

Serving the Marshall Space Flight Center Community

## May 15, 2003

# Be a Marshall innovator

## <u>New Technology Reporting ceremony</u> <u>recognizes Center employees</u>

from the Tech Transfer Department

nnovators at the Marshall Center were recognized April 29 at an awards ceremony and luncheon hosted by the Technology Transfer Department in the Center Activities Building.

Employees who submitted new technology reports in fiscal 2002 were commended and presented with mementos for their efforts by Marshall Director Art Stephenson and Vernotto McMillan, manager of the Technology Transfer Department.

Guest speaker Remigius Shatas, a local entrepreneur, inventor and venture capitalist, praised Marshall for its contributions to the area's standing as a hub of technology. He noted that for every seven persons in Madison County there is one patented innovation -- the highest ratio in the United States.

Stephenson offered congratulations to all the innovators and urged them to return to their respective organizations as ambassadors to encourage new technology reporting by their coworkers. Tereasa Washington, director of the Customer and Employee Relations Directorate, echoed the importance of Marshall's innovations in her remarks to the group.

## Innovators' Forum

Following the awards ceremony, an Innovators' Forum, hosted by the Technology Transfer Department and the Marshall



**Checking out student space experiments** Dr. Adena Loston, right, associate administrator for NASA's Office of Education, checks out a sample of classroom-grown protein crystals during a recent tour of the Marshall Center. Greg Jenkins, left, director of the Madison campus of the University of California at Irvine, holds the tray of colored cuvettes, which were crystallized under different conditions by elementary students. Jenkins and his colleagues, in conjunction with the Marshall Center, have allowed more than 700 students and teachers to fly similar protein crystal growth experiments into space.

Patent Office, was open to all employees across the Center. The forum is one component of the Center's active campaign to increase awareness of new technology reporting and associated activities — Space Act Awards, patenting, licensing, software release, Space Act Agreements, the Center Director's Discretionary Fund, the Technology Investment Projects Program, contract compliance, and more.

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## **Bill Parsons selected as Space Shuttle Program manager**

## NASA Headquarters release

ASA has selected William "Bill" W. Parsons as the new manager for the Space Shuttle Program. Parsons, director of the John C. Stennis Space Center in Mississippi, succeeds Ronald D. Dittemore, who announced his resignation April 23. "Bill is a talented leader, motivator, and he's deeply devoted to the success of the Space Shuttle program," said William F. Readdy, associate administrator of space flight at NASA Headquarters in Washington. "His management, technical experience, and dedication to safety are vital as we move forward and prepare to start flying again." Parsons has served as center director at Stennis since August 2002. He was first assigned to Stennis in 1997 as the chief of operations of the Propulsion Test Directorate. Parsons relocated to the Johnson Space Center in Houston to become the director of the Center Operations Directorate, and later served as the deputy director

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## Innovators

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Marshall's Video Image Stabilization and Registration technology, which was NASA's Commercial Invention of the Year for 2002, was demonstrated at the event by licensee Intergraph Government Solutions, a division of Intergraph Corp.

Walter Hussey, NASA Headquarters staff director for the Inventions and Contributions Board, noted the wealth of technical innovations being developed at Marshall. Hussey underscored the importance of reporting new technologies and explained the board's role in promoting technical innovations.

## New Technology Reporting Responsibility

NASA employees and contractors working under funded agreements with reporting clauses are required to submit their innovations. NASA recently implemented the Electronic New Technology Reporting (eNTRe) system, enabling simple, on-line new technology reporting at http://invention.nasa.gov.

In addition to making valuable contributions to NASA's mission, playing an important part in the Agency's technology transfer mission, and garnering prestige and peer recognition, there are a



Abbie Johnson, left, a paralegal specialist at Marshall, discusses pressure vessel innovations reported by Thomas Delay of the Engineering Directorate with Walter Hussey, staff director of the Inventions and Contributions Board at NASA Headquarters, during the recent Innovators Forum at the Center.

number of monetary incentives for employees to report their innovations. All innovations are potential candidates for NASA Space Act Awards.

## What are Space Act Awards?

The National Aeronautics and Space Act of 1958 that established NASA also created the Inventions and Contributions Board and NASA Space Act Awards. The National Aeronautics and Space Act authorizes "... a monetary award ... to any person ... for any scientific or technical contribution to the Administration which is determined to have significant value in the conduct of aeronautical and space activities. Each application for such award shall be referred to the Inventions and Contributions Board ... "

Theron M. Bradley Jr., NASA's chief engineer, chairs the Inventions and Contributions Board and its membership reflects NASA's finest technical talent, whose expertise covers more than 40 fields of science and technology. Marshall's Dr. Biliyar N. Bhat of the Metallic Materials and Processes Group in the Materials, Processes and Manufacturing Department of the Engineering Directorate, recently was selected as a member of the board.

# How Do You Receive a Space Act Award?

Since Space Act Awards reward scientific and technical contributions not required to be patentable — all award submissions are driven by a disclosure of the innovation through the appropriate channel. At Marshall, all invention disclosures are submitted to the Center's new technology representative, Susan

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Mike Tinker, left, discusses Space Act Agreements with Roger Pamsa, center, and Sandra Brown, right, during the Innovators Forum in Bldg. 4316.

# Meet Marshall's Dr. Alok Majumdar

**Celebrating Asian Pacific American Heritage Month** 

Editor's note: During May, the Marshall Star is highlighting some of the members of the Asian Pacific American community who work at the Marshall Center.

from the Equal Opportunity Office

r. Alok Majumdar has traveled a long way – from India to the United Kingdom and finally to Alabama, where he works in the Marshall Center's Thermodynamics and Heat Transfer Group in the Engineering Directorate. He is responsible for developing thermal-hydraulic analysis software for spacecraft and propulsion systems.



