



# Authorization Act Moves Agency Forward

## Center Director Stresses Commitment to Developing Strategies

With the passage of the NASA Authorization Act of 2010, Administrator Charlie Bolden, Deputy Administrator Lori Garver and NASA's senior leadership met last month to begin making plans for moving the agency forward. At an All Hands Meeting at Glenn on Oct. 18,

Center Director Ray Lugo shared outcomes of that meeting.

"The goal of the two-day retreat was to develop strategies to effectively engage the leadership and workforce in implementing the ambitious plan, which

includes \$19 billion for NASA fiscal year 2011," Lugo explained.

He called the authorization bill a roadmap for NASA and a strong vote of confidence in tough economic times. While the bill offers many opportunities, he said, it requires NASA to develop new, innovative approaches to accomplish the goals contained within the bill.

## Glenn Wins Four R&D 100 Awards

### Among 100 most technologically significant in 2010

Four NASA Glenn research teams and their partners were acknowledged for innovation in communication technologies, mechanical devices and process sciences at the R&D 100 Awards banquet on Nov. 11 in Orlando. Widely recognized as the "Oscars of Innovation," the R&D 100 Award serves as a benchmark of excellence for gauging the commercialization of emerging technologies. Winners of the R&D 100 Awards are selected by an independent judging panel and the editors of R&D Magazine. Glenn continues to lead all NASA centers with a total of 109 of the coveted awards.



Glenn members of the LPB team: Dr. Gabb and Telesman

### Life-Extending Tool

Low Plasticity Burnishing (LPB), a new metal-strengthening process, developed by Lambda Technologies in Cincinnati under a Small Business Innovation Research contract with NASA, offers a low stress method for improving impact resistance and fatigue life of metallic components such as airplane wings and other structures. The team responsible for the process includes Glenn's Dr. Tim Gabb, Advanced Metallics Branch, and Ignacy (Jack) Telesman, Life Prediction Branch; Lambda Technologies' Doug Hornbach, Perry Mason and Paul Prev y; and Honeywell Engine Systems' Pete Kantzos (not pictured).



Lambda Technologies members of the LPB team: left to right: Mason, Prev y and Hornbach with metallic samples.

"I am committed and proud to have the opportunity to lead the Glenn team at this particular time to achieve the goals we have before us," Lugo affirmed. "I believe Glenn is well positioned to make significant contributions to the new programs. The only thing that remains is for us to do what we do best—provide innovative technology solutions."

For further information on agency goals, visit the NASA website at: [http://www.nasa.gov/pdf/488471main\\_2011\\_Strategic\\_Goals.pdf](http://www.nasa.gov/pdf/488471main_2011_Strategic_Goals.pdf)

—By Doreen B. Zudell

**ATTENTION RETIREES**

You are invited to a special briefing from Center Director Ray Lugo on Monday, Dec. 6.  
See page 7 for details.

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Center Director Lugo

## Building a Safety Culture

I've just completed the annual performance review of NASA Glenn's senior leadership and had a very interesting discussion with our Director of Safety and Mission Assurance (SMA), Tom Hartline. To frame the context of this message, I want to share some of the discussion. First, and most importantly, I have never worked with anyone more passionate about assuring the safety of our Glenn workforce. Tom related a story from his days in the Navy that involved the failure of leadership to implement and monitor an effective safety program that resulted in the tragic loss of a crewman. Tom comes to this job with the hard experience of having to investigate the loss of a fellow employee and ultimately find that the loss was completely preventable.

From a personal perspective, I remember as a young engineer I felt the safety of

the equipment, hardware and people working on tasks I was responsible for, were my responsibility. I tended to discount the contributions of the SMA organization because of this belief. I was fully versed in the safety and quality rules and regulations and was aggressive in making sure that my work, my workplace and my team were safe. I was fortunate to have never been involved in a mishap. Over time I grew to understand that while I was "right" in my belief, I was wrong for not taking advantage of the expertise, knowledge and help the SMA experts can and will provide.

On numerous occasions, I've been asked what keeps me up at night. To

be honest, I worry that one of us will come to work and not return home to our family and friends. We work in an environment which is as safe as we can make it, but each of us has an individual responsibility for our own safety and the safety of others in our workplace. I can attest that no single person or organization can or should be responsible for assuring our safety in the workplace. It takes a team. We must all take responsibility for making and keeping our workplace safe. We must fully embrace the guidance and counsel of the SMA experts. Let's not wait for something to happen; let's be proactive and think what we can do together to make Glenn an even safer place to come to work. Finally, when you look in the mirror at the end of the day, the person looking back must be more accountable for safety.

## Humphries Named Acting CIO

Center Director Ray Lugo has named William R. (Randy) Humphries Acting Chief Information Officer and Director of the Office of Chief Information Officer. In this position, he is responsible for advocating, managing and implementing information technology investments and infrastructure at Glenn.



Humphries

Humphries has a broad scope of responsibility, including managing administrative telecommunications, desktop computing, and computer graphics and visualization; computer modeling and simulation; and high-end computing and networking. He also serves on the center's Strategic Management Council and the Operations Management Council.

Prior to this appointment, Humphries served as Deputy Director for Glenn's Space Flight Systems since 2006.

## New Door for RATF Chamber

### Massive Horns Installed

Weighing in at 350,000 pounds, this 58-foot tall rolling door (pictured top right) constructed of steel-welded plate was installed at the Reverberant Acoustic Test Facility (RATF) at NASA Glenn's Space Power Facility in September. This door lift is a major milestone for the SPF's ongoing renovation project. When complete, the steel-reinforced-concrete chamber will accommodate high-power acoustic testing of large space vehicles and will be one of the largest and most powerful in the world, reaching an overall sound pressure level of 163 dB in the empty chamber. The testing will demonstrate the performance and function of the vehicle during and after exposure to the acoustic environments of lift-off and ascent. To simulate the vehicle's extreme acceleration through Earth's atmosphere, horns currently being installed (pictured above) will be used to deliver sound power to the chamber—seven times more powerful than standing next to a jet engine or a Formula 1 race car.

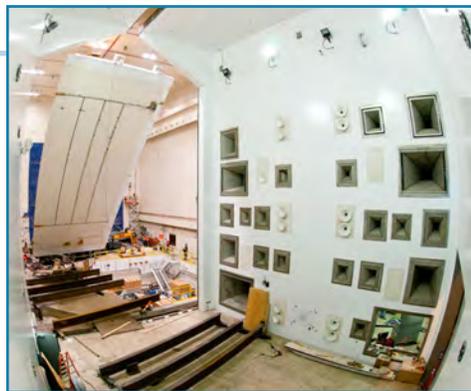


Photo by Chris Lynch



C-2010-4851 Photo by Marvin Smith

—By Elizabeth Wagner

# Glenn Celebrates Summer of Innovation Success

## Students explore STEM career opportunities

Nearly 100 students from Cleveland and Grand Rapids, Mich., who had participated in NASA's Summer of Innovation (SoI) project, came to Glenn on Oct. 15 to help celebrate SoI's inaugural year of accomplishments.

Robyn Gordon, Glenn's director of Center Operations, welcomed the students and distinguished guests from NASA headquarters to Glenn's SoI culminating event. Guests included NASA's Associate Deputy Administrator Charles Scales, Associate Administrator for Mission Support Dr. Woodrow Whitlow Jr., Manager of Elementary, Secondary and eEducation Dr. Shelley Canright and SoI Project Manager Dovie Lacy.

The event featured a high-energy science, technology, engineering and mathematics (STEM) career roundtable discussion with four Glenn researchers and scientists—Mary Jo Long-Davis, Terri Rodgers, Dr. Felix Miranda and Lance Foster—followed by an astronaut briefing with veteran astronaut Mike Foreman and lunch. Fifty-eight students from Chicago and New York participated in the roundtable and briefing via the Internet. Onsite, students toured one of four Glenn facilities before departing to the Great Lakes Science Center to view the OMNIMAX film "Hubble."

