

# 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)

## Work continues for October launch of STS-120

A leak in a hydraulic seal in Discovery's right main landing gear strut has shuttle program managers reassessing processing milestones for mission STS-120. Technicians are fixing the leak in the strut, which acts as a shock absorber during the shuttle's landing. Managers soon will determine a new date for the vehicle's rollover to the Vehicle Assembly Building and decide how the work might affect Discovery's Oct. 23 target launch date.

A fifth spacewalk was added by program managers to the itinerary for Mission Specialists Scott Parazynski and Douglas Wheelock, who will test tile heat shield repair techniques, extending the mission to 14 days.

The crew will take an Italian-built U.S. multi-port module, also known as Harmony, to the International Space Station on this mission, marking the 23rd shuttle

flight to the station.

Retired U.S. Air Force Col. Pamela Melroy will command the STS-120 mission to take the Node 2 connecting module to the station. Melroy, a veteran shuttle pilot, is the second woman to command a shuttle. George Zamka will serve as pilot. The flight's mission specialists also include Stephanie Wilson and Paolo Nespoli, a European Space Agency astronaut from Italy. Zamka, Wheelock and Nespoli will be making their first spaceflight.

This flight also will bring astronaut Daniel Tani to the station, allowing Expedition 15/16 Flight Engineer Clayton Anderson to return to Earth from the space station aboard Discovery. Tani will return on shuttle mission STS-122.

The STS-120 mission will bring the Harmony module, christened after a school contest, to provide attachment points for European and Japanese laboratory modules.



IN BAY 3 of the Orbiter Processing Facility, workers oversee the lowering of the tool storage assembly unit into Discovery's payload bay, where it will be stored. The tools will be used on a spacewalk during mission STS-120. In an unusual operation, the payload bay doors had to be reopened after closure to accommodate the storage.

## Reinarts prepares Dawn mission for Launch Services

By Linda Herridge  
Staff Writer

As the launch date nears for NASA's Dawn mission, Tom Reinarts reflects on key turning points in his career that brought him to his current positions as the NASA deputy chief engineer for the Launch Services Program and the Dawn mission chief engineer at the Kennedy Space Center.

With a nuclear engineering background, Reinarts worked on advanced space power concepts while earning a doctorate in nuclear engineering from Texas A&M University in 1993. His studies included thermal control of space nuclear designs and advanced cooling techniques.

While doing postdoctoral studies at Johnson Space Center from 1993 to 1994, he had the opportunity to work on the precursor to the International Space Station. It was then that he made the leap to aerospace engineering.

"I've always been fascinated by space travel and the space program," Reinarts said.

His work as the Dawn mission chief engineer gives him a unique perspective. In this role, he represents the technical authority for NASA with respect to the launch vehicle and works with United Launch Alliance to ensure the vehicle is ready to launch the spacecraft.

(See REINARTS, Page 2)



TOM REINARTS of the Launch Services Program is the chief engineer for the Dawn mission scheduled to lift off Sept. 26.



**Pat Simpkins**  
Engineering Director

## Director's Update

Nearly a year ago, Kennedy Space Center created an Engineering Directorate to better align itself with both NASA's Exploration initiative and how the agency has emphasized the need for independent technical authority and engineering excellence, separate from the programs and projects being supported.

That's quite a mouthful of words to describe simple matrix engineering.

Two of the key objectives of the new directorate are to improve application of our operational expertise to meet current and future program challenges, and to stand up a fully functioning organization that successfully supports current and evolving Exploration requirements.

In order to support Exploration, the center joined together both operational engineering and ground systems design and development capability in the new organization. Due to the diversity of depth of experience leveraged in the new organization, expertise from multiple spaceflight projects have been applied to provide the best possible engineering solutions to Constellation's needs.

This support has ranged from ground projects such as the new mobile launcher and emergency egress systems, to flight systems such as the Ares 1-X test flight.

The directorate leveraged existing chief engineers, systems, subsystems and design engineering capabilities to continue to support current programs while

providing engineering excellence to Constellation. Indeed, of the 460 engineers in the new directorate, 412 are working on more than one program or project.

This is a feat enabled through the new matrix engineering organization.

The new Engineering Directorate focuses on the basic tenets of integrity, credibility and capability. We have an open communicative relationship with all of our clients and customers. We strive to do what we say we're going to do and deliver results.

We are enhancing the expertise and experience we have in order to make our promises come to life.

With the "capability" tenet in mind, the Engineering Directorate

community. Jack Fox, the Management Support Office manager, moonlights as the "dean" of the KEA.

Presenters to date have highlighted a variety of topics, including fluid systems leak check technologies, umbilical systems design and a panel discussion on the KSC perspectives on Apollo 13. These and others will be available for viewing in October on the KEA Web site at <http://kea.ksc.nasa.gov>. System engineering and integration and the concept of matrix management continue to be works in progress, and questions about roles and responsibilities still get asked.

