

# MARSHALL STAR

Serving the Marshall Space Flight Center Community

Nov. 18, 2004

## George Schmidt to head Propulsion Research Center

By Rick Smith

Dr. George R. Schmidt has been named manager of NASA's Propulsion Research Center, the primary organization occupying the new Propulsion Research Laboratory at the Marshall Center.

Schmidt will lead the organization's research and development of advanced propulsion technologies at Marshall's state-of-the-art laboratory. Under Schmidt's guidance, NASA scientists, engineers, guest researchers, and partners from

industry, academia and other government labs will seek innovative breakthroughs in propulsion systems to support a broad range of future space missions.



Schmidt

The Propulsion Research Center is a key participant in realizing the Vision for Space Exploration — NASA's bold initiative to return Americans to the Moon and send robotic missions to Mars and elsewhere in the Solar System to prepare for eventual human journeys

beyond near-Earth space.

Schmidt most recently served as program executive for Nuclear Power Systems in NASA's Science Mission Director-

*See Schmidt on page 4*

## Marshall exceeds CFC goal

**\$570,308!**

**\$550,000**

**\$500,000**

**\$450,000**

**\$400,000**

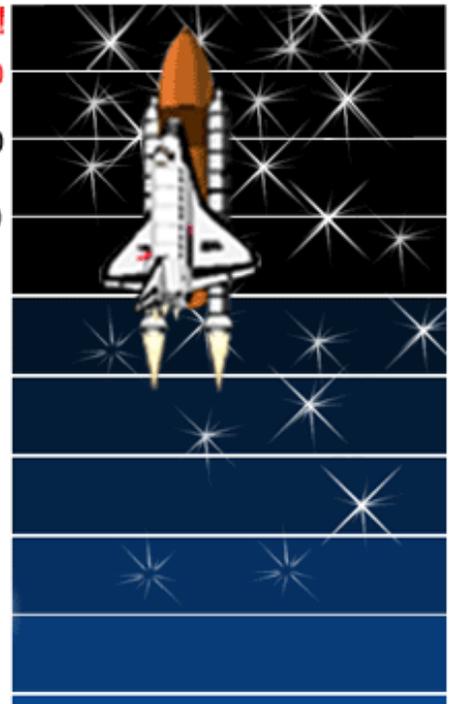
**\$350,000**

**\$300,000**

**\$250,000**

**\$200,000**

**\$100,000**



Marshall Center team members exceeded the Center's Combined Federal Campaign goal of \$550,000 by more than \$20,308, according to preliminary reports. More than 61 percent of Marshall's civil servants participated. David King, Center director, thanked team members for responding to the community's needs. "Local agencies will have the resources needed to provide services to residents in this area --- our neighbors."

## NSSTC, Marshall Center host solar imaging workshop

By Rick Smith

The dreary, pre-winter rains that soaked North Alabama last week did little to dampen the spirits of 60 leading space scientists, who converged on the National Space Science and Technology Center in Huntsville Nov. 9-10.

For these researchers, the Sun — and its connection to Earth — is always in

their mind's eye.

The NSSTC and the Marshall Center's Science and Technology Directorate jointly hosted the two-day workshop, in which participants explored the challenges and goals of imaging the so-called "Sun-Earth Connection," the complex natural relationship between our planet and its parent star.

The Sun-Earth system — which includes Earth's ionosphere and magneto-

sphere and the Sun's heliosphere and magnetosphere, as well as the space between both celestial bodies — has gained sizeable international attention in recent years. Changes on the Sun impact life on Earth in many ways, but the planet's atmosphere and magnetic field limit much of the threat to human life, acting as a buffer for the solar winds and a

*See Solar Imaging on page 2*

## Solar imaging

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shield against harmful solar radiation.

Electronic equipment and other machinery, however, are not always so lucky. And the ever-growing number of satellites in Earth orbit — which handle everything from simple human communications to weather and climate prediction and matters of international security — are particularly vulnerable to damaging solar activity.

And as the United States embarks on its bold Vision for Space Exploration, intended to extend human reach across the Solar System, there is obvious concern for those people living and working for long durations in space, without Earth's atmosphere and magnetic field to shield them from direct solar radiation.