Majumdar

Majumdar has developed

software called Generalized Fluid System Simulation Program that can accurately model complex flow distribution in cryogenic propulsion systems in rocket engines. It has been used in many NASA programs, including the Space Shuttle Main Engine, International Space Station, Space Launch Initiative, Nuclear Propulsion, X-33 and X-34. GFSSP won the NASA Software of the Year Award in 2001.

Majumdar received his bachelor's and master's degrees in mechanical engineering from Calcutta University, India, in 1967 and 1969, respectively, and earned a doctorate at the university in 1975. He did his post-doctoral research in computational fluid dynamics and heat transfer at Imperial College of Science & Technology in the United Kingdom. He worked at the Central Mechanical Engineering Research Institute in India for eight years.

Majumdar came to the United States in 1980 with his wife, Krishna and daughter Bipasha. He first worked for CHAM of North America where he developed a CFD code for thermal performance analysis of cooling towers. He also worked for SRS Technologies where he worked on the Space Shuttle Main Engine Turbopump Bearing Project and Solid Rocket Motor redesign.

In 1989, Majumdar joined Sverdrup Technology as the supervisor of its Thermal Group, where he was responsible for developing thermo-fluid analysis codes to support the design of material processing furnaces for Space Lab. These efforts finally led to the development of GFSSP.

Majumdar joined the Marshall Center's Thermodynamics and Heat Transfer Group in 1999. He is the principal investigator of several technology projects for developing numerical algorithm and general-purpose software for analyzing thermofluid network systems. He also serves as a mentor for junior engineers, is a NASA Summer Faculty Fellow and mentors graduate students at the University of Alabama in Huntsville.

He has been serving as an adjunct professor at UAH since 1985, and has published more than 50 technical papers, filed one patent application and served on the Technical Committee for the American Institute of Aeronautics and Astronautics.

## Asian Pacific American Heritage Month events

he theme for this year's Asian Pacific American celebration is "Salute to Liberty" and will feature cultural foods, a fashion show and dance demonstration.

Daphne Kwok, executive director of the Asian Pacific American Institute for Congressional Studies, will speak at the main ceremony from 11:30 a.m.-1 p.m. in Morris Auditorium on May 28, followed by a Community Banquet in her honor at 6:30 p.m. at Tai Pan Palace at 2012 Memorial Parkway S.W. in Huntsville. Tickets for the banquet are \$12 for adults and \$7 for children. To reserve tickets, call Brenda Sands at 544-5032 or Diep Trinh at 544-6797.

Other events during the month include:

• Proclamation signing by Huntsville Mayor Loretta Spencer at 4:15 p.m. Wednesday at City Hall.

• Casual Conversation with Marshall Director Art Stephenson from 9:30-10:30 a.m., Bldg. 4200, Room P-110.

For more information, call Willie Love at 544-0088.

## Innovators

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Whitfield, of the Technology Transfer Department, at 544-1933. An invention disclosure is submitted using NASA Form 1679, "Disclosure of Invention and New Technology (including Software)," with on-line submission at http://invention.nasa.gov. Once a disclosure is received, a number of activities can occur in the life cycle of the process, including patenting and licensing. Inventors share in royalties that are generated from the licensing of patented technologies.

Space Act Initial Awards are given for:

← Publication in NASA "TechBriefs" magazine for selected reports - \$350 per author. The Technology Transfer Department manages the process of "TechBriefs" publication for the Center

✓ Software release - \$500 for each multiple contributor or \$1,000 for a single contributor

\$1,000 for a single contributor

These awards are initiated when warranted as part of the routine process by Marshall's Technology Transfer Department and the Patent Office. If selected for any initial award, innovators will be notified and the necessary payment information collected.

Based on the value of the contribution, both to NASA and the public, "Board Awards" in amounts up to \$100,000 also are available to individuals. Board Awards are the "next step" beyond an initial award and are initiated by the innovator. In order for a

technology to be nominated for a Board Award, an innovator must first submit the new technology disclosure. Formal board nominations can be submitted by innovators at any time - these are not annual awards - using NASA Form 1329, "Inventions & Contributions Board Award Evaluation Questionnaire" at http:// icb.nasa.gov/aeqchoice.html. These forms are submitted to Jim McGroary, Marshall's awards liaison officer, in the Office of the Chief Counsel at 544-0013. Annual "Software of the Year" and "Invention of the Year" awards are subcategories of these special, Agency-level awards, coordinated by the awards liaison officer during an annual Center call.

## **Other Awards**

Several other non-Invention and Contributions Board awards also are part of the available recognition for significant technical contributions, such as the Technology Transfer Awards presented at the Center's annual awards ceremony, the reporting awards recently recognized at the April 29 ceremony, and Space Technology Hall of Fame and Federal Laboratory Consortium awards.

McGroary, the Center's awards liaison officer, and Whitfield, the new technology representative, are available to answer questions on any information contained in this article.

For more information, go to http://nasasolutions.com and http://inside.msfc.nasa.gov/CCO/index.html. For more information on the Space Act Awards program, go to the Inventions and Contributions Board Web site at http://icb.nasa.gov/.

