

MARSHALL STAR

Serving the Marshall Space Flight Center Community

May 13, 2004



Photo by David Higginbotham, Marshall Center

O'Keefe addresses Alabama Legislature

NASA Administrator Sean O'Keefe addresses the Alabama Legislature at the state Capitol in Montgomery May 6. In the same chamber where the Marshall Center's first director, Dr. Wernher von Braun, addressed state lawmakers 43 years ago, O'Keefe praised Alabama's continued support of NASA through educator programs and the role state universities play in preparing students for technology careers. The Legislature responded by passing a resolution asking Congress to fully fund "The Vision for Space Exploration."

Marshall NSSTC researchers studying severe weather

Better storm prediction goal of research

by Sherri Super

Scientists at the National Space Science and Technology Center (NSSTC) in Huntsville are using information gleaned from NASA satellites, aircraft and field research to better understand dynamics behind tornadoes, lightning, hurricanes and other destructive forces of nature.

"A better understanding of severe weather can help people year-round," said Dr. Tim Miller of the Global Hydrology and Climate Center (GHCC) in Huntsville. "The Center is conducting a variety of unique research projects that could someday help forecasters better predict and prepare the public for severe weather."

The GHCC is one of seven research centers at the National Space Science and Technology Center. Center scientists have

See *Storms* on page 2

Gravity Probe B continues mission

Radiation hits spacecraft; no damage

from combined reports

The Gravity Probe B spacecraft, launched into Earth orbit April 20, continues to perform well with expectation of a smooth and successful transition into the science phase of the mission.

The spacecraft remains in a science mission orbit, with Guide Star, IM Pegasi, in the orbit plane. The gyro readout system performance continues to exceed expectations, and all four SQUIDs (Superconducting Quantum Interference Devices) are functional and calibrated, with very low noise levels. Power and thermal

See *Gravity Probe B* on page 3

Five student launch teams take top honors

by Sheri Bechtel

Five student teams grabbed top honors in NASA's 2004 Student Launch Initiative May 1, with winners hailing from Alabama, Indiana, Maryland and New York. Saturday's launch was the finale to a yearlong mission by students to design and build reusable rockets as part of a hands-on educational program sponsored by the Marshall Center.

More than 50 high school and college students and their teachers participated in this year's event. Cheered on by hundreds of rocketeers from across the country, 10 student teams launched their rockets in Manchester, Tenn., at "Southern Thunder

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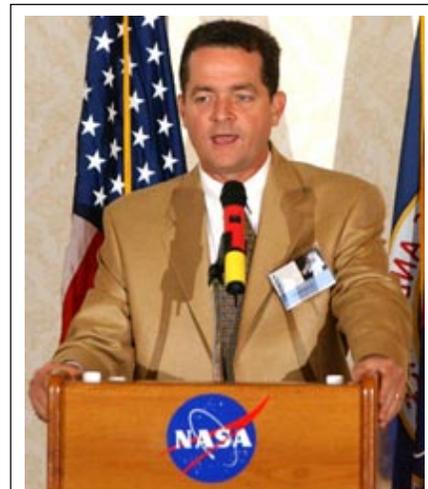


Photo by David Higginbotham, NASA/Marshall Center

King talks about 'Vision'

Marshall Director David King speaks about "The Vision for Space Exploration" at the Contractor's Breakfast in Huntsville on May 5. The breakfast, sponsored by the Marshall Center, is an annual event updating the contractor community on Center programs and projects.

Storms

Continued from page 1

played leadership roles in better understanding tornadoes, lightning, hurricanes and other natural phenomenon.

Understanding severe weather

Sometimes, one dangerous element of severe weather is a key to understanding another. Using a combination of ground- and space-based weather monitoring equipment, NSSTC scientists have documented dozens of cases in which lightning rates increased dramatically as severe storms developed. This offers an early clue for weather forecasters to take a more detailed look at other storm characteristics with radar – and perhaps a chance for them to get warnings out earlier, saving more lives.

Other research answers the question of where lightning is more likely to occur. A map created in 2001 by National Space Science and Technology Center scientists offered the first animated glimpse of annual lightning activity worldwide.

