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Spaceport News

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

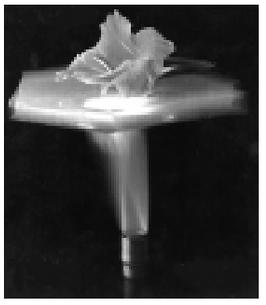
John F. Kennedy Space Center

Fortieth Anniversary
Pioneering the Future

Mars Polar Lander is next to launch...

The Mars Polar Lander is scheduled to launch from Cape Canaveral Air Station during a 25-day launch period beginning on Jan. 3, 1999. The lander will be targeted to the northernmost boundary of the Red Planet's south pole. This is near the edge of Mars' thin, carbon dioxide ice sheet, which will have receded by the time the lander arrives in December 1999. The mission's objective is to study the water cycle to help scientists learn more about climate change and current resources on Mars.

...followed in February by Stardust



This flower is sitting on a piece of aerogel suspended over a bunsen burner. Aerogel, which is protecting the flower from the flame, will be used on the Stardust spacecraft to capture particles from the Comet Wild-2. To collect the comet's particles without damaging them, Stardust will use this silicon-based substance, which is 1,000 times less dense than glass.

The first U.S. launch for the International Space Station: *wrapping up a successful year of Space Shuttle missions*

The launch of STS-88 on Dec. 4 at 3:35 a.m. marked the beginning of construction efforts for the greatest adventure in space to date: the assembly and habitation of the International Space Station, or ISS. (The launch was delayed 24 hours due to a master alarm sounding in the crew cabin. The launch team ran out of its launch window while working to clear the concern.) The STS-88 launch also signaled the close of a year of successful launches for KSC.

The first mission of 1998, STS-89, was the eighth mission to the Russian Space Station Mir and the fifth involving an exchange of U.S. astronauts on the station. Astronaut David Wolf, M.D., who had been on Mir since late September 1997, was succeeded by Astronaut Andrew Thomas, Ph.D.

The continuing cooperative effort in space exploration between the United States and Russia and a joint spacewalk were the primary focus of NASA's first Shuttle

(See Year, Page 4)

As Endeavour lifts off Dec. 4 at 3:35 a.m. from Launch Pad 39A on STS-88, several fish believed to be mullet (bottom left) "launch" themselves as well. The first launch attempt Dec. 3 was scrubbed when controllers assessed a suspect hydraulic system problem indicated by a master alarm in the crew cockpit. Although the problem was rapidly resolved, the launch window was missed by one to two seconds.

KSC Director of Shuttle Processing Bob Sieck retires; successors named

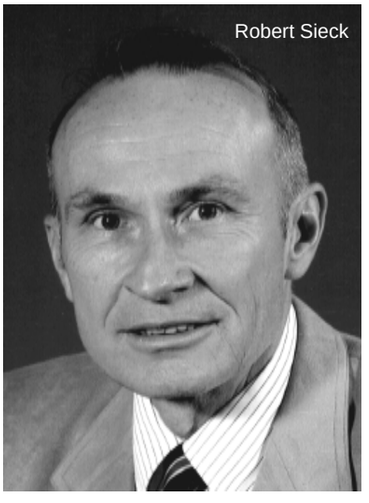
Kennedy Space Center's Director of Shuttle Processing Robert Sieck has announced his retirement from NASA. Shuttle Processing Deputy Director David King will succeed Sieck as director. Additionally, Ralph Roe Jr., will continue in the position of KSC's launch director on a permanent basis.

Sieck joined NASA at Kennedy Space Center in 1964 as a Gemini Spacecraft systems engineer. He later served as an Apollo Spacecraft Test Team project engineer and Shuttle Orbiter Test Team project engineer and in 1976 was named the engineering manager for the Shuttle approach and landing tests at Dryden Flight Research Center in California.

Returning to KSC in 1978, he became the Chief Shuttle Project engineer for STS-1 through STS-7 and the first KSC Shuttle flow director in 1983. In February 1984, he was appointed director, Launch and Landing Operations, where he served as Shuttle launch director for 11 missions.

Sieck served as deputy director of Shuttle Operations (renamed

(See Sieck, Page 3)



Robert Sieck

U.S. Secretary of State Madeleine Albright talks with NASA Administrator Daniel Goldin (at left) in the Apollo/ Saturn V Center while awaiting launch of Mission STS-88. Astronaut Michael Lopez-Alegria looks on in background.

U.S. Secretary of State Madeleine Albright views launch of STS-88

U.S. Secretary of State Madeleine Albright attended the first United States launch of the International Space Station on Dec. 4 to witness history first-hand. She was in attendance for the first launch attempt Dec. 3 as well, returning to KSC after the first attempt was missed by mere seconds.

"We all debated about coming back," Albright said to KSC workers in the Launch Control Center moments after the launch, "and we all knew that we were hooked on you.

"All day long, I deal with disputes on the ground – countries that can't get along — and it's great to look at the space station endeavor which shows the fact that we have countries working together on the kinds of issues that the 21st century is going to be concerned with," she said.

"I admire you," she concluded, "and I will have a personal attachment to the whole program from now on."

Albright is the first United States Secretary of State to attend a Shuttle launch.

Leonardo Multipurpose Logistics Module transferred to NASA

NASA Administrator Daniel Goldin and the President of the Italian Space Agency, Sergio De Julio, met at Kennedy Space Center on Dec. 3 for a ceremony to transfer the "Leonardo" Multipurpose Logistics Module (MPLM) from the Agenzia Spaziale Italiana (Italian Space Agency) to NASA. The MPLM, a reusable logistics carrier, will be the primary delivery system used to resupply and return station cargo that requires a pressurized environment.

It is one of Italy's major contributions to the International Space Station Program. The cylindrical module is approximately 21 feet long and 15 feet in diameter, weighing almost 4.5 tons, not counting its capability to hold up to 20,000 pounds of contents.

