

**Aviation Safety Investigation Report
198700001**

Boeing B747-338

2 August 1987

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NOTE: All air safety occurrences reported to the ATSB are categorised and recorded. For a detailed explanation on Category definitions please refer to the ATSB website at www.atsb.gov.au.

Occurrence Number: 198700001 **Occurrence Type:** Accident

Location: 16kms south of the coast of GUAM

Date: 2 August 1987 **Time:** 47

Highest Injury Level: Serious

Injuries:

	Fatal	Serious	Minor	None
Crew	0	0	18	18
Ground	0	0	0	-
Passenger	0	1	58	271
Total	0	1	59	289

Aircraft Details: Boeing B747-338

Registration: VH-EBT

Serial Number: 23222

Operation Type: Regular Public Transport

Damage Level: Minor

Departure Point: Narita JAPAN

Departure Time: 2155,(1 Aug 87)

Destination: Sydney NSW

Approved for Release: 13th January 1992

Circumstances:

The aircraft was engaged on a scheduled international passenger flight. Between Narita and Guam the aircraft weather radar was used to avoid unforecast, isolated cumulonimbus cloud formations. Approaching Guam, the flight conditions were smooth with the aircraft flying through cirrus cloud. The Captain and Second Officer, who were on duty on the flight deck, were monitoring the weather radar. A heading change to the right of track was required to avoid weather activity observed by radar over the island. Whilst regaining track, the aircraft encountered an area of severe turbulence lasting for approximately 30 seconds and resulting in vertical accelerations of +1.8G and -0.4G. Forty passengers and two cabin attendants were injured. At the time of the encounter the seat belt signs were off and most of the injured passengers were asleep with their seat belts undone. The Captain illuminated the seat belt sign immediately the turbulence was noticed. The injured were treated by the cabin crew and a passenger who was a qualified medical practitioner. The Captain was advised that none of the injured required immediate specialised treatment and, as the aircraft did not sustain any significant damage, he decided to continue the flight to Sydney. The airline company was notified and the aircraft was met by medical staff on arrival. Twenty eight passengers and cabin crew were conveyed to hospital for further treatment. It was determined the aircraft had encountered an area of turbulence associated with cumulonimbus cloud which was not detected by the aircraft weather radar. Although the seat belt signs were not illuminated, passengers were advised during an after take off announcement, to keep their seat belts fastened when seated. These announcements were made in English and Japanese languages.

Significant Factors:

The following factors were considered relevant to the development of the accident

1. The aircraft encountered an area of turbulence undetected by the aircraft weather radar.
2. The seat belt sign was not illuminated.
3. Many passengers who were sleeping, did not have their seat belts fastened.
4. The cumulonimbus cloud formations in the vicinity of Guam were not forecast.