



MARSHALL STAR

Serving the Marshall Space Flight Center Community

March 25, 2004

Marshall manager tackles 'Exploration' Vision

Mark Fisher named Center liaison to Exploration Systems Office

By Rick Smith

One of the Marshall Center's top propulsion experts is playing a key role in carrying out the Vision for Space Exploration at the Center.

Mark Fisher, who most recently managed the Projects and Engineering Office of the Orbital Space Plane program at Marshall, has been appointed Marshall's primary liaison to NASA's newly chartered Office of Exploration Systems (Code T). The office is headquartered in Washington under the leadership of retired U.S. Navy Rear Adm. Craig E. Steidle.

Fisher will report to Center Director David King at Marshall, and to Steidle at NASA Headquarters. He assumed the role following the departure of Garry Lyles, former manager of the Next Generation Launch Technol-



Fisher

ogy Program at Marshall, who has transferred to NASA Headquarters to lead the Office of Exploration Systems' new Project Constellation.

"Right now, NASA is examining the resources, facilities and capabilities of a vast cross-section of Agency programs and projects," Fisher said. "My job is to present the task force with an analysis of key assets available at the Marshall Center to support the Vision for Space Exploration, and to assist the Center in developing the appropriate approach to begin execut-

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Photo by Emmett Given, NASA/Marshall Center

Celebrating Women's History Month

Carolyn Griner makes a point during her presentation at a March 16 program commemorating Women's History Month at the Marshall Center. She is a former deputy director of the Marshall Center and currently is principal for Booz Allen Hamilton, a management and technology consulting company based in McLean, Va. Griner inspired the audience with humorous anecdotal glimpses of her 36-year career at Marshall. See page 3 for a Women's History Month Presidential Proclamation as well as a note from NASA Administrator Sean O'Keefe.

NASA X-43A vehicle ready for Saturday flight

NASA Headquarters release

NASA has set Saturday, March 27, for the flight of its experimental X-43A research vehicle. The unpowered 12-foot-long vehicle, part aircraft and part spacecraft, will be dropped from the wing of a B-52 aircraft, boosted to nearly 100,000 feet by a booster rocket and released over the Pacific Ocean to briefly fly under its own power at seven times the speed of sound, almost 5,000 mph.

See X-43A on page 4

Dr. William H. Pickering, former JPL director, dead at 93

NASA Headquarters release

Dr. William H. Pickering, a central figure in the U.S. space program and former director of NASA's Jet Propulsion Laboratory (JPL), Pasadena, Calif., passed away March 15 of pneumonia at his home in La Canada Flintridge, Calif. He was 93.

Pickering, known affectionately as "Mr. JPL," served as

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Fisher

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ing the initial requirements of the Exploration agenda.”

Among the programs Fisher is assisting in transitioning are the Orbital Space Plane effort and the Next Generation Launch Technology program. The former was developing crew escape/crew transfer capabilities to the International Space Station. The NGLT program was tasked with conducting research and risk-reduction testing to enable development of reusable engines, boosters and other components of an integrated, next-generation reusable space transportation system.

According to Fisher, both programs contain resources and technology projects that are being considered for applicability to efforts within the new Exploration office. The Crew Exploration Vehicle is chief among these new efforts — intended to fly human crews to the Moon no later

than 2015, and eventually to take them beyond it.

Other programs at Marshall could play key roles as well, Fisher said. Robotics exploration projects to the Moon and Mars — now being developed by the In-Space Propulsion Technology Program under leadership of NASA’s Office of Space Science (Code S) — will play a vital role in re-establishing America’s presence on the Moon, and will prepare the way for human explorers. The new Propulsion Research Laboratory at Marshall, scheduled to be fully operational by June, also could support advanced, long-term propulsion research and testing for eventual Exploration missions to the far reaches of the Solar System.

Though Fisher noted that it will be some months before Code T can clearly determine how new and transitional programs and projects will break out across NASA, he said the Marshall Center

is certain to continue playing a vital role in all these efforts.

“There’s a huge core of capability here,” he said. “This planning period is intended to identify the Marshall resources that will support the Exploration mission — with the same level of commitment and expertise we always deliver.”

