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MARSHALL STAR

In This Week's Star ⊟ (Click to Expand)

More than 350 attend Space Launch System and Orion Presentation on the Future of Human Spaceflight

By Amie Cotton

More than 350 U.S. Space Campers and enthusiasts attended the Feb. 2 "Pass the Torch" lecture sponsored by the U.S. Space & Rocket Center.

Image right: A U.S. Space Camper asks a question about the future of human spaceflight to experts, standing from left, Dan Dumbacher, deputy associate administrator for Exploration Systems Development Division; Mark Kirasich, deputy program manager for Orion; Todd May, SLS program manager; and Dr. Deborah Barnhart, chief executive officer of the U.S. Space & Rocket Center. (NASA/MSFC)

Dan Dumbacher, NASA's deputy associate administrator for Exploration Systems Development Division, introduced Space Launch System Program Manager Todd May and Orion Deputy Program Manager Mark Kirasich, who discussed the development of the first deep-space human spacecraft and heavy-lift launch vehicle. The lecture was held in collaboration with the Orion crew module exhibit at the Space & Rocket Center on Feb. 1-5.

The Orion crew module -- used to test and develop NASA's deep-space human spacecraft, Orion -- has been on a cross-

country tour, stopping in Huntsville on its way from testing at the White Sands Missile Range in New Mexico to the Kennedy Space Center, where it will undergo additional testing. The Orion Program is managed by the Johnson Space Center.

The Launch Abort System team for Orion is led at the Marshall Space Flight Center and managed by Glenn Research Center. Marshall is responsible for the solid rocket propulsion for the three motors for the abort system, which includes an abort motor that pulls the Orion capsule from danger; an attitude control motor to provide directional control; and the jettison motor that separates the system from the crew module. In addition, Marshall is responsible for all production processes and safety for the launch abort system.

Image left: Speaking with guests at the U.S. Space & Rocket Center Feb. 1, Larry Gagliano, second from left, deputy project manager for the Orion Launch Abort System and Orion lead at Marshall, discusses the Orion spacecraft and how the Launch Abort System will protect future astronauts. More than 2,000 attended the Orion crew module exhibit Feb. 1-5 at the rocket center. (NASA/MSFC)

The Space Launch System is a heavy-lift launch vehicle that will provide an entirely new capability for human exploration beyond low-Earth orbit. Designed to be flexible for carrying the Orion spacecraft or cargo missions, SLS will expand human presence beyond low-Earth orbit and enable new missions of exploration across the solar system. SLS is managed by the Marshall Center.

For more information on Orion, visit http://www.nasa.gov/orion.

For more information on SLS, visit http://www.nasa.gov/sls.

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Marshall to Host Industry and Academia Day Feb. 14 to Discuss Space Launch System Advanced Development
By Amie Cotton

The Marshall Space Flight Center will host an industry and academia day Feb. 14 at 9:30 a.m. in Morris Auditorium, in Marshall's Building 4200, to share information on an upcoming NASA Research Announcement for the Space Launch System's advanced development.

Image left: Artist concept of Space Launch System (NASA/MSFC)

Marshall is leading the design and development of the SLS on behalf of the agency. The new heavy-lift launch vehicle will expand human presence beyond low-Earth orbit and enable new missions of exploration across the solar system. The 130-metric-ton, evolved SLS vehicle will require advanced developments in the areas of concept development, propulsion, structures, materials, manufacturing, avionics and software. These efforts will focus on affordability and sustainability of the SLS as it evolves from the 70-metric-ton vehicle to the 130-metric-ton vehicle. Speakers will include Todd May, SLS program manager at Marshall; Mindy Nedermeyer, NASA Research Announcement chair; and Monica Heidelberg, SLS advance development NASA Research Announcement contracting officer. For information about NASA's Space Launch System, visit http://www.nasa.gov/sls or follow SLS on Twitter at http://twitter.com/NASA_SLS.

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Marshall Center to Celebrate Black History Month throughout February

By Megan Davidson

Freeman Hrabowski III (Photo Courtesy)

The Marshall Space Flight Center will commemorate Black History Month with several events in February. Team Redstone -- which includes the Marshall Center and U.S. Army organizations on Redstone Arsenal -- will host a Black History Month observance program at 10 a.m. Feb. 15 in Bob Jones Auditorium at the Sparkman Center, Building 5304. Guest speaker will be Dr. Crystal Kuykendall -- a public speaker, former educator, author and legal analyst. Awards for the Black History Month essay and display contests also will be presented at the program.

