



# MARSHALL STAR

Serving the Marshall Space Flight Center Community

Feb. 21, 2008

## Shuttle Atlantis returns home after successful mission

*NASA Headquarters News Release*

Space shuttle Atlantis and its crew landed at 8:07 a.m. CST Feb. 20 at NASA's Kennedy Space Center, Fla., after completing a 13-day journey of nearly 5.3 million miles in space. The STS-122 mission expanded the size and research capabilities of the International Space Station with the delivery of the European Space Agency's Columbus laboratory.

Associate Administrator for Space Operations Bill Gerstenmaier described STS-122 as one of the program's most successful space station construction missions.

"These missions are extremely challenging, and a great deal of preparation and teamwork are required to get these vehicles ready to fly," Gerstenmaier said. "We're focused on completing assembly and moving into the full utilization phase of the station. This mission opens the door for another one of our international partners to join in the important work and science on the space station."

Steve Frick commanded the flight and was joined



Space shuttle Atlantis lands at the Kennedy Space Center, Fla., Feb. 20.

by Pilot Alan Poindexter, mission specialists Leland Melvin, Rex Walheim, Stanley Love and European Space Agency astronauts Hans Schlegel from Germany and Leopold Eyharts from France. Eyharts remained on board the space station,

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## Ares I: Resolving the thrust oscillation issue

A NASA focus team led by Garry Lyles, the Marshall Center's associate director for technical management, is working to assess and resolve the Ares I first-stage "thrust oscillation" issue raised in recent weeks.

Thrust oscillation is a common characteristic of all solid rocket motors, including the first stage of the Ares I crew launch vehicle. It is characterized by a series of increasingly quick pulses that occur late in first-stage powered flight. Depending on the amplitude of these pulses, or their maximum periodic displacement of air, the impact of the phenomenon on the vehicle's structure and occupants could be significant.

What causes them? Vortices — spinning, turbulent flows created inside the solid rocket motor by burning propellant or other flow disturbances — can "tune" with acoustic energy, or sound waves,

created in the motor combustion chamber. That convergence of energies can generate forces running lengthwise across the chamber. The resulting vibration could exceed permissible flight loads, if the thrust oscillation frequencies "tune" with the natural frequencies of the launch vehicle.

Lyles and his team, which includes NASA, academic and industry experts, are working to understand how thrust oscillation may impact the entire stack — the first stage, the upper stage and the Orion crew exploration vehicle they lift to space — and to determine how to minimize the impact.

Such assessment and mitigation studies are standard operating procedure for any new development program, Lyles said.

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# Marshall's Robert 'Bob' Ryan inducted into State of Alabama Engineering Hall of Fame

By Megan Norris

While it may seem basketball and space exploration have nothing in common, one Marshall Center employee — who's a recent State of Alabama Engineering Hall of Fame inductee — attributes his success at NASA to his early successes on the court.

In 1948, Robert "Bob" Ryan taught math and science, as well as perfecting layups and two-point shots, as a new teacher and basketball coach at Priceville High School in Priceville, Ala. As coach, he led his team to two Class A State Basketball Championships, four 8th District Championships and two Morgan County Championships in just eight years at the school. But even with a case full of trophies, Ryan said he felt a need to pursue his true "calling" — engineering.

Sixty years later, Ryan is still using that same dedication and leadership that changed high schoolers into hometown heroes to teach and mentor engineers pursuing their dreams to become champions of discovery. And for giving so much to the field of engineering, he's getting back more than he ever expected — a coveted spot in the State of Alabama Engineering Hall of Fame.

The Hall of Fame honors the outstanding accomplishments and contributions of individuals, projects and corporations or institutions that have brought, and continue to bring, significant recognition to Alabama. Inductees, like Ryan, have made and continue to make significant contributions to the advancement of engineering and technology. By their example, they inspire others to pursue rewarding and challenging careers in all engineering fields.

Ryan joined the 116-member Hall of Fame as one of seven new inductees during a Feb. 16 ceremony in Prattville, Ala., honored for his significant contributions to space exploration since he joined the Marshall Center when it was established in 1960. Though, he says, his success is not something he has achieved alone.

