



# MARSHALL STAR

Serving the Marshall Space Flight Center Community

April 6, 2006

## New space station crew launches from Baikonur as current crew prepares to return to Earth

Commander Pavel Vinogradov and NASA Science Officer Jeffrey Williams, the 13th International Space Station crew, launched aboard their Soyuz TMA spacecraft Wednesday, March 29, to begin a six-month stay in space. Their Soyuz capsule reached orbit a little less than nine minutes after liftoff from the Baikonur Cosmodrome in Kazakhstan.

The crew docked with the station on March 31. With the Expedition 13 crew is Marcos Pontes, the first Brazilian astronaut to go into space. He is spending eight days on the station, flying under a contract with the Russian Federal Space Agency.

Pontes will return to Earth with Expedition 12. That crew, Commander Bill McArthur and Flight Engineer Valery Tokarev, has been on the orbiting laboratory since October. They are scheduled to undock at 3:28 p.m. CDT April 8 in the Soyuz that brought them to the station. Landing is scheduled for 6:46 p.m. in the steppes of Kazakhstan.

Vinogradov is a veteran of a 198-day mission aboard the Russian



NASA TV

**Expedition 13 lifts off onboard a Soyuz rocket from Baikonur, Kazakhstan.**

space station Mir, where he did five spacewalks. Williams, an Army colonel, flew on STS-101 in May 2000. He did one spacewalk during that flight to the station.

## ***NASA'S Great Moonbuggy Race — this Friday and Saturday — helps steer students' career paths and may take some to the moon***

*By Bill Hubscher*

Students find one of the best ways to learn is to make it fun. And set significant goals.

Today, in classrooms and workshops, high schools and colleges across the country, students have set their goals and are having fun working on what some teachers call one of the more effective and challenging classroom projects: NASA's 13th annual Great Moonbuggy Race, conducted by the Marshall Center at the U.S. Space & Rocket Center.

This Friday and Saturday, April 7-8, high school and college students will bounce their way across a simulated lunar surface at the Space & Rocket Center — the culmination of months of hard work. The lessons they learn getting there could last a lifetime and perhaps help them reach a real lunar landscape someday.

The student teams spend countless hours creating their moonbuggies from scratch. From the drafting table where they

refine their designs to manufacturing and assembling the vehicles, the students work hard toward a goal of at least finishing the grueling half-mile course. These competitors face some of the same challenges NASA engineers faced when building the original lunar rover used on the moon in the 1970s. The original lunar rovers were designed at the Marshall Center.

***See Moonbuggy on page 4***

# NASA to bring the stars to Alabama with interactive exploration exhibit

By Bill Hubscher

The stars may have fallen on Alabama, but starting April 6, residents can visit them without ever leaving the ground.

NASA is launching the Vision for Space Exploration Experience — an interactive traveling exhibit allowing visitors to slip the confines of Earth — on a month-long tour of the state. Stops along the way include Mobile, Tuskegee, Montgomery and Birmingham.

The Experience uses holographic and 3D imagery to show “explorers” what it might be like to visit the surfaces of the moon, Mars and destinations beyond. Visitors can manipulate their environment and explore simulated lunar and Martian landscapes as well as travel to one of Saturn’s moons, free of charge.

The first stop on the Alabama tour — Mobile, beginning April 6 — combines NASA with America’s pastime. The exhibit visits Hank Aaron Stadium to coincide with opening day of Mobile BayBears baseball, a double-A minor league, where they will kick off their season with a three-game series against the Carolina Mudcats. The Vision for Space Exploration Experience will be there through April 8. There is no admission charge for the NASA exhibit, but there is a \$3 charge for the stadium parking lot, where the exhibit will be set up.

Next, the Experience will travel to Tuskegee University in Tuskegee, April 10-12, to show what the future of NASA may hold. The exhibit will be open to the public, the university community and students from Tuskegee elementary, middle and high schools.

The exhibit’s next stop is a natural for a tour showcasing space exploration. From April 14-15 and 17-18, visitors to the W.A. Gayle Planetarium in Montgomery will see a projection of constellations at the planetarium and then travel among the stars inside the NASA exhibit, located just outside the planetarium.

A special guest will accompany the exhibit one day during the



Inside the Vision for Space Exploration Experience. The interactive displays allow visitors to virtually explore the moon and Mars.