## Marshall employees who submitted new technology reports in 2002

**Center Operations Directorate** 

· Patrick Meyer

#### **Customer and Employee Relations** Directorate

Fred Schramm

#### **Engineering Directorate**

- Douglas Bearden
- Robert Kapustka
- Anthony Kelley
- Jeri Briscoe
- Eric Corder
- Jane Alexander
- David Howard • Dennis Smith
- Joseph Bell Ken Schrock
- Albert Johnston
- Michael Book
- · Thomas Bryan
- Joseph Gaines
- Drew Hall
- Richard Howard
- · William Ly
- Fred Roe
- John Weir
- Michael Tinker
- Raf Ahmed • Ken McCoy
- · David Edwards

- Robert Carter
- Jeff Ding
- Jonathan Lee Arthur Nunes
- Majid Babai
- Ken Cooper
- Thomas DeLay
- Michael Effinger
- James Johnston
- Mariea Dunn
- Jeremy Myers

#### **Flight Projects Directorate**

- Jonathan Campbell
- Donald Carter
- Donald Holder
- Tim Horvath
- Steve Chubb • Robert Gillis
- Jeff Lippincott
- James Rice
- Michelle Schneider
- Donna Sellers
- Christopher Sims
- Jim Whitaker

#### **Science Directorate**

- Tia Ferguson
- Ron Porter
- Ed Carrasquillo
- Richard Hagood

### · Richard Holmes

- Paul Luz
- Helen Cole
- · Kenneth Fernandez
- · Charles Darby
- · Craig Kundrot Marc Pusey
- Dennis Gallagher • Philip Stahl
- John Rakoczy
- Dennis Tucker

#### Space Transportation Directorate

- · Les Johnson
- Ed Semmes
- · Reginald Alexander
- Donald Chavers
- Richard Eskridge
- Michael Lee
- · James Martin Jon Pearson
- William Sims
- Richard Dabney
- Susan Elrod
- · Sandra Elam
- Huu Trinh
- Neill Myers
- Paul Patterson
- Doug Counter
- Jeff West
- Robert Williams
- · Richard Norman

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## Parsons

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of JSC. He returned to Stennis in 2001 to serve as director of the Center Operations and Support Directorate.

"I welcome the opportunity to work with Bill. He knows the space flight family and he knows the Space Shuttle program," said Michael C. Kostelnik, deputy administrator for the International Space Station and Space Shuttle programs at NASA Headquarters. "NASA is about the people who fly, fix, maintain and design our vehicles, and I know we've found a terrific leader to help guide the team through this difficult time."

"This is a critical position for the agency as we begin to focus our Return to Flight efforts in the wake of the Columbia tragedy," said NASA Administrator Sean O'Keefe. "The Space Shuttle Program, the entire space flight community, and the

nation will be served by Bill's great leadership. He will be missed by our colleagues at Stennis, but the benefits to all the NASA family will be tremendous."

Parsons began his career in the United States Marine Corps as an infantry officer, then worked as a manufacturing engineer and later as an aerospace engineer at Cape Canaveral Air Force Station in Florida.

In 1990, Parsons joined the NASA team at Kennedy Space Center as a launch site support manager in the Shuttle Operations Directorate, worked as an executive management intern, and later as the Shuttle flow director of the Shuttle Operations Directorate. In 1996, he became manager of the Space Station Hardware Integration Office at Kennedy.

"From the first time I saw a Space Shuttle launch, I knew I wanted to be a part of NASA and America's space exploration



**NASA Advisory Council member tours Marshall** Dr. Charles Kennel, right, chair of the NASA Advisory Council, holds a foam sample that is representative of External Tank insulation while Jon Sharpe, a Lockheed Martin engineer, gives an overview of a pending cryogenics-mechanical test supporting the STS-107 investigation. Kennel visited the Marshall Center last week.

efforts," Parsons said. "This is a challenging time for the program, but the people of NASA have a long, successful history of overcoming adversity. I'm proud to be a part of the Return to Flight effort and look forward to getting the Space Shuttle safely flying again."

Parsons has received numerous honors, including NASA's Exceptional Service Medal, the National Intelligence Medal of Achievement, the Silver Snoopy, a Center Directors' Commendation; and the Commandants Certificate of Commendation from the United States Marine Corps.

He graduated from the University of Mississippi with a bachelor's degree in engineering. He earned a master's degree in Engineering Management from the University of Central Florida.

Stennis Deputy Director Michael Rudolphi will serve as interim director until a permanent successor is named.

## Scientific community may get chance to study Shuttle Columbia debris

## Kennedy Space Center release

ASA's Kennedy Space Center has issued a Request for Information seeking organizations interested in using debris from the orbiter Columbia in researching the effects of reentry.

Scientific, academic and governmental organizations interested are asked to submit their requests by June 6, detailing their previous experience, plans for use of the orbiter debris, and the scientific benefits expected to be gained by their research.

"This is a general request to organizations outside the NASA family," said Mike Leinbach, Columbia reconstruction chairman and Shuttle launch director. "Through the efforts of outside researchers, we stand to learn a great deal regarding hypersonic and thermodynamic properties and their affects on spacecraft parts. This will greatly assist in the design and flight safety of future spacecraft." NASA also has requested input on how to best preserve and manage the debris from Columbia.

An RFI is intended to solicit information to help NASA decide how to proceed. It does not represent a commitment to making Columbia debris available to any person or organization.

Interested organizations should contact Steve Parker at the Kennedy Space Center Office of Procurement, by e-mail at Steve.Parker@nasa.gov or by calling 321-867-2928.

