National Aeronautics and Space Administration

MARSHALL STAR

Serving the Marshall Space Flight Center Community

Jan. 28, 2010

Day of Remembrance: Message from the center director

'It's about people…'

The last Thursday of each January marks NASA's annual Day of Remembrance, a day set aside to honor the crews of Apollo 1, Challenger and Columbia and co-workers who have lost their lives in this great endeavor – exploration of space. It is also a day to reflect on what we can do as individuals to ensure that a similar tragedy doesn't happen again.

John F. Kennedy was right about the difficulty of our enterprise when he set the Apollo program on track in the early sixties. Exploration brings with it both risk and reward. It also brings with it extraordinary responsibility. One of those responsibilities is to speak up when you have a concern. Another responsibility is for leaders to actively listen to those concerns. You have my promise that your views will be treated with professional and technical consideration.

So on this Day of Remembrance, we'll best honor the memory of those we have lost by resolving to speak up when we have a concern, to truly listen when others have a concern and to remember that safety is much more than numbers and checklists – it's about people.

Robert Lightfoot
Marshall Center Director

STS-129 crew visits Marshall

STS-129 astronauts who flew space shuttle Atlantis on a mission to the International Space Station visited the Marshall Space Flight Center on Jan. 21. Commander Charlie Hobaugh, at the podium, speaks about their November mission to local media. In the background, from left, are Mission Specialist Mike Foreman and Pilot Barry Wilmore. Please see page 2 for more about the crew's visit to the center.

NASA managers meet to set STS-130 launch date

By Sanda Martel

At Marshall Star press time, NASA senior managers were meeting Jan. 27 at the Kennedy Space Center, Fla., to assess the readiness of space shuttle Endeavour to launch Feb. 7 on the STS-130 mission to the International Space Station. Liftoff for the 13-day mission is targeted for 3:39 a.m. CST.

The Flight Readiness Review, held before each space shuttle mission, allows NASA managers and engineers to

*See **STS-130** on page 5*

'We're very humbled to talk about our experience'

STS-129 crew thanks Marshall for shuttle, station work

By Jessica Wallace Eagan

Space shuttle Atlantis astronauts who flew the STS-129 mission to the International Space Station visited the Marshall Space Flight Center on Jan. 21 to personally thank team members for their work on the shuttle and station programs.

Marshall Center Director Robert Lightfoot introduced the crew members to a packed Morris Auditorium in Building 4200. Commander Charlie Hobaugh was joined by Pilot Barry Wilmore and Mission Specialists Randy Bresnik, Mike Foreman and Bobby Satcher. They presented video highlights of the fifth and final shuttle mission in 2009. Mission Specialist Leland Melvin was unable to attend the event.

"We're here today to thank you for what you did to get our mission airborne," said Hobaugh. "Those main engines and boosters are what gets us up in orbit."

The Marshall Center is responsible for the space shuttle propulsion system – consisting of the space shuttle main engines, solid rocket boosters with their solid rocket motors and the external tank. The three high-performing, reusable liquid propellant rocket engines, along with the solid rocket boosters, provide more than 7.8 million pounds of thrust to lift the shuttle to orbit.

Hobaugh also acknowledged Marshall's role in developing and operating many space station systems such as the Environmental Control and Life Support System, which gives astronauts clean water and air to live. "All of you continue to work superbly to make our missions work, so thank you for keeping the shuttle and space station flying."

When a member of the audience asked Wilmore what inspired him to become an astronaut, he responded, "My first word as a baby was not 'mom' or 'dad.' It was 'why.' I've always been a curious person who enjoys learning new things. NASA just looked so interesting. Plus, I get to contribute to the goal of our nation."

"It's a pleasure to represent NASA when we fly a shuttle mission," said Hobaugh. "We're very humbled to talk about our experience."

Atlantis launched Nov. 16 from the Kennedy Space Center, Fla. The 11-day mission of about 4.5 million miles was completed Nov. 27 with a landing at Kennedy.

