



MARSHALL STAR

Serving the Marshall Space Flight Center Community

Nov. 9, 2006



NASA/MSFC

An artist's concept of a radially segmented launch vehicle, now in development at the Marshall Center.

Wisconsin firm selected to manufacture fuel tanks for future launch vehicles

By Rick Smith

KT Engineering of Huntsville, a Marshall Center partner in the development of next-generation spaceflight technologies, has selected Walker Stainless Equipment Group of New Lisbon, Wis., to manufacture stainless steel fuel tanks for a future launch vehicle.

The work supports a Small Business Innovation Research, or SBIR, agreement reached in 2003 between Marshall, KT Engineering and the U.S. Air Force Research Laboratory at Kirtland Air Force Base, N.M.

Under the agreement, KT Engineering is developing an innovative, low-cost launch vehicle suitable for transporting science payloads and commercial cargo to Earth orbit at commercially affordable prices. The Air Force contributed the 20,000-pound, thrust-class engine design. The Marshall Center's Radially Segmented Launch Vehicle Project, which supports NASA's research into low-cost launch vehicle transportation, is responsible for engine and engine component testing and oversight of all propellant tank hardware design, development, fabrication and testing.

See Future vehicles on page 5

Mission formerly known as Solar-B

First images from Hinode now available

By Sherrie Super

They're more than just pretty pictures. The first images released from Hinode, the international mission to study the sun, are giving scientists a fresh look at explosive solar activity.

Known as Solar-B before reaching orbit, Hinode has successfully obtained images with all three of its on-board instruments — the X-ray Telescope, Solar Optical Telescope and Extreme Ultraviolet Imaging Spectrometer.

Each geared to view the sun in a different way, these instruments observe how changes in the sun's magnetic field spread through different layers of the solar atmosphere.

Images from Hinode's array of instruments promise to help scientists better understand the origin of solar disturbances that can impact Earth. This explosive solar activity can interfere with satellite communications and electric power transmission grids, and threaten the safety of astronauts traveling beyond the safety of the Earth's magnetic field.

The spacecraft launched Sept. 23 from Uchinoura Space Center in Kagoshima, Japan. Hinode's "first light" — marked by the opening of each instrument's sunshade doors to capture images — began Oct. 21. Its newly released first images are part of the checkout process that confirms the health of Hinode's instruments.

See Hinode images on page 6

CFC still short of goal; campaign runs through Nov. 17

Donations for the Combined Federal Campaign by Marshall employees have reached \$374,305.08, illustrated in the graphic at right. The campaign is an annual initiative by federal and military personnel to raise money for local charities and continues through Nov. 17. As of Nov. 3, approximately 39 percent of civil service employees eligible to contribute have donated an average of \$383.90 per person toward this year's campaign goal of \$575,000.

Civil service employees are not the only ones who can contribute to CFC. On-site contractors and civil service retirees who wish to contribute may mail a check to: NASA-MSFC, Marshall Space Flight Center, Ala. 35812, Attention: George Myers — EV41. Brochures and pledge forms for designating a charity for donations are available in Building 4315 in the Wellness Center. For questions about

contributing, call George Myers at 544-1477.

"As in past years, Marshall team members and civil service retirees have been very generous with their time and donations, but participation is key," said George Myers, an engineer in the Engineering Directorate's Spacecraft & Vehicle Systems Department and the Marshall 2006 CFC executive chairperson. "The donations of team members and retirees help support local charities and demonstrate 'Compassion In Action,' this year's CFC theme."

Marshall employees have the opportunity to donate by cash, check or payroll deduction through Nov. 17. For more information about the CFC campaign, visit <http://cfc.msfc.nasa.gov/>.



