National Aeronautics and Space Administration

MARSHALL STAR

Serving the Marshall Space Flight Center Community

March 18, 2010

Marshall Center got its name 50 years ago this week

Gen. George C. Marshall

By Mike Wright

Fifty years ago this week on March 15, 1960, President Dwight Eisenhower announced a name for the NASA facility that the administration and Congress had agreed to establish in Huntsville, Ala. Eisenhower named the new facility the George C. Marshall Space Flight Center in honor of Gen. George C. Marshall, Army chief of staff during World War II.

Both Marshall and Eisenhower were architects of the Allied victory over Germany in Europe. Following the war, Marshall had once again risen to prominence as a top American statesman and the designer of what became known as the "Marshall Plan" for rebuilding Europe.

(Go to http://www.nasa.gov/centers/marshall/history/ to see a Marshall 50th anniversary Web site that will include an expanding collection of photos, articles, documents and more as the anniversary year continues at Marshall.)

In an executive order issued on March 15, 1960, Eisenhower stated

*See **Marshall** on page 5*

Technology journey – materials science from space to Earth

By Janet Anderson

The first American research sample processed in the International Space Station's Materials Science Laboratory was opened for study March 16 at the Marshall Space Flight Center.

The Materials Science Laboratory, a furnace facility housed in the new Materials Science Research Rack, was developed and is operated by the European Space Agency aboard the space station. The research rack was developed and built at the Marshall Center.

The first sample cartridge returned to Earth contains an aluminum silicon alloy that was melted and resolidified on orbit. The experiment was controlled by commands from the ground and monitored by scientists David Poirier, Robert Erdman and Matthew Goodman from the University of Arizona in Tucson. Scientists will compare the sample to an Earth-based recreation of the experiment conducted by Surendra Tewari of Cleveland State University in Ohio. Tewari will join the Arizona team to analyze and dissect the sample from orbit.

Research conducted in the environment of microgravity, such as that found aboard the space station, enables scientists to understand the relationships among the processing, structure and properties of a variety of materials. The goal of studying materials processing in space is to develop a better understanding of the chemical and physical mechanisms involved. Scientists look at these relationships to understand how to improve processing techniques and control defects when materials are

*See **Sample** on page 6*

NASA managers will meet March 26 to set launch date for next mission

By Sanda Martel

NASA managers will meet March 26 at Kennedy Space Center, Fla., for the traditional agency-level Flight Readiness Review for the STS-131 mission and to set the launch date for space shuttle Discovery.

The target launch date is April 5 at 5:21 a.m. CDT.

Conducted prior to each space shuttle mission, the meetings allow 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. The review also determines the readiness of the flight crew and payloads.

A multi-purpose logistics module filled with science racks managed by the Marshall Space Flight Center will be delivered to the International Space Station during the mission. (Look for details about the racks in a coming issue of the Marshall Star.)

STS-131 astronauts, from left, are Mission Specialists Rick Mastracchio and Stephanie Wilson; Commander Alan Poindexter; Mission Specialist Dorothy Metcalf-Lindenburger; Pilot Jim Dutton; and Mission Specialists Naoko Yamazaki and Clayton Anderson.

Commander Alan Poindexter will lead the STS-131 mission. Jim Dutton will serve as the pilot. Mission Specialists are Rick Mastracchio, Clay Anderson, Dorothy Metcalf-Lindenburger, Stephanie Wilson and Naoko Yamazaki of the Japan Aerospace Exploration Agency.

Mastracchio and Anderson will conduct three spacewalks to replace an ammonia tank assembly, retrieve a Japanese experiment from the station's exterior and switch out a rate gyro assembly on the space station's truss. The assembly is an electronics box that helps the space station determine and maintain its flight attitude in space.

STS-131 is the 33rd shuttle mission to the space station.

The remaining shuttle missions include STS-132, targeted to launch May 14; STS-134, targeted to launch July 29; and STS-133, targeted to launch Sept. 16.

For more information about the STS-132, visit http://www.nasa.gov/shuttle.

Martel, an AI Signal Research Inc. employee, supports the Office of Strategic Analysis & Communications.

Obituaries

Harold Wainscott, 90, of Huntsville died Feb. 2. He retired from the Marshall Center in 1979 as an administrative services officer. He is survived by his wife, Adreene Wainscott.

James William Zahnd, 86, of Huntsville died Feb. 13. He retired from the Marshall Center in 1984 as an air conditioner mechanic. He is survived by his wife, Jewell Faye Zahnd.

