



# MARSHALL STAR

Serving the Marshall Space Flight Center Community

Aug. 11, 2005

## *Discovery is home!*



NASA

Commander Eileen Collins and her crew address the news media. Collins landed Discovery at Edwards Air Force Base in California Tuesday.

From NASA Headquarters

The Space Shuttle Discovery is home after a 14-day, 5.8 million-mile journey in space. The mission included breathtaking in-orbit maneuvers, tests of new equipment and procedures, and a first-of-its-kind spacewalking repair.

Commander Eileen Collins and the crew of the STS-114 mission, Jim Kelly, Charlie Camarda, Wendy Lawrence, Steve Robinson, Andy Thomas and Soichi Noguchi of Japan, landed at Edwards Air Force Base, Calif., at 7:12 a.m. CDT Tuesday.

"We have had a fantastic mission," Collins said shortly after the crew disembarked from the Shuttle. "We brought Discovery back in great shape. This is a wonderful moment for us all to experience."

Discovery's mission, the first of two Return to Flight test

**See Shuttle on page 6**

## **Marshall Center Director David A. King receives Presidential Rank Award**

By Sheri Bechtel

Marshall Center Director David A. King has been awarded the Presidential Rank Award for Distinguished Executives — the highest honor attainable for government work.

The Presidential Rank Award is given annually to a select group of senior federal executives for outstanding leadership and service in some of the most critical positions in federal government. Executives who have consistently demonstrated strength, integrity and commitment to public service in their careers are nominated for the award by members of their agency. Review boards, made up of private citizens, refer a select few to the President for approval.

King is one of four NASA employees nationwide to be honored. He is one of only 55 members of the Senior Executive Service, a corps of highly qualified executives who fill top positions in the federal government, to be selected for the Distinguished Executive award by the President. That rank is awarded to just 1 percent of the more than 7,800 career members of the Senior Executive Service.

"I am honored to receive the Presidential



David A. King

**See King on page 4**

## **Mars Orbiter launch set Thursday**

The launch of NASA's Mars Reconnaissance Orbiter (MRO) is scheduled for Thursday. The launch window is from 6:50 to 8:35 a.m. CDT.

The MRO will study Mars to understand the planet's water riddles and to advance the exploration of the mysterious red planet.

As a weather satellite, the MRO will help to understand the Martian climate. As a geological explorer, the spacecraft will identify water-related landforms and aqueous surface deposits. As a site finder, it will observe hundreds of locations to assist in future exploration, and as a communications satellite the MRO will relay data from future Mars missions.

For more information, visit:  
<http://www.nasa.gov/mro>

# New Marshall test stand helps NASA, university team demonstrate advanced thruster

By Rick Smith

Scientists from Princeton University in Princeton, N.J., came to the Marshall Center in July to test an innovative electric propulsion thruster — one that could play a role in future NASA science and exploration missions into Earth’s “solar neighborhood.”



NASA/MSFC

Princeton University’s CHET thruster mounted on the VAHPER thrust stand at the Propulsion Research Laboratory at Marshall.

The Propulsion Research Laboratory at Marshall was a good choice, given that researchers there recently built a one-of-a-kind, low-thrust test stand. The stand proved ideal for the new thruster’s ultra-delicate sensitivity requirements, and is expected to dramatically broaden the Marshall Center’s ability to evaluate a range of advanced propulsion technologies.

The test article — the Cylindrical Hall-Effect Thruster (CHET), developed at Princeton’s Plasma Physics Laboratory — is a new type of electric propulsion device, part of the Hall class of thrusters used on several past satellite missions to maintain altitude. Glenn Research Center in Cleveland, Ohio; the Jet Propulsion Laboratory in Pasadena, Calif.; and several companies and universities have developed a number of conventional Hall thruster technologies, which could support future robotic spacecraft, and cargo missions to the Moon or Mars.

