National Aeronautics and Space Administration

AeroSpace FRONTIERS

VOLUME 24 • ISSUE 10 • OCTOBER 2022

Coming Together for Summerfest

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Slips, Trips, and Falls

Slips, trips, and falls remain the largest contributor to mishap injuries. As we approach the Ohio winter season, icy pathways or tracked snow indoors can be a leading cause of injury. Regardless of how well we remove snow and ice from outdoor pavement and parking lots, slippery surfaces can still remain. Please be mindful of icy conditions at all times, whether on-site or at your remote workplace. Use walkways that have been treated and wear the appropriate winter footwear. Exercise caution when entering or exiting vehicles, test your travel path, lighten your load, and slow down to ensure you remain healthy and safe. For more information, go to https://nsc.nasa.gov/topics/slips-trips-and-falls.

AeroSpace Frontiers
is an official publication of Glenn Research Center, National Aeronautics and Space Administration. It is published the second Friday of each month by the Office of Communications in the interest of the Glenn workforce, retirees, government officials, business leaders, and the general public.

Submit short articles and calendar items to the editor at doreen.b.zudell@nasa.gov.

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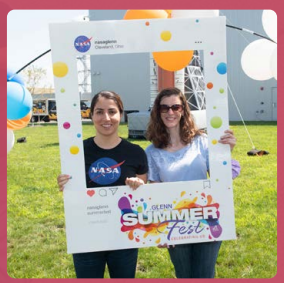
SUMMER Fest

More than 1,300 NASA Glenn employees and retirees celebrated the 2022 Glenn Summerfest on Aug. 24. Held in front of the Research Support Building, along Taylor Road at Lewis Field, the event provided lunch, music, activities, exhibits, and entertainment. Other highlights included the annual Vehicle Show, a tour of Glenn's in-house manufacturing facility, and visits through the Journey to Tomorrow trailer.

GRC-2022-C-07020

GRC-2022-C-07058

Photos by Bridget Caswell and Marvin Smith



On the Cover:
Niloufar Afnani, left, and Holly Walburn enjoy Glenn's Summerfest celebration—which was held on-site at Lewis Field on Aug. 24.

GRC-2022-C-07122
Photo by Marvin Smith

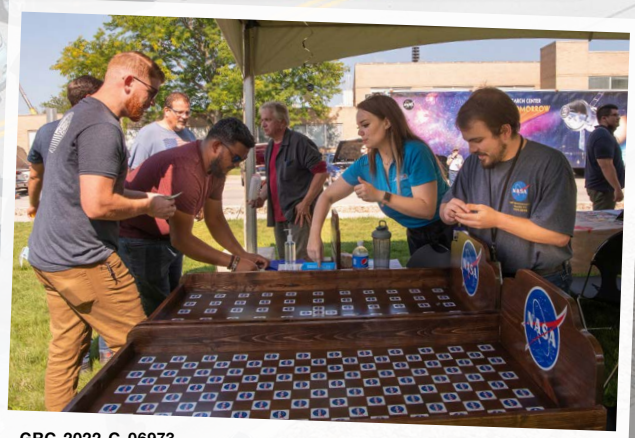
GRC-2022-C-07049

GRC-2022-C-07112

2022 Summerfest Planning Committee

GRC-2022-C-07068

GRC-2022-C-07036



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GRC-2022-C-07086

GRC-2022-C-07123

GRC-2022-C-07157

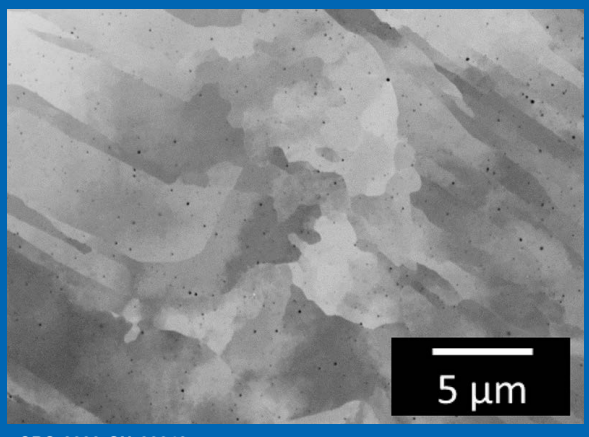
Superalloy Attracts Aerospace Companies

GRC-2022-CN-00042

Jet Engine Optimization

GRC-2022-CN-00044 Photo by NASA

ODS Combustion Demo Creation



GRC-2022-CN-00043 Photo by NASA

Microstructure Analysis

The aerospace industry is abuzz about a breakthrough high-temperature metal alloy developed at NASA Glenn. Aerospace companies across the country are exploring opportunities to further investigate applications of this alloy.

