



# MARSHALL STAR

Serving the Marshall Space Flight Center Community

Feb. 9, 2006

## King says 2007 budget 'good for agency, good for Marshall'



David Higginbotham/MSFC

Marshall Center Director David King addresses employees in Morris Auditorium.

By Jonathan Baggs

The federal budget request released Monday by President Bush includes a 3.2-percent increase for NASA and an increase for the Marshall Center as well.

NASA Administrator Mike Griffin, in a statement on the budget, available in full on [www.nasa.gov](http://www.nasa.gov), said the fiscal 2007 budget request for the agency totals \$16.8 billion.

Marshall Director David King, speaking to employees in Morris Auditorium and on Marshall TV, said the center's budget increased to about \$2.25 billion — up from \$2.1 billion for fiscal 2006.

"This is a good budget for the agency and a good budget for the Marshall Space Flight Center," King said.

King said the budget "continues to reflect the president's strong support" for the Vision for Space Exploration announced a little more than two years ago.

Marshall's civil service employment will remain stable at about 2,600, King said.

"Marshall will continue to be a key player as NASA moves forward to fly the shuttle, complete the (International Space) Station, return to the moon and on to Mars," King said. "I'm very excited. We are central to achieving these agency priorities."

The Marshall Center's role in achieving agency goals includes:

- Transportation systems development and integration
- Scientific spacecraft and habitable systems development and integration
- Scientific research and instrument development and integration

The budget allows NASA to continue assembly of the International Space Station with the minimum number of space shuttle flights necessary before 2010. It also allows the agency to bring the Crew Exploration Vehicle online no later than 2014, and potentially much sooner, according to Griffin and King.

Part of the approach to get to the moon faster is that the Crew Launch Vehicle, managed by Marshall, will use a single, five-segment Reusable Solid Rocket Motor first stage instead of the modified space shuttle four-segment motor originally proposed in the Exploration Systems Architecture. The vehicle's upper stage will use the J-2X engine, a derivative of the S-II and S-IVB main propulsion engines of the Saturn

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*—Marshall Center Director King*

*See Budget on page 2*

# Expedition 12 completes second spacewalk



Expedition 12 Commander Bill McArthur and Flight Engineer Valery Tokarev successfully completed the second spacewalk of their mission last Friday. McArthur and Tokarev deployed SuitSat, an old Russian spacesuit with an amateur radio transmitter. They also moved a cargo boom adapter from one module to another, performed maintenance and retrieved experiments.

## Budget

*Continued from page 1*

V. The CLV will deliver the Crew Exploration Vehicle to rendezvous with the Earth Departure Stage and Lunar Surface Access Module, which will be delivered by a Cargo Launch Vehicle, also managed by Marshall.

The J-2X also can serve as the Earth Departure Stage engine instead of using a modified Space Shuttle Main Engine. The Space Shuttle Main Engine will evolve into a relatively low-cost expendable engine called the RS-25F for use on the Cargo Launch Vehicle booster stage in combination with an in-line core stage derived from the External Tank and five-segment Reusable Solid Rocket Motor.

King said this new approach to the CLV architecture reduces risk for the lunar program by addressing critical systems sooner.

Although Marshall has a key role in engineering, integrating and delivering the propulsion systems required to return to the moon, King said, science also is an important part of the center's portfolio.

"Marshall is uniquely positioned to serve both roles with extensive experience engineering and integrating complex systems needed for both scientific and human exploration," he said.

King said Marshall must ensure that science performed at the center is relevant to NASA's exploration effort, but remain prepared to support and respond to the agency's continuing missions in the areas of Space and Earth Science.

Other aspects of the Marshall budget included:

- An increase of approximately 30 percent for Exploration work, with a substantial increase in the CLV budget
- A slight decrease in space operations due to the shuttle-to-CLV transition
- Reduction in the science budget by about 10 percent as a result of agency and technology realignments and completion of the Gravity Probe B analysis

For more information on the NASA and Marshall budget overviews given by the administrator and the center director on Monday, go to Inside Marshall and select Center Director's February 6, 2006 All Hands presentation or go to [www.nasa.gov](http://www.nasa.gov) and select FY07 Budget Request.

