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UK Aeronautical Information Services
NATS Swanwick
Room 3115,
Sopwith Way
Southampton SO31 7AY
aissupervisor@nats.co.uk
http://www.ais.org.uk
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NOTICE OF PLANNED EXPANSION OF THE TRIAL IMPLEMENTATION OF 25 NAUTICAL MILE LATERAL SEPARATION MINIMUM IN THE ICAO NORTH ATLANTIC REGION

1 Introduction

1.1 The first phase of the reduced lateral separation minimum (RLatSM) of 25 nautical miles (nm) in the North Atlantic (NAT) region commenced 15 December 2015. As of that date, all flights operating between flight level (FL) 350 and FL 390 inclusive on the three published RLatSM tracks within the Gander and Shanwick oceanic control areas (OCA) and have participated in the trial.

1.2 Phase 2 will expand the introduction of tracks that are spaced by one-half degree, beyond the core tracks of the NAT organized track system (OTS) between FL 350 and FL 390 inclusive.

1.3 RLatSM Phase 2 is expected to begin no earlier than **1130 on 4 January 2018.**

1.4 A progressive approach to tactical track design will be adopted to support operators, ATC and neighbouring ANSPs adjust to the changes in demand that transition to RLatSM Phase 2 is expected to bring.

2 Background

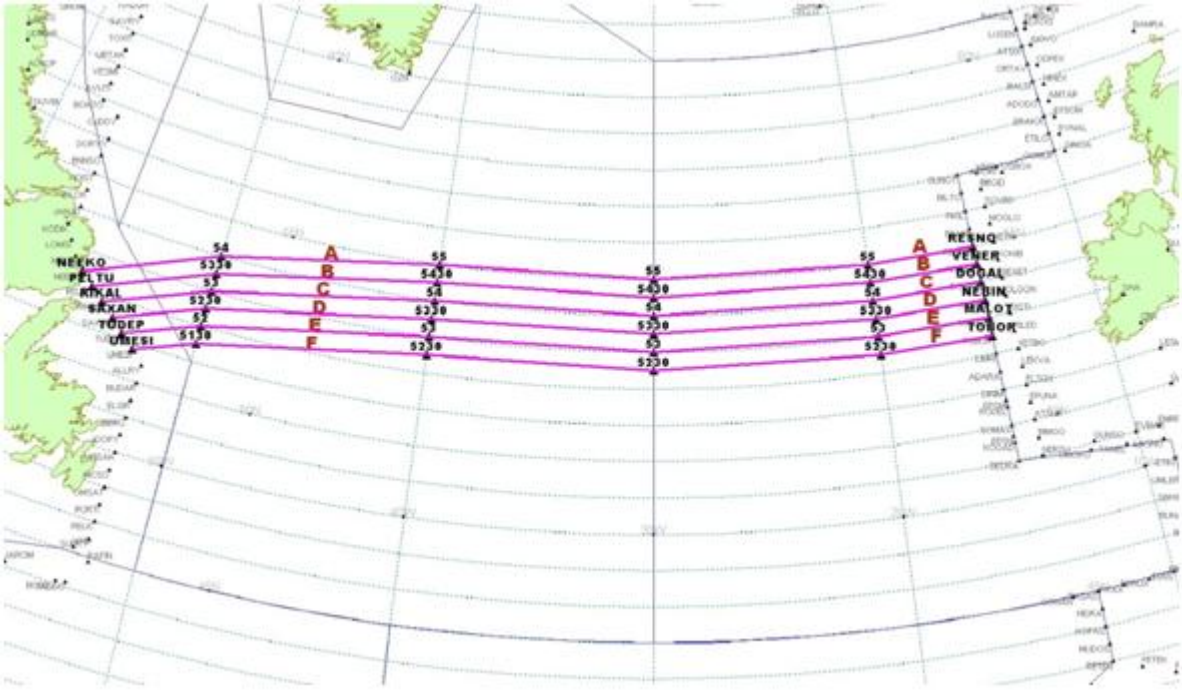
2.1 Advancements in aircraft avionics and air traffic management flight data processing systems have driven an initiative to analyze whether the lateral separation standard in the current North Atlantic (NAT) minimum navigation performance specification (MNPS) airspace (one degree of latitude, which equates nominally to 60 nm) can be reduced to increase the number of route options available and therefore increase capacity at optimum flight levels.

