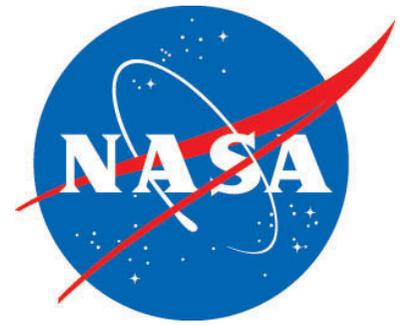


# Spaceport News

John F. Kennedy Space Center - America's gateway to the universe

[http://www.nasa.gov/centers/kennedy/news/snews/spnews\\_toc.html](http://www.nasa.gov/centers/kennedy/news/snews/spnews_toc.html)



## Space shuttle mission STS-122: Voyage of Columbus caps 2007

**S**PACE shuttle Atlantis' mission on STS-122 is what everyone's been working toward: expanding the science capabilities of the International Space Station.

Over the past year and a half, solar arrays and a connecting module have been added for power and to provide a pathway to new modules. But the mission of Atlantis' crew marks the beginning of the culmination of all that work.

In addition to the Columbus module itself, Atlantis will deliver experiments to be performed in orbit and two astronauts to perform them – one to visit and one to stay.

And to oversee all of this, the European Space Agency's Columbus Control Center in Oberpfaffenhofen, Germany, will come online for the first time.

"This is history," said Mission Specialist Léopold Eyharts, the ESA astronaut from France who will remain on the station after his shuttle crewmates leave. "Europe is doing today things that we never did before. This is really a first step into permanent operations in space."

Eyharts will take -- or float -- the literal

first step into Columbus, but he and his crewmates will have a lot of work to do before he gets to that point. Even getting the laboratory out of Atlantis' cargo bay will be a challenge. Columbus was designed before NASA's Return to Flight after the Columbia accident. One of the modifications made to the shuttle was the addition of a 50-foot boom used by the shuttle's robotic arm to inspect the shuttle's heat shield. There isn't room for it and all of Columbus.

The grapple fixture – or handle – that the robotic arm uses to pick Columbus up and out of the cargo bay gets in the way of the boom, so the laboratory is being launched without the handle attached. During the mission's first spacewalk, Mission Specialists Rex Walheim and Hans Schlegel – an ESA astronaut from Germany – will put it back on.

"That has to go exactly as planned," said Michael Sarafin, lead shuttle flight director for STS-122. "Otherwise we can't get Columbus out of the payload bay."

The actual mechanical connection is a common berthing mechanism, which has been used many times in the past. No problems are fore-

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Atlantis is "hard down" on Launch Pad 39A after a seven-hour rollout from the Vehicle Assembly Building Nov. 10.

## Preparing for the first 2008 launch



In mid-November, technicians, perched on a Hyster forklift, install the space shuttle main engine No. 1 in Endeavour.

**T**HE space shuttle Endeavour is in the Orbiter Processing Facility being prepared for its targeted Feb. 14 launch to the International Space Station. In bay No. 2, integrated testing of the main engines and the main propulsion system continues. Testing of the orbiter's three-string GPS system, which provides guidance on re-entry, is complete.

The functional test of the star tracker door is complete. Window No. 7 has been removed and replaced. The payload bay door functional test is finished as well as installation of BRI tile around the perimeter of the right main landing gear door.

Checkout of the shuttle-to-station power transfer system is complete. Endeavour was powered up to support testing of the space shuttle main engine/main propulsion system.

In high bay No. 1 of the Vehicle Assembly Building, stacking of the left solid rocket booster is under way. Stacking of the right booster was scheduled to begin this week.

Flying on mission STS-123, Endeavour will carry the pressurized section of the Kibo Japanese Experiment Logistics Module (ELM-PS) and the Canadian Dextre robotics system on the 25th mission to the space station.



# Director's Update

By Steve Francois  
Launch Services Program Manager

WHAT a year of incredible accomplishments this has been for NASA's Launch Services Program, or LSP.

