March 3, 2006 Vol. 45, No. 5

Spaceport News

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

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

Hale shares KSC's shuttle, transition status with work force

"We are driving toward a May launch date," space shuttle program manager says.

By Linda Herridge
Staff Writer

NASA Space Shuttle Program Manager Wayne Hale discussed the status of the shuttle program, the upcoming return-to-flight test mission, the agency's newly released budget proposal and the work force's transition during an all hands meeting Feb. 17 at Kennedy Space Center.

"We're getting ready for STS-121," Hale told attendees in the training auditorium and KSC viewers watching on an internal TV channel. "We've done a lot of work over the last year -- doing all kinds of maintenance work to get ahead of the power curve -- so that when we start flying again, we will be able to do it quickly, regularly and reliably."

AT A space shuttle all hands meeting in the training auditorium, Space Shuttle Program Manager Wayne Hale discusses the status of the program, successes of the STS-114 mission, effects of Hurricane Katrina on NASA facilities, and the newly released budget. He also expressed confidence in transitioning the work force to the programs involving the next-generation space vehicle.

Hale said it is imperative that NASA proceeds with shuttle missions on a regular basis to complete the International Space Station. He also said space shuttle Atlantis will likely be retired in 2008 and used to furnish components for the two remaining orbiters.

Hale praised everyone at KSC, including the thermal protection system team, for working hard to provide a stronger and more capable thermal protection system on the orbiters.

Hale said KSC workers will

(See HALE, Page 2)

NASA engineer McQuade earns hero's welcome home

By Jeff Stuckey
Editor

Following NASA engineer Bill McQuade's one-year deployment to Iraq as a reservist with the U.S. Army's Judge Advocate General Corps, he expressed his fondness for his colleagues at a Feb. 21 homecoming celebration at Kennedy Space Center's Launch Control Center.

"I look forward to getting back into the swing of things here," McQuade said. "I told everybody over there that I've got two families -- my biological family and my NASA family. What a great family you all are. Thank you very much."

He said the homecoming he received from his co-workers reinforced his belief that the entire work force at KSC, both government and contractor alike, is part of a large family. Everyone has been tremendous in helping McQuade reintegrate into his job, he said.

"Because of the great support shown

(See MCQUADE, Page 6)

BILL MCQUADE, a NASA engineer who recently returned from a one-year deployment to Iraq as a reservist with the U.S. Army, receives a warm welcome from employees.

The Kennedy Update

Jim Kennedy
Center Director

Greetings, friends! It's hard to believe the first two months of 2006 have slipped into the history books, but they certainly were memorable. The success of Pluto New Horizons, Steve Fossett's GlobalFlyer launch and landing, the arrival of Bill Parsons and progress toward launching STS-121 are all highlights from the past 60 days. It sets up 2006 to be one of the most exciting and successful years in Kennedy Space Center history.

Speaking of exciting, our Launch Services Program is on the verge of conquering another challenge as the team prepares to successfully launch Space Technology 5 (ST5) aboard a Pegasus rocket from Vandenberg Air Force Base, Calif., scheduled for March 11. This is a microsatellite technology demonstration mission that many people have been working on for years, and we wish the entire team the best of luck. Everyone back in Florida can catch all the action live on NASA TV or on the Web.

I hope you saw the press conferences or NASA Updates held by NASA Administrator Mike Griffin during February, as they were extremely insightful. With the president's proposed budget on the street, Mike laid out the path NASA will take to fly out the space shuttle and complete the International Space Station, while at the same time bringing the Vision for Space Exploration to life with the advent of the Crew Exploration Vehicle and its associated components.

The super news is KSC is in the middle of it all, and we certainly have exciting days ahead. With people like Tip Talone and Scott Kerr leading the transformation charge in preparation for the CEV, we are in good hands. I ask everyone to support them at every level in carrying out this important endeavor.

> "The super news is KSC is in the middle of it all, and we certainly have exciting days ahead."

In the space shuttle world, it may seem to some that STS-121 is still way down the road, but it's simply not the case. As Wayne Hale pointed out in his Feb. 17 KSC all hands meeting, with the calendar turning to March and the launch set for May, many of the major milestones, such as booster stacking, external tank arrival, orbiter rollover, space shuttle rollout and the Terminal Countdown Demonstration Test have either occurred or are rapidly approaching.

