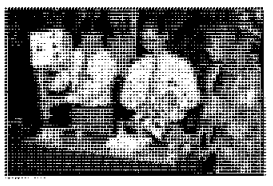
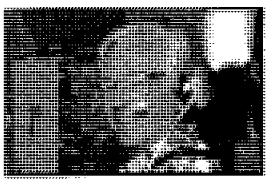
National Aeronautics and Space Administration
Lyndon B. Johnson Space Center
Houston, Texas



Testing techniques

STS-69 space walk begins an era of getting down to the nuts and bolts of building the space station. Story on Page 3.



Snoopy simulation

Cartoonist Charles Schulz recently checked out shuttle mission simulator. Photo on Page 4.

Space News Roundup

Vol. 34 | August 11, 1995 | No. 32

Carolyn L. Huntoon

Huntoon leads planning for life sciences institute

By Jeff Carr

NASA Administrator Daniel S. Goldin announced last Friday that, effective immediately, JSC Director Dr. Carolyn L. Huntoon has taken on a special assignment for the administrator to lead the development of plans for a new sciences institute for biomedical research.

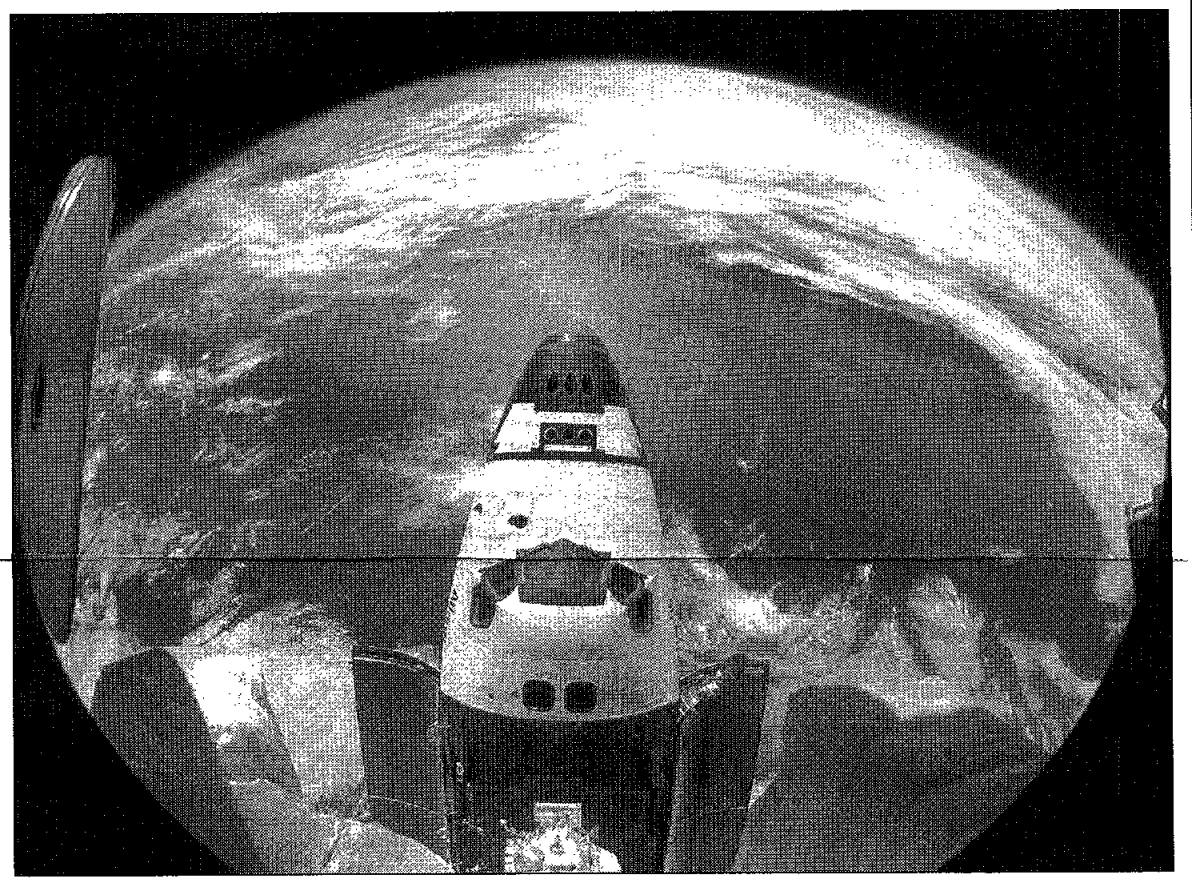
As a key part of her assignment, Huntoon will represent the agency in establishing a dialogue with potential national and international participants in the life sciences institute. She will represent the administrator in these efforts. JSC Deputy Director George Abbey will serve as acting center director.

