



# MARSHALL STAR

Serving the Marshall Space Flight Center Community

Oct. 13, 2005

Managed by the Marshall Center

## Gravity Probe B completes data collection

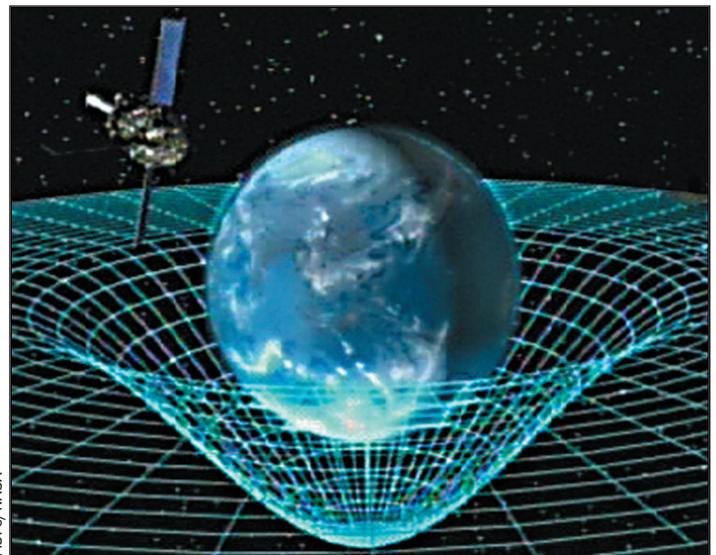
Almost 90 years after Albert Einstein first postulated his general theory of relativity, scientists have finished collecting data to put it to a new, different kind of experimental test.

NASA's Gravity Probe B satellite has been orbiting the Earth for more than 17 months. Managed by the Marshall Center, the mission used four ultra-precise gyroscopes to generate the data required for this unprecedented test.

Fifty weeks of data have been downloaded from the spacecraft and relayed to computers in the Mission Operations Center at Stanford University in Stanford, Calif. Scientists have begun the painstaking task of data analysis and validation, which is expected to take approximately one year.

"The completion of the Gravity Probe B mission is the culmination of years of hard work, training and preparation by the entire team," said Tony Lyons, NASA Gravity Probe B program manager from the Marshall Center.

*See Probe B on page 4*



Artist concept of Gravity Probe B orbiting the Earth to measure space-time, a four-dimensional description of the universe including height, width, length and time.

## Propulsion Research Laboratory to hold Industry Day on Oct. 18

The Propulsion Research Laboratory at Marshall, one of NASA's premier research facilities for cutting-edge space propulsion systems and hardware development, will hold an Industry Day on Tuesday, Oct. 18, from 10 a.m. to 3 p.m.

Local and regional businesspeople, scientists and NASA stakeholders are

expected to visit the facility to learn more about NASA propulsion research efforts and opportunities for industry collaboration.

Attendees will hear a series of presentations by members of the Propulsion Research Center, the primary organization that occupies the 66,000-square-foot lab complex. Speakers will introduce key research

efforts now under way at the lab or planned for the near future — including advanced chemical, electromagnetic and simulated nuclear propulsion research activities pivotal to the Vision for Space Exploration. The vision calls for Americans to return to the moon and travel to Mars and beyond in coming decades.



MSFC/Emmett Given

Propulsion  
Research  
Laboratory  
at Marshall

## Charles Scales named deputy of Center Operations

Charles H. Scales has been appointed deputy director of the Office of Center Operations at the Marshall Center.

A 32-year NASA veteran, Scales will help guide environmental engineering, logistics, facility management, protective services, occupational medicine and environmental health, and food services at the Marshall Center. He also will provide support for NASA's Integrated Enterprise Management Program, the agency-wide transformation of NASA's business systems to improve fiscal management and accountability.

Scales is a new member of NASA's Senior Executive Service, a personnel system covering most top managerial and policy positions in the executive branch of the federal government. He returns to Marshall after serving as director of center operations at Glenn Research Center in Cleveland. From 1997 to 2004, Scales was director of Marshall's Equal Opportunity Office.

A native of Livingston, Scales graduated from Alabama A&M University in Huntsville in 1975 with a bachelor's degree in business. While at A&M, he enrolled in the Cooperative Education training program at Marshall.

After receiving his degree, Scales joined the Marshall Center's Institutional and Program Support Directorate as a communications specialist. In 1976, he became a program analyst in the

Communications Division. He was appointed chief of the Program Control Office in Marshall's Facilities Office in 1986. Two years later, he was named chief of the Information Systems Services Office's Resources Management Branch. In 1994, he was appointed director of the Business Management Office. He became deputy director of Marshall's Equal Opportunity Office in 1996.