NASA Alloy GRX–810, an oxide-dispersion-strengthened (ODS) alloy, can endure temperatures over 2,000 degrees Fahrenheit, is more malleable, and can survive more than 2,000 times longer than existing state-of-the-art alloys. These new alloys can be used to build aerospace parts for high-temperature applications, like those inside aircraft and rocket engines, because ODS alloys can withstand harsher conditions before reaching their breaking point.

"This breakthrough is revolutionary for materials development," said Dale Hopkins, deputy project manager of NASA's Transformational Tools and Technologies project. "New types of stronger and more lightweight materials play a key role as NASA aims to change the future of flight."

Dr. Timothy Smith, High Temperature and Smart Alloys Branch and one of the inventors of the alloy, said word is getting around about the significance of GRX–810. A public webinar presented by Glenn's Technology Transfer Office (TTO) on the alloy attracted hundreds of participants from 26 different countries and thousands of views on YouTube. An Aviation Week Network article, presentations at conferences, and information through numerous social media platforms has also garnered interest in this breakthrough.

TTO reports that more than 35 companies and universities have expressed interest in learning about the superalloy. Nearly two dozen have already submitted applications for or received research licenses to work with the alloy. Additionally, two of these companies are developing Space Act Agreements with NASA. Three local organizations are among Ohio companies that have submitted research license applications.

To learn more about GRX–810, and the methods researchers used to discover it, visit https://www.nasa.gov/feature/glenn/2022/nasa-s-new-material-built-to-withstand-extreme-conditions.

NASA's Transformational Tools and Technologies project delivers innovative solutions through foundational research and cross-cutting tools. To learn more, visit https://www.nasa.gov/aeroresearch/programs/tacp/ttt.

By Doreen B. Zudell

GLENN RESEARCH CENTER HALL OF FAME

Ceremony Honors Employees' Significant Contributions

NASA Glenn welcomed the third class of inductees into the NASA Glenn Research Center Hall of Fame—in person—at Lewis Field on Sept. 14. The celebration, held in the Mission Integration Center auditorium and streamed online, featured remarks, inductee videos, the presentation of plaques, and a reception following the program.

WEWS News 5 Cleveland anchor DaLaun Dillard emceed the event, which included remarks by NASA Deputy Associate Administrator for Aeronautics Research Mission Directorate Steven Clarke. Acting Center Director Dr. Jimmy Kenyon conducted the presentation of plaques.

The Class of 2021 includes **Bruce Banks, Olga González-Sanabria, Dr. Henry Kosmahl, Dr. Patricia O'Donnell, Tony Powell, Bobby Sanders, John Sloop, Frank Spurlock, Jesse Strickland,** and **Erwin (Erv) Zaretsky.**

While recipients were announced on Sept. 20, 2021, as part of the center's 80th Anniversary celebration, a ceremony was not held due to the COVID–19 pandemic. During the 2022 ceremony, Glenn was able to formally recognize the inductees and/or their representatives who attended the live event.

An article highlighting the 2021 Glenn Research Center Hall of Fame announcement can be found in the October 2021 AeroSpace Frontiers. Visit the Glenn Hall of Fame web page to learn even more about these latest members.

By Doreen B. Zudell

GRC-2022-C-08526 Photo by Bridget Caswell

Recipients and recipient representatives gather at the induction ceremony.

Meet and Greet

Acting Center Director Dr. Jimmy Kenyon, Deputy Center Director Dawn M. Schaible, and Associate Director Larry Sivic visited Armstrong Test Facility (ATF) on Sept. 13. ATF Director Dave Stringer introduced the senior staff members, who then joined employees for lunch and conversation.

GRC-2022-CN-00047 Photo by Doreen B. Zudell

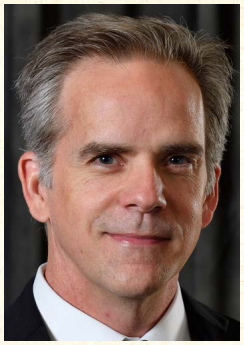
Schaible and Sivic, front right, enjoy lunch and conversation at ATF.

Retirements

George Scott Crawford, Office of the Director, Counterintelligence/Counterterrorism Office, retired Sept. 30, 2022, with 34 ½ years of federal service, including 14 years with NASA.

Henry C. de Groh III, High Temperature and Smart Alloys Branch, Materials and Structures Division, Research and Engineering Directorate, retired Sept. 24, 2022, with 37 years of NASA service.

Crawford



de Groh III

More Than A Memory

Migdelio Camargo Sr., 69, a 2010 retiree with 35 years of federal service, died July 19, 2022. After serving in the U.S. Air Force, Camargo joined NASA as a welding and pipe fitting apprentice and became an engineering technician. He served in the Facilities Operations and Maintenance Division, the Test Installations Division, and later headed the Tactical Support Branch's Welding Team. Over the years, Camargo supported many aerospace facilities and research. He earned a Group Achievement Award for Rich-Quench-Lean Project Support Team in 1991.

Roy D. Hager, 70, a 1997 retiree with 33 years of service, died July 17, 2022. During his NASA career, he worked as an engineer researching and/or managing aircraft engine compressors, alternative aeropropulsion projects, and microgravity science projects for the space shuttle. He earned a Space Act Achievement award for sustained superior performance (1983); Energy Efficient Engine Project Team Group Award (1983); Special Act or Service Award (1988); Advanced Turboprop Project Group Award (1989), and Microgravity Science Laboratory Mission Group Award (1998).

The 2022 Combined Federal Campaign (CFC) has begun!

"You Can Be the Face of Change"

The official campaign kicked off this month.

Glenn's CFC Agency Fair is Nov. 9. See Inside Glenn for details.

Chair: Tonya Mitchell (tonya.l.mitchell@nasa.gov)

GLENN HAPPENINGS

INFORMATION CAFÉ

The next Information Café is Wednesday, Oct. 19, from 11–11:45 a.m., in building 142, room 188, or on Teams. Check Inside Glenn for the topic and link.

POC: robin.n.pertz@nasa.gov

OUTDOOR SIREN TESTING

Emergency Management Office staff will conduct a mass notification voice test at building 87 on Wednesday, Nov. 2, at Lewis Field. An audible siren test on the "all clear" tone will be conducted on Saturday, Nov. 5.

POC: allen.r.turner@nasa.gov

Deadline for the next calendar section is **Wednesday, Oct. 19, noon**. News and feature stories require additional time.

Promotions

Carl Sandifer II has been selected chief, Radioisotope Power Systems (RPS) Program Office for the Space Flight Systems Directorate. He will also serve as RPS program manager for the Planetary Science Division of the Science Mission Directorate. He was previously deputy chief of the Space Science Project Office.

Sandifer II

For more information on upcoming events, visit **https://nasa.sharepoint.com/sites/grc/SitePages/calendar.aspx**

National Aeronautics and Space Administration

John H. Glenn Research Center

Lewis Field
21000 Brookpark Road
Cleveland, Ohio 44135

Neil A. Armstrong Test Facility
3597 E. Scheid Road
Sandusky, Ohio 44870

www.nasa.gov

Read AeroSpace Frontiers online at https://www.nasa.gov/glenn/aerospacefrontiers.

Keeping the Center Moving *Forward*

While many employees transitioned to telework due to the pandemic, others remained on-site to ensure a safe and secure environment at the center. This column highlights these services.

Institutional systems operate much like human muscles. The more they are used, the more efficiently they work. During the pandemic, buildings at Glenn's Armstrong Test Facility (ATF) housed fewer employees, so systems had to be "exercised" to maintain optimal functionality.

At ATF, the Institutional Services Group, part of the TFOME II contract (Test Facilities Operations, Maintenance, and Engineering), kept the 6,400-acre campus operational throughout the pandemic. What was viewed as routine or behind-the-scenes duties became critically important. When many employees teleworked, the TFOME II Institutional Team continued to perform their daily duties. The goal: ensure ATF remained in a safe and operational readiness mode throughout the various stages of NASA's Framework for Return to On-Site Work.

To prevent water stagnation, maintenance staff sequenced hydrant flushing with flowing water to ensure water was circulated throughout ATF's large distribution piping system. They changed building air handlers more frequently, and routinely checked water chemical composition to guarantee water was safe for drinking. Grounds personnel maintained grassy areas to prevent invasive species from overpopulating the property while keeping test and institutional sites mowed and trimmed. This same group continued road upkeep, including snow removal, salting, and clearing entrances and roads for routine and emergency entries. Electricians were on-site throughout the pandemic to maintain electrical grids.

The custodial staff met the ever-changing COVID–19 protocols to keep on-site and returning personnel safe. They used electrostatic sanitizing equipment to keep hard surfaces clean, such as stairway railings, doorknobs, push plates, and floors.

A special thanks to Institutional TFOME II employees who kept ATF in a safe and ready state. Your efforts are noticed and appreciated!

GRC-2022-CN-00045

Custodian Lori Pokorny, TFOME II, used electrostatic sanitizing equipment during the pandemic to keep surfaces safe for employees at ATF.

Emergency and Inclement Weather Lines

Lewis Field: 216–433–9328 (WEAT)
Neil A. Armstrong Test Facility: 419–621–3333

Connect With Glenn