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## Turbulence injuries, Boeing 767-222, June 20, 1995

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**Micro-summary:** This Boeing 767-222 experienced turbulence in cruise, seriously injuring three flight attendants and a passenger.

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**Event Date:** 1995-06-20 at 1810 CDT


**Investigative Body:** National Transportation Safety Board (NTSB), USA

**Investigative Body's Web Site:** <http://www.nts.gov/>

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1. Accident reports can be and sometimes are revised. Be sure to consult the investigative agency for the latest version before basing anything significant on content (e.g., thesis, research, etc).
  2. Readers are advised that each report is a glimpse of events at specific points in time. While broad themes permeate the causal events leading up to crashes, and we can learn from those, the specific regulatory and technological environments can and do change. ***Your company's flight operations manual is the final authority as to the safe operation of your aircraft!***
  3. Reports may or may not represent reality. Many many non-scientific factors go into an investigation, including the magnitude of the event, the experience of the investigator, the political climate, relationship with the regulatory authority, technological and recovery capabilities, etc. It is recommended that the reader review all reports analytically. Even a "bad" report can be a very useful launching point for learning.
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		NTSB ID: CHI95LA188		Aircraft Registration Number: N600UA	
		Occurrence Date: 06/20/1995		Most Critical Injury: Serious	
		Occurrence Type: Accident		Investigated By: NTSB	
Location/Time					
Nearest City/Place CHAMPAGNE		State IL	Zip Code 61821	Local Time 1810	Time Zone CDT
Airport Proximity: Off Airport/Airstrip		Distance From Landing Facility:		Direction From Airport:	
Aircraft Information Summary					
Aircraft Manufacturer BOEING		Model/Series 767-222		Type of Aircraft Airplane	
Sightseeing Flight: No			Air Medical Transport Flight: No		
Narrative					
<p>Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:</p> <p>On June 20, 1995, about 1810 central daylight time, a Boeing 767- 222, N600UA, operated by United Airlines as United Airlines Flight 9, experienced severe air turbulence approximately ten miles south of Champagne, Illinois, and lost approximately 900 feet of altitude. The flight crew diverted the flight and made a precautionary landing at Lambert-St. Louis International Airport, St. Louis, Missouri. The airplane sustained no damage. Three flight attendants, of a crew of 11, reported serious injuries. One of 137 passengers, who had been seated but had not had her seat belt fastened, reported serious injuries. The scheduled domestic passenger flight operated under 14 CFR Part 121. The flight originated from Kennedy International Airport, New York, New York, at 1625 eastern daylight time with a planned destination of the San Francisco International Airport, San Francisco, California. An IFR flight plan was filed, and instrument meteorological conditions (IMC) existed along the route of flight.</p> <p>According to the captain's written statement, he was deviating the flight from its planned course line to avoid thunderstorm activity. The captain stated he observed on radar an opening between two cells of approximately 45 miles. He stated that a route between these cells would allow their flight to return back to its course.</p> <p>While vectoring between these two cells in IMC, the airplane momentarily entered into visual meteorological conditions (VMC) and the captain and first officer saw a cumulus nimbus buildup directly ahead of their path. The captain stated that this buildup had not been displayed on their radar despite use of various ranges and tilts. He stated that the buildup was too close to avoid. The captain immediately made an announcement over the PA for the flight attendants, who were in the process of serving the cabin, to be seated. But he stated that there was not enough time for the flight attendants to react before the airplane penetrated the top of the cumulus buildup. The captain reported they encountered ten seconds of severe turbulence and lost approximately 900 feet of altitude. The airplane was level at flight level 390 approximately 120 miles northeast of St. Louis, at the time of the turbulence encounter. The flight diverted to St. Louis International Airport for medical care for the injured flight attendants and passenger. The airplane landed without further incident.</p> <p>The first officer described the flight up until the turbulence encounter as smooth to light chop. He stated that the seat belt sign for the passengers had been turned on for approximately eight to ten minutes prior to cell penetration.</p> <p>The nine flight attendants described the flight up until the encounter as normal and smooth. Two of the nine flight attendants also mentioned light chop. During a telephone interview, the first flight attendant stated that the captain did give a preflight briefing and it was normal. She did not recall anything mentioned out of the ordinary, nor any mention of bad weather.</p> <p>Convective Sigmet 39C was issued at 2255 Zulu and was in effect for an area that included the</p>					
FACTUAL REPORT - AVIATION					

