



# MARSHALL STAR

Serving the Marshall Space Flight Center Community

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## Chippewa-Choctaw heritage part of Marshall team member Melody Herrmann's identity



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Ira A. Cloud, grandfather of Marshall aerospace engineer Melody Herrmann, holding his son.

by Jonathan Baggs

Ira A. Cloud, a full-blooded Chippewa American Indian, reached down, picked up his young son and cradled him in a blanket as they posed for the camera.

The trees and foliage were in full bloom. Long shadows from the sun helped frame the photo of father and son. It was a moment long before the space race, satellites and orbiting space stations, but one that has been repeated by generations of Americans. Cloud didn't know his granddaughter would one day help NASA and the Marshall Center discover the secrets of the universe.

The old photograph is a constant reminder for Melody Herrmann of who she is, and where she came from. Cloud was her grandfather.

Herrmann is an aerospace engineer and lead for systems analysis for NASA's In-Space Propulsion Program at the Marshall Center. She and her three children also are members of the Choctaw Nation of Oklahoma.

"My grandfather was a full-blooded Chippewa and my grandmother was part Choctaw," Herrmann said.

Herrmann's children are active in local Indian education groups

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## Striving for continuous improvement with fewer resources? Try Kaizen

by Lisa Watson

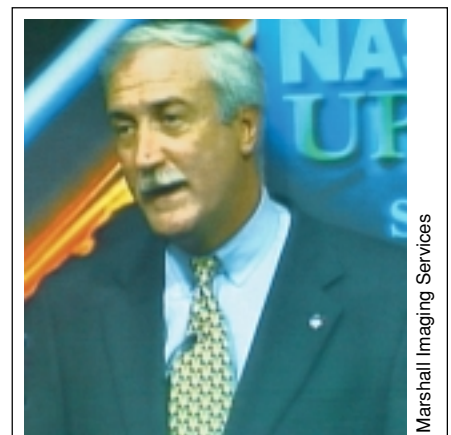
Change is hard, an unknown, but inevitable and when many NASA programs are faced with leaner budgets, there is a way to face change — saving money and improving processes at the same time.

Taking a cue from a common Japanese word applied as a business strategy, the Ground Systems Department in the Flight Projects Directorate has tackled how to change and improve its processes — saving

approximately \$1 million in the way processes are worked. The Department used a strategy called "Kaizen."

Kaizen is a Japanese word meaning gradual, orderly, continuous improvement. As a business strategy, it has been used successfully in conjunction with Six Sigma, another strategy defined as a statistically derived performance target operating with only 3.4 defects for every one million activities.

See *Kaizen* on page 4



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### NASA Update

NASA Administrator Sean O'Keefe addresses Agency employees about the new Integrated Space Transportation Plan last week during an edition of "NASA Update" on NASA TV.

# Heritage

*Continued from page 1*

and one is learning the Choctaw language. “All three have scholarships to college through the Choctaw Nation,” she said.

Herrmann said she was very young when her grandfather died so she never actually learned the language herself. “He didn’t impart the language to his kids, which was a shame,” she said. “I remember he was always nice – gentle and kind. He was fun to be around.”

In the old photo, Cloud is holding Herrmann’s uncle. His other son, Don Cloud, was Herrmann’s father.

Don Cloud was a career military man. “My dad joined the Army when he was 18. He taught ROTC before he was shipped off to Korea where he became a prisoner of war by the Chinese for three years,” Herrmann said.

Don Cloud’s best friend, Ted Sprouse, kept a journal of his and Cloud’s war experiences, which later was turned into a book, “Limbo on the Yalu ... and beyond!” by Robert J. Berens. Herrmann’s father is quoted throughout the book, which makes note of his Indian heritage several times.

Many years after the war, Sprouse and Don Cloud looked at a satellite photo of the prison camp where they were held.

Don Cloud’s reaction to the photo is included in the book. “The picture is sterile,” he said. “No smells, no lice, no wet, no cold, no pain, no time. No endless, endless time.”