Princeton team leads Prof. Nathaniel Fisch and Dr. Yevgeny Raitses believe their innovative thruster could vastly improve on the performance of standard Hall thrusters, delivering a greater power-to-mass ratio, higher efficiency and better specific impulse — the equivalent of gas mileage in an automobile. They chose the Propulsion Research Laboratory to test the new thruster because of the facility’s unique capabilities in low-thrust measurements.

Of greatest interest to Raitses and his team was the laboratory’s new Variable Amplification Hanging Pendulum with Extended Range (VAHPER) mobile test stand, built specifically to support the CHET test. VAHPER is capable of measuring the minute force of a single millinewton — a little more than three-thousandths of an ounce.

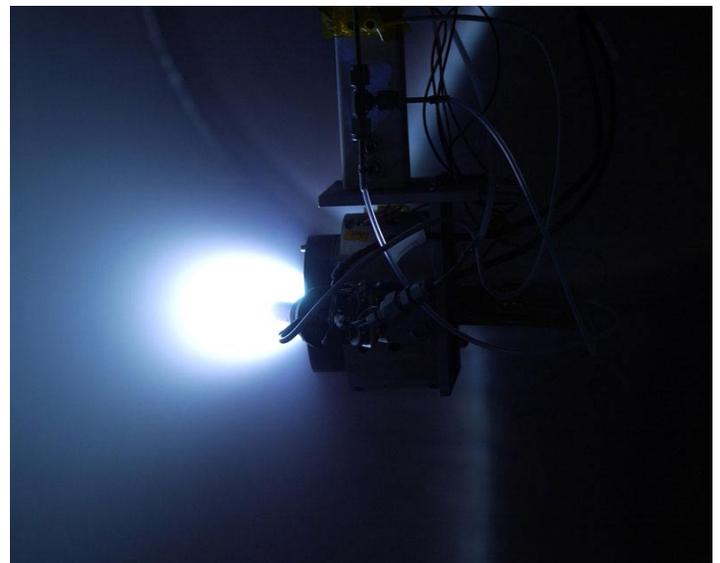
VAHPER was engineered to test propulsion devices ranging in weight from a few ounces to more than 300 pounds. It can evaluate a variety of devices with power output from 10 watts to more than 100 kilowatts. Most importantly, the stand measures a broad range of thrust levels — from 1 millinewton to 1 Newton — and delivers an extraordinarily high resolution of approximately 100 micronewtons, a change in force equal to 1/1,000th of 1 Newton.

Princeton’s CHET thruster was successfully tested in July, delivering an average thrust of 3 millinewtons over seven days. That may seem like a miniscule amount of force, but in the space environment, that thrust is compounded exponentially over time, eventually delivering velocities critical to interplanetary travel.

“This joint effort demonstrates the ability of our laboratory and our research team to assist other scientific organizations, including those outside NASA,” said Dr. George Schmidt, manager of the Propulsion Research Center at Marshall. “Our versatile facility is ideally suited to support research and development across a broad spectrum of advanced propulsion technologies needed for space exploration.”

Schmidt expects further successes to follow. “Thanks to new capabilities brought about by in-house innovations such as the VAHPER test stand, the Propulsion Research Laboratory is poised to contribute to advancements in a number of key propulsion technologies,” he said.

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



NASA/MSFC

The CHET thruster fires in a vacuum chamber at Marshall’s Propulsion Research Laboratory. Glowing xenon plasma is ejected from the thruster, producing thrust for in-space applications.

# Seven Marshall team members receive Silver Snoopy Awards

Seven Marshall team members were recipients of the Silver Snoopy Awards, presented Aug. 5 by Expedition 10 astronaut Leroy Chiao during a visit to the Marshall Center.

Dr. Chiao was commander and NASA science officer of Expedition-10, the 10th mission to the International Space Station. He spent six-and-a-half months on board the Station, concluding his mission April 24. He is a veteran of four space flights, logging 229 days in space.