NASA officials previously announced plans to create science institutes to help streamline the agency's management structure and improve the quality of its scientific research. As envisioned by NASA, the institutes would be privatized arrangements in which government-owned assets are managed by an external entity, such as a university, an industrial organization or a consortium.

"Outside involvement and participation are key to the success of the institute approach," Goldin said. "Dr. Huntoon, as an internationally-recognized scientist, is the perfect

Please see **HUNTOON**, Page 4

George W. S. Abbey



This Imax image of the nose of *Atlantis* was taken from the Russian Mir Space Station during STS-71. This and other images now are available on the Shuttle Home Page or the NASA Home Page.

IMAX images available on Internet

Several dramatic new images highlighting the historic docking of the Space Shuttle *Atlantis* and the Mir space station now are available via the Internet.

The high resolution images show crew activities and views of *Atlantis* taken from Mir. The images were recorded using the 70-mm IMAX camera system.

The IMAX images are part of a larger photo gallery that includes images from the STS-71 docking mission and from STS-63, a mission flown earlier this year in which *Discovery* performed a rendezvous with the Mir that served as a dress rehearsal for the docking mission.

The images can be found on the STS-71 Home Page at URL:

http://shuttle.nasa.gov/sts-71

Links to the collection also can be found on the Today at NASA Home Page at URL:

http://www.hq.nasa.gov/office/pao/NewsRoom/today.html.

Repairs begin on *Endeavour*'s O-ring sealant

Technicians are preparing to begin repairs on rubber sealant around the O-rings in the nozzle joints of *Endeavour*'s reusable solid rocket motors on Launch Pad 39A at Kennedy Space Center.

The repairs to the Room Temperature Vulcanized rubber are designed to fill air pockets that have formed in the crevices leading to the O-rings in the nozzle joints as a result of what managers believe is a change in the way engineers apply the soft rubbery sealant during the manufacture of the nozzles.

Endeavour's launch on the fifth shuttle mission of the year was put on hold July 28 after managers were told that the primary O-rings in the nozzle joints of the RSRM's from STS-71 and STS-70 had suffered heating effects from the hot gasses that pass through the nozzle during the first two minutes of flight. The secondary O-rings in the nozzle joints and both the primary and secondary O-rings in the RSRM's field joints were unaffected by the hot gasses.

In preparation for the repair work, *Endeavour* was returned to Launch Pad 39A at KSC on Tuesday after a week's stay in the Vehicle Assembly Bldg. The shuttle was hauled back to the VAB last week to protect it from Hurricane Erin, which lashed the Florida spacecoast with winds of 85 miles an hour. The storm did no damage to the launch pads or other key shuttle support facilities at the oceanside spaceport.

Technicians from Thiokol, the manufacturer of the RSRM's, were due at KSC at week's end to familiarize themselves with the procedures necessary for the "excavation" of the RTV from *Endeavour*'s booster nozzle joints and the method developed to refill the joints with the RTV substance. The actual repair work is scheduled to begin Monday.

Preliminary schedules indicate that *Endeavour* still could be ready for launch on the STS-69 mission that will deploy and retrieve a pair of satellites and feature a six hour space walk by the end of the month.

Meanwhile, the solid rocket boosters earmarked for *Columbia*'s launch on the STS-73/USML-2 mission in late September were hooked up to the shuttle's external fuel tank. *Columbia* is scheduled to be moved

Please see ***ATLANTIS***, Page 4

JSC plans open house

By Steve Nesbitt

JSC will open its gates to the general public on Aug. 26, welcoming the Houston community to a first-hand look inside facilities not usually seen.

The Open House, which runs from 10 a.m.-4 p.m., is being held to show appreciation to the community for its ongoing support. Visitors will get the chance to hear astronauts describe their space flights and see where they train. Engineers and scientists will be on hand to demonstrate many of the special tools and projects on which they work.