“Apparently, a lot of my father’s Indian instincts got them through this ordeal,” Herrmann said. “I think it is neat that his Indian heritage is referenced so many times.”

Herrmann said knowing her grand-



Photo by Doug Stoffer, NASA/Marshall Center

**Melody Herrmann looks at photos of her American Indian ancestors.**

father gave her a unique perspective when studying history in school. “It was ‘personal’ history for me because I’m not that far removed from it. I don’t advertise my heritage but it does seem to come up in conversation.”

These conversations can be an important way to educate people. Herrmann said the Marshall Center’s efforts at recognizing National American Indian Heritage Month is also a good way to educate people by stimulating conversations on heritage.

“I think it’s good that Marshall focuses on the heritage of people because we are a diverse team,” Herrmann said. “We’re getting to know another culture, which can be beneficial for all of us.”

“It’s important to remind people,” Herrmann continued. “If you’re not directly

connected, it is easy to forget.”

Herrmann is proud of her direct connection to her American Indian heritage. She wishes her grandfather had lived long enough to tell her stories of his tribal customs and rituals. Her father, however, did instill a sense of pride to never forget where she came from.

And an old photograph reminds Herrmann that on a sunny Oklahoma day many years ago, a proud man, a proud American Indian, wrapped one of his sons in a blanket, looked into a camera lens, and peered through time.

“He’s part of who I am,” Herrmann said.

*The writer, employed by ASRI, is the editor of the Marshall Star.*

## **Marshall holiday events feature tree-lighting and reception**

**M**arshall team members can celebrate the upcoming holidays by taking part in two of the Center’s main events during the season.

The annual tree-lighting ceremony will be at 4:30 p.m. Tuesday in front of Bldg. 4200. All Marshall team members are encouraged to attend.

On Dec. 10, from 12:30-3 p.m., the Center’s Holiday Reception will be held in Bldg. 4316.

This year’s theme is “the festival of trees.” White pine trees will be donated to each organization for the event. The trees will be replanted afterward on Center grounds.

The reception will feature food and live music. Employees also are encouraged to bring donations of non-perishable food items for the North Alabama Food Bank, or toys, which will also make them eligible for door prizes. Employees must be present to win door prizes.

# Tereasa Washington one of six NASA employees nationwide to receive 2002 Presidential Rank Award

by Rick Smith

**T**ereasa H. Washington, director of the Customer and Employee Relations Directorate at Marshall, is one of just six NASA employees nationwide who received the 2002 Presidential Rank Distinguished Executive Award — the highest honor attainable for a civil servant.

Washington, a Tuscumbia, Ala., native, manages a wide range of programs at the Center, including human resources, internal relations and communications, media relations, government and community relations, employee and organizational development, educational programs and technology transfer — the development of space technology for commercial use.

“My heartfelt gratitude for this honor is matched by my deep appreciation of each member of the Customer and Employee Relations Directorate and the rest of the NASA and Marshall Center team for helping make it possible,” Washington said. “Together, we are improving the way we do our jobs, furthering NASA’s mission and communicating our successful endeavors to the American people. There is no greater reward.”

Washington received a Presidential Rank Meritorious Executive Award in 1999.

“The honor conferred on Tereasa Washington is a source of pride and inspiration to me and the entire Marshall team,” said Art Stephenson, director of the Marshall Center. “Her selection demonstrates that hard work, dedication and achievement by those in public service do not go unrecognized, and that is tremendously gratifying to me,” he added.

The Presidential Rank Awards honor executives who have provided exceptional service to the American people, exhibiting strong leadership skills, strength, integrity and a commitment to outstanding public service. The awards are given annually to a select number of government executives in the Senior Executive Service — a group of leaders who serve as a vital link between presidential appointees and the rest of the federal workforce. Just 1 percent of the more than 6,100 career members of the Senior Executive Service may receive the Distinguished Executive award.

