



SPACE CENTER

Roundup

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Eye in the Sky



STS-109 crew to service the world-famous Hubble Space Telescope

See Page 3 for story

PAO: TELLING YOUR STORY

By Dan Carpenter, Director of Public Affairs



The Johnson Space Center Public Affairs (PAO) Team is looking forward to another exciting year. I am proud to be a member of this talented team. We work hard to help tell the stories of our Center's research, engineering, science and space flight programs, with a focus on the employees who work tirelessly "behind the scenes."

We tell these stories through various outlets. The most visible way is through the *Roundup*, which originates in PAO. For instance, last month the *Roundup* highlighted the Human Resources Team

and some of the new programs they are fielding.

This month the *Roundup* is giving you another behind the scenes look – this time at PAO. We will show you how we have changed some of our services, introduce you to our team and provide details about contacting us to learn more about what we offer.

Do you know your JSC PAO team? Numbers can help tell you our story. Here is a sampling of what we did last year to tell *your* story to the public:

- ❖ The Newsroom wrote and distributed 127 press releases and more than 200 status reports during space flight missions;
- ❖ Our Exhibits program provided exhibits for 461 locations – from Houston to Tokyo to Moscow to Paris to Rio de Janeiro;
- ❖ We received more than 400 requests for interviews and completed 466 (some requested multiple interviewees) from media around the globe;
- ❖ The www.spaceflight.nasa.gov Web site attracted approximately 9 million visitors; visiting the 45,000 pages on the site, including the 23,000 pages that our web team either edited or created last year
- ❖ The External Relations Office, which rejoined PAO in September, scheduled a total of 283 protocol tours – 198 of them were VIP tours and 85 were educational tours.

But numbers only tell you one aspect of the story. Here are just some of our responsibilities:

- ❖ Cover missions and ongoing operations using NASA TV and the host of production tasks that entails
- ❖ Work media requests
- ❖ Produce videos and other presentations
- ❖ Coordinate involvement with major network and film producers
- ❖ Process Freedom of Information Act requests
- ❖ Coordinate JSC participation in community events and exhibits
- ❖ Coordinate requests for speakers
- ❖ Develop and manage the most popular Agency Web site: www.spaceflight.nasa.gov

Finally, our story wouldn't be complete if it didn't involve telling your story. How do we tell your story or, sometimes, how do we help you tell it? As you will find out more on pages 4 and 5, our team is using some new resources and improved tools. However, more important than the resources and tools is our team's dedication and commitment. We have reallocated and reprioritized our resources to provide you with quality, timely information about:

- ❖ Upcoming missions and ongoing operations
- ❖ Relevant employee-related HR information about development and other programs
- ❖ JSC People at Work
- ❖ Letters and key messages from Center Management
- ❖ In-depth coverage of JSC stories and much more

In the coming issues of the *Roundup*, and soon through videos over the JSC cable system and JSC Web site, we hope to offer you many more glimpses – behind the curtain so to speak – of what many people do on a daily basis, many times with little or no recognition outside of their own team.

There are so many more stories at JSC that the public and other employees are interested in hearing about. We are dedicated to increasing our ability to help tell those stories. And, through close coordination with HR and the Information Systems Directorate, we are realizing that many other directorates find value in telling the JSC story to more people onsite as well.

As PAO strives to be better storytellers for and with you, we seek your input and suggestions. I hope you enjoy both the *Roundup's* new look and the fresh outlook it has adopted. That outlook is representative of our entire PAO approach. ❖



FROM THE DESK OF ROY S. ESTESS

The President has presented to Congress his budget for fiscal year 2003. The budget relating to human space flight and the Johnson Space Center are essentially as we expected.

The year ahead will hold many challenges for us here at JSC. We recognize that we must be fiscally accountable to the

American public. Consistent with that accountability, we will maintain our commitment to safety and record of technical achievements that have been the hallmark of this Agency and Center for the past 40 years.

While less than the 2002 budget, the budget for 2003 is consistent with both Station and Shuttle planning. We will continue to build and operate the International Space Station and provide transportation with the Space Shuttle. The projected budget does reflect the plan for some job losses at JSC and other parts of the country. This is due to the planned completion and deployment of space hardware.

Understandably, we all are concerned about possible job losses as a result of this budget plan. However, the budget process is not yet sufficiently mature for us to speculate on any possible specific numbers locally.

