NASA National Aeronautics and Space Administration

GODDARD NEWS

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Recipients of the 1977 Secretaries' Awards

Eight of the ten Goddard secretaries chosen as "most outstanding" flank Dr. Robert S. Cooper, Center Director. Two of the elite group not pictured are Donna L. Barber and Rebecca A. Creel. From left to right are Bernice R. Seminara, Nancy J. Kemper, Patricia R. Neff, Frances W. Smith, Dr. Cooper, Hattie A. Thompson, Mary B. Adkins, Enola N. Gigerich, and Mary A. Igal.

Nominations were solicited from all Goddard employees. A committee chaired by Barbara McKee, consisting of a representative from each directorate, received all nominations and made final selections.

Greenbelt Solar Energy Research Home Saves Oil

A solar energy research home in Greenbelt, Md., has demonstrated a fuel oil savings of 47 percent for its first six months of operation.

GHI and its nearby neighbor, the NASA/Goddard Space Flight Center jointly undertook the project in which a four-home structure was equipped with a solar energy system. Their goal was to demonstrate how such a system can augment a conventional hot water heating unit to conserve home heating fuel.

The research project began full-time operation this past February and was recently turned over to GHI by Goddard in a *special ceremony*. Participants included Goddard Director, Dr. Robert S. Cooper, GHI President, Dr. James W. Smith, Greenbelt Mayor Pilski, Project Director Emil Hymowitz and other officials.

As a major NASA research Center, Goddard developed expertise in the design of thermal control systems for satellites which must maintain stable temperatures for successful operation in the vacuum of space.

"By putting this expertise to work, we were able to help show a community the way to conserve heating fuel," said Emil Hymowitz, Goddard's manager for the project.

Federal agencies such as NASA are under a mandate not only to conserve energy but to help demonstrate new ways for conserving energy.

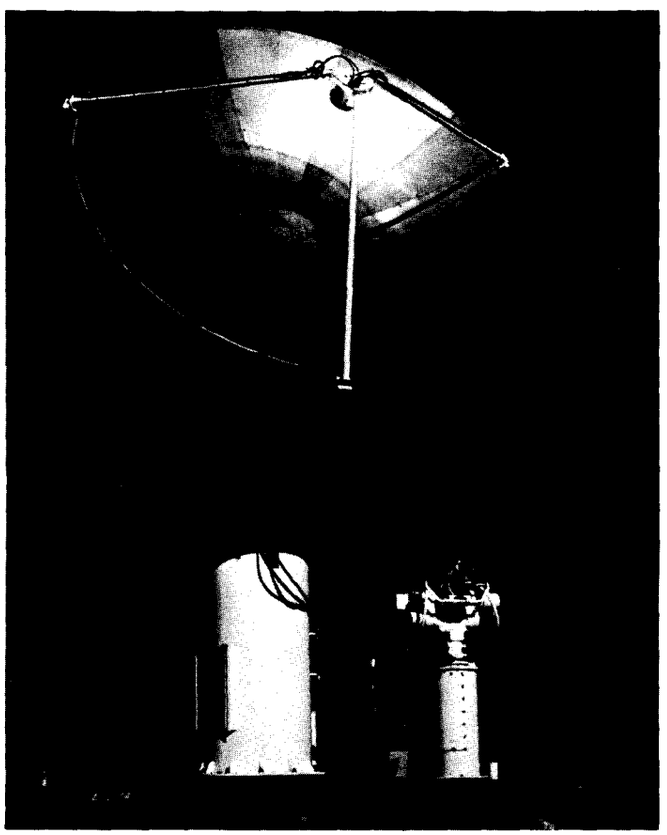
COE PROGRAM RESULTS

The Cooperative Office Experience Program once again has had a very successful year. This program is designed to allow students with clerical skills to gain on-the-job experience in their senior year to prepare them for permanent employment upon graduation.

Out of 26 students who participated in the program, 22 (of whom 9 were minorities) have been permanently hired.