# America's first space station,

*Editors Note:* This year marks the 100<sup>th</sup> anniversary of the Wright Brothers flight at Kitty Hawk, N.C., in 1903. It also marks other important anniversaries related to aviation and space flight during the past 100 years, including the launch of Skylab.

by Mike Wright

hirty years ago, on May 14, 1973, NASA launched Skylab, the first American space station wholly dedicated to scientific research. It was a major milestone in the history of the Marshall Center and one in which the Center played an important role in this unprecedented scientific venture.

Skylab's three different crews spent up to 84 days in Earth orbit and performed more than 100 experiments. The Marshall Center developed the major Skylab components and the four Saturn vehicles used to launch the orbital cluster and its three separate crews. Marshall also was responsible for directing many of the experiments.

Marshall engineers designed the centerpiece component for Skylab, the orbital workshop, by converting a Saturn rocket stage into a habitable space module containing living quarters and support systems as well as experiment areas.

Marshall assignments also included the Skylab airlock module, docking adapter, and Apollo Telescope Mount — the first manned astronomical observatory designed for solar research from Earth orbit.

"All of the living quarters, plenty of food, all the water you needed, and all of the telescopes that would be used to study the Sun were mounted up where the lunar module would normally have gone on the Saturn V," said veteran astronaut Owen Garriott, who flew on skylab and later on the Shuttle.

The Saturn V was the rocket that flew Apollo missions to the moon.

The Marshall Center was responsible for investigations in materials processing and solar physics, and designed and built a series of Skylab biomedical experiments.

Marshall also served as the NASA interface for a series of Skylab experi-



ments proposed by students from across the country.

"Things went smoothly right up to and including the day of the launch," Garriott said.

Unfortunately, trouble soon arose. A huge panel protecting the orbital workshop from micrometeoroids and solar radiation ripped off seconds after launch. NASA had originally planned to launch its first three-man crew to Skylab on May 15 using a Saturn IB rocket. Faced with a crisis, however, NASA put those plans on hold. Rising temperatures inside the workshop and a crippled electrical power system dogged engineers at Marshall and at other centers. Some Marshall employees stayed at their posts day and night looking for immediate and long-term solutions. Hundreds at the Center, at Skylab contractor sites, and at other NASA field centers were involved in a relentless 10-day effort to identify repair procedures and equipment that the astronauts eventually carried into space and used to save Skylab.

> "Then, after they understood the problem, they had to say, 'How can I fix it?' They had to build the apparatus to do it," Garriott said. "They had to test it. They had to get it all prepared for flight, get it to (Cape Kennedy) and load, and that was all done within 10 days."

> Skylab's first crew, astronauts Charles Conrad Jr., Paul J. Weitz and Joseph P. Kerwin, went into space on May 25, 1973, and returned home on June 22. A second crew was launched on July 28 and splashed down on Sept. 25. Repair procedures were part of both missions, but attention also focused on the scientific data that Skylab gathered. For example, the second mission, with astronauts Garriott, Alan

L. Bean and Jack R. Lousma, orbited a pair of common spiders, Arabella and Anita. The experiment was designed to determine the spiders' ability to spin a web without the influence of gravity. It was one of the student experiments coordinated by the Marshall Center for Skylab.

The third manned Skylab crew, astronauts Gerald P. Carr, William R. Pogue, and Edward G. Gibson, went into space on Nov. 16, 1973, and splashed down in Feb. 1974, setting a new endurance record of 84 days and reflecting man's ability to live and work in space for

# Skylab, launched 30 years ago

extended periods of time.

As an orbiting workshop, Skylab was a major space and scientific milestone in the history of NASA.

"We could see the sun in ways that simply were not possible before for long periods (at) ultraviolet and X-ray wavelengths," Garriott said of the solar telescopes that were employed on the mission. Garriott said other information gleaned from Skylab included the "focus on human adaptation and the ability to work for long durations in weightlessness."

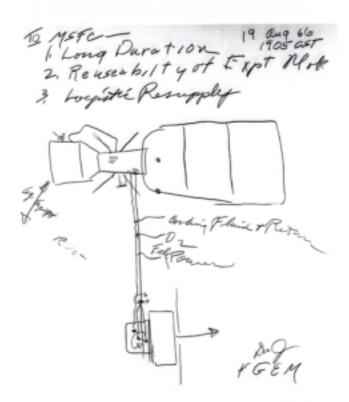
The Marshall Center also provided key support in managing Skylab's reentry. Commands on July 11, 1979, caused the workshop to enter its final tumble and end its flight. As a result, Skylab passed over the east coast of North America and fell harmlessly over the Australian outback and the Indian Ocean.

Today, veterans of Skylab remember the program fondly. Marshall retiree Rein Ise, who managed Skylab's Apollo Telescope Mount, summarized the views of many by saying that Skylab was the "highlight of anybody's career that was associated with it."

The writer is the Marshall Center historian. Quotations by Owen Garriott are from an oral history interview conducted for NASA on Nov. 6, 2000, by Kevin Rusnak of the Signal Corp. in Houston.



A modified Saturn V launches Skylab into orbit on May 14, 1973.



During a visit to Huntsville in August 1966, Dr. George Mueller, then NASA's associate administrator for the Office of Space Flight, made this initial sketch of what would eventually become Skylab.



Skylab in orbit, July-September 1973.

## Huntsville students featured in NASA education video series <u>'NASA CONNECT' venture may motivate careers -- into acting</u>

by Grant Thompson

hen thinking about NASA education programs, the importance of science and math may likely be your first thoughts.

But for some Huntsville middle school students participating in the NASA education video series called "NASA CONNECT," those thoughts could change as they set their sights on Hollywood's "silver screen" or the New York stage.