We celebrated the 50th launch for the program by sending the AIM satellite into orbit on a Pegasus rocket to study high cloud formations in April.

We followed that with two more launches: Phoenix on Aug. 4 to further examine the soil on Mars, and Dawn on Sept. 27 to answer questions about the formation of our

solar system. Both launched on Delta II rockets.

This year also saw the liftoff of THEMIS on a Delta II on Feb.

*"Each and every one of those 52 launches was a success, and we're still going strong."*

17 to monitor Earth's auroras like the Northern Lights.

Each and every one of those

52 launches was a success, and we're still going strong.

In my 30 years of launch experience, this was the first time I can remember working on two missions with such short launch windows that would have had a major impact if those windows weren't met.

Also this year, LSP spread the exciting word about NASA's expendable launch program by supporting more than 100 schools, reaching more than 45,000 students in 28 states. We sent educational packages to classrooms in Canada, Italy, Panama, South Africa, Sweden and Uganda.

Next year, we have 10 launches scheduled at four different launch sites and using every vehicle in the stable. Coordinating those missions will be quite a challenge, but I know the LSP team is up for it. It's amazing to watch

these men and women perform at the level they do on a continuing basis.



Just after sunrise, the Delta II rocket carrying NASA's Dawn spacecraft rose from its launch pad to begin its 1.7-billion-mile journey through the inner solar system to study a pair of asteroids.

# Care for troops inspired by NASA

NASA is concerned about our veterans and injured service men and women. We are proud that our space-inspired innovations have been able to create real benefits for them.

Our country's modest investment of less than six-tenths of one percent of the overall federal budget yields not only technological marvels like the Mars rovers and the International Space Station, but it flows back to us here on Earth to improve our lives.

Several different applications of NASA-inspired technology have helped veterans. For example, wounded troops, including amputees who need help recovering, are benefiting.

Scientists at NASA's Goddard Space Flight Center developed a specialized cable-compliant joint that allows movement in many directions and provides shock absorption. This cable-compliant joint could be used in everything from docking spacecraft to en-

hancing robotics.

The same technology is helping wounded veterans walk at Walter Reed Army Medical Center, thanks to Enduro Medical Technologies, which is located in East Hartford, Conn.

Enduro Medical Technologies used the joint technology to build an advanced walker named SAM

(Secure Ambulation Mode). SAM is hands-free, allowing patients to practice walking with a normal gait, without the fear of falling, which is a key factor in recovery.

This technology helps our injured servicemen and women recover the ability to walk sooner. For example, one active military patient, who has been wheelchair-bound for two years with a spinal cord injury, now uses SAM to walk as much as 25 minutes each day.

## Powered by NASA

Also, SAM is useful for patients with degenerative diseases, such as multiple sclerosis and Parkinson's disease, allowing them to get around more easily.

Another NASA-inspired technology subsequently has been transformed to provide help for troops suffering from stiffness or minor muscle pains in the field.

NASA scientists originally developed small light sources to promote food growth in closed environments, such as the space shuttle and the International Space Station. The scientists found that these light-emitting diode chips could boost plant growth. When they turned the lights on humans, the scientists discovered something similar; if properly tuned, those lights could relieve pain and possibly have other medical benefits.

As a result, the Medical College of Wisconsin and Quantum Devices Inc. of Barneveld, Wis., teamed up and transformed the lights into a new, non-invasive medical device known as WARP 10, which provides temporary pain relief.

The device now is being issued to submarine crews and special operations forces. A Food and Drug Administration-approved variant of this pain reliever also is available for civilians, and research is continuing to test the device's ability to combat certain cancers and degenerative diseases.

Through innovations such as SAM and WARP 10, NASA's space technology is helping to heal soldiers and civilians. They prove that the nation's modest investment in NASA is keeping all of us on the healing edge.

*This is first in a series of articles describing NASA's effects on daily life.*

# London film crew tells NASA's story

**F**OR NASA's 50th birthday in October 2008, Dangerous Films for the Discovery Channel will present the dramatic story of the space agency's pioneering, awe-inspiring missions.

