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INSIDE

2

**Executive
Council
holds
retreat**

3

**Vice-
President
honors
Goddard
group**

4

**Digital
imaging
facility
open**

5

**Astronaut
demon-
stration**

Launches of Wind and STS-66 successful

by Jim Elliot

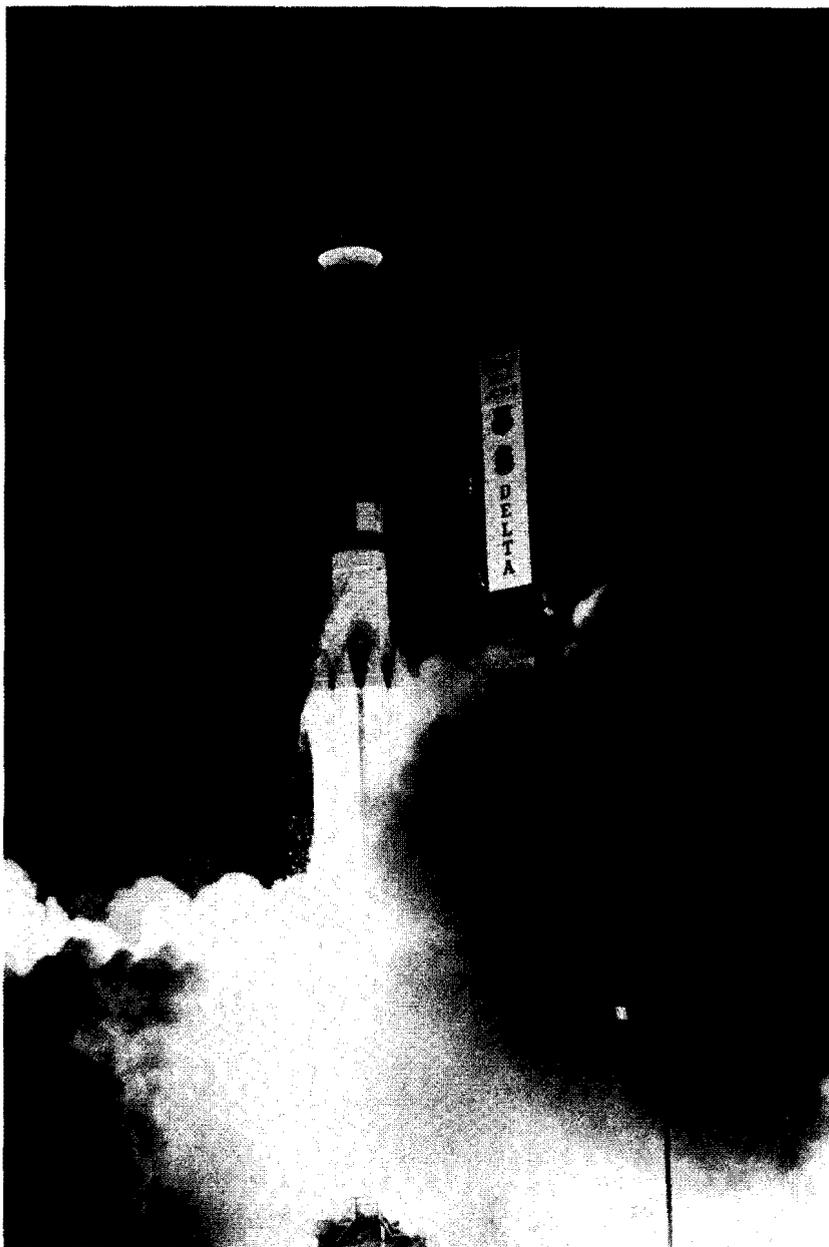
Goddard's Wind spacecraft, the first of two Global Geospace Science missions, launched successfully from the Cape Canaveral Air Station, Fla., at 4:31 a.m. Nov. 1.

All launch events proceeded as scheduled. At press time, the spacecraft was operating normally, according to John Hrastar, project manager, Code 406.

The Wind spacecraft, built by Martin-Marietta and launched on a McDonnell Douglas Delta II rocket, flew into orbit two days before the successful launch of Space Shuttle Atlantis from the Kennedy Space Center. The STS-66 mission with a primary payload known as ATLAS-3 (Atmospheric Laboratory for Applications and Science) lifted off under clear skies at 11:59 a.m. Nov. 3.

Wind, carrying eight scientific instruments, had only a five-minute launch window. The countdown went smoothly and the launch was right on the minute. The Russian Gamma-Ray Spectrometer (KONUS), included in the Wind instrument compilation is the first Russian experiment ever to fly on an American spacecraft. Dr. Mario Acuna, Code 695, is the project scientist for Wind.

