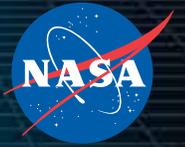


National Aeronautics and Space Administration



Roundup

Lyndon B. Johnson Space Center

July | 2010



Going to **new** depths

JSC Column



On the cover:

Astronauts and dive staff train on International Space Station assembly tasks in the Neutral Buoyancy Laboratory pool.



NASA/PHOTO STS132-S-140

Photo of the month:

Space Shuttle Atlantis' underside is visible as it approaches Runway 33 at the Shuttle Landing Facility at Kennedy Space Center in Florida. Landing was at 7:48 a.m. CDT on May 26, completing the 12-day STS-132 mission to the International Space Station.

We are now in the middle of a typical hot and humid Houston summer. With eight shuttle missions in the 14 months between March of 2009 and May of this year, as well as final assembly and around-the-clock operation of the International Space Station and the successful Ares 1X and Pad Abort 1 Constellation tests, it has been a busy, demanding and wonderfully successful year. The Johnson Space Center team is performing exactly as experienced space professionals should perform, and I couldn't be more proud of this team. While station activities are as busy as ever, Constellation is working hard during a period of uncertainty, and the next shuttle mission is not scheduled until September at the earliest. I encourage everyone to try to take some time off if they are able to do so. I've learned over many years that productivity increases after some "down time" and is almost always accompanied by a more positive attitude.



NASA PHOTO

While hurricane season officially started last month, the possibility of a serious storm threatening us is much higher in August and September. If you haven't already made your hurricane preparations, including a well-thought-out plan of action, now is the time to do so. Don't wait until a storm is in the Gulf.

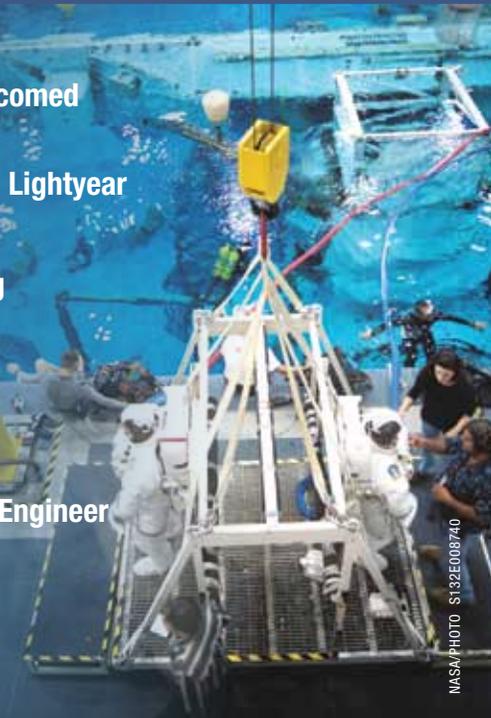
As I've promised before, we will immediately inform you of any developments regarding the transition of Constellation, including our efforts to implement the president's 2011 space policy. The tiger team we established immediately after the budget rollout is now led by Deputy Director Ellen Ochoa after Director of Flight Crew Operations Directorate Brent Jett was asked to also assume the duty of deputy for Commercial Crew. They have been working hard to match our core competencies at JSC with the programs and projects outlined in the 2011 budget proposal. The team has also identified a number of areas for collaboration with the other NASA centers.

Stay cool and dry and keep up the good work.

Mike

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NASA PHOTO S132E008740

Three new **Expedition 24** crew members welcomed aboard station

Expedition 24 Flight Engineers Doug Wheelock,

Shannon Walker and Fyodor Yurchikhin docked with the International Space Station on June 17. The trio began the journey to their new home when they launched aboard the Soyuz TMA-19 spacecraft from the Baikonur Cosmodrome in Kazakhstan.

From inside the station, Expedition 24 Commander Alexander Skvortsov and Flight Engineers Tracy Caldwell Dyson and Mikhail Kornienko monitored the approach of the Russian spacecraft as it docked to the aft port of the Zvezda service module.

After the completion of leak checks, the hatches between the two vehicles were opened at 7:52 p.m. CDT. Skvortsov, Caldwell Dyson and Kornienko, who arrived at the station April 4 aboard the Soyuz TMA-18, welcomed the new Expedition 24 crew members aboard their orbital home during a welcome ceremony.