These students are part of the 78,000 students and 4,000 teachers served through SoI's focused attempt to aid low income, minority middle schools

*Career panelist Foster, far right, amuses the students and fellow panelist (left to right) Long-Davis, Rodgers, and Dr. Miranda, with his freestyling "rap."*



Photos by Tim Dedula



*Associate Deputy Administrator Scales addresses the students.*

by making STEM more realistic and understandable by using NASA content. Eighteen hundred NASA employees supported 150 SoI events held at NASA field centers and various sites across the country, with NASA Glenn leading

the way in the number and variety of opportunities.

Lacy spoke to the students about the value of their SoI experience and their role in making it a success. "It's important for you to stay engaged in STEM-related activities, because we've invested the best of NASA's assets—its people, technology and exciting thought-provoking programs—to help you grow and make informed decisions about your future," she said.

—By S. Jenise Veris

## NASA Heroes Fuel Student Success

While legends inspire us, trailblazers guide us. Glenn ingenuity brought both together for two Summer of Innovation events designed to motivate minority students to pursue science, technology, engineering and math (STEM) careers.

The Legends & Trailblazers Roundtable, featuring some of NASA's most notable past and current senior managers and astronauts, headlined the Minority Student Education Forum held from July 27 to 29 in Cocoa Beach, Fla. Former Glenn Center Directors Donald Campbell and Dr. Julian Earls joined former NASA Dryden Flight Center Director Isaac Gilliam, former Headquarters Associate Administrator for Aeronautics Dr. Wesley Harris, and NASA's first female African-American "human computer" Katherine Johnson on a panel of legends. Associate Director Vernon "Bill" Wessel and Raquel



*The Legends & Trailblazers poster, designed by Lisa Liuzzo (WYLE), was distributed to Forum attendees and at the TJMS Family Reunion.*

Redhouse, a mechanical engineer, participated as trailblazers. Their message to the hundreds of fifth through twelfth-grade students attending was: "It's never too late to follow your dreams. Dream big!" The roundtable was repeated, Sept. 5, for the 2010 Tom Joyner Morning Show (TJMS) Family Reunion, in Orlando, with Glenn's Director of Center Operations Robyn Gordon participating as a trailblazer.



*Chris Hartenstine (PaTT) kept students engaged as master of ceremonies for the culminating event.*

# IT Improvements Take Three

## Here's the Latest!

Change can be good—especially if it means safer and more efficient information technology (IT) systems. Glenn's Office of the Chief Information Officer and the ODIN staff are working on activities that impact the user community in a positive way. Here are three of the latest projects:

**1 Windows 7 Deployment:** This upgraded operating system offers a variety of features to improve productivity and simplify everyday tasks—such as easily navigating several windows and instantly locating files and programs. This operating system is currently being deployed to pilot volunteers and ODIN (Outsourcing Desktop Initiative for NASA) refresh systems. A migration readiness review



is scheduled for January 2011 with ODIN centerwide deployment from January to May 2011.

**2 Elevated Privileges (EP) Management:** The process for applying for Elevated Privileges (System Administrator Rights) on your computer has been changed to reduce the risk of employees compromising their computers and other Glenn/NASA systems. Elevated Privileges, formerly requested through the System Level Privilege (SLP) process, are now requested through a NASA Account Management System (NAMS) and require supervisor approval. Training, through SATERN, is required for Short-Term Elevated Privileges (30 days or less) and Long-Term Elevated Privileges (over 30 days but less than

1 year). Persons with approved System Administrator Rights from the previous approval process have been converted to the NAMS and will expire in 1 year.

**3 New Glenn Directory Services (Phonebook):** This easy-to-use Web-based directory offers many new features, including the ability to search by 28 fields, download lists of information to Excel, click on links to e-mail employees and use special services listings. This application also allows employees to change their own information in the directory and submit group changes for moves.