NASA's Orion Launch Abort System team meets at Marshall



NASA/Nancy Bennett

Greg Stover, left, manager of the Launch Abort System Project Office at NASA's Langley Research Center in Hampton, Va., visited the Marshall Center in October for a two-day project-planning session with Project Deputy Steve Gaddis, right, and the Launch Abort System team at Marshall. The Launch Abort System is a primary safety element of the Orion crew exploration vehicle, which will be boosted to space atop the Ares I launch vehicle. In the event of a launch emergency, small motors in the escape tower anchored atop Orion will ignite, quickly

separating the crew module from the rocket. Parachutes will then lower the module safely back to Earth. Langley leads system integration for the Launch Abort System, providing oversight and independent analysis to the prime contractor, Lockheed Martin Corp. of Bethesda, Md., and its key subcontractor for the system, Orbital Sciences Corp. of Dulles, Va. The Marshall Center's Exploration Flight Projects Office, part of the Science and Mission Systems Office, provides coordinated technical and programmatic support and expertise for the Launch Abort System project.

STS-115 astronauts visit Marshall to thank employees, share highlights of September shuttle mission

By Sanda Martel

Space Shuttle Atlantis crew members visited the Marshall Center Nov. 1 to thank employees for their work on the STS-115 mission, which flew Sept. 9-21.

Commander Brent Jett, pilot Christopher Ferguson and mission specialists Joseph Tanner, Daniel Burbank and Heidemarie Stefanyshyn-Piper presented highlights of their 12-day mission in Marshall's Morris Auditorium in Building 4200.

Marshall Center Associate Director Robin Henderson welcomed the astronauts, congratulating them on the success of their mission — the first in a series of shuttle missions that will be among the most complex in space history.

The astronauts shared with the audience highlights of their mission, which succeeded in restarting assembly of the International Space Station. The crew delivered and installed the massive P3/P4 truss — a 35,000 pound, girder-like structure that is an integral part of the station's backbone, and two sets of solar arrays that will eventually provide one-quarter of the station's power.

"The Marshall Center is vital to what we do," Ferguson said in an interview with news media following the presentation. "Marshall is the center of excellence for propulsion. We couldn't go into space without the Marshall team."

The Shuttle Propulsion Office at the Marshall Center is responsible for the manufacture, assembly and operation of the primary shuttle propulsion elements: the



Doug Steffer/MSFC

From left, space shuttle astronauts Joe Tanner, Dan Burbank, Heide Stefanyshyn-Piper, Chris Ferguson and Brent Jett are interviewed by Huntsville news media following their STS-115 mission highlights presentation at the Marshall Center on Nov. 1.

main engines, external tank, solid rocket boosters and reusable solid rocket motors.

The mission featured three spacewalks. The astronauts performed unprecedented robotics work, using the shuttle's arm in a delicate maneuver to hand off the school-bus-sized truss to the space station's arm. The astronauts also moved the station's robotic arm to a position where it will assist in the next phase of station construction. A new procedure called a "camp out" was implemented, in which astronauts slept in the Quest airlock prior to their spacewalks. The process shortens the "prebreathe" time when nitrogen is purged from the astronauts' systems and air pressure is lowered so the spacewalkers avoid the

condition known as the bends.

STS-115 became one of the most photographed shuttle missions, with more than 100 high-definition, digital, video and film cameras documenting the launch and climb to orbit. The STS-115 mission set the stage for the next assembly phase of the International Space Station. Preparations continue for Space Shuttle Discovery's launch, targeted for mid-December, on the STS-116 mission to deliver an additional truss segment and a cargo module to the station. Discovery will also do extensive work on the station's electrical and cooling systems.

The writer, an ASRI employee, supports the Office of Strategic Analysis and Communications.

Obituary

Morgan Mahone, 86, of Huntsville died Oct. 18. He retired from the Marshall Center in 1973 as a mechanical engineer technician.

He is survived by his wife, Verna Potts Mahone; two daughters, Gwendolyn Cobb and Cynthia Miller; and four sons, Morgan Mahone, Donald Mahone, Michael Mahone and A. Neal Mahone.

Lou Durnya, Marshall's assistant chief counsel, salutes the Army for preparing him in his work at NASA

By Jessica Wallace

Handling one career can be challenging, but imagine balancing two.