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

# NASA tests new breed of propulsion engine and system in support of Vision for Space Exploration

By Sheri Bechtel

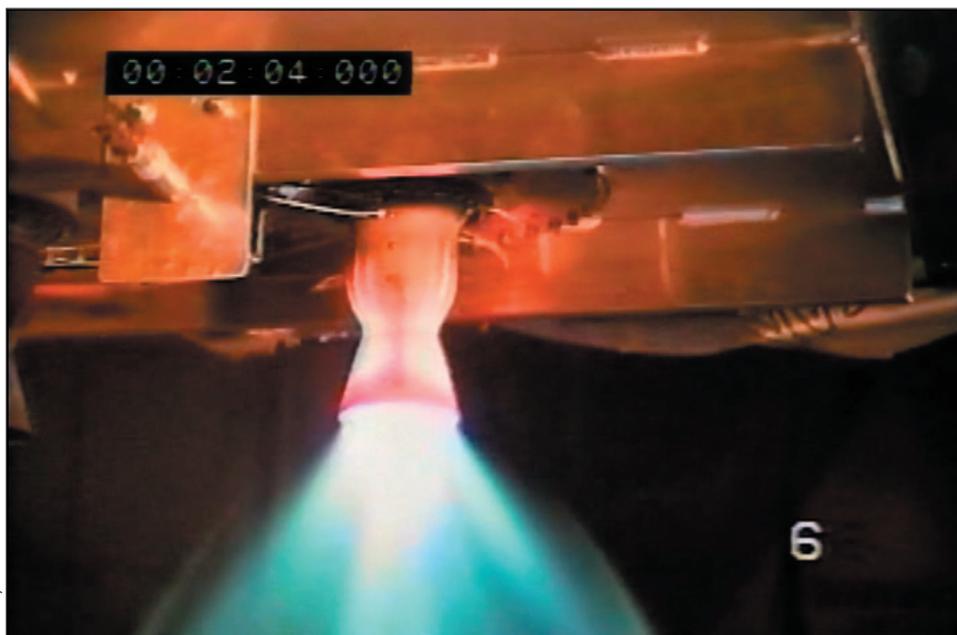
NASA engineers have successfully tested a new breed of reaction control engine and propulsion system. The tests, aimed at furthering NASA's exploration goals, helped investigate the possibility of future space travel fueled by non-toxic propellants.

The Reaction Control Engine and the Auxiliary Propulsion System Test Bed were tested in January at NASA's White Sands Test Facility near Las Cruces, N.M. The engine is a prototype thruster used for maneuvering a vehicle in space, and was designed and developed by Aerojet of Sacramento, Calif., in cooperation with the Marshall Center and Johnson Space Center in Houston.

The Reaction Control Engine is unique in its use of non-toxic propellants — liquid oxygen and ethanol, or alcohol made out of corn. Environmentally friendly, inexpensive and easily vaporized, the propellants have the potential to create a safer work environment for ground operators, lower costs and increase efficiency. Other significant potential benefits include lower maintenance and quicker turnaround between missions.

The Auxiliary Propulsion System Test Bed simulates the tanks, propellant feed lines and other components of an integrated spacecraft propulsion system. The system includes integration of three Aerojet Reaction Control Engines, plus three engine simulators.

The test bed was first tested by flowing propellants through the system without igniting the engines, also called cold flow testing, to verify components and subsystems. Engineers then conducted a series



NASA/White Sands

One of three Reaction Control Engines is successfully ignited during hot-fire tests in January at NASA's White Sands Test Facility in New Mexico.

of hot-fire tests on the system's three Reaction Control Engines.

The engines were tested individually and then in various combinations with each other under differing propellant temperature and pressure conditions, similar to operations experienced during an actual mission in space.

The series included pulse mode and steady-state testing. In pulse mode, the engines are repeatedly fired and turned off at varying intervals. Steady-state testing allows the engines to fire and burn continuously for a specified period of time.

Data obtained from the engine and system tests could advance auxiliary propulsion system design and modeling for future flight demonstrators.

