



MARSHALL STAR

Serving the Marshall Space Flight Center Community

June 12, 2003

Marshall holds ground-breaking ceremony for new building complex

The Marshall Center held a ground-breaking ceremony Tuesday, June 10, for a new office facility for the Engineering Directorate, which provides development and research engineering services for the Marshall Center.

The five-story, 139,000-square-foot building will house approximately 500 current Marshall employees. It is the first of several new buildings to be constructed as replacements for older Center facilities.

GSC Construction of Waynesboro, Ga., has been selected as the contractor for the facility, which is scheduled for a September 2004 completion.

Center Director Art Stephenson, Locke McKnight, president of GSC Construction and Sheila Cloud of the Center Operations Directorate participated in the event.

The building construction site is southwest of the intersection of Martin Road and Rideout Road on Redstone Arsenal.



Photo by Doug Stoffer, NASA/Marshall Center

From left, Locke McKnight, president of GSC Construction, Center Director Art Stephenson, and Center Operations Directorate Director Sheila Cloud break ground at the site of the new office facility for the Engineering Directorate.



Marshall Imaging Services

Thanks, Art

The Marshall Star thanks Art Stephenson for his work and dedication over the last five years as Center Director of the Marshall Space Flight Center. You have made a difference at Marshall. We wish you the best in all of your future endeavors. Keep smiling.

Three Marshall employees awarded Administrator Fellowships

by Sherrie Super

Three employees at Marshall were awarded NASA's Administrator's Fellowships to conduct research at minority institutions. Award recipients include Dr. Jonathan Campbell, Dr. Kenneth Fernandez and Tony Kim.

Campbell and Fernandez will conduct their fellowships at Alabama A&M University in Huntsville, while Kim will conduct his fellowship at Texas A&M University in Kingsville.

Campbell is a NASA research scientist based at the National Space Science and Technology Center (NSSTC). He will

conduct homeland-defense research; study methods for protecting Earth from asteroids, meteoroids and comets; and help the university build a research working group for space applications.

Fernandez is an engineer at Marshall. He will work with the Alabama A&M faculty to develop a robotics program within the university's engineering department. His first step will be developing a two-semester course to help students learn the fundamentals of robotic systems and control methods, demonstrate these For

See *Fellowships* on page 4

Director's Corner: Thank you Marshall team

I have received numerous e-mails and phone calls and enjoyed many one-on-one conversations affirming my contributions to the NASA/Marshall Space Flight Center over the nearly five years I have been Center Director. I am aware that at a time like this there are also others who are saying "at last he is moving on" but I choose to pretend that they are few in number. Seriously, I just want to say "thank you" to all who have valued my attempts to "make a difference." Since I arrived at Marshall I have been impressed with the willingness of people to consider and then implement change for the better. From the reorganization in 1999 to ISO to Safety Awareness to changes in project management and systems engineering, the response has been more than I expected. And so I say again "Thank You and keep it up."

I have received many comments addressing my request at the all hands meeting to continue to implement a culture that embraces the Marshall Core values and empowers our employees. It seems the groundswell of support is even stronger than I had imagined. Time will tell, and as I said during the all hands

meeting, it is dependent on every employee claiming this management approach and taking the lead in making it happen. The Center's senior leadership cannot do it alone. When employees consistently say "where do the values as an integrated set fit into this decision?" as each significant decision is addressed, then the Marshall Center will become a well established, values-based organization.

As Dave King steps in as the next Center Director I know you will support him as you have supported me. Dave is a great leader. He is well supported at the Agency by senior leadership and is poised to take Marshall to a new level of excellence. We are fortunate to have him as the MSFC Center Director. I am sure that Dave would appreciate your smiles as I have for nearly 5 years. I look forward to watching Marshall become even more effective in carrying out the important missions of NASA.

— **Art Stephenson**
Marshall Center Director

Major survey suggests finding intermediate-mass black holes will be a challenge

by *Sherrie Super*

Using the NASA Chandra X-ray Observatory for the most comprehensive survey of X-ray sources in nearby galaxies, NASA scientists have shown that the brightest of these objects are otherwise indistinguishable from stellar-mass black holes and neutron stars. This result complicates the ongoing hunt for an emerging but elusive class of intermediate-mass black holes — objects whose existence would defy conventional black-hole formation theory.

