



# Spaceport News

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John F. Kennedy Space Center

## KSC personnel participate in ocean study

Scientists and engineers from KSC are participating in a research project that characterizes the condition of the Oculina Banks and its coral habitat and fish populations. The research will take place onboard the *Liberty Star*, the NASA Space Shuttle support ship operated by United Space Alliance, which departed from Port Canaveral April 29 and returns May 9.

The Oculina Banks stretch 30 miles offshore from Ft. Pierce to Cape Canaveral and include the East Coast's first Marine Protected Area (MPA). The ivory tree coral, *Oculina varicosa*, has constructed various mounds and ridges in water depths of 150 to 300 feet underneath the Gulf Stream, and this supports more than 70 fish species.

In addition, the most valuable fishery species for the southeast U.S., shrimp, are plentiful on the

(See OCULINA, Page 8)

## KSC workers proud to be Reservists

More than 50 NASA KSC civil servant and contractor employees are serving in the U.S. armed forces reserves. Some were called recently, while others have been serving for more than a year. Many are stationed thousands of miles away from home and family.

The U.S. Air Force Reserves recently called Vicki Miletello, NASA Spaceport Management Office customer service specialist, to report April 4. "I never knew what it was like to feel 10 emotions running through my head and heart at one time," Miletello commented after receiving her orders.

"I am honored to have been called to duty. I truly believe in the founding fathers of this great nation and the three great documents we are governed by.... I also believe in all those who have given their lives so we can maintain this great Republic." Miletello serves in the 920th Rescue Group and deployed from Patrick Air Force Base (PAFB) to an undisclosed location.

Albert Gibson, NASA quality assurance specialist, is with the Combat Rescue Unit at PAFB. He was called to Air Force duty for one year in December 2001, with a possible 12-month extension. He returned home for the birth of his daughter, Taramina Kiara, and then was deployed to Asia in February 2002. He came home to be with his family for Christmas last year, returned to Southeast Asia shortly after and will serve through September.

He wrote during the war, "I'm in a warehouse with



These four NASA KSC Quality Engineers (from left), Enrique Barnes, Matt English, William Feller and Al Gibson, are serving as reservists in the war with Iraq.

180-plus guys, sleeping in one big, open bay. Lights only come on when alarm red sounds (an attack siren). You live by the flashlight and have to put on all your gear to go to the bathroom, showers and do laundry."

Rick Rodriguez, NASA quality assurance specialist, was called to duty for the U.S. Air Force Reserves last November. NASA ISS Payload Processing Director Tip Talone said, "Rick is an upbeat, positive thinking, proud to be an American-type person who left a large void within the ISS Payloads Processing

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## Space Congress opens with message from Sean O'Keefe

NASA Administrator Sean O'Keefe was the keynote speaker April 29 at the 40<sup>th</sup> Space Congress held in Cape Canaveral. "It's a

pleasure to be here in Florida and back on the Space Coast," said O'Keefe.

"We need to get back to a re-

turn to flight. We have a tremendous responsibility to do it right and do it diligently.

The Columbia Accident Investigation Board has been extremely diligent and this is very important for the public to understand."

The near-term vision is a return to flight and to maintain the Shuttle fleet, according to O'Keefe.

"A mid-term vision is to have an Orbital Space Plane in order to launch on near demand," he said.

"The long-term vision is to develop the next generation launch technology in concert with our partners in order to achieve our exploration objectives. The Russians have stepped up in a remarkable way to assist us in ISS maintenance."

# Recognizing Our People

## Williams receives fellowship for postgraduate science studies

To assist NASA in future development of extended human existence in space as part of solutions to microgravity, communications and tracking engineer Deon Williams has received the Hugh Dryden Memorial Fellowship.

Selected NASA applicants received this honor for career goal development in acquiring advance degrees, such as a master's or Ph.D.

Williams, working toward his doctorate in medical physics, will use this education accomplishment to assist NASA in science and engineering.

His work at Kennedy Space Center's International Space Station Avionics Branch ensures flight hardware meets technical,

safety and mission requirements. Meeting these requirements ensures a high yield of science as an end product, on orbit, in microgravity.

