



# MARSHALL STAR

Serving the Marshall Space Flight Center Community

Jan. 19, 2006

## NASA's comet tale draws to a successful close in Utah desert



NASA/Ames Research Center

*From NASA's Jet Propulsion Laboratory*

NASA's Stardust sample return mission returned safely to Earth when the capsule carrying cometary and interstellar particles successfully touched down at 4:10 a.m. CST Sunday, Jan. 15, in the desert salt flats of the U.S. Air Force Utah Test and Training Range.

Stardust is part of NASA's Discovery Program of lower cost, scientifically focused exploration projects. The Science Mission Directorate at NASA Headquarters in Washington has assigned the program management responsibilities for the project formulation, development, launch, mission operations and risk assessments to the Marshall Center's Discovery and New Frontiers Program Office.

"Ten years of planning and seven years of flight operations were realized early this morning when we successfully picked up our return capsule off of the desert floor in Utah," said Tom Duxbury, Stardust project manager at NASA's Jet Propulsion Laboratory in Pasadena,

The Stardust capsule return as seen from NASA's DC-8 Airborne Laboratory.

*See Stardust on page 2*

## Marshall hosts NASA Administrator Mike Griffin for town hall meeting

*By Jonathan Baggs*

There is strong support from Congress for NASA's exploration initiative, the moon is a necessary destination before going to Mars, and private industry may play a role in re-supplying the International Space Station, said NASA Administrator Mike Griffin during a recent town hall meeting with the Marshall workforce.

The administrator answered audience questions for the better part of an hour after a brief introduction by Marshall Center Director David King. Following are some of the highlights:

The administrator said that NASA objectives are to fly the shuttle safely until 2010; use the available shuttle flights to complete the space station; define and get started on building an architecture to return humans to the moon; keep a robust earth and space science program going and protect aeronautics.

"I have not, since the 1960s, seen such strong endorsement of what we at NASA want to do with the funding that is entrusted to us," Griffin said.

Asked about the role of centers and program management, Griffin said he is returning the agency to a "functional separation" between program and project management chain of command and the engineering management chain of command — a system used

prominently during the Apollo era.

This command separation allows for "truly independent" approval or disapproval of technical decisions, according to Griffin, because supervisors in the institutional chain of command will not be tied to a specific program that could lead to a possible conflict of interest.

When there is disapproval, the issue will be moved up through the separate chains of command for resolution at a higher level. There are two equal, but separate, chains of command that come together under the NASA Associate Administrator Rex Geveden, according to Griffin.

The administrator said that in the event the two separate chains of command do not reach a resolution on an issue, a decision will come from Geveden.

Several questions concerned full cost accounting — a financial management approach, implemented agency-wide in fiscal 2004, which ties all agency direct and indirect costs, including civil service personnel costs, to specific NASA programs and projects. In the past, civil service personnel and certain other costs were not always tied to

*See Griffin on page 5*

## Director's corner

I hope the holiday season offered an opportunity for you to relax and become rejuvenated after a year of excitement and difficult challenges. When I look back at 2005, I am very pleased by the accomplishments of the center. The year literally began with a bang with the discovery of a super massive black hole — the most powerful eruption in the universe — by the Marshall-managed Chandra X-ray Observatory. In addition, Gravity Probe B completed its science data collection to test Einstein's theory of general relativity, with the results expected this year.

In preparing for the Vision for Space Exploration, we witnessed a number of milestones during 2005 — the first and most widely known was America's return to flight. When the crew of STS-114 returned space shuttle Discovery to low-Earth orbit, the excitement was almost overwhelming. The entire NASA team worked very hard to make the launch happen. Return to flight was all-encompassing and required steadfastness to work through many difficult issues; however, even in the midst of the excitement and appreciation for the hard work, the Marshall team did not lose focus or negate the seriousness of the PAL ramp foam shedding during launch. It was not something we expected to happen, but it did. And with the same determination seen in all the challenges we have faced, the team got right to work to begin addressing the foam loss.

The center's realignment last year was a very important step. Our willingness to make necessary and important changes around the center opened the door for Marshall to play an integral role in the new exploration journey. Reshaping the center was not an easy task, but it was a needed priority to position us for exploration work. The return on our investment became evident when the agency assigned the Marshall Center the Crew Launch Vehicle work. This vehicle, combined with the Crew Exploration Vehicle, will replace the space shuttle and ultimately return humans to the lunar surface. The plan to return to the moon, and eventually build a permanent outpost has created an excitement within our community like that of the Apollo era.

