



MARSHALL STAR

Serving the Marshall Space Flight Center Community

May 26, 2011

Marshall reorganizes in support of new missions

By Emily Townsend

Center Director Robert Lightfoot rolled out the Center's plans for a new organizational structure in an All-Hands meeting last week at Marshall.

Lightfoot shared that Marshall will have four key program offices, including the Space Launch System Office (SLS), the Science & Technology Office (S&TO), the Flight Programs and Partnership Office (FPPO) and the Shuttle-Ares Transition Office.

"It is important for us to reorganize around our new work," said Lightfoot. "This reorganization will help us focus our resources around our key programs in heavy lift and science, while maintaining the appropriate focus on Shuttle until retirement and cancellation of Ares."

See *Reorganization* on page 3

Endeavour astronauts install Alpha Magnetic Spectrometer-2, complete three spacewalks

By Sanda Martel

The fourth and final scheduled spacewalk performed by a space shuttle crew is slated for May 26, when astronauts Mike Fincke and Greg Chamitoff attach the orbiter boom sensor system to the outside of the International Space Station. The single spacewalk scheduled during the STS-135 mission, targeted to launch July 8, is to be conducted by space station residents.

Shuttle Endeavour astronauts



Shuttle Endeavour in a photograph taken by an STS-134 crew member aboard the space station.

See *STS-134* on page 4

This is the last printed issue of the Marshall Star

Daily Planet to cease publication May 31

Due to budget constraints, this is the last printed issue of the Marshall Star. The Star will only be available online beginning June 1.

To continue reading the Star, simply visit <http://marshallstar.msfc.nasa.gov/>. A link will be sent to the Marshall Space Flight Center workforce every Wednesday when the new issue is posted. Articles also will be available on ExplorNet, the center's new internal social media tool created to increase collaboration, communicate in real-time throughout the Marshall community and find expertise to effectively complete tasks.

The Star will no longer be mailed to Marshall retirees or to other NASA centers. Classified advertisements also will cease in the Star. However, Marshall team members can post their ads to ExplorNet.

In addition, the Daily Planet will not be available after May 31. To view center announcements, visit ExplorNet. To view the latest NASA news, visit www.nasa.gov.

Marshall Exchange Family Picnic to be held June 4

Games, water slides, car show, prizes, live music part of festivities

By Megan Norris Davidson

Marshall Space Flight Center team members, retirees and their families are invited to the Marshall Exchange Family Picnic, from 10:30 a.m. to 3 p.m. June 4 at the walking trail, directly across the street from the Marshall Child Development Center.

Lots of fun activities are planned, including games, inflatables for kids, water slides and bingo. Bingo prizes will include large-screen televisions and iPads. Several musical groups featuring Marshall Center team members – including Screaming Harmon and 741 Hertz – will provide a variety of live music throughout the day. All games and activities are free, with the exception of bingo, food and refreshments. Bingo will be 50 cents per card, with a maximum of two cards per player per game.

"The Exchange is proud to sponsor and fund this year's picnic," said Edwin Jones, operations manager for the Marshall Exchange. "The Exchange likes to have at least one family-focused event each year – it's our way of using the revenue we generate from vending and gift shop sales for family fun. Also, it gives team members a time and place to show off their family members, and see their favorite boss get 'dunked.'

"And this year," added Jones, "we believe the picnic is especially important to help heal some of the heartbreak we all experienced since many of our coworkers were affected by the devastating tornadoes of April 27."

Meal tickets are \$5 and may be purchased through administrative officers until noon June 1. Each ticket is good for barbecue pork or chicken, baked beans, coleslaw, pickle, roll and drink. Although the barbecue needs to be pre-purchased, hamburgers, hot dogs, chips, funnel cake sticks, snow cones and soft drinks will be sold the day of the event. For those over 21, draft beer also will be available for purchase.

