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WORKING PAPER

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CAR/SAM Planning and Implementation Regional Group (GREPECAS) Eighteenth Scrutiny Working Group Meeting (GTE/18)

Mexico City, Mexico, 22 – 26 October 2018

Agenda Item 1: Review of the previous CARSAMMA and Scrutiny Group meetings Conclusions and Recommendations

SCRUTINY OF THE RVSM AIR MOVEMENTS OF THE CAR/SAM FIR

Summary of the scrutiny of the archives of the air movements in the RVSM space sent by the CAR/SAM FIRs and received in the year of 2018 by CARSAMMA, in relation to 2017

(Presented by CARSAMMA)

EXECUTIVE SUMMARY	
This Working Paper presents a summary of the scrutiny of the Reduced Vertical Separation Minimum (RVSM) 2017 air movements made by CARSAMMA, and the filtering performed with the help of other Regional Monitoring Agencies (RMAs) and the Civil Aviation Authorities (CAAs) of the CAR/SAM States.	
Action:	Take note and review the contents of this Working Paper.
<i>Strategic Objectives:</i>	<ul style="list-style-type: none">• Safety
<i>References:</i>	<ul style="list-style-type: none">• ICAO Annex 6 - <i>Aircraft Operations</i> - Part I and II• RVSM air movements received by CARSAMMA in 2017

1. Introduction

1.1 Since the creation of the CAR/SAM Monitoring Agency (CARSAMMA), this agency has been receiving files of the aircrafts movements that occurred in the RVSM space of the CAR/SAM Flight Information Regions (FIRs), with the objective of monitoring the vertical collision risk and the RVSM certification status of the aircraft operating in this space.

1.2 This document aims to show the quality of the files sent and requests an improvement in the quality of these, as well as the filtering of this data with the participation of the RMA and the Civil Aviation Authorities (CAAs) of the CAR/SAM Regions, who are responsible in their States for the RVSM certification of the aircraft with their registration or operations, according to the ICAO Annex 6 - *Aircraft Operations* (Part I and II).

2 Analysis

2.1 CARSAMMA received from the CAR/SAM FIRs an amount of 397,265 flights that used the RVSM space in 2017 that, after processing, resulted in 369,724 flights valid for the purposes of CRM processing.

2.2 Table 1 and Figure 1 below show the values of the post-process flights separated by States, the number of aircraft records that are not recorded in the CARSAMMA database or in the files of the other RMAs (called here from NO RVSM), with the percentage of NO RVSM per Total Movement per State.

State/Agency	DELIVERY FLIGHTS	POST PROCESS	USE OF DATA	NO RVSM	% NO RVSM
ARGENTINA	39,287	36,716	67.49%	57	0.16%
BOLIVIA	8,516	7,733	67.68%	3	0.04%
BRASIL	133,639	127,467	83.22%	102	0.08%
CHILE	22,771	21,523	88.12%	13	0.06%
COLOMBIA	29,696	24,922	57.49%	8	0.03%
ECUADOR	8,696	7,605	87.45%	7	0.09%
GUYANA	2,202	2,032	92.28%	0	0.00%
FRENCH GUYANA	2,557	1,558	35.39%	0	0.00%
PANAMA	21,403	19,971	91.77%	25	0.13%
PARAGUAY	5,369	5,045	86.32%	1	0.02%
PERU	25,084	24,927	99.13%	1	0.00%
SURINAM	2,856	2,561	84.11%	9	0.35%
URUGUAY	5,642	4,441	67.02%	2	0.05%
VENEZUELA	10,615	9,361	65.31%	41	0.44%
NETHERLANDS ANTILLES	6,722	5,843	86.92%	0	0.00%
CENTRAL AMERICA	19,625	18,051	80.29%	1	0.01%
CUBA	33,594	33,592	99.99%	4	0.01%
HAITI	-	-	-	-	-
JAMAICA	-	-	-	-	-
DOMINICAN REPUBLIC	12,935	11,771	72.73%	1	0.01%
TRINIDAD & TOBAGO	6,056	4,605	59.53%	0	0.00%
TOTAL	397,265	369,724	93.07%	275	0.05%

