



MARSHALL STAR

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April 15, 2004

Marshall-managed Gravity Probe-B to launch next week

Mission will test Einstein theory

by Sherrie Super

The NASA spacecraft, managed by the Marshall Center, that will test two predictions of Albert Einstein's general theory of relativity is set to launch Monday at 12:01 p.m. CDT from Vandenberg Air Force Base in California. The launch will be carried live on NASA Television.

NASA's Gravity Probe-B mission, also known as GP-B, will use four ultra-precise gyroscopes, orbiting the Earth in a unique satellite, to experimentally test two extraordinary predictions of Einstein's 1916 theory that space and time are distorted by the motion of massive objects. The two effects being tested are: The geodetic effect — the amount by which the Earth warps local space time through which it moves; and the frame-dragging effect — the amount by which the Earth drags local space time around with it as it rotates.

See *Gravity Probe-B* on page 3

NASA's X-43A flight results in trove of data

NASA Headquarters release

NASA's extremely successful X-43A hypersonic research aircraft flight of March 27 resulted in a treasure trove of the first actual scramjet flight data ever obtained.

The initial data review of the flight was conducted on March 31, confirming that high-fidelity flight data was obtained throughout the vehicle's boost, stage separation and descent to splash down in the Pacific Ocean.

"The data clearly shows, and without

See *X-43A* on page 4

Subscale Solid Rocket Motor test at Marshall Center a success

by Lynnette Madison

A 28-second test firing April 6 of a scaled-down version of the Space Shuttle's Reusable Solid Rocket Motor was a success, engineers reported.

Results from the static, or stationary, test — conducted at the Marshall Center — will be used to evaluate the performance of a new internal insulation material that will be used in the aft dome of the motor.

See *Rocket motor* on page 4



Photo by Emmett Given, NASA/Marshall Center

President's Commission visits Marshall

Members of the President's Commission on Implementation of United States Space Exploration Policy listen to Marshall engineer Sam Russell, left, explain flash thermography inspection techniques. With Russell is John Vickers, second from left, manager of the National Center for Advanced Manufacturing at the Marshall Center. Commission members are, from right, Laurie Leshin of Arizona State University in Tempe; Maria Zuber of the Massachusetts Institute of Technology; and retired four-star Air Force Gen. Lester Lyles. Commission members visited Marshall on April 7.

NASA Workforce Flexibility Act to take effect by summer

Act will strengthen Agency's human capital program

by Danny Hightower

The NASA Workforce Flexibility Act of 2004, designed to strengthen the Agency's human capital program, will be available for use by NASA on July 8.

President Bush signed the Act in February. The Act requires NASA to submit a written workforce plan, approved by the U.S. Office of Personnel Management, to Congress 90 days before implementing any of the Act's provisions. The

See *Flexibility* on page 2

For results of the NASA Safety Climate and Culture Survey, go to <http://www.nasa.gov/about/highlights/index.html>

Our culture: Let's take a fresh look ...

I believe that in the wake of any major event, it is our duty to look objectively at where we are, and then learn how to become better. To take this fresh look at our organization is the goal of our recent cultural change initiative.

There are certain norms and expectations that have been established over a long period of time at the Marshall Center. Although not always written down, we all have been exposed to them, and to some extent, some of the behaviors and attitudes have become ingrained. However, sometimes we need to step back and examine these and decide what is best for the Center. This is particularly important after the loss of the Columbia and her crew, which, in turn, caused a mirror to be held up to NASA in the form of the Columbia Accident Investigation Board report.

Several weeks ago, we had the opportunity to participate in the NASA Mission Safety Climate and Culture Survey. Since the survey period concluded on Feb. 26, Behavioral Science Technol-

Director's Corner



King

ogy Inc. (BST) has completed an analysis at the Agency level. I recently had an opportunity to speak with BST concerning its conclusions and learned a great deal. While this process will give all of us valuable insight, it is simply the beginning.

In the coming weeks we will perform our own assessment of the Marshall organizational culture with the MSFC Organization Climate Study. This survey will evaluate a broad range of factors and will give us a clearer picture of our local environment. The assessment will be comprehensive, consisting not only of a questionnaire but also focus group interviews of Marshall employees, contractors and customers. It will also include such factors as participation in decision-making and leadership effectiveness.

The MSFC Organization Climate Study will be used each year at Marshall to measure the progress of our organizational development efforts.

Marshall's leadership is committed to developing a culture that learns from every day occurrences, not just the accidents and incidents. I believe we can have a healthier environment, and I ask for your help and commitment in attaining and sustaining it.

— David King

Marshall Center Director

Flexibility

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plan describes how NASA will use the new provisions and was submitted to Congress on April 8.

The Act was a culmination of efforts by NASA to obtain new and enhanced authorities to meet human capital goals and gain more flexibility in managing the Agency's workforce. It includes provisions that allow NASA to more effectively compete with the private sector in recruitment for both current and future critical competency needs. The Act provides a "toolbox" of options to address particular human capital needs at each NASA center.

Key provisions of the Act include:

- Scholarship for Service – a program to provide scholarships to full-time students majoring in disciplines needed by NASA
- Enhanced travel benefits for new hires
- Authorization for larger recruitment, relocation and retention bonuses
- Ability to make term appointments for up to six years, with the option of converting term-appointment employees to permanent appointments without further competition.

These flexibilities are not entitlements and use of one or more of the provisions will be made on a case-by-case basis.

A brochure detailing the NASA Flexibility Act of 2004 will be provided to all Agency civil servants within the next couple of weeks. A copy of the approved Workforce Plan will be provided

to NASA civil servants in May.

For more information on the NASA Workforce Flexibility Act, go to <http://nasapeople.nasa.gov/hclwp/index.htm>.

The writer is Marshall's Human Resources Department manager.



Photo by Doug Stoffer, NASA/Marshall Center

Motivating youth to be next-generation explorers

Carolyn Lundy, of the Marshall Center's Human Resources Office, helps inspire the next generation of explorers during the recent 30th Annual Youth Motivation Task Force Conference at Alabama A&M University in Huntsville. NASA officials and industry representatives visited more than 200 classrooms during the event. The conference goal is to motivate students to continue pursuing higher education and attain professionalism in their chosen career fields. Charles Scales of Marshall's Equal Opportunity Office served as the event's chairperson.

Gravity Probe-B

Continued from page 1

“The GP-B launch represents 40 years of ingenuity, commitment, and extraordinary technical achievements,” said Marshall Deputy Director Rex Geveden, Gravity Probe-B program manager. “When GP-B was first proposed in the early 1960s, the technology required for this ambitious experiment did not yet exist. At least seven new technologies had to be invented and perfected in order to get to this point, with the program’s advances only possible through breakthroughs in cryogenics, drag-free satellite technology and new manufacturing and measuring technologies.”

Dr. Anne Kinney, director of the Astronomy and Physics Division in NASA’s Office of Space Science, Washington, said, “Gravity Probe-B has the potential to uncover fundamental properties of the invisible universe, a universe which seems very bizarre and alien to our everyday perceptions yet one that Einstein tried to show us almost a century ago. Testing the key aspects of Einstein’s theory, such as GP-B will do, will provide crucial information to science just as it has already helped America by pushing technological progress in developing the tools needed for these ultra-precise measurements.”

Once placed in its polar orbit of 400 miles (640 kilometers) above Earth, GP-B will circle the globe every 97.5 minutes, crossing over both poles. In-orbit checkout and calibration is scheduled to last 40-60 days, followed by a 13-month science-data acquisition period and a two-month post-science period for calibrations.

To test the general theory of relativity, GP-B will monitor any drift in the gyroscopes’ spin axis alignment in relation to its guide star, IM Pegasi (HR 8703). Over the course of a year, the anticipated spin axis drift for the geodetic effect is a minuscule angle of 6,614.4 milliarcseconds, and the anticipated spin axis drift for the frame-dragging effect is even smaller, only 40.9

milliarcseconds. To illustrate the size of the angles, if you climbed a slope of 40.9 milliarcseconds for 100 miles, you would rise only one inch in altitude.

During the mission, data from GP-B will be received a minimum of two times each day. Earth-based ground stations or NASA’s data relay satellites can receive the information. Controllers will be able to communicate with GP-B from the Mission Operations Center at Stanford University.

Data will include space vehicle and instrument performance, as well as the very precise measurements of the gyroscopes’ spin-axis orientation. By 2005, the GP-B mission will be complete, and a one-year period is planned for scientific analysis of the data.