Montgomery stop. Mitzi Adams, a Marshall engineer and solar scientist at the Marshall Center, will speak to several groups April 15 — Astronomy Day. For that day only, the planetarium is waiving its admission charge.

The final public stop on the tour is a four-day visit to Birmingham, where the McWane Science Center will host the exhibit April 20-23. The science center has hands-on science activities, an aquarium, a fossil lab and an IMAX theater. To explore outer space, visitors of all ages also can enter the NASA exhibit to learn about travel to other heavenly bodies and the future of space exploration. The exhibit will be located outside the science center.

Marshall Center experts will be on hand at each of the tour’s stops to discuss and answer questions about NASA space exploration activities. Visitors can learn how tomorrow’s lifestyles will change as NASA develops advancements in power, computer technologies, communications, networking and robotics. Visitors also will see how other advanced technologies will increase safety and reliability of space transportation systems, while also reducing costs.

Touring the exhibit, which is wheelchair accessible, takes approximately 15 minutes; it can accommodate up to 128 visitors each hour. The exhibit enables NASA to spread knowledge of the Vision for Space Exploration at up to 50 events annually, reaching millions of Americans nationwide.

*The writer, an ASRI employee, supports the Office of Strategic Analysis and Communications.*



The Vision for Space Exploration Experience is housed on a 53-foot-long, custom-designed trailer.

## Vision for Space Exploration Experience at Marshall April 26-27

The Vision for Space Exploration Experience will cruise to its final stop on the Alabama tour when it comes to the Marshall Center on April 26-27. Employees are invited to bring their children to see the exhibit April 27 as part of the annual “Take Our Children to Work Day.” Event details will be announced in the Marshall Star and Inside Marshall.

# 'To the Point' — new publication for Marshall supervisors

A new communications tool for Marshall Center supervisors is debuting in April. "To the Point" will provide supervisors with concise information and analysis about center issues and activities.

Delivered in a monthly e-mail, "To the Point" will include articles on a variety of topics, interviews with center managers and experts, guest articles by supervisors and reader feedback. The monthly e-mail, containing a summary of each article with a headline link to the full text, will be sent to Marshall supervisors and also will be available to the Marshall Team on Inside Marshall at <http://tothepoint.msfc.nasa.gov/archives.html>. Single items of interest also will be distributed when timely.

Watch for the first issue of "To the Point" this month. Don't miss the article about recognizing the signs of stress and learning to manage it, an important topic to all of us.

To learn more about communications within the center, the Office of Strategic Analysis and Communications conducted a communications survey here in December 2005, followed by two focus groups in early 2006. Included in what was learned is that employees want more information on issues facing the center, on

Marshall's strategic direction and its programs, and on how they can help Marshall be successful and reach its goals. Marshall employees revealed that their preferred source of information is their supervisor, rating the supervisor 4.7 out of 5 in importance as an information source.

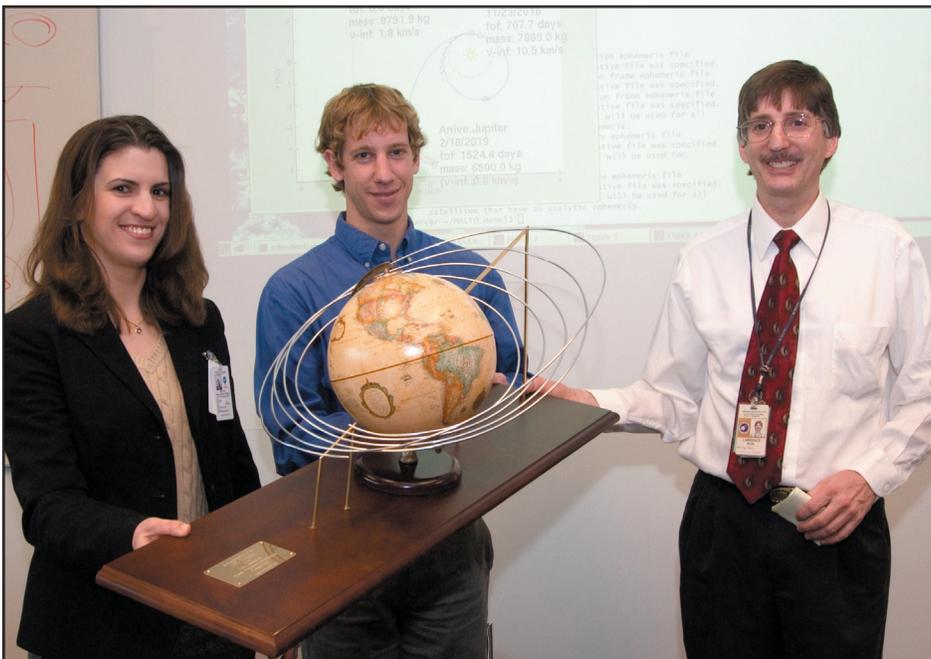
"To the Point" is part of an effort by the Office of Strategic Analysis and Communications to enhance internal communications products and processes, based on what was learned from the survey and focus groups. The goal of "To the Point" is to provide relevant information concisely, as the name suggests, to help supervisors keep their employees well informed.