Compiled using satellite data, each frame of the animation represents average lightning activity worldwide on a single day of the year.

The map shows that lightning avoids the ocean, but frequently strikes in Florida. It's likely to strike in the Himalayas and even more so in central Africa. The animated maps also clearly show how lightning-producing storms are caused by the Sun's daily heating of Earth's surface and atmosphere. This was the first time scientists mapped the global distribution of lightning, noting variations by latitude, longitude, day of year and time of day.

Improving prediction

In another first, to better understand both the causes of an electrical storm's fury and its effects on our home planet, NSSTC scientists, in 2002, used a tool no atmospheric scientist had ever used before to study lightning - a remotely piloted aircraft, commonly called an uninhabited aerial vehicle or "UAV." This marked the first time an uninhabited aerial vehicle was used to conduct lightning research.

This project, called the Altus Cumulus Electrification Study, united researchers from NASA, universities and industry. By chasing down thunderstorms in Florida using the remotely piloted aircraft, scientists achieved dual goals — gathering weather data safely and testing new aircraft technology.

Such studies have the potential to help forecasters improve weather prediction, especially for storms that may produce severe weather. And, by learning more about these individual storms, scientists hope to better understand weather on a global scale.

Sometimes, the greatest barrier to more detailed forecasts is the amount and quality of data available to forecasters. Researchers at the center are collaborating with other agencies to change that.

New generation of satellites

A new generation of weather satellites, to be launched around 2011 by National Oceanic and Atmospheric Administration, will carry advanced sensors capable of producing higher-resolution images than today's satellites. A sharper, richer picture of the ever-changing atmosphere — available to forecasters in near real-time — will bring a new level of detail and accuracy to short-term forecasts.

In the meantime, sensors of this caliber are already in orbit aboard NASA's newest climate research satellites, Terra and Aqua.

Known as Short-term Prediction Research and Transition, or SPoRT, the program uses data from a sensor called MODIS — or MODerate-resolution Imaging Spectrometer — aboard NASA satellites.

MODIS gleans between 16 and 100 times more detail than current weather satellites, giving researchers a head start in

incorporating highly detailed data into weather forecasts.

Hurricane research

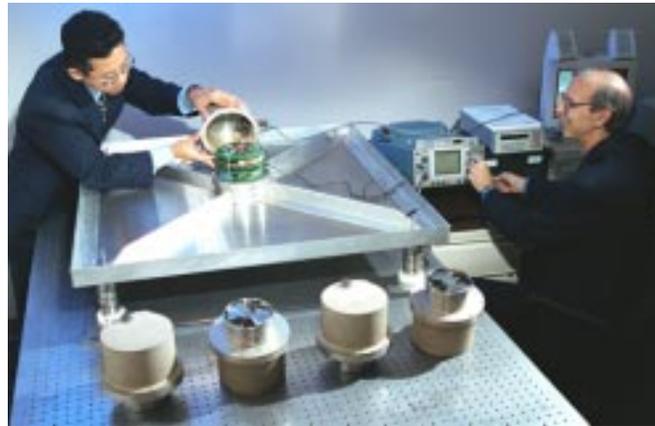
The NSSTC is also home to hurricane researchers who helped lead a series of field research investigations called Convection And Moisture Experiments, or CAMEX. Sponsored by the Earth Science Enterprise at NASA Headquarters in Washington, the most-recent CAMEX mission in 2001 attracted researchers from 10 universities, five NASA centers and the National Oceanic and Atmospheric Administration.

Monitoring storms simultaneously from near sea level to 65,000 feet, the researchers monitored temperature, pressure, humidity, precipitation, wind speed, lightning and ice crystal sizes.

NSSTC researchers are using this information to identify hurricane precipitation and cloud electrical field patterns and to study how they relate to hurricane intensity. They are also studying how the characteristics of a land-falling hurricane are changed once the storm begins to interact with the coastline.

The National Space and Technology Center is a partnership among the Marshall Center, research universities, industry and other federal agencies.

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



Tony Kim, left, and Dr. Richard Blakeslee test aircraft sensors used to measure electric fields produced by thunderstorms. Both Marshall researchers are based at the National Space Science and Technology Center in Huntsville.

