

EXECUTIVE SUMMARY
AIRCRAFT ACCIDENT INVESTIGATION
F-16CG, S/N 89-2104 and Cessna 172, N73829
Moody Air Force Base, Georgia
16 November 2000

On 16 November 2000, at 3:48 PM local time, an F-16CG, S/N 89-2104, and a Cessna 172, N73829, collided midair near Bradenton, Florida. The mishap F-16, call sign Ninja 2, assigned to the 69th Fighter Squadron, 347th Wing, Moody AFB, Georgia, was part of a two-ship low level, surface attack tactics sortie. The Cessna 172, call sign Cessna 829, registered to Crystal Aero Group, had taken off from the Sarasota-Bradenton International Airport. The F-16 pilot ejected safely from his crippled aircraft less than a minute after the collision. The Cessna pilot sustained fatal injuries. The F-16 impacted in an unpopulated area causing fire damage to surrounding vegetation, but no damage to any structures. The Cessna 172 broke up in midair with the wreckage impacting a golf course and surrounding homes causing minor damage. There were no injuries to civilians on the ground.

Shortly before impact, Ninja flight had cancelled Instrument Flight Rules service and descended under Visual Flight Rules toward the entry point for VR-1098, a published low level training route. However, the lead F-16, call sign Ninja 1, had developed a 9-11 mile position error in its Inertial Navigation System. Ninja 1 did not recognize this error and unknowingly led his flight into the controlled airspace surrounding Sarasota-Bradenton Airport, heading south at 2000 feet. Cessna 829, flying under Visual Flight Rules, but following radar vectors from Tampa Approach, was also transiting that controlled airspace, heading northwest, in a climb from 1600 feet to 3500 feet. These flight paths placed Ninja 2 and Cessna 829 on a collision course that neither pilot recognized in time to avoid the mishap. Approximately 30 seconds prior to the midair collision, Tampa Approach received a Mode C Intruder (Conflict) Alert between Cessna 829 and Ninja 1's 1200 code. They did not issue a safety alert.

There are two causes of this mishap, both supported by clear and convincing evidence. First, Ninja 2 and Cessna 829 failed to "see and avoid" each other in sufficient time to prevent the mishap. Second, Tampa Approach failed to transmit a safety alert to Cessna 829 when their radar system generated "Conflict Alert" warnings. In addition, there were three factors that substantially contributed to the mishap, all supported by substantial evidence. First, Ninja 1 lost situational awareness and descended under Visual Flight Rules into Tampa Class B airspace without clearance. Second, Ninja 1 failed to recognize a significant position error in his aircraft's Inertial Navigation System and unknowingly navigated the flight into Sarasota Class C airspace without the required communications with Tampa Approach. Third, Ninja 1 failed to recognize a cursor slew bias in his ground attack steering and unknowingly navigated the flight onto a collision course with Cessna 829.

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 those conclusions or statements.