

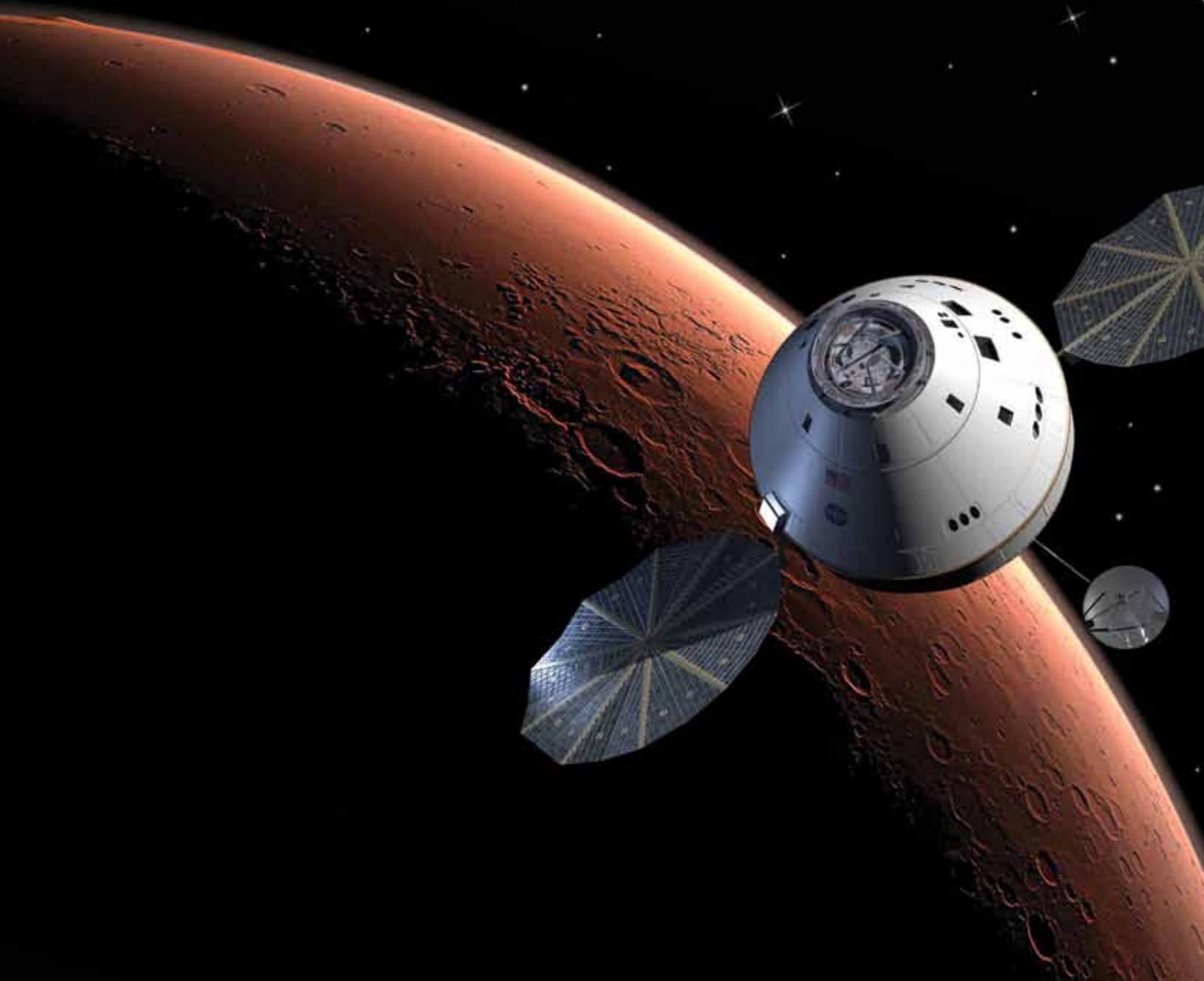
National Aeronautics and Space Administration



Roundup

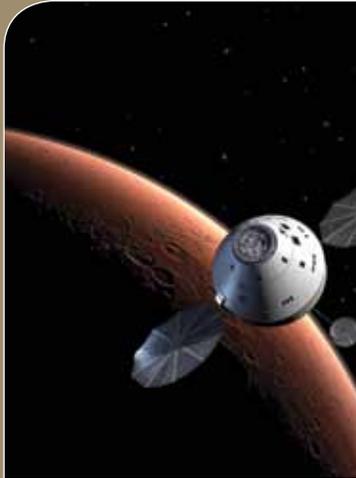
LYNDON B. JOHNSON SPACE CENTER

November | 2011



And away we go

JSC Director



MASAPHOTO 562-00632

On the cover:

Orion is poised to take on new destinations, and this busy year of milestones for the capsule is paving the way for its first flight test.



MASAHARNETT JSC2011E196846

Photo of the month:

Kids at the JSC Child Care Center swarm a real, live firefighter as they learn to recognize and not fear someone who could potentially save them during a fire. This educational activity was part of Fire Prevention Week.



