



# LAGNIAPPE

## Return to Flight

### Gilbrech, Smiles assist Return to Flight efforts

Dr. Rick Gilbrech, Program Integration Office manager, and Mike Smiles, Office of Safety and Mission Assurance manager, are detailed to Michoud Assembly Facility for the next three to four months on Return to Flight assignments. Gilbrech chairs an External Tank Return to Flight Independent Technical Assessment Team, and Smiles oversees a Safety Emissions Assurance Program.

### Wing test, technical segment of accident investigation complete

The Columbia Accident Investigation Board on July 7 wrapped up the technical phase of its investigation into the Space Shuttle Columbia mishap after researchers fired foam insulation at a mock-up of Columbia's left wing assembly. The researchers were trying to re-create conditions prior to the Shuttle's breakup. Stennis Space Center machined two lower beam spanners for the mock-up.

### NASA announces plans for safety assessment center

NASA announced on June 15 the plans to create an Independent Engineering and Safety Center at Langley Research Center in Hampton, Va., to provide comprehensive examination of all programs and projects. The center will provide a central location to coordinate and conduct engineering and safety assessment across NASA.



### Testing the way to the future

Engineers at Stennis Space Center conducted a turbine drive activation test July 16 at the E1 Cell 2 test stand in the E-Complex. The test was conducted to evaluate components in preparation for Integrated Powerhead Demonstrator (IPD) fuel turbopump tests scheduled to begin next month. The IPD program is a joint venture between NASA and the U.S. Air Force to develop future propulsion systems. Originally designed as a developmental rocket engine component test facility for the National Launch System Program, the E1 Test Facility is available for developmental testing projects that require high pressure and high flow-rate cryogenic fluids, hydrogen, oxygen, inert gases and industrial water.

## NASA, Mississippi schools sign education initiative

Representatives from NASA's Stennis Space Center (SSC) and five Mississippi schools signed Memorandums of Understanding (MOU), embarking on a three-year effort to spur students' imaginations through the new NASA Explorer Schools Program.

Under the memorandum, an educator team from each middle or junior high school will work with

NASA personnel and resources to make the schools' math and science curricula more appealing to students. The MOU also outlines NASA's and the schools' efforts to sustain educators' professional development and "to encourage student involvement and discovery."

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Signing the Memorandum of Understanding for Florence Middle School are, from left, SSC Interim Center Director Michael Rudolphi, Florence Middle School teacher and NASA Explorer Schools lead teacher Jennifer McCutchen, Florence Middle School principal Beverly Weathersby and Rankin County School District Superintendent Lynn Weathersby. Back row, from left, are Florence Middle School teachers Shelley White, Laurie Smith and Anne Bowlin.

### Mississippi Explorer Schools

- Ed Mayo Junior High Moss Point
- Choctaw Central Middle Choctaw
- North Gulfport Seventh and Eighth Grade Gulfport
- Bay-Waveland Middle Bay St. Louis
- Florence Middle Florence

*From the desk of  
Michael Rudolphi*

*Stennis Space Center Interim Director*



During the past several months, we have had many changes taking place, not only at Stennis (SSC), but throughout NASA. While it's true some of these changes are a result of our number one mission – returning to flight – much of what has taken place is to help us, as a center, operate in a better, more efficient manner.

I know that sometimes change can be difficult; however, what we are doing is a good thing. This is an opportunity for us to embrace change and learn from our new experiences. The future is bright for Stennis, and we are headed in a positive direction.

We are at the dawn of a new beginning, a time of better things to come. SSC has some of the best and brightest people in NASA, as evidenced by recent moves such as Bill Parsons taking over as manager of the Space Shuttle program and Robert Lightfoot becoming the senior systems integration manager for the Space Shuttle. With everyone pulling together as a team, we will continue to

be a shining example for others to follow.

The Columbia Accident Investigation Board is scheduled to issue its report next month. It is my hope the great people we have in NASA and at Stennis will view this report as a chance for us to better ourselves. This is a time to focus on the future and show the world we can take the tough blows, fix the problem and keep our heads held high. We will learn from the experience and move forward.

