



# AEROSPACE *Frontiers*

## ATC serves as safety and mission assurance resource

BY DOREEN ZUDELL

Established in May 2002, the NASA Assurance Technology Center (ATC) is working to provide an integrated resource that aids the Agency in creating, documenting, and fostering a uniform approach to developing and maintaining safety and mission assurance (SMA) expertise.

"We have many experts working in SMA disciplines throughout the NASA centers, but they don't always have time to share their knowledge with one another," explained ATC Deputy Program Manager Kerry Remp. "Our goal at the ATC is to establish ongoing relationships with these experts, document their knowledge,

and serve as a central clearinghouse of information for the Agency."

The ATC assists the Office of Safety and Mission Assurance (OSMA) in the management of NASA SMA activities in four broad areas: education and career management, data collection and information management (including SMA databases), mishap investigation, and research and development.

Training and education is a major focus for ATC at this time. "When someone comes to us looking for a specific type of training in our disciplines, we search across the Agency to see if it is available," Remp said. "Our customers can obtain information by contacting us face to face, by

telephone, or by referring to our Web site, <http://atc.nasa.gov>, which has information concerning training courses and symposiums being offered throughout the year."

With OAI (Ohio Aerospace Institute) as its prime contractor and OAI's facility as the principal operating location, the ATC currently has a staff of seven employees from four other companies who assist in carrying out the ATC mission.

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## 7000 Directorate realigns

BY DOREEN ZUDELL

Like any successful business, Glenn's Engineering and Technical Services Directorate (E&TSD)/7000 knows the

importance of meeting its customers' needs. The recent realignment is testimony of the Directorate's commitment to quality services.

"Our realignment is not the goal; it's a stop along the way," explained E&TSD Director Randall Furnas. "We are pursuing the ultimate organization, and changing the

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C-2003-119

Photo by Marvin Smith

*Pictured, left to right, Robert Thomas and Debra DeAngelo, Business Systems Office, discuss E&TSD's new structure with Director Randall Furnas.*

### Employees to receive high honor

Deputy Director Dr. Julian Earls has been selected to receive the 2002 Black Engineer of the Year award in the category of Career Achievement in Government.

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### NASA tests environmentally friendly rocket fuel



Photo courtesy of NASA Ames

Two years of collaboration between Stanford University and Ames have led to the development of a nontoxic, easily handled fuel made from a substance similar to what is used in common candles. The new paraffin-based fuel could eventually be used in space shuttle booster rockets. It is less expensive, nontoxic, and nonhazardous. The byproducts of combustion of the new fuel are carbon dioxide and water, unlike conventional rocket fuel that produces aluminum oxide

and acidic gases such as hydrogen chloride. The main goal of this NASA test program is to determine if the promising results of earlier bench-top experiments conducted at Stanford will scale up to the combustion chamber conditions required for space launch operational systems. Images and more information are available on the Internet at <http://amesnews.arc.nasa.gov/releases/2003/03images/paraffin>.

### NASA instrument captures early Antarctic ice shelf melting

An international research team using data from NASA's SeaWinds instrument aboard the Quick Scatterometer spacecraft has detected the earliest yet recorded pre-summer melting event in a section of Antarctica's Larsen Ice Shelf. Since 1995, this huge, nearly 200-meter (656-foot)-thick plate of glacier-fed floating ice has shrunk by nearly 10 percent, losing more than 2 trillion tons of ice. Using QuikScat images the scientists have determined the melting was triggered by a mid-latitude cyclone that delivered warm air to the region. Scatterometers operate by transmitting high-frequency microwave pulses to Earth's surface and measuring the "backscattered," or echoed, radar pulses bounced back to the satellite. They can effectively and quickly detect the difference between melting and dry surfaces, which may prove to be an important new tool in our capability to monitor climate change impacts on the Antarctic ice cover on a daily basis.

### Milky Way monster stars in cosmic reality show

The longest x-ray look yet at the supermassive black hole at the Milky Way's center has given astronomers unprecedented access to its life and times. New data from NASA's Chandra X-ray Observatory reveals that our galaxy's central black hole, Sagittarius A\* or Sgr A\*, is a frequent bad actor, prone to numerous outbursts and occasional large explosions. Scientists theorize that massive black holes such as Sgr A\* are found at the center of active galaxies. Considered powerhouses of incredible sources of energy and radiation—especially x-rays—they drive the explosive activity of the galaxy. Observations recently conducted over a 2-week period—164 hours—revealed that Sgr A\* flared up in x-ray intensity several times, which suggests it had an even more boisterous past. These discoveries will help unlock the secrets of how Sgr A\* grows and interacts with its environment. The Marshall Center manages the Chandra program. Images and additional information are available at <http://chandra.harvard.edu> and <http://chandra.nasa.gov>. ♦

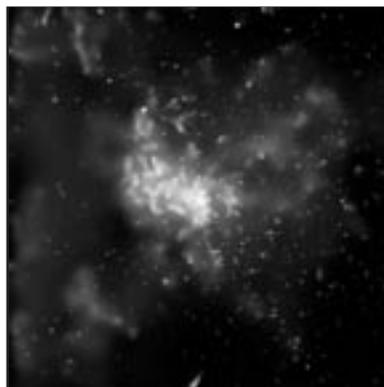


Photo courtesy of NASA/CXC/MIT/F.K.Baganoff

## Mulville retires

Associate Deputy Administrator Dr. Daniel R. Mulville leaves after more than 16 years of service as one of the most senior advisors to Administrator Sean O'Keefe.



