



ICAO

International Civil Aviation Organization  
North American, Central American and Caribbean Office

## **Optimization of the CAR Region Airspace Meeting**

### **NAM/CAR Air Navigation Implementation Working Group (ANI/WG) Performance-Based Navigation (PBN) Airspace Concept Task Force**

**(ANI/WG/PBN/TF/OPT)**

## **Final Report**

20 – 23 October 2020

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**List of Contents**

<b>Contents</b>	<b>Page</b>
<b>Index</b> .....	i-1
<b>Historical</b> .....	ii-1
<b>ii.1</b> Place and Date of the Meeting.....	ii-1
<b>ii.2</b> Opening Ceremony.....	ii-1
<b>ii.3</b> Officers of the Meeting .....	ii-1
<b>ii.4</b> Working Languages .....	ii-1
<b>ii.5</b> Schedule and Working Arrangements.....	ii-1
<b>ii.6</b> Agenda .....	ii-2
<b>ii.7</b> Attendance .....	ii-2
<b>ii.8</b> Conclusions and Decisions.....	ii-2
<b>ii.9</b> List of Working and Information Papers and Presentations .....	ii-3
<b>List of Participants</b> .....	iii-1
Contact Information .....	iv-1
<b>Agenda Item 1</b> .....	1-1
<i>Provisional Agenda Approval</i>	
<b>Agenda Item 2</b> .....	2-1
<i>Optimization of Longitudinal Separation</i>	
<b>Agenda Item 3</b> .....	3-1
<i>Implementation of Performance-Based Navigation (PBN) Routes</i>	
<b>Agenda Item 4</b> .....	4-1
<i>Harmonization of the CAR Region Upper and Lower Level Limits</i>	
<b>Agenda Item 5</b> .....	5-1
<i>Other Business</i>	



## **HISTORICAL**

### **ii.1 Place and Date of the Meeting**

The Optimization of the CAR Region Airspace Meeting – NAM/CAR Air Navigation Implementation Working Group (ANI/WG) Performance-Based Navigation (PBN) Airspace Concept Task Force (ANI/WG/PBN/TF/OPT) was held online, from 20 to 23 October 2020.

### **ii.2 Opening Ceremony**

Mr. Julio Siu, Deputy Regional Director of the North American, Central American and Caribbean (NACC) Regional Office of the International Civil Aviation Organization (ICAO) provided opening remarks, pointing out the importance of regional and interregional collaboration to achieve the improvements expected by the users of the air navigation system. Mr. Siu welcomed the participants and officially opened the meeting.

### **ii.3 Officers of the Meeting**

Mr. Riaaz Mohammed, Trinidad and Tobago, ANI/WG PBN Task Force Rapporteur, chaired the ANI/WG/PBN/TF/OPT Meeting. Mr. Eddian Méndez, Regional Officer Air Traffic Management and Search and Rescue of the ICAO NACC Regional Office, served as Secretary of the Meeting, assisted by Mr. Fernando Hermoza Hübner, Regional Officer Air Traffic Management and Search and Rescue of the ICAO SAM Regional Office.

### **ii.4 Working Languages**

The working languages of the Meeting were English and Spanish. The working papers, information papers and report of the meeting were available to participants in both languages.

### **ii.5 Schedule and Working Arrangements**

It was agreed that the working hours for the sessions of the meeting would be from 08:00 to 16:00 hours daily with adequate breaks. Ad hoc Groups were created during the Meeting to do further work on specific items of the Agenda.

## **ii.6            Agenda**

### **Agenda Item 1:            Provisional Agenda Approval**

### **Agenda Item 2:            Optimization of Longitudinal Separation**

Identify and support opportunities for implementation of reduced longitudinal separation minima between Caribbean Flight Information Regions (FIRs).

### **Agenda Item 3:            Implementation of Performance-Based Navigation (PBN) Routes**

Post-implementation review of 2019 agreed regional routes, sharing experience to improve the routes agreement and implementation process. Initial discussion of proposals for 2021 routes implementation. Review and improve interaction with neighbouring regions to enhance implementation of new Air Traffic Services (ATS) routes.

### **Agenda Item 4:            Harmonization of the CAR Region Upper and Lower Level Limits**

Under this Agenda Item the Task Force will analyze the difference in limit of the upper and lower airspace in the FIRs of the CAR Region and will assess whether the integration into the Task Force Work Programme of a more thorough analysis is deemed necessary.

### **Agenda Item 5:            Other Business**

## **ii.7            Attendance**

The Meeting was attended by 18 States/Territories from the NAM/CAR/SAM Regions and 3 International Organizations, totalling 60 delegates as indicated in the list of participants.

## **ii.8            Conclusions and Decisions**

The Meeting recorded its activities as Conclusions and Decisions as follows:

**CONCLUSIONS:**            Activities requiring endorsement by the NAM/CAR Air Navigation Implementation Working Group (ANI/WG).

**DECISIONS:**                Internal activities of the NAM/CAR Air Navigation Implementation Working Group (ANI/WG).

An executive summary of these conclusions/decisions is presented in **Appendix A** to this report.

**ii.8 List of Conclusions and Decisions**

Number	DECISIONS	Page
OPT/1	<i>ANALYSIS OF THE STATUS OF THE LONGITUDINAL SEPARATION BETWEEN CAR FLIGHT INFORMATION REGIONS</i>	2-1
OPT/4	<i>ANALYSIS OF THE CAR REGION UPPER AND LOWER AIRSPACE LIMITS</i>	4-3

Number	CONCLUSIONS	Page
OPT/2	<i>IMPLEMENTATION OF THE 40NM BASED ON GNSS LONGITUDINAL SEPARATION IN THE PORT-AU-PRINCE FIR</i>	2-2
OPT/3	<i>IMPLEMENTATION OF REGIONAL/INTERREGIONAL OPTIMIZED RNAV ROUTES</i>	3-2

**ii.9 List of Working and Information Papers and Presentations**

**WORKING PAPERS**

Number	Agenda Item	Title	Date	Prepared and Presented by
WP/01	1	Provisional Agenda and Schedule	29/09/20	Secretariat
WP/02	3	ATS Routes Optimization Proposals for the CAR and SAM Regions Version 2020	14/10/20	Secretariat
WP/03	4	CAR Region Upper and Lower Airspace Limits	15/10/20	Secretariat

**INFORMATION PAPERS**

Number	Agenda Item	Title	Date	Prepared and Presented by
IP/01	--	List of Working and Information Papers	19/10/20	Secretariat

**PRESENTATIONS**

Number	Agenda Item	Title	Presented by
1	2	Status of the longitudinal separation of the CAR/SAM Regions	IATA





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**Agenda Item 1:           Provisional Agenda Approval**

1.1           The Secretariat presented WP/01 and invited the Meeting to approve the Provisional Agenda and Schedule. The Meeting approved the Agenda and Schedule as presented.

