April 18, 2008

Vol. 48, No. 7

Spaceport News

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

www.nasa.gov/centers/kennedy/news/snews/spnews_toc.html

NASA/Kim Shiflett

Payton Jones, with United Space Alliance, monitors the progress of space shuttle Discovery's external tank.

Crews attach STS-124's ET, SRBs

By Linda Herridge
Staff Writer

Inside the Vehicle Assembly Building, NASA and United Space Alliance workers watched as a crane operator lifted the External Tank for space shuttle Discovery's upcoming STS-124 mission high up out of a test cell and slowly moved it above the transom and across the facility's transfer aisle. Its destination was the integrated cell in high bay 3 where two solid rocket boosters were waiting atop the mobile launch platform.

Alicia Mendoza is the NASA External Tank/Solid Rocket Booster vehicle manager. She said the two-day procedure to attach the solid rocket boosters to the external tank requires about 60 NASA and USA technicians, safety and quality personnel and the USA crane crew, as well as up to 40 engineers, managers, floor support and facility maintenance staff.

USA External Tank Move Director J.J. Laplante oversaw the tank move from Level 6 in high bay 4 east, where he had a view of the intertank and the forward attach point for the sling set. Laplante, who has been at Kennedy for 27 years, said the external tank processing team went above and beyond to meet this milestone.

Before this precise and well-coordinated procedure could take place, several events had to occur first. The external tank was transported by barge from the Michoud Assembly Facility in New Orleans, La., and delivered to the Vehicle Assembly Building for processing in a test and checkout cell.

The solid rocket boosters arrived in eight segments by rail car from ATK in Utah, loaded with solid propellant in a star pattern. They were delivered to the Rotation Processing and Surge Facility, where they were offloaded and rotated to the vertical position.

The Exit Cones and Aft skirts also were delivered to the RPSF from the Kennedy SRB Assembly Refurbishment Facility and attached to the left and right aft segments. Mendoza said stacking of the four-segment solid rocket boosters on the Mobile launch Platform takes about 22 days. During this

See **SRBs** Page 8

MODE II/IV Simulation answers 'What if?'

By Linda Herridge
Staff Writer

For three days, a group comprised of NASA and contractor workers from Kennedy Space Center and other NASA centers, along with the Department of Defense, participated in a flight crew evacuation simulation, also referred to as the Mode II/IV Simulation, at Launch Pad 39B.

According to Charlie Blackwell-Thompson, who was the NASA test director leading the exercise, the Mode II/IV is required every 18 months to certify Fire Rescue and Closeout Crew personnel. At the same time it also is an opportunity to train NASA test directors.

"This was a high fidelity simulation that allowed us to practice and refine our emergency egress and rescue operations, Blackwell-Thompson said. "The team did a great job planning and executing during this three-day event."

Workers faced many situations during the Mode II/IV Simulation from Launch Pad 39B. Simulated injuries were treated on site or evacuated by helicopter to local hospitals.

NASA/Jim Grossman

During the exercise, an emergency condition during launch countdown was simulated and participants did their parts to perform an emergency egress of the flight and ground crew. Representatives from Kennedy and Johnson Space Center served as the flight crew, dressed in launch and entry suits.

With the simulated emergency in play, Fire Rescue and Closeout Crew

See **Simulation** Page 8

Clean-up prepares for sea turtle nesting season

By Mary Ann Chevalier
Staff Writer

Sun, surf, sand … shredded balloons, foam fishing buoys and a message in a bottle were some of the highlights of this year's Kennedy Space Center and U.S. Fish and Wildlife Service beach cleanup on April 10.

More than 130 volunteers from NASA, FWS and Kennedy Space Center contract organizations gave their afternoon to gather "unnatural" items that had accumulated on 6.1 miles of Central Florida's eastern shoreline the past 12 months.

"We try to do this every year," supervising refuge ranger Dorin Whitmore said. The goal is to help provide a clean and safe environment for wildlife, but it especially is targeted to support the upcoming sea turtle nesting season." According to Whitmore, there are about 150 nests found on every mile of space center coastline. The majority, about 95 percent, are endangered Loggerhead turtles coming "home" to lay eggs June and July.

Three bus loads of volunteers combed the beach from dunes to waterline accumulating large amounts of waste along with a great deal of satisfaction, said United Space Alliance employee, John Morefield. "We live and work in a picture post-card place here in Florida. It's our responsibility to take care of it," he said.