NASA has a reputation of getting things done and overcoming obstacles. By staying focused on our values and esprit, I'm certain we will benefit from these changes. Let's view this as an opportunity to look at our surroundings from a different angle and grow from the experience. This can be a time to shine – as only NASA can.

*This is an opportunity for us to embrace change and learn from our new experiences. The future is bright for Stennis, and we are headed in a positive direction.*

MURGL

## Lightfoot assumes key Shuttle Program role

Robert Lightfoot has been selected as Stennis Space Center's (SSC) participant for the Office of Space Flight (OSF) Corporate Executive Development Program, which is designed to offer a planned approach to developing current Senior Executive Service (SES) employees for top OSF and center positions.

Selectees are engaged for approximately two years in developmental activities, such as mobility assignments, mentoring, and training courses. Lightfoot's assignment in this program is at NASA Headquarters as the senior systems integration manager, Space Shuttle, Code M/Office of Space Flight. In this position he supports the deputy associate administrator for the International Space Station and Space Shuttle Program in providing advice and recommendations as to the technical readiness and constructive execution of the Space Shuttle Program.

Lightfoot has been serving as director of the SSC Propulsion Test Directorate since March 2002. He joined NASA in 1989 at Marshall Space Flight Center in Huntsville, Ala., and moved to Stennis in 1999 as chief of the Test Operations Division. He was promoted to deputy director of the PTD in 2001.



**Robert M. Lightfoot**

## NEWSCLIPS

### NASA and NAACP focus on the future

NASA is teaming with the National Association for the Advancement of Colored People (NAACP) to show its commitment to diversity by making scientific, technological and engineering opportunities accessible to all, as well as inspiring underrepresented communities to prepare for a high tech tomorrow.

To inspire the next generation of explorers, NASA featured a Space Shuttle launch experience theater during the NAACP annual convention July 12-17, 2003, at the Miami Beach Convention Center. The exhibit featured a virtual reality station and hands-on interactive technology to help stimulate interest in science, math and technology education.

### NASA takes REASoN-able approach to Earth sciences

NASA has selected 41 proposals in response to the "Research, Education, and Applications Solutions Network," a cooperative agreement notice known as "REASoN."

The selected proposals will expedite the use of NASA Earth Science observational measurements, models and systems engineering capabilities.

REASoN ensures scientists studying Earth system science have access to the most accurate and complete key geophysical observation records. Solutions that serve society will emerge from the selected proposals to help us understand and protect our home planet, while inspiring the next generation of explorers.

### Hubble helps confirm oldest known planet

Long before the Sun and Earth ever existed, a Jupiter-sized planet formed around a sun-like star. Now, almost 13 billion years later, NASA's Hubble Space Telescope has precisely measured the mass of this farthest and oldest known planet.

Its existence provides tantalizing evidence the first planets were formed rapidly, within a billion years of the Big Bang, leading astronomers to conclude planets may be very abundant in the universe.



We Have Friends In High Places

### Space Station crew focusing on upgrades

The International Space Station's (ISS) Expedition 7 crewmembers concentrated on Station upgrades and routine maintenance during their 11th week on orbit. Commander Yuri Malenchenko and NASA ISS Science Officer Ed Lu also advanced the research in several laboratory experiments during the week.

The crewmembers upgraded a relay unit in the Russian audio system that enables module-to-module "telephone" calls; completed inspections of life support systems, smoke detectors and microbe filters throughout the Station; rebuilt and restored laptop computer hard disk drives; and audited supplies to help mission managers decide what to launch on upcoming Progress resupply ships.

### Twin Exploration Rover lifts off for Mars mission

NASA launched its second Mars Exploration Rover, Opportunity, on July 7 aboard a Delta II launch vehicle. Opportunity's dash to Mars began with liftoff at 11:18 p.m. EDT from Cape Canaveral Air Force Station.

The spacecraft separated successfully from the Delta's third stage 83 minutes later, after it had been boosted out of Earth orbit and onto a course toward Mars.