Dangerous Films is a production company based in London. Its production team recently spent two weeks at Kennedy to prepare stories for the six-part series, such as the shuttle's recovery from disaster. The film will also include heroic struggles to break the sound barrier and the Apollo-Soyuz link-up.

According to assistant producer James Leigh, the film company's work for the first part of the project began six months ago. Arranging accreditation for all the Dangerous Films personnel was an early step. Then there were contacts to arrange for interviews,

## VOYAGE . . .

*continued from Page 1*

seen with that.

Once those connections are made on the shuttle's fourth day in space and a few preparations are completed, Eyharts will be able to take a quick peek inside Columbus the following day.

NASA's ground control will be in charge for some of the initial activation of Columbus systems, but once the laboratory's computers are up and running, the Columbus Control Center will take over.

Additionally, any time the crew members are not doing a spacewalk, they'll be working inside Columbus to get it up and running. In fact, Commander Stephen Frick has said much of the transformation will take place while the shuttle is still there. The goal is to get as much of Columbus' outfitting done as possible. That way, after the shuttle leaves, Eyharts can devote more time to science.

The success of the voyage of this Columbus, more than 500 years after its namesake, begins and ends with the details.

such as with Leroy Cain, Scott Carpenter and Jon Clark, husband of Laurel Clark, who was lost in the Columbia accident. Finally, there were arrangements to be made to film at various locations at Kennedy. That also required the appropriate equipment, most of which was rented in the U.S. In all, the team comprised 11 people for the Kennedy shoot and three vans of equipment.

None of that would have been possible without the help of Kennedy's External Relations Press Site. "Many teleconferences, phone calls and e-mails made it happen, beginning in August," said Manny Virata, lead media projects coordinator.

The company first scheduled scouting trips in August and September to identify sites they wanted to use. Then permissions had to be sought to film there. Some the team handled directly. Most went through the Press Site. Aiding Virata was Mary Hunter of All Points Logistics and NASA's Laurel Lichtenberger, who has the monumental task of accrediting everyone who needs to be on site.

The teleconferences and phone calls eventually hammered out the badging and a schedule of what to shoot, where and when. However, the schedule is a boilerplate, subject to change due to over- or un-



On location at Kennedy: (From left) Dangerous Films Associate Producer James Leigh, Producer/Director Nick Green, Camera Assistant Rick Rojas, Director of Photography Paul Jenkins and Series Producer Kate Botting.

der-estimating shooting times, or people not available when needed. More than one interview had to be rescheduled, even changing venue from Kennedy to Johnson Space Center at a later date.

Near the end of the filming, the photographer decided he'd like to capture some of the historic pads at sunset and sunrise. So the schedule was reworked to include five additional locations before and after the normal work day.

The film shoot also was sandwiched around a shuttle rollout.

One of the events on the

schedule was filming the interview with Jon Clark, not in a climate- and sound-controlled studio, but at the 195-foot level of the fixed service structure on Launch Pad 39A. That meant hauling a big jib, tracks and camera to that level and setting up in the open with winds of 12 knots. Leigh stated the interview took one month to arrange and one day to shoot, yet probably only a portion of the interview will actually air. The backdrop of the Kennedy environs no doubt was deemed

See **FILMS**, Page 6

## Mitskevich taking position as deputy manager of Launch Services Program

**K**ENNEDY Space Center Director Bill Parsons recently announced the selection of Amanda M. Mitskevich to the position of deputy manager of the Launch Services Program, or LSP. She replaces Ray Lugo, who was recently selected as the new deputy director of NASA's Glenn Research Center in Cleveland. The position is pending approval by Headquarters and the Office of Personnel Management.

"Amanda brings a wealth of technical and managerial expertise to this position," said Parsons. "She has an impressive background in LSP mission inte-

gration and mission management operations, and will step into this challenging and complex role immediately."