The Silver Snoopy Award is the astronauts' own award for outstanding performance contributing to flight safety or mission success. Less than 1 percent of the space program workforce receive the award annually.



David Higginbotham/MSFC

Silver Snoopy Award recipients Marylou Uchaker, left, Office of the Chief Financial Officer, and Amy Stapleton, right, Center Operations Directorate, pose with Chiao.



David Higginbotham/MSFC

Chiao, second from left, presented Silver Snoopy Awards to, from left, Elizabeth Holland, Space Partnership Development Program Office; Reggie Spivey, Tec-Masters, Inc; Guy Smith, University of Alabama in Huntsville; and Cheryl Erdner, Science and Technology Directorate.



Mary Colbert of the Office of Strategic Communications is presented a Silver Snoopy Award by Chiao.



David Higginbotham/MSFC

# Walter Schirra to speak at Marshall, Von Braun Forum Aug. 26

By Sanda Martel

Retired astronaut Walter M. Schirra, one of the original seven Mercury astronauts, will visit the Marshall Center and speak to employees Friday, Aug. 26.

Later that evening, Schirra will be the featured speaker at the Von Braun Forum at 7 p.m., in the IMAX Theater of the U.S. Space & Rocket Center. The forum is free and open to the public.

Schirra is the only one of the three living Mercury astronauts who flew in all three of the nation's pioneering space programs — Mercury, Gemini and Apollo.

Schirra was selected by NASA as one of the first group of astronauts, along with Gordon Cooper, Scott Carpenter, John Glenn, Alan Shepard, Gus Grissom and Deke Slayton. He flew on the fifth Project Mercury flight, orbiting the Earth six times on Oct. 3, 1962, and was commander of the Gemini 6 flight which launched Dec. 15, 1965. Schirra was commander of Apollo 7, the first manned flight of the Apollo spacecraft and the Saturn 1B rocket. He and crewmates Walter Cunningham and Donn Eisele successfully checked all the Apollo systems during the 11-day mission which launched Oct. 11, 1968. The Apollo 7 mission qualified the spacecraft for later Moon missions. Schirra retired from the Navy and NASA in 1969.



The original seven astronauts for NASA's Mercury Project are, front row, from left, Walter M. "Wally" Schirra, Donald K. "Deke" Slayton, John H. Glenn Jr. and Scott Carpenter. From left, at rear are Alan B. Shepard, Virgil I. "Gus" Grissom, and L. Gordon Cooper Jr.

He co-authored a recently published book, "The REAL Space Cowboys," with Ed Buckbee, a former NASA public affairs officer and the first executive director of the U.S. Space & Rocket Center in Huntsville. The book highlights the Mercury astronauts and their contribution to America's space program.

In his presentation to Marshall employees at 2 p.m. Aug. 26 in Morris Auditorium, Schirra will discuss his pioneering space missions. A video about Schirra's career, produced by Anthony Orton and Mike Arrington of Marshall Television Services, will be presented. Schirra will be available to sign copies of his book following the presentation.

The Von Braun Forum celebrates the contributions of Dr. Wernher von Braun, Marshall's first director, to the Tennessee Valley and the space program. Past keynote speakers have included John Denver, the late folk-pop musician; Dr. James Burke, author and science historian; and Walter Cronkite, former anchorman and managing editor of the CBS Evening News.

On Aug. 27, the Space & Rocket Center is sponsoring the Saturn/Apollo Reunion. For more information, contact the Space & Rocket Center or visit the Reunion Web site at:

<https://register.spacecamp.com/tick>

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

## King

*Continued from page 1*

Rank Award, one I share with the entire Marshall team," King said. "This award recognizes all the work accomplished here at the Marshall Center and our commitment to excellence in furthering NASA's mission and the Vision for Space Exploration."

In 2001, King received the Presidential Rank Award for Meritorious Executives, recognizing high-performing senior career employees for long-term accomplishments.