As of July 8, Opportunity's twin, Spirit, has traveled 48 million miles since its launch June 10 and is operating in good health.

Opportunity is scheduled to arrive at a site on Mars called Meridiani Planum on Jan. 25, 2004, three weeks after Spirit lands in a giant crater about halfway around the planet. Both rovers will examine rocks and soil for clues about whether past environments at their landing sites may have been hospitable to life.

## Program will link geospatial industry, workers

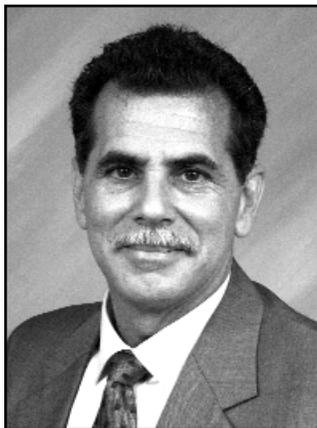
The University of Southern Mississippi (USM) learned July 1 that it was the recipient of a \$1.5 million grant from the Department of Labor to fund a pilot Geospatial Technology Apprenticeship Program (GTAP).

"Our role from the beginning has been to develop the process that highlights the skills needed in the geospatial workforce," said Dr. David Powe, director of Earth Science Applications (ESA) Directorate at Stennis Space Center (SSC). "We long ago began work to set up a competency model that surveyed geospatial companies in the U.S.,

gained understanding of the skills they needed, then identified the national standards for math, science, technology and geography education. Then we identified the gaps between education and the workforce."

Dr. Cyndi Gaudet is USM associate professor of workforce training and development and director of the Geospatial Workforce Development Center (GeoWDC).

"The GTAP is a partnership among employers, education and economic development," Gaudet said, "to involve on- See PROGRAM, Page 7



**Miguel A. Rodriguez**  
Director  
Propulsion Test Directorate



**Marina L. Benigno**  
Director  
Center Operations Directorate



**Michael C. Dawson**  
Director  
Business Management Directorate

## SSC key personnel changes announced

Interim Center Director Michael Rudolphi recently announced several key leadership changes at NASA'S Stennis Space Center (SSC).

"Grooming future leaders for NASA continues to be a growing mission at Stennis," said Rudolphi. "This has proven true again with Robert Lightfoot moving to Headquarters."

Lightfoot is Stennis' selectee to participate in the Office of Space Flight Corporate Executive Development Program and has been assigned the role of senior systems integration officer for the Space Shuttle Program.

"Although Robert will be missed, his departure provides the opportunity for other senior staff at SSC to move into some challenging positions," added Rudolphi.

Taking over as director of the Propulsion Test Directorate (PTD) is Miguel Rodriguez. Rodriguez has served as director of the Center Operations Directorate since November 2002 and was previously chief of the Integration Office at the Cape Canaveral Space Management Office.

As chief of the PTD, Rodriguez is responsible for the safe operation of SSC's one-of-a-kind national test facilities valued at over \$2 billion. He oversees several rocket engine propulsion test programs including Space Shuttle Main Engine (SSME)

acceptance testing, and the testing and evaluation of next-generation propulsion systems for NASA's Space Launch Initiative.

Marina Benigno is now the director of the Center Operations Directorate. Benigno has served as director of the Business Management Directorate since November 2002. She came to SSC in 1989 as resources management officer and was selected as chief financial officer in 1992.

As SSC's Center Operations director, Benigno is responsible for providing a comprehensive and integrated program that is a customer-focused delivery system for institutional services.

Mike Dawson has been named director of the Business Management Directorate. He has been serving as deputy director of the SSC Propulsion Test Directorate.

Dawson joined SSC in 1989 and has served in numerous positions, including head of operations and project management for SSME and Advanced Solid Rocket Motors. He was also manager of the Propulsion Integration Office, which is responsible for NASA's Rocket Propulsion Testing Program.

As director of the Business Management Directorate, Dawson is responsible for providing business, financial and acquisition management support to center programs, institutions and resident agencies.