U.S. Army Col. Wheelock, 50, is making his second trip into space. As an STS-120 mission specialist aboard Space Shuttle *Discovery* in 2007, he traveled to the station and conducted three spacewalks.

Walker, 45, is a graduate of Rice University and the first native Houstonian to be named an astronaut. This is her first spaceflight.

Yurchikhin, 51, is making his third trip into space and his second long-duration stay aboard the station. He flew aboard Space Shuttle *Atlantis* on the STS-112 mission to the station in October 2002. He also spent six months aboard the station in 2007 as commander of Expedition 15.



NASA/NASA/CARLA CIOFFI

The Expedition 24 crew members (from top to bottom): NASA astronauts Shannon Walker and Doug Wheelock, as well as Soyuz Commander Fyodor Yurchikhin of Russia's Federal Space Agency, wave farewell from the bottom of the Soyuz rocket at the Baikonur Cosmodrome in Kazakhstan prior to their launch.



Summer with a twist

Innovation inspires students



By Texas Twister

So I've appointed myself as a periodic reporter in the Roundup. Because I can. And because—oh, I'll just say it—they can't afford to hire people with real credentials.

My job will be to keep you informed. (Being holed off in that pasture means I'm privy to a lot of top secret stuff at Johnson Space Center. You would be surprised how many people will just blab about anything in front of cows.)

But on to my real topic: SUMMER OF INNOVATION. (The editor said all caps is a faux pas, but I disagree. Everyone loves emphasis.)

Have you heard about this program? If you haven't, it's pretty neat.

NASA has launched an initiative to use its out-of-this-world missions and technology programs to boost summer learning, particularly for underserved students around the nation. It's called Summer of Innovation, or Sol. The program supports President Obama's Educate to Innovate campaign for excellence in Science, Technology, Engineering and Mathematics (STEM) education.

This particular summer effort is a pilot program that begins a three-year effort with the agency goal to reach 100,000 students across the country in the first year.

Sol officially kicked off at the Jet Propulsion Laboratory (JPL) in Pasadena, Calif., on June 10, where NASA Administrator Charles Bolden, JPL Director Charles Elachi and astronaut Leland Melvin shared their personal space exploration experiences with middle school students during a live NASA TV program.

JSC's outreach goal is to reach and inspire more than 5,000



NASA/JPL-CALTECH

JPL's outdoor mall is transformed into a launch pad for a stomp-rocket activity during the Summer of Innovation kickoff.

students through STEM celebrations, and all organizations and directorates are encouraged to get involved.

I hope y'all decide to take part. Once we've reached all the underserved kids, we need to take it to the next level: underserved Longhorns.

For more about Sol, visit: <http://www.nasa.gov/education>

It's all the Buzz ... Lightyear

With the "Toy Story" franchise back on the big screen, fans of the films can learn about real-life space travel, thanks to a DVD inside look at the International Space Station from fictional space ranger Buzz Lightyear.

The 12-inch-tall action star spent more than 15 months on the orbital outpost before returning to Earth aboard Space Shuttle *Discovery* during STS-128, flying to space as part of an education initiative between Disney Parks, Pixar and NASA.

NASA, Pixar and Walt Disney Studios Home Entertainment



teamed up to celebrate Buzz Lightyear's cosmic achievement as the longest-tenured space ranger with the new "Toy Story" and "Toy Story 2" Blu-ray plus DVD combo pack. Both Blu-ray DVDs contain special bonus educational material—"Buzz Lightyear Mission Logs"—as Buzz reports back about his adventures aboard the International Space Station. The mission logs were produced as part of an agreement between NASA and Disney-Pixar to inspire interest in Science, Technology, Engineering and Mathematics (STEM) in younger audiences through the familiar venues of Buzz Lightyear, NASA and space station.

Geared toward viewers of all ages, the "Buzz Lightyear Mission Logs" provide a look at the experience of flying to the space station aboard the space shuttle, the day-to-day life onboard the orbiting laboratory, the effects of gravity on humans living in space, as well as the task of assembling the station—the largest space outpost ever constructed.

