

AEROSPACE

Frontiers

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Glenn plays critical role in CEV propulsion

BY DOREEN ZUDELL

The Crew Exploration Vehicle (CEV)—America’s new spacecraft for human space exploration—will assure access to the International Space Station return to the Moon, and enable eventual journeys to Mars and beyond. Propelling the spacecraft beyond low-Earth orbit, however, will require an advanced propulsion system.

Glenn is leading the CEV Propulsion Advanced Development Project, a multi-center effort to investigate a new propellant combination—liquid oxygen and liquid methane (LOX/Methane)—used for both primary and reaction control propulsion systems.

"This new propellant offers high performance and storability, and is environmen-

tally friendly," said Jim Free, project manager for the CEV Propulsion Advanced Development Project. "In addition, future astronauts can convert Martian resources into methane fuel."

Free explained that the project involves analyzing, designing, building, and testing to address the propulsion system, subsystem, and component risks in order to prepare for the development of the flight system.

Three Glenn facilities are being utilized toward this effort: the Small Multipurpose Research Facility and the Rocket Combustion Laboratory at Lewis Field, and the Spacecraft Propulsion Research Facility (B-2) at Plum Brook Station.

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Center Director bids fond farewell to NASA

On Friday, December 8, a capacity crowd filed into the Main Cafeteria Center for a farewell cake and coffee reception honoring Center Director Dr. Julian Earls, who is retiring after 40 years of NASA service.

Earls, who was accompanied by his wife Zenobia, endured more than an hour of good-natured roasting and well wishes as members of the Director’s Leadership Team (DLT), peers, and loyal friends took turns at the podium with Center Deputy Rich Christiansen as the Master of Ceremony.

In addition to expressions of their respect and appreciation for Earl’s integrity, intellect, leadership, and examples of managerial and oratory excellence, some DLT members shared humorous examples of the “little known” and fun facts they uncovered during Earls’ tenure at NASA Glenn.

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Ann Heyward, center, and William Selbach of OAI, present Earls with a proclamation establishing the Julian M. Earls Educational Fund.



C-2005-1810

Photo by Hugh Aylward

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CEV propulsion testing

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"This project is a critical element in the overall architecture of the Vision for Space Exploration," Free said. "Utilizing LOX/Methane engines for the initial flights to ISS establishes operations and reliability experience for lunar missions. LOX/Methane is also the baseline for the ascent propulsion system for the Lunar Surface Access Module. Ultimately, Mars missions can be enabled by the use of LOX/Methane propellants derived from the Martian atmosphere."

Glenn is responsible for project management, systems engineering, safety and mission assurance, propellant storage and delivery, and propulsion technical support to other centers. Johnson Space Center and Marshall Space Flight Center are also providing substantial technical contributions. The CEV Propulsion Advanced Development Project is one of several advanced development projects under the CEV Project managed by Johnson.

"This is the first of several critical development efforts led by Glenn in support of the Vision for Space Exploration," said Bryan Smith, chief, Glenn CEV Project Office. ♦



Photo by Kristin Jansen

During a recent visit to Glenn's Components Combustion Lab, Dennis Kroeger, Johnson, views a liquid acquisition device screen channel used to deliver vapor-free propellant. Irene Piatek, Johnson, left, and Glenn's Sue Motil, CEV Project Office, look on.

SAMS on display at the National Air and Space Museum

BY DOREEN ZUDELL

The Glenn-developed Space Acceleration Measurement System (SAMS) has earned its place in the National Air and Space Museum (NASM) in Washington, DC.

Designed and built at Glenn, SAMS was developed to collect data characterizing the acceleration environment onboard spacecraft to help principal investigators evaluate how microgravity disturbances affect their experiments.

The first SAMS flew on STS-40 in 1991. Subsequently, 7 SAMS flight units flew on 22 space shuttle missions in Spacelab modules, in the middeck and the cargo bay, through 2003. The unit on display at the NASM flew on STS-43 and STS-47, was retrofitted for Russia's *Mir* space station, and operated there successfully from 1994 to 1998.

Richard DeLombard, one of SAMS' early project managers, advocated SAMS placement in the NASM. "Satisfying NASM's needs is a very rigorous process, requiring drawings, reports, procedures, and data samples to document the artifact," DeLombard explained. "SAMS is a very reliable and respected set of instruments that is well-deserving of this honor."

The unit is on display in the Steven F. Udvar-Hazy Center annex of the NASM, which houses hundreds of famous spacecraft, rockets, satellites, aircraft, and small artifacts. The centerpiece of the space hangar is the Space Shuttle *Enterprise*. Visit <http://www.nasm.si.edu/museum/udvarhazy/> for more information on the Udvar-Hazy Center.



The SAMS unit, pictured in a closeup photo above and in the showcase at left, is on display at the Udvar-Hazy Center of the NASM. The unit flew on the space shuttle and the Russian Mir space station.

