



Marshall Center hosts 25 teachers for summer workshop

Twenty-five K-6 teachers from 12 states and the District of Columbia are attending a two-week summer workshop through July 20 at the Marshall Center.

The NASA Educational Workshop (NEW) Program is a NASA Headquarters initiative managed by the National Science Teachers Association, and coordinated by Marshall's Education Programs Department.

During the workshop, participants will observe NASA's state-of-the-art research and development through direct interaction with NASA scientists, engineers, technicians and educational specialists. The educational materials and activities presented in the workshop are related to Earth science, aerospace technology, human exploration and development of space and space science.

Approximately 700 educators submitted applications for the

See Teachers on page 7



Photo by Terry Leibold, NASA/Marshall Space Flight Center

Little Patriots

Jonathan Bradford, left, and Kyle Siersma wave miniature American flags during the Marshall Child Development Center Fourth of July Parade July 6. Jonathan is the son of Annette Bradford, a contractor with Cortez III, and Bobby Bradford of the Flight Projects Directorate. Kyle is the son of Dave Siersma, of Marshall's Science Directorate, and Janet Siersma.

Chandra captures flare from brown dwarf star

The first flare ever seen from a brown dwarf, or failed star, was detected by the Marshall-managed Chandra X-ray Observatory. The bright X-ray flare has implications for understanding the explosive activity and origin of magnetic fields of extremely low-mass stars.

Chandra detected no X-rays at all from LP 944-20 for the first nine hours of a 12-hour observation, then the source flared dramatically before it faded away over the next two hours. "We were shocked," said Dr. Robert Rutledge of the California Institute of Technology in Pasadena, the lead author on the discovery paper to appear in the July 20 issue of *Astrophysical Journal Letters*. "We didn't expect to see flaring from such a lightweight object."

The energy emitted in the brown dwarf flare was comparable to a small solar flare, and was a billion times greater than observed X-ray flares from Jupiter. The flaring energy is believed to come from a twisted magnetic field.

LP 944-20 is about 500 million years old and has a mass that is about 60 times that of Jupiter, or 6 percent of the Sun's mass. Its diameter is about one-tenth that of the sun and it has a rotation period of less than five hours. Located in the constellation Fornax in the southern skies, LP 944-20 is one of the best-studied brown dwarfs because it is only 16 light years from Earth.

The absence of X-rays from LP 944-20 during the non-flaring period is in itself a significant result. It sets the lowest limit on steady X-ray power produced by a brown dwarf, and shows that the million degree Celsius upper atmospheres, or

coronas, cease to exist as the surface temperature of a brown dwarf cools below about 2500 degrees Celsius.

Brown dwarfs have too little mass to sustain significant nuclear reactions in their cores. Their primary source of energy is the release of gravitational energy as they slowly contract. They are very dim — less than a tenth of a percent as luminous as the Sun — and of great interest to astronomers because they are poorly understood and probably a very common class of objects that are intermediate between normal stars and giant planets.

The observation was made on Dec. 15, 1999, using the Advanced CCD Imaging Spectrometer (ACIS).

Images associated with this release are available on the World Wide Web at: <http://chandra.harvard.edu> and <http://chandra.nasa.gov>

"Safety Starts With You"

— *Safety slogan submitted by Karen Stephens, ED19*

Finding a balance, creating our future

Here at Marshall Space Flight Center, we are creating our future every day through the actions we take in support of our many Customers.

The company I worked for just before coming to Marshall always capitalized the word “Customer,” emphasizing the importance of the concept that we are always working for and on behalf of a Customer. Our Customer may be another NASA Center, a person or group within Marshall or a company we are helping to succeed. The best way to create our future is by doing the right things, at the right time — each and every day.

The trick is to figure out what the right things are.

The most important element of our current product- and service- oriented organization is its focus on the Customer. A Customer-focused organization is a more

Director’s Corner

challenging environment in which to work, to be sure. There is always a built-in conflict in such an organization: the necessity of balancing our attention to current issues and the tasks at hand with our awareness of — and preparedness for — tomorrow’s challenges.