For more information on these IT services, contact Linda McMillen, IT Operations Office, 216-433-8031 or visit the CIO website at <http://www.grc.nasa.gov/WWW/OCIO/index.html> and click on "What's New."

—By Doreen B. Zudell

# R&D 100 Awards

Continued from page 1

## Staying in Touch

Advanced communications, a Glenn core competency, was rewarded with two R&D 100 awards. The Thin Film Ferroelectric High Resolution Scanning Reflectarray Antenna is a new antenna concept designed to enable electronically steerable, high-data rate communications supporting NASA's mission with greater efficiency and at significantly reduced costs. Glenn's Dr. Félix Miranda, Dr. Bob Romanofsky and Frederick VanKeuls (OAD), Antenna and Optical Systems Branch; and Nicholas Varaljay and Elizabeth McQuaid, Space Power & Propulsion, Communication and



*GATR Inflatable team, left to right: Glenn's Dr. Romanofsky and Dr. Lambert and below, Paul Gierow, GATR Technologies.*



Instrumentation Branch, developed the technology. Romanofsky also was a major contributor to critical testing in development of the GATR Inflatable Satellite Communication System (GATR 1.8m and GATR 2.4m Antenna Systems), which was further refined through a partnership with GATR Technologies, Huntington, Ala., and the collaboration of Dr. Kevin Lambert, (QNA) Antenna and Optical Systems Branch, and GATR's Paul Gierow. The system includes a portable inflatable antenna that can be fully deployed on the ground in less than an hour, targeting a geostationary satellite to reestablish high-bandwidth communications for

first response emergency and military scenarios.

## Reinventing the Wheel

Glenn's Vivake Asnani, Tribology and Mechanical Components Branch, teamed with The Goodyear Tire & Rubber Company's Jim Benzing and Jim Kish on the award-winning Spring Tire resulting from advancements in terramechanics modeling and lunar surface wheel development. Their success has reinvigorated research in wheel designs and methods for predicting off-road vehicle performance.



*Spring Tire team: left to right: Goodyear's Benzing and Kish with Glenn's Asnani.*

For more information on the awards, visit <http://www.rdmag.com/Awards/RD-100-Awards/2010/07/R-D-100-2010-Winners-Overview/>

—By S. Jenise Veris



*Thin Film team: left to right: Dr. Miranda, Dr. Romanofsky, VanKeuls, McQuaid and Varaljay.*



## News and Events

### Hernández Shares His Story >

Whether it was his hard work inspired by migrant worker parents sacrificing to educate their children, or the effect of viewing the Apollo 17 mission, José Hernández persevered to become an astronaut and award-winning engineer. On Sept. 24, Hernández shared his story as the featured speaker of Glenn's 2010 Hispanic Heritage Observance Event, which was sponsored by Glenn's Hispanic Advisory Group. During his visit to the Cleveland area, Hernández also spoke at the Cuyahoga Community College Western and Metro campuses for the Celebrating Diversity Series. Center Director Ray Lugo presented Hernández a personalized Glenn poster.



C-2010-4883

Photo by Michelle Murphy



C-2010-4719

Photo by Marvin Smith

### < "I Have a Dream" Revisited

The Oct. 5 Director's Leadership Training Forum presented a Diversity Dialogue Session that focused on an expansive, nontraditional perspective of Dr. Martin Luther King's "I Have A Dream" speech. The speaker, Rev. Dr. Valentino Lassiter, pastor in residence at John Carroll University and pastor of East View United Church of Christ, provided insight on Dr. King's legacy, his relationship with other civil rights leaders of his time and the events leading up to the historic March on Washington.