Launched in the Space Shuttle's payload bay, it will be docked to the International Space Station once on orbit.

Leonardo is the first of three such pressurized modules that will serve as the station's "moving vans," carrying laboratory racks filled with equipment, experiments and supplies to and from the station aboard the Space Shuttle.

The unpiloted, reusable logistics modules function as both a cargo carrier and a space station module when they are flown.

While berthed to the station, racks of equipment are unloaded from the module after which old racks and equipment may be reloaded to be taken back to Earth.

The logistics module is then detached from the station and positioned back into an orbiter's payload bay for the trip home.

In order to function as an attached station module as well as a cargo transporter, the logistics modules also include components that provide some life support, fire detection and suppression, electrical distribution and computer functions.

Eventually, the modules also will carry refrigerator freezers for transporting experiment samples and food to and from the station.

Although built in Italy, the MPLMs are owned by the United States and provided in exchange for Italian access to U.S. research time on the station.

A ceremonial signing of a document signifying the transfer of Leonardo was held at KSC's International Space Station Center on Dec. 3.

Participating in the ceremony were NASA Administrator Daniel Goldin, Italian Space Agency President Sergio De Julio and KSC Director Roy Bridges. Also in attendance were NASA Associate Administrator for Space Flight Joseph Rothenberg, NASA International Space Station Program Manager Randy Brinkley and Italian astronaut Umberto Guidoni.

Participants pose for a photo at the Space Station Processing Facility ceremony transferring the "Leonardo" Multipurpose Logistics Module (MPLM) from the Italian Space Agency, ASI, to NASA. From left, they are Astronaut Jim Voss, ASI President Sergio De Julio, European Space Agency Astronaut Umberto Guidoni of Italy, NASA Administrator Daniel Goldin and European Space Agency Astronaut Christer Fuglesang of Sweden. The MPLM, a reusable logistics carrier, will be the primary delivery system used to resupply and return International Space Station cargo requiring a pressurized environment. Leonardo is the first of three MPLM carriers for the International Space Station and is scheduled for launch on STS-100, targeted for April 2000.

Sieck ...

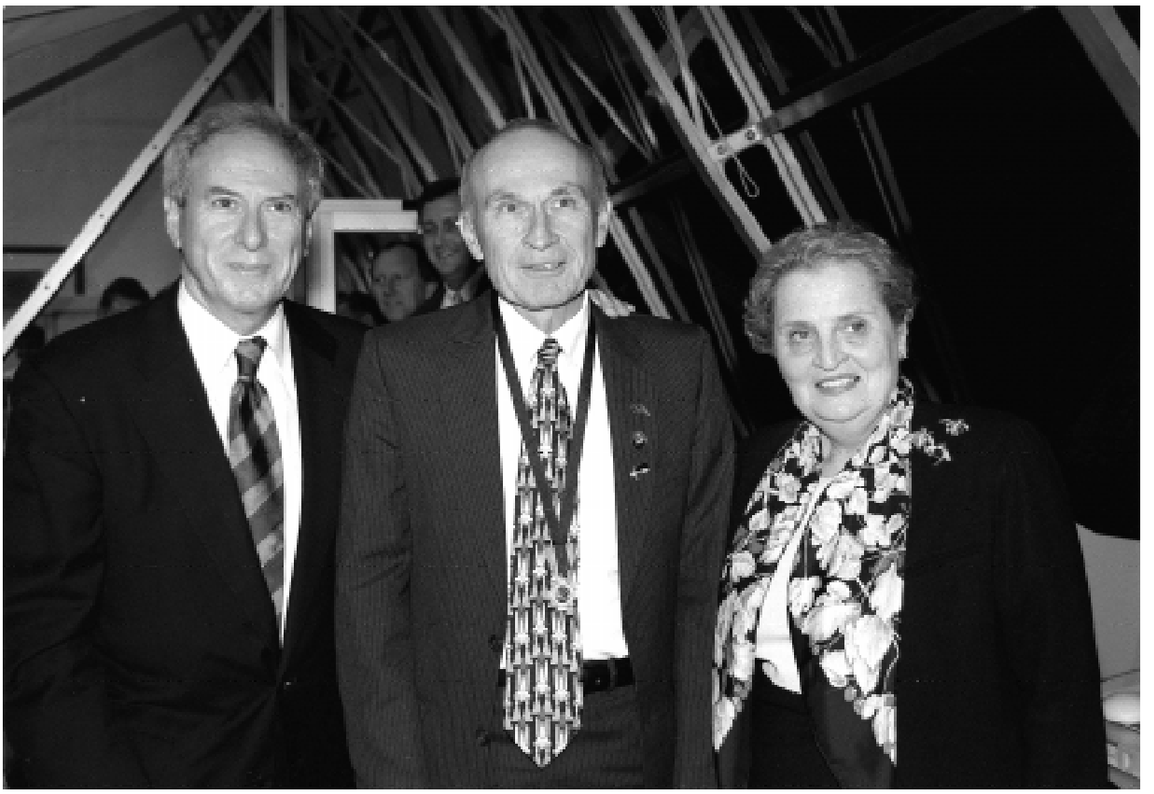
(Continued from Page 1)

Shuttle Processing in 1996) from April 1992 until January 1995.

He was responsible for assisting with the management and technical direction of the Shuttle program at KSC. He also retained his position as Shuttle launch director, a responsibility he had held from February 1984 through August 1985 and then from December 1986 to January 1995. He was launch director for STS-26R and all subsequent Shuttle missions through STS-63, a total of 52 Space Shuttle launches. Sieck has served as director of Shuttle Processing since January 1995.

Sieck recently received one of NASA's most prestigious awards, the Distinguished Service Medal — the highest honor NASA confers upon a government employee. NASA Administrator Daniel Goldin presented the award to Sieck following the launch of STS-88. This award is presented to a person in the federal service who, by distinguished service, ability, or courage has personally made a contribution representing substantial progress to the mission of NASA in the interests of the United States. The contribution must be so extraordinary that other forms of recognition by NASA would be inadequate.