**Agenda Item 2 Optimization of Longitudinal Separation**

2.1 Under this Agenda item, IATA presented P/01 that provides details on the status of the longitudinal separation applied between the Flight Information Regions (FIRs) of the CAR/SAM Regions.

2.2 The subject of the reduction of the applicable longitudinal separation between FIRs has been debated in the region for quite some time, identifying limitations related to policy, personnel training, operational procedures and technology. While some progress has been achieved, there are still opportunities for improvement.

2.3 The Meeting agreed that the PBN Task Force must retake this subject, working to identify and address roadblocks for further improvement; and in this sense, the Meeting agreed the following decision:

<b>DECISION</b>	
<b>ANI/WG/PBN/TF/OPT/01</b>	<b>ANALYSIS OF THE STATUS OF THE LONGITUDINAL SEPARATION BETWEEN CAR FLIGHT INFORMATION REGIONS</b>
<p><b>What:</b></p> <p>That, having identified the opportunity to continue working to optimize the applicable longitudinal separation between the Flight Information Regions of the CAR Region, in order to improve capacity and efficiency of the airspaces, maintaining safety levels in accordance with the ICAO SARPs, the ANI/WG PBN Task Force shall:</p> <p>a) carry out an analysis of the longitudinal separation applied by every FIR of the CAR Region, identifying opportunities for improvement of these separations, as well as pointing out the possible causes that prevent their reduction, in cases that were possible; and</p> <p>b) present the results of this analysis to the next ANI/WG PBN Task Force Meeting.</p>	<p><b>Expected impact:</b></p> <p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Inter-regional</p> <p><input checked="" type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Operational/Technical</p>
<p><b>Why:</b></p> <p>To improve capacity and efficiency of the CAR Region FIRs airspaces</p>	
<p><b>When:</b> By the next ANI/WG PBN Task Force Meeting.</p>	<p><b>Status:</b> <input checked="" type="checkbox"/> Valid / <input type="checkbox"/> Superseded / <input type="checkbox"/> Completed</p>
<p><b>Who:</b> <input type="checkbox"/> States <input checked="" type="checkbox"/> ICAO <input checked="" type="checkbox"/> Other:</p>	<p>ANI/WG PBN Task Force</p>

2.4 Multilateral meetings were carried out between Cuba, Dominican Republic, Haiti, Jamaica and United States, with the participation of IATA representatives, to agree on a definite date for the implementation of the 40nm longitudinal separation based on Global Navigation Satellite System (GNSS) at the Port-au-Prince FIR.

2.5 All the consulted FIRs are operationally ready to move forward with the implementation; however, this change requires updating the operational letters of agreement between the involved FIRs.

2.6 Haiti proposed 1 December 2020 as the applicability date of the aforementioned longitudinal separation, which implies that the required coordination be completed within the proposed period, taking into account the requirements of each State.

<b>CONCLUSION</b>	
<b>ANI/WG/PBN/TF/OPT/02</b>	<b>IMPLEMENTATION OF THE 40NM BASED ON GNSS LONGITUDINAL SEPARATION IN THE PORT-AU-PRINCE FIR</b>
<p><b>What:</b></p> <p>That, taking into consideration the actions carried out by Haiti to enhance its airspace, develop operational procedures and train its ATS personnel to implement in the Port-au-Prince FIR the longitudinal separation of 40 nm based on GNSS, pending the updating and signing of the letters of operational agreement between Haiti and the FIRs of Havana, Santo Domingo, Kingston and Miami:</p> <p>a) Cuba, Dominican Republic, Haiti, Jamaica and United States take the necessary measures to update and sign the revised operational letters of agreement between Port-au-Prince and the Havana, Santo Domingo, Kingston, Miami FIRs to allow the application of the 40 nm longitudinal separation; and</p> <p>b) Haiti take any additional measure to ensure the implementation of the 40nm longitudinal separation at Port-au-Prince FIR.</p>	<p><b>Expected impact:</b></p> <p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Inter-regional</p> <p><input checked="" type="checkbox"/> Economic</p> <p><input checked="" type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Operational/Technical</p>
<p><b>Why:</b></p> <p>To enhance Port-Au-Prince FIR airspace capacity and efficiency</p>	
<p><b>When:</b> 1 December 2020</p>	<p><b>Status:</b> <input checked="" type="checkbox"/> Valid / <input type="checkbox"/> Superseded / <input type="checkbox"/> Completed</p>
<p><b>Who:</b> <input checked="" type="checkbox"/> States <input type="checkbox"/> ICAO Other:</p>	<p>Cuba, Dominican Republic, Haiti, Jamaica and United States</p>

2.7 In the same line, opportunity to improve longitudinal separation between other FIRs in the Region was identified. Houston, Merida and Monterrey Area Control Centres (ACC) agreed to hold a future multilateral discussion concerning the reduction of longitudinal separation between their respective airspaces.

**Agenda Item 3            Implementation of Performance-Based Navigation (PBN) Routes**

3.1            Under this Agenda Item the Secretariat presented WP/02, which details the proposal for optimization of the Air Traffic Services (ATS) routes network for the CAR and SAM Regions for 2020.

3.2            Twenty-five proposals were analysed for this optimization project, involving 10 States and 13 FIRs for the CAR and SAM Regions. The summary of the proposals is included in the Appendix to WP/02.

3.3            During this session, Ad hoc Groups were established to analyse proposals for optimization of the route structure. The proposals presented in the **Appendix B** to this report were agreed to be included in this new version of the routes.

