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## NASA's Marshall Center Receives Small Business Administrator's Cup Award

*By Rick Smith*

NASA's Marshall Space Flight Center was honored July 11 when NASA Administrator Charles Bolden, visiting from Washington, presented center leaders with the [Small Business Administrator's Cup](#) -- an agency award for managing the most effective small business program.

It is the third time in five years Marshall has earned the prize. The award honors innovative practices that promote small business participation in a variety of NASA initiatives, and recognizes significant contributions to the agency's small business programs by the winning center's senior management, procurement office and program and technical personnel.

"Small business is essential to NASA's mission, and the Marshall Center has demonstrated excellence and commitment in this crucial area," Bolden said. "I'm

*See Administrator's Cup Award on [page 2](#)*

## NASA Technology Has Stabilizing Effect for Rockets and Buildings

*By Janet Anderson*

A NASA technology originally designed to stabilize rockets could now help buildings survive earthquake damage. The patented technology, called fluid structure coupling, uses simple physics to dampen potentially harmful shaking in structures. NASA engineers designed the device to fit inside a rocket engine's liquid fuel tank to calm the effects of intense vibrations



*Jeff Lindner makes adjustments during tests of a fluid structure coupling device near the top of the 365-foot-tall Dynamic Test Stand at NASA's Marshall Space Flight Center. (NASA/MSFC)*

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# 'Marshall Center Feeds Families' Summer Campaign Happening Now!

All NASA Marshall Space Flight Center team members -- including contractors -- are encouraged to contribute non-perishable food items to the "2013 MSFC Feeds Families Campaign." This campaign is a great opportunity to show how much we care about and are committed to supporting our local community.

The "Feds Feeds Families Campaign" is a nationwide effort by federal agencies to collect 2 million pounds of non-perishable food items this year. The Marshall Office of Diversity and Equal Opportunity is working with the North Alabama Food Bank to feed families in our local communities.

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## Administrator's Cup Award *Continued from page 1*

proud of the hard-working Marshall employees who continue to make the center's small business program a critical part of NASA's future."

NASA's Office of Small Business Programs sponsors the award, which Marshall previously won for its work in fiscal years 2008 and 2010. Glenn Delgado, associate administrator of NASA's [Office of Small Business Programs](#) in Washington, joined Bolden to present the latest award to Marshall Center Associate Director Robin Henderson.

"I am incredibly proud to see Marshall's small business team recognized once again with this prestigious award," Henderson said. "This team remains tirelessly dedicated to our small business partners, and to the mutually beneficial relationships that strengthen us all and help NASA accomplish the work of the nation."

Marshall small business specialist David Brock credited the center's winning program to a number of factors, including strong support from center management and two on-site organizations: the Marshall Prime Contractor Supplier Council, which includes representatives of 50 large businesses; and the Marshall Small Business Executive Leadership Team, comprised of representatives of 30 small businesses. Most participate in the Marshall Small Business Alliance. Founded in 2007, the alliance is a vital resource for thousands of small businesses, serving as a regional conduit to help them pursue NASA procurement and subcontracting opportunities.

Marshall's large business prime contractors also aid in that pursuit, Brock said. In fiscal 2012, those large prime contractors helped provide approximately \$250 million in total subcontracting awards to small businesses.



Participating in the award presentation were, from left, Marshall Associate Director Robin Henderson; David Iosco, deputy director of Marshall's Office of Procurement; Marshall small business specialist David Brock; Marshall Center Director Patrick Scheuermann; Glenn Delgado, associate administrator of NASA's Office of Small Business Programs in Washington; Kim Whitson, director of Marshall's Office of Procurement; NASA Administrator Charles Bolden; and Terry Wilcutt, associate administrator of NASA's Office of Safety and Mission Assurance. (MSFC/Fred Deaton)

"The success achieved over the past several fiscal years by the Marshall Center Small Business Program is a result of a total team effort," Brock said. "Participation by our senior managers at Marshall Small Business Alliance meetings and regional business forums, and outstanding support by Marshall's acquisition, technical and contractor communities have helped lay a solid foundation on which to grow and expand our programs."

Learn more about doing business with the Marshall Center [here](#).

*Smith, an Analytical Services Inc. employee, supports the Office of Strategic Analysis & Communications.*

# Aerospace Safety Advisory Panel Tours Marshall Center July 10-12



*The Aerospace Safety Advisory Panel held its third quarterly meeting at NASA's Marshall Space Flight Center July 10-12. During a center tour on July 10, Steve Cash, NASA Marshall Space Flight Center's director of safety and mission assurance, and Bryan O'Connor, former astronaut and retired NASA chief of safety and mission assurance, listen as Ken Cooper, manager of Marshall Center's 3D printing facility, discusses the process of 3D printing. The tour marked the beginning of the ASAP meetings. (NASA/MSFC/Emmett Given)*

## **Stabilizing Technology** *Continued from [page 1](#)*

launch vehicles experience during liftoff.