The ATLAS, making its third shuttle flight, is a remote sensing laboratory for studying the Sun's energy output, the middle atmosphere's chemical makeup and how these factors affect global ozone levels. The ATLAS flights are part of NASA's Mission to Planet Earth effort, directed by Goddard. ATLAS is a Marshall Space Flight Center mission.



The Wind spacecraft launches on time from the Cape Canaveral Air Station, Fla. The spacecraft is part of an international effort to learn more about the complex interaction between Earth and the Sun.

The Atlantis carried two Goddard-specific experiments: the Shuttle Solar Backscatter Ultraviolet Spectrometer (SSBUV) and Experiment of the Sun

Continued on page 3

photo by: NASA

Goddard's Executive Council meets to discuss the future

How do we strategically manage our resources and priorities in the new NASA, so that we can:

- support the goals of the Agency and the administration;
- use Goddard's unique capabilities, including personnel and facilities to perform science, engineering and project management;
- secure challenging work for all our staff; and
- lead NASA in selected areas in the future?"

These questions on Goddard's role in a changing environment were the focus of the Executive Council retreat this past fall. Center Director, Dr. John Klineberg posed the challenge. "How do we change and yet preserve the things that are important to Goddard and the Agency?"

Themes

Each member of the Executive Council addressed key issues from their own perspective. Ideas focused inward on Goddard and outward to Headquarters and external customers.

The central theme of maintaining the integrity of Goddard's mission amidst program changes while finding better ways to plan and work together were the subject of much discussion. Other themes included: problems posed by external forces such as streamlining and reduced budgets, as well as their impact on Goddard's workforce; understanding external environments; and strengthening relationships with Headquarters, other NASA Centers, and external customers.

Nowhere was consensus stronger than on the issue of change itself: "Change is here, it is permanent." "Decision rules from the past are changing." "Business is not diminishing, but changing." While change is everywhere, several important aspects of the Center's environment were also repeated.

NASA and Goddard's resources are significant. Goddard's mission, based on Earth and space sciences, project management and operations remain a solid foundation. For any that perceive change away from the great observatories of recent years to smaller spacecraft as a threat to

Goddard, Bob Baumann, director, Office of Flight Assurance, Code 300, and co-inventor of the 20 inch, 21.5 pound Vanguard satellite, put the issue into proper perspective, "We were doing smaller, faster, better, and cheaper satellites when GSFC began!"

Values

The Executive Council also focused on what the Center must keep for Goddard to be Goddard. These values were expressed in many different ways - some more elaborate than others - but distilled to their essence, there was consensus on:

- End-to-end capability: by this we mean the breadth of in-house skills in scientific, technical, managerial and administrative areas that allow us to proceed from science definition through instrument and spacecraft design, to mission development, launch, and operations, and finally to data analysis and archiving.
- Excellence: by this we mean that we possess demonstrable quality in the broad range of skills needed for our mission and that our physical plant, facilities and tools nurture the highest level of achievement.
- The "Goddard Culture:" by this we mean a tradition of "hands-on," "can do" that permeates our total workforce.

Issues

Coupled with these strategic perspectives, the retreat agenda next focused on a wide range of other issues facing the Center including the current environment for new business opportunities, how small satellite initiatives will form an important set of these opportunities, and how adjustments to Goddard's own new business process must assure a balance between the formal approval process for new business and the creative innovation within Goddard that generates new ideas.

In addition, the Council discussed how to stop things that no longer meet Agency and Center missions and goals. The conclusion was that

resources for most new initiatives are only going to come from the resources saved by stopping lower priority activities.

Other aspects of the retreat centered on institutional issues ranging from impacts of the National Performance Review and "streamlining" to the forthcoming review of Federal Laboratories that will be looking at Goddard in November.

Actions

Deputy Center Director Tom Huber, challenged everyone to translate discussions into specific actions that ranged from simplifying signature and approval authorities to reduction of documents and unnecessary mail and to further developing end-to-end systems engineering approaches and capabilities. Each Directorate is to review its internal operations for opportunities to be more efficient and eliminate work that does not add value to the Center's current mission priorities.

Program related actions included establishing a "skunkworks" approach for proposal teams, increasing incentives for contractor efficiencies, shortening phase B's on smaller programs, identifying and eliminating barriers to timely procurement on small satellite initiatives, modeling lifecycle costs, and increasing Government Furnished Equipment (GFE) when it reduces unnecessary contractor development.

