

# MARSHALL STAR

Serving the Marshall Space Flight Center Community

March 6, 2003

## Marshall boosts state economy

***\$897 million in expenditures  
during fiscal 2002***

by Sanda Martel

**T**he Marshall Center contributed \$897 million to Alabama's economy in fiscal year 2002, significantly more than spending in any other state.

Included in the 2002 spending was \$273 million in salaries for civil service personnel and related costs. In addition, Marshall civil service employees collectively paid about \$32 million in federal income taxes and about \$7 million in Alabama state income taxes in 2002. Some \$624 million was spent on locally procured services, prime contractor and subcontractor support, and local construction.

Also during 2002, The Boeing Company spent approximately \$85 million in NASA funding in North Alabama for International Space Station hardware development. Another \$45 million was spent by the

Marshall Center on NASA programs where Marshall had a supporting role, and another \$9.5 million was spent on programs where Marshall performed work for other agencies.

Marshall received approximately 16.4 percent - or \$2.4 billion - of NASA's total budget of \$14.9 billion during fiscal 2002. By program areas, 57 percent was spent for Space Shuttle and Space Station activities and 43 percent was spent for Space Science, Earth Science, Aero-Space Technology, Biological & Physical Research, and Crosscutting Technology Programs.

Also in 2002, approximately \$69 million in retirement annuities were paid to 2,381 Marshall retirees residing in Alabama. The 1,619 retirees in the cities of Huntsville and Madison received \$47 million of that amount.

See *Economy* on page 3



Photo by Terry Leibold, NASA/Marshall Center

### ***Tree-topping ceremony for Propulsion Lab***

Workers gather recently for the "tree-topping" ceremony at the Propulsion Research Laboratory under construction at the Marshall Center. The tradition of placing a tree on top of the final piece of structural steel dates back to the Norsemen, who, when building a lodge, would put a tree on the last lodge pole signifying a gathering or celebration. Flags or ribbons also were placed to ward off spirits and bless the new structure. The Germans continued this tradition and immigrants brought it to the United States. Construction of the 108,000 square-foot propulsion lab began in July 2002, and is scheduled for completion in April 2004. The lab will become home to research into new and innovative space transportation and propulsion technologies.

## Additional One NASA e-mail addresses to become available

from the Office of the Chief Information Officer

**M**arshall Center civil servants adopted a new e-mail address on Dec. 16, 2002 that reflected the One NASA initiative.

Since that time, Marshall has been working with the other NASA centers to provide users with an additional One NASA e-mail address. As a result, civil servants now can select one additional "@nasa.gov address."

This option will be open to all NASA centers beginning March 10.

See *E-mail* on page 2

# 'People Value' is Marshall Team's greatest strength

Recently, I addressed the workforce on center-wide television. My intent is to keep the lines of communication open and to stress what I believe to be important and timely issues.

As I mentioned in my address, my concern for the well being of our Marshall Team is of the utmost importance. Since Feb. 1, I have talked frequently about the need to support each other now, and in the future.

As a workforce family, we have been through a traumatic event. From the repeated images we see on television and the Internet, to the nonstop newspaper stories "guessing" at the cause of the re-entry failure, we are regularly reminded of the terrible event that unfolded on Feb. 1, 2003.

The loss of the STS-107 Crew and the Space Shuttle Columbia is a personal loss for us. As I stated at the Community Memorial Service on Feb. 5, "We are 'One NASA' and our journey will continue. We will move forward, but it will not be without pain." The roller coaster of emotions may be immediately evident, or they may surface over time — manifesting themselves and creeping in slowly.

Now, more than ever, we need to embrace our People Value. People are truly most important and our greatest strength. And, it will be through our combined strength that we will get through the STS-107 tragedy. It is not an easy thing to work on something and then see it lost and when humans are involved it is all the more difficult to absorb and process. I would ask each of you to continue to offer your support to one another.

Also in my center-wide address, I talked about the goal of getting back to flight. In order to do so, a number of things have to happen. First and foremost, the Columbia Accident Investigation Board (CAIB) must complete its very complex mission. The STS-107 CAIB, headed by Adm. Gehman, is now planning to return to Marshall, Michoud and our Shuttle prime contractor sites to begin their more in-depth investigations. They will separate in to four groups, so we most likely will not have the entire Board visit us again as they did Feb. 14.

## Director's Corner



Stephenson

Marshall Imaging Services

I am very impressed with the way the board is going about this investigation — they are demonstrating that they will be very disciplined in getting to the facts and seeking to learn from telemetry data and from the debris that is being assembled at Kennedy Space Center. Our Shuttle team, including civil servants and contractors, is being very open with the board. This approach, I believe, will lead us to best identify the issues and to establish a strategy for implementing the needed changes to return to flight as soon as possible without sacrificing safety.

We have five MSFC Shuttle working-groups that continue to work with fault trees to pursue every possible cause of the accident. The five working-groups are External Tank, Space Shuttle Main Engines, Reusable Solid Rocket Motor, Solid Rocket Booster, and Shuttle Systems. These groups are tasked with

the job of closing hundreds of potential "causes" by reviewing flight data and conducting analyses and tests. This process will take several months in some cases. The findings of these teams will be reported to the Agency Mishap Response Team (MRT), and the MRT will provide findings to the CAIB.