For more on Buzz teaming up with NASA, see:

http://www.nasa.gov/externalflash/Buzz_Lightyear/web/

http://www.nasa.gov/mission_pages/station/science/nlab/buzzoniss.html

Students get their ‘STEM’ on with NASA



By Jenna C. Maddix

On May 8, students from Mississippi, Maryland and Texas attended the National Communications, Science, Technology, Engineering and Mathematics (CSTEM) Challenge at the George R. Brown Convention Center in Houston. Meanwhile, another group of students from the Baylor Saturday Morning Science Outreach Program heard from an astronaut and got a specialized tour of biosciences at Johnson Space Center.



PHOTO/BAYLOR COLLEGE OF MEDICINE

Astronaut Jose Hernandez explains the different functions of the International Space Station mockup.

The CSTEM Challenge is where students from all grade levels—including elementary, middle and high school—work together and solve technical problems related to CSTEM. Challenges this year included Geographical Information Systems, murals, creative writing, sculpture and robotics.

NASA supported the CSTEM event with an exhibit that included two large graphic pop-ups, picture kiosk, interactive game, a one-fiftieth scale shuttle stack model and handouts. JSC volunteers answered questions and spoke with students and teachers, explaining what NASA could offer in relation to STEM-related fields and careers.

“This event certainly demonstrated innovative strategies in furthering CSTEM success goals of NASA and our nation,” said Glenda Johnson, JSC Integrated Projects Office program generalist. “These types of programs fuel our desire to build a pipeline of young people to be the communicators, scientists, technologists, engineers and mathematicians of the future.”

The CSTEM Challenge serves underrepresented students, with more than 80 percent minority participation and more than 40 percent female participation. The event this year included approximately 50 teams, including three dozen Houston Independent School District schools.

While the CSTEM Challenge participants were competing at the George R. Brown Convention Center, 75 students from the Baylor Saturday Morning Science Day made their way to JSC.

“The majority of our students are from groups underserved in

medicine, and our goal is to improve their presence in biosciences,” said Dr. James Phillips, program founder and senior associate dean and professor of pediatrics. “Meeting with astronauts who are also from the underserved and underrepresented (areas, yet) have outstanding scientific careers, charges our students and gives them confidence that they can be successful in biosciences.”

The visit started in the Gilruth Center Ballroom, where JSC Director Mike Coats gave opening remarks. Neal Pellis, senior scientist of the Space Life Sciences Directorate, provided a brief overview, including how the weightless environment of space can take a toll on the human body.

Students then proceeded to the Habitability and Human Factor Labs in Building 15 and the Biomedical Research and Environmental Labs in Building 37. Before the day was over, students listened to astronaut Jose Hernandez describe how he came to NASA and became an astronaut.

This marks the third year the event has been held at NASA. The program runs from January to late May every year and focuses on enlightening students about careers in biosciences. Many of the lectures and workshops are held at the Baylor College of Medicine, where students learn fun ways to use math and science. The workshops are also taught by visiting physicians, scientists, astronauts and medical students.

“NASA is committed to supporting STEM education, using the excitement of space exploration as a catalyst for inspiration,” said JSC Director of Education Susan White. “These two programs pull on our unique resources to touch the lives of students and encourage them to continue their studies in math and science. They also support our current initiative called Summer of Innovation, which focuses on working with thousands of middle school students and teachers during multi-week summer learning programs. NASA’s goal is to increase the number of future scientists, mathematicians and engineers, with an emphasis on broadening participation of underserved, underrepresented students.”



PHOTO/BAYLOR COLLEGE OF MEDICINE

Astronaut Alvin Drew and Saturday Morning Science Founder Dr. James Phillips pose with students receiving a guided tour of the Space Vehicle Mockup Facility.

The Neutral Buoyancy Laboratory Swimming to new business



By Sean Wilson

There's no neon sign flashing out front, but the Neutral Buoyancy Laboratory (NBL) at Johnson Space Center's Sonny Carter Training Facility is open for new business. Routine use of the facility to train astronauts for spacewalks will decrease once the space shuttles retire and International Space Station assembly winds down, opening up access to a host of industry partners.

"We still have a need for underwater and weightless testing, but definitely at a lower rate than (what) we had leading up to and in the middle of space station assembly," said Paul Hill, director, Mission Operations Directorate. "This was the impetus for us to start looking for ways to bring in additional revenue."

Officials at the NBL have been looking at ways to use the facility and 6.2-million-gallon pool, touted as a national asset, for several years now. Individual exploratory tests have been conducted at the NBL for industry a number of times. While these single tests provide some financial benefits, Hill and his team realized that to neutralize engineering costs for the entire year, they needed a long-term solution.

"That's been the real drive for the past few years: how can we find a few tenant customers that we can have a win-win relationship with?" Hill said. "They can use our facility for less than it would cost them to build their own, and we are able to bring in revenue that will offset the cost for us to continue to do underwater testing and astronaut training."

Last summer, Stone Aerospace visited the NBL to test their latest design—the Autonomous Underwater Vehicle, also known as Endurance. Endurance is a prototype for developing and testing two of the most critical capabilities that will be needed to explore the icy landscape of Europa, Jupiter's sixth moon.

"When you look at the pathfinding work we've done, it's very different than what employees are used to seeing," said Trey Hall, Chief Operating Officer of Rothe Enterprises, Inc. "Employees aren't used to seeing things outside of NASA hardware and mock-ups, so when we bring in something from outside industry, everybody's curiosity is piqued. It's neat to see something new and it gives them hope that as these programs phase out, there potentially is something on the other side."

This exciting new era for the NBL opens up a world of possibilities for mutually beneficial collaboration, but it isn't without some challenges.

"Our primary objective is that we are here on behalf of the U.S. government and NASA to support the station and shuttle and the vehicles that conduct training required for spacewalks," said Dan Sedej, NBL/Logistics Mockup Facility commercialization manager. "As we start to look at other agencies and commercial entities, we have to

ensure that they are compatible with the type of work we do here and allow us to keep doing what we have to do."

Challenges aside, the team is motivated to pair up with industry to take advantage of the capabilities the facility offers. The NBL provides controlled neutral buoyancy operations to simulate weightless conditions and is a controlled test area with clear water and underwater video and photography. In addition, there is a full audio communications system, a control center, a hyperbaric chamber and overhead cranes capable of moving large, heavy pieces of equipment in and out of the pool.

But, according to Raytheon Program Manager Larry Chase, these capabilities lie beyond the brick and mortar of the building.

"There are other large swimming pools, but when you pair what this facility brings as far as an institutional capability with our personnel capability and personal services that we deliver, the facility is truly unique," Chase said. "That is a huge drawing card to industry partners."

To capitalize on the experience that the NBL brings to the table, the team is looking at pursuing a diversified set of external business partners. They have looked at partnerships with the offshore petroleum industry, entertainment and "edutainment," government agencies such as the Department of Defense and Coast Guard, and commercial aerospace.

The team has already manufactured some parts for commercial aerospace organizations and are interested in leveraging into the commercial space sector. In the future, Hall believes that the NBL team may be training commercial astronauts or helping to build their hardware or mock-ups.

"There are other companies out there that do training of commercial astronauts or potential commercial astronauts, and they don't necessarily have the facility complement that we have here," Hall said.

New business is coming through Space Act Agreements, and the NBL is using reimbursable agreements with paying external customers. The pricing model pays not only for the NBL's use but for labor resources and services.

"What we are really trying to do is create new revenue streams (and) job opportunities for our community of civil servants and contractors, and that more than anything gets people jazzed," Chase said. "They want to be a part of this."

The team is actively pursuing agreements with external partners and hopes to have projects in work in the near future. According to Hall, the future looks bright.

"We are really enthusiastic about this endeavor—we are believers," Hall said.