Dr. Mulville

Mulville was responsible for planning, directing, and managing the daily operations and transformation activities of the Agency.

Prior to his assignment as associate deputy administrator, Mulville served as NASA's chief engineer from 1995 to 1999. As Deputy Director of the Materials and Structures Division from 1986 to 1990, he managed the Advanced Composite Technology Program, the Space Exploration Initiative, and High Speed Civil Transport. He also directed the Agency's participation in the joint NASA/FAA Aging Aircraft Program. ♦

## NASA/SCE-TV offers unique series

NASA and South Carolina Educational Television (SCE-TV) are joining forces to videostream three educational television series to classrooms in South Carolina and across the country.

Developed by NASA's Langley Office of Education, the shows "NASA Science Files" and "NASA Connect" enhance and enrich the learning of mathematics, science, and technology for students from grades 3 through 12. Approximately 18,000 South Carolina educators, representing about one-half million students, are registered users of the programs.

A third show, "NASA's Destination Tomorrow," is designed for educators, parents, and lifelong learners. Previously unavailable on the Internet, the award-winning programs will now be accessible Nationwide via SCE-TV's K-12 educational portal. ♦

## Local microgravity research on STS-107

On January 16, STS-107/*Columbia* began a research mission that included seven Glenn science experiments. The experiments ranged from determining how fire changes in microgravity to understanding the mechanisms of soot formation during combustion, to measuring the viscous behavior of xenon (a heavy inert gas used in flash lamps and ion rocket engines) to measurement of vibrations 1 million times weaker than Earth's gravity.



The international crew of seven, including the first Israeli astronaut, worked 24 hours a day in two alternating shifts to conduct outstanding peer-reviewed and commercial research to advance knowledge in medicine, fundamental biology, fluid physics, materials research, and combustion.

Glenn was responsible for Combustion Module-2 (CM-2), which housed experiments that examine health and safety issues that affect life on Earth and in space by investigating three main areas: pollution control, fuel efficiency, and fire suppression. CM-2 comprised three individual experiments that address these areas: Laminar Soot Processes, Structure of Flame Balls at Low Lewis-number, and the Water Mist Fire Suppression Experiment, respectively.

Glenn also managed Critical Viscosity of Xenon-2 (CVX-2), which studied the fundamental properties of xenon at its critical point, and an array of acceleration measurement instruments used to accurately report any disturbances to the space shuttle environment, which is close to no acceleration (or zero-g).

This mission carried the first flight of the SPACEHAB Research Double Module, which houses the lab space where the flight crew worked. This mission served as a prelude to long-duration investigations planned for the International Space Station.

More information about Glenn's involvement in STS-107 is available online at <http://microgravity.grc.nasa.gov/sts-107>. ♦

## ATC aids safety and mission

Continued from page 1

A small group at NASA Headquarters serves as an Agency steering committee and guides the activity of the ATC. Acting Deputy Associate Administrator of the Office of Safety and Mission Assurance Jim Lloyd currently serves as the steering committee's chairman.

Lloyd relates, "SMA staffs around the Agency are facing everyday challenges in fulfilling their assurance roles. We believe that the ATC can help our SMA staffs successfully meet these challenges. The ATC has been formed to assist each SMA constituent to more effectively address Agency needs in the most rigorous but resource-efficient manner possible."

In addition to the initial efforts to identify the various sources of SMA training, ATC is consolidating the Agency's large collection of SMA policies. From this collection they will establish a degree of commonality that should lead to more efficient and focused SMA processes. Pursuing this work under a concept of 'one NASA' will better enable the SMA community's role of assuring mission safety and success activity. ♦



## Hickman takes HQ assignment



Hickman

Karen Hickman, former liaison officer, Office of the Director at Glenn, joins the Headquarters staff as executive officer to James Jennings, deputy associate administrator for Institutions and Asset Management. She will be responsible for helping plan and integrate activities related to personnel and institutional management.

Hickman leaves Glenn after 8 years of service where she was principally responsible for communicating complex technical information to House and Senate congressional offices as well as local and state legislators. She also helped to foster local, state, and regional partnerships. Some of her more notable leadership responsibilities included program manager for the Centennial of Flight Committee, implementation of the Cleveland Federal Community Leadership Institute, and key coordinator for Glenn's Renaming and 60<sup>th</sup> Anniversary events. ♦