A car, truck and bike show will be featured at the event, showcasing dozens of classic and exotic cars and motorcycles, owned and maintained by Marshall team members. The vehicles will be on display in the west lane of Morris Road alongside the walking trail parking area. Cash prizes of \$50, \$100 and \$150 will be awarded to the top three vehicles. To participate in the car show, contact Rich Wegrich at 544-2626 by June 3. One-day passes for any show vehicle that doesn't have a Redstone Arsenal sticker are available at the security desk in the Building 4200 lobby until June 3.

Picnic parking will be available in the parking lots of

several buildings adjacent to and surrounding the walking trail area, including the lot just north of the Marshall softball field on Pioneer Street. Overflow parking will be available at the Building 4200 complex. Other than Activities Building 4316, no Marshall Center buildings will be open during the event.

More information will be available on ExplorNet.

Guidelines for non-badged family members

Family members arriving unescorted by a permanently badged team member must have a one-day pass prior to arrival. Team members can pick up one-day family passes from 8 a.m. to 3:30 p.m. May 26 through June 3 at the security desk in the lobby of Building 4200. Passes should be placed on the driver's side of the windshield. Drivers must present a valid driver's license, proof of insurance and vehicle registration when arriving at a Redstone Arsenal gate.

Marshall team members who wish to attend the event with a spouse, children or grandchildren who are non-U.S. citizens must pre-coordinate their access no later than May 26. Contact Protective Services' Sherman Wilson at Sherman.N.Wilson@nasa.gov for more information.

Davidson, an AI Signal Research Inc. employee, supports the Office of Strategic Analysis & Communications.

Marshall Exchange Family Picnic

Saturday, June 4, 2011 - 10:30am - 3:00pm



Atlantis moves to launch pad May 31 for final shuttle launch

Space shuttle Atlantis will begin moving to its launch pad at 7 p.m. CDT on May 31, at NASA's Kennedy Space Center in Florida. The six-hour rollout from Kennedy's Vehicle Assembly Building is a major milestone as Atlantis is prepared for the final shuttle launch targeted for July 8.

During the STS-135 flight to the International Space Station, Atlantis' four astronauts will deliver the Raffaello

multi-purpose logistics module filled with supplies and spare parts to sustain station operations once the shuttles are retired.

NASA Television will provide live coverage of the shuttle's rollout. Highlights of the move will air on NASA TV's Video File. For downlink information, schedules and links to streaming video, visit <http://www.nasa.gov/ntv>.

Reorganization *Continued from page 1*

For months, since the agency and center received the President's authorization request for NASA, Marshall has been planning and looking at how the center needs to realign to support new programs while creating opportunities to explore future partnerships and technology. In parallel to this, the center has sought to create efficiencies in the organization in response to tough budget challenges.

While the organizational structure is still awaiting formal approval at NASA Headquarters, Lightfoot is confident the new structure will serve the center well in supporting the agency's missions.

The new structure

The new SLS Office is focused on development of a heavy lift vehicle. Led by Todd May and Jody Singer, the office will have multiple focus areas, including ground operations, advanced development, spacecraft and payload integration, boosters, engines, stages, and avionics. The office will be supported by Garry Lyles as chief engineer and Rick Burt as chief safety officer. SLS will work in parallel and stay integrated with the Multi-Purpose Crew Vehicle.

The organization known currently as Science and Missions Systems (SaMS) is being divided into two distinct organizations, the Science and Technology Office (S&TO), led by Dan Schumacher and Corky Clinton and the Flight Programs and Partnership Office, led by Teresa Vanhooser and Paul Gilbert.

The S&TO is primarily focused on research and technology and is divided into three key areas: Science Research and Applications, Science & Space Technology Projects and Technology

Development and Transfer. It will also support the Centennial Challenges Program. This office will perform basic and applied research, develop new technologies for exploration, and continue to manage space and earth science programs, projects and applications.

The Flight Programs and Partnerships Office (FFPO) will focus on International Space Station operations, robotic missions, and human exploration development, which include elements that support human exploration activities including projects, tasks, technical support, integration and architecture studies. FFPO will also seek to develop and enable future partnerships with external customers.

