Meteorites	47	40
Surface Sulfur Measurements on Stratospheric Particles	51	80
Survey of Probable Micrometer Sized Earth-Orbital Debris Fragments in the NASA-JSC Cosmic Dust Sample Collection	46	31
System for Conducting Igneous Petrologg Experiments Under Controlled Redox Conditions in Reduced Gravity	61	164
Systems Analysis and Technology Development for the NASA Orbit Transfer Vehicle	21	17
Technology for Manned Mars Flight	3	2
Tectonic Significance of Biomodal Volcanism	60	151
Telepresence Work System Concepts	23	1
Telerobotic Work System Concepts	23	2
Test Results From a Comparative Evaluation of a Condensation Nuclei Fire Detector	29	1
Testing EVA Equipment for Polar Orbit Operations	50	70
Thermal Energy Storage (TES) Materials Compatibility Test for Space Solar Dynamic Power System	18	1

.

Title	Page	Entry
Thermal Energy Storage for a Space Solar Dynamic Power System	59	142
Thermal Management System Options for High Power Space Platforms	10	8
A Three-Dimensional Navier-Stokes/Euler Code for Blunt-Body Flow Computations	21	12
Towards A Lunar Base Programme	47	39
Toxicological Concerns and Safeguards at NASA	37	14
U.S. Gravity Utilization of Tethers Activity	18	6
Use of Ground Radar to Detect Reentering Debris	46	35
A Variable Configuration Controller for a Multi-Purpose Articulated End Effector	16	1
Vegetation Change Detection from NOAA Polar Orbiting Satellites	55	113
Very High Potassium (VHK) Basalt: Complications in Mare Basalt Petrogenesis	58	137
A View from the Shuttle Orbiter: Observing the Oceans from Manned Space Flights	55	112
Vision Requirements for Space Station Applications	65	2
Voice Controlled Closed Circuit Television for the Space Shuttle Orbiter	14	17
Volcano-Tectonic Segmentation of the Northern Andes	48	47
Widespread Tholeiitic Melts in Archean Crustal Genesis	56	116
Young Thrust Fault Scarps in the Highlands: Evidence for an Initially Totally Molten Moon	44	15
Your Spacesuit and You – Significance of Manloading in Pressure Suit Design	11	13
Zinc Balance During Bed Rest: Sodium Flouride Supplementation	39	29

AUTHOR INDEX

Hyphenated number sets following author names refer to page number, then entry number(s). When an author's name appears on multiple pages, hyphenated number sets are separated by semicolons.

Aaron, John W. 31-1	Benz, Frank J. 33-1,2,3,4
Actkinson, Arland L. 17-1	Bernstein, W. 50-71
Adelfang, S. I. 22-20	Berry, Robert L. 20-1
Alred, John W. 12-1,2,5	Binder, Alan 44-12,13,14,15,16
Amsbury, D. 62-170	Blanchard, Douglas P. 44-17,18; 45-19,20,21; 49-56; 55-111
Anderson, C. A. 58-134	Blevins, D. 19-10
Anderson, D. J. 35-5	Block, Roger F. 10-6
Annexstad, John O. 43-1,2, 3,4	Bluford, Guion S., Jr. 5-1
Antin, Johnathan F. 64-1	Bogard, Donald D. 45-22,23,24, 25,26; 55-110; 58-138
Armstrong, Dan 33-4	Bollendonk, Walter W. 11-14
Arndt, George D. 13-1,2	Boronkay, Allen R. 64-2
Arrott, A. P. 35-3,5	Bourke, R. D. 44-18
Ashwal, L. D. 43-5; 55-110	Boyda, Robert B. 10-4
Audran, J. 39-33	Brasher, Warren L. 3-3
Babich, J. W. 39-32	Brochwicz-Lewinski, W. 62-175
Badhwar, Gautam D. 43-6,7,8; 44-9,10; 56-121; 57-126	Bricker, Richard W. 29-1
Baggen, Abe 64-2	Briles, Owen 33-1
Ball, M. E. 39-32	Bromley, Linda K. 13-3
Bansal, B. M. 44-11; 45-25; 47-36; 55-114; 57-125; 58-138	Brown, Jeri W. 64-3
Barlow, G. H. 40-43	Bruce, Tandy N. 7-1
Barton, Richard L. 12-3	Bungo, Michael W. 36-1,5,7; 37-8; 39-32; 41-47