Another milestone toward the Vision was the Marshall team's win on a proposal for the second Robotic Lunar Exploration mission. A very dedicated team put the proposal together that won the work for this lunar lander. The team, drawing on all its experience and expertise, developed a science-driven proposal that calls upon Marshall, Goddard Space Flight Center and Johns Hopkins University Applied Physics Lab to develop the next spacecraft to land on the moon.

Now that we have entered 2006, new challenges begin. We will immediately begin ramping up the work on the Crew Exploration Vehicle and the lunar lander. Even as I write this, New Horizons, NASA's Pluto-Kuiper Belt mission is preparing for its launch from Kennedy Space Center. This mission, a part of the Marshall-managed Discovery and New Frontiers Program, is the world's first mission to Pluto.

We will be successful in 2006 because we have a strong resolve to be rigorous in the execution of our work and rigorous in meeting and exceeding customers' expectations. Our responsibility is huge: America is going back to the moon, on to Mars, and then beyond by way of Marshall Space Flight Center. What a great job ahead of us! I am excited about Marshall Space Flight Center, its employees and awe-inspiring work. We will literally have a hand in writing America's new chapter on space flight, and I am hopeful you feel honored to be a part of this team because it is a team known for excellence and know-how.

**David A. King**

**Director, Marshall Space Flight Center**



David King

## Stardust

*Continued from page 1*

Calif, shortly after the mission's return.

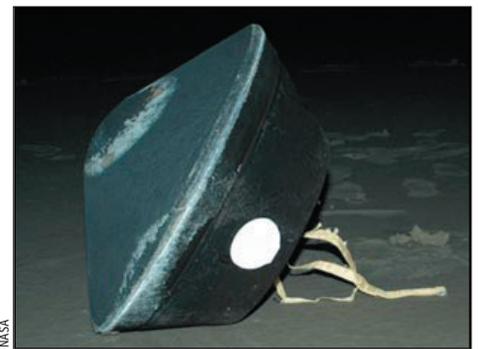
"The Stardust project has delivered to the international science community material that has been unaltered since the formation of our solar system."

Stardust released its sample return capsule at 11:57 p.m. CST Saturday, Jan. 14. The capsule entered the atmosphere four hours later.

"I have been waiting for this day since the early 1980s when Deputy Principal Investigator Dr. Peter Tsou of JPL and I designed a mission to collect comet dust," said Dr. Don Brownlee, Stardust principal investigator from the University of Washington in Seattle. "To see the capsule safely back on its home planet is a thrilling accomplishment."

The sample return capsule's science canister and its cargo of comet and interstellar dust particles will be stowed inside a special aluminum carrying case to await transfer to NASA's Johnson Space Center in Houston, where it will be opened. NASA's Stardust mission traveled 2.88 billion miles during its seven-year round-trip odyssey. Scientists believe these precious samples will help provide answers to fundamental questions about comets and the origins of the solar system.

NASA's Jet Propulsion Laboratory manages the Stardust mission for NASA's Science Mission Directorate. Lockheed Martin Space Systems of Denver developed and operated the spacecraft.



Stardust capsule carrying cometary and interstellar particles.

# Classified Ads

To submit a classified ad to the Marshall Star, go to Inside Marshall, to "Employee Resources," and click on "Employee Ads — Submit Ad." Ads are limited to 15 words, including contact numbers. No sales pitches. Deadline for the next issue is 4:30 p.m. Thursday.

## Miscellaneous

Baseballs in carrying bucket, 12 new Rawlings OLB3 official size & weight, \$20. 256-828-1234

White metal double Futon bed w/extra thick mattress, \$100. 772-1870

Trundle bed w/mattress, \$50; bookcase, \$30; king mattress set w/frame, \$100; baby stroller, \$40. 603-3558

Two Steve Polomchak and one Larry Dyke registered lithographs. 551-1044

Coleman MAXA 5000 extended run generator w/10hp Tecumseh, \$275. 828-6213

Pentium 2-piece windows XPSP2 MS Office, 17" monitor, speakers, \$100. 508-0691

Yamaha rose-tinted trumpet, needs new valve springs, music books included, \$300. 479-4345

Weider Powerguide home gym, weights w/cable/pulley system, \$150. 256-852-2438

Exercise equipment: Nordic track ski machine, \$150; weight bench w/weights, \$75; bicycle, \$30. 881-3527