The scientists surveyed over 3500 X-ray sources in 90 nearby galaxies (other than the Milky Way). Among these sources, the NASA team identified 120 unusually bright ones, categorized as Ultra-Luminous X-ray sources (ULXs) — candidates for intermediate-mass black holes. The team found that, apart from brightness, the ULX class shared many of the more fundamental X-ray properties of the dimmer neutron stars and stellar-mass black holes.

"Statistically, it looks like many ULXs may be just extreme cases of rather typical

X-ray objects," said Dr. Douglas Swartz of the National Space Science & Technology Center, who led the analysis. Among proposed explanations for a ULX is an intermediate-mass black hole. If ULXs are intermediate-mass black holes, they must have properties similar to those of neutron stars and stellar-mass black holes.

Another proposed explanation for an ULX is a micro-blazar — a stellar-mass black hole whose radiation happens to be beamed in the direction of the Earth. "Beaming" occurs when an object emits electromagnetic radiation (such as X rays) into a preferred direction rather than equally in all directions, much like a lighthouse beacon. If the Earth happens to lie in this direction, then an X-ray source will appear very bright or luminous. Because of beaming, Swartz said, a stellar-mass black hole could appear ultra-luminous.

Swartz and colleagues, Dr. Kajal Ghosh and Dr. Allyn Tennant, both of the NSSTC at Marshall, compared the X-ray characteristics of the ULXs with those of the other X-ray sources. These characteristics included the change in brightness over time, the X-ray frequency (X-ray "colors"), and the spatial

distribution of the sources within their host galaxies. Swartz and his colleagues found that the X-ray properties of the 120 ULXs looked rather similar to those of the larger population. It was this that led to their conclusion that the ULXs differed from their sub-ULX counterparts only in apparent luminosity, or degree of brightness.

"Some of the sources we've analyzed have characteristics of intermediate-mass black holes, others have characteristics of beamed sources (such as micro-blazars) or of supernovas," Swartz said. "But the reality is that most of the ULX sources just look like brighter versions of the other detected sources."

The team hopes to carry out future surveys with longer observation times and a larger sample of galaxies to understand the objects more fully.

The Marshall Center manages the Chandra program.

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

Redstone U.S. Army Garrison Command joins Marshall in a campaign to save lives

by Joseph Hobson

Marshall's Seat Belt Awareness Initiative Committee and the U.S. Army Garrison joined forces to help save lives during the National "Buckle-Up" Awareness Campaign Week, May 19-23.

Wrecked cars with buckle up signs were placed at key exits gates and in the circle of Bldg. 4203. The Marshall and Redstone management team assisted the committee by wearing Marshall Safety, Health and Action Team's Buckle-Up for Safety vests while passing out seat belt awareness brochures donated by the Alabama State Troopers Department in Montgomery, key chains and pens with the "MSAT" logo and "Buckle-Up" to employees exiting their buildings at the end of the day May 20. Safety City volunteers, a part of the City of Huntsville Municipal Court System for Child Care, demonstrated and installed child car seats in employee vehicles. A video entitled "Balance in Safety" was aired on Redstone and Marshall centerwide TV daily. Posters and flyers were posted in buildings throughout the center.



Photo by Doug Stoffer, NASA/Marshall Center

Center Director Art Stephenson shakes hands with Darrell Brewer, deputy to the Garrison Commander, while Joseph Hobson, left, Jan Davis and Michael Moore look on.

"Because the campaign was held before a major holiday such as Memorial Day, it was destined to be successful in the drive to save lives," said Joseph Hobson, chairman of the committee.

Hobson is chairman of the 2003 Seat Belt Awareness Initiative Committee.



courtesy photo

WHO AM I?

I was born in Johnson City, Tenn. I attended University High School. My family called me "Terry" for a while, but I put a stop to that and only a few of my cousins call me that now. As a child, I spent a lot of time at the racetrack with my Dad who was a member of the rescue squad. I also enjoyed being "sandwiched" between my older sister and my Dad on his Norton motorcycle. I am an avid Tennessee football fan even though I received my bachelor's degree from Tennessee Tech and my master's degree from the University of Alabama in Huntsville. I am about 9 months old in this photo. Can you guess who I am?



Photo by David Higginbotham, NASA/Marshall Center

Tour d'Arsenal 2003

Over 60 cyclists participated recently in an 18-mile tour of Redstone Arsenal. The event was sponsored by the Jacob Sverdrup MSFC Group Contract Employee Morale and Welfare Committee. The Marshall Environmental Excellence Team also supported the event.