For thousands of Americans who help defend and protect this country by serving in the U.S. Army Reserve, juggling two careers is the norm. They start out dedicating one weekend each month and an additional two weeks each year, but, when called, these men and women leave behind their families and daily lives to serve their country for as much as two years on active duty.

Retired Army Col. Lou Durnya, an employee of Marshall's legal office for 24 years and currently assistant chief counsel of the Marshall Center's Office of the Chief Counsel, is one of those soldiers who packed his bag and answered the call when he was activated for military duty with the Army Reserve. Before retiring as a judge advocate general in February, Durnya was the staff judge advocate of the 2145th Garrison Support Unit in Nashville. He was awarded the Legion of Merit upon his retirement after 34 years of military service. The Legion of Merit is a military decoration that is awarded for exceptionally meritorious conduct in the performance of outstanding services and achievements in the U.S. armed forces.

The skills Durnya developed in the Army Reserve and at Marshall complement each other and have contributed to his performance in the field and in the office. In the Reserve, Durnya supervised attorneys and legal specialists; rendered legal advice to his command; made sure soldiers' financial and legal affairs were in order in the event they were called to active duty; assisted soldiers' spouses with family finances; and basically took care of numerous Army legal issues, including military justice.

For his Marshall job, Durnya reviews Space Act agreements, which represent NASA's commitment of resources to accomplish a joint undertaking with a partner; renders legal advice on government contracts and environmental law issues; provides legal support to Marshall management; and works alongside Marshall's chief and deputy chief counsels dealing with a myriad of legal issues at the center. He also represents NASA in contractor protests before the General Accountability Office as well as contract claims before the Armed Services Board of Contract Appeals and the federal courts. The board consists of administrative judges who hear contract claims filed by contractors of the Department of Defense, NASA and other federal agencies.

"I gained valuable experience with two careers," said Durnya. "The jobs I performed were linked to one

another, allowing me to gain a unique perspective of my jobs. In the Reserve — besides becoming accustomed to challenging legal matters and knowing how to resolve them under less than optimum conditions — I learned how important teamwork is. It's amazing what you can do through the help of others — things you couldn't do individually."

"I always applied those lessons learned from my military career to my NASA career to help support Marshall's mission. I'm a true believer in teamwork to get the mission accomplished," he added.

"In addition, the Reserve gave me the confidence in my NASA career by instilling discipline, professionalism and leadership, and vice versa," said Durnya. "I would definitely recommend joining the Reserve to anyone. The experiences you live through can be applied in numerous ways, both in your private and professional life."

Durnya earned his bachelor's degree in business from Seton Hall University in South Orange, N.J., in 1972, and was commissioned in the military the same year. He earned his law degree from the University of Richmond in Virginia in 1975. After serving with the JAG Office of the 101st Airborne Division upon law school graduation, he joined the legal office as an attorney at Kennedy Space Center in 1979. In 1982, Durnya joined Marshall's legal office as a staff attorney and in 1996 was appointed assistant chief counsel.

He and his wife, Beth, have two children, Cameron and Sarah.

The writer, an ASRI employee who supports the Office of Strategic Analysis and Communications, is the Marshall Star editor.



Emmett Giverny/MSFC

Lou Durnya

Marshall Center gives visually impaired students from the Tennessee School for the Blind a feel for the space program

By Bill Hubscher

A group of visually impaired students from the Tennessee School for the Blind in Nashville — students who may become the scientists and engineers of tomorrow — toured the Marshall Center Oct. 24 to learn about its cutting-edge technology and how they could someday become a part of America's space program.

Among the dozen students was Kesha Lanham, a ninth-grader at the K-12 school who wants to be the first blind woman to work in space. "I have always had a fascination with science," she said. "I would love to someday work in the space program — and even on the International Space Station."

The students were invited to Marshall as part of the center's Disability Employment Awareness Month. "We feel it's important for these students to know there are career opportunities here for the visually impaired," said Allan Day, disability programs manager for Marshall's Office of Diversity & Equal Opportunity. "We encourage them to pursue opportunities in science and math."