AKC Labs, black & yellow, hunting bloodlines, \$250 each. 256-306-9903

Broyhill traditional couch, \$100. 882-6982

Three piece sectional w/2 recliners; coffee/end tables; lamp; \$700; Weider Pro-9640 gym system, \$300. 325-0085

Fender P Bass guitar, MIM w/USA electronics, brown burst w/case, \$300. 534-5175

Aquarium w/stand, 55 gallon, filters, blue lights, driftwood & hood, \$350. 851-6746

SWR SuperRedhead bass amplifier, 350 watts, 2x10 w/horn, built-in flight case, removable casters, \$600. 303-3702

Antique pedestal-base tub, 23x56x29, \$250. 508-8746

Snapper Hi-Vac riding lawn mower w/bagger attachment, 8hp Tecumseh industrial engine, \$175. 851-7406

This End Up classic solid end bunk bed set, \$330. 256-533-5942

Open CD storage unit, 30"x60", 8 shelves, \$50. 880-7381

Metal/wood baker's rack, \$50; Rattan pedestal table, glass-top, 4-chairs w/cushions, 2-swivel stools, \$250. 256-355-1542

Craftsman generator, 19hp Briggs & Stratton, 10,000 watt, electric start, never used, \$1,800. 714-5999

Antique furniture: 1870s chest; Birdseye Maple pieces; radio; typewriter. 830-1820/5-9 p.m.

Sofa, over-sized chair, ottoman from Marks-Fitzgerald, rose, green & blue floral, \$450. 503-5115

Utility trailer, 5'x9', spare tire and lights, \$500. 859-5624

Decorative kitchen bottles of peppers, olives, etc., \$5 each; OEM Harley pipes for Electro-glide, \$75. 527-8116

Rectangle kitchen table w/4 chairs, light wood, white trim, \$200; couch, multi-colored, \$150. 847-524-4978

Broadway Theatre tickets: Evita, Bombay Dreams, Mama Mia, Sunday, 1 p.m., front row, \$150. 256-498-2028

Double Jogger baby stroller, \$250. 256-551-0276

Ramsey 12,000 lb. winch, \$600. 431-2965

White wicker bedroom set: twin headboard/rails, dresser/mirror, armoire, nightstand, chest, TV cart, mirror, \$500. 256-337-9683

Berkley Lightning fishing rod w/Abu Garcia 704 Cardinal spinning reel, new, \$40. 883-1003

Pit Bull puppies, 2 males, 4 females, registered, call for pictures. 990-1626

Pocket USB drive, 1gb, \$48; Motorola V220 Cingular cell phone, \$70. 655-1986

Surplus building supplies, 8' garage doors w/operators; lumber. 509-7907

SunQuest 16-bulb tanning bed w/extra bulbs, new play pen. 859-1188

Four Bose speaker stands, 3-4 feet tall, black, \$20 each; round kerosene heater, \$75. 337-7745

1997 Thunderbird LX, maroon, V8, power seat, sunroof, 142K miles, \$4,000. 426-5404

2000 Nissan Frontier crew-cab, automatic, power, CD/cassette, silver, 99K miles, \$10,000. 880-9025

2005 Polaris ATP 500 H.O. camo package, heavy duty cargo box, receiver hitch, all-wheel drive. 256-353-0933

2004 Nissan Altima SE, 3.5, one lady owner, 21K miles, garaged, loaded, immaculate, \$21,500. 837-1774

Vintage 1975 Honda CB 500T motorcycle, SE Huntsville, \$1,500. 883-1667 evenings

2005 Toyota Camry LE, V6, 5K miles, all-power, JBL stereo, disc brakes, \$19,990. 881-3612

1989 Nissan SE pickup truck, V6, 278K miles, \$1,000. 256-551-0276

2001 Ford Focus SE, gold, 92K miles, one-owner, service records, \$4,500. 865-567-8862/Adam

2004 Harley Davidson Road King Classic, 9K miles, pearl white, cruise, factory alarm, \$17,900. 256-776-0811

2002 Yamaha Banshee 350, \$2,800. 256-513-2699

1993 Honda Accord EX, auto, a/c, power locks/windows, new tires, \$2,950. 256-880-2015

1974 Jeep CJ5, 4x4, w/Chevy 350/V8 and Turbo 350 transmission, many new parts, \$1,850. 683-9364

2005 Volvo S60, white, tan leather, 7K miles, \$26,000. 881-1968

Two 1965 Ford Thunderbirds: one for restoring and one for parts car, \$1,500. 256-506-6106