Photo by Doug Stoffer, NASA Marshall Center

European Space Agency delivers key components for ISS research rack

by Tracy McMahan

A team of engineers from the European Space Agency recently delivered to the Marshall Center a furnace and other key components for the Materials Science Research Rack.

The rack is a floor-to-ceiling, refrigerator-sized facility for processing materials, including glass and metal in the microgravity environment of the International Space Station.

During the next year, European engineers will join NASA engineers at Marshall in testing the equipment and preparing it for a 2007 flight to the International Space Station.

Aboard the Space Station, scientists will use the rack and its furnaces to conduct fundamental science research on, and develop and test, materials that may be useful for technologies important to "The Vision for Space Exploration."

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Photo by David Higginbotham, Marshall Center

Uwe Zell, an engineer with the European Aeronautics Defense and Space Co. in Fredrichshafen, Germany, demonstrates how samples are inserted in a furnace that will process materials on the International Space Station.

Gravity Probe B

Continued from page 1

systems are meeting all mission requirements. All spacecraft subsystems continue to perform nominally. All four of the science gyros are functioning as expected.

Almost two weeks ago, the spacecraft was hit by radiation while passing over the Earth's south magnetic pole. This radiation caused data errors in the spacecraft's primary (A-side) computer, which exceeded its capacity for self-correction. By design, the spacecraft automatically switched to the backup (B-side) computer, which placed the spacecraft in a "safe"

mode, and put the planned timeline of events on hold.

The automatic switch over from primary to backup computer worked flawlessly. The GP-B mission operations team has since re-booted the primary computer, restored its data parameters, and then commanded the spacecraft to switch back to the primary computer, which is once again in control. During this incident, the GP-B science instrument continued to function perfectly.

The spacecraft's Attitude and Translation Control System (ATC) is continuing

to maintain a stable attitude (relative position in orbit — pitch, yaw and roll). Preparations are in work to acquire the Guide Star, IM Pegasi.

Overall, it appears that all of the spacecraft's subsystems are continuing to meet or exceed mission requirements, in preparation for beginning the science experiment.

The spacecraft is being controlled from the Gravity Probe B Mission Operations Center, located at Stanford University. Mission operations have demonstrated that the hardware developed for the GP-B mission is functioning as planned, and the Stanford-NASA-Lockheed Martin operations team is continuing to perform superbly.

The Initialization & Orbit Checkout (IOC) phase of the Gravity Probe B mission is planned to last within 60 days, after which the 13-month science data collection will begin. This will be followed by a two-month final calibration of the science instrument assembly.

NASA's Gravity Probe B mission will use four ultra-precise gyroscopes to test Einstein's theory that space and time are distorted by the presence of massive objects. To accomplish this, the mission will measure two factors — how space and time are warped by the presence of the Earth, and how the Earth's rotation drags space-time around with it.

The Marshall Center manages the Gravity Probe B program for NASA's Office of Space Science. Stanford University in Stanford, Calif., developed and built the science experiment hardware and operates the science mission for NASA. Lockheed Martin of Palo Alto, Calif., developed and built the GP-B spacecraft.



Photo by Doug Stoffler, Marshall Center

Marking Asian Pacific American Heritage

Marshall team members join Huntsville Mayor Loretta Spencer, third from left, at Huntsville City Hall where she signed a proclamation declaring May as Asian Pacific American Heritage Month. With Spencer are, from left, Alan Chow, TD40; Brenda Sands, ED20; Diep Trinh, ED34; Katherine Mims, ED21; and Biliyar Bhat, ED01. Asian Pacific American Heritage Month will be celebrated at the Marshall Center at 11 a.m. May 26 in Bldg. 4316. Samuel Mok, chief financial officer for the Department of Labor, will speak.

CaER Awards Ceremony casts

The annual Customer and Employee Relations Directorate Awards Ceremony at the Marshall Center was May 4.

This year's theme was "Reflections of the 20th Century." Each department, according to its organization code, was assigned to perform a short skit reflecting historical events of each decade.

Winner of the annual "Shiney Award" for Best Presentation was CD40, Internal Relations and Communications Department, for a video the group produced highlighting music of the 1940s.