PRECEDING PAGE BLANK NOT FREMED

89

Bunnik, N. J. J. 44-10 Calkins, Dick S. 35-1 Campins, H. 61-159 Campos, Carlos S. 31-2 Cardenas, F. 46-28,29; 49-54,55; 59-146 Carol, J. R. 13-2 Castner, Willard L. 20 - 2Cerimele, C. J. 12-4; 21-19 Charles, John B. 36-1,2,3,4,6,7; 37-8, 9 Chen, J. P. 39-34 Chen. Y. 37-10 Chhikara, R. S. 10-3 Cintala, Mark J. 46-27,28,28,30; 48-53; 49-54,55; 59-145,146 Cintron, Nitza M. 36-1; 37-9,10, 11,15; 39-29; 41-46 Cirlin, E. -H. 51-73 Clanton, Uel S. 46-31,32,34; 50-68 Coleman, M. E. 37-12,13; 39-33 Colling, Arthur K. 10-2 Compton. W. 54~102 Conkin, Johnny 37-14; 42-57 Cooke, D. R. 20-6 Cour-Palais, Burton G. 46-33.34: 48-53 Crews, J. L. 46-35; 48-53

Crosby, W. 39-34 Crouse, Kenneth 66-1.2 Curry, Donald M. 22-27 Cusick, Robert J. 10-1,2,7 Dasch, E. J. 47-36 Davidson, Shayla 13-1,4,5,6,7,8 Davis, D. W. 55 - 110Davis, J. 35-7 Day, Jack L. 40-39 DeBra, Daniel B. 31-3 Deiterich, Charles F. 7-2 Dell'Osso, Renato D., Jr. 7-3 deVries, J. P. 44-18 Dibner-Dunlap, M. E. 37-15 Driscoll, T. B. 39-28; 41-44 Duke, Michael B. 3-2: 47-37.38. 39 Dungan, Michael A. 45-19 Dunn, C. D. R. 37-16: 39-34: 41-44 Eckberg, D. L. 37-15 Edwards, Ben F. 38-17 Ehlers, H. K. F. 20-3,8 Ejzak, Edward M. 11-9 Erwin, Harry O. 13-9; 14-10,11,18 Estes, James 13-1 Faget, Nanette M. 18-1,2; 59-142

90

Farkas, Tibor 33 - 1Feiveson, Alan H. 10 - 3Fitton. J. G. 49 - 56Fitzpatrick, T. 39-30 Fleischman, George 11-12 Forman, Royce G. 20-4.5 Francis, Peter 61-168 Fraser, Wilson M., Jr. 18-2: 59-142 Freeborn, W. P. 58-134 Gaiser, K. 38-18 Gamble, J. D. 12-4; 20-6; 21-19 Garcia, Frank Jr. 27-1 Gardner, Dale A. 5-2 Garman. John R. 25-1 Garriott, Owen K. 31-3 Germany, Daniel M. 27-2 Gibson, E, K., Jr. 47-40; 54-104 Goesch1, J. D. 38-19 Goldwater, D. J. 36-5; 41-47 Gooding, James L. 46-31; 47-41, 42,43,44; 48-45 Goodrich, Winston D. 22-27 Goolsby, C. L. 39-31 Grady, Jane L. 14-12,13 Graham, Olin L. 14-20 Gray, Robert 11-13 Griffin, John W. 14-14,15; 18-3,4 Groves. T. 38 - 18Grüen, E. 50-64 Guimon, R. K. 51-74 Gunga, H.-C. 44-15 Hagemann, Dan 33-1 Haisty, Brett 22-26 Hall, Forrest G. 43-7 Hall. M. L. 48-46.47 Hamilton, David A. 22-24 Harmon, R. S. 49-56 Hauck, Frederick H. 5-2 Hawke, B. R. 46-30 Healey, Kathleen Jurica 16-1 48-48,49,50; Helfert, Michael R. 55-112,113; 62-169,170 Henderson, Herbert R. 27-1 Henderson, John B. 18-5: 19-10 Henderson, Keith E. 43-8 Henize, Karl G. 5-3.4 Henney, M. 38-18 Heydorn, R. P. 44-9 Hoefs, J. 49-56 Holz, R. K. 48-49; 55-113 Homa, John 33-2 Homann, C. 19-10 Homick, Jerry L. 35-3,5; 38-20,21 Horrigan, David J., Jr. 38-17.22. 23; 42-57

