



Fortieth Anniversary
Pioneering the Future

1999 Integrated Launch Manifest

The following is a launch forecast for the Space Shuttle at KSC and for NASA payloads on expendable vehicles at CCAS and VAFB.

Shuttle launches at KSC

- Apr. 8 (no earlier than)** — STS-93/Chandra X-ray Observatory (formerly AXAF), 7:21 a.m.
- May 13** — STS-96/International Space Station-2A.1, 11:41 a.m.
- Aug. 5** — STS-101/International Space Station-2A.2, 2:15 a.m.
- Sept. 16** — STS-99/Shuttle Radar Topography Mission, 8:47 a.m.
- Oct. 28** — STS-92/International Space Station-3A
- Dec. 2** — STS-97/International Space Station-4A

ELV launches at CCAS...

- Jan. 3** — Mars Polar Lander/Deep Space-2, Boeing Delta II
- Feb. 6** — Stardust, 4:07 p.m. EST, Boeing Delta II
- Mar. 31** — GOES-L, Lockheed Martin Atlas IIA
- late May** — FUSE, Boeing Delta II
- mid-July** — TDRS-H, Lockheed Martin Atlas

... and at Vandenberg Air Force Base, California

- Jan. 14** — SLC-2, ARGOS (USAF), ORSTED/SUNSAT, Delta II
- Feb. 26** — WIRE, Pegasus XL
- Apr. 1** — TERRIERS/MUBLCOM, Pegasus XL
- Apr. 15** — SLC-2, Landsat-7, Boeing Delta II
- Apr. 27** — QuikSCAT, Titan II
- 3rd Qtr.** — SLC-3, EOS-1, Lockheed Martin Atlas IIA
- Oct. 27** — ACRIM, Orbital Sciences Taurus
- December** — NOAA-L, Atlas
- December** — EO-1/SAC-C, Delta

January 8, 1999

Vol. 38, No. 1

Spaceport News

America's gateway to the universe. Leading the world in preparing and launching missions to Earth and beyond.

John F. Kennedy Space Center

1999 opens ringing in the new and building on the past

In 1998, Kennedy Space Center was both a witness to history and a history-maker, as America's spaceport hosted space legends and anniversary celebrations, as well as launching the United States' first component and construction mission of the International Space Station. In doing so, KSC is now competently and competitively poised to greet and lead the new millennium.

By year's end, five Space Shuttles had lifted off, carrying 35 crew members into space, logging more than 21.9 million miles and carrying many major payloads into orbit.

Last year, America's spaceport hosted President Bill Clinton and First Lady Hillary to witness the launch of space pioneer John Glenn Jr. on STS-95. Glenn is now America's oldest astronaut at age 77, and Clinton is the first United States president to witness a Space Shuttle launch first-hand.

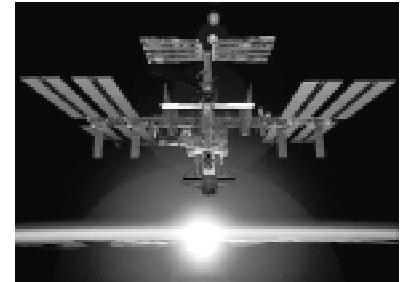
U.S. Secretary of State Madeleine Albright was on hand to

With contrails following like the tail of a comet, the orbiter Endeavour prepares to touch down on Runway 15 at KSC's Shuttle Landing Facility on Dec. 15 to complete the STS-88 mission at 10:53 p.m. This was the tenth nighttime landing for an orbiter and the fifth such at KSC. Endeavour's landing is also the 47th landing at Kennedy Space Center and the 17th consecutive KSC landing.



see the launch of the Unity connecting module on STS-88 in December. During the mission, the crew joined Unity with the 22-ton unmanned Zarya control module already on orbit, beginning the first construction effort of the International Space Station (ISS).

The next Shuttle assembly mission to the station is STS-96, scheduled for launch aboard Discovery in May.



Artist's rendering of the International Space Station, which saw its first construction on orbit in December 1998.

The diversity of tasks undertaken by KSC workers reflected the center's commitment to keeping the Shuttle a valuable resource, while positioning itself to support future launch vehicles and missions.

The top priority, in line with Kennedy Space Center's guiding principles, was safety, as the center participated in its first Super Safety Day on July 16. All normal work activities, with the exception of mandatory services (fire, security, cafeteria, and buses) were suspended to focus exclusively on safety.