### MythBusters at Glenn >

On Oct. 6 and 7, Glenn hosted the film crew from "MythBusters," a popular science entertainment television program on the Discovery Channel. The crew shot footage inside Glenn's Icing Research Facility, where they installed a test model of their own design in the icing tunnel to determine the validity of a myth. Pictured, left to right, inside the icing tunnel: Trent Miller, director of photography and cameraman; Grant Imahara, host; with Glenn icing technicians Craig Rieker and Bill Magas (TFOME); and Tory Belleci, co-host. The results of the test will be revealed in a future episode of "MythBusters." An announcement will be posted on [Today@Glenn](mailto:Today@Glenn) when that episode will air.



C-2010-4795

Photo by Marvin Smith



C-2010-4739

Photo by Michelle Murphy

### < NASA Brings Orion Mockup TO GLSC

NASA's full-scale mock-up of a future astronaut safety system—Orion launch abort system (LAS) pathfinder—went on a cross-country trek last month. It made a stop at the Great Lakes Science Center's (GLSC) NASA Glenn Visitor Center from Oct. 9 through 14. The mock-up was used earlier this year to help prepare for the successful Pad Abort 1 flight test, the first fully integrated flight test of the launch abort system, which occurred at White Sands Missile Range in southern New Mexico. Pictured, left, is Joe Mayer, Lockheed Martin, and, right, James Free, director of Glenn's Space Flight Systems, talking to students about the LAS at the GLSC.



## People

**Barbara Esker** has been appointed the agency's deputy program director for the Fundamental Aeronautics (FA) Program. Esker has served in an acting role for the position over the past year and is credited with spearheading several important activities, including the successful 2009 Program Annual Review. Prior to joining the FA Program Office, she served as project manager for the Subsonic Rotary Wing project.



*Esker*

**Robert Jankovsky** has been selected to the position of deputy chief of the Mechanical and Fluids Systems Division in the Engineering Directorate. Prior to this appointment, Jankovsky served as chief of the Space Propulsion Branch in the Mechanical and Fluids Systems Division.



*Jankovsky*



*Sacksteder*

**Dr. Kurt Sacksteder** has been selected chief, Space Environment and Experiments Branch, in the Space Processes and Experiments Division. Sacksteder previously served as Glenn's technical lead for NASA's Exploration Technology Development Program's In-Situ Resource Utilization project.

### Editor's Note:

The photograph caption for the story titled "Glenn Tests Alternative Nontoxic Fuel for Rocket Engine," page 1, of the October *AeroSpace Frontiers* was incorrectly identified. It should have read: "Cryogenic propellant conditioning equipment used at the Altitude Combustion Stand for nontoxic rocket fuel engine tests."

## Boy Scouts Build PBS Walking Trail

Thanks to local Boy Scout Troop 214, employees and visitors to NASA Glenn's Plum Brook Station (PBS) can now better enjoy the natural beauty of the facility's surroundings in addition to its technological wonders. The troop took on the ¼ mile-walking trail project in support of an Eagle



*Eagle Scout candidate Spacek, second from right, and fellow members of Troop 214 post by dedication sign.*



*The bridge and start to a 1/4 mile-walking trail constructed by Boy Scouts at Plum Brook Station.*

Scout service project initiated by troop member Ben Spacek, following a consultation with Environmental Scientist Rosemary Giesser (SAIC). The trail not only offers employees a wellness/stress-relieving respite from the workday but also augments PBS's commitment to respectfully cohabitate with nature. Constructed within the confines of the PBS gates, the curvilinear trail features a accessible bridge that allows visitors to see rare prairie grasses and flowers, as well as several types of resident and migrating birds up close and in their natural environment. Now, instead of a "windshield" tour or brief roadside stop, employees and visitors can go into the prairie and have a richer experience.

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### 2010 HENAAC Luminary Honoree

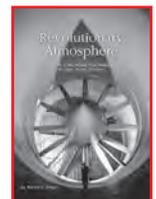
**Dr. Marisabel Lebrón-Colón**, Polymers Branch, received a Luminary Honoree Award at the HENAAC (Hispanic Engineer National Achievement Awards Corporation) 22<sup>nd</sup> Annual Conference, Oct. 6 to 11, in Orlando. Luminary honorees are Hispanic American STEM professionals who are leading, collaborating or initiating key programs and research within their respective organizations, as well as mentoring future generations of engineers and scientists. Lebrón-Colón is recognized for her pioneering research in the development of carbon-nanotube-based composites for aerospace applications, particularly nanotube purification and functionalization.