Recently, NASA Administrator Sean O'Keefe reiterated that NASA will implement the recommendations of the CAIB. How long that will take is undetermined at this time. The implementation time will obviously dictate when we will again fly the Shuttle. In the meantime the International Space Station Program is addressing how we will support our astronauts on the Station. Options are available to continue to operate the Station with astronauts present for at least a year.

We have committed the full resources of Marshall Space Flight Center to the Shuttle Program and to the CAIB.

I look forward to the day when we once again launch Shuttle into orbit. We can do it with the support we have from the NASA team, our communities around the country and from our leaders in Washington, D.C.

— Art Stephenson  
Marshall Center Director

## E-mail

*Continued from page 1*

The additional One NASA e-mail address, or alias, selected will not replace a civil servant's current @nasa.gov address. Also, the current "@msfc.nasa.gov" addresses will remain active, but eventually will be phased out.

To search your One NASA e-mail

addresses and select an alias, go to <https://isd.jsc.nasa.gov/OneNASAemail/>. Also, go to the Frequently Asked Questions about Aliasing at [faq\\_aliasing.pdf](#) for questions about guidelines and procedures for selecting an alias. Go to the Frequently Asked Questions concerning One NASA e-mail at [faq\\_onenasa\\_email.pdf](#) for answers

to the more common questions concerning the original transition activity that occurred in December. Any additional questions can be directed to 544-HELP (544-4357), Option 0. More information is available at [http://www1.msfc.nasa.gov/INSIDE/announcements/onenasa\\_email.html](http://www1.msfc.nasa.gov/INSIDE/announcements/onenasa_email.html).

## Marshall Center environmental team expands

from the Environmental Engineering Department

The Environmental Excellence Team (EXT), a volunteer group of about 35 members from 20 different Marshall organizations, promotes a culture at Marshall that moves the Center beyond federal and state environmental guidelines.

"We don't want to just protect the environment, we want to enhance the environment," said Sharon Scroggins, a Marshall environmental engineer.

The EXT is an expansion of the former Recycling Committee. It serves as a public relations and awareness team supporting all environmental issues, including energy, recycling, pollution prevention, Clean Air Act, Clean Water Act, and hazardous waste and materials. The team is responsible for coordinating events and educational tools such as Earth Day activities, energy and recycling awareness, and environmental education outreach programs.

The EXT is implementing a new Environmental Suggestion Award Program for civil service and contractor personnel, replacing the former Spot An Environmentalist Award, to recognize employees who submit practical environmental suggestions to improve processes, save money, reduce waste



Photo by Terry Leibold, NASA/Marshall Center

The Marshall Environmental Excellence Team

or reduce environmental liability.

Environmental suggestions for award consideration should be sent to Sharon Scroggins at [sharon.scroggins@msfc.nasa.gov](mailto:sharon.scroggins@msfc.nasa.gov) or Dan Adams at [dan.adams@msfc.nasa.gov](mailto:dan.adams@msfc.nasa.gov) by April 1. A maximum of 10 suggestions will receive a \$50 gift certificate to a local nursery at the Earth Day ceremony on April 23.

## Economy

Continued from page 1

Since it was established in 1960, the Marshall Center has had budget responsibility for more than \$71 billion. When adjusted for inflation, this total is equivalent to more than \$176 billion in today's dollars. Since its creation, the Marshall Center has paid a total of \$5.4 billion in federal salaries.

At the end of September 2002, Marshall's permanent and temporary civil service employees totaled 2,713, including some employees at prime contractor facilities and at NASA's Michoud Assembly Facility near New Orleans.

Of Marshall's workforce, 2,237 were college graduates, with 1,467 holding bachelor's degrees. There were 176 employees with doctorate degrees and 594 with master's degrees in the fields of engineering and science — predominately mathematics and physics, as well as business administration and other disciplines.

During 2002, a total of 24,621 contractor personnel were engaged in work for the Marshall Center, including 3,264 in mission support, 10,696 on prime contract work and 10,661 as subcontractors and

vendors. Of the total, 6,730 worked in Alabama. Additionally, 396 contractors were associated with International Space Station work being done by Boeing in Huntsville, and 652 jobs were related to other NASA work supported by Marshall.

Also during fiscal 2002, approximately 57,700 people visited Marshall, including educators, conference and symposium visitors and news media. Attendance at the U.S. Space & Rocket Center - Marshall's official NASA Visitor Center - was 332,214. In addition, Marshall's education programs reached more than 29,784 students and 22,604 teachers and faculty representing all 50 states during the year. The Marshall Center donated \$884,284 in research equipment and made some \$211 million in grants, contracts and cooperative agreements through its education programs.

Marshall's education program also recorded 427 partnerships and collaborations with other federal, state and local programs, professional societies, non-profit organizations, industry and contractor communities, and with all levels of the educational community, but primarily secondary education.