An editorial board made up of six-to-eight Marshall Team members, including supervisors and employees from across the center, will help shape the publication's content.

Also, reader feedback and suggestions for topics to be covered are welcomed. For questions about "To the Point," please contact the editor, Rita Roberts, at [rita.g.roberts@nasa.gov](mailto:rita.g.roberts@nasa.gov) or call 544-1121.

*The writer, an ASRI employee, supports the Office of Strategic Analysis and Communications.*

## Asteroid mission design honored at Marshall rollout of new software set



Theresa Kowalkowski, left, and Matt Vavrina, center, of the Jet Propulsion Laboratory in Pasadena, Calif., receive a trophy commemorating the win by the JPL team in the European Space Agency's Global Trajectory Optimization Competition. The team used new software to design a spectacular mission to a main-belt asteroid. The software is called MALTO — short for Mission Analysis Low-Thrust Optimization. It is one of five "tools" that comprise the suite of Low-Thrust Trajectory Tools, new software for analyzing missions that use low-thrust propulsion technologies. Kowalkowski and Vavrina were among nearly 50 participants from five NASA centers who attended a technical interchange meeting hosted by Marshall to roll out the new tools. Larry Kos, right, an aerospace engineer from Marshall's Advanced Concepts Office, led the collaborative effort to create the tools.

## Marshall Center to mark the 25th anniversary of STS-1

The Marshall Center will observe the 25th anniversary of STS-1 on April 12, 13 and 14 with a centerwide video on Marshall TV. Times will be announced in the Daily Planet and Inside Marshall.

The Marshall Star also will feature an STS-1 anniversary insert with articles, photos and a message from Center Director David King.



Chris Robinson

## Chris Robinson selected to represent Marshall, NASA in Huntsville/Madison Connect Leadership class

Chris Robinson, Organizational and Leadership Development consultant in the Office of Human Capital, is participating in a three-month program for Leadership Huntsville/Madison County.

The program is called Connect and is designed to provide a networking forum for the next generation of area leaders dealing with

Huntsville's transformational issues. Connect helps to identify, educate and inspire future community leaders by integrating seminars, industry benchmarking visits and teambuilding exercises.

The program contributes to and complements other communitywide efforts to attract and retain young professionals.

## Moonbuggy

*Continued from page 1*

The process of designing, building and racing a moonbuggy helps students in high school and college learn practical applications for math, physics and analytical thinking. Jim Ellis, manager of the Academic Affairs Office at the Marshall Center, believes those intangible benefits far outweigh the trophies awarded to race winners.

"The race provides a hands-on learning experience where students not only design an engineering test model, but build it and bring it to Huntsville to test it," Ellis says. "The race has become a proving ground for students to use their knowledge in a real-world situation. While they explore important scientific areas, teams also learn to recognize the importance of a cooperative effort and teamwork in reaching their goal of a working moonbuggy."

Pittsburg State University in Pittsburg, Kan., is entering its 10th year of competition. Larry Williamson, a Pittsburg State professor and advisor to the school's moonbuggy teams over the years, looks back fondly on his and his students' first race.

"At our first race 10 years ago, we were on a shoestring budget and drove all night

to get to Huntsville," Williamson says. "After the race, we spent all night driving back home. The students were so elated about the experience, they stayed awake talking about it the entire trip. We were not there to win, just to see if we could do it."

The team exceeded its own expectations that first year, coming in third and beating out the previous year's winner Georgia Tech from Atlanta. Pittsburg State has since won the competition twice, in 1999 and 2001, and finished second last year.