The answers to these questions will come to light as we fulfill our

**"Indeed, of the 460 engineers in the new directorate, 412 are working on more than one program or project."**

commitment to continue flying the space shuttle and complete construction of the Interna-

tional Space Station; continue to send probes to study our Earth and the rest of the universe; and prepare to go back to the moon, then travel to Mars and the stars. It all starts here at KSC and the Engineering Directorate is dedicated to making it happen.

created the KSC Engineering Academy, or KEA, to bring engineering resources together to create a culture of engineering excellence in which engineers learn continuously, inquire constantly and share openly within and beyond the engineering

## September NASA employees of the month



THE SEPTEMBER NASA employees of the month include, from left, Tiffany Nail, Launch Services Program; Kenneth Hosterman, Engineering directorate; Debra Kral, Constellation Project Office; Tim Bianchi, Cape Canaveral Spaceport Management Office; Janice Nieves, Procurement Office; Robert Yaskovic, International Space Station and Spacecraft Processing; and Gail Villanueva, Center Operations. Not pictured are Geoffrey Swanson, Chief Counsel Office; William Sloan, Information Technology and Communications Services; Eblan Farris, Engineering Directorate; and Andrew Stampfel, Safety and Mission Assurance.

### Reinarts . . .

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Reinarts is also responsible for NASA's engineering assessment of the vehicle.

Prior to his current position, Reinarts was a thermal analyst and then became a vehicle system lead in 2003. His responsibilities included reviewing the hardware qualification of the Atlas V 500 series vehicle for the New Horizons mission which launched on Jan. 19, 2006.

"One of my most memorable times was working on the New Horizons mission," Reinarts said.

He also worked on the high-profile Mars Exploration Rovers Spirit and Opportunity. Reinarts said the launch vehicles for both missions had significant thermal concerns. He interfaced with launch vehicle providers on the engineering side.

"It was a lot of hard work to

help these spacecraft get to where they are and how successful they've become," Reinarts said.

He's looking forward to being involved in the Lunar Reconnaissance Orbiter mission to map the moon. It is currently scheduled to launch in October 2008 on an Atlas rocket.

"This has been the most exciting and interesting work I've ever done," Reinarts said. "We work with a wide variety of launch vehicles and it's great to be involved in the NASA spacecraft launches."

He also worked on the shuttle solid rocket boosters for USBI and then United Space Alliance from 1997 through 1999, before joining NASA in 2000.

Reinarts and his wife, Robin, have an 11-year-old son, Nick. He is a member of a local spina bifida support organization and participates with his son in the Boy Scouts.

# Tenbusch ensures Endeavour goes with the flow

By Jennifer Wolfinger  
Staff Writer

**K**en Tenbusch's future responsibilities as Endeavour's new flow manager can be summed up in a simple statement: He'll ensure Endeavour will safely fly and meet the program mission objectives. While the words are fairly straightforward, the work he'll perform is anything but.

"I will be in a non-stop stage of learning," said Tenbusch, who will assume the new role in October and replace Tassos Abadiotakis. "One of the greatest challenges is developing a working knowledge of the numerous complex systems that make up the vehicle: ground systems, payload interfaces, propulsion elements and the orbiter."

On a regular basis, he will integrate all of the vehicle turnaround requirements, mission-specific configurations and crew requirements from landing through launch to meet all of the Space Shuttle Program milestones, and provide a safe vehicle to meet the mission objectives.



KEN TENBUSCH is the flow manager for space shuttle Endeavour. He joined NASA in 1989, working on the external tank.

He's also prepared for the fast pace and demands that he'll encounter as launches approach, knowing that he can rely on the experienced teams dedicated to launch pad and vehicle operations and control room tests.

"I'm excited about working with a great vehicle processing team and the challenges associated

with readying a vehicle for spaceflight," he said.

Tenbusch joined NASA in 1989 as an external tank mechanical systems engineer, became a NASA test director in 1994, supported landing operations from 1998 to 2003, and started work as the external tank/solid rocket booster operations manager in

2003.

He spent the last few years working with the Marshall Space Flight Center's Reusable Solid Rocket Booster Project team. He appreciates that his past and upcoming opportunities are unique.

"The orbiter fleet and shuttle propulsion elements have successfully supported the NASA mission for many years. A lot of blood, sweat and tears have gone into these vehicles, many good memories," he said.

"Being a part of the team that prepares the vehicle for the remaining missions will bring all of those memories back."

Tenbusch earned a bachelor's degree in aerospace engineering from the University of Florida in Gainesville, and a master's in business administration from the University of Central Florida in Orlando.

He takes great pride in his family. "I have been happily married to my best friend, Andrea, for 14 years and we have three great children: Daniel, 11, Steven, 10, and Catherine, 7," he said. "They mean the world to me."