Peer Recognition awards, Length of Service awards, "CaER Giver" awards and Group Achievement awards also were presented by Marshall Deputy Director Rex Geveden and CaER Director Tereasa Washington.



Photos by Doug Stoffer, NASA/Marshall Center

Marshall Center Deputy Director Rex Geveden, right, takes Customer and Employee Relations Directorate Director Tereasa Washington for a spin on the dance floor.



Steven Durham, center, manager of the Internal Relations and Communications Department, accepts the "Shiney Award" for Best Presentation. Looking on are CD40 team members, from left, Sandy Williams and Angela Storey.

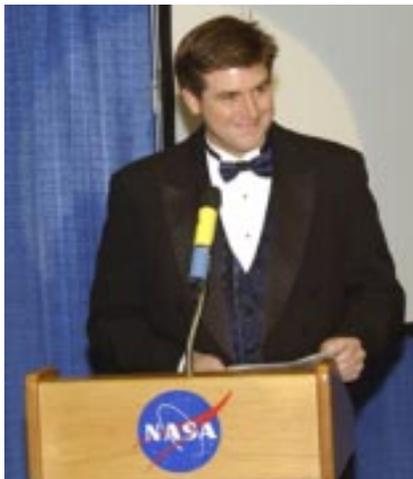


Members of the Employee and Organizational Development Department get on the dance floor with other CaER team members to participate in the "Electric Slide." Among the dancers are Chrissa Hall, far left, and Jeannette Chaney, center, both portraying "flappers" from the 1920s. They are joined by Brandy Adams, right, as "Miss America."



Jessica Isbell of the Government and Community Relations Department portrays "Lucille Ball."

'Reflections of the 20th Century'



Roy Priest serves as "master of ceremonies."



Members of the Plans and Systems Analysis Office perform a take-off of the "We Are the World" music video from the 1980s. From left are Thom Holden as "Stevie Wonder," Antoinette Pelt as "Diana Ross," Sheila McDonald as "Tina Turner" and Lou Nosenzo as "Billy Joel."



Joel Farbman of the Education Programs Department portrays "Spock" from the 1960s television show "Star Trek."



Portraying the fashions of 1910-1919 are Doris Scruggs, left, and Rita Evans-McCoy of the Human Resources Department.



Stephanie Whitehead of the Protocol Office performs as model "Cindy Crawford" during a "Pictionary Skit" illustrating the 1990s.



A skit based on "The Mary Tyler Moore Show" in the 1970s showcases the talent of the Media Relations Department. From left are Jack Robertson as "Murray Madison," Lynnette Madison as "Rhoda," Amie Cotton as "Mary Tyler Moore," and Dom Amatore as "Lou Grant."



Sitting among the decorated tables enjoying the skits are CD40 team members, from left, Jonathan Baggs, Jania Johnson and Janie Crawford.

Student

Continued from page 1

2004" — one of the largest regional rocket events in the United States.

The Student Launch Initiative allows high school and college students to experience practical aerospace and engineering activities. Working in teams, students demonstrate proof-of-concept for rocket and payload designs, develop Web sites dedicated to their work, learn how to budget — including how to present financial proposals to NASA engineers and community leaders — and gain problem-solving skills.

At the launch, student teams demonstrated to NASA engineers and scientists that their rocket designs were capable of being launched, recovered and reused. The payloads or cargo carried on the rockets also had to be recovered intact.

The target altitude for the high school teams was one mile, while the college teams aimed for two miles. Teams also were evaluated on formal reviews and Web designs.

The student team from Goshen High School in Goshen, Ind., took home three of the seven Student Launch Initiative awards — Best Payload Design, Best Web Site Design and the Altitude Award.

Manlius Pebble Hill School in Dewitt, N.Y., won Best Vehicle Design. Boonsboro High School in Boonsboro, Md., took home the Best Overall Student Launch Initiative Fair Presentation award. From Alabama, the Lee High School student team in Huntsville took home honors for Best Overall Flight Readiness Review, and Athens Bible School in Athens won the Director's Award, which recognizes the team that exemplifies outstanding



Photo by Vince Huegele

Student Launch Initiative team members from Bob Jones High School in Madison connect a few last wires before pointing their rocket skyward.

teamwork and initiative in advancing their appreciation for science, math and engineering during the design and building process.