Although the SAMS unit onboard the ISS is currently not in use (to conserve energy), it stands ready to be reactivated when the Glenn-developed Fluids and Combustion Facility is operational, now scheduled for 2007. ♦

Employees, friends, colleagues provide fitting sendoff

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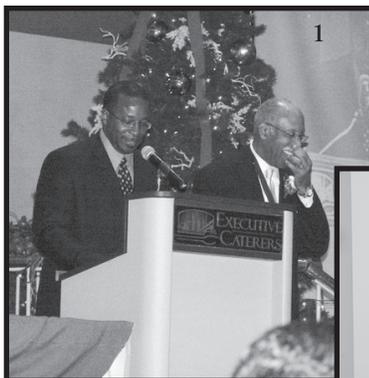
In the midst of the fun and banter, however, William Selbach, president and CEO of the Ohio Aerospace Institute (OAI) and Ann Heyward, (OAI) vice president of Workforce Enhancement, initiated a sobering moment with an announcement that OAI is establishing the Julian M. Earls Educational Fund.

Earls and many others in the audience were moved to tears as he accepted a framed copy of the proclamation, which stated, "... in recognition of outstanding Leadership at NASA Glenn, unwavering commitment to Education, and the Example of Extraordinary Achievement You Represent for All Students."

At the conclusion of the presentations, Earls took a few minutes to poke fun at some of his staff before expressing his gratitude to all who came out to share this event.

"Your unwavering support has helped to define my success," said Earls, "and for that I will be eternally grateful."

The following evening, December 9, a crowd of nearly 300 family, friends,



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C-2005-1808



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C-2005-1807

Photos by Hugh Aylward and Mack Thomas

NASA staff, and local dignitaries joined Earls to celebrate his retirement over dinner at Landerhaven. ♦

(1) Incoming Center Director Dr. Woodrow Whitlow ribs Earls during the Landerhaven dinner. (2) External Programs Director John Hairston makes a guest appearance at the farewell reception. (3) Earls enjoys his personal view-finder designed by Jay Horowitz, Computational Sciences Branch. (4) NewsChannel5 anchor and emcee Leon Bibb displays retiree Ed Richely's (center) gift to Earls, the return of a framed caricature Earls presented as gag gift at Richely's retirement. (5) Dr. Earls and his wife, Zenobia, left, accept the best wishes of Dr. Jih Fen Lei, deputy director, Research and Technology.

Companies receive partnership awards from Glenn alliance

The Glenn Alliance for Technology Exchange (GATE) presented four Ohio-based companies with the GATE Partnership Award on Monday, December 5 at the Ohio Aerospace Institute (OAI).

GATE, a collaboration of NASA Glenn, the OAI, and Battelle's Great Lakes Industrial Technology Center, all of Cleveland, established the Partnership Award Program to aid small Ohio companies interested in enhancing their products and processes with NASA technologies.

Twenty-six proposals were submitted from all over Ohio and four were selected in this second round of GATE Partnership Awards. The award consists

of \$50,000 in cash plus \$50,000 in NASA assistance in developing the new product or process.

The four winning proposals and their Glenn partners include:

- ITEN Industries, Ashtabula, will work with Nick Leventis in the Polymers Branch to develop a production feasible manufacturing process for strengthened aerogels, which may be used in a variety of applications as insulation.
- Theken Disk, LLC, Akron, will work with Dr. Felix Miranda and Dr. Rainee Simons in the Antenna, Microwave and Optical Systems Branch and the Electron

and Optical Devices Branch, to jointly pursue development of an artificial spinal disc incorporating micro-antenna technology.

- H Cubed, Inc., Olmsted Falls, will continue work with Noel Nemeth in the Life Prediction Branch and the Cleveland Clinic Foundation's BioMEMS group to further the development of high-resolution ultrasonic transducers for use in intravascular ultrasound devices used to detect coronary artery blockages.
- Innovative Engineering & Consulting, Middleburg Heights, will work with

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CFC exceeds goal

On December 7, the Combined Federal Campaign (CFC) held an appreciation luncheon to thank everyone who helped make the 2005 campaign a success. The Center raised a total of \$378,168.54, surpassing its goal of \$372,590. Despite the current economic climate, Glenn employees demonstrated their commitment to the community by giving generously. The CFC committee presented Time Off Awards to Anna Falcon, Robert Grossman, Edith Parrott, Blanche Preusser, Ruben Ramos, and Erline Trsek for their outstanding efforts in the campaign. Pictured, left to right, Jose Guerra, Carol McClain (Northeast Ohio CFC director) Phuoc Thai, Bernice Beznoska (Glenn CFC chair), and Center Director Dr. Julian Earls proudly hold the check to CFC. Guerra and Thai are Loaned Executives from Glenn who worked downtown with McClain on the Northeast Ohio campaign.



C-2005-1728

Photo by Michelle Murphy



Photo by Eli Abumeri

Recycling Day

Glenn acknowledged National Recycling Day on December 1 with a variety of conservation-related vendors in the Administration Building Auditorium. The committee extends a special thanks to employees who visited and participated in a recycling survey. Your input will help the Center to strengthen its recycling program. Another highlight included a scavenger hunt in which employees were asked to locate recycling containers throughout the Lab. Mary Beth Celebrezze and Suzanne Kelley won the grand prize drawing—a recycled clock—for her participation in the scavenger hunt.

Elmo and friends



Photo by Nancy Hall

Five years after the retirement of Glenn's annual Holiday Show, its costumed characters are still going strong. Twenty-one employees (past and current) slipped into the familiar costumes on December 9 to spread some holiday cheer at Lewis Little Folks. Pictured is Helina Wilson, center, daughter of Scott Wilson, Thermal Energy Conversion Branch, giving a high-five to Elmo (Bruni Quinones, former ANLX employee). Santa's Helper (Cheryl Schilens, SGTI/Life Support and Habitation Projects Office) looks on.



Photo by Doreen Zudell

Mocktail winner

Glenn's Community and Media Relations Office gained accolades for its participation in the 6th annual Holiday Mocktail Party and SAFE KIDS Benefit at the I-X Center on December 1. Sponsored by the Greater Cleveland SAFE KIDS/Safe Communities Coalition and Rainbow Babies and Children's Hospital, the effort raised awareness for Drunk and Drugged Driving Prevention Awareness Month. Glenn's "Back to the Moon" exhibit featured moon-related photographs and models, as well as a nonalcoholic mocktail creation: Lunar Lemonade. The effort earned the team Best Decor and Best Mocktail. Pictured at right of table, left to right, CMRO members John Oldham, Sallie Keith, Lori Rachul, Jan Wittry, and Mack Thomas serve and welcome participants at the NASA table.

Dreamers and doers who inspired

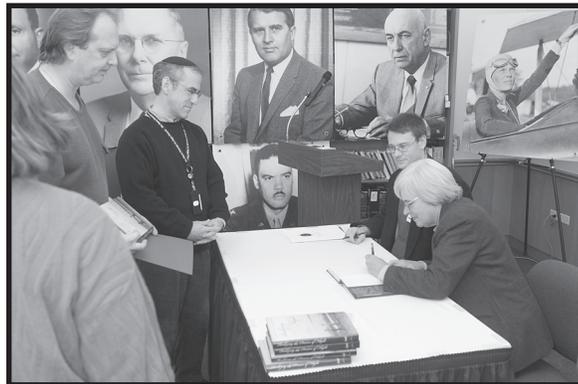
BY S. JENISE VERIS

Glenn's reward for outstanding coordination and production of the Dream of Flight Symposium, sponsored by the NASA History Division and held at the Great Lakes Science Center in 2003, culminated in a book signing and award ceremony 2 years later on December 2nd.

Harvey Schabes, deputy director of Center Operations, and Mary Lester, chief of the Logistics and Technical Information Division (LTID), presented NASA Certificates of Achievement to Kevin Coleman, Glenn's History officer, and the team from LTID's records, history, graphics and the imaging staff who helped Coleman coordinate the efforts of 12 different authors and historians to commemorate the

centennial (1903-2003) of the Wright Brothers' first flight.

The symposium was so well received that Headquarters commissioned noted historians Dr. Virginia Dawson and Dr. Mark Bowles of Cleveland's History Enterprise, Inc., to edit 12 biographical essays of aerospace pioneers, that were bound into a book titled, "Realizing the Dream of Flight." NASA's History Office Recognition Award was presented to Dawson and Bowles for their outstanding efforts to tell NASA's story; to Coleman for his leadership in coordinating the event; and to Susan Hennie, Glenn's Centennial of Flight program manager, for her sym-



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Photo by Quentin Schwinn

Jim Firak, LTID, standing left, and Schabes head the line of autograph seekers for the "Realizing the Dream of Flight" book signing by authors Dr. Bowles and Dr. Dawson.

posium support. Copies of the book and DVD are available for checkout through the Technical Library, 3-5761. ♦

News Notes

LESA MEETING: LESA/IPFTE, Local 28, will hold its next monthly membership meeting on January 11, at noon in the Employee Center, room.

AFGE LUNCHEON: AFGE Local 2182 will hold a luncheon on January 13, from 11 a.m. to 1 p.m., at Sullivan's Irish Pub & Restaurant in Lakewood. For reservations, call Dennis Pehotsky, 216-433-2753.

THIRD SATURDAY AT THE VC: On Saturday, January 21, Glenn's Visitor Center (VC) will present "Space Exploration Update" from 10 a.m. to 3 p.m. During the 11 a.m. and 1 p.m. presentations, visitors will learn about NASA's Crew Exploration Vehicle, as well as the status of the Stardust and New Horizons missions. Other highlights include free photos available in the Picture Yourself in Space photo booth, kids make and take crafts, and plenty of handouts. For more information and reservations, call 216-433-9653 or see glennevents.grc.nasa.gov.