The quality and timeliness of the work we do each day determines whether or not our Customers will choose to call on our services or products in the future. This approach requires that we keep our eye on the ball on our current programs while doing the advanced work on future programs, thereby ensuring we’re ready to perform on them when the time comes.

I’ve experienced this approach many times in business. We must perform optimally on today’s programs while preparing our skills and tools for tomorrow. The team that emphasizes one at the expense of the other will be the team that experiences a downturn in business in the not-too-distant future.

I ask each Marshall organization to examine your balance. If you are dedicated to a program or project, are you occasionally willing to go the extra mile when your “home” organization needs help on a proposal or advanced technology project review? And if you are doing more to address advanced technologies that will enable the future, are you willing to jump in and help an ongoing project in need? My sense is that you are — and that is why we are successful.

To those who manage our line organizations: you must be experts at balancing attention to present performance and future readiness. You must always be asking yourselves questions: Are we taking time to train our people? Are we developing technologies, tools and processes to enable better services in the future? Are we in balance?

We are in a transition state on many of our projects, moving from limited insight (in, some cases, almost no insight) to more direct insight and accountability. To make



Stephenson

this transition successful, we need to dedicate more resources to these projects — resources that are already limited. To do this properly, we may have to make some tough decisions on what we are not going to do. We may have to learn to say no.

At a recent “Skip Level Lunch,” I met with employees from across the Center — a process I use to get direct feedback from team members with whom I don’t normally interface. We talked about balance and the need to say no, to limit the number of things we commit to doing. They pointed out that Marshall has a long history of wanting to “do it all,” to accept more and more work. The group agreed that we are at our limit — and in some instances beyond our capacity. Taking on too much can result in what is sometimes referred to as the “uniform botch” — that is, we do equally mediocre work on all of our projects, rather than outstanding work on a more reasonable number.

In many instances, finding the proper balance includes working very hard. That is the way any truly successful endeavor goes — requiring a dedication to the cause that leaves no room for clock-watching. At the same time, we need to support our employees in making time for family, friends and adventures away from work. Again ... it’s about balance.

Let’s conscientiously address the balance we seek to maintain between today’s projects and tomorrow’s projects. As we do this, each of us will strike the right balances and — together — we will create a great future.

— Art Stephenson,
Marshall Center Director

Job Opportunities

Reassignment Bulletin 00-29-RE, AST, Aerospace Flight Systems, GS-861-13, Space Shuttle Projects Office, Solid Rocket Booster Project. Closes July 14.

CPP 00-95-Re, Supv, AST, Liquid Propulsion Systems, GS-861-14, Space Transportation Directorate, Vehicle & Systems Development Department, Systems Analysis Group. Closes July 14.

CPP 00-97-RE, Supv, AST, Flight Systems Program Management, GS-861-15, Space Transportation Directorate, Program Planning & Development Office. Closes July 17.

CPP-00-88-CP, Program Analyst, GS-343-7 (multiple vacancies). This announcement is the result of a program developed by the Customer and Employee Relations Directorate, the Office of the Chief Financial Officer and the Marshall Business Management Council to recruit and develop program and budget analysts for the Center. The purpose of the program is to develop a cadre of highly skilled business managers prepared to handle the challenges of today’s changing business world at Marshall. The Business Management Council consists of the chief financial officer, procurement officer and all Center directorate and staff office business managers. The job announcement is located at: <http://hrd.msfc.nasa.gov/JOBS/INTERNAL>, and is open to Marshall employees and NASA employees stationed at Marshall. Interested applicants are encouraged to apply. Closes July 19.

Celebrate 'Spirit of the Americans with Disabilities Act Month'

By the President of the United States of America
A Proclamation

The enactment of the Americans with Disabilities Act (ADA) 10 years ago this month signaled a transformation in our Nation's public policies toward people with disabilities. America is now a dramatically different — and better — country because of the ADA.

In the last 10 years, we have worked hard to eliminate harmful stereotypes and have grown to understand disability as a natural part of the human experience. We are taking steps, such as renovating and constructing public accommodations to make them fully accessible, to ensure that people with disabilities are fully integrated into our communities and workplaces. And we have come to appreciate that people with disabilities are a key element — and an untapped resource — in sustaining our Nation's historic economic growth.