With a different point of view, Kevin Panik, NASA operations, added, "It's really not hard to take an afternoon to enjoy the beach and meet new people. I'm having a great time."

NASA/Dimitri Gerondidakis

More than 130 volunteers from NASA, the U.S. Fish and Wildlife Service and Kennedy Space Center contract organizations cleaned about six miles of shoreline to show support of the upcoming sea turtle nesting season.

Message found in a bottle traveled for seven months

While helping to clean up NASA's Kennedy Space Center's shoreline Jill Vogel, a United Space Alliance environmental engineer, stumbled on something that could have come straight out of a children's storybook or a pop song -- a message in a bottle.

The glass bottle had washed up high on the dunes and was partially buried in sand, but its precious contents were safe and dry.

After prying off the lid and gingerly poking the roll of paper inside Vogel went to work in earnest. She shook the bottle, held it upside down but failed to dislodge the note.

Then she used a small stick to prod the paper but it was stuck fast inside the damp vessel. Finally, Vogel employed her finger clad in a rubber glove. It worked. Millimeter by millimeter the rolled paper came out of the bottle.

Eureka, it was out.

Unrolling the missive all manner of things went through Vogel's mind. What did it say? Was it a joke? Where was it from? Who was it from?

After a moment to quickly scan the message, a slow smile came to her face. "It's from a little boy," she said. "He and his classmates wrote letters, put then in bottles and sent them on their way hoping for a response." He just wants a "sea pen-pal" according to the letter.

As she walked the beach picking up garbage for the rest of the afternoon, Vogel kept patting the bottle to make sure it remained safe. She had placed it in a separate plastic bag. A special bag. That bag would not go into the dumpster at the end of the day but home with her instead.

Traveling across the ocean for seven months from a tiny island in the Bahamas the special bottle with the message from a hopeful little boy had finally found a home with someone who considers it a privilege to answer the mail.

From Eagle Tower 4 to the boundary between Kennedy Space Center and Cape Canaveral Air Force Station, volunteers gathered enough trash to fill about 450 garbage bags and enough recyclable plastic and glass to fill 150 bags. "Historically, we've had beach cleanups before," said Kathy Whaley, deputy refuge manager, But this is the first time we've actually separated the trash from the recyclables. It was a huge success. The whole process worked flawlessly."

Along with the expected fishing line, plastic bottles of sunscreen and the occasional lone flip-flop, the volunteers found some unexpected treasures. They included a computer monitor, multiple fluorescent tube lights, a large cruise-line lounge chair, a 5-gallon gas can and a fully functional pump sprayer.

"This beach cleanup has truly been a team effort. I was overwhelmed by the response from everyone involved," said Carol Cavanaugh, NASA program specialist and event organizer. "I am so proud of NASA, FWS and our contractor organizations. They've donated personnel and logistical support to the cleanup so there was minimal cost impact to any one group. Hopefully, we can do it twice a year from now on," she said.

Blue Angels eye Kennedy for Space & Air Show

Duo check out 'aerobic box' for two-day exhibition

By Anna Heiney
Staff Writer

Employees at Kennedy are accustomed to seeing a lot of action in the skies overhead. But there was something unusual in the airspace on April 7: a sleek F/A-18 Hornet aircraft, one of the U.S. Navy's famed Blue Angels.

Pilots Lt. Frank Weisser and Lt. Dan McShane were visiting Kennedy to make preparations for the precision flying team's headline performance at the 2008 Space & Air Show at Kennedy Space Center, which is set for Nov. 8 and 9.

The air show will be only the second time the Blue Angels have performed at Kennedy. Their demonstration includes high-speed passes, fast rolls, mirror formations, tight turns and their signature Delta formation.

NASA/Kim Shiflett

Many Kennedy workers enjoyed F/A Hornet aircraft that pilots, Lt. Frank Weisser and Lt. Dan McShane, flew April 7.

To help plan for the performance, Weisser and McShane boarded a Huey helicopter for an aerial tour of the "aerobatic box," the portion of Kennedy airspace where the flying team will carry out its thrilling maneuvers.

The spaceport "provides an absolutely fantastic backdrop for an airshow," said Weisser, who pilots the No. 7 aircraft and serves as the narrator during the Blue Angels' demonstrations.