While the outlook for Goddard's future is strong with Mission To Planet Earth, small explorers, operations and the other elements of the NASA mission for which Goddard is the steward, the Federal and NASA environment have changed. "People need to know about streamlining and downsizing," said Dr. Klineberg. "Employees need to be able to talk about what's happening in NASA and at Goddard."

The Executive Council concluded that Goddard's role in a reinvented government is to continue to pursue the Center's mission and make change a partner in doing it even better.

Vice President honors Goddard group

In the world of honors and awards, the Vice President's Hammer Award is a coveted prize that honors federal employees who work to eliminate unnecessary bureaucracy and help to build a better government. Goddard's Earth Observing System Data and Information System (EOSDIS) group fit that description. As a result, the group was given the award by Vice President Al Gore in recognition of its contribution.

The group was recognized for creating a system that offers unprecedented ease of access to data. The system also allows customers to take part in program design; and uses innovative procurements to ensure both the effective use of technology and the availability of data at a marginal cost.

The EOSDIS Version O Information Management System (VO IMS) offers 'one-stop shopping' for EOS and related Mission to Planet Earth data sets. IMS users can search for and view data sets through a graphical user interface, then place orders for the data they want during the same or subsequent sessions.

According to project officials, as the



photo by: NASA

Pictured from left are: John Dalton, Code 505; Robert Pride, Code 170; Michael Keeler, Gonzaga High School; Karen McDonald, Code 285; Vice President Al Gore; David Emmitt, EOS investigator; Gail McConaughy, Code 505; Ken McDonald, Code 505 and NASA Administrator Daniel Goldin.

largest civilian information program in the world, EOSDIS has and will continue to ask its customers for feedback, incorporating suggestions and emerging technologies where appropriate.

When Vice President Gore made the

award presentation this past summer at NASA Headquarters, he said, "These success stories prove that, together, we can and will give the taxpayers a space program that costs less, with less red tape and bureaucracy."

What's Up?

November 1994

Geostationary Operational Environmental Satellites (GOES) completes testing

The nation's first in a series of five advanced weather satellites, GOES-8, has successfully completed basic engineering testing and is now beginning to provide more precise data for improved forecasting.

The Commerce Department's National Oceanic and Atmospheric Administration (NOAA) and NASA held a press briefing on Nov. 7 to update the media on the progress of GOES-8. NASA turned the satellite over to NOAA on Oct. 26 for operations.

Geostationary Operational Environmental Satellites (GOES) are a main stay of weather forecasting; their images of clouds over the Earth are well-known to viewers of nightly weather forecasts on television.

International Ultraviolet Explorer (IUE) Days in orbit 6,185

In October, IUE observed several hot stars in the Large Magellenic Cloud. The purpose of these observations was to study hot bubbles of gas created by ancient supernovae.

The Large Magellenic Cloud is a small satellite galaxy of our own Milky Way Galaxy. It is about 150,000 light years from earth. When massive stars reach the end of their lifetime, they can explode as supernovae. While a supernova is only directly observable for a few years, the material ejected during the explosion can blow a large hot bubble in the surrounding interstellar gas that can persist for millions of years. Although they are very tenuous, these bubbles can be detected by their X-ray emission, and

by studying the effect they have on the light emitted from stars behind them.

The stars observed by IUE were chosen because they lie along the line of sight of X-ray emitting bubbles in the Large Magellenic Cloud. It is hoped that several of them will lie in or behind the hot X-ray emitting gas. By studying with IUE how the UV light of these stars is absorbed by intervening material, the observers should be able to learn more about the nature of the gas inside the bubble, including information about its velocity and chemical composition.

This will in turn lead to a better understanding of how the bubble interacts with the surrounding interstellar gas, how it is likely to evolve in the future, and how long ago the supernova explosion that created the bubble occurred.

Wind launch

Continued from page 1.

for Complementing the Atlas Payload and for Education (Escape II), an experiment designed, managed and built entirely by

undergraduate and graduate students of the Colorado Space Grant Consortium at the University of Colorado. The SSBUV provides accurate, reliable reading of global ozone. Principal investigator is Ernest Hilsenrath, Code 916.

The crew of astronauts deployed and retrieved a free-flying satellite designed to study the middle and lower thermosphere. Also the National Institutes of Health conducted two collaborative experiments with NASA involving rats.

The future is here at Goddard photographic shop

Goddard's Photographic Services Branch, Code 253.2, jumped into the future this October, when it opened its new Digital Photographic Facility. Located in a specially designed room in the basement of Building 8, the facility houses a Kodak Professional Photo Imaging Workstation 4200 for writing Pro Photo CD master discs.