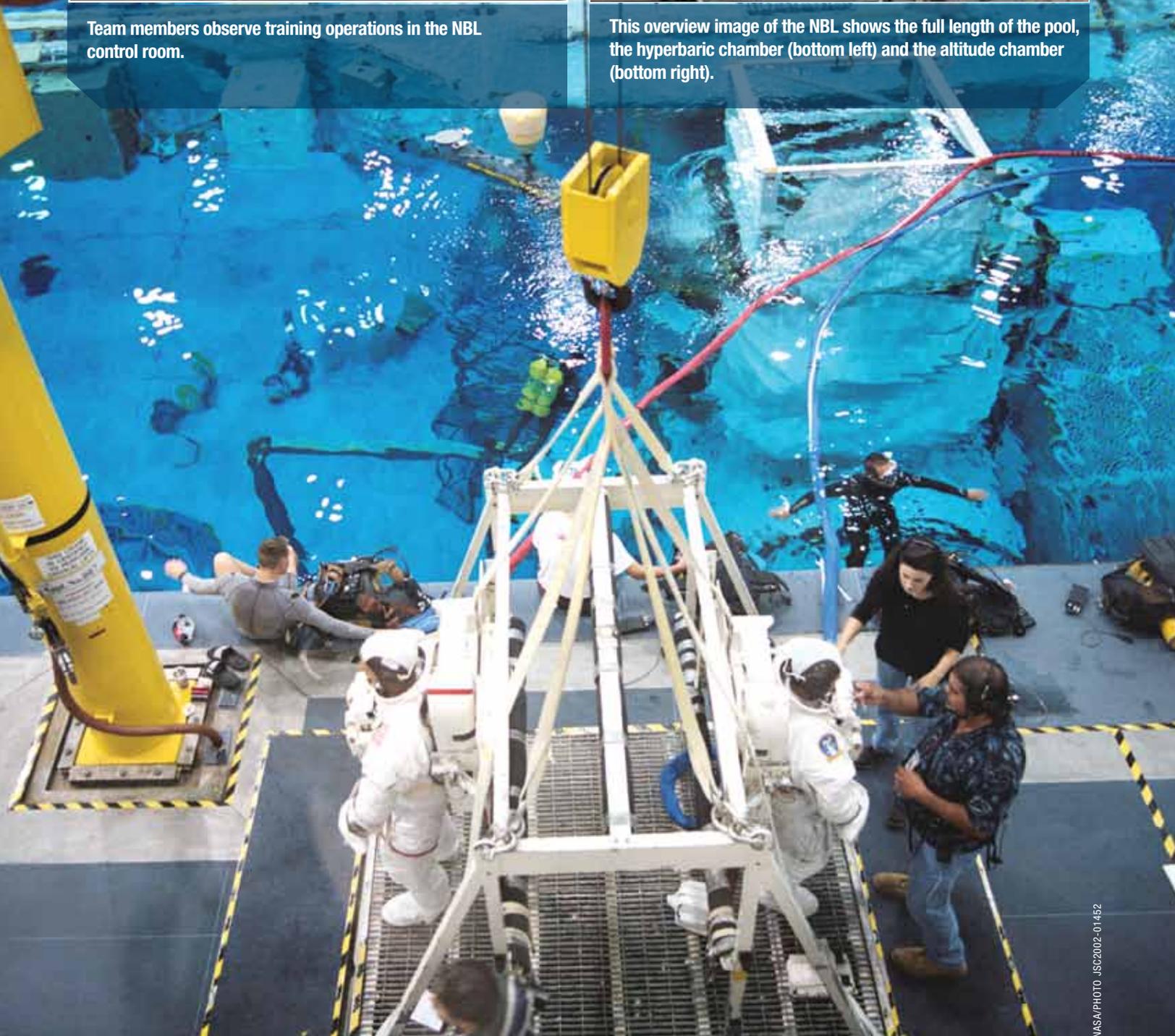
NASA/PHOTO | JSC2002-027503

Team members observe training operations in the NBL control room.



NASA/PHOTO | JSC2006-003

This overview image of the NBL shows the full length of the pool, the hyperbaric chamber (bottom left) and the altitude chamber (bottom right).



NASA/PHOTO | JSC2002-01452

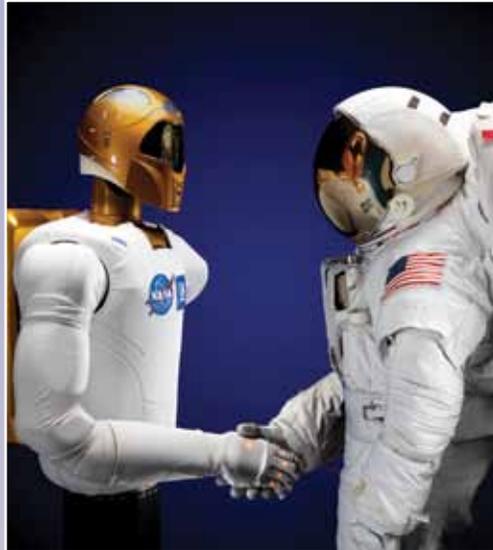
The NBL staff prepares two astronauts for spacewalk training in the NBL pool. The large, yellow crane is used to lift the suited astronauts into the water.

