NASA Technical Memorandum 58273

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

AUGUST 1986
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 E. Huntoon
Associate Director
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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.


MISSION OPERATIONS DIRECTORATE

1. Bruce, Tandy N.: STS Retrieval of Satellites. Presented at the 22nd Space Congress hosted by the Canaveral Council of Technical Societies, April 23-26, 1985, Cocoa Beach, Florida.


ENGINEERING DIRECTORATE


Advanced Programs Office


Tracking and Communications Division


Avionics Systems Division


Structures and Mechanics Division


Flight Projects Engineering Office


MISSION SUPPORT DIRECTORATE


SPACE STATION PROJECTS OFFICE


SAFETY, RELIABILITY, AND QUALITY ASSURANCE OFFICE


WHITE Sands TEST FACILITY

1. Benz, Frank J.; Briles, Owen; Hagemann, Dan; and Farkas, Tibor: Explosive Decomposition of Hydrazine Due to Rapid Gas Compression. Presented at the JANNAF Interagency Propulsion Committee Conference, April 9-12, 1985, San Diego, California.


SPACE AND LIFE SCIENCES DIRECTORATE

Space Biomedical Research Institute


5. Reschke, M. F.; Parker, D. E.; Homick, J. L.; Anderson, D. J.; Arrott, A. P.; and Lichtenberg, B. K.: Reinterpretation of Otolith Input as a Primary Factor in Space Motion Sickness. NATO AGARD Results of Space Experiments in Physiology and Medicine and Informal Briefings by the F-16 Medical Working Group, March 1985, 18 p.


Medical Sciences Division


3. Bungo, Michael W.; Charles, John B.; and Johnson, Philip C., Jr.: Cardiovascular Deconditioning During Space Flight and the Use of Saline as a Countermeasure to Orthostatic Intolerance. Aviation, Space, and Environmental Medicine, Volume 56, October 1985, pp. 985-990.


13. Coleman, M. E.: Toxicological Concerns and Safeguards at NASA. Presented at the University of Mississippi Medical Center, July 22, 1985, Jackson, Mississippi.


35. Leach, Carolyn S.; and Johnson, Philip C., Jr.: Fluid and Electrolyte Control in Simulated and Actual Spaceflight. Presented at the 7th Annual Meeting of the IUPS Commission on Gravitational Physiology, 1985, Niagara Falls, New York.


Solar System Exploration Division

1. Annexstad, John O.: Displacement, Ablation, and Meteorite Concentrations at the Allan Hills Icefield. Presented at Oregon State University, Corvallis, Oregon, April 23, 1985; and at the University of Minnesota, Minneapolis, Minnesota, April 26, 1985.

2. Annexstad, John O.: Geography and Glaciology of Selected Blue Ice Regions in Antarctica. Presented at the University of Minnesota, Minneapolis, Minnesota, April 26, 1985.


81. Mackinnon, Ian; Rietmeijer, Frans J.; McKay, David S.; and Zolensky, Michael E.: Microbeam Analyses of Stratospheric Particles. Presented at the Workshop on Microbeam Analysis Techniques in the Study of Lunar, Meteorites, and Cosmic Dust Samples, August 5-9, 1985, Louisville, Kentucky.


Artificial Intelligence and Information Sciences Office


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