

SCOUT Wins \$1.5M Phase II STTR from US Space Force to Improve Characterization and Estimation of In-space Objects

In collaboration with the Stanford University Space Rendezvous Laboratory (SLAB)

RESTON, VA, UNITED STATES, August 10, 2023 /EINPresswire.com/ -- SCOUT Space Inc., a space technology company dedicated to enabling a new era of space safety and transparency and leading in-space observation data provider, today announced it has been selected by SpaceWERX for a Phase II STTR in the amount of \$1.5M USD, focused on "Robust Cross-Domain Optical Navigation with Space-Based Sensors" to address the most pressing challenges in the Department of the Air Force (DAF). SCOUT was awarded the Phase II Orbital Prime STTR in collaboration with Stanford University's Space Rendezvous Laboratory (SLAB), founded and led by Professor Simone D'Amico.

SCOUT will collaborate with SLAB to enhance Space Mobility and Logistics capabilities by exploring the boundary between characterization of resolved and non-resolved imagery, and working to bridge it for space-based sensing.

"The characterization of location, motion, and other data of objects in space for space domain awareness requires well-defined processes for processing sensor data. Our work with Prof. D'Amico's lab is exciting because it lets us tackle an environment - the semi-resolved domain - which is very indeterminate today, and in which few algorithms are proven," stated Sergio Gallucci, SCOUT's Co-founder and CTO. "We hope to facilitate decision-making across the entire range of rendezvous and proximity operations by achieving continuity and convergence in state estimation from these different phenomenologies."

"We are poised to increase the technology readiness level of new algorithms at the intersection of astrodynamics, nonlinear estimation, and machine learning to enable new mission concepts in the area of In-Space Servicing, Assembly, and Manufacturing (ISAM)," stated Prof. Simone D'Amico, SLAB's Founder and Director. "The US Space Force and SCOUT are giving us a unique opportunity to reach flight readiness with spacecraft navigation technologies that would have normally taken several years to accomplish."

The Air Force Research Laboratory and AFWERX have partnered to streamline the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) process by accelerating the small business experience through faster proposal to award timelines, changing

the pool of potential applicants by expanding opportunities to small business and eliminating bureaucratic overhead by continually implementing process improvement changes in contract execution. The DAF began offering the Open Topic SBIR/STTR program in 2018 which expanded the range of innovations the DAF funded and now, SCOUT Space will start its journey to create and provide innovative capabilities that will strengthen the national defense of the United States of America.

DISCLAIMER: The views expressed are those of the author and do not necessarily reflect the official policy or position of the Department of the Air Force, the Department of Defense, or the U.S. government.

About SCOUT Space:

SCOUT Space was founded in 2019 with the mission to enable a new era of space safety and transparency. SCOUT's in-space products and services, first launched in June 2021, allow spacecraft to see and understand things around them. The orbital distributed sensor network developed by SCOUT will significantly improve Space Domain Awareness (SDA) and ensure responsible use of the space environment. The company is a Techstars, MassChallenge, and venture-backed startup with ongoing government and commercial contracts. SCOUT holds the Established® 2021 Startup of the Year® title. For more information, visit www.scout.space.

About Stanford's Space Rendezvous Laboratory (SLAB):

SLAB is a research and development laboratory of the Department of Aeronautics and Astronautics at Stanford University founded and led by Professor Simone D'Amico. SLAB performs fundamental and applied research at the intersection of Astrodynamics, Guidance/Navigation/Control (GN&C), Machine Learning and Artificial Intelligence to enable future Distributed Space Systems (DSS). DSS are space architectures including two or more agents to achieve objectives otherwise impossible or very difficult to achieve by a single spacecraft. These include, but are not limited to: spacecraft formation-flying, rendezvous and docking, swarms, fractionated space architectures, and constellations. SLAB is currently responsible for the GN&C system of several miniaturized DSS with tight requirements such as Starling (4x 6U propulsive CubeSats launched on July 17, 2023), VISORS (2x 6U propulsive CubeSats, due launch in 2024) and SWARM-EX (3x 3U propulsive CubeSats, due launch in 2024). For more information on projects and publications, visit https://slab.stanford.edu/

About Air Force Research Laboratory (AFRL)

Sole organization leading the planning and execution of U.S. Air Force & U.S. Space Force science & technology programs. Orchestrates a world-wide government, industry & academia coalition in the discovery, development & delivery of a wide range of revolutionary technology. Provides leading-edge warfighting capabilities keeping air, space and cyberspace forces the world's best. Employs 10,800 military, civilian and contractor personnel at 17 research sites executing an annual \$4B budget. For more information, visit: www.afresearchlab.com.

The innovation arm of the DAF and a directorate within AFRL. Brings cutting-edge American ingenuity from small businesses and start-ups to address the most pressing challenges of the DAF. Employs approximately 215 military, civilian and contractor personnel at five hubs and sites executing an annual \$1.4B budget. Since 2019, AFWERX has executed 4,671 contracts worth more than \$2B to strengthen the U.S. defense industrial base and drive faster technology transition to operational capability. For more information, visit: www.afwerx.com.

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