MASA PHOTO

We have all seen the devastation because of natural disasters and mass tragedies that demand a humanitarian response of the highest level. You may also know of other people who have endured personal emergencies. To those going through a difficult time, the scale is relative. When people need help, they look to their friends and neighbors. For 50 years, Johnson Space Center has been at the forefront of leading—not only in space, but in the community. The Combined Federal Campaign (CFC) also turns 50 this year and is committed to offering a manageable way to make a difference in our communities.

For federal employees, choosing a channel to make a difference is easy. Over the past 50 years, the commitment and generosity of federal employees have made CFC one of the most successful philanthropic programs in history. In fact, since its inception in 1961, the CFC has raised more than \$6 billion.

Each year, with the anniversaries of horrific moments in the history of the world—events such as Hurricane Katrina, 9/11, the earthquake in Haiti and the earthquakes and tsunami in Japan—Americans continue to donate funds to various charities. But while many donate with the intention of helping others, many times their donations don't make it to those who really need the help. Fortunately, the CFC gives federal employees an accountable, transparent and flexible way to donate. Before becoming a part of CFC, charities go through a rigorous evaluation process by the U.S. Office of Personnel Management, and they must reapply each year.

To make gift giving even more meaningful, federal employees can choose from a variety of charities and causes, ranging from local to international, that they are passionate about. They also have the option to donate one-time gifts or set up their payroll withholding so that they can contribute as little or as much as they would like to charities throughout the year.

For the same weekly cost as a cup of coffee or a pack of gum, you can make a difference by providing steady funds to meaningful charities. It is an easy way to support the causes that matter most to you. By donating through a payroll contribution at any level, you can simply “set it and forget it.” From federal employees' regular payroll contribution, charities are able to make cohesive plans for the next fiscal year rather than “wait and pray” that people are in the giving spirit during the holiday season. Programs like the CFC are also beneficial to charities because a greater proportion of the dollars contributed goes directly to the charity as opposed to third-party fundraisers.

This year, the CFC celebrates 50 years of success. It is my hope that those of us at JSC can help to make the next 50 years of the CFC even more successful than the first 50. It all starts with your contribution. Please take a moment to review the many charities to which you can contribute, and let's collectively show the JSC spirit!

In this edition...

- 3** AMO project investigates challenges posed by new destinations in space
- 4** Grass fire at Johnson Space Center becomes lesson learned
- 5** Telling stories ... the truth about space station and why we need it
- 6** Yes, there is an exploration program
- 8** NASA's Commercial Crew Program moves ahead
- 9** Tons of food donated by NASA White Sands Test Facility employees
- 10** Meet Connie Lamb, Logistics Specialist/Astronaut Office Russian Travel Coordinator
- 11** Center Scoop; and Telling stories ... the truth about space station and why we need it *continued*
- 12** BioHouston celebrates women of science and honors NASA's own Dr. Peggy Whitson

AMO project investigates challenges posed by new destinations in space



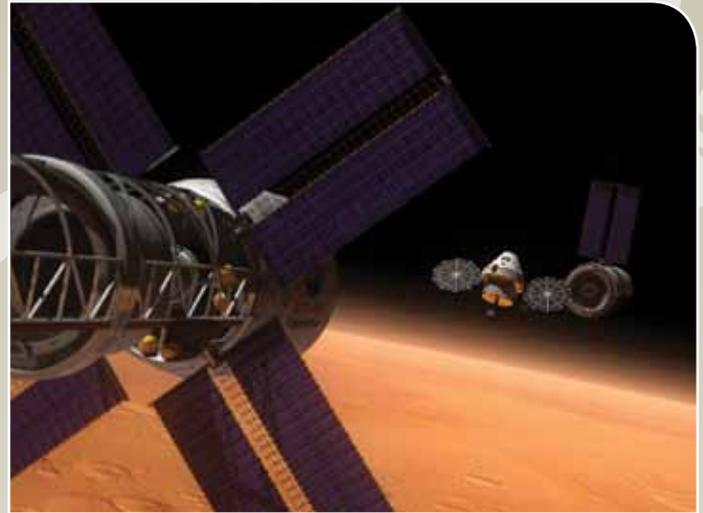
By Rachel Kraft

When humans explore Near-Earth Objects, Mars and other destinations deep in space, astronauts and flight controllers won't always be able to relay messages and commands back and forth in a matter of seconds like they do today. By the time word gets back to Mission Control, the crew may already need to be working on a solution to an anomaly or performing operations independently during a time-critical mission phase.

Through the Autonomous Mission Operations (AMO) project within the Advanced Explorations Systems program, a 40-person team composed of engineers and mission operations planners from several NASA centers is investigating what systems and processes may require automation during missions to different destinations throughout the solar system. These missions to varied destinations are called Design Reference Missions and have been identified by NASA's Human Spaceflight Architecture Team.