3.4            Given the difference in the publication dates requirements for the CAR and the SAM Regions, two sets of implementation dates were agreed, in order to meet both operational requirements. The first set of routes will be published on 25 March 2021 and effective date 20 May 2021. The second set of routes will be published on 22 April 2021 and effective date 17 June 2021. The agreed proposals will be published according to **Appendix C** to this report.

3.5            In this sense, the following conclusion was agreed:

<b>CONCLUSION</b>	
<b>ANI/WG/PBN/TF/OPT/03</b>	<b>IMPLEMENTATION OF REGIONAL/INTERREGIONAL OPTIMIZED RNAV ROUTES</b>
<p><b>What:</b></p> <p>That, in order to enhance the optimal flight paths for air traffic in the CAR and SAM Regions, providing enhanced efficiency and improved levels of safety, CAR/SAM States and Territories providing air traffic services in the aforementioned Regions agree:</p> <p>a) to implement the ATS routes proposals presented in the Appendix B to this Report; and</p> <p>b) publication and effective dates for the agreed proposals will be carried out in accordance with Appendix C to this report.</p>	<p><b>Expected impact:</b></p> <p><input type="checkbox"/> Political/Global</p> <p><input checked="" type="checkbox"/> Inter-regional</p> <p><input checked="" type="checkbox"/> Economic</p> <p><input checked="" type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Operational/Technical</p>
<p><b>Why:</b></p> <p>In order to complete the implementation of the “CAR/SAM Routes 2021 version”, approved by the Meeting.</p>	
<p><b>When:</b> Publication and effective dates are according to Appendix C to this report</p>	<p><b>Status:</b> <input checked="" type="checkbox"/> Valid / <input type="checkbox"/> Superseded / <input type="checkbox"/> Completed</p>
<p><b>Who:</b> <input checked="" type="checkbox"/> States <input checked="" type="checkbox"/> ICAO <input checked="" type="checkbox"/> Other:</p>	<p>Territories and ANS providers of the CAR/SAM Regions</p>

3.6 The States expressed their concern with the recurring problem associated with the harmonization of project implementation dates between States that fall under the umbrella of ICAOs South American (SAM) Regional Office and those that fall under the umbrella of the North American, Central American and Caribbean (NACC) Regional Office. The same problem arose during the joint CAR-SAM RLA/06/901 - Tenth Workshop/Meeting on South American Region ATS routes network optimization (SAM ATSRO/10), held in Bogota, Colombia, from 17 to 21 June 2019.

3.7 The States observed that in the past, the ICAO SAM Regional Office initiated the ATSRO 10 project independent of the NACC Office and the NACC Regional Office initiated the Proposal for Amendment (PfA) 3 project independently of the SAM Regional Office.

3.8 Additionally, each region share the same Air Navigation Plan (ANP) and has previously undertaken efforts to update these documents unilaterally without considering the effect it would have on the adjacent ICAO Region’s member States.

3.9 The Meeting emphasized that for the future, every effort should be taken between the NACC and SAM Regional Offices to synchronize updates to the ANPs and related airspace modernization efforts from the very beginning in an effort to minimize the likelihood of future conflicts related to such project implementation dates. In this regard, ICAO NACC and SAM Regional Offices will look to enhance this coordination for the timely update of the CAR/SAM ANP.

**Agenda Item 4 Harmonization of the CAR Region Upper and Lower Level Limits**

4.1 Under this Agenda Item, the Secretariat presented WP/03 to provide information regarding the current difference in the vertical limits of upper and lower airspaces for the Flight Information Regions (FIRs) of the CAR Region, and to propose further analysis by the ANI/WG PBN Task Force.

4.2 Annex 11 – *Air Traffic Services* establishes the requirements for ATS routes identification. The ATS route designator shall consist of a basic designator supplemented, if necessary, by one prefix to indicate:

- a. low-level route established for use primarily by helicopters;
- b. that the route or portion thereof is established in the upper airspace; and
- c. route established exclusively for use by supersonic aircraft during acceleration, deceleration and while in supersonic flight.

4.3 The table of ATS routes classification of the CAR/SAM Digital – Air Navigation Plan (e-ANP) separates routes in the upper and lower airspace, using the Annex 11 criteria.

4.4 In practice, air navigation professionals have a common understanding of what it is referred to as upper airspace; however, the definition and rationale for the establishment of the vertical limits of the upper and lower airspaces have different interpretations. The table below shows the different limits established in FIRs across the CAR Region:

CAR REGION FIRs	UPPER AIRSPACE LIMITS		LOWER AIRSPACE LIMITS	
	lower limit	upper limit	lower limit	upper limit
SAN JUAN	18,000 FT (MSL)	600	5,500 FT (MSL)	17,999 (MSL)
PIARCO	245	UNL	MSL	245
CURACAO	195	UNL	2500	195
NASSAU	N/A	N/A	1,500 MSL	12,000 MSL in Nassau TMA; 6,000 MSL everywhere else
CENTRAL AMERICAN	195	UNL	GND	195
NEW YORK OCEANIC WEST	18,000 FT (MSL)	600	5,500 MSL	17,999 MSL
KINGSTON	245	UNL	GND	245
HABANA	245	UNL	MEA	245
SANTO DOMINGO	195	UNL	GND	195
PORT-AU-PRINCE	245	UNL	GND	245
MEXICO	195	UNL	GND	195

CAR REGION FIRs	UPPER AIRSPACE LIMITS		LOWER AIRSPACE LIMITS	
	lower limit	upper limit	lower limit	upper limit
MIAMI OCEANIC	18,000 FT (MSL)	600	<i>12,001 MSL over Nassau TMA; 6,001 MSL everywhere else over Nassau FIR; 2,700 MSL outside of Nassau FIR</i>	17,999 MSL
HOUSTON	280	600	1,200 (MSL)	27,999 MSL
HOUSTON OCEANIC	280	600	1,200 (MSL)	27,999 MSL
MIAMI	18,000 FT (MSL)	600	2,700 (MSL)	17,999 MSL

4.5 Since the regional agreement of Air Traffic Services (ATS) routes is carried out for upper and lower ATS routes, we could have an aircraft flying an upper ATS route in one FIR and transitioning to a different lower ATS route in a neighbouring FIR, or no route at all, since some ATS routes are published for the upper airspace only. In addition, we could have a non-equipped aircraft flying a conventional lower ATS route transitioning to an upper Area Navigation (RNAV) route in the neighbouring FIR, for which the aircraft is not approved.