Marshall employees and retirees volunteered last year to participate in the NASA Project LASER (Learning About Science, Engineering and Research) Program, serving locally as speakers, tutors, consultants and science fair judges. Marshall's Educator Resource Center also conducted 136 teacher workshops for 1,326 educators and provided 84,320 publications or other literature to the 6,895 educators who visited or wrote to the facility.

The Marshall Center gives back to the community through monthly Red Cross blood drives - collecting 1,156 pints of blood in fiscal 2002 from civil service and on-site contractors - and by contributing to the Combined Federal Campaign, which collected \$573,844 in fiscal 2002, \$316,857 of which was designated to help agencies in Alabama.

As Marshall marks its 43rd year in Alabama and looks to the future, the Center continues its role as a vital contributor to America's future in space - as well as to the economy of Huntsville and the state.

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

# 'The Souls of Black Folk: Centennial Reflections'

*Black History Month closing ceremony at the Marshall Center*

The theme of Black History Month for 2003 at the Marshall Center was "The Souls of Black Folk: Centennial Reflections."

Dr. Sandral Hullett, chief executive officer and medical director of Jefferson County Health System, Cooper Green Hospital, in Birmingham, spoke. The winner of several prestigious awards for her medical work, she has dedicated her career to improving public education and rural health care for the citizens of Alabama and helping restructure the provision of health care.

Stephen R. Brewster, a University of Alabama in Huntsville student, reflected on memories of growing up and the influence his grandmother had on who he is today. To him, he said, she embodied the Black History Month theme "The Souls of Black Folk" because of her steadying influence on his life.

The Huntsville Spiritual Chorale provided music and song, including the Negro National Anthem, "Lift Every Voice and Sing."



Dr. Sandral Hullett, left, guest speaker during Marshall's Black History Month closing ceremonies, accepts a plaque of appreciation from Marshall Center Associate Director Axel Roth.



The Huntsville Spiritual Chorale performs during Black History Month closing ceremonies.



Stephen Brewster engages the audience with stories of his grandmother during the ceremony's "Spoken Word" presentation.

# Combined Federal Campaign at Marshall resounding success

by James Bailey

**T**he 2002 Combined Federal Campaign was a resounding success.

Marshall Center personnel rallied around their favorite charities in the Tennessee Valley and pledged an unprecedented \$573,000. The contributions from Marshall provide a significant portion of the total Tennessee Valley contribution of \$1.8 million.

To show appreciation to the individuals at the Marshall Center with lead roles during the campaign, the CFC Committee sponsored an awards and recognition luncheon on Feb. 19.

During the luncheon, CFC Chairperson James Bailey recognized monitors and solicitors, organizational leads, Center leadership for its continued support to the campaign, and support organizations around the Center vital to the success of the campaign.

Marshall Center Director Art Stephenson recognized the CFC executive team members with Center Director's Commendations and expressed his appreciation for the hard work that went into the campaign.

The winners of the John Stallworth 2002 autographed Hall of Fame pictures were Debra L. Grissom, AD41; James J. Lomas, TD54; Michael H. Lee, TD40; Matthew J. Casiano, TD63; Wilda B. Davis, TD02; and Joseph H. Ruf, TD64. The winner of the autographed football from the overall CFC was Kirby G. Lawless, ED33. The winner of the bus tour autographed football was Cathy Moore, PS20.

The CFC committee ran the 2002 campaign on a very simple principle — we are a part of our community and we care.

"Congratulations to Marshall for continued support to our Tennessee Valley Community," Bailey said.

## '50 Years of Rockets and Spacecraft in the Rocket City' chronicles Marshall Center history

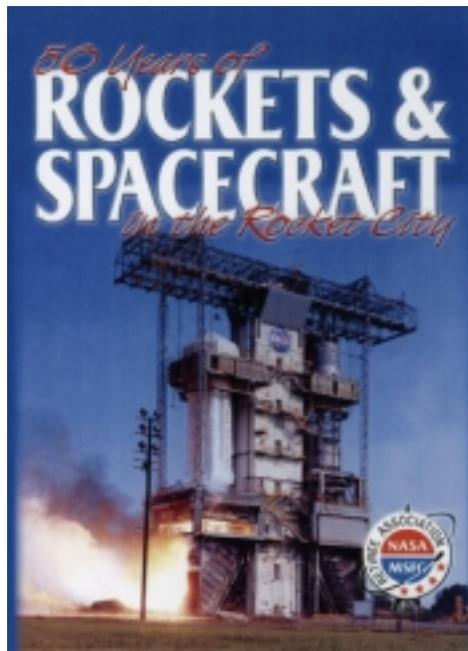
from the Marshall Retirees Association

**T**he new Marshall history book "50 Years of Rockets and Spacecraft in the Rocket City" has just been released.

Ed Buckbee directed the two-year project sponsored by the NASA-Marshall Retirees Association. The book covers the history of the Marshall Center and tells the story of the thousands of engineers, scientists, technicians and administrative personnel who contributed for five decades to the peaceful exploration of space.

Nearly 600 advance orders of the 8 1/2 x 11-inch, coffee table-styled book have been pre-sold by Turner Publishing, headquartered in Paducah, Ky. The NASA Exchange Space Shop in Bldg. 4203 offers the book for \$35 and will take orders for mailing. For information on ordering, call Candy Kelley at 544-7565 or e-mail [Candy.L.Kelley@nasa.gov](mailto:Candy.L.Kelley@nasa.gov).