Horz, Friedrich 46-28,29; 48-51, 52.53: 49-54.55: 54-105.106.107: 56-118; 58-135,139,140; 59-145, 146 Houston, A. G. 44-9; 66-3 Hubbard, W. B. 60-157 Huntoon, Carolyn L. <u>see</u> Leach, Carolyn S. Huth, Gaylord K. 14-15 Jacobs, S. 20-8 Janauer, G. E. 39-30 Jauchem, James R. 38-24 Jedlika, Russel P. 13-1 Jenkins, Lyle M. 23-1.2 Johnson, P. 45-24 Johnson, Philip C., Jr. 36-3; 37-16; 38-25, 26, 27, 28, 32, 34; 39-35 Jones, Jess H. 27-1 Jordan, William T. 14-16,17 Kaltenback, J. 55-112 Karakulko, W. 19-10 Kelley, James S. 14-15 Kempton, Pamela 45-19; 49-56 Kessler, Donald J. 46-34; 49-57,58,59,60,61,62; 50-63, 64,65,66,67,68; 59-147 Konradi, Andrei 50-69.70.71 Koontz, Steven L. 33-5 Kramer, W. G. 41-46 Krauhs, Jane M. 40-36

Krebs, J. 39-29 Kril, M. B. 39-30 Krishen, Kurmar 14-18 Kroll, Kennth R. 18-6: 21-19 Kubiak, E. T. 17-2 Kuminecz, J. F. 22-22 Kunze, M. E. 39-31; 40-43 Kuo, M. C. 39-29 Lacy, J. L. 39-32 Lance, Nick Jr. 10-4,5,6; 65-6,7 Lange, R. D. 37-16; 39-34 Larkin, E. 39-34 Lauer, H. V., Jr. 54-104 Laul, J. C. 58-137; 59-144 39-33 Lawrence, W. H. Lawson, C. A. 54-104 Lazaron, Mary 12-1 36-1:39-28,29, Leach, Carolyn S. 34; 40-35,36 Leach-Huntoon, Carolyn S. see Leach, Carolyn S. LeBlanc, A. 39-29,32 Leger, Lubert J. 12-5; 20-7,8,9; 22-21,22 Lehtinen. A. 10-8 Leitner, Nancy J. 12-2 Leobofsky, L. A. 61-159 Lewis, C. F. 47-40

Lewis, James L. 40-37: 41-48: 64-3 Lewis, M. L. 39-31: 40-43 Li, Chien-Peng 21-10,11,12,13, 14,15; 21-19 Li, Z. K. 40 - 43Lichtenberg, B. K. 35-3.5 Lin, Chin 10-7 Lin. Karl K. 35 - 2Llobet. X. 50-71 Lofgren, Gary E. 51-72.73. 74,75,76,77 Loftus, Joseph P., Jr. 3-1,2, 3,4,5 Long, Stuart A. 13-6.7.8 MacDonald, R. B. 44-9 MacKinnon. Ian D. 51-78,79, 80; 52-81; 57-125; 62-172, 173,174 Maczuga, David E. 55-110: 56-117 Magic. N. M. 37-15 Magin, Roy L. 53-97 Magnuson, J. W. 41-53 Malin, Jane T. 10-5: 65-4.5.6.7 Mall, W. N. 50-70 Mancuso. Thomas G. 27 - 3Mandell, Humboldt C. 27-4.5 Mason. John A. 40 - 38McCandless, Bruce 11-14

McCormick, T. C. 51-75 McCoy. J. E. 52-82 McCutchen, Don K. 20 - 1McDowell A. F. 55-115 McFadden. L. A. 60-158 McFadyen, Gary M. 40-39 45-24; 50-68; McKay, David S. 52-81,83,84,85,86,87,88; 53-89, 90: 62-174 McKay, Gordon A. 53-91,92,93,94, 95,96 McKay, May Fae 53-97 Mendell, Wendell W. 47-39: 53-98: 54-99,100,101 Meyer, Charles, Jr. 54-102 Miller, Edgar 12-5; 20-8 Mitchell, Charles 22-26 Mogk. D. W. 51-80 Molberg, Bernard H. 64-4.5 Molina, T. 38-18 Moorbath, S. 49-56 Moore. C. B. 47-40 Morgan, T. H. 57-124 Morris, Richard V. 45-24; 54-103, 104,105,106,107; 58-136 39-31; 40-40, Morrison, Dennis R. 41,42,43,44 Morrison, Donald A. 43-5; 55-108, 109.110: 56-117 Moser, Thomas L. 9-1,2

