GOES-H Launch Scheduled From Cape Canaveral

Weather Satellite Also Will Aid International Search and Rescue Program

A Geostationary Operational Environmental Satellite (GOES-H) is scheduled to be launched on a Goddard-managed Delta 3924 launch vehicle no earlier than December 4, 1986.

Launch is planned for the Cape Canaveral Air Force Station, Florida, during a 31-minute window that opens at 5:46 P.M. EST.

The GOES satellite, to be operated, when functional, by the National Oceanic and Atmospheric Administration (NOAA), is the seventh GOES spacecraft and the tenth meteorological satellite to be launched since 1974 for bringing images from a geosynchronous satellite of cloud cover on Earth.

In addition to providing images of cloud cover, GOES-H will collect other environmental data and conduct an experiment to explore the use of integrating a near-instantaneous distress alerting capability, available from a geostationary satellite, with the already-proven location capability of low-altitude, polar-orbiting satellites. The polar orbiters—three Soviet Cosmos navigational satellites and two U.S. NOAA meteorological satellites—operate search and rescue equipment on board as part of an international search and rescue program that began in 1982. Since its inception, the program has contributed to saving more than 600 lives.

NASA flight controllers from Goddard will take charge of the spacecraft for approximately 30 days after it is released from the launch vehicle while they check out the spacecraft's systems and subsystems. In orbit, GOES-H will become GOES Seven.

During the time the spacecraft is under their control, Goddard technicians will guide the satellite through an elliptical to a circular orbit at an altitude of 22,237

Continued on page 2

NASA
National Aeronautics and Space Administration
Goddard Space Flight Center

Goddard News

Vol. 32 No. 9 October 1986

Two Launch Successes:

NOAA-G Goes on Atlas; DoD Payload on Delta

NASA registered two major launch-successes in September when two Goddard-managed missions roared into space with near perfect precision.

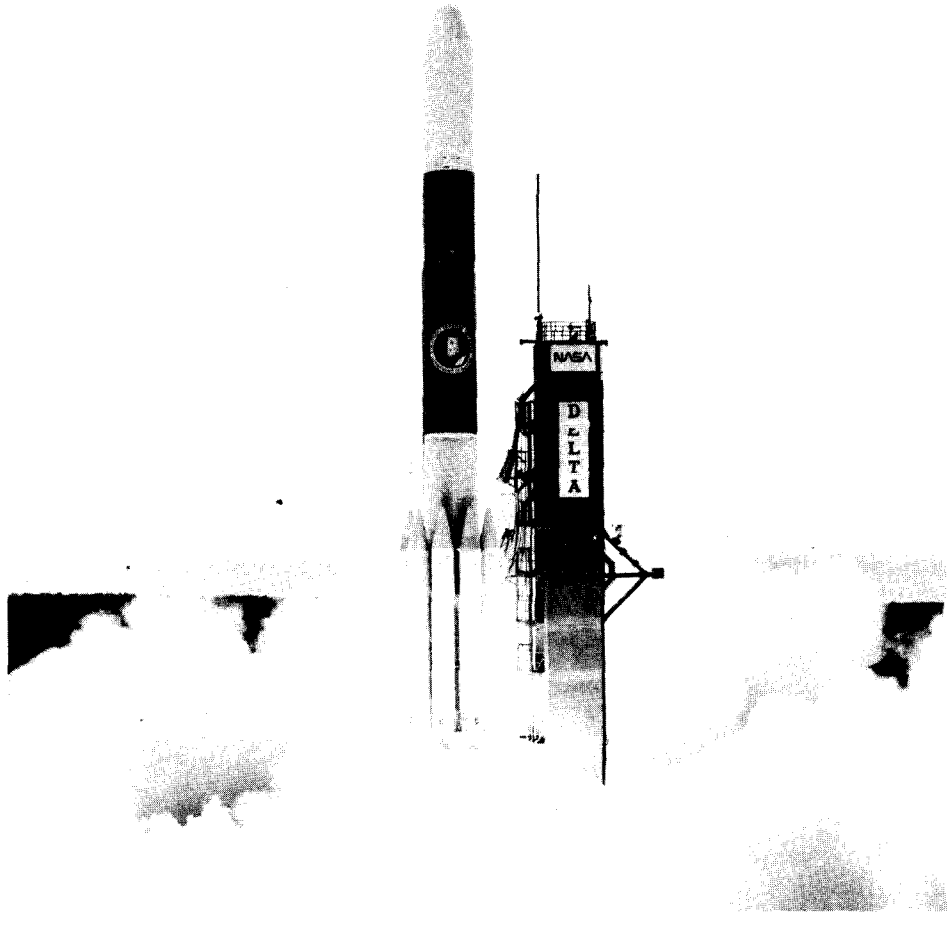
The launches were the Delta 180 from the Cape Canaveral Air Force Station on September 5 and the NOAA-G from Vandenberg Air Force Base on September 17.

Following the tragic loss of the Space Shuttle Challenger and its crew of seven last January and the failure of Delta 178 on May 3, the launches ended a nine-month drought of major launch successes and raised the hopes inside and outside NASA for a brighter future for the Nation's space program.

