Managers to set launch date for Shuttle Atlantis

STS-117 to build on experience of two previous missions, continue construction of International Space Station

By Sanda Martel

NASA managers are meeting May 30-31 at the Kennedy Space Center, Fla., for a Flight Readiness Review, where they will select the launch date of Space Shuttle Atlantis for its STS-117 mission to the International Space Station.

The traditional meeting held before each shuttle launch allows top NASA managers and engineers to determine whether the shuttle’s complex array of equipment, support systems and procedures are ready for flight, and to assess any risks associated with the mission.

June 8 has been the targeted launch date for Atlantis’ 11-day mission since its March 15 launch was delayed when a February 26 hail storm passed over the pad at the Kennedy Space Center.

See Launch on page 6

Rocket motor test helps NASA’s Shuttle and Ares I

By Sanda Martel

NASA’s Space Shuttle Program successfully fired a reusable solid rocket motor May 24 at a Utah test facility. The two-minute test provided important information for continued shuttle launches and for development of the rocket that will carry the next human spacecraft to the moon.

The static firing of the full-scale, full-duration flight support motor was performed at ATK Launch Systems Group, a unit of Alliant Techsystems Inc. in Promontory, Utah, where the shuttle’s solid rocket motors are manufactured.

The flight support motor, or FSM-14, burned for approximately 123 seconds, the same time each reusable solid rocket motor burns during an actual space shuttle launch. The Marshall Center’s Reusable Solid Rocket Booster Project Office manages these tests to qualify any proposed changes to the rocket motor and to determine whether new materials perform as well as those now in use.

“Full-scale static testing such as this is a key element of the ‘test before you fly’ standard and ensures continued quality and performance,” said Jody Singer, manager of the Reusable Solid Rocket Booster Project, part of the Space Shuttle Propulsion Office at Marshall.

The May 24 test provided data on numerous process, material and design changes planned for future missions.
Ann McNair appointed director of Marshall’s Office of Center Operations

Ann McNair has been appointed to the position of director of the Marshall Center’s Office of Center Operations.

McNair has served as acting director of the office since September 2006. In this position, she is responsible for all institutional services at Marshall, including environmental engineering, logistics, facility maintenance and operations, technical information and operations, protective services, occupational medicine and food services.

McNair began her NASA career with Marshall after receiving a degree in mathematics and physics from the University of Alabama in Tuscaloosa. Since her initial appointment as a mathematician in Marshall’s Aeroballistics Laboratory, McNair has held several key managerial positions at the center. Prior to assuming her current position, she served as manager of the Mission Operations Laboratory. From 2000 to 2004, McNair was manager of the Ground Systems Department in the Flight Projects Directorate, and from 1993 to 2000, she was assistant director of the Mission Operations Laboratory.


Appointed to the Senior Executive Service in February 2000, McNair holds the distinction of being the first female supervisor in engineering at Marshall. She played a prominent role in developing innovative, new and advanced technologies and processes in the areas of information systems, payload operations and ground control systems that are still in use today.

McNair has authored several technical papers and has been recognized with numerous awards, including three NASA Exceptional Service Medals, a Center Director’s Commendation, and several group achievement and special service awards.

Digna Carballosa joins Marshall as deputy director of the Office of Human Capital

By Sherrie Super

Digna Carballosa has been named deputy director of the Office of Human Capital at the Marshall Center. She will help lead the organization that oversees organization and leadership development, academic affairs, training and incentives, workforce strategy and planning, federal labor relations, and employee services and operations.

Carballosa joins NASA from the U.S. Office of Personnel Management in Washington, where she worked for nearly 13 years beginning in 1993. Most recently, she was an operations supervisor, with responsibilities that included leading a team of 20 human resources and consulting professionals who worked to transform human capital managers in seven federal agencies and to hold them accountable for managing their workforce effectively and efficiently. These agencies included the Department of Homeland Security, Department of Transportation, Department of the Treasury, Department of Justice, Department of Housing and Urban Development, General Services Administration, and the Department of Commerce.

From 1999 to 2003, Carballosa was an Office of Personnel Managements human capital officer, serving federal agencies that included the Department of Homeland Security, Department of Housing and Urban Development, Small Business Administration, Securities and Exchange Commission, and General Services Administration.

In that capacity, she worked to streamline hiring processes, modify and certify performance appraisal systems, and improve workforce analysis and planning. She served as a compliance auditor in the Office of Personnel Management from 1999 to 2003, and a performance management specialist from 1994 to 1999.

