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Spaceport News

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John F. Kennedy Space Center

Hammering out a more cost-effective way

Reinventing a costly way of doing business that will save taxpayers an estimated $557 million has earned Kennedy Space Center and the 45th Space Wing one of Vice President Al Gore's Hammer Awards.

Morley Winograd, director, National Partnership for Reinventing Government, presented the award at Kennedy Space Center's Visitor Complex's IMAX 2 Theater July 16.

"This creation of the NASA-Air Force team to share the procurement contract and support services ... will eliminate more than a half a billion dollars in unnecessary spending over the next 10 years," said Winograd. "We want to recognize through this Hammer Award what you've done to maintain America's position as the leader in commercial, scientific and military use of space."

The Hammer Award recognizes the accomplishments of a joint NASA and Air Force team that established the Joint Base Operations and Support Contract (J-BOSC) Source Evaluation Board.

This team developed and implemented the acquisition strategy for establishing a single set of base operations and support service requirements for Kennedy Space Center, Cape Canaveral

(See Hammer, Page 4)

The X-ray files:

Our past is out there

What can observe X-rays from clouds of gas so vast that it takes light five million years to go from one side to the other, yet operates on about the same electrical power as a hair dryer?

Chandra — the world's most sophisticated X-ray observatory.

At more than 45 feet in length and weighing more than five tons, Chandra is also the largest payload to be launched by a Space Shuttle.

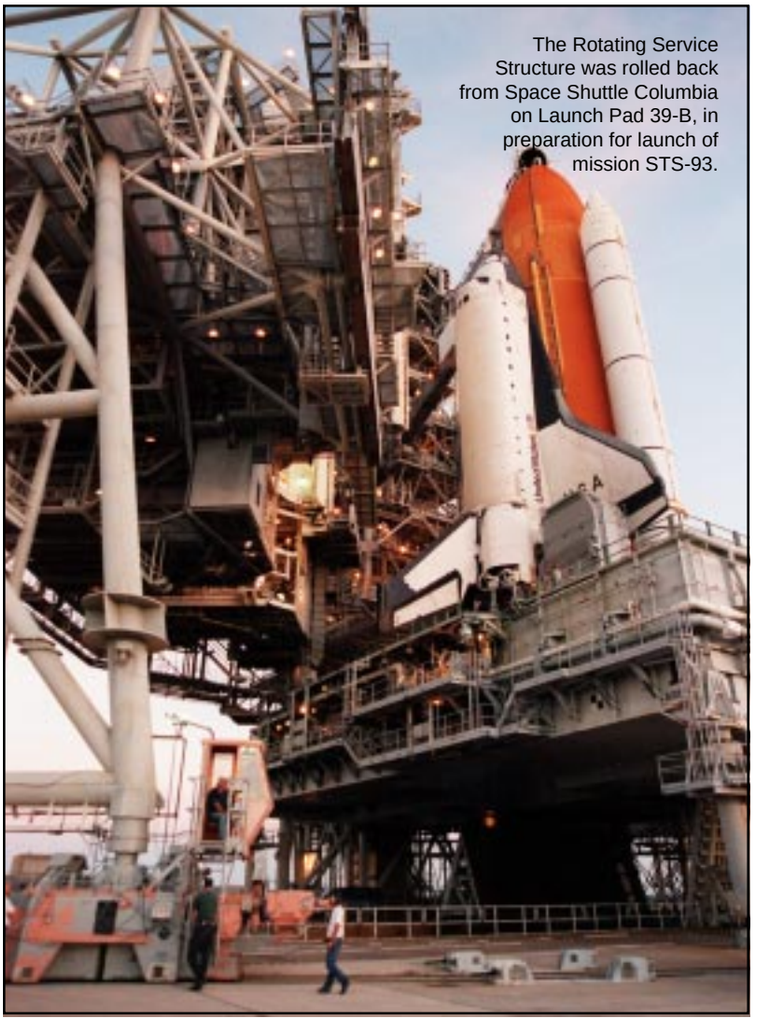
At press time, the Chandra X-ray Observatory's original launch date of July 20 was rescheduled for July 22 at 12:28 a.m.

