

Way to Go EUVE Team!

NASA
National Aeronautics and
Space Administration

Goddard Space Flight Center

Goddard News

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"Getting it
Right the
First Time"**



"Thank You for What You Do."

President George Bush takes a tour of the Building 7/10 facilities, during his recent visit to Goddard. From left, Center Director D. John Klineberg, NASA Administrator Daniel Goldin, Environmental Protection Agency Administrator William K. Reilly and President Bush.

by Susie Marucci

The crowds gathered early outside Building 3, waiting for the helicopter that carried President George Bush on his first visit to Goddard, June 1. The President, along with Center Director Dr. John Klineberg, NASA Administrator Daniel Goldin and NASA Associate Administrator for Space Science and Applications Dr. Lennard Fisk, toured Buildings 7/10, where Goddard personnel explained to the President the types of work our Center performs.

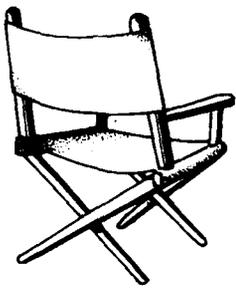
Several exhibits were placed on display in Building 7/10. Tom Huber, Code 700, Director of Engineering, gave a presentation on the thermal test chamber and the Get Away Special program to the President.

One special feature of the President's tour took place when Orlando Figueroa, Code 701, project manager for the Small Explorer (SMEX) mission and Gilberto Colon, Code 740.4, mission manager for SAMPEX, the Solar, Anomalous Magnetospheric Particle Explorer, talked about this project and introduced several of the students involved with the Cooperative Satellite Learning Project (CSLP), a special program at Laurel High School, created by Bendix Field Engineering Corp. for students to learn about building and operating a spacecraft.

Vincent Salomonson, Code 900, Director of Earth Sciences, briefed the President on Mission to Planet Earth programs and requirements including deforestation observations from space and monitoring ozone from space with the Total Ozone Mapping Spectrometer (TOMS). He was assisted by Dr. Mark Schoeberl, Code 930, and Patricia Guimaraes, Hughes STX, on ozone and Brent Holben, Code 923, on deforestation.

Another highlight of the tour for the President was an overview of TOPEX, the Ocean Topography Experiment, which was at Goddard for environmental testing.

After the tour, the President addressed approximately 400 invited Goddard employees in the Building 8 auditorium. Employees unable to be present in Building 8, watched the speech, televised live on NASA Select, in the Building 3 auditorium. The President spoke about how necessary it was to protect the environment. He praised the work Goddard does and said, "I am grateful to each and every one of you who gives of himself or herself to further the science and, thus, to improve and keep something very, very special -- the environmental quality of our entire world. Thank you for what you do."



Directors' Dialogue

Q. Please explain GSFC's employment program(s) for Veterans? How would a veteran go about applying for any of these programs?

A. Goddard does not have specific programs for veterans, but veterans can be hired through the use of special appointing authorities. Goddard applies veterans preference in noncompetitive and competitive hiring. There are two noncompetitive mechanisms which can be used to hire veterans. The Veterans Readjustment Act authorizes noncompetitive appointments for certain Vietnam era and Post Vietnam era veterans to fill positions up to the GS-11 level. Additionally, veterans with a compensable disability rating of 30 percent or more are eligible for noncompetitive appointment. To be eligible for noncompetitive appointment, the applicant must meet the basic experience and education re-

quirements of the position and may apply for employment consideration at any time. The Office of Personnel Management has delegated to the Center the authority to examine applicants for many competitive positions. Veterans interested in competitive positions may apply for vacancies as they occur and receive veterans preference in hiring. If you need additional information concerning employment of veterans, please contact Christina Reed at x6-7571.

**Roger L. Jenkin, Director
Office of Human
Resources Code 110**

Q. Matrix Management. Total Quality Management. And now Strategic Plans. Is NASA going to fall for every management idea that comes along?

A. We believe that the values and practices of the Center are fully con-

sistent with the principles of Total Quality Management (TQM). Goddard has had a long history of scientific and technical successes, and these have been based on the values of teamwork, emphasis on the professional development of our employees, excellent project management, a focus on our customer and a strong recognition program. These values are the heart of the Goddard Strategic Plan published last year, and they are the basis of a formal Total Quality Management effort. Center management has committed to undertake over the next several years. We strongly believe that these values are simple common sense and that we should organize this common sense so that it guides everything we do at the Center.