Other high schools participating in the 2004 Student Launch activities included Johnson High School and New Century Technology High School in Huntsville, and Bob Jones High School in Madison. College teams included Huntsville's Alabama A&M University and the University of Alabama in Huntsville.

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Job Announcements

MS04D0127, AST, Structural Materials. GS-0806-12, 13 (promotion potential to

GS-13), Engineering Directorate, Materials, Processes & Manufacturing Depart-

ment, Nonmetallic Materials & Processes Group. Delegated Examining Unit. Closes May 14. Contact: Debbie Longeddy at 544-2308.

MS04D0130, AST, Aerospace Polymeric Materials. GS-0893-12, 13 (promotion potential to GS-13), Engineering Directorate, Materials, Processes & Manufacturing Department, Nonmetallic Materials & Processes Group. Closes May 14. Delegated Examining Unit. Contact: Debbie Longeddy at 544-2308.

SES vacancy announcement

MS04S0131, Associate Director for Management. ES-0801-00, Office of the Director. Closes May 31. Contact: Diedra Williams at 544-5721.

MS04C0133, Industrial Property Specialist (IPO). GS-1103-12 (promotion potential to GS-13), Center Operations Directorate, Logistics Services Department, Property Management Group. Competitive Placement Plan. Closes May 28. Contact: Dana Blaine at 544-7514.

Photo by David Higginbotham, NASA/Marshall Center



NASA Exchange Agency-wide conference at Marshall

The Marshall Center's Bill Mayo gives a presentation during the NASA Exchange Conference recently at the Marshall Institute. Members of Exchange Councils from across NASA attended the conference. The Councils are chartered to support various morale and welfare activities on behalf of NASA team members.

Announcements

'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.

UAH Engineering Summer Camp set for June, July

The University of Alabama in Huntsville will host its third annual Engineering Summer Camp for incoming high school juniors and seniors June 14-18 and July 12-16. Cost is \$350. Scholarships are available. For applications or more information, go to www.eb.uah.edu/camp or call Veronica Molina at (256) 824-3590.

Bicycling events at Marshall set May 20-21

Two events for bicycle enthusiasts will be held at the Marshall Center in May. The third annual Tour d' Arsenal will be at 5 p.m. May 20 beginning in the Marshall Exchange Fitness Center parking lot with registration at 4 p.m. The event is a 19-mile scenic ride through Redstone Arsenal. National Bike to Work Day for Marshall team members will begin at 6:45 a.m. May 21 at the "Runner's Parking Lot" near the Municipal Golf Course on Airport Road in Huntsville. For more information, call Jamie Miernik at 544-6534.

LifeSouth Blood Drive will be Friday

LifeSouth will host a blood drive from 8 a.m.-1:30 p.m. Friday at Bldg. 4316. For details, call Rick Wallace at 544-8855.

Blood pressure screenings emphasized during May

May is High Blood Pressure Month and the Marshall Center is partici-

pating by offering blood pressure screenings for employees on work days from noon-3 p.m. at the Bldg. 4249 Medical Center. HEMSI paramedics also will stop by various Marshall buildings to offer screenings during the month. For more information, see "Inside Marshall."

Management Operations Office retirees to meet May 27

Retirees of the Management Operations Office will meet for brunch at 10 a.m. May 27 at the Cracker Barrel Restaurant in Madison. For details, call 539-0042.

MARS Golf League tournament will be May 22

The MARS Golf League will host a modified stableford tournament at the newly re-opened Point Mallard Golf Course in Decatur on May 22. Entry deadline is Friday. Call 544-8117, 544-3808 or 544-1589 for information.

Nominations open for NASA leadership programs

Nominations are open for the NASA Leadership Development Program; NASA Fellowship Program; and the Federal Executive Institute's Leadership for a Democratic Society Program. Nominations are due May 28 to CD20, though individual organizations may have earlier submission dates. For more information, including Web sites containing complete program details, call Vanessa Suggs at 544-7527.