McShane agreed. "Flying around this facility, seeing things that you always see covered on the news and in the media . . . it was breathtaking."

NASA/Kim Shiflett

Pilots Lt. Frank Weisser and Lt. Dan McShane arrived at Kennedy to begin preparations for the 2008 Space & Air Show.

Hosted by the Kennedy Space Center Visitor Complex, the 2008 show will feature several aerial demonstrations in addition to the Blue Angels, including an astronaut rescue simulation performed by the 920th Rescue Wing based at nearby Patrick Air Force Base. In addition to the action in the air, aircraft and space-related exhibits will be displayed on the ground in the viewing area. Astronauts from the Mercury, Gemini, Apollo and Space Shuttle programs will be available for autographs and photos.

NASA's commander and pilot astronauts, as well as several mission specialist astronauts, are current and former U.S. military pilots. Many come to the space agency from the U.S. Navy.

"The chance to join with fellow aviators, and fly at their home, is really a phenomenal opportunity for us," Weisser said. "The fact that there are so many Navy pilots who have gone on to become astronauts is something we brag about time and time again as Blue Angels, and as Navy pilots, and as servicemen of this country."

NASA/Kim Shiflett

Pilots Lt. Frank Weisser and Lt. Dan McShane visited Kennedy to make preparations for the precision flying team's performance at the 2008 Space & Air Show on Nov. 8 and 9 at Kennedy. The air show will be only the second time the Blue Angels have performed at Kennedy.

Scene around Kenn

Reader-submitted photo

Technicians are shown removing space shuttle Atlantis' Orbiter Docking System last month. The ODS was detached since Atlantis is flying the Hubble mission and will not need the docking mechanism to attach to the ISS.

Spaceport News wants your photos

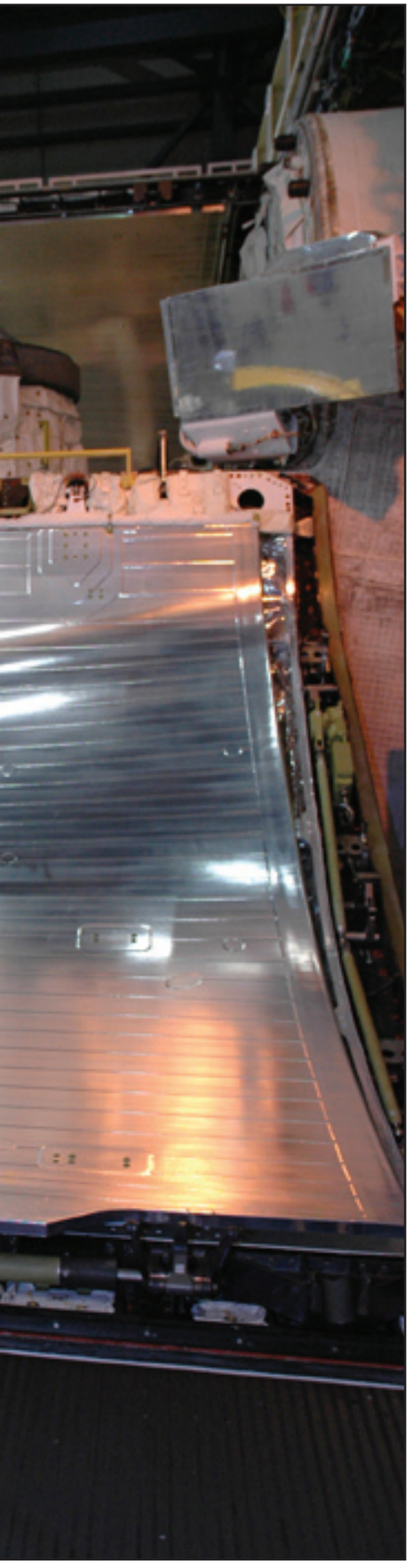
You are encouraged to send unique story ideas and exciting photos of workers in action for possible publication. Photos should include a short caption with the names and job titles, from left to right. Send e-mail to **KSC-Internal-Comm@mail.nasa.gov.**

NASA/Jim Grossmann

A racoon takes a stroll at Kennedy.