“Developing GP-B has been a supreme challenge requiring the skillful integration of an extraordinary range of new technologies,” said Professor Francis Everitt of Stanford University, and the GP-B principal investigator. “It is hard to see how it could have been done without the kind of unique long-term collaboration that we have had between Stanford, Lockheed Martin, and NASA. It is wonderful to be ready for launch.”

NASA’s prime contractor for the mission, Stanford University, conceived the experiment and is responsible for the design and integration of the science instrument, as well as for mission operations and data analysis. Lockheed Martin, a major subcontractor, designed, integrated and tested the spacecraft and some of its major payload components. NASA’s Kennedy Space Center in Florida, and Boeing Expendable Launch Systems in Huntington Beach, Calif., are responsible for the countdown and launch of the Delta II rocket that will carry Gravity Probe-B into orbit.

Information about launch events and video will be carried on a NASA Web site called the Virtual Launch Control Center at: <http://www.ksc.nasa.gov/elnw/gpb/vlcc.htm>.

The writer, an employee of ASRI, supports the Media Relations Department.

‘Lunch-N-Learn’ program to feature Axel Roth

from the Marshall Association

The Marshall Association is hosting a “Lunch-N-Learn” program at 11:30 a.m. Wednesday in Morris Auditorium featuring Marshall Associate Director Axel Roth “sharing a lifetime of memories” of the space program.

Roth will share stories with his Marshall “family” before he begins his next adventure -- retirement. Marshall team members should bring a bag lunch to the event. For more information, call Roslin Hicks at 544-7795.

Roth is the son of Ludwig Roth — a member of the German rocket team led by

the Marshall Center’s first director Dr. Wernher von Braun.

Roth’s memories began early and he has continued to add to them from a career spanning more than 45 years at the Marshall Center. He began his career as a co-op in the test laboratory for the Army Ballistic Missile Agency and joined NASA in 1960 as a structures engineer in the Apollo-Saturn program. He has held positions supporting Spacelab, the International Space Station, program development, and flight projects during his career. Roth was named Marshall’s associate director in January 2001.

Who Am I?

Here I am at age 12 when I was selected as an all-star baseball team member. I won the Alabama State Mile Championship when I was a senior at Huntsville High School and later participated in two Iron Man Triathlons in Hawaii. In 1993, I helped start the “Toys for Tots Rocketman Triathlon,” an annual event that raises several thousand dollars each year for needy children. To see who I am, go to page 6.



Courtesy photo

Rocket motor

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Static firings of modified NASA motors are part of the ongoing verification of components, materials and manufacturing processes required by the Shuttle's Solid Rocket Motor Project Office and the Space Shuttle program.

"Testing is a key element in our program, providing valuable information on design, process and material changes," said Jody Singer, manager of Marshall's Reusable Solid Rocket Motor Project Office.

The test, which produced near flight motor internal environments, also will allow engineers to assess potential instrumentation including one that offers a sharper chemical "map" of the motor's plume during launch and another that provides more information on the temperature of the nozzle's phenolics — resin-impregnated fiber reinforced material cured under heat and pressure.

The test motor is deemed one-sixth scale, based on its 9-inch nozzle throat diameter versus the full-scale motor's 54-inch diameter nozzle throat. The duration of the test was approximately one-fourth the amount of time that motors perform during Shuttle flights.

Engineers from the Marshall Center Space Transportation Directorate and the Shuttle Reusable Solid Rocket Motor Project Office conducted the test. ATK Thiokol Propulsion Division in Promontory, Utah, manufactures the Shuttle's Solid Rocket Motor.

The writer, an employee of ASRI, supports the Media Relations Office.



Photo by Dennis Olive, NASA/Marshall Center

A plume of smoke fills the Huntsville sky April 6 during the 28-second firing of a subscale Solid Rocket Motor.

X-43A

Continued from page 1

question, that scramjets work," said Griff Corpening, X-43A chief engineer at Dryden Flight Research Center in Edwards, Calif. "But we did see a couple of areas that differed from what was seen in the wind tunnels, thus reinforcing the need for flight testing."

Two significant aviation milestones occurred on this joint effort by Langley Research Center in Hampton, Va., Dryden, and their industry partners: First, controlled accelerating flight at Mach 7 under scramjet power; and the successful stage separation at high dynamic pressure of two non-axisymmetric vehicles. This was the first time an air-breathing scramjet-powered aircraft has flown freely.