## CHIPS ready to work on the Bubble

The January 11 launch of NASA's Cosmic Hot Interstellar Plasma Spectrometer (CHIPS) will enable a new study on the gases and dust in space, which are believed to be the basic building blocks of stars and planets. The mission will focus on a region in space called the Local Bubble, which is about 300 light-years in diameter. The 131-pound, suitcase-sized satellite will orbit the Earth at about 350 miles (590 kilometers) altitude and is expected to operate for 1 year. CHIPS is the first NASA University-Class Explorer (UNEX) mission geared to train young scientists and engineers on a real flight mission. For more information about CHIPS, visit <http://chips.ssl.berkeley.edu>, <http://www.gsfc.nasa.gov/topstory/2002/1217chips.html>, and <http://icesat.gsfc.nasa.gov/intro.html>. ♦

## MLK recognition breakfast



C-2003-120

Photo by Marvin Smith

Glenn's Office of Equal Opportunity (EO) Programs hosted its annual Martin Luther King, Jr., Equality Recognition ceremony on January 16. The event recognized the EO advisory group members and employees who have supported Glenn's EO outreach over the past year. Rev. Valentino Lassiter, assistant professor in the Department of Religious Studies at John Carroll University, was the keynote speaker. Lassiter reflected on

Dr. King's mission and his dream of equal opportunity for everyone. The ceremony was augmented by displays and a video of Glenn managers sharing their views of King's impact on strides made towards equal opportunity and diversity in the workplace. Center Director Donald Campbell, left, is pictured thanking Lassiter for his words of inspiration.

## FIRST Hall of Fame

Cleveland's East Tech High School Scarabian Knights got an extra boost of inspiration at the FIRST (For the Inspiration and Recognition of Science and Technology) robotics competition 2003 kickoff event on January 4. The 1999 East Tech team (pictured below) was inducted into the FIRST Hall of Fame, which is reserved for those teams that have won FIRST's most coveted prize, the National Chairman's Award. This award recognizes a team's successful partnerships with corporate sponsors, professionalism, outreach into the school and community, and sportsmanship. This year, East Tech will be one of 10 local high schools competing in a field of 59 teams at the FIRST Buckeye Regional cosponsored by Glenn on March 6 to 8 at Cleveland State University's Convocation Center. Volunteers are needed for this event. Contact Debi Daugherty (OAI), 440-962-3006, if you are able to volunteer. You can also support the schools by coming down to the competition to cheer them on. Bring the family. Admission is free!

Photo by S. Jenise Veris



C-2003-100

Photo by Marvin Smith

## NTA honors EO

Glenn's Office of Equal Opportunity (EO) Programs Chief Robert Romero (center), joined by members of the EO staff, graciously accepted the National Technical Association (NTA) Silver Corporate Technical Image award on behalf of the Center's EO Office during the January 6 Director's Leadership Team meeting. NTA's national president, Frank Robinson (0510), and Dr. Dexter Johnson (5930), treasurer, presented the award in recognition of Glenn's high level of support for the NTA mission and programs as well as sponsorship of the 74<sup>th</sup> National Conference. The award was originally announced at the 74th NTA National Conference held last fall in Las Vegas. Pictured, left to right, are David Namkoong, Dionne Hampton, Dexter Johnson, Robert Romero, Renee Batts, Deborah Cotleur, and Frank Robinson.



## We're online

Spread the word—*AeroSpace Frontiers* newsletter is online! You can view our monthly publications via the Internet at <http://AeroSpaceFrontiers.grc.nasa.gov>. Special thanks to the Logistics and Technical Information Division, especially Kelly Shankland (IDI), who designed the site, and the Systems Information Division for their assistance in this endeavor. We hope you enjoy reading about Glenn online.

their experiences and offer key points for school presentations.

Glenn also teams with the Cleveland Area N.E.W. Committee in sharing resources and enthusiasm. A highlight of the collaboration is the annual N.E.W. banquet, which encourages Glenn staff and engineers to join peers in the local community to honor technical talent through various awards. Supporting this year's theme, *Turning Ideas Into Reality*, Glenn's Wright Brothers' performers will share some of their stories leading up to this Nation's first flight.

Through the commitment of our engineers, our Center has touched over 40,000 students throughout the past 5 years. I encourage employees to continue their involvement in this worthy initiative. By involving students in our work and creating opportunities for them to learn, we are inspiring a new generation of engineers. ♦



## Director's Corner

With Donald Campbell

### Sparking future engineers

Throughout history, engineers have played a major role in shaping the way we live and work, and this month serves to highlight their contributions and the importance of maintaining a tradition of excellence in the field. National Engineers Week (N.E.W.), celebrated February 16 to 22, is intended to increase student interest in technology, science, and mathematics by sharing exciting and realistic engineering-related activities that highlight those subjects in classroom presentations across the country.

Our Center's Office of Educational Programs (OEP) has worked diligently to provide Glenn engineers and local area engineers with the training and resources they need to go into classrooms with the goal of exciting and inspiring young minds. They have been especially effective in targeting students from kindergarten through 12<sup>th</sup> grade. The annual N.E.W. Speaker Workshop provides age-appropriate, hands-on activities to enhance their school presentations. Veteran Glenn speakers volunteer to share

## News Notes

**LESA MEETING:** LESA/IFPTE, Local 28, will hold its next monthly membership meeting on Wednesday, February 12, at noon in the

**WOMEN RETIREES LUNCHEON:** The next luncheon for Glenn (Lewis) female retirees is Thursday, February 13, noon, at the

in Middleburg Heights. For further information, contact Malvina Hay, 440-331-1737.