Washington was among the first African-American students to attend Deshler High School when Tuscumbia schools were desegregated in the mid-1960s. Washington — who was part of a popular family singing group, “The Hortons,” that performed



Washington

Marshall Imaging Services

throughout the southeast and had appeared on local television and radio — says public familiarity with the group helped ease her integration into the previously all-white school. She credits her work ethic to the motivation and encouragement she and her siblings received from their parents, who were devoted to public service, education and community.

“I learned early about the value not just of doing things right, but of doing the right things,” Washington said. “Emphasizing relationships and fostering community — whether among small-town neighbors, or co-workers in an organization the size of NASA — stand at the heart of that goal. By embracing our commonality, each of us becomes more than we are.”

Washington received a bachelor’s

degree in economics from Alabama A&M University in Huntsville in 1978. In 1982, she earned a doctorate of jurisprudence from Vanderbilt University School of Law in Nashville, Tenn., and immediately joined the Marshall Center’s Office of Chief Counsel as a legal research assistant. In 1983, she was appointed general attorney-advisor, handling legal matters for the Center’s administration and technical operations. In 1988, she became associate chief counsel for issues related to personnel and labor relations. Four years later, she was appointed associate deputy chief counsel for the Center.

In 1995, Washington was named director of the Marshall Center’s Human Resources and Administrative Support Office. She led the office’s evolution, in January 1998, into the Customer and Employee Relations Directorate, which today, under her direction, includes more than 250 civil service and contract employees.

Washington is the recipient of numerous NASA and industry awards, including a 1999 Senior Managers in Government award from Harvard University in Cambridge, Mass.; a NASA Exceptional Achievement Medal in 1992; the Astronaut Corps’ “Silver Snoopy” Award for service to the Space Shuttle program in 1990; and a Marshall Center Director’s Commendation in 1988.

She has served in a number of civic capacities, including sitting on the board of directors for the Valley Corridor Summit, an organization devoted to fostering the technological leadership of the Tennessee Valley region; serving on the board of directors of the Huntsville chapter of the Girl Scouts of North America; and on the Huntsville Hospital Foundation’s development council.

*The writer, employed by ASRI, supports the Media Relations Department.*

# Kaizen

*Continued from page 1*

Kaizen and Six Sigma strategies have been used in manufacturing processes for years. Now, there is a movement to use these strategies to improve processes and paperwork – and NASA creates a lot of paperwork.

When an organization is trying to find a less expensive way to operate, performing Kaizen can help and at the same time improve customer satisfaction with products and processes.

Some rules and processes were created long ago and no longer are applicable in today's business climate. Organizations always must continue reviewing processes but it is important to review them from a "systems perspective." Many organizations instead apply narrow "Band-Aids" or "symptomatic solutions" to issues without reviewing how these solutions will affect future operations. While a symptomatic solution may show short-run improvements, such a method can create larger problems over time. Uncovering the fundamental solution from a systems perspective is where Kaizen can help.

The savings for the Ground Systems Department was in the time spent processing paperwork through the system. This savings means more productivity time for the department as well as happier customers.

Prior to performing Kaizen, it took the Ground Systems Department an average of 113 days to process an extensive change request through the system. The Kaizen team formulated a new process that recommended an average of 54 days – about a 50-percent improvement. Six months later, the department had reduced the actual time to about 80 days from the original 113 – still a significant improvement of about 30 percent.

After the Kaizen event, it is essential to continue to monitor progress to ensure

the team meets its goal and to understand why there is still a variation, if a variation exists. The Ground Systems Department still wants to meet the recommended 54 days and the team is continually pursuing that goal.

**How to perform Kaizen?**

A Kaizen event can be initiated by anyone in an organization who sees variations or inefficiencies in the process. Whomever the process "owner" is must support the Kaizen effort so that any changes filter to all those who will be affected. The first step is for the Kaizen initiator to meet with the process owner and establish the goals of the Kaizen effort as well as the parameters of the process to be analyzed.

