

EXECUTIVE SUMMARY

AIRCRAFT ACCIDENT INVESTIGATION

F-16CJ, S/N 90-0815

77TH FIGHTER SQUADRON (FS), SHAW AIR FORCE BASE (AFB),
SOUTH CAROLINA

06 JULY 2001

On 06 July 2001, at 1435 Zulu/1035 local time, while performing Basic Fighter Maneuvers (BFM), the mishap pilot (MP) initiated ejection from the mishap aircraft (MA), F-16CJ, Serial Number 90-0815. The MP, assigned to 77 FS, Shaw AFB, South Carolina, suffered fatal injuries during the ejection sequence. The MA impacted the Atlantic Ocean off the coast of Charleston, South Carolina, and was destroyed.

There is clear and convincing evidence that the pilot suffered from G-induced loss of consciousness (G-LOC) that resulted in the mishap aircraft being put into unrecoverable flight parameters from which the pilot ejected and sustained fatal injuries. The mishap aircraft impacted the ocean and was destroyed.

The mishap engagement was a 2.5 nautical mile (NM) high aspect BFM set-up, where the MP initially positioned his aircraft 2.5 NM behind the mishap instructor pilot (MIP) to start with an offensive advantage. The engagement began at 16,500 feet above ground level (AGL) and 450 knots. At 19 seconds into the engagement, the MP initiated a high-G, descending left turn to retain his offensive advantage. At 24 seconds, passing through 7,500 feet AGL and approximately 460 knots, the MP stabilized at 45-60 degrees nose low and 35-45 degrees left bank with no reaction to radio calls from the MIP. This unresponsiveness after the initiation of a high-G turn in an environment where the G-loading can be sustained for long periods of time is characteristic of a G-LOC. Historical experience with G-LOC incidents indicates an average incapacitation of 24 seconds, during which the victim may be totally unresponsive to external inputs.

The MIP, in view of the deteriorating situation, assessed that the MA was no longer in a position to recover safely and commanded the MP to "bail-out." The MIP observed the MP eject immediately after making the "bail-out" call. This is again consistent with G-LOC symptoms, wherein the victim may regain some consciousness after a period of incapacitation.

Ejection was initiated at approximately 1,500 feet AGL and 550-600 knots, 60 degrees nose low, and 30 degrees left bank. Under those conditions, serious flailing injury can and in most cases does occur. During the high-speed ejection, the MP sustained a blunt impact to the head that proved fatal. Had the MP not attempted the ejection, he would have impacted the water with the MA. The MA impacted the water in excess of 640 knots at approximately 60 degrees of dive and 30 degrees of left bank, with the throttle just below military power.

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 by the United States or by any person referred to in these conclusions or statements.