The STS-129 mission included three spacewalks and the installation of two platforms to hold large spare parts that will sustain station operations after the shuttles are retired. Atlantis' crew delivered some 30,000 pounds of replacement parts for systems that provide the station with power, keep it from overheating and maintain its proper orientation in space. American space station crew member Nicole Stott traveled home aboard Atlantis, concluding her 87-day tour on the orbiting research facility.

The next space shuttle mission, STS-130, is scheduled to launch Feb. 7 from Kennedy. Commander George Zamka and his crew of five astronauts will fly space shuttle Endeavour on a 13-day mission to the station to deliver a third connecting module – the Tranquility node – and a seven-windowed cupola to be used as a control room for robotics.

For more information about the STS-129 mission, visit http://www.nasa.gov/mission_pages/shuttle/shuttlemissions/sts129/main/index.html.

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Eagan, an AI Signal Research Inc. employee and the Marshall Star editor, supports the Office of Strategic Analysis & Communications.

Marshall Director Robert Lightfoot, at far right at the podium, welcomes STS-129 crew members in Morris Auditorium, Building 4200. The crew, from left, includes Mission Specialists Bobby Satcher, Mike Foreman and Randy Bresnik; Pilot Barry Wilmore; and Commander Charlie Hobaugh.

'Aid to Haiti served from on high'

NASA satellite network helps response teams pinpoint hardest hit areas, assess future dangers