2005 Yamaha YZ125F 4-stroke, blue, \$2,000. 751-3766

2001 Nissan Frontier crew-cab, automatic, 97K miles, silver, 2WD, fully loaded, \$11,950. 533-1172

## Vehicles

2001 Procraft fish/ski boat, 150 Mercury XR6, many extras, \$12,000 firm. 714-7852

2004 Honda Civic EX. 233-6197

John Deere tractor, front-end loader, landscape box, tiller, finishing mower, bush-hog, & more, \$15,000. 883-7089

Trailer to haul ATV and/or riding lawn mower, 5'x7'. 830-2806

1999 Ford Explorer XLS, 4x4, 81K miles, 4-door, towing package, \$7,500. 353-3229

## Found

Reading glasses and umbrella. Please call 544-3623 to identify/claim

Umbrella and laser pointer. Call 544-3623 to claim/identify

## Free

To good home, smart black Lab mix dog, under one-year old. 256-931-4678

West Highland Terrier, "Westie", 4-yrs. old. 533-7234/leave message

Female dog, very playful, white w/red spots, possible Whippet/Chihuahua mix. 653-5374

Cat needs one-cat home, not de-clawed, shots up-to-date. 776-4092

Firewood, pick up only. 539-5995

# NASA helping Alabama, Florida businesses make "connection"

By Bill Hubscher

NASA depends on contractors and small businesses to help achieve the mission of crewed spaceflight, as well as in many other areas of the agency. Starting Jan. 23, NASA will help small local businesses in two different regions grow by showing them the best ways to work with government agencies on the local, state and federal levels.

The NASA Southeast Regional Technology Transfer Center, part of Georgia Tech University in Atlanta, has invited entrepreneurs and business owners from across the southeast United States to the 2006 Regional Small Business Conferences, which are themed

"Making the Connection." The events, to be held in Vance, Ala., Jan. 23 and Pensacola, Fla., Jan. 24-25, permit industry and commercial organizations to interact with government and business representatives, exchanging knowledge, experience and ideas about current and future opportunities that could help small businesses win government contracts.

Mercedes-Benz will co-sponsor and host the Vance forum, which begins with registration at 7:30 a.m. on Jan. 23. The Pensacola conference is hosted by the National Museum of Naval Aviation, which opens with a reception Tuesday evening, Jan. 24 and continues at 7:30 a.m. Jan. 25.

# Marshall team member spotlight

For 2006, share one goal you would like to accomplish both professionally and personally.



**Allan Day**  
0501

One of the professional goals I would like to accomplish is to increase the representation and awareness of disabled veterans and people with disabilities in the Marshall Center's workforce. As the center's disability program manager, I am looking forward to this challenge and I am confident that by working diligently with center managers and supervisors, we will be successful in raising both awareness and employment opportunities for these individuals.

Personal goals I plan to accomplish are to begin course work toward the completion of a master's degree. I also plan to take an extended road trip on my Harley to the Grand Canyon and parts "West"!

What is a new year without something new? In 2006, I look forward to new beginnings and new adventures in my upcoming marriage. Spending quality time sharing stories and creating new memories with my new extended family is my number one personal goal.

Being empowered and entrusted to make decisions is every professional's desire. In 2006, I will strive to achieve this goal by becoming more knowledgeable in procurement law and the internal working affairs of the agency.



**Rosalind Greene**  
LS01



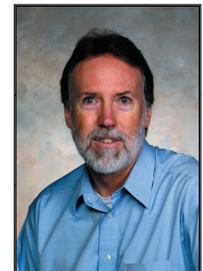
**Gene Goldman**  
MP21

My professional goal is to ensure and increase the current emphasis, within the space shuttle main engine team, on flying the shuttle safely toward the scheduled program end date while working closely with our Upper Stage Engine/Crew Launch Vehicle Program counterparts to maximize synergism and provide a seamless, successful transition.

My personal goal, as every year, is to effect an optimum balance of fuel intake and energy expenditure to create a streamlined and structurally reinforced me. . .that is, eat right, exercise and lose weight, darn it!

The one goal I would like to reach on a professional level this year is to win funding for my scientific research from NASA Headquarters. My ongoing research on the origins of the 11-year solar activity cycle had received support from headquarters for the last two decades. However, under full cost accounting my most recent proposal was denied support. I hope to win support this year with a more compelling proposal.

