



SPACE CENTER

Roundup

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Gearing up

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STS-110 mission specialist Astronaut Lee M. E. Morin trains for the upcoming April mission, which is scheduled for no earlier than April 4. He is pictured here wearing a training version of the full-pressure launch and entry suit. Atlantis' mission will be one of the most complex station assembly flights to date, including four space walks and operations with both the shuttle's and the station's robotic arms.

EOPO: Making progress for you

By Estella Hernandez Gillette



The JSC Equal Opportunity Programs Office (EOPO) has gone through many changes since it was established in 1972 when Affirmative Action was extended to the Federal sector.

Our team is comprised of five civil servants, one detailee from Alabama A&M University and one Office Education student. We have oversight of two major groups of JSC employee groups who help us carry out our mission: The JSC Diversity Council and the JSC EO Counselors.

We are the responsible organization for oversight of the affirmative employment regulations and

policies. JSC has invested heavily in diversifying its work force throughout the years - it now consists of approximately 52 percent white males and 48 percent minorities and women. Progress has been made but certainly there's much more to do!

What we do for JSC

We transformed our previously multiple, weeklong cultural observances into American Heritage Week, a week to celebrate the rich heritage that we all bring to our U. S. space mission.

This year, we want to try something new for American Heritage Week and we are seeking your input. How about a celebration of our "American Heroes," which are those members of the JSC work force and/or their children who have served or are serving in defense of our American freedom? What better proof that we all have common objectives, but maybe from different perspectives? Call us at x30601 or email paula.n.scheffman1@jsc.nasa.gov to offer your suggestions.

We also continue to celebrate our special emphasis observances. Employees have been entertained by many different performers and for this year's observances, we'll be sponsoring different exhibits to make all of us more aware of the contributions of each group, including contributions to NASA's goals and objectives.

In the area of discrimination complaints, we have taken a very proactive approach to resolve issues, including extensive training of the Equal Opportunity staff and the JSC EO Counselors, as well as the establishment of a JSC mediation team to further help resolve issues. We have successfully resolved issues because we have involved all necessary levels of the aggrieved employee's organization to help resolve the issue. Our goal is to return employees to their productive environment - we all want solid careers and a stable future in our professions.

In the area of education and outreach, we have programmed millions of dollars through the Minority University Research and Education Program (MUREP) to assure a future work force that can do our NASA work and continue to keep our country in the forefront of technology. We identified our growing minority workforce as a business concern a long time ago, even before the word "outreach" became popular!

Our academic partners are doing research that is relevant to the NASA mission with funding from the MUREP. We are currently preparing for the arrival of about 40 students from historically Black universities and colleges, Hispanic-serving institutions and Tribal colleges, as well as college- and high school-level students with disabilities. Our goal is for those students to gain positive experiences in their JSC internships so that they will return to us as full-time employees upon graduation.

Cooperation and coordination with the various JSC Directorates is paramount. We couldn't plan our different activities without the help of our JSC workforce, nor resolve issues without the involvement of our JSC employees and management. And, we couldn't place our summer interns without the cooperation and support of our JSC mentors.

We work very closely with management, the Human Resources Office, the Legal Office, the Public Affairs Office and the American Federation of Government Employees to make sure that we do the most we can to afford all of our employees opportunities to succeed.

However, the road to success is multi-faceted. It doesn't just take the organization or the EOPO or management to help an individual succeed. JSC has many opportunities for development, visibility and for individuals to gain practice that will help them achieve their next level of success.

It's not only hard work that helps us to succeed - it's also attitude and the ability to step out of our comfort zone. JSC is filled with talented, qualified individuals who work in a competitive environment, but there is so much our system has to offer!

We have a formal Mentoring Program now, one that everyone can sign up for as either a mentor or protégé. We have a formal Leadership Development Program to assure that we get the proper development to be the leaders of the future. Finally, we have new leadership - a fresh start for all of us.

We all have a common goal: The success of our Center and our Agency. Our leaders have the responsibility to provide us with the vision, but we have equal responsibility to be ready and willing to tackle the challenges that they set before us. From those challenges will come many opportunities. Prepare yourself for



FROM THE DESK OF ROY S. ESTESS

Recently, Estella Gillette and her Equal Opportunity Program Office staff hosted the Agency's Equal Opportunity (EO) Board meeting here at JSC. The EO Board is comprised of Agency Deputy Associate and Assistant Administrators, Deputy Center Directors and EO Directors.