As icing on the cake that capped the

mission's success, the flight resulted in the setting of a new aeronautical speed record. The X-43A reached a speed of over Mach 7, or about 5,000 mph, faster than any known aircraft powered by an air-breathing engine has ever flown.

"We flew very closely to how we predicted we would fly in terms of Mach, dynamic pressure, vehicle angle of attack, vehicle yaw, and vehicle roll," Corpening said.

The March 27 flight, originating from Dryden, began with NASA's B-52B launch aircraft carrying the X-43A out to the test range over the Pacific Ocean off the California coast. The X-43A was boosted up to its test altitude of about 95,000 feet where it separated from its modified Pegasus booster and flew freely

under its own power.

Planning is underway for the next flight, currently scheduled for this fall. The recent flight success allows engineers to zero in on where to focus their attention, allowing the Hyper-X team to move more quickly and with more confidence in preparing for the Mach 10 flight.

The Langley Center and the Dryden Center jointly conduct the Hyper-X program. ATK GASL (formerly MicroCraft, Inc.) in Tullahoma, Tenn., built both the vehicle and the engine, and Boeing Phantom Works in Huntington Beach, Calif., designed the thermal protection and onboard systems. The booster is a modified Pegasus rocket built by Orbital Sciences Corp. in Chandler, Ariz.

Children scramble for treats at Marshall Egg Hunt

Hundreds of children scrambled for treats at the Marshall Center's annual Egg Hunt on April 10 -- proving adults are no match for keeping up when free candy and prizes are involved.

The big bunny also was in attendance and happily posed for photos at the Center's picnic area.

Cloudy skies early on threatened rain but the sun soon broke through and was matched only by the brightness of children's smiles.



Photos by Terry Leibold, NASA/Marshall Center

Faster than butter melting in a skillet, these children scramble for eggs.



Christopher Hanson manages to keep plucking eggs while having his photo made. He's the son of Efrem Hanson in PS40.



Sandi Roberts of Mainthia and her daughter Carly look for a prize egg.



Christian Readus adds to his egg collection. He's the son of Kim Readus in TD06.



Marshall Center Director David King examines the treasure his daughter Bethany managed to collect.



Lauren Askins poses with the big bunny. She's the daughter of Bruce Askins in ED38.

TVA official to speak at Marshall Earth Day celebration

Janet Herrin, senior vice president of river operations for the Tennessee Valley Authority, will speak at the Marshall Center's Earth Day celebration at 10:30 a.m. today at Center Activities Bldg. 4316.

This year's theme is "Spaceship Earth: No Passengers ... All Crew."

Vendors will display environmental exhibits and tree seedlings also will be given away.

The Marshall Safety and Health Action Team will make "I Think Safe Because ..." badges from 11:30 a.m.-1 p.m. To obtain a badge, Marshall team members should bring a small photo to be laminated.

Scheduled events include:

10 a.m. -- Live radio broadcast to XHIPM Radio Ecologica in Merida, Yucatan, Mexico about NASA's environmental work.

- Vendor exhibits open.

10:30 a.m. -- Earth Day Speakers:

- Jim Carter, director of Center Operations Directorate
- Dr. Jan Davis, director of Safety and Mission Assurance Directorate

- Janet Herrin, senior vice president of river operations for the Tennessee Valley Authority.

11:10 a.m. -- Awards presentation.

11:25 a.m. -- Japanese maple tree planting and dedication by Dr. Jan Davis.

11:30 a.m. -- Closing

- Sharon Scroggins, Environmental Excellence Team chairperson

- Environmental Excellence Team will distribute free tree seedlings and promotional items.

Job Announcements

MS04C0109, Supervisory AST, Aerospace Flight Systems. GS-0861-15, Engineering Directorate, Engineering Systems Department, Environments Group. Closes April 20. Contact: Dana Blaine at 544-7514.

MS04B0117, AST, Reliability. GS-0861-13, Safety and Mission Assurance Directorate, SR&QA Policy, Assessment & Integration Department. Closes April 15. Contact: Rita Evans-McCoy at 544-7507.

MS04C0111, Lead AST, Technical Engineering Operations Management. GS-

0801-14, Engineering Directorate, Engineering Systems Department, Configuration & Data Management Group. Closes April 26. Contact: Dana Blaine at 544-7514.