To mark the ADA's 10th anniversary and the 25th anniversary of the Individuals with Disabilities Education Act (IDEA), the American Association of People with Disabilities has organized a nationwide "Spirit of ADA" Torch Relay. Twenty-four cities from coast to coast are hosting official relay events, and hundreds of communities are organizing additional local events as part of this national celebration.

The Spirit of ADA's organizing theme is "Renew the Pledge" to encourage individuals, organizations, and government entities to reaffirm their commitment to the principles of the ADA and IDEA. Vice President Gore and I are proud to join in the celebration and to renew our own pledge to help advance the cause of disability rights.

Promoting disability rights not only improves the lives of the 54 million Americans with disabilities; it improves all of our lives. As President Franklin Roosevelt recognized more than 60 years ago, in words that are now inscribed on the FDR Memorial in our Nation's capital: "No Country, however rich, can afford the waste of its human resources."

NOW, THEREFORE, I, WILLIAM J. CLINTON, 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 July 2000 as Spirit of the ADA Month, 2000. I urge

government officials, business people, community leaders, educators and all the people of the United States, to celebrate the contributions people with disabilities have made, and continue to make, to the progress and prosperity of our Nation, and to renew our commitment to upholding the nondiscrimination principles of the ADA and IDEA.

Marshall Center helps employees with disabilities

The Marshall Center continues to upgrade facilities and provide the accommodations needed to make the workday a little easier for employees with either temporary or permanent disabilities.

These upgrades include curb cuts near handicapped parking spaces to allow for wheelchair access; evacuation chairs for disabled employees to use in the event of an emergency; cell phones to call for help in an emergency; telecommunications devices for the deaf; rest room modifications and a buddy system where employees look out for and assist individuals with disabilities. Additionally, the Center Operations Directorate recently approved a design that will allow for wheelchair accessibility to the front entrance of Bldg. 4200.

"These services also are available to employees with temporary disabilities," said Charles Scales, director of the Equal Opportunity Office. "For instance, we can provide temporary permits for handicapped parking to employees while they are recovering from an injury or illness. We also can provide motorized carts or wheelchairs — for use while at work — for people who have difficulty walking. Requests for these services must be accompanied by an appropriate certification of need from a physician."

"The Americans with Disabilities Act in 1992 brought about a lot of changes," said Shelve Miller, Disabilities Program manager. "However, the Marshall Center has been helping individuals with disabilities overcome obstacles long before the government made it mandatory."

For more information, call 544-4927.

Countdown to Safety Bowl: Teams should be selected by Aug. 7

Marshall's Safety Bowl begins Aug. 30 and culminates with the championship on Safety Day, Oct. 18. Teams from each directorate will compete. For more information, call Irene Taylor at 544-2051.

Sample Questions

1. While picnicking with his girlfriend Julie at the park, Butch put on

sunscreen with an SPF of 30. Not to be outdone, Julie put on three layers of SPF 15. Who was better protected?

- a) Julie.
- b) Butch.
- c) They were equally protected.

2. Where should you keep emergency medical services numbers?

- a) Hung up on the refrigerator with a magnet.

b) Beside the telephone.

c) In a kitchen drawer.

3. What is Marshall Center's safety policy?

4. In the test areas, what does a flashing red light mean?

5. What is the acronym of the volunteer "grass roots" safety and health action team at Marshall?

See Answers on page 8



Marshall Center presents checks from annual employee fund drive to local charities

Federal employees and on-site contractors at Marshall contributed \$448,390 through the Combined Federal Campaign last year, benefiting non-profit charitable organizations. In June, local

charities that are representative of Huntsville area charities served by CFC received checks.

Presented checks were Habitat of Madison County; American Cancer

Society, Mid-South Division Inc.; Madison/Marshall County Chapter of the American Red Cross; Harris Home for Children; Christmas Charities; and United Way of Madison County.



Photos by Emmett Given, NASA/Marshall Space Flight Center

Marshall Center Deputy Director Carolyn Griner, left, presents a check to the American Cancer Society. Beginning second from left are Rosa Kilpatrick, Roslin Hicks, Melinda Seigler, Bruce Askins and Laura Richardson.

