NASA
National Aeronautics and Space Administration

GODDARD NEWS

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Dr. McElroy leaves Goddard for new post at NOAA

Dr. John H. McElroy, Deputy Director of Goddard, is leaving the Center to become Assistant Administrator for Satellites with the National Oceanic and Atmospheric Administration (NOAA) effective February 7.

In his new position with the Department of Commerce, Dr. McElroy will head the National Earth Satellite Service of NOAA, which is responsible for the Nation's civil weather satellites (polar orbiting and geostationary) and for the planning of operational land remote sensing system.

Dr. McElroy has been Deputy Director at Goddard since September 1980. He has been with NASA since 1966 and has served as Director of Communications and Information Systems Programs, Office of Space and Terrestrial Applications, NASA Headquarters.

Before joining NASA, Dr. McElroy had served in the Quantum Electronics Research Laboratory of the University of Texas at Austin where he participated in research in laser-induced ionization of high-pressure gases.

Earlier, he had served as an electronics instructor and technical writer on various U.S. Army air defense guided missile systems.

ATS-1 satellite repositioned for greater stability

NASA has begun relocation of the Applications Technology Satellite-1 (ATS-1) from its present position at 149 degrees west longitude to about 50 degrees farther west to 162 degrees east longitude.

ATS-1's current location requires maximum thruster use to maintain the orbit position. Relocating to 162 east longitude puts the satellite into a more stable position where the power from onboard thrusters required for station keeping is reduced substantially.

At its location of 149 degrees west, the satellite required twice weekly station keeping management. Estimates of onboard fuel supplies indicated the useful lifetime of the satellite would end near mid-1982. Several options concerning the extension of this lifetime have been examined by Goddard, including the present action to move the spacecraft to 162 degrees east longitude.

This action will prolong the orbital station keeping period of ATS-1 through 1983 and will reduce station keeping activities to quarterly from twice weekly. This new position also improves the satellite's "look angle" to more westerly islands in the Pacific Basin.

ATS-1 is the oldest synchronous communi-

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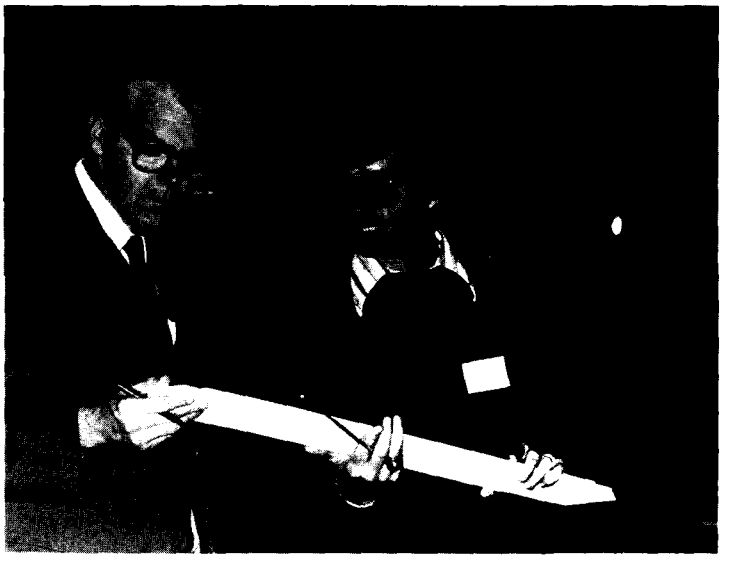
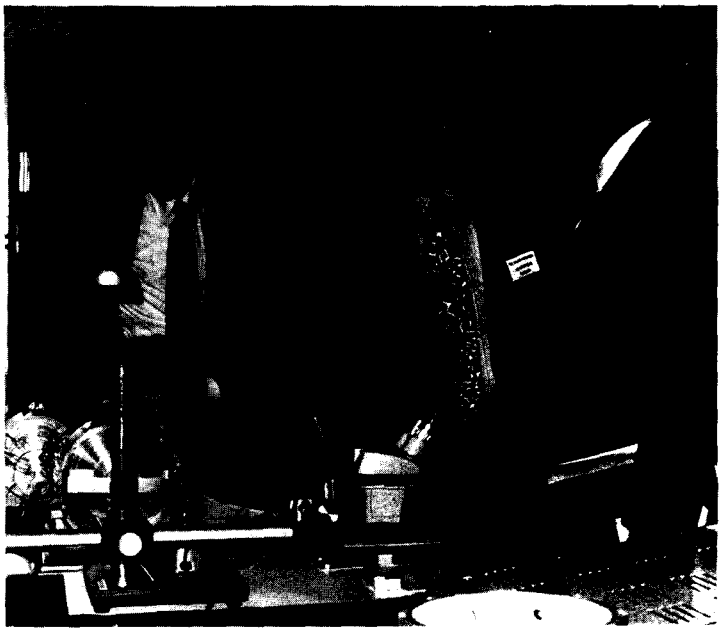
NASA Deputy Administrator Dr. Hans Mark visits Goddard

Dr. Hans Mark, NASA Deputy Administrator visited Goddard January 18 and 19. He toured virtually all parts of the Center and was briefed on a host of activities. Below are pictures marking the event.



John Robinson (code 716.1) (r), and Dr. Mark inspect a MACOR spark chamber beam for the Energetic Gamma Ray Experiment Telescope (EGRET). EGRET is a principal instrument in the Gamma Ray Observatory (GRO) project.

