



MARSHALL STAR

Serving the Marshall Space Flight Center Community

Sept. 21, 2006

Object investigation and weather delay landing of Atlantis until Thursday

HQ news release

As the Marshall Star went to press, landing opportunities for Atlantis on Thursday, Sept. 21, begin with a potential 5:21 a.m. CDT touchdown at the Kennedy Space Center, Fla.

The Wednesday, Sept. 20, landing attempts were waved off due to an unfavorable weather forecast, coupled with additional inspections of Space Shuttle Atlantis.

An object was observed by flight controllers using a TV camera on the shuttle in close proximity to the spacecraft. It was observed following standard tests of Atlantis' reaction control system.

Space Shuttle Program Manager Wayne Hale said on Wednesday that Atlantis has been cleared for



NASA/TV

See Atlantis on page 4

The STS-115 crew answers questions from the media.

CFC bus tours — an opportunity to see the difference employees' dollars can make

Editor's note: See next week's Marshall Star for details of CFC kickoff, which was held Tuesday, Sept. 19.

By Rita Roberts

Beginning Friday, Sept. 22, Marshall Center employees will have the opportunity to visit local charitable organizations to see firsthand how their Combined Federal Campaign donations positively impact the community.

The bus tours are a part of the annual CFC fundraising effort — a campaign led by federal and military personnel to raise money for local charities. Those organizations provide community services ranging from supplying hurricane disaster relief to granting the wishes of children with life-threatening illnesses.

Most people in the Tennessee Valley know someone affected by hurricanes Katrina and Rita. Numerous organizations that receive funds from the CFC provided aid and assistance to victims of the storms. Countless lives — family, friends, co-workers — have been touched during a time of tragedy or other crisis by at least one of the organizations supported by the CFC.

"You can truly see 'Compassion In Action' — which demonstrates this year's CFC theme," said Mark Boudreaux, Marshall's CFC bus tour chairman. "A large portion of last year's Tennessee Valley CFC donations went to local charities. The bus tours will give Marshall employees an up-close look at how Marshall dollars can make a difference locally."

See CFC on page 6

Marshall manages development of NASA instrument components

Solar-B, international mission to study sun, set for launch Friday, Sept. 22

By Sherrie Super

Solar-B — an international mission to study the turbulent sun and its impact on Earth — is set to launch Friday, Sept. 22, at approximately 4 p.m. CDT, from Uchinoura Space Center in Kagoshima, Japan.

Because of time difference, the launch will take place Saturday, Sept. 23, in Japan.

The spacecraft will circle Earth at least three years, studying the solar magnetic field that fuels the sun's explosive activity. Led by the Japan Aerospace Exploration Agency, Solar-B is a collaboration between the space agencies of Japan, the United States, the United Kingdom and continental Europe.

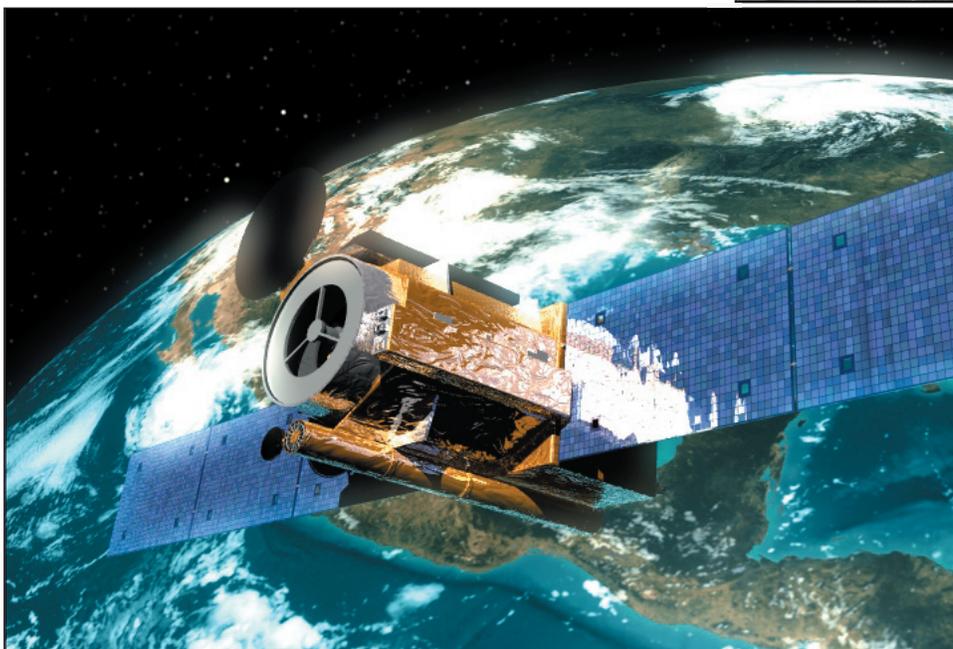
The Marshall Center managed the development of the scientific instrumentation provided by NASA, with additional support by academia and industry. From Marshall, Larry Hill is the Solar-B project manager, and John M. Davis is the Solar-B project scientist.