A worker observes space shuttle Discovery's payload bay as the doors ar Kennedy. Launch is targeted for May 31.

nedy Space Center



NASA/Chris Rhodes

e closed in the Orbiter Processing Facility Bay 3 at

NASA/Jim Grossman

A group of birds flock together at Kennedy. The Centershares a boundary with the Merritt Island National Wildlife Refuge, which is a habitat for more than 310 species of birds.

NASA/ Troy Cryder

United Launch Alliance technicians check the list of activities completed on the mating of the nine solid rocket boosters to the Delta II rocket for the launch of NASA's Gamma-ray Large Area Space Telescope, or GLAST. Launch currently is planned in a window between 11:45 a.m. and 1:40 p.m. May 16.

Ombuds impartially handle difficult situations

By Jennifer Wolfinger
Staff Writer

The work accomplished in a single day at Kennedy Space Center is complex to say the least, so it shouldn't be surprising that employees performing this work face challenges. Whether the problem is serious or simple, Kennedy's ombuds and alternate ombuds are available to impartially handle these issues.

James V. Thompson was appointed as ombuds by former Kennedy Director Jim Kennedy, who said he chose Thompson for his trustworthiness and ability to maintain confidentiality. Kennedy said he appointed Hortense Burt as alternate ombuds for demonstrating discretion and a concerned approach to the needs of center employees. They perform these duties while maintaining their assigned roles.

Thompson explained that ombuds informally gather problem-solving information, open avenues of communication, and identify and evaluate options to resolve issues. They're not part of any formal administrative, legal or judicial process and don't advocate or represent either management or employees.

NASA file

Alternate Ombuds Hortense Burt, left and Ombuds Jim Thompson always are available to handle interests of the Kennedy workers by investigating and addressing daily challenges.

They can't make or change policies, or make binding decisions or employee requirements.

Unless there are safety or security threats or a serious crime's involved, anything said to an ombuds is confidential. They meet quarterly with Kennedy Center Director Bill Parsons and/or Deputy Director Janet Petro to convey general activities and concerns that indicate trends or changes, and at any time for immediate concerns. Confidentiality is maintained during these meetings as well.

"We don't fix employees' problems. We're a sounding board, and help them identify what their next steps could be, and provide information so they can make the decision they need to make. We can't make decisions for them," Burt said.

Thompson, who previously served as alternate ombuds, enjoys finding honest and workable answers to concerns and questions.

"Often an employee just wants to talk-out a problem without it becoming public. At other times, a person doesn't know where to go to get the issue resolved," he said.

Thompson's been in Human Resources at Kennedy for more than 30 years and enjoys the win-win situations it offers. He focuses primarily on program policy and development, and labor relations with federal unions. He also edits a human resources newsletter.

Burt has spent most of her 25-year government career in the engineering field as a project and mission assurance manager. For the past three years, she has worked in the External Relations Directorate's Education Programs and University Research Division as Kennedy's Education Projects Manager. She takes great pride in NASA's ability to inspire students to seek careers in math, science and engineering.

Any employee may call Thompson at 867-3813 or Burt at 867-8768 for assistance.

The NASA Ombuds Program was established in January 2004 in response to a recommendation of the Columbia Accident Investigation Board.

Technology Hall of Fame honors Kennedy for blood-flow device

By Jennifer Wolfinger
Staff Writer

Kennedy Space Center's innovative technologies continue to impact lives and gain national recognition, and the ResQPOD medical device joined this elite club when it was inducted into the Space Technology Hall of Fame.

ResQPOD is a non-invasive medical device that improves cardiac output and blood flow to the brain compared to conventional resuscitation techniques.

At NASA, it is used to help astronauts reacquaint with the feeling of gravity by quickly and effectively increasing the circulation of blood flow to the brain. Emergency medical services, hospitals and the U.S. military also use ResQPOD.

More online

For more on the Space Technology Hall of Fame, go to **www.spacetechhalloffame.org**

The technology's development began in 2002, according to Biomedical Engineering Chief Don Doerr, who was inducted for his contribution to making the project a reality.

"I am proud to represent our Biomedical Laboratory and NASA/KSC. Much good work has occurred here over many years, but this is the first time that something from the lab has captured the attention of a national award group. It is my hope and expectation that the ResQPOD will make an important advance to emergency medicine," Doerr said.