"We're going to lay out a roadmap that says how we think automation should be applied to the ground and onboard as we go through the Design Reference Missions," said Timothy Hall, Johnson Space Center's lead on the AMO project, which is co-led at Ames Research Center. "We're going to test this roadmap through demonstrations and make updates based on results. As NASA starts to travel beyond Earth, we can use that roadmap as a place to start our design."

Ever since NASA first launched humans into orbit, Mission Control has played an integral role in determining how the crew members spend their hours and find timely solutions to malfunctions. New destinations pose challenging questions about how the traditional roles



NASA/PHOTO

An artist's rendering of the Multi-Purpose Crew Vehicle on a deep space mission.

occupied by the crew and the ground will change as a vehicle moves further from Earth.

For example, during normal operations on a mission to Mars, communication delays could be as long as 22 minutes each way. The crew will likely communicate with Mission Control only a few times per day, working more autonomously than they do now.

"We'll see what the crew's doing; we'll take that input at the end of the day and say, 'OK, here's what they got done and didn't get done; let's plan the day tomorrow for them,'" Hall said. "But then we need a system onboard for them to be able to manipulate the daily plan as things change."

AMO will examine the whole system, including the crew, vehicle and Mission Control, and propose one integrated solution rather than separate pieces. The project will also simulate different operational scenarios at JSC and across different centers or exploration analogs, similar to how Desert Research and Technology Studies performs exploration testing.

As part of the Advanced Exploration Systems mandate, AMO will also find new ways of doing business.

"We're going to try to do short, frequent demonstrations," Hall said. "Instead of building up for three years and having a demonstration at the end, we're going to try to do a couple of demos a year. Our goal is to eventually do a demonstration on the International Space Station."

The project also plans to devote fewer hours to oversight to allow technically skilled team members more time for hands-on activity.

"We're going to lay out a path to show here's how we think automation will work, and then we're going to go test it," Hall said. "Every time we test it, we're going to come back and ask, 'Is that the right ops concept?' We should be able to come up with some good integrated system demonstrations that show how the automated vehicle and ground systems will work. It may not be the exact system used going forward, but it will be the architecture for the future system design."



NASA/PHOTO

The Autonomous Mission Operations project seeks to enable future explorers to work more independently when exploring new destinations, such as an asteroid.

Grass fire at Johnson Space Center becomes lesson learned



By Neesha Hosein

On July 13, Johnson Space Center Director Mike Coats gave a special thanks to the Houston, Webster, Nassau Bay and Seabrook Fire Departments. They were each presented with a montage and flag that had flown in space for their ongoing support to the JSC community. While the support has been continuous, these presentations were primarily prompted by the response to a grass fire on JSC property west of Building 14 on June 1.

The team had the JSC Fire Protection Specialists (FPS) on scene to fight potential grass fires. They cut the grass short, 300 feet around the pad, to reduce the fuel load. They also briefed the Houston Fire Department about the potential hazards beforehand. While the team had controls in place to mitigate the risk, additional factors, including a second fire call in Building 9 within minutes of the Morpheus test, combined on June 1 as the team watched the grass fire grow beyond control.

As a result of this incident, the Morpheus team—in concert with JSC Safety, Fire Protection Services and local fire departments—has developed an enhanced Fire Plan for future testing on site. A fire break was installed around the test site to prevent the spread of fire beyond 250 feet. Dedicated JSC FPS personnel will be on location for all tests, and a Houston Fire Department truck will be on standby as well. Onsite fire-fighting resources are also being enhanced, with the addition of a truck-mounted grass fire pallet being made available to FPS.

In the aftermath, the Morpheus test vehicle and test stand were not affected. Because the fire was actually started by super-hot concrete being flung out in the prairie as the pad cooled down after the test, the flames were never near the vehicle.

“The Morpheus Project has been conscientious about safety from the start of the project, but we are always willing to learn and improve,” said Jon B. Olansen, Morpheus project manager. “While not desired, the grass fire incident identified shortcomings in our fire response plan that we have since diligently addressed in cooperation with JSC Fire Protection and the Houston Fire Department. Their support, and the support of the entire JSC community, has been outstanding and a critical component in allowing us to advance our vehicle test capabilities.”



From left to right: JSC Director Mike Coats, Nassau Bay Emergency Manager Jamie Galloway, Nassau Bay Fire Chief Tom George, Webster Emergency Manager Joe Ferro, Seabrook Emergency Manager Jeff Galyean, Seabrook Assistant Fire Chief Dominic Del Rosso and Webster Fire Chief Patrick Shipp.

The grass fire burned 24.9 acres of prairie grass, and 75 hay bales were lost. Given the nature of the blaze, the fire departments primarily fought the fire as it approached the west boundary of JSC property. The fire started at approximately 2:15 p.m. and was extinguished by 5:23 p.m. after extending to within 550 feet of the residential area to the west and 110 feet from Houston Fire Station 72.

