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## Turbulence injuries, Boeing 777-236, G-VIIP, May 14, 2006

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**Micro-summary:** This Boeing 777 encountered turbulence, injuring passengers and crew.

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**Event Date:** 2006-05-14 at 0048 UTC

**Investigative Body:** Aircraft Accident Investigation Board (AAIB), United Kingdom

**Investigative Body's Web Site:** <http://www.aaib.dft.gov.uk/>

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## ACCIDENT

<b>Aircraft Type and Registration:</b>	Boeing 777-236, G-VIIP	
<b>No &amp; Type of Engines:</b>	2 General Electric Co GE90-85B turbofan engines	
<b>Year of Manufacture:</b>	1999	
<b>Date &amp; Time (UTC):</b>	14 May 2006 at 0048 hrs	
<b>Location:</b>	400 nm east of New York	
<b>Type of Flight:</b>	Public Transport (Passenger)	
<b>Persons on Board:</b>	Crew - 13	Passengers - 257
<b>Injuries:</b>	Crew - 1 (Minor)	Passengers - 2 (Minor)
<b>Nature of Damage:</b>	Nil	
<b>Commander's Licence:</b>	Airline Transport Pilot's Licence	
<b>Commander's Age:</b>	49 years	
<b>Commander's Flying Experience:</b>	9,007 hours (of which 1,110 were on type) Last 90 days - 138 hours Last 28 days - 41 hours	
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the pilot	

## Synopsis

Whilst in the cruise at FL370, the aircraft encountered a short period of unforecast, severe turbulence. A number of occupants were thrown into the air and injured. An on-board doctor, assisted by medical advice from ground based specialists, diagnosed the injuries as minor and the flight continued to London (Gatwick) Airport.

## History of the flight

The aircraft, on a scheduled flight from Atlanta (USA) to London (Gatwick), was established in the cruise at FL370. It was a clear, dark night and there were no warnings of turbulence on the Significant Weather Chart produced by the Washington World Area Forecast Centre, or from radio transmissions from other aircraft on the same route. The aircraft's weather radar was tilted

one degree nose down but displayed nothing to indicate likely turbulence. Whilst looking out, both pilots visually acquired cloud directly ahead, at short range, and began an avoiding turn. The seat belt signs were switched ON and the speed selected to Mach 0.82; the recommended turbulence penetration speed for that level. The aircraft entered the cloud and experienced two or three large jolts over a period of approximately 10 seconds. It then exited the cloud and the turbulence dissipated.

The aircraft's flight data recorder revealed that during the turbulence, the aircraft experienced a maximum vertical acceleration of 1.633g and a minimum of -0.023g two seconds later. There was also an uncommanded autothrottle disconnection.

The turbulence was encountered immediately after the seat belt signs were switched ON, whilst the cabin crew were serving the passengers refreshment from the service trolleys. As a result of the turbulence, two cabin crew members were thrown into the air together with their service trolley. A female passenger, holding a baby, had not had time to return to her seat and was also thrown into the air. She held onto the baby with both arms and was unable to break her fall, consequently

injuring her knees. The baby appeared uninjured and ate and slept normally throughout the rest of the flight. Medical advice was sought from ground based specialists and an on board doctor diagnosed the injuries as minor and the flight continued to London (Gatwick) Airport. After landing an ambulance and paramedics met the aircraft to treat the injured persons. It was subsequently discovered that the baby had suffered a broken leg.