Identifying Sieck as "one of the finest people ever to work at NASA," Goldin stated in presenting the award, "I don't know of anyone that has done more for America's space program than Bob Sieck. We've relied upon him for making sure that the Shuttle is safe, because that's the most important thing."



NASA Administrator Daniel Goldin (far left) called KSC Director of Shuttle Operations Robert Sieck "one of the finest people ever to work at NASA" moments after the launch of Space Shuttle Endeavour on mission STS-88 at 3:35 a.m. on Dec. 4. Goldin awarded Sieck the highest honor NASA confers upon a government employee, the Distinguished Service Medal, for "sustained outstanding leadership and total dedication to the success of the Space Shuttle program." In attendance was U.S. Secretary of State Madeleine Albright (right) who came to KSC to witness the first U.S. launch for the International Space Station. Calling the launch "truly fantastic," Albright praised KSC workers. "I admire you and I will have a personal attachment to the whole program from now on."

Before presenting the medal, Goldin noted that Sieck was receiving the award for "distinguished service as the Kennedy Space Center launch director and director of Shuttle Processing, sustained outstanding leadership and total dedication to the success of the Space Shuttle program."

Kennedy Space Center Director Roy Bridges applauded Sieck for the "incredible achievement of serving as Launch Director for over half of all Shuttle launches to date." He also commended Sieck for "the indelible impression he has made on future Shuttle launches by managing the transition of day-to-day processing activities to the prime contractor United Space Alliance to ensure continued safety and effectiveness."

"It's been a privilege for me to be a part of this program since the beginning and to share all the hard work and tough launch decisions," noted Sieck. "I know that the launches and missions are in the hands of the greatest team ever assembled, so I know the program has a great future."

Dave King

David King began his career with NASA in 1983 as a main propulsion engineer. He later served as flow director for the orbiter Discovery and as the acting deputy director of the Installation Operations Directorate.

He served as the space center's launch director from December 1997 to July 1998, managing and directing three successful Shuttle missions. King has served as the deputy director of Shuttle Processing since September 1996.

As director of Shuttle Processing, King will be responsible for the management and oversight of all activities involving Shuttle processing and launch operations at KSC.

He has a bachelor of science degree in mechanical engineering from the University of South Carolina and a master's degree in business administration from the Florida Institute of Technology.

Ralph Roe Jr., began his career at KSC in 1983 serving as a propulsion systems test engineer. He also has been chief of the Fluid Systems Division, Vehicle Engineering directorate, later serving as acting director of Process Engineering.

He was named director, Process Engineering, in October 1996, with responsibility for the engineering management and technical expertise of personnel involved in prelaunch, landing, recovery and turnaround operations for the Shuttle fleet.

Roe has a bachelor of science degree in mechanical engineering from the University of South Carolina and a master's degree in industrial engineering from the University of Central Florida.

Ralph Roe

Year ...

(Continued from Page 1)

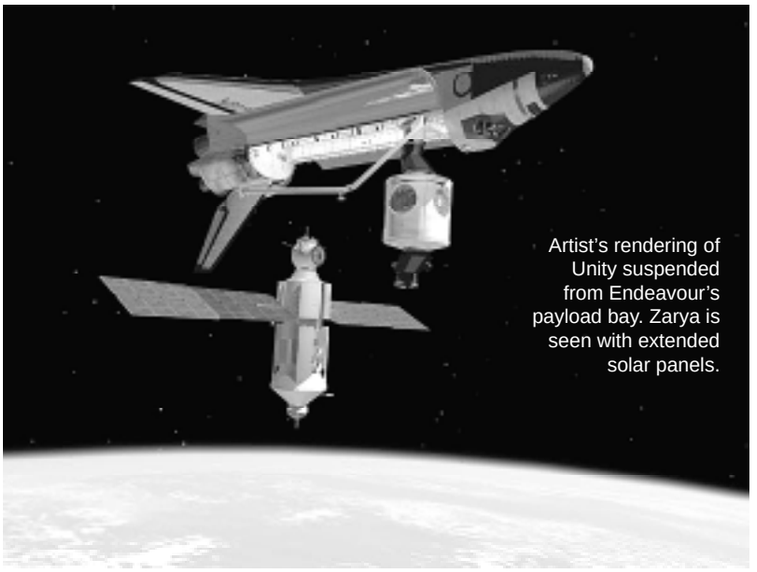
mission of 1998. During the mission, which launched Jan. 22 at 9:48 p.m., more than 7,000 pounds of experiments, supplies and hardware were transferred between the two spacecraft.

The second mission of the year, STS-90, launched on Apr. 17 at 2:19 p.m. The launch of Neurolab (a Spacelab module focusing on the effects of microgravity on the nervous system) was a joint venture of six space agencies and seven United States research agencies.

Investigator teams from nine countries conducted 31 studies in microgravity during STS-90. Other participating agencies included six institutes of the National Institutes of Health, the National Science Foundation, and the Office of Naval Research, as well as the space agencies of Canada, France, Germany, and Japan, and the European Space Agency.

STS-91 launched June 2 at 6:06 p.m., marking the final Shuttle/Mir docking mission and closing out Phase 1 of the International Space Station Program.

The mission included the first use of the super lightweight external tank, which is 7,500 pounds lighter than its predecessor; launched the Alpha Magnetic Spectrometer Investigation, which searched for anti-matter and dark matter in space; and returned Andrew Thomas from Mir to Earth after a four-month stay.



Artist's rendering of Unity suspended from Endeavour's payload bay. Zarya is seen with extended solar panels.

The fourth mission of the year was STS-95, which launched Oct. 29 at 2:20 p.m. It was the first Shuttle launch attended by a United States president.