Please be patient in this process and know that Center management is fully aware of and understands your concerns. I remain confident you will continue to keep your focus on the amazing work we have before us to keep our space flight team operating safely and on schedule.

I am proud of each one of you. You too should be proud of the incredible technical achievements of our operational team. Together, as a team, we will continue our commitment to accomplishing our country's goals of human space flight.

Roy S. Estess

Combined Federal Campaign sets record

JSC closed out the 2001 Combined Federal Campaign with a record contribution of \$609,375 to the Texas Gulf Coast CFC.

Contributions from employees, contractors, military personnel and other government employees who work at the Center, as well as retirees, far exceeded JSC's goal of \$561,000. The CFC goal for the Houston and Galveston area was \$2.82 million, and JSC proved again this year to be a major contributor to the success of the area campaign.

"I want to congratulate all of you for a great team effort and for your individual generosity. You have once again demonstrated how much you care for those in need," Acting Director Roy Estess said. "In these trying times, your contributions will go a long way in helping our community and our nation."

While the campaign is over, the CFC and the charitable agencies it supports are available to help those in need throughout the year. For more information, contact Krista Heidi, CFC Regional Coordinator, at (713) 685-2734 or Candy Hunt, JSC CFC coordinator, at x31836. ❖

Editor's note: You may notice the *Roundup* has once more switched its paper.

While the coated text paper used for the January issue is indeed recyclable, the JSC recycling contractor does not currently recycle coated paper due to cost. The *Roundup* has switched to an uncoated paper because we are all environmentally aware here at JSC.

Space Shuttle: Hubble Space Telescope servicing mission to be a challenge

The STS-109 mission of *Columbia* to service the Hubble Space Telescope is scheduled for launch no earlier than Feb. 28, 2002, at the Kennedy Space Center, Fla.

The mission is commanded by Scott Altman (Cmdr., USN) with Duane Carey (Lt. Col., USAF) serving as Pilot. Dr. John Grunsfeld will be Mission Specialist 1 and Payload Commander and Nancy Currie (Lt. Col., USA) is the Flight Engineer and Mission Specialist 2. Dr. Rick Linnehan is Mission Specialist 3, Dr. Jim Newman will serve as Mission Specialist 4 and Dr. Mike Massimino will be Mission Specialist 5.

On STS-109, the Hubble Space Telescope will be serviced for the fourth time since it was launched, as Grunsfeld and Linnehan team up to conduct three spacewalks and Newman and Massimino are paired for two spacewalks to install new, more durable solar arrays, a large gyroscopic assembly to help point the telescope properly, a new telescope power control unit and a cooling system to restore the use of a key infrared camera and spectrometer instrument which has been dormant since 1999.

In addition, almost 12 years after Hubble was launched, the telescope's view of the universe will be dramatically improved with the addition of the newest scientific instrument – the Advanced Camera for Surveys (ACS). With up to four times the speed of previous instruments, this device will be able to survey a field of the cosmos twice as large as before with 10 times the resolution.

The new instrument's potential dwarfs the capability of the existing and complementary Wide Field Planetary Camera, which provided the world's astronomers with breathtaking views of the Eagle Nebula and the Hubble Deep Field in recent years. The ACS will replace the Faint Object Camera, the last of Hubble's original instruments and the last to require the corrective optics that were installed in Hubble during the first servicing mission in 1993. All of the current generation instruments have their own internal corrective mirrors.

The new solar arrays, which are the third set of power-generating wings for Hubble in its history, will generate 20 percent more power at two-thirds the size of the current arrays, with a new rigidity and durability that will provide the telescope with enough power for the rest of its operational lifetime. Rather than rolling up, the arrays each fold in two sections, providing greater reliability than its predecessors.

One of four Reaction Wheel Assemblies will be replaced during the flight. This mechanism helps to maneuver the telescope into the proper orientation for scientific observations. Although the assembly has not failed, it is exhibiting erratic behavior. Only three of the four assemblies are required for science, but a new assembly will be installed to insure Hubble's capability for new discoveries in the years to come.

The new Power Control Unit is the heart of electrical production for Hubble's systems. This unit will collect energy from the new solar arrays and distribute that power to all key Hubble components. The original unit has been operating since Hubble's launch in 1990. With Hubble's mission of discovery now extended to 2010, the new power unit will enable Hubble to remain healthier and more productive.