The Tennessee School for the Blind, established as the official state school for the blind by the Tennessee Legislature in 1844, serves nearly 200 blind and visually impaired Tennessee students.

For more than 30 years, Norma Englehardt, who teaches science classes at the school, has brought students to Huntsville for an annual

tour of the Marshall Center and the U.S. Space & Rocket Center.

"I grew up with the space program, and I try to pass on to my students the excitement we felt watching man walk on the moon," Englehardt said. "Their experiences at the Marshall Center and the Space & Rocket Center are so important, because they get to touch and feel history as well as hear stories from scientists who are working toward the future of the space program."

This year, the students toured a number of Marshall laboratories and talked to scientists. They also explored a lunar capsule, getting a sense of how much room astronauts had on their trip to the moon, and they learned more about the history of Marshall and what's on the drawing board for the future in space.

The students agreed that a highlight of the trip was witnessing a hot-gas firing at the East Test Area. The roar of the test made an impression. "The vibrations were very strong," said Derek Neach, a high school freshman at the Tennessee school. "We could feel the power of the test and hear the deep rumble. I can imagine the test might be what a space shuttle launch feels like. It was amazing!"

Neach, who plans a career in meteorology, was fascinated by the similarities between weather forecasting and the work of the Environmental Modeling Branch at the Marshall Center. Scientists

See Tennessee on page 8

Future vehicles

Continued from page 1

KT Engineering tapped Walker Stainless Equipment, which manufactures a range of stainless steel products, primarily because of the company's record in delivering high-quality storage tanks for the dairy industry. That industry's rigorous quality control requirements are similar to NASA's, said David Stephenson, manager of the Radially Segmented Launch Vehicle Project at Marshall.

A radially segmented launch vehicle — such as the one slated to employ the stainless steel propellant tanks from Walker — gets its name from the fact that a series of wedge-shaped propellant tanks, each sitting atop an engine, are linked in a circular fashion to form a single propulsion stage with an "aerospike" engine arrangement. An aerospike is a type of rocket engine with an altitude-compensating nozzle that maintains efficiency across a wide range of altitudes.

The innovative, liquid oxygen and liquid methane engines use pressurized propellant tanks to force fuel into their combustion chambers, where the fuel is ignited and burned to produce thrust. The environmentally friendly LOX-methane propellants burn cleanly and deliver greater efficiency than conventional propellants — a major factor in achieving the project's ultimate goal of delivering heavy payloads to orbit for less than \$10 million per flight.

This summer, the project unveiled a new, state-of-the-art

fabrication welding facility, featuring a 12-axis, numerically controlled welding tool, at Walker's New Lisbon plant. The new, automated system will be used to fabricate a set of stainless steel test tanks, called "pathfinders" because they'll help guide

future research and development. The pathfinder propellant tanks are expected to be completed before the end of the year.

Structural and mechanical testing of the tanks will commence at Marshall in spring 2007, followed by hot-fire tests of LOX-methane engines mated with pathfinder tanks.

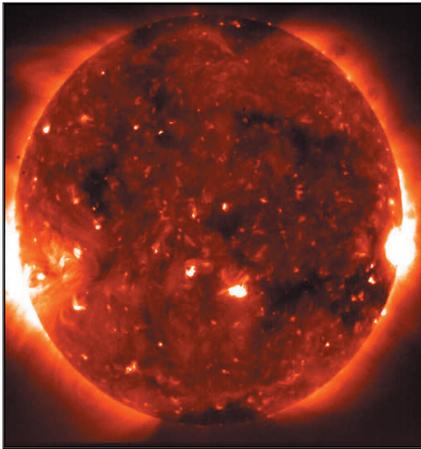
In April 2006, Radially Segmented Launch Vehicle Project engineers successfully completed a 103-second hot-fire engine test at the Marshall Center — believed to be the longest-duration test in history of a LOX-methane engine developed in the United States.