From the roof of the Launch Control Center, Bill Clinton and first lady Hillary watched the launch of the seven-member STS-95 crew, which included space pioneer John Glenn Jr.

The primary objectives of the mission included conducting a variety of science experiments in the pressurized SPACEHAB module, the deployment and retrieval of the Spartan free-flyer payload and operations with the Hubble Space Telescope Orbiting Systems Test and the International Extreme Ultraviolet Hitchhiker payloads in the payload bay.

"In foreign policy, we have our version of launches, and we don't get it right the second time often, so all my admiration to you. Amazing job! I do believe in the space program; I want to do everything I can to help."
— U.S. Secretary of State Madeleine Albright, addressing KSC workers

And closing out the year while opening a new era of space exploration and discovery was STS-88, which launched successfully at 3:35 a.m. on Dec. 4 on its second launch attempt. This fifth and final Shuttle mission of the year marked the 13th flight of Endeavour and the 93rd flight overall in NASA's Space Shuttle Program.

The six-member STS-88 astronaut team served as a construction crew for this first International Space Station assembly mission. The primary objective of the mission was to mate the U.S.-made Unity connecting module to the Russian-built Zarya control module.

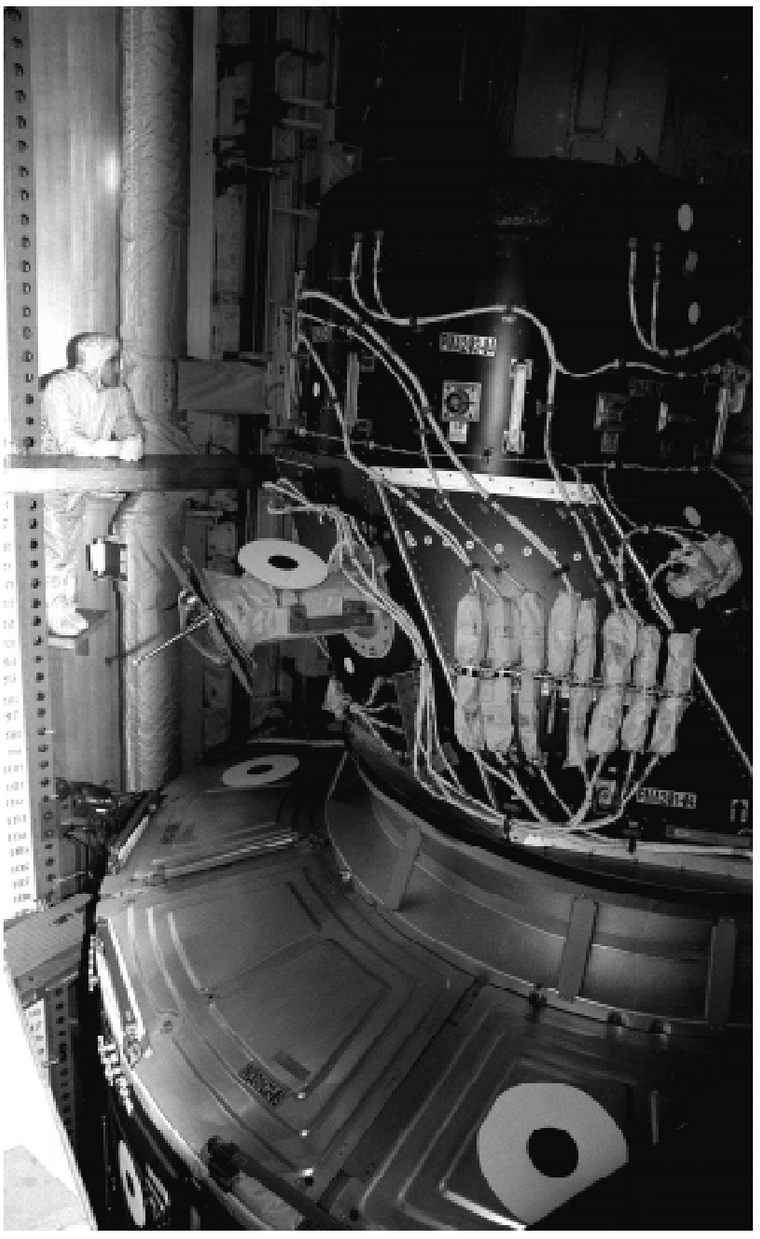
Zarya — a 20-ton, 43-foot long module that provides propulsion, command and control systems for the station's first months in orbit — was launched Nov. 20 from the Baikonur Cosmodrome in Khazakstan. Zarya will evenutally become a station passageway, docking port and fuel tank.

The Unity connecting module provides six attachment ports, one on each of its sides, to which future modules will be joined.

During the STS-88 mission, Unity came to life when it was activated for the first time. Activation followed the connection of electrical and data cables by Astronauts Jerry Ross and Jim Newman during a seven-hour, 21-minute space walk.

Working smoothly and ahead of schedule, Ross and Newman mated 40 cables and connectors running 76 feet from the Zarya control module to Unity as the 35-ton station towered over the cargo bay of the orbiter Endeavour.

