



Aviation Investigation Final Report

Location:	Birmingham, Alabama	Accident Number:	DCA13MA133
Date & Time:	August 14, 2013, 04:40 Local	Registration:	N155UP
Aircraft:	Airbus A300 - F4 622R	Aircraft Damage:	Destroyed
Defining Event:	Controlled flight into terr/obj (CFIT)	Injuries:	2 Fatal
Flight Conducted Under:	Part 121: Air carrier - Non-scheduled		

Analysis

The Safety Board's full report is available at <http://www.nts.gov/investigations/AccidentReports/Pages/aviation.aspx>. The Aircraft Accident Report number is NTSB/AAR-14/02.

On August 14, 2013, about 0447 central daylight time (CDT), United Parcel Service (UPS) flight 1354, an Airbus A300-600, N155UP, crashed short of runway 18 during a localizer nonprecision approach to runway 18 at Birmingham-Shuttlesworth International Airport (BHM), Birmingham, Alabama. The captain and first officer were fatally injured, and the airplane was destroyed by impact forces and postcrash fire. The nonscheduled cargo flight was operating under the provisions of 14 *Code of Federal Regulations* (CFR) Part 121 on an instrument flight rules flight plan, and dark night visual flight rules conditions prevailed at the airport; variable instrument meteorological conditions (IMC) with a variable ceiling were present north of the airport on the approach course at the time of the accident. The flight originated from Louisville International Airport-Standiford Field (SDF), Louisville, Kentucky, about 0503 eastern daylight time (EDT).

Probable Cause and Findings

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

the flight crew's continuation of an unstabilized approach and their failure to monitor the aircraft's altitude during the approach, which led to an inadvertent descent below the minimum approach altitude and subsequently into terrain. Contributing to the accident were (1) the flight crew's failure to properly configure and verify the flight management computer for the profile approach; (2) the captain's failure to communicate his intentions to the first officer once it became apparent the vertical profile was not

captured; (3) the flight crew's expectation that they would break out of the clouds at 1,000 feet above ground level due to incomplete weather information; (4) the first officer's failure to make the required minimums callouts; (5) the captain's performance deficiencies likely due to factors including, but not limited to, fatigue, distraction, or confusion, consistent with performance deficiencies exhibited during training; and (6) the first officer's fatigue due to acute sleep loss resulting from her ineffective off-duty time management and circadian factors.

Findings

Aircraft	Descent/approach/glide path - Not attained/maintained
Personnel issues	Monitoring equip/instruments - Flight crew
Aircraft	Flt management computing sys - Incorrect use/operation
Personnel issues	Use of automation - Flight crew
Personnel issues	Lack of communication - Pilot
Environmental issues	(general) - Awareness of condition
Environmental issues	Low ceiling - Accuracy of related info
Personnel issues	Lack of communication - Copilot
Personnel issues	(general) - Pilot
Personnel issues	Lack of sleep - Copilot
Organizational issues	(general) - Operator
Organizational issues	Oversight of operation - FAA/Regulator
Aircraft	Ground proximity system - Related maintenance info

Factual Information

History of Flight

Approach-IFR final approach	Controlled flight into terr/obj (CFIT) (Defining event)
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Pilot Information

Certificate:	Airline transport	Age:	58
Airplane Rating(s):	Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	5-point
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	April 16, 2013
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	June 26, 2013
Flight Time:	6406 hours (Total, all aircraft), 3265 hours (Total, this make and model), 1516 hours (Pilot In Command, all aircraft), 97 hours (Last 90 days, all aircraft), 41 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Co-pilot Information

Certificate:	Airline transport	Age:	37
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	5-point
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	January 7, 2013
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	June 26, 2013
Flight Time:	1253 hours (Total, all aircraft), 403 hours (Total, this make and model), 0 hours (Pilot In Command, all aircraft), 95 hours (Last 90 days, all aircraft), 31 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Airbus	Registration:	N155UP
Model/Series:	A300 - F4 622R F4 622R	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Transport	Serial Number:	0841
Landing Gear Type:	Retractable - Tricycle	Seats:	7
Date/Type of Last Inspection:	August 14, 2013 Continuous airworthiness	Certified Max Gross Wt.:	375900 lbs
Time Since Last Inspection:		Engines:	2 Turbo fan
Airframe Total Time:	11043 Hrs as of last inspection	Engine Manufacturer:	P & W
ELT:	Installed, not activated	Engine Model/Series:	PW4158
Registered Owner:	UNITED PARCEL SERVICE CO	Rated Power:	58000 Lbs thrust
Operator:	UNITED PARCEL SERVICE CO	Operating Certificate(s) Held:	Flag carrier (121)
Operator Does Business As:	UNITED PARCEL SERVICE CO	Operator Designator Code:	IPXA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Unknown	Condition of Light:	Night/dark
Observation Facility, Elevation:	BHM,650 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	09:53 Local	Direction from Accident Site:	180°
Lowest Cloud Condition:	Few / 1100 ft AGL	Visibility	10 miles
Lowest Ceiling:	Broken / 3500 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	/ None
Wind Direction:	340°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.96 inches Hg	Temperature/Dew Point:	22°C
Precipitation and Obscuration:			
Departure Point:	Louisville, KY (SDF)	Type of Flight Plan Filed:	IFR
Destination:	Birmingham, AL (BHM)	Type of Clearance:	IFR
Departure Time:		Type of Airspace:	Class C

Airport Information

Airport:	Birmingham-Shuttlesworth Inter BHM	Runway Surface Type:	
Airport Elevation:	650 ft msl	Runway Surface Condition:	Wet
Runway Used:	18	IFR Approach:	Localizer only;RNAV
Runway Length/Width:	7099 ft / 150 ft	VFR Approach/Landing:	

Wreckage and Impact Information

Crew Injuries:	2 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:		Aircraft Fire:	On-ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Fatal	Latitude, Longitude:	33.563888,-86.802223

Administrative Information

Investigator In Charge (IIC):	Bower, Daniel
Additional Participating Persons:	Bob Hendrickson 202-340-6406 (c); FAA Reed Potecha 267-319-6354; UPS Stephen Whyte 630-404-2737 (c); IPA Bob Bao 860-830-5220 (c); Pratt and Whitney Brian Stephenson 502-689-3190; IBT (Teamsters) Jim Payne 205-266-7647 (c); Birmingham Airport Authority Romain Bevillard +33 6 15 89 17 80; BEA Denis CADOUX +33 676116513; AIRBUS
Original Publish Date:	February 3, 2015
Last Revision Date:	
Investigation Class:	Class 1
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=87780

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