**SOVIE RETIREMENT RECEPTION:** R. Joseph (Joe) Sovie retired January 3, 2003. A retirement reception in Joe's honor will be held Wednesday, February 26, from 4 to 7 p.m. in

Tickets are \$14 per person. Reservations are due by February 19. Contact Barbara Coles, 216-433-6147.

**AFGE MEETING:** AFGE Local 2182 will hold its monthly membership meeting at 4:30 p.m. on Wednesday, March 5, at the

All members are encouraged to attend.

**WOMEN'S HISTORY MONTH:** Glenn will welcome Mayor Jane Campbell as

the guest speaker for the Women's History Month program on Thursday, March 6, 1 to 3 p.m. in the

The theme is "Women Pioneering the Future." Living vignettes of Amelia Earhart (1897-1937), aviatrix, and Edmonia Lewis (1843-?), the first successful African-American sculptor, will be performed by the Women's History Troupe. The Glenn Federal Women's Program awards will also be presented. Refreshments will be available.

**DISTINGUISHED PUBLICATION:** Nominations for the 2002 Glenn Distinguished Publication Award may be submitted through division offices by March 12. Directorates will collect the packages and submit them (as one package) to the Chief Scientist Marvin Goldstein by 4:30 p.m., Friday, April 25. A *Today@Glenn* bulletin will be posted outlining the selection process. For further information, contact Shirley.D.Frye@nasa.gov.

**BPW SCHOLARSHIP:** The NASA Glenn Business and Professional Women's (BPW) organization will again offer a scholarship to civil servant or contractor women to continue career advancement

## Harvest For Hunger March 1 to 31

studies. In addition, there are many other BPW state and national scholarships available with deadlines beginning April 1. For more information, contact Judy Budd, 216-433-5580.

**NASA COLLEGE SCHOLARSHIP:** The NASA College Scholarship Fund, Inc., was established to award scholarships to qualified dependents of NASA and former NASA employees Agencywide. Six scholarships will be awarded in the amount of \$2,000 each for the 2003-2004 school year. The renewable scholarship is for a maximum of \$8,000 over 6 calendar years. Applicants must be pursuing a course of 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. For additional information, application, and deadlines, visit <http://jscpeople.jsc.nasa.gov/nasascholarship.htm>, or contact Marie Borowski, 216-433-5582.

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# E&TSD works to meet its customers' needs

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way we're structured will get us to the next level."

This recent realignment results from recommendations from a diverse, cross-functional team known as the Goal State Team (1999 to 2000). While many of those recommendations were directly adopted, others required changes in the organizational structure before implementation.

"Directorate management was working with an organization pulled together from two separate directorates in the mid 1990s—the Engineering Directorate and the Technical Services Directorate," Furnas said. "The result wasn't ideal and the customers' needs weren't always being met in an efficient and effective manner."

To better meet customers needs, the Directorate senior management reassessed the E&TSD structure, practices, and processes based on the following key drivers:

- Flexibility and agility to respond to rapidly changing requirements
- Best deployment of limited civil servants
- Optimal customer satisfaction
- Strengthening employee career opportunities
- Significant progress toward the model workplace
- Best position for full-cost environment

This resulted in the creation of five divisions—Information Systems, Facilities, Research Testing, Engineering Development, and Systems Engineering—which were constructed around the core functions of the Directorate. Three division-level offices—Business Systems, Plum Brook Management, and Aircraft Operations—were also formed.

E&TSD instituted the Business Systems Office (BSO) to ensure a directorate-wide approach to business management, and consistent division goals and practices. Ensuring a flexible structure to meet

the ever-changing needs of E&TSD's customers was also key in creating the BSO.

In addition, the E&TSD management team agreed that creating a more unified, "one-stop shopping" environment for its research customers would best support the Center's R&D mission. This led to the creation of the Research Testing Division from the previous Test Installations and Facilities and Test Engineering divisions.

"I am proud of E&TSD's employees, both civil servant and support service

contractors, and our excellent management team," Furnas affirmed. "We worked hard and accomplished the realignment from concept to completion in just 1 year's time. Our dedication in making important decisions that were best for the directorate is very inspiring to me—and to our customers."

For more information about E&TSD, visit their Web site at <http://www.grc.nasa.gov/WWW/ETSD/index.htm>. ♦

## E&TSD Structure and Mission

**7000/Engineering and Technical Services Directorate:** Assure safe, cost-effective and reliable engineering, testing, and information technology systems to accomplish Glenn's R&D mission—Director Randall Furnas, Deputy Director Jose Vega

**7010/Business Systems Office:** Envision, design, and implement processes and tools to deliver optimized management and programmatic support to E&TSD management and staff—Chief Robert Thomas

**7030/Plum Brook Management Office:** Assure safe, cost-effective, responsive, and reliable performance of research testing at Plum Brook Station—Chief Robert Kozar

**7040/Aircraft Operations Office:** Assure safe, cost-effective, responsive, and reliable performance of research flight activities—Chief William Rieke