According to workshop organizer Jim Spann, a NASA space science researcher at the NSSTC, the challenge now is to increase our knowledge of how the Sun and Earth are connected, how to mitigate the detrimental effects of the Sun's sometimes mercurial behavior — and, most importantly, how to predict impending space storms and other events. NASA considered these questions critical enough in 2000 — not long after “solar maximum,” or the most energetic period in the Sun's approximately 11-year cycle of activity — to establish the “Living With a Star” program to tackle them.

The key to delivering this early-warning system is the science of remote sensing, which typically uses aerial photography or orbiting satellites to collect information about the Earth's surface. Now, Spann and his colleagues seek to adapt remote sensing technologies to produce a systematic approach to studying the Sun-Earth Connection as well.

“Obviously, imaging is the only way we've ever studied the Sun — we can't do it *in situ!*” Spann said. “To effectively study the relationship between the Sun and Earth requires systematic imaging of ‘geospace,’ the region around Earth, on an even larger scale.” It also requires hardware and optics technologies capable of capturing images across a broad visual and elemental spectrum, he says — from the aurora, or the “footprint” of the magnetosphere, to the cold gases surrounding Earth and the radiation belts encircling the planet.

The workshop primarily served as a brainstorming session to determine what imaging technologies must be developed in coming years to address researchers' needs. Participants volunteered to develop white papers intended to outline the necessary technology components of the Sun and Solar System Connection “roadmap” — a NASA-led effort that will help solidify the Agency's strategic planning in years to come.

Among the workshop participants were top solar researchers from Johns Hopkins University's Applied Physics Laboratory in Laurel, Md.; the Harvard-Smithsonian Center for Astrophysics in Cambridge, Mass.; Lockheed Martin's Solar & Astrophysics Lab in Palo Alto, Calif.; the University of California at Berkeley; and the Geophysical Institute at the University of Alaska in Fairbanks.

*The writer, an ASRI employee, supports the Public Affairs Office.*



Photos by Doug Stoffer, Marshall Center

### **Veterans Day Parade draws participants**

In top photo, Andrea Nunn, left, and Willie Love, assistant director of Marshall's Equal Opportunity Office, represent the Marshall Center during the Veterans Day Parade in downtown Huntsville. In bottom photo, parade watchers display their patriotic spirit.

## Tree lighting, Holiday Reception set at the Marshall Center

The Marshall Center's annual tree lighting ceremony will be at 4:45 p.m. Dec. 6 in front of Bldg. 4200.

The Holiday Reception will be from 1 to 3 p.m. Dec. 9 in the Center Activities Bldg. 4316. This year's theme is “Holiday Magic in the Snow.”

The reception will feature music, food and door prizes. To be eligible for door prizes, team members must make donations of non-perishable food items for the North Alabama Food Bank. Team members must also be present to win. Transportation will be provided.

For more information, call Angela Storey at 544-0632 or Andrea Nunn at 544-8965.

# Five vying for seats on Marshall Exchange Council



Gill

Five Marshall Center employees are seeking to fill two vacant positions on the NASA/Marshall Exchange Council.

The candidates are Hansel Gill, ED22, Judy Green, CS40; Drew Hall, ED19; Joey Shelton, ED42, and May Wales, AD62.

Voting is done electronically and begins Monday through Dec. 8. The two candidates with the most votes will win. Only civil servants may vote.

To vote, go to <http://oscar.msfc.nasa.gov/cd/exchange.nsf>. Ballots are linked by employee badge numbers and UserID numbers to ensure a fair election.

Below are brief candidate biographies and their statements on why they want your vote.

**Hansel Gill** has been with the Marshall Center since 1990 — as a student aide worker, a Cooperative Education Program participant and as a full-time employee.

He graduated from Oakwood College with a degree in mathematics in 1996 and has since worked with the Metallurgy Research Team as an Aerospace Metallic Materials Engineer.

Gill enjoys playing sports and spending time with his wife and daughter.



Green



Hall

“For the past 12 to 13 years, I have participated in many of the Marshall Exchange activities, including the Softball Club, serving as captain of the basketball teams and as a referee in the football league. I’ve seen first-hand the value, the camaraderie and the morale generated when we can get together with our colleagues for some fun and leisure.”

**Judy Green**, protocol assistant, came to the Marshall Center in 1997. In her current position, she is responsible for the bookkeeping, budgets and accounting functions of the Protocol Office. She also coordinates the Shuttle Launch Guest Operations. Before joining NASA, she worked as a document control clerk for the Tennessee Valley Authority.