Mount. Frances E. 64-6 Mueller, A. C. 50-65 Murali, A. V. 45-20: 55-111: 62-175 Nace, G. A 54-104 Nader. Blair A. 25-2 Nagy, Kornel 21-19 Nanevice, J. E. 50-70 Natchman, R. G. 41 - 44Nelson, R. 55 - 112Nerem, R. S. 55-113 37-16 Nessel, R. Ngo, John Carre 13-1 Nieder, R. L. 22-20 Nitschke, Harold A. 14-19 Noves, Gary 10-1 Nyquist, Laurence E. 44-11: 45-25; 47-36; 55-114, 115; 57-125; 58-137,138; 60-152 Oberst, J. 44-16 01ds. S. 49-54 Orr, Linda S. 64-2 Papike, J. J. 58-139,140; 59-144 Parish, Richard C. 10 - 8Parker, D. E. 35-3,5 Parker, Robert A. R. 5 - 3Perez, L. 37-16

Peterson, J. S. 51-76 Petro, A. J. 53-97 Petty. J. C. 40 - 39Phinney, William C. 43-5; 55-110; 56-116,117 Pierson, D. L. 38-18: 41-45 Pieters. C. 56-118 Pippen, David L. 33-6 Pitts. David E. 56-119,120,121 Pixley, Paul T. 27-6 Popp, R. L. 36-5; 41-47 Potter, Andrew E. 50-68; 56-122. 123; 57-124 Price, Donald F. 11-9 Primus, T. M. 47-40 Putcha, L. 37-11: 41-46 Rader, W. Paul 20-1 Rankin, J. Gary 11-10,11,12 Rappole, C. L. 41-52 Reid. Robert C. 21-19 Reimold, W. U. 57-125 Reschke, Millard F. 35-3,4,5; 38-21 Resnick, Judith A. 53-97 Reyna, Edward 56-121: 57-126 Reysa, Richard P. 10-2 Richards, William F. 13-6,7,8

Riddle, J. 36 - 4Rietmeijer, Frans J. 52-81: 57-127,128,129,130,131,132,133 Roberds, J. B. 50~66 Roberts, Barney B. 3-2; 21-16,19; 47-39 Roberts. R. 39-32 Robinson, G. A. 50-68; 62-174 Rodriguez, Manuel 11-15 Roesch, J. 36-4 Rogers, Leslie 11-15 Rouen, Michael 11-13 Russell, W. J. 51-77 Sadunas, J. A. 10-8 Samonski, Frank H. 10-6Sandler, Harold 36-5: 40-36: 41-47 Sanford, C. 39-33 Santy, Patricia A. 41-48; 64-4 Sarnoff, B. E. 40 - 4338-19; 39-30: Sauer, Richard L. 41-49,50,51,52,53 Sawyer, Ralph S. 14-20; 15-21 Scarlett. J. 38-18 Schardt, Bruton, B. 64-5 Scheetz, B. E. 58-134 Scheld, H. W. 38-19: 41-53 Schliesing, J. A. 20 - 9Schlosser, D. C. 20 - 6

Schmidt, Oron L. 14-20: 15-21 Schmitt. R. A. 45-26 Schneider, V. 39-29 Schramm. L. S. 50-68 Schultz, R. A. 46-32; 50-68 Schwartz, Mary R. 10-4Scott, Carl D. 21-18,19 Sears, D. W. G. 51-74 Seddon, R. 36-4 See. T. H. 49-54,55; 54-105,106, 107; 58-135,136,139,140 Sehnal, L. 50-64 Shaw, Randy 33-2 Shervais, J. W. 58-137 Shih, C. -Y. 44-11; 45-25; 47-36; 55-114; 57-125; 58-137,138 Shinkle, Gerald L. 7-4 Simanton, Donald F. 25-3 Simon, S. B. 58-139,140: 59-144 Simon, William E. 18-2.7.8: 58-141; 59-142,143 Smistad. Olav 31-4 Smith, D. K. 58-134 Smith, Irwin D. 33 - 5Smith, M. R. 45-26; 59-144 Smith. O. E. 22-20 46-28,29; 59-145, Smrekar, S. 146 Smyth, J. R. 51-75