Marshall's Associate Director Sid Saucier, left, presents a check to Harris Home for Children. Beginning second from left are Rosa Kilpatrick, Roslin Hicks, Robert Richardson, Shar Hendrick and Melinda Seigler.

Tereasa Washington, left, director of Marshall's Customer and Employee Relations Directorate, presents a check to United Way of Madison County. Beginning second from left are Art Wikle, Nancy Kramer, Melinda Seigler, Rosa Kilpatrick, Rufus Taylor and Roslin Hicks.



See CFC on page 5

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Charles Scales, right, director of Marshall's Equal Opportunity Office, presents a check to the American Red Cross. From left are Barry Porter, Gene Sievert, Rosa Kilpatrick, Bruce Askins and Melinda Seigler.



Teresa Washington, left, director of Marshall's Customer and Employee Relations Directorate, presents a check to Christmas Charities Year Round Inc. Beginning second from left are Rosa Kilpatrick, Roslin Hicks, Shar Hendrick, Melinda Seigler and Gerri Mills.



Sheila Cloud, second from left, director of the Center Operations Directorate at Marshall, presents a check to Habitat for Humanity. At left is Melinda Seigler. Beginning third from left are Roslin Hicks, Rosa Kilpatrick, Camille Solley, Bill Giardini and Bruce Askins.

Upcoming Events

'Thunder in Huntsville' — As part of the activities celebrating the 40th anniversary of the Marshall Center, the Marshall team is invited to a lunchtime showing of the 30-minute historical video "Thunder in Huntsville." The video will be shown at 11:30 a.m. and 12:15 p.m. Friday in a partitioned area of the Bldg. 4203 cafeteria.

40th Anniversary Theme Contest — Marshall's 40th Anniversary celebration committee invites all Marshall team members to submit ideas to its "name the theme" contest. Entries should emphasize Marshall's 40-year history and its dedication to the future of space exploration. E-mail submissions to robert.jaques@msfc.nasa.gov no later than July 20. The winner will be awarded a prize.

Joint Propulsion Conference — The 36th Joint Propulsion Conference & Exhibit will be Sunday through Wednesday at the Von Braun Center in Huntsville. Bus service is being provided every 30 minutes between 7 and 9:30 a.m. from Bldg. 4200 and Bldg. 4203 southeast parking lot to the Von Braun Center and returning to Marshall between 3:30-5 p.m. Bus schedule information is on "Inside Marshall." A complete schedule of speakers is located on the Web at:

<http://www.aiaa.org/calendar/joint00prog.html>

Science Writing, Web Technology Training — Limited seating is available for the Science Writing and Web Technology class from 8:30 a.m.-4:30 p.m. Tuesday and Wednesday at the Huntsville Hilton. The course includes writing stories for Internet use, presentation of science and engineering to the layperson, and aspects of Internet communications. Interested individuals should submit an MSFC Form 59 to Stephanie Elliott/CD20 no later than Friday. For more information, call Vanessa Suggs at 544-7527 or Elliott at 544-7553.

Marshall Association — The Marshall Association will meet at 11:30 a.m. July 20 in the Bldg. 4203 cafeteria. The menu is pizza, salad, cookies or brownies, and tea. Cost is \$5.50 for members and \$6 for non-members. Dr. Larry DeLucas, a professor with the University of Alabama at Birmingham, will speak. His research involves investigation of the three-dimensional structure of molecules of biological importance. To make reservations, call Efreem Hanson at 544-6340.

Hazardous, Controlled Waste Training — Training for all civil servants and contractors involved in the generation and accumulation of hazardous and controlled waste at Marshall will be held from 9-11 a.m. July 20 in Morris Auditorium. Registration begins at 8:30 a.m. Personnel currently designated as a point of contact or alternate for hazardous and/or controlled waste accumulation sites are required to attend this training annually. For more information, call John Troy at 544-4787.

NASA observes anniversary of Apollo Soyuz test

With Russia's Wednesday launch of its Zvezda service module — Russia's major contribution to the International Space Station — NASA prepares to mark Saturday's 25th anniversary of an earlier cooperative human space flight endeavor — the Apollo Soyuz Test Project (ASTP). ASTP was designed to test rendezvous and docking system compatibility for American and Soviet spacecraft and open the way for future joint human flights.