"I feel I can't take this honor by myself because so many people at Marshall have helped me along the way," Ryan said. "My success has truly been a team effort, and being inducted into the Hall of Fame is more credit to my colleagues for helping me reach this pivotal point in my career."

His transition from educator to engineer began in January 1956 when Ryan was first hired by the Army Missile Command and then by NASA in 1960 as an aerospace engineer in structural analysis and control systems analysis. From 1974 to 1989, he served as chief of Marshall's Structural Analysis Division of the Engineering

Directorate. Ryan put his coaching skills back into practice in the management and technical direction of 95 civil service employees on the structural design and dynamic analysis of NASA projects. Some of those projects included the space shuttle, Spacelab and High Energy Astronomy Observatories.

The 1990s brought a new decade of technical innovations in space exploration, such as the launch of the Hubble Space Telescope, and a new role for Ryan as deputy director of Marshall's Structures and Dynamics Laboratory. He helped plan and direct research and development, engineering and technical management of 400 people in such areas as dynamic environment, control systems and structural dynamics.

As deputy, he guided activities for Hubble — launched from space shuttle Discovery in 1990 — as well as activities for the design and development of the space shuttle and its elements — main engine, external tank and solid rocket motor — and the International Space Station. Ryan's career contributions exemplify the committed workforce that keeps Marshall at the forefront of America's space propulsion and transportation challenges.

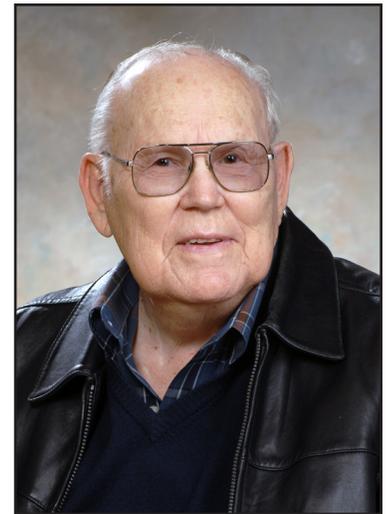
Ryan retired from NASA in May 1996, but continues today to mentor new engineers and teach courses as a technical training coordinator with ASRI, a contractor supporting Marshall's Office of Human Capital. He is also a technical consultant for Lee & Associates, LLC of New Market, Ala. His engineering expertise is crucial on several NASA projects, including the Constellation Program. The program's new launch vehicles, the Ares I and Ares V, are currently under development at Marshall and are playing a critical role in maintaining America's pre-eminence in space.

Ryan's legacy continues. Two of his sons, Rick and Steve, are engineers at Marshall, and three of his grandchildren are following the family footsteps into engineering, as well. He said teaching — the starting point of his career — is important in helping new engineers continue turning theoretical research here at home into tangible technologies for the future of space discovery.

"In every project I've worked and been involved with across my career, I feel my greatest contribution is teaching engineers the ever-changing technologies and design processes," Ryan said.

"No matter what kind of computer software comes out or high-tech innovations, nothing is more powerful than the creativity of the human mind."

*Norris, an ASRI employee, supports the Office of Strategic Analysis and Communications.*



Robert "Bob" Ryan

## This month in history ...

Fifty years ago today, the Soviet Union fired a single-stage rocket to a 294-mile altitude with 3,340 pounds of experiments for measuring ion composition of the atmosphere, pressure, temperature, micrometeorites, etc., according to the Soviet Committee. The launch



was another in a series of space launches by the Soviets and other launches by the United States that were part of the opening of the space program. Ultimately, NASA decided to create a civilian space agency in October 1958.

## Black History Month continues at Marshall

### 'Lunch & Learn' events Feb. 27-28

The Marshall Center continues to honor Black History Month and the diverse, multitalented workforce that is the backbone of NASA with two "Lunch & Learn" events Feb. 27-28.

On Feb. 27, retired Huntsville physician Dr. Sonnie Hereford III, a lecturer at Calhoun Community College in Huntsville, will present his documentary, "A Civil Rights Journey," a snapshot of the civil rights movement in Madison County in the 1960s.

Hereford will be introduced by his son, Sonnie Hereford IV, technical director of Freedom Information Systems,

an information technology firm supporting the Constellation program at the Marshall Center. The younger Hereford will present his own unique perspective on the era — in 1963, as a first grader, he was the first African-American to integrate into an Alabama public school.

