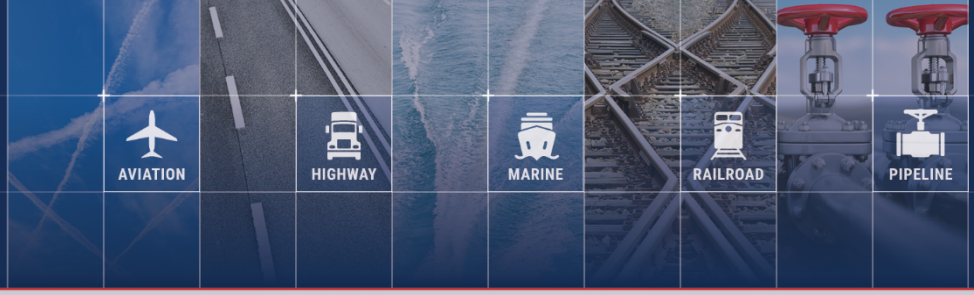

Aviation Investigation Final Report

Location:	CHICAGO, Illinois	**Incident Number:**	CHI93IA125
Date & Time:	March 8, 1993, 13:37 Local	**Registration:**	N248AT
Aircraft:	ATR ATR 72	**Aircraft Damage:**	None
Defining Event:		**Injuries:**	4 None
Flight Conducted Under:	Part 121: Air carrier - Scheduled		

Analysis

THE LOCAL CONTROLLER CLEARED SIMMONS FLIGHT 4298 FOR TAKEOFF ON RUNWAY 32L T-1 WITH INSTRUCTIONS TO FLY THE RUNWAY HEADING AFTER TAKEOFF. SHE THEN CLEARED AMERICAN 1106 FOR TAKEOFF ON RUNWAY 32L WITH INSTRUCTIONS TO TURN TO A 010 DEGREE HEADING. SIMMONS FLIGHT 4298 WAS THEN CLEARED TO A HEADING OF 360 DEGREES. THIS TURN VIOLATED THE MINIMUM DIVERGENCE HEADING SEPARATION STANDARDS OF 15 DEGREES FOR AIRPLANES TAKING OFF ON THE SAME RUNWAY AS SET FORTH IN ATC HANDBOOK 7110-65G.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this incident to be: the local controller's failure to issue a proper heading clearance which resulted in a loss of radar separation between two departing airplanes.

Findings

Occurrence #1: MISCELLANEOUS/OTHER
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings
1. (C) ATC CLEARANCE - IMPROPER - ATC PERSONNEL(LCL/GND/CLNC)
2. (C) RADAR SEPARATION - NOT MAINTAINED - ATC PERSONNEL(LCL/GND/CLNC)

Factual Information

On March 8, 1993, at 1337 central standard time, the minimum air traffic control separation was lost between N248AT, an ATR 72 being operated as Simmons Flight 4298 and a McDonnell Douglas MD-80, N427, operated as American Airlines Flight 1106. Both airplanes had departed on Runway 32L at the O'Hare International Airport, Chicago, Illinois, just prior to the loss of separation.

There was no damage or injuries reported as a result of this incident. Visual meteorological conditions prevailed and IFR flight plans were filed.

Both airplanes were under the control of the North Local Controller (NLC) when the loss of separation occurred. The controller was responsible for aircraft landing on runway 27R and aircraft departing on 32R and 32L at the T-1 intersection. The Air Traffic Control Handbook 7110 65G, 5-113 requires a minimum heading divergence of 15 degrees or more. The events of the loss of separation which resulted in a 10 degree heading divergence occurred as follows:

1335:01 The NLC cleared Simmons 4298 for takeoff on runway 32L T-1 with instructions to fly the runway heading.

1335:09 The NLC cleared American 1106 for takeoff on runway 32L with instructions to turn right heading 010 degrees.

1337:01 The NLC clears Simmons 4298 to turn right to heading 360 degrees.

Both aircraft were then instructed to contact departure control. The local controller was unaware of the loss of separation until the tower received a call from the TRACON questioning the 10 degree heading divergence.

The local controller stated that she had cleared a previous Simmons flight for takeoff on 32L and a turn to 040 degrees. During the turn she stopped the airplane at 030 degrees due to the wind conditions. American 1106 was next to takeoff and instead of issuing a normal heading of 020 degrees as she normally would have done, she issued 010 degrees to maintain separation with the first Simmons flight. She stated that when she cleared Simmons 4298 to a heading of 360 degrees, she failed to offset the heading to 350 degrees to maintain separation with American 1106.

See Air Traffic Control/Human Performance Group Chairman's Report and Attachments for CHI-93-I-A115.

Pilot Information

Certificate:	Airline transport; Commercial	**Age:**	31,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 1 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	May 4, 1993
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	
Flight Time:	9000 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	ATR	**Registration:**	N248AT
Model/Series:	ATR 72 ATR 72	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Transport	**Serial Number:**	
Landing Gear Type:	Retractable - Tricycle	**Seats:**	76
Date/Type of Last Inspection:	Unknown	**Certified Max Gross Wt.:**	40000 lbs
Time Since Last Inspection:		**Engines:**	2 Turbo prop
Airframe Total Time:		**Engine Manufacturer:**	P&W
ELT:	Installed, not activated	**Engine Model/Series:**	124
Registered Owner:	GPA ATR II, INC.	**Rated Power:**	2400 Horsepower
Operator:	SIMMONS	**Operating Certificate(s) Held:**	Flag carrier (121)
Operator Does Business As:		**Operator Designator Code:**	SIMA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	ORD ,667 ft msl	**Distance from Accident Site:**	
Observation Time:	13:37 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	Unknown / 5500 ft AGL	**Visibility**	15 miles
Lowest Ceiling:	Broken / 5500 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	9 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	300°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	3°C / -3°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(ORD)	**Type of Flight Plan Filed:**	IFR
Destination:	MILWAUKEE , WI (MKE)	**Type of Clearance:**	IFR
Departure Time:	13:35 Local	**Type of Airspace:**	Class E

Airport Information

Airport:		**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	
Runway Used:	0	**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	4 None	**Aircraft Damage:**	None
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	4 None	**Latitude, Longitude:**	

Administrative Information

Investigator In Charge (IIC):	Sullivan, Pamela
Additional Participating Persons:	ALAN LEBO; WASHINGTON , DC SANDY SIMPSON; WASHINGTON , DC BURT SIMON; WASHINTON , DC TOM CARMODY; WASHINGTON , DC
Original Publish Date:	December 2, 1994
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=9189