Safety was also a burning issue during the summer of 1998 as brush fires raged through central Florida. In June, Florida's Division of Forestry called on KSC to help through the use of its helicopter, an infrared camera, a global position-



Perfectly aligned: STS-89 Commander Terrence Wilcutt, at left, shakes hands with Pilot Joe Edwards Jr. under the orbiter Endeavour after it landed on Runway 15 at KSC's Shuttle Landing Facility Jan. 31, 1998. Kneeling in front of the wheel of the orbiter's nose, they congratulate each other on a perfect landing, the first of five at KSC in 1998.

(See Year, Page 4)

Breaking new ground at KSC's Reusable Launch Vehicle Support Complex

Kennedy Space Center and the Spaceport Florida Authority (SFA) began construction of an \$8 million Reusable Launch Vehicle (RLV) Support Complex at a ground-breaking ceremony near KSC's Space Shuttle Landing Facility (SLF) on Dec. 18.

Plans for the complex, to be located on the tow-way at the south end of the Shuttle Landing Facility, include a multi-purpose reusable launch vehicle hangar and adjacent facilities for related ground support equipment and administrative and technical support. Intended to support the Space Shuttle, other reusable launch vehicles and X-vehicle systems, the new complex is jointly funded by Spaceport Florida Authority, NASA's Space Shuttle Program and Kennedy Space Center.

A four-phased development plan promises completion of the complex by year 2000, in time to support KSC test flights of the X-34 reusable launch vehicle technology demonstrator. NASA managers announced plans to bring the X-34 to KSC at the ground-breaking ceremony. The support complex may also support the



KSC and Marshall Space Flight Center directors and managers, along with representatives from Spaceport Florida Authority, Rush Construction, Inc. and the State of Florida break new ground together Dec. 18 on KSC's Reusable Launch Vehicle Support Complex.

proposed VentureStar reusable launch vehicle.

"Phase One of this development plan includes the construction of a multipurpose hangar," explained Kennedy Space Center Director Roy Bridges. "This groundbreaking not only starts the construction of a hangar, but it marks an important milestone in our joint effort with Florida to expand the world class

capabilities at KSC."

Spaceport Florida Authority was established in 1989 by Florida's governor and legislature to assist space-related enterprises statewide and to coordinate state government support to the space transportation industry. This project is a prerequisite to accommodating some of our nation's next-generation space transportation

systems and a perfect example of the kind of federal/state cooperation envisioned in the National Space Policy," said Spaceport Florida Authority Executive Director Ed O'Connor.

NASA and the Spaceport Florida Authority officials were joined at the ground breaking by federal and state elected officials who support the partnership initiative.

January employees of the month and the 1998 employees of the year



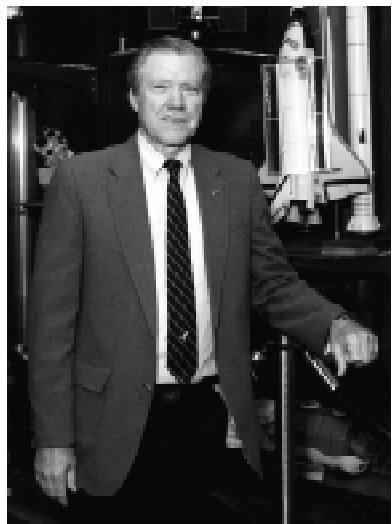
January employees of the month are, left to right, Hong Le, Checkout and Launch Control System Office; Rita Long, Office of the Chief Financial Officer; Len Nicholson, Logistics Operations; Susan Hutchinson, Safety and Mission Assurance; Suzie Cunningham, Advanced Development and Shuttle Upgrades; Dr. Philip Scarpa, Biomedical Office; Cheryl Johnson, Administration Office; Robert Franco, Space Station and Shuttle Payloads; John Weeks, Space Station Hardware Integration Office; Delores Green, Installation Operations; and Larry Hand Jr., Engineering Development. Not shown are Jessie Clarke, Office of the Chief Counsel; Kenneth Nowak, Shuttle Processing; and Mary Conklin, Payload Processing.

The Employee of the Year is a new NASA award at KSC. Every October, co-workers within each directorate will select one awardee from among the previous fiscal year's employees of the month. Each employee of the year will receive a monetary award and a choice of special tour options.



