



MARSHALL STAR

Serving the Marshall Space Flight Center Community

Nov. 4, 2010

Marshall CFC drive passes \$270,000

Community Service Days still seeking volunteers for variety of goodwill functions

Contributions to the Marshall Space Flight Center's Combined Federal Campaign reached \$270,067 as of Nov. 2. Marshall's goal for 2010 is to raise \$675,000 by the campaign's end on Dec. 10.

A number of Community Service Days activities still need volunteers: Christmas Charities seeks volunteers to wrap gifts for those in need Nov. 15, 17 and 22; to support its annual Can-a-thon food drive Dec. 2; and to help

See CFC on page 4



The Marshall Center's 2010 Combined Federal Campaign runs through Dec. 10. So far, Marshall's work force has contributed more than \$270,000 toward the center's \$675,000 goal.

Discovery's final mission



Space shuttle Discovery, on the launch pad at Kennedy Space Center, Fla., for its final mission is currently targeted for launch at 2:29 p.m. CDT on Nov. 4. Scheduled launches earlier this week were postponed while shuttle processing teams repaired a small leak in the propellant line in Discovery's orbital maneuvering system engines and worked to troubleshoot the status of electrical irregularities that occurred when the shuttle main engine controllers were powered up early Nov. 2. The primary payload for the 11-day STS-133 mission is delivery of the Permanent Multipurpose Module to the International Space Station. Marshall Space Flight Center engineers were responsible for developing and integrating modifications that converted the Leonardo Multipurpose Logistics Module into a permanent fixture on the orbiting facility. The latest weather forecast has degraded to 80 percent "no go" weather for Nov. 4 should the team decide to proceed with the launch attempt.

Marshall leaders discuss key issues at von Braun symposium



The Marshall Space Flight Center co-hosted the third annual Wernher von Braun Memorial Symposium on Oct. 25-27 in Huntsville. With the theme, "21st Century Approaches to the Use and Development of Space," the conference brought together space professionals from government, industry,

academia, business and international partners. From left, Marshall Center Director Robert Lightfoot; Marshall Associate Director, Technical, Todd May; and Center Chief Technologist Andrew Keys share leadership insights into Marshall's future during a panel discussion.



In recognition of Marshall's 50th anniversary, former Marshall Center managers, including three former center directors, honored Marshall's rich space operations and engineering past at the symposium. Bob Ryan, center, an engineering training consultant for Will Technologies and a former Marshall Center manager, addressed transitions through the decades. Also taking part in the discussion is Robert Lightfoot, left, and former Marshall Center Director William Lucas, right.

Veterans to be honored at Marshall Nov. 10, invited to take part in city parade Nov. 11

On Nov. 10, the Marshall Space Flight Center will hold its annual Veterans Day meet-and-greet event to honor team members who serve or have served in the U.S. military.

The event, at 10 a.m. in Building 4200, Room P110, is organized by Marshall's Office of Diversity and Equal Opportunity. Maj. Gen. James Rogers, commander of the Army's Aviation & Missile Command on Redstone Arsenal,

will be the guest speaker.

Veterans who would like to participate may contact Allan Day at 544-4079 or allan.v.day@nasa.gov, or Phyllis Olinger at 544-0022 or phyllis.y.olinger@nasa.gov.

Team members and veterans also are encouraged to take part in the Huntsville Veterans Day parade Nov. 11. The parade will start at 11 a.m. in the parking lot at the intersection of Clinton Avenue and Woodson Avenue in downtown Huntsville. Marshall veterans and team members will follow NASA's rolling "Exploring New Worlds, Improving Our Own" exhibit, and will hand out space shuttle replicas to the crowd. NASA vans also will be available for those who wish to ride.

Webb Telescope primary mirror segment completes cryogenic test

By Kim Newton

Last week, a primary mirror milestone was met for NASA's James Webb Space Telescope project as the first gold-coated mirror segment finished testing in the X-ray & Cryogenic Facility at the Marshall Space Flight Center.

The observatory's giant, 6.5-meter diameter, or 21.3 foot, hexagonal primary mirror will contain 18 flight mirror segments. Each mirror segment is made of beryllium and coated with a microscopically thin coat of gold to enable the mirror to reflect infrared light more effectively.

"We've tested all of the beryllium mirror segments at least once and completed cryogenic testing of the first of the primary mirror segments, the engineering development unit," said Helen Cole, project manager for the Webb Telescope activities at Marshall. "Now the manufacturing process and gold coating for the rest of the flight mirror segments can be completed."

Cryogenic mirror testing for the Webb Telescope began at the Marshall Center in 2009 and will continue into 2012. Each of the 18 mirror segments will be tested, re-polished, coated with gold, measured at Ball Aerospace & Technologies Corp. of Boulder, Colo., and finally tested again in the Marshall test facility at cryogenic temperatures before the mirror test program is complete.

