

GNSS/RNAV Non-Radar Longitudinal Separation in the Caribbean

For: ICAO/IATA/CANSO PBN
Harmonization, Modernization, and
Implementation Meeting

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Federal Aviation
Administration



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Overview

- **Review of current separation standards**
- **Potential longitudinal separation reductions**
- **Summary**



Houston ARTCC

- **Current longitudinal separation minima**
 - Monterey ACC-
 - 10 NM radar
 - 10 minutes Mach Number Technique (MNT)
 - 5 minutes faster in front by M 0.06 or greater
 - Merida ACC-
 - 10 minutes MNT
 - 5 minutes faster in front by M 0.06 or greater
- **Potential longitudinal separation reductions**
 - Procedural issues clarified to allow for reduced GNSS/RNAV non-radar longitudinal separation
 - Will require LOA discussions with Houston, Monterey & Merida
 - Estimated time for implementation of reduced separation
 - 4-6 months



Miami ARTCC

- **Current longitudinal separation minima**
 - Havana ACC
 - 10-20 NM radar
 - 10 minutes non-radar or 40 NM MUHA to KZMA with coordination
 - Larger separation minima typically associated with traffic management initiatives
 - Port-au-Prince ACC
 - 10 minutes with MNT
 - Santo Domingo ACC
 - 10 NM radar
 - 10 minutes non-radar
 - New York ARTCC
 - 10 minutes with MNT
 - 15 minutes all others
 - San Juan CERAP
 - 5 NM radar



Miami Center (cont.)

- **Potential longitudinal separation reductions**
 - Havana ACC
 - Current radar procedures in effect
 - Very robust- non-radar separation very rare
 - » No current discussions on non-radar longitudinal separation
 - Port-au-Prince ACC
 - Draft LOA revision sent to MTEG for review
 - Miami still coordinating with MTEG
 - Timeline- TBD
 - New York ARTCC
 - Procedural issue with rules in FAA Air Traffic Procedures manual
 - Currently being resolved through procedure change
 - » Expected publication- Fall 2017
 - Timeline- First Quarter CY 2017 with Notice prior to Fall publication
 - Santo Domingo ACC
 - Non-radar operations generally limited to “mid-shift” during low traffic
 - No current discussions on non-radar longitudinal separation planned



San Juan CERAP

- **Current longitudinal separation minima**
 - New York ARTCC, Piarco ACC, Maquetia ACC, Curacao ACC, Santo Domingo ACC, St. Maarten Approach
 - 10 minutes with MNT
 - 15 minutes all others
 - Aircraft below FL200 require 20 minutes
 - Miami ARTCC
 - 5 NM radar separation
 - In areas of non-radar below FL200, 10 minutes



San Juan CERAP (cont.)

- **Potential longitudinal separation reductions**
 - New York ARTCC, Piarco ACC, Maquetia ACC, Curacao ACC
 - Procedures issue with airspace definition
 - Nearing resolution
 - Requirements issue
 - Utilization of ICAO PANS-ATM Chapter 5 requires direct pilot controller voice communication
 - » Areas along common boundaries with these facilities have limited frequency coverage
 - » Work to analyze cause and address is underway
 - » Timeline- TBD
 - St. Maarten Approach
 - Procedures issue with airspace definition nearing resolution
 - International agreement required by FAA
 - Work underway to finalize agreement for FAA air-to-ground communication equipment at St. Maarten; radar data sharing may also be possible
 - Site survey for communication equipment completed
 - Installation/certification of equipment with expected implementation in 2 years



San Juan CERAP (cont.)

- **Potential longitudinal separation reductions (cont.)**
 - Santo Domingo ACC
 - Manual radar handoff procedure LOA drafted
 - Under review by San Juan CERAP Collaborative Working Group
 - Expected implementation of manual radar handoffs- April 2017
 - Automated radar handoffs
 - Requires Automated Data Exchange Stage III
 - » TBD



Summary

- **A number of areas for potential non-radar GNSS/RNAV separation being evaluated**
 - Procedures being reviewed and modified to support
 - Technical requirements and international agreements under development or review
 - LOA discussions and required safety work being conducted



Questions/Comments?