*Glenn's Associate Director Bill Wessel celebrates with Dr. Lebrón-Colón.*

### Wind Tunnel History Book Signing

The Library will host a book signing and video presentation on Glenn's Altitude Wind Tunnel (AWT), Thursday, Nov. 19, from 9:30 to 11:30 a.m. Bob Arrighi (WYLE), an archivist in Glenn's History Program Office, is the author of the book, "Revolutionary Atmosphere: The Story of the Altitude Wind Tunnel and Space Power Chambers," which chronicles the 65-year history of the AWT and its vital role in developing U.S. jets, training NASA's first astronauts and launching NASA first missions beyond Earth Orbit.



## Disability Awareness Event Set

The Disability Awareness Advisory Celebration will be held Tuesday, Nov. 15, from 1 to 3 p.m. Although normally held in conjunction with the National Disability Month in October, this year's awareness event was deferred to include the display of a mural, "Liberty, Justice & Access for All," commemorating the 20th anniversary of Americans with Disabilities Act (ADA). Twelve Ohio artists with disabilities were commissioned to help paint the ADA mural, which was recently unveiled at the Ohio Statehouse. Glenn's awareness event will feature speakers discussing the ADA mural and its relevance to society. The mural will be on display at Glenn throughout November.

## ATTENTION RETIREES

**Center Director Ray Lugo will host a briefing for retirees to update them on activities at NASA Glenn Research Center on Dec. 6, 2010 at 10 a.m. in the new Briefing Center, building 8.**

Register online at  
<http://retiree.grc.nasa.gov>  
or call 216-433-9304.



## In Memory



*Pagan*

**Angel L. Pagan**, 60, who retired May 2010 with 27 years of NASA service, died Sept. 28. Pagan joined the NASA workforce as a member of the Procurement Division where he remained throughout his career. Prior to retirement, Pagan served as a contract specialist. He earned numerous Special Act or Service awards, including consecutive Group Achievement awards as a member of the DGS User Group (1987) and the Space Station SEB Housing Support Group (1988). Pagan was a longstanding member and former officer for both the Hispanic Advisory Group and the International Federation of Professional and Technical Engineers, Local 28, and an annual keyworker volunteer for Glenn's Combined Federal Campaign. A veteran of 4 years of service in the U.S. Navy followed by 4 years in the Navy Reserves, Pagan also was a proud supporter of Glenn's Veterans Awareness Committee,

often participating in their events in full uniform.

**Carl E. Larson**, 81, who retired in 1986 with 25 years of NASA service, died Sept. 8. Larson began his NASA career working as a mechanic in the Abe Silverstein 10-by 10-Foot Supersonic Wind Tunnel in 1955,



*Larson*

but left after 2 years to pursue a master's degree at Indiana University. He returned to the center in 1962 where he was hired as a specialist in the Personnel Division's Classification (Human Resources) Branch and remained in that organization until his retirement. Larson was a bibliophile and amateur genealogist who enjoyed learning about his Swedish heritage.



*Dietz*

**Karl W. Dietz**, 90, who retired in 1985 with 25 years of Federal service, died Aug. 26. Dietz began his NASA career in 1964 as an apprentice and graduated in 1966 as an experimental metal model maker. He spent his entire career in the Fabrication Division, where he earned recognition as a member of a Machine Shop team that designed and built an EDM (electric discharge machine) to modify the center's 60-inch cyclotron to accommodate an ion source. Their innovation enabled a \$50,000 savings. He was a World War II veteran, who served 4 years with the U.S. Air Corps, 330<sup>th</sup> Bomb Group and proudly maintained his membership with the local VFW.