I know the processing team has worked incredibly hard since last July to prepare for the next launch and, very soon, all that work will pay off. As I travel, I can assure you the American public is behind us all the way, and they are eager to see our majestic spaceships flying in their rightful place in space once again.

Finally, I appreciate the way everyone has welcomed Bill Parsons "back home" to KSC and I know Bill really appreciates the warmth everyone has shown. I couldn't ask for a better partner — and that is how I view Bill — to help carry out the incredible task of managing the premier spaceport of the world. He already has made a huge difference in many areas.

I know March is the month of Florida spring breaks, so if you are taking time off to be with family, have fun and be safe. See you around the center!

Federally Employed Women donate to Brevard business program

KIETA OSTEEN-Cochrane (front center), executive director of the Institute for Business Training and Community Education at Brevard Community College, holds the check donated to BCC's WENDI program by the Federally Employed Women-Space Coast Chapter at Kennedy Space Center. The ceremony was held at Kennedy. Gathered for the presentation were, front row from left, Helen Kane, Richard Belton, Sandra Eliason, Osteen-Cochrane, Jean Grenville, Arden Belt, Charmel Anderson and Carolyn Burnham; (back row) Kathy Roberts, Connie Dobrin, Patty Boatman and Purvette Bryant. Eliason is president of FEW.

The FEW scholarship committee, chaired by Helen Kane, and the chapter's Board of Directors, recently voted to contribute their educational scholarship money for 2006 to the WENDI program. This donation amounts to $6,000. FEW organizes and sponsors conferences and seminars on issues pertinent to women that have benefited not only their members and women at Kennedy Space Center, but throughout all of Brevard.

HALE . . .

(Continued from Page 1)

be busy when Discovery's external tank arrives. "We want to do the work safely," he said. "We are driving toward a May launch date."

Commenting on the proposed budget, Hale said NASA is one of few agencies that have received an increase in funding.

"We have a lot of support. We have got the resources we need to go forward and do this right. Our job is to make sure we use those resources wisely. It's going to take some discipline. We're going to have to make some hard choices," Hale said. "We have to fly the next flight safely. And the one after that."

Hale said the day the space shuttle is retired will be a bittersweet day for him. "It's been my entire career and it's a remarkable vehicle."

He expressed confidence in transitioning the work force to the programs involving the next-generation space vehicle. "If you're worried about finding work, I would say you are worried about the wrong thing," Hale said. "We are providing the training ground for all of you that are going to work on those advanced programs in the future."

The main focus now and in the future must remain on space flight safety, he said. "Safety is what we're all about. Don't get distracted about worries about the future," Hale said.

"When you're on the job, those folks who sit in the cockpit are counting on us. Make sure when you come to work that you're focused on doing the job right."

Development manager greets Fossett in England

Ball meets GlobalFlyer team at original destination of record flight

By Jeff Stuckey
Editor

Jim Ball, Kennedy Space Center's spaceport development manager and the principal contact between the center and the Virgin Atlantic Airways GlobalFlyer team, was on hand to greet pilot Steve Fossett shortly after he set a new world record for the longest nonstop flight of any type of aircraft. Ball talked to Fossett, his wife Peggy, and Virgin Atlantic founder and chairman Sir Richard Branson at Kent International Airport near London, the intended destination of the record-setting flight.

Fossett was forced to land at Bournemouth Airport in southern England due to a generator problem.

Soon after securing the GlobalFlyer at Bournemouth, he flew over to join an awaiting crowd of project officials and media gathered for an end-of-mission celebration.

SIR RICHARD Branson (left), Peggy and Steve Fossett, and Jim Ball, KSC's spaceport development manager, at Kent International Airport shortly after Virgin Atlantic's GlobalFlyer set the world record for the longest nonstop flight.

"The first thing Steve said to me on the tarmac at Kent was, 'Thanks for all you did at KSC, and that is from the whole team,'" Ball said. "KSC can take great pride in having been a part of this historic aviation event."

Ball's visit to the United Kingdom also gave him the opportunity to discuss potential future use of KSC by Branson's company Virgin Galactic, which plans to offer suborbital flights to paying customers.

My Story

By Vince Mandese
Retired NASA Information Technology and Communications Services engineer

This column provides Kennedy Space Center employees and retirees a chance to tell a story about their life.

From an Ybor City childhood to NASA engineer – that is my odyssey as I retired in February after almost 42 years with NASA at Kennedy Space Center.

