

# NASA Completes 3D Lidar Scan for Ames Research Center and Park



Researchers from NASA's Ames Research and Armstrong Flight Research Centers conducted a physical survey of NASA Ames using a jeep roof-mounted Lidar system during the week of 5 August. The survey included NASA Ames Research Center, the NASA Research Park, and perimeter (R.T. Jones) road. The survey route included all vehicle-accessible areas, including roads, parking lots, around the perimeter of the field at the intake of the 80x120 wind tunnel, and the Roverscape near building N269.

The results of the scan will be received in the coming week and will be post-processed and combined with other data sources to produce a 3D point cloud and obstacle map. The Transformative Tools and Technologies – Autonomous Systems (TTT – AS) subproject Perception effort will use the resulting data to demonstrate technology and algorithms that

combine a priori obstacle maps with sensed conditions for accurate and robust obstacle avoidance. The data will also be used by the System Wide Safety (SWS) project to demonstrate their obstacle avoidance safety metric. The resulting data is also available for any other interested project.

## Background

The multi-center TTT – AS subproject is tasked with identifying and addressing the critical technological gaps for autonomous Urban Air Mobility (UAM). The AS subproject does this through leadership, coordination, and both foundational and near-term applied research and development in areas of critical technological gaps. The jeep roof-mounted Lidar system used in this survey belongs to the AS Resilient Autonomy effort, which is working with the Federal Aviation Administration (FAA) and US Department of Defense (DoD) to produce a plan to certify autonomous aircraft. The TTT – AS subproject also includes research into Human Autonomy Teaming (HAT), Perception, Contingency Management, and Autonomous Airspace.

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