**7100/Information Systems Division:** Assure innovative, cost-effective Information Technology (IT) hardware and software systems, tools, technologies and solutions supporting research, engineering, and administrative information requirements—Chief Sasi Pillay

**7300/Facilities Division:** Assure safe, cost-effective, and reliable performance and utilization of the Glenn facilities and physical assets—Chief Dallas Lauderdale

**7600/Research Testing Division:** Assure safe, cost-effective, responsive and reliable performance, and utilization of research laboratories and research testing—Chief Jeffrey Haas

**7700/Engineering Development Division:** Assure advanced and maturing engineering, technologies, and prototyping capabilities—Chief John Taylor

**7800/Systems Engineering Division:** Assure mature and integrated systems engineering and analysis services, practices, and procedures—Acting Chief Randall Furnas

# Centennial kickoff

Glenn's Centennial of Flight Committee unveiled its plans for the year-long celebration to a packed audience of employees in the Administration Building Auditorium on January 15. Committee members shared key activities and areas of responsibility pertaining to 100<sup>th</sup> anniversary of flight celebrations throughout the country. At the event, committee members also introduced support team leads and encouraged employee involvement for coordination and staffing.



C-2003-123

Photo by Marvin Smith

The Centennial of Flight Commission is overseeing and coordinating the national celebrations, which are collectively entitled "Centennial of Flight: Born of Dreams—Inspired by Freedom." Glenn will celebrate the Centennial of Flight by showcasing the Center's contributions to powered flight from the past, in the present, and into the future.

"Glenn's role in this Agency initiative is an especially strong one given our Center's geographic location and Ohio's role in the history of flight," said Program Manager Karen Hickman, Office of the Director. "Over the past 2 years, we've assembled a diverse team of employees throughout the Center to assist the Agency in putting on an outstanding show of events."

<http://centennial.grc.nasa.gov>

## Key Events

Glenn is taking part in several major events throughout the centennial year. From galas to airshows, each event offers a history lesson as well as a good time.

**Inventing Flight**  
July 3 to 20

**WPAFB Air Power 2003**  
May 10 to 11

**Festival of Flight**  
May 16 to 26

**AIAA/ICAS International Air & Space Symposium and Exposition**  
July 14 to 17

**Dayton Air Show**  
July 17 to 20

**Rockefeller Centennial of Flight Expo**  
July 28 to August 17

**EAA's Airventure 2003**  
July 29 to August 4

**Cleveland National Air Show**  
August 30 to September 1

**L.A. County Fair and Shore Fest**  
September 6 to October 6

**First Flight Centennial**  
December 13 to 17

### Exhibits

Glenn's Community Exhibits Management Team has developed plans and conceptual designs for NASA exhibits to support the Agency's presence at national shows. The exhibits incorporate artifacts, models and demonstrations, multimedia components, video programming, and publications. Employee participation in staffing exhibits and conducting demonstrations at the events is vital. Contact David DeFelice.

<http://wright.nasa.gov>

### Education

Glenn will participate in many educational events and activities in recognition of the centennial celebration. Activities will not only highlight the Wright Brothers but also the use of their invention process by NASA scientists in current research programs. An informative and interactive activity-packed Web site, <http://wright.nasa.gov>, entitled "Re-Living The Wright Way" awaits students and adults alike. Contact Carol Galica.

### Inventing Flight

Glenn will take the lead role in the Centennial of Flight event, "Inventing Flight—The Centennial Celebration," July 3 to 20 in Dayton, OH. This exciting event will be held at Deeds Point, an acre park overlooking the City of Dayton's downtown landscape at the Great Miami River. The event will require the participation of many employees. Contact Theresa Benyo.

### Timeline and Web

A Web-based timeline database, <http://timeline.grc.nasa.gov>, highlights Glenn's contributions to air and space flight by recreating the Center's history. The timeline allows visitors to explore the Center's history and learn about accomplishments in the areas of research and technology, including powered flight. Contact Susan Hennie and Bonnie Smith.

# Sharing the pursuit of excellence

BY S. JENISE VERIS

As one of the most active members of Glenn's Speakers Bureau, Bryan Palaszewski, Combustion Branch, is adept in communicating NASA's mission and vision and relating the "wided-eye" wonders of technological development. However, at a recent speaking engagement he gained insight himself into the Ismaili Muslim community and their common pursuit of educational excellence as a means to effect change.

Palaszewski spoke on the topic "The Future is Yours" for the Excellence Awards ceremony in Chicago sponsored by the Aga Khan Development Network (AKDN). The network promotes educational excellence and career guidance for a multitude of Muslim-American students.

"It was exhilarating to witness the dozens of awards presented to students for improvement, not just for the highest grade or achievement," Palaszewski said. "I observed some interesting aspects of their training but more importantly their commitment to providing mentors to students literally from a prenatal state until they graduate."

By request, Palaszewski's presentation included the representation of women and ethnic minorities at NASA, futuristic endeavors, and the importance of sacrifice and teamwork to achieve seemingly impossible goals. It included material on Mae Jemison, the first African-American female astronaut and entrepreneur, and other women in NASA; Glenn R&T projects; future projects such as "Cradles of Humanity (or space colonies for human preservation in case of planetary disasters)," Europa exploration missions, and the Hubble Space Telescope; and examples of how teams are critical to making complex projects a reality.