## In Appreciation

We would like to thank everyone that was involved in planning, making and dedicating the Lewis Little Folks' reception hall bench in Carmella Genaro's memory. Special thanks to Teddy Reehorst for making this beautiful memorial bench. I am sure Carmella is looking down smiling and proud of him. Thank you all.

—The Genaro Family

Thanks to all at Glenn who expressed their sympathy for the passing of my mom. Your thoughtfulness just illustrates the true meaning when we say NASA family.

—David Petrarca



## Calendar

**WOMEN'S RETIREE LUNCHEON:** The next luncheon will be Thursday, Nov. 18 at Pier W, 12700 Lake Road, Cleveland at noon. For reservations call, Gerry Ziem, 330-273-4850.

**PLANET'S ODYSSEY AT SEVERANCE HALL:** On Nov. 27 and 28, The Cleveland Orchestra will perform Gustav Holst's "The Planets" with HD NASA images projected on a giant screen. NASA employees receive a 20 percent discount on regular-priced tickets. Order tickets online at [clevelandorchestra.com](http://clevelandorchestra.com) or call 216-231-1111. Promo code for discount is 8572.

**AFGE MEETING:** AFGE LOCAL 2182 will hold its next membership meeting on Wednesday, Dec. 1 at 5 p.m. at Denny's Restaurant, 25912 Lorain Road, North Olmsted.

**IFPTE LOCAL 28, LESA MEETING:** LESA will hold its next membership meeting on Wednesday, Dec. 8 at noon in the Small Dining Room of the Employee Center.

## Deadlines

News items and brief announcements for publication in the December issue is noon, Nov. 19. Larger articles require at least one month notice.

**READ US ON THE INTERNET:**

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

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Editor: **Doreen B. Zudell**, SGT, Inc.

Assistant Editor: **S. Jenise Veris**, SGT, Inc.

Managing Editor: **Kelly R. DiFrancesco**



## Leadership Class Empowers Future Rocket Scientists

### Rocketry Kit Paves the Way

Rockets play a vital role in launching spacecraft into the solar system, but rocketry is also an exciting platform for students to learn about science, technology, engineering and mathematics (STEM). Members of Glenn's 2010 FIRST (Foundations of Influence, Relationships, Success and Teamwork) class have developed a bottle rocketry kit aimed at boosting sixth- through eighth-graders' STEM-related skills.

The NASA FIRST Rocketry Kit Educator's Guide examines the history of rockets, early scientists and theories; provides the tools for students to build and launch bottle rockets; examines the composition of various materials; teaches about astronauts from the local

area; and explores a scaled model of NASA rockets. The topics within the guide incorporate cooperative learning, problem solving, critical thinking and hands-on involvement.

The five-member 2010 FIRST class, consisting of Quiana Carter-Blackwell, Gary Crawford, Trevor Jones, Jennifer Jordan and Quynhgioa Nguyen, worked intensely to develop the comprehensive kit as part of their 1-year leadership training program. Working with Glenn's Education Programs Office, the class beta tested the kits with area teachers and students. The kits will soon be available through the Cleveland Natural History Museum and NASA CORE (Central Operations of Resources for Educators), a worldwide distribution center for

NASA's educational multimedia materials.

Carter-Blackwell, a 2010 FIRST class member, said the goal of the project was to design a tool that would excite young minds about working in STEM-related areas. "Students have the potential to be our future leaders, planners, builders, engineers and scientists," she said. "We hope this guide will lay a foundation for that future."

In addition to this educational outreach project, the class has participated in agencywide meetings and workshops, shadowing experiences and special events throughout the year. The 2010 class will graduate from the program at NASA's Johnson Space Center in December.

NASA FIRST is the agency's leadership development program for GS 11 and 12 engineers, scientists and administrative professionals. The program targets some of the agency's most promising professionals by focusing on developing leadership capabilities and intra-agency collaboration. For more information on the program, contact Jennifer Budd, 216-433-8021.



*Members of the 2010 Glenn FIRST class with student test group.*

—By Doreen B. Zudell