Fisher joined NASA in 1990, starting as an engineer in the Marshall Center’s Propulsion Laboratory. Since that time, he has led the Vehicle Subsystems Engineering Group, managing vehicle engineering of all flight projects in Marshall’s Space Transportation Directorate. He has managed development and testing of the X-34 rocket plane project and the MC-1 engine designed to power it. He served as the RS-83 Main Engine Project Manager before moving on to the Orbital Space Plane.

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

Pickering

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director from 1954 to 1976. He was an original “Rocket Man,” and one of few public figures to appear twice on the cover of Time magazine.

“Dr. Pickering brought a vision and passion to space exploration that was remarkable,” said Dr. Ed Weiler, NASA’s Associate Administrator for Space Science. “His pioneering work is the very foundation we have built upon to explore our solar system and beyond.”

Pickering led the successful effort to place the first U.S. satellite, Explorer 1, into Earth orbit. Following the success of Explorer 1, Pickering was instrumental in leading a new era of robotic space exploration, including the first missions to the moon and the planets.

Pickering started at JPL in 1944, when the laboratory was developing missile systems for the U.S. Army. He organized the electronics efforts at JPL to support guided missile research and development.

In 1954, Pickering was named director of JPL, and he soon had his hands full with the space race. In November 1957, following the first Soviet Sputnik launch, JPL and the Army Ballistic Missile Agency at Redstone Arsenal were given the assignment to place the first U.S. satellite into orbit. Pickering directed the JPL effort, which, in just 83 days, provided the satellite, telecommunications, and the upper rocket stages that lofted Explorer 1 into orbit on January 31, 1958. It was considered one of Pickering’s greatest achievements and laid the groundwork for future robotic exploration of the moon and

planets.

Pickering received numerous awards throughout his career, including NASA’s Distinguished Service Medal. In 1975, he was awarded the National Medal of Science by President Gerald Ford, and in 1976 he was given honorary knighthood from the Queen of England. He also received awards from numerous science and engineering societies.

Pickering was born in Wellington, New Zealand in 1910. He came to the United States in 1929 to study at Caltech. Pickering was naturalized a U.S. citizen in 1941. He obtained his bachelor’s and master’s degrees in electrical engineering, and he received a doctorate in physics from Caltech before becoming a professor of electrical engineering there in 1946.

His widow, Inez Chapman Pickering, and daughter, Elizabeth Pickering Mezitt, survive him.



Dr. William Pickering, left, helps hoist a model of the first U.S. satellite, Explorer 1, during a celebration of its successful flight in 1958. Helping with the celebration are Dr. James Van Allen, center, and former Marshall Director Dr. Wernher von Braun.

Marshall Imaging Services

Bush issues Presidential Proclamation for Women's History Month

During Women's History Month, we celebrate the many accomplishments of our Nation's women. Women are leaders in American business, government, law, science, medicine, the arts, education, and many other fields. As mothers, sisters, and daughters, they bring compassion and integrity to our communities and help to teach our children the values that make our country great.

Women today are following in the footsteps of pioneers such as Sarah Pierce, Emma Willard, Catherine Beecher, and Mary Lyon, who helped open the doors to higher education for women in our country. Their vision and determination changed America forever. Women today also join a long tradition of defending our Nation. During the Revolutionary War, Margaret Cochran Corbin fought as a gunner and was severely wounded at the battle of Fort Washington. Today, more than 200,000 women are serving

in our Nation's Armed Forces and working to defend America and advance peace and freedom. We are grateful for their sacrifice and for the military families that support them.

This month, we celebrate the many ways women strengthen and enrich America. NOW, THEREFORE, I, GEORGE W. BUSH, President of the United States of America, by virtue of the authority vested in me by the Constitution and laws of the United States, do hereby proclaim March 2004 as Women's History Month.

I call upon all Americans to observe this month with appropriate ceremonies and activities. IN WITNESS WHEREOF, I have hereunto set my hand this fifth day of March, in the year of our Lord two thousand four, and of the Independence of the United States of America the two hundred and twenty-eighth.

— **George W. Bush**
President of the United States of America

Women inspire hope and possibility throughout first century of flight

A message from NASA Administrator Sean O'Keefe

This month, NASA joins with other agencies and organizations in honoring the accomplishments and achievements of women throughout our nation, as we celebrate Women's History Month.