45-21: 55-111 Sommer, M. Spiker, I. K. 22-22 Spudis, P. J. 46-30 Steiner, Allan 14-15. Stewart. C. 54 - 104Stewart, D. 35-7 Stoltzfus, Joel 33-3 Stone, H. W., Jr. 20-6 Stradling, Jack S. 33-6 Straskus, J. V. 50-70 Su. S. -Y. 50-66,67; 59-147 Suddath, J. H. 13 - 2Swank, Paul R. 42-55 Sylvester, Paul J. 59-147,148, 149; 60-150,151 Taeuber, Ralph J. 18-9; 19-10 Takeda, H. 44-11; 55-114; 60-152 Tanzer, Herb 11-12 Tapley, B. D. 55-113 Tavassoli, M. 39-34 Taylor, G. J. 45-26 Taylor, Gerald R. 42-55 Taylor, L. A. 51-73; 58-137 Taylor, Peter 21-19 Tholen, D. J. 61-159 Thomas-Ver Ploeg, K. L. 60-153 Thompson, T. D. 49-55; 59-146

Thornton, William E. 5 - 5J Todd, P. W. 39-31; 40-43 Tsui. J. 41-46 Underwood, J. M. 20-6 Vanderploeg, James M. 35-6.7: 37-11; 38-21; 41-46 Vang, Harold A. 14-15 Van Tassel, Keith E. 19-11: 59-143 Veeder, G. J. 61-159 Verani. M. S. 39-32 Verhoef, W. 44-10 Vernikos-Danellis, Joan 40 - 36Vilas, Faith 60-154,155,156,157, 158,159 Visentine, J. T. 20-9; 22-21,22 Wade, Donald C. 22-23,24 Waligora, James M. 38-17,23; 42-56,57 Warren, J. L. 50-68 Watts, L. A. 50-68 Weaver, B. L. 49-56 Wells, Gordon, L. 55-112; 61-160; 62-170 Wentworth, S. J. 50-68 West. Walter 22-25,26 White, W. B. 58-134 Whitehead, V. S. 61-161 Whitsett, Charles E., Jr. 11-14. 15

Wiesmann, H. 44-11; 47-36; 55-114; 57-125; 58-138 Williams, I. S. 54-102 Williams, Ralph 33-4 Williams, Richard J. 61-162, 163,164 Williams, S. D. 22-27 Wolf, D. 36-4 Wood, Charles A. 48-46,47,50; 61-165,166,167,168; 62-169,170 Wooden, J. L. 43-5; 44-11; 55-110,114; 57-125; 58-138 Woolford, Barbara J. 64-3,7,8 Zavala, Ruben 64-9 Zolensky, Michael E. 45-21; 52-81; 55-111; 58-134; 60-153; 62-171,172,173,174,175 Zook, Herbert A. 46-32,34; 50-68; 62-176,177; 63-178,179,180,181

Zrubek, William E. 14-15

SUBJECT INDEX

Hyphenated number sets following subject terms refer to page number, then entry number(s). When a subject occurs on multiple pages, hyphenated number sets are separated by semicolons.

Activated charcoal columns 39-30 AD148937 5-3 Aerobrakes flow equations 21-14 orbital transfer vehicles 21-19 Aerodynamics 12-3; 20-6; 22-20 see also Flow equations Aerosols 51-78 Aerospace medicine 40-38 see also Cardiovascular system: Orthostatic tolerance; Weightlessness Africa geologic mapping 61-167 water resources 48-48,49,50; 62-169 Altitude decompression 38-17 Anorthosites 43-5: 55-108 Antarctica Glaciology 43-2 Meteorites 43-3,4; 48-45 Antennas conformal arrays 13-2 design 13-5 discrete element arrays 13-1 dual band 13-6,7,8 metallizing 13-4 microstrip 13-6,7,8 radar 14-19 reactive loading 13-6,7,8 Anthropometry 64-8 Apollo 12 drive tube 12027 59-144

Apollo 15 and 16 impact melts see Impact melts Artificial intelligence 65-4,5 <u>see also</u> Expert programs Asteroids 50-64 1982 DV 61-159 spectral reflectance 60-156: 60-158 Astronauts 3-5; 41-48 Atomic oxygen 20-9; 22-22 Audio potentials 5-5 Auxiliary power sources 20-5 Basalt 44-11,13,14; 45-19,25; 47-36; 53-90,93; 55-114; 58-137 Beam plasma discharge 50-71 Beam-plasma interactions 50-69 Bed rest studies 39-29 Bioinstrumentation 40-39.42 Biomedical data Computer programs 42-54 Biotechnology 40-40 Blood 36-6; 38-25,26; 39-28,34 see also Cardiovascular system; Hematopoiesis; Hematology Body fluids 40-35,36 see also Blood