MS04D0114, Executive Support Assistant (Steno/OA). Delegated Examining Unit. GS-0303-08, Office of the Chief Financial Officer. Closes April 16. Contact: Dana Blaine at 544-7514.

MS04B0119, AST, Quality Assurance.

Delegated Examining Unit and Competitive Placement Plan. GS-0861-14, Safety and Mission Assurance Directorate, SR&QA Policy, Assessment & Integration Department. Closes April 30. Contact: Rita Evans-McCoy at 544-7507.

MS04C0122, Lead Budget Applications Support Specialist. GS-0501-13 (promotion potential to GS-14), Office of the Chief Financial Officer, Budget Integration Office. Closes April 26. Contact: Dana Blaine at 544-7514.



Photo by Doug Stoffer, NASA/Marshall Center

Who Am I?

Mike Butler is a systems engineer in the Marshall Center's Shuttle Projects Office. He describes himself as an "avid cyclist" and earned a degree in industrial engineering from the University of Alabama. He's been a Marshall team member since 1984 and has one daughter, Rose.

Obituaries

Henry E. Attaya Jr., 88, of Owensboro, Ky., died March 10. Funeral services were at Our Lady Queen of the Universe Catholic Church in Huntsville. Burial was in Maple Hill Cemetery with Laughlin Funeral Home directing.

Attaya was born May 1, 1915, in New Orleans to Henry E. and Mary Finnegan Attaya. He was a U.S. Army veteran of World War II and the Korean War -- serving 21 years in the military and retiring as a lieutenant colonel. He earned a master's degree in chemistry from Louisiana State University in Baton Rouge, La. He retired from the Marshall Center in 1979 as an AST, technical management in the S&E/ER organization.

He is survived by two sons, Stephen M. Attaya of New Orleans and James Jude Attaya of Davison, Mich.; two daughters, Ann Reynolds of Melbourne, Fla., and Kathy Daugherty of Owensboro, Ky.; two sisters, Helen Attaya and Rita Bell, both of Baton Rouge, La.; and eight grandchildren.

Announcements

'Take Our Children to Work Day' set for April 22

The annual "Take Our Children to Work Day" at the Marshall Center for children in grades 3-12 will be April 22. Marshall Center Director David King will open the event at 8:20 a.m. in Morris Auditorium. Deadline to register children to participate in the event is Friday. Participants who ordered T-shirts can pick them up from 10 a.m.-2 p.m. Monday-Wednesday in the Bldg. 4203 lobby. Since 1994, the event has been an opportunity for the Marshall team to promote education and awareness of the space program. See "Inside Marshall" for a Web link detailing registration, workshops, tours and other information, or go to <http://inside.msfc.nasa.gov/CHILDREN/>.

Red Cross blood drive is Friday

A Red Cross blood drive will be 8 a.m.-1:30 p.m. Friday at the Marshall Center Activities Bldg. 4316. For more information, call Rick Wallace at 544-8885 or see "Inside Marshall."

'I Am Set' mentors needed

Mentors are needed to work with high school students during a high-tech summer internship for the Individuals with Disabilities in Math, Science, Engineering & Technology (I Am Set) program scheduled for June 7-July 16. For more information, including location and times, call Dr. Barbara Cady, project director, at (256) 372-4041 or Madeline Hereford in the Marshall Center's Equal Opportunity Office at 544-7420.

Health Fitness Expo set April 28

A Health Fitness Expo will be from 10 a.m.-2 p.m. April 28 at the Center Activities Bldg. 4316. Theme for this year is "Healthier Living in 2004." There will be a fitness walk at 11 a.m. and the annual 5K Run at 4 p.m. A 10-mile bike ride will begin at the Fitness Center parking lot at 5 p.m. Rain date for the walk and run will be April 29. For more information, see "Inside Marshall" or call Heather Day at 544-9355.

Training course open for new civil service supervisors

Registration for a required training course for new civil service supervisors is open. The course will be held at the Marshall Institute. "Creative Problem Solving" will be from 8 a.m.-4:30 p.m. April 26-28. For details, e-mail pat.schultz@nasa.gov.

Shuttle Buddies to meet April 26

The Shuttle Buddies will meet at 9 a.m. April 26 at Mullins Restaurant on Andrew Jackson Way in Huntsville. For more information, call Deemer Self at 881-7757.