As director of the Marshall Center, King heads one of NASA's largest field installations, with more than 7,300 civil service and contractor employees and an

annual budget of approximately \$2 billion. Named to the position in 2003, he manages a broad range of propulsion, scientific and space transportation activities contributing to the nation's space program.

Prior to his appointment as director, King served as deputy director of the Marshall Center from 2002 until 2003.

King joined NASA in 1983 as a main propulsion system engineer at the Kennedy Space Center in Florida. He held numerous managerial and leadership positions at Kennedy, including deputy director of Shuttle Processing in 1996; Shuttle launch director in 1997; and director of Shuttle Processing in 1999. King again assumed the

responsibilities of Shuttle launch director in 1999. In 2000, he was named director of Space Shuttle processing at Kennedy, overseeing the work of approximately 5,400 civil service and contractor employees.

King, a native of Sumter, S.C., earned a bachelor's degree in mechanical engineering from the University of South Carolina in Columbia in 1983 and a master's degree in business administration from the Florida Institute of Technology in Melbourne in 1991.

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MSFC

## ***Marshall exhibit at Huntsville's Bicentennial Celebration***

**Brian Nelson, right, of Union Grove, visits Marshall's Mobile Theater exhibit last Saturday at Big Spring International Park. The exhibit, which presents information about the Vision for Space Exploration, was open to the public during Huntsville's day-long "Unity Day," part of the city's Bicentennial Celebration. The Marshall Center was also represented with an entry in Saturday afternoon's Unity Day Parade in downtown Huntsville. Dr. Jan Davis, director of the Safety and Mission Assurance Directorate, and "Huntsville's own astronaut," appeared in the parade. Marshall Team members walked the parade route with the mobile Shuttle exhibit.**

# ***NASA's Spitzer finds hidden, hungry black holes***

**M**ost of the biggest black holes in the universe have been eating cosmic meals behind closed doors— until now.

With its sharp infrared eyes, NASA's Spitzer Space Telescope (SST) peered through walls of galactic dust to uncover what may be the long-sought missing population of hungry black holes known as quasars.

"From past studies using X-rays, we expected there were a lot of hidden quasars, but we couldn't find them," said Alejo Martínez-Sansigre of the University of Oxford, England. He is lead author of a paper about the research in this week's *Nature*. "We had to wait for Spitzer to find an entire population of these dust-obscured objects," he said.

Quasars are super-massive black holes that are circled by a giant ring of gas and dust. They live at the heart of distant galaxies and can annually consume up to the equivalent mass of one thousand stars. As their black holes suck in material from their dusty rings, the material lights up brilliantly, making quasars the brightest objects in the universe. This bright light comes in many forms, including X-rays, visible and infrared light.

Astronomers have puzzled for years over the question of how many of these cosmic behemoths are out there. One standard method for estimating the number is to measure the cosmic X-ray background. Quasars outshine everything else in the universe in X-rays. By counting the background buzz of X-rays, it is possible to predict the approximate total number of quasars.

But this estimate has not matched previous X-ray and visible-light observations of actual quasars, which number far fewer than expected. Astronomers thought this might be because most quasars are blocked from our view by gas and dust.

They proposed that some quasars are positioned in such a

way their dusty rings hide their light, while others are buried in dust-drenched galaxies. Spitzer appears to have found both types of missing quasars by looking in infrared light. Unlike X-rays and visible light, infrared light can travel through gas and dust.

Researchers found 21 examples of these quasars in a small patch of sky. All the objects were confirmed as quasars by the National Radio Astronomy Observatory's Very Large Array radio telescope in New Mexico and by the Particle Physics and Astronomy Research Council's William Herschel Telescope in Spain.

"If you extrapolate our 21 quasars out to the rest of the sky,

## ***More complete picture***

you get a whole lot of quasars," said Dr. Mark Lacy of the Spitzer Science Center, California Institute of Technology (Caltech), Pasadena, Calif., a co-author of the *Nature* paper. "This means that, as suspected, most super-massive black hole growth is hidden by dust."