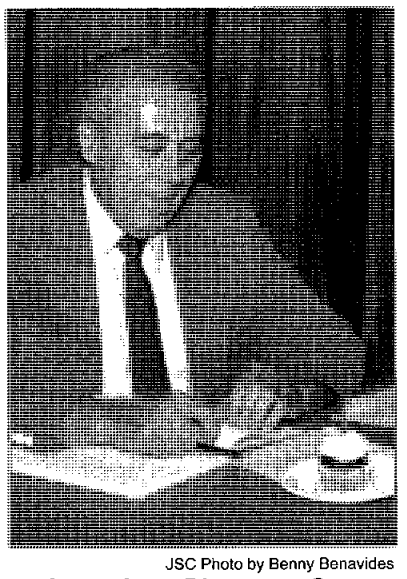
"We wanted to give a special 'thank you' to members of the local community for all the support they have given us," said JSC Director, Dr. Carolyn L. Huntoon. "We hope they will come out and see the exciting work their neighbors do."

Also on display will be space suits, moon rocks and the 100-foot vacuum chamber once used to test the Apollo spacecraft. In a series of special presentations in the auditorium, current and former astronauts will describe space flights, scientists will show dramatic photos of the Earth taken from space and astronauts from earlier missions will offer a history lesson on America's human space flight program.

A tram will operate around the perimeter of the site, allowing visitors to ride to various stops. Visitors will be given a brochure that will include a map of JSC with all open buildings and tram stops marked.

The Open House comes during the annual Ballunar Festival sponsored by Space Center Houston, from Aug. 25-27.

This year's Ballunar Festival will feature over 60 inflatable balloons, along with other attractions. The festival will take place at Rocket Park, with activities beginning on Friday, Aug. 25, at 6 p.m.



JSC Photo by Benny Benavides

JSC Acting Director, George Abbey, chairman of the Executive Safety and Health Committee was presented a cup cake with a single candle recently in celebration of the first anniversary of the committee's formation.

ESC marks anniversary

The JSC Executive Safety and Health Committee marked its first anniversary last month with a report that lost workday cases have been cut in half since last year, showing a major turn-around as the center stepped up efforts to protect both JSC employees and the environment.

"These successes could not have been possible without the conspicuous commitment, emphasis and leadership which has been displayed and encouraged by top and mid-level management since the institution of the Executive Safety and Health Committee," said Rich Dinkel, special assistant to the director for institutional safety.

The ESC initiative was JSC Director Dr. Carolyn L. Huntoon's response to a recommendation of the 1994 Safety Review Board. That board chaired by Dave Walker, commander of the upcoming STS-69 mission, realized the importance of management involvement in safety issues.

Since the formation of the ESC, chaired by JSC Acting Director George Abbey, many accomplishments have been achieved to promote safety at JSC. Foremost was line management's acceptance of the responsibility for the safety, health and general well-being of their employees, and the significant rise in the safety awareness levels of people across the center. In addition, the enhanced communications which have resulted from the ESC's regularly-scheduled meetings, and the revitalization of the directorate safety committees have brought about a new level of awareness regarding safety.

The ESC has established and developed projects of a variety of forms to help protect both the

Please see **SAFETY**, Page 4

NASA/FAA announce aviation design competition winners

NASA and the FAA have selected a team from three Kansas universities as joint winners of their first National General Aviation Design Competition for U.S. aeronautical and engineering universities.

The joint team was composed of students and faculty from the University of Kansas, Kansas State University and Wichita State University.

The contest challenged teams of undergraduate and/or graduate students, working with faculty advisors, to address design challenges for general aviation aircraft and related transportation systems. The competition was held during the 1994-95 academic year.

For taking first place, the participating academic departments of the joint Kansas team shared a $5,000 award and the student design team members shared a $3,000 award. Their "Shrike" aircraft concept was conceived to introduce advanced operator-friendly technologies that promise to make general aviation flying easier than driving a car. The new series of aircraft would feature advanced flight control systems and a heavily automated, simplified cockpit display and pilot interface system.

Second place and a $2,000 award went to the design team from Embry-Riddle Aeronautical University, Daytona Beach, Fla. Their Aquilas design concept suggested several innovative features to enhance safety and efficiency of general aviation aircraft. Features would include improved structural crashworthiness and a deployable parachute.

Third place and a $1,000 award went to Mississippi State University, for conducting a study of advanced cockpit and propulsion system concepts that would feature the latest in pilot displays and early warning emergency systems. These systems were designed to replace the older, less efficient systems commonly found in general aviation aircraft today.