4.6 The Meeting agreed the PBN Task Force should conduct a more thorough analysis of this situation, taking into consideration operational related aspects only. In this sense, the following decision was agreed:



<b>DECISION</b>	
<b>ANI/WG/PBN/TF/OPT/04</b>	<b>ANALYSIS OF THE CAR REGION UPPER AND LOWER AIRSPACE LIMITS</b>
<p><b>What:</b></p> <p>That, taking into consideration the current difference in the vertical limits of upper and lower airspaces for the Flight Information Regions (FIRs) of the CAR Region and the need to gather additional information of possible operational repercussions of this situation the ANI/WG PBN Task Force:</p> <p>a) conduct an analysis of the possible operational impact of the current difference in the vertical limits of upper and lower airspaces for the Flight Information Regions (FIRs) of the CAR Region; this analysis shall be limited and take into consideration operational related aspects only; and</p> <p>b) present the results of this analysis to the next ANI/WG PBN Task Force Meeting.</p>	<p><b>Expected impact:</b></p> <p><input type="checkbox"/> Political/Global  <input type="checkbox"/> Inter-regional  <input type="checkbox"/> Economic  <input type="checkbox"/> Environmental  <input checked="" type="checkbox"/> Operational/Technical</p>
<p><b>Why:</b></p> <p>To identify possible operational impact of the difference in the vertical limits of upper and lower airspaces for the Flight Information Regions (FIRs) of the CAR Region</p>	
<p><b>When:</b> Before the next ANI/WG PBN Task Force Meeting</p>	<p><b>Status:</b> <input checked="" type="checkbox"/> Valid / <input type="checkbox"/> Superseded / <input type="checkbox"/> Completed</p>
<p><b>Who:</b> <input checked="" type="checkbox"/> States <input checked="" type="checkbox"/> ICAO <input checked="" type="checkbox"/> Other:</p>	<p>ANI/WG PBN Task Force</p>

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**Agenda Item 5            Other Business**

5.1            Under this Agenda Item the Meeting discussed several topics related with airspace management and optimization of flights.

***TRAFFIC FORECAST EVALUATIONS***

5.2            The effects of COVID-19 continue to drastically affect all stakeholders in the aviation industry. Following a suggestion by IATA, it was agreed that the PBN Task Force would meet at least once a month to discuss information provided by IATA on the forecast for traffic over the short to medium term.

5.3            The discussions will be geared towards:

- Assisting short-term decision making for Air Navigation Service Providers (ANSPs) based on IATA projections.  
Currently, many ANSPs may have reduced staffing rosters based on low traffic demand. Additionally, they may be accepting Users Preferred Routes requested by airline operators based on this low demand.  
An indication of a possible increase in traffic will provide ANSPs with time required to prepare for it and to advise operators of any changes to initiatives that are currently implemented.
- Providing the region with an assessment of the use of Users Preferred Routes and the possibilities of continuing these initiatives for the future.  
The assessment could provide data as to what will be required in order to incorporate Users Preferred Routes in the future airspace optimization plans even with an eventual increase in demand.

5.4            There was a suggestion by United States that this forum be extended to include discussions with the Air Traffic Flow Management (ATFM) Task Force; IATA also suggested that it would be beneficial to include the representatives from the SAM Region as well. The ICAO NACC and SAM ATM/SAR Regional Officers and the relevant Task Force Rapporteurs will discuss how this can be achieved.

***SLNCs UPDATES IN ICARD***

5.5            There continues to be issues with inconsistencies between what some States have published in their Aeronautical Information Publication (AIP) and the International Codes and Routes Designators (ICARD) database. This is a critical issue especially for automation.

5.6 All States were reminded to conduct an exercise to analyse the waypoints in their airspace and compare to what is in the ICARD Five-Letter Name Code (5LNC) database. They should report any discrepancies to the ICAO ATM/SAR Regional Officer. The ATM/SAR Regional Officer will provide recommendations for the resolution of these issues. United States advised that their automation database extends well into the CAR Region and that they would like to ensure that the coordinates they use are the correct coordinates correct to the decimal places. It was suggested that the PBN Task Force assist with this request.

**APPENDIX A  
EXECUTIVE LIST OF CONCLUSIONS AND DECISIONS**

Number	Conclusion/Decision	Responsible for action	Deadline
OPT/1	<b>ANALYSIS OF THE STATUS OF THE LONGITUDINAL SEPARATION BETWEEN CAR FLIGHT INFORMATION REGIONS</b>		
	That, having identified the opportunity to continue working to optimize the applicable longitudinal separation between the Flight Information Regions of the CAR Region, in order to improve capacity and efficiency of the airspaces, maintaining safety levels in accordance with the ICAO SARPs, the ANI/WG PBN Task Force shall:		
	a) carry out an analysis of the longitudinal separation applied by every FIR of the CAR Region, identifying opportunities for improvement of these separations, as well as pointing out the possible causes that prevent their reduction, in cases that were possible; and	ICAO and ANI/WG/PBN/TF	By the next ANI/WG PBN Task Force Meeting
	b) present the results of this analysis to the next ANI/WG PBN Task Force Meeting.	ICAO and ANI/WG/PBN/TF	By the next ANI/WG PBN Task Force Meeting.
OPT/2	<b>IMPLEMENTATION OF THE 40NM BASED ON GNSS LONGITUDINAL SEPARATION IN THE PORT-AU-PRINCE FIR</b>		
	That, taking into consideration the actions carried out by Haiti to enhance its airspace, develop operational procedures and train its ATS personnel to implement in the Port-au-Prince FIR the longitudinal separation of 40nm based on GNSS, pending the updating and signing of the letters of operational agreement between Haiti and the FIRs of Havana, Santo Domingo, Kingston and Miami:		
	a) Cuba, Dominican Republic, Haiti, Jamaica and United States take the necessary measures to update and sign the revised operational letters of agreement between Port-au-Prince and the Havana, Santo Domingo, Kingston, Miami FIRs to allow the application of the 40nm longitudinal separation; and	Cuba, Dominican Republic, Haiti, Jamaica and United States	1 December 2020
	b) Haiti take any additional measure to ensure the implementation of the 40nm longitudinal separation at Port-au-Prince FIR.	Cuba, Dominican Republic, Haiti, Jamaica and United States	1 December 2020

