

## ATR42-300, G-SSEA

<b>AAIB Bulletin No: 5/2004</b>	<b>Ref: EW/G2003/11/20</b>	<b>Category: 1.1</b>
<b>Aircraft Type and Registration:</b>	ATR42-300, G-SSEA	
<b>No &amp; Type of Engines:</b>	2 Pratt & Whitney Canada PW120 turboprop engines	
<b>Year of Manufacture:</b>	1990	
<b>Date &amp; Time (UTC):</b>	12 November 2003 at 1955 hrs	
<b>Location:</b>	50 nm south south-east of Dublin, Ireland	
<b>Type of Flight:</b>	Public Transport (Passenger)	
<b>Persons on Board:</b>	Crew - 3	Passengers - 13
<b>Injuries:</b>	Crew - 1 (Serious)	Passengers - None
<b>Nature of Damage:</b>	None to aircraft	
<b>Commander's Licence:</b>	Airline Transport Pilot's Licence	
<b>Commander's Age:</b>	31 years	
<b>Commander's Flying Experience:</b>	2,550 hours (of which 350 were on type)	
	Last 90 days - 120 hours	
	Last 28 days - 30 hours	
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the pilot and subsequent AAIB enquiries	

### History of the flight

The aircraft was flying from Cardiff to Dublin and, as permitted by the regulations, was operating with only a single cabin crewmember on board. Turbulence associated with a frontal passage had been forecast en-route but another aircraft flying the same route in the opposite direction reported that no turbulence had been encountered.

Whilst in cloud and approximately 50 nm from Dublin the aircraft encountered light turbulence at which point the commander switched on the cabin seat belt signs. The cabin crewmember immediately secured the cabin and informed the commander by interphone that this had been done. Because the turbulence was only very light she remained standing in the galley, but a few seconds later the aircraft encountered severe turbulence which lasted between 10 and 20 seconds. This was sufficient to throw the cabin crewmember across the galley, causing her to hit the cabin ceiling and a bulkhead before finally throwing her to the floor.

The turbulence stopped and after recovering for a short while the crew member managed to get into her seat and secure the harness, although she found moving and breathing both difficult and painful. Realising what had happened a passenger asked if she was all right, however she was too shocked and

winded to reply. After a further short period she was able to speak to the commander on the interphone and inform him of the situation. She was further able to make a pre-landing announcement to passengers to ensure the cabin remained secure, although she was unable to leave her seat.

Being aware of the situation the commander requested that an ambulance meet the aircraft. On arrival at Dublin airport he asked the passengers to remain seated so that the First Officer could make his way into the cabin to open the cabin door and attend to the injured crewmember. She was then taken to hospital where an examination showed that she had suffered skeletal muscular injuries.

## **Analysis**

The company's Operations Manual instructs cabin crew that on encountering turbulence, having first secured the cabin, they are to take their seats as soon as is reasonably practicable. It is understandable that experiencing only very light turbulence the crewmember chose to remain standing. However, the potentially rapid onset and severe nature of some turbulence encounters poses a danger to anyone remaining unsecured. The danger is compounded if, as on this occasion, there is only one cabin crewmember on board whose incapacitation through injury could have serious consequences in any subsequent aircraft emergency.

The table below illustrates the numbers of cabin crew injured during turbulence encounters reported to the AAIB since 1 January 2000. There was a growing trend of injuries during 2003.

<b>Calendar Year</b>	<b>Number Injured</b>
2000	2
2001	1
2002	2
2003	8

It is important, therefore, that operators continue to highlight such risks through appropriate training to their crews, both cabin and flight deck, to help reduce the level of injuries to cabin crewmembers.