The book is a detailed narrative documenting the history of the Marshall Center, illustrated with dramatic photographs, and covers all of the major programs conducted by the men and women of the Marshall team. A special tribute to Wernher von Braun, Marshall's first director, highlights the period from 1950-



1970, and features a pictorial collection of the von Braun teams work beginning with the U.S. Army and progressing through the NASA years.

Nearly a hundred Marshall retirees contributed special "insider" stories that recount some of the exciting events that occurred during their career, along with photographs from personal collections. A timeline illustrating the major milestones in Marshall's history demonstrates the impressive number of famous "firsts" made possible by our unique organization.

The work of the Marshall Retirees Association and its members is outlined and a roster of its members listed, as well as a list of Marshall retirees.

"I wish to thank all of the retirees and the many active Marshall employees who have participated in this project through their stories, photographs and suggestions," Buckbee said. "This space history book was written for the Marshall Team — present and past family, friends and supporters — who have a passion for human space flight. Our goal is to preserve the Marshall Team's legacy of five decades of exploration of space for peaceful purposes."

For more information, call Buckbee at 534-4929 or e-mail at [buckbee@air-space.com](mailto:buckbee@air-space.com).

# FIRST Robotics day at Marshall

Six area high schools came together for the annual FIRST (For Inspiration and Recognition of Science and Technology) Robotics trials to test their engineering creations before heading off to regional competitions.

About 250 people attended the event in Intergraph Bldg. 21 in February.

Five of the teams are sponsored by the Marshall Center; Madison County Career Academy, New Century Technology High School, and Lee High School in Huntsville; Arab High School in Arab, and Lincoln County High School in Fayetteville, Tenn. The sixth team, Butler High School in Huntsville, is sponsored by Daimler Chrysler Corp. of Huntsville.

Students across the country team with engineering mentors from government, industries and universities to design, build and

operate robots capable of playing a specific game within six weeks. The goal is for students to gain experience solving engineering challenges in a competitive environment.

Each team receives an identical kit of parts from which they create a robot. The robot must perform specific tasks in a "game." This year's game, "Stack Attack," calls for the robots to collect and stack plastic storage containers into a designated area.

The FIRST Robotics Competition was founded by Dean Kaman, an inventor and entrepreneur, to stimulate student interest in science and engineering. In 2002, more than 20,000 students on more than 600 teams competed.

The Huntsville-area school teams will participate in regional competitions in March. The national competition will be in Texas in April.



Madison County Career Academy team members, the "Ubergeeks," cheer on their robot.



A robot engages in the "Stack Attack."



Lincoln County High School's robot traverses the ramp.

All photos by Emmett Given, NASA/Marshall Center

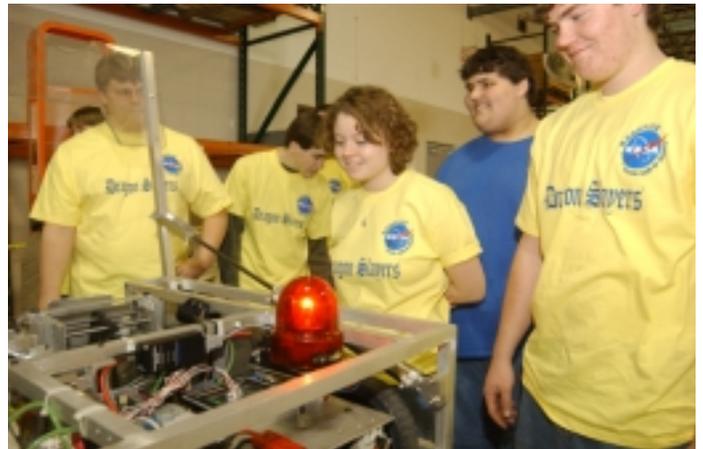


Lux Preston, left, and Jamie Berg, right, members of the "LeeGeneers" of Lee High School, perform a last minute check on their robot before the competition begins.

# teams excitement with learning



Shane Newton of Madison County Career Academy and teammates get caught up in the excitement.



The "Dragon Slayers" of Arab High School fine tune their robot. From left, Will Strawn, Matt Blair, Jennifer Eubanks, Jamie Harrison and Adam Christiansen.



It takes a delicate touch by the robot and controller to become successful in the "Stack Attack."



Steve Pierce, left, gives driving instructions to Butler High School's Shaun Clark. The team is called "Rocket City Robotics."



New Century Technology High School "Monster Mechanics" team members Jerron Bigbee, left, Chris Greene, center, and Matt Robinson, right, assemble their robot.



Marshall engineer Arthur Henderson, with microphone, enjoys the competition with members of the Lincoln County High School team. Henderson also was a mentor for the Lee High School team.

# Be informed and be prepared

## Know your work area's emergency and evacuation plans

*From the Center Operations Directorate*

**T**he Department of Homeland Security recently announced that the nation's threat level had been reduced from "High (Orange)" to "Elevated (Yellow)."