Patricia Statwick of NASA's Illinois Commercialization Center (a regional affiliate of Cleveland's Great Lakes Industrial Technology Center) was among the 500 attendees at the ceremony. Statwick referred Palaszewski for the event after having served as a presenter

at a business summit attended by AKDN members earlier in the year.

"The awards ceremony was almost like a pep rally with cheers of affirmation given to the speakers and award winners—from preschoolers to business leaders—throughout the 3-hour event," Statwick said. "Bryan's delivery of his presentation matched the level of enthusiasm and fulfilled their desire to have 'a rocket scientist' who could inspire and encourage the students to reach for the stars." ♦



Bryan Palaszewski, right, and Hussien Din, the AKDN speaker coordinator.

## Glenn aids calibration research

BY S. JENISE VERIS

A more affordable option for year-round calibration of solar cells looms on the horizon thanks to the ingenuity of Wayne State University (Michigan) professor Dr. James Woodyard and a Glenn grant. Initiated in 1999, the grant has enabled Woodyard to design, develop, and construct a low-cost calibration system using a weather balloon.

The balloon system, dubbed *Suntracker*, includes a 6-by-8-foot latex balloon, hardware, and electronics that will accommodate a 5-pound payload. To date, it has reached heights up to nearly 100,000 feet and distances as far as 186 miles, tracked via a global positioning satellite (GPS) receiver and radio transmitter. Data from the transmitter is retrieved by Glenn engineers using the amateur radio band.

"How accurate we can be is yet to be determined," explained Dr. David Snyder, Photovoltaic and Space Environment Effects Branch, who is technical monitor for the grant. "So far, the system clearly shows a relationship between sunlight intensity and atmospheric conditions. But we're working towards higher resolution."

Woodyard, with a team of students and Glenn engineers including Snyder and Phil Jenkins and David Scheiman (OAI) from Photovoltaic and Space Environment Effects Branch, have conducted flight demonstrations at a farm near Findley, OH. Four out of six flights have flown successfully.

Although there is risk in package loss or the transmitters malfunctioning, the advantages loom larger. In addition to the low cost of construction, the system has the advantage

of year-round flight compared to the larger Mylar balloon program at the Jet Propulsion Lab and flies nearly twice as high as Glenn's Lear Jet—above the ozone layer.

"With a funding increase of 50k over last year's grant, we have high expectations for the project," Snyder said. "It also provides a unique learning opportunity for interested parties to record the data via the open amateur radio band at 144.34 Megahertz using a ham packet radio." ♦

Photos Jim Scheiman



Drs. David Snyder, left, and James Woodyard seal the weather balloon with duct tape.

*Black Heritage Month Spotlight*

# A call for mentorship



EO Advisor to AHAC Renee Batts (left), with AHAC chairs Carl Brown and Shanton Bland

Photo by S. Jenise Veris

BY S. JENISE VERIS

The start of the new year marks a time of renewal and rejuvenation for many, including Glenn's African Heritage Advisory Committee (AHAC). Co-chairs Shanton Bland, Information Services Division, and Carl Brown, Safety Office, are committed to sharing the AHAC mission of involvement, empowerment, and cooperation that will help extend educational and employment opportunities to Glenn employees of African descent.

Bland states, "We need to assure Glenn's African-American employees that AHAC is available to address issues of common concern. One of the items on AHAC's 2003 agenda is to host a series of social events to not only reacquaint them with our mission, but also introduce them to various Lab personnel who can assist with their professional goals.

"AHAC also plans to review data on the decline in African-American managers at Glenn and encourage mentorship from current managers and supervisors to their staff and interns that will ensure a pipeline of talent that is capable of replacing them," Bland added.

Bland and Brown complement each other well in their administrative responsibilities. Although they exhibit a decided contrast in demeanor, they share similar employment backgrounds and views on the importance of advocacy and mentorship.

"I bring to the organization a sort of 'bulldoggish' tenacity to do the right thing, but am mindful of processes that can make things happen," said Brown, who served as a process consultant in the Office of Diversity 2 years ago. "I want to enhance rather than deter opportunities for those who follow behind me, just as role models here at Glenn have done for me."

Brown came to the Lab 18 years ago as a co-op in electrical engineering through the 2+2 Program at Cuyahoga Community College. He learned the importance of

mentorship through Leroy McCreary, a recently retired manager in Human Resources. McCreary encouraged Brown to consider retooling as a mechanical technician, which enabled Brown to earn a job as a model maker immediately after graduation. When away from Glenn, Brown uses high school sporting events as a forum for outreach to encourage students to excel and investigate Glenn's educational programs.

Bland also benefited from mentorship, first as an LERCIP intern and then as a co-op in his current division (previously the Computer Science Division), where he has excelled for the past 16 years. His demonstrated leadership as president (now president-emeritus) of the Cleveland Chapter of the National Technical Association was the reason one of his mentors, Deputy Director Dr. Julian Earls, encouraged Bland to join AHAC 2 years ago.