Table 1 – Flights and amount of NO RVSM in 2017

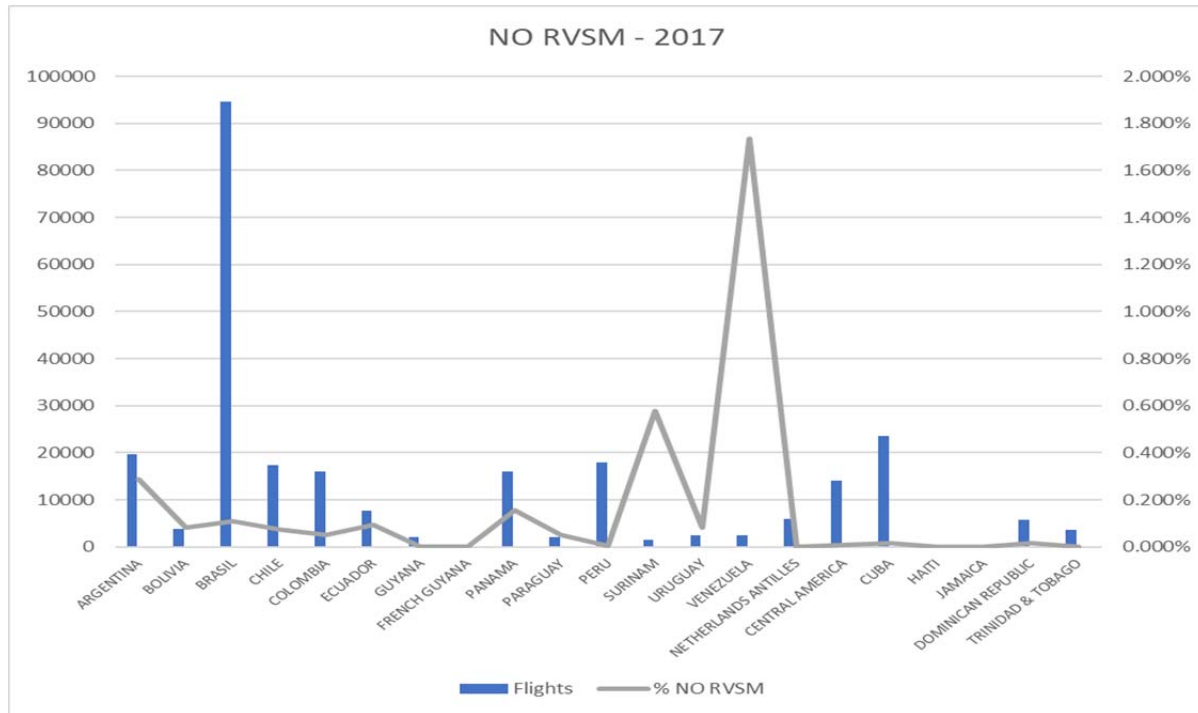


Figure 1 – NO RVSM by Air movements in 2017

2.3 We must point out that:

- Haiti only sent its RVSM movements in July 2018, making it impossible to process and filter the data sent to CARSAMMA, in time to be presented in this WP;
- Jamaica did not send the data of its air movement in the RVSM space.

2.4 We must recall that to use RVSM airspace, aircraft operators must request to the Civil Aviation Authority (CAA) of their State the start of the RVSM Certification or Cancellation process, and that since its creation until the present day CARSAMMA has monitored and reported to the CAR/SAM Planning and Implementation Regional Group (GREPECAS) the use of RVSM airspace by aircraft that do not appear in our database.

2.5 The use of RVSM airspace by an uncertified aircraft induces a significant increase in the Vertical Collision Risk according to the analysis method recommended by ICAO in this airspace.

2.6 We must also bear in mind that, according to Annex 6 Part I and II of ICAO, the RVSM certification and cancellation correspond to the State of registration or operation of an aircraft, and in the case of the CAR/SAM Regions, the relevant States must report these events to CARSAMMA.

2.7 It happens that rarely the responsible unit that certifies/cancels the RVSM operations on behalf of the State participates in our meetings (Scrutiny Group (GTE) or teleconference). With this, the reports of occurrences of misuse of this special airspace do not reach them in time for an active correction. We should also note that some aircraft with registration of our Regions and that are not included in CARSAMMA's RVSM database, fly in other regions outside of CAR/SAM, leading other

Regional Monitoring Agencies to request from CARSAMMA clarification of the STATUS RVSM of these aircraft.

2.8 Another situation is when an aircraft is exported, or its operations are transferred to another State or Region, without CARSAMMA being notified. In these cases, the aircraft appears in two records with conflicting data, leading again to questioning the STATUS RVSM of it.

2.9 We believe that the first step to mitigate this problem is the invitation by the ICAO Regional Offices so that the RVSM Certification/Cancellation units of the States actively participate in our Meetings, to know and propose appropriate solutions in each case, increasing the safety of the aircraft that circulate in this space.

2.10 Another point is that, during the movements' filtering process, there were several cases of aircraft that do not have the capacity to reach or stay in the RVSM space. We ask that the Points of Contact (PoCs) responsible for sending these files to CARSAMMA, make an inspection of them before sending.

2.11 In the case of aircraft belonging to companies whose air operations are registered in States that are not in the CAR/SAM Regions or have a nationality register outside of our Regions, we have the collaboration of the other RMAs relevant to these States to confirm the RVSM status.

2.11.1 This implies a series of correspondence exchanges between the RMAs, and the need for reliable data to prevent the insertion of an RVSM certified aircraft by a State, in our RVSM Bulletin as a non-RVSM aircraft (not certified). This newsletter is maintained by CARSAMMA, it is distributed monthly to the other RMAs.

2.12 For aircraft belonging to companies whose air operations are registered in States that are in the CAR/SAM Regions or have nationality registration in our Regions, it is essential that the State Civil Aviation Certification Authorities respond in a timely manner and with data reliable to the inquiries made by CARSAMMA during this process.

3 Suggested Actions

3.1 The Meeting is invited to:

- a) take note and review the contents of this Working Paper;
- b) request the certification Authorities of the Civil Aviation of the States pertinent to CARSAMMA to respond to the questioning of the RVSM status of the aircraft of their responsibility according to ICAO Annex 6 - *Aircraft Operations* - Part I and II; and
- c) share experiences and express opinions on the actions of CARSAMMA in this matter.