During her tenure at the Office of Personnel Management, Carballosa earned several awards, including the National Association of Hispanic Federal Executives Excellence in Public Service Award, superior performance awards and two director’s awards for excellence. She has contributed to several professional publications on topics ranging from performance management to human capital assessment and accountability.

Carballosa earned her bachelor’s degree in international affairs in 1992 from Florida International University in Miami. A native of Cuba, she and her husband live in Athens with their two sons.

The writer, an ASRI employee, supports the Office of Strategic Analysis and Communications.
Creatively showing NASA’s mission on paper

Marshall’s in-house duplicating facility brings latest technology to its customers

By Jessica Wallace

Forty years ago, if copies of a document were needed and the Marshall Center’s in-house duplicating facility was called for assistance, a hot oven would be one of several required tools for the task.

Now, with a computer and a push of a button, the facility — part of Marshall’s Applications, Web & Multimedia Services Office in the Office of the Chief Information Officer — can produce documents immediately with the latest advancements in technology.

From reproduction to photography to developing Web sites, the Applications, Web & Multimedia Services Office is crucial to the Marshall workforce and every organization in the center.

“We’re really two diverse teams,” said Sheila Fogle, the office’s supervisor. “The applications and Web team is responsible for development and maintenance of applications and Web sites, such as the Centerwide Action Item Tracking System, or CAITS, and “Inside Marshall.” The multimedia services team is responsible for reproduction, graphics, publications, Marshall’s TV studio, and imaging, which is the center’s photo lab.”

The office works to provide the best customer service possible as it manages many areas and serves a large group of Marshall team members. Investing in technology such as its in-house duplicating facility has given the multimedia services team the ability to accept last-minute projects, yet quickly turn them around because of the speed of its equipment.

“The first color machine we purchased was around 1994,” said Becky Caneer, Marshall’s printing and copying manager. “It produced seven copies a minute. Now our machines produce 60 color images a minute. For black and white copies, it is possible to get 115 copies a minute. We have been able to take advantage of the technology to deliver good-quality products for the center. With the quick response of our equipment and our duplicating facility team, we can satisfy our customers’ requirements.”

In successfully meeting the customers’ needs, the multimedia services office helps smooth the path for Marshall employees to support Marshall’s mission. It is not uncommon for the duplicating facility to be in full operation at 6 a.m. to complete a project for an 8 a.m. center meeting. “When I came to Marshall in 1964, things were a bit different,” said Bruce Weaver, reproduction supervisor. “What now takes us a few hours, would have taken us days before we had the technology we do today.”

In the past, all documents were printed on presses. Master film — a negative film used for printing large quantities — was typed on a waterproof sheet and placed in a small oven for a few minutes to fuse the image to the sheet. If photos or images were part of the document to be printed, the masters were developed in a darkroom. Once a master was ready for printing, it was coated with a solution and placed on a cylinder in the printing press and the number of documents needed were printed. With each passing year, new systems were created to allow quicker printing.

“Now, computers and electronic files have changed printing completely,” said Weaver. “Customers can send us their files and expect products in a few hours. Electronic files are sent directly to a printer, which has its own workstation for calibrating digital color. A selection of bindings can ensure a document or presentation looks top-notch. With our state-of-the-art technology and ability to print on demand, we are supporting Marshall customers and the mission more efficiently than ever before.”

While technology enhancements can improve quality of work, keeping up with the updates can be a challenge to the duplicating facility employees — a challenge that is met through constant training. Learning to use new equipment and software and applying them to customer needs has allowed the in-house facility team to continually improve on the ability to deliver products to Marshall customers when needed. The facility is currently producing 17 million copies a year.

Security issues are another challenge for the multimedia service office. Ensuring that sensitive documents are properly handled is a task that is under control. “If it’s necessary, we allow the customer...”

See Duplicating facility on page 8
Thirty selected for Space Flight Awareness honors

Thirty Marshall Center employees and contractors are being honored for their significant contributions to the space program. The honorees are attending a special recognition event in Orlando on June 5-8. There will be an awards ceremony in their honor, and they will tour Kennedy Space Center and view the launch of STS-117, targeted for June 8.

Ronald D. Beshears
Engineering Directorate

Robyn A. Brick
Engineering Directorate

Kevin Depew
Science & Mission Systems Office

Laura Dominguez
CI Travel

Luis A. Duarte
Engineering Directorate

William R. Feltner
Engineering Directorate

Mark A. Foshee
Computer Sciences Corp.