The Great Moonbuggy Race — and all the work leading up to it — encourages students to think about their future, Williamson says. "Our community and high schools have seen what our team has accomplished," Williamson says. "Some have decided to compete in the high school competition because of our moonbuggy. We like to think we've indirectly influenced more students to begin a career in math, science and engineering."

One high school student in particular agrees. "Watching all this come together is great," says Jeremy Draper, a junior at Flinthills High School in Rosalia, Kan., and one of the drivers in the school's first entry into the Great Moonbuggy Race. "I've always

thought about a career in space, but if I can't get that far, finding a job building and testing things like moonbuggies would be pretty awesome."

The first Great Moonbuggy Race was run in 1994 to commemorate the 25th anniversary of the Apollo lunar landing. Eight college teams participated that first year. In 1996, the race was expanded to include high school teams.

Many volunteers from both the Marshall Center and the space industry ensure the success of the event. The Northrop Grumman Corp. sponsors this year's Great Moonbuggy Race. Other contributors include the American Institute of Aeronautics and Astronautics; ATK Thiokol; CBS affiliate WHNT Channel 19 of Huntsville; Jacobs/Sverdrup; Morgan Research Corp.; Science Applications International Corp.; the Tennessee Valley Chapter of the System Safety Society Inc.; and the United Space Alliance, LLC.

For more event details, race rules, information on the course and photos from previous competitions, visit <http://moonbuggy.msfc.nasa.gov>.

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## NASA Integrated Enterprise Management Program awards ceremony scheduled April 12

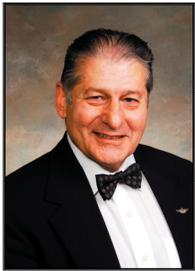
The NASA Integrated Enterprise Management Program awards ceremony will be held Wednesday, April 12, at 10 a.m., in Intergraph Building 700, Room 722.

The ceremony will acknowledge the achievements and exceptional contributions of individuals who participated in the

implementation of the agency's Project Management Information Improvement, Agency Labor Distribution System and Recruitment One Stop projects. Parking is limited. Employees are encouraged to carpool.

Contact Sheryl Gates at 544-2438 for more information.

# Retired Marshall engineer 'Sonny' Morea to sign copies of new book featuring his work on lunar rovers



Saverio "Sonny" Morea

By Lori Meggs

Retired NASA engineer Saverio "Sonny" F. Morea, who helped develop the Lunar Roving Vehicle, will be on hand Saturday, April 8, at the 13th annual Great Moonbuggy Race at the U.S. Space & Rocket Center to sign copies of a book that features his work.

The Lunar Roving Vehicle allowed astronauts to move around on the surface of the moon and is the inspiration for the moonbuggy race.

Billy Watkins' new book, "Apollo Moon Missions — The Unsung

Heroes," features a chapter on Morea, who managed development of what he calls "a spacecraft on wheels." A lunar rover was used on each of the last three Apollo missions in 1971 and 1972 to allow the crew to travel several miles from the lunar landing site.

Morea's work continues to be honored by the hundreds of students who compete annually in NASA's Great Moonbuggy Race, trying to duplicate his effort by designing and building their own moonbuggy vehicles. This year's moonbuggy race is Friday and Saturday, April 7 and 8.

Morea retired from NASA in 1990 after a 30-year career. Both Morea and Watkins will be at the U.S. Space & Rocket Center lobby April 8 from 1 to 4 p.m. to sign copies of the book.

## 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

Harvard Victory II game table, foosball, billiards, air-hockey, etc., accessories, many unopened, \$200. 303-3702

DR Field and Brush mower, 11HP, 5 speed, electric start, 1 yr. old, \$1,400. 771-7799

DVD player for car/van/suv, 2 monitors, 4-way switcher, \$200. 658-7719

Two side-by-side crypts, Valhalla Memory Gardens, \$5,200. 860-558-3063

Futaba 8-channel model airplane radio kit w/servos, \$100. 656-2951

Pit Bull puppy, female, 13 wks., wormed & shots, \$150. 990-1262

Maytag dishwasher, 2 months old, \$150. 348-8640

Murray riding lawn mower, 12HP, used two seasons, \$500. 233-3961

Wicker set, 5 piece: couch, table, 3 chairs w/cushions, natural color w/green & burgundy trim, \$200. 509-2536

Dining room set; sleeper sofa; futons; piano; desk; bookshelf; queen bed; Pfaltzgraff remembrance set. 882-4450