The technology's potential to mitigate seismic or wind damage to buildings has been extensively tested at NASA's Marshall Space Flight Center by shaking and stabilizing the 365-foot-tall Dynamic Test Stand -- the center's tallest test stand. Engineers fitted the 4.5-million-pound building with a rig designed to make the entire structure move. The system includes a 14,000-pound water reservoir and massive weights on the top floor of the building. During testing, the weights were moved to give the building a perceptible sway. But when a technician engaged the fluid structure coupling device located inside the water reservoir, the movement was nearly completely stopped.

"We found that by incorporating one small device, weighing less than 100 pounds, we were able to successfully reduce the vibrations of a 650,000-pound launch vehicle," said Rob Berry, manager of the project at Marshall. "This device controls the interaction between the fluid and the structure, thereby calming the vibrations that occur during launch. Using this application, we were able to use fluid propellant we were already carrying to control the vehicle's response."

The basic idea behind the stabilization device is to use the liquid fuel in a rocket's upper stage to diminish shaking caused by the vibrations and resonance experienced during launch. But by installing water

tanks or using existing pools and tanks, the device could be adapted for many other uses.

"Not only could this technology be applied to existing structures that have problems, this technology has immense potential; it could change the way buildings and other structures are designed," Berry said. "It could have the ability to keep aircraft, ships and oil platforms steady during high winds, waves and other weather events -- anywhere where fluids and structures coexist. We are currently in discussion with industry regarding potential applications."

NASA developed the technology to solve a problem on a launch vehicle; however, the technology is an easily implementable concept and has the potential to solve a multitude of vibration issues.

For video of this fluid structure coupling technology and how it may benefit structures on Earth, visit [here](#).

To learn more about this technology and its potential benefits, join the NASA Tech Briefs webinar on July 18 by visiting [here](#).

For information on commercially licensing this technology, contact Sammy Nabors at [Sammy.Nabors@nasa.gov](mailto:Sammy.Nabors@nasa.gov).

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

# Marshall Association Awards Its Largest Scholarship Amount Ever to Promising Students

By Jena Rowe

The Marshall Association awarded \$5,000 in scholarships to five promising high school and college students at an awards luncheon July 11 at NASA's Marshall Space Flight Center. It was the largest amount ever presented in scholarship dollars by the Marshall Association.

“The Marshall Association is proud to give away more scholarship dollars this year than we have ever given away in the past,” said Bob Devlin, president of the Marshall Association and deputy director of the Office of Center Operations. “It is humbling to see the outpouring of people wanting to support the next generation of leaders. Based on their essays, these students show great potential to make our world a better place.”

Scholarship recipients are Michael Volt, son of Martin Volt of the Materials & Processes Laboratory, attending Auburn University in the fall; Grace E. Keys, daughter of Andrew Keys of the Office of the Director, attending Auburn University in the fall; Harper Cox, son of Renee Cox of the Chief Engineers Office, attending the University of Alabama in Huntsville in the fall; Maria Torres, daughter of Pablo D. Torres of the Materials & Processes Laboratory, currently attending the University of Alabama in Huntsville; and Bayleigh Hicks, daughter of Roslin Hicks of the Facilities Management Office, currently attending the University of Alabama in Tuscaloosa. These students were chosen from a pool of candidates pursuing Science, Technology, Engineering and Math (STEM) and non-STEM careers based on their academic records, after-school involvement and a written essay describing their planned career paths 10 years from now. To be considered, students must submit scholarship applications and their parents must be association members.

NASA Administrator Charles Bolden addressed the scholarship recipients along with Leland Melvin, a former astronaut who currently is NASA associate administrator for education.



*The Marshall Association awarded \$5,000 in scholarships to three recent high school graduates and two college students July 11. NASA Administrator Charles Bolden presented the awards. From left are Harper Cox, Grace E. Keys, NASA Administrator Charles Bolden, Michael Volt, Bayleigh Hicks and Maria Torres. (NASA/MSFC/Fred Deaton)*

“Continue to follow your dreams,” Bolden told the students, “because you are the only one who can make them happen. Do something you’re passionate about. You have done incredibly well to be recognized by the association and I have no doubt you will be incredible future leaders.” Former astronaut Jan Davis of Huntsville introduced Charlie Bolden and Leland Melvin at the event.

The Marshall Association was established to build the exchange of innovative and stimulating ideas within the Marshall community. The self-governing organization sponsors several activities throughout the year, all of which are supported through the volunteer efforts of its dues-paying members. In addition to the scholarship competition, the association sponsors a speaker program addressing topics of interest to Marshall team members.

For more information about the Marshall Association, visit [here](#).