An honorable mention went to the UPM Design Group, made up of members from the University of Virginia, the Pratt Institute at Brooklyn, N.Y., and the Mallen Research Corporation of Charlottesville, Va. The team was honored for its futuristic state-of-the-art aircraft design, which includes an "ergonomically" designed cabin interior providing passengers with access to the latest in onboard computer communication systems.

The design competition was created because NASA and the FAA want to increase the involvement of the academic community in the revitalization of the U.S. general aviation industry while providing real-world design and development opportunities for students.

The competition is now an annual event. It allows university students to participate in a national effort to develop technologies for an aircraft transportation system for smaller aircraft. It is intended to help raise student awareness of the economic relevance of general aviation and its value for business and personal use.

Design packages are reviewed by a panel of industry and government experts who provide feedback to the student teams.

Design packages for the 1995/96 NASA/FAA General Aviation Design Competition are due by May 6, 1996. Winners will be presented with their awards at the annual Experimental Aircraft Association Fly-In Convention and Sport Aviation Exhibition in Oshkosh, Wis.

Computer security symposium to be held next month

Lewis Research Center along with the Information Systems Security Association, Information Systems Audit and Control Association and the National Computer Security Association are hosting a "Network System Operating Threats from Hackers, Crackers and Sniffers Symposium" on Sept. 11-13 at the Cleveland Airport Marriott.

This symposium will draw together some of the best computer security practitioners from the public and private sectors to discuss the nature of the growing menace from computer penetrations, as well as the serious magnitude of this threat and the potential consequences.

Actual cases will be discussed and the culture and criminal uses of hackers techniques will be described. Some of the more revealing details will describe the vulnerability of the personal computer in the privacy of homes.

Cost of the symposium is $345. JSC civil servants must fill out a JSC Form 75. For more information contact Pam Kotlenz at (216) 433-5164 or Kathy Clark at (216) 433-8354.

Matt Abbott of the Flight Design and Dynamics Division redeems his cafeteria coupons to Bea Lara, a Bldg. 11 cafeteria cashier.

Coupons now redeemable

The JSC cafeterias are now redeeming those cafeteria coupons.

Employees who collected coupons may redeem seven coupons for one daily special or an equivalent. Coupon redemption will be accepted until Sept. 30.

"We really wanted to show our customers how much we appreciate them," said Teresa Sullivan, JSC Exchange Operations manager. "This is one small way we can say thank you to the JSC employees for their business."

Seminar focuses on kids

The Total Health Program will present a seminar on "Latch-Key Children: How to Protect Them from Danger," at 11:30 a.m. Wednesday in the Teague Auditorium.

Lieutenant Nona Holoman of the Seabrook Police Department will discuss community programs in the area that are design to help protect children who stay at home alone until their parents get home from work.

For more information call Terri Lauderdale at x37247.

Safety programs are working

(Continued from Page 1)

employees and the environment. Standouts among that list include a senior managers' safety course, establishment of facility managers, emergency preparedness and planning enhancements, installation of a center wide warning system, consideration of safety as a factor in contractor source selection and performance assessment, safety surveys conducted by experienced personnel who bring new insight into JSC safety, incorporation of the DuPont Safety Committee system model, Safety Awareness Day, a Close Call reporting system and inclusion of safety performance as a factor in all managers' annual performance evaluations

During the celebration, Dinkel presented some safety performance statistics. JSC's lost workday cases were down from a total of 77 at this time last year to about half of that so far this year, for a total of 34. The lost workday case rate is an indicator of the amount of work missed due to injuries sustained on the job (expressed as the number of cases per 200,000 hours worked). In 1995, JSC's contractors posted a rate of 0.83, down from 1.89 for 1994. JSC civil service loss work day case rate was 0.04 in 1995, down from 0.27 in 1994.

In addition, about five times as many Close Call reports have been received this year as compared to last year. Studies indicate that there are about 300 close calls for every accident that occurs. Reporting close calls is an essential element in JSC's accident prevention program.

Huntoon looking forward to challenge of new institute

(Continued from Page 1)

choice to ensure that we achieve the necessary support and participation. The biomedical institute is the centerpiece of NASA's strategy to foster world-class life sciences research in support of human space exploration. The institute will provide us with the tools we need to understand how men and women can live and work in space, and in doing so, will provide the answers to medical problems here on Earth."