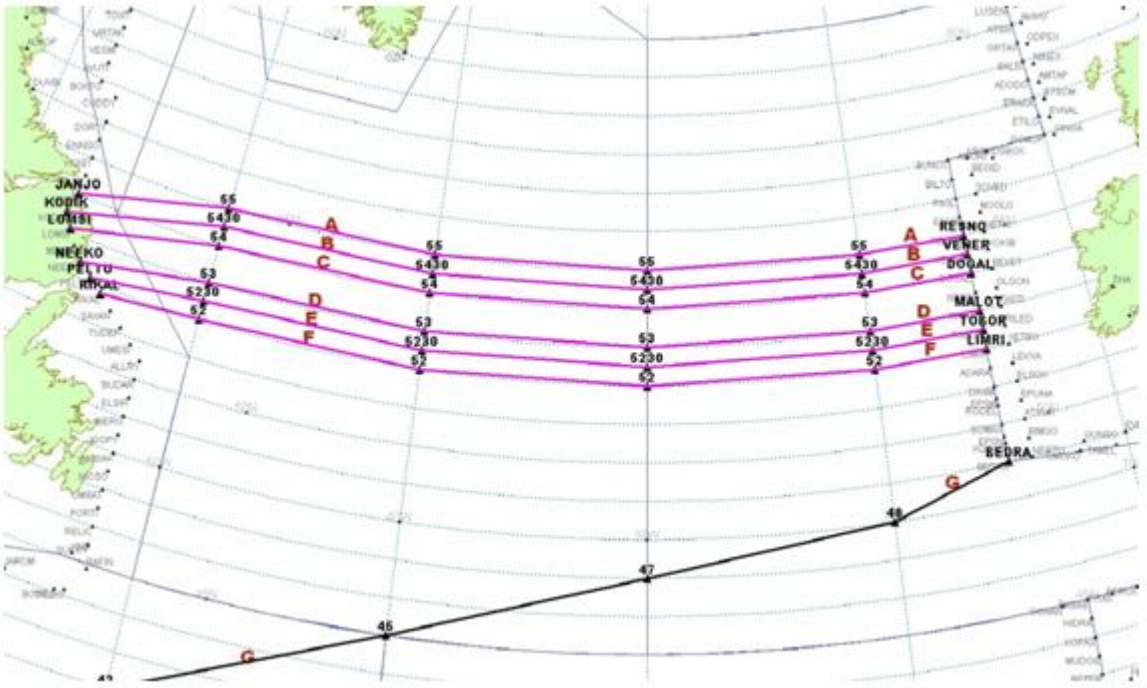
3 Operator Eligibility and Participation

3.1 Aircraft operating on or at any point along the published RLatSM tracks (see example diagram below) within the NAT OTS between FL 350 to FL 390 inclusive during the OTS validity period are required to be fitted with, and using, controller-pilot data link communications (CPDLC) and Automated Dependent Surveillance–Contract (ADS-C) equipment (see North Atlantic Operations Bulletin 2012-031).

3.2 The trial implementation of RLatSM will occur in NAT HLA airspace; therefore HLA approval remains a requirement. Only those operators/aircraft eligible for RLatSM operations will be allowed to operate on designated RLatSM tracks between FL 350-390 (inclusive). All RLatSM tracks and FLs will be uniquely identified in Note 3 of the OTS Track Message

3.3 Flights operating on or at any point along published RLatSM tracks will be permitted to request a climb or descent outside the FL350 to FL390 level band, clearances being subject to tactical traffic situations. However 60 nm lateral separation will then be applied.





