



'We bring people to space — We bring space to people'

Celebrating 40 years of excellence

Marshall Center celebrated its 40th anniversary last Thursday with a myriad of events, including a visit from Apollo 17 astronaut Gene Cernan, a Perspectives Forum sponsored by the Marshall Association and a time capsule ceremony.

The day's events reflected on Marshall's accomplishments over the past 40 years, and looked forward to the next 40.

"The Marshall team worked hard to plan this ceremony for the Center," said

See photos on pages 6, 7, 8

Center Historian Mike Wright, who chaired the 40th anniversary celebration committee. "Without all the help we received from across the Center, this celebration would not have been possible."

Following a tribute to Marshall's namesake, Gen. George C. Marshall, by the 283rd U.S. Army Band from Fort Benning, Ga., Cernan shared stories from his days as an Apollo astronaut and the last human to walk on the Moon. For the

Marshall Association's Perspectives Forum, Center Director Art Stephenson was joined by former directors and key Marshall leaders in a panel discussion that encompassed the four decades of Marshall history.

Lunch in the Bldg. 4200 Courtyard preceded the time capsule event, which will leave Marshall's 40-year legacy to a future generation that will open the capsule in 2035.

In the afternoon, cake was served while the Latin Rhythms band performed.

Center Director makes 35-year forecast for Marshall progress

Editor's note: The following comments were made by Center Director Art Stephenson during the 40th anniversary time capsule ceremony Sept. 21.

Good Afternoon — I trust you enjoyed this morning's activities with Apollo 17 astronaut Gene Cernan and the panelists on the Perspectives Forum, sponsored by the Marshall Association.

As we close this time capsule this afternoon, I cannot help but wonder about the people three-and-a-half decades from now who will be opening this time capsule. What legacies will we have left behind? When this time capsule is opened in 2035, on the Center's 75th anniversary, many of our children will already be retired.

With some trepidation, I have decided to give myself the task of forecasting our future in space — reflecting on what we will have accomplished 35 years from now. I consulted with some of the Center experts, but I decided not to force them to put their names on this forecast. I take full responsibility for this forecast.

Attempting such undertakings, however, brings to mind some of the perils of performing long-distance forecasting. For example,

• At the end of the 19th Century, Charles H. Duell, U.S. Commissioner of Patents, made the recommendation to close the patent office — on the basis that everything that could be



Photo by Doug Stoffer, NASA/Marshall Space Flight Center

Community leaders, from left, Madison Mayor Chuck Yancura, Madison County Commissioner Mike Gillespie, Huntsville Mayor Loretta Spencer, and U.S. Reps. Jim Haney and Sue Schmitz of Alabama join Marshall Center Director Art Stephenson to place city, county, state and federal proclamations into the 40th anniversary time capsule Sept. 21 at Marshall. The capsule will be opened in 2035, when Marshall celebrates its 75th anniversary.

invented had been invented.

• By mid-century, in 1949, "Popular Mechanics" predicted that "computers in the future may — perhaps weigh only 1.5 tons."

• And more recently, we find that, according to an internationally renowned computer guru, "640K of memory ought to be enough for anyone" — this from Bill Gates in 1981.

See 2035 on page 6



Marshall Center begins Combined Federal Campaign charitable drive Oct. 5

by Marianne Higgins

Two local television personalities will help employees at Marshall kick off the annual Combined Federal Campaign charitable drive Oct. 5.

WAFF-TV news anchor Liz Hurley will give the keynote address, and fellow newswoman Lee Marshall also will speak. The event, with its theme "Care Enough to Share Enough," will be from 9-10 a.m. in Morris Auditorium.

Liz Hurley has served on the board of directors for several non-profit organizations, and as a breast cancer survivor, is well known for her support of breast cancer awareness and research. October is Breast Cancer Awareness Month. Lee Marshall works frequently with the American Cancer Society and also sings at many community events. She will perform the National Anthem at the campaign kickoff.

Current and retired federal employees and on-site contractors participate in the Combined Federal Campaign each fall. The fund-raising effort benefits thousands of non-profit organizations in Huntsville

and the surrounding area, plus nationwide and internationally.

Following the kickoff, a showcase highlighting charities in line to receive Combined Federal Campaign support will be held at the Army's Sparkman Center on Redstone Arsenal from 10:30-11 a.m. This year's goal at Marshall is to raise \$435,000 between Oct. 5 and Nov. 17.

"Marshall employees historically are great participants in the campaign," said Roslin Hicks, the campaign's executive director and an engineer at Marshall. "Last year, we exceeded our goal by \$32,000. That gives me confidence that we'll have no trouble reaching our goal again this year."

The six-week campaign includes a speaker series – when presentations are made to the Marshall community by various charities – and tours of the charities so employees can see first-hand how contributions are put to use.