## KSC volunteers tell NASA story to thousands of visitors

By Linda Herridge  
Staff Writer

**A**lmost 365 days of the year, the External Relations Directorate relies on assistance from volunteers to tell the "NASA story" to hundreds of special guests and VIPs who tour the Kennedy Space Center. During launch days, the need for volunteers greatly multiplies.

Jane Kleinschmidt is the manager of the directorate's Public Service Division volunteer program, which has been active for about 25 years. It includes close to 400 NASA and contractor employees, and a group of 80 dedicated retiree volunteers who give their own time to serve as tour guides, bus escorts, viewing site hosts and hostesses, media escorts and NASA Guest Center staff.

"The volunteer program, for us,

is vital at KSC," Kleinschmidt said. "It is an opportunity for our volunteers to tell the public what the space program does for them."

Volunteers have escorted VIP guests including presidents, vice presidents, international dignitaries, members of royalty, actors and actresses, race car drivers, government leaders, veterans and business leaders.

During launches, the volunteers work at all the viewing sites, including the NASA Causeway, Banana Creek, Turn Basin, Press Site and Operations Support Building-II. Kleinschmidt said there is also a core team of volunteers who work at the NASA Guest Center at the KSC Visitor Center to check in guests for launch activities.

Retiree Bob Merrilees recently toured a group of people around

(See VOLUNTEERS, Page 7)



NASA EMPLOYEES from the Kennedy Space Center who also serve as viewing site hosts include, from left, Vickie Hall, Valencia Mitchell, Debbie Billias, Penny Hale, Dexter Westbrooks, Brenda Davis, Greg Hale, Maria Zaparta, Kevin Heard, Christine Wilson, Lisa Singleton, Lynn Barnette, Cindy Kirkpatrick, Alex DeCamargo, Ken Young (wearing hat), Lorene Williams, Kathy Parker, Craig Parker, Joy Pickett, Joette Feeny and Anna Contreras.

## 2007 Diversity Event speaker encourages 'eyebrow raisers'

By Jeff Stuckey  
Editor

**W**hile speaking in character as the late Albert Einstein, Dr.

Arden Bercovitz introduced attendees at the 2007 Diversity Event to a new NASA metric. For government agencies, metrics are documents written about the work performed by an individual or group.

"The metric is 'Are you willing to raise eyebrows?'" Bercovitz said. "Also, are you willing to raise eyebrow raisers?"

He suggests each individual find a way to say something that makes the person they are talking to raise their eyebrows. The eyebrows are a very powerful monitor of whether people are listening and indicate some measure of understanding, he said.

Bercovitz was the guest speaker at the Sept. 8 event themed "Altogether Different" at the Radisson Resort at the Port Pavilion, where he shared different methods of affecting the way people see things and communicate.

"I want to teach you how to create time to think," said Bercovitz, complete with a full white wig and German accent. "It involves what psychologists call creative pause. It is a way to relax, retreat and recreate before you answer a question."

A simple response strategy when someone asks a question and wants a quick answer is to repeat the question back to them, he said. It will take two to three seconds, which will provide time to think about a response.

"Most of your day is not so urgent that you can't take two to three seconds to give the best answer, not your quick answer," he said.

Bercovitz asked the audience to remember the phrase, "Creativity is seeing what everyone sees and thinking what no one has ever thought."

Tara Gillam, manager of the Office of Diversity and Equal Opportunity at the Kennedy Space Center, emphasized the importance of diversity in the Kennedy work force.

"We take time to recognize that each of us brings something unique to this incredible mission of ours," Gillam said. "It is not our sameness that has made America the great explorers of space, it is our differences, and the creativity and ingenuity that stem from those differences is what counts."

Gillam believes the need for cultural awareness is critical for businesses and government agencies to thrive.

"If we are truly to value the input of everyone, we have to allow for every voice to be heard," she said. "We have to allow for every option to be considered."



DR. ARDEN Bercovitz (above pointing) talks to the audience, including Center Director Bill Parsons (standing left), during the 2007 Diversity Event. At left, Donna Stubbs (right) receives a certificate of appreciation from Cindy Gooeden of the Office of Diversity and Equal Opportunity.



MEMBERS OF the Kennedy work force, along with family and friends, socialize at the 2007 Kennedy Space Center Diversity Event (above) themed "Altogether Different" at the Radisson Resort at the Port Pavilion.

## Second annual KSC Stress Out Days offer health programs, prizes

**T**here are days when it's going to happen: stress. Although everyone has his or her own way of dealing with this byproduct of life, we can all use tips on how to cope. The second annual Kennedy Space Center Stress Out Days are an answer.

Visit the Operations and Checkout Building's Mission Briefing Room from 11 a.m. to 2 p.m. on Oct. 3, or the Operations Support Building II's 5th floor Conference Room from 11 a.m. to 3 p.m. on Oct. 4, to take advantage of free demonstrations, such as dance, reiki and yoga.