We were very pleased that Administrator Sean O'Keefe wanted to transmit a live message to this group. I think it valuable and pertinent to pass on what he had to say about diversity.

He said, "The objectives of diversity should be to resolve the way we do things. It should not be a pursuit in or of itself for reporting purposes only. The only way to avoid 'the group thing' is to be proactive by emphasizing diversity throughout whatever agenda we pursue. It's an opportunity to look at problems differently, not just by academic discipline, but also by the diversity of thought."

I agree with him, but more importantly, I have observed this in practice here at JSC. A few years ago, JSC examined its philosophy and determined that it was time to better match the current JSC environment. That process led to discontinuing the committees for the different cultural groups, in existence for 20 years, and instead the JSC Diversity Council (DC) was formed. The DC represents all of the JSC community and works together to understand the issues existing within our work force and to bring those issues to senior management through the JSC Evolution Team (JET).

The JET, was formed to involve senior management in addressing the issues once they were identified. Through focus-group interviews, we identified a set of leading concerns that included:

- ❖ Lack of defined vision for the Agency and the Center
- ❖ Limited career tracks for some of the work force
- ❖ Lack of a formal mentoring process
- ❖ Balancing family concerns with work demands
- ❖ The development of strong future leaders who would lead us through the challenges we are facing as a Center and Agency.

These are all areas that the Center is in the process of remedying - witness the many programs that HR is fielding and that were highlighted in the January issue of the *Roundup*.

Are we satisfied with our gain? Pleased, but not nearly satisfied. I don't think we can afford to rest on our laurels, as there remains much work to do. However, I am proud of the progress that JSC has made through the years in expanding its understanding and appreciation of the positive impact a diverse work force delivers to the rich contributions JSC makes to the country.

I applaud your efforts in this arena and encourage you to continue to foster diversity in our attitudes and work relationships. By attaining a diverse outlook within our environment and workforce we strengthen the threads that tie together our common goals and objectives.

Roy S. Estess

HOWELL NAMED JSC DIRECTOR

The yearlong wait is over. **Jefferson Davis Howell, Jr.**, has been named Director of the Johnson Space Center effective April 1.

Howell is no stranger to JSC. He currently serves as Senior Vice President and Program Manager for the Safety, Reliability and Quality Assurance contract at JSC. The contract focuses on safety and mission assurance for the Space Shuttle and International Space Station programs. He is employed by Science Applications International Corporation (SAIC).

A retired U.S. Marine Corps Lieutenant General, Howell is only the eighth person to serve as Director in the center's 40-year history. In the April issue of the *Roundup*, we will have more extensive coverage of JSC's new Center Director. We will also provide a look back at Roy Estess' year of leadership. Until then, for additional information on Howell, please visit the JSC homepage at: www.jsc.nasa.gov.

STS-110: A framework for station expansion

The Space Shuttle *Atlantis* will begin expanding the International Space Station on STS-110, installing the initial section of a framework that eventually will hold systems needed to provide power and cooling for future international research laboratories.

Scheduled to launch no earlier than April 4, *Atlantis*' mission will be one of the most complex station assembly flights to date, including four space walks and operations with both the shuttle's robotic arm and the station's robotic arm. During the space walks, astronauts will truly take on the appearance of high-rise construction workers as they assemble beams, attach work lights, bolt girders and plug in electrical connections.

For the first time, the station's Canadarm2 robotic arm will be used exclusively to hoist the 13-ton truss section, called the S0 Integrated Truss Structure, from *Atlantis* and attach it to the station. Other firsts also will be apparent: The first use of the station arm as a space "cherry picker" to maneuver space walkers and the first shuttle flight to have all space walks originate from the station's airlock.

The *Atlantis* crew will be comprised of:

Commander

Michael J. Bloomfield, 43, Lt. Col., USN – Third space flight

Pilot

Stephen N. Frick, 37, Lt. Cmdr., USN – First space flight

Mission Specialist 1

Rex J. Walheim, 39, Lt. Col., USAF – First space flight

Flight Engineer and Mission Specialist 2

Ellen Ochoa, 43 – Fourth space flight

Mission Specialist 3

Lee M. E. Morin, 49 – First space flight

Mission Specialist 4

Jerry L. Ross, 54 – Making a record seventh flight aboard the shuttle, the most of any astronaut in history

Mission Specialist 5

Steven L. Smith, 43 – Fourth space flight

Smith and Walheim will form one team of space walkers while Ross and Morin will form a second spacewalking team.