Williams, who holds an Alabama A&M University bachelor of science degree in physics and master's degree in applied physics and material science, also supports testing and planning activities, as well as assessment of processing changes and much more.

"I am excited, intensely, about the opportunity and flexibility provided by the fellowship to undertake concentrated study of long-range technical and scientific problems, in NASA-oriented disciplines," said Williams.

"Some of these are engineering



Deon Williams

payload processing, developmental study in microgravity research, human biological research and deep space travel. The sky is the limit!"

## Four KSC employees earn management certification

KSC Director Roy Bridges Jr. recently recognized four NASA KSC employees for completing the Project Management Development Process (PMDP). NASA created the PMDP to prepare project managers for future tasks and to create a level of project management consistency throughout the Agency.

The PMDP consists of four career levels that reflect increased responsibilities and performance expectations as employees develop in their careers.

"I appreciate your taking the time and energy to complete these programs and become certified," said Bridges.

Level III certificates of completion were presented to Hector Delgado, Safety, Health and Independent Assessment Directorate, and Rita Willcoxon, Spaceport Engineering and Technology Development Directorate.

A Level II certificate of completion was presented to Keith Britton, Spaceport Engineering and Technology Development Directorate.

Howell Hilton, Spaceport Engineering and Technology Directorate also earned his Level III certificate of completion.

Currently, 34 KSC employees are enrolled in the PMDP. For more information, contact Michele Martin at 867-9088 or e-mail [Michele.Y.Martin@nasa.gov](mailto:Michele.Y.Martin@nasa.gov).



## Reconstruction team hails spirit of Columbia

Members of the Columbia Reconstruction Project team show their team spirit around an enlarged replica of the STS-107 crew emblem delivered to the RLV Hangar. The emblem is now on the outside front wall of the hangar. At press time, ground search teams have completed approximately 80 percent of their primary search area, airborne spotters have finished more than 80 percent of their assigned areas, and underwater search operations were completed. More than 70,000 items, weighing more than 78,000 pounds and about 37 percent of the Shuttle by weight, have been delivered to KSC for use in the investigation.

## Four earn QASAR Award for contributions to NASA

Four NASA and contractor employees of Kennedy Space Center were honored this quarter with the Quality And Safety Achievement Recognition (QASAR) Award.

The QASAR recognizes individuals who have displayed exemplary performance in contributing products and services, and a safe environment and processes for NASA.

The QASAR Award is sponsored

by NASA Headquarters' Office of Safety and Mission Assurance. The director of KSC's Safety, Health and Independent Assessment Directorate makes the final selection of QASAR recipients at the space center.

### The honorees

- **John Jackson** (NASA) – recognized for his persistence and thorough operational leadership in

support of safe ammonia load tasks for the International Space Station program.

- **Kenneth Lee** (Analex) – recognized for his vigilant observations, which averted several serious impacts to the ICESat/CHIPSat launch vehicle personnel and hardware.

- **David Shaner** (SGS) – recognized for being instrumental in reducing injuries and illnesses

within Security Services. His effort ensures safety equipment is available to the 400-plus security officers that work in the field.

- **Charles Smith** (SGS) – Because of his direct involvement, TWU employees have sustained a preeminent safety record to include significantly reduced accident and injury rates. He also played a vital role in SGS's OSHA Star Flag award.

## Benefits of diversity discussed at Training Auditorium

The "Straight Talk on Leading Diversity" seminar held recently in the KSC Training Auditorium was a unique, leadership-based approach to diversity presented by Dr. Fred Soto of Straight Talk Enterprises in Orlando. Dr. Soto, one of America's leading authorities on diversity, leadership and career success, mixed humor with hard-hitting honesty to capture his audience.

"If you're happy to be here, please tell your face," was the opening remark that set the stage for an educational, fast-paced 2-

hour presentation that kept the audience riveted.

Dr. Soto has dedicated 20 years to personal research relating how leadership affects personal success, diversity, teamwork and productivity. He encouraged audience participation and requested written questions, which were answered throughout the presentation.