"Long-term, we expect this facility to help our section evolve into a strictly front-end provider of image services," said Ron Moltere, Code 253.2. According to Moltere, the system will allow his unit to capture an image, then in a certain time period, post its digital file on-line for internal customers. Customers could download the image, digitally enhance it, print it out and use it

as they choose.

The new system includes a high-quality film scanner that handles various professional tape formats. There also is a digital printer that can produce vivid color thermal dye transfer prints from digital images. In the near future, a computer with image-management and enhancement software will be added to the system and connected to its own digital printer.

Although the digital facility is designed primarily for scanning, storing and distributing images captured on film, the section also has begun experimenting with a new professional grade digital camera.

Moltere says he has a number of goals for the facility: development of an advanced image archive, electronic research for and

distribution of images, the ability to provide graphic designers with electronic images they can import directly into documents and adding the capability to digitally enhance and manipulate high-resolution images.

In order to maintain image integrity Moltere set up a protocol for labeling all images either enhanced or manipulated by computer. "Each copy of a Pro Photo CD master disc contains the same high-quality image data as the original disc, whether it's the first copy or the 500th," said Moltere. The security of each disc is ensured by routinely writing three copies of each disc, one for normal access of images, one back up and a third for off-site storage.

New computing, communications center opens

photo by: Randy Friech



Dr. Milton Halem, chief, Space Data and Computing Division, Code 930 (left), looks on as Dr. Dorothy Zukor, deputy director, Earth Sciences Directorate, Code 900, Center Director Dr. John Klineberg, and Lee Holcomb, director, High Performance Computing and Communications Office, Code R at NASA Headquarters, cut the ribbon to open Goddard's High Performance Computing and Communications, Guest Computational Facilities in Building 28.

Goddard's new High Performance Computing and Communications (HPCC), Guest Computational Facilities, Code 930, are open for business. The facilities are part of the HPCC Earth and Space Sciences Project, which is aimed at accelerating the development and application of high-

performance computing technologies for tackling NASA's "grand challenges."

A grand challenge is a fundamental problem in science and engineering, with broad scientific and economic impact, whose solution can be advanced by high-performance computing.

Current NASA efforts include probing the formation of the large-scale universe; modeling the global climate system in the past, present and future; ascertaining the dynamics of the interior of stars; and indexing and searching through massive Earth-observational data sets. The renovated wing houses testbed computing systems, visitor space for collaborators from the 120-investigator grand challenge teams, and an interface to a high-speed network.

In late 1995, Goddard will acquire a major next-generation parallel testbed through a multimillion-dollar cooperative agreement notice. Also in the new facilities is an interface to the 2.5-billion-bit-

per-second Advanced Technology Demonstration Network. This prototype of the National Information Infrastructure connects six federal laboratories in the Washington area. A virtual reality laboratory is being installed.

Astronauts test servicing tool

by Ann Jenkins

Jeff Hoffman and Claude Nicollier, astronauts from STS-61, the Hubble Space Telescope (HST) First Servicing Mission, participated in a demonstration of the Remote Manipulator System (RMS) Simulator and the Goddard-developed Servicing Aid Tool (SAT) during a recent visit to the Center. The devices will be used during future servicing missions.

The RMS is the large robotic arm currently flying on the Shuttle. The SAT, is a new telerobotic tool, that is smaller, more dexterous and easily reconfigurable arm designed to assist astronauts in extravehicular servicing activities. The RMS and SAT are each teleoperated from a pair of hand controllers on the aft flight deck.

Hoffman was one of four astronauts on the Hubble servicing mission who participated in extravehicular activity (EVA), and Nicollier was the primary RMS operator. They evaluated the reach and access capabilities of the RMS as it maneuvered around deployed solar arrays on the full-sized HST model located in the Shuttle Trainer Facility in Building 10. The astronauts also tested the ability of the RMS to reach areas of HST with an astronaut on its end effector.

Hoffman and Nicollier evaluated the ability of the SAT to assist EVA astronauts in specific tasks that are planned for the HST Second Servicing Mission in 1997. Included in the demonstration was a feasibility check on two crew members—one controlling the RMS and one controlling the SAT—working simultaneously on the aft flight deck.

According to Frank Cepollina, Code 440, project manager for the HST Flight Systems and Servicing Project, the extreme EVA demands of the HST First Servicing Mission strained Shuttle resources and indicated a need for a telerobotic EVA servicing tool to aid the astronauts. In a March 1994 study, the project concluded that a telerobotic servicing tool such as the SAT could reduce EVA timelines, increase the probability of mission success and reduce mission risk.

