



MARSHALL STAR

Serving the Marshall Space Flight Center Community

Feb. 24, 2005



Photo by Emmett Given/Marshall Center

Erik Reimers, a student at the Huntsville Center for Technology, shows off one of the International Space Station training lockers he helped build as part of the HUNCH project. Listening to his demonstration are, from left, Dan Hartman, manager, International Space Station Payloads Office at the Johnson Space Center; Carmine Bailey, deputy program manager of Space Station payloads at The Boeing Company in Huntsville; Teresa Vanhooser, acting director of Marshall's Engineering Directorate; Rickey Cissom, chief of Marshall's Operations Director's Office; Ann McNair, manager of Marshall's Mission Operations Laboratory; Stacy Hale, deputy manager of the Space Station Training Facility at Johnson Space Center and the founder of the HUNCH program; Rick Golden, program manager of Space Station payloads at The Boeing Company in Houston; Dr. Joseph B. Morton, Alabama Superintendent of Education; and Lynn Baker, manager of payload crew training at Teledyne Brown Engineering in Huntsville.

Students build Space Station training lockers

By Lori Johnston

NASA has a "hunch" high school students can help meet a real need in the U.S. space program. In a Feb. 17 ceremony at the Huntsville Center for Technology, NASA officials signed a Space Act Agreement with two North Alabama high schools to build cargo stowage lockers for International Space Station training here on Earth.

The Space Act Agreement is a partnership between NASA and the schools participating in the High School Students United with NASA to Create Hardware project, or HUNCH. More than 120 high school students from the Huntsville Center for Technology and Brewer High School in Somerville, Ala., are developing practical skills by building 30 cargo lockers, using materials provided by

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Solid Rocket Motor test is successful

By Lynnette Madison

NASA's Space Shuttle program successfully test fired its first Flight Verification Motor -- a test to further validate the five-year lifespan of a Reusable Solid Rocket Motor -- Feb. 17 at a Promontory, Utah, test facility.

Shuttle Solid Rocket Motors are certified for flight for five years. The test of the four-segment motor further substantiates a certification established by NASA more than

20 years ago at the beginning of the Space Shuttle Program.

The test was performed at ATK Thiokol Inc., an Alliant Techsystems company, in Promontory, north of Salt Lake City. ATK Thiokol manufactures the Shuttle's Solid Rocket Motor. The four right-hand segments of the flight set Reusable Solid Rocket Motor number 89, or RSRM-89, were used for the test.

The Flight Verification test allows NASA and ATK Thiokol engineers to better understand mid-life rocket motors and to gather information not typically gained from previous motor tests. Motor tests generally focus

on guaranteeing that new materials meet safety requirements for the motors. The static, or stationary, test closely reproduces Space Shuttle launch and ascent conditions. The two-minute test duration is the same length of time that the motors perform during Shuttle flights.

During the test, 167 data-gathering instruments were placed on the motor to provide information on the motor's performance. Additionally, a powerful X-ray was used to scrutinize how the motor would perform during launch and ascent. A total of 32 objectives were established for the

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Team Redstone salutes black history



Robin Henderson, Marshall Center associate director, addresses the audience during the Black History Month celebration.

Team Redstone celebrated Black History Month Feb. 17 with a program of music, dance and reflections. The joint effort by several Redstone Arsenal government agencies, including NASA, was held at the Sparkman Center. The program also commemorated the 100th anniversary of The Niagara Movement, the first significant black organized protest movement of the 20th century.



The Saved By Grace mime team of St. Luke Missionary Baptist Church performs during the celebration.

Photos by Doug Stoffer/ Marshall Center

Star Gazing

From the Marshall History and Archives Files

Forty years ago today, the *Marshall Star* reported that a new latex-type paint coated the upper portions of an SA-9 rocket that had recently lifted the Pegasus satellite into orbit. The special white paint, developed by the Illinois Institute of Technology, served as a solar heat reflector to protect the Pegasus instrumentation. The ITT researcher who created the paint once worked at the Marshall Center. Known as "S-13," the paint, or thermal control coating, consisted of a zinc-oxide pigment with a methyl silicate binder. The mixture covered the Saturn I S-IV stage, instrument unit and Apollo adapter module. It took 23 gallons of the rubbery-white mixture to cover this area.