Employees of the year for 1998 are, left to right, Robert Preston, Safety and Mission Assurance; Mike Canicatti, Installation Operations; Terry Taylor, Public Affairs; Frank Villalpando, Space Station Hardware Integration Office; Avis Upton, Shuttle Processing; Robert Ashley, Space Station and Shuttle Payloads; Gladys Escobar, Procurement; Elisa Atrusa, Checkout and Launch Control System; Denise De La Pascua, Biomedical Office; Henry Collier, Office of the Chief Financial Officer; Lori Weller, Joint Performance Management Office; and Robert Page, Launch Integration Office. Not shown are Suzie Stuckey, Office of the Chief Counsel; Doretha Worthy, Administration Office; Bill Roy, Logistics Operations; and Maria Littlefield, Engineering Development.

Breakfield and Reynolds retire as directors; successors named



Thomas Breakfield

P. Thomas Breakfield III, KSC's director of Safety and Mission Assurance, and Joel Reynolds, KSC Safety Assurance director, have announced their retirement from NASA.

John "Chris" Fairey will succeed Breakfield as director, and Ann Montgomery will move up to deputy director of Safety and Mission Assurance.

Breakfield joined NASA in 1964 and served as a data systems/electronics engineer involved in the development of real-time guidance and navigation data processing software for Saturn launch vehicles, Apollo launch data systems and lunar module data reduction software. In 1973, he was

assigned to the newly formed Shuttle Launch Processing System and was project manager for the Central Data Subsystem Design Team. In 1979, he became chief of the Shuttle Launch Processing System Division. In May 1983, Breakfield was assigned to the Shuttle Engineering Directorate and in December 1983 became deputy director, Shuttle Engineering. From December 1985 until he was appointed to his current position in 1996, he was director, Payload Flight Operations.

"My 34 years with NASA at KSC have been very rewarding to me," said Breakfield. "I have had the opportunity to be directly involved in the most exciting work in the universe. I will miss the excitement and challenge of processing and launching the vehicles and their payloads, and most of all, the daily contact with those fantastic folks who have become family."

Joel Reynolds joined NASA at KSC in 1969 as a fire protection engineer. From 1979 to 1994, he managed the KSC Operations Safety Program including the Space Shuttle, payloads and expendable vehicles. He directed the planning for NASA's emergency response efforts for the Galileo and Ulysses missions. In his current position as director of Safety Assurance, he is

responsible for providing management and direction to the KSC Safety and Reliability programs including the Space Shuttle, expendable vehicles, payloads, the International Space Station and Industrial Safety Divisions.

John "Chris" Fairey is the present director of Shuttle Process Integration. He was appointed in June 1995 as KSC's director of Quality Assurance, covering the Space Shuttle, expendable vehicles, payloads and the International Space Station. Concurrently in 1998, he was the acting director of the Joint Performance Management Office with KSC and the 45th Space Wing. Fairey joined NASA in 1969 and served as the lead station engineer and test conductor for the Facilities and Environmental Measurement Station in support of the Apollo, Skylab and ASTP programs. In 1980, he served as Operations Section chief for the Launch Processing System for Checkout, Control and Monitor Systems for the Space Shuttle. In 1984, he was assigned to the Guidance and Digital Systems Division of Shuttle Engineering. He served as a Shuttle Project engineer for 15 missions beginning in 1985. In 1991, he was assigned as orbiter Discovery's flow director and in 1993 was appointed as the



Joel Reynolds

deputy director, Shuttle Ground Engineering.

Ann Montgomery is director, Quality Assurance, appointed in July 1998. Prior to that time, she held several positions of leadership in Logistics, including deputy director and acting director of Logistics Operations. From 1986 to 1989, Montgomery was the flow director for orbiter Columbia, responsible for the management of all activities associated with processing Columbia for each mission. Beginning in 1989, she was the manager of the Orbiter Processing Facility. Montgomery joined NASA in 1968 and worked as a lead crew systems engineer on the Apollo, Skylab and Apollo-Soyuz Test Project.

David Dickinson retires from NASA

David Dickinson recently announced his retirement from NASA after 28 years of government service. Dickinson was designated the acting director, Public Affairs Office, at Kennedy Space Center in April 1998. He had been deputy director of the Public Affairs Office since January 1993. As acting director of the Public Affairs Office, Dickinson directed the center's educational programs; media services; guest activities, tours and briefings; special events; and the KSC Visitors Center.

Dickinson began his NASA career in 1985 as a personnel management specialist at KSC and was appointed chief of training in 1988. He managed all NASA training and development programs at KSC, the Senior Executive Service personnel system and the

Drug-Free Workplace Program. Prior to joining NASA, Dickinson served in agency-level positions with other Federal organizations in Washington, DC, including the Peace Corps, the Federal Labor Relations Authority, and the U.S. Civil Service Commission.