## NASA engineer nominated for Women in Aerospace award

Christine Powell, a systems integration engineer at NASA's Stennis Space Center, has been nominated for the 2003 Women in Aerospace Outstanding Achievement Award. The award honors service as a role model or mentor that shows dedication to the advancement of women in aerospace. Powell is pictured speaking at the first annual Mississippi Robotics Consortium held July 16 at Stennis.



## Astro Camp celebrates Centennial of Flight

Students at Astro Camp 2003, which was conducted at the visitor center, StenniSphere, prepare hot-air balloons for lift-off. The campers made hot-air balloons to help them learn about the history of flight in keeping with this year's Astro Camp theme, 'From First Flight to Space Flight,' a celebration of 100 years of human flight.

# Upgrades enhance Fire Department capabilities

The Stennis Space Center (SSC) Fire Department made a technological leap forward this month when it purchased a hand-held hydrogen detector that allows firefighters to see the invisible flames of hydrogen and alcohol fires in daylight.

The device, a digital imaging camera, is manufactured by International Safety Instruments of Lawrenceville, Ga.

The imager will be an important addition to the SSC Fire Department because liquid hydrogen is one of the fuels that propel the Space Shuttle Main Engine (SSME). As NASA's center for testing and certifying the SSME, SSC is one of the world's largest consumers of liquid hydrogen.

Similar technology to that of the fire department's new imager was developed by two former NASA engineers at SSC, Heidi Barnes, formerly with NASA, and Harvey Smith, now with Lockheed Martin Space Operations.

SSC's fire department will now use its hand-held imager in traditional fire environments to

detect smoldering embers in dense smoke and fog, to determine a fire's origin point and to find victims trapped in a fire or lost in the woods.

Another leap forward for the station will be the combination rescue response vehicle-pumper unit on its way to SSC later this summer. The vehicle will replace three trucks, according to Fire Chief Ted Clark.

It will carry major improvements to Jaws of Life rescue efforts, Clark said. "The one truck will actually become a rapid intervention response team."

The cab of the truck will be air-conditioned to serve as a rehab center for firefighters, helping them avoid or recover from heat exhaustion.

The new truck, custom-designed by the 15 firefighters at SSC, is currently being built.

"The new truck is going to pay big dividends for the center," said NASA's Clyde Dease, with Facility Operations and Maintenance. "These upgrades are kind of like health insurance.

See **UPGRADES**, next page



Stennis Fire Department Driver/Operator Pete Lacy demonstrates the relative ease of donning new turn-out gear and breathing tanks that are lighter and more comfortable than the firefighters' old suits.

## Daughter of Stennis employee wins NASA College Scholarship

**K**aryn Klein, daughter of NASA's Kerry Klein, E2 Test Stand director at Stennis Space Center (SSC), and Barbara Klein, all of Slidell, La., is one of six recipients of a NASA College Scholarship, awarded for 2003-2004.

Klein was honored with a reception at the space center where SSC Interim Center Director Michael Rudolphi presented her with a scholarship certificate.

The NASA Scholarship Fund was established to award scholarships to qualified dependents of NASA and former NASA employees. Applicants must also major in a science or engineering field to be eligible to compete for the scholarship.

Klein recently completed her freshman year at Louisiana State University in Baton Rouge, where she majors in computer science.

This year, more than 82 children of NASA employees from across the country applied for the six scholarships available. The scholarship amount is \$2,000, renewable annually for a maximum of \$8,000 over six calendar years.



NASA's Stennis Space Center Interim Director, Michael Rudolphi, presents the certificate for a NASA Scholarship to Karyn Klein.

## UPGRADES ...

Continued from previous page

You pay for it, hoping you never need it, but you want it to be there if you ever do need it."

Other developments at the station include a truck bay exhaust system; turn-out gear 30 pounds lighter than the firefighters' old suits; and lighter, self-contained breathing apparatuses.