Jerry Franks, 78, of Athens died Feb. 14. He retired from the Marshal Center in 1981 as an electronics engineer. He is survived by his wife, Dot Franks.

Keith Coates, 72, of Madison died Feb. 14. He retired from the Marshall Center in 1993 as a supervisor aerospace engineer. He is survived by his wife, Jamie Coleman Coates.

Evelyn Clark, 90, of Sulfur Springs died Feb. 17. She retired from the Marshall Center in 1982 as a stenographer secretary.

NASA's Aerospace Safety Advisory Panel visits Marshall Center

By Jessica Wallace Eagan

NASA's Aerospace Safety Advisory Panel visited the Marshall Space Flight Center on Feb. 23-24 to independently evaluate Marshall and NASA activities that have the most significant potential to directly or indirectly impact the safety of the NASA astronauts, employees and contractors, and programs and missions.

Established in 1968 by Congress after the Apollo I command module spacecraft fire Jan. 27, 1967, the panel is an independent group of experts that advises NASA on ways to improve safety based on observation of NASA operations.

"Marshall is a national treasure," said retired Navy Vice Adm. Joe Dyer, member of the panel and executive vice president and general manager of the iRobot Corporation's Military Government & Industry Division in Bedford, Mass. "It has energy, and is unabated with changing times." (Unabated is defined as "to continue on without losing any strength.")

Other members of the panel include John Frost, principal of Safety Engineering Services in Huntsville; James Bagian, director of the National Center for Patient Safety for the U.S. Department of Veterans Affairs in Washington; Deborah Grubbe, president and owner of Operations and Safety Solutions LLC in Philadelphia; John Marshall, independent aviation consultant in Atlanta; Joyce McDevitt, systems safety consultant at Johns Hopkins University's Applied Physics Laboratory in Laurel, Md.; Donald McErlean, senior director for Federal Programs with L-3 Communications, Integrated Systems Group in Waco, Texas; and George Nield, associate administrator of Commercial Space Transportation for the Federal Aviation Administration in Washington. The Headquarters executive director is Katherine Dakon, and the administrative officer is Susan Burch.

For more information about the panel, visit http://www.hq.nasa.gov/office/oer/asap/index.html.

Eagan, an AI Signal Research Inc. employee and the Marshall Star editor, supports the Office of Strategic Analysis & Communications.

Marshall Director Robert Lightfoot, right, welcomes panel members to Marshall, including John Frost, center, and retired Navy Vice Adm. Joe Dyer.

Members of Program Development, Advanced Systems Office invited to reunion

Team members and retirees who were a part of the Marshall Space Flight Center's Program Development directorate and the Advanced Systems Office are invited to a reunion from 5:30 to 10 p.m., March 23, at the Knights of Columbus Hall, 3053 Leeman Ferry Road in Huntsville. The cost is $5 and is due at the door. Spouses and dates are welcome. Please bring a small hors d'oeuvre.

Program Development was formed in 1969 with Dr. William Lucas as its director. In 1974, Lucas was named the fourth Marshall Center director. The organization led in the design and development of projects and programs such as the space shuttle, Hubble and Chandra telescopes, and Spacelab – a reusable laboratory flown on the shuttle.

The Advanced Systems Office was formed in 1965. It was instrumental in planning the uses of Apollo and Saturn V capabilities. Mars flybys and landings also were studied, along with advance concepts such as reusable launch vehicles.

For more information, contact Stan Fuller at 544-1503 or at foy.s.fuller@nasa.gov.

MARS Soccer Club games to start March 22

MARS Soccer Club games will start March 22 at the Army soccer field on Patton Road. Participation in the club is available to NASA civil service employees and contractors. The registration fee is $15. Games will be played

Monday, Tuesday and Thursday at 5:30 p.m.

For questions, contact Andy Heaton at 544-3839 or at andrew.f.heaton@nasa.gov, or Victor Collazo Perez at 544-6581 or victor.m.collazo-perez@nasa.gov.

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, March 25, is 4:30 p.m. Thursday, March 18.