The astronauts also practiced servicing tasks with a SAT emulator very similar to the actual SAT, in Building 11, in the Code 714 Robotics Laboratory. Two prototype end effector designs—a parallel jaw gripper and a nut driver—were demonstrated.

The parallel jaw gripper, opens and closes like a pair of jaws or forceps, and is used to pick up Orbital Replacement Units (ORUs). The nut driver is a tool

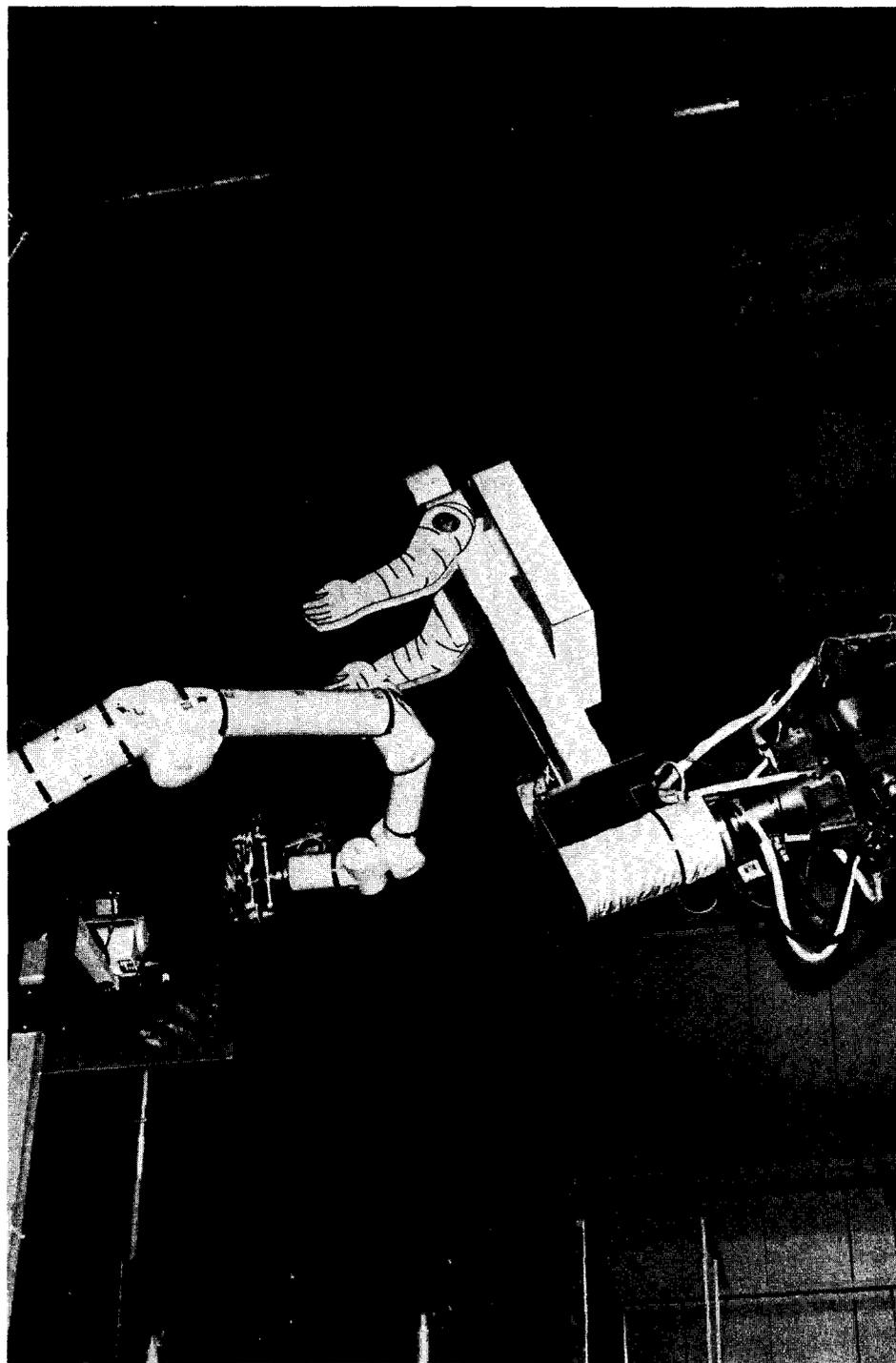


photo by: NASA

“Ernie the astronaut” rides on the Remote Manipulator System Simulator (RMSS) (right) as Goddard’s Servicing Aid Tool (SAT) (left) moves in to grapple a dummy instrument in the shuttle mockup in Building 15. Astronauts Claude Nicollier and Jeff Hoffman operated and evaluated the SAT during a demonstration Sept. 28 and 29. The robotic device is designed to aid the astronauts during their space walks. It is being evaluated for possible use on the second Hubble Space Telescope servicing mission, scheduled for 1997.

with a socket wrench at the end for removing nuts and bolts. Both end effectors contain Capaciflectors, Goddard-designed sensors that tell the SAT when it is getting close to an object. The Capaciflectors prevent the SAT from col-

liding with objects and allows it to home in on an object for specific servicing tasks.