Borosilicate glass 58-134

Breccia 45-22.23.24: 52-87 CAD/CAE workstation 13-3 Carbon dense, formation 10-1 poorly graphitized 57-132.133 Carbon dioxide concentration 10-4 Carbonaceous materials 57-127 Carboxyglutamic acid 37-10 Cardiovascular system 37-14,15,16 space flight effects 36-2,3,4,5, 6.7: 37-8: 38-24.25,26; 39-28; 41-47 Charge neutralization 52-82 Chondrites 47-44: 51-74: 55-115 Chondrules 51-72,73,77; 52-85 Chromite 52-86 Comets 63-181 Communication systems 14-20: 15-21: 25-3: 31-1 Computer command modes 64-1 Computer vision 17-1: 65-2.3 Conical bodies 21-10 Contamination 12-5: 20-8 Control systems automated 10-6; 65-1,4 frequency analysis 17-2 variable configuration 16-1 see also Environmental control systems Cosmic dust 46-31: 62-171 see also Interplanetary dust Cosmic ray flux 55-115

Crew stations 3-4 Crew workloads 7-4 Crops remote sensing 43-6,8; 44-9 see also Vegetation Cytology 39-31: 40-41,42,43 Dactites 59-148 Debris see Space debris Decision processes 25-3 Design analysis 35-2 Docking systems 14-11 Earth crust 56-116 Earth observations (from space) 48-50; 55-112; 61-167; 62-169,170 Ecocardiography 36-4,5 Electric power generation 18-8 Electrochemical carbon dioxide concentration 10-4 Electronstagmography 5-5 Electro-optics 14-10,13; 64-7 End effectors 16-1 Energy storage 18-2 Environmental control systems 10-2,7,8 Erythrokinetics see Blood Eucrite 44-11; 45-26; 55-114; 60-152 Euler solutions 21-11.15

. . .

Eutectics 51-76 Exobiology plant species 38-19 Expert programs 64-6; 65-6,7 Explorer satellites 49-59.60 Extraterrestrial matter 57-132,133 see also Cosmic dust. Interplanetary dust, Meteorites Extravehicular activity 11-15 equipment tests 50-70 physiological effects 38-22,23, 24: 42-56 Fault diagnostics 10-5 Feldspars 51-76; 58-139,140 Finite difference method 21-12 Fire detectors 29-1 Fisher linear classifier 7-2 FLAGRO computer program 20-4 Flash evaporator system 20-3 Flight operations 7-3: 61-161 Flight tests Space Shuttle orbiter 12-3; 20-6 Flight training 7-3; 53-97 Flow equations 21-10,12,13,14,15 Fluid metabolism see Body fluids Food see Nutrition Fracture mechanics 20-4.5 Frequency analysis 17-2 Gabbro 55-109

Gamma ray imagery 39-32 Geochemistry 45-20 Glass 45-21; 52-84; 55-111; 58-134 Granite 55-110: 58-138 Granodiorite 49-55 Granulite 49-56 Greenstone Belt, Ontario 55-110: 59-147,148; 60-150,151 Guidance orbital transfer vehicles 12-4 Heat pipes 11-12 Heat rejection radiators see Radiators Heat transfer 21-18 Heating analysis 22-27 Hematology 38-24; 39-34; 41-44 see also Blood Hematopoiesis 37-16 Human factors 40-37; 64-3,7 Hydrazine coupling systems 18-5 explosive decompression 33-1 Igneous rocks 61-164 Ilmenite 53-92,93 Image interpretation 61-166 Image resolution 13-1 Immunodeficiency 42-55 Impact facilities 46-27; 48-53 Impact melts 45-26; 51-72; 54-105. 106,107; 57-125; 58-135,136,139, 140

Impact studies 49-55: 60-152 cold rock targets 59-145,146 H₂0 ice 46-28,29 low gravity 46-27 spacecraft 46-32,33,34; 49-60 Inertial energy storage 59-143 Interplanetary dust 51-78; 57-128; 63-179 see also Cosmic dust Ion chromotography 37-9,10 Ion exchange resins 39-30 Iron oxides 54-104 Jupiter Interplantetary dust 63-179 Kidney cells see Cytotogy Kunlun Fault, Tibet 61-160 Lake Chad see Africa, water resources LAMPS computer program 12-2 Landsat data 43-7 Large Format Camera 61-160; 64-4,5 Lasers 14-10 docking systems 14-11 space proximity operations 14-18 Space Station 14-13 Leaf area estimates 10-3 Life support systems 65-6 Liquid chromatography 37-10 Low Earth orbit 20-7; 22-21 Low gravity see Reduced gravity; Weightlessness