One of the more popular projects at the fire station in Building 2201 is 11 bunk rooms that have replaced the one occupied by the five firefighters on any given shift. Now, each man on shift has his own 8-by-8 room.

Additional upgrades were also done in the station's kitchen area.

Dease and Clark said they are excited about ongoing plans for a new First Response Facility that will house the Emergency Operations Center, fire station, medical clinic, security office and energy-management systems control center. The facility design is expected to be completed this fiscal year, with ground breaking scheduled for December.

## NASA 'changing the way it does business' with new Financial Management Program

**N**ASA's business operations took a giant leap forward last month as all 10 NASA field centers began using the same system to pay bills and manage financial accounts.

The new system, part of NASA's Integrated Financial Management Program (IFMP), is one component of a major overhaul of the way NASA does business. The program replaces duplicating systems with new ones for common use by the centers.

"The new system allows us to work with common tools toward common goals, not as 10 different centers with different ways of budgeting or managing their finances," said Patrick Ciganer, program executive for IFMP.

The Core Financial Module, rolled out in late June, replaces 145 systems across NASA. Within the next two years, the Integrated Asset Management Module will replace more than



**NASA's Jane Johnson has experienced the advancement of technology firsthand. She was the first Stennis employee to have a computer, and recently helped input contracts into the IFM system.**

100 additional systems.

While the IFMP "Go Live" success marks a new height of computing accomplishment, it was a real milestone for Jane Johnson, procurement analyst in NASA's Acquisition Management at Stennis Space Center (SSC). In

1978, she became the first employee among NASA and its contractors to have a computer. To bring the technology full circle, Johnson, as SSC's procurement data conversion representative, recently helped input all SSC's contracts into the IFM system.

The next major milestone within IFMP will be the February 2004 deployment of the new Budget Formulation (BF) module. With BF's implementation, IFMP will play an integral role in facilitating Full Cost Management. Full Cost Management requires an integrated system to measure and report resource planning, utilization and allocation.

The BF module will support the Full Cost Management requirements when it is fully implemented.

For information about the Integrated Financial Management Program on the Internet, visit <http://ifmp.nasa.gov>.

# Kennedy engineer supports One NASA principles

*Editor's note: This is one in a series of stories from other NASA centers on the One NASA concept. This month's story is from Kennedy Space Center.*

Well before NASA Administrator Sean O'Keefe focused NASA on the concept, Cheryl Malloy, Kennedy Space Center (KSC) mission integration manager for the Launch Services Program – formerly Expendable Launch Vehicles (ELV) Program – was putting the One NASA principles into practice.

Malloy, a 15-year veteran with NASA, has had several firsthand experiences in working with other NASA centers on projects at KSC.

"I've been lucky in that all of the Launch Services Program missions we work on require integration with other centers," Malloy said.

For example, as mission integration manager on the Kodiak Star mission in 2001, she coordinated launch site activation, mission integration and launch activities with Wallops



**Cheryl Malloy: A One NASA veteran.**

Flight Facility, the U.S. Air Force and Coast Guard, and Lockheed Martin, bringing together one Kodiak launch team to ensure a smooth mission flow and successful first launch in Alaska.

The launch coordination was a prime example of NASA's core values and KSC's guiding principles. It emphasized the importance of building reliance and teamwork everywhere.

Malloy started at KSC as a summer appointee in 1987 and then worked full-time in Shuttle Payloads starting in 1990.

It was during her time in Shuttle Upgrades, from 1996 to 1998, that Malloy's work required her to become involved in projects rather than missions with other NASA centers. She transferred to ELV in 1998 and has remained there.

She took it one step further and also participated in NASA's Industry Exchange Program, which temporarily places personnel from commercial business into NASA, and vice versa.



## Star Scene at Visitor Center



## Astro Camp inspires youth at Drug-Free Awareness Day

StenniSphere representatives recently conducted Astro Camp activities as part of the Drug-Free Awareness Day held in Algiers, on the West Bank of New Orleans. The event provided information on the effects of drugs and alcohol. At far left, Miguel Rodriguez, Propulsion Test director at NASA's Stennis Space Center, watches as Lance Dallas launches a balloon rocket he made. At left, Astro Camp Director Maria Lott helps children build the balloon rockets.