Number	Conclusion/Decision	Responsible for action	Deadline
OPT/3	<b>IMPLEMENTATION OF REGIONAL/INTERREGIONAL OPTIMIZED RNAV ROUTES</b>		
	That, in order to enhance the optimal flight paths for air traffic in the CAR and SAM Regions, providing enhanced efficiency and improved levels of safety, CAR/SAM States and Territories providing air traffic services in the aforementioned Regions agree:		
	a) to implement the ATS routes proposals presented in the Appendix B to this Report; and	States/Territories, ANSP from the CAR/SAM Regions and ICAO	Publication and effective dates are according to Appendix C to this report
	b) publication and effective dates for the agreed proposals will be carried out in accordance with Appendix C to this report.	States/Territories, ANSP from the CAR/SAM Regions and ICAO	Publication and effective dates are according to Appendix C to this report
OPT/4	<b>ANALYSIS OF THE CAR REGION UPPER AND LOWER AIRSPACE LIMITS</b>		
	That, taking into consideration the current difference in the vertical limits of upper and lower airspaces for the Flight Information Regions (FIRs) of the CAR Region and the need to gather additional information of possible operational repercussions of this situation. the ANI/WG PBN Task Force:		
	a) conduct an analysis of the possible operational impact of the current difference in the vertical limits of upper and lower airspaces for the Flight Information Regions (FIRs) of the CAR Region; this analysis shall be limited and take into consideration operational related aspects only; and	ANI/WG PBN Task Force	Before the next ANI/WG PBN Task Force Meeting
	b) present the results of this analysis to the next ANI/WG PBN Task Force Meeting.	ANI/WG PBN Task Force	Before the next ANI/WG PBN Task Force Meeting

**SUMMARY OF DISCUSSIONS FOR AGENDA ITEM 3  
October 21<sup>st</sup> 2020**

**SLOT 1**

**Proposal 23: United States / San Juan**

- Agreed with the following changes:
  - Add the deletion of ANU/VOR and include GOUDA; L577 will start at ELOPO

**INPUT AMEND ATS ROUTES TABLE**

**L577**

~~ANU/VOR 17° 07' 33'' N 061° 48' 01'' W~~

ELOPO 17° 39' 00.2'' N 062° 33' 15.8'' W

GOUDA 17 56 02.47N, 063 40 00.00W

~~PJM VOR/DME 18° 02' 17.22'' N 063° 07' 05.80'' W~~

~~STT VOR/DME 18° 21' 20.94'' N 065° 01' 28.40'' W~~

STIIV 18 10 36N 064 58 41W

ANTEX 18 289 00N 45N 068 00 00W

**Proposal 24: United States / San Juan**

- Agreed as presented in the WP/02

**INPUT ADD NEW ATS ROUTES TABLE**

**L327**

SCAPA 155002.90N, 0672958.30W

OPAU 21 51 23.75N, 0635047.68W

**Proposal 25: United States / San Juan - Dominican Republic**

- Agreed as presented in the WP/02

**INPUT ADD NEW ATS ROUTES TABLE**

**L343**

ANADA 15 00 00N 064 08 46W

SATOE 17 40 00N 068 00 00W

**SLOT 2**

**Proposal 6: Curaçao - Venezuela (SAM) – Dominican Republic**

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- Curacao requires the same trajectory
- Need coordinates for KABON
- Venezuela requires to keep UA554 from KABON to Maiquetia
- Accept UL216

**INPUT DELETE ATS ROUTES TABLE**

UA554 See Note/Voir Note/Véase Nota 2\*

~~LAMER~~

~~CERDA~~

~~GRAND TURK~~

~~SEKAR~~

~~PUERTO PLATA~~

~~PUNTA CAUCEDO~~

~~POKAK~~

~~KABON 12 44 45.00N 067 41 22.00W~~

~~MAIQUETIA 103634.10N 0665922.80W~~

~~\*To/Vers/Hasta SEKAR~~

**INPUT AMEND ATS ROUTES TABLE**

**UL216**

NELOX 29 59.76S 051 09.91W

GEBUN 263440S 0534646W

FOZ 253500S 0543013W

ARVOP 221601S 0563657W

SIDAK 193821S 0581228W

UGUPA 153734S 0602330W

ARMUK 132856S 0613330W

UBSIM 12 56.50S 061 50.62W

PORTOVELHO 08 42.84S 063 54.21W

MEDLE 03 33.07S 065 46.19W

SAO GABRIEL 00 09.04S 066 59.11W

ZORRO 01 51.80N 067 12.11W

PUERTO AYACUCHO 053658N 0673637W

ALTOS 102335N 0670231W

MAIQUETIA 10 36 34N 066 59 22W

KABON ~~12 44 45N 067 41 22W~~

POKAK 16°00'00"N 068°34'00"W

DCY/VOR 19° 16'14"N 069°44'26.65"W

LERED 20° 23'54.8"N 070° 27'03.5"W

**Proposal 7: Curaçao - Venezuela (SAM) - Trinidad and Tobago**

- Keep the lower level A563 as it is now.
- Pending coordinates for BONAX, BONAIRE and CURACAO
- Venezuela agrees with the complete deletion of UA563 (already deleted since ATSRO10)

- Agrees to include UL219 in the Maiquetía airspace
- UL219 : CURACAO- BONAIRE-BONAX-MTA-MEGIR
- Include UP671 pending coordinates for MEGIR and PIARCO EXTEND UP671 Trinidad will send the additional information.