On May 13, students from Randolph School and Williams Technology Middle School in Huntsville gathered for a sneak preview of a 30-minute production - in which they are the "stars" - of NASA CONNECT. It's goal: to enhance the teaching of math, science and technology to middle school students. The award-winning series, seen by more than 7 million students in over 7,600 schools, airs across the country on PBS affiliates, cable access stations and NASA TV.

The segment with Huntsville "actors," premiering nationwide May 15, will help viewers understand Sir Isaac Newton's first, second and third laws of gravity and how they relate to NASA's efforts in developing the next generation of space transportation. Like all the CONNECT segments, the episode is accompanied by a Web-based educator's guide describing hands-on and Web activities to supplement its themes.

"NASA CONNECT gives teachers and students hands-on lessons to apply what they are learning in the classroom," said Tammy Rowan, an education specialist at the Marshall Center. "It production of the taped segment began last fall, Smith's students "played themselves" during filming of their science class.

Randolph drama students auditioned for their parts. Three were cast to interact on camera with NASA CONNECT host Jennifer Pulley at the U.S. Space & Rocket Center in Huntsville, and to appear throughout the episode.

"Working on NASA CONNECT gave my students experience working with a camera and crew," said Connie Voight, Randolph's drama teacher. "You don't usually associate NASA with acting, but for my students the experience could motivate them toward careers in math and science - and possibly into acting or video production."

Produced from NASA's Langley Research Center in Langley, Va., the CONNECT series has won numerous awards, including recognition at the 2002 International Film and Video Festival for creative excellence. The series has also been awarded six regional Emmys, including the award for children's programming from the Washington, D.C., chapter of the National Academy of Television Arts and Sciences.

For more information about NASA CONNECT visit the Web site at: http://connect.larc.nasa.gov/index.html.

The writer, an employee of ASRI, supports the Media Relations Department.

involves the student in a total learning experience that enhances the student's ability to think critically. The hands-on learning enables students to apply not only what they have learned, but more importantly, the process of learning, to various life situations."

In the fall 2002, Williams' math teacher Vicki Smith, who had previously worked with the Marshall Center's education department and the NASA CONNECT series, was chosen to participate in the segment on Newton's laws of gravity.

"The idea for the segment parallels what scientists are working on at Marshall," Smith said, "so it seemed an appropriate thing for schools in Huntsville to be part of."

NASA CONNECT producers then decided to feature Smith's students in the segment - students to whom she'd taught other NASA CONNECT lessons. When



Marshall team helps Drake celebrate excellence

J.F. Drake State Technical College in Huntsville recently celebrated four decades of educational excellence. Marshall team member Calvin Drake, left, has taken several computer courses at the school while Charles Gamble, right, is a graduate of the college. They flank Drake College President Helen McAlpine, center.

## President's **Management Agenda** on NASA Web site

by Scott N. Pace

ASA's new Web site for the President's Management Agenda (PMA), "Steps to Green," is available at http://www.hq.nasa.gov/ office/codea/pma.

"Steps to Green" features messages from NASA Administrator Sean O'Keefe and NASA Deputy Administrator Fred Gregory, as well as NASA's Action Plan for Implementing PMA and status from each of five NASA "Champions" - as of March 31 — and much more.

The President's Management Agenda is a bold strategy for improving the management and performance of the federal government. The Agenda contains five core strategic management initiatives to improve federal management and deliver results that matter to the American

people: Strategic Management for Human Capital; Competitive Sourcing; Improved Financial Performance; Expanded Electronic Government; and Budget and Performance Integration.

Learn more about NASA's progress toward implementing the

President's Management Agenda by visiting "Steps to Green" at http://www.hq.nasa.gov/office/codea/pma.

The writer is the NASA deputy chief of staff.

## For Agency employees

# **NASA Family Assistance Fund created**

NASA Headquarters release

ASA Administrator Sean O'Keefe has announced the formation of the NASA Family Assistance Fund.

The fund was created in response to numerous requests of Agency employees to support the families of STS-107 and other NASA families during their times of need.

Formed in cooperation with the Federal Employee Education and Assistance Fund (FEEA), the NASA Family Assistance Fund will provide need-based financial assistance and educational assistance to the families of the seven Columbia astronauts, as well as to other families of NASA personnel who die as the result of personal injuries suffered in the performance of their official duties.

The money collected will be used to satisfy current expenses, with the primary goal of guaranteeing the education needs of the Columbia crew's 12 children as well as the children of other NASA personnel who die as the result of personal injuries suffered in the performance of their official duties.

NASA employees, if they choose, may designate their contribution for all the Columbia families, for a particular

Columbia family or family member, or for some other NASA family or family member.

<sup>2</sup>hoto by Doug Stoffer, NASA/Marshall Center

Employees interested in contributing to the NASA Family Assistance Fund can donate online, by mail or by telephone.

To contribute online, go to http:// www.nasa.gov/about/overview/ AN FAF.html. To contribute by mail, send a check to FEEA NASA FUND, 8441 W. Bowles Avenue, Suite 200, Littleton, Colo. 80123-9501. To make a donation by telephone, call the FEEA at 303/933-7580 or 800/338-0755.

Contractor Excellence Award

Jacobs Sverdrup Technology Inc. was named the 2002 winner of the Marshall Center Contractor Excellence Award in the large business, service category. Marshall Associate Director Axel Roth, right, presents the award to Jacobs Sverdrup President Roger Starr, left, and Lon Miller, center, vice president and general manager of the company's Huntsville operations.

