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EXPERIMENTS SELECTED FOR FIRST SPACELAB FLIGHT

NASA and the European Space Agency have selected 37 scientific experiments to be conducted on the first flight of Spacelab, scheduled for launch aboard the Space Shuttle in late 1982.

The experiments fall into five broad categories: atmospheric physics and Earth observations, space plasma physics, material sciences and technology, astronomy and solar physics, and the life sciences. Thirteen are sponsored by NASA; the remainder are the responsibility of the European Space Agency, a consortium of 11 nations. (Member nations of the European Space Agency are Belgium, Denmark, France, West Germany, Ireland, Italy, The Netherlands, Spain, Sweden, Switzerland and the United Kingdom.

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May 8, 1980



Dr. Thomas A. Mutch, NASA Associate Administrator for Space Science, announced selection of the NASA-sponsored experiments in letters to the experiment developers, who are called Principal Investigators.

The selection was made from a list of experiments identified several years ago for definition and development. Three NASA-sponsored experiments and a major European Space Agency facility that were under development had to be deferred and will be assigned to subsequent Spacelab flights. The major limiting factor that prevented the selection of all experiments under development was mass, according to the Spacelab 1 mission manager. Each agency will be able to fly 1,392 kilograms (3,062 pounds) of experiment equipment on the mission.

Spacelab is a flexible laboratory system that can be installed in the cargo bay of the Space Shuttle orbiter to provide an orbital research center for both astronauts and scientists. Unlike its predecessor, Skylab, this new system will not be left in space unattended. It will remain in the Shuttle for the duration of its mission, and be returned to Earth for refurbishment and preparation for the next mission.

The Spacelab facility is being designed and manufactured by the European Space Agency and a European contractor consortium. NASA will furnish the Space Shuttle and will manage the in-orbit activities with support from ESA.

Unique non-astronaut science crew members, called Payload Specialists, will provide support to the Principal Investigators in conducting their experiments in space.

Five Payload Specialists, two Americans and three Europeans, are now training for the first mission. Two of this group, an American and a European, will fly aboard Spacelab 1. The other three will provide support to the mission in the Operation Control Center at NASA's Johnson Space Center, Houston.

The Marshall Space Flight Center, Huntsville, Ala., is Spacelab 1 mission manager for NASA.

The NASA experiments selected and the Principal Investigators involved are:

Dr. Marsha R. Torr
University of Michigan, Ann Arbor
An Imaging Spectrometric Observatory

Prof. Tatsuzo Obayashi
University of Tokyo, Japan
Space Experiments with Particle Accelerators

Dr. Stephen B. Mende
Lockheed Palo Alto Research Laboratory, Palo Alto, Calif.
Atmospheric Emission Photometric Imaging

Prof. C. Stuart Bowyer
University of California, Berkeley
Far UV Observations Using the Faust Instrument

Prof. Eugene V. Benton
University of San Francisco, Calif.
HZE Particle Dosimetry

Dr. Frank M. Sulzman
Harvard Medical School, Boston
Characterization of Persisting Circadian Rhythms

Dr. Richard C. Willson
Jet Propulsion Laboratory, Pasadena, Calif.
Active Cavity Radiometer Solar Irradiance Monitor

Dr. Raymond L. Gause and Ann F. Whitaker
Marshall Space Flight Center, Huntsville, Ala.
Dr. Coda H. T. Pan, Shaker Research Corp.,
Ballston Lake, N.Y.
Tribological Experiments in Zero Gravity

Prof. Allan H. Brown
University of Pennsylvania, Philadelphia
Nutation of Helianthus Annuus

Prof. Laurence R. Young
Massachusetts Institute of Technology, Cambridge
Vestibular Experiments

Dr. Carolyn S. Leach
Johnson Space Center, Houston
Influence of Space Flight on Erythrokinetics in Man

Dr. Millard F. Reschke
Johnson Space Center
Vestibulo-Spinal Reflex Mechanisms

Prof. Edward W. Voss, Jr.
University of Illinois, Urbana
Effects of Prolonged Weightlessness