Charles H. Scales

During his NASA career, Scales has earned a number of awards for outstanding leadership, including the Space Flight Leadership Award and the NASA Exceptional Service Medal. He was honored in 1997 with a Silver Snoopy Award for outstanding performance, contributions to flight safety and mission success.

A 2005 inductee into the Alabama A&M University Alumni Hall of Fame, Scales has completed the Carnegie Mellon University Senior Executive Seminar and the Federal Executive Institute's Leadership for a Democratic Society course. He is a graduate of Leadership Huntsville and Leadership Alabama, nonprofit community and state organizations that nurture civic participation.

Scales and his wife Bunnie reside in Huntsville.

## Around Marshall

### Red Cross chapter director to speak at CFC 'Lunch-n-Learn'

Rick Cantrell, executive director of the Madison and Marshall County Chapter of the American Red Cross, will speak at a Combined Federal Campaign "Lunch-n-Learn" on Wednesday, Oct. 19. The event will be at 11:30 a.m. in Building 4200, Room P-110. Cantrell will discuss the mission of the Red Cross and his personal experiences during four weeks assisting with Hurricane Katrina relief efforts. All Marshall team members are invited. For more information, call Robby Newton at 544-7880.

### Labor official to speak at Disability Awareness luncheon

Dr. Roy Grizzard, assistant secretary in the U.S Department of Labor's Office of Disability Employment Policy, will speak at the Team Redstone "Disability Awareness Month Luncheon" Thursday, Oct. 20. The luncheon begins at 11 a.m. at the Redstone Officers' and Civilians' Club. Tickets are \$12. October is Disability Employment Awareness Month. This year's theme is "Workers with Disabilities: Ready for Tomorrow's Jobs Today." For more information or to purchase tickets, call Allan Day, the Marshall Center's Equal Employment Manager for Disability Programs, at 544-4079.

### Shuttle Buddies to meet Oct. 24

The Shuttle Buddies will meet at 9 a.m. Monday, Oct. 24, at Mullins Restaurant on Andrew Jackson Way in Huntsville. For more information, call Deemer Self at 881-7757.

### Management Operations retirees to meet Oct. 27

Retirees of Marshall's Management Operations Office will meet for breakfast at 10 a.m. Thursday, Oct. 27, at the Cracker Barrel Restaurant in Madison. All retirees, former employees or current employees are invited.

### Dr. Jan Davis speaks at Marshall Association luncheon

Dr. Jan Davis, director of the Marshall Center's Safety and Mission Assurance Directorate, speaks at the Marshall Association luncheon Oct. 5 about her NASA career as an engineer, astronaut and manager. Davis plans to retire from federal service Oct. 15 and work in the aerospace industry.



MSFC/Emmett Given

## Marshall, Redstone teams celebrate Hispanic Heritage Month

# 4th Annual Hispanic Youth Conference on Friday in Huntsville

The Marshall Center joins the U.S. Army and associated agencies across Redstone Arsenal Thursday, Oct. 13, to celebrate Hispanic Heritage Month.

Festivities will continue Friday when Marshall welcomes about 300 Hispanic students to Huntsville for the Fourth Annual Hispanic Youth Conference.

The Hispanic Heritage celebration will be held at the Army Recreation Center on Redstone Arsenal from 10 a.m. to 12:30 p.m. Charles Scales, deputy director of Marshall's Office of Center Operations, will speak, along with representatives of the Alabama Hispanic Association.

The theme of this year's celebration



NASA

Robin Henderson

Huntsville Marriott Hotel adjacent to the U.S. Space & Rocket Center.

Attendees include students participating in "Mi Futuro" (My Future) and "Alcanzando Metas" (Reaching Goals) programs from

is "Hispanic Americans: Strong and Colorful Threads in the American Fabric." The event also will include Latin music and food for attendees.

Friday's Hispanic Youth Conference will at the

Lawson State Community College in Birmingham and Stillman College in Tuscaloosa.

Marshall Center Associate Director Robin Henderson will welcome the students, who also will meet with NASA scientists and engineers, business professionals and state leaders. They will tour the Space & Rocket Center and attend workshops on Hispanic heritage and careers in science, math and engineering. The conference concludes Friday night with a banquet at the Marriott.

For more information about Hispanic Heritage Month events, call Elia Ordonez, Marshall's Hispanic Employment Program manager, at 544-6658.

