Air Force Achieved Two Significant Advances with the YF-12A During Last Week in July.

First, one test aircraft flew 3 missions, on one of which a dummy air-to-air missile was launched at an altitude of 75,000 feet and at a speed of more than 2,000 MPH. The purpose of the test was to check for correct missile separation at high speed. The system is unique because the missile-launcher ejects the missile downward with an explosive charge to insure safe clearance from the aircraft before the missile's rocket motor is fired. The test was entirely successful and will be followed by live missile launches as the development program normally progresses.

Second, another test aircraft was flown at 70,000 feet and maximum speed for the first time. All 3 of the test aircraft have now been taken to the design speed of 2,000 MPH-plus. A total of 265 hours have been flown by the 3 aircraft.
A YF-12A successfully launched a 45A FALCON Air-to-Air Missile against a Target Drone on the Pacific Missile Range, 30 September 1965.

Aircraft was flying at 75,000 feet at about 2,000 MPH. The missile was launched 32.3 miles from the drone, which was at 20,000 feet, flying at 600 MPH. Missile passed within 50 feet of the target in a nose attack. The fire control system and the missile operated normally.
Air Force Completes a Number of "Firsts" While Launching an AIM-47 Air-to-Air Missile from a YF-12A on 13 May 1966.

An AIM-47 missile was launched from a YF-12A experimental aircraft flying over the Pacific Missile Range at 74,400 feet and 3.17 Mach. Target was a Ryan BQM-34A "Firebee" drone at a range of 35 nautical miles, flying at 20,000 feet. Telemetry data indicates that the missile passed within the kill radius of the target. Noteworthy "firsts" were:

First launch of the AIM-47 utilizing stern approach geometry.

Time-of-flight of 58 seconds was the longest to date, and approached maximum design flight time for the prototype missile.

First all-military firing of the missile.