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DARC Technology Demonstrator test a success

WHITE SANDS MISSILE RANGE, N.M. -- The Deep Space Advanced Radar Capability (DARC) program successfully tested their Technology Demonstrator (DARC-TD) recently at White Sands Missile Range. The exercise was a preliminary test by Space Systems Command's Enterprise Corps and Special Programs Ground Radar portfolio to ensure that the technology inherent in the system is in a state of readiness and could be successfully used in a new application.

With all of the space debris and objects now populating Earth orbit, the DARC tracking radar will use existing technologies to detect small space objects or satellites quickly and with highly precise orbital information. If a collision threatens a satellite system, the operator will be alerted and have time to maneuver away from oncoming debris. DARC will also identify adversarial threats that have the potential to disrupt/deny civil and military space services.

The WSMR demonstration involved a small-scale version of the envisioned system, complete with similar hardware, and was used to broadcast a signal at specific test objects in space. DARC-TD will be used for additional research to buy down risk associated with fielding the DARC system. The success of this test has brought the United States Space Force one step closer to making this technology a reality for the warfighter and our nation.

"The success of the DARC-TD was a significant step in building confidence for this radar technology and allowed our program office to release a Request for Prototype Proposal through the Space Enterprise Consortium to quickly deliver the first DARC site," said Greg Carr, Enterprise Corps Space Domain Awareness Division, Special Programs Directorate's Rapid Reaction branch manager for Space Systems Command. "Building out a global DARC system, while working with our closest allies, ensures the ability to detect, track, identify, and characterize objects in geosynchronous orbit to protect and defend our most valued space assets against adversarial action."

Space Systems Command is the U.S. Space Force field command responsible for rapidly identifying, prototyping and fielding resilient space capabilities for joint warfighters. SSC delivers sustainable joint space warfighting capabilities to defend the nation and its allies while disrupting adversaries in the contested space domain. SSC mission areas include launch acquisition and operations; space domain awareness; positioning, navigation and timing; missile warning; satellite communication; and cross-mission ground, command and control and data.

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The highly-advanced Deep Space Advanced Radar Capability (DARC) transmit and receive arrays are capable of a multitude of missions crucial to monitoring, tracking, and reporting objects of interest in space, capability that will fill critical gaps in the ground-based element of the Space Domain Awareness architecture enterprise. (Photos: Craig Weiman - Johns Hopkins University Applied Physics Laboratory)



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