No one was injured and no animals were hurt. The Houston Fire Department was the lead department on the scene, and they called for mutual aid support from Webster, Nassau Bay, Seabrook, Pasadena and Friendswood Fire Departments. Fifty-five fire fighters battled the blaze.

The June 1 grass fire was actually sparked during a tethered test flight of the Morpheus vehicle. During the engine firing, which was very successful for the Morpheus team, pieces of molten concrete were dispersed up to 160 feet from the test pad. These particles caused spot fires that then spread with wind. This phenomena, however, was understood and expected. The Morpheus team was fully aware of the risk of grass fires, and team members had taken several steps to reduce the possibility of that hazard growing out of control, should it become reality.



An aerial view of the charred Earth caused by the June 1 grass fire on JSC grounds. Saturn Lane is the road on the left side of the photo.

Telling stories . . . the truth about space station and why we need it



By Catherine Ragin Williams

The International Space Station (ISS) may be the most amazing engineering feat to ever occur in space, but the orbiting laboratory is not always hailed as the most “glamorous” of NASA’s endeavors. There is no moon involved, no awe-inspiring launches aboard the dynamic space shuttle (anymore), and it doesn’t go beyond low-Earth orbit even on the best of days.

But . . . NASA needs this gem of a laboratory to get further into

Robinson said. “Our science community was ready to use it about 10 years too soon, and they spent 10 years being frustrated.”

The agency also had to overcome hurdles such as the Space Shuttle *Columbia* accident and investigation, as well as technological challenges that came with assembly.

“Here in 2011, we’re in a brand-new place,” Robinson said. “Now assembly is complete, and we’re getting the next decade or more of



NASA/MARKOWITZ JSC2011E196579

Dr. Julie Robinson and Dr. Tara Ruttle speak on the research stories they find most inspirational for the public during their storytelling event.

the solar system, and we need it to benefit our lives on Earth. More importantly, we need public support so that we can continue with these best-laid plans of exploration. Each and every Johnson Space Center team member can be, and should be, an ambassador for this burgeoning research platform.

ISS Program Scientist Dr. Julie Robinson and Associate ISS Program Scientist Dr. Tara Ruttle advised just how to navigate the sometimes treacherous public waters during their storytelling session, “ISS Research and Technology Stories.”

“At NASA, we often get a lot of criticism for not being good at communicating our great successes, and yet we also enjoy this immense popularity with the general public,” Robinson said. “If you ask people how they feel about NASA, they believe in their hearts that NASA is doing good, but they don’t always have good examples.”

One problem about science and research is that they take time to come to fruition. Mankind may have been around for thousands of years, but it took us a while to get away from the horse and buggy. The same thing goes for emerging discoveries.

“When we do research in space, and when we do technology development in space, both of those things return amazing benefits back here on Earth—but they don’t always happen within the first few weeks,” Robinson said. “Over time, we see these benefits evolve and develop.”

The space station has been in sticky situations during its lifespan, but 2011 is a watershed year for the floating lab.

“We’re in an interesting position, because as we developed the vehicle itself, it took so much longer to build than people imagined,”



NASA/PHOTO ISS028E016137

The Alpha Magnetic Spectrometer (AMS) is a state-of-the-art particle physics detector that was attached to station during STS-134. AMS uses the unique environment of space to advance knowledge of the universe and lead to the understanding of the universe’s origin by searching for antimatter and dark matter and measuring cosmic rays.

full-time research on space station.”

But there is a silver lining to the assembly story.

“When we look back at the research we accomplished in the last 10 years or so, all that research was done around the edges,” Robinson said. “The primary goal was building the vehicle; not

(continued on page 11)

Yes, there is an exploration program



By Catherine Ragin Williams

You perhaps wouldn't know it if you follow the news or listen to your neighbors, but exploration at the agency is still more than alive—and working vigorously to expand our presence in the solar system. And while the destination may have altered from the moon to something even more challenging to avid sci-fi fans and engineers alike, the goal is still the same.

In fact, quite a bit is the same. In the midst of political wrangling about the agency's future, NASA continued to quietly work toward

design milestones with the Orion spacecraft.

"As we were getting ready starting to build the Ground Test Article (GTA), we got the new direction (with) the presidential rollout (that) said they wanted to cancel Constellation," said Orion Program Manager Mark Geyer.

In spite of the grim news, the program continued with the Phase 1 Safety Review and Pad Abort 1 test.

"After that, we made some changes to react to the political environment, to save money and still allow us to fly early," Geyer said. "And then we did all the work to show that the new architecture the president signed with Congress in the (2010 NASA) Authorization Act, to do exploring, Orion actually fit those requirements. This is when it was decided by this administration, as well as Congress, that Orion would continue as the next exploration vehicle."

During the emotionally charged rollercoaster of the past two years, "we were actually making progress with the hardware," Geyer said.



PHOTO LOCKHEED MARTIN

Technicians position microphones around the Orion and Launch Abort System test craft in preparation for the second round of testing in the acoustic chamber at Lockheed Martin's facilities in Denver. The vehicle was bombarded by acoustic levels of 150 decibels to simulate conditions during launch and abort (if necessary).