ENGINEERS WEEK: Glenn's Educational Programs Office (EPO), in conjunction with the Cleveland Area National Engineers Week Committee, is coordinat-

ing the National Engineers Week (NEW) celebration, February 19 to 25. Building on last year's success, the EPO will present the 2006 NEW Speaker Workshop on Friday, January 27, from 9 to 11:30 a.m. in the Administration Building conference rooms. The workshop features breakout sessions with demonstrations of creative, grade-appropriate hands-on activities to enhance your school presentations. Veteran speakers will also be available. NEW classroom presentations will be scheduled from February 21 through February 24. For more information, contact Lucille Rhodes, NEW program manager, 216-433-5579.

AFGE MEETING: AFGE Local 2182 will hold its next monthly membership meeting on February 1, at 5 p.m., at Denny's Restaurant, 25912 Lorain Road, North Olmsted. All members are encouraged to attend.

NASA SCHOLARSHIP FUND: The NASA College Scholarship Fund, Inc., a Texas nonprofit corporation, was established to award scholarships to qualified dependents of NASA and former NASA employees Agencywide. The scholarship fund was established through an unsolicited gift by the noted Pulitzer Prize

winning author, James A. Michener. Up to six scholarships will be awarded in the amount of \$2,000 each in the 2006-2007 school year; renewable for a maximum of \$8,000 over 6 calendar years. Applicants must be pursuing study in the science or engineering field that will lead to a recognized undergraduate degree at an accredited college or university in the United States. Applications MUST be received at Johnson no later than March 20, 2006. For additional information and to access the application online, visit <http://nasa-people.nasascholarship/05schopp.htm>. Contact Lynne Sammon, 216-433-3952, for questions or concerns.

Ohio partnerships

Continued from page 3

Glenn Williams and Tim Ruffner in the Diagnostics and Data Systems Branch, to develop an innovative infrared imaging system for such essential tasks as locating survivors in a burning building.

GATE was established in October 2004. It provides NASA Glenn with several mechanisms to reach out and impact these small firms, and thus impact the



economy of the state of Ohio. ♦

Glenn pilots new program to attract business

BY S. JENISE VERIS

Glenn is spearheading a program that will fully utilize and maintain NASA's combined assets—its unique facilities and highly educated and skilled workforce.

In November, the Center initiated a 1-year pilot program that establishes an Institutional Reimbursable Agreement

that enables the Center to be competitive in attracting new business. The key difference between the Institutional Reimbursable and the traditional Program Reimbursable is that it allows use of Glenn facilities and/or workforce for customers that are not directly linked to Center programs or NASA missions.

Chief Financial Officer Bruce Ward, aided by Karin Gornick, Reimbursable Team project manager, championed Headquarters' Chief Financial Office for this nontraditional approach. The decision to employ this new agreement was based on a Centerwide evaluation conducted by Glenn's Reimbursable Solution Team, which was tasked to examine the reimbursable process to determine opportunities and avenues to utilize Glenn expertise and facilities.

Retiree Spotlight

Piltch expands her research

By DOREEN ZUDELL

Glenn retiree Nancy Piltch's laboratory has shifted to the great outdoors. As a volunteer with the Cuyahoga Valley National Park, Piltch is adapting her skills as a researcher to studies in wildlife.

Shortly after she retired in April 2005, Piltch participated in a butterfly survey where she canvassed sections of the park to identify butterfly species and population. Between the beauty of the insects and 22 years in optical-based research, Piltch became fascinated with the complexity of the butterflies' eyes and is now pursuing her own personal interest in that area.

Last fall, Piltch took part in a survey to identify coyote populations in the parks. From 11:30 p.m. to 4:30 a.m., she and a teammate played an audiotape of recorded coyote calls at 13 sites throughout the parks. Piltch then noted the number of coyotes who responded to the audiotape.

"One of the neat things about retirement is that when you mess up your sleep schedule you can make it up with no problem," she said. "Besides, it is well worth the inconvenience when you hear a coyote return a call from its natural habitat."

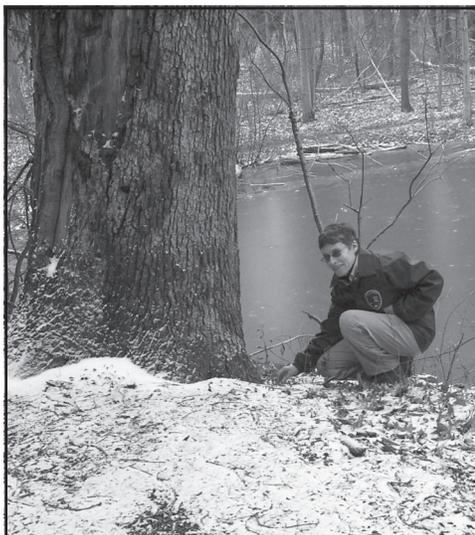


Photo by Doreen Zudell

Nancy Piltch dedicates some of her newly acquired hours to nature preservation.