**INPUT AMEND DELETE ATS ROUTES TABLE**

**UA563** See Note/Voir Note/Véase Nota 1\*

CURACAO

BONAX 120441.00N 0674949.00W

GRAND ROQUE 115640.80N 0664016.50W

TOROP 112747.00N 0661019.00W

MARGARITA 105449.40N 0635718

CARUPANO 103929.90N 0631534.10W

MEGIR 103100.00N 0615220.00W

PIARCO

**INPUT ADD NEW ATS ROUTES TABLE**

**UL219**

MEGIR [ ]

MAIQUETIA [ ]

BONAX ~~[ ]12 04 41N 067 49 49W~~

BONAIRE ~~[ ]12 07 54N 068 14 58W~~

CURACAO ~~[ ]12 11 49N 069 00 42W~~

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**INPUT ADD NEW ATS ROUTES TABLE**

**UP671**

MEGIR [ ]

PIARCO [ ]

New Waypoint pending [ ]

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**Proposal 8: Curaçao - Venezuela – Colombia (SAM)**

- Curacao agrees with the deletion of UA574 from DATOR - ARUBA and ARUBA-CURACAO
- Venezuela agrees with the elimination of UA574 DATOR-GILGA
- Extend UL220 from DATOR to GILGA
- ~~Pending coordination with Colombia to continue the previous decision until CARTAGENA (CTG)~~
- Colombia agrees with the implementation of UL220 until Cartagena and the deletion of UA574

**INPUT AMEND ATS ROUTES TABLE**

**UA574** See Note/Voir Note/Véase Nota 1

TABOGA 08 47 15 N 079 33 43 W

BOGAL 093405N 0772459W

CARTAGENA 10 12 30 N 075 30 22 W

BARRANQUILLA 10 47 43 N 074 51 37 W

GILGA 12 07 44 N 071 06 23 W



DATOR 122435.00N 0701613.00W

ARUBA

CURAÇAO

INPUT ADD NEW ATS ROUTES TABLE

UL220

CARTAGENA 10 12 30 N 075 30 22 W

BARRANQUILLA 10 47 43 N 074 51 37 W

GILGA 12 07 44 N 071 06 23 W

DATOR 12 24 35N 070 16 13W

ARUBA ~~12 30 20N 069 56 35W~~

CURAÇAO 12 11 49N 069 00 42W

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Proposal 9: Curaçao - Venezuela (SAM) - United States/San Juan

- All agree with the Deletion of UA516
- All agree with the implementation of UM576 from MILOK to Curacao

INPUT ~~AMEND~~ ~~DELETE~~ ATS ROUTES TABLE

~~UA516~~ See Note/Voir Note/Véase Nota 2\*

~~RKDIA~~

~~NEYDU~~

~~MILOK~~

~~ST. MAARTEN~~

~~MILOK 15 17 32.00N 065 52 51.00W~~

~~ACORA 13 39 27.00N 067 29 58.00W~~

~~CURACAO \*Between/Entre ST. MAARTEN/MILOK~~

INPUT ADD NEW ATS ROUTES TABLE

UM576

MILOK 15 17 36N 065 52 48W

ACORA 13 39 27N 067 29 58W

CURACAO 12 11 49N 069 00 42W

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INPUT ADD NEW ATS ROUTES TABLE

~~L325~~

~~SCAPA 15 50 03N 067 29 58W~~

~~JOSHE 18 14 33N 066 30 04W~~

~~M576~~

~~RKDIA 21 00 00N 060 00 00W~~

~~MILOK 15 17 36N 065 52 48W~~

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Proposal 11: Curaçao - United States/San Juan – Venezuela (SAM)

- ~~All~~ Agreed with the deletion of UG431 except of the segment ENPUT-ALCOT which Venezuela will maintain until further notice.

- All agree with UL325 from SCAPA-CURACAO-ALCOT-ENPUT
- Venezuela agrees to implement the new UL325 from ALCOT to ENPUT

INPUT ~~DELETE~~ **AMEND** ATS ROUTES TABLE

UG431

~~ENPUT~~

ALCOT 115441.00N 0691537.00W

~~CURACAO~~

~~SCAPA~~

~~DORADO~~

~~ELMUC~~

~~LETON~~

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INPUT ADD NEW ATS ROUTES TABLE

UL325

ENPUT [ ]

ALCOT 11 54 41N 069 15 37W

CURACAO 12 11 49N 069 00 42W [ ]

SCAPA 15 50 02N 067 29 58W

Additional proposals from Venezuela will be addressed in proposal 15

SLOT 3

Proposal 12: Cuba – Jamaica – Curaçao -Venezuela (SAM)

- All agree with the deletion of UG442 until ALCOT, Venezuela wants to keep the segment ALCOT-MAIQUETIA.
- All in agreement but use another route designator to avoid 222.
- Curacao wants to make sure that the new RNAV route maintains the same trajectory as UG442.
- Pending coordinates.

INPUT ~~DELETE~~ **AMEND** ATS ROUTES TABLE

UG442

~~CAYO L. DEL SUR~~

~~KATAL~~

~~MONTEGO BAY~~

~~MANLEY~~

~~AMBIN~~

~~ARUBA~~

ALCOT 115441.00N 0691537.00W

MAIQUETIA 103634.10N 0665922.80W

**INPUT ADD NEW ATS ROUTES TABLE**

~~UL222~~ pending new designator  
~~CAYO L. DEL SUR VOR/DME (UCL) 21 36 18N 081 31 58W~~  
~~21 36 18N 081 31 58W~~  
KATAL 20 00 00N 079 38 18W  
MONTEGO BAY [ ]  
MANLEY [ ]  
AMBIN [ ] 15 41 02N 074 00 00W  
ARUBA 12 30 20N 069 56 35W [ ]  
ALCOT 11 54 41N 069 15 370W  
MAIQUETIA 10 36 34N 066 59 22W

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**Proposal 13: Dominican Republic – Curaçao – United States/Miami**

- All agree to delete G446 from OLDEY-KARUM
- Keep the segment of G446 from KARUM to Puerto Cabello
- All agree the complete deletion of UG446 from OLDEY to Puerto Cabello

**INPUT AMEND ATS ROUTES TABLE**

G446  
(OLDEY)  
BROOM  
GRAND TURK  
BESAS  
KOBET  
~~CAUCEDO~~  
KARUM 16 00 00N 069 24 00W  
CURAÇAO  
REPIS 114429.00N 0684843.00W  
PUERTO CABELLO (PBL) 10° 29' 03'' N 068° 04' 40'' W

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**INPUT AMEND DELETE ATS ROUTES TABLE**

UG446  
(OLDEY)  
BROOM  
GRAND TURK  
BESAS  
KOBET  
~~CAUCEDO~~  
KARUM  
CURAÇAO  
REPIS 114429.00N 0684843.00W  
PUERTO CABELLO (PBL) 10° 29' 03'' N 068° 04' 40'' W

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**Proposal 15: Dominican Republic – Curaçao – Venezuela (SAM)**