After the Kaizen initiator and process owner agree on the process to be analyzed, a team of volunteers -- who each have a specific knowledge of the process -- is chosen. To maintain team dynamics, try to keep the maximum number of members to 10. A facilitator should also be chosen for the team. The facilitator of the Kaizen event should be a green belt or black belt certified facilitator and does not need specific process knowledge to be successful. For example, if the Kaizen is being applied to paperwork processes, the facilitator and Kaizen initiator determine span times, i.e., walk the process — how long paperwork is in the current system, how much reworking the paperwork goes through, and how much manpower is associated with the task. This raw information is used to determine "data points" using statistical techniques.

The team then meets for a week – normally away from the office – to map out a new process. As the team reviews the old process, using a flow chart, areas of inefficiency become obvious and the brainstorming begins where the major problem areas are dissected through cause-

and-effect diagrams to establish why the old process is done in a certain way.

Near the end of the week, the team is ready to carve out a new process with improvements. Estimates are made as to how long it should take to develop a starting point for the new process. Once the new process is in place, data should be collected every six months to determine actual improvements.

The final step is a list of actions to work through in the next few months and who will be responsible for each one. Then the process owner and management are brought in on the last day of the team meeting for a presentation on recommended changes and improvements.

In the Ground Systems Department, two teams went through the week-long Kaizen process. Not only did they have a new appreciation for other team members' jobs, they also attained a real sense of accomplishment. Even those who were not "gung-ho" at the beginning of the week were believers at the end.

Kaizen is a good step toward creating a learning organization because team members take back many tools they can use daily. They can see "value added" versus "non-value-added" tasks and make a concerted effort to remove waste in a process. It's a way to face change without fear, learn about co-workers' responsibilities and streamline a process to save time, money and improve a product – and customer satisfaction.

*The writer works in the Ground Systems Department of the Flight Projects Directorate. Jonathan Baggs, employed by ASRI and the editor of the Marshall Star, contributed to this article.*

## Job announcements

**MS03C0017**, Financial Management Specialist. GS-501-07 (PIP position with promotion potential to GS-12), Office of the Chief Financial Officer, Accounting Operations. Competitive Placement Plan. Closes Dec. 3

**MS03C0018**, AST, Aerospace Flight Systems. GS-861-15, Space Shuttle Projects Office, Space Shuttle Main Engine. Competitive Placement Plan. Closes Dec. 9.

# National American Indian Heritage Month at Marshall



Photo by Doug Stoffer, NASA/Marshall Center

**Tom Estes entertains Marshall employees with American Indian stories.**



Photo by Doug Stoffer, NASA/Marshall Center

**Dawn Mercer reads "Cherokee Roots" at the American Indian history display in the lobby of Bldg. 4200.**



Photo by Doug Stoffer, NASA/Marshall Center

**Second-grade students at Rainbow Elementary School in Madison created a banner of Indian pictographs for the Marshall Center's American Indian Heritage Month celebration.**



Photo by Terry Leibold, Marshall Center

**Marshall team members of American Indian descent near the old Madison quarry site.**

## Obituaries

**Abraham, Ronald N., 68**, of Huntsville, died Nov. 19. Funeral services were at Twickenham Funeral Home South. Burial was in Maple Hill Cemetery.

Abraham retired from the Marshall Center in 1993 as an aerospace engineer. During his career, he supported projects including the Saturn V, Space Shuttle External Tank and the International Space Station. He earned a degree in mechanical engineering from the University of Kentucky.

He is survived by his wife, Jeraldene; one son, Edward Abraham of Huntsville; two daughters, Karen Cunningham and Lisa Pourhassani, both of Huntsville; one sister, Betty Grossman of Lexington, Ky.; and five grandchildren.