While Piltch has been involved with the Cuyahoga Valley National Park since 1995 in such activities as the Bike and Hike Patrol and as a First Aid and CPR instructor, retirement has enabled her to dedicate more of her time to natural and cultural preservation.

"When I moved to the Cleveland area from Colorado to work for NASA, I instantly felt at home in the area parks," Piltch said. "I began volunteering as a way of paying back for the many positive experiences I have had there, but through these efforts I continue to gain much more than I can ever repay." ♦

"We recognized there is a unique set of facilities, experience, and expertise our Center and NASA as a whole can share with outside business, universities, and other Government agencies that was not linked to any specific program," Ward said. "The Institutional Reimbursable offers a different approach to seeking new business based on a set of criteria that not only benefits the community but also allows us to share the costs of Agency infrastructure. Through these efforts our employees gain skills and competencies that strategically position them to meet future NASA program needs."

The Office of Strategic Management is responsible for managing the program's implementation. It has created a cross-organizational business team, working with the Center's senior management to review, approve, or modify proposed business opportunities suitable for the pilot program. Directorate point of contacts, who will aid in the proposal process, include the following: Bruce Bream, Research and Technology; Tammy Guthrie, Engineering and Technical Services; Peter McCallum, Program and Projects; and Kathleen Needham, External Programs.

A new Business Registry managed by Kirk Seablom, Office of Strategic Management, ties in with Glenn's ability to identify new business opportunities suitable for the pilot program.

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International Space Station materials return to Earth

Glenn researchers and students recently received an important package that they have been anxiously awaiting for more than 4 years.

On November 14, members of the Electro-Physics Branch and students from Hathaway Brown School opened the Polymer Erosion and Contamination Experiment (PEACE).

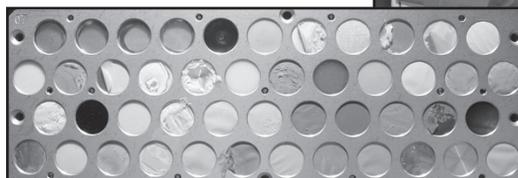
Part of the Materials International Space Station Experiment (MISSE), PEACE was attached to the outside of the International Space Station after launching aboard STS-105 in August 2001. Originally planned to be retrieved in 2003 after 1 1/2 years of exposure, the experiment was retrieved during the STS-114 Return to Flight mission after 4 years of space exposure.

Now that the polymer samples are back, Glenn researchers will analyze them to determine how well they withstood the harsh environment of space. So far, PEACE principal investi-

Right: Researchers de Groh, left, and Banks, far right, are assisted by students Lauren Berger and Rochelle Rucker as they open the polymer samples in a clean room at Glenn. Below: PEACE samples after 4 years of exposure.



Photo by Doreen Zudell



gator Kim de Groh is happy with what she has seen.

"The samples look very interesting," she said. "A few were completely eroded away, many are degraded in varying degrees, and several still have a pristine appearance. So we have a wide range of degradation results to analyze."

In 2001, four Hathaway Brown high school students helped de Groh prepare the samples for flight. Those students

have since graduated and passed the torch to a younger team. They will assist de Groh and co-investigator Bruce Banks by conducting numerous analyses of the samples.

Polymers are long-chain molecular materials often used for spacecraft applications because of their light weight and flexibility. Data from this long-duration space experiment is quite unique, according to de Groh, and will provide valuable information for spacecraft design purposes. ♦

This article was written by Jan Wittry, SGTI/Community and Media Relations.

Native American Heritage Month

Setting the record on Native American contributions

BY S. JENISE VERIS



Photo by S. Jenise Veris

His Horse Is Thunder at NASA Glenn.

When you think of the Native American Indian, what pictures come to your mind? Some may recall Indians feasting with the Pilgrims, scouting for or fighting against the Calvary, or dancing in bright-colored feathers around a campfire—all images from the past and often inaccurately depicted.

"Most children have been taught that Indians were 'savages in the way of progress' rather than how we were some of the first great scientists and engineers," said Ron His Horse Is Thunder, the featured speaker for Glenn's National American Indian Heritage celebration, sponsored and presented by the Native American Advisory Council on November 26.

During his presentation, His Horse Is Thunder, who is the great, great, great-grandson of the legendary Chief Sitting Bull of the Dakota Sioux, focused on the importance of educational reform as the pathway to a stronger community. He is dedicated to guiding a new generation respectful of the contributions of all cultures and eager to cultivate the similarities for a stronger nation.