National Transportation Safety Board

**FACTUAL REPORT****AVIATION**

NTSB ID: CHI95LA188


Occurrence Date: 06/20/1995


Occurrence Type: Accident


**Narrative** (Continued)

approximate location of the turbulence encounter. Convective Sigmet 39C indicated an area of severe thunderstorms moving from 040 degrees at 15 knots with tops above 45,000 feet. It also indicated hail to one inch and possible wind gusts to 50 knots. The Enroute Terminal Forecast for Indianapolis at 1800 central daylight time indicated a chance of four miles visibility, thunderstorms, and light rain showers.

The captain was not able to recall Convective Sigmet 39C being broadcasted. The first officer stated that it had not been broadcasted. An inquiry was made to the FAA concerning the time in which 39C was broadcasted. The FAA indicated that a transcript was prepared which covered the time frame of five minutes before the incident until five minutes after the incident. The FAA stated that in reviewing the transcript, it was not possible to determine when 39C was broadcasted from the existing data.

 <b>National Transportation Safety Board</b> <b>FACTUAL REPORT</b> <b>AVIATION</b>		NTSB ID: CHI95LA188			
		Occurrence Date: 06/20/1995			
		Occurrence Type: Accident			
<b>Landing Facility/Approach Information</b>					
Airport Name	Airport ID:	Airport Elevation Ft. MSL	Runway Used 0	Runway Length	Runway Width
Runway Surface Type:					
Runway Surface Condition:					
Type Instrument Approach:					
VFR Approach/Landing:					
<b>Aircraft Information</b>					
Aircraft Manufacturer BOEING		Model/Series 767-222		Serial Number 21867	
Airworthiness Certificate(s): Transport					
Landing Gear Type: Retractable - Tricycle					
Homebuilt Aircraft? No	Number of Seats: 178	Certified Max Gross Wt.	320000 LBS	Number of Engines: 2	
Engine Type: Turbo Fan	Engine Manufacturer: P&W	Model/Series: JT9D-7R4	Rated Power: 47000 LBS		
<b>- Aircraft Inspection Information</b>					
Type of Last Inspection Continuous Airworthiness	Date of Last Inspection 05/1995	Time Since Last Inspection 67 Hours	Airframe Total Time 47060 Hours		
<b>- Emergency Locator Transmitter (ELT) Information</b>					
ELT Installed?	ELT Operated?	ELT Aided in Locating Accident Site?			
<b>Owner/Operator Information</b>					
Registered Aircraft Owner  UNITED AIRLINES		Street Address P.O. BOX 66100			
		City CHICAGO	State IL	Zip Code 60666	
Operator of Aircraft  Same as Reg'd Aircraft Owner		Street Address Same as Reg'd Aircraft Owner			
		City	State	Zip Code	
Operator Does Business As:			Operator Designator Code: 011A		
<b>- Type of U.S. Certificate(s) Held:</b>					
Air Carrier Operating Certificate(s): Flag Carrier/Domestic					
Operating Certificate:			Operator Certificate:		
Regulation Flight Conducted Under: Part 121: Air Carrier					
Type of Flight Operation Conducted: Scheduled; Domestic; Passenger Only					