The writer, an ASRI employee, supports the Office of Strategic Analysis and Communications.



Propellant tanks like this one, fabricated at Walker Stainless Equipment Group in New Lisbon, Wis., soon could help Marshall engineers test an innovative launch vehicle.

A glimpse at Hinode's first images

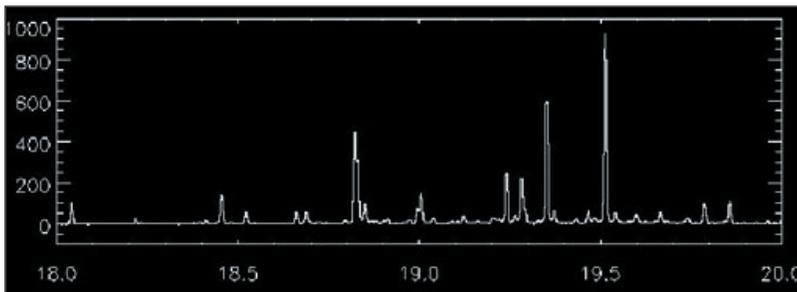
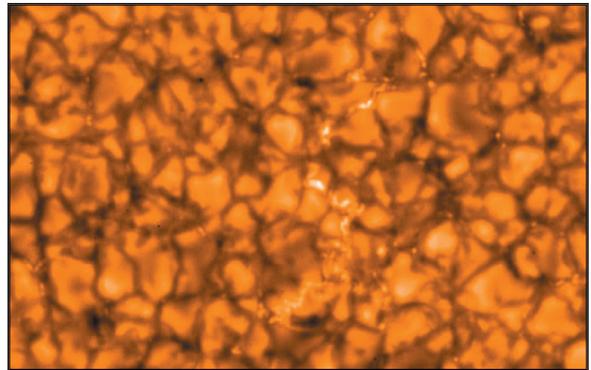


From Hinode's X-ray Telescope

This image of the sun was taken Oct. 28 by Hinode's X-ray Telescope. One of three instruments on Hinode, the X-ray Telescope is designed to capture images of the sun's outer atmosphere, the corona. The corona is the spawning ground for explosive solar activity, such as coronal mass ejections. Powered by the sun's magnetic field, this violent activity produces significant effects in the space between the sun and Earth. This image reveals, for the first time, that X-ray bright points are composed of magnetic loops. It also reveals structural details in the polar region of the sun, along with active-region loops. By combining observations from Hinode's optical and X-ray telescopes, scientists will be able to study how changes in the sun's magnetic field trigger these powerful events.

From Hinode's Solar Optical Telescope

Hinode's Solar Optical Telescope is the first space-borne instrument to measure the strength and direction of the sun's magnetic field in the sun's low atmosphere, also called the photosphere. This image from the Solar Optical Telescope shows a greatly magnified portion of the solar surface. Energy from below the surface of the sun is transported by convection and results in the convection cells, or granulation, seen in this image. The lighter areas reveal where gases are rising from below, while the darker "intergranular lanes" reveal where cooler gases are sinking back down.



From Hinode's Extreme Ultraviolet Imaging Spectrometer

Although capable of generating images, the primary function of the Extreme Ultraviolet Imaging Spectrometer is to measure the flow velocity, or speed, of solar particles, and to diagnose the temperature and density of solar plasma — the ionized gas that surrounds the sun. This instrument provides a crucial link between the other two instruments because it can measure the chromosphere and the chromosphere-corona transition — the layers that separate the photosphere from the corona. The graph's peaks show the instrument spectral range in nanometers — a unit that measures very small objects and the wavelength of light. For comparison, a human hair is roughly 80,000 nanometers in diameter.

Hinode images

Continued from page 1

"These images have given us our first glimpse of Hinode's capabilities," said Larry Hill, Hinode project manager at Marshall. "They will be followed by another series of scientific images in the coming weeks. In all likelihood, the best is yet to come."