The Delta 180 lifted off at 11:08 A.M. EDT, carrying a classified Strategic Defense Initiative (SDI) payload. Air Force officials later declared that the SDI mission was successful.

The NOAA-G weather satellite, equipped with atmospheric-measuring instruments and search and rescue equipment, was launched aboard a General Dynamics/Air Force Atlas E at 8:52 A.M. PDT.

Continued on page 3



DELTA LAUNCH—**Delta 180 lifts off on September 5 from Cape Canaveral Air Force Station, FL, carrying classified payload.**

Nonstop, 'Round-the-World Flight of Voyager Will Carry NASA-Provided Emergency Transmitter

If the 'round-the-world flight of the Rutan Voyager encounters an emergency during its 12-day nonstop, unrefueled mission, it can count on assistance from an international search and rescue program, according to officials at Goddard.

The program employs four satellites—three from the Soviet Union and two from the United States—to "pick up" emergency signals from downed aircraft or from ships in distress and relays the information to rescue forces on the ground, according to Fred Flatow, mission manager for the search and rescue project at Goddard.

For this historic, 25,000-mile flight, the Goddard center is providing a lightweight prototype Personal Locator Beacon (PLB) which can be activated by the two-person crew in an emergency, Flatow said.

The one-and-a-half pound, waterproof beacon, about twice the size of a pack of cigarettes, is powered by five nine-volt alkaline batteries, according to Morton L. Friedman, the project's system engineer.

The Voyager aircraft, designed by aeronautical engineer Burt Rutan, is scheduled to takeoff from Edwards Air Force Base, California, and fly westward via Australia and Africa. It will be flown by the designer's 46-year-old brother, Dick, and Jeana Yeager, 32.

The prototype transmitter, built by Telonics of Mesa, Arizona, will transmit on 406 and 121.5 megahertz frequencies, Friedman said. The 406 frequency would be used primarily to determine the location of the distress signal, if transmitted, and the 121.5 would be used to help rescue forces "home in" on the signal.

Friedman said tests on the prototype, of which there are only two, showed the beacon could operate for 23 days. In addition, he said, the tests showed the prototype provided an extremely good signal, permitting ground stations to pinpoint the location very accurately.

***EMERGENCY BEACON*—Morton Friedman, SARSAT systems engineer, holds beacon for Voyager aircraft attempting 'round-the-world, nonstop flight.**

GOES-H Launch

Continued from page 1

miles (35,788 kilometers) and at a speed of 6,878 miles (11,069 kilometers) an hour at 80 degrees west longitude. At that height and velocity, the spacecraft's movement becomes "synchronized" with that of the Earth below, so that it appears to remain stationary in the sky. Actually, it completes one orbit every 24 hours.

The GOES satellite will reach its checkout point at 80 degrees west longitude on December 16 and remain there until December 29. Then, controllers will start its "drift" toward its permanent location at 75 degrees west longitude. It will arrive on station at 75 degrees west longitude on January 2 and be "handed over" to NOAA on that date.

At its position at 75 degrees west longitude, it will become known also as GOES East, providing primary weather coverage of the East Coast of the United States. A twin satellite (GOES Six) at 135 degrees west longitude provides coverage for the western half of the United States as GOES West. Currently, GOES Six is located at 98 degrees west longitude to provide wider coverage for the United States with one satellite. It was moved from its normal position at 75 degrees west longitude two years ago when the GOES East (5) satellite failed when its complement of encoder incandescent lamps burned out. Lamps on GOES-H are designed to operate at lower voltage with lower intensity.

GOES Six has been moved back and forth with the seasons to monitor severe storms. For example, images of weather conditions around Alaska and Hawaii when the single GOES satellite was in its eastern position during the summer months were distorted. Similarly, during winter months, when the single GOES was positioned westward, New England TV viewers endured distorted images.

With two GOES satellites in operation, the system—for the first time in two years—will be able to detect early stages of tropical disturbances off the coast of Africa, where hurricanes often start, as well as keep a closer watch on early winter storms in the Gulf of Alaska and western tropical disturbances approaching Hawaii.

The search and rescue experiment had been planned for the GOES-6 spacecraft, which was lost May 3 when the Delta 178 launch vehicle veered out of control and was destroyed by range safety.

The experiment, being conducted in coordination with Canada, France, Norway and the Soviet Union, will augment the polar-orbiting system now in operation. The low-flying satellites, in coordination with sophisticated equipment at ground stations in Canada, France, Great Britain, Norway, the Soviet Union, and the United States, can detect and locate the site of a downed aircraft or a ship in distress. The spacecraft picks up the distress signal and relays it to the gound, where ground controllers and their equipment pinpoint the location, usually to within five to 10 miles (8-16 kilometers).

In turn, the ground controllers notify rescue forces.

The receiver on the GOES-H satellite will not assist in determining the location of a distress signal specifically. However, it will pick up and relay distress signals to Earth, providing what is hoped to be a faster alert of rescue forces.

Goddard's Meteorological Satellites Project, under the supervision of Jerry Longanecker, provides project management for the GOES program, including research and procurement, and the Goddard Delta Project, under Bill Russell, will furnish the launch vehicle. NOAA reimburses NASA for the cost of the Delta launch vehicle and launch services. The GOES-H spacecraft was built by Hughes Aircraft Company.