The discovery will allow astronomers to put together a more complete picture of how and where quasars form in our universe. Of the 21 quasars uncovered by Spitzer, 10 are believed to be inside fairly mature, giant elliptical galaxies. The rest are thought to be encased in thick, dusty galaxies that are still forming stars.

A team of researchers based at the University of Arizona, Tucson, found similar quasars using Spitzer. Their research is described at: <http://uanews.org/science>

JPL, a division of Caltech, manages the SST mission for NASA's Science Mission Directorate. Science operations are conducted at the Spitzer Science Center at Caltech. For information about NASA and agency programs on the Web, visit:

<http://www.nasa.gov/home/index.html>

# NASA brings Moon, Mars experience to Missouri State Fair Aug. 11-21

By Sheri Bechtel

NASA's Vision for Space Exploration Trailer will take fair goers at the Missouri State Fair in Sedalia on a different kind of ride Aug. 11-21 — one that will send visitors on a "journey" to the Moon and Mars.

The experience is intended to carry visitors' imaginations rocketing to the farthest reaches of the Solar System, and inspire space enthusiasts as they embark on a simulated journey into space.

Housed in a 53-foot-long tractor and trailer rig, the Vision for Space Exploration exhibit is designed to share with visitors

NASA's exploration goal, which is to return to the Moon and travel to Mars and beyond. The exhibit is managed by NASA's Exploration Systems Mission Directorate in Washington and implemented by the exhibits team in the Public and Employee Communications Office, part of Marshall's Office of Strategic Communications.

The interactive exhibit has been on the road since mid-July, when the trailer first rolled into the Boy Scout Jamboree at Fort A.P. Hill in Carolina, Va. Hundreds of scout masters and young explorers visited the exhibit during the annual jamboree. In early August, the exhibit traveled to NASCAR's Allstate 400 at the Brickyard at the

Indianapolis Speedway in Indiana, where hundreds of race fans were treated to an out-of-this world ride.

Visitors who enter the Vision for Space Exploration Trailer are surrounded by stars and planets. Surfaces of the Moon and Mars encompass the "space voyagers." Visitors then prepare for the exciting journey ahead in the Experience Dome — a hexagon-shaped, three-dimensional theater featuring a five-screen presentation on the Vision for Space Exploration.

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

## Shuttle

*Continued from page 1*

missions, was one of the most complex space flights in NASA history. The crew flawlessly executed its to-do list.

After an on-time lift-off from Kennedy Space Center, Fla., on July 26, the crew tested new capabilities and techniques developed over the past two-and-one-half years to inspect and possibly repair the Space Shuttle in orbit. Collins guided Discovery through an unprecedented back flip maneuver as it approached the International Space Station. The maneuver allowed the Station crew to snap high-resolution photos that added to the wealth of new data that mission managers used to ensure Discovery was in good shape to come home.

"It's going to be hard to top this mission," NASA Administrator Michael Griffin said. "Everywhere you look, there's nothing but outstanding success."

The astronauts repaired one Space Station Control Moment Gyroscope and replaced another. Their efforts put all four of the Station's gyros back into service. They also tested new repair techniques for the Space Shuttle's heat-shielding outer skin and installed equipment outside the Station.

## Obituaries

**John Olin Evans**, 84, of Huntsville, died July 30. He retired from the Marshall Center in 1974 as supervisor of the Motion Picture Production team. He was a World War II veteran with the U.S. Army Signal Corps.

Survivors include his wife, Louise Evans; one son, Ron Evans; and one daughter, Angela Jones.

**Richard Nolen "Rock" Penley**, 50, of Elkmont, died July 31. He was an employee of Colsa Corp. providing computer maintenance at the Marshall Center's Huntsville Operations Support Center for more



NASA

Discovery touches down at Edwards Air Force Base in California.