Some 'far out' conversation starters



Compiled by Catherine E. Williams

While Johnson Space Center awaits another spectacular shuttle launch viewing in the fall, there's plenty going on in the meantime. Whet your appetite for spacey theatrics with the following tidbits, or use them to impress your friends.



PHOTO/ NASA

Science fiction, meet reality

Robonaut 2, a dexterous, humanoid astronaut helper, will fly to the International Space Station aboard Space Shuttle *Discovery* on the STS-133 mission. Although it will initially only participate in operational tests, upgrades could eventually allow the robot to realize its true purpose—helping spacewalking astronauts with tasks outside the space station.

Sightsee on the moon (with the help of the Lunar Reconnaissance Orbiter)



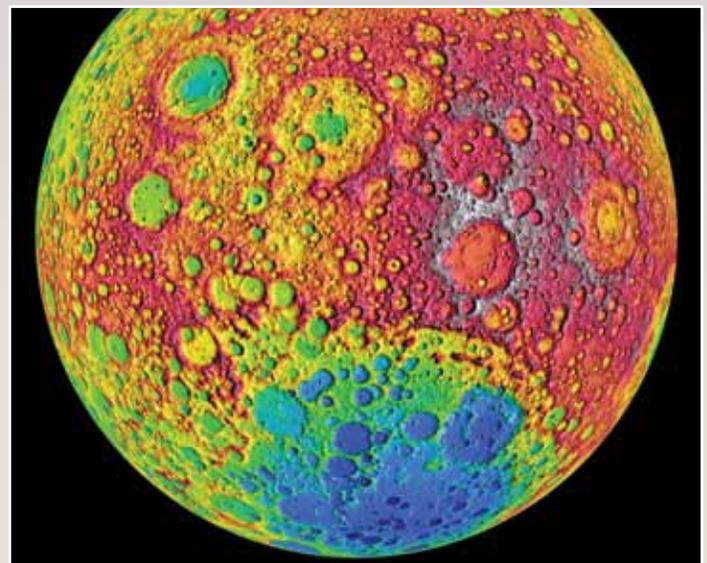
PHOTO/ NASA/JHUAPL/LSI

Having officially reached lunar orbit on June 23, 2009, the Lunar Reconnaissance Orbiter (LRO) has now marked one full year on its mission to scout the moon. Maps and datasets collected by LRO's state-of-the-art instruments will form the foundation for all future lunar exploration plans, as well as offer critical insights to scientists working to better understand the moon and its environment. In only the first year of the mission, LRO has gathered more digital information than any previous planetary mission in history.

To celebrate one year in orbit, here are some cool things already observed by LRO. These are a minute sampling of what the LRO team has released, and barely touch on the major scientific accomplishments of the mission. Visit the official LRO Web site at <http://www.nasa.gov/LRO> to find out even more.

Right: Tidal forces between the moon and the Earth have slowed the moon's rotation so that one side of the moon always faces away from our planet. Though sometimes improperly referred to as the "dark side of the moon," it should correctly be referred to as the "far side of the moon," since it receives just as much sunlight as the side that faces us. Several spacecraft have imaged the far side of the moon, yet LRO is providing new details about the entire half of the moon that is obscured from Earth. The lunar far side is rougher and has many more craters than the near side, so quite a few of the most fascinating lunar features are located there, including one of the largest known impact craters in the solar system: the South Pole-Aitken Basin. The image highlighted here shows the moon's topography from LRO's instruments, with the highest elevations up above 20,000 feet in red and the lowest areas down below -20,000 feet in blue.

Above: Rilles are long, narrow depressions on the lunar surface that look like river channels. Some are straight, some curve, and others, like the ones highlighted here, are called "sinuous" rilles and have strong meanders that twist and turn across the moon. Rilles are especially visible in radar imagery, like that gathered by the LRO. The formation of lunar rilles is not well understood. It is believed there may be many different formation mechanisms, including ancient magma flows and the collapse of subterranean lava tubes.



PHOTO/NASA/GODDARD

'Tweeps' come to Johnson Space Center for exclusive **Twitter event**

By Hallie Mann

Sarah Worthy had her cell phone, laptop and digital video camera all running as astronaut Jeff Williams spoke to a group of "tweeps," or Twitter users, who followed NASA during the STS-132 Tweetup on May 19. Worthy, from Houston, constantly updated her Twitter account as Williams and others talked about life, and the internet, in space.

