

Desert Testers: 586th FLTS 'Roadrunners'



Operating on and over White Sands Missile Range – the largest military installation in the United States – Air Force Materiel Command's resident unit, the 46th Test Group, offers a wide variety of truly unique test capabilities, from indoor evaluations to actual flight-testing. The latter is the core business of the 586th Flight Test Squadron, providing agile, responsive and expeditionary flight tests of the most advanced equipment in the world to ensure that the US military stays ahead of global threats.

The 46th Test Group is the largest associate unit based at Holloman AFB and reports to the 46th Test Wing headquartered at Eglin AFB, Florida – itself part of the Air Armament Center (AAC), Air Force Materiel Command (AFMC). The Test Group performs a unique test and evaluation mission for which it operates world class test facilities for high-speed sled track testing, navigation and guidance system testing, radar signature measurements and weapon system flight testing. It is the liaison office for all Air Force programmers tested at White Sands Missile Range (WSMR). Some 450 military, civil service and contractor personnel staff the Group, of whom two-thirds are scientists, engineers and technicians.

The 46th Test Group directs the activities of the 746th Test Squadron, 846th Test Squadron, National Radar Cross Section Test Facility,

Directed Energy Office, Detachment 1 and the only Air Force Flight Test Squadron based at Holloman AFB, the 586th Flight Test Squadron.

The 746th Test Squadron, also known as Central Inertial Guidance Test Facility (CIGTF), was established in 1959 to test and validate inter-continental ballistic missile guidance systems. Today it is the DoD's 'Center of Expertise' for testing and evaluating GPS user equipment, inertial guidance systems for aircraft, missiles and spacecraft, as well as Doppler and stellar-aided inertial navigation systems and navigation sub-systems such as sensors, gyroscopes and accelerometers. It is considered the leader in GPS open-air combat threat environment testing and the centre of excellence for testing all aircraft and missile guidance systems. The 746th Test Squadron is the Responsible Test Organization (RTO) for GPS user equipment tests, being

responsible for test, evaluation and verification of GPS user equipment and GPS integrated systems.

The 846th Test Squadron operates the Holloman High Speed Test Track (HHSTT) and its capabilities are unique in subsonic through hypersonic velocities. It is the world's premier rocket sled test facility and its 50,788 ft (15,480 m) sled track is the longest in the world. Payloads up to full-scale aircraft can be tested at selected portions of the flight environment under accurately programmed and instrumented conditions. The test capabilities provided by the Test Track fill a distinct gap between laboratory investigations and full-scale flight tests. The squadron is also DoD's 'Center of Expertise' for all ejection seat testing using the Multi-Axis Seat Ejection (MASE) sled and is the lead facility for all supersonic tracks.

The National Radar Cross-Section (RCS) Test Facility (NRTF) is the primary DoD facility for outdoor static cross-section measurements. Located on White Sands Missile Range, this one-of-a-kind NRTF consists of two separate but complementary outdoor test sites, combining the best of monostatic and bistatic radar cross-section measurements. The NRTF Main Site facilities are capable of radar cross-section amplitude and phase measurements, antenna pattern measurements, glint and near field measurements. A wide variety of targets can be tested, from models to full-size aircraft or ground vehicles. Targets can be