About her selection, Mitskevich said, "I have been a part of Launch Services since the program transitioned to KSC and I am excited about the opportunity to contribute in this leadership role."

Currently serving as the chief of the Flight Projects Office in the LSP, Mitskevich is responsible for the mission managers of NASA's robotic missions flying on expendable launch vehicles. There are approximately 30 missions in



Amanda M. Mitskevich

work at any given time from the Science, Exploration and Space Operations Mission directorates.

See **LSP**, Page 8



Counterclockwise from top: STS-122 Launch Director Doug Lyons (right) greets Mission Specialist Leland Melvin as Commander Steve Frick and Pilot Alan Poindexter look on. Behind them, disembarking, are Mission Specialists Hans Schlegel of the European Space Agency, Stanley Love and Leopold Eyharts, a European Space Agency astronaut.

Crew members inside an M-113 armored personnel carrier.

Mission Specialist Rex Walheim practices driving an M-113.

Frick and Poindexter complete STA practice.



# Meet the STS-122

**T**HE STS-122 astronauts and ground crews participated in a launch dress rehearsal and other prelaunch activities Nov. 17-20, known as the terminal countdown demonstration test, or TCDT. The test provides each shuttle crew with an opportunity to participate in various simulated countdown activities, including equipment familiarization, emergency training and landing practice, excerpts of which appear here.

Commander **Steve Frick** will lead the international crew of mission STS-122 on his second shuttle flight. He served as pilot on mission STS-110, aboard Atlantis, to deliver and install the S-0 truss segment to the International Space Station. Frick has logged more than 250 hours in space. He was born in Gibsonia, Pa., and is married.

**Alan Poindexter** will serve as pilot on his first shuttle flight. Most recently, Poindexter served in the Astronaut Office Shuttle Operations Branch performing

duties as the lead support astronaut at Kennedy Space Center. He was born in Pasadena, Calif., but considers Rockville, Md., to be his hometown. He is married and has two children.

Making his second shuttle flight, **Rex Walheim** will serve as a mission specialist. His first mission was STS-110, during which he served on the extravehicular activity crew and logged more than 250 hours in space, including more than 14 hours on spacewalks. He was born in Redwood City, Calif., but considers San Carlos his hometown. He is married and has two children.

**Dr. Stanley Love** will serve as a mission specialist, making his first shuttle flight. Love served as spacecraft communicator in Mission Control at Johnson Space Center for International Space Station Expeditions 1 through 7 and for space shuttle missions STS-104, STS-108 and STS-112. He most recently served in the Exploration Branch of the Astronaut Office, helping to develop

future missions but considered his hometown to be Rockville, Md. He is married and has two children. Making his first shuttle flight, Mission Specialist Rex Walheim will serve as a mission specialist. His first mission was STS-110, during which he served on the extravehicular activity crew and logged more than 250 hours in space, including more than 14 hours on spacewalks. He was born in Redwood City, Calif., but considers San Carlos his hometown. He is married and has two children. Dr. Stanley Love will serve as a mission specialist, making his first shuttle flight. Love served as spacecraft communicator in Mission Control at Johnson Space Center for International Space Station Expeditions 1 through 7 and for space shuttle missions STS-104, STS-108 and STS-112. He most recently served in the Exploration Branch of the Astronaut Office, helping to develop



# crew members

re space vehicles and mis-  
s. He was born in San Diego,  
considers Eugene, Ore., his  
hometown. He is married and has  
children.

Mission STS-122 will be Mis-  
sion Specialist **Leland Melvin's**  
shuttle flight. Prior to his  
mission assignment, he served as  
manager of NASA's Educator  
Astronaut Program. He traveled  
across the country, engaging  
hundreds of students and teach-  
ing them the excitement of space ex-  
ploration. He most recently served  
as the Robotics Branch of the  
Astronaut Office. He was born in  
Richmond, Va., and loves walk-  
ing his dogs, Jake and Scout.

