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THE AIR FORCE RESEARCH LABORATORY

SDPE'S RAPID DRAGON CAPABILITY DEMONSTRATED IN NORWAY



ANDØYA AIR STATION, Norway – The Air Force Rapid Dragon Experimentation Program, led and developed by the Air Force Strategic Development Planning and Experimentation, or SDPE, office, part of the Air Force Research Laboratory's Integrated Capabilities Directorate, in partnership with U.S. Special Operations Command Europe successfully completed a live fire of a Joint Air-to-Surface Standoff Missile-Extended Range long-range cruise missile on a Norwegian range Nov. 9, 2022. The Rapid Dragon Palletized Effects System, capable of deploying long-range cruise missiles using standard airdrop procedures from a cargo aircraft, was successfully deployed from an MC-130J Commando II. The operational MC-130J aircrew from the 352nd Special Operations Wing airdropped a Rapid Dragon deployment system containing long-range cruise missiles which were sequentially released on a range over the Norwegian Sea as part of U.S. European Command approved, U.S. Special Operations Command led Operational Series ATREUS. "Now, more than ever we must take a different approach to accelerating capability to the warfighter," said AFRL Commander Maj. Gen. Heather Pringle. "Rapid Dragon is a fantastic example of the speed at which technologists and warfighters can work the design, development, prototyping and experimentation of new capabilities can get to the field on operationally relevant timelines." <u>Read More</u>



WPAFB, OH – Science, technology, engineering and math, or STEM, career fields are part of the Air Force Research Laboratory, or AFRL, commanders' intent to lead, discover, develop and deliver science, technology and innovation for warfighters. And with the recent report on a Line of Effort 3.6 showing low numbers in STEM advanced degrees in its general officers, the laboratory hopes to grow those numbers through various programs. Among them is the AFRL Regional Research Hub, which works with Purdue and Cornell universities to provide more science and engineering opportunities; various STEM events, which introduce the career fields to the younger generation; Edison Grants, which promote technical proficiency in military members to provide more science and technology opportunities; and Project Arc, which is still in its grass-roots stages, but is making an impact, even in its infancy. In 2016, then 2nd Lt. Jason Goins, who is on the Project Arc council, found himself at a coffee shop with a group of coworkers

Project Fierce fuels the future of synthetic jet fuel generation

WPAFB, OH – Jet fuel relies on a complex network of drillers, refiners and shippers, but those who were near the Hsu STEM Range in Laurel Hill, Florida, July 27, 2022, heard the sounds of a small jet flying, heralding a new era for the jet fuel supply chain. Led by the Air Force's Project FIERCE, this was the first demonstration of a technology that could allow flightlines and airports to generate fuel on-site in the future. Since 2008, the Air Force has used alternative fuels, known as sustainable aviation fuels (SAF), that require blending with traditional fossil fuels. Most of these alternative fuels require refinement or blending by large refineries. In recent years, energy companies, engine/aircraft manufacturers and airlines have explored new fuel synthesis technologies that would not require blending with fossil fuels. Beginning in fall 2021, as part of the Chief of Staff of the Air Force's Blue Horizons Fellowship, Project FIERCE partnered with the Air Force Research



discussing the reasons they joined the

Air Force. Goins, who is now a major,

mentioned that these reasons included

a desire to serve their country and to

use their technical degrees and skillsets,

among others. Full Story

Educational Foundation to create and test a fully synthetic "drop-in" replacement jet fuel from captured carbon dioxide and water. Full Story

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PEOPLE OF AFRL

November marked National American Indian Heritage Month, a time for celebrating, educating and raising general awareness of the unique challenges the people have faced. Lenell Kern, the lead for Strategic Engagements at the Air Force Research Laboratory or AFRL, celebrated her story as a proud member of the Native American community. In 1975, Kern went to work for the Susquehannock American Indian Center in Harrisburg, Pennsylvania. While there, she focused on seeking others with Native American heritage and registering them for the Bureau of Indian Affairs, which provided healthcare and financial assistance. **Read More**



Test Stand 1-C

The historic Test Stand 1-C, run by AFRL's Rocket Propulsion Division, part of the Aerospace Systems Directorate at Edwards Air Force Base, California, is undergoing major renovations to better support its mission to safely and effectively test the rockets of the future. <u>Watch Here</u>



R.O.S.A. returns AFRL's very own Roving Organizational Surveillance Assistant, R.O.S.A., returns this month to create some



magic and inspire young minds in STEM by visiting labs and programs around our organization. Check out her story on Facebook and Instagram. <u>Read More</u>

AFRL LAB LIFE PODCAST: Episode 69

"Nondestructive evaluation" Dr. John Welter, a materials research engineer with AFRL's Materials and Manufacturing Directorate,



joins the podcast to discuss nondestructive evaluation of aircraft and more.

DIGITAL MEDIA SPOTLIGHT