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

Right, at the Uchinoura Space Center in Japan, Solar-B is mounted on the rocket that will carry the satellite into space.



JAXA



Left, artist's concept of Solar-B operating in space.

NASA/GSFC/Chris Meany

STS-121 astronauts visit Marshall to say 'thank you'

By Sanda Martel

NASA's Space Shuttle Discovery STS-121 crew members visited the Marshall Center Sept. 14 to thank employees for their work that contributed to the success of the July 2006 mission.

Commander Steven W. Lindsey, pilot Mark Kelly and mission specialists Piers J. Sellers and Lisa M. Nowak presented highlights of their 12-day mission, from July 4 through 17, to the International Space Station. STS-121 was the second and final Return to Flight test mission. NASA returned to the assembly of the International Space Station with the September STS-115 mission.

Marshall Center Director David King introduced the astronauts to a packed Morris Auditorium in Building 4200, and commended them for a "spectacular job."

During their mission, the crew tested new equipment and procedures to increase shuttle safety, transported supplies and performed maintenance on the space station. They also delivered a new Expedition 13 crew member, flight engineer Thomas Reiter of the European Space Agency, to the orbital outpost.

Lindsey thanked the Marshall team, which is responsible for the performance of the shuttle propulsion elements that accelerate the orbiter to an orbital velocity of 17,500 mph, 25 times faster than

the speed of sound. STS-121 was the first shuttle mission to fly an external tank without protuberance air load ramps, or PAL ramps.

The ramps, manually sprayed wedge-shaped layers of foam along the tank's pressurization lines and cable trays, had been identified as a source of potential foam loss. STS-121 post-launch imagery indicated foam loss from the tank overall was minimized during that mission.

STS-121 also was the first mission to fly with five new cameras on the solid rocket boosters, which provide detailed images of the tank during launch and ascent. These images help engineers identify locations on the external tank where foam loss occurs.

Following their presentation, the astronauts answered questions from the audience and made a presentation of their most memorable moments of their days in space.

Discovery lifted off from the Kennedy Space Center on July 4 with a spectacular display of sound and light befitting Independence Day. Landing was July 17 at the Kennedy Center.

For more information about the STS-121 mission, visit www.nasa.gov/mission_pages/shuttle/shuttlemissions/sts121/.

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



Marshall Center Director David King, center, presents mementos to astronauts Steven W. Lindsey, Lisa M. Nowak, Mark Kelly and Piers J. Sellers during their visit to Marshall.

Doug Staffer/MSFC

Hispanic youth encouraged to 'Reach New Frontiers' at Marshall conference



David Higginbotham/MSFC

Willie Love, left, assistant director of the Office of Diversity and Equal Opportunity, talks with a student at NASA's Fifth Annual Hispanic Youth Conference, held Friday, Sept. 15. The theme of this year's conference was "Reaching New Frontiers." Approximately 100 Hispanic students from North Alabama converged on downtown Huntsville to take part in the conference. This year's conference was hosted by the Marshall Center's Office

of Diversity and Equal Opportunity; Stillman College in Tuscaloosa, Ala.; and Oakwood College in Huntsville. The conference is part of Project Mi Futuro, an educational effort started in 2002 with funding support by NASA, to help Hispanic children improve their quality of life. Organizers designed the conference to motivate high school students to stay in school and pursue possible careers in science, technology, engineering and math.

Atlantis

Continued from page 1

re-entry. No damage or missing components were found during the inspection Wednesday morning using the shuttle's arm and the boom sensor system. The crew is ready to attempt landing on Thursday.

Atlantis' mission has resumed the construction of the International Space

Station. Atlantis delivered the P3/P4 integrated truss to the station Sept. 11.