Robert Fowler
Hernandez Engineering

Mercedes C. Galloway
Engineering Directorate

Efrem J. Hanson
Office of Procurement

David A. Herda
Shuttle Propulsion Office

Donald W. Holder Jr.
Engineering Directorate

Amy G. Keith
Office of Center Operations

Kenneth D. King
Office of the Chief Financial Officer

June Malone
Office of Strategic Analysis & Communications

Sharon M. Manley
Teledyne Brown Engineering

Rondal C. Mize Jr.
Engineering Directorate

Joseph J. Pelfrey
Science & Mission Systems Office

Kevin C. Plank
Office of Human Capital

LaTonya S. Powell
Office of the Chief Information Officer

John B. Rector
Safety & Mission Assurance Directorate

Donna Robinson
Morgan Research Corp.

Jose Román
Exploration Launch Projects Office

Jeffrey D. Sexton
Exploration Launch Projects Office

See Space Flight Awareness on page 5
Chris Singer assigned as deputy director of Marshall’s Engineering Directorate

Chris Singer has been assigned to the position of deputy director in the Marshall Center’s Engineering Directorate.

As deputy director, Singer will assist the director in leading the organization responsible for the design, testing, evaluation, and operation of hardware and software associated with space transportation, spacecraft systems, and science instruments and payloads under development at Marshall. Singer had shared the deputy director responsibilities since 2004 with Teresa Vanhooser, who has been named deputy manager in the Marshall Center’s Exploration Launch Projects Office.

Throughout his 24-year NASA career, Singer has established himself across the agency and the nation as an expert in propulsion technology. He championed many enhancements to the Space Shuttle Main Engine that significantly increased payload capacity and improved the operational efficiency of the shuttle. Singer has held several key managerial positions, including deputy director of the Space Transportation Directorate; chief engineer for the Space Transportation Directorate; assistant SSME program manager; and SSME Propulsion Systems team lead. As senior SSME manager on detail to NASA Headquarters’ Space Shuttle Support Office, he concurrently served as executive secretary for a congressionally mandated committee of experts responsible for SSME improvements and safety.

Singer received a Presidential Rank Award for Meritorious Service in 2005. This year, he received a Stellar Award from the Rotary National Award for Space Achievement for “unwavering pursuit of innovative approaches to mitigate critical debris sources from propulsion elements and enable the safe return to flight of the space shuttle.”

Singer earned a bachelor’s degree in mechanical engineering in 1983 from Christian Brothers University in Memphis, Tenn.

Teresa Vanhooser named deputy manager of Marshall’s Exploration Launch Projects Office

Teresa Vanhooser has been assigned to the position of deputy manager in the Marshall Center’s Exploration Launch Projects Office.

In her new position, Vanhooser will be responsible for assisting the manager in the overall project management of NASA’s Ares I and Ares V launch vehicles, which will transport the Orion crew exploration vehicle into space and deliver unmanned cargo payloads to space.

Vanhooser succeeds Dan Dumbacher, who has been appointed director of Marshall’s Engineering Directorate. Previously, she was co-deputy director of the Engineering Directorate with Chris Singer.

Vanhooser has a strong technical background, extensive experience in program and project management, and a long history of involvement in the design, development and operation of space systems.

In 2006, Vanhooser was awarded the Presidential Rank Award for Meritorious Service — the highest honor attainable for federal government work. She has the distinction of being the first female mission manager for Spacelab missions and of having orchestrated an unprecedented night launch of the ATLAS-2 mission.

Vanhooser earned a bachelor’s degree in industrial engineering from Tennessee Technological University, Cookeville, Tenn., in 1980, and a master’s degree in administrative science and project management from the University of Alabama in Huntsville in 1986.
Launch

Continued from page 1

Space Center. The vehicle’s external tank, ET-124, was damaged by hail as the vehicle was being prepared for launch and had more than 4,000 damage sites requiring repair. Work on the tank was completed May 11.

The launch window for the STS-117 mission remains open through July 19, although July 3-19 is still under review. STS-117 is the 21st shuttle mission to the space station.

The STS-117 mission will continue construction of the space station and build on lessons learned from the two most recent shuttle missions in 2006, STS-115 in September and STS-116 in December. The STS-117 crew will install new solar arrays and retract an existing array on the space station.

Objectives of the STS-117 mission also include external installation of the hydrogen vent assembly of the Marshall-managed oxygen generation system. Plans call for mission specialists to install the assembly on the outside of the Destiny Laboratory on flight day eight during the third extravehicular activity, or EVA, of the mission. Activation of the system may occur in July after the STS-117 mission is complete.