During the nine-day mission launched July 15, 1975, astronauts Thomas P. Stafford, Vance D. Brand and Donald K. Slayton rendezvoused and docked their Apollo spacecraft with the Soyuz 19 spacecraft with cosmonauts Aleksey Leonov and Valeriy Kubasov onboard.

For more information, visit the NASA History Office ASTP Web page at: <http://www.hq.nasa.gov/office/pao/History/astp/index.html>

The site contains historical information, including mission video and still images, biographical sketches of key personnel and primary-source documentary material about the flight.

Marshall marks 40th anniversary

Juno rockets increase NASA's payload-lifting capabilities

This is the third in a series of historical articles the Marshall Star will publish this summer on the history of the Marshall Center.

by Mike Wright

America's growing interest in space exploration in the late 1950s led to the desire for launch vehicles able to lift increasingly larger scientific payloads.

The modified Jupiter — sometimes called Juno I — used to launch Explorer I had minimum payload lifting capabilities. In fact, Explorer I weighed slightly less than 31 pounds. Huntsville's Juno II was part of America's effort to increase payload-lifting capabilities.

Among other achievements, a Juno II successfully launched a Pioneer IV satellite on March 3, 1959, and an Explorer VII satellite on Oct. 13, 1959. Pioneer IV was a joint project of the Army Ballistic Missile Agency in Huntsville and the Jet Propulsion Laboratory in California. It passed within 37,000 miles of the Moon before going into permanent solar orbit. Explorer VII, with a total weight of 91.5 pounds, carried a scientific package for detecting micrometeors, measuring the Earth's radiation balance and conducting other experiments.

Responsibility for Juno II passed from

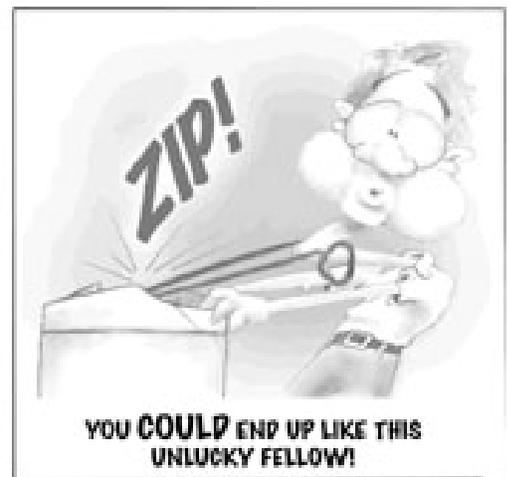
the Army to the Marshall Center when the Center was activated on July 1, 1960. On Nov. 3, 1960, a Juno II sent Explorer VIII into a 1,000-mile deep orbit within the ionosphere.

Explorer VIII was significant in Marshall's history since the Center was involved in the mission in at least three different ways:

- The Center had responsibility for the Juno stage of the vehicle.
- It had responsibility for conducting the launch from the Launch Operations Directorate at Cape Canaveral.
- Marshall shared responsibility with Goddard Space Flight Center in Greenbelt, Md., for designing, preparing and testing the satellite.

Other launch vehicles later replaced the Juno II as the primary launcher for the Explorer satellite series. However, another Juno II provided by the Marshall Center was fired on April 27, 1961, and launched Explorer XI into orbit to conduct a complex gamma-ray astronomy experiment. The spacecraft was referred to as the S-15 astronomy satellite and was developed by the Massachusetts Institute of Technology in Cambridge.

The writer is the Marshall Center historian.



Joe Ruffini to discuss computer security

On Wednesday, Joe Ruffini, information operations program manager for System Technology Associates Inc. of Colorado Springs, Colo., will discuss computer security awareness and responsibility with Marshall civil servants and contractors.

His topics will include the impact of computer security in our personal lives, as well as security at our job sites.

A session for onsite managers will be at 9 a.m. in Bldg. 4200, conference room P110. A general session will begin at 1 p.m. in Morris Auditorium.