The following Web sites provide valuable information to help you and your family better understand and prepare for many different types of emergencies:

- <http://www.redcross.org>
- <http://www.fema.gov>
- <http://www.dhs.gov>

Emergency planning at the Marshall Center is a continuous process committed to ensuring the safety of people and property. The Emergency Management Team consists of the emergency management director, deputy emergency management director, protective services, medical support (industrial hygienists, paramedics,

physicians and nurses), the Redstone Fire Department, safety and mission assurance, media relations, and support services and emergency responders who are trained to respond to a variety of threat conditions. They engage in coordinated planning with Redstone Arsenal, Huntsville and Madison city, and Madison County emergency management organizations, as well as state and federal authorities.

The Marshall Center's Emergency Operations Center (EOC) monitors emergency-related information provided by local, state, and federal sources. It is operational during normal business hours and is fully activated during emergency events. Activation of the EOC brings team members together to jointly analyze and evaluate emergency conditions, to implement response measures, and to communicate actions to the Center

workforce by means of the Emergency Warning System and the Marshall information telephone line at 544-HELP (544-4357) Option 5.

Marshall team members should be familiar with established emergency and evacuation plans for their particular work areas. These plans can be found at entrances or elevator areas of all occupied buildings. In the event of an emergency, clear and timely instructions will be provided to all employees. Those instructions should be acted on quickly, calmly, and precisely.

For more information about emergency preparations or activities at the Marshall Center, go to the "Dr. Know" Web site at [https://msfcsma3.msfc.nasa.gov/she/dr\\_know/dr\\_know.asp](https://msfcsma3.msfc.nasa.gov/she/dr_know/dr_know.asp) and look under the "Emergency Preparedness" category.

## NASA announces new appointments to Inventions and Contributions Board

*From the Office of the Chief Patent Counsel*

**A**t the end of January, NASA Administrator, Sean O'Keefe appointed three new members to the Inventions and Contributions Board (ICB) — Dr. Clyde F. Parrish, Dr. Biliyar N. Bhat and Dr. Donald C. Braun.

The Inventions and Contributions Board, chaired by Chief Engineer Theron Bradley, was established in 1958 under the Space Act that created NASA. The Board is comprised of more than a dozen scientists and engineers representing many technical disciplines involved in NASA research and development.

The ICB has statutory responsibility to recommend to the NASA administrator the granting of waivers to property rights in inventions and to recommend an individual monetary award for significant scientific and technical contributions to NASA's aeronautical and space activities.

Parrish's currently is involved in experimental chemistry and setup of production scale chemical processes. He is a senior chemist at the Kennedy Space Center in Florida in the Spaceport Technology Development Office.

Bhat's expertise is in the area of advanced metallic materials as well as welding and allied processes, particularly as they pertain to the future propulsion and launch systems. He currently heads the Metallurgy Research Team at the Marshall Center and is representing NASA's space transportation systems to the Department of Defense as partnerships are developed with its space launch programs.

Braun's skills are in scientific computer programming and in experimental data signal processing. His designs for systems that

evaluate and find solutions for the adverse effects of icing on airfoils provide a major contribution to NASA's civil aviation efforts as we seek "To understand and protect our home planet." He is a computer engineer at the Glenn Research Center at Lewis Field in Cleveland, where he is the center expert in digital signal processing.

For more information on the ICB, go to [icb.nasa.gov](http://icb.nasa.gov) where you can find your local awards liaison officer at your Center or call Walter Hussey, ICB staff director, at 202-358-0591.



Photo by Emmett Given, NASA/Marshall Center

### **Educator workshop**

High school science and biology teachers listen as Marshall education outreach coordinator Patricia Currier, right, explains how the inner ear helps humans maintain balance. The workshop took place at the Marshall Educator Resource Center in February.

# STS-107 merchandise orders accepted until March 10

from the Marshall Exchange

**D**ue to the high volume of requests, the Exchange Space Shop is accepting orders through March 10 for STS-107 Columbia commemorative memorabilia. The NASA Exchange Space Shop is located in Bldg. 4203. Marshall team members may go by the Space Shop or go to <http://inside.msfc.nasa.gov/MARS/index.html> to order. Samples of the

items are on display in the Space Shop. Marshall retirees may fill out the attached order form and mail it to the address indicated. Orders should be postmarked no later than March 10. For more information, call Candy Kelley at 544-7565. To see photos of the merchandise, go to [http://www1.msfc.nasa.gov/INSIDE/announcements/STS-107\\_Memorabilia.pdf](http://www1.msfc.nasa.gov/INSIDE/announcements/STS-107_Memorabilia.pdf)

**DEADLINE FOR ORDERING IS: MARCH 10, 2003**

Complete the following order form and mail check & order to: **NASA Exchange Space Shop, Attn: Candy Kelley, CD10XX, Building 4203, Marshall Space Flight Center, AL 35812.** Cash, Visa, MasterCard, Discover may also make payment, or American Express by taking your order form to the NASA Exchange Space Shop located in Building 4203.