Brown and Bland look forward to the Black Heritage Month observance on February 27, the first of several opportunities for Glenn's African-American employees to socialize. This year's national theme, "The Souls of Black Folk: Centennial Reflections," was inspired by W.E.B. DuBois' book, *The Souls of Black Folk*. Historians believe this book inspired much of the Black consciousness movement of the 1960s. Bland and Brown hope AHAC's sponsorship of this event and others this year will help spark a spirit of activism in Glenn's African-American population to encourage and remind them how mentorship helps everyone achieve. ♦



**Claiborne Haughton**

Former Acting Deputy Assistant Secretary of Defense for Equal Opportunity

**featured speaker for  
Glenn's Black Heritage  
Month Program  
Thursday, February 27  
9 to 11 a.m.**

## In Memory

### Center loses dedicated officer

Employees across the Center are feeling the loss of **Daniel Kramer, Jr.**, 38, who died unexpectedly on December 21, 2002. A member of the Center's security force for 12 years, Kramer, SETK/0550, built a solid reputation as a dedicated and skilled officer.



Kramer, Jr.

"Dan was one of the best I've ever worked with," said Charlotte Hamilton, SETK/0550, who served as his supervisor. "No one can fill his shoes."

In addition to his professional presence, Kramer was appreciated by many at the Center for his positive, caring, and gracious attitude. He often shared his love for softball and jazz with his fellow employees but the light of his life was his wife and four children, ages 8 through 16.

Glenn's Security Management Office has received an outpouring of condolences and is accepting donations for the Kramer family. Stop by the Main Gate or Headquarters location, or call 216-433-2204/5617, if you wish to contribute. A Kramer Children Memorial

Fund, c/o First Federal Savings of Lorain, 2233 East 42<sup>nd</sup> Street, Lorain, OH 44055, has been established as well.

**John Beleny**, 84, who retired with 34 years of Government service including 15 years at Glenn, recently died. Beleny worked as a shipping foreman before retiring in 1976. He continued working at the Center as a contractor for several years. His wife, Geraldine (Jerry), was employed in the Construction Branch for 15 years before retiring in 1979.



Beleny

**Alice Coates**, 92, who retired from Glenn in 1979, recently died. She worked as a supply clerk.

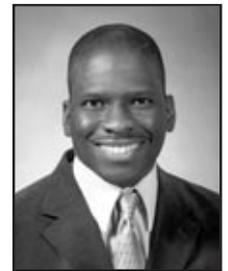
**Virginia Indovina** (Hucovsky), 66, who retired in 1999 with 13 years of service, recently died. She worked in the Office of the Chief Scientist.

**Louis Reiman**, 87, who retired from Glenn with 32 years of service in 1974, recently died. He worked as a supervisory mechanical engineer.

## People



Dr. Earls



Robinson

Continued from page 1

The award is given by Career Communications Group, Inc., which sponsors the annual Black Engineer of the Year Technology Awards conference. Lockheed Martin, *US Black Engineer & Information Technology* magazine, and the Council of Engineering Deans of the Historically Black Colleges and Universities will host this year's event, February 13 to 15, in Baltimore, MD.

**Daryl Robinson**, Satellite Networking and Architecture Branch, will also be recognized at the event as a Modern-day Technology Leader. He will receive a certificate of recognition and be featured in the Black Engineer of the Year Awards conference magazine and souvenir journal. ♦

*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.

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DEADLINES: News items and brief announcements for publication in the March issue must be received by noon, Friday, February 14. The deadline for the April issue is noon, Friday, March 14. 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

Ideas for news stories are welcome but will be published as space allows. View us online at <http://AeroSpaceFrontiers.grc.nasa.gov>.



## News Notes

Continued from page 5

**FACILITY PORTAL:** Glenn's new research facility portal is now online at <http://facilities.grc.nasa.gov>. It features Glenn's major facilities supporting research in aeronautics, aerospace, and space program areas.

**NACA REUNION:** The NACA Retiree Reunion X is October 10 to 12 in Cleveland. If you have not received an invitation, please send your name and address to NACA Reunion X Committee, c/o NASA Glenn, Brookpark Rd., Cleveland, OH 44135, or call 216-433-5358.

**CORRECTIONS:** *AeroSpace Frontiers'* December 2002, p. 5—Jesse Barnes' title is Tuskegee University's safety officer; and January 2003, p. 2—Dr. Arnauld Nicogossian joins George Madison University's School of Public Policy.

## In Appreciation

My family and I wish to thank the many friends at Glenn for the sympathy cards and caring that was shown to us at the passing of my wife, Joy.

—David L. Wright

## People

### Procurement honors



Tripp



Mensurati



Shaw

Three Glenn Procurement personnel have been awarded the prestigious Agency Procurement Person of the Year awards for FY03. The awards provide high-level recognition of particularly outstanding achievements in procurement activity.

**Paivi Tripp** was awarded the Procurement Supervisor of the Year for her leadership in preparing Procurement personnel and Center requisitioners for the Integrated Financial Management's (IFM's) Core Financial implementation.