Ruffini retired from active duty as an Army lieutenant colonel in 1995. He has more than 25 years experience in information operations, U.S. and Allied armed forces command and operations, logistics management, training and education, risk management, operations security, counter-terrorist operations and Special Access Program management.

He has served as chief, Special Technical Operations for the Commander in Chief, U.S. Space Command; and was appointed the command's first Command and Control Warfare officer. Ruffini was the first strategic Unified Command information warfare action officer within the Department of Defense.

For more information on information technology security, visit: <http://co.msfc.naa.gov/ad50/its>

Help for Marshall's grassy fields is here

The Center Operations Directorate has hired new lawn maintenance personnel to cut the grass at Marshall.

The new grounds contractor, Excell Corp. of Lanham, Md., came on board July 1 and should be fully on board by Friday. "They started cutting grass last week and are making their way throughout the Center," said Sheila Cloud, director of Center Operations.

Nick's Lawn Service of Merritt Island, Fla., is the new landscaping contractor. Its contract begins Aug. 1. Temporary landscapers started filling the gap in contracts Tuesday and will work until the new contract takes effect.

"We understand some areas are behind schedule for cutting," Cloud said. "However, a plan is in place to get to the most critical areas first, and we will proceed with this plan until all areas have been cut."

For more information, call May Wales at 544-5552 or Joyce Eagan at 544-3996.

Teachers

Continued from page 1

workshop program. Each applicant answered questions pertaining to the incorporation of the national standards and/or state framework into their instruction, the needs of their students and the development of a post-workshop action plan.

A panel of educational experts from across the country evaluated and scored the applications. The top ranked 250 educators were selected for participation in program. Each finalist was assigned to one of 10 NASA Field Centers.

Participants represent 49 of the 50 states, the District of Columbia, Puerto Rico, Guam, Department of Defense Dependand Schools and Department of State Overseas Schools.

An additional 250 educators were invited to participate in one of 10 NASA Educational Workshops designed for rural and urban systemic teams or institutions that provide educational opportunities in an informal setting.

NASA Educational Workshops are sponsored and implemented by NASA. The

National Science Teachers Association serves as an educational partner to the program and provides administrative support. The National Council of

Teachers of Mathematics and the International Technology Education Association also provide educational guidance to the program.



Photo by Dr. Wil Robertson

Teachers from 12 states and the District of Columbia participate in the two-week summer workshop.

Employee Ads

Miscellaneous

- ★ Oriental brass and beveled glass dining table, 40x71x29.5, \$495. 355-3089
- ★ Portecto truck bed liner for late model full size pickup, short bed, \$80 installed. 864-0565
- ★ DP Dual Trac 20 weight machine w/all accessories, \$275. 461-8359
- ★ King-size mattress set, Serta Perfect Sleeper, \$400. 776-9165
- ★ Sofa, dark blue with multi-colored stripes, coordinating throw pillows, \$150. 880-6146
- ★ Broyhill natural cherry entertainment center, 8-1/2' wide x 7-1/2' tall, 2 lighted curio cabinets, \$1,500 obo. 536-8349
- ★ Twin 3-drawer pedestal bed w/mattress, allergy cover on mattress, \$250. 864-2629
- ★ 1996 Gulfstream Innsbruck 21' travel trailer w/extras, \$8,400. 881-5093
- ★ Aquarium, 10-gallon polymer w/13 fish, food, etc, \$100. 722-9483
- ★ Outboard motor, 7-1/2HP w/tank. 722-9989
- ★ Kenwood 440SAT amateur radio, high frequency, 100 watt output w/antenna tuner, matching power supply, \$600. 233-5247
- ★ Heavy duty welders, 500 and 600 amp, 3-phase power. 325-6000
- ★ Epson action laser printer, \$100; Kenmore air conditioner, 8,000 BTU, window unit, \$100. 721-9904
- ★ White bathroom sink, wall mount, \$6; ceramic supplies, large assortment, glazes, clear glaze, mold for pitcher, \$30. 837-6776
- ★ Stationary Bicycle, \$50 obo. 828-4251