The Herefords' presentation will be held in Building 4664, Room A164.

On Feb. 28, Marshall Center Historian Mike Wright will present a lunchtime lecture titled "An Historical Perspective on Black 'Historiography,'" or the collected body of historical literature and data pertaining to the African-American experience.

Wright's presentation will be held in Building 4610, Room 1054.

Both events will begin at 11 a.m. Marshall team members are encouraged to bring a lunch and take part.

For more information, contact Willie Love, assistant director of Marshall's Office of Diversity and Equal Opportunity, at 544-0088 or [willie.j.love@nasa.gov](mailto:willie.j.love@nasa.gov).



Above left, at the Marshall Center's informal Black History Month leadership celebration in early February, Tereasa Washington, director of Marshall's Office of Human Capital, center, greets Cedreck Davis, energy and water program manager within the Facilities Management Office, right.



Above right, attendees line up for snacks served by Abbie Johnson, equal employment manager in Marshall's Office of Diversity and Equal Opportunity, far right. The office hosted the leadership celebration to kick off Marshall's month-long activities marking Black History Month.

David Higginbotham/MSC

# Landing

## *Continued from page 1*

replacing Expedition 16 Flight Engineer Dan Tani, who returned to Earth on Atlantis after nearly four months on the station. Eyharts will return on shuttle Endeavour's STS-123 mission, targeted for launch March 11.

The mission included three spacewalks to outfit Columbus with power, data and cooling cables, installation of two science experiments on the lab's exterior, replacement of an expended nitrogen tank on the space station's cooling system, and retrieval of a failed space station control moment gyroscope — a device that helps control the orientation of the station — for its return to Earth.

Several inspections in orbit revealed no damage to Atlantis,

and the shuttle's thermal protection system was declared safe for re-entry Feb. 19. Workers immediately will begin processing Atlantis for its next flight to service the Hubble Space Telescope, targeted for Aug. 28.

STS-122 was the 121st space shuttle flight, the 29th flight for shuttle Atlantis and the 24th flight to the station.

With Atlantis and its crew safely home, the stage is set for the next phase of station assembly. The STS-123 mission will deliver the Japan Aerospace Exploration Agency's Kibo logistics module and Canada's new robotics system, Dextre, the Special Purpose Dexterous Manipulator, to the station.

For more about the STS-122 mission and the upcoming STS-123 mission, visit <http://www.nasa.gov/shuttle>.

# Ares I

## *Continued from page 1*

"Program risks always must be identified and resolved prior to a hardware development effort," Lyles said. "Thrust oscillation is an example of such a risk. It's being reviewed, and a mitigation plan is being developed. We're still early in program development. This is a good point to work this issue, before we get deeper into the design cycle.

"Marshall has excelled for 50 years at using its technical

capabilities and expertise to develop NASA's space transportation systems," he added. "We're doing so again now."

The thrust oscillation focus team will deliver its report to NASA Administrator Michael Griffin in March. NASA is committed to resolving the thrust oscillation issue well in advance of the Ares I preliminary design review, scheduled for August.

"NASA has an excellent track record of resolving technical challenges," Griffin has said in a statement. "We're confident we'll solve this one as well."

## *Obituaries*

**Van Alfron McAuley**, 81, of Huntsville died Jan. 8. He retired from the Marshall Center in 1981 as an engineer.

**Jack G. Blankenship**, 77, of Huntsville died Jan. 15. He retired from the Marshall Center in 1974 as an engineer. He is survived by his wife, Blanche E. Blankenship.

**Paul E. Tidwell**, 87, of Rock Hill, S.C., died Jan. 16. He retired from the Marshall Center in 1987 as a supervisor accountant.

**James Halliday Morrow**, 101, of Huntsville died Jan. 17. He retired from the Marshall Center in 1974 as a facility management specialist.

**Annie Lee White**, 86, of Madison died Jan. 18. She retired from the Marshall Center in 1975 as a secretary.

**John Milroy Theiss**, 79, of Kingston, Tenn., died Jan. 21. He retired from the Marshall Center in 1990 as an electronics technician.