Vendor booths will feature KSC occupational health programs, free massage, spa services with free mini facials, recreational and leisure activities, acupuncture, relaxation therapies, counseling, mental health and caregiver services, vacation and financial planning, and more.

Attendees will also have a chance to win prizes, such as leisure activities, books, spa visits, and dance and movie passes. Early participants will receive stress squeeze balls! For information, call 867-3414 or 867-4566.

# Astronauts bring NASA magic to Disney

By Anna Heiney  
Staff Writer

**F**ive... Four... Three... Two... One... A voice over the loudspeakers counted down as the crowd waited in anticipation outside the "Mission: SPACE" attraction at Walt Disney World's Epcot Center in Orlando.

Finally, with a thundering *whoosh* and an explosion of smoke and confetti, a glass plaque bearing the inspirational words of astronaut Barbara Morgan was unveiled as onlookers cheered.

"Reach for your dreams...the sky is no limit," states the plaque outside the ride that takes guests on a simulated journey into space.

The plaque dedication was part of Disney World's "NASA Space Day" celebration on Sept. 10 in which the seven astronauts who flew aboard space shuttle Endeavour on the STS-118 mission were honored for their hard work in space with a visit to "the happiest place on Earth." Throughout the day, students and theme park guests gathered to listen as the blue-suited astronauts answered questions and shared stories of



DURING A special event at Walt Disney World honoring the crew of space shuttle mission STS-118, Mission Specialist Barbara R. Morgan (left) helps dedicate a plaque outside the Mission: Space attraction. At right are Vice President of Epcot Jim MacPhee and NASA Assistant Administrator for Education Joyce Winterton.

their spaceflight experiences.

A special education session gave students from Orlando-area schools the opportunity to speak with Commander Scott Kelly, Pilot Charlie Hobaugh and Mission Specialists Tracy Caldwell, Rick Mastracchio, Barbara R. Morgan, Alvin Drew and Canadian Space Agency

astronaut Dave Williams. Local fourth- and fifth-graders joined students from the Oak Ridge High School Aviation and Aerospace Academy Magnet Program, and the Osceola High School Aviation Academy.

One student asked which was the most difficult and challenging obstacle the astronauts faced.

"Everybody has a different challenge or obstacle that they have to overcome," answered Mastracchio. "One of the things that I ran into is when I graduated from college, I wanted to be a military pilot, so I went to join the Air Force or the Navy or the Marines."

Mastracchio went on to explain that because he has to wear glasses or contacts to improve his vision, he couldn't be a pilot, so he decided instead to work for NASA as an engineer.

"I kept putting in astronaut application after astronaut application, and eventually got selected as an astronaut and got to fly in space two times," Mastracchio said.

"So even though you meet obstacles, there are always ways around those obstacles to achieve your goals and make your dreams come true."

Education has been a strong focus for the STS-118 crew members, who participated in a

series of question-and-answer sessions with students on Earth during the 13-day mission in August. The assembly flight to the International Space Station was highlighted by the installation of the two-ton S5 truss segment, a high-tech girder that extends the length of the station's backbone by 11 feet.

The astronauts also activated the new Station-to-Shuttle Power Transfer System, which allows a docked shuttle to draw power from the outpost, making more time for station construction.

While at Disney, the astronauts also took the time to answer questions from enthusiastic park guests. Five-year-old Kaitlyn Brown was visiting the theme park with her father, Clyde, who happens to be a NASA contractor employee at the agency's Langley Research Center in Virginia.

Kaitlyn asked how long it takes to adapt to space. "It's different for every person," Morgan answered, remembering that she felt upside-down at first. "But I got used to it, and that's when the fun starts."

As the day drew to a close, the crew members served as honorary grand marshals of the Magic Kingdom's afternoon parade. Families gathered on the sidewalks in a drizzling rain along the park's famed Main Street to watch and applaud as the astronauts waved.

Ariel Katz, a 7-year-old visiting from Brooklyn, N.Y., watched with excitement as the crew passed by. "I was out of my mind when I saw the astronauts!" the second-grader breathlessly exclaimed afterward.

The boy's mother, Helene Feit-Katz, said they were simply visiting the Magic Kingdom on vacation when they found out the STS-118 crew was there. "It's a pleasant surprise. I never expected this," she said. "It's amazing. You don't know what this does for Ariel."

As it turns out, one of the major highlights of the family's trip to Florida was a visit to Kennedy Space Center. It's a small world, after all.



MEMBERS OF the space shuttle mission STS-118 crew march down Main Street at Walt Disney World. From left are Mission Specialists Alvin Drew, Barbara R. Morgan and Dave Williams, Pilot Charlie Hobaugh, Mission Specialist Tracy Caldwell and Commander Scott Kelly. Not pictured but present is Mission Specialist Rick Mastracchio.