The current Shuttle Propulsion Office, focused on safely flying out Shuttle will continue to be led by Steve Cash. About 30 days after wheels are down on the final shuttle flight, Cash will become the director of the Safety & Mission Assurance Office (S&MA), and current S&MA director Roy Malone will become manager of a new Shuttle-Ares Transition and Retirement Office (T&R), which will focus on retirement and transition of the Constellation and Shuttle programs.

The organizational structure for the T&R Office will be determined based on need once an architecture decision has been made for SLS and there is a determination on which Shuttle and Ares resources need to be transitioned versus closed out.

The Engineering and S&MA organizations will remain directorates that provide matrix support to the programs and projects. They will be looking at their individual organizations to see if changes are necessary to best

align to the Center structure and agency needs. Engineering will be led by Chris Singer as director and Preston Jones as deputy.

The institutional organizations will continue to support the programs and projects, although they will be working with more limited resources, due to cuts in the Center Management Operations budget.

The reorganization also includes a new Center Strategic Development Office, which will be managed under the Office of Strategic Analysis and Communications. This office is responsible for identifying and analyzing opportunities on behalf of center management to capture future work complementing the center's core capabilities.

As part of the reorganization, Dale Thomas was also announced as the Associate Center Director of Technical at Marshall.

While the center is already beginning implementation of the reorganization, full completion is targeted for this summer.

"There are still a lot of things that have to happen before we can fully transition to the new organization," said Lightfoot. These steps include defining the structure within each organization, identifying and defining necessary positions within each structure, and determining how and when to place employees within their assigned organizations. "We appreciate everyone's ongoing hard work and continued patience as we transition to the new organizational structure," Lightfoot said.

Townsend, a Schafer Corp. employee, supports the Office of Strategic Analysis & Communications

Centerwide messaging process undergoes changes

Due to budget constraints, the Centerwide messaging process is being revised. A daily "Heads Up" message will continue to be distributed to the Marshall Team by the Office of Strategic Analysis & Communications (and archived in Inside Marshall and ExplorNet), but only duly authorized officials of Marshall Center organizations will be able to submit messages for distribution in "Heads

Up." Individuals seeking to initiate a Centerwide message can work within their organization to do so or can post the message on the "Announcements" section of ExplorNet, located in the "MSFC Happenings" site accessible from the front page of ExplorNet. "This Just In" messages will no longer be provided; however, Office of Center Operations will distribute Emergency Messages as needed. "Message from

the Center Director" will continue to be distributed to the workforce as well. This new messaging system will be implemented on June 1. The "MSFC-INTERCOM" mailbox will cease being used on June 1 and will be disabled at the end of June. A message notifying users of the new messaging system will appear in "MSFC-INTERCOM" throughout the month of June.

STS-134 *Continued from page 1*

have completed three spacewalks during the next-to-last shuttle mission, which launched May 16 from Kennedy Space Center, Fla., on a 16-day mission to the space station.

During the mission's first spacewalk, on May 20, Andrew Feustel and Chamitoff installed antennas for the external wireless communication system, routed cables, set up an antenna, installed handrails and connected power cables. Pilot Greg Johnson and Mission Specialist Roberto Vittori transferred equipment and supplies from Endeavour's middeck to the station.

Feustel and Fincke completed the second spacewalk May 22. At eight hours and seven minutes, it was the sixth longest spacewalk in history. The astronauts completed all planned tasks, including refilling one of the station's cooling loops with ammonia and lubricating one of the station's massive solar alpha rotary joints.

During the third spacewalk, on May 25, Feustel and Fincke continued hardware installations on the exterior of the orbiting outpost.

On May 19, the Alpha Magnetic Spectrometer-2, a particle

physics detector, was installed on the outside of the space station's right side. Feustel and Vittori used the space shuttle's robotic arm to extract the spectrometer from Endeavour's payload bay and hand it off to the space station's Canadarm2, a robotic arm that helped Johnson and Chamitof install the particle detector on the outside of the space station.