David Dickinson

No NEAR miss for this asteroid

At noon, Jan. 3, the Near Earth Asteroid Rendezvous (NEAR) mission team conducted a 24-minute, large bipropellant engine burn, to increase the spacecraft's speed for a rendezvous with the asteroid Eros in February 2000.

NASA's Deep Space Network, which is tracking the NEAR spacecraft, confirmed the accuracy of the burn. It increased NEAR's speed by 2,100 mph (940 meters per second) to catch up to the faster-moving Eros asteroid, which overtook NEAR during its Dec. 23 flyby. At the time of the burn, the spacecraft was 565,650 miles from Eros. For now, NEAR continues on its orbit around the sun, traveling at about 43,000 mph as it gains on asteroid Eros. Plans will soon be finalized for a small hydrazine engine burn to correct any deviation from the spacecraft's intended location. This burn is expected to take place within two weeks.

NEAR is part of NASA's Discovery program for lower cost space exploration missions. Twenty-five miles long, Eros was the first near-Earth asteroid discovered in 1898. NEAR will orbit the asteroid and will conduct the first long-term, close-up look at an asteroid's surface composition and physical properties.

Year ...

(Continued from Page 1)

ing satellite system and operating crews. KSC also committed about 33 percent of its firefighting resources to battle wildfires.

Also provided was NASA's rail car tanker loaded with 20,000 gallons of water. KSC workers had to fabricate a special elbow connection to the tanker so it could fill empty fire trucks waiting in north Brevard County.

During the year KSC achieved its goal of receiving ISO 9001 certification, an international standard for quality management systems, but the majority of the KSC workers' time during the year was spent processing Shuttle and space hardware and payloads, in addition to planning and preparing for next-generation launch vehicles.

Advanced Development and Shuttle Upgrades

KSC made major gains as a developer of advanced technology, winning a cryogenic testbed to provide automated umbilical design input to Boeing and to other projects as well.

The past year saw completion of a study to evaluate a series of potentially less toxic orbiter Thermal Protection System (TPS) waterproofing agents to reduce the hazard level and impact of current TPS waterproofing operations.

Additionally, the first phase of a study on Standard Payload Carriers for the Shuttle was completed. The objective is to provide standard orbiter-to-payload carrier interfaces with unique payload interfaces within the carrier. This has the

potential to greatly reduce payload integration operations.

During STS-95, Payload Specialist and septuagenarian John Glenn Jr. had his health monitored as part of experiments on the aging process, and the orbiter, too, was the subject of scrutiny. Fifteen-year-old Discovery had readings taken from 30 sensors located throughout its aft compartment main propulsion system and power reactant storage distribution system. This flight of the Integrated Vehicle Health Management (IVHM) technology demonstration was the first time that a KSC-developed vehicle system was flown on a mission.

The sensors installed as part of IVHM included KSC-developed smart sensor technology for hydrogen and oxygen detection as well as main propulsion system vacuum-jacketed line pressure. The payload portion of the demonstration was a state-of-the-art central data processor/recorder unit installed in the payload bay.

Also on the same flight, the KSC-developed Fiber Optic Flight Experiment tested the ease of



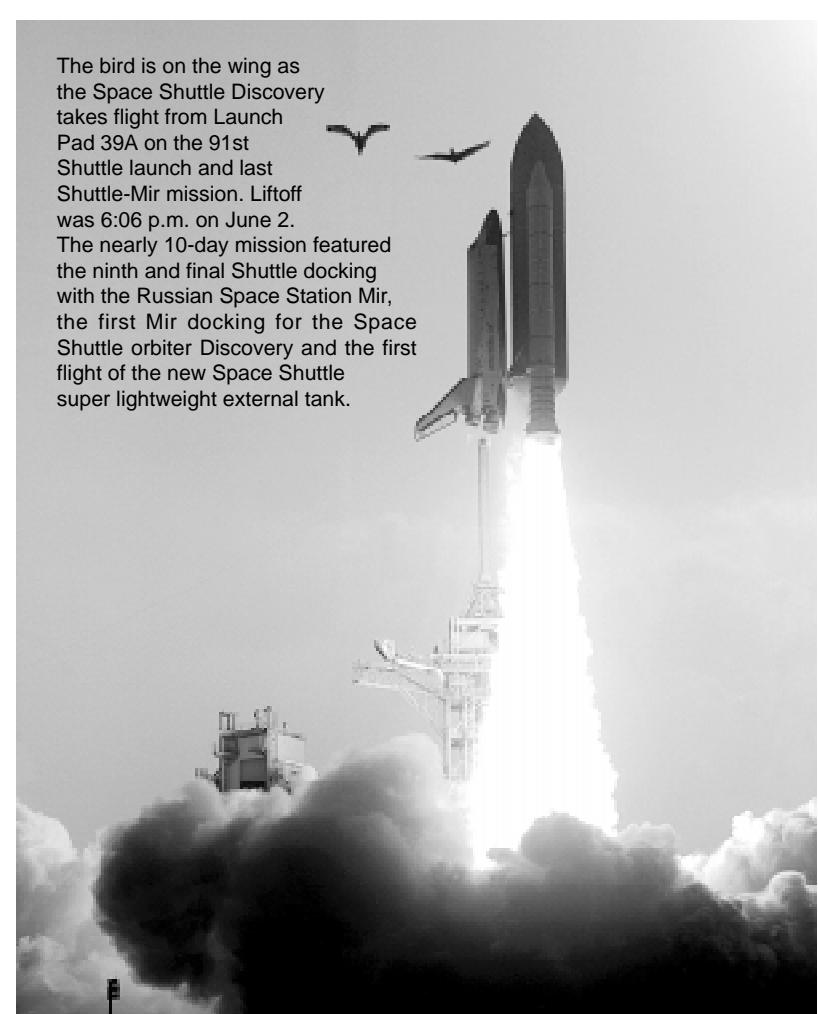
At left, three of the STS-90 crew members pose hours after arrival on May 3, 1998, ending their nearly 16-day Neurolab mission. Left to right are Payload Specialist Jay Buckey, and Mission Specialists Dafydd "Dave" Williams and Kathryn "Kay" Hire with a sign stating "Proud to be at KSC!" Hire was the first KSC employee to join the astronaut corps and fly aboard the Space Shuttle.

installation and testing, durability and on-orbit performance of fiber optics. The long-term objective is to use fiber optics to standardize interfaces in the payload bay, thus reducing processing time in the Orbiter Processing Facility.

Kennedy Space Center's IVHM team members are currently working on the STS-96 launch, which will refly the previously flown sensors, adding a fiber optic hydrogen detection system, fiber

optic strain and temperature system, two X-33-developed remote health nodes and advanced software processing of Space Shuttle Main Engine accelerometer data.

More good news was received in 1998 with the awarding of \$1.4 million from the Future-X Program to KSC for development and demonstration of IVHM technologies with Ames Research Center and Lewis Research Center on the



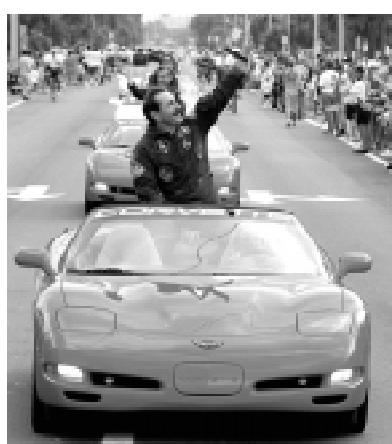
first Future-X vehicle that will fly as a Shuttle payload in 2002.

Shuttle mission highlights

Five Shuttle missions were launched in 1998, starting with STS-89, which highlighted the continuing cooperative effort in space exploration between the United States and Russia. It was the eighth mission to the Russian Space Station Mir and the fifth involving an exchange of U.S. astronauts. Dave Wolf, M.D., on Mir since September 1997, was replaced by Andrew Thomas, Ph.D.

The second mission of the year was STS-90, during which the nearly 16-day Neurolab mission focused on research to contribute to a better understanding of the human nervous system.

STS-91 marked the final Shuttle/



STS-95 Commander Curtis Brown Jr., with the other crew members behind him, waves as he leads a parade in Cocoa Beach on Dec. 11, 1998.

Mir docking mission in Phase One of the International Space Station Program, a precursor to maintaining a continuous American presence in space and developing the procedures and hardware required for an international partnership in space. The STS-91 landing on June 12 culminated 977 total days spent in orbit by the seven U.S. astronauts aboard Mir.

STS-91 also saw the first use of the super lightweight external tank, which is the same size as the external tank used on previous launches, but about 7,500 pounds lighter. The tank's structural design was improved, and its walls now provide added strength and stability, improving payload capacity on flights to the International Space Station.

STS-95, which launched Oct. 29, was perhaps the most highly publicized mission in decades due to the return to space of John Glenn Jr. The mission also included a variety of science experiments in the pressurized SPACEHAB module, the Spartan free-flyer payload, the Hubble Space Telescope Orbiting Systems Test and International Extreme Ultraviolet Hitchhiker payloads.

Wrapping up the year, STS-88 enjoyed tremendous success with the mating of the Unity connecting module with Zarya, completing the first assembly work of the International Space Station.

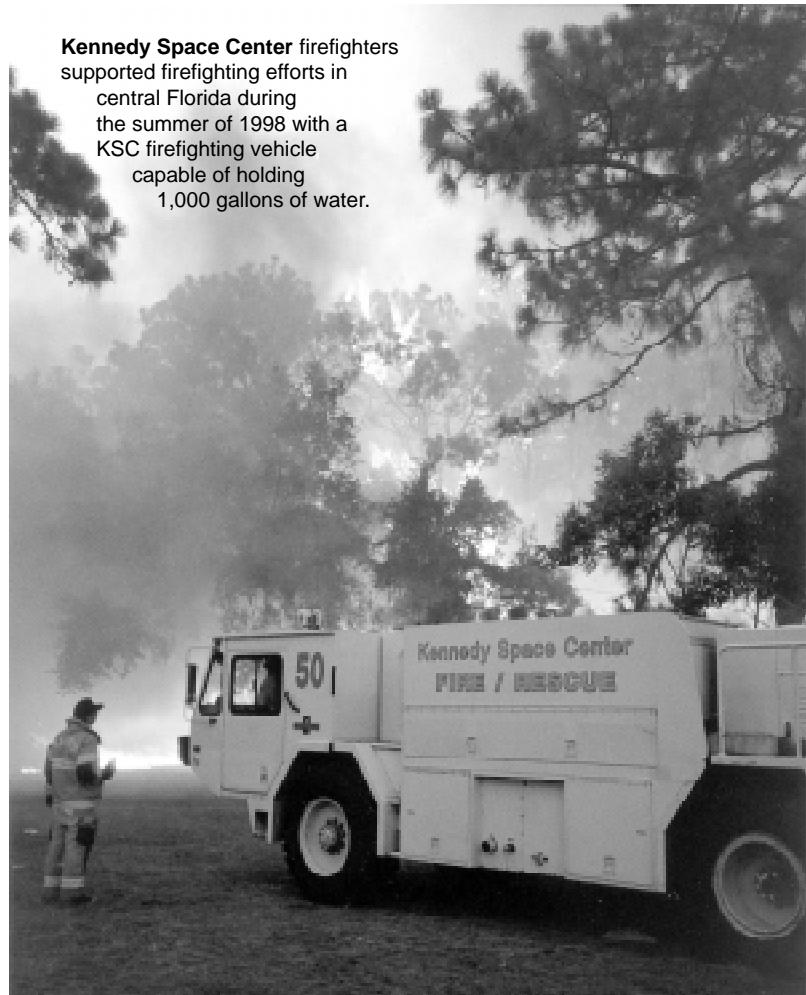
All five Shuttle missions landed at KSC in 1998. The orbiter Atlantis rejoined the fleet in late

September, returning from Palmdale, Calif., where 443 structural inspections and at least 150 major modifications were made, including the first fully digital cockpit to be placed in an orbiter.

Expendable Launch Vehicles

As lead center for NASA's

Kennedy Space Center firefighters supported firefighting efforts in central Florida during the summer of 1998 with a KSC firefighting vehicle capable of holding 1,000 gallons of water.



acquisition and management of expendable launch vehicle launch services, KSC enjoyed a successful year. KSC's Expendable Launch Vehicle team supported many major missions carrying NASA payloads — including Lunar Prospector in January, Deep Space 1 in October and the Mars Climate Orbiter in December from Cape Canaveral Air Station. From



Budding technology: Aerogel, the lightest solid known to man, has displayed a remarkably high quality of insulation, enough to protect this chocolate candy from a burning flame. Aerogel has been used to insulate the walls of houses, engine compartments in cars, and material on the rover Sojourner aboard the Mars Pathfinder. It will also be used on the upcoming Stardust mission, scheduled for launch Feb. 6, to capture particles from the Comet Wild-2.