Green enjoys cooking, reading and playing with her grandsons.

“I have a genuine interest in the programs run by the



Shelton

Marshall Exchange and how the employees benefit from them.”

**Drew Hall**, computer engineer, joined the Marshall Center in 1986 and has worked with the Engineering and Science directorates and in the Safety and Mission Assurance Office. During that time, he has worked on several adaptive optics applications and supported various programs, including the Astro 1 and 11, X-33 and DART.

For the past 13 years, he has coordinated the annual chili cook-off for his organization.

“By participating on the Exchange Council, I hope to make the Marshall Center a better place for all employees.”

**Joey D. Shelton** came to the Marshall Center in 1997 as lead engineer for the Systems Analysis and Integration Laboratory support to the International Space Station Nodes

Project Office. He has also managed the software development and hardware software integration for the Nodes Project Office and worked as systems engineer in the Second Generation Reusable Launch Vehicle Program, Requirements Management Office.

Shelton is currently assigned to the Space Transportation and Projects Office and is working with NASA Headquarters Exploration Systems Mission Directorate to develop the directorate’s program managers handbook. He has served as a Combined Federal Campaign monitor and coordinated CFC community service day efforts for his organization.

He enjoys spending time with his family, hunting and fishing.

“I would like the opportunity to serve you as a member of the Marshall Exchange Council with a goal of being dedicated and diligent in managing Marshall events and activities to your satisfaction.”

**May Wales’** career at the Marshall Center spans 30 years. She is lead support specialist in the Center Operations Directorate, Integrated Customer Support Department, Operations and Sustaining Support Group. She has served as Center Operations ombudsman since 1996 and worked as executive assistant to the center director from 1994 to 1996.

Wales enjoys spending time with her grandchildren and reading.

“My 30-year career experience and the in-depth knowledge that I have of the center would enable me to be an asset to the Exchange Council.”

## Singhal is SAE Fellow



Singhal

Dr. Surendra Singhal has been elected to the 2003-2004 Society of Automotive Engineering International Fellows class. He was one of 20 people inducted during the 2004

ceremony.

Singhal is technical manager in the Materials and Processes Laboratory. He is recognized for his contributions to structures and materials engineering and technology and for his leadership in the aerospace industry. He has made significant advances in the development and application of probabilistic assessment of aerospace structures.

He holds degrees from the Indian Institute of Technology of Kanpur in Uttar Pradesh, India; Case Western Reserve University; the University of Houston; and University of Wisconsin.

## Schmidt

*Continued from page 1*

ate in Washington. There, he led development of radioisotope-based nuclear power systems for flight applications and advanced power conversion technologies for NASA's Project Prometheus — intended to develop spacecraft power systems capable of sending exploration missions throughout the solar system.

From 1999 to 2002, Schmidt served as deputy manager of the Propulsion Research Center at Marshall, directing research intended to deliver key technologies — nuclear, electric, high-energy plasma, solar, laser and antimatter propulsion and studies in advanced physics — for safe, low-cost access to Earth orbit and travel beyond.

A graduate of NASA's Senior Executive Service candidate development program, which grooms men and women to lead programs at the top levels of the federal government, Schmidt had numerous additional responsibilities during his tenure at the Propulsion Research Center.

In 2001, Schmidt helped the Marshall Center expand its partnership with Alabama universities to develop space propulsion technologies while assigned to the National Space Science and Technology Center in Huntsville — the collaborative

## Obituaries

**John R. Cochran**, 74, of Huntsville, died Oct. 9. He retired from the Marshall Center in 1994 after working as a program analysis officer.

Mr. Cochran served as minister of music for both Southside Baptist Church and Highland Baptist Church in Huntsville.

Survivors include his wife, Ginger G. Cochran; his children, Saleta Jech, Glenda Briley, Melody Hubbard, Heather Shanton, Erin Murphy, Cari Presley, and John Duane Cochran; and a sister, Doris Bridges.

**Margaret "Marty" Eddy**, 58, of Hartselle, died Oct. 19. She retired from the Marshall Center in 1994 after working as a secretary.

Mrs. Eddy took several church mission trips to Romania and since 1995 conducted Bible and English correspondence courses.

Survivors include her husband, Shirley Curtis Eddy; her children, Rhonda Woodall Smith, Lisa Eddy

Bryant, Ani Stanescu, Toby Eddy and Mel Eddy; three brothers, Thomas Massey, Arthur Massey and Gerald Massey; two sisters, Mary Massey Calvert and Movlyn Massey Roberson.

**Connie H. Godwin**, 53, of Grant, died Oct. 21. She retired from the Marshall Center in 2002 after working as an administrative assistant.

Survivors include her children, Lisa Wright and Joey Sutphin; four sisters, Hazel Pritchett, Dorothy Hall, Ann McAlpin and Brenda Bevel.

**William G. Horn**, 69, of Pulaski, Tenn., died Oct. 10. He retired from the Marshall Center in 1995 after working as a quality assurance specialist.

Survivors include his wife, Wanda Lee Kimbrough Horn; his children, Toby Horn, Barry Horn, Renee Shelton, Michelle Bowers; two brothers, Jerry Horn and Mike Horn; and two sisters, Barbara Anderson and Wilma Jean Holley.

research facility uniting government, academic and industry scientists. In 2000, Schmidt went to NASA Headquarters in Washington to aid the Agency in responding to Federal Bureau of Investigation recommendations for comprehensive security guidelines and protection of sensitive NASA technology and software products and documentation.

Schmidt joined NASA in 1989, leading testing of advanced cryogenic fluid management systems for storage and transfer of extremely low-temperature rocket fuel and propellants. He rapidly advanced to a number of successive leadership positions related to the development of propulsion systems and hardware.

The Propulsion Research Center is part of the Marshall Center's Science and Technology Directorate, supporting NASA's Exploration Systems and Science Mission Directorates, and is a member of the National Space Science and Technology Center. The Propulsion Research Center plays a critical role in NASA's development of advanced launch technologies and propulsion systems intended to carry out the work of the Vision for Space Exploration.

*The writer, an ASRI employee, supports the Public Affairs Office.*

# Announcements

## ***Schedule use or lose annual leave by Nov. 28***

Use or lose annual leave for civil servants must be scheduled by Nov. 28. Annual leave that is lost due to required public business cannot be restored unless scheduled in writing. Leave requests should be submitted through WebTADS or by e-mail. See "Inside Marshall" for more information or call Mack Blackman at 544-7509 or Amy Rape at 544-7002.

## ***Volunteers sought for robotics education project***

The NASA Robotics Education Project is seeking volunteers to support robotics competitions or mentor local teams. The Robotics Education Project sponsors educational robotics competitions and events, facilitates robotics curriculum enhancements and maintains a Web site clearinghouse of robotics education information. For more information, call Tammy Rowan at 961-7507.

## ***AARP safety course set***

The Marshall Center and the American Association of Retired Persons are sponsoring a safety course for drivers over age 50 on Dec. 13 and 14. The course, limited to 30 people, will be held in Bldg. 4200, Room G13E. See "Inside Marshall" for registration.

## ***Management Operations retirees to meet Thursday and Dec. 16***

The final Management Operations Office retirees meetings for the year are at 10 a.m. Thursday and Dec. 16 at the Cracker Barrel Restaurant in Madison. For more information, call Linda Zielinski at 544-1498.

## ***Native-American celebration, powwow is Friday and Saturday***

November is Native-American Heritage Month and the Marshall Center, in collaboration with Team Redstone, is honoring the contributions of Native Americans with several events. The annual celebration, or powwow, will be from 10 a.m. to 6 p.m., Friday and Saturday at the military parade grounds, just inside Gate 10. This year's theme is "Spirit of the Veteran — Honoring Our Elders." The winning essay and best group display will be presented during the powwow. For more information, call Jerald Kerby at 544-3243 or Karen Russell at 544-6972.

## ***MARS Ballroom Dance Club Christmas dance is Dec. 4***

The Marshall MARS Ballroom Dance Club will hold its annual Christmas Dinner Dance on Dec. 4 at the Von Braun Center East Hall. The semi-formal event begins with a social at 6:30 p.m. and dinner at 7 p.m. Dance from 8 - 11 p.m. to the music of The Little Big Band. Tickets are \$20 for MARS Dance Club members and \$25 for all others. Call Pat Sage at 544-5427 for more information or see "Inside Marshall."