## Obituaries

Margaret Brooks Alexander, 75, of Decatur, died May 6. Funeral services were held May 9 at Roselawn Chapel in Decatur with the Rev. Bill Compton officiating. Burial was in Decatur City Cemetery with Roselawn Funeral Home directing.

Alexander was born Aug. 28, 1927, in Decatur to Thomas Donovan Brooks and Mary Hodges Brooks. She was a graduate of the University of Alabama and was a chemist for seven years with Union Carbide Corp. in Oakridge, Tenn. At the time of her death she was employed at the Marshall Center where she had worked for 42 years as an aerospace engineer. She was one of the first women engineers at the Marshall Center. Her work included analysis of meteorological data for the Apollo and Space Shuttle programs and she served as editor for many NASA technical publications.

She is survived by her husband, Joel S. Alexander of Decatur; and one sister, Frances B. Harper of Decatur.

**Charles Osgood Brooks Jr., 77,** of Estill Springs, Tenn., died May 9. Memorial services will be at 3 p.m. Saturday at First Baptist Church in Huntsville.

Brooks was a U.S. Navy veteran of World War II and retired from the Marshall Center in 1984 as director of Reliability and Quality Assurance. He is survived by his wife, Susie Brooks; one son, Charles O. Brooks III; two daughters, Candice Kennedy and Amy Torgerson; and four grandchildren.

Valerie "Vicky" Lee Shelton, 50, of Ryland, died May 4. Funeral services were May 7 at Spry Funeral Home in Huntsville with Bill Cantrell officiating. Burial was in Shiloh Cemetery in Huntsville with the funeral home directing.

Shelton was born Dec. 8, 1952, to Bill Young and Joyce Ashley Young. She was a member of Shiloh Methodist Church and worked at the Marshall Center for more than 15 years.

She is survived by one son, Ronald Young of Huntsville.

## Job Announcements

**MS03N0085,** AST, Electrical Power Systems. GS-850-14, Space Shuttle Propulsion Office, Solid Rocket Booster Project, Kennedy Space Center Residential Office. Closes May 19. Contact: Edwina Bressette, 544-8115.

**MS03N0087,** AST, Experimental Facilities Development. GS-801-13, Center Operations Directorate, Facilities Engineering Department, Planning & Business Management Group. Closes May 21. Contact: Dana Blaine, 544-7514.

**MS03N0088,** Program Support Specialist. GS-301-13, Center Operations Directorate, Facilities Engineering Department, Planning & Business Management Group. Closes May 21. Contact: Dana Blaine, 544-7514.

**MS03C0089,** AST, Environmental Control Systems. GS-861-14, Flight Projects Directorate, Flight Systems Department, ECLSS Group. Competitive Placement Plan. Closes May 22. Contact: Carolyn Lundy, 544-4049.

**MS03C0090,** AST, Aerospace Flight Systems. GS-861-14, Flight Projects Directorate, Flight Systems Department, Nodes 2/ 3 Program Group. Competitive Placement Plan. Closes May 22. Contact: Carolyn Lundy, 544-4049.

**MS03C0091,** AST, Mission Operations Integration. GS-861-14, Flight Projects Directorate, Payload Operations and Integration Department, Payload Operations Director's Office. Competitive Placement Plan. Closes May 22. Contact: Carolyn Lundy, 544-4049. **MS03C0092,** AST, Mission Operations Integration. GS-861-14, Flight Projects Directorate, Payload Operations and Integration Department, Payload Operations Director's Office. Competitive Place Plan. Closes May 22. Contact: Carolyn Lundy, 544-4049.

**MS03C0093,** Administrative Officer. GS-341—07 (Promotion potential to GS-11), Flight Projects Directorate, Business Management Office. Competitive Placement Plan. Closes May 22. Contact: Carolyn Lundy, 544-4049.

**MS03C0094,** Integrated Financial Management Advisor. GS-501-13 (Promotion potential to GS-14), Center Operations Directorate, IFM Integration Office. Competitive Placement Plan. Closes June 2. Contact: Dana Blaine, 544-7514.

**MS03N0096,** Lead Human Resources Specialist. GS-201-13, Customer and Employee Relations Directorate, Human Resources Department. Closes May 16. Contact: Mack Blackman, 544-7509.

## Special thank you

Thank you to the Marshall family for all of the phone calls, prayers and visits during our daughter's recent hospitalization and recovery at home.

— Dawn Christian Space Transportation Directorate

# Dial-in and VPN require security registration

Marshall team members who use the Virtual Private Network software to connect to the Marshall Private Network, or who dial directly into the network from home or TDY, must apply for a MSFC RSA SecurID Token in May or June. For more information, including frequently asked questions and an updated schedule to apply, go to http:// www1.msfc.nasa.gov/INSIDE/announcements/dial\_in\_token.html.

## **Thrift Savings Plan season open**

The Thrift Savings Plan open season closes June 30 for employees wanting to begin, increase or decrease, contributions to their account. For more information, see "Inside Marshall" or call 544-5654 or 544-7536.

# MARS ballroom dance lessons available

The MARS Ballroom Dance Club will be teaching the fox trot to beginners and intermediates on Mondays in May excluding Memorial Day, and on the first Monday in June. Intermediate classes are from 7-8 p.m. and beginners from 8-9 p.m. at St. Stephens Episcopal Church on Whitesburg Drive. Cost is \$6 per person, for each lesson, but free for dance club members. For more information, call Woody Bombara at 650-0200.