The inductees were recognized at the 24th National Space Symposium and at the Space Technology Hall of Fame dinner. The annual events were at The Broadmoor Hotel in Colorado Springs from April 7-10. Due to the collaborative nature of the effort, members from other contributing organizations also were inducted.

The Space Foundation, in cooperation with NASA, established the Space Technology Hall of Fame in 1988 to increase public awareness of the benefits resulting from space exploration programs and to encourage further innovation.

NASA/Dimitri Gerondidakis

Biomedical Engineering Chief Don Doerr was inducted in to the Space Technology Hall of Fame for his contribution in making the ResQPOD project a reality.

Pioneer 11 launch team 'pumped up' for Saturn flyby

By Kay Grinter
Reference Librarian

As 1973 got under way, emotions were high for Kennedy Space Center's launch team as the processing for the much-anticipated liftoff of Pioneer 11 from Launch Pad 36B on Cape Canaveral was reaching its finale.

"We were pumped up because we were going to Saturn for the first time," Don Sheppard, then chief of Spacecraft Operations, said. "We also were using our most powerful launch vehicle, the Atlas-Centaur with an additional solid propellant third stage, and our largest clean room for spacecraft preparation where you could see the plaque designed by Carl Sagan that would send a message from Earth to beyond the solar system. We had a good time supporting this mission which had a lot to do with our excellent working relationship with the Pioneer Project management at Ames Research Center."

Remembering Our Heritage

At launch time on April 4, Pioneer 10, its sister ship, already was three-fourths of the way to Jupiter.

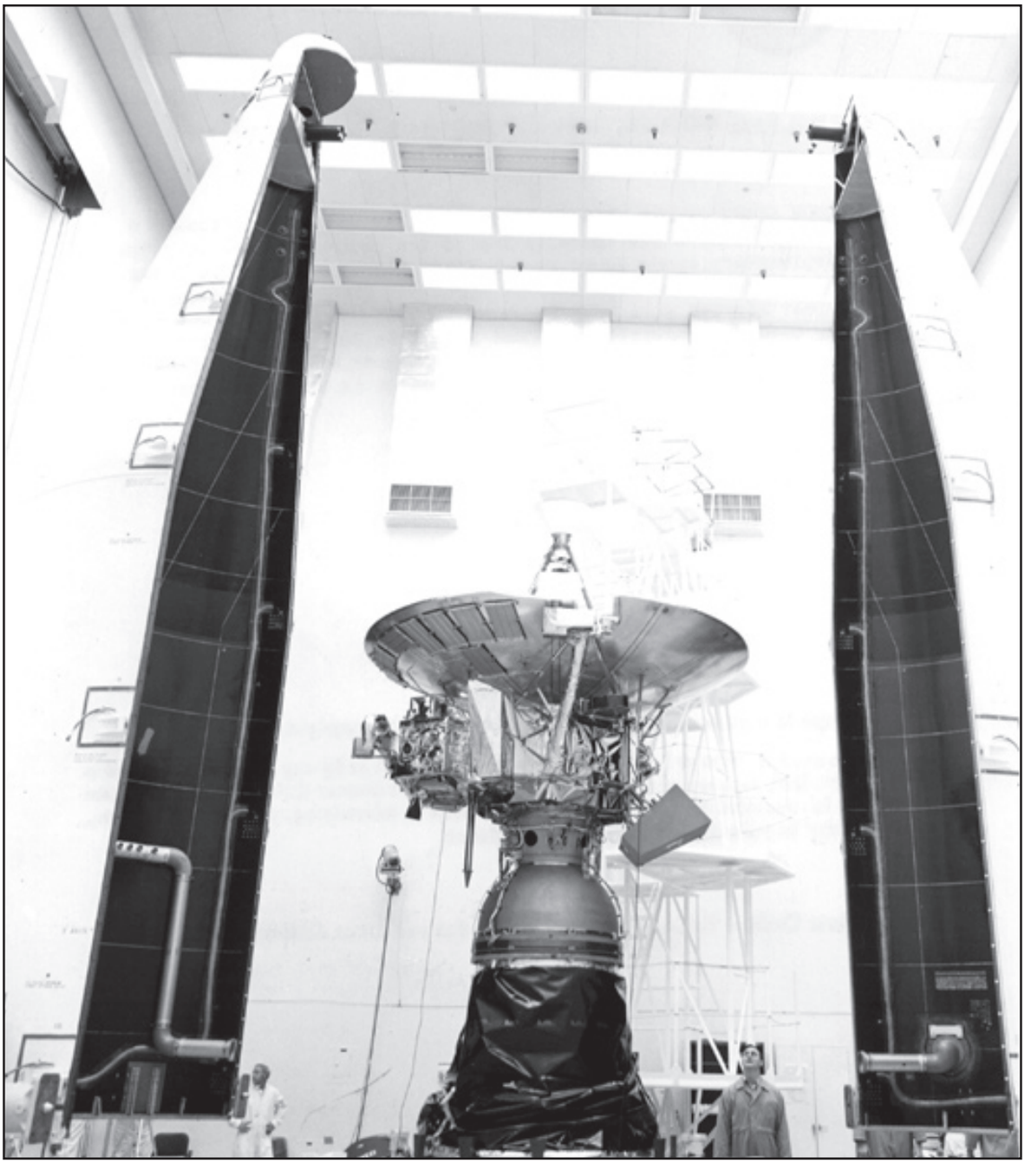
John Neilon was NASA's director of Unmanned Launch Operations, or ULO. "The late John Gossett was chief of Centaur Operations," he said. "For almost 20 years, he supervised the day-to-day operations for Centaur missions in the Surveyor, Mariner, Viking, Pioneer and Voyager exploration programs."

Terry Terhune was a lead electrical engineer in Centaur Operations.

The Pioneer 11 launch was the first use of a redesigned Centaur stage, outfitted with a forward equipment module that provided an Atlas/Centaur integrated astrionics system for vehicle flight control.

"The redesign was a big step forward in stability," Terhune recalled. "The previous Atlas just used a timer."

A new digital computer unit controlled the stage, working from data supplied by a new inertial measurement group guidance system, making the Centaur, in effect, a computer-controlled vehicle.



NASA file

The Pioneer 11 spacecraft launched atop an Atlas Centaur rocket April 5, 1973. Pioneer 11's mission took passed the asteroid belt, Jupiter and Saturn. NASA's launch teams from Kennedy Space Center handled final testing and the launch.

Jim Johnson was manager for Pioneer Operations at Kennedy. Each Pioneer carried two nuclear radioisotope thermoelectric generators, or RTGs, to supply the spacecraft with power since solar cells are not effective long distances from the sun.

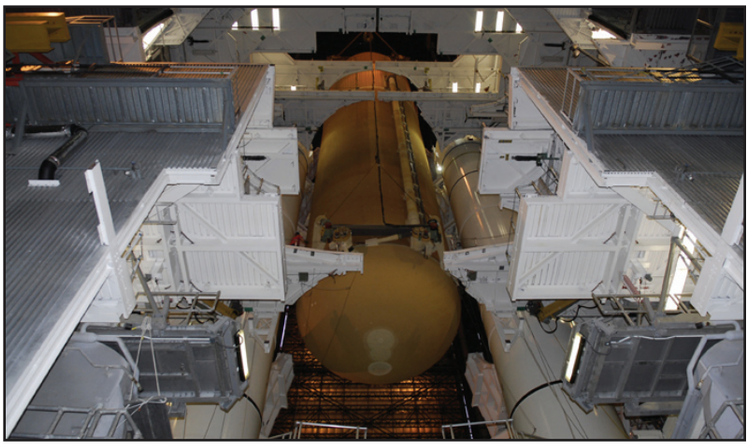
"The RTGs were hot to the touch," Johnson said. "They were installed through hatches in the fairing onto a rail system on the spacecraft. After the spacecraft was released from the third stage, they moved to the end of the rails to keep their heat and radiation away from the experiments."

Bill Fletcher was a payload coordinator and the local NASA custodian for the RTGs. "I still remember the day the generators were delivered," he said. "Until this time, custodianship had been held by the Atomic Energy Commission.

"All safety planning was done in-house," he recalled. "Precautions were taken. Time-and-motion studies were made. Dosimeters were worn by those in proximity to the generators. Thankfully, mine never registered any dose of radiation at all."

Pioneer 11 returned beautiful images of Jupiter and Saturn, and in 1990, became one of only four spacecraft to journey outside our solar system.

Its last transmission was received in November 1995.



NASA/Kim Shiflett

Launch crews mated the solid rocket boosters and external tank that are to carry Discovery to orbit on its scheduled May 31 launch.