Hurley



Marshall

"My goal as chairwoman is to make Marshall employees more aware of the needs in our community," said Hicks. "We're doing this by including more agencies in our speaker series and by arranging tours to more agencies for our employees. We're also extending our community service day activity into a series of days, so more employees have a chance to volunteer."

The speaker series will be Oct. 10-Nov. 3, and tours will be Oct. 17-19.

The writer, employed by ASRI, supports the Media Relations Department.

Space Transportation Day

New-generation technologies focus of daylong event

by Deana Nunley

Long-life rocket engines, space sails and the status of NASA's technology demonstrators are among topics to be discussed in October when the Marshall Center hosts "Space Transportation Day 2000: Risk Reduction for the Next Generations."

The second annual Space Transportation Day and technology workshop will be Oct. 11-12 at Marshall.

NASA will showcase cutting-edge technologies aimed at strengthening the U.S. space launch industry by dramatically improving safety, reliability and cost of future space transportation systems.

"Innovative technology development is at the heart of the space transportation revolution, and it's essential for government, industry and academia to exchange the latest technology ideas and achievements," said Dr. Row Rogacki, director of Marshall's Space Transportation Directorate. "Space Transportation Day is designed to update recent technology accomplishments."

Technology areas to be discussed include intelligent vehicle health management systems, Space Shuttle upgrades, airframes, thermal protection systems, launch vehicle operations, upper stages, propulsion, in-space transportation systems and research.

The morning session on Oct. 11 will be an overview of space transportation, followed by breakout sessions for technical presentations. Admission is free and open to the public. Marshall employees are welcome to attend pending space availability. Interested employees must visit the "ST Day 2000" Web site Oct. 2-4 to register. Only registered employees will be admitted.

As NASA's premier organization for development of space transportation and propulsion systems, the Marshall Center is developing revolutionary technologies that promise a new age of space exploration. These innovative technologies will dramatically increase safety and reliability and reduce the cost of space transportation.

The writer, employed by ASRI, supports the Media Relations Department.

Center to house NASA employees

Former astronaut Garriott named NSSTC interim director

by Sherrie Super

Dr. Owen K. Garriott has been named interim director of the newly created National Space Science and Technology Center in Huntsville.

Garriott will be responsible for managing the national science laboratory until a permanent director can be found, said Dr. Ron Greenwood, director of the Space Science and Technology Alliance.

“Dr. Garriott provides the knowledge and experience that is necessary to move this research facility from an embryonic beginning into a productive resource for NASA and its partners,” Greenwood said. “He has a strong background in space science and has held positions in government, industry and academia. Dr. Garriott will be able to draw on all of those experiences as he provides leadership for this important research center.”

The National Space Science and Technology Center is located in a 120,000-square-foot facility in Huntsville’s Cummings Research Park. A 60,000-square-foot laboratory annex is planned next year. The facility will house approximately 450 people from NASA, other government agencies, academia and private industry.

The Marshall Center’s space science and technology expertise will provide the core for the new center, focusing on research in space science, materials science, biotechnology, Earth sciences, propulsion and optics, as well as other areas that support NASA’s mission.

“We are delighted that Dr. Garriott has agreed to serve as the interim director for the National Space Science and Technology Center,” said Marshall Center Director Art Stephenson. “His academic, industrial and NASA experience make him an ideal choice to guide the center during its formative stages.”

The center will be operated through a partnership between the Marshall Center and the Alabama Space Science and Technology Alliance — a group of six Alabama universities including The University of Alabama in Huntsville, Alabama A&M University, Auburn University, the University of Alabama, the University of Alabama at Birmingham, and the University of South Alabama.

Garriott began his duties Sept. 5. The Oklahoma native has an undergraduate degree in electrical engineering from the



NASA Photo

Former astronauts Owen Garriott, left, and Jim Lovell, conduct research in Antarctica.

University of Oklahoma. He received graduate degrees from Stanford University.

Garriott served in the U.S. Navy from 1953 to 1956. He taught at Stanford University from 1961 to 1965 and performed research and led graduate studies in ionospheric physics.

Garriott joined NASA as a scientist/astronaut in 1965. He set a world record for space flight duration on his first trip into space when he flew 60 days aboard Skylab in 1973. He spent 10 days aboard Spacelab in 1983.

He has served as director of Science and Applications at Johnson Space Center in Houston and was a program scientist in the Space Station Program Office from 1984 to 1986. After leaving NASA in 1986, he was a consultant for aerospace companies, and joined Teledyne Brown Engineering in Huntsville as vice president of space programs in 1988. He served in that role until 1993.

Garriott became a founder and president of Immutherapeutics Inc., a company that initiated FDA approved human trials for a tumor therapy. He resigned his post, but remains active with the company’s board of directors.

A search will begin immediately for a permanent director. Greenwood said that process could take up to a year.