Vehicles

- ★ 1997 Dodge Grand Caravan LE, white, 61K miles, captains chairs, rear a/c, extended warranty, \$13,700. 880-9400
- ★ 1996 Suburban LT 4WD, leather seats, tutone paint, fully loaded, 52K miles, \$23,500. 882-3197
- ★ 1995 Ford Taurus GL, 93K miles, power windows/locks, airbags, keyless entry, \$5,700. 536-8221
- ★ 1992 Olds Cutlass, 128K miles, one owner,

\$3,500 firm. 837-0559
 ★ 1999 BMW 328i, silver, 5-speed, sport package, leather, sunroof, CD, power equip, warranty, \$32,500 obo. 859-3686

Free

- ★ Cardboard boxes, various sizes perfect for moving. 883-6821

Found

- ★ Gold chain, Bldg. 4201 parking lot. Call 544-4758 to identify
- ★ Silver bracelet, Bldg. 4203 area. Call 544-4758 to identify

Carpool

- ★ One rider for established carpool from Guntersville, 7 a.m. - 3:30 p.m. 544-8010

Wanted

- ★ Toyota steel wheels from 4-Runner, preferably w/center caps, set of four. 464-5819
- ★ Roommate for 2-bedroom apartment in Madison. 971-0048

Center Announcements

- ☛ **Shuttle Buddies** — The Shuttle Buddies will meet for breakfast at 9 a.m. July 24 at Mullins Restaurant on Andrew Jackson Way. For more information, call 881-7757 or 852-8189.
- ☛ **MESA Meets** — The Marshall Engineers and Scientists Association will meet at 11:30 a.m. July 21 in Bldg. 4471, room C-105.
- ☛ **MOO Meets** — The Management Operations Office (MOO) retirees will meet for breakfast/lunch at 10 a.m. on July 27 (4th Thursday) at the Cracker Barrel Restaurant in Madison. For more information, call 539-0042.
- ☛ **Discount Tickets** — For discount tickets to local performances and attractions, call the NASA Exchange at 544-2185.
- ☛ **'MoonDreams'** — "MoonDreams," an

original Broadway-style musical written by Rhett Parrish in conjunction with the Von Braun Celebration of the Arts & Sciences, will be July 20-22 at the Von Braun Center Concert Hall. Performances are 7:30 p.m. nightly with a 2:30 p.m. matinee on July 22. Tickets are on sale at the Von Braun Center Box Office at 533-1953 and all Ticketmaster locations (800) 277/1700 or www.ticketmaster.com

Obituaries

Moses, Vann C., 77, of Falkville, Ala., died June 20. He retired from Marshall in 1977 where he worked as an aerospace engineering technician.

Gunnoe, Pierre "Pete" Sr., 76, of Huntsville, died June 12. He retired from Marshall in 1974 where he worked as a quality control specialist. He is survived by his wife, Rosetta Gunnoe.



Mann

Mann, David, 55, of New Hope, Ala., died July 9. Mann, worked as an engineer in Marshall's Ground Systems Department of the Flight Project Directorate. He is survived by his wife, Linda.

Answers

Continued from page 3

1. B. Butch.
 2. B. Beside the telephone.
 3. The Marshall Center will strive to prevent human injury and occupational illnesses and ensure safety of all operations and products.
 4. Extremely hazardous area; no one may remain; evacuate immediately
 5. MSAT (Marshall Safety and Health Action Team)
- For more Safety Bowl questions, see "Inside Marshall," "The Daily Planet" and ETV.

MARSHALL STAR

Vol. 40/No. 44

Marshall Space Flight Center, Alabama 35812
 (256) 544-0030
<http://www1.msfc.nasa.gov>

The Marshall Star is published every Thursday by the Internal Relations and Communications Department at the George C. Marshall Space Flight Center, National Aeronautics and Space Administration. Contributions should be submitted no later than Monday noon to the Marshall Internal Relations and Communications Department (CD40), Bldg. 4200, room 101. Submissions should be written legibly and include the originator's name. Send electronic mail submissions to: intercom@msfc.nasa.gov The Marshall Star does not publish commercial advertising of any kind.

Acting Manager of Internal Relations and Communications — Tereasa Washington
 Editor — Debra Valine

U.S. Government Printing Office 2000-533-127-20006

PRE-SORT STANDARD
 Postage & Fees PAID
NASA
 Permit No. G-27