Lunar bases 46-30; 47-37,39; 48-51; 53-98; 54-99,100,101 metabolic support 41-49.50 Lunar crust 54-102 Lunar evolution 44-12,15; 49-54; 54-102; 56-118 Lunar geology 44-11,12,13,14, 15,16; 45-23,24,25,26; 46-30; 47-36; 49-54; 54-102; 58-137, 138; 59-144 Lunar mineralogy 54-104; 61-163 see also names of specific minerals Lunar rocks <u>see</u> Lunar geology or specific rock and mineral types Manganese 45-20 Manned Maneuvering Unit (MMU) 11-14: 20-1 Manned missions 3-1 Mars 3-2 history 3-4 see also Space Shuttle missions Mars 44-17,18; 53-98 Mars missions 3-2 Martian volatiles 47-42.43 Mass extinctions 48-52 Materials tests 33-6 see also Spacecraft materials Mercury (planet) 56-122; 57-124; 60-155 Metabolic support 41-49,50 Metals. antenna materials 13-4 cleaning 33-5 ignition 33-2,3,4

Meteorite craters Lonar crater 45-21; 55-111 Lunar microcraters 62-177 Meteorites 45-22 Allan Hills icefield 43-1 Achondritic 47-40 Antarctica 43-3,4; 48-45 Apollo 16 impact melts 54-107 chondrite 47-44 CI/CM 57-128 clay minerals 47-41 collisional balance 62-176 Poland 62-175 Shergotty 53-194 Meteoroid shielding 46-33: 49-59 Meteoroids optical detection 63-180 Microbiology 38-18; 39-30; 41-45; 42-55 Microgravity see Reduced gravity; Weightlessness Micrometeorites 52-83.88 Micrometeoroid flux 62-177 Modal assurance 22-25,26 Moonguakes 44-16 Multigrid techniques 21-11 Navier-Stokes/Euler code 21-15 Navigation 27-6 Neptune 60-155,157 NGR6164-65 5-3 Nitrogen depletion 42-57 Non-contact sensors 13-9 Nutrition in space flight 39-27; 41-51,52

Oceans Space Shuttle observations 55 - 112Olivine 49-54; 51-72,73,75,77 Optical communications 14-12 Optical spectroscopy 5-3 Orbit-to-orbit stages 3-3 Orbital debris see Space debris Orbital environments 20-7; 22-21 Orbital fluid tranfer 18-3.4 Orbital rendezvous contamination effects 12-5 Orbital transfer vehicles design 21-19 quidance 12-4 systems analysis 21-17 Orthostatic tolerance 36-1.3: 37-8 Otolith see Vestibular physiology Oxygen prebreathing 37-14 Oxyhydroxides 54-104 Particle emission 21-16 Payloads see Space Shuttle payloads Pharmacology 40-40: 41-46 Plagioclase 49-54; 53-90; 56-117 Planetary evolution 56-116,117; 57-130.131 <u>see also</u> Lunar evolution Planetary exploration 47-38 see also Mars missions Plant growth systems 41-53

Plume models 12-1 Polar orbiting satellites 55-113 Polar orbit EVA 50-70 Polvimides 39-33 Polyurethane foam 39-33 Pressure suits see Space suits (Productivity 13-3: 14-16 Propulsion Space Station 19-9 **Protoplanets** see Planetary evolution Proximity operations in space 12-5: 14-18 Pyroxenes 49-54; 53-91.95.96 Radar imaging 14-19 Ku-band 14-14,15 Reactant supplies 18-8 Reaction control system 19-10 Redox crystallization 61-162 Redox environment igneous petrology experiments 61-164 Reduced gravity 31-3 cell separation 40-42 impact experiments 46-27 see also Weightlessness Regression models 10-3 Remote sensing 43-6.7.8; 44-9; 55-113; 56-119,120,121; 57-126 Africa 48-49.50 see also Space Shuttle missions; Earth photography; Ocean observations