Only Six Days After Launch—

America's Latest Weather Satellite Plays Major Role in Canadian Rescue

By Jim Elliott

Only six days after its launch and less than 24 hours after its search and rescue equipment was turned on, America's latest weather satellite—NOAA-G—picked up the first distress signal that led to the rescue of four Canadians whose plane crashed in a remote area of Ontario.

The Canadian- and French-built search and rescue equipment on board was activated on September 22, according to Goddard officials.

Records indicate the equipment was turned on at 7:40 P.M. EDT on September 22 during its 76th orbit of the Earth. The next day at 7:28 P.M., during its 90th revolution, it "heard" a distress signal over Canada and relayed it to Canadian rescue forces in Trenton. The signal was the first indication that someone was in trouble.

Later, a Soviet satellite—also equipped with search and rescue equipment—verified that a distress signal, indeed, was emanating from that area of Ontario. Then, the NOAA-G satellite—known as NOAA-10 in orbit—picked up the emergency signal again on its next, or 91st, orbit.

At about the same time, Al Geary, owner of an airplane that had left Red Lake to pick up an Ojibwa Indian trapper, his seven-year-old son, and a nine-year-old nephew at Lake Francois, called Canadian rescue forces. Calling from Red Lake, he told rescue personnel that his plane, its pilot and three passengers were overdue. The plane, a pontoon-equipped Cessna 185, had been scheduled to pickup the trapper and the youngsters and fly them to the Ojibwa Reservation and return to Red Lake.

The combination of reports from the American and Soviet satellites and from the owner caused the Canadian officials to alert rescue units in Edmonton, Alberta, which dispatched a four-engine C130 Hercules with paramedics on board. Poor weather that Tuesday evening and Wednesday morning prevented the C130 crew from spotting the downed aircraft. Because of the accuracy of the satellite's coordinates, however, the C130 crew was able to pick up the distress signal from the Cessna at the exact location the satellite system had indicated it would be. The distress signals are sent by an Emergency Locator Transmitter (ELT). They are designed to be activated automatically upon impact.

The C130 returned at dawn Wednesday and was joined by a Turbo Beaver from the Canadian Ministry of Natural Resources and a commercial Bell helicopter from Red Lake, on which Geary was a passenger.

When the fog lifted about 9 A.M., two medical technicians parachuted into the area and provided first aid. The Turbo Beaver picked up one of the injured children, and the helicopter picked up the pilot, trapper and other child. All four were injured.

The pilot, Rory Johnston, reported that the plane had lost power on takeoff, forcing him to try an emergency landing on the lake. The plane crashed and sank nose down in about six to eight feet of water. Johnston, suffering from facial cuts, a badly bruised shoulder and a dislocated wrist, swam 200 yards to shore, where he found a canoe, paddled out to his sunken craft and brought his injured passengers ashore.

Once ashore, they made their way to a nearby abandoned cabin where they built a fire, dried their clothes, tended their wounds and waited for rescue. The trapper, a large man who Johnston could not carry, had to crawl to the cabin on his elbows. He had suffered a broken right leg, broken left ankle and other injuries.

After they received first aid, they were flown to an airstrip at Sachigo Lake, where

Continued on page 4

Two Launch Successes

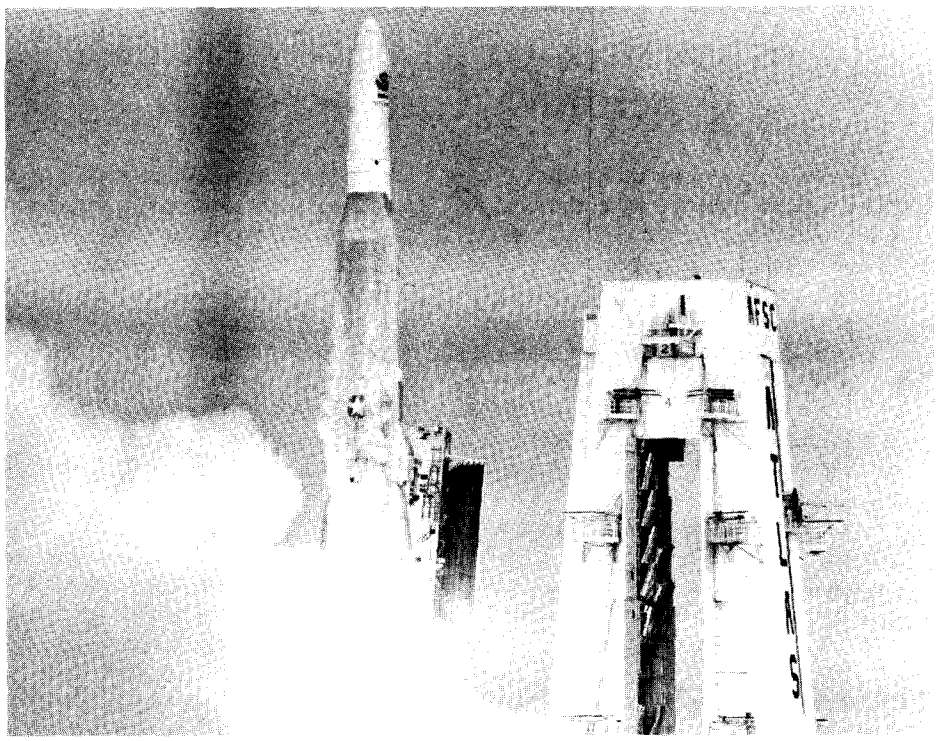
Continued from page 1

Following a month-long checkout by NASA engineers, the weather satellite will be turned over to NOAA (National Oceanic and Atmospheric Administration) for operation.

NOAA-G, to be known as NOAA-10 in orbit, will replace NOAA-6, which was reactivated into limited service when NOAA-8 failed last December.

Polar-orbiting satellites, NOAA-9 and NOAA-10, will give the United States two spacecraft equipped with search and rescue equipment.

The Soviets have three satellites equipped with search and rescue equipment in orbit. All five operate under an international program of cooperation that has contributed to saving more than 600 lives since its inception four years ago.



***NOAA-G LAUNCH*—NOAA-G weather satellite is boosted into space on September 17 from Vandenberg AFB, CA on Atlas E launch vehicle. The spacecraft also is carrying search and rescue equipment.**

Goddard Plans Grand Opening of New Exhibit on Space Exploration

By Michael Braukus

NASA employees and contractors are invited to attend the grand opening of the Goddard Visitor Center's new exhibit area on Monday, October 27, 1986 at 12:30 p.m.

The new exhibit area reflects the changes that have taken place in the space program since the Visitor Center was opened 10 years ago.

Designed for children of all ages, the new area will house various interactive exhibits which simulate living in space, working on the space shuttle, and performing scientific and commercial experiments on the space station.

Among other attractions, visitors will be able to sit in a mock-up of a Manned Maneuvering Unit—used for propelling astronauts during their excursions outside the shuttle—and simulate the operation of the vehicle, sign up to have their name carried into space, or sit in a gyro chair and feel what it's like to navigate and control a spacecraft.

The centerpice of the new hall will be an eight-screen visual presentation highlighting a window into space. Through graphics and slides, visitors will learn about space and Earth science in forms made possible only by observations from space vehicles.

A model of the Hubble Space Telescope (HST) will be displayed near the theatre. As imagery from the HST is developed in the future, it will be presented as a regular feature in the theatre.

The opening ceremonies for the new exhibit area will begin with a welcome from center Director Dr. Noel W. Hinners. The ribbon cutting will be performed by pre-school age children from the Goddard Day Care Center.

A special viewing time for NASA employees and contractors and their families has been scheduled on Monday evening from 5 to 8 p.m.

For more information call the Visitor Center at 286-8981.

Goddard Hosts First Symposium on Massively Parallel Scientific Computation

The first supercomputer conference devoted solely to the scientific results from computation performed on massively parallel computer hardware was held at Goddard September 24–25.

The two-day conference was called Frontiers '86 because the use of massively parallel computers (i.e., processors having more than 1,000 arithmetic/logical operating units simultaneously) represents new and uncharted territory in scientific computation.

Frontiers '86 addressed the performance and use of NASA's Massively Parallel Processor (MPP), as well as other commercially available parallel computers, based on experiences gained in solving specific problems in the space and Earth sciences, physical sciences, and computational sciences.

A pioneering team of NASA-selected U.S. scientists discussed its first-year results in testing and implementing computational algorithms (steps for solving a mathematical problem) on the MPP.

In addition, distinguished scientists with computational experiences gained with other highly parallel computers spoke.

Topics discussed included Astronomical Restorations, Simulation of Spiral Galaxy Evolution, Plasma Simulation, Ocean Dynamics Modeling, Cellular Automata for Non-Linear Systems, and Graphics Ray Tracing.

The MPP is a super-speed computer developed for NASA by Goodyear Aerospace Corporation in response to NASA's need for large-scale computer machines to handle tasks requiring computing power orders of magnitude beyond those currently available. The MPP is capable of performing at speeds greater than a billion instructions per second.

NASA Alumni League Formed

The NASA Alumni League has been formed to support the goals, objectives, programs and activities of NASA as outlined in the Space Act of 1958.

The League, whose chairman is Dr. Robert Seamans, is open to any person who ever has served as a NASA employee.

Commenting on formation of the league, and its purposes. Dr. Seamans issued this statement:

"The Alumni League is committed to the principle that America's civil space program—combining and balancing scientific research, technological developments, manned and unmanned exploration of the universe, and beneficial exploitation of new knowledge and capabilities—is fundamental to the evolution of the human spirit, to the healthy progress of civilization and to a strong United States. While the League acknowledges with pride and admiration the great past achievements of NASA and the civil space program, it is the future of that program that has the greatest claim on the League's attention. The league sees that future as spanning the interests of all people. The League cherishes its independence from NASA just as much as it welcomes its close ties with that agency."

The league is chartered as a charitable organization under the Internal Revenue Code. All members receive a free subscription to *Space World* magazine.

Further information can be obtained from the league:

The NASA Alumni League
West Wing Suite 203
600 Maryland Avenue, S.W.
Washington, D.C. 20024

Weather Satellite

Continued from page 3

all four were transferred to a Cessna 402 and flown to Winnipeg, Manitoba, where they were admitted to hospitals at the Health Science Center.

The search and rescue program, known as COSPAS/SARSAT, is a international cooperative program in which the major partners are Canada, France, the Soviet Union and the United States. Since the inception of the program in 1982, the satellites have contributed to saving more than 600 lives.

Work Force Conference: Preparing for Future

By Randee Exler

Will our children be prepared to meet the technical demands of the future? Will the United States remain a leader in productivity and technical development or lag behind other nations? How can the business community help our schools develop skills and motivate young people to excel in math and science?

In pursuit of the idea that tomorrow's work force is in the classroom today, NASA's Office of Education and Productivity sponsored a two-day conference on September 10–11 at Goddard to discuss long-range objectives for improving the quality of our future work force.

The conference was a forum for the exchange of ideas and information partnership initiatives with elementary and secondary schools. NASA officials believe that reaching students at the University level may be too late. Ability and interest must be nurtured at a lower level.

Jack Anderson, nationally-syndicated columnist and one of the guest speakers, said one vehicle for nurturing our youth is the Young Astronaut Program, of which he is chairman.

"Every generation needs a dream to inspire it and adventure to enoble it," Anderson said, "never in human history has there been an adventure with the excitement and appeal of space exploration.

GUEST SPEAKER—**Syndicated columnist Jack Anderson holds Landsat photo of his hometown, Salt Lake City, Utah, given to him on behalf of Goddard.**

"Our children are the most fortunate of all generations because there awaits for them the greatest adventure that mankind has ever undertaken." Anderson said the program could get students excited about education.

"RCA and the South Jersey Experience," "Partnership Action in Prince George's County," "Things That Can Be Done" and "Alliance in the Nation's Capital," were among the 12 topics addressed in the two-day meeting, entitled "The Future Work Force Conference."

Space Services Inc. To Use Wallops Launch Facility

NASA and Space Services Inc. of America (SSI), a Houston-based aerospace company, have agreed to general terms on the use of NASA's Wallops Flight Facility for the launch of the expendable Conestoga booster.

SSI will reimburse NASA for launch operations support provided by NASA.

Under the agreement, SSI will be responsible for preparation and launching of the vehicles, including all required non-NASA resources, and NASA will participate as observers to the extent necessary to insure compliance with all range and safety requirements. Overall range control, safety and operation will be the responsibility of NASA.

In signing the agreement, Issac T. Gillam IV, Assistant Administrator for the Office of Commercial Programs, said, "Here is a clear and early example of NASA's continued support and commitment to the President's commercial space policy."

"With some modification and the construction of a Conestoga gantry at one pad, the Wallops facility is ideal for our type of operation" said Donald K. "Deke" Slayton, President of SSI. "It's an exciting arrangement and we are looking forward to working with the NASA people at both Goddard and Wallops."

First flight of the Conestoga with a commercial payload could come as early as 1987 followed by two to three launches in 1988.

Three Center Scientists Get Uranus Awards

By Carter Dove

Three Goddard scientists—all from the Laboratory for Extraterrestrial Physics—were cited in a special awards ceremony at the Jet Propulsion Laboratory, Pasadena, CA on September 19 for their role in the Voyager 2 spacecraft rendezvous with the planet Uranus during November 1985–February 1986.

Among the 16 award recipients for the Exceptional Scientific Achievement Medal were Dr. Norman F. Ness, Chief of the Laboratory for Extraterrestrial Physics, and associates Dr. Rudolf A. Hanel and Michael L. Kaiser.

NASA's Voyager 2 spacecraft, managed by JPL, passed 81,500 kilometers (50,600 miles) above the cloud tops of the planet during its closest approach to Uranus at 1 p.m. (EST) on Jan. 24, 1986.

At that time, Uranus was 3 billion km (1.8 billion miles) from Earth.

Ness is principal investigator for the magnetic fields experiment, one of eleven on the Voyager 2, which produced evidence that the Uranian magnetic axis is off-center by a significant amount and tilted at the surprisingly large angle of 60 degrees with respect to the rotation axis.

Hanel, principal investigator for the Infrared Radiometry and Spectrometry (IRIS) instrument on board Voyager, focused primarily on Uranus' atmosphere to gather data on its heat balance, composition, structure and dynamics.

The planetary radio astronomy team, of which Kaiser was a member, determined that the length of the Uranian day is just under 17 hours, 15 minutes.

One of seven award categories at the JPL ceremony, the Exceptional Scientific Achievement Medal—the top scientific award—was presented for "unusually significant contribution toward achievement of aeronautical or space exploration goals."

In all, more than 20 Goddard Scientists participated in the Voyager 2 experiments.

The last stop on Voyager 2's grand tour will be the planet Neptune on August 25, 1989.

International Cometary Explorer (ICE) Ownership To Be Transferred to NASM

By Randee Exler

When the first spacecraft to travel through the tail of a comet returns to the vicinity of Earth in August, 2014, NASA intends to transfer ownership of this celestial traveler to the National Air and Space Museum (NASM), Goddard officials announced last month.

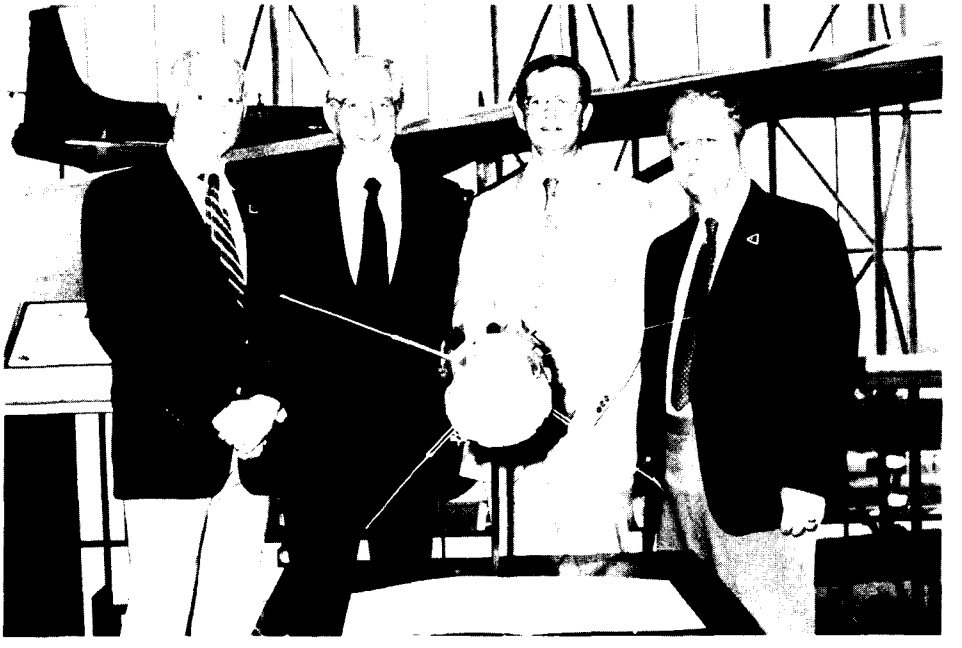
The special signing ceremony of NASA and Smithsonian officials at NASM took place on the first anniversary of the historic International Cometary Explorer (ICE) encounter with Comet Giacobini-Zinner, September 11, 1986. NASA Administrator Dr. James C. Fletcher and NASM Acting Director Dr. James C. Tyler signed the transfer of ownership document.

The signing ceremony was the first event in a symposium on deep space satellite gymnastics. Among the symposium participants was Goddard's Dr. Robert W. Farquhar, who described his role in the historic intercept of Comet Giacobini-Zinner by ICE.

Farquhar "threaded" the ICE spacecraft—traveling at a speed of 46,000 miles (74,000 km) an hour—through the tail of the comet while it was 44 million miles from Earth. Farquhar maneuvered ICE past the Moon five times in 1983, using lunar gravitational assists to "slingshot" the spacecraft toward its rendezvous.

ICE in its future orbital motions is expected to return to the vicinity of the Earth in August, 2014 and is expected to be retrievable at that time. If retrieved, NASM will add the ICE spacecraft to the Smithsonian institution's permanent collection.

***TRANSFER SIGNING*—NASA Administrator Dr. James C. Fletcher (r) and National Air and Space Museum Acting Director Dr. James C. Tyler sign document which will transfer ownership of NASA's ICE spacecraft to NASM in the year 2014.**



***ICE TRANSFER*—From left to right: Dr. John C. Brant, chief, Goddard Laboratory for Astronomy and Solar Physics; NASA Administrator Dr. James C. Fletcher; Goddard Center Director Dr. Noel W. Hinners; Flight Director for the ICE mission Dr. Robert W. Farquhar. In foreground, model of ICE spacecraft and transfer document.**

Space Shuttle Mission 51-L Recovery Operation Ends August 28

The massive marine salvage operation which began within hours of the Space Shuttle Mission 51-L accident on Jan. 28 came to an end August 28.

Rear Admiral Richard H. Truly, NASA Associate Administrator for Space Flight, called the three vessels engaged in the recovery—the Freedom Star, Liberty Star and Independence—back to port at the end of the day on August 28 to close the seven-month-long recovery effort.

The Department of Defense Managers' STS Contingency Support Office involved in the 51-L accident investigation terminated at the same time.

The U.S. Navy's salvage operation center at Cape Canaveral Air Force Station will also close.

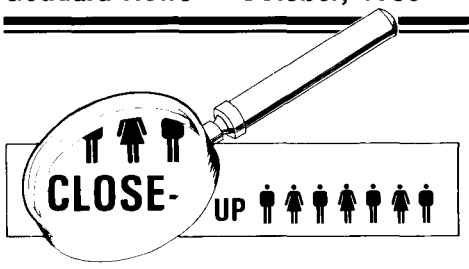
Characterized as the largest ocean recovery operation in history, the 51-L effort consisted at its peak in February of 22 ships, 6,000 NASA, Air Force, Navy, Coast Guard and contractor personnel and numerous aircraft.

Working in the Atlantic Ocean in water up to 1,100 feet deep to the east and northeast of the Kennedy Space Center, the crews involved in the operation retrieved a large proportion of the orbiter Challenger and other shuttle flight systems.

