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**Physical Science Laboratory**

# New Mexico UAS Test Site

The Physical Science Laboratory (PSL) at New Mexico State University (NMSU) runs and manages the UAS flight operations for the New Mexico UAS Flight Test Site (FTS). With over 70 years in the aerospace domain, PSL today is a multi-disciplined, aerospace/defense-oriented scientific and technical organization with over 200 staff, many with unique subject matter expertise. Many key staff have clearances including all UAS support staff.

The NM UAS Flight Test Site is located at the Las Cruces, NM airport in a 15,000 sq. ft hanger. This location serves as the main operating and coordination location. The UAS team has worked at my CONUS & OCONUS work locations supporting a broad range of customers. PSL owns and operate multiple UAS classes of various sizes - small to large including a Predator surrogate and chase aircraft.



UAS Flight Operations are completed under various Certificates of Authorization (COA) including a long-term facility COA. The New Mexico team has over 20 years of UAS flight ops and flight testing in the NAS (non-segregated airspace). The NM UAS FTS includes 15,000 square miles of airspace from ground to over 10,000 ft. This airspace includes 130 nm of New Mexico border shared with Mexico. The terrain varies from desert to alpine forest. There is exceptional weather/visibility throughout the year (over 320 days of sun-shine). The main flight areas are either sparsely populated or are over controlled area with limited to no public access that include very flat open terrain with no obstructions and clear visibility.

The NM UAS FTS supports a broad array of missions, research and testing. The FTS provides unique support for new UAS development (small to very large) and through our airworthiness process can get new vehicles flying under our research COA to test systems, vehicle performance and log flight time to prove out systems and safety. The NM FTS team supports flights by flying missions for our customers or support customer driven flight missions for safe operations under our Mission Control. Our in house UAS flight systems (both manned and unmanned) serve as a test bed for new sensor or flight technologies. We support unique CO-NOPs development and mission planning. The NM UAS FTS has expertise in supporting very high altitude (>60,000 ft) UAS planning and mission operations.

As one of the seven FAA Approved UAS Test Sites, the NM UAS Test Site brings a long history of research, development, and testing and almost two decades of UAS flight operations experience. PSL are special-use airspace experts including International airspace coordination. NMSU PSL personnel are also part of the FAA's ASSURE UAS Center of Excellence with research for the FAA on Beyond Visual Line of Site (BVLOS) and Detect and Avoid technologies, UAS Human Factors, UAS detection near airports, and STEM outreach with UAS. Research Testing Development and Evaluation efforts are facilitated by our open space with controlled access for a controlled testing environment, our experience with integrations of systems into PSL flight systems, and our experience with facilitating test of provided vehicles and systems.