When two thermal protection tile gap-fillers were spotted jutting out of Discovery's underside, a plan was devised to prevent the protrusions from "tripping the boundary layer," causing higher temperatures on the Shuttle during atmospheric re-entry. Work on the Shuttle underbelly had never been tried before, but Robinson delicately completed the extraction.

The Discovery astronauts will spend the next few days undergoing medical checkouts and reuniting with their families.

than 22 years. He was a U.S. Navy veteran of the Vietnam War.

Survivors include his wife, Donna Penley; one son, Richard Penley; one daughter, Stephanie Penley; one brother, Don Penley; and one sister, Connie Higgins.

**Richard A. "Dick" Potter**, 73, of Athens, died Aug. 2. He was a physicist for 42 years and retired from the Marshall Center in 1996 as AST, Aerospace Engineer in Aerospace Flight Systems. He was a U.S. Army veteran.

Survivors include his wife, Bobbie Bradford Potter; and one daughter, Linda "Lyn" Potter.

# Classified Ads

To submit a classified ad to the Marshall Star, go to Inside Marshall, to "Employee Resources," and click "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

LCD monitor/TV, 30", LG L3000H, includes desktop stand, speakers, internal TV tuner, \$800. 603-6306

Circa 1970 Aria brand Mosrite-style "High Flyer" bass guitar, sunburst, 30-inch neck, w/case. \$500. 303-3702

Pilates Performer bench with stand, \$325. 828-9099

Chest, \$75; stereo/radio, \$75; chest, \$25; small electric appliances, \$5-\$10, crystal dishes, \$5-\$10. 534-0939

GE built-in double electric ovens, white, electronic controls, self-cleaning, \$250. 353-0370

Uniden cordless phone w/digital voice mail, speaker phone, \$49. 694-0116 after 5 p.m.

Mission style queen headboard, \$75. 655-6293

Auto air conditioner refrigerant, R-12, \$7 per can. 565-9806/Decatur

Four Goodyear Wranglers, 225R70-14, 14" rims, 5x4.75; four Chevy hubcaps, \$50. 348-7146

2002 Cannodale T2000 touring bike, size M, VGC, many extras, \$995. 864-8183

SofTub hot tub, 6' diameter, self sustaining, inside/outdoor use, all accessories, \$2,000. 509-3392

Step 2 fire truck toddler bed w/Serta toddler/crib mattress, \$150. 828-1981

Oak entertainment center, holds 27" TV, CDs, tapes, component shelves, \$125. 830-0248

Pennsylvania House video cabinet, holds up to 30" TV, VCR/DVD, Cherry, \$750. 931-427-2059

1992 NASCAR McDonald's MAXX cards, several complete sets, Earnhardt, Allison, etc., \$10 set. 256-592-7207

Refrigerators: 25 cu. ft. side-by-side, \$150; 15 cu. ft., top freezer, \$60. 508-6863

Kenwood HF amateur radio & matching power supply, \$525. 656-2951

Wedding gown, white beaded satin lace drop waist, train, size 12, \$500. 256-773-8592

Two Pioneer HPM-60 floor speakers, \$50; Royce 23 channel CD w/accessories, \$15. 256-461-8619 after 5 p.m.

Tongue and groove pine paneling, 28 pieces, 1/2'x8'x8', \$125. 508-7388

Ladies 14K wide band ring, 0.50 carat pear cut & ten .025 round diamonds, \$995. 256-552-0998

Kenmore dehumidifier, Model D22M52300, 30 pints/hour, \$45. 318-5738

The Firm complete workout system, \$50. 837-3562

Navy and white plaid sofa, \$200. 881-0995

Black metal patio furniture, 48" round table, 4-chairs, 72" umbrella, \$100. 772-5823

Weider Advantage crossbow, Lat tower, leg development, rowing seat, 240 lbs. resistance, \$350. 256-859-8577

Rattan wicker pedestal square rounded-corner glass top table w/4 chairs, blush, make offer. 772-7262