I graduated from Jefferson High School in Tampa in 1959 and then attended pre-engineering courses at the University of Tampa. After two years, I entered the College of Engineering at the University of Florida. Upon graduation with a Bachelor of Science in Electrical Engineering, I accepted a position with NASA and came to the Launch Operations Center, as KSC was known in May 1964.

My first job was in measurements and instrumentation, supporting the Apollo Program. This was five years before Neil Armstrong set foot on the moon! I was 22 years old, fresh out of college and married with a baby on the way. My salary was a whopping $6,770 per year!

In the early days of my career, rocket launches were viewed as a novelty and unsuccessful tries were like spectacular fireworks. Success was the rocket clearing the launch tower. The Vehicle Assembly Building was under construction, as were most of today's facilities. The atmosphere was invigorating for this young engineer, even though the hours were long and the work was demanding.

I am fortunate to have worked for two of the greatest human space programs ever: Apollo and shuttle. I feel that my real legacy lies with the contributions I made to the Launch Processing System, especially in the simulation area. I have worked for every center director at KSC and have been a part of all 114 shuttle launches.

I value the memories I have from 42 years at KSC. Now it's time to retire and enjoy life golfing, fishing, traveling, gardening and just relaxing.

All American picnic set for April 22

Mark April 22 on your calendars to attend the annual KSC All American Picnic at KARS Park 1. Scheduled from 10 a.m. to 4 p.m., the theme for this year's event is the KSC family. There will be a chili cook-off, family sports, children's games, a car and motorcycle show, community exhibits, live bands, rock wall climbing and more.

Everyone entering the park will need a ticket. Volunteers are also needed. For more information, visit **www.kscpicnic.ksc.nasa.gov**.

STS-121 crew prepares for mission with

Astronauts work with employees, equipment to prepare for second return-to-flight mission

Six of the seven members of the STS-121 crew were busy at the Kennedy Space Center in mid-February, further familiarizing themselves with the space shuttle that will take them on the second return-to-flight mission.

The astronauts took part in the Crew Equipment Interface Test, or CEIT, an exercise every shuttle crew takes before flight. The experience served as a reminder that the May launch opportunity is drawing closer.

Steve Lindsey will command Discovery. He is making his fourth space flight, and second as commander. The pilot will be Mark Kelly, making his second flight.

Other crew members include Mission Specialists Mike Fossum, Stephanie Wilson, Piers Sellers and Lisa Nowak. This will be the first space flight for Fossum, Wilson and Nowak, while Sellers is making his second space flight.

European Space Agency astronaut Thomas Reiter will also accompany the crew, then remain on the International Space Station as a member of the station's crew.

During the three-day CEIT, the crew spent the bulk of their time in the Orbiter Processing Facility, where orbiter Discovery is undergoing final preparations for flight. The CEIT allowed the astronauts to work closely with the hardware they will be required to operate while on orbit.

THE STS-121 crew kneels for a photo with the vehicle crew. The crew members, recognized by t
Sellers and Mike Fossum, Commander Steve Lindsey, Mission Specialist Lisa Nowak, Pilot Mark K

Mission STS-121 Facts

Launch: No earlier than May 2006
Orbiter: Discovery (OV-103)
Mission Number: Shuttle flight No. 115; Discovery flight No. 32
Launch Window: Five minutes
Launch Pad: 39B
Mission Duration: 12 days
Landing Site: KSC
Primary Payload: MPLM Leonardo (ULF 1.1)

STS-121 COMMANDER Steve Lindsey (left) and Mission Specialist Piers Sellers (center), under the watchful eyes of Victor Badillo, practice working with equipment for the mission. Badillo, with United Space Alliance, is a flight maintenance trainer from Johnson Space Center.

PILOT MARK Kelly inspects one of the windows that will fly on Discovery during the mission.

MISSION SPECIALIST M
Gonzalez-Torres, with NA
the equipment he is hand
Specialist Stephanie Wils

with Crew Equipment Interface Test

bers, recognized by the flight suits, are (left to right) Mission Specialists Piers a Nowak, Pilot Mark Kelly and Mission Specialist Stephanie Wilson.

STS-121 MISSION Specialists Stephanie Wilson (left) and Lisa Nowak look closely underneath the wing of Discovery.

DURING THE February Crew Equipment Interface Test at KSC, STS-121 Commander Steve Lindsey works with equipment that will be on the mission.

SION SPECIALIST Michael Fossum (left) talks to Tomas zalez-Torres, with NASA's Johnson Space Center, about equipment he is handling. Next to Fossum is Mission cialist Stephanie Wilson.