The spectrometer is a two-ton ring of powerful magnets and ultrasensitive detectors built to track, but not capture, cosmic rays in a search for various types of unusual matter. The 15,251-pound instrument will be operated remotely from Earth and should not require any attention from astronauts in orbit.

Mission managers have cleared Endeavour's thermal protection system for reentry after analysis of data and images from a focused robotic inspection of the tiles.

Shuttle Endeavour is scheduled to undock from the space station May 29. The first landing opportunity is at Kennedy on June 1.

For more information about the STS-134 mission visit http://www.nasa.gov/mission_pages/shuttle/main/index.html.

Martel, an AI Signal Research Inc. employee, supports the Office of Strategic Analysis and Communications.

Classified Ads

The ads will no longer be printed after this week. Marshall team members can post their ads to ExplorNet.

Miscellaneous

New set of four beige floor mats for 2009 Lexus RX350 SUV, \$70. 256-881-0656

Men's Titan 26" 36v electric mountain bike, \$485. 256-883-1667

1958 bedroom set, \$295; coffee table, \$75; king-sized headboard, \$50. 256-852-0893

White Maytag dishwasher, Jetclean EQ Plus, \$300. 256-682-4739

DCI Titleist irons, steel/regular shafts, 3-PW, plus SW and LW, \$225. 256-881-5642

Three-piece table set with glass tops, \$150; two end tables with bottom shelf, coffee table. 256-797-0746

Troy-Built 3-in-1 push mower, Honda easy start engine, mulch, bag, \$100. 256-880-9025

Ruger P90DC, (2)7 1 clips, carrying case, \$350. 256-612-7729

Large two-piece entertainment center, cherry finish, see photo at <https://explornet.msfc.nasa.gov/docs/DOC-3139>, \$350 obo. 256-682-5418 or 256-603-3558

Intex 18' easy set above-ground pool, accessories, additional larger pump, floats, \$450. 256-337-3500

Graco Contempo high chair, Birkshire print, \$45; Graco Baby Einstein stationary entertainer, \$40. 256-895-2959

Utility trailer, \$195 obo; pressure washer, \$45. 256-852-6952

17-foot aluminum canoe, \$400. 256-881-4565

Minn kota endure, 30 trolling motor, \$40. 256-468-3134

Vehicles

2005 Honda Rancher AT400, green, 2" Lift Kit, 25" Mud Lite tires, 250 hours, \$3,500. 256-694-8836

2003 Buick Regal, LS, tan, leather, many extras, 107k miles, \$4,900. 256-534-2025

2002 Nissan Pathfinder LE, green, tan leather, sunroof, 78,600 miles, \$9,900. 256-468-0785

2002 Suzuki Savage LS650, new battery, bike cover, saddlebags, 3,827 miles, \$3,000. 256-883-2757

1998 GMC pickup, six cylinder, LWB, white, 200k miles, \$4,000. 256-468-9377

Wanted

Students interested in obtaining beginner to advanced scuba diver certification. 256-651-9909

10' trampoline mat. 256-603-1273

Working refrigerator with ice maker. 256-656-2965

Found

iPod shuffle, May 19, parking lot of B4312; pair of glasses, May 16, B4200 second floor women's restroom. 256-544-4680

James Webb Space Telescope mirrors find shelter at Marshall during April tornadoes

By Janet Anderson

As skies turned dark and the sounds of sirens pierced the humid air, the James Webb Space Telescope mirror test team – made up of contractor personnel from Ball Aerospace & Technologies Corp. in Boulder, Colo., the University of Alabama, and NASA employees – continued to test the mirror segments.

During the late afternoon of April 27, the X-ray and Cryogenic Facility, or XRCF, located at the Marshall Space Flight Center, lost power due to Tennessee Valley Authority transmission lines being destroyed in the storms. When the power first went out, the team had just completed the optical measurements for the third of six primary mirror segment assemblies for the Webb telescope in the test chamber.