# Inaugural World Space Expo celebrates 50 years in space

## Weekend air show features U.S. Air Force Thunderbirds

**W**orld Space Expo is a unique event to celebrate space history and look forward to exploring the moon and beyond. The event, set for Nov. 1 through 4 at the Visitor Complex, will also highlight the deep ties between NASA and the U.S. Air Force in the past, present and future.

NASA and the Air Force are partners for all human space launches, as well as numerous scientific unmanned space exploration missions. NASA and the Air Force will jointly celebrate "50 Years in Space" and the "60th Anniversary of the Air Force."

Among the many featured participants for the four days will be renowned aerospace heroes John Glenn and Scott Carpenter and the Pioneering Women of Aerospace forum, featuring Eileen Collins and other prominent female space veterans.

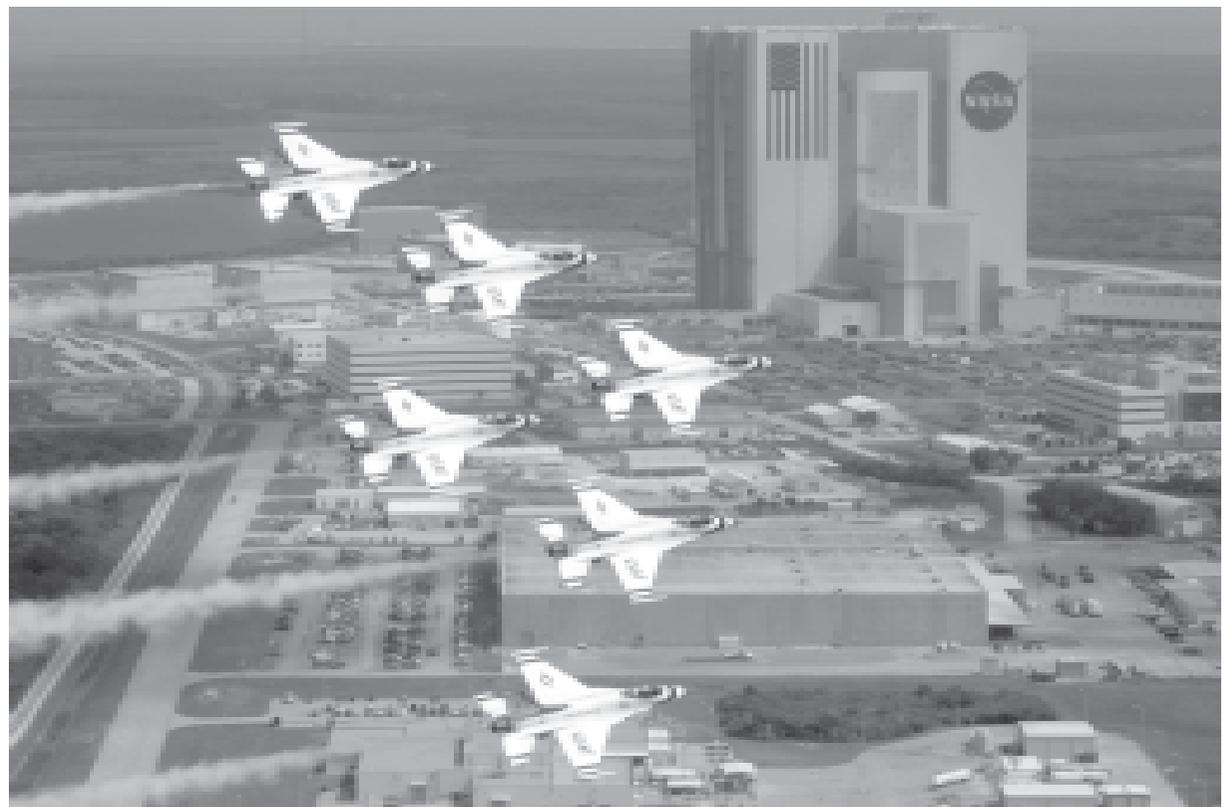
Major events include:

### **Aerial Salute to 50 Years in Space — Nov. 3-4**

All the aerial acts flying in the space expo will highlight the rich cooperation between the military and NASA. The Air Force Thunderbirds and the other Air Force demo teams, including the F-22 Raptor, will salute the military branch's support to the space program by celebrating together with NASA. In an employee-only opportunity on Nov. 2, NASA and the 45th Space Wing will stand side by side on the NASA Causeway and salute the incredible achievements this partnerships has yielded over the past half century. More details will be released soon.