From **SRBs**, Page 1

time, technicians close out the joints, connect the system wiring, and install the ordinance and range safety wiring.

"The ETs and SRBs are pretty much the structural backbone for the space shuttle, not to mention they provide all the propellant necessary to lift the 4.5 million pound shuttle system off of the launch pad," Mendoza said.

Before mating, the boosters were pulled apart slightly using tethered bands to allow for clearance as the tank was lowered into position.

Payton Jones is an aerospace senior technician with USA. From E platform on the 14th floor of high bay 3 he monitored the tank as it was being lowered and leveled between the solid rocket boosters and platforms.

He communicated with the solid rocket booster shop lead and exchanged information about clearance between the tank and boosters.

Jones said knowing that we are the only work force in the world that performs this type of processing is very exciting. "It feels like we are accomplishing a great task that will make a difference for our future," he said.

NASA launches science Web site

NASA's Science Mission Directorate has launched a new Web site that provides enhanced and engaging information about NASA's vast scope of scientific endeavors and achievements.

The site will provide in-depth coverage of NASA's past, present and future science missions with features that include:

- Interactive tables and searches for Earth, heliophysics, planetary and astrophysics missions
- Insight into dark matter and dark energy, planets around other stars, climate change, Mars and space weather
- Resources for researchers including links to upcoming science solicitations and opportunities
- A mapping of science questions for NASA science missions and the data they produce
- A citizen-scientist page with access to resources that equip the public to engage in scientific investigation
- Expanded "For Educators" and "For Kids" pages to provide access to a broader range of resources for learning the science behind NASA missions
- Easy-to-navigate design and an improved search engine to help find information

Visit **http://nasascience.nasa.gov**

Earth Day Fair offers tours, giveaways

The Kennedy Space Center Mission Briefing Room (O&C M7-0355, room 1144) will host a 2008 Earth Day Fair from 10 a.m. to 2 p.m. Monday, April 21. The fair will include environmental partners sharing information on natural resources, energy conservation and environmental stewardship.

There will be eco-giveaways, contests and KSC eco-tour signups. KSC eco-tours include a KSC aquatic boat tour, scrub jay tour, manatee tour, Merritt Island National Wildlife Refuge/ Visitor Center Tour and the KSC beachside corrosion control lab tour.

Also, NASA transportation will display alternative fueled vehicles in the O&C courtyard.

For more information, call Shannah Trout 867-1692.

From **Simulation**, Page 1

workers aided in the extraction and rescue of the crew.

Blackwell-Thompson said the three-day exercise included classroom training on the first morning and rescue technique exercises on the 195-foot level of the launch pad where astronauts enter and exit the space shuttle. On day two, the group demonstrated and practiced rescue techniques at the slide wire termination area, including basket unloading procedures and bunker operations.

During the afternoon, the group returned to the launch pad's 195-foot level and performed rescue and egress exercises with the Firex water system flowing. On the third day, an end-to-end simulation was completed where the emergency egress and rescue operations were demonstrated from emergency declaration, through personnel transport to area hospitals.

Participants included the NASA and contractor personnel from Kennedy and Johnson Space Centers. Representatives from the NASA/United Space Alliance Closeout Crew, firing room test team, flight crew engineering, Pad B facility and planning personnel, and safety also participated.

As well as NASA/Comprehensive Health Services Medical Team, Johnson Space Center Flight Crew Office, Space Gateway Support security and NASA/SGS shuttle landing facility support, Mission Operations Directorate at Johnson, suit technicians from Johnson, and helicopters from Kennedy, DoD and First Flight Commercial carrier and Kennedy public affairs officers.

Observers also included Constellation Program workers, who were gathering information on emergency egress techniques and launch and entry suit configurations.

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 External Relations in the interest of KSC civil service and contractor employees.

Contributions are welcome and should be submitted three weeks before publication to the Media Services Branch, IDI-011. E-mail submissions can be sent to **KSC-Spaceport-News@mail.nasa.gov**

Acting managing editor. . . . . Candrea Thomas
Editor. . . . . Frank Ochoa-Gonzales

Editorial support provided by InDyne, Inc. Writers Group.
NASA at KSC is on the Internet at www.nasa.gov/kennedy
USGPO: 733-049/600142