**Hans Schlegel**, an astronaut  
with the European Space Agency,  
ESA, will serve as a mission  
specialist on his second shuttle  
flight. He served as a payload  
specialist on STS-55 aboard space  
shuttle Columbia in April 1993.  
Over 90 experiments were  
conducted during the German-  
sponsored Spacelab D-2 mission  
to investigate life sciences, mate-

rial sciences, physics, robotics,  
astronomy, and the Earth and its  
atmosphere. He most recently  
served as ESA lead astronaut at  
Johnson Space Center. He was  
born in Uberlingen, Germany, but  
considers Aachen, Germany, to be  
his hometown. He is married and  
has seven children.

**Leopold Eyharts**, another  
ESA astronaut, will serve as a  
mission specialist on his first  
space shuttle mission. He was the  
prime cosmonaut for the Cen-  
ter National d'Etudes Spatiales  
scientific space mission called  
"Pegase," and flew in the Mir  
Space Station in February 1998.  
During the three-week mission,  
he performed various French ex-  
periments and logged 20 days, 18  
hours and 20 minutes in space.  
He was assigned to the Astronaut  
Office Space Station Operations  
Branch and served as a flight en-  
gineer to the Expedition 12 and  
13 back-up crews. He was born in  
Biarritz, France. Eyharts is mar-  
ried and has one child.



Above, the STS-122 crew lines up for a media press conference near Launch Pad 39A. From left are Commander Steve Frick, Pilot Alan Poindexter and Mission Specialists Leland Melvin, Rex Walheim, Hans Schlegel, Stanley Love and Leopold Eyharts.

Below right, the crew is dressed for the simulated launch countdown at the pad. Leading the way are Poindexter (left) and Frick (right). Behind them are Melvin, Love, Eyharts, Schlegel and Walheim.



Left top, crew members practice on the slidewire baskets for emergency egress. Standing, from left, are Love and Eyharts' backup, Frank De Winne, and Poindexter. Below them in the basket, from left, are Schlegel, Melvin and Walheim.

Left bottom, dressed in clean room attire, the crew checks out the payload in Atlantis' payload bay. From left are Frick, Melvin, former astronaut Jerry Ross, (kneeling), who is chief of the Vehicle Integration Test Office at NASA's Johnson Space Center, Poindexter and Love.

# What's old becomes new again

by Jennifer Wolfinger  
Staff Writer

**A**FTER more than a year of refurbishments, rocket engines built for early missiles can now serve as a learning tool for engineers working on tomorrow's designs.

The S-3D engines were used as the first-stage engine on the Jupiter Intermediate Range Ballistic Missile, or IRBM, as well as the Thor IRBM and Juno II rockets. According to vehicle systems engineer Gina O'Shaughnessy, the Thor IRBM, which used the S-3D, later evolved into the Delta family of rockets. The Delta II uses the RS-27 engine, a derivative of the S-3D. Perhaps the engine's most



entertaining accomplishment was that it powered the Jupiter rocket that carried Able and Baker, the first monkeys to make it safely back to Earth from space.

Beginning in August 2006, two S-3D rocket engines began undergoing the refurbishment

process which involved completely disassembling the hardware and rebuilding it as three separate displays: a complete, full-size engine; a partial engine with the ability to gimbal, or change the angle of its nozzle; and a complete turbopump assembly, which is used on liquid-fueled rockets to pump propellants to the engine. Twelve employees from the Engineering, Center Operations, and Launch Services directorates contributed to this effort.

"These refurbished engines can be used as excellent training tools for any engineer who needs to become familiarized with the RS-27, or any other liquid rocket engine. They can be, and have been, used to aid in solving technical issues found in the RS-27 engine by giving engineers an op-

portunity to have hands-on access to the hardware in question," said Nathan Knopp, a Launch Services co-op student.