During cryogenic testing, the mirrors are subjected to extreme temperatures dipping to -415 degrees Fahrenheit in the 7,600 cubic-foot, helium-cooled vacuum chamber.

It permits NASA engineers to measure in extreme detail how the shape of the mirror changes as it cools – just as each mirror will change shape over a range of operational temperatures in space. The cryogenic test series helps NASA predict how well the telescope will image infrared sources in those conditions.

The facility at Marshall is the world's largest X-ray telescope test facility and a unique site for cryogenic, clean-room optical testing.

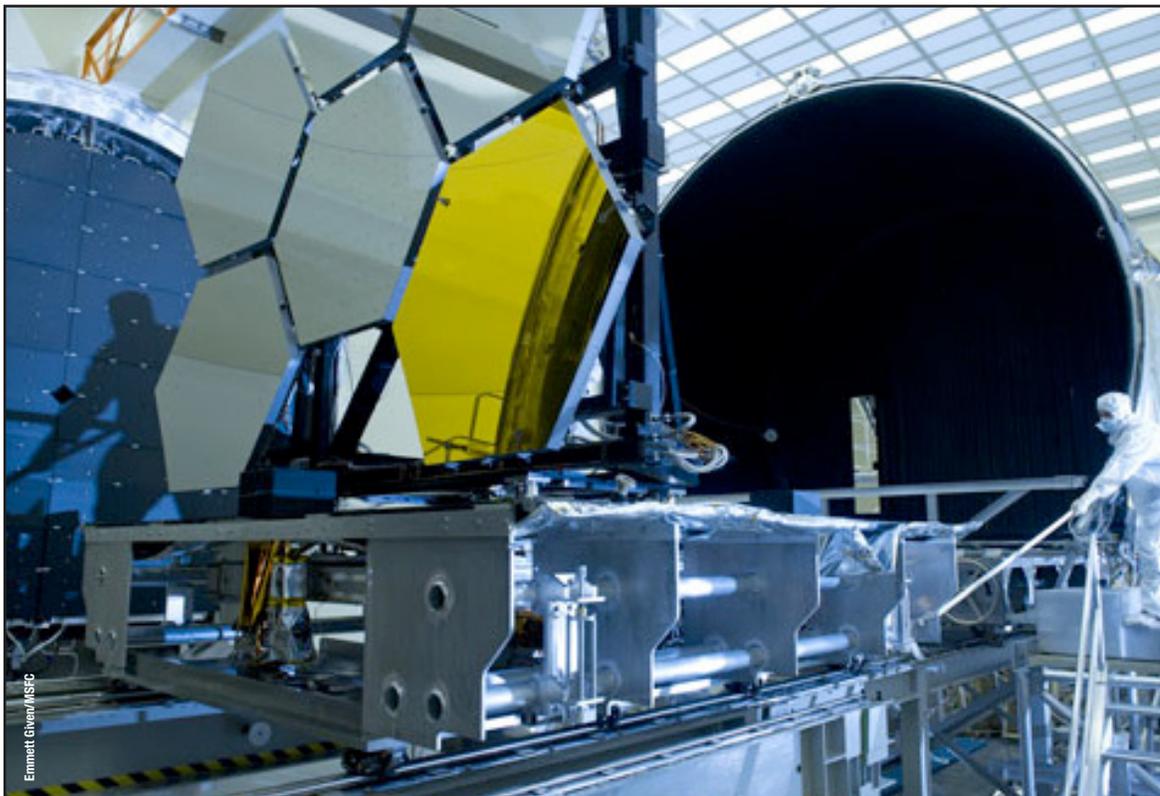
Northrop Grumman of Redondo Beach, Calif., is the prime contractor for the Webb telescope, leading a design and development team under contract to NASA's Goddard Space Flight Center in Greenbelt, Md. Ball Aerospace is responsible for all mirror development.

The James Webb Space Telescope is NASA's next-generation space observatory and successor to the Hubble Space Telescope. The most powerful space telescope ever built, Webb will observe the most distant objects in the universe, provide images of the very first galaxies ever formed and help identify unexplored planets around distant stars.

The Webb Telescope is a joint project of NASA, the European Space Agency and the Canadian Space Agency.

For more information about the James Webb Space Telescope, visit: <http://www.jwst.nasa.gov>.

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



The chamber is opened to move the first cryogenically tested gold-coated engineering development unit out of Marshall's X-ray and Cryogenic Facility.

NASA celebrates 10th anniversary of space station

The International Space Station partner agencies marked a major milestone on Nov. 2 with the 10-year anniversary of people living permanently aboard the space station.