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## Severe Weather Awareness Week is Feb. 19-24

Several educational activities and drills will be conducted at Marshall during Severe Weather Awareness Week, Feb. 19-24, to help people prevent injuries or deaths that result from severe weather.

For more information, go to <http://www.srh.noaa.gov/hun> or Inside Marshall.

## NASA scholarship applications now available

The NASA College Scholarship Fund Inc. is now accepting applications from dependants of NASA employees or retirees pursuing a college degree in science or engineering. The application deadline is March 20. For more information, visit <http://nasapeople.nasa.gov/nasascholarship/index.htm> or call Bill Mayo at 544-7220.

# Marshall couple works side-by-side to ensure safety of NASA's missions

By Bill Hubscher

NASA engineers Van and Rosalynne Strickland point to trust and teamwork as the cornerstones of their successful marriage. Those traits are also the cornerstones of their jobs — helping ensure the safety and success of the U.S. space program.

The Stricklands, who work in the Safety and Mission Assurance Office at Marshall, have worked together for 15 years. Today, they're working to realize the goals of NASA's Vision for Space Exploration, which calls for completing the International Space Station, returning to the moon and exploring Mars and other destinations in the solar system.

Rosalynne Strickland is the software assurance team lead in the safety office, leading a group that provides insight into the quality of software and makes sure it is developed according to established standards and procedures. The team reviews software for NASA projects, from the space shuttle and deep-space science missions to the new Crew Launch Vehicle, which will replace the space shuttle as NASA's flagship space transportation vehicle in the next decade.

"We provide insight by working closely with those who develop the software," she said. "We help improve programs by catching errors and risks early — before software is used in an actual mission and those problems have the chance to become major issues."

Van Strickland, who started his career in the private sector, joined his wife in the Safety and Mission Assurance Office when he accepted a job offer with the Marshall Center in 1991. Today, he is manager of the Vehicle Integration Branch within the safety office, supporting development of the Crew Launch Vehicle.

"We are working directly with design engineers, making sure the different elements of the vehicle, from engines to the crew compartments, are integrated properly," he said. "We're working with the people and hardware that will take us to the next level of space exploration."

The Stricklands' history together started long before they joined the Marshall team. They met as high school juniors in 1979. "There was a minority engineering conference for prospective college students at Auburn University," Van Strickland recalled of that first meeting. "As a group, we obviously had similar interests, so we all stayed in touch."

Both prospective engineers enrolled at The University of Alabama in 1980. Rosalynne Strickland earned her bachelor's degree in 1984 in industrial engineering and joined Marshall the following year. Van Strickland completed his bachelor's in mechanical engineering at The University of Alabama in Huntsville in 1987. Their common love for the space program helped bring them together personally and professionally, and they married that year.

"I admit, I dreamed of being an astronaut. I knew when I was a child I wanted to work with NASA. I've always been a bit of a space cadet," Rosalynne Strickland joked.

Van Strickland admits to his own obsession with a certain science fiction television series. "I'm a 'Star Trek' fan from way back!" he said. "I was a huge fan of the series from the 1960s. I've always loved the idea of space exploration. I think I was destined to work in the field in some capacity."

The Stricklands also play a role in the Huntsville community. She is a member

of the local alumni chapter of the Delta Sigma Theta Sorority Inc. and he is president of the graduate chapter of Alpha Phi Alpha Fraternity Inc.

The goal of both social organizations, and in turn the Stricklands, is to inspire children and young adults by being good mentors and role models. They help students through tutoring, scholarships and other activities.

"We feel like it is important to give back to our community by helping the next generation," Rosalynne Strickland said.

Van Strickland agreed. "We want to be good role models for students and young people," he said. "Perhaps they will think about entering fields of business they may not have otherwise considered."

As the Stricklands work toward NASA's goals, they also have ideas for the future of their own corner of the agency.

"The Safety and Mission Assurance Office is part of the team, working side-by-side with the personnel and their projects," Van Strickland said. "We give an independent assessment, but we are still members of the team, not outsiders to the projects and organizations we serve. We provide value-added products and services and help improve NASA's future — a common goal for all of us here at the Marshall Center."