"People are paying attention to NASA again because of things like Twitter and Facebook," Worthy said. "I hope NASA continues these special events."

Johnson Space Center's Office of Communications and Public Affairs, External Relations, hosted its second tweetup to coincide with the STS-132 mission. A tweetup is an assembly of avid Twitter users who tweet simultaneously about an event to generate interest about it in the social media world. Worthy was one of the lucky few who got to attend the STS-132 launch tweetup in Florida just days before JSC's event.



JSC Deputy Director Ellen Ochoa briefs the tech-savvy audience at the STS-132 tweetup.

Worthy got an up-close and personal view of the launch at Kennedy Space Center, where she tweeted with rocket scientists, weather officials and NASA personnel as she watched the final launch of *Atlantis*.

"This was something so beautiful and so wonderful," Worthy said. "I'm so glad I got to be part of NASA's history and be there for the launch and this event."

The tweeps were given a tour of JSC's most famous buildings—the Space Vehicle Mock-Up Facility, Mission Control Center and the Neutral Buoyancy Laboratory. Throughout the tour, they tweeted live updates about their experiences.

Glyn Curtis and Ian Howell, U.K. natives, came all the way to Houston for the tweetup. Both claimed to be mild Twitter users, but when they heard about this special NASA occasion, they jumped at the chance to come see JSC.

"I follow NASA on Twitter to keep up with the news, but I've never



Many of the tweeps updated their Twitter accounts while on a behind-the-scenes tour at JSC.

been to an event like this before," Howell said. "Since I got selected for this event, I've been trying to get more active in Twitter."

Curtis had the opportunity to see the STS-125 launch and said he has always wanted to come to JSC to see where all the training happens. Howell and Curtis said they were excited to get a glimpse behind the scenes at JSC, and that the trip was worth the long distance.

The tweetup had 75 tweeps and 12 NASA twitter ambassadors in attendance, and reached 440,294 followers. The event garnered tweeps from five different areas around the world, including the U.K., India, Sweden, Hong Kong and Australia. NASA officials also tweeted from @NASA and @NASA_Johnson throughout the event.



While Earthlings were tweeting about the mission, STS-132 was in full swing. Here, Mission Specialist Garrett Reisman participates in the first spacewalk.

Spotlight Daniel Gillies

Mechanical Subsystems Engineer, Boeing

Q: Coolest part of your job?

A: The best part of my job as a Space Shuttle Program mechanical subsystem engineer is watching hardware I helped repair, analyze and test, fly mission after mission on the orbiter. The ability to gain hands-on experience with returned space hardware, refurbish it and prep it for flight again is not available in most, if not all, other space programs (manned and unmanned) on the planet.

Q: Favorite hobbies or interesting things you do away from the office?

A: One of the most interesting things I do outside of the office is volunteering at the Challenger Learning Center (CLC) at the George Observatory in Brazos Bend State Park. The CLC is an educational facility that simulates missions to the moon and Mars with children of all ages using a mock Mission Control Center and spacecraft. As a result of volunteering with the CLC, I can actually say I get to “fly” to the moon four times a day, before lunch! The CLC is an amazing facility, and with the help of other volunteers here at Johnson Space Center, we’re able to bring space that much closer to the public.

Q: What would you be doing if you weren't in your current job at JSC?

A: Aside from just working another job at JSC, I would love to get more involved with education, particularly in the areas of science, technology, engineering and math (STEM) and promoting space exploration. I think space exploration is a wonderful topic to get children interested in STEM, and would love to work in an environment like the CLC full time.

Q: What did you want to grow up to be when you were a child?

A: A physicist ... but I really had no idea what that really meant. I always loved to draw and build things, and eventually a math teacher in grade school told me I should be an engineer—and here I am!

Q: What would people be surprised to know about you?

A: People would be surprised by all the odd jobs I’ve worked in the past. I’ve gone from cleaning bathrooms at a New York State Park, to being a bridal consultant, to working as an engineer on the Space Shuttle Program.

Q: What is your favorite quote or motto?

A: “All men dream; but not equally. Those who dream by night in the dusty recesses of their minds wake in the day to find that it was vanity; but the dreamers of the day are dangerous men, for they may act out their dreams with open eyes, to make it possible.”

