



National Transportation Safety Board Aviation Accident Final Report

Location:	PHILADELPHIA, PA	Accident Number:	BFO91LA055
Date & Time:	06/16/1991, 1500 EDT	Registration:	PHBFG
Aircraft:	BOEING 747-400	Aircraft Damage:	None
Defining Event:		Injuries:	1 Serious, 5 Minor, 272 None
Flight Conducted Under:	Part 129: Foreign		

Analysis

THE FLIGHT WAS ON A CRUISE DESCENT AT 20,000 FEET MSL WHEN IT ENCOUNTERED TURBULENCE, CAUSING INJURIES TO CABIN CREWMEMBERS INCLUDING ONE WHO WAS SERIOUSLY INJURED. THE PILOT REPORTED THAT HE WAS DEVIATING AROUND CUMULONIMBUS CLOUDS WHEN HE INADVERTENTLY ENTERED ONE. HE SAID THE SEAT BELT SIGN WAS ON AT THE TIME. THE FLIGHT PROCEEDED TO THE DESTINATION AND LANDED WITHOUT FURTHER INCIDENT.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: FAILURE OF THE PILOT TO ENSURE CABIN CREW MEMBERS WERE PREPARED FOR AN ENCOUNTER WITH TURBULENCE.

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER
Phase of Operation: DESCENT - NORMAL

Findings

1. (F) WEATHER CONDITION - TURBULENCE
2. (C) PROCEDURES/DIRECTIVES - NOT FOLLOWED - PILOT IN COMMAND

Factual Information

Pilot Information

Certificate:	Airline Transport	Age:	54, Male
Airplane Rating(s):	Multi-engine Land	Seat Occupied:	Unknown
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	04/01/1991
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	15016 hours (Total, all aircraft), 134 hours (Last 90 days, all aircraft), 65 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BOEING	Registration:	PHBFG
Model/Series:	747-400 747-400	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Transport	Serial Number:	
Landing Gear Type:	Retractable - Tricycle	Seats:	
Date/Type of Last Inspection:	01/02/2000, Unknown	Certified Max Gross Wt.:	356000 lbs
Time Since Last Inspection:		Engines:	4 Turbo Fan
Airframe Total Time:		Engine Manufacturer:	
ELT:		Engine Model/Series:	
Registered Owner:	KLM ROYAL DUTCH AIRLINE	Rated Power:	
Operator:	KLM ROYAL DUTCH AIRLINE	Operating Certificate(s) Held:	Flag carrier (121)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	PHL, 99999 ft msl	Distance from Accident Site:	999 Nautical Miles
Observation Time:	1500 EDT	Direction from Accident Site:	0°
Lowest Cloud Condition:	Scattered / 4000 ft agl	Visibility	8 Miles
Lowest Ceiling:	Broken / 7000 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	200°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	27° C / 22° C
Precipitation and Obscuration:			
Departure Point:	AMSTERDAM, OF (AMS)	Type of Flight Plan Filed:	None
Destination:	BALTIMORE, MD (BWI)	Type of Clearance:	IFR
Departure Time:	0000	Type of Airspace:	Class E

Wreckage and Impact Information

Crew Injuries:	1 Serious, 5 Minor, 12 None	Aircraft Damage:	None
Passenger Injuries:	260 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious, 5 Minor, 272 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	DENNIS L JONES	Adopted Date:	08/13/1993
Additional Participating Persons:			
Publish Date:			
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 pubinquiry@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report.