Nov. 20. The Unity connecting module lifted off aboard the Space Shuttle Endeavour on Dec. 4 from KSC's Launch Pad 39A.

Payloads for the ISS that arrived in 1998 for processing at KSC included Unity, the Leonardo Multipurpose Logistics Module, the Z-1 Integrated Truss Structure and the U.S. Laboratory.

Kennedy Space Center is well underway preparing for the next U.S. assembly flight, STS-96, which is a logistics and resupply mission for the International Space Station. It will be the first flight to dock to the fledgling station.

Reusable launch vehicles

Significant portions of X-33 ground support equipment were designed and fabricated at KSC, including Ground Interface Modules, umbilicals, and hold-downs.

KSC workers also performed the lion's share of the X-33 Environmental Impact Statement.

KSC and the Spaceport Florida Authority began construction of a Reusable Launch Vehicle Support Complex near the Space Shuttle Landing Facility on Dec. 18. (See page 2.)

Also, NASA exercised an option in its X-34 contract with Orbital Sciences Corp., Dulles, Va., for 25

(See Review, Page 6)



Detail to the Nth degree: Workers at the Vehicle Assembly Building apply a fresh face and a new look to the 525-foot high facility. The logo, also known as the NASA "meatball," measures 110 feet by 132 feet, or about 12,300 square feet. Suspended on platforms from the top of the facility, workers painted the logo and also repainted the American flag, which spans an area 209 feet by 110 feet, or about 23,437 square feet. The repainting honored NASA's 40th anniversary on Oct. 1, 1998. In addition, the entire fleet of orbiters received the NASA logo on their wings and sidewalls.

Vandenberg Air Force Base in California, the KSC expendable launch team supported the successful launch of the Student Nitric Oxide Explorer in February, the Transition Region and Coronal Explorer in April and the Submillimeter Wave Astronomy Satellite in December.

International Space Station

The past year saw the commencement of the largest international peacetime scientific program in history: the launch and construction of the first elements of the International Space Station.

A Russian Proton rocket carried the Zarya control module to orbit, lifting off from the Baikonur Cosmodrome in Kazakhstan on

Review ...

(Continued from Page 5)

additional test flights during a 12-month period beginning immediately after the initial contract is complete.

Once the X-34 has demonstrated safe and reliable performance at White Sands in New Mexico, the project will be moved to KSC for a significant number of test flights.

Mars exploration

The Mars Climate Orbiter launched from Cape Canaveral Air Station Dec. 11, followed by the Mars Polar Lander Jan. 3.

Together, these spacecraft will contribute to NASA's scientific goals of observing the Martian climate to look for hints that primitive life may have existed during Mars' early history.

Also, two Mars environmental chambers — one in the Operations and Checkout Building and a prototype lab behind the Launch Equipment Test Facility — are under development. They will simulate Mars' atmospheric pressure and constituency, dust and thermal environment.

Contracts and facilities

In August, Space Gateway Support of Herndon, Va., was selected for award of a government contract to perform base operations for KSC and the U.S. Air Force's 45th Space Wing, including Cape Canaveral Air Station and Patrick Air Force Base.

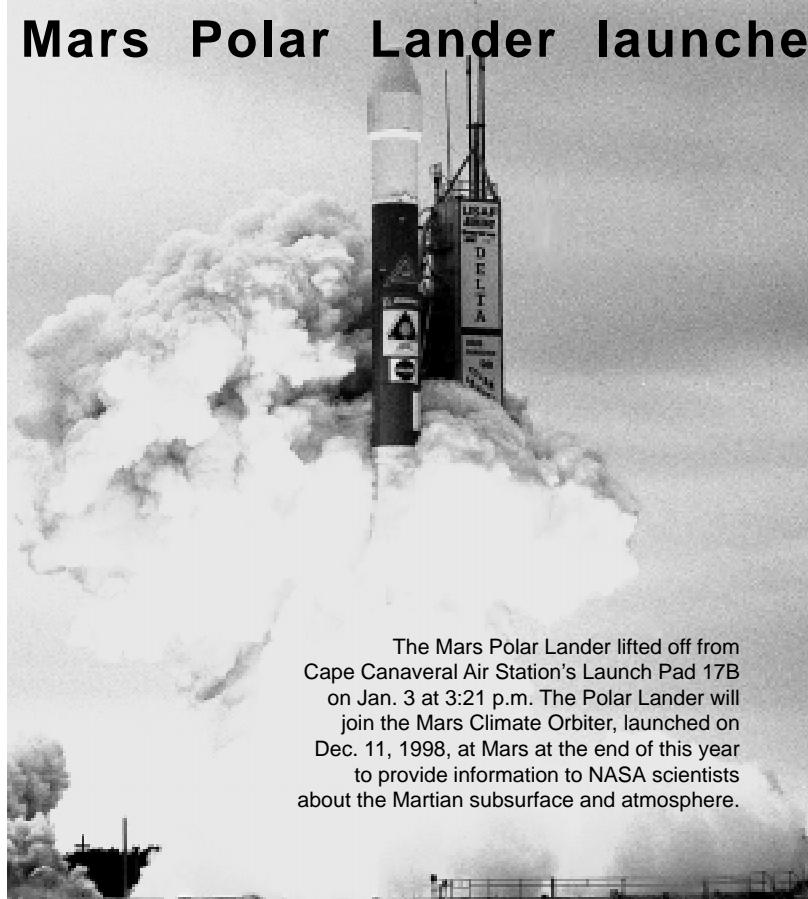
To save money, reinvest savings and consolidate functions with the objective of remaining competitive in a global launch market, this new Joint Base Operations Support Contract will save the government a substantial sum during the years of the contract.