Test

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test, including determining how the motor's igniter -- which begins combustion -- performs at mid-life.

"This test is just one example of the aggressive testing program NASA pursues to assure flight safety," said Mike Rudolphi, manager of the Space Shuttle Propulsion Office at NASA's Marshall Center. "It will also allow us to gather information on how a motor performs that was built immediately prior to the flight set that will launch STS-114, NASA's Return to Flight mission planned for May."

The writer, an ASRI employee, supports the Public Affairs Office.

HUNCH

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NASA.

HUNCH helps provide students with insight into a world they might otherwise never experience. They meet with engineers at NASA's Marshall Center, view current training hardware and build equipment that meets a specific need in NASA's Space Station payload training program. Space Station crews and ground support personnel will use the equipment to practice conducting science experiments that eventually will be performed in space.

"It's a great opportunity for NASA to join with these high schools in an effort that's beneficial to all of us," said Teresa

Vanhooser, acting director of the Marshall Center's Engineering Directorate. "They are building the hardware we need to continue our exploration of space. And at the same time it may inspire these young people to choose careers in science and engineering."

Students have been working on the project since last summer and have completed two lockers. They are involved in the total process -- from drawing plans, to machining parts, to final assembly. Students and instructors presented the two finished products to NASA during the signing ceremony.

The HUNCH project was started in Novem-

ber 2003, and is sponsored by the Marshall Center's Engineering Directorate, in conjunction with the Space Station Payloads Office at the Johnson Space Center in Houston. Students from eight Houston-area schools and one in Laurel, Mont., also participate in HUNCH. Two more North Alabama schools -- Scottsboro High and Madison Career Academy -- are scheduled to join the project in coming weeks. An estimated 375 students currently are building various Station training hardware.

The writer, an ASRI employee, supports the Public Affairs Office.

Announcements

Advanced Space Propulsion Workshop set for April 7-8

The 16th Annual NASA Advanced Space Propulsion Workshop is set for April 7-8 at the University of Alabama in Huntsville Bevell Center. This year's workshop will focus on technology readiness levels, relatively far-term space propulsion and power concepts and technologies that hold the promise of enabling ambitious robotic and human exploration missions for the 21st century. Register for the workshop at <http://www.uah.edu/research/PRC/ASPW>

Entries being accepted for 2005 Software of the Year Award

Entries are being accepted for the 12th Annual NASA Software of the Year Award. This award recognizes NASA team members who develop exceptional software for use by NASA. The award includes the NASA Software Medal certificate and up to \$100,000. NASA centers, facilities, major contractors, supporting universities and small businesses may participate. Entry deadline is April 15. For contest rules and submission guidelines, go to <http://icb.nasa.gov/>

Shuttle Buddies to meet Monday

The Shuttle Buddies will meet at 9 a.m. Monday at Mullins Restaurant on Andrew Jackson Way. For more information, call Deemer Self at 881-7757.

Charitable groups may apply now to be considered for CFC funds

The Tennessee Valley Combined Federal Campaign is accepting applications from non-profit charitable human, health and welfare organizations that want to receive CFC contributions. The organizations must be a 501 c (3) organization. Applications will be accepted from March 14-April 14. For more information or to obtain an application, call Melinda Seigler at 536-0745, ext. 108, or download the application with instructions at: <http://cfc.redstone.army.mil>

AIAA, AATA chapters offer college scholarships

The American Institute of Aeronautics and Astronautics and the Alabama Aerospace Teachers' Association will award three engineering scholarships for 2005 to graduating high school seniors interested in pursuing degrees in engineering or related fields. The scholarship amounts are \$500, \$1,000 and \$1,500. For an application, go to www.aata.net

Earth Day class offers continuing education credit

A free continuing education class on environmental sustainability will be held from noon to 2 p.m. April 19 in Bldg. 4316, following the Earth Day ceremony. The class will be taught by Dr. Brian and Mary Natrass, experts in the field of sustainability. Each participant will earn two continuing education credit hours.