- All agree with the deletion of UA567 from Punta Caucedo-BEROX-ARUBA
- All agree with the implementation of UL450 from BEROX-ARUBA-NOREX-ENPUT

**INPUT DELETE ATS ROUTES TABLE**

~~UA567~~ See Note/Voir Note/Véase Nota 1\*

~~ARUBA~~  
~~BEROX~~  
~~PUNTA CAUCEDO~~

**INPUT ADD NEW ATS ROUTES TABLE**

~~UL450~~  
~~ENPUT [ ]~~  
~~NOREX [ ]~~  
~~ARUBA 12 30 20N 069 56 35W~~  
~~BEROX [ ] 16 00 00N 070 04 00W~~  
~~ARUBA [ ]~~

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**Proposal 16: Cuba - United States/Miami – Haiti – Dominican Republic - United States/San Juan**

- All agree with the complete deletion of A636.
- All agree with the complete deletion of UA636.
- All agree with the implementation of M348 from VARADERO-JARDINES DEL REY-MEDKO-[NEW 5LNC that replaces ZIN]-ALBBE-KATOK- AQABA18 35 45.16N, 067 22 28.89W-MEEGL
- All agree with the implementation of UM348 from VARADERO-JARDINES DEL REY-MEDKO-ALBBE-RETA-K-PUERTO PLATA-KATOK

**INPUT DELETE ATS ROUTES TABLE**

~~A636~~  
~~GREAT INAGUA~~  
~~ALBEE~~  
~~RETA-K~~  
~~PUERTO PLATA~~  
~~KATOK BORINQUEN~~

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~~UA636~~ See Note/Voir Note/Véase Nota 2\*

~~GREAT INAGUA ALBEE~~  
~~RETA-K~~  
~~PUERTO PLATA~~  
~~KATOK~~  
~~BORINQUEN~~

\*Between/Entre GREAT INAGUA/RETA-K and between/et entre/y entre KATOK/BORINQUEN

**INPUT ADD NEW ATS ROUTES TABLE**

**M348**

MEDKO 21 13 12N 074 26 37W

~~KNSLY new SLNC (to be provided by the USA) 20 57 35N 073 40 39W~~

ALBBE 20 25 00N 072 14 55W

KATOK 18 50 00N 068 00 00W

AQABA 18 35 45N 067 22 28W

MEEGL 18 29 19N 067 10 15W

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**INPUT ADD NEW ATS ROUTES TABLE**

**UM348**

VARADERO ~~23 01 29N 081 27 13W~~

JARDINES DEL REY ~~22 28 03N 078 18 43W~~

MEDKO 21 13 12N 074 26 37W

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ALBBE 20 25 00N 072 14 55W

RETAK 20 11 42N 071 41 30W

PUERTO PLATA 19 45 33N 070 34 14W

KATOK 18 50 00N 068 00 00W

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**Proposal 18: United States/Miami – Cuba – Jamaica - Colombia/Barranquilla**

- All agree with the deletion of UG430 from TANIA-AVILA-PUTUL-MONTEGO BAY-KILER-CARTAGENA-GIRARDOT-LEGUIZAMO
- ALL agree with the deletion of G430 from TANIA-AVILA-PUTUL
- All agree with the implementation of G430 URSUS-PUTUL
- All agree with the implementation of a new RNAV route UP406 from URSUS-PUTUL-SUDSA-~~AKPEK-PULTU~~ (SOUTHBOUND)

**INPUT DELETE ATS ROUTES TABLE**

**UG430**

~~LEGUIZAMO 00 10 43 S 074 46 32 W~~

~~GIRARDOT 04 11 30 N 074 51 57 W~~

~~CARTAGENA 10 12 30 N 075 30 22 W~~

~~KILER 15 00 00 N 076 52 49 W~~

~~MONTEGO BAY~~

~~PUTUL~~

~~AVILA~~

~~TANIA~~

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**INPUT AMEND ATS ROUTES TABLE**

**UG430**

GIRARDOT 04 11 30 N 074 51 57 W  
CARTAGENA 10 12 30 N 075 30 22 W  
KILER 15 00 00 N 076 52 49 W  
MONTEGO BAY  
PUTUL 19 58 34N 078 17 36W  
AVILA  
TANIA  
URSUS 24 00 00N 079 04 12W

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**INPUT ADD NEW ATS ROUTES TABLE**

**UP406**

URSUS 24 00 00.19N 079 04 11.28W  
PUTUL 19 58 34N 078 17 36W  
SUDSA [ ]  
AKPEK 07°59'15.0"N 075°48'59.0"W  
PULTU 00°4'0.0"N 075°34'48.0"W

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**Proposal 19: Cuba – Jamaica - Colombia/Barranquilla**

- ALL agree with the implementation of a new UM779 from NESMO- KILER-EPSIM 19 48 45N 078 01 10W (northbound) confirm with Colombia

**INPUT ADD NEW ATS ROUTES TABLE**

**UM779**

NESMO [ ]  
KILER [ ]  
EPSIM 19 48 45N 078 01 10W  
ZEUSS 24 00 00N 078 47 45W

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**Proposal 20: Cuba – Jamaica - Colombia/Barranquilla**

- All agree with the deletion of UA301
- All agree with the Implementation of a new UP525 (SOUTHBOUND) NEFTU-EMABU-SINID-BARRANQUILLA-DAGAN

**INPUT DELETE ATS ROUTES TABLE**

**UA301** See Note/Voir Note/Véase Nota 2\*

OTAMO 15 00 00 N 075 59 00 W  
MANLEY  
TOTON  
AVILA  
URSUS

BIMINI

ANAME

\*Between/Entre URSUS/BIMIN

INPUT ADD NEW ATS ROUTES TABLE

UP525

NEFTU 20 33 00N 077 26 49W

EMABU 19 29 23N 077 28 26W

SINID []

BARRANQUILLA []

DAGAN []

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Proposal 21: CENAMER –Jamaica - Colombia/Barranquilla –Venezuela- Brazil (SAM)

- All agree with the deletion of UR640 EXCEPT THE SEGMENT IN THE KINGSTON FIR.
- All agree with the implementation of UM409 from MARACAIBO-URIBI-ERIKO-EDROD-MANLEY