His program is presented as a "comprehensive process for developing a workplace environment that is productive for all employees. It is inclusive, rather than exclusive, and addresses workplace

behaviors while understanding differences. It is not based on quotas."

Dr. Soto explained the differences between EEO and diversity: although separate, they are related. Primarily, EEO is mandatory compliance and the law, while diversity is voluntary, valuing differences of various kinds. Diversity promotes individuality and inclusion and has a focus on productivity, quality and efficiency with long-term future benefits.

Once individuals within an organization feel that they can freely

function in a culture that is open and rewards diversity of thought and ideas, then that organization will be free to tap into the infinite potential of the human mind and spirit. The main point of the speech was that diversity improves performance, productivity and motivation to effectively accomplish the mission.

Dr. Soto left the crowd with a final thought: "The future does not just happen – we, by our actions or the lack of action, can invent and reinvent the future."

## RESERVISTS. . . (Continued from Page 1)

Directorate. All of Rick's friends and co-workers are proud to know him and wish him well. We all hope and pray, that with God's help, he and all the others serving our great country will return home quickly and safely."

NASA IT Specialist Abe Negron was called to duty in late February. Of Negron, Talone said, "We're very proud of him and his service in the Air Force. We also desperately miss him, his talent, his humor and his quick laugh. During the year that he was activated, before he deployed to the war zone, we celebrated every visit from Abe. Now we're anxious to celebrate his safe homecoming."

Enrique Barnes, NASA quality assurance specialist, joined the U.S. Air Force Reserves in 1989 after three years in the Army, and was called to duty in Kuwait nearly

three months ago.

"War, in this case, was a justified, combined effort, used to liberate the Iraqi people from oppression and a ruthless dictator," said Barnes.

According to Barnes, his search and rescue missions involved an F-18 and A-10 aircraft, and several wounded Army soldiers. His work day is 12 hours with four hours of sleep "if you are lucky. The real heavy burden was the amount of maintenance

and work in order to be ready for each mission."

Milatelto summarized the resolve and dedication of the active reservists by saying, "I salute you all and will always raise my right hand to support and defend the

Constitution of the United States of America, the greatest Republic so far known to man."

NASA KSC Quality Assurance Specialists Enrique Barnes (left) and William Feller take a brief break from duties. Most reservists are working 12-hour days with four hours of sleep.



# Recovery team in East Texas draws members, volunteers

The major Columbia recovery efforts in East Texas required a cast of thousands and produced approximately 40 percent of the Space Shuttle by weight as the mission wound up in late April.

Although the task was a somber one for workers from across the country, it was a challenge that often brought out the best in those who served in the field.

"It showed us what happens when the country sees the vehicle on the ground," said Kennedy Space Center Launch Manager Ed Mango, who served as recovery director for about three months.

"We learned firsthand that people love the space program and

want to support it any way they can."

Mango vividly remembers a family's reaction February 2, the day after Columbia broke up in the skies of East Texas on its way back home to Kennedy Space Center.

Mango, accompanied by two service men and a Texas State Trooper, was surveying the suspected debris field in a U.S. Army Blackhawk helicopter.

The group came across a farm field and spied what they later learned was the Shuttle's left main tire and attached structure. The family that owned the farm greeted the helicopter landing team with open arms.

"All the men expressed sorrow for the loss, and the woman put her hand on my shoulder and said we were all in their prayers," said Mango. "The woman asked if we would fly again, as if knowing the only answer she would accept was 'Yes!'"

The encounter was just an early example of the support space program workers and others would receive from East Texas residents.

Preceding a highly organized, grid-based search that lasted for three and a half months were two weeks of recovery efforts by residents and members of the National Guard. Local restaurants, including McDonald's, provided workers free food.

NASA KSC's Gerry Schumann, the Hemphill incident commander, noted the tireless support by Roger and Belinda Gay, owners of Fat Fred's convenience store and restaurant in Hemphill.