The oxygen generation system was delivered to the space station during the STS-121 mission in July 2006. The Boeing Company provided integration and interfaces for its installation in the Destiny Laboratory.

Engineers at Marshall’s Engineering Directorate provide technical support to the project, while the Advanced Environmental Control and Life Support Systems group in Marshall’s Science and Mission Systems Office leads the project.

The 17.5-ton S3/S4 truss segment to be delivered and installed is part of the station’s girder-like backbone and is a mirror image of the P3/P4 truss installed during the STS-115 mission in September.

The new truss segment includes a set of 240-foot photovoltaic solar arrays that, when unfurled, will provide additional power for the station in preparation for the delivery of international science modules during the next two years. The truss also contains a Solar Alpha Rotary Joint, or SARJ, which will rotate 360 degrees clockwise or counterclockwise to position the S4 and S6 solar arrays to track the sun.

Processes to activate the SARJ were modified after STS-115. During that mission, difficulties were encountered with software associated with the gears within the joint, and spacewalking astronauts had trouble loosening bolts during its structural preparation. Software to control the SARJ was updated, and the spacewalkers now will carry another tool, called a torque multiplier, to help remove any bulky launch restraints.

The STS-117 mission also includes the retraction of the starboard solar array, known as 2B, on the P6 truss atop the station, which would otherwise interfere with the rotation of the new starboard arrays. The retraction prepares the P6 truss for its relocation to the outboard port side of the station later this year.

Frederick Sturckow, a U.S. Marine Corps colonel, will command STS-117. Pilot Lee Archambault, an Air Force colonel, joins Sturckow in the shuttle’s cockpit. Mission specialists James Reilly II, Patrick Forrester, Steven Swanson and John D. Olivas round out the crew.

Expedition 15/16 flight engineer Clayton C. Anderson will get a ride to the station aboard Atlantis, replacing Expedition 15 flight engineer Sunita L. Williams, who will return from the space station aboard Atlantis. Anderson will return home aboard Discovery on mission STS-120 later this year.

Spacewalks are planned on flight days four, six and eight. Each spacewalk is estimated to last six-and-a-half hours. Mission specialists Jim Reilly and Danny Olivas will conduct the first and third spacewalks. Mission specialists Patrick Forrester and Steven Swanson will conduct the second. This will be Reilly’s third spacewalk and Forrester’s second. Olivas and Swanson will be conducting their first spacewalks.

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

Obituary

Charles A. “Charlie Brown” Williams, 81, of New Hope died Nov. 30. He retired from the Marshall Center in 1986 as a mechanical engineer technician.

James E. Hatfield Jr., 65, of New Market died Dec. 20. He was a current employee of the Marshall Center where he worked as an electrical systems engineer. He is survived by his wife Sarah Sharpe Hatfield.

Tulon Bullock, 80, of Athens died May 14. He retired from the Marshall Center in 1995 as an aerospace engineer. He is survived by his wife, Gwen H. Bullock.

Bennie Shultz Jr., 75, of Huntsville died May 15. He retired from the Marshall Center in 1995 as an aerospace engineer. He is survived by his wife, Irmgard Shultz.

Hilmar W. Haenisch, 78, of Huntsville died May 21. He retired from the Marshall Center in 1989 as an engineer. He is survived by his wife, Sue Flippo Haenisch.
The shuttle's reusable solid rocket motor is the largest solid rocket motor ever flown, the only one rated for human flight and the first designed for reuse. Each shuttle launch requires two reusable solid rocket motors to lift the 4.5-million-pound shuttle. The motors provide 80 percent of the thrust during the first two minutes of flight. Each motor, just over 126 feet long and 12 feet in diameter, generates an average thrust of 2.6 million pounds. It is the primary component of the shuttle's twin solid rocket boosters.

During a shuttle launch, the rockets take the shuttle to an altitude of 28 miles at a speed of 3,094 mph before they separate and fall into the ocean. Then they are retrieved, refurbished and prepared for another flight.

Regular static-fire tests of the motors help maintain the highest safety, quality and reliability standards of solid rocket motors used for human spaceflight. Engineers conduct approximately 110,000 quality-control inspections on each motor designed for flight.