The distribution within Goddard is as follows:

Administration and Management Directorate	14
Office of Flight Assurance	1
Project Management Directorate	2
Mission and Data Operations Directorate	1
Engineering Directorate	2
Networks Directorate	1
Applications Directorate	1



Shuttle antenna was designed, installed and checked-out by Goddard personnel.

Throughout the Shuttle Approach and Landing Test (ALT) program, the Buckhorn Station, located at Dryden Flight Research Center, will support the ALT missions using a GSFC-supplied 15-foot antenna system. This system, with its optical tracker, was designed, installed and checked-out by Antenna Systems Branch, Network Engineering Division personnel.

The cost of the system was kept to a minimum by utilizing equipment that was no longer in direct use. The feed and reflector were from a completed research program. The pedestal came from the Mojave station, and the optical tracker came from the Bermuda station. Technician John Fuches (now with Code 953), Joe Kueberth, Bill Logan, Fred Meader, and Billy Williams of the Antenna Systems Branch created the antenna system that supports the multi-million dollar and sophisticated Shuttle ALT program.

Mr. Bob Owen is the Network Engineering Division Chief.

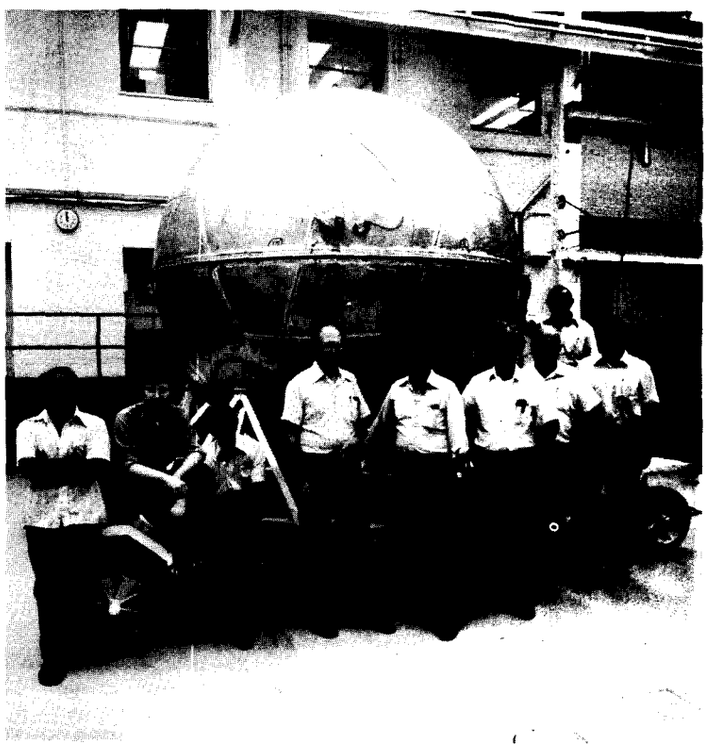
Guam Legislature Commends Tracking Station Personnel

When Typhoon Pamela roared through the Pacific Ocean and hit the Island of Guam winds of over 140 miles per hour caused extensive damage throughout the Island. Most of the territory lost electrical power and telephone service. One hundred and eight Bendix personnel assigned to the NASA STDN tracking station were affected, however, they had received enough warning to make preparations to secure station facilities and as a result only minor damage was sustained at the NASA site located near the town of Dan Dan.

The NASA Station Director, Charles (Chet) A. Matthes, authorized the station to be used as an emergency typhoon shelter for 75 local citizens who were housed and fed with provisions contributed by the Bendix personnel at the station. Hundreds of gallons of potable water were made available from the station to fill mobile water trailers for the local Agena Public Utilities organization during and following the emergency.

The station's technical personnel maintained the diesel generator at the Southern Area Health Center and performed the electrical wiring changes in order to have the air-conditioning unit operate from emergency power sources. Bendix people helped clear debris and provided other assistance to help restore the Island to livable conditions.

For their humanitarian assistance to the people of Guam following Typhoon Pamela, the Bendix personnel at the NASA tracking station were commended by the Legislature of the Territory of Guam. We are proud of our fellow Bendix employees at the NASA station for helping their fellow citizens at Guam during that natural disaster.



