

AERONAUTICAL INFORMATION CIRCULAR 36/21

NOTICE OF AUTOMATIC DEPENDENT SURVEILLANCE: BROADCAST SERVICE TRIAL BELOW FLIGHT LEVEL 290

Introduction

On or soon after 2 December 2021, NAV CANADA will commence an operational trial of air traffic service (ATS) surveillance services using space-based automatic dependent surveillance – broadcast (ADS-B) below flight level (FL) 290 in the portion of the Montreal flight information region (FIR) depicted below.

The trial will evaluate overall system performance and assess the effectiveness of space-based ADS-B performance under conditions where the capability for aircraft to transmit to receivers in space (e.g., diverse antenna) is required. Bottom mount transponders alone are insufficient. An antenna that emits the signal toward the satellites is required for space-based ADS-B receivers to acquire a reliable signal.

Background

NAV CANADA currently provides ADS-B surveillance service in Canadian Domestic Airspace at FL 290 and above. The implementation of space-based ADS-B provides the capability to expand surveillance to areas where it was previously not available, thereby providing greater situational awareness for air traffic controllers with safety and efficiency benefits for pilots. Benefits are expected to include:

- Increased situational awareness through improved accuracy of aircraft position and trajectory.
- Earlier warnings and alerts of unexpected aircraft deviations.
- Improved emergency response for tracking and locating aircraft in distress.
- Added redundancy in the event of radar failure allowing for air traffic control (ATC) service provision to continue for appropriately equipped aircraft.

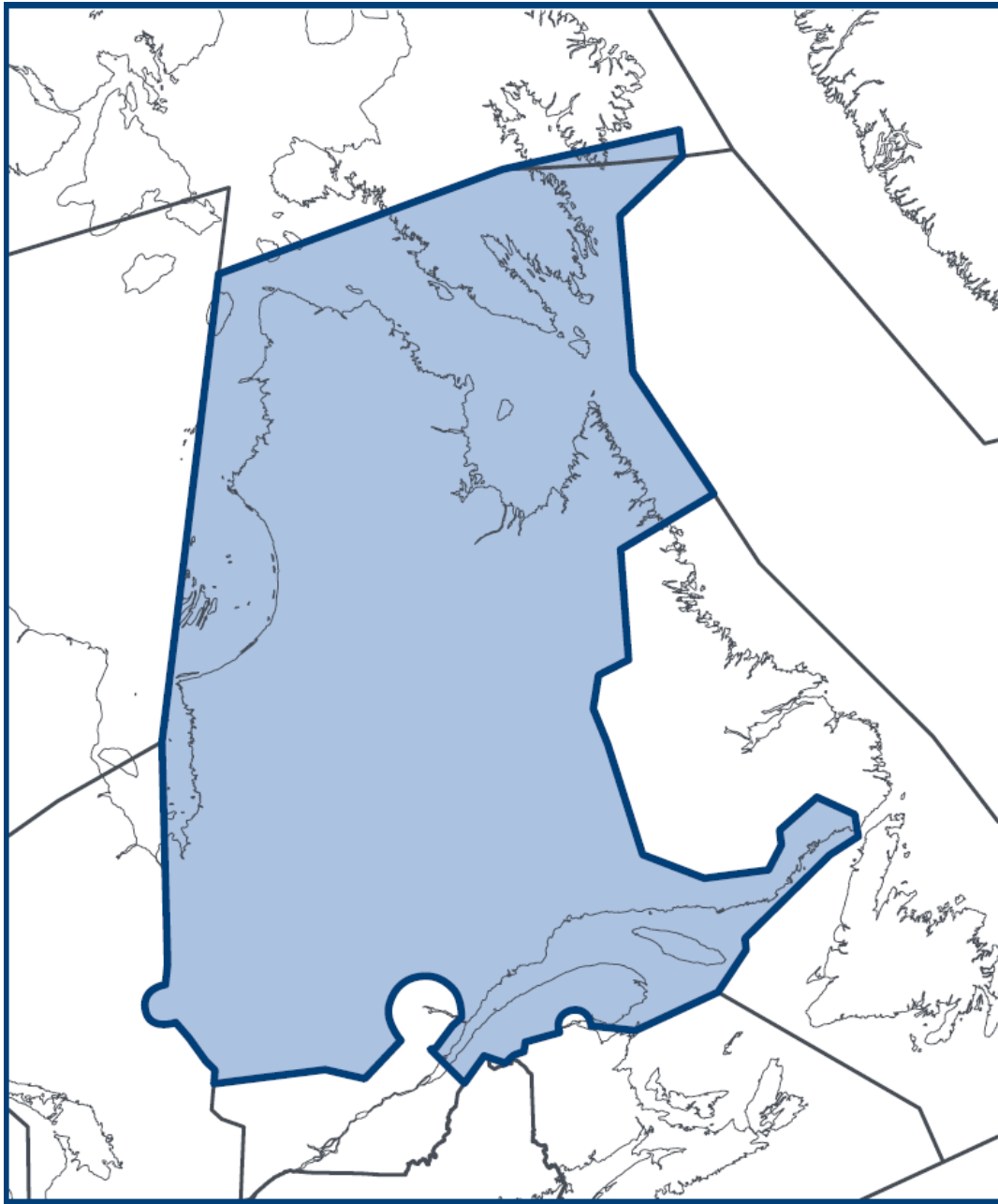
Equipment and Operator Participation

Operators intending to receive ADS-B service in the portions of the Montreal FIR airspace depicted below are expected to be fitted with and operate 1090 MHz extended squitter Mode S transponders utilizing diverse antennae or antennae capable of broadcasting upwards towards satellites meeting the Radio Technical Commission for Aeronautics (RTCA) DO-260B, "Minimum Operational Performance Standards". They are also expected to file the following ADS-B equipment in Item 10 of the ICAO flight plan:

- B1 ADS-B with dedicated 1090 MHz ADS-B "out" capability.
- B2 ADS-B with dedicated 1090 MHz ADS-B "out" and "in" capability.

Area of Applicability

ADS-B services will be enabled below FL 290 in the area within the Montreal FIR depicted below.



NOT FOR NAVIGATION

Further Information

For further information, please contact:

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