Management Operations Office retirees will meet April 22

Management Operations Office retirees will meet for brunch at 10 a.m. April 22 at Cracker Barrel Restaurant in Madison. The group meets the fourth Thursday of each month. For more information, call 539-0042.

Administrative Professional's briefing set Wednesday

An Administrative Professional's Briefing will be at the Marshall Center from noon-2 p.m. Wednesday in Bldg. 4200, Room G-13C. Former Texas Gov. Ann Richards and Dr. Laree Kiely, author of "Taking Charge," will speak via satellite. The event is sponsored by the American Management Association and the International Association for Administrative Professionals. Seating is limited. For more information, call Denise McCaul or Gloria Turner at 544-8291.

Hazardous & Controlled Waste training will be Wednesday

Hazardous & Controlled Waste Generator Training course will be from 9-11 a.m. Wednesday in Morris Auditorium. The training, which must be renewed annually, is required for personnel who utilize waste accumulation sites. For more information, call Dan Adams at 544-1614.

MARS Golf League tournament registration due Friday

The MARS Golf League will host a two-person best-ball tournament at Twin Lakes Golf Course on April 27. Registration is due by close-of-business Friday. The MARS Golf League is open to Marshall employees, on-site contractors, retirees and dependents. For more information, call 544-8117, 544-3808 or 544-1589.

Marshall Center's Cotton Row Run teams to practice Friday

Practice sessions for Marshall Center teams participating in the May 31 Cotton Row Run in Huntsville will be at 11:15 a.m. each Friday at the Fitness Center. For details, call James R. Burnum at 544-4008 or 653-4064.

Land Trust of Huntsville membership drive April 24-25

The Land Trust of Huntsville & North Alabama is hosting a membership drive April 24-25 at Bennett Nurseries at 7002 Memorial Parkway North in Huntsville. The Land Trust is a Combined Federal Campaign agency dedicated to preserving green space. For details, go to www.landtrust-hsv.org or call (256) 534-5263.

Earth Science Technology Conference will be June 22-24

NASA's Earth Science Technology Office will present the fourth annual Earth Science Technology Conference June 22-24 in Palo Alto, Calif. The conference showcases a variety of technology research related to the Agency's earth science efforts, as well as new developments in information systems, computing, instruments and component technologies. To register or view a schedule of events, go to <http://esto.nasa.gov/conferences/estc2004/>.

For more Announcements, see "Inside Marshall"

Classified Ads

Miscellaneous

- ★ Kenmore side-by-side refrigerator/freezer, 27 cu. ft., ice maker, water dispenser, white, \$500. 881-3527
- ★ Antique Seth Thomas mantle clock, chimes, works, \$175. 325-6000
- ★ Living room set, bedroom set, washer, will work with you on price, best offer. 348-4889
- ★ Porcelain dolls, several, no antiques, \$40 each; sofa sleeper, navy w/small mauve flowers, \$75. 837-0037
- ★ Department 56 Snow Village, half of original purchase price, \$750. 837-0037
- ★ Kid's Power Wheels, 12 volts, 4-wheeler with charger, \$100. 256-828-7013
- ★ Kenmore "Super Capacity" gas dryer, two temperatures, 1-1/2 yrs. old, \$225. 890-0981
- ★ Springfield Model 1842 rifled musket, 69-cal., long-range military sights, walnut stock, leather sling, \$195. 882-6947
- ★ Double porcelain sink, 30" wide, almond, w/Kitchen-Aid disposal and strainer, \$50. 539-0094
- ★ Taylor Made Rescue woods, number 4 & number 5, graphite, \$75 each. 828-8005
- ★ Water bed, super single, 3-years old, \$150. 353-3216
- ★ Dining room suite, china cabinet, table w/leaf & pads, 6-chairs, buffet server, pecan, \$75. 883-5168
- ★ Side-by-side refrigerator w/ice maker, 22 cu. ft., needs compressor, \$100. 656-2965
- ★ Almost new light fixtures, \$50 each; Oriental style rug, \$50. 885-2450
- ★ Purebred Australian Shepherd puppy, male, vet checked, 1st shots, wormed, 6 wks. old, \$100. 256-651-2287
- ★ Youth bed with Sealy mattress, cherry wood. 316-2902
- ★ Dumbbell set, 2.5 lbs. to 50 lbs., with rack and bench, \$75. 890-0554/Nell
- ★ 1977 Avion travel trailer, 27', for hunting, camping or lake lot, \$4,500. 931-427-2059
- ★ Olympic weight set w/300 lbs. of weights & heavy duty weight bench, \$125. 656-2951
- ★ Motorized hospital bed, \$1,200; Gibson