GUMPS GONDOLA scientists, engineers and technicians after successful leak testing. From left to right: Dr. R. Ramaty, U. Maryland; Dr. R.E. Strietmatter, U. Maryland; Dr. V.K. Balasubrahmanyan and Dr. J.F. Ormes, J.W. O'Connor, D. McHugh, F. Flynn, J. Cooper, and W. Lund, all from Goddard.

Dr. G. Yodh, U. Maryland, PI, and associate Dr. J. Goodman. Russell Groves, and A. Marshall, of Goddard, were not present when picture was taken.

GODDARD/UNIVERSITY OF MARYLAND JOINT COSMIC RAY EXPERIMENT

A massive 9000 lb. high energy Cosmic Ray experiment known as GUMPS, to be balloon-flown from Palestine, Texas, is in the final stages of integration at GSFC. Representing a cooperative effort between the University of Maryland and Goddard, the experiment will study cosmic ray protons up to energies of 10 TeV, i.e., 20 times greater than those available from man-made accelerators. As indicated by the principal scientists; Dr. Jonathan Ormes and Dr. V.K. Balasubrahmanyan of GSFC and Dr. Gaurang Yodh of the University of Maryland, one purpose of the experiment is to help us understand cosmic ray particle accelerations in active supernova explosion remnants. Knowing this energy distribution gives information about the interactions of such particles and the magnetic field in interstellar space around the Milky Way. By comparing the intensities at the top and deep within the atmosphere we can learn much about the fundamental properties of matter from studying the products interactions. This is very important for future studies in high energy physics.

The experiment is made up of detectors furnished in part or whole by Goddard or the University of Maryland. The heaviest of these is a calorimeter consisting of large plates of iron in which the incoming cosmic rays interact, producing a cascade of particles. The number of particles is proportional to the energy of the incident (incoming) particle. Cosmic rays are of such high energy that the atoms are completely ionized. The charge of the incident nuclei is measured by eight sensitive detectors viewed by acrylic light pipes fabricated by Code 752.

A multiwire Proportional Counter hodoscope measuring 50 inches x 50 inches with a resolution of 0.6 inches was designed and furnished by the University of Maryland. Its purpose, according to Jordon Goodman and Dr. Robert Straitmatter, the responsible University of Maryland scientists, is to determine the trajectory of the nucleons (mass of originating atoms) and whether they are accompanied by other incident particles. Maryland University also furnished the large scintillator and GSFC the large light pipes that make up the hodoscopes which determine the location of the cascade in the calorimeter.

According to Dr. Ormes this large but relatively simple experiment is proposed for an early Shuttle mission as well as the planned 80,000-foot altitude balloon flight.

A significant milestone was achieved when the GUMPS gondola designed by Dr. Thomas Morrison, University of Maryland, successfully passed its leak rate test at GSFC. A cooperative engineering team effort was necessary within Goddard to test this giant. The aluminum sphere is so large that it had to be trucked around on a surplus OAO dolly. According to Joe O'Connor of the Instrument Electromechanical Branch, Code 721, who coordinated and directed the engineering team efforts, Sounding Rockets Division, Code 743, performed the integration, Engineering Services Division, Codes 754 and 752, installed the strain gaging and provided supporting fabrication, respectively and Spacecraft Technology Division, Code 713, performed the actual leak rate test.

The gondola is now ready to accept the experiment which will be supported by a single platform that attaches at eight points in the bottom gondola hemisphere. Experiment integration is being accomplished by the High Energy Laboratory, Code 661, and University of Maryland, also supported by the Sounding Rocket Division, who will continue to support the mechanical integration.

Certified Professional Secretary Training Program

Goddard has embarked on a unique training program for secretaries who desire to attain top recognition as a Certified Professional Secretary (CPS).