Above: James Barrowman (l), code 742.2, explains some of the details of the Getaway Special (GAS) payload model. Through the GAS program, independent users will fly experiments on future Shuttle missions.



Dr. Allan Sherman, Head, Cryogenics, Propulsion & Fluid Systems Branch (center), briefs Dr. Mark on the Stirling Cycle Cryogenic Cooler. The cooler will be used for refrigeration of spaceborne instruments.

ATS-1

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cations satellite still in use. Present experiments include voice transmissions among 11 Pacific island nations, the Trust Territory of the Pacific, Australia, New Zealand, Hawaii and California. Other experiments provide medical care delivery communications for Alaska, technology transmissions between Japan and Australia, and coordination of oceanic research vessels in the Pacific and Gulf regions.

ATS-1 was launched in 1966 and has been a pioneer in the use of communications satellites for health care delivery, education, public safety, emergency communications and mobile land and maritime applications.

The maneuver to reposition ATS-1 to 162 degrees east is expected to take about eight months to complete. Full communications with ATS-1 will be maintained throughout the move period with periodic adjustments of ground station antennas to keep the satellite in view.

Lunar Sample Education Project Briefing held

Goddard held its fifth Lunar Sample Education Project Briefing for educators from northeastern states November 20, 1981.

A dozen Goddard scientists met with 84 educators to present and acquaint them with packages of lunar material, and to brief them on recent progress in lunar, planetary and stellar studies.

Dr. Paul Lowman of the Geophysics Branch introduced the educators to the lunar sample packages, each of which contains a set of six different classes of lunar material: anorthosite, breccia, basalt, orange soil, highlands soil, and mare soil.

Dr. Isadore Adler, Professor of Chemistry/Geology from the University of Maryland, briefed educators on "What's New on the Moon;" Dr. Herbert Frey, of the Geophysics Branch, spoke on "Voyage to Jupiter, Saturn, and Beyond;" and Dr. Albert Boggess, head of the Advanced Systems Development Branch, spoke on the IUE satellite project.

Additionally, study sessions for the educators were conducted by Dr. Adler, Dr. Harry Herzer (of NASA Headquarters), and Goddard's Winifred Cameron, Dr. David Nava, Richard Schmadebeck, Dr. Nicholas Short, Dr. Jacob Trombka, and Dr. Peter Wasilewski.

The program concluded with discussion of the status of the Lunar Sample Education Project Loan Program by James Poindexter of the Johnson Space Center's Public Services Branch (via telecon); description of the resources of the National Space Science Data Center by Winifred Cameron; and a briefing on NASA security requirements regarding the samples by Goddard security officer Philip Everson.

Space Radiation Shielding Seminar scheduled at Goddard

A two-day "Space Radiation Shielding" seminar will be presented at Goddard on February 25 and 26, in building 26, room 200, from 8:30 a.m. to 4:30 p.m. The seminar will be conducted by Mr. T. M. Jordan of Experimental and Mathematical Physics Consultants and will address the following topics:

- One dimensional attenuation kernels;
- Ray-trace/sectoring approximations;
- Adjoint Monte Carlo calculations of fluence current, biological dose, energy deposition, damage equivalence, stopped charge density, and pulse height spectra (deposited energy per particle, e.g., soft error rate);
- Geometry modeling options that can be used to describe satellites, space probes, man models, space shuttle, electronic boxes, particle detectors, and other instruments.

Preceding the seminar, a brief review of the "Space Radiation Environment" will be given by E. G. Stassinopoulos of Goddard's National Space Science Data Center, describing some of the complexities of the medium and discussing some application oriented concerns. Registration is required and a refreshment fee of $5 is being charged. The closing date for registration is February 10, 1982. For further information contact E. G. Stassinopoulos, code 601, ext. 8067.

Mail your story to the Goddard News, Code 202, or call the Editor at

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NACA reunion planned

The second National Advisory Committee on Aeronautics (NACA) reunion has been planned for November 11, 1982, in Williamsburg, Virginia. Facilities are limited so only the first 1,000 reservations will be accepted.

For complete details, send a self-addressed, stamped envelope to Abe Leiss, 20 Lakeshore Drive, Newport News, Virginia 23602.

Scientists conduct study of cleft region via rocket launch project

Goddard personnel from the Greenbelt and Wallops facilities returned December 17 from Cape Parry, Canada, after successful completion of Project CENTAUR launch operations. The Cleft ENergetics Transport And Ultraviolet Radiation (CENTAUR) Project is a cooperative international project conducted by NASA and the National Research Council of Canada (NRCC). The objective of the project is to study the dynamics of the cleft region of the earth's magnetic fields.

Study of the cleft region near earth requires travelling to high latitudes in the Arctic region known as the auroral oval. There the cleft in the magnetic lines of force create kind of a hole in the earth's magnetic shield, and the energetic particles hurled out from the sun can penetrate deeply into the earth's atmosphere.

The CENTAUR group launched five large sounding rockets into the pre-noon, noon, and post-noon cleft region (three NASA and two NRCC). The rockets, launched in accordance with desired magnetospheric activity, cleft locations, and favorable weather, included two Goddard Black Brant X, a Wallops Terrier Malemute II, and two NRCC Black Brant IVB.