Expedition 25, the 25th crew now living and working aboard the station, consists of Commander Doug Wheelock; his fellow NASA astronauts Scott Kelly and Shannon Walker; and Russian cosmonauts Fyodor Yurchikhin, Alexander Kaleri and Oleg Skripochka.

"As we look forward to the next 10 years, taking us through 2020, the space station will serve many roles," said Mike Suffredini, International Space Station program manager. "With its permanent human presence, it will serve as a foothold for long-term exploration into space, being an integral part of testing human endurance, equipment reliability and processes essential for space exploration."

Since the Expedition 1 crew arrived at the station, humans have continuously occupied the orbiting laboratory. More than 196 people have visited the complex, and by the exact time of the anniversary (5:21 a.m., Nov. 2, 2000), the station will have completed 57,361 orbits of the Earth, traveling some 1.5 billion miles.

Representatives of the five international agencies that built and operate the station have agreed in principle to continuing its use for another decade. The governments of the 15 participating nations in the station partnership are in the process of formally endorsing that plan.

More than 600 different research and technology development experiments have been conducted on the station, many of which are producing advances in medicine, recycling systems and a fundamental understanding of the universe.

NASA is updating the content of the International Space Station section of its website in recognition of the 10th anniversary. The update supports the on-going transition from station assembly to utilization. The website now will focus on the research in the unique microgravity environment of low-Earth orbit.

The updated section of the NASA website incorporates an improved organization system to help visitors find what they are looking for with regard to research and technology development, crews and expeditions, international cooperation and the new capabilities of the station as a U.S. national laboratory.

The new space station section also provides better linkages with social media applications, including a new International Space Station Program scientist blog, and Twitter accounts for astronauts aboard the station and the National Laboratory. For more information, visit: <http://www.nasa.gov/station>. For a Flash feature and Web story on the first 10 years of human life aboard the station, visit: http://www.nasa.gov/externalflash/expedition_10_years and http://www.nasa.gov/mission_pages/station/living/10years.html.

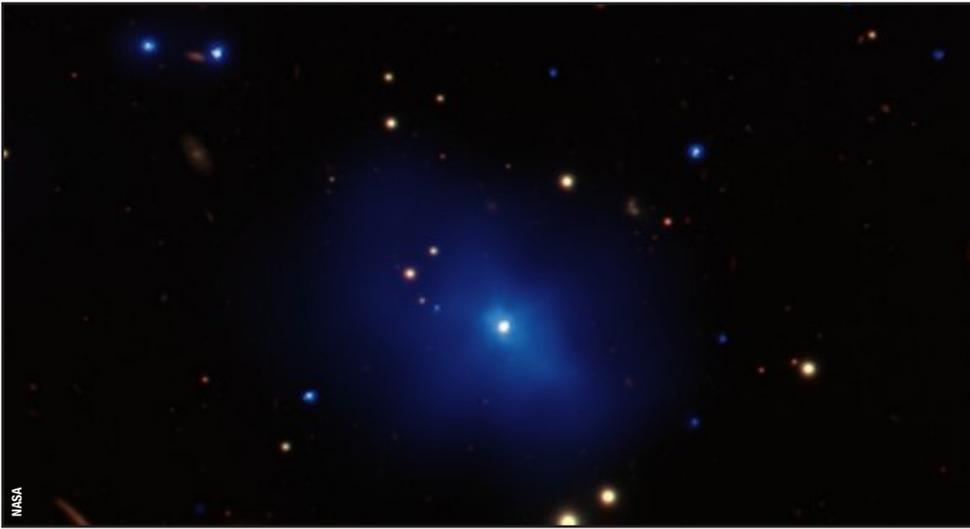
CFC supports science for all ages



Marshall Space Flight Center team members explore the attractions at Sci-Quest-The North Alabama Science Center during a CFC bus tour in October. A second visit to Sci-Quest is planned for Nov. 18 from 1-3 p.m. To sign up, visit <http://cfc.msfc.nasa.gov/CFM/bus1.cfm>.

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fill out applications and load supplies into vehicles Dec. 20-22. Habitat for Humanity needs volunteers for home-repair tasks Nov. 11. The Huntsville Hospital Foundation seeks help delivering magazines to patients Nov. 18-19. The Burritt Museum Association is asking for volunteers to help set up outdoor lighting Nov. 22 and Dec. 3 for its annual holiday festivities. For volunteer shift hours, activity locations and other details, visit <http://cfc.msfc.nasa.gov/CFM/csd.cfm>.



Chandra captures unusual galaxy cluster

NASA's Chandra X-ray Observatory has observed an unusual galaxy cluster that contains a bright core of relatively cool gas surrounding a quasar called 3C 186. This is the most distant such object yet observed, and could provide insight into the triggering of quasars and the growth of galaxy clusters.