**Peter Burr
Deputy Director
Code 100**

Questions for Directors' Dialogue may be sent in to Directors' Dialogue, Code 130, without identification. Questions are sent to the appropriate directorate office as written but may be edited for space and clarity before being printed.

Scientists Solve Stellar Mystery

U.S. scientists have solved a 20-year-old mystery about the nature of Geminga, one of the brightest emitters of high-energy gamma rays in the sky. Scientists were unclear about the source of Geminga's power and why it only shines brightly in gamma rays.

Using data from two different spacecraft, scientists now know that the power plant in Geminga is a rotating, 300,000-year-

old neutron star. Geminga as a close cousin of the Crab and Vela nebulae, which also have pulsating neutron stars at their cores," Holt said.

An investigative team led by Dr. David Bertsch, Code 662, confirmed the pulsations using gamma ray data from the Goddard-built Energetic Gamma Ray Experiment (EGRET) on Goddard's Compton Gamma Ray Observatory and estimate the age of Geminga as 300,000 years.

"With this discovery, we consider the mystery of Geminga largely solved," said Holt.

Geminga is brighter than the Crab nebula in gamma rays. Because it has no obvious optical or x-ray counterpart like the Crab, for example, it was given the name Geminga, which means "it isn't there" in Milanese Italian dialect. With virtually all of its power emitted in gamma rays, its nature has been a true mystery for 20 years.

Several years ago, a very weak x-ray source was suggested as a poten-

tial identification for Geminga on the basis of approximate positional coincidence. Using ROSAT, Halpern and Holt discovered that the x-ray intensity of this source is modulated with a period of 237 milliseconds.

"The pulsations are the key to understanding the nature of Geminga," explained Holt. Geminga contains a rotating neutron star remnant of a supernova explosion at its center, also.

This discovery not only explains the nature of Geminga, but suggests that the remaining unidentified gamma ray sources in our Galaxy also are neutron stars. Although nearly all pulsars are discovered because of their strong radio signals, Geminga is apparently silent in the radio band. It is possible that Geminga is not unique in this regard, and the ROSAT and Compton Observatories will search for additional members of this emerging class of gamma ray pulsars.

"With this discovery, we consider the mystery of Geminga largely solved."

- Holt

old neutron star.

Dr. Jules Halpern, Columbia University, New York City, and Goddard's Director of Space Sciences Dr. Stephen Holt, Code 600, report that they have observed x-ray pulsations from Geminga using data from the German/American Roentgen Satellite (ROSAT). Goddard manages the U.S. participation in the ROSAT program.

"These observations firmly estab-

Goddard Restructures its Engineering Organization

by Susie Marucci

Goddard restructured its engineering directorate May 17, 1992 -- a move planned to increase efficiency and streamline management functions for in-house projects including spacecraft development.

Following are the results of the restructuring:

The Space Technology Division will be restructured to encompass the design, development, and management

of spacecraft and instrument components and subsystems including guidance, attitude control and cryogenics. E. John Pyle, Code 710, is the chief of the Space Technology Division.

The new Mechanical Systems Division is responsible for providing capabilities to conceive, design, analyze, fabricate, integrate, test and launch instruments and spacecraft systems and subsystems in the areas of

structural, thermal, optomechanical and electromechanical systems. Edward I. Powers, Code 720, is the chief of the Mechanical Systems Division.

The new Electrical Engineering Division is responsible for the design, development and management of spacecraft and instrument electrical components and subsystems such as power, data, communications, instruments and advanced space systems

(continued on page 8)

What's UP ?

June 1, 1992

UARS -- Days in Orbit: 261

Interesting Fact: The observatory is in a safe mode after the solar array appeared to stop rotating and was not able to track the Sun properly. Project officials are analyzing spacecraft data to determine the cause.

COMPTON -- Days in Orbit: 422

Interesting Fact: With the help of the Goddard Energetic Gamma Ray Experiment Telescope (EGRET), aboard Compton, scientists solved a 20-year-

old mystery about the nature of Geminga, one of the brightest emitters of high-energy gamma rays in the sky. (See story page 2) Compton controllers plan to maneuver next to the NGC 2992 target on June 4. The observatory will remain at that attitude for one week.