**Ernest Mensurati** was awarded the MidRange/Commercial Person of the Year for his skills and initiative in applying the streamlined MidRange procedures to a wide variety of contracts. **Heidi Shaw** was awarded the Grants Specialist of the Year for her exceptional performance, timeliness, and customer service in supporting many varied and challenging programs. ♦

## Exchange Corner

- Valentine's Day is Friday, February 14. The Exchange Store has great gift ideas for this special holiday.
- In honor of Black History Month, the \_\_\_\_\_ will offer a lunch special on Thursday, February 20 from 11 a.m. to 2 p.m.

## Behind the Badge

### a closer look at our colleagues

#### Sean O'Keefe



**Job assignment:** Administrator

**Time at NASA:** One year as of January.

**Hometown:** I was born in New Orleans and currently live in Ashburn, VA.

**Describe your family:** The O'Keefe family consists of Laura, my best friend and partner of 25 years; two teenagers, Lindsey and Jonathan, as well as an 11-year-old want-to-be teenager, Kevin. Rounding out the O'Keefe family is a reasonably well-behaved golden

retriever and two cats who tolerate him.

**Favorite food:** Cajun

**Favorite music:** Classical

**Favorite movie:** *The Natural*

**Person you most admire:** Vice President Dick Cheney

**What do you see as an area of expertise at NASA:** Our entrepreneurial spirit, can-do attitude, and enthusiasm for exploration

#### Monetta Moffitt



**Job assignment:** My title is branch secretary in the Project Management Branch but I am currently on detail to the Office of the Director as a process consultant to the Space Directorate.

**Time at Glenn:** Eighteen years

**Hometown:** I was born, raised, and have remained in Cleveland.

**Describe your family:** I have an 18-year-old son, Clifford, three older sisters, and a very large extended family. We are a very close family who suffer through battles and tragedies; we are joyful when we make up and are triumphant.

**Career alternative:** My career alternative is to be a process consultant (which is exactly what I am doing). There are many of us who judge people based on preconceived prejudice instilled in us from birth, not from personal contact. Learning about various cultures can help us understand people's uniqueness. Hopefully, we can respect the fact that we all share one thing—the right to be an individual. We can all work together.

**Favorite food:** My favorite food is soul food.

**Favorite music:** Jazz is my favorite form of music.

**Person you most admire:** I admire Linda S. Mayes, a member of the Space Flight Project Branch. She has the unique ability to talk to anyone—such as the person next to her in a grocery store line—and in no time they are calling each other by first name. She has had some rough times in her life, but does not dwell on the past. Rather, she trusts in God to answer her prayers. If you haven't met her yet, you will.

**Activities when away from Glenn:** I enjoy playing cards, specifically Bid Whist. It's similar to Spades, but much more complicated.

# Test prepares Rolls Royce nozzle design

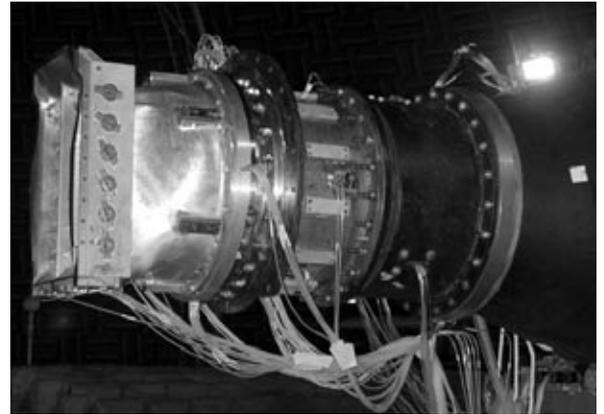
Glenn's facility readiness and professionalism ensured the successful outcome of 3 months of nonstop performance testing in the Aero-Acoustic Propulsion Lab (AAPL). Despite a 2-month delay in reactivating the Powered Lift Rig (PLR) from a 2-year standby and substantial additions to the original evaluation plan, Glenn engineers completed testing for 120 different configurations of the Rolls Royce Corporation's lift-fan nozzle design for the Joint Strike Fighter (JSF).

Considered the future of flight technology, the JSF has become the Department of Defense's choice to replace the Harrier with vertical takeoff and landing capabilities. The PLR was originally constructed to support NASA's efforts in Advanced Short Take-Off and Vertical Landing (ASTOVL) aircraft research, but was placed on stand by when program funding terminated in the mid-1980s.

"Unfortunately, our data delivery date never changed, despite the delay and additions to the original tests plan," explained Luis Beltran, Research Testing Division. "The only way to make up time was to extend test shifts by 3 hours and test daily while trying to minimize the impact to schedules of three other active acoustic test rigs in the AAPL."

"A great deal of thanks goes to the team headed by Ray Loew (QSS) with Al Johns providing research expertise, the Akima technical staff supporting facility operations and the other personnel who worked so hard to meet the customers schedule," Beltran added.

This activity supported the System Design and Development Phase of JSF testing



*Joint Strike Fighter lift-fan nozzle mounted in PLR.*

in preparation of planned aircraft flight testing in FY05. The test activity was sponsored by the Advanced Aircraft project within the Propulsion and Power Program. ♦

National Aeronautics and  
Space Administration

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