A pioneer in life sciences research for NASA, Huntoon has directed numerous important efforts in support of the agency's human space flight program. She joined NASA in 1970 as a life sciences researcher, and served in a variety of key positions before being named the agency's first woman center director in January 1994.

"I am looking forward to the challenge of helping bring broad participation to the life sciences institute," Huntoon said. "Establishment of the institute is clearly one of Mr. Goldin's highest priorities and he is committed to ensuring that resources are made available to ensure its success."

The life sciences institute has been designated by Goldin as the agency's "pathfinder" effort to expand its scientific efforts through new ways of doing business. NASA envisions establishing other institutes affiliated with NASA centers and programs across the country, and linked to the agency's core missions of human space flight, robotic space exploration, space and Earth science and technology. Broad participation is a goal for all the institutes, and Huntoon's efforts will establish a model for later institute efforts.

Huntoon will work with Deputy Associate Administrator Alphonse Diaz, who is coordinating the agency's overall plans for establishing the sciences institutes, including efforts to consult with the administration and Congress and to secure appropriate authority.

Travel Fair set for Tuesday

The Employee Activities Association is sponsoring a Travel Fair from 4-6:30 p.m. Tuesday at the Gilruth Center.

The fair will feature more than 50 travel experts including airlines, tour companies and cruise lines. A cache of door prizes will be awarded during the fair.

"We will probably be drawing door prize winners constantly because we have so many prizes to give away," said Ginger Gibson, president of the EAA.

The grand prize is a Delta Dream Vacation to Orlando, Fla. The package includes round-trip airfare on Delta Airlines, four day, three night stay at the Ramada Resort Maingate and an Alamo Rental car.

Tickets for door prizes can be picked up at the Bldg. 11 Exchange Store. One ticket per badged employee. For more information, call x35352.

Atlantis prepares for Mir

(Continued from Page 1)

from the Orbiter Processing Facility to the VAB on Aug. 21 to be mated to its stack in advance of its rollout to Launch Pad 39B on Aug. 26. Officials have not yet determined where *Columbia*'s RSRM nozzle joints will be repaired, but the work is not expected to affect the targeted liftoff date of Sept. 21 on the 16-day Spacelab microgravity research mission.

Atlantis is in the homestretch of its refurbishment for the October STS-74 mission, the second flight to link a shuttle with the Russian Mir Space Station. The Russian-built Docking Module, which will be mated to *Atlantis*' Orbiter Docking System through the use of the ship's robot arm, will be formally turned over to NASA in a ceremony next week at KSC.

The Docking Module will be attached to the Mir's Kristall module as *Atlantis* docks to Mir to form a permanent docking port extension for the remainder of the Phase One shuttle-Mir missions. The Docking Module will provide *Atlantis* with the clearance it needs to avoid the myriad of solar panels that will protrude from Mir in the future as a result of the addition of new arrays and the reconfiguration of existing solar panels.

JSC Photo by Mark Sowa

SNOOPY SIMULATION—Charles Schulz, center, and John Young, special assistant for engineering, operations and safety, check out the shuttle mission simulator in Bldg. 5. Schulz came to Houston to view his exhibit "Around the Moon and Home Again, A Tribute to the Art of Charles M. Schulz" at Space Center Houston. The exhibit features his comic strip "Peanuts" and its relationship to the space program. The exhibit will run to Sept. 17.

Correction

In the process of electronic transfer, some names were lost from the list of employees who received Certificate of Commendation in a special awards ceremony that took place Wednesday.

Other recipients were Office of the Director, Betty McNeely; Human Resources, Karl Schuler and Dianne Stokes and Office of the Comptroller Cathey Lamb.

Space News Roundup

The **Roundup** is an official publication of the National Aeronautics and Space Administration, Lyndon B. Johnson Space Center, Houston, Texas, and is published every Friday by the Public Affairs Office for all space center employees.

The Roundup office is located in Bldg. 2, Rm. 181. The mail code is AP2. The main Roundup telephone number is x38648 and the fax number is x45165.

Electronic mail messages should be sent to the editor, khumphri@gp301.jsc.nasa.gov or the associate editor, kschmidt@gp301.jsc.nasa.gov.

Editor .....Kelly Humphries
Associate Editor .....Karen Schmidt