NASA/PHOTO

Construction on the first space-bound Orion crew module began with the first weld at the Michoud Assembly Facility on Sept. 9. This capsule will be used during Orion's first test flight in space. After welding is complete at Michoud, the Orion spacecraft orbital test article will be shipped to Kennedy Space Center, where the heat shield will be installed.

Orion seeks rocket for long treks into outer space

With the Orion team working diligently toward a flight test, a big question remained: How would they get to said destinations?

Enter the Space Launch System (SLS). In September, the agency unveiled the advanced heavy-lift launch vehicle that would rocket Orion to bigger and better places.

Incorporating aspects from the Space Shuttle Program and Constellation Program to take advantage of proven hardware and manufacturing technology, SLS will be NASA's first exploration-class vehicle since the Saturn V. With an initial lift capability of 77 tons, SLS will allow us to reach points in the solar system such as near-Earth asteroids, Mars and its moons beyond. Not only that, but SLS will serve

The Space Launch System (SLS) will be designed to carry Orion, important cargo, equipment and science experiments to Earth's orbit and destinations beyond. Additionally, the SLS will serve as a backup for commercial and international partner transportation services to the International Space Station.



NASA/PHOTO

as a backup for commercial and international partner transportation services to the International Space Station.

“This launch vehicle decision is the culmination of a months-long, comprehensive review of potential designs to ensure that the nation gets the best possible rocket for the investment—one that is not only powerful but is also evolvable so it can be adapted to different missions as opportunities arise and new technologies are developed,” said NASA Administrator Charles Bolden. “President Obama challenged us to be bold and dream big, and that’s exactly what we are doing at NASA. While I was proud to fly on the space shuttle, tomorrow’s explorers will now dream of one day walking on Mars.”

Orion a ‘star student’ during testing

It’s been a busy time for the capsule that will take our explorers to new heights. Construction began early September on the first new NASA spacecraft built to take humans to orbit since Space Shuttle *Endeavour* left the factory in 1991.

Engineers at NASA’s Michoud Assembly Facility in New Orleans started welding together the first space-bound Orion.

“The Orion team has maintained a steady focus on progress, and we now are beginning to build hardware for spaceflight,” Geyer said.

The first welds were completed using an innovative new friction stir welding process, developed especially for Orion. This method creates a seamless, leak-proof bond that has proven stronger and higher in quality than conventional welding.

Around the same time, engineers successfully completed the first of a series of acoustic tests on the Orion GTA, which consists of two major spacecraft components: the crew module and the launch abort system. More than 600 instruments, 500 accelerometers and 100 microphones were placed throughout the Orion crew module/launch abort system stack to test critical components of the spacecraft such as avionics, propulsion and crew life support. This ground test vehicle will undergo environmental testing that provides critical data to define the spacecraft’s capabilities needed for long-duration, deep space missions.

The series of tests conducted at Lockheed Martin’s facilities near Denver exposed the GTA to acoustic forces as high as 150 decibels—equivalent to the sound energy any one of us would experience standing about 50 yards from a jet aircraft. The sound pressure tests lasted a few minutes and were completed incrementally so that engineers could isolate and understand the behavior of each of the major vehicle components.

After the acoustics investigation, the spacecraft remained in the chamber for modal survey testing. Vibrating stingers were applied to the spacecraft structure to measure responses to simulated launch environments. The acoustic and modal tests will verify the spacecraft can withstand the extreme noise and vibration the vehicle will experience during a launch or an emergency abort.

NASA also completed the first in a series of flight-like parachute tests for the Orion spacecraft. The drop tests at the U.S. Army’s Yuma Proving Grounds in Arizona support the design and development of the Orion parachute assembly.

Flying at an altitude of 25,000 feet, a drop-test article that mimicked the Orion parachute compartment was deployed from a C-130 aircraft. Once airborne, two drogue chutes were deployed at an altitude of 19,000 feet, followed by three pilot parachutes, which then deployed three main landing parachutes.

The tests were the closest simulation so far to what the actual Orion parachute landing phase will be during a return from space.

The Orion spacecraft has passed all its recent examinations with flying colors and will no doubt continue to do so into the next year, which should involve the assembly of the flight test article at Kennedy Space Center.

For exploration at NASA (yes, we still do that), it’s onward and upward.



NASA/PHOTO

An artist’s concept shows Orion and future destinations for human exploration beyond Earth: the moon, an asteroid and Mars.



NASA's Commercial Crew Program moves ahead

By Linda Herridge
Kennedy Space Center

Commercial space transportation is a vital component to the future of human space exploration. As NASA charts a new course to send humans deeper into space than ever before, we are stimulating efforts within the private sector to develop and operate safe, reliable and affordable commercial space transportation systems. Once the capabilities are matured and available to the government and other customers, NASA could purchase commercial services to transport crew and cargo to the International Space Station and low-Earth orbit (LEO).