Name: \_\_\_\_\_ Office Symbol: \_\_\_\_\_  
Office Phone: \_\_\_\_\_ Email Address: \_\_\_\_\_

ITEM	PRICES	QUANTITY BY SIZE						TOTALS
		S	M	L	XL	XXL	3XL	
1 White POLO	\$31.00							
Ash/gray "	\$31.00							
Black "	\$31.00							
Hunter Green "	\$31.00							
Royal Blue "	\$31.00							
2 Black Nylon Jacket "	\$38.00							
Hunter Green Jacket "	\$38.00							
*Add \$2 for each XXL		→						
*Add \$3 for each XXXL in shaded area		→						
STS-107 Columbia Commemorative Memorabilia							Quantity	
3 STS-107 Coin	\$6.00							
4 STS-107 LAPEL PIN	\$2.50							
5 STS-107 Patch	\$3.50							
6 STS-107 MISSION PATCH	\$2.70							
7 STS-107 MISSION PIN	\$1.50							
8 STS-107 MEDALLION*	\$3.00							
*Photo Not Available for STS-107 Medallions								
<b>TOTAL COST</b>								

Merchandise SHIPPED date: \_\_\_\_\_ Receipt Confirmation: \_\_\_\_\_

Receipt Number \_\_\_\_\_ Date Paid: \_\_\_\_\_

Merchandise picked up by: \_\_\_\_\_ Date: \_\_\_\_\_

## Obituaries

**Columbus Brooks, 81**, of Huntsville, died Feb. 19.

He retired from the Marshall Center in 1990 as an ARSPC engineering technician. He is survived by his wife, Eula W. Brooks.

**Dr. Helmet Krause, 91**, of Houston, died Feb. 18. Memorial services were held Feb. 25 at Kinsmen Lutheran Church with Pastor John Boldt officiating.

Krause was born Nov. 10, 1911, in Germany and obtained master's degrees and doctorates in astronomy, physics and mathematics in 1938. He worked at the Marshall Center from its founding in 1960 until his retirement in 1990. During his career, he wrote 40 extensive theoretical research papers on rocket ballistics, supersonic aerodynamics, aerodynamic heat transfer, free-flight dynamics and theories of celestial bodies. He was the recipient of the first Ernst Heinkel Space Flight Award in 1951 and was honored by Dr. Wernher von Braun with letters and certificates of personal achievement.

Krause is survived by his wife, Annemarie Krause; one daughter, Gina Gradoni; and one brother, Hans Krause of Stuttgart, Germany.

**William P. Morrow, 84**, of Huntsville, died Jan. 4.

Morrow spent 35 years in government service. He was a World War II veteran of the U.S. Army Air Corps serving in the Central Pacific and came to Redstone Arsenal with the Army Ballistic Missile Agency and Army Missile Command in 1954. He then served as chief of transportation at the Marshall Center before retiring in 1976. He was a charter member and deacon of Whitesburg Baptist Church and a member of SAR.

Morrow is survived by his wife, Verna D. Morrow; one son, William S. Morrow of Franklin, Tenn.; four daughters, Peggy Benefield of Birmingham, Diane Morrow of Alexandria, Va., Kathy Latta of Mobile and Mary Beth Morrow of Huntsville; one brother, Jimmie Morrow of Russellville; one sister, Christine Oja of Tucson, Ariz.; and eight grandchildren.

### Job Announcements

**MS03C0058**, AST, Solid Propulsion Systems. GS-0861-14, Space Shuttle Propulsion Office. Closes March 13.

## March is Logistics Services Month at Marshall

from the Logistics Services Department

**M**arch marks Logistics Services Month at the Marshall Center. The Logistics Services Department is part of the Center Operations Directorate.

"In the past, we concentrated solely on Property Awareness," said Vic Cordier, acting equipment team lead for property management and this year's point of contact for the campaign. "This year and in the future, we want to highlight all of the functions of the Logistics Services Department, which include mail, program critical hardware, flight hardware, shipping and packaging services, taxi and bus Services, travel services, storage, NASA 3 Services, property disposal services, and many more."

During March, articles will be published in the Marshall Star highlight-



Photo by Doug Stoffer, NASA/Marshall Center

### Marshall participates in 'Read Across America'

Chris Robinson, right, of the Marshall Center's Customer and Employee Relations Directorate, participated in Monday's "Read Across America" day by visiting Viola Robinson's kindergarten class at University Elementary School in Huntsville. Several Marshall Center team members volunteered their time to visit schools in the area and participate in student reading programs.

ing different services within the Logistics Services Department. Walk-up, interactive sessions will be scheduled during lunch hours in Bldg. 4203 and 4610 for later in the month.

Comments and suggestions about logistics services can be submitted at any time using the Logistics Customer Survey (MSFC Form 4362) or via the web at: [http://co.msfc.nasa.gov/ad40/cust\\_serv2.html](http://co.msfc.nasa.gov/ad40/cust_serv2.html).

### Energy tip

**Avoid sending money down the drain**

**T**here are many ways to conserve water and lower your water bill. If you have a leaky faucet, repair it promptly. Install aerating, low-flow faucets and shower heads. If you have an energy or water conservation tip that you would like to share, send it to: [cedreck.davis@msfc.nasa.gov](mailto:cedreck.davis@msfc.nasa.gov) or [juergen.haukohl@msfc.nasa.gov](mailto:juergen.haukohl@msfc.nasa.gov).