On a personal level, I would like to improve some of my physical abilities so that I can overpower those 20-year-olds on the volleyball court.



**David Hathaway**  
XD12



**Jay Onken**  
E001

Professionally, I plan to take the steps necessary to ensure that the Mission Operations Laboratory is fully and properly supporting the beginnings of the RLEP and CLV projects in parallel with laying the groundwork for exciting work in mission operations at this center for years to come.

On the personal side, I have a wonderful wife, daughter and two sons. I plan to continue to coach my two sons in basketball and baseball. In addition, I plan to find a way to carve out more time for fun outings with the whole family.

In 2005, I fulfilled a professional goal in being named the systems engineering lead for the Crew Launch Vehicle, Upper Stage Element. A primary goal this year is to help lead the upper stage through a successful systems requirements review. A good set of requirements is a key to our success in upper stage.

Personally, I am in the process of moving my family out into the country this year. My wife and I look forward to simpler life where our five children can be exposed to living on a farm and life in the outdoors.



**Joey Shelton**  
NP21

# Griffin

*Continued from page 1*

specific projects. Some Marshall scientists expressed concern that they are not on a level playing field when competing with their colleagues in academia — many of whom receive institutional subsidies. The Marshall scientists attributed that to full cost accounting. Griffin said that the question of whether or not NASA should subsidize scientists to make them more competitive “is a strategic decision for the agency . . . and I don’t know the answer to that yet.”

It also is taking time to develop a strategy for getting to Mars, Griffin said. The red planet hasn’t been put on the backburner. NASA just doesn’t know enough yet about how to get a crew there safely and back.

Griffin said the purpose of sending humans to the moon is to provide a place to learn how to live and work “off-planet” while only three days from home. And, he said, there is a lot of learning to be done since total human experience on the moon is miniscule.

“The total amount of experience we have in learning how to be effective beyond low-Earth orbit is about a man-month, shuttle time, and it ended almost 35 years ago,” said the administrator.

“We don’t know what we need to know to be able to go to Mars intelligently, in my view. It involves getting to the moon (first) and using it in a way which is going to help create a spacefaring capability for the United States.”

He said “we do know . . . we need 500 or 600 metric tons passing through low-Earth orbit to get there (Mars), almost no matter what the architecture is. If that’s the case, I can see using five or six launches of a shuttle-derived class heavy-lift launcher. Over the course of five or six months, we assemble a craft to go to Mars. But, the moon comes first. . . ”

So why not partner more with private industry groups who are trying to build spacecraft? Is criticism fair that NASA is holding back private industry?

Griffin said it’s not a fair comparison because of constraints, by law, under which a government agency such as NASA must work compared to private industry.

“I believe there is an interface between government and a special entrepreneurial industry that we should take advantage of,” he said. “We are about to release the final . . . request for proposal . . . advertising a requirement for service, demonstrations of service, to the International Space Station. It is our hope that some of these entrepreneurial firms will use . . . the seed money that we

are providing, together with their own investment, to be able to bring some of these entrepreneurial techniques and approaches to bear in solving some of our problems.”

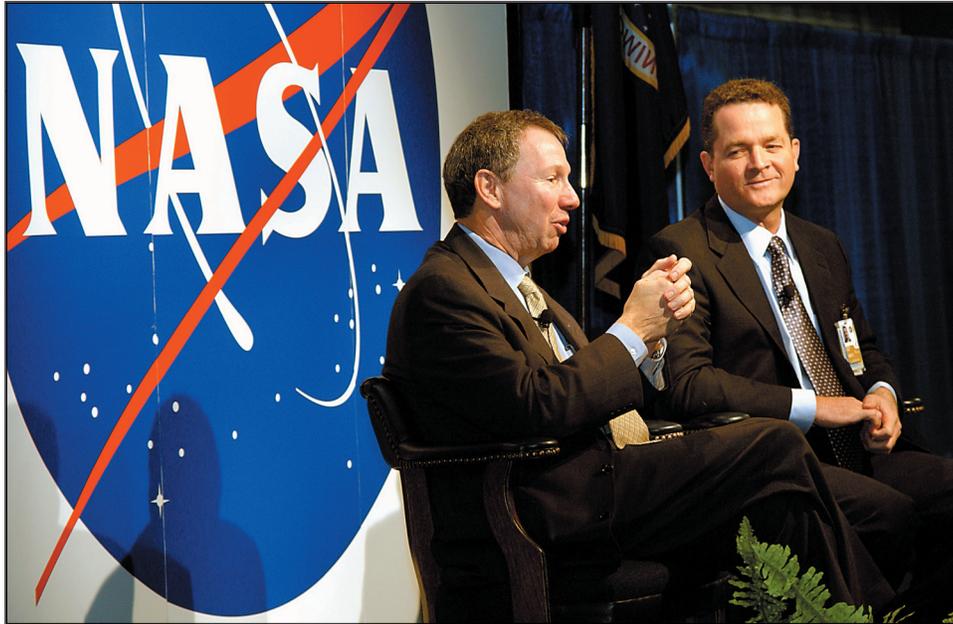
Griffin said with the routine costs of supplying goods, services and people to the space station, perhaps private industry can step