HST -- Days in Orbit: 738

Interesting Fact: Astronomers announced that HST was responsible for detecting a new class of object in the

universe, gigantic star-forming clusters created from the wreckage of two galaxies colliding.

Future Goddard- Related Missions

- * **SAMPEX:** June 19, 1992 -- Scout Expendable Launch Vehicle (ELV)
 - * **Geotail:** July 21, 1992 -- Delta II ELV
 - * **CONCAP II/III & LDCE I/II/III:** mid-July 1992 -- STS-46
- * Launch dates subject to change

IUE Makes a Change for the Future

by Susie Marucci



When the International Ultraviolet Explorer (IUE) launched in 1978, it had an expected life of three years, and scientists hoped it would last five. Fourteen years later, IUE is still circling the Earth, providing ultraviolet data. As IUE aged, four of the six gyros on-board IUE failed. A new system was devised to run IUE using only two gyros. That system is in

effect today. Now, looking toward the future, a one-gyro system has been developed for use when another gyro fails. No one knows when this will happen, but the IUE team is ready. The one-gyro system will require additional software and computer memory to run.

In the last few months, the old Telescope Operations Control Center



(TOCC) left, was replaced with a new TOCC, right, containing computer systems ready to run the new programs. The new TOCC, which opened in March, is also much bigger, allowing telescope operators, resident astronomers and guest observers to work in a more spacious environment. The new TOCC also has a computer room and an office for guest observers.

Left: The old Telescope Operations Control Center (TOCC)
Right: The new TOCC

Geotail Ready for Launch

by Dolores Beasley

Surrounding the Earth--including its upper atmosphere, ionosphere and magnetosphere--is an area called geospace. The Geotail spacecraft, scheduled for launch July 21, is designed to explore the tail of the magnetosphere.

The comprehensive instrument package on Geotail will investigate the energy dynamics (transport, storage and conversion of energy) of the Earth's magnetotail and mid-magnetosphere region from near-Earth to distant-tail regions.

Geotail, developed by the Japanese Institute for Space and Astronautical Science (ISAS) in collaboration with NASA, inaugurates the International Solar Terrestrial Physics Program (ISTP). ISTP provides the NASA contributing elements to the Geotail, the Solar and Heliospheric Observatory Mission (SOHO) and Cluster international cooperative missions. Ken Sizemore, Code 407, is project manager for ISTP, and Mario Acuna, Code 695, is project scientist.

Along with Geotail, NASA's Wind and Polar spacecraft, to be launched in 1993 and 1994, will provide an overlap in coverage enabling the missions to make coordinated science measurements in key energy source and storage regions for the U.S. Global Geospace Science (GGS) Initiative. In addition, major orbital changes can be made for certain spacecraft, allowing study of the global behavior of the geospace system for many combinations of satellite orbit configurations.

The GGS Initiative will provide the Wind and Polar satellites and use data from the Geotail satellite to perform simultaneous and closely coordinated measurements of key geospace regions, supplemented by data from equatorial missions along with ground-based and theoretical investigations.

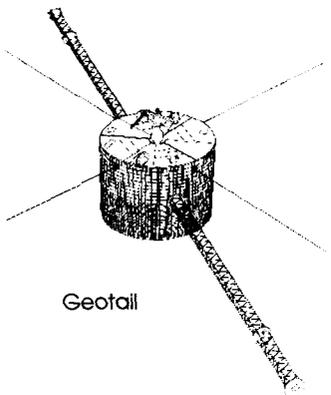
The information gathered by Geotail will allow scientists to model and more accurately predict Sun-Earth interactions and their effects on space exploration, communications and ground technology systems.

ISAS constructed the Geotail spacecraft for launch on a Delta II expendable launch vehicle from Cape

Canaveral Air Force Station. Geotail will use the gravity of the Moon to assist its orbit on the night side of the Earth, where the magnetotail is stretched out as a result of the impact of the solar wind encountering the Earth. Geotail's orbit will extend from 220 Earth radii (1,401,620 km) at its farthest point to 8 Earth radii (50,960 km) at its nearest point.

Geotail has a complement of seven instruments, with the United States providing two and the Japanese providing three complete instruments. The remaining two instruments are shared. The principal roles of the seven experiments on board the Geotail spacecraft are divided into magnetic-field measurements, electric-field measurements, plasma and plasma wave analysis and energetic particles.

