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NASA SELECTS 18 SCIENTISTS FOR SPACE TELESCOPE

Eighteen scientists have been tentatively selected by NASA to participate in the design and early operational phases of its Space Telescope Project.

To be launched into Earth orbit in 1983 by the Space Shuttle, the 10-ton observatory will make astronomical observations deeper into space and with more detail than has ever before been possible.

The Space Telescope should permit scientists to solve some of the mysteries relating to the structure, origin, evolution and energy processes of the universe, which could never be approached with observatories below the obscuring veil of Earth's atmosphere.

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With the Space Telescope, astronomers should be able to observe some 350 times the volume of space that can be seen now with the largest ground-based telescope.

Once placed in orbit, the telescope will be operated remotely from the ground. However, it will be designed to permit maintenance and the change of instruments by a space-suited astronaut and to be retrievable by the Space Shuttle for return to Earth for extensive overhaul and subsequent relaunch. These features should allow the Space Telescope to serve as an in-space astronomical observatory for more than a decade.

The 2.4-meter (8-foot)-diameter Space Telescope will be capable of accommodating five different instruments at its focal plane. The observatory will weigh 9,100 kilograms (10 tons) and will orbit the Earth at an altitude of approximately 500 kilometers (310 miles), above the obscuring effects of the atmosphere. It will thus be available to all astronomers for observations which cannot be made from the surface of the Earth.

Scientists have been chosen to head teams to participate individually in a variety of categories as follows:

Investigations Definition Teams: These teams consist of principal investigators, co-investigators and supporting staffs who will design and develop the focal plane scientific instruments. They will also carry out major scientific investigations.

Individual Co-Investigators: These are scientists who had not been affiliated with an investigation definition team prior to selection but who will be assigned to a team now.

Astrometry Science Team: This team will be responsible for assuring that the fine guidance system will adequately perform astrometric functions as required.

U.S. Members of European Space Agency Faint Object Camera Instrument Science Team: The two U.S. members chosen will represent the American astronomical community.

Telescope Scientists: Two scientists have been chosen with strong backgrounds in optical instrumentation. They will be responsible for interpreting the scientific performance requirements in terms of telescope design specifications.

Data and Operations Team Leader: Will lead a team of representatives appointed by each principal investigator to review or establish requirements and specifications for instrument control systems, flight operations and ground data handling systems.

Interdisciplinary Scientists: Designed to give breadth to the guidance of the Space Telescope Project beyond the concerns of the individual principal investigators and the technical specialists. The four chosen will be responsible for a broad scientific overview of the observatory's development.

Investigators selected by NASA, their respective institutions and their areas are:

Principal Investigators	Institution	Area or Team
Dr. James Westphal	California Institute of Technology	Wide Field Camera Team
Dr. Richard Harms	University of California, San Diego	Faint Object Spectroscopy Team Leader
Dr. John Brandt	Goddard Space Flight Center	High Resolution Spectroscopy Team Leader
Dr. Robert Bless	University of Wisconsin	High Speed Photometry Team Leader

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Principal Investigators	Institutions	Area or Team
Dr. William H. Jefferys	University of Texas at Austin	Astrometry Team Leader
Dr. James L. Elliot	Cornell University	Individual Co-Investigator on Photometry
Dr. Bruce Margon	University of California, Los Angeles	Individual Co-Investigator on Faint Object Spectrograph Team
Dr. Arthur F. Davidson	Johns Hopkins	Individual Co-Investigator on Faint Object Spectrograph Team
Dr. P. Kenneth Seidelmann	U.S. Naval Observatory	Individual Co-Investigator on Wide Field Camera Team
Dr. Daniel J. Schroeder	Beloit College	Telescope Scientist
Dr. William G. Fastie	Johns Hopkins University	Telescope Scientist
Dr. Edward J. Groth	Princeton University	Data/Operations Team Leader
Dr. Philippe Crane	European Southern Observatory	U.S. member/FOC Team
Dr. Ivan R. King	University of California, Berkeley	U.S. member/FOC Team
Dr. John N. Bahcall	Institute for Advanced Study	Interdisciplinary Scientist
Dr. John Caldwell	State University of New York at Stony Brook	Interdisciplinary Scientist
Dr. Malcolm Longair	Cambridge University	Interdisciplinary Scientist
Dr. David L. Lambert	University of Texas	Interdisciplinary Scientist

The planned payload is composed of two cameras, two spectrometers and a photometer. The Faint Object Camera, provided by European Space Agency (ESA) and the Wide Field Camera are distinguished by their fields of view, spatial resolution and wavelength range. Both instruments cover the ultraviolet and blue regions of the spectrum. The Wide Field Camera covers the red and near-infrared regions as well. The Faint Object Camera has a very small field of view but can use the highest spatial resolution which the Space Telescope optics can deliver. The Wide Field Camera covers a field at least 40 times larger but with a resolution degraded by a factor of two to four.

The two spectrographs provide a wide range of resolutions which would be impossible to cover in a single instrument. Only the Faint Object Spectrograph covers the visible and red regions of the spectrum.

The fifth instrument is a simple, single channel photometer which can be used both for calibrating the other instruments and for very high speed photometry. By operating while other instruments are observing, this instrument can also collect information on the brightness of the galactic background, which can be generally useful.

A Space Telescope Science Working Group will be formed to provide scientific guidance to the project. The group will be composed of the various team leaders, the two telescope scientists, the interdisciplinary scientists and appropriate project personnel.

NASA's Marshall Space Flight Center, Huntsville, Ala., will have overall management responsibility for the Space Telescope. NASA's Goddard Space Flight Center, Greenbelt, Md., will be responsible for managing the development of the scientific instruments and for the operational aspects of the observatory. The European effort will be managed by the European Space Technology Center at Noordwijk in the Netherlands.

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