The STS-115 and Expedition 13 crews used the shuttle and station robotic arms to attach the truss to the orbital outpost. Then STS-115 astronauts conducted three spacewalks in four days to prepare the truss and its solar arrays for operation.

The weather forecast at the Kennedy

Center calls for better weather at the Shuttle Landing Facility on Thursday.

Forecasters will continue to monitor the situation. The weather forecast for Wednesday had called for unacceptable thunderstorms and strong winds at the potential landing time.

For more shuttle information, go to www.nasa.gov.

Marshall employees invited to attend 'Space: Huntsville's History and Legacy' course at UAH beginning Oct. 1

By Shelley Miller

Nicknamed "Rocket City USA" in the 1950s, Huntsville has deep historical roots when it comes to America's space program. Beginning Oct. 1, Marshall employees will have the opportunity to learn about the city's space heritage during a seven-week course, titled "Space: Huntsville's History and Legacy," offered by the Osher Lifelong Learning Institute in the Division of Continuing Education at the University of Alabama in Huntsville.

The course is free and open to the public. Advance registration is encouraged due to maximum seating of 150 persons. The weekly sessions will be held on Sundays, from 3 to 4:30 p.m., beginning Oct. 1

through Nov. 12 at the Bevell Center, Room 280, on the UAH campus.

The course will acquaint participants with Huntsville's space history — beginning with the arrival of Dr. Wernher von Braun's German rocket team in Huntsville in 1950. Students will learn about the city's contributions to space exploration, including the next-generation launch vehicles that will be developed and managed by the Marshall Center.

Alex McCool, a retired manager of Marshall's Shuttle Propulsion Office, will kick off the course series. Von Braun team members and local space veterans also will share their experiences in Huntsville's space history.

Oct. 1, Introduction and Overview

Instructor: Alex McCool, retired manager, Shuttle Propulsion Office, Marshall Center

Oct. 8, Dr. Space

Instructor: R. J. Ward, author of *Dr. Space* and retired editor of *The Huntsville Times*

Oct. 15, Early Rocketry

Instructor: Konrad Dannenberg, original member of Dr. Wernher von Braun's team

Oct. 22, Engineering Problems

Instructor: Bob Schwinghamer, retired associate director technical, Marshall Center

Oct. 29, The Real Space Cowboys

Instructor: Ed Buckbee, co-author of *The Real Space Cowboys* and retired director of the U.S. Space & Rocket Center

Nov. 5, Hubble Space Telescope and Chandra Observatory

Instructor: Fred Wojtalik, retired manager, Observatory Projects Office, Marshall Center

Nov. 12, Launch Vehicles for Future Space Exploration

Instructor: Dan Dumbacher, deputy manager, Exploration Launch Projects Office, Marshall Center

For reservations, contact Alex McCool at 881-3248, Peggy Shanahan at 883-6730 or the Osher Lifelong Learning Institute at 824-6959.

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

Expedition 14 crew arrives at International Space Station



The Soyuz rocket carrying Expedition 14 lifts off from the Baikonur Cosmodrome in Kazakhstan on Sunday, Sept. 17.

HQ news release

Commander Michael Lopez-Alegria and Cosmonaut Mikhail Tyurin of the 14th International Space Station crew launched from the Baikonur Cosmodrome in Kazakhstan at 11:09 p.m. CDT Sunday, Sept. 17, to begin a six-month stay in space.

With them is American Anousheh Ansari, the first female spaceflight participant to visit the orbiting laboratory. She is flying under contract with the Russian Federal Space Agency.

She will return to Earth with the Expedition 13 crew, Commander Pavel Vinogradov and NASA science officer Jeff Williams, on Sept. 28. Expedition 13 launched to the station on March 30.

Expedition 14's Soyuz TMA spacecraft docked at the station at 12:21 a.m. on Sept. 20.

There they were greeted by their third Expedition 14 crew member, European Space Agency astronaut Thomas Reiter of Germany. Reiter arrived at the station on board Space Shuttle Discovery on the STS-121 mission in July. He joined Expedition 13, bringing the number of station crew members to three for the first time since May 2003.

Lopez-Alegria, 45, is making his fourth flight into space. He flew three space shuttle missions. On Expedition 14, he also will serve as NASA science officer.