Using the NASA Science Internet, investigators will use Remote Data Analysis Facilities at their home institutions to access the data at the ISTP Central Data Handling Facility and use the key parameters to determine which data are most useful to their particular investigation.



Geotail

Youth Participates in Flight Mechanics Symposium

by Susie Marucci

In a highly-technical area, keeping up to date with the information and changes in the field are all part of the job.

Through meetings, scientists, engineers and other technical professionals learn about the newest advances and ideas in their field.

One symposium held recently at Goddard, the Flight Mechanics Symposium, offered a subject discussed for the first time in the five-year history of this national symposium -- model rockets. But what made it really unusual was its presenter, Jonathan Betz, a high school student.

The 1992 Flight Mechanics/Estimation Theory Symposium, which was held from May 5-7 at Goddard, is not advertised to students. In fact, there has never been a presentation by a college undergraduate, let alone a high school student. Betz, however, is not the

average high school student. When he saw the notice, stating that the symposium "provides an opportunity for specialists in flight dynamics to present, discuss and exchange information on a wide variety of topics..." he decided to send in an abstract.

According to Tom Stengle, Code 553.1, head of the Attitude Section in the Flight Dynamics Division and the program committee chairman for the symposium, when he reviewed the abstract, he noticed it dealt with a topic not normally received. He "didn't know it was from a 15-year-old, well, he was 14 at that time," he said. Only after the abstract went to the reviewing committee did Stengle find out Betz was a teenager. "His father called to see if we'd received it," Stengle explained.

While Betz's work was very good, he needed some help fine tuning his presentation. That's when Dave Baker, Code 553.1, got into the act. Stengle asked Baker to work with Betz to make his presentation as good as possible. He met with the Thomas Jefferson High School student several



Photo: J. Semeraro

Tom Stengle, (left) program committee chairman, presents Jonathan Betz a Flight Dynamics mug

SAMPEX to Look at Cosmic Rays and Energetic Particles

by Dolores Beasley

Goddard's Solar, Anomalous and Magnetospheric Particle Explorer (SAMPEX) satellite, the first of the Small Explorer (SMEX) missions and an international collaboration with Germany, will provide information on the composition of energetic particles arriving at Earth from the solar atmosphere and interstellar space.

The satellite, scheduled for launch on a Scout expendable launch vehicle from Vandenberg Air Force Base, CA, this month, was developed by the Small Explorer (SMEX) project, Code 740, in just three years after the mission was initiated. SAMPEX is designed to support a minimum mission duration of one year, with a mission goal of three or more years.

Dr. Glenn M. Mason, University of Maryland, College Park, is principal investigator for SAMPEX. There are 10 co-investigators from American and German institutions. Gilberto Colon, Code 740.4, is mission manager, Dr. Daniel Baker, Code 690, is mission scientist, and Roberto Aleman, Code 740.4, is the SAMPEX instrument manager. All three are from Goddard, as is Orlando Figueroa, Code

701, project manager for SMEX.

SAMPEX, with its four instruments, is expected to provide unprecedented detail about the composition of energetic particles from our galaxy (galactic cosmic rays) and from the Sun (solar energetic particles). However, the most dramatic new results are expected to come from measuring the composition of anomalous cosmic rays. Anomalous cosmic rays are thought to be atoms of the local, interstellar gas that enter the solar system, are ionized and then accelerated to cosmic ray energies at the boundary of the magnetically-defined region of space called the heliosphere.

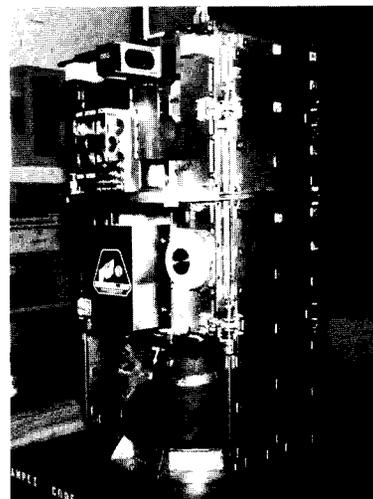
The four instruments on SAMPEX are: the Low Energy Ion Composition Analyzer (LEICA), provided by the University of Maryland, College Park; the Heavy Ion Large Telescope (HILT), provided by the Max Planck Institute for Extraterrestrial Physics in Garching, Germany; the Mass Spectrometer Telescope (MAST), provided by the California Institute of Technology, Pasadena; and the Proton/Electron Telescope (PET), also provided by the California Institute of Technol-

ogy. PET is housed in the same instrument box as MAST.