**Hugh J. King**, 90, of Huntsville died Feb. 5. He retired from the Marshall Center in 1980 as a food services officer.

**Anna J. W. Fowler**, 73, of Huntsville died Jan. 27. She was a current employee of the Marshall Center and served as a facilities specialist. Ann began working at NASA in 1958 as a personnel assistant where she interviewed, hired and then married her husband, Harry W. Fowler Jr., who passed away in 1978. Ann is survived by her daughters and son-in-law, Dee Dee Cobb of Nashville, Tenn.; Becky and Dale Leavy of Orlando, Fla.; Jeannie and Karen Fowler, both of Huntsville; grandchildren, AJ and Megan Cobb, Jonathan Fowler and Ginny Leavy; one sister, Nadine Harmon; and several nieces and nephews and her beloved friends. Her youngest daughter, Karen, works at the Marshall Center for a contractor supporting the Flight & Ground Software Division in the Engineering Directorate. Donations may be made to the Clearview Cancer Institute & Foundation (Hematology Department) or to the Arthritis Foundation.

# Internal Communications Survey being conducted

Effective internal communications is key to overall mission success and center leadership wants to ensure that supervisors and employees have timely and relevant information. Therefore, a communications survey will be conducted of all center supervisors and a group of randomly selected employees to better understand how employees get their information and which communications vehicles are most useful and effective.

The Office of Strategic Analysis & Communications will use the survey results to inform and enhance the planning and development of internal communications products and processes. If you are one of the selected employees to receive an e-mail with a link to the survey, please provide your input and share your ideas for improving employee communications at the center. The survey is anonymous

and should take no more than 15 minutes of your time.

A communications survey conducted in 2005, followed with focus group discussions, resulted in new employee communications products including "Focus on Marshall," a monthly broadcast program that spotlights the people and work performed at Marshall, and To the Point, an e-newsletter that provides useful and timely information for Marshall supervisors. The Marshall Star, the center's weekly newspaper, also was enhanced with topics about the center's mission, programs and personnel. Newsstands also were placed in high traffic areas around the center to provide quick access for employees and visitors. All of these internal communication products are available online on Inside Marshall at <http://inside.msfc.nasa.gov/>.

## 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. 28, is 4:30 p.m. Thursday, Feb. 21.*

### Miscellaneous

- Weider Pro 9635 home gym, universal multi-station, \$150  
Antique cherry drop-leaf dining room table, six chairs.  
772-4646
- Pecan dinette for six, leaf, china cabinet, \$500.  
883-8632. For pictures, e-mail kennjenn2@hotmail.com.
- Pottery Barn set, twin quilt, pillow, quilted pillow shams,  
slip cover, bed skirt, \$75. 466-0723
- Green fabric sofa, loveseat, \$450. 694-0116
- Wicker seven-drawer dresser, white, pictures available,  
\$100 obo. 379-3398 or 509-2536
- Large dome-shaped bird cage, 32x64x24, \$150. 603-0608
- G&L Tribute Legacy guitar, case, amp, \$300. 468-3803
- Utility trailer, 5 feet by 8 feet, \$500 obo. 233-8505
- Huntsville Memory Garden, Garden of Devotion, six adult  
spaces, \$2,195 each, negotiable. 859-4002
- Antique dining table, leather chairs, sideboard, mirrors,  
paintings, settee, lamps, occasional tables, sofa.  
498-6225
- Piedmont Recreation Association pool membership, \$250.  
885-5973