We are fortunate that outstanding women have helped inspire hope and possibility throughout the first century of flight. Like NASA's own mission "to inspire the next generation of explorers," the theme of this year's observance, "Women Inspiring Hope and Possibility," gives us the opportunity to celebrate the milestones of visionary women explorers.

During Women's History Month we

are reminded of pioneers like Amelia Earhart, the first woman to fly solo across the Atlantic Ocean; Bessie Coleman, the first African-American — male or female — to earn a pilot's license; and the "Mercury 13," a team of ground-breaking aviators from the 1960s who paved the way for the first female astronauts in the 1980s.

Throughout NASA, a number of extraordinary women play an integral role in our agency's success. They serve as scientists, engineers, astronauts and administrators, making significant contributions to NASA's mission and new vision for space exploration. Currently,

pioneering women help lead our Mars Exploration Rover team, direct our efforts to understand the effects of space travel on the human body and remain at the forefront of NASA's Return to Flight preparations.

I encourage you to participate in planned programs and activities commemorating Women's History Month at NASA and in your communities. As women continue to reach historic achievements, we look to them to inspire not only our nation, but also the next generation of explorers.

— **Sean O'Keefe**
NASA Administrator

Great Moonbuggy Race set April 2-3

Seventy high school and college teams are getting ready to "buggy" in NASA's 11th Annual Great Moonbuggy Race on April 2-3 at the U.S. Space & Rocket Center in Huntsville.

The race is a grueling endurance test over a half-mile course that includes twists, turns and inclines, as well as simulated Moon craters, rocks, lava ridges and soil.

For details, go to <http://moonbuggy.msfc.nasa.gov>.



Doug Stoffer, NASA/Marshall Center

Discussing how to do business with NASA

Tom Luedtke, second from right, NASA associate administrator for procurement, discusses procurement policies, practices and initiatives during a Contractors Open Forum last week at the Marshall Center. With Luedtke are, from left, Roger Watkins and Harold Hamilton of the Boeing Co., and, right, Steve Beale, director of the Marshall Center's Procurement Office.

X-43A

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The flight is part of the Hyper-X program, a research effort designed to demonstrate alternate propulsion technologies for access to space and high-speed flight within the atmosphere. It will provide unique "first time" free flight data on hypersonic air-breathing engine technologies that have large potential pay-offs.

Hyper-X is inherently a high-risk program. No vehicle has ever flown at hypersonic speeds powered by an air-breathing scramjet engine. In addition, the rocket boost and subsequent separation from the rocket to get to the scramjet test condition have complex elements that must work properly for the mission to be successful.

The \$250 million program began with conceptual design and scramjet engine wind tunnel work in 1996. In a scramjet (supersonic-combustion ramjet), the flow of air through the engine remains supersonic, or greater than the speed of sound, for optimum engine efficiency and vehicle speed. There are few or no moving parts, but achieving proper ignition and combustion in a matter of milliseconds proved to be an engineering challenge of the highest order. After a series of successful wind tunnel tests, however, NASA is ready to prove that air-breathing scramjets work in flight.

This will mark the first time a non-rocket, air-breathing scramjet engine has powered a vehicle in flight at hypersonic speeds, defined as speeds above Mach 5 or five times the speed of sound.

Researchers believe these technologies may someday offer more airplane-like operations and other benefits compared to traditional rocket systems. Rockets provide limited throttle control and must carry heavy tanks filled with liquid oxygen, necessary for combustion of fuel. An air-breathing engine, like that on the X-43A, scoops oxygen from the air as it flies. The weight savings

could be used to increase payload capacity, increase range or reduce vehicle size for the same payload.

The X-43A will fly in the Naval Air Warfare Center Weapons Division Sea Range over the Pacific Ocean off the coast of southern California.

After booster burnout, the 2,800-pound, wedge-shaped research vehicle will separate and fly on its own to perform a preprogrammed set of tasks. After an approximate ten second test firing of the engine, the X-43A will glide through the atmosphere conducting a series of aerodynamic maneuvers for up to six minutes on its way to splashdown.

This will be the second flight in the X-43A project. On June 2, 2001, the first X-43A vehicle was lost moments after release from the wing of the B-52. Following booster ignition, the combined booster and X-43A vehicle deviated from its flight path and was deliberately destroyed. Investigation into the mishap showed that there was no single contributing factor, but the root cause of the problem was identified as the control system of the booster.