- clothes dryer, \$100; wooden table w/4 chairs, \$100. 653-4240
- ★ Microsoft computer steering wheel w/ foot pedals, USB, \$30. 881-8674
- ★ Weedeater Snap-N-Go electric weed trimmer, \$10. 655-3065
- ★ Stamina 885 air resistance exercise bike, \$60. 256-858-5552
- ★ GE washer & dryer, \$175 for pair. 882-1473
- ★ Chipper/shreader, new, MTD Model 462, 5.5 Briggs OHV engine, \$365. 256-773-5051
- ★ Graco stroller, \$50; child's booster seat, \$25. 539-6351
- ★ Medium size wooden doghouse, shingled roof, one month old, \$50. 837-1774
- ★ Exercise bicycle, D.P. Airgometer, \$40. 256-895-2959
- ★ Meade 4500 4.5", telescope on EQ mount, \$125; Camelot pool membership, \$500. 508-4379
- ★ "Beatle bass" guitar by Rogue. Copy of Hofner 500/1. Flamed hollow body. \$400. 306-0700 Decatur

Vehicles

- ★ 1995 Mustang GT, new stereo, headlights, shocks, shifter, tune-up, Flowmasters, H-pipe, 17" wheels. \$6,200. 216-8868
- ★ 1997 Ford Ranger, 6-cyl., auto, ps/pb/ac, 3.0L, 150K miles, new tires, \$3,500. 256-479-3660
- ★ 1999 Mitsubishi Monterro Sport XLS, green/tan, CD, 6-cyl., new tires, all-power, \$6,900. 256-335-5896
- ★ 1994 Toyota 4x4. 931-937-6518
- ★ 2000 Impala LS, 3.86L/200HP/V6, automatic, loaded, new tires, 70.3K miles, one-owner, \$11,000. 883-5832
- ★ 1987 Porsche, 944s, red, \$3,000. 534-1227
- ★ 1996 Pontiac Trans Sport SE van, 7-passenger, loaded, 93K miles, \$5,000. 256-518-9162 before 8 p.m.
- ★ 2003 Expedition. 233-6197
- ★ Suzuki 50cc 2/stroke dirt bike, late 90's model, \$400. 256-539-7560
- ★ 1974 MGB convertible, red w/black interior and top, last model with chrome

- bumpers, \$5,000. 489-0797
- ★ 1995 Ford Windstar van, one-owner, Huntsville local, all-power, 160K miles, \$1,750. 256-722-0997
- ★ RV, 22' travel trailer, 2000 model, stove, microwave, bath w/shower, ac/heat, sleeps 6, \$7,500. 881-8674
- ★ 1990 Honda motorcycle, VFR, 750F, V4, red, sport bike, 26K miles, \$3,000. 859-0729
- ★ 1998 Dodge Grand Caravan SE, 92K miles, one-owner. 3.3L/V6, built-in child seats. \$6,990. 830-9119
- ★ 1988 Jeep Laredo, 4WD, 6 cyl., 5-speed, hard-top, bikini-top, \$3,900. 603-4389
- ★ 1999 Saturn SL2, 4-cyl., 4-door, 5-speed, 125K highway miles, \$2,950 firm. 256-753-2278
- ★ Dirt bikes: 1989 Honda CR250R; 1996 Honda XR100; make offer. 655-6293
- ★ 2003 Chevrolet Impala sport, white, leather, 41K highway miles, CD, sunroof, rear spoiler, \$16,000. 256-858-0189

Wanted

- ★ Ride to work, near Huntsville Hospital, 7 a.m.-3:30 p.m. \$7 per day. 533-6980/544-3670
- ★ Treadmill, preferably not more than 2-yrs. old. 430-0470
- ★ Baby items, swing, bouncy, clothes, high-chair, etc. 885-4365
- ★ Hammock stand. 655-7072

Free

- ★ To good home, two female puppies, Lab mix, 3-1/2 months old. 230-9315
- ★ Composted horse manure, great for your garden, will load for free. 420-6524

Found

- ★ Pair of glasses at picnic grounds. Call 544-0514 to claim/identify

MARSHALL STAR

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