Tyurin, 46, is making his second spaceflight. He served as a member of the station's Expedition 3 crew in 2001, which launched in August and landed in December. He is the second long-duration crew member to be assigned to a second station expedition.

CFC

Continued from page 1

Marshall employees are encouraged to participate in one of the following tours:

Friday, Sept. 22, 9-11 a.m. – Huntsville-Madison County Senior Center

Monday, Sept. 25, 12:45-2:30 p.m. – Huntsville Rehabilitation Foundation

Tuesday, Sept. 26, 9-11 a.m. – Land Trust of Huntsville and North Alabama

Thursday, Sept. 28, 9-11 a.m. – Alabama Center of Military History

Monday, Oct. 2, 1-3 p.m. – Children's Hospital of Alabama, the Huntsville clinic

Tuesday, Oct. 3, 9-11 a.m. – Huntsville-Madison Rescue Squad Inc.

Tuesday, Oct. 3, 1-3 p.m. – Burritt Museum Association Inc.

Wednesday, Oct. 4, 9-11 a.m. – Therapy Partners Inc., animals as partners

Wednesday, Oct. 4, 1-3 p.m. – Huntsville Hospital Foundation

Thursday, Oct. 5, 9-11 a.m. – Huntsville-Madison County Botanical Garden Society Inc.



To sign up for one of the Marshall CFC bus tours, visit the CFC Web site at <http://cfc.msfc.nasa.gov/>.

Buses will pick up participants in the southeast corner of the parking lot on the south side of Building 4203. Participants should arrive at the designated pickup place 15 minutes prior to the start of the tour. To arrange special transportation needs, call 4-taxi. For additional information and questions, call Mark Boudreaux at 544-1276 or e-mail mark.e.boudreaux@nasa.gov.

The opportunity to give to the CFC begins Oct. 9 and continues through Nov. 17.

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

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

Yakima roof rack, \$250. 520-0216

Roush F150 air dam, new, \$165. 931-425-0459

Canon A80 digital camera w/swivel LCD screen, \$169; computer monitor, 17" CRT, \$35. 655-1986

1997 Weber Gallatin mandolin, "F" style, spruce top, mahogany sides, back, neck, \$1,050 firm. 883-8483

Router and table, \$75; drafting table, \$25; Tennis ball retriever, \$15; pond kit, \$50. 837-1006

Fender precision Bass, 1993-1994 MIJ, copy of '57, \$300. 256-293-8774

Four bar stools, black iron w/rush seats, 2 for \$80; 4 for \$120. 527-9084

Chipper/shredder, heavy duty, large capacity, MTD 5HP Briggs. \$150. 931-967-8972

Bureau, white wood, 6-drawer, \$160; nightstand, 3-drawer, \$100; coordinating twin headboard, \$85. 679-1910

Two Auburn vs. Buffalo football tickets, \$30 each. 256-536-6436

Sofa and love seat, beige, burgundy, hunter, \$175. 430-0755

Diamond solitaire ring, .51 carat, appraised \$2,700, sell for \$1,400. 468-4107

Wheels, 20", six lugs, came off Chevrolet, \$800, OBO. 232-4370

Wood Normandy clarinet w/case and music stand, \$600. 837-5380

Kasson Auburn pool table, 8', fruitwood, Queen Anne feet, leather pockets, all accessories, \$2,500. 880-6563

Garmin GPS 18, USB interface with suction-cup mount, \$50. 850-4185

Kenmore washer, \$90; Amana dryer, \$105. 837-6649

Magic Chef side-by-side refrigerator, ice & water dispenser in door, \$225. 880-7381

"Mechanics and Thermodynamics of Propulsion," by Hill & Peterson. 256-233-0705

Bradington Young wing recliner, Mahogany Chippendale legs, sage tapestry, \$525. 783-6595

Toshiba laptop computer, A105-2712, Intel Centrino processor, 1G DDR2 RAM, 60GB HD, 15.4" screen, DVD/CD burner, \$650. 256-683-7683