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



Doug Steffer/MSFC

**NASA engineers Van and Rosalynne Stricklands' love for the space program brought them together as high school juniors in 1979. They married in 1987 and have been co-workers at Marshall for 15 years.**

# 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

Troy-Bilt riding lawn mower, 16.5hp Kohler, 42", \$200. 464-0994

Trampoline, 14' diameter. 830-2806

Baby stroller, \$35; 5-piece brass/black fireplace tool set, \$10; trundle bed w/mattress, \$45. 603-3558

Canon Rebel 2000 film camera, \$100. 256-655-6293

Oval shaped cluster ring w/29 diamonds, \$350. 534-9838

Sunbeam cold and hot bottled water cooler w/refrigerator compartment, \$75. 679-8797

Aquarium w/stand, 55 gallon, filters, blue lights, driftwood and hood, \$350. 256-851-6746

Antiques: mahogany china cabinet, \$300; white pine wardrobe, single door, \$150. 859-6636

Moving boxes, approximately 100, large, small, medium, \$50. 678-777-4521

Kenmore dryer, \$95. 837-6649

Pitbull pups, Razors/Jeep/Redboy, ready Feb. 10. 881-7690

2003 Sunburst Epiphone Casino w/hardshell case, rarely played, factory strings, \$570. 746-9080

Computer desk; NordicTrack ski machine; VHS camcorder; Sony under-the-counter AM/FM/CD player. 256-830-5039

Antique oak dresser w/beveled mirror, 4-drawers, \$275. 353-0370

Wooden table w/four chairs, \$60; Futon, \$100. 289-3905

Clear SY pine lumber, 1x6s and 1x8s, 185 board feet, must buy all, \$220. 536-6295

Cellos: one quarter-size, one half-size, three full-size, some old, some very old, violins & violas. 534-8186

Matchbox "Mega-Rig" Space Shuttle playset, never removed from box, discontinued, large set, \$50. 303-3702/Decatur

Suzuki violin, one-fourth, \$125; Gerbil cage w/accessories, \$8; Century stroller, \$30. 881-4148 after 6 p.m.

Aquarium, 150 gallon, stand, lights, filters and heater, \$600. 256-931-6954

Four one-day passes to Sea World, Orlando, good until Sept. 30, four for \$110. 520-9318

M1 carbine, Howa, U.S. machined postwar issue, 3 war time mags pouch, \$500 firm. 880-3503

Marque diamond solitaire wedding ring set, approx. 1/4 carat, \$199. 751-3766

Entertainment center, 19.5"Dx61.5"Wx52"H, fits 31" TV, \$125. 603-0136

Murray lawn tractor, 12HP. 508-8269

Queen comforter set, scarf valance, shower curtain, bath rug, pillows, picture, Crossill "Chambord", \$75. 461-7411

Queen mattress set/frame, Sears-0-Pedic Elite Ultra Plush, medium-firm, 2-1/2 yrs. old, \$395. 256-880-6146

Two oval solitaire diamond engagement rings, best offers. 468-4796

Ashley Millennium coffee and two end tables, gold covered iron w/glass tops, \$200. 503-5115

Longaberger basket liners: medium square waste, \$12, serving tray, \$12. 852-6335

Dell AXIM-x50v PDA, VGA screen, Bluetooth, 802.11b, CF/SD slot, software, \$290. 655-1986