NASA's new Commercial Crew Program (CCP) is up and running at Kennedy Space Center (KSC). Under the leadership of Program Manager Ed Mango (KSC), Deputy Program Manager Brent Jett (Johnson Space Center) and a team of NASA and commercial engineers, CCP will pursue the development of a commercial capability to LEO and, ultimately, transport crew back to the space station.

"This program will allow others at NASA to move toward exploration beyond low-Earth orbit," Mango said.

Mango stated that CCP objectives include maturing the design, development, demonstration and certification of U.S. commercial crew space transportation capabilities and providing technical assurance to support certification of commercial space transportation systems.

Mango noted that NASA will be intimately involved in the design and development of launch and spacecraft systems to ensure safety.

"The initial design work is going on now," Mango said. "We would like to move into critical design within the next couple years and then into certifications and flights by the middle of the decade."

The center will assist commercial partners and give them access to NASA's technical expertise and resources for development issues.

"NASA brings over 50 years of human spaceflight experience and lessons learned that we want to ensure are part of the design, development and certification efforts associated with the commercial capability," said Maria Collura, acting deputy director for CCP.

"We plan to implement an innovative approach to ensure that we limit the safety risks while also allowing industry to use their extensive engineering practices and experience in developing commercial human spaceflight systems," Mango said.

NASA previously awarded \$50 million in Space Act Agreements during the first phase of commercial crew development and \$270 million during the second phase.

Industry partners selected during the two phases were Blue Origin in Seattle; The Boeing Co. in Seattle; Paragon Space Development Corporation in Tucson, Ariz.; Sierra Nevada Corp. in Sparks, Nev.; Space Exploration Technologies in Hawthorne, Calif.; and United Launch Alliance in Denver.

Mango said the CCP is establishing relationships with key NASA stakeholders, including mission directorates, other centers, NASA programs and technical authorities. The CCP also is creating interfaces with the U.S. Air Force and the Federal Aviation Administration (FAA).

One of the CCP's primary objectives is to develop agreements among government entities to clarify roles and responsibilities and ensure that a balance between public and crew safety is achieved.

While NASA's role in the CCP will include mission assurance and crew safety, Mango said that the FAA will develop the crew safety regulations and compliance standards and collaborate with the Air Force and the CCP

on common standards and compatibility of requirements.

The CCP is working with industry to collect diverse input on commercial crew development to move closer to integrated design concepts.

"We've always been looking for feedback from industry," Mango said. "We are committed to this communication between CCP and industry as we move forward."



SpaceX's Falcon 9 rocket and Dragon spacecraft lift off from Launch Complex-40 at Cape Canaveral, Fla., on Dec. 8, 2010. This was the first demonstration flight for NASA's commercial partnerships.

NASA/TONY GRAY AND KEVIN O'CONNELL

Tons of **food donated** by NASA White Sands Test Facility employees

By Cheerie R. Patneau
NASA White Sands Test Facility

With local food banks facing severe shortages of nonperishable items, federal employees nationwide were challenged to step up and meet this need by gathering 2 million pounds of food for hungry families. Johnson Space Center encouraged its team members to donate enough food to match Space Shuttle *Endeavour's* payload of 28,951 pounds. JSC's White Sands Test Facility (WSTF) joined the Feds Feed Families Program

amount raised by JSC and WSTF past the 28,951-pound goal for the 2011 Feds Feed Families Program. In August alone, WSTF employees donated 10,851 pounds of food.

"Everyone's donation is appreciated, but mention should be given to the eight Oxygen Group members, who averaged 223 pounds per person," Franklin said.

"White Sands Test Facility, thank you for your amazing effort," said Lorenzo Alba Jr., executive director for the Casa de Peregrinos Emergency Food Program. "We are grateful for your diligence in this project (and) just speechless in what you have accomplished for the people we reach out to every day. Casa de Peregrinos has been serving the Las Cruces area for more than 30 years with the same goal and the same mission. It is quite simple: Feed anyone who might be at risk for experiencing hunger, regardless of circumstances. We rely on the community for support, and the White Sands Test Facility has gone above and beyond to aid in our mission."

In addition to Las Cruces, N.M., Alba's organization serves the rural communities of Rincon, Radium Springs, Organ, Doña Ana, Del Cerro, Anthony and Sunland Park. Recently, 700 additional families were added to his client list. The organization provided food for 2,817 people in July.

"With the national and local economies suffering, more and more people need our services," Alba said. "Your timing was impeccable. We depend on generosity and kindness of donors such as White Sands Test Facility. We are truly blessed with your food drive efforts."

If you would like to learn more about NASA White Sands Test Facility, go to:

<http://www.nasa.gov/centers/wstf/home/index.html>



NASA/PHOTO WSTF0811E08432

NASA White Sands Test Facility Construction Maintenance and Operations employees are proud of their generous contributions to the Feds Feed Families 2011 Food Drive for local food banks and shelters.

with a food drive campaign that Hardware Processing Office Chief Sandy Ruttle officially kicked off June 1.