World Year of Physics Conference is set for April 5-7 in Huntsville

The World Year of Physics Conference will be held April 5-7 at the Von Braun Center in Huntsville. The event will include two days of invited paper presentations and a day of education outreach activities. Thirteen speakers have been invited, including two Nobel Laureates. For more information, go to <http://www.wyp-ptm.org>. The Marshall Center is a co-sponsor of the conference.

Chamber president to speak at Marshall Association Luncheon

Brian Hilson, president of the Huntsville-Madison County Chamber of Commerce, is speaker for the Marshall Association Luncheon on March 8 at 11:15 a.m. in Bldg. 4316. The luncheon cost is \$9 and includes cajun roast beef, pasta salad, rice pilaf, green beans, and apple cobbler. Call Tom Fleming at 544-3962 by March 4 for reservations.

NASA College Scholarship applications now available

The NASA College Scholarship Fund, Inc. is now accepting applications from dependants of NASA employees or retirees who are pursuing a college degree in science or engineering. The application deadline is March 21. For more information and an application, go to <http://nasapeople.nasa.gov/nasascholarship/index.htm>. or call Bill Mayo at 544-7220.

Classified Ads

Miscellaneous

Short S-10 camper shell, \$125; Sunn Model T guitar amp, \$500; Bach Stradivarius trumpet, \$1,200. 851-8085

Just for Dinner bread machine, \$30; George Foreman grilling machine, 2 hamburger size, \$18. 430-4349

Standard monitor riser for computer monitors, \$8. 461-6459

1999 Whirlpool white electric range, \$125; white sofa, \$100; green chairs, \$25; exercise bike, \$20. 430-6842

Wedding gown w/train & veil, size 6, \$100; long evening gown, red, size 5, \$75. 881-8674

French Provincial dining room set, cherry, table, 6-chairs, 3 leaves, china cabinet, buffet. 881-0883

Electric guitar w/amp & extras, \$350; Seagull acoustic guitar, \$200. 652-3809/Dave

2001 Procraft fish/ski, 150 Mercury motor, many extras, \$14,950. 348-4899

Loveseat & matching chair, navy/burgundy/green, \$75. 673-0041

Peavey XR-1200C powered mixer, 12-channel, stereo & mono masters, output 250W @ 4ohms, \$400. 256-229-5059

Bush corner computer desk, hutch & pullout keyboard tray, natural Cherry finish, \$200. 520-6442

Upright piano, good sound, \$300. 256-828-5260

Heavy duty washing machine, works well, \$75. 828-5602

Magnavox stereo TV, 27", \$25; GE stereo vcr, \$15; both with manuals & remotes. 881-7805

Little Tykes dual-light art desk & swivel chair, \$40. 683-3027

Antique German Anniversary clock, restored, \$100. 837-1774

Nautilus gym & approximately 300 pounds of free weights, \$200. 479-0139

GE washer & dryer set, large capacity, 2 yrs. old, \$400. 468-4406

John Deere tiller, 5.5', 3 point hitch, \$1,000. 256-772-9768

Pennsylvania House video cabinet, Cherry, up to 30" TV, vcr/dvd, \$750. 931-427-2059

Changing table and hutch, natural finish, storage and shelving, \$75. 256-464-8073

Scooter, red, key & pull start, new, \$200; Wedding dress/

veil, ivory satin w/beading, size 8. 776-9165

AKC male Black/Tan German Dobermans, ready Mar. 1, parents on site, 1st shots/wormed, \$450. 256-423-4575

Nikon 8008 35mm SLR w/MF-21 data back, \$200; Nikon 8008s 35mm SLR w/MF-21 data back, \$330. 256-656-2965

Gas dryer, \$75; refrigerator, rough paint, \$50; built-in stove/oven, \$50. 509-7907

Sony 4-Head, Hi-Fi vcr/dvd combo player, remote, manual, silver, \$80. 864-2517

Two Queen Anne cushioned wooden armchairs, \$140. 464-9408

1993 Shasta pull-behind camper w/awning, 21', sleeps 5, \$4,800. 256-694-0501

Nikon 5400 5MP digital camera, \$295. 508-4379/evenings.