**Boczek, Roger L., 41**, of Huntsville, died Nov. 20. Funeral services were at Spry Funeral Home with the Rev. Roland Lee officiating. Burial was in Plainview Cemetery.

Boczek was a computer programmer for Computer

Science Corp. at the Marshall Center.

He is survived by his wife, Karen Boczek; one daughter, Christina Leigh Boczek of Huntsville; one brother, Dale Boczek of DuBoise, Ill.; two sisters, Vickey Boczek and Lisa Blodgett, both of Edwardsville, Ill.; and his maternal grandmother, Eleanor Bronke of Tamaroa, Ill., and his paternal grandmother, Alfreda Boczek of DuBoise, Ill.

**La Roche, Lillian B., 80**, of Glenview, Ill., died Nov. 6. Memorial services were held at the Huntsville Church of Religious Science.

La Roche retired from the Marshall Center in 1989.

She is survived by one son, Robert W. La Roche of Burlington, Conn.; one daughter, Gloria R. La Roche of Glenview, Ill.; one brother, Ignacio Herrera, Jr., of Asheboro, N.C.; one sister, Juanita H. Candow of Mentor, Ohio; and two grandchildren.

# Marshall team using innovative approach to understand flow liner cracks

from the Subsystem and Component Development Department

Engineers at the Marshall Center recently employed an innovative approach in an effort to understand the cause of cracks found in the Space Shuttle Main Engine Propulsion System flow liners.

A cooperative effort between the Space Transportation Directorate's Fluid Physics and Dynamics Group, TD63, and the Engineering Directorate's Structural Dynamics & Loads Group, ED21, utilized finite element analysis techniques to model the acoustic environment around the flow liners.

Typically, finite element analysis techniques are used for structural or thermal applications.

During the flow liner crack investigation, TD63 was responsible for providing the fluid loads on the flow liners to ED21 for loads assessment. Because the cracked flow liners were only a few inches upstream of the Space Shuttle Main Engine low-pressure fuel turbopump, a complex and unsteady fluid dynamic environment exists around the liners. One element of this environment is the liner cavity acoustics, which are pressure perturbations driven by flow- or pump-induced pulsations.

The Structural Dynamics and Loads Group first generated a finite element model from geometry provided by the Mechanical Design Group, TD62. Matt Casiano of the Fluid Physics and Dynamics Group's then used MSC.NASTRAN to calculate the flow liner natural frequencies, acoustic mode shapes, and an



The Shuttle Flow Liner Investigation Team at Marshall is, from left, Scott Taylor, Matt Casiano (seated), Greg Frady, Tom Nesman, Tom Zoladz and Kurt Smalley.

Photo by Dennis Olive, NASA/Marshall Center

acoustic forced response of the liquid hydrogen in the duct and in the cavity behind the flow liner.

Past analysis techniques would have sought to use a closed form analytical solution of a simple representative geometry.

This new application of finite element analysis techniques allowed for much more accurate prediction of the acoustics. Analysis results have been used to interpret data from recent Space Shuttle Main Engine static tests at the Stennis Space Center and have played an important role in the investigation effort.

## Cobb receives 'Employee of the Year' award for CMT at Marshall

from Creative Management Technologies

Margaret "Peggy" Cobb received Creative Management Technology's "Employee of the Year" award during the annual "Bugle Awards" ceremony Nov. 16.

Jacob Dixon, Jr., president and chief executive officer of CMT, presented Cobb with the award recognizing her exceptional contributions, and for reflecting positively the goals and mission of the company.

She also received CMT award pins for performing above and beyond customer expectations, the "Manager's Special Award" for significant achieve-

ment throughout the year, a safety award for participation in safety meetings, and a "Special Act of Service Award," which recognized her contributions to quality and efficiency.

Cobb's supervisors said she excels in job performance, initiative, and expedient custodial service for the fourth and fifth floors of Bldg. 4200. She also supports the eighth and ninth floors in the absence of those floors' regular custodian.