The National Space Science and Technology Center became reality Aug. 8 in Montgomery, Ala., when Alabama Governor Don Siegelman and Stephenson formally endorsed a partnership agreement to operate the new center.

The writer, employed by ASRI, supports the Media Relations Department.

“Don’t Be Too Hasty, Check For Safety”

— Safety slogan submitted by
Terri Dailey, AP01



Marshall employees, contractors named honorees for NASA's 100th Shuttle launch Oct. 5

Thirty-one Marshall employees and contractors are being honored for their significant contributions to the space program. The honorees will be hosted by NASA at Kennedy Space Center, Fla., for the scheduled Oct. 5 launch of Space Shuttle Discovery.

Mission STS-92 marks NASA's 100th Shuttle launch. The crew will continue the assembly of the International Space Station.

During two decades of service, the Shuttle has supported two space stations; made three maintenance flights to the Hubble Space Telescope; launched planetary missions to study Jupiter, Venus and the Sun; and conducted hundreds of studies in onboard laboratories supported by the Marshall Center.

Thanks to the Shuttle program, more than 100 spinoff technologies — including a miniaturized ventricular assist pump for the artificial heart — have improved the quality of life on Earth.



Pravin K. Aggarwal, ED22



William C. Baker, ED02



Nicholas Bornas, New Technology Inc.



Renae Bowman, CSC



Patricia M. Doty, SD44



Jeff Fell, Pratt & Whitney



Rosemary S. Finley, ED41



Patsy H. Fuller, DE01



Robert L. Green, ED15



Karen Gresham, HEI



Ricky A. Hall, TD72



**Earline Hammonds,
ED36**



**Blair J. Herren,
SD10**



**Elizabeth Jane Holland,
SD10**



**Scott Hyatt,
Wang**



**David A. Iosco,
PS20**



**Deborah Kromis,
Quality Research**



**Catherine C. Lapenta,
FD11**



**Tracy M. Lynam,
FD11**



**Carol S. Macpherson,
RS50**



**Kathleen C. Matus,
MP41**



**Patrick S. McRight,
TD52**



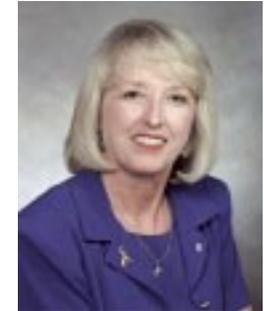
**Dan A. Nelson,
CSC**



**Nelson C. Olinger,
AD20**



**Katherine J. Poe,
MP31**



**Jane G. Posey,
AD32**



**Monserrate C. Roman,
FD21**



**Robert S. Ryan,
ASRI**



**Brenda G. Sparks,
TD31**



**Jeanette C. Tokaz,
Sverdrup Tech.**



**Jere D. Whirley,
QS10**



The 283rd U.S. Army Band from Fort Benning, Ga., performs a musical tribute to Gen. George C. Marshall, for whom the Marshall Center was named.

2035

Continued from page 1

Even so, I am going to take a run at it anyway.

Marshall will partner with the Centers across NASA, with industry, with universities, and with DoD laboratories to make this forecast possible, for we cannot do it alone. I hope that we not only collaborate with organizations within the U.S., but also with other nations. A good example of that is today's International Space Station, which is going together as we speak.

With the Space Launch Initiative beginning in 2001, we will attack the largest obstacle to opening the frontier of space — highly reliable, low-cost space transportation systems.

Breakthrough microgravity development technologies, stemming from the International Space Station, will enable us to dramatically improve the quality of life here on Earth while opening the doors to space.

Large optics manufacturing technologies will result in space-based visible light and X-ray observatories that will open our vision of the universe.

I believe that by 2035:

- We will have returned to the Moon and established a permanent presence there.
- We will have landed humans on Mars, having staged the mission from the Moon.
- We will travel in low-Earth orbit with accessible, reliable transportation systems on the order of transatlantic flight that we know today.
- Commercial ventures in low-Earth

See 2035 on page 7



Tina Swindell of Marshall's Flight Projects Directorate sings "A Time for Courage" at the anniversary event's opening ceremony.



Ken Cooper of Marshall's Engineering Directorate stands with the 40th anniversary cake depicting four decades of Center excellence.



From left, Apollo 17 astronaut Gene Cernan talks with members of the original von Braun rocket team: Konrad Dannenberg, Gerhard Reisig, Fritz Mueller and Ernst Stuhlinger.

See Anniversary on pages 7 and 8

Anniversary

Continued from page 6



The Marshall Association presents its George C. Marshall Scholarship to the parents of recipients Lucy E. Jones and Jessica Hauff. Efrem Hanson, center, of the Marshall Association presents the scholarships.



Cernan, left, signs copies of his book, "Last Man on the Moon."