"Native American's contributions to this country have been 'minimized and marginalized' in the history textbooks (and the media) so much so that our children don't learn to be proud of their heritage, and as a result, readily adopt

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2005 AeroSpace Frontiers Year in Review



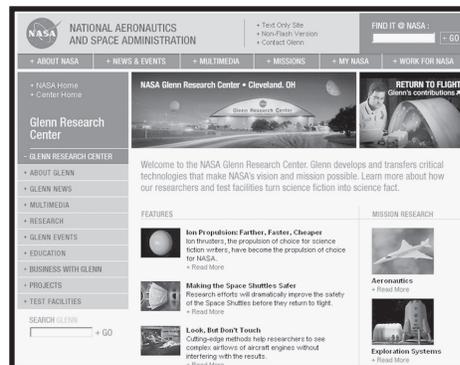
Glenn's Visitor Center buzzed with excitement during NASA's Return to Flight mission, STS-114. Before and during the 13-day mission, Glenn researchers shared their contributions to the mission with the public.



Appointed in April, new NASA Administrator Mike Griffin visited Glenn in May for a Town Hall event and tour of test facilities. He replaced NASA Administrator Sean O'Keefe, who resigned in February.

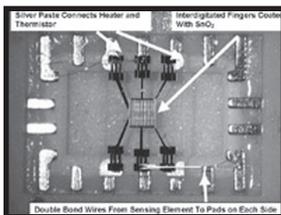


Glenn researchers successfully tested a new thruster that has great potential to open the door to using solar electric propulsion in deep space without adding significant weight or cost to the mission.



Glenn unveiled its new public Web site. The site integrates Glenn's home page into an Agencywide portal connecting all NASA missions and field centers.

Glenn and university partners developed a new generation of fire detectors that could significantly reduce the rate of false alarms in the cargo and baggage compartments of commercial airliners.

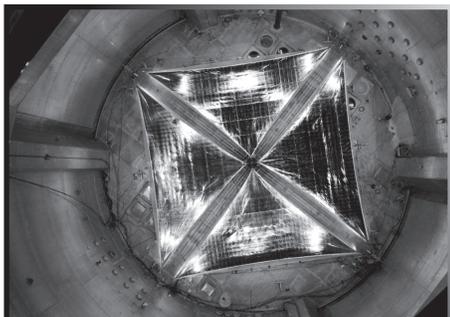


The Fluids Integration Rack and the Dust Aerosol Measurement Feasibility Test leave Glenn bound for the International Space Station (ISS). Meanwhile, Glenn's Binary Colloidal Alloy Test-3 has been invited for an extended stay on the ISS.



Dr. Bruce Steinetz and Patrick Dunlap garnered the Government Invention of the Year Award for their work in developing a thermal barrier and solid rocket motor design for the space shuttle.





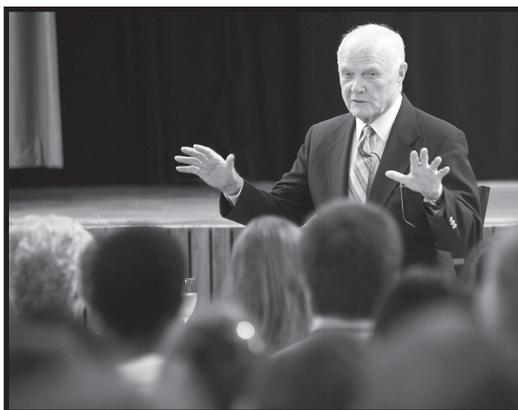
Plum Brook Station tested two 66-foot-long solar sail propulsion system designs in the Space Power Facility. The tests are important milestones in the development of propulsion technology that will use the Sun's energy for future robotic space missions.



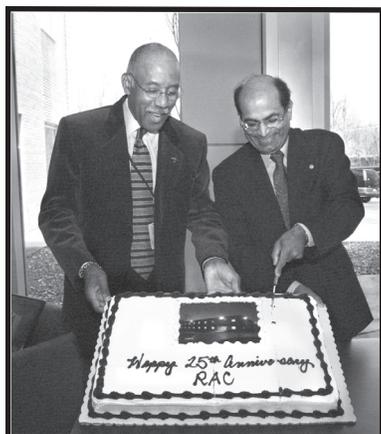
With 40 years of dedicated service to NASA, Center Director Dr. Julian Earls announced his retirement, effective January 2, 2006.



Glenn's Fuel Cell Test Facility came on line this year. The facility, capable of testing various fuel cell types of 1-to-125kW power, brings to NASA new and unique capabilities for the evaluation of fuel cells for future missions.



At the invitation of NASA Glenn Academy research associates, Senator John Glenn and his wife Annie joined them for lunch and he later held an informal dialogue with all of Glenn's summer interns.



The Research and Analysis Center celebrated its 25th anniversary as the hub of information technology at Glenn.

Glenn and the Cleveland Area Metropolitan Library System sponsored a public discussion, live and over the Internet, with Homer Hickam, Jr., author of "Rocket Boys."



Awards and Honors

The Inventions and Contributions Board has awarded Kevin Melcher, Instrumentation and Controls Division, a Software Release Award for the software package titled, "Compressible Flow Toolbox," a collection of algorithms that solve almost 300 classical compressible flow functions. Implemented in the popular Matlab® programming language, the toolbox solves both linear and nonlinear equations to obtain relationships between relevant flow parameters. Algorithms included in the toolbox were originally developed to support controls and dynamics research under the High Speed Research Program.