Its replacement will be the most complex task of the mission, requiring the delicate disconnection and reconnection of 36 small and closely spaced electrical connectors by the spacewalking astronauts. For the first time in history, all of Hubble's systems will be completely shut down to accommodate the spacewalking upgrade effort, which should take seven hours or more to complete.

The spacewalks and specific tasks to upgrade Hubble's instruments are regarded as more intricate and challenging than astronauts have encountered in previous servicing missions.

The flight will be the 27th for *Columbia* and its first mission since undergoing major modifications after its last flight in 1999. ♦

For more details about the mission, please visit:
<http://sm3b.gsfc.nasa.gov/>



Astronaut John M. Grunsfeld, STS-109 Payload Commander, uses virtual reality hardware at JSC to rehearse some of his duties on the upcoming STS-109 mission, NASA's fourth servicing visit to the Hubble Space Telescope (HST).

Behind the scenes with . . . Bryan Austin, STS-109 Lead Flight Director

By Melissa Davis

Q Can you give any insight on the work being done on the Hubble?

A We have a fantastic team of people working on the preparations for this mission. The Hubble Space Telescope (HST) team at Goddard Space Flight Center (GSFC) is very experienced, having completed three previous servicing missions, as well as dealing with the day-to-day operations of the HST on orbit.

The objectives of Hubble Servicing Mission 3B are to improve Hubble's scientific productivity by greatly improving visible imaging capability, restoring infrared science capability and also to replace failed or degraded spacecraft components. Specifically, we are replacing the pair of solar arrays with new fix panel arrays, replacing a failing power control unit, installing a new Advanced Camera for Surveys, which is expected to increase scientific discovery by 10 times, and installing a cooling system to regain the operations of the Near Infrared Camera and Multi-Object Spectrometer science instrument.

Q What are some specific challenges you will face?

A Five EVAs (extravehicular activity, or spacewalks) are the most we have ever attempted in a single Shuttle mission. This HST servicing mission is shaping up to be the most challenging of any servicing mission. Each of the EVA tasks fills most of the EVA day with little margin to accommodate failures and still get everything accomplished.

Q What should readers keep in mind and be on the lookout for when following this particular mission?

A It may be difficult to recognize, but each of these EVAs are very tightly choreographed. Each EVA crewman will be doing something different, one on the RMS and one free-floating. Along with this, the flight control teams in JSC's Mission Control Center (MCC) and at GSFC's Space Telescope Operations Control Center (STOCC) are integrated into the activities to configure the HST in preparation for the EVA, verify subsequent safety statuses and then quickly test the new equipment to ensure it is working.

Q What interesting behind-the-scenes activity is going on with this mission that readers might be surprised to know?

A Because each EVA is so tightly choreographed, we have to watch the extravehicular mobility unit (EMU) suit consumables (oxygen, power, etc.) to determine how much longer we could stay out in the event we have a problem. The EVA flight controller is continually tracking the pace of the EVA and determining if the crew is ahead or behind and what we would do if we had to "breakout" of the EVA.

Another interesting item is the magnitude of ground team interaction and communications that goes on between the team in Houston and the HST team.

Q Would you like to add anything else?

A I have been fortunate to play a part in every HST mission. I was the Training Simulation Supervisor for STS-31 and STS-61. After being selected into the Flight Director Office, I was one of the Flight Directors for STS-82 and STS-103. It's a great privilege for me to be the Lead Flight Director for this mission.

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SPACE CENTER
Roundup

PAO Account Managers use their talents in many ways to benefit various directorates. Below are brief profiles of just four of our Account Managers:



Kylie Moritz

In my role, I serve as a media liaison for the Engineering Directorate and the Space Shuttle Program. My primary focus is to gather and write newsworthy press releases for the public and the media. I also generate fact sheets covering our accomplishments for the media and am available for media inquiries regarding new technological developments for our programs.



Doug Peterson

As a liaison to Flight Crew Operations and the Astronaut Office I reside in both the Astronaut office and the Public Affairs Office, providing public affairs advice to the astronaut office management (CB) and the astronaut corps. My other responsibilities include coordinating access to the astronauts for appearances, selected interviews and film shoots that appropriately conveys the NASA space story.