Freeman Hrabowski III, president of the University of Maryland, Baltimore County, will be the keynote speaker at Marshall's Black History Month program Feb. 16. The event -- open to all Marshall Center team members --

will be held from 10-11:30 a.m. in Building 4200, Morris Auditorium. His topic will be "Preparing Americans for Innovation and Collaboration for America's STEM Workforce."

Born in Birmingham, Hrabowski has served as president of the University of Maryland, Baltimore County, since 1992. His research and publications focus on science and math education, with special emphasis on minority participation and performance. He serves as a consultant to the National Science Foundation, the National Institutes of Health, the National Academies, and universities and school systems nationally.

As a child, Hrabowski was an activist during the civil rights movement, and was featured in Spike Lee's 1997 documentary, "Four Little Girls," about the 1963 racially motivated bombing of Birmingham's Sixteenth Street Baptist Church.

Hrabowski has received many honors during his career. In 2011, he received the Teachers Insurance and Annuity Association and College Retirement Equities Fund Theodore M. Hesburgh Award for Leadership Excellence; and the Carnegie Corporation of New York's Academic Leadership Award -- recognized by many as the nation's highest awards among higher-education leaders. He also was named one of seven "Top American Leaders" in 2011 by The Washington Post and the Harvard Kennedy School's Center for Public Leadership. In 2009, Time magazine named him one of America's "10 Best College Presidents." In 2008, he was named one of "America's Best Leaders" by U.S. News & World Report.

On Feb. 22, the Marshall Center will host a Black History Month lunch-and-learn event from 11:30 a.m. to 12:30 p.m. in Building 4200, Room 504. The guest speaker will be Dr. Harry Hobbs, communications relations officer at the Huntsville Police Department. His topic will be "Bridge Building: Creating an Inclusive Community."


Harry Hobbs (Photo Courtesy)

Hobbs has an extensive military career, serving in the U.S. Army from 1978 to 2007. He is the recipient of numerous military honors, including the Legion of Merit -- awarded for exceptionally meritorious conduct in the performance of outstanding services and achievements; and the Bronze Star Medal, awarded for bravery, acts of merit or meritorious service.

He was selected as the "Mentor of the Year" in 2011 by the Greater Huntsville Chapter of 100 Black Men of America for his commitment to working with youth. Mentoring is the cornerstone of the organization's purpose, which is to encourage at-risk black males to be educated, healthy and contributing members of society.

The Black History Month events are sponsored by Marshall's Office of Diversity & Equal Opportunity.

For more information about Kuykendall, visit http://crystalkuykendall.com/.

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Remnant of an Explosion With a Powerful Kick?
NASA news release

Vital clues about the devastating ends to the lives of massive stars can be found by studying the aftermath of their explosions. In its more than 12 years of science operations, NASA's Chandra X-ray Observatory -- managed by the Marshall Space Flight Center -- has studied many of these supernova remnants sprinkled across the galaxy.

Image left: Chandra's new image of the supernova remnant known as G350.1+0.3. This stellar debris field is located some 14,700 light years from the Earth toward the center of the Milky Way. (X-ray: NASA/CXC/SAO/I. Lovchinsky et al; IR: NASA/JPL-Caltech)

The latest example of this important investigation is Chandra's new image of the supernova remnant known as G350.1-0.3. This stellar debris field is located some 14,700 light years from the Earth toward the center of the Milky Way.

Evidence from Chandra and from the European Space Agency's XMM-Newton telescope suggest that a compact object within G350.1-0.3 may be the dense core of the star that exploded. The position of this likely neutron star, seen by the arrow pointing to "neutron star" in the right image, is well away from the center of the X-ray emission. If the supernova explosion occurred near the center of the X-ray emission, then the neutron star must have received a powerful kick in the supernova explosion.

Data from Chandra and other telescopes suggest this supernova remnant, as it appears in the image, is between 600 and 1,200 years old. If the estimated location of the explosion is correct, this means that the neutron star has been moving at a speed of at least 3 million miles per hour since the explosion. This is comparable to the exceptionally high speed derived for the neutron star in Puppis A, and provides new evidence that extremely powerful "kicks" can be imparted to neutron stars from supernova explosions.

