

Log 1709

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: July 16, 1984

Forwarded to:

Honorable Elizabeth H. Dole
Secretary
Department of Transportation
Washington, D.C. 20590

SAFETY RECOMMENDATION(S)

A-84-75

The National Transportation Safety Board has completed its investigation into the near midair collision 1/ of Pan American World Airways, Inc., (PA) Flights PA 099 and PA 8113, which occurred about 1554 2/ on January 1, 1984, about 200 nautical miles east of Miami, Florida. The airplanes nearly collided over the Atlantic Ocean while under the control of the Miami Air Route Traffic Control Center (ARTCC) in a nonradar environment. Both airplanes were at the same assigned flight levels of 370 3/ and were operating on routes which had been approved and issued by the Miami ARTCC.

Through analysis of digital flight data recorder (DFDR) and available recorded radar data, the Safety Board's laboratory staff was able to reconstruct the flightpaths of both airplanes. The reconstruction indicated that the airplanes came within 300 feet of each other after the pilot of PA 8113 initiated an evasive maneuver to avoid a collision with PA 099. Additionally, the data indicated that the airplanes approached each other at a combined speed of about 840 knots. A midair collision may have been averted only as a result of the evasive action taken by the pilot of PA 8113.

The near midair collision occurred in a nonradar environment just beyond the limits of ground-based air traffic control (ATC) radar coverage. The likelihood of such an incident would have been greatly reduced had the area been within radar environment. Under radar coverage, the convergence of the two flights would have triggered the conflict alert 4/ to provide a redundant safeguard to the controllers' traffic separation function.

1/ Near midair collision: instance in which aircrew members inform air traffic control personnel that the hazard of a collision existed between two or more aircraft.

2/ All times are eastern standard time, based on the 24-hour clock.

3/ Flight Level--A level of constant atmospheric pressure related to a reference datum of 29.92 inches of mercury. Each is stated in three digits that represent hundreds of feet. For example, flight level 250 represents a barometric altimeter indication of 25,000 feet; flight level 255, an indication of 25,500 feet.

4/ Conflict alerts are aural and/or visual alerts to controllers based upon a computer analysis of the transponder tracks of two or more airplanes that an actual or potential aircraft separation hazard exists. Not all alerts indicate an actual compromise of separation; some alerts indicate that separation will be compromised if corrective action is not taken.

The Safety Board is aware that the FAA plans to expand radar coverage over the ocean in the Miami ARTCC by activating radar installations with a 200-nautical-mile range at Nassau, Bahamas, and Grand Turk Island. We understand that initial planning for both of these radar installations began in 1975. The funding and planned construction for the Grand Turk Island facility occurred in fiscal year (FY) 1980. Actual construction on the facility began in June 1983, with a planned commission date of about June 1984. Currently, commissioning is scheduled for January 1985, contingent upon delivery of critical equipment, the reason for the delay. The Nassau, Bahamas, installation was originally funded in FY 1979 and refunded in FY 1983. Construction of the facility is a joint FAA/Bahamian project in cooperation with the International Civil Aviation Organization (ICAO).

The Safety Board is aware that all hardware required for the FAA portion of the Nassau radar project is in storage and awaiting shipment as soon as the Bahamian Government installs electrical power to the radar antenna site. The Board understands that the FAA has offered to install electrical power to the site, however, the Bahamian Government declined its offer. According to FAA Southern Region personnel, once electrical power is installed, they can complete the installation and site commissioning in about 6 months. The Safety Board believes that the island radar installations will greatly enhance aviation safety in the Miami ARTCC area and that action should be taken to expedite the completion of the installation at Nassau, Bahamas, and Grand Turk Island.

Accordingly, the National Transportation Safety Board recommends that the Department of Transportation:

Take the action needed to minimize delays and additional schedule slippages in the completion and commissioning of the radar installation at Nassau, Bahamas, and Grand Turk Island. (Class II, Priority Action)
(A-84-75)

BURNETT, Chairman, GOLDMAN, Vice Chairman, BURSLEY and GROSE, Members, concurred in these recommendations.


By: Jim Burnett
Chairman