Two tickets, Hsv Ballet Co. spring concert, seats D23/24, Sat., April 8, 2 p.m., \$10 each. 883-5168

Ariens riding lawn mower, 32" cut, 13HP, serviced recently, \$250. 651-8236

Full size mattress & foundation, \$100. 883-1667 evenings

1996 Viking Pop-Up Camper, queen & full bed, a/c, heat, bath, full kitchen w/o oven, canopy, \$3,500. 694-1217

Leica M6 range finder camera body, S/N 1784527, black w/hand grip, recently serviced, \$1,200. 658-5506

Amana chest freezer, \$100; roll-top maple desk, \$100; Eddie Bauer bassinet, \$90. 256-830-8968/leave msg.

Groovy girl dolls, large bag full with accessories, \$75. 479-1527

Sonoma oak computer roll-top desk, 54wx33dx54h, w/printer stand, \$550. 325-2823

Craftsman lawn tractor, 15.5HP, 42" deck, electric start, 6

speed, garage kept, \$900. 864-8183

Reptile terrarium, 36"Lx18"Wx13"D w/screen top, has 2 heaters on bottom, \$30. 882-0461

Kenmore washer and dryer, washer needs some repair, \$150. 880-1606

Executive desk, cherry finish, two drawer stacks, arched large surface, keyboard tray, \$300. 348-5042

Refrigerator, 20.6 cu. ft., white, \$100; oak dining room set w/6 chairs, leaf, \$250. 881-2131

2003 Epiphone Casino w/case, sunburst finish, rarely played, \$570. 684-0910

Motegi wheels, 17x7, gunmetal w/polished tip, fits Accord, \$300. 851-8085

Pug, AKC, fawn, male 1st shot/wormed, ready now, \$375. 256-882-2037/David

Murray 2-seat Go-Kart, 6HP, Tecumseh engine, roll cage and seat belts, \$445. 325-1492

Roland JC-120 guitar amplifier, \$300. 885-0851

Oak entertainment center, holds 27-36" TV, matching side pier, modern, paid \$1,200, make offer. 829-0285

Dell 8400 computer, 3GHz, new 10" LCD monitor, 1GB-RAM, new 128MB-video, CD-RW/DVD, WinXP, \$800. 655-1986

Fisher Price Chevrolet Silverado battery-operated truck, used, battery good, comes with charger, \$50. 828-9099

Troy-Bilt Tiller, Tuffy model, \$275. 883-2653

Nordic Track Pro, \$50. 931-732-4742

Kenmore washer, \$100; GE dryer, \$95. 837-6649

Four Valhalla Masonic Garden plots, Lot 97, Block C, Section 3, Units 1-4, \$7,500. 250-881-9421

Amana 3-ton electric/gas pack, \$60; Floor model drill press, 16 speed, \$110. 852-6952

Custom built smoker, 250-gallon tank on 14-foot trailer, 2 wooden storage boxes, \$4,000. 520-2327

### Vehicles

2001 Seville SLS, crimson red, tan leather, luxury pkg., Bose, CD changer, 74K miles, \$13,200. 880-9171

Polarcraft aluminum hunting/fishing boat with trailer, 14', Mercury electric start, 25HP, \$3,500. 520-2327

1995 Lincoln Town Car Executive Series, red w/red leather, all-power, 122K miles, \$4,000. 431-7755

2000 Blazer ZR2, 4x4, 2-door, black, loaded, cruise, keyless, hitch, roof rack, 119K miles, \$5,600. 882-0404

2000 Nissan Frontier Crew Cab, automatic, silver, power, remote, CD/cassette, 102K miles, \$9,500. 880-9025

1987 Ford Ranger, automatic, bedliner, \$1,200. 520-2802/Ron

2004 Jeep Wrangler, yellow, 22K miles, 5 speed, 6 cyl., soft top, garage kept, \$18,900. 256-721-1234

1985 Bayliner, 215 Capri, 230HP, depth finder, dry storage, \$4,700; boathouse pneumatic lift, \$11,500. 881-8376

1986 Berlinetta Camaro, V8 w/305 engine, \$2,000. 679-4929

1999 Ford Explorer XLS, 4x4, 4-door, towing package, privacy package, 82K miles, \$7,150. 353-3229

2002 Nissan Pathfinder SE, Arctic White, 50K miles, leather, sunroof, V6/auto, one owner, \$13,900. 652-5575

2001 Toyota Tacoma Xtra-cab, pre-runner, red, V6/AT, SR5 trim, 74K miles, bedliner, toolbox, \$15,995. 256-693-9016

2002 Dodge Ram 1500 SLT, 4x4, silver, 102K miles, \$13,500. 256-891-1073

1997 Ford Ranger XLT, 4 cyl., 5 speed, A/C, cassette, alloy wheels, bedliner, 87K miles, \$3,850. 864-8183

"89" Wellcraft Bowrider boat, 19', Chevy V8, Volvo Penta DP outdrive. 256-656-2139