## Visitors from Louisiana enjoy a day at StenniSphere

Visitors from the Lafayette Natural History Museum and Planetarium in Lafayette, La., recently visited NASA's Stennis Space Center on a field trip. Here, from left, Erin LeDoux, Dexter LeDoux, Jason Comeaux and Tim Chauvin look intently at a computer screen that tracks their spacecraft's movements as they virtually pilot the Space Shuttle.



## Competing with robots

Stennis engineers Scott Olive and Christine Powell, left, watch as Gulfport High School students and For Inspiration and Recognition of Science and Technology (FIRST) robotics team members Adam Barnett and Ashlin Bollacker take their robot for a spin at the first annual Mississippi Robotics Consortium, held July 16 at Stennis Space Center. Community leaders and educators throughout the state attended the



consortium to learn about the FIRST Robotics Program. FIRST inspires students to pursue careers in engineering, science and technology by allowing them to work with engineers to design and build robots for competition.

## PROGRAM ...

Continued from Page 3

the-job training at organizations that have geospatial workforces.”

The first task of Gaudet and the GeoWDC will be to hold workshops with geospatial experts and to establish standards for the apprenticeship that will work for the industry. They will spend approximately the next two years delivering and evaluating GTAP.

Gaudet envisions that GTAP will have participants working 40 hours a week for a company in some type of geospatial support position and attending classes two nights a week. The grant will help pay for tuition and help them connect their jobs to GTAP as they work toward a certificate, a two-year associate's degree or additional certification.

The GTAP aims to accomplish several other goals, including:

- Building on outcomes of NASA's National Workforce Development Education and Training Initiative;
- Establishing geospatial technology apprenticeship standards;
- Building the capacity of community colleges (especially Mississippi Gulf Coast Community College and Pearl River Community College) to offer geospatial technology certificate and technician/technology programs;
- Providing a model for replication

throughout the U.S.

“This program really comes about as part of the vision that Dr. Powe had for helping to build the geospatial workforce. As the NASA Earth Science Enterprise further defines its national application themes, we want to support and address workforce needs of those applications,” Gaudet said.

According to Powe, there is an immediate need to fill thousands of positions in the geospatial industry, with more to come over the next 10 years. “We'll benefit as soon as the program begins,” Powe said.

## INITIATIVE ...

Continued from Page 1

“When you say NASA's going to be a part of something, it excites students, fires their imaginations,” said Wanda DeMaggio, pre-college/technology officer for NASA's Office of External Affairs, Education, at SSC.

The signing kicked off a weeklong workshop for the teacher and administrator participants. The 25 team members will learn how to use SSC and NASA education resources, get help developing their action plans and take part in activities such as Distance Learning, Noodling with Newton, Mission Mathematics and 100 Years of Flight. For more information about NASA's Explorer Schools program, visit [www.explorerschools.nasa.gov](http://www.explorerschools.nasa.gov).

## Child Services prepares children for 'big school'



Stennis Child Development Center (SCDC) worker Jacalyn Cruff helps two of her charges with a gardening activity near the SCDC playground.

The recently named director of the University of Southern Mississippi's (USM) Child Services at Stennis Child Development Center (SCDC), Rose Pouriraji, is introducing several new pre-school and pre-kindergarten programs to help children get ready for “big school.”

The programs are themed, unit-based activities with learning experiences incorporating phonics, letter recognition and other necessary kindergarten-readiness skills. Themes include Hawaiian luaus, bike derbies, pajama days, field and sports days and sailboat regattas. They incorporate science, social studies, music appreciation and social skills.

The SCDC, administered through USM's contract with NASA, aims to provide a safe, nurturing place where children develop in an age-appropriate environment. “Children will move through the curriculum beginning at age 1 and complete it just before entering kindergarten,” Pouriraji said.

Pouriraji also said construction on the new SCDC facility should be finished by Aug. 15. When completed, the facility will have state-of-the-art furnishings that will include creative and dramatic play areas, along with updated science centers, listening centers, early childhood computer programs, educational directives, manipulative and playground equipment.

Although most of the classes are full, there will be limited fall preschool openings for ages 2-5.

For more information, contact Rose.Pouriraji@usm.edu or ext. 8-3224.



## Be sure playground equipment is safe

Sunny summer days and children naturally go together, so it's a good time to get your backyard playground ready for children or to buy new equipment. Keep these safety tips in mind:

- Check the swing seats of the playground equipment before you buy it. The seats should be made of soft material, not wood or metal.

- Avoid equipment with "s"-type hooks, sharp edges or rings between 5 and 10 inches diameter, which could trap a child's head.

- Assemble home playground equipment following the manufacturer's instructions. If you are not sure how to do it, talk to a professional.

- Install playground equipment at least 6 feet from fences or walls.

- Anchor the equipment firmly on a level surface. Do not install it over a hard surface such as concrete or asphalt. Use a softer surface like sand, wood chips or bark to cushion a fall.

- Make sure to cap all screws and bolts, and check the equipment once a month for loose nuts and bolts.

Home playground equipment needs just as much safety attention as public park playground equipment. Make sure your kids have a safe and fun-filled summer.

## QUICKLOOK

**Stennis Space Center Rotary Club membership is open.** Stennis employees can help with community service and outreach projects by joining the Rotary Club. Membership is open to every Stennis contractor, university, military and civil service employee. Meetings are every Tuesday from 11:30 a.m. to 12:30 p.m. in Building 1103, the Glazier Conference Room. For more information, visit [www.rotary-ssc.org](http://www.rotary-ssc.org) or call Rob Young at 8-5867.

**Businesses to learn about SSC at Industry Day.** NASA's Stennis Space Center (SSC) will host Industry Day 2003 on Aug. 19 at Casino Magic in Bay St. Louis. The SSC Acquisition Management Office is hosting the event to provide industry, particularly small businesses, with an opportunity to learn about SSC and to meet with NASA and federal, state and commercial agencies at SSC to explore business opportunities. For more information, visit [www.ssc.nasa.gov/industryday/](http://www.ssc.nasa.gov/industryday/) or e-mail [ssc-sbs@ssc.nasa.gov](mailto:ssc-sbs@ssc.nasa.gov).

**Tickets available for Women's Equality Day.** The 2003 Stennis Space Center Women's Equality Day luncheon and program is scheduled for Aug. 21, from 11:30 a.m. to 1:30 p.m. in the Atrium of Building 1100. The program's theme, "Women: Fighting, Supporting, Surviving," pays tribute to women's roles in the war effort. This event highlights the contributions and accomplishments of women in America and around the world. Guest speaker is one of The Boeing Co.'s new leaders, Dina Barmasse, director of Human Resources, Canoga Park, Calif. For more information, call Joyce Lawrence at 8-2195.



*Wilbur and Orville Wright made their historic first flight Dec. 17, 1903. In support of NASA Quest's Centennial of Flight Project, LAGNIAPPE offers trivia questions about NASA's role in flight each issue during the yearlong celebration.*

**Q.** What did NASA use as a test vehicle for technology that would fly on missions to the planets?

**A.** In 1972, NASA used high-altitude balloons to test a parachute system that would lower NASA's Viking Lander to the surface of Mars in 1976. A 34.6 million-cubic-foot, zero-pressure helium balloon carried the simulated Mars entry vehicle to 120,000 feet. Then a rocket shot the entry vehicle to 147,000 feet, where the parachute system deployed, dropping the vehicle safely to Earth. The tests indicated that the Viking parachute system could be used in the Mars mission.

## LAGNIAPPE

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Managing Editor . . . . . Paul Foerman  
Editor . . . . . Marty Oramous

Comments or suggestions  
should be forwarded to:

LAGNIAPPE Office  
Building 1200, Room 208D  
Stennis Space Center, MS 39529

or call:  
(228) 688-3585

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