John Ira Petty

As the liaison for the International Space Station (ISS) and the KC-135 Reduced Gravity Student Opportunities Program, I provide a variety of communication services to each group. For the ISS I provide the Station Program Managers with talking points for scheduled briefings as needed, ISS commentary from the Station Flight Control Room daily, write press releases about the program and provide focused outreach work. For the KC-135, I compile the press kits, publicity materials and news releases, and I brief the students on how to handle the media while at JSC.



Cathy Watson

In my role, I am the liaison to the Space and Life Sciences group. My responsibilities consist of updating and maintaining various public JSC Web sites. Items such as press releases, announcements of publications of journal articles, the convening of a group of scientists at a local conference can be found on both internal and external Web sites.

Meet your PAO team

We are your Public Affairs Office. We are a talented team of skilled communicators. We are editors, public speakers, producers, reporters, writers and story creators. We serve as liaisons, escorts, representatives and press agents. We are partners, leaders and speakers. We are contractors and civil servants. Often we are the first people visitors and media interact with when they contact NASA.



NASA JSC 2002e00168 photo by Robert Markowitz

We work to tell the Johnson Space Center story, your story, to the public and the media. As JSC employees serve, create, accomplish, design and innovate, we work to share this news with the world. We do this through many ways. Sometimes through carefully selected images taken by the photography team, or through broadcast images on NASA TV. Other times, we use written pieces to share the excitement that is JSC through media kits, press release and numerous publications. Here is how we work:

Newsroom

Members of JSC's newsroom team handle all aspects of media relations for the center. Major activities include:

- ◆ Providing around-the-clock Space Shuttle mission support and commentary for NASA Television
- ◆ Providing International Space Station NASA TV support and updates on weekdays and during major flight activities, such as spacewalks or visiting vehicle dockings
- ◆ Interfacing on a daily basis with national and international print, electronic and broadcast media working on articles, television news stories, documentaries, movies and TV shows
- ◆ Writing, editing and distributing all JSC local and national press releases
- ◆ Developing mission press kits for all space shuttle flights and all Expedition crews
- ◆ Preparing and broadcasting shuttle preflight press conferences, status briefings and other events
- ◆ Acting as the representatives for JSC's directorates in composing press releases and articles in their newsworthy activities and events
- ◆ Maintaining and updating Internet sites, including NASA's Human Space Flight Web site at www.spaceflight.nasa.gov

The JSC newsroom also plays a key role in a wide variety of astronaut public affairs activities including pre-mission crew interviews, film shoots, appearances and publicity, interviews and communications advice and support.

Web Team

The Web Team within PAO is primarily responsible for the maintenance and enhancement of the following PAO Web sites:

- ◆ NASA Human Space Flight Web <http://spaceflight.nasa.gov/>
- ◆ JSC External Web Site <http://www.jsc.nasa.gov/>
- ◆ Daily Cyberspace Roundup <http://www.jsc.nasa.gov/pao/roundup/index.html>

The NASA Human Space Flight Web site is the primary mechanism for delivery of information to the public and media concerning the Human Exploration and Development of Space (HEDS), which includes space shuttle mission coverage, ISS coverage, release of news concerning all aspects of the HEDS effort and real-time and historical information. The Web team is responsible for updating the information on this Web site and also developing tools and techniques to allow others to deliver information.

The JSC External Web Site is the conduit for information to the public and media for such topics as space shuttle and space station activities, specific JSC activities such as the JSC Exhibits program, FOIA information and University Research programs.

The Daily Cyberspace Roundup is an extension of the JSC Roundup publication, which is updated daily to provide JSC personnel, media and the public with the latest information regarding NASA's activities.

Internal Communication

Our employees are our most important audience. Your mood, perceptions and interpretations of the center's activities influence how you present JSC to everyone you encounter and even how you perform your duties. If we arm you with positive and straightforward information, we hope you will feel valued, involved and can speak more knowledgeably and positively about your work. And you will be the committed workers that we want in our workforce.

The internal communication teams works to provide key center messages, such as the JSC commitment to safety and diversity and the promise of NASA as an investment in America's future. The internal communication team works to represent all JSC Civil Servants,

contractors and the entire JSC workforce, including White Sands Test Facility and the Sonny Carter Training Facility – from top management to engineering to administrative staff to janitorial, cafeteria and security.

To keep you up-to-date, the publication *Horizons* is the internal guide for those of you that help tell the ISS Story. It has fun facts, quotes, and basic mission info. Whether you are speaking to school kids, the Kiwanis or to a technical symposium, this is a tool for you.