Another intriguing aspect of G350.1-0.3 is its unusual shape. While many supernova remnants are nearly circular, G350.1-0.3 is strikingly asymmetrical as seen in the Chandra data in this image in gold. Infrared data from NASA's Spitzer Space Telescope, shown in light blue, also traces the morphology found by Chandra. Astronomers think that this bizarre shape is due to stellar debris field expanding into a nearby cloud of cold molecular gas.

The age of 600-1,200 years puts the explosion that created G350.1-0.3 in the same time frame as other famous supernovas that formed the Crab and SN 1006 supernova remnants. However, it is unlikely that anyone on Earth would have seen the explosion because of the obscuring gas and dust that lies along our line of sight to the remnant.

These results appeared in the April 10, 2011, issue of The Astrophysical Journal. The scientists on this paper were Igor Lovchinsky and Patrick Slane of Harvard-Smithsonian Center for Astrophysics in Cambridge, Mass.; Bryan Gaensler of the University of Sydney in Australia; Jack Hughes of Rutgers University in New Brunswick, N.J.; Stephen Ng of McGill University in Montreal, Quebec, Canada; Jasmina Lazendic of Monash University in Clayton, Australia; Joseph Gelfand of New York University in Abu Dhabi, United Arab Emirates; and Crystal Brogan of the National Radio Astronomy Observatory in Charlottesville, Va.

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Center Director Robert Lightfoot, Marshall's First Astronaut Jan Davis to Speak at Marshall Association Meeting Feb. 28

Marshall Space Flight Center Director Robert Lightfoot and Marshall's first astronaut, Dr. Jan Davis, will speak at the year's first Marshall Association meeting Feb. 28. The event will begin at 3 p.m. at the Firehouse Pub in Building 114 on Hankins Road.

Lightfoot will show his support for the association with words of encouragement for the coming year and Davis will speak about the Huntsville Space Club.

Cost of attendance is free but Marshall team members will be responsible for paying for their refreshments. The Firehouse Pub has a large selection of wings, sauces and non-domestic beers on draft. To view the menu, visit here.

A RSVP is not required but is appreciated. Contact Mallory Johnston, vice president for communications, at mallory.m.johnston@nasa.gov to sign up.

The officers also will be available during the meeting to collect 2012 membership dues. The cost is $15 before March 31 and those who pay before that date will be entered in a contest to win a free Marshall Association lunch valued at $10.

Officers also will collect dues during a membership drive from 11 a.m. to 1 p.m., Feb. 22-23, in the lobby of Building 4203.

Contact Amir Deylami, association treasurer, at amir.deylami@nasa.gov to pay outside of the meetings and membership drive.

The 2012 Marshall Association Officers will be introduced in a future Marshall Star.

For more information about the Marshall Association, Marshall team members can visit http://inside.msfc.nasa.gov/marshall_association/index.html. For more information about the upcoming meeting, team members can visit ExplorNet at https://explornet.msfc.nasa.gov/docs/DOC-5914. For more information about the Huntsville Space Club, visit http://spaceclub-hsv.org/.

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Nominations Open for Space Camp Hall of Fame Class of 2012

Nominations are now open for the U.S. Space & Rocket Center's Space Camp Hall of Fame Class of 2012.

The Hall of Fame was established to honor the outstanding achievements of the Space Camp family, including graduates and former employees, who have distinguished themselves in their respective careers. Nominees also can be supporters of Space Camp who have made considerable contributions of personal time, effort or resources.

Nominees will be selected and inducted into the Hall of Fame from these categories: Space Camp or Aviation Challenge Alumnus, Space Camp Counselor/Staff and Space Camp Friend.

To submit nominations or for more information, visit http://www.spacecamp.com/halloffame by March 15. A ceremony to announce the 2012 class will be held at the U.S. Space & Rocket Center on June 15.

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Obituaries

James M. Gallien, 89, of Athens died Nov. 30. He retired from the Marshall Center in 1986 as an electronics technician. He is survived by his wife, Frances Butler Gallien.

Joyce Griffin, 70, of Athens died Jan. 26. She retired from the Marshall Center in 1994 as a secretary. She is survived by her husband, Douglas W. Griffin.

Vachel Stapler, 88, of Huntsville died Feb. 4. He retired from the Marshall Center in 1979 as an engineer technician.

Thomas Clem, 85, of Athens died Feb. 5. He retired from the Marshall Center in 1981 as an equipment operator supervisor.

Find this article at:

http://www.nasa.gov/centers/marshall/about/star/index.html