Flight software organization achieves Software CMM Level 3 rating

by Cathy White

The Marshall Center's Flight Software Group (ED14) is the first NASA organization to achieve a Software Capability Maturity Model (CMM*) Level 3 rating. This achievement could not have been accomplished without the dedicated support from Software Assurance/QS40 and Training/CD20.

This success directly supports the Marshall values such as delivering quality products and services, pursuing excellence in our people and in everything we do, and promoting continual learning and improvement. This success could not have happened without the support and sharing of information between NASA Centers. The Marshall group used information from a number of NASA

software organizations in preparing for this event. This accomplishment supports a number of the NASA software initiative goals, including education of our software engineering workforce in order to improve our software acquisition processes.

The Software CMM was developed by Carnegie Mellon's Software Engineering Institute to describe a five-stage improvement path that evolves from ad hoc, immature processes to mature, disciplined processes for planning, engineering and managing software projects. The Software CMM has become a de facto standard for assessing software processes and provides a useful guide and common sense approach for software process improvement efforts.

The resulting Level 3 maturity rating implies stable and consistent software engineering and management activities, tracking of software quality and organization-

wide understanding and practice of the activities, roles and responsibilities of the defined software process. Software process data and products from the Materials Science Research Rack (MSRR), Urine Processor Assembly (UPA) and the Demonstration for Autonomous Rendezvous Technology (DART) Advanced Video Guidance Sensor (AVGS) projects were assessed as a part of the evaluation.

Additional information on the Software CMM can be found at <http://www.sei.cmu.edu/cmm/cmm.html>.

* CMM is registered in the U.S. Patent and Trademark Office by Carnegie Mellon University.

White is an employee of ED14.

Fellowships

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principals using simulation software based on Fernandez's research at Vanderbilt University in Nashville, Tenn., and work in teams to design robotic systems that respond to challenges posed by representatives from NASA and industry.

Kim is a project manager based at the NSSTC. As part of his fellowship, he will teach and lead two semesters of a senior engineering design class of multiple engineering disciplines, giving students the opportunity to design a tool to aid in NASA's human exploration and development of space.

The Administrator's Fellowship was designed to enhance the professional development of NASA employees, as well as the science, mathematics and engineering faculty of minority-serving institutions. The fellowship also aims to increase the capability of institutions serving minorities to participate in NASA's research and development programs.

Campbell has a bachelor's degree in aerospace engineering and a master's in experimental plasma physics from Auburn University in Auburn, Ala., as well as a master's in engineering management, a master's in theoretical physics and a doctorate in astrophysics and space science from the University of Alabama in Huntsville. He recently retired from 30 years in the Air Force Reserve, which awarded him the Legion of Merit, a medal recognizing members of the U.S. Armed Forces for outstanding service to their country.

Fernandez has a bachelor's degree in electrical engineering from Northwestern University in Evanston, Ill., a master's in computer science technology from Alabama A&M University, a doctorate in electrical engineering from Vanderbilt University, and has completed post-doctorate studies at the Massachusetts Institute of Technology in Cambridge.

Kim has a bachelor's degree in aeronautical and astronautical engineering from the University of Illinois at Urbana-Champaign and a master's degree in material science from Auburn University. He also completed a summer session program at the International Space University hosted by Rice University in Houston in 1997.

The United Negro College Fund Special Programs Corporation administers the NASA Administrator's Fellowship. For more information about the NASA Administrator's Fellowship Program, visit <http://www.uncfsp.org/nasa/nafp/>.

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

Students learn what it's like to be a NASA engineer

by Sanda Martel

Thirty-five students - chosen from hundreds participating in this year's Earth-to-Orbit Design Challenge - visited the Marshall Center May 28-30 for a symposium, with Marshall engineers and education specialists reviewing the students' propeller designs. Student and teacher feedback was collected and will be used by Marshall's Education Department to refine details and use results as a learning tool for teachers and students nationwide.

This NASA educational event, keyed to the 100th anniversary of the first powered airplane flight, is letting school children from around the country discover the thrill of engineering design.

The design challenge, being conducted by the Marshall Center, connects students in the classroom with similar types of problems NASA engineers face as they design the next generation of aerospace vehicles.