External Communications

Supplementing our internal communications program is our effort to communicate key messages and news from our center to external audiences. Through the proliferation of media, both traditional forms and now online mechanisms, there are tremendous new opportunities to get our story out.

It is the goal of the External Communications Team to proactively capture some of those opportunities and to increase awareness of NASA-Johnson Space Center and the fascinating work done here. More specifically, to expand the reach of our coverage beyond Space.com and the *Houston Chronicle*, we're moving into mainstream press that reaches more of our public. Look for more to come from this team highlighting our diverse and talented workforce, like the media hit in January's issue of *Women's Enterprise* with Dr. Nitza Cintron.

Additionally, leveraging our important community and business partnerships also happens through this team. In recent months, we've been able to garner more visibility in Houston and national print materials through building relationships with our community and business partners such as the Greater Houston Partnership and the Clear Lake Area Economic Foundation.

External Relations Office

The External Relations Office works to provide increased emphasis on the Center's relationships with key external audiences, communities and government entities. They build support for NASA/JSC programs through community involvement, exhibits programs, public presentations, special events, guest operations and government relations. This office also participates in community organizational meetings and

interacts with committees that seek an interface for events and initiatives.

The Information Services Center (ISC)

The ISC is often referred to as the "library." This office responds to all requests for information from the general public. The library moniker is a holdover from the days when the ISC housed a lot of books and the staff researched NASA information for the public. The number of books has been significantly reduced, and the staff no longer does a lot of library type research, but they are an excellent source of information about NASA, JSC and other space contacts. They like to think they know something about everything, so give them a shot.

The ISC is open for employee walk-up requests during the hours of noon to 4 p.m. This enables JSC employees to get information, lithographs (pictures) and posters for their contacts, families and friends. As an example, the office provides crew pictures and information for each shuttle flight.

International Space Station Traveling Exhibit

JSC's ISS Traveling Exhibit, housed in two semi-truck trailers, travels the United States presenting the story of the ISS and the excitement of human space flight to a diverse audience. Visitors receive a guided tour and hand-out souvenirs after having learned the purpose of building the ISS. Exhibit staff often conducts teacher workshops and student activities in addition to providing tours.

Speaker's Bureau

The Speaker's Bureau dispatches selected speakers to events nationwide and internationally. Sample requests supported in FY 2000-2001 included events in Denmark (Danish Ministry of Culture) and in Scotland (TechniTex Faraday Partnership). Dow Chemical Company in Houston and Massachusetts General Hospital in Boston were other beneficiaries of the JSC Speaker's Bureau. The Speaker's Bureau is also responsible for recruiting volunteer staff for events such as the Houston Livestock and Rodeo Show, Texas State Fair and the Houston International Festival. ❖

Telling Your Story

Wondering how to get your message out to those inside or outside JSC? Let PAO and ISD help you.

Roundup

A monthly newspaper that contains human-interest stories, events, major awards and initiatives.

Cyber Roundup

An online newsletter that provides additional JSC features, news, announcements and employee recognition.

Contact for both: Melissa Davis, x39978

JSC Today

Online announcements, three times a week.

Contact: <http://isd.jsc.nasa.gov/>
GA/isdhome/jstoday.html

Print publications

Brochures, fact sheets and posters that highlight programs and organizations.

Contact: For internal publications, contact Donna Baumer, x46175 [For external publications, contact your PAO Account Manager]

Spaceflight Web site

Managed here at JSC, this is NASA's primary location for human space flight on the Web to include mission news, updates and facts at <http://www.spaceflight.nasa.gov>.

Contact: Your PAO Account Manager

Internal Communication Video Series

An internal video series that highlights JSC's people, projects and organizations.

Contact: Beth Nischik, x36992

Press releases/events

An announcement to inform the media about a project, event or person.

Contact: Your PAO Account Manager

NASA TV

A video news release service that delivers NASA programming to media outlets and educational institutions.

Contact: Your PAO Account Manager

Information Services Center (ISC)

Located in Bldg. 2, Room 174, the ISC offers a variety of material, including *Horizons*, crew lithographs, educational packets, posters and Jukebox information.

Contact: x38693

Want to know which Account Manager serves your directorate or program? Please call the ISC at x38693

Expedition 3 returns home

EXPEDITION 3 COMMANDER FRANK L. CULBERTSON, JR.