"Peggy is the epitome of team spirit, supporting and motivating others to make customer needs top priority," said Lois Walton-Jackson, CMT project manager at the Marshall Center. "She recognizes customer service as the key to company success."



Cobb

Photo by Dennis Olive, NASA/Marshall Center

# Center Announcements

## Dial 4-4PAY for payroll assistance

Marshall employees can now receive payroll assistance by dialing 4-4PAY. Questions on WebTADS, pay and leave will be answered. Employees also can e-mail questions to payroll\_office@msfc.nasa.gov or type "Payroll" in the "To" field of their e-mail application.

## Source evaluation class rescheduled

The Source Evaluation Board Training Class has been rescheduled for Jan. 6-9. Participants who have previously enrolled are already on the roster. Anyone interested in taking this course should sign up immediately via AdminSTAR.

## Propulsion symposium set for Dec. 10-11

Propulsion Engineering Research Center symposium on propulsion will be Dec. 10-11 at Penn State University in State College, Pa. Registration must be completed by Dec. 4. For more information, call Dr. Roger D. Woodward at 814-863-6289.

## Venture Crew volunteers needed

Marshall's Education Programs Department is requesting volunteers to work with students who are members of the NASA Marshall Venture Crew. Venture Crew, open to high school students interested in learning about NASA and careers in science and engineering, is sponsored jointly with the Greater Alabama Council of the Boy Scouts of America. Students do hands-on projects with NASA scientists and engineers, tour the Marshall Center and participate in other activities throughout the year. Anyone interested in working with Venture Crew should call Tammy Rowan at 544-8706.

## Faculty/undergraduate programs information requests available

The request for task descriptions for the fiscal year 2003 NASA Faculty

Fellowship Program and Undergraduate Student Research Program has been sent to Marshall directorates. For more information and a list of contacts, go to "Inside Marshall."

## Health benefits open season

The Federal Employees Health Benefits program open season is until Dec. 9. For more information, go to "Inside Marshall."

## MARS Ballroom Christmas dance is Dec. 7

The MARS Ballroom Christmas dance is 6:30 p.m. to 11 p.m., Dec. 7, at the Von Braun Center. Two bands will provide continuous music and a special buffet with turkey and all the trimmings is available. Tickets cost \$20 for members and \$25 for non-members and should be purchased no later than Dec. 3. To purchase a ticket, or for more information, call 544-3525, 544-5427, 544-3998, 461-0230, 534-7408, 880-2270 or 650-0200.

## ASEM meeting is Wednesday

The Tennessee Valley Chapter of the American Society of Engineering Managers is at 11:30 a.m. Wednesday at Papa Lovetti's in Huntsville. No reservations are required. For more information, call 544-3645.

## Book fair set for Tuesday

The NASA Exchange book fair will be from 9 a.m.-4 p.m. Tuesday-Friday in the lobby of Bldg. 4203. For more information, call Candy Bailey at 544-7565.

## Directives Control Board meeting is Wednesday

Directives Control Board meeting will be from 2-3 p.m. Wednesday in Bldg. 4200, Room 409. Primary or alternate members should attend. OPRDs who are presenting documentation comments, resolutions or status draft documents must attend.

## SHARP mentors needed for student education programs

The Marshall Center's Education Programs Department needs volunteers to work with students participating in the 2003 NASA Summer High School Apprenticeship Program. SHARP offers high school students opportunities to participate in an eight-week science and engineering program. Researchers and other science and engineering professionals are encouraged to volunteer as mentors. For more information, call 544-6025.

## Astrionics lab retirees to meet

Instrumentation Division Astrionics Lab retirees and friends will meet at 11 a.m. Tuesday at the Redstone Golf Course coffee shop. The group will continue to meet on the first Tuesday of each month.

## Mentors needed for Equal Opportunity program

Employees in Marshall's technical directorates are encouraged to volunteer as mentors for the 2003 Equal Opportunity Office Summer Internship Program. For more information, call Madeline Hereford at 544-7420.