This year's challenge took inspiration from history. More than 100 years ago, two boys named Wilbur and Orville Wright received a gift from their father - a tiny, rubber-band-powered helicopter that fascinated the boys and spurred their interest in flight. That simple toy inspired the brothers to design, build, and launch additional flying toys. And it is generally believed this modest gift ultimately played a role in their design and successful launch of the first powered airplane flight at Kitty Hawk, N.C., on Dec. 17, 1903.

This year's event, Centennial of Flight: Propeller Design Challenge, connected students in the classroom with similar types of problems NASA engineers face as they design the next generation of aerospace vehicles. The current student project was to design, build, test and evaluate a small propeller, and measure its effectiveness by using a simple test stand which students also constructed.

One hundred years later, young boys and girls can still discover the thrill of engineering design.

NASA provides the project educational materials, which support the National Research Council's science education standards in the categories of science as inquiry, physical science, science and technology as well as math and thinking skills.

Teachers involved in the design challenge tell stories of how their students are inspired and energized through the program. For instance:

- ★ Jessica Smith and Alexis Miller, sixth-graders at Mill Middle School in Williamsville, N.Y., were motivated to visit the Niagara Aerospace Museum in Niagara Falls, N.Y., to search for information on aviation. There, they learned about two local aviation pioneers, Glenn Curtiss and Lawrence Bell, and their contributions to aviation. The students included the research and findings in their report, which will be a part of their presentation at the



Photo by David Higginbotham, NASA/Marshall Center

Space Pioneer Houbolt visits Marshall

Kathleen Conese and Amanda Vogue, students participating in the Earth to Orbit Symposium talk with Dr. John Houbolt in the lobby of Bldg. 4200. Houbolt, former chief aeronautical scientist at Langley, pioneered the lunar orbit rendezvous concept used to first land men on the moon and return them safely to Earth. Houbolt was guest speaker at the symposium.

Marshall Center, said Kenneth Huff, sixth-grade science teacher at Mill Middle School.

- ★ Chantelle Rose, a science teacher at Graham High School in St. Paris, Ohio, said two of her students entered their design challenge project in the school's science fair. Their project earned the second highest team score at local and district levels, and received an excellent rating at the state level. "It was great to see young women competing in an engineering division," Rose said, "and they really knew their stuff."

During their visit to the Marshall Center, the participating students - from Alabama, Arkansas, California, Missouri, New York, Ohio, Tennessee, Texas and Wisconsin - toured Marshall, as well as the U.S. Space & Rocket Center.

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Photo by David Higginbotham, NASA/Marshall Center

Marshall honors National Guard troops

Center Director Art Stephenson talks recently to members of the Alabama National Guard Company 131 during a ceremony in the company's honor. Company 131 provided security for the gates at Redstone for the past nine months.

Obituaries

Samuel H. Hunter, 80, of Falkville died Tuesday, May 20, at Windham House Assisted Living. Funeral services were Friday, May 30, at Union Hill Church with Laverle Buckelew, Wayne Nails and Charles Marable officiating and Cullman Heritage Funeral Home directing.

Hunter was born August 24, 1922, in Madison. He was a metallurgist for NASA. He was a deacon at Union Hill Freewill Baptist Church for 40 years. He served in the U.S. Army during World War II.

Survivors include his wife, Katie Miller Hunter; four sons: Rodger Hunter, Sammy Hunter, Melvin Hunter, and Terry Hunter; one daughter, Carolyn Harris; two brothers, Dick Hunter and Bobby Hunter; seven sisters, Jo Whitaker, Jettie Webster, Mary Doran, Ida Belle Woody, Gertha Moon, Barbara Manley and Kay Davis; 15 grandchildren, 15 great-grandchildren and one great-great-grandchild.

Special thank you

My family and I would like to express our deepest appreciation for our Marshall family's thoughts and prayers during our recent family illness and resulting loss. My mother-in-law passed away Easter Sunday after a 13-year battle with Alzheimer's. We also thank you for donating leave over the past four years as we dealt with multiple crises throughout my immediate and extended family. You cannot imagine how much your kindness has helped us survive. Thank you for your heart toward helping others. If you need a presentation for your Health and Safety meetings, I would be glad to share our Alzheimer's experience.

—*Steve Deutschendorf*
Center Operations Directorate

Energy Tip

Caulks are airtight compounds, usually latex or silicone, that fill cracks and holes. Before applying new caulk, old caulk or paint residue remaining around a window or door should be removed. Use a putty knife, stiff brush, or special solvent. After removing old caulk, new caulk can be applied to all joints between the frame and wall and in window frames.