Space Shuttle Columbia's July 20 launch attempt was scrubbed at the T-7 second mark in the countdown.

Following a virtually flawless countdown, the orbiter's hazardous gas detection system indicated a 640 ppm concentration of hydrogen in Columbia's aft engine compartment, more than double the allowable amount.

System engineers in KSC's Firing Room No. 1 noted the indication and initiated a manual cutoff of the ground launch sequencer less than one-half second before the Shuttle's three main engines would have started.

(See STS-93, Page 2)



The Rotating Service Structure was rolled back from Space Shuttle Columbia on Launch Pad 39-B, in preparation for launch of mission STS-93.

KSC savings bond drive success

This year's U.S. Savings Bond Fund Drive at KSC produced outstanding results by KSC civil service employees when the goal of 10 percent increase in overall participation was exceeded by KSC employees achieving 13 percent participation.

Clinton and Collins at KSC

Visiting KSC for the launch of STS-93 were First Lady Hillary Rodham Clinton (right) and folk singer Judy Collins, who wrote a song for the occasion. Judy Collins honored Eileen Collins, the first woman to command a Space Shuttle, with a song titled "Beyond the Sky," which was commissioned by NASA through the NASA Art Program.

STS-93 ...

(Continued from Page 1)

Standard safing operations were followed immediately, and the safety of the flight crew and orbiter were not compromised at any time.

"The whole crew salutes the vigilance and professionalism of the launch team," said STS-93 Commander Eileen Collins, "and we fully support the decision they made."

After preliminary system and data evaluation, launch managers were confident that the hydrogen concentration indication was false and proceeded with a 48-hour scrub turnaround plan.

A complete review of the Shuttle's main propulsion system and related sensors was conducted July 20, but managers had already determined that the hydrogen concentration was actually about 114 ppm. This measurement is within allowable limits.

Because the external ignitors at Launch Pad 39B were ignited, KSC technicians needed to replace them over the two days following the originally scheduled July 20 launch.

These ignitors burn off the hydrogen concentration outside the orbiter, near the Shuttle main engines.

Eight middeck payloads were scheduled to be removed, reserviced and installed back inside the orbiter during the down period.

The Chandra X-ray Observatory was scheduled to remain powered up inside the orbiter and was not adversely affected by the scrub.

Chandra, which will provide images 20 to 50 times more detailed than previous X-ray missions, will fly 200 times higher than the Hubble Space Telescope — more than one-third of the way to the moon.

Extraordinary precision and commitment are required to plan and build telescopes that will be placed in space, withstanding the controlled fury of launch and then operated by remote control in a hostile environment of wild temperature swings and hard vacuums.

X-ray astronomy can only be done from space because Earth's atmosphere blocks X-rays from reaching the surface.

Some of the more interesting facts about Chandra include:

- During maneuvers from one target to the next, Chandra slews more slowly than the minute hand on a clock.
- Chandra's resolving power is equivalent to the ability to read a newspaper at the distance of half a mile.
- Chandra can observe particles up to the last second before they fall into a black hole.
- The largest cosmic X-ray sources are clouds of hot gas containing enough matter to make several hundred trillion stars.

Above, in this fish-eye view, a worker oversees the movement of the Chandra X-ray Observatory into the payload bay of the orbiter Columbia for STS-93. The world's most powerful X-ray telescope, Chandra will allow scientists from around the world to see previously invisible black holes and high-temperature gas clouds.

Weldon observes KSC's 'Destiny'

On July 8, U.S. Rep. Dave Weldon (center) looked over the U.S. Laboratory, called "Destiny," with a group of Boeing workers in KSC's Space Station Processing Facility. Behind (left) the congressman is Dana Gartzke, the congressman's chief of staff. Weldon is on the House Science Committee and is vice chairman of the Space and Aeronautics Subcommittee. Destiny, the centerpiece of scientific research on the International Space Station, is scheduled to be launched next year.