Hitachi Ultra-vision big screen TV, 60", \$750. 882-3326

## Vehicles

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

2001 Dodge Durango SLT, leather, 7-passenger, 4WD, 82K miles, V8, rear air, \$11,900. 527-8116

1964 Porsche 356C, needs work, \$5,500. 533-7234

1992 Chevy C1500 pickup, long-bed, V6, AC, ps/pb, AOD,

bedliner, 2" receiver hitch, CD player, \$1,850. 508-0691

2000 Plymouth Neon, dark green, 62.5K miles, \$4,500. 265-534-0141

1999 Toyota Camry, beige, 147K miles, \$5,500. 256-773-8592 after 6 p.m.

2000 Acura TL, one-owner, new tires, battery, front brakes, 114K miles. 797-4084

1998 SeaRay 210 SunDeck, loaded, 265 hrs., dry storage, 2003 tandem trailer, 4-disc brakes, \$21,500. 882-3753

2004 Lincoln Aviator, RWD, 25K miles, white, factory DVD entertainment system, \$27,500. 694-1112

2005 Nissan Frontier extended cab, Storm Gray, 22 mpg city; 28 mpg highway, garaged, \$17,900. 837-1774

1993 Honda Accord EX, auto, a/c, power locks/windows, new tires, 22 mpg, \$2,950. 256-880-2015

2002 Forest River Shamrock expandable travel trailer, 23', sleeps 8, loaded, anti-sway hitch, \$11,900. 874-7874

2001 Toyota Camry LE, 100K miles, white w/gold trim, \$7,600. 777-8906

1974 Jeep CJ-5 w/Chevy 350 motor and turbo 350 transmission, \$1,700. 683-9364

2000 Ford Explorer XLT, V8, 2WD, gold, 4-door, CD/cassette, Michelin tires, 89K miles, \$7,000. 337-4861

1998 Chevy Silverado, 305/V8, white, auto, a/c, cruise, tow-package, short bed, 144K miles, \$5,500. 776-0811

1999 Ford Explorer, 4x4, 82K miles, \$7,500. 353-3229

2000 Nissan Frontier crewcab, automatic, power, CD/cassette, 100K miles, remote, silver, \$10,000. 880-9025

1999 Javelin bass boat w/1999 Evinrude, 175hp, TM, DF, hydraulic steering, \$11,500. 837-4136

## Free

Five cubic yards of white river rock, pea gravel size, free for taking. 461-7786

## Wanted

Snow ski clothes, men's size M. 837-5975

Good home for 18 month old dog, female, Shepherd mix, spayed. 656-8723

## Volunteers needed for 13th annual Great Moonbuggy Race on April 7-8



Volunteers for the 13th annual Great Moonbuggy Race are needed for Friday, April 7, and Saturday, April 8. The race will be at the U.S. Space & Rocket Center.

Positions include obstacle judging, score keeping, reporting, pre-race qualifying and start/finish line activities.

A T-shirt and lunch will be provided for

each volunteer.

To sign up, go to <http://oscar.msfc.nasa.gov/hs/tgmr2006.nsf/reg> or Inside Marshall. There will be a volunteer meeting Wednesday, March 29, at 3 p.m. at the Space & Rocket Center.

For more information, contact Julie Clift at [julie.d.clift@msfc.nasa.gov](mailto:julie.d.clift@msfc.nasa.gov).

# Marshall Association elects new officers for 2006



From left, George Schmidt, David Spacek, Dawn Stanley and Sharal Huegele.

The Marshall Association has elected officers for 2006. They are George Schmidt, president; David Spacek, vice president for communications; Dawn Stanley, vice president for programs; and Sharal Huegele, treasurer.

The Marshall Association was established 19 years ago to foster the exchange of innovative and stimulating ideas within the Marshall community.

Originally founded as the Marshall Management Association, the organization has expanded its membership to include all members of the Marshall community, including non-supervisory employees, contractors and retirees.

The self-governing organization sponsors several activities throughout the year, all of which are supported through the volunteer efforts of its dues-paying membership.

Emmett Given/MSFC

## Marshall Association to meet Feb. 10

The first Marshall Association meeting of 2006 will be Friday, Feb. 10, at 1 p.m. in Building 4200, Room P-110. The guest speaker will be Bob Ward, author of the 2005 biography, "Dr. Space: The Life of Wernher von Braun." Ward is a former managing editor and editor-in-chief of The Huntsville Times. Copies of his book will be available for purchase and autograph following the meeting. There is no charge to attend.

## Marshall Association dues are now payable

The Marshall Association CY2006 membership dues are now payable. The annual fee of \$25 goes directly into the fund that finances scholarships awarded by the association each year. Membership is open to all Marshall civil service and contractor personnel, as well as retirees. Payment should be forwarded to Sharal Huegele/RS03, Building 4200/730H, 544-7286, with checks made payable to "The Marshall Association."

# MARSHALL STAR

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