Goddard-developed software enables the robot to use these sensors to autonomously accomplish some parts of the task, relieving the astronaut of some work.

Striving for excellence

by Karen W. Davis

It should not surprise anyone who knows Dr. John Day that he has enjoyed a successful and ambitious career. Day, head of the Space Power Applications Branch, Code 734, attributes his desire to achieve to his father who retired from the U.S. Air Force, and his mother who taught junior high school.

Early in life, Day committed himself to excellence. A native of Savannah, Ga., Day graduated as the Valedictorian of his high school class and went on to attend Bethune-Cookman College, Daytona Beach, Fla. He received a Bachelor of Science degree in 1973, a Master of Science degree in 1976 and a Doctorate in 1982 from Howard University, Washington, D.C.

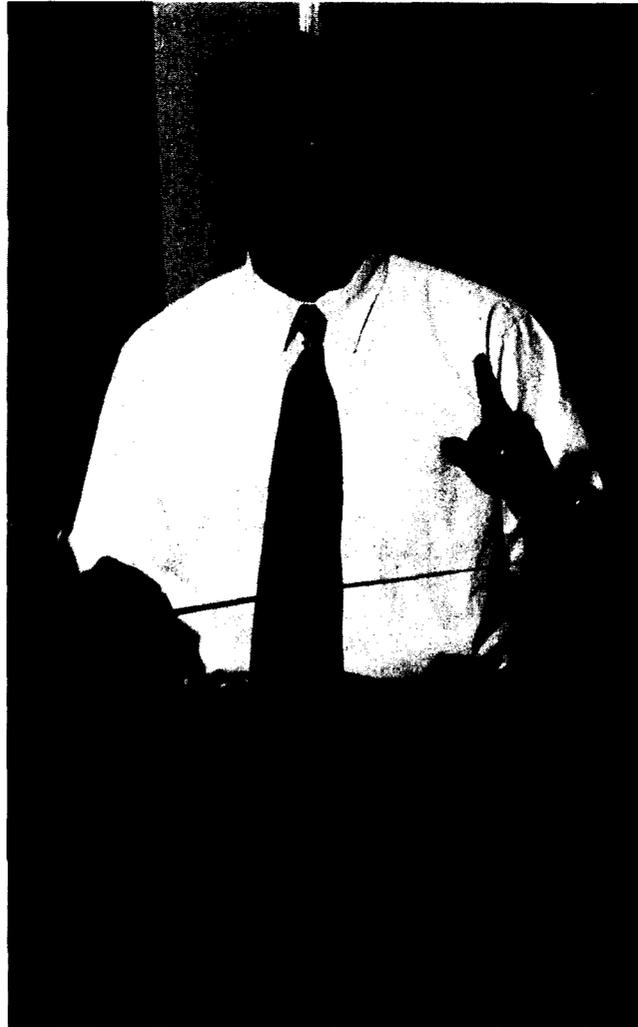
His wife, Dr. Agnes Lasiter Day, is a microbiology professor at the Howard University College of Medicine. They have one daughter, Teresa, who is a senior at John's Hopkins University, Baltimore, majoring in Biomedical Engineering. A current resident of Mitchellville, Day enjoys golf, family life and hard work.

According to Day, he long ago recognized the value of hard work and determination. He worked summers to pay for college and graduate school.

Before coming to Goddard in 1982, Day worked as a physicist in the Isotope Branch at the U.S. Geological Survey. He says that he always was interested in the Space Program and NASA. So when two colleagues told him about Goddard, he took advantage of the opportunity and submitted his resume.

"Because of my interest in working for NASA, I provided a resume to the Equal Employment Opportunities Office (EEO), Code 120, that was circulated around the Center. I received solicitations from three Goddard organizations," said Day. Day accepted a position as a solar array engineer in the Energy Conversion and Analysis Section, Code 734.4.