-- T.E. Lawrence (of Arabia)

Q: What is your favorite sport?

A: To watch: baseball. To play: tennis.

Q: Last good book you read?

A: “Automated Docking and Rendezvous of Spacecraft.” Really, it’s a good read.

Q: Favorite movie?



NASA PHOTO

A: “The Life Aquatic.”

Q: Who are your heroes, and why?

A: I’ve always admired people like Jim Henson for amazing, unconventional creativity.

Q: What quality do you most admire in people?

A: I admire people who question everything. It’s how you learn about the world.

Q: What is your best memory at JSC?

A: My best memory working at NASA has been climbing into the aft compartment of the orbiter to watch an external tank umbilical door actuator I helped refurbish undergo installation. It was a very rewarding experience, and to me, although the flight deck is pretty neat, being in the aft compartment makes you really feel like you’re on a spaceship.

WANTED!

Do you know a JSC colleague or team that does something extraordinary on or off the job? Whether it’s a unique skill, interesting work, special professional accomplishment, remarkable second career, hobby or volunteerism, your nominee(s) may deserve the spotlight!

The Roundup shines the light on one special person or team each month, chosen from a cross section of the JSC workforce. To suggest “Spotlight” candidates, send your nomination to the JSC Roundup Office mailbox at jsc-roundup@mail.nasa.gov. Please include contact information and a brief description of why your nominee(s) should be considered.

Celebrating mission success

On May 27, Johnson Space Center team members and fellow space nuts gathered at Ellington Field to honor the accomplishments of the STS-132 crew: Commander Ken Ham, Pilot Tony Antonelli and Mission Specialists Michael Good, Garrett Reisman, Piers Sellers and Steve Bowen.

During the 12-day flight and *Atlantis'* final mission, the six astronauts flew to the International Space Station, performed three spacewalks and left behind a Russian Mini Research Module, a dish antenna, other replacement parts and a set of batteries for the station's truss.



NASA/STAFFORD AND GEESEMAN jsc2010e09664

Inspiring a **NEW** generation

More than 900 JSC employees and their children enjoyed a full program of activities at the Gilruth Center and had the chance to tour special facilities on site during Bring Our Children to Work Day (BOCTW) 2010. Held on June 11 and coordinated by JSC's Education Outreach team, BOCTW shows kids a day in the life at JSC and motivates participants to explore future education and career options in the space industry.



NASA/STAFFORD AND HARNETT jsc2010e092190



NASA/STAFFORD AND HARNETT jsc2010e092247

Roundup

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OR CURRENT RESIDENT

What a relief ...

By Cherrie R. Patneade
NASA White Sands Test Facility

NASA's White Sands Test Facility (WSTF) in Las Cruces, N.M., added a National Board Inspection Code (NBIC)-certified Valve Repair (VR) Facility to its array of spacecraft, component and propulsion system test and evaluation capabilities.

The Component Services Section's VR Facility of the Hardware Processing Department received the NBIC's authorization to repair and refurbish code-stamped pressure-relief valves. Only facilities authorized by the NBIC can perform this type of refurbishment and retain the valve's code stamp.

Pressure-relief valves can prevent catastrophic failure of a vessel or system by venting pressure buildup caused by a chemical reaction, failed pressure regulator or human error. Relief valves being used in aerospace fluid applications require specialized cleaning and handling due to the nature of the fluids and their reactivity.

The NBIC certification allows the facility to test pressure-relief valves "as-received" and then disassemble and replace interior components such as soft goods, orifices or springs, if necessary, and clean the valves at the part level. The cleaned components can then be reassembled and functional tests performed to ensure that the valve is operating properly.

The ability to repair relief valves used in aerospace fluid applications makes WSTF's new capacity critical to NASA operations.

"This important certification proves WSTF is committed to maintaining the integrity of the pressure-relieving devices used by NASA," said Clifford Madrid, technical services manager, NASA Hardware Processing Office. "This capability gives us a truly unique facility, because we are the only facility where relief valves can be refurbished and tested in a clean environment, providing a better product."

To read more about this facility and its benefits, visit JSC Features: <http://www.jsc.nasa.gov/jsfeatures/>

Valve Repair quality control personnel review data while testing a relief valve cleaned for oxygen service.



NASA/ELLIOT WSTF0210E00934