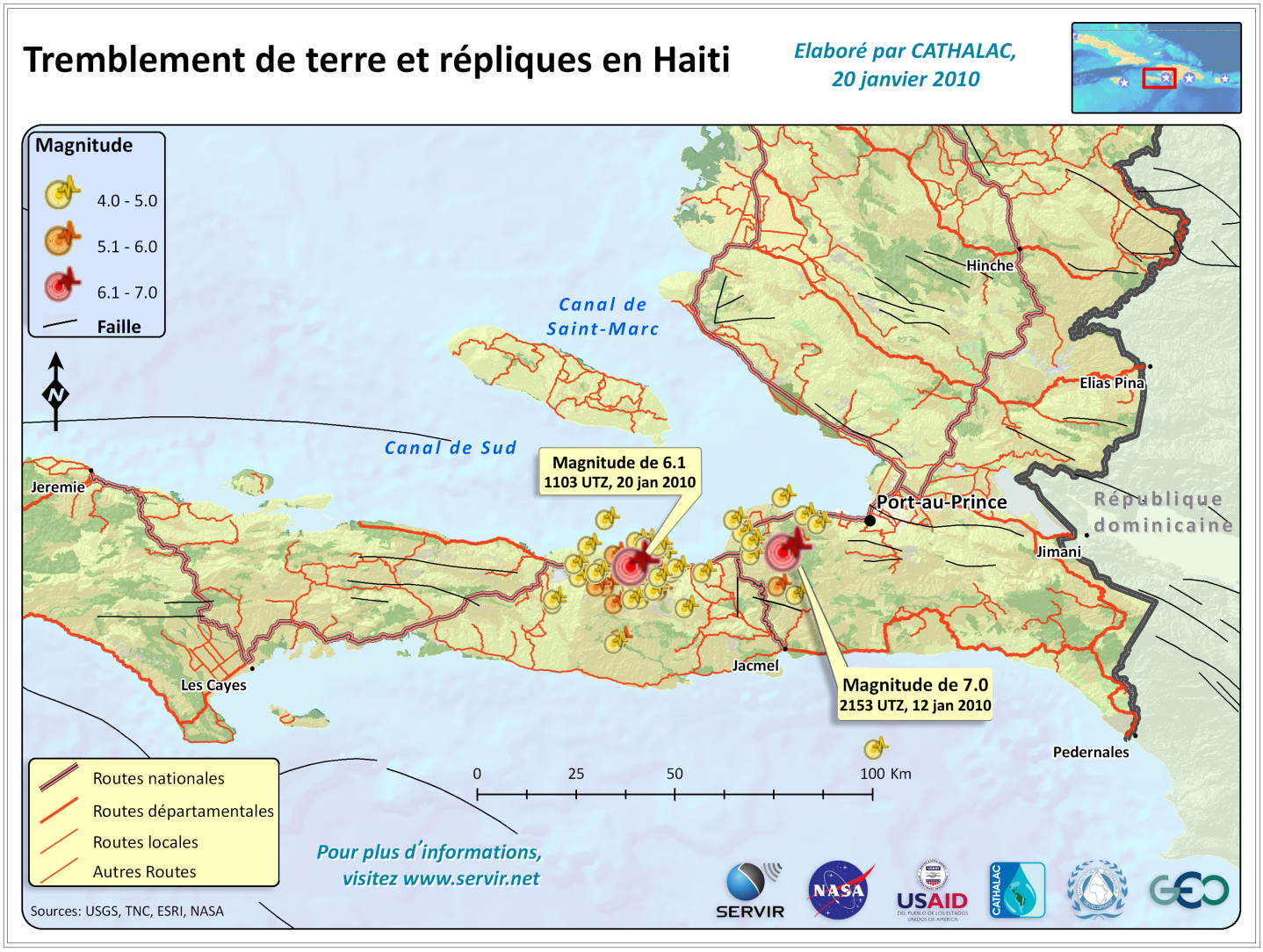
By Janet Anderson

NASA's SERVIR continues to carry out the Spanish meaning of its name – that being "to serve." During the past week, SERVIR has been actively engaged in serving information to aid one of its neighbors – Haiti.

"Haiti is not one of the countries SERVIR works in directly," said NASA researcher Dan Irwin, project manager for SERVIR at the Marshall Space Flight Center. "However, given the nature of the disaster and the capability of SERVIR, we quickly became engaged in helping out."

SERVIR – which has been operational since 2005 in Mexico, Central America and the Caribbean – gathers data from satellites operated by NASA such as Earth Observing-1 and Advanced Spaceborne Thermal Emission and Reflection Radiometer, and agencies such as the National Oceanic and Atmospheric Administration and the private sector. After processing, the information is shared with national authorities as well as regional and international humanitarian assistance groups. This information helps the agencies direct their relief efforts and anticipate further damages due to landslides. Finally, the data are combined with ground-based observations and sent to SERVIR's Web site, which is public and offers the available information to everyone.

*See **Haiti** on page 6*



A map showing the location of the new earthquake epicenter was prepared by the SERVIR network and shared with national authorities as well as regional and international humanitarian assistance groups. On Jan. 20, a magnitude 6.1 aftershock struck Haiti, just west of the 7.0 magnitude earthquake Jan. 12.

Safety Culture Survey to start at Marshall on Feb. 1

Marshall Space Flight Center Director Robert Lightfoot encourages center team members to take part in a new safety culture survey beginning Feb. 1.

The survey will be used to help benchmark the center's safety culture. It also will help identify critical areas for improvement and track efforts to reaffirm personal responsibility, teamwork and a shared purpose to keep safety first across the work force.

The survey, produced by the Office of Safety & Mission Assurance at NASA Headquarters, will be jointly administered by Marshall's Office of Human Capital and the Safety & Mission Assurance Directorate. It should not take more than five minutes to complete.

The survey has 21 questions and is based on the five-part NASA Safety Culture Model:

1. Reporting Culture: We report our concerns.
2. Just Culture: We have a sense of fairness.
3. Flexible Culture: We change to meet new demands.
4. Learning Culture: We learn from our successes and mistakes.
5. Engaged Culture: Everyone does his or her part.

Only the Safety Culture Survey administrators will have access to the data. Individual participants and their responses will not be identified.

The survey will be available through Feb. 10. More information is available at https://safety.msfc.nasa.gov/safetyculture.

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, Feb. 4, is 4:30 p.m. Thursday, Jan. 28.

Miscellaneous

Rockwell 11-inch drill press, stand, $75; Craftsman 10-inch radial arm saw, $150. 651-8236

Burgundy leather loveseat, $125. 698-7328

50-inch 1080p LCD RPTV, KDS-50A2000, $600; 50-inch 720p LCD RPTV, KDF-E50A10, $400. 325-2368

Ciprian bowl chandelier, golden nickel, 63 lights, 33"W x 24.5"H, pic available, $100. 777-1810.