The CPS program was developed in 1951 by the Institute for Certifying Secretaries as a measurement standard of proficiency for the secretarial profession. The CPS program has the following objectives: 1) to improve secretarial personnel, 2) to provide secretaries with the assurance which comes from having a professional educational standard; 3) to promote the professional identity of the exceptional secretary; and 4) to assist management in selecting qualified secretaries. To obtain the CPS certification, one must successfully complete the 6-part, 2-day examination that is administered by the Institute for Certifying Secretaries.

Approximately 25 Goddard secretaries attended a meeting in Building 8 Auditorium regarding this program.

Guest speaker was Mrs. Sally A. Linn, who is a CPS at National institute of Health. She briefly told about the Institute for Certifying Secretaries and noted that of approximately 25,000 secretaries who have taken the examination only 10,000 have received certification. In Maryland there are only 109 CPS's. Mrs. Linn then discussed in detail the contents of the examination and the qualifications needed to sit for the examination.

Mrs. Linn also stated that a CPS is eligible to attend CPS seminars and that some colleges throughout the country are offering as much as two years of college credit. Goddard secretaries who obtain this certification are eligible to receive two quality increases (reference GSFC announcement #1951 dated April 1, 1976).

Bonnie Kaiser of the Employee Development Branch outlined the program that will be offered by Prince George's Community College on-Center over an 18-month period.

Five credit courses (Group Discussion, Business Law, Psychology, Economics I and Accounting I) will be offered on a split on-off duty hour basis for 15 week periods and four non-credit courses (Management for Secretaries, Secretarial Office Procedures, Records Management Workshop and Data Processing) will be offered on-duty hours.

Representatives of Prince George's Community College were: Dean James, Director of Extension Center; Nancy Mitchell, Counsellor; Dean Allison, Associate Dean for Business Affairs; and Mr. George Raley, Program Director for Records and Registration. Mr. James and Ms. Mitchell promised Goddard a quality program and encouraged secretaries to enroll.

Mrs. Sally A. Linn, Certified Professional Secretary at the National Institute of Health, recently spoke about the Certified Professional Secretary Training Program at Goddard.

CPR Instruction Continues To Gain Momentum at Goddard

Cardiopulmonary Resuscitation, also known as CPR, is a combination of artificial respiration and artificial circulation which should be started immediately as an emergency procedure when cardiac arrest occurs, by those properly trained to do so.

It has been used widely and successfully for some time by doctors and nurses and allied health personnel. Over 300 Goddard personnel have successfully passed the 8-hour course and have been officially certified to perform C.P.R. Many other are on the waiting list.

According to Joseph Lopez, Safety and Training Coordinator for the CPR program, "The credit for Goddard's outstanding success in carrying out the program rightfully belongs to the volunteer instructors who have given so generously of their time and effort. I particularly wish to cite Walt Allen (952), Charlie Calhoon (953), Ed Danko (851), Doug Kahle (951), Jan Kalshoven (941), Dennis Maddy (863.1), Morey Miller (401), Dan Naylor (863), Bill Olden (933), Larry Pratt (733), Frann Smith (750) , and Walt Sullivan (951)."

Anyone interested in taking the life-saving CPR course should contact the Health and Safety Engineering Office (ext. 2441) without delay.

The gentleman in action is not trying to crush the life out of an unfortunate victim. He is a student trainee in a Cardiopulmonary Resuscitation course given periodically at Goddard. "Annie" doesn't mind at all. She's an instrumented rubber dummy who has been brought back to "life" thousand of times.

Did You Know?

10,300 man-made objects have been shot into space during the past 20 years. 5,916 have returned to Earth. The only fatality from the space debris—a South American cow.

NASA is active in a variety of energy research and development efforts where technology developed for space and aeronautics is finding important and promising applications.

About one cent of each Federal tax dollar goes to the space program.

It is probable that women will orbit as crew members, experimenters, or observers in the Space Shuttle Program of the 1980's.

"FAME" Award Winners—Pictured above are the winners of the Functional Support Division's FAME (Functional Awards for Meritorious Excellence) Program. The winners were cited for outstanding performance in their individual skill groups during FY77. From left to right are Al Bell (Supervisory Award), Mike Kelly (Procurement Award), Joanne Milazzo (General Business Award), Division Chief Ron Dapice, Sue Sheeley (Secretarial Award) and Bob Sampson (Financial and FAME Awards).