The best time to apply caulk is during dry weather when the outdoor temperature is above 45-degrees Fahrenheit. Low humidity is important during application to prevent cracks from swelling with moisture. Warm temperatures are necessary so the caulk will set properly and adhere to the surface.



Photo by David Higginbotham, NASA/Marshall Center

WHO AM I?

Teresa Vanhooser is the manager of the Payload Operations & Integration Department of the Flight Projects Directorate, supervising over 90 employees. Other than helping out with the family-owned jewelry business, Teresa has spent her entire career, 23 years, working for NASA. Teresa counts working as a diver in the Neutral Buoyancy Tank and managing the Microgravity Science Laboratory Mission, from "the beginning" through flight, as two of her most exciting assignments. She also finds her current job very exciting. Teresa is married to Mike, also a NASA employee, and they have two daughters, Heather and Holly.

Center Announcements

Dial-in and VPN require security registration

Marshall team members who use the Virtual Private Network software to connect to the Marshall Private Network, or who dial directly into the network from home or TDY, must apply for a MSFC RSA SecurID Token in June. For more information, including frequently asked questions and an updated schedule to apply, go to http://www1.msfc.nasa.gov/INSIDE/announcements/dial_in_token.html.

Thrift Savings Plan season open

The Thrift Savings Plan open season closes June 30 for employees who want to begin, increase or decrease, contributions to their account. For more information, see "Inside Marshall" or call 544-5654 or 544-7536.

Trade studies and decision-making course will be June 18-19

A trade studies and decision-making course for civil servants will be June 18-19 in Bldg. 4200, Room G-13E. Registration is through AdminSTAR. For more information, call Tina Smith at 544-7834.

Earth Science Technology Conference will be June 24-26

NASA's Earth Science Enterprise will hold its third annual Earth Science Technology Conference June 24-26 at the University of Maryland in College Park. The conference is an opportunity for NASA planners, managers, technologists and scientists to review research sponsored by the Earth Science Technology Office. Registration is due June 13. For more information, go to <http://esto.gsfc.nasa.gov/conferences/esto2003/index.html> or call Mary A. Floyd, conference coordinator, at 301-345-3211.

Presentation delivery course available June 19

A presentation delivery skills course

will be offered from 1-3:30 p.m. June 19 at the Marshall Institute, Room 722.

Participants should register through AdminStar. For more information, call Pat Schultz at 544-7559.

Chandra X-ray Observatory Symposium set for September

The Chandra X-ray Observatory Program will host a three-day symposium Sept. 16-18 at the Huntsville Marriott. A banquet will be Sept. 17 at the U.S. Space & Rocket Center. The Marshall Center's Chandra Program is sponsoring the event. For more information, go to <http://mi.msfc.nasa.gov/chandra/index.html> or call 544-5468 or 544-0570.

MSAT safety jeopardy board event June 12

The next Marshall Safety, Health and Action Team safety jeopardy event will be Thursday, June 12 from 11 a.m.-12 p.m. in Bldg. 4203 lobby. MSAT also will be making free "I think safe because" badge cards. Bring a small photo for laminating.

Joint Propulsion Conference July 20-23

The American Institute of Aeronautics and Astronautics has provided a special registration discount for Marshall civil servants employees attending the Joint Propulsion Conference July 20-23. To register, visit <http://www.aiaa.org/events/jpc-nasa-marshall>. Employees will need to submit a MSFC form 1265 to EODD/CD20. Deadline for registration is July 1. For more information, call Chris Robinson at 544-1422.

Marshall Association scholarship applications due July 31

The Marshall Association will award two college scholarships to dependents of Marshall employees or retirees in August. A technical and a non-technical scholarship will be awarded to incoming September freshmen. The association will accept applications until July 31. To

receive or submit a completed application form, call Cliff Bailey at 544-5482.

IFMP Business Warehouse open house in June

For answers to Business Warehouse reporting questions, visit the open house on Tuesdays, Wednesdays and Thursdays throughout June from 1-3 p.m. in Bldg. 4200, Room 600. Bring SAP/BW ID and password. For more information, call Lee Harp at 544-7271.

Revised guidelines for Foreign National Visitors

The revised NPG 1371.2A guidelines for Foreign National visitors are now in effect. Visit Inside Marshall for more information.