Led by the Japan Aerospace Exploration Agency, Hinode is a collaboration among the space agencies of Japan, the United States, the United Kingdom and Europe. The Marshall Center managed the development of the scientific instrumentation provided by NASA, with additional support by academia and industry.

NASA and the science teams are supporting instrument operations and data collection from the spacecraft operations center at JAXA's Institute of Space and Astronautical Science facility located in a suburb of Tokyo.

The writer, an ASRI employee, supports the Office of Strategic Analysis and Communications.

Classified Ads

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

Miscellaneous

Four mag wheels, Niche Spikes, 17" Kumho tires, 75 tread left, \$350. 256-468-4107

Chandelier for dining room, gold, double tier, \$100. 881-2131

PC games: UT 2004, BF1942, 2 Exp, BF Vietnam, Battlefield 2, Delta Force Extreme, \$65. 256-961-9526

Solid oak rectangle table with leaf, six oak arrow-back Windsor chairs, \$300. 256-830-0248

KitchenAid refrigerator: 14.3 cu. ft. refrigerator, freezer, 5.5 cu. ft., almond, glass shelves, \$225. 325-7201

Black computer desk w/hutch, wheels, assembled, 36"widex20"deepx53"high. 895-6722

Radio-controlled butterfly airplane and glider w/4-channel transmitter, \$160. 828-4564

Windows, \$10; changing table, \$15; crib mattress, \$10; broadcast spreader, \$75; Gap jeans, \$7. 885-2293

Brass ceiling fan/light, 52", \$25; Kitchen chandelier, white, 3 lights, \$15; Eastlake marble table, 1865-1895, \$125. 837-1774

Sea Kayak composite, 17'6", by Novus Composites w/carbon paddle, Thule roof rack, other accessories. 457-0206

Assorted cake and cookie decorating accessories, \$75 all. 256-505-3363/Guntersville

Two tickets to Cirque Jungle, 11-25-06, 8 p.m., VBC, Row T. 256-259-1834

Game table, 42", with 10" leaf and 4 Naugahyde chairs, \$75. 256-498-3864

Health Pro treadmill, \$200. 508-1807

K&N P/N 57-9014-1 used Intake for 2000/2001 V8 Toyota Tundra, \$125. 256-714-7709

Solid oak 3-piece entertainment center, decorative molding, shelves, storage, \$750. 830-5285

Oak entertainment center, \$500. 829-0285

Wood chipper, used very little, \$25. 353-8229/Brothers

Two hot tubs for sale, seats 6, \$3,000 each. 256-434-0499.

Dinette set, glass table top with metal base, 4 chairs, 2 bar stools, \$250. 722-5051

Daniel Moore Alabama football print, "The Winning Connection", signed and numbered, professionally framed, \$250. 423-4217

Pulaski keepsake reproduction oak curio cabinet w/curved glass, \$300; rocking chair, \$125, dry-bar, \$200. 468-6016

SIG P220, special moly-coating finish, LNIB, Pachmayr grips, extra clips, night sights, \$495. 714-3742

Antique wardrobe w/center door/mirror, \$195; mid-century modern coffee table, \$35. 679-1681

Golf clubs, men's left-handed, woods 1/3/5, irons 3-9, PW, SW, putter, no bag, \$125. 882-3983

Two adjoining seats, Row E, Broadway Theatre League, "The Producers," Jan. 12, 8 p.m., \$100. 325-0085

Solid wood dining set w/6 chairs, buffet and china cabinet, \$1,700. 665-0877

Eastlake marble top table, 1865-1895, \$125. 837-1774

Four cemetery plots, Tri-Cities Memorial, Florence, \$4,000. 256-436-1106

New Giovanni 20" rims and tires, \$1,500. 256-797-6099

Lawn sweeper, \$75. 256-497-3951

iPod Remote Interactive Dock, DS-A1, for Onko

stereo/home theater systems, never used, \$60. 256-828-1234

Silver bullion, 100 oz. bar, \$1,300. 256-227-5671

Murray 12HP riding lawnmower, 38" cut, \$200; large oak entertainment center w/glass cabinets, \$300. 684-6271