Roger serves as commander of the local VFW post where the Hemphill recovery effort was based and Belinda as president of

the ladies' auxiliary.

The two worked nonstop with Schumann and others during the early weeks of the recovery to organize, feed and otherwise support searchers.

"These people felt called to serve and they answered the call with no thought for themselves," said Schumann. "The whole town has continued to show us tremendous support."

After the first two weeks, the search was organized by coordinating federal agencies funded by FEMA. Teams of full-time and seasonal Texas and U.S. Forest Service workers were accompanied by space program and Environmental Protection Agency workers as they scoured woods and fields for Shuttle materials for about three and a half months. The recovery groups wore chaps and other gear to protect themselves from briars and cottonmouth snakes in the woods.

Full-time and seasonal U.S. Forest Service workers were up to the rigors of the search because of



# s from KSC

their experience over the years fighting fires. Their stamina and appreciation of the space program was an inspiration to space program workers, said Jeff Angermeier, who relieved Mango at the Lufkin Command Center.

“When you work in the program all the time, you care deeply about it, but it isn’t glamorous to you. Out away from the space centers NASA is a big deal,” said Angermeier. “The townspeople and firefighters were fired up, and that fired our people up.”

NASA and contractor team members who were called upon to work 12-hour days and seven-day weeks in the field often volunteered with enthusiasm. Others not tapped sought the duty, which they called “an honor.”

David McLaughlin, a NASA technician at Kennedy Space Center’s Prototype Lab, for example, spent much effort convincing managers he would be of help on a recovery team.

During his stint in Hemphill, McLaughlin worked with the Laguna Fire Fighters, a Native Ameri-



can team from New Mexico. “I knew I couldn’t change what happened, but I could do what I could in the efforts to get us back flying again,” said McLaughlin.

“I have especially been moved by the passion and determination of my crew to push through the briars and find every piece to the puzzle they can.”

Space program team members who worked intimately with Columbia on a day-to-day basis and those who knew the fallen STS-107 astronauts personally found their service in the field both painful and rewarding.

Jim Moos, the United Space Alliance (USA) manager at the Barksdale Hangar in Louisiana, had been working as an electronics technician for two weeks before Columbia was brought to KSC March 21, 1979. It was his birthday, forever marking the date in his mind.

Through his many years of working on and with Columbia, Moos, like many others at KSC, came to see the vehicle almost as a being. During his seven weeks at Barksdale, Moos tried to focus his mind on his positive memories.

“Columbia was a good ship. She flew many successful missions. That’s what I try to think about most,” said Moos.

And Chris Meinert, a KSC team leader on the closeout crew, the USA team who inserts the crew and closes the hatch at launch, remembered kidding with Israeli astronaut Ilan Ramon in the white room just before the STS-107 launch.

Ramon was presented a “boarding pass” the closeout crew had made for him. The closeout crew signed it and Ramon took it onboard Columbia.

Meinert thought about those moments while he was working

with a recovery team in Nacogdoches.

“I wondered if any of us would come across the boarding pass. It was such a personal item,” said Meinert.

Space program workers said their service in the field was a life-altering experience. Their faith in humanity was reaffirmed because they met and worked with so many people who made sacrifices in support of the space program.

NASA KSC’s Ronnie Lawson,

who served as lead at the Nacogdoches site, said he experienced many touching moments during his tour of duty.

“It has been so uplifting to me to see people of diverse cultures from all over the country work together for the common good,” said Lawson. “In camp I heard Native American and Hispanic music being played and felt in a very poignant way that no matter what our backgrounds are, we’re all in this together.”



Photos, Top left: Space Gateway Support Security Officer Jeff Ellison signs in a worker at the Nacogdoches site. In the background, NASA site lead Ronnie Lawson (left) speaks with his United Space Alliance counterpart George Odom; Bottom left: David McLaughlin (left), Prototype Lab technician at KSC, listens to a co-worker at the Hemphill site in East Texas before going to the field with his search team; Center: members of a U.S. Forest Service search team walk a grid during a Columbia recovery search near the Hemphill site. The group is accompanied by a space program worker able to identify potential hazards of Shuttle parts. Above: Eric Baker (right), a United Space Alliance project engineer at KSC, works at the Lufkin Command Center to track hazardous tank finds; Top right: Lisa DeVries uses a sensor to test a piece of Columbia at the Barksdale Hangar for toxic fumes. DeVries, on assignment at Barksdale, La., works with United Space Alliance Safety at KSC.