## Trade studies and decisionmaking course will be June 18-19

A trade studies and decision-making course for civil servants will be June 18-19 in Bldg. 4200, Room G-13E. Registration is through AdminSTAR. For more information, call Tina Smith at 544-7834.

## Management Operations Office retirees to meet

Management Operations Office retirees will meet for breakfast at 10 a.m. May 22 at the Cracker Barrel Restaurant in Madison.

## **Center Announcements**

## Shuttle Buddies to meet

The Shuttle Buddies will meet at 9 a.m. May 26 at Mullins Restaurant on Andrew Jackson Way. For more information, call Deemer Self at 881-7757.

# Student Launch Initiative event is Saturday

The Student Launch Initiative will be 10 a.m.-1 p.m. Saturday at Army Test Area 1 at Redstone. Area high school teams will be launching rockets and payloads they designed and built under mentorship from Marshall engineers. Transportation from the U.S. Space & Rocket Center begins at 9:15 a.m. Everyone attending must have their badges or a photo ID. Updated launch information is available at 544-4500.

# Buckle-Up Awareness Day is Tuesday

A s part of National Buckle-Up Awareness Week, Marshall Safety and Health Action Team members will be handing out literature, key chains and pens at major exit points from the larger buildings at the Center from 3-4:30 p.m. Tuesday. The goal is to raise awareness on the importance of seat belt safety when driving.

## Friday is 'Bike to Work Day'

"Ride en Masse to Work" begins at 7 a.m. Friday as part of "National Bike to Work Day." Marshall team member Jamie Miernik will lead the 8mile, 30-minute ride from the Runner's Parking Lot off Airport Road to the Marshall Center. Participants can park their vehicles at the lot, which is near the entrance to the Huntsville Municipal Golf Course and then bicycle to work. Helmets are mandatory. Miernik also will lead a "Tour d'Arsenal Bike Ride" at 5 p.m. Tuesday. The ride will roughly follow the historical railroad route around the southern part of the Arsenal, making a loop along Dodd, Buxton and Patton roads. A highlight of the 18-mile bicycle tour is a unique path through NASA's West Test Area and the Wheeler Wildlife

Refuge. The tour begins at Marshall's Exchange Fitness Center on Morris at Digney Road and will last for about one hour. For more information, call Miernik at 544-6534.

## AIAA awards dinner is May 22

The American Institute of Aeronautics and Astronautics Alabama-Mississippi Section Awards Dinner will be at 5:30 p.m. May 22 at the Radisson Suite Hotel at 6000 South Memorial Parkway in Huntsville. The 2003 Section Awards and installation of officers will highlight the event. Cost is \$20 for adults and \$10 for students. For reservations, call Tom Hancock at 722-5555 or 961-4002 by noon Tuesday.

# Cystic Fibrosis walk-a-thon set for Saturday

The Alabama Chapter for Cystic Fibrosis will have a walk-a-thon to help fund research. The event begins at 2 p.m. Saturday at the University of Alabama in Huntsville near the duck pond. Check-in begins at 1 p.m. The Decatur chapter also will hold a walk at 10 a.m. Saturday at Delano Park in Decatur. For more information, call Paige Vaughn at 883-6821.

# Stamp show honors 50th anniversary of Redstone launch

The Huntsville Philatelic Club will sponsor its 36th annual stamp show May 31-June 1 at the Tom Bevill Center at the University of Alabama in Huntsville. Show hours are 10 a.m.-5 p.m. May 31 and 10 a.m.-4 p.m. June 1. Admission is free. A special philatelic cover and postal cancellation featuring the Redstone rocket will be available at the show. For more information, call Kathy Campbell at 881-0941.

For more Center Announcements, see "Inside Marshall"

## **Employee Ads**

Miscellaneous ★ New 15-speed DBX Mt 1000 men's bicycle, \$50. 883-5543

★ Big Wheel riding toy, \$15; children's bicycle, \$20; hair dryer, hard-bonnet, new, \$20. 776-9165

★ Dinette table w/4 chairs, wrought iron w/glass top, \$150. 256-883-5454

- ★ Queen Anne wing back chair, \$35; Samsonite luggage, two large pieces, rollers, \$42 each. 256-837-0786
- ★ Aluminum extension ladder, 28', Type

III. 353-4922

★ Samsonite card table, 35"x35", 4 chairs, \$20; Westingthouse roaster/stand, \$50; Ladies Murray bike, \$25. 881-6025

★ AKC German Shepherd puppies, 4-months old, 2-males, black & tan, shots, \$300. 256-694-5912

★ Two Alabama Farewell concert tickets, B'ham Oak Mountain Amphitheater, 6/21/ 03, \$100. 881-1230

★ Silver Roosevelt dime set, 1946-1964, in holder, \$30; old silver dollar, \$15. 256-883-5114

★ Antique ornamental fireplace frame w/ coal grate, \$50; Nordic-Trac Walk-Fit manual treadmill, \$75. 256-883-6416

★ Wagner Professional Power paint roller, used one time, \$80 obo. 971-1511

★ Jenny Lind baby crib w/Kolcraft mattress, \$75. 858-0272 evenings/468-9874 cell

★ MTD shredder, 5HP, \$125. 457-1130/ 534-2408

★ Aquarium, 10-gallon, two gold fish, power filter & accessories, \$10. 881-4148 ★ Medela Pump-in-Style electric dual breast pump, all accessories/attachments, manual included, \$125. 461-8314

★ Vinyl shutters, new-in-box, louvered, one-pair/15"x55", 4-pairs/15"x75", Alcoa Vintage, Blue #41, \$75. 256-837-6109