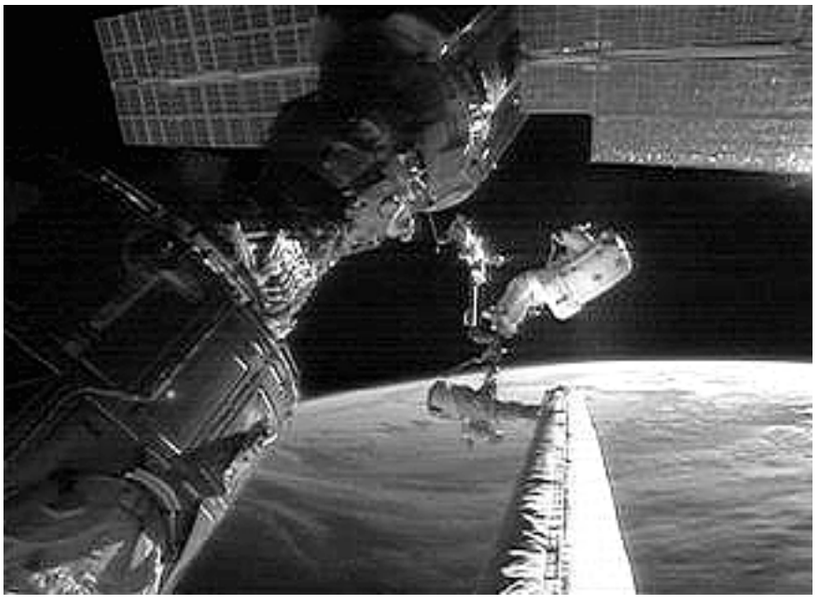
The two veteran space walkers quickly pressed ahead with the connection of crucial data and power cables between Zarya and Unity.



At Launch Pad 39A, STS-88 Mission Commander Robert Cabana gets a close look at the Unity connecting module in Endeavour's payload bay. Unity is the primary payload of the mission, which is the first U.S. launch for the International Space Station. The crew's mission was to mate Unity with the Russian-built Zarya control module on orbit.

Ross and Newman also installed handrails and other hardware that will help future spacewalkers move around the station on upcoming assembly missions, completing all of the connections within three hours.

"It was under the tutelage of KSC and training team experts that the STS-88 crew developed and practiced to perfection the EVA procedures in underwater neutral buoyancy conditions and with flight hardware," said Don McMonagle, NASA manager of launch integration. "From the launch count to assembly operations to wheel stop, it's the careful and thorough preparation by talented and dedicated people that makes such daunting challenges look easy. And when the execution of a difficult task looks easy on orbit, you know that the hard part was done on the ground!"



Astronaut Jerry Ross, perched on the end of Endeavour's robotic arm, prepares to hook up connections on the International Space Station in this orbiter's-eye view. The cylindrical Unity connecting module is at lower left; the Zarya control module with solar arrays is at upper right.

At various times, robot arm operator Nancy Currie moved Ross and Newman around the station modules on the end of the orbiter's manipulator system to conduct their work.

As Endeavour and the International Space Station passed over Russian ground stations, commands were sent from the Russian flight control team to activate a pair of Russian-American voltage converters, enabling power to flow from Zarya to Unity for the first time.

International Space Station flight controllers in Houston confirmed perfect electrical continuity between the two modules. Unity's systems were then activated, including a pair of data relay boxes serving as the brain and nervous system for the U.S.-built component.

Shortly before the first STS-88 spacewalk ended, Ross broke the record for most cumulative extravehicular activity time by a U.S. astronaut of 29 hours and 41 minutes previously held by former astronaut Tom Akers during five space walks on STS-49 and STS-61. By the time the mission was complete, Ross and Newman spent 21 hours and 22 minutes outside Endeavour in the initial assembly of the station.

Ross now has completed seven space walks totaling 44 hours and 9 minutes, more than any other American space walker. Newman moved into third place on the all-time U.S. space-walking list, with a total of 28 hours and 27 minutes on four excursions.

At press time, landing for STS-88 was scheduled for Dec. 15 at about 10:36 p.m. EST at KSC.

By the end of this year, most of the components required for the first seven Space Shuttle missions to assemble the station will have arrived at Kennedy Space Center.

Once the ISS assembly is completed in 2004, the Shuttle and two types of Russian rockets will have conducted at least 45 missions to launch and assemble the station. Of these missions, 36 are scheduled to be Space Shuttle flights. In addition, resupply missions and change-outs of Soyuz crew return spacecraft will be launched regularly.

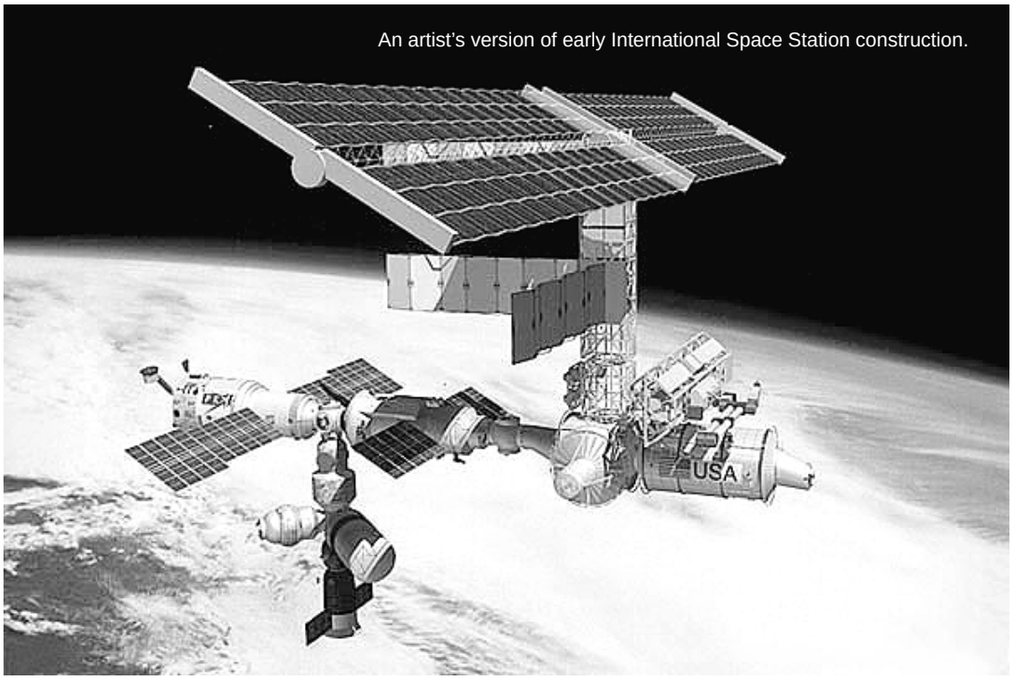
An international cast of astronauts and cosmonauts will do much of the assembly by hand, performing more spacewalks in just five years than have been conducted throughout the history of space flight. To assemble and maintain the station, spacewalking astronauts will work in partnership with a new generation of space robotics. Astronauts will be assisted by an inch-worming robotic arm, a two-fingered Canadian "hand," and a free-flying robotic "eye" that may be used to circle and inspect the station.