## Freedom to Manage 'Town Hall' meeting is Dec. 12

All Marshall team members are invited to a Freedom to Manage "Town Hall" meeting from 10-11:30 a.m. Dec. 12, Bldg. 4200, Morris Auditorium. Courtney Stadd, NASA's chief of staff and White House liaison, and other members of NASA's F2M team will update Marshall employees on F2M activities and successes. Sessions with F2M Task Force Category Leads are from 1:30- 3 p.m. For more information, go to <http://f2m.msfc.nasa.gov/>.

## Exchange Council election open

Only civil servants can vote in the NASA Exchange Council election, which runs through Dec. 5. For details, go to "Inside Marshall."

# Employee Ads

## Miscellaneous

- ★ ATI Rage 8MB PCI video, \$10. 772-8712
- ★ Hockey skates, Pro-Stock, sizes 7.5 & 5, \$35 ea.; child's ice skates, size 2, \$20. 837-2223
- ★ 2001 John Deere GX-85 riding mower w/ bagging system, 13HP, B&S w/30" cut, \$1625. 461-9662
- ★ Queen bed, Hooker, solid cherry headboard and footboard, 7' tall posts, \$585. 325-8958
- ★ Mitsubishi console TV, oak, 26", stereo, \$375. 256-498-3023/1-800-209-1907 Lee
- ★ 1997 Yamaha Timberwolf ATV, 1WD, 150cc, front & rear racks, \$1,650. 259-2164
- ★ Para-ordinance P-14 pistol, 45ACP, \$675; Bach Stradivarius trumpet, \$1,300; several Playstation games. 851-8085
- ★ PC games: Madden 2002/2000; Falcon 4.0, Baldur's Gate, NCAA99; Civilization 2; \$5 each. 828-9651
- ★ Blue 3-piece sectional, double recliners, \$350; several car seats, \$5-\$20. 721-9964
- ★ Craftmaster glass-lined 30-gallon electric water heater, Energy guide rating 407, \$30. 882-0133
- ★ Image home gym for sale, already disassembled, \$200. 489-1487
- ★ Utility trailer, 5'x10', new tires, \$275. 830-4191
- ★ Two crypts, side by side, Heart Level, Chapel of Love, Valhalla Memory Cemetery, \$7,900. 931-962-0709
- ★ Camper shell for Toyota Tundra, white, \$375; storage building, 12'x16', \$995. 256-233-0025
- ★ Bose 901 speakers, pre-amp, stands, \$875 obo. 922-1424
- ★ BMW factory aluminum shift knob for 5-speed, fits all except E31 8-series, \$45. 922-1424
- ★ TV stand for 27" Sony, black, one-shelf, glass door, \$25. 828-1441
- ★ Local honey, light or dark, \$5/quart, \$3/pint; \$1.75/12 oz. bear; quantity discounts. 837-8087
- ★ Mountain bicycle, 12-speed, \$35; ladies bicycle with large comfort seat, \$20. 430-6897
- ★ Toolbox for full-size truck, \$20; kitchen table w/chairs, \$80; Yamaha keyboard, \$25. 830-5292