Vehicles

Aluminum craft boat, 14', 18HP motor, many extras, \$700. 348-1881

1998 Corvette convertible, triple black, 13K original miles, garaged w/cover, Z06 wheels, \$30,000. 837-1774

1998 Volvo V70 wagon, 120K miles, \$5,000. 256-679-8041

1988 Stratas 256 bass boat, multiple fish finders, troll motor, faded jell coat. 729-8020

1998 Nissan Maxima, one-owner, non-smoker, sunroof, auto, \$5,450. 527-8116

1994 Camry LE, 120K miles, \$3,700. 497-3260

1994 Crown D/W mobile home, 28x54, to be moved, will pay \$2,000 moving expense. 256-773-5051

2003 Toyota Matrix, auto, one-owner, white, 73K miles, \$9,500. 527-8116

2002 Buick LaSabre, V6, 63K miles, leather, beige, \$10,500. 256-759-0478

1998 Cadillac Eldorado, red, 2-door, touring package, 58K miles, \$11,000. 885-2293

1998 GMC Yukon SLT, maroon w/tan leather, heated seats, auto, 4WD, \$8,900. 682-6326

2004 Toyota Tundra double-cab, Line-X bedliner, undercover tonneau, towing package, 21K miles, \$24,500. 714-3742

1993 Mazda 626, 2.5L, V6, 130K miles, needs auto transmission, \$200. 651-5847

1995 Honda Accord LX, 4-door, 5-speed, leather, 145K miles, 32 mpg, \$3,200. 256-603-0741

1999 Javelin Bass boat, 19', 1999 Evinrude 175HP, TM, DF, GPS, hydraulic steering, \$11,500. 837-4136

1991 Dodge Stealth RT/Turbo AWD, 214K miles, \$3,000. 776-4175

1999 Yamaha XT225, \$1,650; 1998 Yamaha PW80, \$500. 233-5620

2000 SeaDoo GTI, cover, CD manual, trailer, \$2,400. 683-3745

Wanted

GMC/Chevy 4x4 step-side bed truck, 1987 or older. 683-9364

Gently used leather motorcycle jacket, men's size medium. 256-777-8229/leave message

Free

Lab/Boxer puppies, de-wormed and Parvo shots, 3 months old. 773-1433

Two general admission tickets to Food World 250 ARCA Race in Talladega, Oct. 6. 431-7591

Lost

Small lock blade pocket knife, brown w/brass ends, lost Monday, Sept. 11, Bldg. 4201/4203/4493 areas. 544-3819

Scott Croomes, deputy chief engineer in Marshall's Engineering Directorate, to speak at Marshall Association luncheon Sept. 25

Scott Croomes, deputy chief engineer with the Chief Engineers Office in the Engineering Directorate, will speak at the Marshall Association luncheon Monday, Sept. 25, at 11:15 a.m. in Activities Building 4316.

Croomes, who served as the chairman of the DART Mishap Investigation Board, will share the results of the investigation along with lessons learned for future missions.

The luncheon is \$11 for Marshall Association members and \$13 for non-members, payable at the door. Employees planning to attend must contact Sharal Huegele at sharal.b.huegele@nasa.gov or call 544-7286 by noon Thursday, Sept. 21. See "Inside Marshall" for more details.

Focus on Marshall goes 'tech shopping'

"Focus on Marshall" continues to spotlight Marshall's people and their work. The newest edition is now available on "Inside Marshall." It will be broadcast on Marshall TV and Desktop TV at 11 a.m., noon and 1 p.m. on Thursday, Sept. 21.

"Focus on Marshall" is available on "Inside Marshall" and the Marshall home page within the NASA portal Web site. "Focus on Marshall" normally airs on Marshall TV on Tuesday and Thursday the first and third week of each month, but will only air on Thursday this week because of STS-115 mission coverage.

Shuttle Buddies to meet Sept. 25

The Shuttle Buddies will meet at 9 a.m. Monday, Sept. 25, at Mullins Restaurant on Andrew Jackson Way. For more information, call Deemer Self at 881-7757.

Small Business Innovation Research/Small Business Technology Transfer exhibited at Space and Missile Defense Conference and Exhibition



Emmett Given/MSFC

The Marshall Center's Small Business Innovation Research/Small Business Technology Transfer programs recently exhibited at the 9th annual Space and Missile Defense Conference and Exhibition. The event was held at the Von Braun Center in Huntsville last month. Small businesses were invited to display their products in Marshall's booth.

Hardware was featured from companies, including Orion Propulsion in Madison, Ala., and Quantum Devices Inc. in Barneveld, Wis. From left, Robin Schumacher and Ron Ignatius of Quantum Devices demonstrate one of the company's technologies to Lynn Garrison, Marshall's Small Business Innovation Research program manager.

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