Before the station is completed, more than 100 different components launched on three different types of rockets will have been bolted, latched, wired, plumbed and fastened together.

Because of the unprecedented complexity, NASA expects to encounter surprises during the orbital construction work. To prepare for the challenges, both engineers and astronauts have been methodically practicing procedures, preparing tools, testing equipment and building experience during more than a decade of space-walking flight tests. In fact, since astronaut Ed White stepped out of a U.S. Gemini spacecraft in 1964 to become the first American to walk in space, NASA has conducted about 377 hours of spacewalks.

Approximately 850 clock hours of spacewalks will be performed to assemble and maintain the International Space Station. Once completed, the International Space Station will have a mass of about one million pounds.

The first crew to inhabit the station will launch in January 2000 aboard a Russian Soyuz spacecraft. The crew will include U.S. Astronaut Bill Shepherd as commander, along with two Russian cosmonauts, Soyuz Commander Yuri Gidzenko and Flight Engineer Sergei Krikalev (who is a mission specialist on STS-88). They, along with the crews of the initial assembly missions, are now in training. The timetable and sequence of flights for assembly, beyond the first two, will be further refined at a meeting of all international partners this month.



An artist's version of early International Space Station construction.

Ongoing microgravity research is our Destiny

Maybe you're wondering what on Earth is so special about a permanent Earth-orbiting laboratory.

The answer lies not on Earth, but off Earth. The International Space Station (ISS) will provide the first laboratory complex where gravity can be controlled for extended periods. This control of gravity opens up an unimaginable world where almost everything grows differently than on Earth.

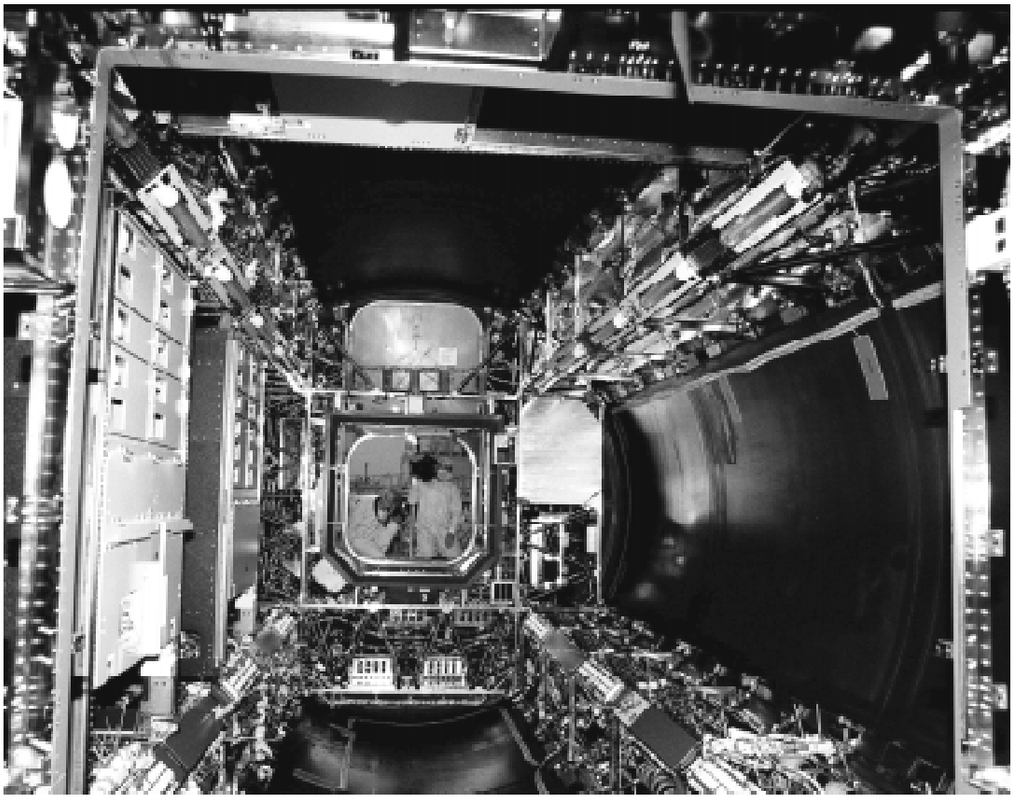
For example, protein crystals can be grown more pure in space than on Earth. By analyzing crystals grown on the space station, scientists may be able to develop medicines that target particular disease-causing proteins. Such crystals grown on the Space Shuttle for research into cancer, diabetes, emphysema and immune disorders have already shown promise.

New drugs to fight influenza and post-surgery inflammation are already in clinical trials, and future research will benefit from the extended exposure to weightlessness available on the ISS.

The completed station will have six laboratory modules: one each from the United States, Europe and Japan; two from Russia; and a sixth module, built in Japan and operated by NASA. There will also be outside attachment points for experiments to be exposed to space.

The U.S. Laboratory module, considered by many to be the centerpiece of the International Space Station, was officially named Destiny on Dec. 1 at KSC's Space Station Processing Facility. Destiny is planned for launch aboard Space Shuttle Endeavour on the sixth International Space Station construction flight currently targeted for Feb. 3, 2000.

The station will enable projects of longer duration than the Shuttle, and its facilities will be bigger and freer from vibration than the Russian Space Station Mir.



