



National Aeronautics and  
Space Administration  
**Lyndon B. Johnson Space Center**  
Houston, Texas



## Mir memories

STS-81 crew members capture memorable moments during docking with the Russian station. Photos on Page 3.



## Rodeo days

Houston Livestock Show and Rodeo volunteers entertain JSC employees and their children. Photos on Page 4.

# Space News Roundup

Vol. 36

February 7, 1997

No. 6

## Shannon, Thorson to split offices

The Business and Information Systems Directorate once again will become two separate directorates with Jim Shannon leading the business side and Richard Thorson heading up information systems.



Shannon

Shannon will serve as acting director of the new Business Management Directorate. As the director, Shannon will lead the center's procurement and resources functions that previously were part of the Business and Information Systems Directorate. Shannon joined JSC in 1962 and has held progressively responsible positions in the Mission Operations Directorate over his 34-year career. After holding numerous managerial positions within MOD, Shannon was appointed assistant director in 1989 and was named deputy director in 1995.



Thorson

Thorson will lead the center's information systems and information technology programs that previously were part of the Business and Information Systems Directorate. He joined JSC in 1966 and has held numerous managerial positions, including manager for Integration for Space Station Freedom; deputy manager of the National Space Transportation Systems Operations; manager of the Data Management and Operations Office and most recently, deputy director of Center Operations.



NASA Photo KSC-97EC-0221

**STS-82 crew members are all smiles as they take a break at Launch Pad 39A in front of *Discovery* during the Terminal Countdown Demonstration Test. Front row from left are, Mission Specialists Steve Smith, Greg Harbaugh and Steve Hawley. Back row from left are, Mission Specialists Joe Tanner and Mark Lee, Commander Ken Bowersox and Pilot Scott Horowitz. STS-82 will be the second Hubble Space Telescope servicing mission. Liftoff is targeted for Tuesday.**

## Black history artifacts needed for exhibit

In observance of Black History Month, the Equal Opportunity Programs Office will host a Black History Exhibit from 11 a.m.-1:30 p.m. Feb. 25 and 26 in the Bldg. 3 cafeteria.

JSC employees are encouraged

to submit items for display to enhance the variety and significance of African-Americans in American history.

Employees who have any items to display can contact Patricia Burke at x30606 no later than Feb. 18.

## Four space walks highlight STS-82 Hubble mission

By Ed Campion

The STS-82 astronauts are to arrive at Kennedy Space Center today as *Discovery* prepares to lift off on the second servicing mission to the orbiting Hubble Space Telescope.

Commander Ken Bowersox, Pilot Scott Horowitz, and Mission Specialists Mark Lee, Greg Harbaugh, Steve Smith, Joe Tanner and Steve Hawley were to leave Ellington Field early Friday and spend the next few days in weather and mission-related meetings.

The official STS-82 countdown is to begin early Saturday at 3 a.m. CST. At the Flight Readiness Review meeting on Jan. 30, NASA managers set Feb. 11 as the official launch date for the mission. The 65-minute launch window opens at 2:56 a.m. CST Tuesday.

Work at Launch Pad 39A this week included completion of payload integration and verification tests, cooling of the Near Infrared Camera and Multi-Object Spectrometer payload and closeout of the aft compartment.

In addition to standard pre-launch processing activities this week, KSC technicians also removed and replaced the nozzle throat plugs on the solid rocket boosters. The team examining the nozzle throat erosion issue asked for the plug changeout to give engineers additional data on a batch of polysulfide material used on some recent SRBs. The polysulfide material may be a possible contributor to the unusual erosion pattern seen during two previous shuttle launches.

Assuming an on-time launch on Feb. 11, *Discovery* will rendezvous with the orbiting telescope just before 2 a.m. CST on Feb. 13. When the shuttle is within 200 feet of the telescope, ground controllers will command Hubble to perform a

roll maneuver to position it for grappling. Hawley will use the robot arm to grab the telescope and berth it in *Discovery's* cargo bay. Once the telescope is secure and power has transferred to *Discovery*, Horowitz will maneuver the shuttle so that Hubble's solar arrays face the sun and its internal batteries can recharge.