up to handle those tasks. “I would be all for it because it would allow us to take the (cost) difference and plough that toward things . . . like voyages to the moon,” he said. “I believe if we at NASA are proactive in our desire to engage and involve industry we can benefit from entrepreneurship. . . ”

So how close are we getting to all of this — return the shuttle to flight, finish the space station, go to the moon and then to Mars?

“I’m cautiously optimistic we are making progress, but I won’t go farther than that,” Griffin said. “You will have to judge how well we’re doing.”

*The writer, an ASRI employee, supports the Public and Employee Communications Office.*



**Marshall Director David King, right, listens as NASA Administrator Mike Griffin answers a Marshall team member’s question at a town hall meeting Jan. 6.**

## **Marshall surplus property can be purchased through sales Web site**

Marshall Center’s surplus property can be purchased through the General Services Administration sales Web site. Go to [www.gsaauctions.gov](http://www.gsaauctions.gov), search by State of Alabama and you will find items located at Marshall and other federal agencies to bid on. For more information, call 544-4667.

# Marshall creates management system to better monitor and control chemicals

By Lori Johnston Meggs

The Marshall Center's Environmental Engineering and Occupational Health Office has created a new chemical management system to better monitor and control chemicals stored and used at the center.

The new system requires all chemicals purchased or brought on-site to be routed through Marshall's Central Receiving in Building 4631 for bar coding and inventory.

"This system is much more accurate, because the old system simply relied on designated personnel to manually count and report all chemicals located in their area," said Dan Adams, an environmental engineer at Marshall.

Bar coding all incoming chemicals at Central Receiving records each chemical into the Marshall chemical inventory system. Federal environmental regulations require the center to annually report all chemicals stored and used on-site. "Knowledge of the chemicals stored in each building helps provide a safer environment for every employee," Adams added. The information also is used by the Redstone Arsenal Fire Department and the Redstone Arsenal Emergency Planning Committee.

"Chemicals may be ordered or purchased however the user wishes,

either through the Marshall Retail Store or off-site," said Adams. "But if purchased through the Retail Store, the chemical definitely goes through Central Receiving where bar codes are automatically placed on the chemicals," he added.

Items exempt from bar coding include cafeteria and janitorial supplies, fire extinguishers, construction contractor supplies, office products and non-hazardous items. For inquiries about bar coding, or to make arrangements to inventory a chemical not feasible to bring to Central Receiving, employees may contact environmental support contractors David Glover at 544-4772 or Nathan Coffee at 544-6007.

In January 2005, environmental personnel began conducting a baseline inventory of chemicals stored on-site.

Inspectors continue to search buildings for chemicals and apply bar codes to them. This effort should be completed later this spring. In the future, when environmental inspectors find chemicals on-site without bar codes, they will record them as an environmental finding against the responsible organization and report the finding in SHEtrak — a Marshall reporting system database listing safety, health and environmental findings.

*The writer, an ASRI employee, supports the Public and Employee Communications Office.*



David Higginbotham/MSFC

**Sheila Koza, a chemical inventory contractor with Marshall's Environmental Engineering and Occupational Health Office, searches for the correct printed yellow barcode to apply to a chemical container.**

**Correction**  
The Jan. 12 Marshall Star omitted the name of NASA Associate Administrator Rex Geveden in the caption of the photo honoring Katrina heroes. The Marshall Star regrets the error.

**Shuttle Buddies to meet Jan. 23**  
The Shuttle Buddies will meet at 9 a.m. Jan. 23 at Mullins Restaurant on Andrew Jackson Way. For more information, call Deemer Self at 881-7757.

## MARSHALL STAR

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