



SPACEPORT AMERICA®

Stratodynamics and the University of Kentucky to Conduct Test Flights at Spaceport America

Stratodynamics Inc. and research collaborators from the University of Kentucky will conduct a multi-flight campaign along with engineers from autopilot developer, UAVOS at Spaceport America starting early December.



The HiDRON at an altitude of 27km. Note the earth's curvature is exaggerated by the use of a wide-angle lens. (Courtesy of Stratodynamics Inc.)

The two-week campaign is the culmination of an experimental NASA Flight Opportunities project to validate a new method of real time, forward sensing turbulence detection developed by the University and NASA Langley. These tests will follow COVID-safe practices. Stratodynamics goals are to demonstrate sensor performance aboard airborne platforms and to commercialize forward sensing turbulence detection technology for the Aviation and Urban Air Mobility (UAM) sectors.

"We're looking forward to hosting Stratodynamics at Spaceport America," said Interim Executive Director Scott McLaughlin. "The technology they are developing could make a significant difference in avoiding clear air turbulence and associated injuries in commercial aviation, as well as better characterization of atmospheric conditions for the new markets developing around urban air mobility. Unseen turbulence has always been a nemesis of aviation, and the ability to directly detect it could also someday help in smoother space tourism flights."



This flight graph illustrates the HiDRON's flight envelope as compared with piloted scientific aircraft. (Courtesy of Stratodynamics Inc.)

Test Pilot Miguel A. Iturmendi adds, "The future of both HALE and HAPS type vehicles depend on finding the correct climb and descent corridors of atmospheric turbulent free areas. The ability to sense turbulence with Stratodynamics' proposed technology represents a significant leap in the oldest unsolved problem of modern physics. This technology can be of great significance in the area flight safety for current operating airliners and future flights in and out the stratosphere".

The project's Principle Investigator, Dr. Sean Bailey of the University of Kentucky said "We're excited to work with Stratodynamics on this project. This is a great opportunity to learn more about a rarely explored region of the atmosphere."

"Favorable market conditions exist for a new approach to turbulence mitigation in the commercial aviation and UAM sectors and occurrences of turbulence events are projected to increase due to climate change. Stratodynamics is once again honored to collaborate with our colleagues at the University of Kentucky and NASA to demonstrate this novel approach for turbulence detection." said Stratodynamics Inc. CEO, Gary Pundsack.

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Spaceport America (<https://www.spaceportamerica.com>) is the first purpose-built commercial spaceport in the world. The FAA-licensed launch complex, situated on 18,000 acres adjacent to the U.S. Army White Sands Missile Range in southern New Mexico, has a rocket friendly environment of 6,000 square miles of restricted airspace, low population density, a 12,000-foot by 200-foot runway, vertical launch complexes, and about 340 days of sunshine and low humidity.

Some of the most respected companies in the commercial space industry are tenants at Spaceport America: [Virgin Galactic](#), [HAPSMobile/ AeroVironment](#), [UP Aerospace](#), and [SpinLaunch](#). Other customers include [Boeing](#), [EXOS Aerospace](#) and [C6 Launch Systems](#).

[**Stratodynamics Inc.**](#) is an Earth Observation service provider pioneering new, dynamic methods to offer high-altitude, airborne assessments using uncrewed aerial vehicles flown Beyond Visual Line of Sight (BVLOS). Stratodynamics also provides turbulence detection solutions for the aviation and urban air mobility sectors utilizing licensed NASA technology.

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