The Principal Investigators selected for ESA-sponsored
experiments are:

Dr. M. Ackermann
Institut d'Aeronomie Spatiale de Belgique,
Brussels, Belgium
Grille Spectrometer

Dr. M. Herse
Service d'Aeronomie du CNRS, Verrieres-Ie-Brusson, France
Waves in the OH Emissive Layers

Dr. G. Thuillier
Service d'Aeronomie du CNRS
Measurement of Solar Spectrum from 170 -3200 Nanometers

Dr. J-L. Bertaux
Service d'Aeronomie du CNRS
Lyman Alpha Study of Hydrogen and Deuterium

Dr. Klaus Wilhelm
Max-Planck-Institut fur Aeronomie,
Katlenburg-Lindau, Germany
Low Energy Electron Flux and Its Reaction to Active
Experimentation on Spacelab

Dr. C. Beghin
CRPE/CNET/CNRS, Orleans-Cedex, France
Phenomena Induced by Charged Particle Beams

Dr. D. Crommelynck
Institut Royal Meteorologique de Belgique, Brussels
Solar Constant Measurement

Prof. G. Courtes
Laboratoire d'Astronomie Spatiale, Marseille, France
Very Wide Field Camera

Dr. R. D. Andresen, ESA/ESTEC/SSD, Noordwijk,
The Netherlands
Spectroscopy in X-ray Astronomy

Dr. R. Beaujean
Institut fur Reine and Angewandte Kernphysik der
Universitat Kiel, Germany
Isotopic Stack Measurement of Heavy Cosmic Ray Isotopes

Dr. Helen Ross
University of Stirling, Scotland, United Kingdom
Mass Discrimination During Weightlessness

Dr. K. Kirsch
Physiologisches Institut der Freien Universitat
Berlin, Germany
Measurement of Intrathoracic Venous Pressure via a
Peripheral Vein

Dr. K. Kirsch
Physiologisches Institut der Freien Universitat Berlin
Collection of Blood Samples for the Determination of
Antidiuretic Hormone, Aldosterone and Other Hormones

Prof. Dr. H. Bucker
DFVLR Institut fur Flugmedizin, Frankfurt, Germany
Advanced Biostack Experiment

Prof. Aristide Scano
University of Rome, Italy
Ballistocardiographic Research in Weightlessness

Dr. G. Horneck
DFVLR Institut fur Flugmedizin
Microorganisms and Biomolecules in Space Environment

Dr. H-L. Green
Clinical Research Centre, Middlesex, Great Britain
Personal Miniature Electro-physiological Tape Recorder

Dr. Augusto Cogoli
Eidgenossische Technische Hochschule, Zurich,
Switzerland
Effect of Weightlessness of Lymphocyte Proliferation

Deutsche Forschungs-und Versuchsanstalt fur Luft und
Raumfahrt, Cologne-Porz, Germany
(Mr. A. Langner, Project Manager)
Metric Camera

Deutsche Forschungs-und Versuchsanstalt fur Luft
und Raumfahrt
(Dr. M. Wahl, Project Manager)
Microwave Remote Sensing Experiment

Prof. Dr. R. von Baumgarten
Johannes Gutenberg Universitat, Mainz, Germany
Effect of Rectilinear Accelerations, Optokinetics and
Caloric Stimulations on Human Vestibular Reactions
and Sensations in Space

Deutsche Forschungs-und Versuchsanstalt fur Luft
und Raumfahrt
(Mr. H. Steimle, Project Manager)
Material Science Double Rack Facility

Dr. C. Belouet
Laboratoire d'Electronique et de Physique Appliquee,
Limeil, France
Mercury Iodide Growth

Prof. J. F. Nielsen
Technical University of Denmark
Prof. A. Authier
Universite Pierre et Marie Curie, Paris
Organic Crystal Growth/Growth of Manganese Carbonate

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