Aviation Investigation Preliminary Report

Location:	Kelsey, NY	**Accident Number:**	DCA24LA097
Date & Time:	February 10, 2024, 15:43 Local	**Registration:**	N788UA
Aircraft:	Boeing 777-222	**Injuries:**	2 Serious, 1 Minor, 277 None
Flight Conducted Under:	Part 121: Air carrier - Scheduled		

On February 10, 2024, about 15:43 eastern standard time (EST), United Airlines (UAL) flight 1890, a Boeing 777-222ER, N788UA, experienced moderate turbulence when descending to flight level (FL) 190 inbound to the Newark Liberty International Airport (EWR), Newark, New Jersey. Of the 280 passengers and crew, two flight attendants received serious injuries and one received a minor injury. The flight was conducted under the provisions of Title 14 *Code of Federal Regulations* Part 121 as a scheduled domestic passenger flight from Los Angeles International Airport (LAX), Los Angeles, California to EWR.

The first officer (FO) was the pilot flying and the captain was the pilot monitoring. The flight crew stated that the departure from LAX was uneventful and the flight leveled off at a cruise altitude of FL350. The FO stated that he was responsible for briefing the approach/arrival into EWR and in preparation for the brief, checked for potential turbulence using the Weather Services International (WSI) application (APP) and used the Skypath APP to see if there were any reports of turbulence. Neither application revealed any significant indications of turbulence along their route. After the brief, the captain turned the onboard weather radar ON for the eventual descent into EWR.

The FO stated that while descending through about FL270, the captain announced via the passenger address (PA) system for the flight attendants (FA) to prepare the cabin for landing. Following the announcement, the captain turned the seatbelt sign ON.

The FO stated that he observed an overcast layer of clouds ahead and below that the flight would penetrate on their descent to EWR. However, there was no indication of potential turbulence as nothing showed on the aircraft's weather radar or the Skypath APP. Additionally, there were no reports of turbulence from ATC or dispatch.

The pilots reported that while descending through about FL210 in instrument meteorological conditions (IMC), the flight encountered moderate turbulence lasting a few seconds that caused unsecured items on the flightdeck to be thrown about. After the event, the captain immediately called the cabin crew and was informed of multiple injuries with one flight attendant sustaining a head laceration. Upon being notified of the injuries, the flight crew declared a medical emergency and requested paramedics meet the aircraft at the gate in EWR. Post-flight, two FA's were diagnosed with fracture injuries and a third was diagnosed with a sub-cranial bleed.

Postaccident examination of the weather in the area revealed a frontal boundary moving eastward across New York state. In addition, an upper-level jet stream maximum was located above the accident site. Satellite and weather radar imagery, along with lightning and surface data depicted strong cells in the vicinity of the flight. The U.S National Weather Service (NWS) had issued current Significant Meteorological (SIGMET) warning for embedded thunderstorms with tops reaching FL280 over the region.

NTSB group chairs in the areas of air traffic control, operations, meteorology, survival factors, and flight data recorder were assigned. Qualified parties were invited to participate in the investigation. These included the Federal Aviation Administration (FAA), United Airlines, The Boeing Company, Air Line Pilots Association (ALPA), and the National Air Traffic Controllers Association (NATCA).

Certified ADS-B data and audio recordings were provided to the NTSB by the FAA. The NTSB is currently analyzing this data. At the time of the accident, flight 1890 was being controlled by air traffic control located at the Boston Air Route Traffic Control Center (ZBW ARTCC). During the week of March 4th, 2024, the ATC group and meteorology specialist traveled to Nashua, New Hampshire to interview personnel at the control center.

Data from the digital flight data recorder (DFDR) and the cockpit voice recorder (CVR) were sent to the NTSB's Vehicle Recorder Laboratory in Washington, DC, for analysis.

The investigation continues.

Aircraft and Owner/Operator Information

Aircraft Make:	Boeing	**Registration:**	N788UA
Model/Series:	777-222	**Aircraft Category:**	Airplane
Amateur Built:			
Operator:	UNITED AIRLINES INC	**Operating Certificate(s) Held:**	Flag carrier (121)
Operator Designator Code:			

Meteorological Information and Flight Plan

Conditions at Accident Site:		**Condition of Light:**	
Observation Facility, Elevation:		**Observation Time:**	
Distance from Accident Site:		**Temperature/Dew Point:**	
Lowest Cloud Condition:		**Wind Speed/Gusts, Direction:**	/ ,
Lowest Ceiling:		**Visibility:**	
Altimeter Setting:		**Type of Flight Plan Filed:**	
Departure Point:	Los Angles, CA (LAX)	**Destination:**	Kelsey, NY

Wreckage and Impact Information

Crew Injuries:	2 Serious, 1 Minor, 8 None	**Aircraft Damage:**	None
Passenger Injuries:	269 None	**Aircraft Fire:**	None
Ground Injuries:		**Aircraft Explosion:**	None
Total Injuries:	2 Serious, 1 Minor, 277 None	**Latitude, Longitude:**	42.063057,-75.316284

Administrative Information

Investigator In Charge (IIC):	Hauf, Michael
Additional Participating Persons:	Nathan Williams; Boeing Commercial Airplanes Ryan Hurling; United Airlines; Chicago, IL Dave Keenan; Federal Aviation Administration Chris Hilber; NATCA James LaRosa; ALPA
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this accident.