Expedition 3 Commander Frank L. Culbertson, Jr., has the distinction of being the only American who was not on Earth when the Sept. 11 tragedies occurred. After the day's events, Culbertson wrote about being so far from home at such a tragic moment in history.

Here are some of Culbertson's thoughts regarding September 11:

I haven't written very much about specifics of this mission during the month I've been here, mainly for two reasons: The first being that there has been very little time to do that kind of writing, and secondly because I'm not sure how comfortable I am sharing thoughts I share with family and friends with the rest of the world.

Well, obviously the world changed today. What I say or do is very minor compared to the significance of what happened to our country today when it was attacked by ... by whom? Terrorists are all we know, I guess. (It's) hard to know at whom to direct our anger and fear.

I had just finished a number of tasks this morning, the most time-consuming being the physical exams of all crew members. In a private conversation following that, the flight surgeon told me they were having a very bad day on the ground. I had no idea. He described the situation to me as best he knew it at -0900 CDT. I was flabbergasted, then horrified. My first thought was that this wasn't a real conversation - that I was still listening to one of my Tom Clancy tapes. It just didn't seem possible on this scale in our country. I couldn't even imagine the particulars, even before the news of further destruction began coming in.

Vladimir came over pretty quickly, sensing that something very serious was being discussed. I waved Michael into the module as well. They were amazed and stunned. After we signed off, I tried to explain to Vladimir and Michael as best I could the potential magnitude of this act of terror in downtown Manhattan and at the Pentagon. They clearly understood and were very sympathetic. I glanced at the World Map on the computer to see where over the world we were and noticed that we were coming southeast out of Canada and would be passing over New England in a few minutes. I zipped around the station until I found a window that would give me a view of NYC and grabbed the nearest camera. It happened to be a video camera, and I was looking south from the window of Michael's cabin.

The smoke seemed to have an odd bloom to it at the base of the column that was streaming south of the city. After reading one of the news articles we just received, I believe we were looking at NY around the time of, or shortly after, the collapse of the second tower. How horrible. I panned the camera all along the East Coast to the south to see if I could see any other smoke around Washington, or anywhere else, but nothing was visible.

It was pretty difficult to think about work after that, though we had some to do, but on the next orbit we crossed the US further south. All three of us were working one or two cameras to try to get views of New York or Washington. There was haze over Washington, but no specific source could be seen. It all looked incredible from two to three hundred miles away. I can't imagine the tragic scenes on the ground.

Other than the emotional impact of our country being attacked and thousands of our citizens, and maybe some friends, being killed, the most overwhelming feeling being where I am is one of isolation. ❖

To read more of Culbertson's thoughts about Sept. 11, 2001, go to: <http://spaceflight.nasa.gov/station/crew/exp3/culbertsonletter.html>



NASA JSC 2001e 01120

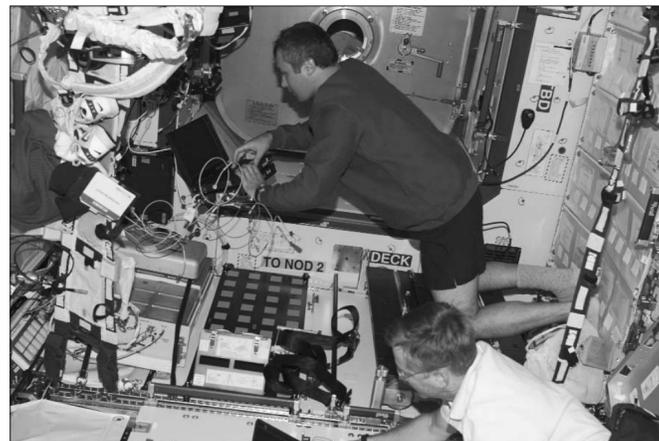
To prepare for their lengthy stay on the International Space Station (ISS), Dezhurov, Tyurin and Culbertson participate in mission training in one of the high fidelity trainers/mockups in the Systems Integration Facility at JSC. The three are seated on the mid deck for an emergency egress training session.



Cosmonaut Vladimir Dezhurov prepares the Russian Orlan space suit for a spacewalk from the Pirs Docking Compartment.



During some down time, Cosmonaut Mikhail Tyurin plays a guitar among storage bags in the hatch area of the Quest Airlock.