Annual Partners in Education and Research Conference set for October

KSC will host the second annual Partners in Education and Research Conference Oct. 5-7 at the Radisson Resort in Cape Canaveral. The conference will focus on emerging technologies that are of increasing importance to KSC. Faculty and industry representatives will have an opportunity to discuss their work in these areas, enabling KSC to identify research experts for future partnerships.

Employees wishing to attend must fill out a training form (SF182) and provide it to their training coordinators. The KSC Training Office has funding to cover conference registration costs.

Employees are advised to register as early as possible and may also encourage university faculty they work with to submit abstracts for conference panel sessions.

Additional information and updates are available on the conference website at *http://www-pao.ksc.nasa.gov/kscpao/univ/programs/conf.html* .

Armstrong, Aldrin return to KSC for Apollo 11 anniversary

Above, at a special Hammer Award presentation at KSC's Visitor Complex, former Apollo astronauts Neil Armstrong (left) and Edwin "Buzz" Aldrin (second from right) applauded the recipients — KSC and the 45th Space Wing. (See Hammer Award story, page 1.) Armstrong and Aldrin were at KSC to attend a banquet and other activities for the 30th anniversary of the Apollo 11 mission, which landed the first man on the moon. Above right, former Apollo 11 astronaut Neil Armstrong stood to a round of applause after being introduced at the anniversary banquet honoring the Apollo team, the people who made the entire lunar landing program possible. The banquet was held in the Apollo/Saturn V Center on July 16, the 30th anniversary of the Apollo 11 launch.

Educating students at KSC — by design

Imagine a space settlement on the surface of Mars where 19,000 residents would live.

That's exactly what about 100 students from Austria, Pakistan and high schools in nine states did July 10-12 at KSC's Center for Space Education.

Using their imaginations and resources such as technical publications, a library, a program book on the "future history" of human activities in space for the next 60 years and the assistance of NASA and contractor mentors, the students competed over 43 hours to design a space settlement and plan its construction.

The students had to design an overall structure, define construction materials, specify vehicles used for transportation and determine sources of electrical power and water. They also provided estimated costs and schedules for completion of the project.

During the competition, students from the participating high schools were grouped into four teams and assigned fictional corporate identitites in the year 2059. As employees of these companies, they developed formal bid proposals to meet specific requirements of the fictional "Foundation Society" request to build a large human settlement on Mars.

"The competition gave students a very good taste of what it's like to work in a corporate environment as professionals," said Dick Edwards, Boeing Space Shuttle engineer and a co-founder of the contest.

The competition ended on July 12 with 35-minute oral presentations before a panel of judges — the same process that companies often follow when they attempt to win large contracts.

"It's just like being on an industry proposal team," said Anita Gale, a Boeing Space Shuttle engineer and the other contest co-founder. "The only way the kids get a worthwhile design is by communicating with each other."

The winning team was called "Rockdonnell," and it was made up of 24 students from Sanilac County Science Math Center, Peck Michigan Whitney High School, Cerritos, Calif., and Thomas S. Wootton High School, Rockville, Md.

Apollo 12 Astronaut Conrad remembered

Charles P. "Pete" Conrad, the third human to walk on the moon, died July 15 of injuries sustained in a motorcycle accident. He was 69.

Conrad made history on Nov. 19, 1969, when, as commander of the Apollo 12 mission, he and Astronaut Alan Bean set their lunar module "Intrepid" down on the moon's Ocean of Storms to achieve the second landing in the Apollo program.

Conrad and Bean conducted two excursions on the moon totaling almost eight hours, in which they retrieved more than 75 pounds of lunar rocks and soil samples.

Cocoa Beach NKF Representative Rich Salick (center) accepts a $2,261 check from James Minnear, lead electrical engineer on Discovery, Process Engineering (right), and Jim Broughton, Boeing, who is vice president of the NKF's Canaveral chapter.

On June 25, 123 KSC employees and their friends participated in an annual golf scramble tournament at Bent Oak Country Club in Titusville to benefit the National Kidney Foundation (NKF).

"The winner each year receives a hideous frog statue to display ... until the next event and the responsibility to host the following year's scramble," said James Minnear, NASA's lead flight electrical engineer on Discovery, who won last year's annual golf scramble.

Hammer ...

(Continued from Page 1)

Air Station and Patrick Air Force Base.

Eighteen different contractors, often with overlapping and duplicate responsibilities, previously performed these services.

Chris Fairey and Ed Gormel, co-chairs of the Joint Base Operations Support Contract Source Evaluation Board, received the award from Winograd on behalf of the team.

The Hammer Award is the Vice President's special recognition of teams of federal employees who have made significant contributions in support of the principles of the President's National Performance Review.

These principles are putting customers first, cutting red tape, empowering employees, and getting back to basics.

As a result of the Joint Base Operations Support Contract Source Evaluation Board's initiatives, substantial savings will be available to reinvest in capital improvements at Kennedy Space Center and Cape Canaveral Air Station to attract new commercial space activities.

These initiatives also paved the way for the U.S. Air Force and NASA to focus on their core missions of research and development and launch operations.

At a special presentation July 16 in the IMAX 2 Theater in the Kennedy Space Center Visitor Complex, the Hammer Award was presented to KSC and the 45th Space Wing. Present for the awards were (left to right) Commander of the Air Force Space Command General Richard Myers, Ed Gormel, Chris Fairey, NASA Administrator Daniel Goldin, and the director of the National Partnership for Reinventing Government, Morley Winograd, who presented the award.

NKMA installs officers for '99- '00 and gives awards

The NASA Kennedy Management Association (NKMA) installed new officers, presented annual awards and recognized scholarships at a ceremony June 29 in the Space Station Processing Facility.

Board member Miguel Rodriguez conducted the installation of Ann Montgomery, Safety and Mission Assurance, as president; Bob Gerron, Integration and New Initiatives, as vice president; Connie Dobrin, Logistics Operations, as treasurer; and Joy Colston, Checkout and Launch Control System Office, as secretary.

Joining existing board members Nap Carroll, Office of the Chief Financial Officer; and David King, Shuttle Processing, were newly installed board members Shannon Roberts, Administration Office; Shannon Bartell, Space Station and Shuttle Payloads; and past NASA Kennedy Management Association president Vanessa Stromer, Information Technology.

Honored with special awards at the ceremony were Catherine Alexander, Joint Performance Management Office, for consistent dedication to the NKMA and support to NKMA continuous improvement activities, and Janet Thompson, Information Technology, for support to NKMA officers, awards committee, scholarship committee, and NKMA focus-group activity.

The NASA Kennedy Management Association annually recognizes leadership, education outreach and community service of individuals with prestigious awards that are displayed in various building lobbies.

This year, Tommy Mack, Engineering Development, received the Leadership Award. Felix Soto Toro, Engineering Development, received the Education Outreach Award, and Ed Markowski, Shuttle Processing, was presented with the Community Service Award.

NASA Kennedy Management Association College Scholarships were awarded this year to Taya Hall and Stephanie Peaden.

NASA Kennedy Management Association High School scholarships were awarded this year to Robert Mango, Amy Griffin, Matthew Beller, Andrew Knott, and Luis Moctezuma.

At the NASA Kennedy Management Association (NKMA) installation of new officers on June 29, board member Miguel Rodriguez (far right) recognized the new officers. They are, from left to right, Vice President Bob Gerron, Treasurer Connie Dobrin, Secretary Joy Colston and President Ann Montgomery.

John F. Kennedy Space Center

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