For this flight, the B-52 will carry the booster with the attached X-43A to at least 40,000 feet before its release, versus the 24,000 feet of the first attempt. The booster will carry the X-43A research vehicle to approximately the same test conditions — altitude and speed — as planned for the first flight.

NASA's Langley Research Center, Hampton, Va., and Dryden Flight Research Center, Edwards, Calif., jointly conduct the Hyper-X program.

A video clip, images and additional information about the project are available at <http://www.nasa.gov/missions/research/x43-main.html>.

NASA Television will carry the flight and the post-flight news briefing live.

Job Announcements

MS04C0095, Senior Executive Service (SES), Director, Space Transportation Directorate. ES-0801-01, 06 (promotion potential to ES-6). Closes April 14. Contact: Diedra Williams at 544-5721.

MS04D0096, AST, Flight Vehicle Atmospheric Environments. GS-0861-14, Space Shuttle Propulsion Office, Propulsion Systems Engineering & Integration Office. Closes April 1. Contact: Edwina Bressette at 544-8115.

MS04D0097, AST, Liquid Propulsion Systems. GS-0861-12 (promotion potential to GS-13), Space Transportation Directorate, Vehicle and Systems Development Department, Vehicle

Subsystems Engineering Group. Closes March 29. Contact: Jannette Black at 544-8660.

MS04D0100, AST, Fuels and Combustion Processes. GS-893-14. Space Transportation Directorate, Propulsion Research Center. Closes March 31. Contact: Jannette Black at 544-8660.

MS04C0102, Financial Resources Control Specialist. GS-0501-12 (promotion potential to GS-13), Office of the Chief Financial Officer, Accounting Operations. Closes March 30. Contact: Dana Blaine at 544-7514.

MS04C0104, Executive Support Assistant.

GS-0303-08, Flight Projects Directorate. Closes March 29. Contact: Carolyn Lundy at 544-4049.

MS04D0105, AST, Aerospace Flight Systems. GS-0861-14, Space Shuttle Propulsion Office, Solid Rocket Booster Project (Brigham City, Utah). Closes March 28. Contact: Edwina Bressette at 544-8115.

MS04C0106, Supervisory, AST-Technical Resources Management. GS-0801-15, Science Directorate, Business Management Office. Closes March 29. Contact: Debbie Longeddy at 544-2308.

Announcements

Associate Administrator Loston to speak at scholarship banquet

Dr. Adena Williams Loston, NASA's associate administrator for education, will be the keynote speaker at the 11th Annual Scholarship Banquet sponsored by the North Alabama Chapter of the National Society of Black Engineers, Thursday, April 1, at the Huntsville Marriott, beginning at 6:30 p.m. For tickets, contact any NSBE member or call Shanell Darby, 544-6197, or Lamont Redrick, 461-3549.

'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. 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/>.

Marshall annual Egg Hunt will be April 10

The Marshall Center's annual Egg Hunt will be at 10 a.m. April 10 in the Picnic Area. All Center team members are invited to bring their children ages 12 and under to participate. In case of inclement weather, activities will be held in Bldg. 4316. For details, call 544-3563 or 544-1382.

Wellness Center to sponsor 'Weigh to Win' competition

The Marshall Wellness Center is sponsoring a "Weigh to Win" competition for teams of no more than five people to try to lose weight for six weeks. Teams will score points for each pound lost. All Marshall team members are eligible to participate. Registration is through Friday, with the competition March 29-May 10. For more information, call the Wellness Center at 544-0252.

Marshall Wellness Center annual 5K Run set April 28

The Marshall Wellness Center's second annual 5K Run will be April 28. The run, open to all Marshall team members and retirees, will begin at Bldg. 4315 at 4 p.m. For more information, call Heather Day at 544-9355.

Continuous Risk Management class set Wednesday

The Safety and Mission Assurance Directorate is offering a Continuous Risk Management class from 8 a.m.-4:30 p.m. Wednesday at the Marshall Institute. For more information, call Dena Yell at 544-4655.

Huntsville Channel Cats hockey game tickets available

Marshall team members can get a ticket discount for games one and two of the SEHL Championship Playoff Series at the Von Braun Center featuring the Huntsville Channel Cats hockey team - this year's regular-season champions. The first two games will be April 1-2. Game times are 7:05 p.m. Tickets are \$9 for lower-bowl reserved seats and \$5 for upper-bowl general admission seats. Special ticket prices are not available at the box office, but must be ordered by calling Drew Carter at 518-6163 by Wednesday.