Sony Playstation 2, additional controller, 2 memory cards, 5 games, many extras, \$200. 256-353-9020.

Travel trailer, 10' long, "Scotty" brand, \$1500; fiberglass shell for long-bed Ford, \$550. 227-0339/Dave

Diamond solitaire ring, .25 carat, \$100; diamond cluster heart-shaped ring, \$125. 683-1279

Kenmore Elite electric range, Model 790.46822, slide-in, glass cook-top, convection oven, warming drawer, white, \$800. 256-683-7683

miles, \$2,000. 256-842-9102

1996 Honda XR100 dirt bike, one-owner, \$900. 256-655-6293

1998 Toyota Camry LE, beige/beige, 112k miles, new tires & brakes, \$5,500. 539-6932

2001 Chevrolet 1500HD Crewcab, 4x4, 6.0/V8, leather, all options, step-rails, Tonneau, \$22,900. 256-498-6568

2002 Toyota Tacoma 4x4, automatic, bedliner, toolbox, 33k miles, \$13,900. 585-0473

1966 Ford Mustang, sound body & mechanical parts, ready for restoration/modification, \$2,000. 256-603-5807

2003 Buick LeSabre Limited sedan, 4-door, 23k miles, beige/beige, loaded, \$17,500. 428-6921

2000 GMC Savanna conversion van w/wheelchair lift, loaded, air, leather, cvr, cd & cassette, 38k miles. 880-8004

1999 VW Beetle GLS, 5-speed, 41k miles, loaded, \$8,900. 604-8840

2004 Ford Expedition XLT, red, 4.6L/v8, 25k miles, dvd, 8 passenger, \$23,500. 508-6863.

1999 Honda CR-V, EX, 4wd, sunroof, cd, auto, 98k miles, \$8,200. 256-520-8088

2003 GMC Sonoma Truck, under warranty, 5 speed, 23k miles, below book value, \$9000. 679-4198

1993 Cadillac Deville, new tune-up, brakes, & fluids, \$4,150. 256-757-2344

2003 Neon SE, 4-door, 60k miles, automatic transmission, new tires, \$8,700. 256-431-7509

1995 Chevy Silverado, Ext Cab, all extras, white, 84k miles, \$7,800. 1-256-773-5051

2001 Ford Expedition, 76k miles, rear air, 6-disc changer, back-up sensors, towing, \$11,900. 895-0577

2000 Acura 3.2 TL, 74k miles, 4-door, moonroof, cd, automatic, leather, new tires, loaded, \$12,900. 881-8674

Vehicles

1996 850 GLT Volvo, 80k, all-power, multi-compact disc, black w/gray leather, \$7,900. 256-536-8480

1999 Ford Explorer, 4wd, 74.9k miles, \$8,900. 353-3229

2001 Ford Explorer Sport, \$6,500. 233-6197

2003 GMC Sonoma truck, under warranty, 5-speed, 23k miles, \$9,000. 679-4198

2000 F250 Superduty 4x4 crewcab, V10, automatic, 91k miles, NERF bars spray liner, \$19,000. 725-3798

1994 Lincoln Mark VIII, leather, 220k miles, new air ride suspension compressor, \$2,100. 256-520-3874

1989 Ford Taurus, needs work, \$300. 828-5246

2003 Honda Odyssey van, 36k miles, captain chairs, auto, am/fm/cd, \$21,700. 726-0311

1996 Windstar, 118K miles, motor has 40k miles, \$2,500; Suzuki 125 dirt bike, \$450. 828-0631

2001 Ford Taurus, approx. 69k miles, \$5,000. 205-243-1403

1991 Ford Explorer, 4-door, sun-roof, 4x4, tan, 200k

Wanted

Humane Raccoon animal trap, large size. 256-679-3921

Nokia 6340i cell phone. 539-6351

Lost

Silver rope bracelet, Bldg. 4202. Call 544-3860 if found

MARSHALL STAR

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