## ***Shuttle Buddies to meet Monday***

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

## ***Hazardous and Controlled Waste training is Dec. 1***

A mandatory Hazardous and Controlled Waste Generator training is scheduled for 9 - 11 a.m. Dec. 1 in Morris Auditorium, Bldg. 4200. The annual training is for all personnel associated with hazardous or controlled waste accumulation. Personnel should register via the Safety, Health and Environmental Web site.

## ***Pre-ordered nuts available for pick-up Monday in Activities Bldg.***

Anyone who pre-ordered nuts from the Marshall Exchange may pick them up Monday in the Activities Bldg. 4316 from 8 a.m. to 3 p.m. A limited number of nuts will also be available for general sale in the Space Shop beginning Monday.

## ***Alabama Update with Gov. Bob Riley is Dec. 8 at VBC North Hall***

The Madison County Chamber of Commerce will present the 2004 Alabama Update with Alabama Gov. Bob Riley at noon, Dec. 8 in the Von Braun Center North Hall. Tickets are \$27 and may be purchased from Rosa Kilpatrick of the Government and Community Relations Office through Dec. 3.

## ***IEEE Gold Meeting is Dec. 8***

An IEEE Gold Meeting will be from 5:30 - 7 p.m., Dec. 8 at the University of Alabama in Huntsville Engineering Building, Conference Room 258. John Maxwell of The Boeing Company will speak on "Power Systems for Modern Spacecraft." Food and beverages will be provided. Contact Courtney Spivey at 464-4878 if you plan to attend.

### ***Job Announcements***

MS05D0014 (outside hire), AST, Reliability and Quality Assurance, GS-13,

Brigham City, UT (2 vacancies); New Orleans, LA (3 vacancies); Kennedy Space Center, FL (2 vacancies); Los Angeles, CA (2 vacancies); Huntsville, AL (1 vacancy).

Closes: Nov. 19. Contact: Rita Evans-McCoy, 544-7507

# Classified Ads

## Miscellaneous

Kincaid solid Cherry 3-piece entertainment center, 6'Hx8'W, \$1,200. 828-0756  
 Taylor 512 guitar, 2000 model, \$1,295. 882-0431  
 Nordic Track cross country ski machine w/manual, \$70. 830-5039  
 Golf clubs, women's starter set, bag, woods, and irons, \$50. 536-8692  
 Two tickets to BTL's "The Full Monty," Sunday, Nov. 28, 2 p.m., Row H, \$90. 256-881-0755  
 Two side-by-side crypts, Masonic Bldg., Valhalla Memory Gardens, includes all fees, \$5,500. 860-657-1618  
 Pennsylvania House entertainment center, Cherry, holds up to 30" TV, \$750. 931-427-2059  
 Samuel Lawrence solid pine dresser w/ matching mirror and nightstand, honey glaze finish, \$250. 880-3737  
 Microsoft Office 2004, Macintosh Professional Edition, includes Virtual PC7, new, in unopened box, \$265. 256-587-6343  
 Truck toolbox, fits S10s, Ranger, Tacomas, aluminum, mid-lid design w/full weather-stripping, gas lifts, \$175. 777-4439  
 Birch bedroom suite, double bed, dresser, 2 nightstands, mattress, box springs, bedding, valances, \$425. 650-0630  
 La-Z-Boy leather recliner, navy blue, \$350; Jeweltone sofa & coordinating chair & ottoman, \$200. 828-5879  
 Table, 4-chairs, \$50; Kids table & chairs, \$25; Century stroller, \$20; Gerbil cage, accessories, \$8. 881-4148  
 Decorative cast iron vent-free thermostatically controlled zero-clearance gas heater, 35K BTU, \$400. 656-2965  
 Two tickets, BTL's "The Full Monty," seats G17/G18, Saturday, Nov. 27, 2 p.m., \$45 each. 883-2863  
 Platinum 3-diamond ring, \$150; large hardwood Maple color TV stand w/ drawer, \$50. 890-0755  
 Kenmore 70 Series, heavy-duty washer \$125; Craftsman 24cc gas edger, \$125. 256-503-8040  
 Children's battery powered jeep, ages 3-6, \$65; gas furnace, \$300. 256-723-4983