Glass display cases, 34" with 4" kick base, adjustable shelves, mirror doors, locks, lights, $150. 233-5599

Lily Flagg pool membership, $500. 656-2951

Cherry entertainment center, $200; 27" Toshiba TV, $60; Guitar Hero 3, Nintendo Wii controller, $35. 527-3486

Wedding gown, strapless Maggie Sottero corset back, Swarovski crystals, size 12, $600. 508-5086

Kitchenaid dishwasher, stainless tub, $100; OTR microwave, $100; Whirlpool standalone range, $50; all, $200. 309-0077

Glass-top coffee table, metal legs, $40; two glass-top end tables, metal legs, $20 each. 479-0443

22-inch cruiser wheels with tires, black and chrome, locking lug set, 6 lug. 931-438-1730

Hugo Boss men's straight-leg jeans, Alabama-washed denim, size 36x32, $45. 653-9519

Wedding dress with veil, size 8-10, creme color, $250. 880-9025

Six-week body makeover, six-day mini makeover by Provida Life Sciences, $20. 776-7399

Delta small truck tool box, $150. 830-6584

Gateway EV 910 19-inch CRT monitor, white, power cord resolution 1600 X 1200, $30. 640-7059

R/C Warbird E-flight Alfa Models Ki-84 Hayate Frank RTF, motor, servos, $200. 508-1558

La-Z-Boy burgundy oversized recliner; extra-large stainless steel double bowl kitchen sink with gooseneck faucet. 461-4196

Bowflex motivator with leg attachment, $475. 773-2774 or 476-1593

Two tickets to "A Chorus Line," 8 p.m., Feb. 12, seats E-16 and E17, $54 each. 651-5491

Vehicles

2009 Toyota Camry LE, blue, alloy wheels, 17,500 miles, $18,750 obo. 205-260-6703

2007 Honda Fourtrax Recon four-wheeler, yellow, TRX250TM7, $2,150 obo. 653-2534

2006 BMW 325i, loaded, automatic, V6, 96k miles, $16,000. 599-7445 leave message

2005 Mazda Miata LS, loaded, factory warranty, 39k miles, $14,500. 489-8031

2005 Honda Rebel motorcycle, 250cc, 1,700 miles, $2,100 or make offer. 361-9796

1998 Stingray, RS180 bowrider, new 140HP engine, bimini covers, ski equipment, $9,500. 640-6427

1995 Toyota Camry LE, power windows, locks, mirrors, A/C, cruise, Pioneer CD, 160k miles, $1,300. 881-5522

1992 Jeep Wrangler, white, 4WD, four cylinder, soft top, manual, new tires, $5,000 obo. 698-5182

1985 Ford F-150, 4X4, hunter green, tan interior, chrome wheels, new engine/tires, $2,950. 259-1523

1982 Landcruiser, brown, new tires, some rust on exterior, 165k miles, $2,950. 658-8241

Wanted

Motorcycles to repair, HD or metric, certified HD technician. 430-9667

Carpoolers wanted from Cullman area. 205-602-6868

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

Used youth/teen soccer jerseys, shorts or shoes for mission trip to Central America. 828-1234

Beds, one King, black, wrought iron; one Queen, brown/red, wooden; one Queen, wooden futon.631-8915

Treadmill in working condition. 468-4406

STS-130 *Continued from page 1*

determine whether the shuttle's complex array of equipment, support systems and procedures are ready for flight, and to assess any risks associated with the mission. The review also determines the readiness of the flight crew and payloads.

"We held our program-level review Jan. 19 and determined that our propulsion elements are ready to lift shuttle Endeavour safely into orbit," said Steve Cash, manager of the Shuttle Propulsion Office at the Marshall Space Flight Center. Cash and his propulsion team are responsible for the space shuttle main engines, the external tank and the reusable solid rocket boosters with their reusable solid rocket motors.

STS-130 crew members include, from left, Mission Specialist Nicholas Patrick, Pilot Terry Virts, Mission Specialists Robert Behnken and Kathryn Hire, Commander George Zamka and Mission Specialist Stephen Robinson.