After six years as a solar array engineer, Day was tapped to head the section. In that position he led the development of batteries and solar cell arrays for Goddard spacecraft. In 1990, he was appointed



Dr. John Day

assistant branch head of the Space Power Applications Branch, and handled the administrative duties associated with the day-to-day operations of the branch, as well as serve as a senior power system specialist. In 1992, Day took over as branch head.

In his present capacity, Day leads a team of engineers, technicians, and managers with technical expertise over electrical power systems for Goddard spacecraft. "I know of no spacecraft subsystem more important than electrical power. We are involved in all phases of Goddard flight projects. This branch has the responsibility to deliver flight hardware for all Goddard in-house developed spacecraft, and technical oversight on power systems for out-of-house developed spacecraft. We provide a crucial service, and I take great pride in playing a role in that," Day said.

photo by: Rand Friesch

Under Day's leadership, the branch has made significant contributions in the development of spaceflight solar arrays, batteries and electronics hardware for a variety of projects such as the Cosmic Background Explorer, the Compton Gamma-Ray Observatory, and the Tropical Rainfall Measuring Mission. It also has made contributions towards the development and infusion of technologies such as gallium arsenide solar cells, infrared reflective covers, and advanced nickel cadmium batteries.

Day says that being part of the space program has provided him with a deep personal satisfaction despite some of the obstacles.

"There is an inner struggle that comes with the responsibility of developing flight hardware; testing it to make sure it works properly, and delivering it on time to the program. Then going through the anxiety of launch, followed by the exhilaration of seeing the hardware perform successfully on orbit. There are hundreds of people all working on one spacecraft, and mission success comes only when all do their job without making a significant mistake," said Day.

"Being part of the space program is something that's bigger than anyone person or organiza-

tion. What we do is of vital importance to all segments of our country. I have the opportunity to interface with talented people with diverse backgrounds and opinions and I learn a lot from them on a daily basis. I hope that we will one day commit to a diverse work force and reach beyond the traditional pipeline," Day said.

According to Day, the road ahead is filled with new hurdles to overcome. "Our team is dedicated to excellence and we know that our job is essential to achieve the Center's goals. I am confident that we can meet whatever new challenges that may confront us on each new and unique mission."

Goddard Engineering Colloquia

During December, three engineering colloquia will be held in the Building 3 Auditorium. The sessions begin at 3:30 p.m.

December 5: Dr. Fritz Hasler, Code 912 presents "GOES-8 Imagery."

December 12: Dr. Fredrick Ordway, retired, Department of Energy presents "Mars in the Fifties."

December 19: Dr. Robert Wesson of the United States Geological Survey presents "Earthquake Prediction."

Hispanic Heritage Month wrap-up

by Dan Krieger

Hispanic Heritage Month is celebrated each year from September 15 to October 15. Below is a recap of the four activities held by the Goddard Hispanic Heritage Club (GHHC) and the Hispanic Advisory Committee for Employees (HACE) in commemoration of the annual celebration.

On September 23, Dora Alcalá, director of Civilian Equal Employment Opportunity Training at Patrick Air Force Base, Fla., addressed an audience on the subject of workforce diversity. On October 4, the Puerto Rican duo; Orlando Cotto and Ana Castrello-Vazquez performed music of the Caribbean, Central American and South American to the delight of those in attendance. The performance was capped with a Conga-line of audience members parading around the Building 3 Auditorium.

The last two events were the Hispanic Heritage luncheon and Paella Night. Both took place on October 11. Air Force Col. Pedro Rustan, mission manager of the Clementine project, was the keynote speaker at the luncheon. Rustan talked about revolutionizing the way projects are created and managed. That evening, Paella Night, the final event of the Month-long commemoration was held.

Dedication honored



photo by: NASA

Goddard's honorees (left to right): First row: W. Michael Garner, Computer Sciences Corporation (CSC); Peter Baltzell, Code 253; Kevin Mowles, AlliedSignal Technical Services Corporation (ATSC); Delores Curtis, Code 530; J. Gay Carls, Code 401; Jeffrey Lawson, Lockheed Technical Operations Company; Frederick Daves, ATSC; Joe Cooper, LTOC; Second row: Glenn Tamkin, CSC; Louis Nagao, Jackson and Tull; William Struthers, Code 551; Matthew McCoy, CSC; Jerome Kosko, Code 302 and Glen Clary, ATSC.

As a reward for their hard work and dedication, Goddard's Manned Flight Awareness honorees were included in the VIP group that viewed the launch of the Space Shuttle Discovery at 6:22:35:042 p.m. EST Friday, September 9 from the Kennedy Space Center (KSC), Fla. After a two-hour weather delay, Discovery took off on mission STS-64 carrying three Goddard payloads into orbit.