Marshall, Team Redstone to honor Native American Heritage Month Nov. 4

Marshall Space Flight Center team members and Redstone Arsenal personnel are invited to celebrate Native American Heritage Month Nov. 4 from noon-1 p.m. at the U.S. Space & Rocket Center in Huntsville.

Retired NASA shuttle astronaut John Herrington, a member of the Chickasaw Nation, will speak, and

participants can sample traditional Indian food and watch authentic dance and music performances.

Buses will transport Marshall team members to the Space & Rocket Center for the event. For more information, visit http://inside.msfc.nasa.gov/announcements/nahm_110410.html.

Classified Ads

To submit a classified ad to the Marshall Star, go to Inside Marshall, to "Employee Resources," and click on "Marshall Star Ad Form." Ads are limited to 15 words, including contact numbers. No sales pitches. Deadline for the next issue, Nov. 11, is 4:30 p.m. Thursday, Nov. 4.

Miscellaneous

- Seven model rockets, one video camera rocket, various conditions, \$50. 256-508-1558
- Foosball table, \$200 obo; oak entertainment center, fits 27" TV, \$150. 256-882-0461
- Casio Privia PX-100 keyboard, keyboard stand, foot pedal, power supply. 256-603-4438
- Wooden baby crib/toddler bed; toddler car seat; twin baby clothes. 256-551-0276
- Wooden computer desk, 53x28x53, includes hutch, photos available, \$25 obo. 313-655-7966
- Kincaid solid mahogany pedestal dining room table, two extensions, six chairs, \$1,100. 256-679-6676
- Oak leaf furniture, dining room suite, living room suite, bedroom suite, 20 pieces, \$2,000. 256-783-9018
- Dining table, four chairs, large oak pedestal, \$150. 256-683-3398
- Kenmore dishwasher, 18" wide, \$40. 256-656-3196
- Amana commercial quality 3.3 cubic foot washer; 7.1 cubic foot dryer, \$200. 931-625-1144
- Two NASA lanyards, \$4 each; Polaroid digital camera, \$20. 256-714-0800

PLX Kiwi Wifi diagnostics transmitter, sensor support, for iPhone or iPod Touch, \$150. 256-457-5823

Wagner Paint Crew airless sprayer, 25-foot hose, rebuild kit, \$40. 256-288-0906

Two tickets, Alabama vs. Georgia State football game. 256-895-9520

Two BTL "Legally Blonde" tickets, Jan. 9, 2 p.m., Row K, seats 25, 26. 256-772-3140

Vehicles

2004 Monte Carlo Supersport Supercharged, Dale Jr. edition, loaded, red, \$9,995 obo. 256-652-2978

2002 Hyundai Sonata, pearl, sliding sunroof, 20k miles. 256-464-3639

1945 "A" Farmall, restored, \$1,100; 1994 Ford F150, \$2,495; 16' cattle trailer, \$840. 256-731-9258

PWC/small boat trailer, galvanized, \$550. 256-651-5847

25-foot Fleetwood Mallard camper with slideout, holding tanks. 256-527-2502

Wanted

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

Houses/offices to clean, available evenings and weekends. 256-777-8595, leave message

Land to deer hunt, willing to work for right or open for lease options. 256-468-8906

Free

Three kittens, born 9/10/10, available immediately, gray/black stripes. 256-348-8350

Long-haired cat, approximately 5 years old, declawed front paws, orange and white stripes. 256-684-1634.

Found

Stainless steel coffee travel mug, found in Morris Auditorium on 10/22/10. 256-544-4680

Marshall employees asked to update information in MAMS, telephone directory

Marshall Space Flight Center employees are encouraged to update their physical location and other user information in the Marshall Asset Management System, or MAMS, database and the Marshall telephone directory. The correctness of employee

location information is necessary to maintain the most accurate data for center-wide mail small and large package deliveries.

Employees may go to the Inside Marshall telephone directory at <http://phonebook.msfc.nasa.gov/>

msfc_phonebook_find.asp or to the MAMS database at <http://mams.msfc.nasa.gov/>.

For questions, contact Nancy Jane Spears, Marshall's mail manager, at 544-7561, or Larry Dumont, EG&G Mail Services, at 544-4457.

Talent has no boundaries



Famed Paralympian Kevin Saunders speaks to the Marshall Space Flight Center team Oct. 19 on the subject of "Talent Has No Boundaries: Work Force Diversity Includes People With Disabilities." Saunders, paralyzed from the chest down in an industrial accident in 1981, overcame his injury to become an international wheelchair racing champion and two-time appointee to the President's Council on Physical Fitness & Sports. Saunders was the featured speaker during Marshall's Disability Employment Awareness Month activities, organized by the Office of Diversity & Equal Opportunity.

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