Software Engineering Research telecon will be Tuesday

The second annual Software Engineering Research Infusion Video Telecon (ViTS) will be from 2-3 p.m. CDT on Tuesday in Bldg. 4200, Room 106. The event will offer civil servants and contractors the advantage of NASA's applied software engineering research and help them discover low-risk opportunities for software development teams. For more information, see "Inside Marshall" or go to <http://ic.arc.nasa.gov/researchinfusion>.

2004 annual Marshall Center Retirement Dinner set June 3

The 2004 annual Marshall Center Retirement Dinner will be June 3 at the Von Braun Center in Huntsville. The event begins with a social at 5:30 p.m. in the West Exhibit Hall followed by dinner at 7 p.m. and entertainment at 8 p.m. This year's theme is "Marshall's American Idol." Tickets are \$16 and can be purchased from administrative officers beginning Monday. To reserve tables or for more information, call Joe Drieling at 544-7538.

AIAA section's 52nd annual awards dinner will be May 20

The 52nd Annual Awards Dinner for the Alabama-Mississippi Section of the American Institute of Aeronautics and Astronautics will be May 20. Reservations are due Monday. The event will be at the Holiday Inn-Research Park in Huntsville beginning with a social at 6 p.m. and dinner program at 7 p.m. Awards will be presented, and newly elected officers installed. For reservations, call Joe Sims at 544-4650.

Shuttle Buddies to meet May 24

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

Morelan named 'Employee of the Month' for Shuttle Propulsion

Jeanne Morelan of Mainthia Technologies, has been named "Employee of the Month" for May for the Marshall Center's Space Shuttle Propulsion Office. Morelan was cited for her "exemplary work and step-up attitude" while supporting the Solid Rocket Booster Project Office.



Morelan

Classified Ads

Miscellaneous

- ★ Rickenbacker guitar, 350V63 "Liverpool," jetglo, triple-chrome/nickel toaster p/u's, w/ case, papers, etc. \$1,500. 306-0700 Decatur
- ★ Washer & dryer, works well, \$100 for both, can deliver to Redstone Arsenal. 723-2462
- ★ Full-size bed, dresser w/mirror, tall chest w/ drawers, mattress/box springs, \$350. 256-772-8620
- ★ Living room couch, ivory color, \$350. 551-0008
- ★ Computer CD Read Only disk drive, 40X, \$10. 650-5128
- ★ Tickets, Indy 500, May 30, outside 3rd turn, high row, \$85 each. 881-1249
- ★ Pro-Form Cross Trainer treadmill with weight/workout bench converter, \$225. 864-0483
- ★ Aluminum bass boat, 18HP Johnson, trolling motor, tilt trailer, \$1,400; weight machine, \$100. 256-351-6996
- ★ Flex-a-Lite 250 dual electric cooling fan for 92-99 Chevy/GMC truck/SUV w/34" radiator, \$335. 426-8001
- ★ Modern drafting table, 30"x42" surface, black w/matching adjustable chair, \$50 set. 256-922-0948
- ★ 2000 Sea Doo Millenium Edition GTX, adult owned/driven, low hrs., garaged, w/ trailer, \$5,200. 527-0545
- ★ New SKS 7.62x39, \$225. 651-1518
- ★ Antique Seth Thomas mantle clock, made in 1920, works, \$175. 325-6000
- ★ MAXTOR 80Gb HD, ATA-133, 7200rpm, 8Mb cache, new in box, \$65. 489-0136
- ★ Singer portable sewing machine, Model 5102, w/carrying case, \$50. 656-2951
- ★ Lawn tractor, Simplicity, 12.5HP B&S, 38" cut, \$400. 232-1940
- ★ Bladez XTR electric scooter with charger, \$250. 881-1090
- ★ German Shepard pups, 2-males, 1-female, AKC, champion line, de-wormed, shots, vet checked, \$500. 256-694-5912
- ★ Toshiba A25 laptop, Pentium 4, 2.66GHz, 40GB HDD, 512MB, DVD-ROM/CD-RW, Windows XP, warranty, \$1,150. 694-7133
- ★ Couch, \$25; Navy Blue couch, loveseat, and recliner, all 3 for \$200. 864-9920