While at KSC, the honorees were presented a certificate and pin by astronaut Andy Thomas. They were also given a tour of the Center and honored at a

reception that was attended by members of NASA's astronaut core and senior management from NASA and industry.

The Manned Flight Award is a NASA-sponsored program that recognizes individuals for their exceptional dedication to quality work and flight safety. It is one of the highest and most prestigious awards available to civilian and civil service employees.

Blood drive results

On October 5, 1994, the Bloodmobile was held in the building 8 auditorium. The goal was to collect 160 pints of blood.

Following is a list of employees who reached the gallon mark on October 5.

Name	No. of Gallons
James Foster	10
Michael McNeill	1
Mary Shugrue	1
James Byrd	1
John Sauerwein	4
Don Lindler	1
Sheron Fowler	4
Marion Noordzy	3
Robert Williams	2
John Roeder	2

The next Bloodmobile will be held on December 7. Call Linda Baumann on x8601 to schedule your appointment.

Retirees

Congratulations to the following employees who recently retired!

Name	Code	Years
Cary Milliner	800	44
Henry Plotkin	700	40
Robert Peterson	723.5	37
Berlin Wittig	737.2	34
Gilbert Bullock	513	34
Werner Neupert	682	34
Robert Wilson	513	33
Cornelius Roerdomp	303	32
Peter O'Neill	422	32
Francis Collins	740	31
Thomas Aggson	696	31
Franklin Strempek	722.4	27
James Donohue	712.3	26
Robert Gilroy	303	25
Bernice Seminara	553	23

Educational briefs

Goddard has moon rocks for loan to schools

The Lunar Sample Education Project, conducted by Goddard's Educational Programs Office, Code 130.3, lends authentic lunar samples, accompanied by an instructional handbook to teachers for use in their classrooms. This month more than 100 educators attended a briefing on Center that explained how the program operates. Goddard scientists conducted small group discussions to acquaint educators with the use of the lunar samples. The educators also received an up-date on current NASA programs that feature earth and environmental science topics.

Educational resources available at Goddard

The Teacher Resource Laboratory at the Goddard Visitor Center has a wealth of material and information available for area educators. Some new products now available include Electronic PictureBooks for Macintosh. Laser discs with 91,500 images on the Space Transportation

Missions 1-44. New videos and NASA Traveling Exhibits. There also are many educational sources such as pamphlets, lithographs and teacher's guides available. Also, the education office manages the following educational programs for teachers and students: Lunar Sample Certification Conference, JASON VI, the Earth & Environmental Science Teacher Ambassador Program, NEWMAST - NASA Educational Workshop for Mathematics, Science and Technology Transfer, and the SSIP - Space Science Student Involvement Program.

JASON VI explores Hawaii

Goddard again is serving as a Primary Interactive Network Site (PINS) for the JASON Project. JASON is an historical scientific expedition, which through a specially designed interactive satellite system, allows students to participate in science experiments. There will be expe-

dition broadcasts from the Goddard Visitor Center. Teachers will attend workshops to learn about linking the JASON interdisciplinary curriculum with the broadcasts. This year, teachers and students will study volcanics and astronomy atop Mauna Kea. Read more about JASON VI in early 1995.

Exploring the Solar System and beyond

In early November, the Division for Planetary Sciences, Code 690 and the American Astronomical Society held a two-day workshop for educators who teach astronomy and earth science. Scientists shared with educators the latest results on Comet Shoemaker-Levy 9 from the Hubble Space Telescope. They also participated in hands-on activities related to the properties of light to study the universe. The workshop included a showing of the new IMAX film *Destiny In Space* and a tour of the National Air and Space Museum.

NASA's National & Community Service workshop held in Greenbelt

The third annual National and Community Service Workshop recently was held in Greenbelt. The NASA-wide

conference brought together representatives from each field installation and NASA Headquarters. They met to

exchange program accomplishments from the past year and to establish Agency-wide program goals for 1995.

NASA's National Service Office, which sponsored the conference, is dedicated to engaging the Agency and its workforce in addressing pressing social needs of the Nation. Particular areas of concern include: education, public safety, the environment, and unmet human needs.

Employees may be participating in community service and not be aware of it. If you've served as a mentor with the CAREER program, contributed to Harvest for the Hungry, worked as a Community Day volunteer, provided a demonstration for Take Our Daughters to Work Day, given blood to the Red Cross, or participated in the Aero Space for Kids program then you've taken part in a community service activity.

For more information about Goddard's community service program, please contact the program manager, Nina Desmond, Code 130, at 286-8141.



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