THE STS-121 crew stands for a photo in front of the Vehicle Assembly Building after a media news conference. From left are Mission Specialist Piers Sellers, Pilot Mark Kelly, Mission Specialists Stephanie Wilson and Lisa Nowak, Commander Steve Lindsey and Mission Specialist Mike Fossum. The remaining member of the crew, not pictured, is Mission Specialist Thomas Reiter, with the European Space Agency.

Israeli students visit Kennedy to pay homage to Ramon

By Charlie Plain
Staff Writer

Forty Israeli high school freshmen made the trip of their young lifetime on Feb. 13 and 14 to visit Kennedy Space Center. The students are enrolled in a pilot space studies program meant to encourage interest in science, so it would seem they crossed half the globe mainly to be wowed by mammoth rockets and gleaming space station components.

But the truth is they came to pay tribute to a lost explorer.

"The reason we're here is mostly in memory of Ilan Ramon," explained trip chaperon and guidance counselor Kee Koch.

Ilan Ramon was the first Israeli astronaut to fly in space. He died along with six fellow crewmembers when space shuttle Columbia broke apart during reentry in 2003. Despite the tragic loss, Koch believes the life Ramon led sets an example for the heights Israeli students can reach in space flight and science.

ISRAELI STUDENTS enjoy a hands-on experience at the Center for Space Education during a tour of the center.

"We need to keep his memory alive," Koch added.

Ramon's roots in the students' hometown -- the southern city of Beersheba -- inspired the creation of the space studies curriculum. "The program began because Ilan Ramon graduated from one of our high schools -- Mekif Gimel," said Koch.

In addition to honoring the legacy of Ramon, it's hoped the program will raise the sagging interest Israeli teens have in pursuing careers in science. "Israel is having the same problem the United States is having with getting young people interested in science and technology," said Jeff Fishkin, a NASA space shuttle logistics engineer who helped organize the student trip to Kennedy.

Fishkin started working with the program in 2003 when he was president of the Jewish Federation of Brevard. Fishkin believes Ramon is a great role model for kids because of his contributions to his country and science. "It's important to remember that Ilan Ramon was not only a fighter pilot, but also an engineer."

The first day was devoted to touring Kennedy aboard coach buses to see the facilities. Day two, however, focused on a memorial to Ramon. Following a morning seminar at the Center for Space Education, the students quietly walked over to the nearby Space Mirror Memorial. As the afternoon wind wafted past the mirror, two students unfurled blue-and-white Israeli flags while Koch and four other students stood between them holding pictures of Ramon.

They took turns reading aloud essays they'd written about Ramon — four essays written in Hebrew and one in English. Koch confirmed in her piece that "heroes are hard to come by" and "Ilan Ramon was one of us." The reading was followed by a moment of silence.

MCQUADE . . . *(Continued from Page 1)*

by many colleagues over the last year, in some respects they were a part of my deployment," McQuade said. "So I am honored to be able to share my experiences with them. It is only natural for them to want to get a fresh view of the situation over there from someone who just recently returned. I am happy to answer their questions from the perspective I have."

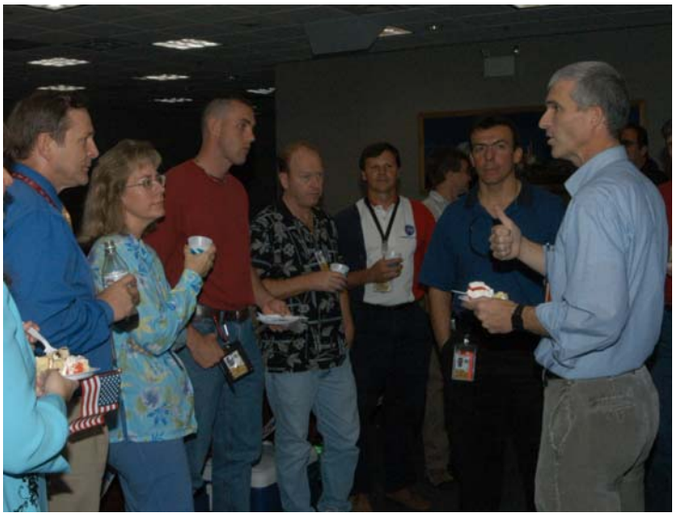
During his service, many of the soldiers, civilians and Iraqi individuals McQuade worked with expressed an interest in the U.S. space program when they found out he worked for NASA.