Walnut china cabinet, \$275; sofa, 11 ft., \$200; large copper collection, \$400. 852-6952

Vehicles

1994 Dodge Ram 2500 Laramie SLT, V8 Magnum, auto, regular cab, 4x4, 104K miles, \$7,500. 256-759-0478

2003 Stratos fish and ski boat, 19', loaded, garage kept, extended warranty, \$15,000. 205-472-3728

1994 Dodge Grand Caravan SE, blue, auto, 128K miles, one owner, \$2,700. 656-5745

1995 Toyota 4Runner SR5, green w/tan leather, new tires, auto, 135K miles, \$5,350. 256-461-8854

2001 HD Ultra-Classic Law Enforcement Special Edition, extras, \$15,000. 256-434-0499.

2003 Ford F-150 SuperCrew XLT, 4.8L, all power, bedliner, running boards, 44,500K miles, \$15,990. 882-0431

1998 Saturn station wagon, 5 speed, 94k miles, burgundy, garaged, records, \$3500. 881-7805

2003 Bayliner 205, V8, many extras, low hours, \$16,500. 830-0305

2002 Goldwing GL1800, warranty, extras, trailer available, \$12,995. 256-655-3469

1996 Cadillac Deville, loaded, \$3,200; 1995 Cadillac Deville, loaded, \$2,500; 1994 Mercury Cougar, loaded, \$1,100. 256-520-2802

Wanted

Go cart for \$250 or less. 256-773-6644

To buy or short term loan: IOMEGA zip drive, 100mb, USB. 881-6887

Manual transmission for 1987 Mustang 5.0, leave message. 858-9655

Extra large igloo-style doghouse. 776-1652



Doug Stoffler/MSFC

Students from the Tennessee School for the Blind in Nashville hear the noise and feel the vibrations from a hot gas test in the East Test Area at the Marshall Center during their recent tour.

Tennessee

Continued from page 5

there predict atmospheric movements of other planets or moons in our solar system to assist in exploration and landings in the future, much like forecasters try to predict the weather patterns on Earth.

Marshall's Craig Moore, a visually impaired chemist in the Spacecraft and Vehicle Systems Department, is an inspiration to blind students who want to make a career in math or science. "I want to make sure the students consider their options regarding what career path they want to follow," Moore said. "Some things are still a challenge when it comes to overcoming a visual disability in today's society. But it is possible to find many careers that will satisfy their interests, including careers in the aerospace industry."

Englehardt believes the educational tours of the Marshall Center and the Space & Rocket Center bring her students closer to the stars.

"These concepts can be hard to teach in the classroom to someone who can't see," said the instructor. "Visiting history and the future at the Marshall Center makes these concepts more realistic. The students can feel the blockhouses where Wernher von Braun tested the first NASA rockets, or touch full-sized replicas of the Saturn V rocket. They experience this living history and the scientific concepts first-hand. That experience can open them up to new possibilities."

The writer, an ASRI employee, supports the Office of Strategic Analysis and Communications.

Renee Wilson, left, a management support assistant with Marshall's Test Laboratory, helps as Luther King, a student at the Tennessee School for the Blind, explores the components of a space shuttle model.



MARSHALL STAR

Vol. 47/No. 9

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 by 4:30 p.m. Thursday, and other submissions no later than 5 p.m. Friday to the Marshall Public and Employee Communications Office (CS20), Bldg. 4200, Room 103. Submissions should be written legibly and include the originator's name. Send e-mail submissions to: intercom@msfc.nasa.gov. The Star does not publish commercial advertising of any kind.

Manager of Public and Employee Communications — Dom Amatore
Editor — Jessica Wallace

GPO U.S. Government Printing Office 2007-623-033-20074

PRSRT STD
 US POSTAGE PAID
 HUNTSVILLE, AL
 PERMIT NO. 298