Latin Rhythms performs songs in honor of Hispanic Heritage Month following the time capsule ceremony.

2035

Continued from page 6

orbit will be well established with the harvesting of special materials grown in microgravity factories in orbit around the Earth.

- And, I think, space tourism will finally become available by the year 2035; however, it might just be for the rich and famous.

Now, let me take a cut at a progression of events that I think Marshall will lead the way in between now and 2035, as spoken by the Center director of the Marshall Space Flight Center in the year 2035.

She might say:

- The first thing we did was that in 2005 we upgraded the Shuttle propulsion safety to double the reliability of the Shuttle as compared to what it was at the close of the 20th century.

- A second-generation low-Earth orbit reusable launch vehicle became operational in 2010 that further improved safety by a factor of 100 and reduced cost by a factor of 10.

- And then in 2025, a third-generation reusable launch vehicle became operational and delivered a 10,000 times improvement in reliability and a cost of \$10 per pound on orbit, compared to the 2000 Shuttle. This was with an electromagnetic launch assist and a rocket-based, combined-cycle, air-breathing engine.

- And in 2035, this year, the fourth-generation reusable launch vehicle just completed its maiden flight that gets us to routine flights to hotels in low-Earth orbit, which were under construction in 2000. This latest vehicle, which is organic, incorporates the latest in non-linear diagnostics and self-healing, making failure an obsolete concern.

In the area of low-cost, reliable in-space transportation, Marshall led the development of:

- Reusable low-Earth orbit to geosynch space tether tugs

- A nuclear electric stage which performed rendezvous missions to Pluto, and

- The first interstellar mission powered by a solar sail.

Through Marshall's microgravity program and the support of our scientists through the Payload Operations Center, we played a vital role in many of NASA's advances in space flight.

At the same time, Marshall's space and earth scientists made tremendous contributions to the quality of life here on Earth! Let me name a few:

- They were instrumental in solving bone loss or breakage problems by treating it with inorganic bone replacement materials

- Genetic damage was made correctable by induced DNA repair

See 2035 on page 8

Anniversary

Continued from page 7



Former Marshall Associate Director, Technical, Bob Schwinghamer, left, former Marshall Director Dr. William Lucas, center, and former Marshall Director Jack Lee provide their perspectives on Marshall's history during the forum sponsored by the Marshall Association.

Anniversary photos by Doug Stoffer and Emmett Given of Marshall's Imaging Services



Marshall Center Deputy Director Carolyn Griner responds to a question during the Perspectives Forum.



Employees enjoy birthday cake to make the celebration complete.

2035

Continued from page 7

• In-space processing and manufacturing advancements permitted the construction of large structures needed for space observatories, space science labs and advanced space vehicles.

Orbiting science satellites provided:

- Ample warning to safeguard against hurricanes, earthquakes and tornadoes, drastically reducing loss of life
- Tenfold crop production increases as a result of "precision farming techniques" brought about by Marshall scientists, and
- Climate control of urban areas through the use of better "climate friendly" materials for buildings and roads, and judicious urban planting.

Lastly, Marshall's advances in large space optics manufacturing technology have revolutionized, ultra-light weight mirror technology measuring less than one tenth of a kilogram per meter squared. This enabled the development of two new generations of visible light technology

- Enabling the imaging of stars and galaxies a thousand times fainter than those seen by Hubble
- And providing an ability to detect "blue dots" orbiting distant suns.

New X-ray observatories provide resolution a million times better than that of the Chandra X-ray Observatory — equivalent to you being able to check the 5 millimeter pencil lead on your pencil if you were standing on the Earth looking at your pencil on the Moon.

Yes, I know, you might be saying this is ridiculous — impossible — but let me share a true story with you I heard while attending a conference in Long Beach, Calif., from U.S. Air

Force Gen. Ed Eberhart, commander of the U.S. Space Command. He said, "Not many years after the Wright brothers flew their plane, the first transcontinental flight stopped on the West Coast. Note I said "stopped" because that first transcontinental flight took 90 days to complete with 76 stops and it also included 20 crashes.

When we think about what we can do, we sometimes limit our thinking too much. Less than 100 years after that first flight, we think nothing of getting on a jet plane and attending a meeting after lunch on the West Coast after starting the day in New York.

We can — and will — do great things if we let our five Marshall Center Values guide our decisions — those values being People, Innovation, Teamwork, Customers and Excellence.

We can do great things if we are willing to believe in ourselves, take prudent risks and accept failures as a necessary part of learning that enables progress.

We can achieve great things if we do the other things well that are necessary for success, like,

- Educational outreach — to have the work force of tomorrow
- Technology transfer — to provide value added to the American tax payer and
- Media communications — to properly inform and inspire the public.

Someone has said: "the best way to forecast the future is to create it ourselves." And we are creating our future.

As we stand here today on the 40th birthday, we are creating our future in new ways. What an exciting time to be a part of the American space program.

