

## EXECUTIVE SUMMARY

### AIRCRAFT ACCIDENT INVESTIGATION F-16C FIGHTING FALCON, SERIAL NUMBER (S/N) 87-0316 522<sup>ND</sup> FIGHTER SQUADRON (FS), CANNON AIR FORCE BASE, NEW MEXICO

9 SEPTEMBER 2002

On 9 September 2002, at approximately 2027 Mountain Daylight Time (MDT), the mishap aircraft (MA), an F-16C, S/N 87-0316 crashed in the Pecos Military Operating Area (MOA) approximately 11 miles southwest of Fort Sumner, New Mexico. The mishap pilot (MP) was fatally injured and the mishap aircraft (MA) was destroyed with the loss valued at \$20,475,759. The MP and MA were assigned to the 522<sup>ND</sup> FS, 27<sup>th</sup> Fighter Wing, Cannon AFB, New Mexico. There was minor damage to private rangeland.

The MP was number three in a 3-ship vs a 4-ship flight of F-16Cs. During the second engagement, the MP was expected descend to a pre-assigned altitude block and then execute a "drag" maneuver (left 180-degree turn). However, approximately 20 seconds after entering the turn, the aircraft impacted the ground wings-level, in approximately 20 degrees of dive and at approximately 550 Knots Calibrated Airspeed (KCAS). There was no attempt by the pilot to eject.

There is clear and convincing evidence that the MP allowed the MA to enter into a tight, descending turn and, in the seconds prior to impact with the ground, began a maximum performance dive recovery. There was insufficient altitude to recover the aircraft. The loss of Flight Data Recorder information provided no evidence to make a clear determination as to why the MP allowed the aircraft to exceed the preplanned parameters. However, the Board President opined that there were several possible causes for the MA's steep dive, the most likely being:

- 1) The MP planned to be the third aircraft in a three-ship trail presentation to the opposing flight. Because of airspace and timing issues, the MP was actually the first aircraft and required a different threat reaction than the MP expected. The MP found himself relatively close to the opposing flight, outside of his altitude block, and possibly confused as to what was expected of him. His confusion and accompanying distraction may have caused him to temporarily fail to monitor his aircraft's attitude during the maneuver.
- 2) The MP was attempting a left 180-degree turn while descending from approximately 22,000 feet above Mean Sea Level (MSL) to his assigned altitude block of 15,000 – 19,000 feet MSL. The mishap sortie was flown on a night with no discernable horizon and low moon illumination. Without exterior references, the MP was more susceptible to spatial disorientation and it is likely that the MP suffered from both somatogyral and G-excess illusions that resulted in an unusual aircraft attitude. Given the attitude, altitude, and airspeed of the MA, the MP did not have the time or altitude available to recover the aircraft.

It is likely that the MP, confronted with changes in the briefed maneuvers, became distracted and spatially disoriented as he executed a descending turn. As he fought to regain his situational awareness, he allowed the MA to enter a very steep dive. There is substantial evidence that the MP regained his situational awareness and attempted to recover the MA, but initiated the recovery at an altitude too low to permit safe recovery and impacted the ground.

*Under 10 U.S.C. 2254(d) any opinion of the accident investigators as to the cause of, or the factors contributing to, the accident set forth in the accident investigation report may not be considered as evidence in any civil or criminal proceeding arising from an aircraft accident, nor may such information be considered an admission of liability of the United States or by any person referred to in those conclusions or statements.*