INPUT ~~DELETE~~ AMEND ATS ROUTES TABLE

UR640

COZUMEL

DANUL

MAMBI

GRAND CAYMAN

MONTEGO BAY

KINGSTON

EDROD 15 00 00 N 074 44 00 W

URIBI 11 15 23 N 072 09 30 W

MARACAIBO 103452.90N 0714252.90W

BARINAS 083700.30N 0701313.90W

AMAYA 060948N 0680930W

PUERTO AYACUCHO 05 37 06 N 067 36 30 W

VUMPI 01 59 40N 063 56 90W

MANAUS 03 02 40S 060 03 28W

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INPUT ADD NEW ATS ROUTES TABLE

UM409

MARACAIBO []

URIBI []

ERIKO []

EDROD []

MANLEY []

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**Proposal 22: Jamaica - Colombia/Barranquilla**

- All agree with the realigning of UL417 from IROTI - NEVPA-BEMOL (NORTHbound) to the implementation of the new UL338 from BEMOL-NEVPA-IROTI (NORTHbound)

**INPUT ADD NEW ATS ROUTES TABLE**

**UL338**

BEMOL [ ]

NEVPA [ ]

IROTI [ ]

**SLOT 4**

**Comment for Houston-Habana agreements:**

“The proposals involving Havana ACC (MUFH) and Houston ARTCC (KZHU) are the first direct routes between these two airspaces and therefore, necessitate a new operational Letter of Agreement (LOA) before the routes can be used. The parties acknowledged this and agreed to have the LOA signed by the PFA 3 implementation date of 17 JUN 2021.”

**Proposal 1: Cuba – Haiti – United States/Miami**

- All agree on the implementation of a new ATS route UL218
  - BORDO 24 00 00N, 078 27 32W, MODIT 19 45 52N 073 35 53W, PAP VOR 18 39 18N 0725448W

**INPUT ADD NEW ATS ROUTES TABLE**

**UL218**

BORDO 24 00 00N, 078 27 32W

MODIT 19 45 52N 073 35 53W

PAP VOR 18 39 18N 0725448W

**Proposal 5: Cuba - United States/Miami**

- All agree with the realignment of UM595 to delete UNV/VOR and introduce BOPOL.

**INPUT AMEND ATS ROUTES TABLE**

**UM595**

UNV/VOR 21 23 42N 077 13 51W

BOPOL 21 23 26N 077 25 17W

ERRCA 22 42 17N 076 08 14W 12W

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**Proposal 2: Cuba- United States/Houston**

- All agree with the implementation of the UM463 from SHARQ to WALKY 22°14'31"N 085°35'04"W (SOUTHBOUND ONLY IN Habana FIR)

**INPUT ADD NEW ATS ROUTES TABLE**

**UM463**

SHARQ 24 00 00N 085 30 00W  
WALKY 22 14 31N 085 35 04W

**Proposal 3: Cuba- United States/Houston**

- All agree with the amendment of the L465 (FL280 and above)
- All agree with the implementation of UL465 from Grand Cayman to SHARQ
- Already coordinated by Cuba with Grand Cayman.
- **Both FIRs agree on the implementation date taking into consideration that LOAs need to be signed before the effective date of the new airways connecting Houston and Habana.**

**INPUT AMEND ATS ROUTES TABLE**

**L465**

TABOGA 084715N 0793343W  
ROKIN 114700N 0772500W  
ARNAL 150000N 0803651W  
GRAND CAYMAN [ ]  
~~TULEV~~ LACET 20 00 00N 081 50 00W [ ]  
FUNKO 20°28'25"N 082°18'02"W [ ]  
SHARQ 24 00 00N 085 30 00W  
NAVVL 25 05 47N 085 30 00W  
MINOW 26 02 47N 085 58 58W  
TRESR 27 17 25N 088 17 48W  
PLNDR 28 16 00N 089 43 07W

**UL465**

TABOGA 084715N 0793343W  
ROKIN 114700N 0772500W  
ARNAL 150000N 0803651W  
GRAND CAYMAN [ ]  
~~TULEV~~ LACET 20 00 00N 081 50 00W [ ]  
FUNKO 20°28'25"N 082°18'02"W [ ]  
SHARQ 24 00 00N 085 30 00W

**Proposal 4: Cuba- United States/Houston**

- All agree with the implementation of UM451 from UCJ/VOR to SHARQ.

**INPUT ADD NEW ATS ROUTES TABLE**

**UM451**

UCJ/VOR 22 28 03N 078 18 43W  
SHARQ 24 00 00N 085 30 00W

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**Agreed Publication and Effective Dates**

Publication Date	Effective Date	States /FIRs Involved
22-Apr	17-Jun	
Proposal 1		Cuba – Haiti – United States/Miami
Proposal 2		Cuba- United States/Houston
Proposal 3		Cuba- United States/Houston
Proposal 4		Cuba- United States/Houston
Proposal 13		Only FAA segment
Proposal 16		Cuba - United States/Miami – Haiti – Dominican Republic - United States/San Juan
Proposal 23		United States / San Juan
Proposal 24		United States / San Juan
Proposal 25		United States / San Juan - Dominican Republic
Publication Date	Effective Date	States /FIRs Involved
25-Mar	20-May	
Proposal 5		Cuba - United States/Miami
Proposal 6		Curaçao - Venezuela (SAM) – Dominican Republic
Proposal 7		Curaçao - Venezuela (SAM) - Trinidad and Tobago
Proposal 8		Curaçao - Venezuela – Colombia (SAM)
Proposal 9		Curaçao - Venezuela (SAM) - United States/San Juan
Proposal 11		Curaçao - United States/San Juan – Venezuela (SAM)
Proposal 12		Cuba – Jamaica – Curaçao -Venezuela (SAM)
Proposal 13		Dominican Republic – Curaçao – United States/Miami
Proposal 15		Dominican Republic – Curaçao – Venezuela (SAM)
Proposal 18		United States/Miami – Cuba – Jamaica - Colombia/Barranquilla
Proposal 19		Cuba – Jamaica - Colombia/Barranquilla
Proposal 20		Cuba – Jamaica - Colombia/Barranquilla
Proposal 21		CENAMER –Jamaica - Colombia/Barranquilla –Venezuela- Brazil (SAM)
Proposal 22		Jamaica - Colombia/Barranquilla