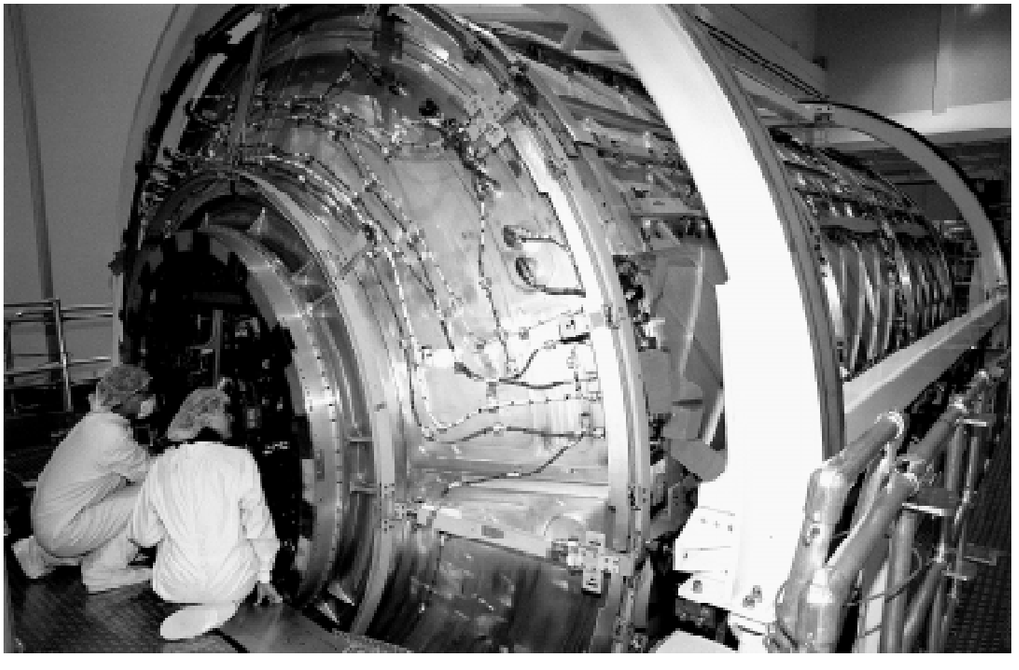
Workers peer through the hatch of an end-cone on the U.S. laboratory module, an element of the International Space Station. The lab is undergoing pre-launch preparations before its launch aboard the Shuttle Endeavour on STS-98. The laboratory comprises three cylindrical sections with two end cones, each of which contains a hatch opening for entering and exiting the lab. The lab will provide a shirtsleeve research environment in the areas of life, microgravity, Earth and space sciences. Designated Flight 5A, this mission is targeted for launch in early 2000.

In addition to its capabilities as an unprecedented, world-class orbital research facility, the space station will provide the infrastructure for humans to learn to live and work in space with ever increasing productivity. This will be essential for future human space travel away from Earth.

With the International Space Station, a permanent laboratory will be established in a realm where gravity, temperature and pressure can be manipulated to achieve numerous scientific and engineering pursuits that are impossible in ground-based laboratories. A few of the possibilities include:

- **Biotechnology** — to learn more about the mechanisms of disease and how to combat them;
- **Fundamental physics** — a powerful magnet will help search for particles of antimatter to gain clues about the evolution of the universe;
- **Earth science** — a 20-inch optical window will give instruments a station's eye-view of Earth for monitoring atmospheric gases such as the planet's protective ozon layer, trends such as reef bleaching and events like hurricanes;
- **Fluid physics** — On Earth, lighter materials rise and heavier things settle. In microgravity, only atomic forces are at work. One application: understanding how soils 'flow' during an earthquake in order to help design safer buildings;
- **Combustion science** — flames burn more cleanly in space. Researchers are looking for ways to burn fuels more efficiently.

In the U.S. Laboratory, along with the other ISS labs, astronauts and Earth-bound researchers will be seeking ways to improve our destiny on Earth and in space.



KSC Space Station Processing Facilty workers peer inside the U.S. laboratory for the International Space Station.

Kennedy Space Center named lead center for NASA Acquisition Pollution Prevention

Kennedy Space Center has been designated the lead center for NASA Acquisition Pollution Prevention (AP2). KSC's AP2 Office, led by Robert Hill, was established to reduce or eliminate hazardous shared materials and volatile organic chemical uses from the design, production and operation in NASA programs.

"We want to qualify common alternatives that can be used by multiple programs in a variety of different contracts," said Hill. "The AP2 office is tasked with standardizing the process and methodology to all NASA programs."

In September of 1994, the Department of Defense's Joint Logistics Commanders' Joint Group on Acquisition Pollution Prevention was chartered with the objective of reducing or eliminating the use of hazardous materials by developing common alternatives that could be used across different programs.

The effort met such success that it provided the DoD with a quick recovery of the development costs and continuing cost savings in annual operations. The savings include millions of dollars in cost avoidances by reducing duplication in qualification testing of alternative materials.

"We are convinced that similiar benefits can be achieved in NASA through this initiative," said Hill.

The effort is expected to result in changes to design, manufacturing and maintenance processes that are faster and cheaper and involve fewer hazardous materials.

"This effort should reduce the use of hazardous materials across the Agency," added Hill, "increase technical confidence, provide cost avoidance and savings, and minimize use of

multiple material specifications at industry contractor and government facilities."

The new Joint Group on Pollution Prevention is comprised of flag officers and directors from the military services, along with the Marine Corps, Defense Logistics Agency and NASA Headquarters' Environmental Management Division.

The group will coordinate joint service and agency activities affecting pollution prevention issues identified during weapon system and NASA system acquisition, manufacturing and sustainment maintenance processes.

The need for this new group (reorganized in October this year by the Joint Logistics Commanders and NASA Headquarters' Office of Space Flight and Office of Management Systems and Facilities) arose in part out of the complexity of validating and implementing pollution prevention alternatives.