# Center Announcements

## Women's History Month event at Marshall is March 20

To commemorate Women's History Month at the Marshall Center, Dr. Sheri M. Shuck, assistant professor of history at the University of Alabama in Huntsville, will speak from 1-2 p.m. March 20 in Bldg. 4200, Room P-110. All Marshall team members are invited. She will discuss women in the workplace -- past, present and future. For more information, call Billie Swinford at 544-0087.

## NASA College Scholarship Fund seeking applications

The 2003 call for NASA College Scholarship Fund applications is open. The Fund awards scholarships to qualified NASA dependents pursuing study in science and engineering fields. Six scholarships will be awarded. Deadline for applications and supporting documentation is March 21. Applications are available at Bldg. 4315, or at <http://jscpeople.jsc.nasa.gov/nasascholarship.htm>. For more information, call Bill Mayo at 544-7220.

## Marshall Association membership drive open

Membership in the Marshall Association is open to all current and former Marshall civil service employees. The Association provides distinctive speaker events for the exchange of ideas and information and sponsors two annual college scholarships for Marshall dependents. Dues are \$25 per year and checks should be made out to the "Marshall Association" and sent to AD01, Cliff Bailey.

## Nominations for Full-Time Study Program open

The call for nominations for the Full-Time Study Program is open. For details, contact administrative officers.

## SHARP application deadline is Monday

The student application deadline for the Summer High School Apprentice-

ship Research Program is Monday.

## MARS Tennis Club membership open

The MARS Tennis Club 2003 membership drive is open until March 31. NASA employees, retirees, on-site contractors and family members are eligible to join. To join, or for more information, call Amy Hemken at 544-7097 or go to <http://inside.msfc.nasa.gov/MARS/clubs.html>.

## 'Take Our Children to Work Day' volunteers needed

Volunteers are needed to serve as tour bus chaperones and workshop monitors for the Marshall Center's "Take Our Children to Work Day" activities April 24. For more information, or to volunteer, call Billie Swinford at 544-0087.

## AIAA 2003 Engineering Scholarship Program open

The American Institute of Aeronautics and Astronautics Alabama-Mississippi Section 2003 Engineering Scholarship Program is open for high school seniors. Three scholarships will be awarded in the amounts of \$1,500, \$1,000, and \$500 to promote career study in the aerospace industry and the pursuit of a related engineering or science degree at an Alabama or Mississippi university. Applications are due by March 31. For more information and applications, go to <http://www1.msfc.nasa.gov/AIAA/> or call 721-2422, 544-7684 or 782-5972.

## Astronomy chat and 'star party' set for Saturday

The Von Braun Astronomical Society will host "Aurorae: Tapestries of their Night Sky" at 7:30 p.m. Saturday. The program on the Northern Lights features Dr. Jim Spann at the Wernher von Braun Planetarium in Monte Sano State Park. Admission for non-members is \$3 for adults and \$2 for children 12 and under. Weather permitting, a "star party" using

the planetarium telescopes will follow the presentation. For more information, call Mitzi Adams at 961-7626.

## Annual 'Software of the Year' competition nominations open

The annual call for nominations for the NASA Software of the Year Award is open until April 18. The award is for recognition of software developed and owned by NASA. The recognition includes a Space Act award of up to \$100,000. For details, see "Inside Marshall" or call 544-0013 or 544-0014.

## Retired Federal Employees hosting recruitment luncheon

The National Association of Retired Federal Employees is hosting a recruitment luncheon for prospective members at 11 a.m. Saturday at the Senior Center on Drake Avenue in Huntsville. For reservations, call 881-3996 or 534-9627.

## Redstone Arsenal hunting 'Town Hall' meeting set for March 13

The MARS Rifle and Pistol Club in association with the Army Outdoor Recreation Center, is hosting a "Town Hall" open forum March 13. The meeting starts at 6 p.m. at the Recreation Center, Bldg. 3711, off Patton Road near the Bowling Center. For more information, call 544-1299.

## 2003 Marshall Retiree Dinner set for September

The 2003 Marshall Center annual Retiree Dinner is tentatively set for Sept. 9 at the Von Braun Center. Invitations and ticket information will be available by mid-August. For more information, call Edwina Bressette at 544-8115.

## Stop smoking program offered

The Oregon Center for Applied Science invites Marshall Center employees who want to quit smoking to participate in a new on-line program. For more information, go to <http://www.smokefreepartners.org>.