Cooperative Satellite Learning Project

The Cooperative Satellite Learning Project (CSLP) is a unique educational partnership between Laurel High School, Laurel, MD; Bendix Field Engineering Corporation, Seabrook, MD; Falcon Microsystems, Landover, MD; and Goddard that involves high school students in the process of developing and operating SAMPEX.

This pilot program provides students with an understanding of the overall "end-to-end" system used to support SAMPEX and will demonstrate how NASA implements a specific mission for a given scientific endeavor. It also introduces the students to careers in space.



This photo of SAMPEX, Goddard's Solar, Anomalous and Magnetospheric Particle Explorer, was taken in Building 7.

times over an eight-week period. The experience was unusual for Baker, especially because Betz is too young to drive. On one occasion, Baker had to pick him up from the subway station. "Jon did a great job," Baker said, "the guidance I gave him was on how to present his materials, which elements to bring out."

On May 6, Betz got up in front of more than 100 people to present his talk. Both Stengle and Baker were impressed. "His presentation was great," said Stengle, "He wasn't nervous." Baker added, "He pulled it off like a pro." For 10 minutes, Betz stood in the Building 3 auditorium, showing slides and results and presenting his talk. "What is the Relationship Be-

tween Altitude and Weight in a Model Rocket?" He answered questions asked by professionals from across the Nation.

Stengle praised Betz for his hard work. He also praised Baker, "Dave deserves credit for his work with Jonathan."

More Students May Be Involved

While the symposium is in its fifth year, each year is a little different. In the first year, the conference lasted only two days, and the majority of the papers came from Goddard personnel. Now, it is three full days, and most papers come from outside GSFC. The

symposium will not be held next year, because the Flight Dynamics Division will sponsor an international flight mechanics conference.

Stengle believes that eventually, there will be a session devoted to high school and/or college presenters. He is not sure what form that will take; currently the committee is considering a poster session. But Stengle attributes their desire to have students take part in the symposium as a direct result of Betz's presentation.

"Certainly after this experience, we are open to working with other students," Stengle said.

He expects to see Betz again. By then, Betz should be driving.

Institutional Assurance Group: "Getting it Right the First Time"

by Jessie Katz

Harold Mitchell's conference table has been taken over by a layer of white looseleaf notebooks. "It's our idea that you can't really do anything without instructions...and what good are instructions unless they're written down?" asks Mitchell, Code 303, Assistant Chief, Institutional Assurance, as he proudly surveys his handiwork.

always looking to streamline the process of creating good quality in-house flight hardware and make life easier for the in-house project personnel.

Hammering Out Procedures

To do this, Mitchell's group works with Codes 600, 700, and 900 to hammer out the quality assurance procedures. "We're trying to avoid putting

out procedures that have been done in a vacuum," Mitchell explains. "You'd have this situation where our people would be on the floor trying to implement some procedure that no one else had ever seen or signed up to." But that's changing.

Members of the Institutional Assurance Group meet with the staff of other directorates whenever a procedure is in the loop that needs coordination.

The procedure is written and a draft is sent to the directorate for review. Thus, the people who must follow the procedures have a say in the implementation of their own quality assurance requirements. In the end, Mitchell hopes, Goddard will have developed its own quality assurance manual for flight hardware development which clearly describes the Goddard assurance implementation system.

Even now, with procedures still being developed, Mitchell's boss, Abby Harper, Code 303, Chief of the Assurance Management Office, says projects involved in in-house flight work need to implement quality assurance. "And, if you have no idea who you're supposed to talk to, the Institutional Assurance Group are the people who can help," Harper explained.

The Core Group

In addition to Mitchell, the core of the Institutional Quality Assurance Group are the quality assurance specialists, Brenda Parkinson and Mary Igal.

Parkinson is the product assurance point of contact for all support service task order contracts. As such, she is a vital part of in-house project development efforts. She reviews all flight task assignments before they are issued. Parkinson is the person to call when you're having some hardware built and you want to know what to tell the contractor in terms of workmanship requirements and what kind of materials he should use.