Beginning Thursday evening, the first of four space walks over four successive days will be conducted.

During the space walks, Lee, Harbaugh, Smith and Tanner will install two state-of-the-art instruments that will significantly upgrade the scientific capabilities of the telescope. They also will perform maintenance to keep Hubble functioning smoothly until the next scheduled servicing mission in 1999.

Once the space walks are complete, ground controllers will turn on Hubble's internal power and Hawley, who originally deployed Hubble on STS-31 in April 1990, will release the orbiting observatory to continue its exploration of distant galaxies.

*Discovery's* mission is planned for 9 days, 22 hours, 47 minutes. The second shuttle mission of the year will conclude with a landing at KSC on Feb. 21 at about 1:43 a.m. CST.

While *Discovery* is poised to begin its mission, processing work on the other shuttles supporting flight operations also continues on schedule.

Following installation of the Spacelab into *Columbia* last Friday, KSC technicians conducted integration and verification tests on the module. Securing of the three shuttle main engines also was completed. Current plans call for *Columbia* to be moved to the Vehicle Assembly Bldg. on March 3 and to be moved to the launch pad one week later. *Columbia's* seven astronauts will fly on STS-83, a 16-day microgravity sciences flight.



## Linenger salutes Houston rodeo from Mir station

Mir 22 Flight Engineer Jerry Linenger sent his greetings to participants in the Houston Livestock Show and Rodeo last week but spent most of the week diving into his experiments on the Russian Mir Space Station and preparing for the arrival of the Mir 23 crew next week.

"Welcome everybody to the Houston Livestock and Rodeo show," Linenger said. "It is going to be a fantastic event and I wish I were down there right now to join y'all. I know that there are more than 10,000 volunteers that make the show a success and so we want to salute all those people that put in all their hard work, hard effort to make the show a success every year. And, also to those volunteers at JSC. I know a lot of folks down there also get involved in the Houston Livestock Show and Rodeo."

Linenger showed off his sheriff-in-space badge and hog socks and roped a couple of aliens as he made deputies of Commander Valery

Korzun and Flight Engineer Alexander Kaleri.

The break in activities came after a busy four weeks on Mir, but Linenger said he is making himself at home and enjoying his stay in space.

"So far it's been a great experience," Linenger said last week during an interview with WDRV in Detroit. "I have been really busy doing some great science experiments, but also having an enjoyable time getting use to a new environment. The floating and those things that most people associate with space becomes second nature around here and it feels like I am at home now. The minute I got into space I felt very comfortable physically. You just have to adjust a little bit because everything is fingertip control. You can't go bounding around or leaping or anything like that, you just basically use your fingertips and push yourself in any

Please see **MIR**, Page 4



NASA Photo STS081-E-5498

**STS-81 Mission Specialist Jeff Wisoff, right, and other *Atlantis* crew members give Mir 22 Flight Engineer Jerry Linenger a special inflatable cake to celebrate his 42nd birthday before leaving him on the orbiting laboratory.**

## JSC workers take buyout advantage

A total of 113 employees took advantage of the latest NASA buy out program and left JSC to pursue other interests.

The following is a breakdown of JSC employees by directorate who elected to voluntarily resign, retire or take an "early out" through the buy-out program.

**Human Resources Office:** Richard Campbell, Curtis Collins, Valerie Michaud and Elaine Trainor.

**Office of Public Affairs:** Juanie Campbell, Edna Campos, Bunny Dean and Jim Poindexter.

**Legal Office:** Harold Dantone, Hank Flagg and John Lottinville.

**Business and Information Services Directorate:** Doris Adams, Bluford Brady, Jane Brandenstein, Anne Brenton, Warren Conner, Dean DesJardins, Ruth Elder, Jackie Fisher, Paula Fyffe, Patricia Kanz, Edward Kenyon, Theodore Please see **WORKERS**, Page 4