"I worked in the Third Infantry Division Governorate Support Team (GST) in Baghdad with about 20 other soldiers," he said. "Their strong support for NASA and especially our return-to-flight effort was exemplified by their eagerness to make a team photo with us holding placards reading 'GO DISCOVERY' that we sent back to KSC prior to STS-114's launch."

The team members followed the STS-114 mission as closely as they could and were thrilled by its success. Most people he met were particularly interested in NASA's plan for returning to the moon and future plans to visit Mars.

Among his multiple accomplishments while being deployed to Baghdad, McQuade assisted the Iraqi judiciary, police and prison ministries in modernizing their capabilities in tracking detainees and prisoners through the criminal justice system by using computer technology. He also helped one of the Baghdad area law schools obtain funding for renovating and restocking its law library, which had been destroyed during the war.

McQuade said he thought of every day he was stationed in Baghdad as a day closer to coming back. "It's nice to be back where people are not shooting at me just because of the uniform I'm wearing," he said. "And it's also nice to be able to drive down the road without the threat of a car bomb. I thought of all of you every day and could not wait to get back."


NASA ENGINEER Bill McQuade (right) talks about his deployment to Iraq with fellow employees, including NASA KSC Shuttle Program Manager Mike Wetmore (second from left).

Remembering Our Heritage

Creating the Operations and Checkout Building

By Anita Barrett
Staff Writer

Before men could fly to the moon, vehicles had to be built to get them there, which meant facilities had to be built to check them out.

Originally known as the Manned Spacecraft Operations Building, the Operations and Checkout Building was used for assembly and checkout of the Apollo spacecraft modules. Among the Apollo mission support facilities, this building was as essential to the spacecraft as the Vertical Assembly Building was to the launch vehicle.

It provided space for the inspection of the spacecraft modules upon arrival at Kennedy Space Center, and for the mating and final integrated tests of the Apollo command, lunar and service modules before they were moved to the Vertical Assembly Building (now known as the Vehicle Assembly Building). The building was the first completed at Kennedy, also housing the first team providing support and maintenance.

Ground-breaking ceremonies for the facility were held Jan. 28, 1963. But building it would present an engineering problem. The 42-foot sand and shale top layer, and the unstable 13-foot layer below, would cause the building to settle at a rapid rate — not exactly a solid base for the delicate instrumentation activities that would be performed on spacecraft. The solution: force the ground to settle prematurely. A 200,000-cubic-yard pyramid of dirt from a nearby borrow pit was piled on the site and then compacted by heavy equipment. The sheer weight of the dirt was expected to compact the underlying soil in a month. That same dirt would then be used as fill on other sites.

The 600,000-square-foot floor area of the Operations and Checkout Building was divided into four functional areas: administrative and engineering offices with an auditorium and cafeteria; a laboratory and checkout area; a high-bay assembly and test area 104 feet high and a contiguous low-bay area 70 feet high; and a service area.

The building was air conditioned and, where operationally necessary, humidity controlled and dust free. Also included in the building were living quarters for the astronauts, a technical and briefing area, a crew preparation area, and a bio-medical area.

Unique to the facility were two identical, heavy steel

FIRST KNOWN as the Manned Spacecraft Operations Building before eventually becoming the Operations and Checkout Building, the facility was the first building completed at Kennedy Space Center.

altitude chambers, 55 feet tall and 34 feet in diameter. They were big enough to receive and check out the Apollo spacecraft in a simulated environment of 250,000 feet above the Earth's surface. All three modules were electrically mated within the chamber for the tests.

They were again used in 1975 in support of the Apollo-Soyuz Test Project missions. And in 1997, in order to increase the probability of successful missions aboard the International Space Station, NASA decided to perform leak tests at Kennedy on space station pressurized modules. Reactivation of the "west" altitude chamber in the Operations and Checkout Building high bay was determined the most practical and feasible option for the procedure. It received new vacuum pumping equipment and controls, a new control room, and a new rotation and handling fixture, becoming operational in February 1999.

On its completion in 1964, the cost for the Operations and Checkout Building totaled $21.8 million.