- Large wood desk; three 26-inch bicycles, Diamondback  
Sorrento, blue, green, Roadmaster MT Climber Sport.  
461-7962
- Aiwa bookshelf surround-sound system, five speakers,  
three disc, dual tape, \$50. 479-4345
- Broadway Theater's "Camelot," Feb. 23, 8 p.m., orchestra,  
rows I-19, I-20, \$54 each. 830-1445
- Small teak roll-top desk, 1970s Scandinavian design, \$200  
obo. 830-0248
- 36x48 mirror, \$25. 509-4454
- Nintendo Wii, used, Wii Play, controller, chuck, CSI game,  
\$400. 565-3534
- Broyhill kitchen hutch, glass sides, doors, shelves, \$575;  
wood kitchen table, four chairs, \$375. 975-1667
- Contemporary dining room set, 72-inch glass table, six  
upholstered chairs, two China cabinets, \$500. 603-1273
- Middle, back bench seats, for 1993 Voyager minivan, \$200  
each, obo. 851-9418
- Carter Brothers go-kart, #2636-LA, 6.5HP, live axle, 2WD,  
adjustable double seat, running lights, \$725. 737-7246
- Weedeater/Poulan 19-inch rear-tine tiller, model WER-  
600, 6HP Tecumseh, \$350 obo. 828-1234
- Whirlpool bathtub, 72 by 42 inches, almond, six jets,  
working pump, \$150. 655-6701

### Vehicles

- 2007 Chrysler Pacifica Limited, black, all power, leather,  
2006 Starcraft RV SB21, see [www.travelstarrv.com](http://www.travelstarrv.com) for  
floor plan, make offer. 864-8045
- 2004 Monte Carlo, \$5,995; 2003 Galant, 77k miles,  
\$5,600, 2001 Sonata, 74k miles, \$3,900. 520-2802
- 2001 Mazda Miata LX, tan leather, power windows, black,  
61k miles, \$10,900. 883-6894 or 468-6894
- 2000 Jetta, green, auto, air, alloys, power windows, locks,  
sunroof, 119k miles, \$5,500 obo. 509-3559

- 1999 Toyota 4-Runner Limited Edition, white, brown  
interior, sunroof, CD, A/C, \$7,000. 694-1260
- 1999 Yamaha TT225, \$1,400; 18-foot metal garage door,  
opener, \$225. 233-5620
- 1998 Honda Civic LX, four door, silver, auto, power, new  
tires, 105k miles, \$4,900. 348-1549
- 1995 Toyota 4-Runner, black, gray interior, CD, A/C,  
\$4,500 obo. 655-1733
- 1995 Jeep Grand Cherokee, Orvis model, 4WD, leather,  
green, Class III square hitch, \$2,500. 783-6851
- Red Pontiac Fiero. 658-8103
- 1986 Nissan 300ZX, red, needs PS pump, A/C needs  
charge. 759-3009

### Wanted

- Freelance photographer for November wedding, must have  
portfolio, salary requirements. 885-2303
- Houses to clean, one-time "deep clean" or regular  
cleaning available. 777-8595
- Someone to fix 1976 pin ball machine, Westinghouse Coke  
machine. 772-1199

### Free

- Female cat, 4 years old, fixed, all paws declawed, very  
social. 864-9975

### Shuttle Buddies to meet Feb. 25

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

## Marshall team receives Combined Federal Campaign recognitions



Celebrating the Marshall Center's unprecedented fundraising milestones for the 2007 Combined Federal Campaign are, from left, Donna Johnson, chairperson of the local federal coordinating committee for the Tennessee Valley CFC; Cindy Campbell, organizational lead for Marshall's Office of Human Capital; Patricia Benson, Marshall CFC vice chairperson for community service; Maj. Gen. James Myles, commanding general of the U.S. Army Aviation and Missile Command at Redstone Arsenal and chairperson of the 2007 Tennessee Valley CFC; Irene Taylor, Marshall CFC executive

chairperson; David Percival, executive vice chairperson for finance and reports; Rosa Kilpatrick, Marshall's representative to the local federal coordinating committee; Linda Vestal, executive vice chairperson for promotions; and Steve Spearman, executive vice chairperson for bus tours. Marshall was honored for its distinguished service to the CFC effort, and for reaching the center's monetary goal of \$600,000 — which Marshall surpassed by more than \$65,000. Johnson and Myles presented the awards to the Marshall team earlier this month.

## Thank you from the Fowler family

On behalf of Ann J.W. Fowler family, we would like to express our sincere thanks and gratitude to everyone that visited, called, sent notes or gifts while mom was in the hospital. We appreciate your kindness during our mom's illness and now during our time of mourning. We know that mom will not only be missed by her immediate family, but also by her NASA family of co-workers, contractors and associates here at MSFC and throughout NASA.

With sincere appreciation,  
*Karen E. Fowler*

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