Thank you.

Texas teacher helps launch Center outreach program

by Debra Valine

At a recent all-hands meeting, Center Director Art Stephenson announced plans to launch a program in which college and high school students design, build and fly reusable rockets carrying actual science payloads.

He was inspired by Fredericksburg, Texas, High School teacher Brett Williams, who teaches a two-year aerospace program. His program, which took five years to develop, launched a 22-foot rocket at the U.S. Army White Sands Missile Range in New Mexico last month with help from the Marshall Center. That rocket reached an altitude of 35,000 feet.

To make this initiative a reality in the Huntsville area, Marshall's Education Programs Department and a group representing organizations from across the Marshall Center are meeting with college and high school faculty and students, discussing the program and recruiting participants.

The group has established program goals and talked to representatives from the University of Alabama in Huntsville about rocket design and development, and representatives from Alabama A&M University about experiments.

Talks also are under way with Huntsville area high schools to solicit proposals for developing rockets and experiments, which are due Oct. 13. The schools will

come to Marshall to present the proposals orally, and two schools will be selected: one to build a rocket, and one to develop the payload.

Williams, who visited Marshall last week to share his experiences, said community support is critical to the success of any program.

"Support in the Fredericksburg area has been tremendous," Williams said. "That support is necessary to not only get these programs off the ground, but to keep them going.

"I feel a program like Art Stephenson is initiating could ripple across the United States, and impact schools across the country, not just in Alabama. It may take a while, but you can't give up. You have to be looking down the road, and I hope that we can keep that interest going over the years," Williams said.

"A program like this is good for the students and the community," said Jim



Photo by Terry Leibold, NASA/Marshall Space Flight Center

From left, Bob Armstrong of Marshall's Space Transportation Directorate, and Mike Phipps of Marshall's Engineering Directorate, speak with Brett Williams and Jeff Ehmen of the Education Programs Department about the new education initiative.

Pruitt, manager of Marshall's Education Programs Department. "This program can supplement the current curriculum. It can complement and enhance programs already in place.

"We cannot do this without the support of the Marshall team," Pruitt said. "There will be an opportunity for the Marshall team to contribute to this initiative by supporting the work done in both the college and high school levels."

The writer, employed by ASRI, is the Marshall Star editor.

NASA selects new financial management software

NASA has selected SAP Public Sector and Education Inc., of Washington, D.C., to deliver a commercial off-the-shelf accounting system to replace 10 different systems now used by NASA field centers.

The award will be made by exercising options for software and associated annual maintenance under an existing General Services Administration Schedule Contract delivery/task order with SAP. The initial award for the software and the first year of maintenance is \$6.67 million.

The standardized system SAP delivers under the firm, fixed-price contract will have several benefits for NASA:

- It will provide timely, consistent and reliable information for management decisions.
- It will improve NASA's accountability and enable full

cost management.

- It will enable NASA to achieve efficiencies and operate effectively.
- It will serve as the infrastructure that will allow NASA to exchange information with customers and stakeholders.
- It will help NASA attract and retain a world-class work force by enabling employees to do their jobs more effectively.

The Core Financial Software will support NASA's Integrated Financial Management Program, Core Financial Project.

It consists of the following components: standard general ledger, accounts receivable, accounts payable, budget execution, purchasing, fixed assets, project accounting and cost allocation.

Marshall researchers to use Space Station to study long-term exposure of materials

by Debra Valine

To get the best value for the money to take humans to space, materials used on the exterior of spacecraft must be able to endure the harsh environment.

On Sept. 13, Marshall researchers shipped four containers loaded with experiments to Langley Research Facility in Virginia for testing and integration into carriers for eventual launch to the International Space Station and long-term study of various materials in space.

Project Materials International Space Station Experiment (MISSE) will test design durability on various polymers, coatings, mechanisms and other items over the course of one year on the Space Station.

The experiment is sponsored by the Space Environmental Effects Program at the Marshall Center and the Materials and Manufacturing Directorate of the Air Force Research Lab at Wright-Patterson Air Force Base in Ohio. It is a cooperative effort among NASA, the Air Force and industry that is being accomplished at Marshall, the Boeing Co. in Seattle and Langley Research Center in Virginia.

It is a follow-on to the Mir Environmental Effects Payload (MEEP) experiment that flew on the Russian space station Mir in 1998.

MISSE will re-use hardware from the

Mir experiment, and some of the materials used in the MEEP experiment also will be used for MISSE. "We are testing different materials and engineering technologies for space applications such as the International Space Station and future spacecraft," said Rachel Kamenetzky, one of three principle investigators for the experiment.

"The space environment is very harsh on materials," Kamenetzky said. "To determine a given design life, we have to build them here and test them in space and in simulated laboratory environments to ensure the materials will survive the design life."