Previously, no joint pollution prevention interface was available to integrate shared needs for the services and NASA program managers, process owners and their contractors to coordinate common pollution prevention objectives. This created the potential for duplication of effort and costly delays for implementing changes.

The group's mission is to address these issues and facilitate change.

The Joint Group on Pollution Prevention has a Web site with more information located at http://www.jgpp.com/

Heuser named program manager

Jan Heuser has been named program manager for the Space Experiments Research and Processing Laboratory Project. This project is the first phase of a proposed research industrial park in which KSC will team with Spaceport Florida Authority (SFA) to create a research industrial campus to serve a host of governmental, commercial, state, and international organizations involved in space-related research.

Heuser currently serves as the associate director of Installation Operations. Her responsibilities as the program manager for the Space Experiments Research and Processing Laboratory Project will include coordination of NASA Headquarters, State of Florida, and KSC program managers, project managers, and technical experts to assess and determine facility design layouts, cost, funding, and construction milestones.

This project has the potential to be a cornerstone for a new era of research and technology development for KSC. It will provide a core capability to our space-faring customer base which is one of the major objectives in the KSC Strategic Roadmap for the future.

Joseph Gordon announced as director of Public Affairs

Joseph "Joe" Gordon Jr. has been announced as the new NASA director of Public Affairs for Kennedy Space Center, effective Dec. 10.

He is responsible for leading the center's public affairs efforts, including media and community relations; aerospace education; tours and briefings of distinguished visitors; guest activities for launches, landings and special events; and the KSC Visitor Complex.

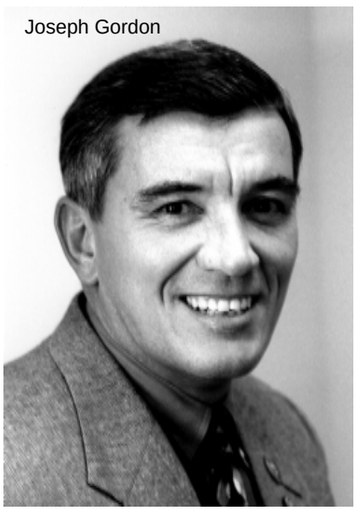
Gordon came to NASA from the Office of the Special Assistant for Gulf War Illnesses, Office of the Deputy Secretary of Defense, where he served as the civilian director of public affairs for one of the Department's most sensitive issues.

He assumed those responsibilities in September 1997, following his retirement from the U.S. Marine Corps after more than 29 years of service.

Gordon joined the Marine Corps in 1968 with the Platoon Leader Class Program.

Commissioned a second lieutenant in 1971, he held a variety of assignments to include command and staff positions, while serving numerous tours of duty with Fleet Marine Forces, Atlantic and Pacific, in the United States and overseas. He also served a command tour as a battalion inspector-instructor training Marine Reserves for active duty with Fleet Marine Forces.

Assigned to Marine Corps Headquarters in 1990, he served as the executive assistant to the deputy Chief of Staff for Installations and Logistics and later as the deputy director of Marine Corps Public Affairs.



Joseph Gordon

Reporting to the Pentagon in 1994, he was named director for management and executive assistant in the Office of the Assistant Secretary of Defense for Public Affairs, where he planned and led program activities in community relations, public communications and defense information.

Gordon is a graduate of Edinboro State University in Pennsylvania, where he received a bachelor of arts degree in Political Science. He is married to the former Debbie West of Richmond, Va. Their daughter, Leah, attends Mary Washington College in Fredericksburg, Va.

Mars Climate Orbiter on its way to the Red Planet

NASA's Mars Climate Orbiter launched successfully on Dec. 11 at 1:45 p.m. from Cape Canaveral Air Station's Launch Complex 17A and is now on its nine-month journey to the Red Planet.

Developed under NASA's Mars Surveyor Program, the orbiter along with its companion Mars Polar Lander (see page 1) will pursue NASA's scientific goals of exploring the Martian climate, searching for traces of frozen water beneath the planet's surface and near its south polar cap and looking for hints of an early warm, wet climate when primitive life may have existed.

By early in the next century, the culmination of the program — a Mars sample return mission — will be launched with the goal of returning samples of Martian rocks and soil to Earth for scientific study.

Once in mapping orbit, the Mars Climate Orbiter will await the arrival of the Polar Lander to support data return from the lander on the surface prior to the start of full orbital science operations.

After the Climate Orbiter supports its companion lander's surface mission, the orbiter will begin its mapping phase, lasting for one Martian year of 687 Earth days.Then it will continue operations in a "relay-only" mode, relaying data to Earth in support of future Mars surface missions.

A Boeing Delta II expendable launch vehicle lifts off with NASA's Mars Climate Orbiter at 1:45 p.m. on Dec. 11 from Launch Complex 17A at Cape Canaveral Air Station. The first of a pair of spacecraft to be launched in the Mars Surveyor '98 Project, the orbiter is heading for Mars, where it will first provide support to its companion Mars Polar Lander spacecraft, planned for launch on Jan. 3, 1999.

Local parade for STS-95 crew gives everyone a lift!

The seven astronauts of STS-95 were treated to a parade through Cocoa Beach with a jubilant crowd of tens of thousands of onlookers on Dec. 11 shortly after the Mars Climate Orbiter lifted off from Cape Canaveral Air Station. The mayors of Cape Canaveral and Cocoa Beach presented keys to the city to the crew members, and a street and plaza were officially renamed in honor of John Glenn Jr., STS-95 payload specialist and the first American to orbit the Earth in 1962. Glenn, seen here in a silver 1998 Corvette, is America's oldest astronaut. He was 77 when he flew with the crew of STS-95 on one of the most publicized Shuttle missions in years. Among other crystal growth and robotic experiments, the STS-95 crew conducted research on the aging process.

John F. Kennedy Space Center

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