Exploration award on display at Astronaut Hall of Fame

Apollo 14 astronaut Stuart Roosa's family recently was presented with the NASA Ambassador of Exploration Award. His family chose to display the award, featuring a small piece of the moon, at the U.S. Astronaut Hall of Fame in Titusville. The award recognizes the sacrifices and dedication of the Apollo, Gemini and Mercury astronauts. Each of these astronauts or their surviving families will be presented with a lunar sample, part of the 842 pounds of moon rocks and soil returned during the six lunar expeditions from 1969 to 1972. An inscription describes the rock as "a symbol of the unity of human endeavor and mankind's hope for a future of peace and harmony."

AT RIGHT, members of Apollo 14 astronaut Stuart Roosa's family donate their NASA Ambassador of Exploration Award to the U.S. Astronaut Hall of Fame while Jim Kennedy (left), director of the Kennedy Space Center, and members of the hall of fame staff accept the award.

Johnson director motivates African-American luncheon audience

By Jeff Stuckey
Editor

As the first African-American to lead Mission Control at NASA's Johnson Space Center in Houston, Kwatsi Alibaruho is eager to relate the characteristics that led to his success.

"As people of color and agents of NASA, I think we have the same objective - that is to reach and change the minds of people," he said. "So the question is: How do we build on the foundation that was laid before us?"

Alibaruho was the keynote speaker for the Black Employee Strategy Team's African-American History Month luncheon held Feb. 27 at the Kurt Debus Conference Center.

First, we need a good self inspection as individuals, as a community and as an agency, he said. Self inspection is critical.

In space flight, self inspection is navigation. "You can not chart your course to another place unless you can accurately determine where you are today," Alibaruho said. "This is not just a message for people of color, but for all of our brothers and sisters. We have to judge ourselves so we won't be judged."

KWATSI ALIBARUHO (left), a Johnson Space Center flight director, receives two plaques from BEST chairperson David Banks at the African-American History Month luncheon held at the Kurt Debus Conference Center.

He said the president has given us a bold challenge in the Vision for Space Exploration and there is a lot to change organizationally. "I think that's also a perfect metaphor for our society," he said. "We could talk a lot about what has been accomplished, but before we embark on a journey to achieve more, we have to take a good look at ourselves and determine what our weaknesses are and how to improve them."

The next thing we need is a vision, Alibaruho said; not a goal, but an image of a place where we can go. Dr. Martin Luther King said he had a dream and his dream provided a template for a whole movement. "We have just as much of a need for a dream today," he said. "After we perform that very difficult self inspection, it is vital that we be able to imagine ourselves and our organization doing what we've never done before, being who we've never been before."

Another thing we need for our journey is discipline, he said. We live in a society that has created whole industries around catering to our feelings and fulfilling them. "Discipline says we start not because we feel like it, but because it's time to start," Alibaruho said. "It also says we keep going even when we don't feel like continuing. Why? Because it is not time to stop yet. Discipline says we do what we have to do because it's necessary."

No one exemplifies that discipline more than the men and women who work at NASA, he said. "There is no group of people anywhere quite like the men and women who do what you do in the advancement of space flight in this country," he said. "The committment of this center to recognizing the ethnic, cultural and intellectual diversity of this group of people is tremendous because it is only through discipline that we will be able to overcome the obstacles that stand before us."

Finally, we have to have a consciousness of partnership, Alibaruho said, adding that partnership is all about mutually beneficial relationships.

It is important as we move to this next phase that we see relationships in terms of partnerships. "We need to form partnerships throughout our community to accomplish a vision," Alibaruho said. "The vision is much too big and the obstacles that lay before us are much too high to accomplish without forming quality relationships and partnerships with people who can help bring this to pass."

After Alibaruho's speech, the Evelyn Johnson Scholarship was presented to Erin Parrish, an employee in the Office of Diversity and Equal Opportunity.

Energy team wins federal award

THE CENTER'S Energy Management Team recently won the U.S. Department of Energy's Federal Energy and Water Management Award for the KSC Solar Thermal Pilot Project. NASA Energy Manager and former KSC Energy Manager Wayne Thalasinos, along with Space Gateway Support employees (from left) Curt Iffinger, Michael Conrad, Brian Orrison and Dick Buckman, received the award in Washington.

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 two weeks before publication to the Media Services Branch, IDI-011. E-mail submissions can be sent to Jeffery.Stuckey-1@ksc.nasa.gov

Managing editor. . . . . Bruce Buckingham
Editor. . . . . Jeff Stuckey
Copy editor . . . . . Corey Schubert

Editorial support provided by InDyne, Inc. Writers Group.
NASA at KSC is located on the Internet at http://www.nasa.gov/centers/kennedy
USGPO: 733-049/600102