Andy Chi Goes Home

For over 40 years, Andrew R. Chi, engineer in the Network Engineering Division, tried valiantly to obtain a visa so he could visit his aging parents in the Peoples Republic of China. Until this summer, his efforts were in vain.

Then on August 8th, 1977, he was notified that his visa had been favorably acted upon and he could now realize his long standing dream.

Andy emplaned for China on August 25th. He had an emotional reunion with his parents, saw his hometown again, and visited many of his friends and neighbors. In 30 days he joyfully caught up on 40 years of absence.

His ambition fulfilled, Andy Chi is back home again in America, delighted with his memories of the trip into the past, but glad to be back to the realities of the present.

New Complaint Regulations

. The U.S. Civil Service Commission has issued regulations for processing "class" complaints of discrimination. They will supplement existing procedures for individual complaints and provide that an individual member of a class of employees may file a discrimination complaint on behalf of the class.

The regulations define a class as a group of current or former employees or applicants who feel that they have been hurt by an agency policy that discriminates against the group on the basis of the race, color, religion, sex, national origin, or age they have in common. Employees desiring information on procedures for processing class complaints should contact the Center Equal Opportunity Officer, James R. Mundy.

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Margie Guensch, darkroom technician, Photographic Branch, recently passed a fire fighting course conducted by the Health and Safety Engineering Office. Margie, who has speech and hearing impairment, was helped by Rita Mills, Printing Section who is adept at sign language.

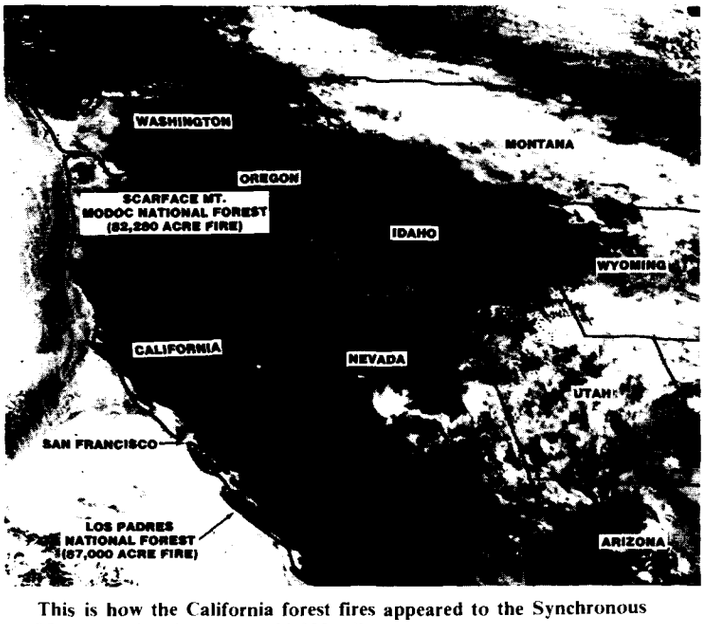
Sounding Rockets Now Have "Person-In-Loop" System

NASA has developed a new system of flight control for its sounding rockets permitting much more accurate pointing of instruments for astronomical and other scientific studies.

Use of the new system has already resulted in a major astronomical find related to quasars—believed to be the most remote celestial objects in the universe.

The latest improvement by engineers at Goddard places a person in the loop by means of a small television camera in the sounding rocket's nose cone. The operator on the ground watches the image coming from the rocket and operates his controls (remotely triggering the on-board attitude control system) for more precise pointing at the desired stellar object.

The technique is a modification of the STRAP (for Stellar Tracking Rocket Attitude Positioning) apparatus developed some years earlier by Goddard for keeping a payload pointed at a given target during a rocket's upward and downward flight above the atmosphere. This involved a "star tracker" or sensor, which usually looked out the front or side of the payload at a prominent guide star.



This is how the California forest fires appeared to the Synchronous Meteorological Satellite at 22,300 miles.