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<b>First Pilot Information</b>																																																																																				
Name		City		State	Date of Birth	Age																																																																														
On File		On File		On File	On File	55																																																																														
Sex: M	Seat Occupied: Left	Principal Profession: Civilian Pilot		Certificate Number: On File																																																																																
Certificate(s): Airline Transport; Flight Engineer																																																																																				
Airplane Rating(s): Multi-engine Land																																																																																				
Rotorcraft/Glider/LTA: None																																																																																				
Instrument Rating(s): Airplane																																																																																				
Instructor Rating(s): None																																																																																				
Type Rating/Endorsement for Accident/Incident Aircraft? Yes				Current Biennial Flight Review?																																																																																
Medical Cert.: Class 1		Medical Cert. Status: Valid Medical--w/ waivers/lim.		Date of Last Medical Exam: 05/1995																																																																																
<table border="1"> <tr> <th rowspan="2">- Flight Time Matrix</th> <th rowspan="2">All A/C</th> <th rowspan="2">This Make and Model</th> <th rowspan="2">Airplane Single Engine</th> <th rowspan="2">Airplane Multi-Engine</th> <th rowspan="2">Night</th> <th colspan="2">Instrument</th> <th rowspan="2">Rotorcraft</th> <th rowspan="2">Glider</th> <th rowspan="2">Lighter Than Air</th> </tr> <tr> <th>Actual</th> <th>Simulated</th> </tr> <tr> <td>Total Time</td> <td>14519</td> <td>1531</td> <td></td> <td>14519</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Pilot In Command(PIC)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Instructor</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Last 90 Days</td> <td>147</td> <td>147</td> <td></td> <td>147</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Last 30 Days</td> <td>75</td> <td>75</td> <td></td> <td>75</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Last 24 Hours</td> <td>2</td> <td>2</td> <td></td> <td>2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>						- Flight Time Matrix	All A/C	This Make and Model	Airplane Single Engine	Airplane Multi-Engine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air	Actual	Simulated	Total Time	14519	1531		14519							Pilot In Command(PIC)											Instructor											Last 90 Days	147	147		147							Last 30 Days	75	75		75							Last 24 Hours	2	2		2						
- Flight Time Matrix	All A/C	This Make and Model	Airplane Single Engine	Airplane Multi-Engine	Night							Instrument					Rotorcraft	Glider	Lighter Than Air																																																																	
						Actual	Simulated																																																																													
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Instructor																																																																																				
Last 90 Days	147	147		147																																																																																
Last 30 Days	75	75		75																																																																																
Last 24 Hours	2	2		2																																																																																
Seatbelt Used? Yes		Shoulder Harness Used? Yes		Toxicology Performed? No		Second Pilot? Yes																																																																														
<b>Flight Plan/Itinerary</b>																																																																																				
Type of Flight Plan Filed: IFR																																																																																				
Departure Point		State	Airport Identifier	Departure Time	Time Zone																																																																															
NEW YORK		NY	JFK	1741	EDT																																																																															
Destination		State	Airport Identifier																																																																																	
SAN FRANCISCO		CA	SFO																																																																																	
Type of Clearance: IFR																																																																																				
Type of Airspace: Class A																																																																																				
<b>Weather Information</b>																																																																																				
Source of Briefing: Company																																																																																				
Method of Briefing:																																																																																				

 <b>National Transportation Safety Board</b> <b>FACTUAL REPORT</b> <b>AVIATION</b>		NTSB ID: CHI95LA188	
		Occurrence Date: 06/20/1995	
		Occurrence Type: Accident	

<b>Weather Information</b>					
WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
CMI	1745	CST	754 Ft. MSL	10 NM	190 Deg. Mag.
Sky/Lowest Cloud Condition: Unknown			0 Ft. AGL	Condition of Light: Day	
Lowest Ceiling: Broken		6000 Ft. AGL		Visibility: 6 SM	Altimeter: 29.00 "Hg
Temperature: 26 °C	Dew Point: 18 °C	Wind Direction: 20			Density Altitude: Ft.
Wind Speed: 12	Gusts:	Weather Conditions at Accident Site: Visual Conditions			
Visibility (RVR): 0 Ft.	Visibility (RVV) 0 SM	Intensity of Precipitation: Light			
Restrictions to Visibility: Haze					
Type of Precipitation: Rain					


<b>Accident Information</b>					
Aircraft Damage: None		Aircraft Fire: None		Aircraft Explosion: None	
Classification: U.S. Registered/U.S. Soil					
- Injury Summary Matrix	Fatal	Serious	Minor	None	TOTAL
First Pilot				1	1
Second Pilot				1	1
Student Pilot					
Flight Instructor					
Check Pilot					
Flight Engineer					
Cabin Attendants		3		6	9
Other Crew					
Passengers		1		136	137
- TOTAL ABOARD -		4		144	148
Other Ground	0	0	0		0
- GRAND TOTAL -	0	4	0	144	148

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	Occurrence Date: 06/20/1995	
	Occurrence Type: Accident	
Administrative Information		
Investigator-In-Charge (IIC) CHRISTINE M. CORSONES		
Additional Persons Participating in This Accident/Incident Investigation:  JOHN KLAY FAA, 10801 PEAR TREE LE, #200 ST. LOUIS, MO 63074  DENNY LESSARD UNITED AIRLINES, BOX 66100 CHICAGO, IL 60666		
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