IFMP Purchasing Open House in June

For answers to purchasing-related questions, visit the open house on Tuesdays, Wednesdays, and Thursdays throughout June from 9-11 a.m. in Bldg. 4200, Room 600. Bring SAP ID, password and relevant purchasing documentation. For more information, call Lee Harp at 544-7271.

Science Directorate Employee Appreciation Day June 26

The Science Directorate will hold an all hands Thursday, June 26, beginning at 8:30 a.m. at the Rustic Lodge. For more information, visit Inside Marshall.

American Red Cross blood drive June 20

The American Red Cross will hold a blood drive on Friday, June 20, at the Activities Building 4316 from 8 a.m. to 1:30 p.m. Blood donors will receive a free T-shirt and a coupon for a Chick Fil-A sandwich.

Employee Ads

Miscellaneous

- ★ Deluxe bicycle child carrier seat, \$15. 881-8674
- ★ Girl's 26" bicycle, 18-speed, \$75. 256-746-8289
- ★ Apple IIC, software, games, Imagewriter printer, Dot Matrix printer. 931-433-0004/Norma
- ★ Broyhill solid pine entertainment center, 60.5"x22"x50", \$250. 325-6266 after 5 p.m.
- ★ Silver coronet, King Cleveland Model 602, \$400; Brass trombone, Besson, \$85; with cases. 564-9912
- ★ Refinished antique Walnut full-size bed w/wood rails and curved footboard, \$250. 355-5610
- ★ Oblong glass table w/wrought iron base & four wrought iron chairs, \$450. 464-9055/iv. msg.
- ★ Kenmore gas clothes dryer, auto/timed dry, white, \$85. 379-4677
- ★ Eight limestone window sills, 4 headers. 882-1097
- ★ K6-400mhz AMD w/floppy, CDROM, 64MB RAM, 600MB HD, onboard audio/video, keyboard, speakers, mouse, \$100. 256-738-3418
- ★ Bob Mann golf clubs, full set, woods, irons, wedges, putter, bag, ball retriever, \$250. 881-4708
- ★ Nordic Track Classic, \$200. 882-9741
- ★ Four Firestone FR690 P185/70R14 tires w/wheels & covers, new, from 2003 Honda, 4-bolt pattern, \$250. 961-3408
- ★ Used Kenwood 10-disc car CD changer, \$50; two 12" Pioneer subs in box, \$90. 527-0545
- ★ Ford 4.10 gears and T-Lok, fits 7.5 rear ends, \$200. 721-3945
- ★ Aquarium w/stand, 44 gallon, corner unit, includes all accessories and seascaping 653-4240
- ★ Black leather love seat, \$50. 533-9683
- ★ TI-83 scientific calculator, new in package, \$85. 259-2164
- ★ "L"-shaped desk, \$75; leather chair, \$30; 12" Vega car subwoofer w/box, \$75; 600W amp, \$20. 652-8383
- ★ Monitor, 17", AOC, in original box, >2 yrs. old, \$50. 461-7786
- ★ GameBoy w/case, battery pack, magnifier, light, seven games, sell separately or all for \$45. 430-6897
- ★ AKC Registered German Shepherd puppies, 4-months, black and tan, 2 males, \$275. 256-694-5912
- ★ Salad serving bowl, Villeroy & Boch, hand-painted, Renate pattern, cream background w/red yellow, green stripes. 882-6832
- ★ Antique Oak table, 54" diameter, \$75; Two children Burley bicycle, can convert to stroller, \$125.

- 881-0533
- ★ Reese 5th wheel hitch w/new mounting hardware and rails, 15K, \$200. 931-732-4742
- ★ Boat, 17', 1966 model, Cobia deep-vee w/65HP Mercury, make offer. 233-0705/Dollman
- ★ Convertible crib, white, \$100; Simmons mattress, \$50. 533-1797
- ★ Winchester Model 1892 Presentation Grade 45-caliber rifle, \$380. 882-6947
- ★ ShopSmith multi-purpose wood working machine w/attachments including band saw, \$400. 683-9364
- ★ Gameboy Color, atomic purple, w/two games, NFL Madden 2001 & Formula One 2000, \$40. 895-9843
- ★ Cockatoo, "Lesser Sulphur-Crested," white w/ bright yellow head-feathers, cage/toys included, good vocabulary, \$650. 256-651-3802
- ★ 2002 Harley Davidson 883R, lots of extras, made only one yr., \$8,400. 509-9550
- ★ Two cloth covered loveseats, cream color, \$175 each or both for \$325. 325-5646

Vehicles

- ★ 1998 Oldsmobile 88 LS, V6, leather seats, maroon, 75K miles, \$6,985. 837-2872
- ★ 1991 Honda Accord, 4-door, 5-speed, a/c, am/fm/cassette radio, 154K miles, \$3,500. 883-6496/683-7015
- ★ 1996 Mustang Cobra SVT convertible, 16K miles, red/black, V8, 6-speaker CD system, \$15,000. 881-7756
- ★ 1998 Olds Aurora, 48K miles, loaded, V8, dark blue, \$13,750. 256-766-9348
- ★ 1997 Buick LeSabre Limited, fully loaded, 83.5K miles, \$7,700. 256-655-3243
- ★ 1996 Honda Accord EX, leather, all-power, CD changer, sunroof, 92K miles, \$7,700. 461-0176/479-2508
- ★ 2002 Honda Civic LX, 4-door, auto, PW/PL/PM, cruise, 34-41 mpg, 20K miles, \$12,500. 828-6213
- ★ 1993 Chevy pickup, stepside, V8, 141K miles, new transmission and parts, \$7,000. 256-723-5170
- ★ 1998 Ford Escort ZX2, 5-speed manual, 96K miles, single owner, \$3,200. 325-0672
- ★ 1992 GMC Conversion van, Hi-top, TV/VCR, 77K miles, garage kept, \$5,995. 714-6819
- ★ 2000 Ford Contour, white, 4-door, automatic, PW/PB, cruise, 58,4K miles, \$8,500. 256-746-8289
- ★ 1998 Ford Mustang GT OEM alloy rims (four), \$125 for complete set. 721-3945

- ★ 1994 Corvette LT1 automatic, 170K miles, white exterior, gray/black interior, power sport seats, \$9,000. 256-325-6885
- ★ 1995 Chevrolet Monte Carlo, white w/gray leather interior, automatic, loaded, \$6,000. 533-4308 after 4:30 p.m.
- ★ 1996 Nissan Pathfinder SE, 4WD, 98K miles, sunroof, CD, PW/PL, \$8,300. 880-4915
- ★ 1998 Ford Explorer Limited 4x4, 73K miles, loaded, moonroof, one-owner, \$12,500. 653-9124/534-7791
- ★ 1996 LaSalle Custom, 39.5K miles, leather seats, prestige options, one-owner, \$11,500. 883-9205
- ★ 1999 Ford Ranger XLT Sport, supercab, 4-door, 6-cyl., cruise, CD, PW/PL, bed cap, \$9,000. 859-0729
- ★ 1994 Toyota Camry, 6-cylinder, 83K miles, 4-door, well maintained, \$6,200. 772-1870 after 5 p.m.
- ★ 2001 Chevy Tahoe LT, 4WD, 36K miles, loaded, seats eight, \$27,000. 256-828-0103
- ★ 1997 Chevrolet C/K 1500 truck, 3-door, auto, 4WD, tow pkg., bed cap, 110K miles, \$9,500. 351-1754
- ★ 1996 Honda Civic DX, black, automatic, PB/PS, CD/tape player, spoiler, Euro taillights, 74.3K miles, \$5,995. 256-586-7181/Mike
- ★ 1989 Nissan Pulsar, \$1,800. 509-2466
- ★ 2003 Mercury Grand Marquis LS, Ultimate Edition, heated seats, leather, 1,500 miles, consider trade. 852-6952
- ★ 2000 Mustang, V6, 5-speed, 60K miles, loaded, factory graphics, \$8,450 firm. 256-753-2278
- ★ 1987 Jeep Cherokee Laredo, dark gray, 4-wheel drive, 4-door, leather seats, \$1,500 firm. 509-9550
- ★ 1997 328I auto, 6 cyl., 94K miles, \$11,900. 256-638-7439
- ★ 1994 Jeep Cherokee Limited, V8, 4x4, towing pkg., loaded, all terrain tires, \$7,700. 464-8960

Wanted

- ★ Older dirt bike, running or not; Boat trolling motor, working or not. 325-6000
- ★ Women's set of golf clubs including drivers. 658-7768
- ★ University of Alabama (Tuscaloosa) Yearbooks, "Corolla", any year. 464-9866

Free

- ★ Chow/Golden Retriever mix, female, spayed, all shots, very gentle. 652-0379

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