Endeavour's external tank, ET-134, will be the first to fly with longitudinal friction stir welding implemented on all four liquid hydrogen tank barrels and liquid oxygen tank barrel. ET-132 and ET-133, which flew on the two previous shuttle missions – STS-128 in August and STS-129 in November – featured longitudinal friction stir welds only on two liquid hydrogen tank barrels. This innovative welding technique uses frictional heating and forging pressure to produce high-strength bonds virtually free of defects. Previously, the barrels were fabricated using traditional fusion welding. Friction stir welding is different in that materials are not melted. A rotating tool pin uses friction and applied pressure to plasticize the metal and join the panels together, resulting in weld joints that are more efficient.

ET-134 also will fly with improved aluminum-lithium thrust panels on the intertank, made with the lighter weight Al-Li 2195 instead of Al 2219, used to construct previous external tanks.

ET-134 was shipped on the Pegasus barge from NASA's Michoud Assembly Facility in New Orleans Oct. 18 and arrived at Kennedy Oct. 24. Marshall Public Affairs Officer Steve Roy went along on the trip and blogged during the six-day journey. To read about ET-134's ocean voyage, visit http://blogs.nasa.gov/cm/blog/sailing_with_nasa.

Commander George Zamka will lead the STS-130 mission. Terry Virts will serve as the pilot. Mission specialists are Nicholas Patrick, Robert Behnken, Stephen Robinson and Kathryn Hire. Virts will be making his first trip to space.

Shuttle Endeavour and its crew will deliver to the space station a connecting module that will increase interior space. Node 3, known as Tranquility, will provide additional room for crew members and many of the station's life support and environmental control systems. Attached to the node is a cupola – a robotic control station with six windows around its sides and another in the center – that will provide a panoramic view of Earth, celestial objects and visiting spacecraft. The mission will feature three spacewalks.

For more information about the STS-130 mission, visit http://www.nasa.gov/mission_pages/shuttle/shuttlemissions/sts130/index.html.

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

Obituaries

Earl H. Eubanks, 92, of Huntsville died Jan. 11. He retired from the Marshall Center in 1973 as a contract specialist supervisor.

Vito Nicola Carmosino, 87, of Huntsville died Jan. 19. He retired from the Marshall Center in 1980 as an engineer. He is survived by his wife, Sylvia Carmosino.

Haiti *Continued from page 3*

Over the past couple of weeks, SERVIR has been focused on Haiti, using NASA and other satellite imagery to develop before and after images of the earthquake ravaged areas.

The SERVIR team is familiar with the island of Haiti because of assistance provided during flooding in 2004 and 2008 from tropical storms. Images were captured by the Advanced Spaceborne Thermal Emission and Reflection Radiometer on NASA's Terra satellite. These base images or maps of Haiti were used to begin providing information to partners in the disaster relief effort.

Products developed to aid partners in the earthquake include a landslide risk map. The mountainous areas around Port Au Prince, Haiti, are prone to landslides post-earthquake due to the upheaval in the rock substrate.

The Haiti maps have been provided to the International Red Cross, the Regional Latin American Humanitarian Information Network of the United Nations Space Based Platform for Information for Disaster Response, the Caribbean Disaster and Emergency Management Agency, the office of the U.S. Foreign Disaster Assistance of the U.S. Agency for International Development, the U.S. Mission in Haiti, and the U.K.-based nongovernmental organization MapAction among others.

In addition to the United States Agency for International Development, other SERVIR partners include the Water Center for the Humid Tropics of Latin America, and the Caribbean and the Regional Center for Mapping of Resources for Development in Nairobi, Kenya. "Organizations around the world are working together, sharing data," said Irwin. "We are pleased to be a part here in Huntsville and at Marshall – making the world a better place and helping out those dealing with pressing issues here on Earth."

For more information on SERVIR, visit http://www.nasa.gov/mission_pages/servir/index.html.

For more information on NASA satellites role in earthquake assistance, visit http://www.nasa.gov/topics/earth/haiti.html.

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

Recycle old telephone books; deadline is Jan. 29

Recycling containers for old telephone books have been placed in foyers and lobbies throughout the Marshall Space Flight Center.

Please place phone books in the appropriately labeled containers. The deadline for recycling is Jan. 29.

For additional information on Marshall's recycling program, please visit http://recycling.msfc.nasa.gov.

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