## KSC employees learn about its environment and energy use

Environmental and Energy Awareness Week (EEAW) is an event employees enjoy yearly; however, each experience is unique and becomes more exciting as more groups contribute to the planning.

From April 21-23, employees were given opportunities to discover the meaning behind this year's theme, "Kennedy Space Center = Kilowatts Saved Count."

The April 21 EEAW kickoff and Earth Day celebration at the Training Auditorium featured special speaker Dr. Stuart Strahl, Audubon of Florida's CEO and president. Prior to Strahl's "Conservation in a Changing Florida" talk, which was organized by United Space Alliance, Center Director Roy Bridges Jr. discussed why KSC selected Environmental Leadership as one of its four guiding principles.

"We live and work within a wildlife refuge and we launch rockets in a wildlife refuge," said Bridges. "It seems simple to take the next step and say we like to be friends with our environmental stewards and all the critters here."

Strahl conveyed to the audience the importance of discovering and protecting Florida's potential. "Part of how we do things in con-

servation is to anticipate the future," said Strahl. "Florida is an amazing place, we have outstanding resources. People have to be aware of what the threats are."

Attendees learned the various ranges of conservation, which includes preservation, management, sustainable use (recreation) and restoration. By doing one or all of these measures, one can be proactive rather than reactive – a key approach according to Strahl.

The MILA Tracking Station team was one group recognized for long-term energy conservation efforts. This group has saved KSC approximately \$100,000 a year in energy bills.

The April 22-23 hands-on activities, astronaut signings and information sessions took place at the O&C and VAB parking lots, for easy access to all. Once inside the event tent, participants received information about KSC's Energy Working Group, the Indian River Audubon Society, hazardous household waste, energy efficient appliances and products and much more.

EEAW wouldn't be complete without exciting field trips, games and demonstrations. With supervisor permission, employees took boat rides, toured Ransom Road,



Employees try out the Segway Human Transporter during EEAW Week.

helped in an environmental cleanup, searched for scrub jay birds and visited the Solid Rocket Booster high bay.

Those interested could sit inside an Alternative Fueled Vehicle and Global Electric Motorcar (GEM). Keeping with the transportation theme was the Segway Human Transporter demo sponsored by the Space Gateway Support Environmental Department. Employees stood in lines to take a spin on the shoulder-width Segway and see how the futuristic device is as natural as walking.

In addition to providing public-

ity, graphics, police, fire support and more, SGS and JBOSC helped make 2003's EEAW unique. The teams sponsored WMEL Talk Radio to interview many KSC directors and company executives allowing the Agency and companies to promote themselves.

To provide an opportunity to put newfound knowledge to use, Amnesty Days were held. KSC workers disposed of unwanted government chemicals except for biohazardous, radioactive or explosive materials.

## Shuttle Program Manager to resign

Ronald D. Dittmore, a 26-year NASA veteran, has announced his intention to step aside as the Space Shuttle Program (SSP) manager at the Johnson Space Center (JSC) in Houston to pursue other opportunities. Dittmore, who has served as the Shuttle program manager for more than four years, will remain in his current position until the Columbia Accident Investigation Board finishes its investigation and a complete return to flight has been established.

"You get to work with some of the most capable and creative people ever gathered together in one place for one common cause, but you also recognize you cannot do this forever," said Dittmore. "I think the coming months of return

to flight activities and responding to recommendations and implementing corrective actions is going to be a very formative time frame for the Space Shuttle program.

"It will be very important to have new leadership in place to have that foundation established. I believe that in this transition time frame it would be very beneficial to allow this new leader time to prepare, the time to respond to recommendations, the time to implement recommendations to have a strong foundation to jump forward into the coming years."