Igal coordinates all of the official Code 300 flight assurance audits of contractors and helps to write procedures and coordinate them with other directorates. This is the first time in Goddard history that a planned, coordinated contractor quality audit program has been in place.

The rest of the group consists of FAMs (Flight Assurance Managers) and PAEs (Product Assurance Engineers). They are either co-located or dedicated to work with certain projects on their quality assurance needs.

Mitchell glances approvingly at the half-completed "Goddard Quality Assurance Manual" and explains, "There are basic things that are required of every project. There should be a standard way at Goddard for accomplishing them...so every project doesn't have to reinvent the wheel."

When the manual is finished, there are a few other things waiting on Mitchell's plate. His group would like to create Goddard systems for centralized receiving, coordinated corrective action, and supplier certification and rating.



Photo: D. McCallum

Gathered around an inspection table in Building 5 are the staff of the Institutional Assurance Group, from left, Harold Mitchell, Brenda Parkinson and Mary Igal, all Code 303.

Mitchell's group monitors the quality assurance for all projects for which most or all of the testing, fabrication and assembly are done on-site at Goddard. Quality assurance is seeing to it that the hardware will work reliably and can be maintained properly once its built.

Before Mitchell's group was formed two years ago, projects had to define their own unique way of implementing project assurance requirements for on-Center activities. Not surprisingly, each would come up with different ways of doing the same things. This was not only inefficient, but also confused the contractors.

The Institutional Assurance Group was formed to save money and time by coordinating assurance procedures for in-house flight activities. The group is

Goddard Names Senior Fellows

by Katie Brannigan

Goddard named three new Senior Goddard Fellows, the most prestigious honor given by the Center, at a reception following the Scientific Colloquium May 15. Dr. Elihu A. Boldt, Code 666; Dr. Inez Y. Fung, Code 940; and Dr. Murzy D. Jhabvala, Code 724, were recognized for their exceptional contribution to the Nation's space program.

The Senior Fellow Program recognizes research workers for their outstanding accomplishments. As Senior Fellows, the individuals serve as Center consultants in their research and engineering specialties, collectively giving advice to Senior Center Management on issues related to policy and improvement of research and development at Goddard.



Photo: J. Semeraro

The new Goddard Senior Fellows are from left, Dr. Inez Y. Fung, Code 940 (Goddard Institute for Space Studies), Dr. Murzy D. Jhabvala, Code 724 and Dr. Elihu A. Boldt, Code 666.

Dr. Boldt is head of the X-Ray Astrophysics Branch of the Laboratory for High Energy Astrophysics at Goddard.

Dr. Fung is both a physical scientist at the Goddard Institute for Space Studies (GISS), New York, NY, and an adjunct professor, Department for Applied Physics and Nuclear Engineering, Columbia University, New York, NY.

Dr. Jhabvala is a staff engineer in the Engineering directorate at Goddard.

Congratulations . . .

Nancy Palm, Code 931, head of the Advanced Computers and Operations Facility (ACOF), who became head of the branch in February. The ACOF is responsible for providing system and operations support for the NASA Center for Computational Sciences computing complex and other systems and equipments supporting various elements of the Space Data and Computing Division, including supercomputers, high performance parallel systems and massive data repositories.

Retirees

Jaylee Mead: After 33 years, employee number 10, and the person who holds it, is retiring. June 26, 1992 will be the last day for Dr. Jaylee Mead, Code 930, Associate Chief of the Space Data and Computing Division.

When Mead came to Goddard in 1959, she remarked "Don't expect me to stay more than two years."

"From her pioneering work using CD ROM discs for some of Goddard's many astronomical catalogs to her stewardship of Goddard's highly successful Scientific Colloquium series for the last 27 years, Dr. Mead's career has exemplified the very best in NASA," according to Dr. Vincent Salomonson, Code 900, Director, Earth Sciences Directorate.



Jaylee Mead

Sue Prevost: One of Goddard's earliest employees retired May 1 after 36 years of government service, 31 years of it at Goddard. Since 1983, she has been a support services supervisor in the Information Management Division, Code 250.

When Prevost came to Goddard in the summer of 1960 to work in Personnel, she moved into an office in the newly-constructed Building 1. She hired a number of people at Goddard over the years, many of whom are working here today.