Left, standing in front of the S-3D full-size and truncated gimbal capable engines are (left to right) NASA's Gina O'Shaughnessy, Vehicle Systems Engineer; Philip D. Stroda, mechanical engineering technician; Adam G. Dokos, mechanical design engineer; James P. Niehoff, mechanical engineering technician; Eric J. Roessler, mechanical engineering technician; Duane Dickey, electrical lead; Russ McAmis, mechanical lead; Shaun M. Daly, flight controls engineer; Nathan D. Knopp, propulsion systems co-op.

portunity to have hands-on access to the hardware in question," said Nathan Knopp, a Launch Services co-op student.

The engines were designed in 1955 by Rocketdyne, and are 2.44 meters in diameter and 643 kg in mass. With a 760 kilo-newton thrust, they flew 10 times between 1958 and 1961 and used liquid oxygen for an oxidizer and kerosene for fuel.

Starting in December, the full-sized and gimbal capable engines will be on display in Hangar AE at Cape Canaveral Air Force Station and the turbopump will be displayed in the Operations and Checkout Building at NASA's Kennedy Space Center. In both cases, they will be displayed permanently, in plain view. There are cutouts on the hardware to allow visitors to see the internal components. The areas will be accessible to any employee, but if better access is needed, contact O'Shaughnessy at 321-867-4275.



Left, moving one of the S-3D engines are Philip D. Stroda (left) and Shaun M. Daly.

## FILMS, *continued from page 3*

worth the effort.

Other areas the team filmed in November included Launch Pads 5, 14, 19 (the Gemini launch pad), 34 (scene of the Apollo I fire that claimed the lives of Ed White, Roger Chafee and Virgil Grissom), 39A and 39B, the Vehicle Assembly Building, the Columbia debris site, the crawler-transporter, Hangar S and the Launch Control Center where drawings by astronauts' children are displayed.

The production team members were not blasé about their job. "Pad 34 was really a remarkable site," said Leigh. "The legacy of

the men -- Grissom, Chafee and White -- who died there led to getting a capsule right for a successful launch within a decade. They are heroes of the space age."

Nick Green stressed the project focuses on how all the events of space history came to be, "not just the final outcome. The astronaut interviews are worth hearing because of the more personal, first-person experience being captured."

Dangerous Films will be filming at Kennedy again in 2008 before editing begins in April. It will probably air before October.



Taking advantage of the view from 195 feet above the launch pad, Dangerous Films photographs Jon Clark, right, for a Discovery Channel series to air in 2008.

# Remembering Our Heritage

## 12 years ago: Successful SOHO launch heralds the yule season

By Kay Grinter  
Reference Librarian

**T**HE successful launch of the Solar and Heliospheric Observatory on Dec. 2, 1995, put the launch team in high



spirits for the holiday season fast approaching.

Known as SOHO, the project was a cooperative effort between NASA and the European Space Agency, or ESA. The spacecraft was manufactured in France by Matra Marconi under a contract with ESA. Its instruments were provided by both European and American scientists and designed to study the internal structure of the sun, its extensive outer atmosphere and the origin of solar wind, the stream of highly ionized gas that blows continuously outward through the solar system.

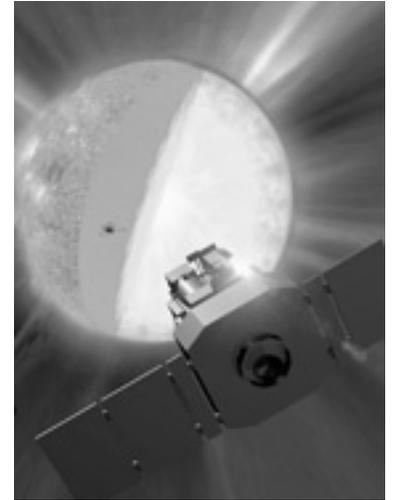
Floyd Curington was NASA's launch manager for the mission. He has since retired and owns a charter fishing boat which operates out of Cape Canaveral. "I was

Left, the SOHO spacecraft is ready for encapsulation before launch. The fairings are at left and right of SOHO.

stationed in the Mission Director's Center in Hangar AE for launch," Curington recalled. "During the last hold in the countdown, I cast the final 'go/no go' vote on behalf of NASA."

