National Transportation Safety Board
Aviation Accident Data Summary

Location:	Macon, MS	**Accident Number:**	ERA12FA376
Date & Time:	05/31/2012, 1656 CDT	**Registration:**	N976S
Aircraft:	HAWKER BEECHCRAFT A36	**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

While on a long cross-country flight on an instrument flight rules flight plan, the pilot attempted to fly through a line of thunderstorms. The airplane was equipped with satellite radar weather (NEXRAD Composite) and a stormscope/strikefinder. Using his equipment and talking with air traffic controllers, the pilot noted a break in the extreme precipitation, which still contained moderate to heavy precipitation, about 115 miles from the airplane's position. As the airplane approached that area, the pilot reported that a thunderstorm cell had filled it in; however, there was still a gap in the line of thunderstorms about 10 miles north. The pilot then attempted to fly to that gap and no further communications were received from the accident airplane. Review of the airplane's radar track was overlaid on a weather radar plot and revealed that the pilot attempted to fly though a Level 5, or heavy, thunderstorm cell. The turbulence from that cell resulted in an in-flight breakup of the airplane due to overstress, and the wreckage was scattered over a mile on the ground.

The satellite radar weather information, most likely displayed in the airplane cockpit when the pilot was attempting to fly to a gap in thunderstorm cells, was about 6 to 7 minutes old at the time of the accident and depicted the airplane in an area clear of precipitation. The airplane's stormscope/strikefinder would have provided real-time lightning information; however, it would have had significantly less detail than composite weather radar depictions and thus be less suitable for use in attempting to navigate through a line of thunderstorms and in between thunderstorm cells. Both sources of weather information used were less suitable than onboard weather radar, which would have provided real-time weather radar images in the cockpit. The pilot had obtained his instrument rating less than 2 years before the accident and had accrued about 32 total hours of actual instrument experience.

The NTSB recently issued a related Safety Alert, In-Cockpit NEXRAD Mosaic Imagery, viewable at www.ntsb.gov, describing how the actual age of NEXRAD data can differ significantly from the age displayed.

Flight Events

Enroute-cruise - Windshear or thunderstorm
Enroute-cruise - Inflight upset
Enroute-cruise - Aircraft structural failure
Uncontrolled descent - Collision with terr/obj (non-CFIT)

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The pilot's decision to continue flight into an area of known thunderstorms, which resulted in an in-flight breakup. Contributing to the accident was the pilot's lack of experience in actual instrument meteorological conditions and his reliance on datalink weather radar imagery for tactical avoidance of

convective weather.

Findings

Aircraft-Aircraft structures-(general)-(general)-Capability exceeded - C
Personnel issues-Action/decision-Info processing/decision-Decision making/judgment-Pilot - C
Personnel issues-Experience/knowledge-Experience/qualifications-Total instrument experience-Pilot - F
Personnel issues-Psychological-Personality/attitude-Confidence/reliance on equip-Pilot - F
Environmental issues-Conditions/weather/phenomena-Convective weather-Thunderstorm-Decision related to condition - C

Pilot Information

Certificate:	Private	**Age:**	53
Airplane Rating(s):	Single-engine Land	**Instrument Rating(s):**	Airplane
Other Aircraft Rating(s):	None	**Instructor Rating(s):**	None
Flight Time:	258 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	HAWKER BEECHCRAFT	**Registration:**	N976S
Model/Series:	A36	**Engines:**	1 Reciprocating
Operator:	Earl Shirley	**Engine Manufacturer:**	CONT MOTOR
Operating Certificate(s) Held:	None	**Engine Model/Series:**	IO-550
Flight Conducted Under:	Part 91: General Aviation - Personal		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	**Condition of Light:**	Day
Observation Facility, Elevation:	STF, 333 ft msl	**Weather Information Source:**	Weather Observation Facility
Lowest Ceiling:	Broken / 2600 ft agl	**Wind Speed/Gusts, Direction:**	7 knots / 22 knots, 240°
Temperature:	20°C	**Visibility**	10 Miles
Precipitation and Obscuration:	Heavy - Thunderstorms - Rain; No Obscuration		
Departure Point:	Clearwater, FL (PIE)	**Destination:**	Norman, OK (OUN)

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Substantial
Passenger Injuries:	N/A	**Aircraft Fire:**	On-Ground
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Latitude, Longitude:	33.038333, -84.776111		

Administrative Information

Investigator In Charge (IIC):	Robert J Gretz	**Adopted Date:**	01/15/2013
Investigation Docket:	http://dms.ntsb.gov/pubdms/search/dockList.cfm?mKey=83818		