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

### 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**

Antique walnut sewing cabinet, $40; antique platform rocker, $100; ornate table base, $80. 679-1910

Bonny Style 603 wedding dress with veil, never worn, $600obo. 410-1733

Formal chairs, $195 each; four-drawer file cabinet, $20; headboards, $65 and $25. 683-7015

Wii interactive game system with baseball, golf, bowling, tennis and boxing games, $310. 828-1234

Black entertainment center, 36 inches, storage space, $75 obo. 684-4883

2.5 gallons of Martin Senour latex paint interior, soft pale yellow, $25. 35-0348

Seagate external hard drive, 160GB, USB 2.0, NIB, $75obo. 227-0671

Yamaha electric keyboard, $25; 35mm Pentax camera, $15; electronic dartboard, six darts, $10. 348-9381

Ladies’ Fleet Street trench/raincoat, zip lining, size 8P, $15; electronic dartboard, six darts, $10. 348-9381

Sony DVP-NS75H single disc DVD player w/HDMI, three 2.5 gallons of Martin Senour latex paint interior, soft pale yellow, $25. 35-0348

Ladies’ Fleet Street trench/raincoat, zip lining, size 8P, $15; electronic dartboard, six darts, $10. 348-9381

2004 Altima 2.5S, 5 speed, silver exterior, gray interior, $7,500. 426-5764

1995 Mini Cooper S, chili red, automatic, paddle shifters, $4,500. 682-7165

1998 Ford Expedition Eddie Bauer Edition 4x4, 104k miles, $9,995. 498-3864

1998 Ford F150 XLT, AC, cruise, extended cab, matching camper shell, $5,500. 572-0047

2006 Saturn Sunfire 4-door, 5 speed, AC, stereo, $1,600. 682-7165

1996 Ford Winstar, green, 153k miles, $2,500; 1995 CAD Deville, BLK, $2,400; 1994 Cougar, maroon, 102k miles, $2,600. 520-9318

1995 Maxum 2300SC cuddy cabin sport cruiser boat, $10,800. 468-1999

1993 Stratos 264V, 115hp, new tires, trolling motor, electronics, $4,500. 883-1003

1989 18-foot Procraft Fish/Ski, 150 hp Johnson, trolling motor, depth finder, trailer. 302-6783
John Horack, manager of Marshall’s Science and Mission Systems Office, and Herb Shivers, deputy director of the Safety and Mission Assurance Directorate, have been honored with the 2007 Alumni of Achievement distinction by The University of Alabama in Huntsville Alumni Association.

The Alumni of Achievement Award recognizes UAH graduates who exemplify the high standards of the university through their professional and personal accomplishments.

Horack leads the day-to-day operations of Marshall’s Science and Mission Systems Office, comprising more than 250 employees, and is responsible for conducting advanced, complex research to expand general scientific knowledge that furthers NASA’s mission to explore the solar system.

Horack was appointed in 2006 to the Senior Executive Service, the government personnel system covering top managerial positions. He graduated from Northwestern University in Evanston, Ill., in 1987 with a bachelor’s degree in physics and astronomy. He earned a master’s degree in 1992 and doctorate in 1993 in physics from UAH. He was named a UAH College of Science Distinguished Alumnus last year.

As deputy director of the Safety and Mission Assurance Directorate, Shivers is responsible for safety, reliability and quality assurance of the full range of Marshall Center programs, projects and institutional services in support of NASA’s mission goals.

This includes space shuttle, space station, space exploration, and Marshall facility safety and quality activities. He also provides technical and managerial guidance associated with related engineering, scientific and program management activities.

In 2006, Shivers was appointed to the Senior Executive Service. He holds three degrees in industrial and systems engineering, including a bachelor’s from Auburn University in Auburn, Ala., in 1975; a master’s from Texas A&M University in Texarkana in 1976; and a doctorate from UAH in 1997.

Duplicating facility

Continued from page 3

to stay with the document during production. If the customer is unable to stay, we ensure security by restricting access to our production area,” said Caneer.

Through the years, the duplicating facility has contributed to unique projects, such as creating blank journals for NASA astronauts to take up in space and producing Flight Readiness Review documents. “We used to print blank books on special tear-resistant paper for the astronauts that they used to keep a record of everyday occurrences in space,” said Weaver. “When the astronauts returned, we reproduced the books.”

“The reproduction team works hard to make sure printing is accomplished efficiently and with good quality control,” said Fogle. “I frequently get e-mails from people across the center thanking us for a quick turnaround and a good quality product. I appreciate my team’s dedication to their customers.”

“In my 40 years at Marshall, it has been interesting to witness the changes in technology because that ultimately changes the way the center operates,” said Weaver, who retires May 31. “I have enjoyed my time here and I look forward to seeing continued advancements in technology as time goes by. It can only get better!”

For in-house duplicating facility printing information, contact Dorothy Wilson at 544-9486.

The writer, an ASRI employee and Marshall Star editor, supports the Office of Strategic Analysis and Communications.