Miscellaneous

Sauna, two person, CD/radio, five ceramic heaters, $850 obo. 337-2450

La-Z-Boy recliner/rocker, brown leather, $400. 694-0880

Sportscraft foosball, trailer to pull behind motorcycle, pics available. 651-2944

Four tickets to INDY 500 race, May 30, $95 each. 679-8003

Government issue parachute, $50. 527-8116

Two tickets to BTL'S Jazz with Wynton Marsalis, March 25, Row S, $50 each. 337-9902

Yamaha grand piano, 5'3", GH-1 series, black high polish, $7,250. 931-625-0671

Engagement ring, 2.32 total carat weight, 1.32 carat oval center stone, have appraisal, $3,800. 527-3723

Wilson Di5s golf clubs, SW 4 Iron, Wilson T-7, driver 3, hybrid and putter, $225. 653-2742

Apple iPhone 3G- 8GB, $225. 457-5173

Oak dining room set, table, six chairs, large china cabinet, buffet, $1,200. 684-4147

Graco double stroller, $35. 783-3428

AKC chocolate Labs, three males, two females, 7 weeks old, 1st shots. 878-5847

Playstation 3 game, Little BIG Planet, Game of the Year edition, rated E, $40. 828-1234

360 games, Grand Theft Auto IV, Prototype, Armored Core, Assassin's Creed II, $30 each. 777-7746

Petco vehicle pet barrier, companion door for access to pet, adjustable, fits all SUVs, $60. 882-0461

Vehicles

2008 Honda CBR 600RR8, orange, silver, black, 1,100 miles, $7,000. 505-2418

2007 Ford Five Hundred Sedan Limited, loaded, navigation system, $10,800. 931-4144

2007 Mini Cooper S, six speed, sports options, factory warranty, 25k miles, $18,495. 426-3124

2005 Hybrid Honda Accord, 255HP, navigation, loaded, 3 years left on comprehensive warranty, $16,400. 464-9871

2005 BMW 525i, dark blue, tan leather, sunroof, BMW CPO warranty, 81k miles, $16,900. 233-2090

2005 Ford Five Hundred Sedan Limited AWD, leather, moon roof, loaded, 45k miles, $12,000. 651-8264

2005 Harley Davidson V-Rod, custom exhaust added, chrome additions, 6,600 miles, $9,950 obo. 777-5924

1998 Stingray RS180, new 140HP, bowrider, bimini covers, fish/ski, seats 7, ski equipment. 640-6427

1995 Ford Mustang GT, red, black interior, 225k miles, $1,200. 479-8536

1995 Lincoln Towncar, princess silver, $5,000. 852-4109

1992 GMC diesel pickup truck, white, 150k miles, $3,300 or will trade for tractor. 379-4010

1985 Ford F-150, 4X4, SW-base, hunter green, tan interior, chrome wheels, new engine/tires, $2,950. 259-1523

Wanted

Boom box with CD player. 777-8229

Found

Red scarf with paisley print, Building 4200 south parking lot, Feb. 22; pair of round wire rimmed men's glasses, Building 4200, second floor men's room, March 9. 544-4680

Shuttle Buddies to meet March 22

The Shuttle Buddies will meet at 8:30 a.m. March 22 at Mullins Restaurant on Andrew Jackson Way. For more information, call Deemer Self at 881-7757.

that he had selected the name for the new NASA field center because the "late general of the Army, George C. Marshall, devoted his life to the service of his country and to the advancement of the cause of peace throughout the world."

On the same day that Eisenhower issued his Executive Order naming the new center, NASA Administrator Thomas K. Glennan issued NASA Announcement 105. "The George C. Marshall Space Flight Center will be composed of the personnel and facilities now assigned to the Development Operations Division of the Army Ballistics Missile Agency, which will be transferred to NASA on July 1, 1960." Glennan added that the Army Ballistics Missile Agency division had been directed by Dr. Wernher von Braun – who would become Marshall's first director – and had "pioneered in the field of military missile development and space research." Glennan also noted that the "Von Braun team had placed America's first satellite in orbit" in January 1958.

Of course, the March 15 announcements by Eisenhower and Glennan were far from spontaneous. The center became operational on July 1, 1960, and was dedicated on Sept. 8, 1960. However, the steps toward the center's creation began on Jan. 14, 1960. On that day, the president officially informed Congress that he planned to transfer the Development Operations Division of the Army Ballistic Missile Agency in Huntsville to NASA.

In his message to Congress, Eisenhower said he had recently reviewed "the needs and requirements" of NASA and the U.S. Department of Defense including the space agency's "responsibility for the nation's program of space exploration" and the Department of Defense's responsibility for the "development and operation of space vehicles for defense purposes." Eisenhower believed that both agencies needed launch vehicles.

However, the question involved which agency would have responsibility for "boosters for space vehicles greatly exceeding the thrust of any boosters now available." Eisenhower favored NASA since he saw "no clear Department of Defense requirement for such very large boosters." As part of his message to Congress, the president added, "For this reason, I assigned sole responsibility for the development of space vehicle boosters of very high thrust to NASA last November."