Square cocktail table w/matching end tables with drawer, distressed pine finish, \$75. 325-7542

Upright freezer, beige, 15 yrs. old, 16 cu. ft., 28"Wx28.5"Dx59.5"H, \$75. 895-2970

J.B. Player electric guitar, MBT international case and Kustom 50-watt amplifier, \$450. 256-656-1918

Children's 20-volume set of encyclopedias, \$30; CRT monitor, 19", \$45; counter-top stove, almond, \$75. 883-5168

Wood utility building w/shingle roof, 8x10, you haul it off, \$50. 883-2948

Cockatiel/bird cages, \$20-\$35; aquariums, \$10-\$40; lizard cage, \$35. 655-9663

Two microwave ovens with rotating platters; Sharp Carousel II, \$20; Sharp Carousel, \$10. 881-5642

Sleeper sofa, beige, \$200, Oak entertainment center, \$150; coffee table, dresser, leather office chair. 256-337-3994

Spinet piano, Maple, \$700. 457-3355

Danner boots, new, men's 8-1/2D, leather, Gore-Tex Mountain Light II Style #30800, \$155. 256-353-7224

HP 51629A (black) & HP 51649A (color) inkjet cartridges, partially used, \$15 for pair. 772-7845

Multi-exercise weight bench, \$80. 881-1249

## Vehicles

1998 Camry, white/gray, 101K miles, power doors/windows, cold air, good tires, \$7,000. 256-574-1542

1986 Toyota pickup, new tires, bedliner, runs good, \$975. 852-2219 after 5 p.m.

1996 Chrysler Town & Country, LXI limited, dark green, tan leather, garage kept, 96K miles, \$5,900. 256-355-6858

2002 Ford F250 Super-duty crew-cab Lariat, 7.3 diesel, 4x4, 136.5K miles, white, \$21,000. 256-497-3518

2004 Dodge Dakota Quadcab, 28K highway miles, blue, bedliner, \$20,000. 509-3392

2000 SR10 ZR2 4x4 extended cab, automatic, loaded, 94K miles, red, \$9,900. 256-593-7207

1998 BMW 740IL, hunter green, tan leather interior, 106K miles, new tires, 682-0888

1995 Dodge Neon Sport, 5-speed, 175K miles, a/c, AM/FM cassette, free spare transmission, \$500. 539-1295

2002 Lincoln Town car, Signature Series, pearl white, 4.6L/V8, 8K miles, \$22,500. 355-6648

1994 Ford F150, \$3,500. 828-5246

1978 Lincoln Continental Mark V, 107K miles, second owner, \$1,795. 851-0893

1993 Baja Islander 180 ski boat, 18', 3.0 Mercruiser, new interior, \$4,500. 256-338-5488

2001 Ford F150 pickup, Lariat, Supercab, leather, power seats, running boards, CD, 62K miles, \$13,995. 534-6155

1991 Isuzu Rodeo, 4x4, new tires, new motor, \$3,500. 256-828-4502

2000 Skeeter Fish & Ski, 12-month warranty on Powerhead, many extras, \$15,700. 256-508-1789

2001 Chevy Suburban LT, 59K miles, all options, new tires, 100K warranty, \$20,500. 256-883-1693

1988 Chevrolet Corsica, 6-cyl./auto, PS/PB, a/c, 101K miles, two-owners, \$850. 256-679-1946

1999 Ford Explorer, Eddie Bauer, 4x4, red, leather, sunroof, loaded, 98K miles, \$9,200. 776-9636

1996 Allegro motor home, 28', 68K miles, new tires, \$23,000. 256-461-0399

Kubota L355 tractor, diesel engine, 4WD, shuttle shift, power steering, turf tires, \$4,800. 256-431-5346