According to Truly, the search yielded up from the sea about 45 percent of the Challenger, 50 percent of the external tank and twin solid rocket boosters, 95 percent of the Spartan-Halley spacecraft, 35 percent of the Tracking and Data Relay Satellite and 90 percent of the inertial Upper Stage.

NASA Space Station

This is the new Space Station logo adopted by NASA Headquarters.



Welcome aboard. . .two new people have joined the Center's Public Affairs Office. . .**KATHLEEN BERES,** one of ten national finalists for the Teacher in Space Project, is working in the Education Office as part of the Center's Outreach education effort. Beres, who previously worked a year at MSFC, is on sabbatical from Kenwood High School, Baltimore County, Md., where she teaches physical sciences and field biology. . .**MICHAEL BRAUKUS** joins PAO's Public Information Unit as a Public Affairs Specialist. Previously, Braukus was a Public Affairs Specialist for the Department of Defense in Philadelphia, PA, and director of Community Relations at Pottsville Hospital, Pottsville, PA, respectively; at Goddard, he will disseminate news about the Center and act as a spokesman for Center activities. . .

Michael Braukus

GARY MEYERS has replaced Roger Werking as head, Flight Dynamics Support Branch. Werking has taken a position with Computer Sciences Corporation, Beltsville, Md.; Meyers previously was Head, Mission and Network Support Section. . .A University of Maryland research associate with Goddard's Low Energy Cosmic Ray Group since 1978, **DR. ROBERT MCGUIRE** has been reassigned to the National Space Science Data Center. One of his key duties there will be that of lead scientist for the International Solar-Terrestrial Program. . . **CARL POLESKY** has joined Goddard's team as an Industrial Relations Officer. Polesky previously worked 12 years with the Department of Labor. . .**ROBERT**

Kathleen Beres

STEPHENS, staff attorney, Office of Chief Counsel at Goddard, will take a position in the Office of the General Counsel at NASA HQ, effective October 20. . .**W. BRIAN KEEGAN** is the new deputy director of the Flight Assurance Directorate, replacing William R. Forlifer, who retired last May. Keegan previously was Head, Verification Engineering Office. . .

Two major appointments have been made in Goddard's Health, Safety and Security Office. . .**TERRY M. POTTERTON,** formerly with the Air Force Logistics Command in Dayton, Ohio, has been named Associate Chief of Health, Safety and Security, and he will be based at Wallops. **SEWELL R. (BOB) MARSH,** who has been Secure Programs Manager for Code 500 at Goddard, has accepted the position as the Center's Director of Security. He replaces Phil Everson, who accepted a position in Air Force security at Andrews Air Force Base recently. . .

DR. GOETZ K.H. OERTEL, a former NASA scientist who worked at Langley and at NASA headquarters, has been elected president of the Association of Universities for Research in Astronomy (AURA). AURA operates the Space Telescope Science Institute under contract to Goddard. Dr. Oertel succeeds Dr. John M. Teem, president since 1977, who retired in September. Dr. Oertel comes to AURA from the Department of Energy in Washington, where—since 1985—he had been deputy assistant secretary for Safety, Health and Quality Assurance. . .

BLOOD DONORS

Following is a list of Goddard donors who were cited by the American Red Cross with gallon pins at the Bloodmobile of October 1, 1986:

Name	*No. of Gallons*
Tom Bryant	1
Virgil Cleveland	16
Daniel Endres	8
Edwin Fung	3
Powell Hinson	5
Ken Kittelberger	8
Donald Lokerson	2
Jane Martz	1
John Quann	1
Arnold Rausch	2
Shari Spitzer	1

Goddard came through with flying colors to support the urgent need for blood in our community! THANK YOU! The next bloodmobile visit will be on December 3, 1986 from 8:30 to 2:30 p.m. in Bldg. 26, Room 205.

Mail your story to the Goddard News (Code 130), or call the Editor at 286-7277.

Retirees

Farewell and best of luck to the following retirees who left Goddard in September!

	Code	Years
Burdick, Harry	716.1	35
Carr, Robert E.	822.2	32
Lanner, Virginia B.	616	25
Lewoc, David G.	541	30
Novak, John J.	480	20
Walker, Barbara	235.3	20

Lend a hand today...

The payroll deduction way!

Combined Federal Campaign
September 29 - November 7

CFC

New Manifest Issued

When Shuttle flights resume in 1988, Goddard-related payloads will fly on four of the first six missions; a spacecraft from the Tracking and Data Relay Satellite System (TDRSS), a project managed by Goddard, will be the sole payload on the first post-Challenger flight.

According to the new Shuttle flight manifest released earlier this month, Goddard plays a major role in the payloads of 19 of the 46 flights scheduled until 1994, apart from its regular Shuttle duties of managing the world-wide tracking network and serving as the hub of the Agency's communications operations.

Following are flights on which Goddard will work with payloads; included will be flight number, date and payload, respectively.