- ★ K&N performance air filter, fits 96-up Mustang w/4.6L, 1-year old, 15K miles, \$30. 655-3065
- ★ Viking hard-top pop-up camper, 1999 Model, sink, stove, \$3,000. 830-1374
- ★ Oak desk, \$100; Mahogany secretary, \$750; Walnut hall-tree, \$1,100. 797-5640
- ★ Honda 1000-watt generator, low usage, \$500. 881-7000
- ★ Huffy Pro fitness, weighted flywheel model, stationary bicycle w/timer, mph, odometer, \$25. 751-3766 after 4:30 p.m.
- ★ New .50-caliber CVA muzzle-loader, chrome/moly barrel w/syn. camouflage, stock, mint, used once, \$150. 851-8491
- ★ Truck bedliner for GM, standard size, black, 1-year old, \$55. 837-1774
- ★ "Bristol" Crown Ducal England luncheon service w/serving pieces, creamer/sugar, platter, covered bowl, \$35. 539-6624
- ★ Weider Pro 9940 gym, \$275; wedding dress, traditional style, veil, train, size 12, \$300. 256-858-5552
- ★ Ski boat, towable tube, Sevylor ski-bob towable tube, used twice, \$35. 232-1940
- ★ Graco 3-speed baby swing, \$20. 895-6640
- ★ Earnhardt Sr., Earnhardt Jr., Kevin Harvick, Jeff Gordon, 1:24 scale die-cast cars. 858-6746
- ★ Packing paper, newspaper quality without print, \$.75 per lb. 931-427-8205
- ★ Nokia N-Gage phone w/6 games, color screen and accessories, \$100. 658-5855
- ★ Bassett baby crib w/mattress & dresser, Cherry, \$400; Little Tykes toddler bed w/ mattress, \$75. 461-8284
- ★ Jenny Lind baby bed, complete comforter & mattress, \$125. 852-0627
- ★ Lexmark Z22 inkjet printer, two color cartridges, \$35. 683-7683
- ★ Kenmore built-in dishwasher, black & white, \$50; GE 1550 watt turntable microwave, white, \$50. 765-532-4218

Vehicles

- ★ 1994 Pace Arrow, 34', new Michelins/brakes, 2-TVs, VCR, 7KW generator, 31K miles, \$30,000. 256-830-1008
- ★ 2000 Impala LS, 3.86L/200HP, V6, loaded, new tires, 70.4K miles, one-owner, \$10,500.

- 883-5832
- ★ 1974 MGB convertible, red w/black interior & top, last model w/chrome bumpers, \$5,000. 489-0797
- ★ 2001 Nissan Altima GXE, 4-cyl., auto, 115K highway miles, many options. 256-753-2278
- ★ 1984 911 Carrera Targa, slate blue, cold a/c, cruise, upgrades, PCA owner, \$12,900. 655-7224
- ★ 2003 Ford Expedition. 256-233-6197
- ★ 1995 Chevy Astro van, loaded, LT package, good Michelins, V6, 119K miles, \$4,800. 256-586-3704
- ★ 1997 Honda Accord LX, blue, 4-door, 5-speed, a/c, all-power, 114K miles, \$4,900. 721-1405
- ★ 1983 Jeep Wagoneer Brougham, 4x4, all-power, sliding back window, for hunters/fishermen. 326-4558
- ★ 2000 Pace Arrow Vision motorhome, 25K miles, all factory accessories, \$75,000. 852-7180
- ★ 2000 Ford Contour, auto, pw/ps/pb, cruise, 80K miles, \$5,000. 256-746-8289
- ★ 2001 Ford F150 XLT, 4-door, SuperCrew, 4.6L, V8, white, tow package, 69.5K miles, \$15,000. 426-2224
- ★ 1998 Dodge Ram Club Cab, all-power, towing package, side-step bars, bedliner, tonneau cover, \$9,500. 256-656-0633

Wanted

- ★ Ride to work, near Huntsville Hospital, 7 a.m.-3:30 p.m., \$7 per day. 533-6980
- ★ 56K Baud internal Modem for PC. 883-2757
- ★ Chest of drawers and student desk, do not have to match. 880-2290

Free

- ★ Maine-coon 3-yr. old cat, neutered, all-shots. 325-8311

Found

- ★ Glasses and auto keys. Call 544-3623 to claim/identify

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