"Our program will help local food banks and shelters such as Casa de Peregrinos, Jardin de los Niños, La Casa, Roadrunner Food Bank and the Children's Crisis Center," Ruttle said.

Kathleen Franklin, Hardware Processing Office administrative assistant, organized the food drive at WSTF and delivered the collected food each evening to local recipient agencies. After each food delivery, Franklin requested a new list of foods the organizations needed and asked for these items or quantities from her co-workers.

"If we had enough food for 26 children when there were 55 children in need, then I would be disappointed," Franklin said.

Contractor employees in WSTF's Construction Maintenance and Operations (CM&O) section stood in total agreement with Franklin. With 54 employees, the CM&O section donated 26.5 pounds of food per person.

"I feel strongly about helping others," said Eddie Rodriguez, a general maintenance mechanic in the CM&O section at WSTF. "We have good jobs and good health, and we should share with those who don't."

"The CM&O group has proven to be the heart and soul of the test facility, not only of this campaign, but also of our site's daily operations," Franklin said.

When the food drive ended Aug. 26, WSTF employees had donated a total of 16,087 pounds of food, which pushed the joint



NASA/PHOTO WSTF0811E07967

Food contributions cover most of Kathleen Franklin's WSTF office floor and desk. Franklin weighed each day's contributions and made daily trips to food banks and shelters.



Spotlight: **Connie Lamb**

**Logistics Specialist/Astronaut Office Russian Travel Coordinator,
TechTrans International, Inc.**



NASA/PHOTO

Connie Lamb, center, with the Expedition 23/24 crew members. Crew members (left to right): Mikhail Kornienko, Tracy Caldwell-Dyson, Alexander Skvortsov, Oleg Kotov, Timothy Creamer and Soichi Noguchi.

Q: Coolest part of your job?

A: I get to work directly and personally with NASA astronauts and International Partner crew members and also their family members.

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

A: Besides hanging around with my husband, I have to say shopping! I collect shoes and purses instead of coins and stamps.

Q: What was your first job (not necessarily at NASA, but ever)?

A: I worked as a radio personality (DJ) on the weekends at a very small FM station in downtown Tokyo when I was in college. I was in the Broadcasting Club in both high school and college for seven years and did extensive emcee jobs for events, conventions, etc.

Q: If you could trade places with any other person for a week, famous or obscure, living or dead, real or fictional, who would it be?

A: Princess Catherine, Duchess of Cambridge. I am simply curious about what she is going through every day as a princess and what kind of "training" is provided to her in order to become a princess (and future queen) from a commoner.

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

A: Probably all the different types of jobs I have done in Tokyo and here in the United States, starting as a DJ, Japanese language instructor at KUMON, freelance stylist, ticketing agent at Continental Airlines, translator/interpreter, travel agent, insurance agent at AIG (I once held a license, too!). Also, people may be surprised to know I used to practice martial arts (Japanese version of fencing, called "Kendo") when I was younger, and I hold the second grade (nidan) in that.

Q: What do you think a perfect Thanksgiving meal would be?

A: Sushi and flan!

Q: Last good book or article you read?

A: A Japanese comic book called "Space Brothers." It is a totally fictional story about two brothers becoming JAXA (Japanese Aerospace Exploration Agency) astronauts and going to the moon, and it features some real JAXA astronauts, NASA Johnson Space Center/Kennedy Space Center and Space Center Houston buildings in drawings. Quite an interesting story.

Q: Favorite travel destination (or place you'd love to go if given the opportunity)?

A: Prince Edward Island in Canada. I was a huge fan of "Anne of Green Gables" when I was growing up. Someday I'd love to visit the island.

Q: When did you first become interested in space and why?

A: I got more interested in space after I started working here at JSC in 2006. I never dreamed of working in the space industry, but now I am a part of the team and I can contribute a little piece to this wonderful human space exploration and mission.

Q: Describe yourself in three words

A: Methodical. Organized. Personable.

Q: JSC turned 50 in September. Where do you hope to see NASA 50 years from now?

A: Definitely to the moon and beyond.

Q: What about JSC or NASA are you thankful for?

A: The opportunity to use my skills and experience that I gained over the years from different jobs and to serve these amazing astronauts from all over the world. And it is a pure blessing to be able to work with all different professionals in the center who are hardworking and tirelessly committed to the mission. I never imagined myself working at NASA, but now I look around and see these top-of-the-world super-talented people. I am just simply blessed! The inspiration I get working here is priceless.



PHOTO COURTESY OF CONNIE LAMB

Connie Lamb and her husband are pictured in Tokyo wearing Kimonos.

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.

Safety sparks interest in October

Texas' historic drought has brought the issue of fire and prevention to the forefront, and Johnson Space Center was immersed in all topics fire, safety and health-related on Oct. 12.