“The Webb telescope program had planned for a specific number of test cycles for each primary mirror segment,” said Jeff Kegley, manager of the XRCF. “If we lost the data gathered in the test sessions under way when we lost power, it would have added an extra cycle which could have affected performance and impacted program costs. The team rose to the occasion and focused on seeing the testing through without adding additional cycles.”

When the storms hit the Huntsville area and power was lost, the XRCF facility regained power by switching over to an 800-kilowatt diesel generator and continued operating at 45 degrees Kelvin. The generator pulled the facility through the power outage, but had to be serviced on two different occasions when it quit working during the night. Support personnel monitored the generator's fuel level continually and worked to ensure that fuel was available.

During the weeklong Marshall power outage, the center's chilled water system, used to cool equipment and the facility, went down. The temperature in the control room climbed well above 90 degrees. To combat the

hot temperature, the Webb team replumbed some systems to accept potable water to cool equipment so testing could continue. Fans were brought in to cool the control and data computers in the control room.

The Marshall air system that operates the facility's valves that maintain vacuum in the chamber and control the helium used to cool the chamber was not being replenished, which caused the pressure system to bleed out by Saturday following the storms. In anticipation of this outage, the Marshall test lab support contractors brought in a trailer of compressed air and connected it to the XRCF's air system to continue operations.

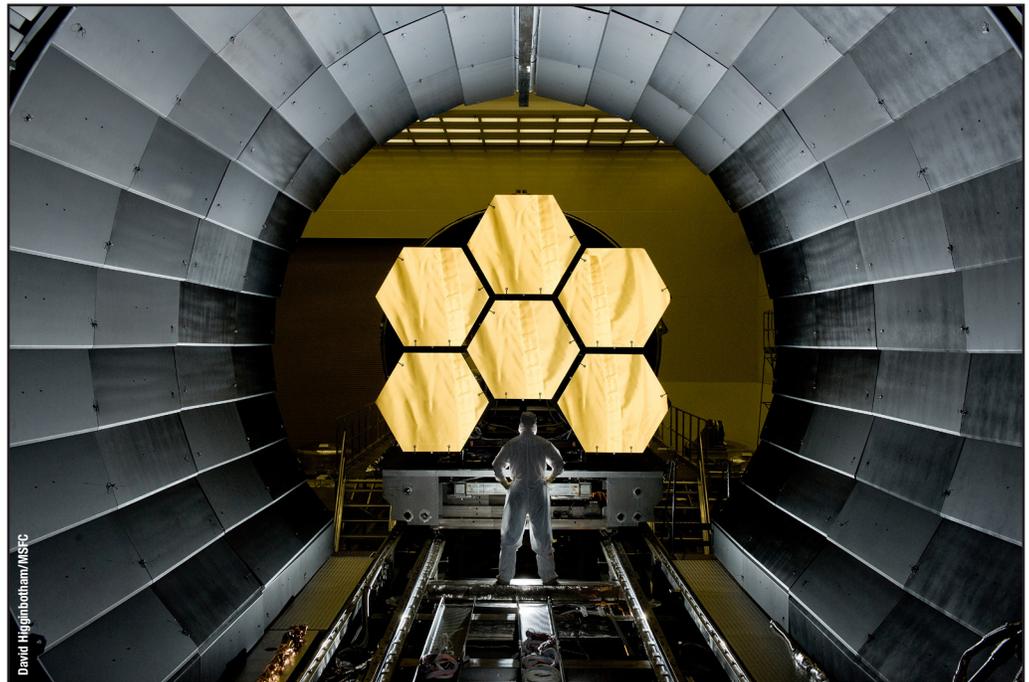
Meanwhile, test lab support contractors continued to bring in liquid nitrogen, which is needed to maintain the cryogenic temperatures and make sure the chamber did not warm up. If the chamber warmed up before the mirrors, any contamination in the chamber could migrate to the colder mirror surfaces and degrade performance.