Next month at Langley, the containers with samples will be integrated onto the four carriers. Two of the carriers are to fly in June 2001.

"On the particular carrier I am working on, we have a number of student-assisted experiments," Kamenetzky said. "The Air Force at Wright-Patterson recruited help from students in Dayton, Ohio."

The materials are tested to help determine the durability of future spacecraft. "It

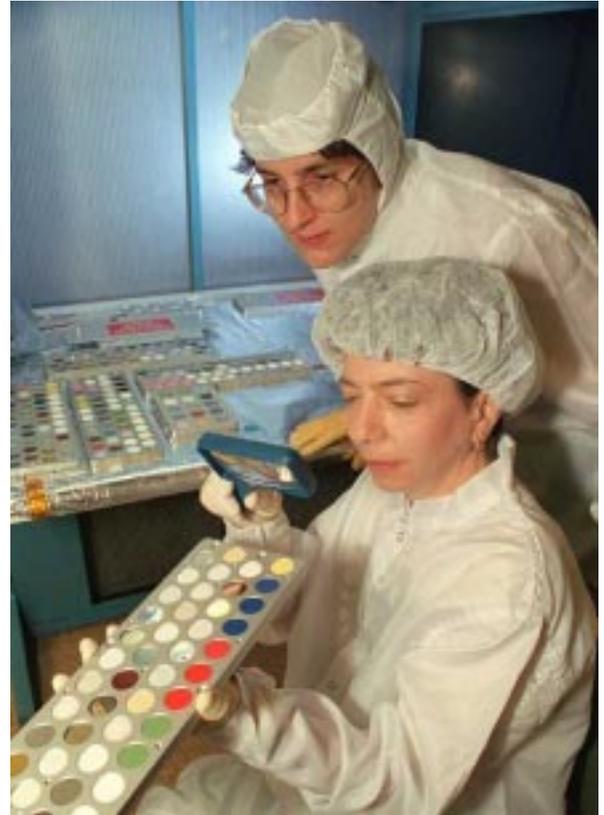


Photo by Emmett Given, NASA/Marshall Space Flight Center

Kamenetzky, seated, and Miria Finckenor of the Materials, Processes and Manufacturing Department examine the experiment before shipping it to Langley.

is cheaper to do things right up front rather than fix them in space," Kamenetzky said. "In the long run, it reduces engineering costs."

The writer, employed by ASRI, is the Marshall Star editor.

Flu vaccine may be in short supply this season

The Marshall Medical Center has been notified by its influenza vaccine supplier to expect delays in vaccine shipments this flu season.

There is a possibility of a nationwide shortage of vaccine for the 2000-01 season. The Centers for Disease Control and Prevention is urging all health care providers who provide flu vaccine to their patients to consider ways to ensure their high risk patients — those 65 or older and persons less than 65 with high-risk medical conditions — receive vaccination if a vaccine shortfall were to occur. Healthy 50-64 year olds are not at any greater risk than healthy adults less than 50.

The Centers for Disease Control also encourages delaying adult mass influenza vaccination campaigns to November (usually recommended for October through mid-November) to diminish the

possibility that the campaigns will need to be canceled because vaccine is not available.

The amount of vaccine available is complicated by two important factors: the yield for this year's influenza vaccine A (H3N2) component appears to be lower than expected, which limits the supply that can be developed in time for the forthcoming flu season; and other manufacturing issues.

An announcement of influenza vaccine availability at the Marshall Medical Center will be made as soon as the vaccine is received. If restrictions on who receives the vaccine are required because of limited quantity, the Medical Center will announce those restrictions.

For more information, visit the Web at: <http://www.cdc.gov/ncidod/diseases/flu/fluvirus.htm>

To provide mission services

Hernandez Engineering awarded \$35M contract

The Marshall Center has selected Hernandez Engineering Inc. of Houston for a contract to provide mission services to Marshall's Safety and Mission Assurance Office.

The one-year cost-reimbursement contract is valued at \$6,793,973, with four one-year priced options, for a total possible contract value of \$35,895,684.

The Marshall Center's Safety and Mission Assurance Office is responsible for assuring the safety and mission assurance of all Marshall programs and projects.

The contracted services include management, personnel, equipment and supplies required to provide mission services associated with the planning, implementation and direction of safety, reliability, maintainability and quality assurance programs at Marshall.

The effort also involves activities at Stanford University in Stanford, Calif., on the Gravity Probe B space experiment to test Einstein's Theory of General Relativity.

Marshall is NASA's lead Center for development of space transportation and propulsion systems. New technologies are being explored to make space more accessible by reducing the cost of launching space vehicles while improving flight safety.

Marshall is also NASA's leader in microgravity research – conducting unique scientific studies in the near-weightlessness of space to improve life on Earth.