Melcher



Robinson

Daryl Robinson, Satellite Networks and Architectures Branch, was presented the OPNETWORK 2005 Achievement Award in the category of "Largest Wireless Network Model Analyzed With Discrete Event Simulation" at the OPNET 2005 Conference in Washington, DC. Robinson received the award for his paper titled "Dual Purpose Simulation: New Data Link Test and Comparison With VDL-2," (NASA\TM-2005-213385). The paper investigates the benefits of prioritized sense multiple access and aeronautical telecommunications networks, controller pilot data link communications. The work was done in support of the former

Advanced Communications for the Air Traffic Management Project.

Dr. Sai Raj, a materials researcher in Glenn's Materials and Structures Division, was named a Fellow of the ASM International, the Materials Information Society, during their 2005 Awards Dinner held September 26 in Pittsburgh. The honor of Fellow is bestowed on members for distinguished contributions in the field of materials science and engineering, and to develop a broadly based forum for technical and professional leaders to serve as advisors to the Society. Raj was recognized "for seminal contributions to the understanding of the creep behavior of materials and the development, processing and characterization of intermetallic alloys."



Dr. Raj

Procurement Division Chief Bradley Baker accepted the Loyal User Award on behalf of NASA Glenn during the Excellence in Partnership Awards Banquet sponsored by the Coalition for Government Procurement and *Federal Computer Week*, held November 8 in Virginia. The award is given to the Federal agency that "has remained a steadfast supporter of the schedules program over the years" and has utilized the schedules for a variety of products and service. Baker said the GSA schedules have allowed the Procurement staff to make selections more efficiently and effectively to meet Glenn missions.



Photo by Quentin Schwinn

Pictured, Baker (center) presents the award to Center Director Dr. Julian Earls, left, and Kenny Agulias, director of Center Operations at a recent DLT meeting.

Promotion

Karen McLaughlin was selected chief of the Financial Management Division in the Office of the Chief Financial Officer (CFO). McLaughlin has amassed significant experience within the Division since beginning as an accountant in 1992. Prior to her new position, McLaughlin served as acting chief and deputy CFO for Finance. She also served as the Core Financial Business Process lead for the Center, where she successfully led Glenn's team of accountants through the year-end closing process. McLaughlin's expertise has played a significant role in Agencywide systems development and implementation projects over the past few years. McLaughlin is an alumnus of Cleveland State University where she earned a masters degree in Accounting and Information Systems.



McLaughlin

HAPPY NEW YEAR!

AeroSpace Frontiers is an official publication of Glenn Research Center, National Aeronautics and Space Administration. It is published the first Friday of each month by the Community and Media Relations Office in the interest of the Glenn workforce, retirees, Government officials, business leaders, and the general public. Its circulation is approximately 6700.

Editor.....Doreen B. Zudell
SGT, Inc.
Assistant Editor.....S. Jenise Veris
SGT, Inc.
Managing Editor.....Kelly R. DiFrancesco

DEADLINES: News items and brief announcements for publication in the February issue must be received by noon, January 13. The deadline for the March issue is noon, February 10. Submit contributions to the editor via e-mail, doreen.zudell@grc.nasa.gov, fax 216-433-8143, phone 216-433-5317



or 216-433-2888, or MS 3-11. Ideas for news stories are welcome but will be published as space allows. View us online at <http://AeroSpaceFrontiers.com>.

In Memory

Edward Bartoo, 91, who retired on June 30, 1972 after 32 years of NACA/NASA service, recently died. Bartoo was an electrical and aeronautical engineer who served in the Facilities Engineering Division working on projects related to the Apollo space missions.

Dr. Rinaldo "Jack" Brun, 89, who retired in 1974 with 32 years of NACA/NASA service, recently died. Brun was a supervisory aerospace engineer who supported the Icing Research Program.

Robert English, 83, who retired in 1980 with 36 years of NACA/NASA service, recently died. English was a research scientist and member of the Center's leadership responsible for providing vision to our work in satellite and space propulsion systems. He is notable for his contributions to the development of Brayton-cycle systems technology designed for use with either a solar or nuclear power source. English was bestowed the NASA Exceptional Service Medal in 1975 and again in 1984. He was recognized "for exceptional engineering and scientific leadership ... of emerging aeronautics and space technologies encompassing turbojets engine components, nuclear and non-nuclear space power systems, and terrestrial energy systems. After retirement, he continued at NASA as a Distinguished Research Associate for a considerable period.

In Appreciation

Cards, flowers, care, concern, understanding, and support are only some of the blessings that my family and I received from my coworkers here at NASA while my mother was undergoing hospice. Your support made her passing a little easier. My family and I thank you.