A day prior, the JSC Fire, Safety and Health Expo kicked off with a colorful fire truck parade across center grounds. On the day of the expo, Morpheus Project Manager Jon Olansen spoke in detail on the grass fire event at JSC, and the JSC family honored Denise Corliss and her dog, Bretagne, who served 10 grueling days in search-and-rescue efforts at Ground Zero during the aftermath of 9/11. JSC team members



NASA/BLAIR JSC2011E196353

received an extra treat, hearing Houston celebrity Jim "Mack" McIngvale share his words of wisdom laced with humor.

Throughout the morning, booths and exhibits in the mall area educated and entertained the JSC team. The day capped off with a healthy run/walk at the Gilruth Center.



NASA/BLAIR JSC2011E196513



NASA/BLAIR JSC2011E196448

(continued from page 5)

MORE RESOURCES AT YOUR FINGERTIPS:

- ISS Science on the Web: <http://www.nasa.gov/iss-science/>
- Follow us on Twitter: @ISS_Research
- Blog - "A Lab Aloft:" <http://go.usa.gov/atl>

actually doing research. So all the benefits that we are giving you are the appetizer for the banquet that is the next decade to come for research."

One such example comes from the medical field—a discipline where the public is anxious for breakthroughs.

"Oftentimes you hear the American public say, 'Oh, NASA's doing things, they're going to cure cancer,'" Ruttlely said. "It's kind of a bold statement, but we do little things here and there to advance the discoveries of cures for cancer. One of those is an improvement of microencapsulation deliveries for chemotherapy. Basically, instead of getting a full treatment of systemic chemotherapy, or in addition to, you can directly inject the microencapsulated anti-tumor drugs right near (or to) the source, in the tumor to treat it. So you get an improvement in systemic effects."

But that is just one small aspect of the research being done. There are many more examples JSC team members can keep handy when someone challenges them about the country's investment in the space station.

SPACE STATION BENEFITS FOR YOUR HIP POCKET

Earth benefits

- Microbial vaccine development
- Cancer treatment delivery
- Macromolecular crystallization
- Environmental Control and Life Support System
- Fluid flow
- Education

Discovery in our future

- X-ray monitoring
- Alpha Magnetic Spectrometer
- Newly discovered impacts of long-duration spaceflight on vision

Did you know that candidate treatments for a form of muscular dystrophy and for testicular cancer have been developed and are based on station research results?

"We want to share the stories with you, but we're not just doing it to inform you—we want you to be able to then take some of those stories and at least throw them into a conversation," Robinson said.

We are rocket scientists, among other things. Speaking about our combined successes should be the easy part.

Roundup

The Roundup is an official publication of the National Aeronautics and Space Administration, Johnson Space Center, Houston, Texas, and is published by the External Relations Office for all Space Center employees.

The Roundup office is located at the Johnson Space Center, Building 2. The mail code is AD94. Visit our website at: <http://www.jsc.nasa.gov/roundup/online/>
For distribution questions or to suggest a story idea, send an email to jsc-roundup@mail.nasa.gov.

Catherine Ragin Williams Editor
Neesha Hosein Assistant Editor
Logan Goodson Graphic Design
Rachel Kraft NASA Publication Manager
Cassandra V. Miranda Contractor Publication Manager

PRSR STD
U.S. POSTAGE
PAID
WEBSTER.TX
Permit No. 39

OR CURRENT RESIDENT

BioHouston celebrates women of science and honors NASA's own **Dr. Peggy Whitson**

On Sept. 20, Dr. Peggy Whitson was honored in recognition of her many accomplishments, which have had a positive impact on the advancement of science in the United States.

Back in 2009, BioHouston established its Women in Science Awards to recognize the leadership and accomplishments of women who have made outstanding contributions in life sciences, medicine, energy, engineering, mathematics, technology and related fields. The organization's goal in handing out these awards is to highlight the notable achievements of women leaders in science and technology and inspire others—women and men alike—to pursue research and applications that will spur economic growth and prosperity for our region and state.

Whitson, who was named the first International Space Station science officer during her stay on Expedition 5, has been a visible ambassador for discovery and research—especially among women. During her first stint

on the station, she conducted 21 investigations on human life sciences and microgravity sciences.

More recently, as the commander of Expedition 16 in 2007/2008, Whitson oversaw the first expansion of the station's living and working space in more than six years. The station and visiting space shuttle crews added the Harmony connecting node, the European Space Agency's Columbus laboratory, the Japan Aerospace Exploration Agency's Kibo logistics pressurized module and the Canadian Space Agency's Dextre robot. Whitson also performed five spacewalks to assist in assembly and maintenance tasks outside the complex.

Whitson accumulated 377 days in space during her spacefaring career—the most for any woman. She now serves as chief of the Astronaut Corps and is responsible for the mission preparation activities of all International Space Station crews and their support personnel.

PHOTO COURTESY OF ANTHONY RATHBUN



Dr. Peggy Whitson mingles with some young fans at the BioHouston annual lunch, Celebrating Women in Science.