Liftoff from Pad 36B on Cape Canaveral came at 3:08 a.m. aboard a Lockheed Martin Atlas IIAS rocket.

Skip Mackey was NASA's data manager at the time. Also retired, he was located in Hangar AE in the Telemetry Lab with a team to help analyze the data received from the launch vehicle both before and after launch. "I was the commentator after liftoff and called the plus-time events," he recalled. "All the data returned were displayed on strip charts, which we preferred over computer screens. Pins traced the data onto rolls of paper about 2 feet wide and 200 feet long."



A drawing of SOHO as it speeds toward the sun.

SOHO successfully completed its primary solar mission in April 1998, and mission control was turned over to NASA's Goddard Space Flight Center in Maryland. SOHO has discovered more than 1,000 comets and approximately half of all comets with computed orbits in the history of astronomy. Enough fuel remains for its comet-hunting to continue for decades.

## Kennedy workers refurbish Enterprise at Smithsonian

By Linda Herridge  
Staff Writer

**N**ASA's first space shuttle orbiter, Enterprise, recently received a facelift. Engineers and technicians from Kennedy Space Center planned, coordinated and performed the restoration work on the orbiter, designated OV-101.

Enterprise is on exhibit at the Smithsonian National Air and Space Museum's annex at the Udvar-Hazy Center at Dulles Airport in Washington, D.C.

Martin Boyd, a NASA orbiter vehicle structures engineer in the Mechanical Systems Division of the Engineering Directorate, led the refurbishment efforts on the vehicle named for the popular television science fiction show "Star Trek."

The project was funded through the Orbiter Project Of-

*"The work was labor-intensive, but fun at the same time. It was like working on the space shuttle in my own garage."*

ice at Johnson Space Center, with NASA and United Space Alliance engineers and technicians performing the work.

Boyd said the first phase included removing all of the forward thermal window panes. He said extensive work was required to take them off because they corroded in place over time.

The team then cleaned and repainted the window frames and installed the original thermal windows that had been removed. The effort took two weeks during July.

The second phase included reinstalling the internal pressure windows and the crew module

consoles. About 150 parts were inspected, cleaned and reinstalled on the vehicle in three weeks during September and October.

"The job was labor-intensive, but fun at the same time," Boyd said. "It was like working on the space shuttle in my own garage."

Boyd said that all of the hardware and tools to perform the job had to be transported from Kennedy to the museum location.

Enterprise was in full view to the public during the refurbishment.

Pat Floyd, the USA off-site lead project engineer, said the workers enjoyed sharing their

knowledge as well as their shuttle experiences with the general public.

"This was a great experience for all and probably one the team will never forget," Floyd said.

Enterprise was built by Rockwell in 1976 and transported to NASA's Dryden Flight Research Facility at Edwards Air Force Base in California for the nine-month approach and landing test program in early 1977.

Two astronaut crews, Fred Haise and Gordon Fullerton, and Joe Engle and Dick Truly, took turns flying the 150,000-pound spacecraft to free-flight landings.

Enterprise is in good company at the Smithsonian. The Udvar-Hazy Center also houses the Enola Gay, the SR-71 Blackbird, the Air France Concorde and a Pegasus rocket.

# Team awards honor multifaceted efforts

**K**ENNEDY Space Center recipients representing NASA, United Space Alliance, InDyne, Lockheed Martin and Boeing Rocketdyne were honored at a ceremony on Oct. 25 in the Operations Support Building II. The recipients received the ELVIS Team Award and the Roll-Out Fatigue Test Loads System Award. The presenter was Don Noah, acting manager of the Johnson Space Center/Space Shuttle Systems Engineering and Integration Office.

Kennedy team members receiving the awards were Lorin Atkinson, Anthony Bartolone, Neil Berger, Angela Brewer, Greg Breznik, George Ray Haskel, Eugene Healey, Kristin Kelley, Jennifer Nufer, Timothy Potter, Lauren Price, Gary Snyder and Brian St. Aubin. Award winners representing Rocketdyne were Paul Brzeski, Edward O'Shaughnessy and Howard Stewart.