Following one of the worst storms in the history of Alabama, the Webb telescope mirror test team never missed a 12-hour shift. Like the rest of North Alabama residents, they waited in long lines for gas, faced the countywide curfew and left their families to cope with loss of power at home.

“It's not clear to me what drives this team's extraordinary dedication or desire to succeed – but I'm sure proud to be associated with them!” said Kegley.

On May 3, the test cycle was completed. The mirrors were safe in the chamber at room temperature and the facility was shut down.

Anderson is a public affairs officer in the Office of Strategic Analysis & Communications.



NASA engineer Ernie Wright looks on as the first six flight ready James Webb Space Telescope's primary mirror segments are prepped to begin final cryogenic testing at the Marshall Center.

THE FACE OF MISSION SUCCESS IS:

Alayna P. Devineni

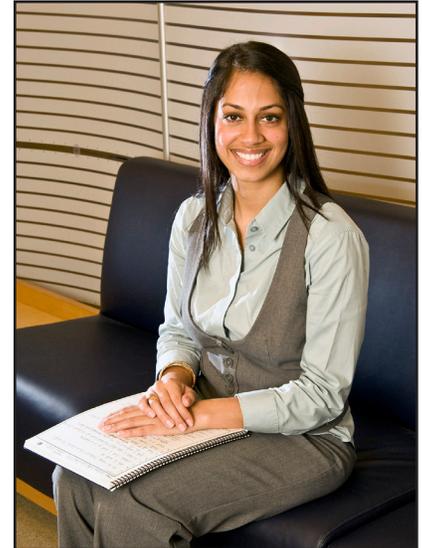
Aerospace Engineer, Spacecraft & Vehicle Systems Department Stage Analysis Branch

- **Organization:** Engineering Directorate
- **Joined NASA:** Cooperative Education student in 2006; joined full time in 2009
- **Education:** Bachelor's degree in electrical engineering, University of Alabama in Huntsville, 2009
- **Responsibilities:** As a systems engineer in the Spacecraft and Vehicle Systems Department's Stage Analysis Branch, I am responsible for developing system models, performing integrated system analysis and serving on advanced concepts study teams to assess potential innovative concepts.
- **How do you hope to contribute to Marshall Space Flight**

Center's future goals? I envision myself contributing to the design and development of a new launch vehicle that can take NASA and the world beyond our current scope of exploration. In the next few years, I plan to explore innovative ideas, strategies, and technology that will make further exploration a reality, provide a fresh look at feasible concepts that have been vastly investigated in the past, and perform systems analysis to evaluate various missions.

What is something people would be surprised to find out about you? I've hiked parts of the Appalachian Trail and am planning to explore the entire trail...of course, not all in one season.

- **Who is someone you admire and why?** I'd have to say Mahatma



Ghandi. This was a truthful and modest man who strived to ease the lives of people who were suffering and to promote peaceful relationships and mutual understanding between so many people.

MARSHALL STAR

Vol. 51/No. 35

Marshall Space Flight Center, Alabama 35812
256-544-0030
<http://www.nasa.gov/centers/marshall>

The Marshall Star is published every Thursday by the Public and Employee Communications Office at the George C. Marshall Space Flight Center, National Aeronautics and Space Administration. Classified ads must be submitted no later than 4:30 p.m. Thursday to the Marshall Public and Employee Communications Office (CS20), Bldg. 4200, Room 102. Submissions should be written legibly and include the originator's name. Send e-mail submissions to: MSFC-INTERCOM@mail.nasa.gov. The Star does not publish commercial advertising of any kind.

Manager of Public and Employee Communications: Dom Amatore
Editor: Jessica Wallace Eagan

U.S. Government Printing Office 2011-723-031-00099

www.nasa.gov

PRE-SORT STANDARD
Postage & Fees PAID
NASA
Permit No. 298