### **Exploration Showcases: Space Florida Commercial Space Pavilion**

The Space Florida Commercial Space Pavilion will feature displays and products from emerging private entrepreneurial companies. Sponsored by Space Florida, confirmed exhibitors include SpaceX, the Federal Aviation



U.S. AIR Force Thunderbird F-16 jets fly in formation past the Vehicle Assembly Building. The Thunderbirds will be part of the inaugural World Space Expo, hosted by the Kennedy Space Center, from Nov. 1 to 4.

Administration's Office of Commercial Transportation and the X Prize Foundation, featuring a full-scale model of SpaceShipOne.

### **NASA Pavilion**

The NASA Pavilion will feature displays from NASA centers across the country, showcasing their unique areas of expertise. NASA's 50th anniversary touring exhibit and an aerospace design art exhibit will celebrate NASA's heritage.

### **Human Exploration Pavilion**

This pavilion will feature NASA's major partners in Human Exploration who will showcase both current Space Shuttle and International Space Station Programs, as well as preview future human exploration, Project Constellation.

### **Early Space Exploration**

The Early Space Exploration exhibit will host an historic flown Vostok capsule, Russia's first habitable spacecraft flown in the early 1960s.

### **World Space Amphitheater**

Featuring a 16-by 9-foot outdoor video screen, stage and sound, this amphitheater will feature activities throughout each day, breaking only for the air show. A schedule of speakers will keep audiences

focused on space, including select Space Florida Space Days activities, educational programming and high-altitude weather balloon releases which feature live video feeds from the edge of space. Confirmed speakers include astronauts John Glenn, Scott Carpenter and Eileen Collins; chairman and president of the X Prize Foundation and founder, chairman and CEO of Zero Gravity Corporation Peter Diamandis; FAA associate administrator Patricia G. Smith; the first female space tourist, Anousheh Ansari; and U.S. Air Force Thunderbirds pilots.

### **Science on a Sphere**

The National Oceanographic and Atmospheric Administration's "Science on a Sphere" will allow attendees to examine the planets and moons of the solar system and learn how space technology can aid in meteorological sciences, such as hurricane prediction.

### **Commercial Space Day 2007, Nov. 1**

Hosted by Space Florida, this event is designed for space industry representatives doing or looking to do business in the state. Florida Lt. Governor Jeff Kottcamp is expected to attend.

### **Space Florida Next Generation Explorers Program, Nov. 1-2**

The Next Generation Explorers Program, sponsored by Space Florida, will immerse 3,000 sixth-through eighth-grade students from across Florida schools in interactive, informative and inspiring experiences designed to motivate them to study math and science. Students will rotate through the following activities: Tour of the Universe program; Science on a Sphere; Cool Space Careers question-and-answer sessions with astronauts, scientists and engineers; and more. Tickets can be purchased online at [www.KennedySpaceCenter.com](http://www.KennedySpaceCenter.com). Admission to World Space Expo, including regular admission to Kennedy's Visitor Complex, is available at a special prepurchase rate of \$28 plus tax for adults and \$18 plus tax for children 3-11 years. This represents a \$10 savings on a Visitor Complex admission and allows for one day of admission between November 1 and 4. A special discounted rate of \$15 is available for KSC and 45th Space Wing badged employees and their family members.

# Remembering Our Heritage

## 40 years ago: Intelsat-D began communications service to Pacific

By Kay Grinter  
Reference Librarian

The Kennedy Space Center Unmanned Launch Operations, or ULO, team was working late - again - on Sept. 27, 1967. Intelsat-D, the fourth in the Intelsat II series of commercial communications satellites, was launched from Pad 17B on Cape Kennedy at the beginning of a 40-minute window that opened at 8:45 p.m. EDT.

The Hughes-built satellite was owned by the International Telecommunications Satellite Consortium and operated for them by the Communications Satellite Corp.

The launch vehicle was a McDonnell Douglas Thrust-Augmented Delta, or TAD, a three-stage vehicle with a Thor first stage and three strap-on solid propellant boosters.

This configuration, often simply called Delta, was highly successful in launching Echo, Explorer, Tiros, Syncom, Orbiting Solar Observatory, Intelsat, and other scientific and applications satellites.

Dale Steffey was the McDonnell Douglas launch conductor for the Delta on this mission and became the Delta Program manager at Kennedy in 1974.