Upcoming Events

Marshall's Safety Day — The Marshall Center will hold a stand-down Safety Day Oct. 25. Dress is casual. Among events planned will be the culmination of the Safety Bowl. Safety Day T-shirts are on sale through Friday. The order form is on "Inside Marshall." Chick-Fil-A lunch tickets go on sale Monday through Oct. 13 through admin officers. There also will be 100 salad lunches available on a first-come, first-serve basis. For more information, call Diane Pearson at 544-8306 or Beth Allison at 544-7330.



Ethics Training — Verbal ethics training sessions will be offered in at 1 p.m. Oct. 5, 9 a.m. Oct. 18 and 9 a.m. Oct. 19 in Bldg. 4200, room P-110 for those who do not choose to take the electronic version of the training which is available until Oct. 6. Federal regulations require that filers of public and confidential financial disclosure reports receive annual ethics training. Employees who are required to receive ethics training were notified at the beginning of September by an e-mail message that contained a link to the training. The training also can be accessed from the Office of Chief Counsel's Web site. For more information, call Lonia Moore at 544-0023.

Deaf Awareness Day — Deaf Awareness Day will be from 10 a.m.-3 p.m. Sept. 30 at Madison Square Mall. Come and enjoy activities while you explore the world of the deaf community. Events include Kathleen Ryan Peavy, Miss Deaf Alabama; entertainment; children's poster contest, exhibits and awards.

EDTec Center Closed — The Employee Development Technology Center (EDTec) in Bldg. 4203, room B303 is closed until the grand opening of the Marshall Institute on or about Oct. 6 in Bldg. 4200, room G13.



Photo by Dennis Olive, NASA/Marshall Space Flight Center

Celebrating Hispanic Heritage Month

Huntsville Mayor Loretta Spencer, seated, signs a proclamation declaring Sept. 15-Oct. 14 Hispanic Heritage Month in Huntsville. Looking on, from left, are Norman Median-Pabon, Ed Adams, Elia Ordonez and Luis Trevino. The Marshall Center recognizes Hispanic Heritage Month during this timeframe. Madison Mayor Chuck Yancura also signed an Hispanic Heritage Month proclamation for the city of Madison.

Employee Ads

Miscellaneous

- ★ Women's hiking boots, size 9, \$10; women's small wet suit boots, never used, \$8. 534-1461
- ★ Two twin beds plus table, convert to sitting area, green/gold covers/cushions, \$250. 533-4824
- ★ Palm Harbor mobile home, 16'x70', 2 bedroom, furnished, appliances, some furniture, \$11,500. 256-753-2583
- ★ Two 16meg 72 pin Simms, \$40 each. 881-8565
- ★ Girl's multicolored toddler bicycle w/ training wheels, \$25. 464-5394
- ★ Collectibles: American Fostoria crystal; Theodore Haviland china, "apple blossom." 539-7122
- ★ Remington 03-43 rifle, \$500. 883-1874 after 5 p.m.
- ★ Roll-a-way bed and mattress, \$50. 852-2936
- ★ Macintosh Power PC 6115CD: 1.6G drive, 13" monitor, CD, color printer, scanner, software, \$350. 772-4460
- ★ Nordic-Trac Medalist Plus exerciser w/ computer and Heart Rate Receiver, \$300. 232-1171
- ★ Couch and 2 matching chairs, 91", mauve and team flame-stitch, \$500. 881-5118
- ★ Corner sectional sofa w/full-size sleeper and recliner, 9'x9'5", light blue, \$475 obo. 776-0024
- ★ Propane blue flame heater, 28,000 btu, thermometer, vent free, \$130. 247-1402
- ★ Chrome bed rails for pickup truck, tubular, 46" in length, \$50. 883-6416
- ★ Apple computer system, 6100 66/DOS, twin monitors, printer, black 3-piece desk set, etc., sell separately or all for \$500. 828-6213
- ★ MacQuadra 605 w/monitor and Laserwriter, \$300; Ruger M96/44 .44 mag lever action, \$300. 851-8085
- ★ PSE Heritage Talon 60 lb., take-down recurve bow w/accessories, \$150; Coleman Ram-X canoe, \$185. 423-4877/651-2407/ Jim
- ★ Ruger "Single Six" revolver, in box, Magnum/long rifle cylinders, \$275. 325-

- 6000
- ★ Refrigerator, \$300; console TV, 275; VCR, \$50; dryer, \$75; bicycle, \$50. 539-5570
- ★ 1997 Coleman pop-up camper, a/c, hot water, awning, two stoves, electric brakes, \$6,500. 852-0142
- ★ Bayliner LOA, 25', restored, w/trailer and boat house w/lift, \$20,000. 539-5058
- ★ Wicker headboard, Victorian, king-size, \$175. 883-2237
- ★ Labrador puppies, AKC field champion line, 10 weeks old, \$125. 882-2579 after 6 p.m.