MARS Tennis Club seeking members

The MARS Tennis Club is seeking members for the 2004 season. Civil servants, retirees and on-site contractors are eligible for membership, which includes use of four lighted tennis courts, participation in tournaments and other club activities. For details, call Amy Hemken at 544-70972004

Earth Day photography entries being accepted until March 31

Entries for the Earth Day photography contest will be accepted through March 31. Submissions must be original, 5-by-7-inches, and showcase the natural

environment on Redstone Arsenal. Entries will be accepted in black and white and color categories. Only one photograph per category will be accepted. Winners will receive a \$25 gift certificate. Photos will not be returned. Send entries to Antionette Pelt, Bldg. 4200, Room 302.

2004 Earth Day Environmental Suggestion Awards

Up to five \$50 gift certificates will be awarded in the Environmental Suggestions Awards program. Suggestions must save money, improve environmental processes, reduce liability or benefit the environment. Submit suggestions electronically to Sharon Scroggins, Environmental Engineering, 544-7932, by March 31.

Self-Study Learning Center Seminar set for March 31

Ken Blanchard, a leader in the development and teaching of management tools to increase productivity and morale, will speak during an Excellence in Leadership and Management lunchtime seminar from 11 a.m.-1 p.m. March 31 in Bldg. 4200, Room G-13. Bring your own lunch. For details, call 544-9291,

Marshall Medical Center Part I physical exam cancellations

The Marshall Medical Center asks that employees cancel scheduled Part I physical examination appointments in the case of illness, as samples collected may be skewed and could result in further unnecessary testing. For details, call 544-2390.

NASA Exchange to sponsor Shoe Extravaganza

The NASA Exchange at Marshall is sponsoring a sports shoe fair March 30-April 1, 8:30 a.m.-4 p.m. in the Bldg. 4203 lobby. Sports shoes for men, women and children will be \$19.95 plus tax. When you buy four pairs, one is free. For details, call Candy Kelly at 544-7565.

Classified Ads

Miscellaneous

- ★ The Firm, complete set of three DVDs, two fanny lifters & workout stick. \$90. 881-9753
- ★ Kenmore stove & refrigerator, black & white trim, make offer. 931-425-0896/evenings
- ★ Small kitchen table with four chairs, \$65. 256-864-3133
- ★ Bose 901 SPKS w/equalizer, Kenwood, 107VR, RCVR, \$500. 774-1955/5-9 p.m. only
- ★ GE self-cleaning stove, white, 30", 3 yrs. old, \$200. 837-1774
- ★ Two Shania Twain tickets, Birmingham, April 17, lower level, Section 7L, \$160. 256-603-0741
- ★ Stoneware-type dishes, service for eight, Strawberry design, \$30; band saw, \$45. 837-6776
- ★ 1977 Avion travel trailer, 27', for hunting, camping or lake lot, \$4,500. 931-427-2059
- ★ 1992 Manta Ray ski/pleasure boat, new upholstery, rebuilt engine, \$6,500. 256-259-5140
- ★ Wooden swing set, slide & two swings, \$20. 682-8068
- ★ Queen-size Craftmatic bed w/ adjustable head, foot and massage, \$350. 682-1431
- ★ Nikon zoom lens, 70-200 2.8F, caps, UV filter, container included. 551-1007 after 6 p.m.
- ★ Sofa and matching loveseat, beige/green, \$500; desk & chair, \$75; sofa table, \$50. 883-5168
- ★ Craftsman garden tractor, 27HP Kohler, auto-trans., 48" deck, sleeve hitch, lawn sweeper, \$3,150. 461-0930
- ★ Murray riding lawn mower, 30" cut, 10HP, \$100. 859-9856
- ★ Booster seat for 4-6 yr. old, w/drink holder, toy caddy, \$15. 890-0755
- ★ Jenny Lind baby bed, including comforter set and mattress, \$125. 852-0627
- ★ Doghouse, shingled, wooden floor w/ commercial heating pad, \$100. 837-1774