2000 Honda Accord, 2 door, 57K miles, tint, auto, white, \$9,999. 256-655-6293

1989 Kawasaki KX125, \$800. 776-4741

2004 Chevy Trailblazer, dark gray, 44K miles, auto, 2WD, PW/PD, cruise, \$15,000. 337-5939

2002 Honda Shadow 600CC, \$3,000. 256-828-5142

2005 Ford F150 XLT Super Crew short bed pickup, 8K miles, \$26,500. 509-5375

1970 Boston Whaler Montauk, Mahogany center console, 1990 Evinrude 150XP, heavy-duty steel trailer, \$3,900. 256-961-1093

2003 Chevy Trailblazer LS, dark green, 49K miles, \$15,500. 347-4804

2000 Ford Explorer XLT, V8, 2WD, gold, 4 door, CD/cassette, Michelin tires, 90K miles, \$6,800. 721-1101

Villian II ski boat, new motor, \$3,000. 679-0073

### Wanted

Free old metal swing set frames, will pickup; New Hope, Ala. 256-725-4411

Kid's battery-powered Power Wheels, ride-in Jeep or truck. 828-6333

Used toddler/child playhouse. 729-6301

Used scaffolding in good condition. 509-7907

Twin mattress set and/or frame for adult, clean. 880-6146

### Found

Money found Monday, March 27, at NASA complex. 890-1177

Ladies eyeglasses in Bldg. 4201 parking lot. Call 544-3623 to claim/identify

### Free

Brindle Boxer, female, AKC registered, 1 yr. old, all shots updated. 615-225-7364

## ***McNair, Foster honored for achievements during Team Redstone Women's History Month celebration***

During the Women's History Month celebration March 23, Team Redstone recognized several women who were the first to perform various job tasks.

Ann McNair, first female supervisor in engineering at the Marshall Center, and Susan Foster, the center's first female chief financial officer, were honored for their achievement and leadership.

The Redstone Garrison commander and the commander of the U.S. Army Aviation and Missile Command presented each employee a framed certificate with commander coins.



Ann McNair



Susan Foster

## **'Focus on Marshall' takes viewers to center work sites, puts spotlight on Marshall's people and their work**

By Lori Meggs

Learning more about the interesting and important work going on throughout the Marshall Center just became a lot easier.

Through a new Office of Strategic Analysis and Communications product called "Focus on Marshall," employees can visually experience — through the camera's eye — what's going on at various work sites throughout the center.

And it's available in an easy-to-watch video on Marshall TV or from your desktop computer.

Viewers can learn how work at Marshall supports the NASA mission and the Vision for Space Exploration by getting an inside

look at the varied skills and cutting-edge technologies that exist at the Marshall Center.

"The intent of 'Focus on Marshall' is to inform Marshall team members about center activities and provide them insight into center capabilities outside their own areas of expertise," said Lori Meggs, who along with Bill Hubscher co-hosts the program. "We will focus, in a light and informative way, on the work that makes our programs and projects possible." Bob Moder of the Office of the Chief Information Officer is the producer of "Focus on Marshall."

Each 10-to-15-minute monthly production of "Focus on Marshall" will feature two or three segments. It will be broadcast on

Marshall TV the first and third Tuesday and Thursday of each month at 11 a.m., noon and 1 p.m.

The first installment, with segments focusing on the recent solid rocket motor test firing in the East Test Area and on the Payload Operations Center, airs on Tuesday, April 4 and again on Thursday, April 6. The video can be viewed live on Desktop TV as it's shown live on Marshall TV. Subsequently, it will be available for viewing on Inside Marshall and the Marshall home page within the NASA portal Web site.

*The writer, an ASRI employee, supports the Office of Strategic Analysis and Communications.*

# **MARSHALL STAR**

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