The awards recognized their outstanding contributions in planning and executing a rollout test with flight and ground hardware to obtain the data needed to vali-

date rollout fatigue environments for the space shuttle.

When asked for his thoughts about receiving the Roll-Out Fatigue Test Award, Brzeski said, "It was a great team to work with. For me, watching the sun rise from the mobile launcher platform while moving at 0.9 mph was one of the highlights of my career."

Howard Stewart added: "This award showed that NASA appreciates its work force that can visualize, communicate and execute its ideas across states, companies, site lines as a team with a mission-success purpose. I thank all those on this team for allowing/trusting me to take ownership of the instrumentations, which is a very integral part for the modal test data, therefore allowing everyone to clearly focus on their area of expertise/knowledge. Hopefully, this will be known as one of the greatest teams ever assembled for this administration that was success driven."

The team developed requirements for test verification of the roll fatigue load spectra with data measured on the flight configura-



Paul Brzeski (right) receives certificate from Don Noah for his efforts on the Roll-Out Fatigue Test Loads Systems presented by the Johnson Space Center/Space Shuttle Systems Engineering and Integration Office. See list at left for all who received awards.

tion. The team planned and conducted rollout tests of both a partial stack and a space shuttle with fully integrated flight hardware to obtain data for analysis validation. Test requirements were coordinated with the Orbiter Project, Kennedy Ground Operations and contractors to identify locations for installing instrumentation on flight hardware and cable routing.

Data was acquired from more than 100 channels from instruments installed on the crawler-transporter, mobile launcher platform, solid rocket booster/redesigned solid rocket motor and orbiter. Locations for instrumentation were identified on flight hardware to obtain the

required data, allow installation access in the Vehicle Assembly Building and removal access at the pad, and yet not damage flight hardware with the installation or removal of the instrumentation or cabling.

Additional data was acquired by video. This required the planning and setup of cameras and lighting, the installation of video targets on flight hardware and coordination across multiple organizations.

Flight-specific evaluation of rollout data was performed by the analysis portion of the team and management was advised of impact to the vehicle prior to flight. This multidisciplinary team consisted of experts from Langley, Johnson, Marshall Space Flight Center, Kennedy, Sandia and industry.

## Link to Shuttle Safety Hotline

**T**he Space Shuttle Program Safety and Mission Assurance Office has a Shuttle Safety Hotline Web site, <http://sma.jsc.nasa.gov/sirma/hotline>, that outlines the multiple routes for personnel to communicate and resolve shuttle safety concerns.

Members of the work force are encouraged to discuss concerns with management or individuals identified on the Web site. Shuttle safety concerns may also be submitted via three methods:

- \* The program's hotline database input (can be made anonymously): <http://sma.jsc.nasa.gov/sirma/hotline/input.asp>.
- \* E-mail: [jsc-sspmmmt@mail.nasa.gov](mailto:jsc-sspmmmt@mail.nasa.gov).
- \* Reporting box at Johnson Space Center in Building 30, Room 118.

The shuttle safety team ensures that all concerns are addressed appropriately. Once a concern is entered, an analysis is made to determine if the issue can be resolved with a short-term program action or if it represents a program risk.

If applicable, a program risk will be entered into the risk database for tracking. During mission operations, safety concerns will be reported daily to the Mission Management Team.

The link to the Shuttle Safety Hotline is located on various Web sites, including <http://sspweb.jsc.nasa.gov>, <http://sspweb.jsc.nasa.gov/mx> and <http://sma.jsc.nasa.gov/sirma>.

## LSP . . . continued from page 3

The Flight Projects Office is the primary interface, providing guidance on launch service capabilities and development, implementation, and verification of mission integration requirements.

Mitskevich was also a center

director management intern, gaining critical insight into Kennedy's strategic planning initiatives and overall management perspective, and she has 10 years of experience in shuttle operations and logistics.



John F. Kennedy Space Center

## Spaceport News

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