Flight **26**, Feb. 2, 1988, TDRS-C; **29**, Sept. 22, 1988, TDRS-D; **30**, Nov. 17, 1988, Hubble Space Telescope (HST); **31**, Jan. 19, 1989, ASTRO-1; **40**, Dec. 7, 1989, SLS-1; **41**, Jan. 18, 1990, Gamma Ray Observatory; **57**, second-quarter 1991, Spartan-2 and TDRS-E; **58**, third-quarter 1991, HST revisit; **59**, fourth-quarter 1991, Upper Atmosphere Research Satellite; **62**, third-quarter 1992, International Solar-Terrestrial Project; **63**, fourth-quarter 1992, Shuttle High Energy Astrophysics Lab (SHEAL-2); **64**, first-quarter 1993, Space Station, LAGEOS-2, GOES-I; **65**, second-quarter 1993, Space Station; **66**, third-quarter 1993, Space Station, NOAA-K; **67**, fourth-quarter 1993, Space Station; **68**, first-quarter 1994, Space Station, ROSAT, Extreme Ultraviolet Explorer and Spartan-5; **69**, second-quarter 1994, Space Station; **70**, third quarter 1994, Space Station; **71**, fourth-quarter 1994, HST revisit.

Don't Forget to Watch NASA Update October 30th in Building 8 Auditorium...Show Runs From 8–5.

NASA Honors Personnel for Outstanding Contributions

By Michael Braukus

Seventy-six NASA civil service and contractor personnel received recognition at Goddard recently for outstanding contributions to space flight.

For their efforts, they were presented the coveted "Silver Snoopy" award.

The award consists of a certificate personally signed by an astronaut and a pin of Snoopy (the Charles Shultz comic strip character) dressed in a space suit and helmet. This year, the presentations were made by astronaut Frederick "Rick" Hauck.

"We're very proud of you and the work you do."

Hauck, who piloted the STS-7 mission and later commanded the STS-51A mission, said,"Of all the things we astronauts do to promote the space program, the Snoopy Awards to me are the most meaningful.

"We're very proud of you and the work you do. And I'm very proud to shake the hands of the people who have been nominated for this award."

The candidates for the "Silver Snoopy" award are selected by their co-workers. The award criteria states that the person's job performance must be oriented to flight crew safety or mission success. Additionally, their job performance must distinguish the individual in his or her particular area of responsibility and must be meaningful in its contribution to the safety of the flight crew or success of the mission.

The recipients of this year's award are: Shurhangi P. Ambardekar, Bendix; John G. Arslanian, GSFC; Anthony J. Begewald, Bendix; Alois Betmarik, Jr., Bendix; Lawrence R. Bradbury, Bendix; George K. Bryant, Bendix; Verna L. Buczek, Bendix; William T. Burns, GSFC-Wallops; Madeline J. Butler, GSFC; James O. Cappellari, Jr., CSC; Jack W. Carlson, CSC; Frank J. Cepollina, GSFC; Oliver R. Coffman, Bendix; Christen L. Christensen, Bendix; Joseph M. Curley, Bendix; Fredrick L. Daves, Bendix; John R. DeShong, Bendix; Ronald Dill, Bendix; Clarence E. Doll, GSFC; Daniel J. Duffy, Bendix; Charles M. Duignan, GSFC; Jeff N. Elliott, Bendix; Dennis Fitzgerald, CSC; Glenn W. Garner, Ford Aerospace; Victor Giddings, MITRE; Thomas A. Gitlin, Bendix; Robert D. Godfrey, GSFC; Yvonne K. Gourley, GSFC; Wilbur J. Grant, Bendix; Walter J. Hensel, GSFC; Bobbie L. Helms, Bendix; Russell B. Hoffman, GSFC; John J. Janintho, GSFC; Donald E. Johnson, Bendix; Winslow S. Johnson, Bendix; Ernest Keith, Sr., Bendix; Carl J. Kircher, Bendix; Charles J. Kresch, Ford Aerospace; Jack Lee, Bendix; Lisa Levine, CSC; Carl L. May, Bendix; John L. McAdory, Bendix; John J. McCann, Bendix; Joseph A. McKenzie, Bendix; Harry W. McMurdy, Ford Aerospace; Fredric Messing, CSC; Betty J. Millar, GSFC; Thomas W. Morris, Bendix; Marvin P. Morrison, Ford Aerospace; Richard Nafzger, GSFC; Hugh B. O'Donnell, GSFC; Vicki L. Oxenham, GSFC; Donald M. Phillips, GSFC; Stephen W. Phillips, Bendix; Fred G. Pifer, Jr., Bendix; Ernest Quintin, CSC; Debbie Ramey, CSC; Michael A. Richter, III, Ford Aerospace; Eli Rosen, Raytheon; James F. Ryan, Bendix; Larry W. Sapper, GSFC; Thomas J. Savage Jr., GSFC-Wallops; William D. Seeley, Bendix; Kenneth R. Shelby, Jr., Bendix; Earnest L. Smallwood, Bendix; Julian T. Smith, Bendix; Steven A. Smith, GSFC; Richard S. Stoehr, Sr., GSFC; John H. Stripling, GSFC-Wallops; Arnold L. Thomas, Ford Aerospace; Bernard V. Tomardy, GSFC; Harry L. Underwood, AT&T; Marvin T. Walker, CSC; Abe Wilk, Bendix; Thomas E. Wise, Bendix; and G. Robert Zambs, Bendix.

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