

EXECUTIVE SUMMARY
AIRCRAFT ACCIDENT INVESTIGATION
A-10C, T/N 81-0963
SPANGDAHLEM AIR BASE, GERMANY
1 APR 2011

On 1 Apr 2011, 1548L, the mishap aircraft (MA), an A-10C, tail number 81-0963, assigned to the 81st Fighter Squadron, 52nd Fighter Wing, Spangdahlem AB, Germany entered an unusual attitude. This occurred as the mishap pilot (MP) experienced spatial disorientation (SD) while flying in close formation on an instrument approach in the weather. The MP broke out of the weather, recognized the unusual attitude, attempted briefly to recover the MA, felt "ground rush" and ejected based on the unrecoverable parameters. The MA impacted at nearly 90 degrees nose low in a field just north of Laufeld, Germany. The MP ejected at roughly 600 ft above ground level (AGL), did not receive full parachute deceleration and sustained significant injuries. The MA was destroyed with loss valued at \$16,172,753.06 with an undetermined environmental clean-up cost.

The mishap flight (MF) planned, briefed, and executed a practice instructor pilot upgrade (IPUG) sortie to include chasing instrument approaches for the MP. The MP moved from chase to close formation off the mishap wingman (MW) prior to the MF entering weather at 5500 ft Mean Sea Level on the instrument approach. For approximately two minutes thereafter, the MP flew a stable close formation, slightly wider than normal. At 14 miles the MF began a 30 degree turn to intercept the instrument landing system inbound course, changed radio frequencies to tower, and established a smooth shallow descent. Once established, the MF configured with speedbrake and gear. During this configuration change, the MP descended 80 ft below the lead aircraft, lost sight of the MW, and executed incomplete lost wingman procedures. The MA then began a left hand roll to 45 degrees of bank resulting in a 15 degrees nose low attitude. The MA paused momentarily, then continued to roll from 45 degrees to approximately 180 degrees inverted resulting in a 60 degrees nose low attitude exiting the weather at 1500 ft AGL. Since the MA impacted in a clean configuration, the MP de-configured the aircraft somewhere between initiation of lost wingman procedures and just prior to exiting the weather. The MP's immediate action to recover the MA upon exiting the clouds and timely ejection decision starkly contrasts with the aircraft's preceding pattern and indicates that the MP did not correctly sense the aircraft's attitude prior to exiting the clouds. Additionally, the MP had not flown on the wing in the weather in about a year. Flying on the wing in the weather commonly causes SD and can be compounded by maneuvering, radio frequency and configuration changes, and limited recent experience.

The accident investigation board (AIB) president found clear and convincing evidence that the cause of the mishap was human factor error. Specifically, the MP suffered from SD in the weather and entered an unusual and ultimately unrecoverable attitude. Additionally, the AIB president found by a preponderance of the evidence, that vision restricted by meteorological conditions, procedural error, and recency of experience were substantially contributing factors to the mishap.

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 the 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.