Dittmore made the announcement April 23 in Washington with Michael Kostelnik, deputy associate administrator for the Space Shuttle and International Space

Station Programs.

Shuttle Launch Director Mike Leinbach has known the Shuttle Program manager since the late 1980s when Dittmore was the Ascent and Entry Flight Director. Leinbach recalls when Dittmore performed an ascent simulation in Mission Control at JSC that experienced technical problems.

"He not only did the whole simulation without taking any notes, he led the flight control team through the entire debriefing, not reviewing any data at all, correcting his flight controllers when they erred in their troubleshooting for the problems," said Leinbach. "It was an impressive show of his depth of technical understanding of the Shuttle systems and his



Ron Dittmore

natural leadership abilities. I was not at all surprised that he would lead us all one day as the SSP manager, he was meant for it. The Program is significantly better now having Ron as our leader for the last four years."

# KSC All-American Picnic enjoys beautiful day

Everything that is wonderful and fun about a picnic was on display at the annual KSC All-American Picnic April 26 at KARS Park – family and friends, delicious food, games, entertainment and great weather. NASA/UB and the Boeing CAPPs team provided almost 200 volunteers under the leadership of Picnic Committee Co-Chairs Patrick Breen and Roy Tharpe.

“During these hectic times, it was great to see so many people enjoying themselves in KARS Park with games, entertainment, shows and the opening ceremony Golden Knights Black Team jump,” said Tharpe. “We had a very generous crowd this year participating in the Chili Cook-Off, which raised \$757 for the KSC Development Center. The Dunking Booth raised \$450 with the proceeds going to the Multiple Sclerosis Society of Central Florida. I’m proud to be part of the great KSC team and let’s continue to build on our teamwork tradition.”

The event got underway with an assortment of games and activities, including three-legged races, closest to the pin golf, and Camp KSC’s “Build your own rocket.” The crowd then started to arrive in time for the start of the parade featuring Center Director Roy Bridges Jr. and astronauts Mike Good, Doug Hurley, Soichi Noguchi, Janice Voss and Terry Wilcutt



riding in a 1938 Ford fire truck.

The parade ended at the landing field for the U.S. Army’s Golden Knights parachute team, where the first member delivered a U.S. flag to the event. He was followed by nine Golden Knights who made the parachute jump with trails of red smoke following their descent.

“It’s a wonderful day for a picnic and we are really pleased to have the Army’s Golden Knights parachute in to start the festivities,” said Roy Bridges Jr. “I’m thrilled to be a part of it. It’s great to see so many people out with their families enjoying a great day.”

A lunch including chicken, pork or ham-

burger was served by volunteers throughout the afternoon. In addition, the crowd was treated to popcorn, ice cream, cotton candy and other treats at stands throughout the park.

Numerous games were set up in the carnival area where children earned prizes for mastering “Putt-Putt To The Planets,” “Shuttle Landing,” and “Rings Over Saturn,” among others. A carousel, the kid’s fishing tournament, and the Japanese candy artists made this a popular area throughout the afternoon.

“I wanted to show my support for my directorate and enjoy everybody’s company who works at KSC,” said picnic volunteer Renee Sawyer, a NASA payload test director, as she gave out prizes at the golf game. “We also wanted to bring T.J. (six-month son) to his first picnic.”

The car show featured a variety of new and classic vehicles which were judged in different categories. Winners included: Gerry Houk’s 1933 Ford cabriolet (Director’s Choice); Nancy Thompson’s 1962 Chevrolet Corvette (Astronaut’s Choice); Bruce Jansen’s 1967 Ford Mustang (Custom Stock); and Charlie Power’s 1956 Model 210 (Factory Classic), among others.

The Chili Cook-Off winners included Best Storefront – Chili Containment Facility (CAPPs and NASA employees); People’s Choice – Cuzin’

Stumpes Chili (CSOC); and Best Chili – also Cuzin’ Stumpes Chili



# Gifted students present memorial to Education Office

Most employees have bookmarked memories, some amazing and some tragic, that define an era. For Deerwood Elementary's gifted program students, that life-changing moment was the Columbia tragedy.