This-End-UP solid end bunk bed set, no mattresses, \$395. 533-5942  
 Maytag dishwasher, white, \$250; Clyde Pierson sofa, purple, \$200. 518-9788  
 Kurzweil PC88 digital piano/midi controller, hard travel case, 60Watt fender KXR series keyboard amp, \$650. 931-703-5956  
 Waterbed, queen size, four poster, dark wood, fully baffled mattress, with heater, \$70. 726-2224  
 Double fish tank metal stand, 55 gallon, 30Hx37Wx18D, \$50. 828-8630  
 Light wood drop-leaf table/chairs, \$175. 217-1948  
 Twin size Oak headboard, footboard, rails, mattress, box-springs w/Joe Boxer Navy plaid bedding, \$175. 882-9591  
 Camper shell for S-10 short-bed, \$125; rare Bach Stradivarius trumpet, mint, \$1,200. 851-8085  
 Boys figure ice skates, two pair, make offer. 464-9408  
 AKC Christmas Pugs, 5M/3F, fawn w/ black masks, ready Dec. 18-23, \$600 each. 882-2037/David  
 Oak computer desk with hutch, best offer. 772-7262  
 Sofa bed, never used, \$300; computer corner table, double desk and bookshelf, \$158. 722-8086  
 Two BTL tickets, "The Full Monty," VBCC, orchestra, Sunday, Nov. 28, 2 p.m., \$89. 256-881-4335  
 Blue leather reclining sofa, \$250/ 837-8946  
 Plastic models, mostly Star Trek, ERTL and Revell kits, call for list. 256-880-7118/Mark  
 1994 Morton Echo mobile home, to move, 14x66, 2-bedroom, 2-bath, stove, refrigerator, dishwasher, heat/air, \$12,500. 256-880-0426  
 Lowe duck boat, 12', camouflage w/ blind, marine battery and trolling motor, \$450. 214-0110  
 1979 fishing boat, 18', 115HP Mercury, 2-live wells, depth finder, trolling motor, trailer, \$2,500. 256-426-0223  
 Aluminum semi-V fishing/duck hunting boat, tilt trailer, 18hp Johnson, trolling motor, \$800 firm. 351-6996

## Vehicles

1996 Honda Goldwing SE3, 29k miles, w/matching cargo trailer. 256-828-1640  
 2002 GMC Envoy SLT, 47k miles, new Michelins, warranty, \$18,500. 656-3383  
 1994 Lumina, \$1,400. 256-739-9467  
 2003 Olds Alero, automatic, 4-door, red, spoiler, under warranty, \$11,500. 256-247-3929  
 1994 Ford Probe, blue, \$2,500. 603-1930  
 1998 Ford Explorer XLT, 4x4, all-power, leather, cruise, keyless entry, cd, cassette, 100k miles, \$6,500. 489-3166  
 1996 Chevrolet Tahoe LT, 4x4, 158k miles, all records, \$5,500. 837-2426  
 1997 Isuzu rodeo, \$3,900. 755-6002  
 1999 Mercedes ML320 SUV, white, 4wd, leather, heated seats, cd changer, 92k miles, \$16,500. 256-653-1401  
 2001 Ford Explorer, 2-door, loaded. 233-6197  
 1992 Mercury Sable Wagon GS, blue, all-power, 248K miles, \$400. 430-6842  
 2003 KIA Spectra, 7.8k miles, a/c, all-power, cd, auto, warranty, \$8,600. 880-6591  
 1976 Corvette Stingray, T-top, 350 automatic. 256-773-4133 after 5 p.m.  
 1998 Honda CBR 600, 12k miles, garage kept, \$3,600. 256-316-3469  
 2004 Chevrolet Avalanche, black, 4-door, all-power, tinted glass, loaded, \$21,500. 464-3280  
 1999 Chevrolet Tahoe LS, 2wd, 67k miles, front/rear a/c, sound system, one-owner, \$13,500. 656-9527

## Wanted

Ride from near Huntsville Hospital, 7 a.m. to 3:30 p.m., will pay \$7 per day. 533-6980  
 Craftsman leaf whacker. 837-6776  
 Storage shed, good condition. 468-4406  
 Rear axle for 1989 Mitsubishi Mighty Max. 230-9348 after 5 lv. msg.

## Free

To good home, two guinea pigs w/ cages. 256-586-7246  
 Gravel, approximately 1 ton, size #78, marble sized. 533-1172

# MARSHALL STAR

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