Culbertson (bottom) and Dezhurov perform routine tasks in the Destiny laboratory on the ISS.

Expedition 3 Commander Frank Culbertson, Pilot Vladimir Dezhurov and Flight Engineer Mikhail Tyurin, returned Dec. 17 from a 129-day stint aboard the International Space Station on STS-108.

Here are some highlights from Expedition 3's mission:

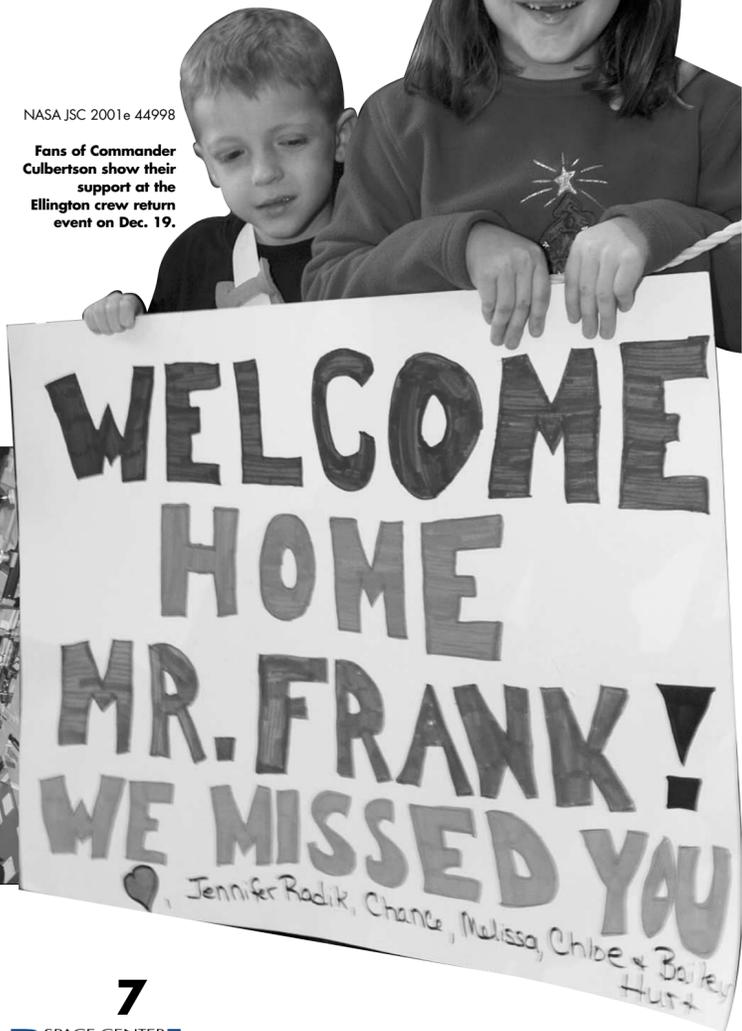
- ❖ The Volatile Organic Analyzer (VOA) was installed and activated. The VOA is designed to sample the air inside the ISS, detecting and identifying any possible contaminants.
- ❖ A wiring check enabled the treadmill to be used for exercise sessions on board.
- ❖ An orientation allowed the station's solar arrays to receive maximum sunlight.
- ❖ The grown colon, kidney and ovarian cancer cell research project was completed.
- ❖ The PuFF experiment began, studying the lungs of an astronaut over the duration of a space flight.
- ❖ The 16-foot-long Russian Pirs module docked with the ISS, providing the station with a new airlock and docking port.

- ❖ Spinal cord experiments continued to study reflexes of long-duration space flight, as well as physical examinations done periodically to gauge the effects of weightlessness.
- ❖ New science experiments included the ability of certain chemical compounds to impede the formation of kidney stones using ingested pills. The crew also continued testing the Active Rack Isolation System in its ability to protect experiments from crew activity.
- ❖ Three space walks finished connecting Pirs with the rest of the station.
- ❖ A fourth space walk by Pilot Dezhurov and Tyurin removed debris in the form of a rubberized seal from the docking interface between a Russian Progress re-supply craft and the Zvezda Service Module that delayed the launch of STS-108 and the arrival of Expedition 4.



NASA JSC ISS003-002

The Expedition 3 crew is comprised of Culbertson (center), who served as commander, and Tyurin (left) and Dezhurov, both flight engineers who represented Rosaviakosmos.