Vehicles

- ★ 1994 Nissan Sentra, 96K miles, automatic, 4-door, am/fm tape, a/c, \$3,395 obo. 464-0660
- ★ 1996 Honda Accord LX, AT, 2-door, green, pw/pdl, a/c, Pioneer CD player, 57K miles, \$13,500 obo. 931-703-7764 day/931-424-6748 night
- ★ 1997 Ford F-250 XLT, 4x4, alloy wheels, 40K miles, towing package w/goose-neck ball, automatic, \$17,950. 931-732-4742
- ★ 1985 Oldsmobile Delta 88 Royale Brougham sedan, gray, 4-door, V-8, 137K miles, \$1,800. 772-0558
- ★ 1986 Mazda RX7, 5-speed, sunroof, some new parts, \$750 obo. 858-5552
- ★ 1991 Ford Explorer, 4x4, red/silver, \$7,125. 881-3527
- ★ 1999 Pontiac Grand Am, dark emerald green w/light gray interior, \$10,750 firm. 895-9050
- ★ 1993 Dodge Grand Caravan SE, one-owner, many new parts, service records available, \$5,700 obo. 895-0520
- ★ 1990 Honda Accord EX, 5-speed, 4-door, 31 mpg, 135K miles, \$4,200 obo. 881-8204
- ★ 1985 Honda Civic wagon, 4-wheel drive, \$1,250. 551-5646/pager
- ★ 1992 Acura Integra, 2-door hatchback, 5-speed, sunroof, a/c, pw, am/fm cassette, cruise, \$5,400. 757-3320
- ★ 1985 Thunderbird, automatic, all power, cassette, a/c, heater, one-owner, \$1,500. 961-1497/880-8648
- ★ 1993 Ford Mustang LX, 2-door hatchback, 5-speed, PS/PW/PDL, stereo w/cassette, moonroof, spoiler, \$5,300. 256-586-5116

- ★ 1998 Chrysler Sebring LXI, dark metallic red, 24K miles, 3-yr. Warranty. 881-6955
- ★ 1983 Ranger w/toolbox, \$950; 1986 Sentra, \$1,150; 1978 Chevy pickup w/camper, \$1,400; 1995 Neon, \$5,500. 851-1854 after 5 p.m.
- ★ 1996 Ford Windstar LX, white/gold, tan leather, captain chairs, dual air, 99K miles, \$8,900.

Wanted

- ★ Ride to work, 7 a.m. to 3:30 p.m., Governors Drive/Huntsville Hospital area, will pay \$6 per day. 534-5398
- ★ Aerator for home lawn. 883-2757

Found

- ★ Automobile key in parking lot of Bldg. 4700 area. Call 544-4758 to identify/claim.
- ★ Umbrella, Bldg. 4200 Quad area after the 40th Anniversary Celebration. 544-4758 to identify/claim.
- ★ Autographed copy of "The Last Man on the Moon" book in Lobby area of Bldg. 4203. Call 2-2485 to identify

Center Announcements

- ☛ **NARFE Meets** — The National Association of Retired Federal Employees (NARFE) will meet Oct. 7 at the Senior Center on Drake Avenue. The annual breakfast — \$5 per person — begins at 9 a.m. An overview of federal health insurance benefits for 2001 will follow. For more information, call 837-0382.
- ☛ **Procurement Office Breakfast** — Procurement Office retirees will meet for breakfast at 9 a.m. Oct. 3 at Five Points Restaurant at 816 Wellman Ave. For more information, call Carl Melton at 837-5604.
- ☛ **Lunch Time Prayer** — Lunch time prayer will be from noon-12:30 p.m. every Tuesday and Thursday in Bldg. 4200, room 432. For more information, call 544-1007.
- ☛ **Memory Walk** — The Alzheimer's Association Memory Walk will be at 8 a.m. Saturday at the Huntsville/Madison County Botanical Gardens on Bob Wallace Avenue. For more information, call 880-1575.

MARSHALL STAR

Vol. 41/No. 4

Marshall Space Flight Center, Alabama 35812
(256) 544-0030
<http://www1.msfc.nasa.gov>

The Marshall Star is published every Thursday by the Internal Relations and Communications Department at the George C. Marshall Space Flight Center, National Aeronautics and Space Administration. Contributions should be submitted no later than Monday noon to the Marshall Internal Relations and Communications Department (CD40), Bldg. 4200, room 101. Submissions should be written legibly and include the originator's name. Send electronic mail submissions to: intercom@msfc.nasa.gov The Marshall Star does not publish commercial advertising of any kind.

Manager of Internal Relations
and Communications — Robert Champion
Editor — Debra Valine

U.S. Government Printing Office 2000-533-127-20017

PRE-SORT STANDARD
Postage & Fees PAID
NASA
Permit No. G-27