## 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

2000 Skeeter SL176 Fish/Ski, 150 HP Yamaha V-Max, 2 depth finders, trolling motor, \$10,000 obo. 256-773-0018

2004 4-wheeler Reckon 250, \$3,300. 971-5990

Ladies golf clubs, 2 woods, 3 irons and putter, \$50; New 17" computer monitor, \$20; Computer desk, \$20. 721-0709

2004 250 Recon Honda 4-wheeler. Like new. Ridden 10 times. 520-1400

1964 University of Alabama National Championship Team photos published by Birmingham Post Herald. 256-551-0276

I.H. Cub tractor with cultivator; hydraulic lift, \$2,500. 256-773-5051

Two like new 84"- 120" brass traverse rods with all brackets, \$40. 883-8340

Japanese 6.5 x 51 Arisaka rifle, 100 rounds, \$150. 883-8340

Accusmart Pro-Form Cross Walk Treadmill, \$125. 541-9071

Samson S700 (350-1000 watts) power amplifier. Two-rack unit, never used, \$300. 303-3702

Tractor, MF-255, 2047 hours, 4 remote hydraulic ports, spin-out rears, barn kept, \$6250. 880-2290

2" memory foam mattress, queen size, \$60. 880-7381

New 1 gigabyte memory stick Pro-DUO, high speed; Sony PSP camera ready, \$99. 655-1986

L.L. Bean men's Super 200 Trailwind pullover, large, \$40. 679-3921

Antique oak dresser with beveled mirror, \$300; sofa, oak frame, multicolored, like new, \$150. 353-0370

4 Tennessee Titans PSL's section 332, row GG, seats 11, 14, \$6,000. 233-0580

4 P195/60R15 Kumho tires and rims fit 1988-1992, \$100; Toyota hubcaps, \$40. 256-882-1385

Mattress set, full size, excellent condition, \$100. 694-1217

Titleist 704.CB, 3-PW, right hand, less than 1 year old, \$450. 566-1554

GE washer & dryer, used 1 year, \$400. 348-8640

Villian II Ski Boat, \$3,000; 2003 dirt bike, 300 DE, \$3,000. 679-0073

Gourmet kitchen cart on casters, solid wood butchers block top, 20" x 26", \$20. 325-8588

### Vehicles

1977 Corvette. Burgandy, ss brakes, modern A/C, 10-cd player, etc. 885-9728

2004 Dodge Ram 1500 Laramie, 5.7L HEMI, quad cab, 2,700 actual miles, leather, \$23,995. 883-5955

2002 Nissan Pathfinder SE, auto, 53k, certified, Bose CD-changer, warranty, \$16,900 or assume payments. 880-9025

1998 Ford F-150 XLT, 124k miles, 1 owner, \$8,250. 256-603-9902

1985 Honda Accord LX, 5 speed, 25/25mpg, \$950. 256-880-2015

1999 Ford Explorer, 4x4, Eddie Bauer, loaded. 776-9636

1997 Honda Magna VF750C, 4 cylinders, 7k windshield, bags, sissy bar, \$4,000. 859-0729

### Wanted

Old sliding glass doors. I'll pick up. 874-7874

Back window for 1987 Mazda B2000 P.U. 256-544-0789

### Pets

Older full-blooded Shih Tzu dog, female. Trained. No papers. Best offer. 751-0999

### Carpool

Blount County/Arab areas. 205-559-1996

### Employees see 'Compassion in Action' through tours of local charities



More than 170 Marshall Center employees recently visited local charitable organizations to see firsthand how their Combined Federal Campaign donations impact the local community. In the left photo, Marshall team members tour the Alabama Center of Military History, guided by, fourth from left, retired Army Lt. Col. Milt Aitken.



Photos by Doug Stoffler/MSFC

In the right photo, Gail Scott, at far right, director of First Stop Interfaith Mission Services, briefs Marshall employees on her agency's activities. This year's Marshall campaign, entitled "Compassion In Action," runs through Nov. 11. It has a fund-raising goal of \$575,000.

## Probe B

Continued from page 1

"This has been a tremendous mission for all of us," said Francis Everitt, Gravity Probe B principal investigator at Stanford. "With all the data gathered, we are proceeding deliberately to ensure everything is checked and re-checked. NASA and Stanford can be proud of what has been achieved so far."

Launched on April 20, 2004, from Vandenberg Air Force Base, Calif., Gravity Probe B has been using four spherical gyroscopes to precisely measure two extraordinary effects predicted by Einstein's theory. One is the geodetic effect, the amount by which the Earth warps the local space time in which it resides. The other, called frame-dragging, is the amount by which the rotating Earth drags local space time

around with it.

Stanford conceived the experiment and is NASA's prime contractor for the mission. Stanford was responsible for the design and integration of the science instruments and mission operations. The university has the lead for data analysis. Lockheed Martin Space Systems Company designed, integrated and tested the space vehicle and built some major payload components.

"We are proud to have been associated with this extremely significant mission," said Bob Schultz, Lockheed Martin's Gravity Probe B program manager. "Working with Stanford and NASA, we formed a powerful team to develop the challenging technologies needed to take a giant step forward in helping understand Einstein's theory of general relativity."

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