The cost-plus award fee contract features a five-year basic performance period that began Oct. 1.

KSC's Space Shuttle Main Engine Processing Facility opened July 6. A major addition to the existing Orbiter Processing Facility bay 3, the new facility replaced the Shuttle Main Engine Shop located in the Vehicle Assembly Building.

KSC and Spaceport Florida Authority agreed to begin plans to construct a \$15-million facility on

Mars Polar Lander launches successfully



The Mars Polar Lander lifted off from Cape Canaveral Air Station's Launch Pad 17B on Jan. 3 at 3:21 p.m. The Polar Lander will join the Mars Climate Orbiter, launched on Dec. 11, 1998, at Mars at the end of this year to provide information to NASA scientists about the Martian subsurface and atmosphere.

KSC property to function as a research laboratory. The new facility will consolidate life sciences research activities and replace the old Hangar L facility.

Finally in 1998, KSC was designated the lead center for NASA Acquisition Pollution Prevention, established to reduce or eliminate hazardous shared materials and volatile organic chemical uses from the design, production and operation in NASA programs.

Tourist destination upgrades

Two new tourist destinations opened Jan. 16 to draw visitors into the heart of Shuttle launch operations and offer a close-up look at preparations for on-orbit construction of the International Space Station.

The Launch Complex 39 Observation Gantry is located halfway between the Vehicle Assembly Building and the Shuttle launch pads.

The International Space Station Center is located adjacent to the Space Station Processing Facility and features a viewing window into the ISS payload processing bay.

Community outreach

KSC's contributions through the

The Mars Surveyor '98 Polar Lander launched successfully through a thin layer of clouds from Cape Canaveral Air Station's Launch Pad 17B on Jan. 3 at 3:21 p.m. on a Boeing Delta II rocket.

The Mars Surveyor '98 project continues the program of Mars exploration begun by NASA in 1996 with the launches of the Mars Global Surveyor and Mars Pathfinder spacecraft.

Together, the Climate Orbiter and the Polar Lander will study the density and distribution of volatile materials in the Martian subsurface and atmosphere to learn more about the history of Mars' climate. The Polar Lander is scheduled to arrive on Mars in December 1999. Like Pathfinder, the Lander will dive directly into the Martian atmosphere, using an aeroshell and parachute to slow its initial descent.

hosted by KSC was held, and in March 1999, KSC will host a robotics competition sponsored by For Inspiration and Recognition of Science and Technology, or FIRST.

The event should draw hundreds of competitors and thousands of spectators. It is the first regional competition for the organization to be held in the southeastern United States.

Also, the center's new multipurpose display won several awards in 1998, while representing KSC in state, regional and national events, showcasing the KSC Center of Excellence while educating the public and KSC customers as well.



John F. Kennedy Space Center

Spaceport News

Spaceport News is an official publication of the Kennedy Space Center and is published on alternate Fridays by the Public Affairs Office in the interest of KSC civil service and contractor employees.

Contributions are welcome and should be submitted two weeks before publication to the Media Services Branch, AB-F1. E-mail submissions can be sent to Susan.Maurer-1@ksc.nasa.gov

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Editorial support provided by Information Dynamics Inc. Writers Group.
NASA at KSC is on the Internet at <http://www.ksc.nasa.gov>

USGPO: 733-112/80022