★ Nerf bars, new, fits 94-99, 4-door,

Chevy Tahoe/Suburban, \$75. 527-0545 ★ Set of 36 cards, 1992 Limited Edition McDonald's Maxx NASCAR, \$30. 256-593-7207

★ Small painted wood desk w/7 drawers, \$50; corner shelves to match, \$15. 533-4824

★ Motorcycle helmet, open face, white, M2R brand, \$40; Pistol Crossbow, new arrows included, \$45. 325-6000

## MARSHALL STAR

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> Manager of Internal Relations and Communications — Steven Durham Editor — Jonathan Baggs

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★ Thirty electrical motors, 1/6-1HP, 1&3 phase, \$90 for all. 890-0302
★ Pool table, 8', 1" slate, Kasson, Victorian style, 2 yrs. old, \$1,890. 880-6563 \* Boys 12" bike, \$25; Little Tykes bicycle trailer, \$50; Little Tykes table/ chairs, \$20. 721-0540  $\star$  Sandstone area rug, 10x15, \$45; Kenmore trash-compactor, \$50; Rasmussen 30" gas logs, \$280. 852-2219 ★ 1984 Honda V065 Magna, 1100cc, 12K miles, adjustable backrest, luggage rack, wind screen, \$2,700. 256-774-3348

★ Wedding gown w/train/veil, size 6, \$190; long red halter evening gown, size 5, \$60. 881-8674

★ Electric range, black & white, 3 yrs. old, \$100. 881-2131

★ Yamaha upright piano with bench, Walnut finish, \$2,500. 837-5580 after 5 p.m

★ Washer/dryer, \$200; refrigerator, \$100; \$250 for all three. 771-7045

★ ATV with lockable aluminum toolbox and ramps, galvanized frame, \$500. 683-9364

★ Ralph Lauren valances, unopened, "Cape May", blue/white stripe, 84"x15", \$20 each. 776-9165

★ Jet Skis: 1993 Waveblaster and 1991 VXR 650, plus trailer, \$2,800. 479-1650

★ 1996 SeaDoo SPX jet ski w/trailer, \$2,500. 256-931-4144.

★ Assault pellet rifle, one-pump clip-fed, folding stock, sling, about 650 fps. Never used. \$65. 306-0700

#### Vehicles

★ 1991 GMC Suburban diesel, Banks Turbo, Michelin tires, white/gray, 178K miles, \$4,995. 881-0749 ★ 2002 Nissan Maxima Se,4-door. ★ 2002 Nissan Maxima Se,4-door, automatic, spoiler, 17" wheels, 45K highway miles, \$17,000. 205-466-7718 ★ 1969 Chevrolet Caprice, 4-door hardtop, 350/300HP, garage kept, one-owner, all original, \$9,500. 256-883-6416 ★ 1995 GMC Serria Z71, ext. cab, new tires, garage kept. 931-937-6518 ★ 2002 Green Toyota Caprix SE 4 door ★ 2002 Green Toyota Camry SE, 4-door, x 1002 Gran (1997) and Champy DL, 4004, 31K miles, automatic, CD, Tires-for-Life program, \$16,000. 694-0478
 ★ 1993 Lexus ES300, dark green, tan leather, moon roof, 98K miles, \$6,850.

883-7088/337-6166

- ★ 1989 GMC Vandura \_ ton custom van, \$3,500. 256-565-6192
- ★ 1994 Jeep Cherokee Limited, V8, towing package, fully loaded, 105K miles,

\$7,800. 464-8960 ★ 1994 Toyota T100 1/2-ton pickup,

black, second-owner, 197K miles, \$4,500. 830-0854

★ 1997 Nissan Maxima SE, 4-door sedan, 83K miles, white, alloy rims, automatic, CD, \$9,990. 881-8674

★ 2001 Isuzu Rodeo LSE, 2WD, all-power, leather loaded, 38K miles,

- \$16,500. 256-829-1296
- ★ 1999 Ford Ranger XLT Sport, supercab, 4-door, 6-cyl., CD, power windows/locks, bed cap, \$9,300. 859-0729

★ 1989 Ford Bronco, Eddie Bauer, 351/ V8, new paint, well maintained, \$4,900. 534-8146

★ 1993 Nissan Sentra SE-R, black, 148K miles, one-owner, auto, sunroof, CD,

\$3,000. 461-6302

★ 1998 Ford Explorer Limited, 4x4, 72K miles, loaded, moonroof, one-owner, \$12,500. 653-9124/534-7791

★ 1996 Chevy extended-cab K2500 truck,

white, high mileage. 990-1509

★ 1998 Ford Ranger XLT, extended cab, 4-cyl., 5-speed, AM/FM/CD, 49K miles, \$8,500. 882-5363

#### Wanted

 $\star$  Bolens garden tractors, running or not, also implements. 533-4244 ★ Set of factory cast aluminum 15" wheels for a 1989 GMC. 829-5409 ★ Flat bed trailer, 6' to 10', one-axle. 256-931-5581 after 5 p.m.  $\star$  Old turkey calls, box calls, etc. 156-572-1011

#### Free

 $\star$  Pine poles for building; white oak log; Tulep popular oak log. 881-6040 ★ Three kittens, 6-weeks old; gray tabby, solid black, black w/white feet. 828-3668

#### Found

★ Several items left in TDY vehicles, taxis, and vans. Call Logistics Services, 544-4565, to identify

Permit No. G-27 ASAN CIA9 2997 & 9057209 *QRADNATS TROS-3RP*  **MARSHALL STAR** 12