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(NASA-News-Release-79-112) NASA SELECTS 40
INVESTIGATIONS FOR SPACELAB/SHUTTLE FLIGHTS
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NASA SELECTS 40 INVESTIGATIONS FOR SPACELAB/SHUTTLE FLIGHTS

NASA has selected 40 scientific investigations -- 33 from the U.S. and seven from four foreign nations -- to be studied and developed for a series of Spacelab/Shuttle flights planned for the period between 1983 and 1985. Costs of the U.S. investigations are expected to total about \$100 million over the next five-year period.

The foreign countries involved are Canada, France, Japan and Belgium, and each will be responsible for funding its own experiments and investigations.

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August 30, 1979

The investigations will be in the disciplines of astronomy, upper atmospheric physics, space plasma physics, solar physics and high energy astrophysics.

Forty principal investigators have been selected from 16 universities, four private organizations or companies and seven different government agencies. Over 250 coinvestigators are associated with the selected investigations.

Spacelab will be carried to and from orbit by the Space Shuttle and remain attached to the Orbiter throughout the flight where it will serve as a platform for investigations in near-Earth orbit for a period of about one week.

Almost 200 responses were received by NASA from the world scientific community in reply to an Announcement of Opportunity for Spacelab science investigations sent out by the space agency last June.

With the advent of the Space Shuttle and the availability of standard space qualified hardware which can be placed in orbit, repaired, retrieved or replaced, NASA plans to exploit this capability and reduce the cost of such payloads while making space flight more accessible to a wider range of users.

It is intended that these investigations will be covered by new procedures which no longer require the investigator to adhere to the strict performance characteristics that had to be demonstrated prior to flight in former years. Now investigations must comply only with flight safety requirements and good engineering and management practices as provided in NASA policy guidelines. Investigations selected for development are expected to be assigned to a flight by NASA when it is determined that the investigators can meet their planned objective and a specific flight delivery date.

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A list of investigations is attached.

INVESTIGATORS AND INVESTIGATIONS

SELECTED FOR SPACELAB

Gordon G. Shepherd
York University
Ontario, Canada

Wide Angle Michelson Doppler
Imaging Interferometer

K. Sigfrid Yngvesson
University of Massachusetts
Amherst, Mass.

Galactic Survey of Inter-
stellar Oxygen Using Mixers
and Masers at 60 GHz

Jean-Loup Bertaux
Centre National de la
Recherche Scientifique
France

Atmospheric Lyman-Alpha
Emissions

Theodore P. Stecher
Goddard Space Flight Center
Greenbelt, Md.

An Ultraviolet Imaging Tele-
scope for Astronomical Inves-
tigations from Spacelab

Brian A. Tinsley
University of Texas
Dallas, Texas

Imaging Spectrometric
Observatory

William L. Kraushaar
University of Wisconsin
Madison, Wis.

Diffuse Soft X-Ray Bragg
Spectrometer

Robert W. Fredricks
TRW Defense and Space
Systems Group
Redondo Beach, Calif.

Waves in Space Plasmas

C. J. Waddington
University of Minnesota
Minneapolis, Minn.

High Energy Interactions of
Cosmic Ray Nuclei

A. F. Davidsen
Johns Hopkins University
Baltimore, Md.

A Far Ultraviolet Telescope/
Spectrometer for Spacelab

Peter J. Serlemitsos
Goddard Space Flight Center
Greenbelt, Md.

Non-Dispersive Spectroscopy
With a Broad Band X-Ray
Telescope

James L. Matteson
University of California
San Diego, Calif.

High Resolution X-Ray and
Gamma Ray Spectrometer

Peter Meyer
University of Chicago
Chicago, Ill.

Elemental Composition and
Energy Spectra of Cosmic Ray
Nuclei

Dietrich Muller
University of Chicago
Chicago, Ill.

Transition Radiation and
Ionization Calorimeter
Telescope

Hugh R. Anderson
Rice University
Houston, Texas

Beam Plasma Physics

B. A. Whalen
Herzberg Institute of
Astrophysics
Ontario, Canada

Ion Mass Spectrometer

George H. Nakano
Lockheed Palo Alto Research
Laboratory
Palo Alto, Calif.

A Large Area, Fine Energy
Resolution Pointed Telescope
for Photons Between .02 and
7 MeV

J. L. Burch
Southwest Research Institute
San Antonio, Texas

Magnetospheric Multi-Probes

Herbert W. Schnopper
Smithsonian Institution
Cambridge, Mass.

Spherical Crystal Imaging
X-Ray Spectrometer

George R. Ricker
Massachusetts Institute
of Technology
Cambridge, Mass.

Hard X-Ray Diffraction Telescope

Bernard F. Burke
Massachusetts Institute
of Technology
Cambridge, Mass.

Very Long Baseline Interferometer
Station on 1981-1983 Spacelab
Missions

R. Novick
Columbia University
New York, N.Y.

Wide-Band Germanium X-Ray
Spectrometer

S. B. Mende
Lockheed Palo Alto Research
Laboratory
Palo Alto, Calif.

Atmospheric Emissions Photo-
metric Imager

Richard C. Catura
Lockheed Palo Alto Research
Laboratory
Palo Alto, Calif.

Fabrication and Flight of a
Wolter Type I X-Ray Telescope

Warner M. Neupert
Goddard Space Flight Center
Greenbelt, Md.

A Solar Extreme Ultraviolet
Telescope and Spectrograph

Allen S. Krieger
American Science and
Engineering, Inc.
Cambridge, Mass.

Solar Atmosphere Studies With
an X-Ray Telescope - Spectro-
meter System

Arthur D. Code
University of Wisconsin
Madison, Wis.

Ultraviolet Spectropolarimetry
of Stars, Galaxies and Non-
Thermal Sources

Stanley D. Shawhan
University of Iowa
Iowa City, Iowa

Recoverable Plasma Diagnostic
Package

Paul Gorenstein
Smithsonian Institution
Cambridge, Mass.

High Sensitivity Cosmic X-Ray
Observations With a Lamar
Instrument

John L. Kohl
Smithsonian Institution
Cambridge, Mass.

Lyman-Alpha/White Light
Coronagraph

Giovanni G. Fazio
Smithsonian Institution
Cambridge, Mass.

Reflight of Spacelab-2
Infrared Telescope

Tatsuzo Obayashi
University of Tokyo
Tokyo, Japan

Space Experiments With
Particle Accelerators

W. H. Parkinson
Harvard University
Cambridge, Mass.

Solar and Terrestrial
Atmospheres Spectrometer

G. Thuillier
Centre National de la
Recherche Scientifique
Verrieres-le-Buisson, France

Solar Spectrum From 180
to 3200 nm
Temperature Wind Measurement

Paul B. Hays
University of Michigan
Ann Arbor, Mich.

High Resolution Doppler Imager

Douglas G. Torr
University of Michigan
Ann Arbor, Mich.

Trace Constituents in the
Middle Atmosphere

R. C. Willson
Jet Propulsion Laboratory
Pasadena, Calif.

Solar Irradiance Experiment

J. W. Waters
Jet Propulsion Laboratory
Pasadena, Calif.

Microwave Limb Sounder

Guenter E. Brueckner
Naval Research Laboratory
Washington, D.C.

Solar Ultraviolet Spectral
Irradiance

D. Crommelynck
Institut Royal Meteorologique
de Belgique
Brussels, Belgium

Variations in the Solar
Constant