Assisting with *Atlantis*' assembly work from aboard the ISS will be the current station residents, the Expedition 4 crew of Commander Yury Onufrienko and Flight Engineers Dan Bursch and Carl Walz. The station crew has been aboard the complex since early December.

Atlantis will carry the first major external truss section for the station, a 43-foot long girder-like segment that will lay the foundation for an eventual cross-beam that will stretch more than 350 feet. Nine additional truss segments will be linked on future missions to the centerpiece segment carried by *Atlantis* to form the finished structure.

The finished truss will support almost an acre of solar panels and giant cooling radiators. Although the ISS already is a fully functional research complex with a single United States laboratory, the additional solar panels and radiators will provide the electricity and cooling necessary for Japanese and European laboratories to be attached to the station, as well as a future U.S. centrifuge laboratory.

The truss segment carried to the station by *Atlantis* also will include the first space railroad. Attached to the truss before launch will be a space railcar called the Mobile Transporter and a section of track that will span the length of the truss segment. The Mobile Transporter, when it is coupled with a base system for the station's Canadian robotic arm later this year, will allow the station's robotic arm to ride up and down the length of the football-field long finished truss. The rail system will allow the arm to be positioned wherever it may be needed along the truss for maintenance or assembly work in the future. ♦

Behind the scenes with . . . Dina Barclay, Lead EVA Officer for STS-110, 8A

By Melissa Davis

Q How long have you been the lead EVA (Extravehicular Activity, or space walk) Officer?

A I was assigned as the lead EVA officer for 8A around May of last year, although I have been working this flight on and off for about three years. I've been in the EVA MOD group for about six years after coming from the Training Division in MOD (Data Processing System and Navigation). I started learning the spacesuit and Shuttle airlock, certifying as a spacesuit instructor, and then moved on to learning the Shuttle exterior, payloads and the International Space Station exterior as an EVA task instructor. I then spent several months in Russia as an EVA liaison, and in May I was fortunate enough to be given this opportunity.

Q How long has the crew trained with you for this mission?

A The crew started training last year. The instructors on our team that really perform the detailed crew training are Michelle Hollinger, the lead EVA task instructor for the S0 element and ISS exterior, and Zeb Scoville, the lead spacesuit and airlock instructor.

Q What are some of the elements of their training?

A They have been hung from the ceiling, dunked under water in spacesuits, taken to vacuum in a JSC airlock and flown around the Space Station in virtual reality. They've also performed numerous tests involving the S0 element at KSC, they've spent time learning the intricacies of EVA tools and they've been riding on top of robotic arms at the Neutral Buoyancy Laboratory. Their training is varied to give them the best possible collective experience on the ground that can simulate working in space.

Q What are some challenges you will face with this mission?

A The biggest challenges involve the structural attach system of S0, and the time criticality of electrically mating the connectors before S0 gets too cold on the first EVA.

The S0 truss element is the central truss element, and it will be the mechanical 'anchor' to the US Lab for the entire truss at ISS assembly complete. There are four deployable, telescoping groups of struts (two of the groups are similar to a large camera tripod). These four strut groups form a rigid attach system between the truss and the Lab. They must be deployed via EVA, and the installation of the bolts that hold them in place is critical for further station assembly.

Also, like other ISS missions, the S0 truss element could get too cold after removal from the Shuttle payload bay and before heater power can be applied to it. As such, we must deploy trays of cables and mate several critical cables to get the heater power applied to it. If anything goes wrong with the as-planned trays or the cables, we have some backup cables we can deploy, but it all must be done on the first EVA.

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

A On the crew are two of the most experienced space walkers in the astronaut office, and they've been paired up with two well-trained and ready-to-fly new space walkers. These guys might make the EVAs look easy. Don't be fooled; completing a complicated mission like this isn't easy.

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

A Two of the EV crew members are grandfathers. Guess which ones? Give up? Lee Morin and Jerry Ross.

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