*Rowe, an Analytical Services Inc. employee and the Marshall Star editor, supports the Office of Strategic Analysis & Communications.*

# NASA Honors 17 Marshall Team Members with Silver Snoopy Award

On July 16, 17 NASA Marshall Space Flight Center team members were honored with the NASA Silver Snoopy award for their outstanding achievements to human flight safety or mission success. The Snoopy represents the astronauts' own recognition of excellence. The awards were presented NASA astronaut T.J. Creamer and Marshall Center Director Patrick Scheuermann. For more information on the award, visit [here](#).



From left, first row, astronaut T.J. Creamer; and honorees Stacie E. Gooch, Stages Office; Carey G. Thompson, Program Planning & Control Office; Erin M. Betts, Propulsion Systems Department; Douglas N. Reeves, Ground Operations Liason Office; second row, Van A. Woodruff, Mission Operations Laboratory; Joseph H. Ruf, IV, Propulsion Systems Department; Stephen D. Creech, Space Launch Systems Program Office; third row, Daniel R. Dennis, Space Systems Department; T. Emerson Oliver, Spacecraft & Vehicle Systems Department; and Richard N. Grugel, Materials & Processes Laboratory. (NASA/MSFC/Emmett Given)



From left, first row, astronaut T.J. Creamer and honorees Dana W. Tipton, Mission Support & Integration Office; Jennifer L. Romine, Office of the Chief Financial Officer; Cassandra Pitts, Office of Human Capital; second row, Deborah G. Swafford, Protective Services Office; third row, David A. Falconer, Science & Research Office; Richard L. Smith, Office of Strategic Analysis & Communications; and Burgess F. Howell, Science and Research Office. (NASA/MSFC/Emmett Given)

## Marshall Feeds Families *Continued from page 2*

Foods needed most at the North Alabama Food Bank are:

- Canned fruits in light syrup or its own juices
- Canned vegetables
- Canned proteins (tuna, salmon, chicken, peanut butter, beans)
- Multigrain cereals (cheerios, cornflakes, grape nuts, raisin brand)
- Grains (brown and white rice, oatmeal, bulgur, quinoa, couscous, macaroni and cheese)
- Soups (low sodium, beef stew, chili, chicken noodle, turkey and rice)
- 100 percent juice (all sizes, including juice boxes)
- Condiments (tomato-based sauces, light soy sauce, ketchup, mustard, salad dressing, oils)
- Snacks (whole grain, low in added sugars, individually packed snacks, crackers, trail mix, dried fruit, granola/cereal bars, pretzels, sandwich crackers)

- Baking goods (flour, sugar, baking powder, baking soda, spices, boxed mixes)
- Dinner kits (hamburger helper, noodles)
- Hygiene items (diapers, deodorants for men and women, feminine products, toilet paper, tissues, soap, toothpaste, shampoo)

For your convenience, food donation bins are located at the ground floor of Building 4200 and the lobbies of Buildings 4203, 4487, 4600, 4601, 4610, 4708 and at the lobby of the National Space Science & Technology Center (NSSTC).

The Marshall Center goal is for each team member to donate 3 pounds of canned goods and other non-perishable food items. For more information, contact Elia S. Ordonez at [elia.s.ordonez@nasa.gov](mailto:elia.s.ordonez@nasa.gov) or (256) 544-6658.

## 'NASA Night' at Joe Davis Stadium Showcases Marshall's Work



Marshall Space Flight Center Director Patrick Scheuermann helps launch "NASA Night" at Joe Davis Stadium July 12 by throwing out the first pitch of the game between the Huntsville Stars and the Birmingham Barons. More than 3,900 people came out for the game and the fireworks that followed -- and had an opportunity to learn more about the work of the Marshall Center and NASA. (MSFC/Fred Deaton)



In the stands at Joe Davis Stadium, Kristin Morgan, right, a strategic analyst in Marshall's Office of Strategic Analysis & Communications, leads a "Jeopardy"-style trivia challenge, asking the crowd questions about NASA and space exploration. Morgan, who won the "Jeopardy" TV game show five consecutive days in January and took part in the series' "Tournament of Champions" in February, was among dozens of Marshall team members who volunteered for the "NASA Night" event, helping to share information about the [Space Launch System](#), the [Centennial Challenges Program](#), NASA's [SERVIR](#) environmental monitoring and mapping system pioneered at Marshall and more. (MSFC/Fred Deaton)



NASA astronaut T.J. Creamer, center, a payload operations director in Marshall's [Payload Operations Integration Center](#), greets Sarah and Tripp Raleigh, the twin children of Shannon Raleigh, a Media Fusion contractor who supports the Office of Strategic Analysis & Communications, or OSAC, providing education and public outreach to the Space Launch System Program Office. Creamer was on hand throughout the game to sign autographs, pose for photos and chat with fans. "NASA Night" was organized for the center by OSAC and the Marshall Exchange. (MSFC/Fred Deaton)