2004 Chevy Trailblazer LS, white, 2WD, low miles, \$18,500. 256-565-9918

1999 Lexus ES300, V6, traction control, 5-disc CD, white/tan leather, 71.4 miles, rebuilt title, \$9,900. 895-6640

1996 Mazda Protégé, 4-door, auto, a/c, power locks/windows, 137K miles, \$3,000. 256-920-9104

1995 CAD Concours Deville, black, fully loaded, leather, rims, \$3,700. 520-2802/Ron

1994 Plymouth Grand Voyager, all power, no leaks, \$1,600. 534-1198

## Free

Wooden boards and metal shelving. 256-881-6595

Two black Lab male puppies & 2-yr. old black Lab male. 721-1939

## Wanted

Dorm refrigerator. 883-2757

Refrigerator in good working condition. 479-2651

Thromax throwing trainer arm brace, right arm, small & large size. 233-7295

## Found

Gold hoop earring, in Bldg. 4200 parking lot. Call 544-1845 to identify/claim

## Huntsville police chief to speak at Retired Federal Employees meeting

Huntsville Police Chief Rex Reynolds will speak at the National Association of Retired Federal Employees meeting Saturday, Aug. 13, at the Senior Center on Drake Avenue in Huntsville.

Refreshments will be served at 9:30 a.m. and Reynolds will speak at 10 a.m. For more information, call 881-4944 or 882-2406.

## Shuttle Buddies to meet

The Shuttle Buddies will meet at 9 a.m. Monday, Aug. 22, at Mullins Restaurant on Andrew Jackson Way. For more information, call Deemer Self at 881-7757.

## Darlene Garner named 2005 Shuttle Propulsion Employee of Year

By Lynnette Madison

**D**arlene Garner has been chosen Space Shuttle Propulsion Employee of the Year for 2005. Garner was recognized for outstanding performance, professionalism and dedication to the Shuttle Propulsion Office at Marshall.

Garner is a program analyst with the Shuttle's Business and Management Operations Office.



Darlene Garner

The Space Shuttle Propulsion Office began the Employee of the Year recognition program in May 2004. Project managers recognize employees who exhibit exceptional performance and dedication each month. The Employee of the Year is chosen by co-workers in the Shuttle Propulsion Office from the monthly honorees.

"Darlene's dedication to details and her initiative are invaluable to this program and to our employees," said Mike Rudolphi, manager of the Shuttle Propulsion Office. "Her ability to tackle huge assignments with ease and her commitment to our safety program are paramount to the success of our organization."

Garner, the organization's December 2004 Employee of the Month, was selected from a field of 13 honorees. She was recognized for coordinating and planning the 2004 Marshall Safety Day and for her efforts in organizing more than 400 office relocations for Shuttle employees during 2004. Garner organizes monthly safety meetings for the Shuttle Propulsion Office, handles employee safety issues, and coordinates and manages special projects and outreach efforts.

She joined the Marshall Center in 1986, assigned to the Space Shuttle Administrative Office. In 1988, she transferred to the Chief Financial Office to manage the Center's travel budget. In 1998, she returned to the Space Shuttle Integration Office.

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



### Historic test engine at Marshall

A piece of a historic NASA test project has come home to Marshall Center to help engineers advance similar technologies for future projects. From left, Rick Ballard, liquid rocket engineer; Harold Gerrish, deputy manager of Marshall's Propulsion Research Laboratory; and Wayne Bordelon, nuclear systems engineer, inspect the Experimental Engine (XE) Double Prime outside the lab. Formerly on display at the U.S. Space & Rocket Center, the engine was one of two nuclear thermal engines assembled for ground testing in Nevada during the Nuclear Engine for Rocket Vehicle Application (NERVA) project. Concluded in 1972, NERVA successfully demonstrated the feasibility of solid-core, nuclear thermal rockets. Marshall propulsion engineers look forward to disassembling, studying and refurbishing the engine to better understand its unique design features. It's part of an on-going effort by Marshall's Nuclear Systems Project Office to advance propulsion technologies that could support future crewed missions to Mars.

# MARSHALL STAR

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