- ★ Five-drawer chest and nightstand, painted primary colors, for child's room, \$75. 859-4048
- ★ Kenmore chest freezer, 18 cu. ft., 3 yrs. old, \$125. 256-830-9383
- ★ Entertainment center, glass doors, shelves, holds stereo, 46x20x35, wood, make offer. 880-6498
- ★ Dewalt 10" table saw, bench-top, 744S, w/portable stand, carbide blade, \$425. 883-1788
- ★ One ticket to Les Miserables, May 2, 2 p.m., Row H, good seat, \$47. 881-0755
- ★ KitchenAid dishwasher, under counter, QuietScrub system, four cycles, black front panel, \$55. 539-0094
- ★ Earnhardt Sr. & Jr. diecast collectibles, 1/24 scale, other NASCAR items, various drivers. 858-6746
- ★ Spare tire w/cover for Jeep Grand Cherokee, \$20. 765-532-4218
- ★ ProForm treadmill, 480Pi space saver, \$150. 256-864-2268
- ★ Panasonic microwave oven w/ turntable, 1000W, 1.0 cu. ft., 2 yrs. old, \$35. 655-3065
- ★ Frigidaire washer & dryer, \$100; RCA console television, 27", \$50. 256-586-7424

Vehicles

- ★ 1991 Explorer XLT, 4-door, leather, sunroof, 64K miles, \$3,000+ in new parts, \$3,700. 880-6498
- ★ 1989 Honda CR250R dirt bike, \$1,000; 1996 Honda XR100 dirt bike, \$1,200. 655-6293
- ★ 1998 Voyager, 3.0L/V6, 112K miles, cranberry, 4th door, good tires, a/c, body, \$5,100. 509-2751
- ★ 1991 Honda ST1100 motorcycle, black, Corbin seat, Cycle Com CB/intercom, helibars, \$4,200. 489-5464/Mark King
- ★ 2000 Chevy Camaro, pw/pdl/ps, keyless, T-top, cd, 38K miles, \$12,700. 256-232-4379
- ★ 2000 Saturn sedan, 67K miles, new tires, cd/cassette, \$6,300. 355-2042
- ★ 2001 F150 Lariat, red, 5.4L/V8, 4-door, 47K miles, \$18,500. 881-9753/Jeff

- ★ 1985 Dodge Caravan, 5-passenger, 117K miles, good seats/tires, \$600. 539-5495
- ★ 1993 Ford F150 truck, medium blue, bench seat, long wheel base, 128K miles, \$2,900. 256-658-8821/Steve
- ★ 1976 Corvette, red on red, 350/4-speed, ps/pb/pw, \$5,500. 679-0694
- ★ 1999 Cadillac Deville, leather, loaded, \$9,500. 534-9631
- ★ 1997 Nissan Maxima, blue, power windows, mirrors & seats, \$6,000. 656-5461
- ★ 2003 Ford Expedition, loaded, 20K highway miles. 256-233-6197
- ★ 1998 Mercedes C230, 94K miles, one owner, \$11,500. 931-425-0896
- ★ 1996 Pontiac Trans-Sport SE van, 7-passenger, loaded, 93K miles, \$5,000. 256-518-9162 before 8 p.m.
- ★ 1994 Chevy conversion van by Gladiator, low roof, all extras, V8, TV/VCP, \$8,750 firm. 534-2368
- ★ 1995 Ford Windstar, one owner, \$2,000. 256-722-0997
- ★ 1993 Explorer XLT, all-power, new air/blower, brakes, new tires, 152K miles, \$2,895. 256-772-0430
- ★ 1997 Ford Ranger, V6/3L, auto, 2wd/ac/ps, utility suspension, 154K miles, \$3,700. 479-3660

Wanted

- ★ Corelle ware, white, dinner plates without raised rims, cereal bowls, miscellaneous pieces. 256-881-3322
- ★ Chevrolet truck, '88-up, bad engine/transmission, clean body, cheap/inexpensive. 654-0789
- ★ Laptop computer, good condition, most recent Windows software preferred, dial-up/Internet capabilities, reasonable. 256-351-6468
- ★ Old scooter or scooter parts, any condition. 325-6000
- ★ Rolled asphalt siding, simulated brick pattern, used in '40s and '50s, about 150 square feet. 534-4968
- ★ Women's golf clubs, starter or full set. 656-2965

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