To enhance space studies, these fourth- and fifth-graders from Orlando visited Kennedy Space Center Visitor Complex Feb 3. Coming so soon after the loss, the occasion's tone was altered by the nation's mourning.

The concerned children wrote letters to astronauts' families, President Bush, and NASA employees and Administrator Sean O'Keefe. After writing letters, the students wished to do something that would last longer.

Therefore, on April 21 approximately 75 of the students and chaperones presented KSC's Education Office with a memorial quilt (above, right). Each student received a fabric square to design, and then two teachers assembled the pieces into the quilt.

Pamela Biegert, KSC's Education Programs and University Research Division chief, was on hand to receive the quilt on behalf of NASA KSC. Kaylee Dominy, Astronaut Memorial Foundation representative, was also present to witness the kind gesture. Two students led the group in the Pledge of the Allegiance, and then four more presented the memorial quilt



Deerwood students display a quilt designed to honor the Columbia crew. KSC's Pamela Biegert (third from left) accepted the donation.

to Biegert.

"Thank you so much for your expressions of condolences. I can tell each of you put a lot of thought and effort into your patches," Biegert said, in response to the gift.

"Remember that it is really important to study hard in the math and science disciplines, and maybe one day you too can join the NASA team."

The memento will likely be displayed in the Center for Space Education and then rotated throughout different Center facilities for employees to enjoy. Further KSC education program information can be found at [www.pao.ksc.nasa.gov/kscpao/educate/edu.htm](http://www.pao.ksc.nasa.gov/kscpao/educate/edu.htm).



## GALEX launched by Pegasus XL

NASA's Galaxy Evolution Explorer spacecraft was successfully launched April 28 from a Pegasus XL rocket. The Pegasus launch vehicle is typically processed at Vandenberg AFB with the spacecraft. KSC's Multi-Payload Processing Facility mated the vehicles and handled follow-on testing.

## OCULINA. . . (Continued from Page 1)

Oculina Banks and are the target of trawl fishing there. Undersea expeditions since the 1970s have shown at least 90 percent of the live coral cover in this area has been reduced to rubble and has little value as a breeding and feeding habitat compared to healthy mounds.

Last year, a similar research mission on *Liberty Star* produced the first ever high-resolution, three-dimensional color map of the Oculina Banks, which will allow researcher's on this year's cruise to pinpoint the last remaining stands of live ivory tree coral.

The team will use a Remotely Operated Vehicle (ROV) to study the current health of coral on the banks and also test an acoustic monitoring system for future uses.

Scientists on the cruise will be deploying a Passive Acoustic Monitoring System (PAMS) developed by NASA to monitor the impact of rocket launches on wildlife refuge lagoons at KSC.

Dr. Grant Gilmore of Dynamac will lead this group in testing the system's suitability for detecting offshore fish populations and vessel traffic.

KSC engineers Steve Van Meter and Mike Lane will assist the team to see if the unit can be used to detect the presence of specific fish species and behaviors.

The National Undersea Research Center at the University of North Carolina at Wilmington is leading all the research with funding from the National Oceanic and Atmospheric Administration's (NOAA) Undersea Research Program.

Scientists from the Harbor Branch Oceanographic Institution, College of Charleston and Florida State University will also be involved in the project.

In 1984, the South Atlantic Fishery Management Council first designated a 92-square-mile portion of the Oculina Banks as an area of concern based on research by the Harbor Branch Oceanographic Institution's John Reed, who will be chief scientist on this year's expedition.

In 1994, this area was closed to all bottom fishing, and in 2000 they expanded the area to about 300 square miles from Fort Pierce to Cape Canaveral.

Due largely to the difficulty of patrolling this location, illegal trawling continues in the closed area.

The public can follow the expedition through daily logs posted to a web site (<http://www.oceanica.cofc.edu>) and a webcast from the *Liberty Star*.



John F. Kennedy Space Center

## Spaceport News

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