NASA JSC 2001e 44998

Fans of Commander Culbertson show their support at the Ellington crew return event on Dec. 19.

Profiles

February is Black History Month



Herbert J. Babineaux, Jr.

Time at JSC:

14 years

Organization:

Office of the Chief Information Officer

Position title:

Computer Engineer, AST

Education:

Bachelor's of Science in Computer Science, Louisiana State University

Place of birth:

Arnaudville, Louisiana

What does Black History Month mean to you?

Having grown up in the Deep South during the 60s and 70s, I have seen firsthand the devastation resulting from the practice of racial discrimination. Although having experienced such discrimination in my life, I know that my personal experiences were mild compared to those of my predecessors. As I learn about the accomplishments of such individuals as Booker T. Washington, George Washington Carver, Jesse Owens, Martin Luther King, Jr. and Barbara Jordan, I am struck with awe.

Although born into slavery, Booker T. Washington became America's premiere black educator promoting the notion that education should be used as the primary tool to help blacks overcome their economic poverty and gain their equality in the U.S. Also born a slave, George Washington Carver's scientific work (agronomy and chemistry) on the sweet potato and peanuts allowed the South to loosen its dependence on cotton as a cash crop. Jesse Owens, gold medalist at the 1936 Berlin Olympics, shattered Hitler's attempt to use the games as a showcase of the athletic prowess of the so-called Aryan race. Civil Rights Leader Martin Luther King, Jr. showed the world courage by laying down his life to support a cause that he so deeply believed in. The wit and wisdom of Barbara Jordan earned her the reputation of being one of the greatest orators of modern time.

Black History Month is an opportunity for me to reflect on my own life and accomplishments. By learning how those who have come before me were able to overcome great adversity and achieve success, I am motivated to apply these same principles to my own life and profession. The lessons learned from these great people are for everyone, regardless of race.

Favorite words of wisdom:

Blessed is the man who finds wisdom, the man who gains understanding, for he is more profitable than silver and yields better returns than gold.

(NIV Bible, Proverbs 3:13, 14)

Sharon R. Evans

Time at JSC: 15 years

Organization: Human Resources, Education & Student Programs Branch

Position title: Student Programs Specialist

Education: Sterling High School, some courses taken at San Jac College

Place of birth: Houston, Texas

What does Black History Month mean to you?

Black History Month is a time where I can reflect on all the great things that have been accomplished by African-Americans.

Favorite words of wisdom?

Be strong. "He" doesn't give you no more than you can handle.



Andrea Renee Falls

Time at JSC: 18 Years

Organization: BJ3/COD Procurement

Position title: Contract Specialist

Education: Business Management Degree, University of Houston-Clear Lake

Place of birth: Rayne, Louisiana

What does Black History Month mean to you?

Black history to me means being blessed to have a great and wonderful multicultural life, opportunities of an education and career, community service and being an AMERICAN. From God's grace and mercy my ancestors riding on the back of a bus to me being able to ride anywhere on a bus, drive a bus or even own a bus. The bottom line is without Black History there wouldn't be a ME.

Favorite words of wisdom?

Faith equals opportunities to infinity plus 2 square.



Rodney L. Lofton

Time at JSC: 23 years

Organization: ISS Program Office, Space Station Payloads Office

Position title: Increment Payload Manager

Education: Bachelor's of Science in Mechanical Engineering, Brown University, 1977; Master's of Aerospace Engineering, Cornell University, 1979

Place of birth: New Bern, North Carolina

What does Black History Month mean to you?

Recognition and celebration of the positive accomplishments of African-Americans have made to this country and the world as a whole.

Favorite words of wisdom?

Always be conscious of your actions and deeds, for they may indeed have an effect on lives of others that may not be readily apparent to you.



Janice K. Hall

Time at JSC: 14 years

Organization: Office of the Comptroller (Org LA)

Position title: Program Analyst - Space Shuttle Program

Education: University of Houston (Main Campus), Bachelor's of Science, Mathematics.

Place of birth: Galveston, Texas

What does Black History Month mean to you?

That a wonderful legacy was established, through blood, sweat and tears, that I am able to enhance.

Favorite words of wisdom?

Seek ye first the kingdom of God. Also: If it is to be, it's up to me.



SPACE CENTER Roundup

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