Prevost has retired to her home in Upper Marlboro to spend time with her husband, their daughter and two grandsons.



Sue Prevost

Don Dillon: Like the other retirees featured this month, Don Dillon was a "pioneer" at Goddard. When he retired May 29, Dillon left behind more than 31 years at Goddard and many memories held by the 10,000 passengers he transported to NASA headquarters and back. As the shuttle driver for 24 years, Dillon traveled more than 1,006,000 miles with no accidents charged to him. He was hit twice.

Dillon, a contract employee, started at Goddard in 1960 working for security, before becoming a computer tape dispatcher and a truck driver. Dillon said he got the job driving the shuttle bus because, "they had to look for someone who did not lose his cool in the traffic jams." Dillon received 28 certificates and letters of appreciation during the past 31 years.



Don Dillon

More retirees are on page 8.

26TH AEROSPACE MECHANISMS SYMPOSIUM -- The 26th Aerospace Mechanisms Symposium was held at Goddard May 13-15. The symposium was co-sponsored by NASA, California Institute of Technology and Lockheed Missiles & Space Company, Inc. The Aerospace Mechanisms Symposium is the only one in the United States devoted solely to information related to aerospace mechanisms. Twenty-four papers were presented at this year's meeting, including ones from Spain, France and Germany.

Manned Flight Awareness Honorees Visit Florida



The STS-45 Manned Flight Awareness Launch honorees were, back row, from left to right, James Sword, Bendix Field Engineering Corp. (BFEC); Phillip G. Matthews, BFEC; Frank J. Vaughn Jr., Code 553; Frederick C. Gessner, BFEC; James G. Suter, Raytheon Service Company; middle row, Julian S. Scarborough, BFEC; Stephen P. Cimino, Code 284.6; Robert L. DeFazio, Code 554; H. Vernon Fernandes, Computer Sciences Corp. (CSC); Mark A. Summerfield, CSC; seated, Richard L. Nafzger, Code 532; Craig L. Hoffman, CSC; Rodney A. Travis, Loral AeroSys; Shawn B. Belton, BFEC; Terry D. Sommers, Code 832; and Kenneth R. Krack, CSC. Not Shown, Patricia Greco, Code 114 and Thomas P. Williams, CSC.

The most recent group of Manned Flight Awareness (MFA) honorees went to Kennedy Space Center (KSC), FL, and viewed the March 24 launch of STS-45 carrying Goddard's Shuttle Solar Backscatter Ultraviolet (SSBUV) instrument. This group of MFA honorees was lucky; many times the honorees do not see the launch they plan to see because of delays. STS-46 was delayed one day, and the honorees all watched as it took to the skies. Astronaut Steve Nagel presented the honorees with a Certificate of Merit. In addition to a reception held in their honor, other activities included a VIP tour of KSC.

Retirees

Congratulations to the following employees who recently retired!

Name	Code	Years
Louise Bozman	244	28
Joe Colney	313	32
John E. Fuchs	975	32
Isidore Goldburg	925	46
Anthony F. Grandi	501	32
Forrest H. Hill, Jr.	833.2	42
Richard R. Johnson	833	46
Richard Moore	440	37
Harold Oseroff	920	45
Gilbert Ousley	400	39
Donald A. Parker	512.1	30
Robert D. Phillips	284.9	32
Sue Prevost	250	36
Henry Price	700	28
Thomas Taylor	423	34
Gary Walters	741.2	29
Billy B. Williams	727.1	24
Robert J. Wojtal	140	33

Goddard News



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The GODDARD NEWS Staff is:
Executive Editor: Randee Exler
Managing Editor: Susie Marucci

Contributing Editors: Dolores Beasley, Jessie Katz, Keith Koehler, John J. Loughlin II
Editorial Assistant: Kati Brannigan

Goddard Restructures its Engineering Organization

(continued from page 3)

and components. Donald A. Krueger, Code 730, is the chief of the Electrical Engineering Division.

The Office of Technical Management will include two new subordinate offices which provide project management for selected in-house instrument and spacecraft programs.

The new Systems Engineering Office will provide system engineering support for flight instruments and spacecraft projects. Dr. Michael G. Ryschkewitsh, Code 704, is the chief of the Systems Engineering Office.