# Employee Ads

## Miscellaneous

- ★ Apollo Command Module spacecraft model kit. 1/32 Monogram. Large kit, never assembled. Mint. \$50. 306-0700
- ★ Visor-Prism, w/software, leather case, backup module, game-pack, book, 2 cradles, travel charger, \$200. 885-6006
- ★ Two Direct satellite television receivers w/remotes, needs dish/DSS subscription, \$175 each. 881-8130
- ★ Loose diamond, one-half carat, clarity SI, color GH and ring w/5 small baguettes, \$500. 883-5543
- ★ Kenmore office refrigerator; two walnut logs; Towmaster tow bar for Saturn vehicle. 852-7180
- ★ Sony 100W AV Dolby receiver, Sony center/rear, Bose 401 tower front speakers, \$400. 882-0431
- ★ Purebred Australian Shepherd puppies, 6-weeks old, first shots, wormed, vet checked, \$75. 256-561-2287
- ★ New upholstery fabric, 2.83 yards, diamond pattern, navy, wine, sage green, tan, \$25 firm. 772-7845
- ★ Swimming pool, 4'x18', w/pump, filter and ladder, assembled, \$200. 233-5403
- ★ Oriental rosewood leather sofa, chair, coffee table and end tables w/glass tops, \$9.50. 325-0554
- ★ Entertainment center corner cabinet, custom built, solid oak, TV space 30"Wx36"H, \$400. 881-2131
- ★ Cemetery lot in Masonic section of Valhalla Memory Gardens, \$1,250. 251-968-6983
- ★ 1999 Harley Davidson Sportster, 17K miles, \$8,000 obo. 256-303-2535
- ★ John Deere 110 lawn tractor, 38" cut, \$850. 880-2229
- ★ Mint floral pattern sofa & loveseat, \$350; stove, \$25; Queen Anne sofa, cream, \$150. 233-4580
- ★ Two tickets to see Tim McGraw, Nashville, March 11, \$160 obo. 256-247-3929

- ★ Wedding gown w/train/veil, size 6, \$250; long red evening gown, halter, size 5, \$75. 881-8674
- ★ 1992 Yamaha XT225, dual sport motorcycle, \$1,600. 325-6000
- ★ McGregor golf bag, black with silver trim, \$30. 533-4824
- ★ Collectable original "Wendy's" table and 4 chairs, \$100. 880-9025
- ★ Broyhill sofa, cream, blue, mauve; two Lane wall-away recliners, blue, mauve; wine leather recliner. 247-5197
- ★ NASCAR items: diecast cars, coke fronts, cardboard stand-ups, novelty items, some autographed items. 858-6746
- ★ Sofa table with glass top and iron base, \$75. 534-0256
- ★ New Sony Mx-N505 portable mini-disc MP3 player, \$119; New Sony studio headphones, MDRV600, \$89. 489-0136
- ★ Washing machine, \$125; two dryers, \$40; refrigerator w/icemaker, \$100. 256-751-4093

## Vehicles

- ★ 2000 Dodge Grand Caravan SE, white, 30K miles, \$13,500. 256-828-2832
- ★ 1994 F150 King Cab, XLT package, \$5,500. 721-1153
- ★ 1999 Toyota 4Runner Limited, 4x4, loaded, 98K miles, one-owner, garage kept. 232-3059
- ★ 1998 Volvo GLT, white, tan leather, many options, 110K miles, \$12,900. 256-464-8374
- ★ 1994 GMC SL truck, 4x4, Z71, black, CD, auto, \$6,950. 256-796-5136
- ★ 1989 Cadillac Limited Edition, fire damaged, engine & transmission good, \$500 obo. 852-2145
- ★ 2001 Dodge Durango SLT, dark green, fully loaded, one-owner, leather, 33K miles, \$19,000. 773-8458
- ★ 1997 Jeep Wrangler Sport, 4x4, green w/tan soft-top, 4.0/6 cyl., 5-speed, 89K miles, \$8,500. 882-7350

- ★ 1994 Ford Ranger XLT, ext. cab, V6, auto, maroon, \$4,000. 777-2701
- ★ 2001 Oldsmobile Silhouette Premier van, extended warranty, loaded, video entertainment system, 35K miles, \$17,500. 881-2131
- ★ 1997 Nissan Altima SE, auto, air, power windows/doors, CD changer, 118K miles, \$6000. 319-2895/682-8851
- ★ 1988 Bronco II, 2.9 liter, 5-speed, 2X4 drive, new spare tire, \$600. 722-2821
- ★ 1991 Mercury Grand Marquis GS, 4-door, 120K miles, \$800. 379-3606
- ★ 1988 Bronco II, one-owner, 160K miles, 4WD, air, new tires, brakes, & alternator, rebuilt transmission. 256-852-5010
- ★ 2000 Mustang, 6-cyl., 5-speed, 55K miles, loaded w/options, \$8,450 firm. 256-753-2278
- ★ 1950 Dodge truck, original equipment, green paint, ready for restoration, running condition, \$2,500. 931-425-0896
- ★ 1999 Mustang convertible, Anniversary Edition, V6, white w/leather interior and top, loaded with options. 682-2209
- ★ 1998 Chrysler Concorde LX, V6, pw/pl/ps, tilt, champagne, 88.2K highway miles, \$7,200. 256-796-9195
- ★ 1995 Mustang GT, V8, dark green, 50K miles, \$8,900. 256-230-3651

## Wanted

- ★ Used upright freezer in good condition. 256-353-5106
- ★ Native Spanish speaker to help work on my Spanish at lunchtime in 4203 Cafeteria. 544-6778
- ★ Glider and ottoman in very good condition. 773-1211
- ★ Chrono Trigger and Final Fantasy II for Super Nintendo entertainment system. 534-7691

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