



National Transportation Safety Board Aviation Accident Factual Report

Location:	Atlantic Ocean, AO	Accident Number:	IAD02LA039
Date & Time:	04/01/2002, 2005 EST	Registration:	G-BNLS
Aircraft:	Boeing 747-400	Aircraft Damage:	None
Defining Event:		Injuries:	1 Serious, 213 None
Flight Conducted Under:	Part 129: Foreign		

On April 1, 2002, about 2005 eastern standard time, a Boeing 747-400, G-BNLS, operated by British Airways as flight 214, was not damaged when it encountered turbulence shortly after takeoff from Boston/General Edward Lawrence Logan International Airport (BOS), Boston Massachusetts. The 2 certificated airline transport pilots, 15 flight attendants, and 196 passengers were not injured. One passenger sustained serious injuries. Visual meteorological conditions (VMC) prevailed and an instrument flight rules (IFR) flight plan was filed for the flight destined for London-Heathrow Airport (LHR), London, England. The scheduled international passenger flight was conducted under 14 CFR Part 129.

In a written statement, the flight crew reported that 20 minutes after departure they encountered "moderate turbulence" while climbing through flight level (FL) 350, to their assigned altitude of FL 370. Several minutes later, they requested a descent from air traffic control to FL 330 to maneuver around the turbulence. During the descent, a flight attendant informed the flight crew that a passenger fell during the turbulence encounter and broke her right ankle. The flight crew then initiated a return to Boston, and landed without further incident. After landing, the passenger was transported to the hospital and the airplane was inspected for damage. When no damage was observed, the flight departed again at 2214, and continued to London uneventfully.

The flight crew reported that windshear advisories had been issued at Boston prior to their departure; however, no turbulence was forecasted for their route of flight. The seat belt sign was illuminated for the entire flight.

According to flight attendant interviews conducted by British Airways, the flight conditions were described as "fairly smooth" and the seat belt sign was illuminated as they prepared for the in-flight service. About 20-30 minutes into the flight, the airplane "shook briefly" and experienced a "sudden jolt." During the encounter, a passenger from seat 17J was returning to her seat from the lavatory, when she fell and was injured. A flight attendant administered first aid to the passenger and notified the flight crew of the injury. The flight crew then informed the flight attendants and passengers that the flight would be returning to Boston.

The weather reported at Boston, at 1954, included wind from 270 degrees at 18 knots, gusting to 31 knots, 10 miles visibility, clear skies, temperature 8 degrees Celsius, dewpoint -3 degrees Celsius, and altimeter setting 29.80 in Hg.

Pilot Information

Certificate:	Airline Transport	Age:	48, Male
Airplane Rating(s):	Multi-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):		Toxicology Performed:	No
Medical Certification:	Unknown	Last FAA Medical Exam:	
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	13200 hours (Total, all aircraft), 3500 hours (Total, this make and model)		

Co-Pilot Information

Certificate:	Airline Transport	Age:	35, Male
Airplane Rating(s):	Multi-engine Land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):		Toxicology Performed:	No
Medical Certification:	Unknown	Last FAA Medical Exam:	
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	8000 hours (Total, all aircraft), 4000 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Boeing	Registration:	G-BNLS
Model/Series:	747-400	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Transport	Serial Number:	24629
Landing Gear Type:	Retractable - Tricycle	Seats:	291
Date/Type of Last Inspection:	03/23/2002, Continuous Airworthiness	Certified Max Gross Wt.:	270000 lbs
Time Since Last Inspection:		Engines:	4 Turbo Jet
Airframe Total Time:		Engine Manufacturer:	Rolls-Royce
ELT:	Installed, not activated	Engine Model/Series:	RB211-524H
Registered Owner:	BRITISH AIRWAYS	Rated Power:	59500 lbs
Operator:	BRITISH AIRWAYS	Operating Certificate(s) Held:	Foreign Air Carrier (129)
Operator Does Business As:		Operator Designator Code:	BRAF

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Night
Observation Facility, Elevation:	BHB, 83 ft msl	Distance from Accident Site:	
Observation Time:	1955 EDT	Direction from Accident Site:	
Lowest Cloud Condition:		Visibility	10 Miles
Lowest Ceiling:	Broken / 4300 ft agl	Visibility (RVR):	
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	230°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.52 inches Hg	Temperature/Dew Point:	5°C / 3°C
Precipitation and Obscuration:			
Departure Point:	Boston, MA (BOS)	Type of Flight Plan Filed:	IFR
Destination:	London (LHR)	Type of Clearance:	IFR
Departure Time:	1920 EST	Type of Airspace:	Class E

Wreckage and Impact Information

Crew Injuries:	17 None	Aircraft Damage:	None
Passenger Injuries:	1 Serious, 196 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious, 213 None	Latitude, Longitude:	42.572500, -70.718611

Administrative Information

Investigator In Charge (IIC):	Jill M Andrews
Additional Participating Persons:	Jack Donahue; Federal Aviation Administration; Boston, MA
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .