



**State Commission on Aircraft Accidents Investigation**  
**INCIDENT 2022/3446**  
**RESOLUTION**  
**of 16<sup>th</sup> January 2023**

<b>Type and model of aircraft:</b>	Aeroplane, Airbus A321 / Aeroplane, De Havilland DHC8 – 400
<b>Registration marks:</b>	D-AIDG / SP-EQI
<b>Date of occurrence:</b>	14 <sup>th</sup> June 2022
<b>Place of occurrence:</b>	PADKA waypoint area (49°56'02"N 018°17'00"E)

After reviewing the investigation final report provided by an Air Navigation Services Provider, pursuant to article 135 of The Act of 3<sup>rd</sup> July 2002 – Aviation Law (with further amendments) and § 18 of the Regulation of Minister of Transport of 18<sup>th</sup> January 2007 on air accidents and incidents, State Commission on Aircraft Accidents Investigation determined that:

**1. The course of the occurrence was as follows:**

De Havilland DHC8 - 400 aircraft, registration marks SP-EQI, (hereinafter referred to as „DHC8“) was in the area of responsibility of APP Ostrava (Czech Republic) and was performing a flight to BAVOK waypoint with climb to FL 110. At 17:59:23 hrs<sup>1</sup>, when on FL 82, it was transferred to communication with Krakow APP and was cleared to continue climbing to FL 250. Appropriate coordination with Ostrava APP and Praha ACC (Czech Republic) was performed.

In the meantime, EC<sup>2</sup> of Krakow APP issued a clearance for the crew of the DHC8 to fly to LOGDA waypoint. At that time, an Airbus A321 aircraft, registration D-AIDG, (hereinafter referred to as „A321“) was inbound from the west to PADKA waypoint, at FL 309 descending to FL 190.

At 18:01:38 hrs, the A321 established communication with Kraków APP and was instructed to descend to FL 130 and approach EPKK airport according to STAR PADKA 3G procedure. The distance between the aircraft, and the altitude difference, were initially assessed by APP EC as not conflicting. When the separation between the aircraft decreased, the attention of both APP EC and PC<sup>3</sup> was focused on radio

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<sup>1</sup> The time in the Resolution is expressed in LMT = UTC + 2 h.

<sup>2</sup> EC – Executive Controller.

<sup>3</sup> PC – Plannig Controller.

correspondence and coordination of movement of several other aircraft in another part of Krakow TMA.

At 18:04:19 hrs, the PEGASUS\_21 system generated an STCA<sup>4</sup> for both aircraft, which were 8.14 NM from each other on converging routes, and the altitude difference was 2,800 ft. The system calculated 3.18 NM as the shortest predicted distance between the aircraft.

At the time of the STCA generation, the EC was making arrangements with another crew for passing through the Kraków TMA. When the EC noticed the STCA, he took action to prevent the loss of the required separation. At 18:04:38 hrs, he ordered the crew of the A321 aircraft to make a right turn to the heading of 120° and stop the descent, and then ordered the crew of the DHC8 aircraft to stop the climb using urgent phraseology ("immediately"). Both crews acknowledged the instructions received.

APP EC actions, although increased the distance between the aircraft, they did not prevent the decreasing of separation below the required minimum. The required separation was at least 5 NM horizontally or 1000 ft vertically. The PEGASUS\_21 system generated a STCA VIOLATION, and APP EC, seeing that the distance and location of the aircraft did not pose a risk of collision (horizontal distance of 3.9 NM, on diverging routes), did not issue further instructions to increase separation.



Fig. 1. Shortest distance between aircraft [source: PANSAs]

Corrective actions taken by APP EC increased the horizontal separation from the predicted 3.18 NM to the actual 3.9 NM. The shortest vertical separation was 300 ft. At 16:05:36 hrs, the separation between the aircraft was restored. The involved aircrews did not report activation of TCAS alarms. When the required separation was restored, the crews received the relevant instructions and continued flying as intended.

At the time of the loss of separation between the aircraft, the traffic density in the TMA Krakow airspace was medium, however, the number of required coordination made the situation complex.

<sup>4</sup> STCA – Short Term Collision Alert.

The EC stated that the incident occurred due to a temporary loss of situational awareness. It was influenced by the need to coordinate and communicate with other traffic.

The actions of the ANSPs<sup>5</sup> of Poland and the Czech Republic were in accordance with their applicable agreement.

**2. Cause of the occurrence:**

**The cause of the aircraft air proximity was a short-term loss of situational awareness by the APP controller.**

**3. Contributing factors:**

- 1) Focus on coordinating and managing traffic in another part of the area of responsibility.
- 2) Complexity of the traffic situation resulting from the need to conduct numerous coordinations.

**4. The Commission accepted the following preventive measures proposed by the ANSP:**

Not formulated.

**5. In addition, the Commission has proposed the following safety recommendations:**

Not formulated.

**Investigator-in-Charge**

**SCAAI Chairman**

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(signature on original)

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(signature on original)

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<sup>5</sup> ANSP – Air Navigation Services Provider.