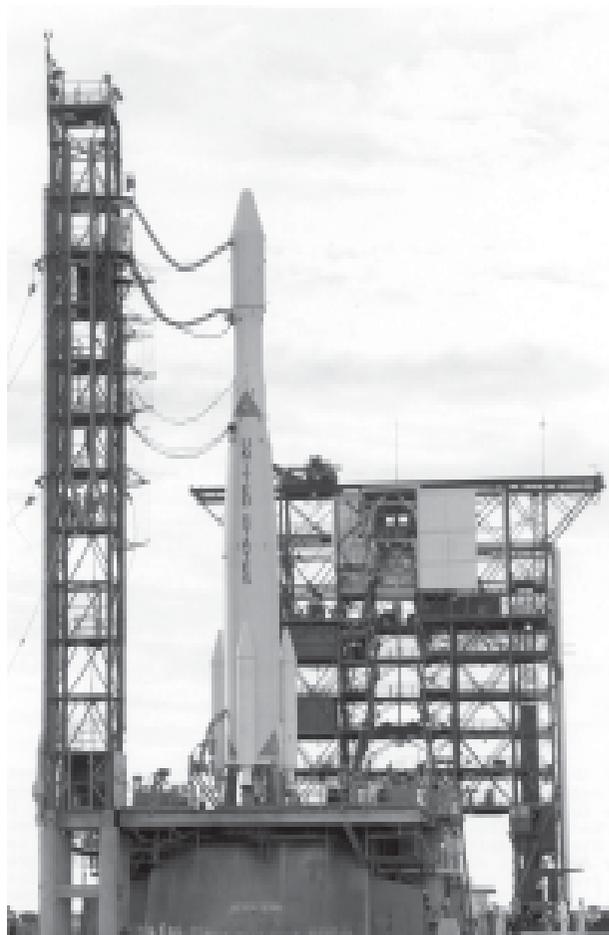
Now retired, he explained from his home on Cocoa Beach, "The term 'thrust-augmented' meant that the Thor stage had the assistance of solid motors." The TAD had a total thrust of 333,500 pounds.

During the final three days of the countdown, Steffey was stationed in the blockhouse only a few hundred yards from the pad. "At main engine ignition, the blockhouse shook like we were in a hurricane," he recalled.

Standing beside Steffey in the blockhouse was NASA test controller Ray Norman. "We gave a 'thumbs-up' to Launch Director Bob Gray to visually signal our readiness to launch," Norman recalled from his home on Merritt Island.

"A propulsion systems engineer manually pushed a button to start the main engines and signal the vehicle to lift off. There was a momentary delay in the clock at T-0 until the liftoff signal from the Delta's sequencer was received in turn."

Norman worked about 150 launches for NASA beginning in 1962. "I often think how fortunate I was to have worked for the agency. The NASA managers in ULO — Fred Stevens, Bob Gray, John Neilon, Jim Johnson and others — were the most technically proficient people with whom I ever had the privilege to work,"



THE INTELSAT-D satellite was launched from Pad 17B on Cape Kennedy on Sept. 27, 1967. The rocket was a Thrust-Augmented Delta, or TAD, a Thor first stage with three solid propellant boosters.

Norman said.

Dubbed Pacific II after launch, the satellite's apogee motor was fired on Sept. 30, kicking it into a synchronous orbit over the Pacific Ocean to join the Pacific I satellite, launched earlier in the year on Jan. 11.

The new satellite provided 24-

hour transoceanic commercial communications and served as a microwave station in space, relaying telephone, teletype and other transmissions between ground stations in Thailand, Australia, Japan, the Philippines, Hawaii and Washington until it was taken out of service in 1971.

## VOLUNTEERS . . . Continued From Page 3

the center. During his 38-year career with NASA, he spent some time as a community relations officer.

"I really enjoy working with people," Merrilees said. "It's important to show people what we do and gain their support — especially with the new (Constellation) Program coming up."

Merrilees said he's been honored to escort groups of wounded veterans to the last two space shuttle launches.

"The retirees have a wealth of knowledge and experience. It's more than a job to them," Kleinschmidt said.

Tom Overton, a multifold integration manager in shuttle processing, has served as a VIP escort for 35 years. He considers it a privilege to be entrusted with the responsibility of representing KSC to guests. "I am enthusiastic about the space program and the support from our guests continues to uplift and inspire me," Overton said. "I always get pumped up after a tour."

One of Overton's most memorable experiences was touring NATO representatives and comparing photos of grandchildren with the prime minister of Bulgaria. Among the other VIP guests he toured were First Lady Laura Bush, Massachusetts Sen. Ted Kennedy, producer George Lucas and actor John Travolta.

Many of the volunteers take time to research information about their groups to find a connection to the space program and make their visit a personal and positive experience.

Volunteer training is done annually by the External Relations Directorate and includes updates from all of NASA's programs, a refresher on safety and security policies, protocol guidelines and an updated Public Services escort/tour guide reference manual.

"We need to keep telling the NASA story — past, present and future. We want to inspire the next generation of explorers, and the volunteers really help us do that," Kleinschmidt said. "External Relations could not accomplish its mission without the assistance of these dedicated volunteers."

# Visitor Complex offers ‘Salute to Brevard Residents’ free weekend

To show its gratitude for 40 years of support from Brevard County residents, the Kennedy Space Center Visitor Complex is hosting the eighth annual “Salute to Brevard Residents,” a free-admission weekend and food drive Sept. 21-23.

Brevard residents and up to five guests will enjoy free admission to the Visitor Complex for this celebration. Residents will need to show proof of residency in the form of a driver’s license or utility bill.