Rhyolite 60-150 Robotics 23-1.2: 65-1.3.5 Rock intrusions Mafic dykes 59-149 Mulcahy Lake 55-109,110 Rocket exhaust 21-16; 50-65; 60-153 Satellite retrieval 7-1 Scatterometers 56-119,120,121 Scopolamine 37-11,15; 41-46 Shergotty 53-91,94,95 Solar energy systems 18-1,2,7; 58-141; 59-142 Solar Maximum Mission 50-68: 52-83,88 Sonic booms 27-1 Space adaptation 35-6 see also Orthostatic tolerance: Space motion sickness; Weightlessness Space biology see Exobiology Space debris 11-10; 46-31,35; 49-57,58,59,60,62; 50-63,64, 65,66,67,68; 56-123; 63-178 Space flight physiology duration effects 37-8 extravehicular activity 38-22 metabolic support 41-50 see also Weightlessness Space manufacturing 31-2 Space motion sickness 35-5.7: 38-20,21 Space photography see Earth observations; Space Shuttle missions

Space platforms 10-8 Space radiators heat pipes 11-12 heat rejection 11-10 Space salvage 5-2 Space Shuttle missions Earth observatories 62-170 Earth photography 48-50; 61-167; 62-169 echocardiography 36-5 electrocardiograhy 40-39 extended duration 10-7 extravehicular activity 11-15; 38-22 flight operations 7-3; 61-161 management 27-5 ocean observations 55-112 satellite retrieval 7-1 Spacelab flights <u>see</u> Spacelab STS-1 sonic boom 27-1 STS-8 atomic oxygen experiment 22-22 cytology 40-43 STS 51-A 5-2 Space Shuttle orbiters aerodynamics 20-6 auxillary power unit 20-5 cameras 64-5 <u>see_also</u> Large Format Camera closed circuit television 14-17 contamination 20-8 electric power supplies 18-8 flight tests 12-3; 20-6 heat transfer 21-18 heating 22-27 molecular environment 20-3 optical communication 14-12 radar 14-15,19 reaction control system 19-10 reduced gravity 31-3 Space Station applications 64-9 structural analysis 22-25,26 STS-1 reentry 27-1 tiles 20-2

Space Shuttle payloads 22-23,24 Space Shuttles heat transfer 21-18 program management 27-5 structural loads 22-20 Space Station artificial intelligence 64-6; 65-4,5,7 atomic oxygen interactions 20-9 commercial opportunities 31-4 communications 14-20; 15-21; 31-1 computers 64-1 control systems 65-7 crew workloads 7-4 data systems 25-1 Earth observatories 62-170 electrochemical CO₂ concentration 10-4 electro-optics 14-13 extravehicular activity 38-23 human factors engineering 40-37 inertial energy storage 59-143 lasers 14-13 maintenance scheduling 64-6 manufacturing flows 31-2 medical sciences 40-38 modular storage 64-9 navigation 27-6 non-contact sensors 13-9 nutrition 41-51 operational control zones 25-2 planning 27-2,3,4 plume models 12-1 propulsion 18-9 robotics 65-1,5 solar energy systems 18-2,7; 58-141 thermal management 11-11 tracking 14-20; 15-21 vision requirements 65-2 Space suits 11-13 Space technology 5-1; 9-1 Spacecraft materials 20-7; 22-21

Spacelab 5-4 hematology experiment 39-34 microbiological monitoring 38-18 Specular reflectance 57-126 Statistical analysis 7-2: 35-1,2 Stratospheric particles 51-78,79, 80; 52-81; 60-153; 62-172,174 Structural analysis 22-25,26 Structural loads 22-20 Structural reliability 9-2 STS flights see Space Shuttle missions Tectonics 48-46,47; 60-151,152; 61-160 Teleoperators 23-1,2; 64-1 see also Robotics Television, closed circuit voice control 14-17 Tethering 18-6 Thermal analysis spacecraft environment 22-27 Thermal energy storage 18-1; 59-142 Thermal protection 20-2 Thermal systems space platforms 10-8 Space Station 11-11 Tholeiitic melts 56-116 Three-dimensional flow 21-13,14,15 Tochilinites 62-173 Toxicology 37-12,13; 39-33 Tracking Space Station 14-20; 15-21

Vegetation remote sensing 55-113: 56-119,120,121; 57-126 Vestibular physiology 35-3,4,5 Vision see Computer vision Voice control 14-16,17 Volcanism 61-165 Andes 48-46,47; 61-168 Geronimo volcanic field 49-56 Greenstone belt 59-147; 60-151 Water analysis 11-9 Weightlessness physiological effects 35-3; 36-2,3,4,7; 37-8; 38-25,26; 39-28,34; 40-35; 41-47 see also Reduced gravity; Space flight physiology Zinc balance 39-29 Zircon 54-102

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