On Jan. 14, 1960, however, Eisenhower addressed what he called the "pertinent arrangements" for NASA to carry out its mission. "This can be done by transferring to NASA the Development Operations Division of the Army Ballistic Missile Agency and certain supporting personnel." Unless Congress objected, the transfer plan would become effective in 60 days.

Gen. George C. Marshall

On the local level, the Huntsville Times predicted the transfer plan would provide jobs for more than 4,800 other Army employees who would join NASA. In addition, the newspaper stated, "NASA would receive title to more than $86 million worth of buildings, land and equipment at Redstone Arsenal, plus $14 million worth to be shared with the Army at Cape Canaveral, Fla." In the months that followed Eisenhower's Jan. 14 transfer proposal, Congress held hearings but eventually accepted Eisenhower's plan. On Feb. 3, 1960, Albert F. Siepert, director of business administration for NASA, articulated NASA's plans for the transfer in a 14-page document labeled "NASA Release No. 60-121." Siepert pointed out that when NASA began operations in 1958, the agency had absorbed the 43-year old National Advisory Committee for Aeronautics. Advisory committee personnel provided NASA with "an immediate competence in various fields of aeronautical and space research." However, Siepert said that NASA "was lacking…adequate competence in the design, construction and operation of space vehicles and in the related fields of advanced guidance and control, communications, tracking and data reduction." This, he said, formed the basis of NASA's decision to acquire the von Braun team in Huntsville.

> "The George C. Marshall Space Flight Center will be composed of the personnel and facilities now assigned to the Development Operations Division of the Army Ballistics Missile Agency, which will be transferred to NASA on July 1, 1960."
>
> *— Thomas K. Glennan*
> *First NASA administrator*

In July 1960, those Army employees who had decided to join NASA were officially sworn in as NASA employees. On Sept. 8, 1960, the president traveled to Huntsville where he officially dedicated the new NASA center as the George C. Marshall Space Flight Center in honor of his fellow World War II military leader, Gen. George C. Marshall.

Wright is the Marshall Center historian in the Office of Strategic Analysis & Communications.

Sample

Continued from page 1

manufactured here on Earth. Understanding how to optimize the processing of materials can lead to enhanced materials which result in innovations such as increased speed in computers, improved fiber optics and medical breakthroughs to cure disease.

Scientists know that gravity interferes with the formation of crystals when melted alloys flow into casts on Earth. With the sample processed on the space station, however, they hope to find an improved version of the alloy.

"Our objective is to optimize the processing of materials today and create innovative materials with enhanced properties for the future," said Dr. Frank Szofran, a microgravity materials science project manager and discipline scientist in Marshall's Materials and Processes Laboratory. "The goal of studying materials and substances in space is to develop a better understanding of thermal and chemical properties. Equipped with this knowledge, we can reliably predict conditions that are vital to develop improved materials on Earth."

"Materials science applies the theoretical framework of physics and insights from the fields of chemistry, engineering, mathematics and computer science to build links between structure, processing and properties," said Dr. Francis Chiaramonte, program executive for physical sciences at NASA Headquarters in Washington. "These links can lead to the improvement of the properties of known materials, such as steel or silicon, and the development of new materials."

The Materials Science Research Rack is a cooperative effort between the Marshall Center and the European Space Agency. Marshall has played a lead role in developing international partnerships through the management of science missions, such as the materials science rack, for the space station and the center's heritage in managing more than 20 Spacelab missions.

Rhonda Lash, a materials engineer at Marshall, prepares the first U.S. sample cartridge for X-ray.

For more information about science on space station, visit http://www.nasa.gov/mission_pages/station/science.

Anderson is a public affairs officer in the Office of Strategic Analysis & Communications.

MARSHALL STAR

Vol. 50/No. 25

Marshall Space Flight Center, Alabama 35812
256-544-0030
http://www.nasa.gov/centers/marshall

The Marshall Star is published every Thursday by the Public and Employee Communications Office at the George C. Marshall Space Flight Center, National Aeronautics and Space Administration. Classified ads must be submitted no later than 4:30 p.m. Thursday to the Marshall Public and Employee Communications Office (CS20), Bldg. 4200, Room 102. Submissions should be written legibly and include the originator's name. Send e-mail submissions to: intercom@msfc.nasa.gov
The Star does not publish commercial advertising of any kind.

Manager of Public and Employee Communications: Dom Amatore
Editor: Jessica Wallace Eagan

U.S. Government Printing Office 2010-623-044-00040

www.nasa.gov

PRE-SORT STANDARD
Postage & Fees PAID
NASA
Permit No. 298