Guests are encouraged to bring canned goods and non-perishable food items to benefit the Central Brevard Sharing Center, North Brevard Charities, and South Brevard Sharing Center. While not

mandatory for complimentary admission, the suggested donation is one food item or canned good per guest.

All Kennedy and Cape Canaveral Air Force Station badged employees and up to five guests, whether they live in Brevard County or not, will also receive free admission by presenting their badge.

In addition to helping a good cause, Brevard residents can experience the new Shuttle Launch Experience, an incredible simulation of vertically launching into space and orbiting Earth aboard NASA’s space shuttle. Complimentary admission also includes the Kennedy Space Center Tour, 3D IMAX space films, Astronaut



THE KENNEDY Space Center Visitor Complex will host the eighth annual “Salute to Brevard Residents” weekend on Sept. 21-23.

Encounter and the U.S. Astronaut Hall of Fame, featuring historic spacecraft, simulator rides and the world’s largest collection of

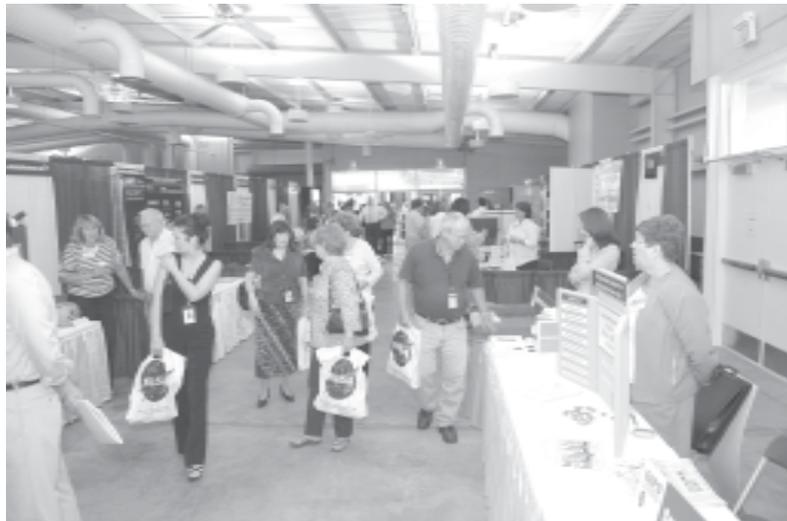
personal astronaut mementos. For more information, call 321-449-4400 or visit [www.KennedySpaceCenter.com](http://www.KennedySpaceCenter.com).

# 2007 EXPO Trade Show features more than 175 exhibitors

Small businesses will not want to miss the unique opportunity to network with more than 175 businesses and government exhibits at the annual EXPO Trade Show from 9 a.m. to 3 p.m. on Oct. 16 at Port Canaveral Cruise Terminal 4. The event is sponsored by the NASA/Kennedy Space Center Small Business Council, 45th Space Wing and Canaveral Port Authority. Exhibitors include vendors from a variety of products and services.

Representatives of NASA, the 45th Space Wing and prime contractors will be available to answer specific questions about doing business with their respective organizations. Admission, parking and exhibitor booths are free. Lunch will be available for purchase.

For more information, please call 321-867-7353 or e-mail the EXPO representatives at [KSC-EXPO@mail.nasa.gov](mailto:KSC-EXPO@mail.nasa.gov). Businesses can send mail to the KSC Small Business Council at 7110 North Courtenay Parkway, Merritt Island, FL 32953.



THE ANNUAL EXPO Trade Show will be held Oct. 16 at Port Canaveral Cruise Terminal 4. Pictured is one of many rows of exhibitors from 2006.

## Do you know an environmental or energy conservation steward?

The Kennedy Space Center Environmental and Energy Awards Program recognizes individuals and teams who have demonstrated environmental and energy management leadership by enhancing the environment, conserving energy and preserving natural resources.

The award covers accomplishments for fiscal year 2007. Selection criteria are based on innovative technology, innovative programs/processes, stewardship and outreach, impact to mission, scope of the impact, ingenuity/creativity, and teamwork/collaboration.

The categories are 1) Sustain-

able or ‘Green’ Purchasing, 2) Education, Outreach and Awareness, 3) Energy Conservation and Use of Renewable Energy, 4) Water Conservation, 5) Sustainable Design/High-Performance Buildings/Leadership in Environmental and Energy Design (LEED), 6) Environmental and Energy Leadership, 7) Hazardous Waste Management, 8) Historic/Archaeological Preservation, 9) Natural Resources/Habitat Conservation, 10) Recycling and 11) Pollution Prevention. Send an e-mail for the nomination form to [Barbara.A.Naylor@nasa.gov](mailto:Barbara.A.Naylor@nasa.gov). The deadline is Sept. 26.



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.

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