3.4 Operators will be eligible to flight plan RLatSM tracks provided the flights are:

(a) RNP4 approved;

(b) Automated Dependent Surveillance–Contract (ADS-C) equipped; and

(c) Controller-pilot data link communications (CPDLC) equipped.

The required CNS systems must be operational and flight crews must report any failure or malfunction of global positioning system (GPS), ADS-C, or CPDLC equipment to air traffic control (ATC) as soon as it becomes apparent.

4 Contingency and Strategic Lateral Offset Procedures

4.1 Contingency procedures applicable in the NAT Region are contained in Chapter 15 (15.2 Special Procedures for In-Flight Contingencies in Oceanic Airspace) of the Procedures for Air Navigation Services – Air Traffic Management (Doc 4444), Chapter 9 (Special Procedures) of the NAT Regional Supplementary Procedures (SUPPS) (Doc 7030) and Chapter 13 (Special Procedures for In-Flight Contingencies) of the North Atlantic Operations and Airspace Manual (NAT Doc 007). Analysis conducted as part of the RLatSM safety assessment has confirmed these procedures remain appropriate for the application of the 25 nm lateral separation minimum. Therefore, no additions or changes to the existing procedures are required.

4.2 The strategic lateral offset procedure (SLOP) which distributes aircraft along a route or track centre-line with offsets of one or two miles to the right thereof has been implemented as a standard operating procedure in the NAT Region since 2004. Detailed guidance on SLOP application in the NAT Region is contained in Chapter 16.5 of PANS-ATM (Doc 4444) Strategic Lateral Offset Procedures (SLOP). Calculations used in the RLatSM safety assessment demonstrate sufficiency to allow provisions for the application of SLOP up to 2 nm right of track or route centre-line where the 25 nm lateral separation minimum is being applied.

5 Flight Planning

5.1 Air traffic services (ATS) systems use Field 10 (Equipment) and Field 18 (Other Information) of the standard ICAO flight plan to identify an aircraft's data link and navigation capabilities. The operator should insert the following items into the ICAO flight plan for RNP 4 authorized and FANS 1/A or equivalent aircraft:

(a) Field 10a (Radio communication, navigation and approach aid equipment and capabilities);

insert "J5" to indicate CPDLC FANS1/A SATCOM (Inmarsat) and/or "J7" to indicate CPDLC FANS1/A SATCOM (Iridium) data link equipment;

(b) Field 10b (Surveillance equipment and capabilities);

insert "D1" to indicate ADS with FANS 1/A capabilities;

(c) Field 18 (Other Information);

insert the characters "PBN/" followed by "L1" for RNP 4.