- ★ Two KW Linear amplifier, antenna rotor, dummy load, monitor scope, test equipment. 256-539-7855
- ★ New Westin steps, bars for 4-door Chevy Tahoe, 94-99, \$75. 527-0545
- ★ Minolta Master VHS-C camcorder w/bag, 3-hr. battery/charger ad all manuals & accessories, \$150 obo. 880-1544
- ★ Flute, Gemeinhardt, w/maintenance / cleaning kit, \$90. 325-8958
- ★ Vitamaster motorized treadmill, programmable w/incline capability, \$150. 534-9780
- ★ Crate guitar amp, 120-watts w/digital FX and footswitch, 6 months old, \$275. 461-8077
- ★ Little Tykes "Grow with Me" adjustable basketball goal, \$35. 830-4191
- ★ Dunlop radial rover tires, P21575R15, less than 200 miles, \$350 obo. 758-2116
- ★ Flatbed car hauler, 16', 6' ramps, 7,000 lb. Capacity, good tires, no brakes, \$775. 859-1483
- ★ Oak dining table, 54" diameter w/no leaves, \$100 obo. 881-4538
- ★ Craftsman 21" 6HP push-mower w/bag, \$100; Power Wheels Kawasaki 4-wheeler, new battery, \$75. 837-7465
- ★ NordicTrack Pro Ski exercise machine w/ monitor, manual/instructions, will deliver & set-up, \$250. 325-6000
- ★ Queen pine bedroom suite, 5-piece, \$1,000. 771-7481
- ★ New full size violin, new horsehair bow and case, \$95. 722-9989
- ★ 1997 Kawasaki Ninja, 7K miles. 773-8755/ 9 a.m.-9 p.m.
- ★ Sears chipper/shredder. 8 hp. \$350. Concrete mixer, 2.5 cubic feet. \$200. 837-6776
- ★ Space Shuttle model kit, extremely large kit, discontinued version, unopened. \$50. 306-0700

## Vehicles

- ★ 1994 Ford F150 Lightning, 115K miles, \$7,400 obo. 256-498-6244
- ★ 1993 Saturn SC2, black, 111K miles, auto, a/c, all-power, sunroof, \$3,100. 536-7144
- ★ 1989 Chevy Eurosport, gray, 127K miles, 4-wheel ABS, cruise, stereo/cassette, all-power, a/c, \$1,400. 256-766-5231
- ★ 1989 Pontiac Grand Prix, silver, 2-door, all-

- power, \$1,250. 851-7406
- ★ 1994 Isuzi Rodeo, 4WD, V6, 5-speed manual, auto hubs, a/c, power windows/locks, \$5,000. 230-6382
- ★ 1998 Nissan Altima GXE, 5-speed, CD player, spoiler, turquoise, \$7,900. 882-1779
- ★ 1995 Mercury Cougar XR7, 85K miles, all-power, leather, V8, 20 mpg, \$5,000. 859-1188
- ★ 1991 Mercury Grand Marquis; Airstream trailer, 25'. 881-6040
- ★ Buick LeSabre, 4-door, 83K miles, Michelin tires, original owner, \$9,397. 881-8648
- ★ 1996 Toyota Avalon, loaded, all-leather, 175K miles, \$6,500 obo. 728-5768 after 5 p.m.
- ★ 1996 Dodge Grand Caravan SE, 132K miles, 2<sup>nd</sup> sliding door, rear air, \$5,600. 864-3236/656-8902
- ★ 1996 Dodge Grand Caravan, quad seats, dual air, \$6,600. 527-7743
- ★ 1989 Dodge Caravan, 145K miles, \$1,000. 230-6819
- ★ 1999 Honda CRV EX, automatic, garage kept, 4WD, CD player, 46K miles, \$15,000. 353-0370/565-3022
- ★ 1996 Dodge Dakota Sport, 5-speed, 52K miles, alloy wheels, stereo/CD, bedliner, sport stripes, \$4,450. 256-753-2278
- ★ 1996 Mazda Millenia, all-power, loaded, 84K miles, tan, \$8,300 or trade for truck. 880-9025

## Wanted

- ★ Sound System: type Bose speakers and two microphones for gospel singing group. 256-931-2822
- ★ PC, early Pentium preferably w/28.8K modem or higher, no monitor needed. 534-4968
- ★ Quality used telescope and microscope for Christmas present. 256-721-9419
- ★ High quality cowboy boots, lady's size 8 or 8-1/2. 885-2401
- ★ Set of drums in good condition for beginning drummer. 828-7377
- ★ Naval officers, USN/USNR, former or currently serving, looking for the thrill of real-time operations. 679-3481

## Free

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