—Bernadette Kan

I appreciate and thank all my "old" FMD coworkers for their sympathy and prayers following the death of my Father and then my Mother. Your support is heartfelt. Keep the prayers coming.

—Mark Czupkowski

Native American contributions

Continued from page 7

prejudices and discriminating attitudes about other groups," he said. "Until we teach the contributions of all groups, our children will internalize racism and will always want to be somebody else."

As Tribal Chairman for the Standing Rock Sioux Tribe, His Horse Is Thunder's mission is to restore a positive self-image and forge the link between higher education and economic development to improve the quality of life among

his tribe and others living in poverty on 314 reservations across the country.

A lawyer and former university president, Mr. His Horse Is Thunder was appointed by President George W. Bush to serve as chairman of the President's Board of Advisors on Tribal Colleges and Universities, and also serves as a board member for the American Indian College Fund, American Indian Higher Education Consortium, and the North Dakota Tribal College Association. ♦

Retirements

Dr. Julian Earls, Office of the Director, retired on January 2, 2006, with 41 years of Federal service, including 40 with NASA.



Dr. Earls

Donald Hicks, Safety Health and Environmental Division, retired on December 30, 2005, with 33 years of Federal service, including 26 years with NASA.

Anatole Kurkov, Structures Division, retired on October 3, 2005, with 37^{1/2} years of NASA service.

Cecil "John" Marek, Propulsion Systems Division, retired on October 3, 2005, with 35 years of NASA service.

2006 News Notes Deadlines

<u>ISSUE</u>	<u>DEADLINE</u>
FEBRUARY	JANUARY 13
MARCH	FEBRUARY 10
APRIL	MARCH 17
MAY	APRIL 14
JUNE	MAY 12
JULY	JUNE 16
AUGUST	JULY 14
SEPTEMBER	AUGUST 11
OCTOBER	SEPTEMBER 15
NOVEMBER	OCTOBER 13
DECEMBER	NOVEMBER 10

Please note that these deadlines apply to the News Notes section. If you want to place a larger article in the newsletter, please contact the Editor or Assistant Editor at least 1 month prior to the publication date.

Nontraditional reimbursables

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"Our roll in supporting this program will be to collect data and monitor metrics that will help us determine adjustments to better ensure opportunity for success," Seablom explained. "Customers unable to pay the full costs of doing business may be offered cost reductions based on a set of criteria that enables a win-win situation for all."

Information on completing Space Act Agreements and Cost Estimating Price Sheets to be considered for the program can be found on the Web sites of the Technology Transfer and Partnership Office, <http://tppo.grc.nasa.gov/>, or the Resources Analysis and Management Office, <http://ramo.grc.nasa.gov/ramonew/>. ♦

Web-based resource provides news at your fingertips

BY S. JENISE VERIS

Traditionally, books and journals have been the standards for keeping pace with research. Now, digital news delivered via the Internet plays an equally important role in enabling researchers, scientists, and engineers to keep abreast of developments in their fields.

The Glenn Technical Library is offering the latest in 21st century referencing technology through RSS reader, a Web-based news resource that delivers breaking news directly to your computer each day. The acronym stands for any of the following: RDF Site Summary, Really Simple Syndication, or Rich Site Summary. However you choose to reference it, RSS makes searching the library's stacks take on a whole new meaning.



"It's difficult to wait 30 days after a finding is announced in a journal to read the details," said Paige Lucas-Stannard, Web page curator for the Library. "RSS is a dynamic source of information that is quickly becoming the preferred way to reach out to users. All of the major news organizations—CNN, MNBC, CBS News, ESPN—have them. Just click on a headline that sparks your interest and read the news without going to individual Web sites."

Glenn's Technical Library created its own RSS feed to become a one-stop-bookmark for current news on the latest library products, news features on existing resources, upcoming events, tips on database searches, and Internet research tricks.

A JavaScript program connects Glenn's Library Web site (<http://techlib.grc.nasa.gov>) to six other NASA RSS feeds, which are updated automatically. For other science and technology news sources, Lucas-Stannard loads new headlines every morning to RSS feeds using XML code, considered the next-generation html.

For those interested in a more narrowly focused search, the Library currently offers five subject guides with news feeds to search engines that provide literally hundreds of news sources. The collection can be overwhelming, but the librarians do with digital news what they have done with books for years; they weed out what you don't have time to read. They go beyond page 3 of the 5 to 12 sources posted and analyze the sources for the authoritative, accurate, regularly updated, and reliable site to determine the best sources.

"We made it convenient for researchers to do a lot of the basic research at their desk, which frees up librarians to do more advanced research and document delivery," Lucas-Stannard said. "We're open to suggestions for additional subject guides, and expect to double the amount later this month."

A complete set of instructions for subscribing to the RSS feed is available on the library's Web site; just click on the RSS icon in the upper right corner. ♦

National Aeronautics and Space Administration
www.nasa.gov

John H. Glenn Research Center
Lewis Field
21000 Brookpark Road
Cleveland, Ohio 44135

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