6 Correct use of the CNS Equipment that is indicated in the Flight Pplan

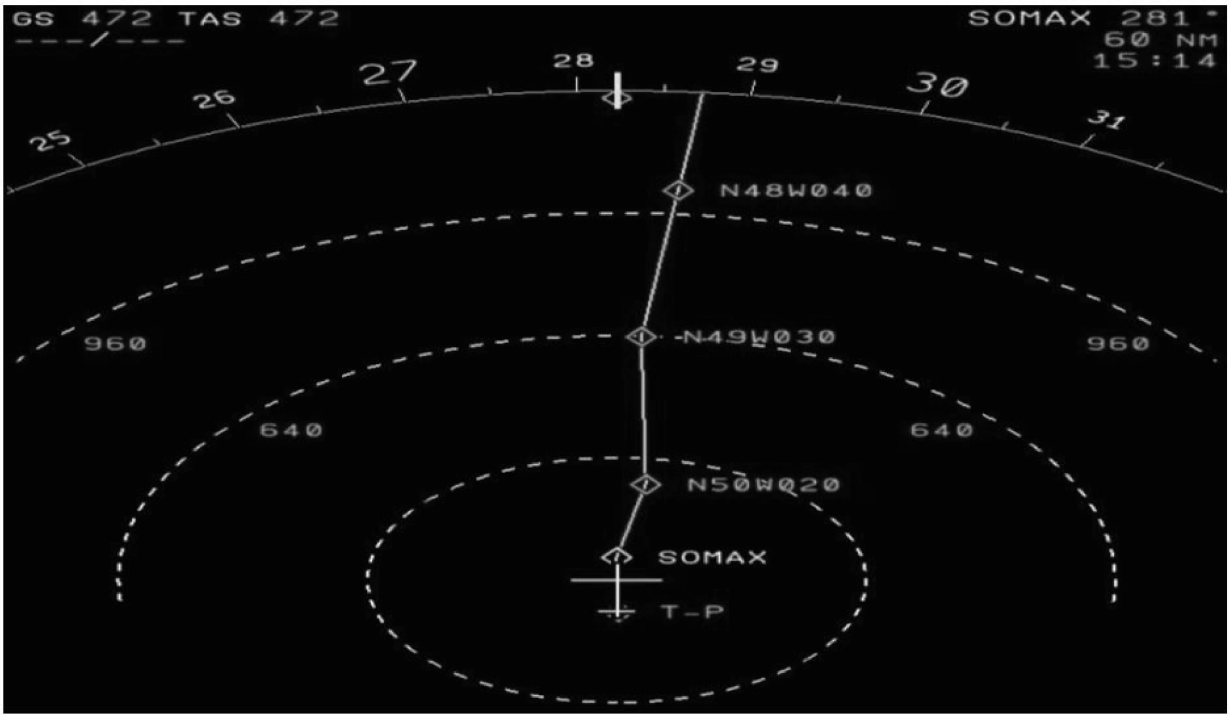
6.1 Before entering the NAT, the flight crew should ensure that:

(a) the aircraft is logged on for data link capability (J5, J7, D1) filed in the FPL; and

(b) RNP 4 is inserted into the Flight Management Computer (FMC), when RNP4 capability (L1) has been filed in the FPL. This is necessary to enable aircraft navigation system monitoring and alerting against the required RNP 4 navigation specification.

7 Verification of Waypoint Degrees and Minutes

7.1 Track spacing for RLatSM may involve the use of waypoints comprised of half degree coordinates. Existing cockpit map display limitations result in truncation of waypoints comprised of latitude/longitude to a maximum of seven characters; minutes of latitude are not displayed. In the example below, the representation would be the same if the flight was operating along whole or half degree waypoints (e.g., the N50W020 label in the figure below could represent a whole degree (5000 North) or a half-degree (5030 North) of latitude)



7.2 As shown below, full 13-character representations of latitude/longitude waypoints can be viewed via the FMC display. To mitigate the possibility for gross navigation errors resulting from incorrect waypoint insertion, it is imperative that established cockpit procedures are followed whereby each pilot independently displays and verifies the degrees and minutes loaded into the FMC for each oceanic waypoint defining the cleared route of flight.

7.3 Flight crews are further advised that, should they be notified that ATC systems indicate the aircraft is not flying the cleared route, they should immediately display the full degrees and minutes loaded into the FMC for the NEXT and NEXT + 1 waypoints, and verify against the cleared route before responding.

7.4 As a precaution against possible waypoint insertion errors, rerouting of flights onto RLatSM identified tracks containing ½ degree coordinates will only be permitted via CPDLC using Uplink Message UM79, UM80 or UM83. Aircraft will therefore not be rerouted onto ½ degree OTS tracks if ARINC 623 data link or voice is used for the issuance of the oceanic clearance.

8 Current Version

8.1 The current, and updated versions of the **draft NAT RLatSM plan and associated documents** are provided on the ICAO European and North Atlantic Office website:

<www.icao.int/EURNAT/>,
EUR & NAT Documents
NAT Documents
Planning documents supporting separation reductions and other initiatives

9 Further Information

9.1 For further Information, please contact:

Prestwick Centre
ATM Systems
Room G-111
NATS Prestwick
Fresson Avenue
Prestwick
Ayrshire
KA9 2GX

Phone +44-(0)1292-692490
Email: 1pcatmsystems@nats.co.uk