



ICAO

International Civil Aviation Organization
South American Office

INFORMATION PAPER

GTE/19 — IP/09

05/11/19

CAR/SAM Planning and Implementation Regional Group (GREPECAS) Nineteenth Scrutiny Working Group Meeting (GTE/19) (GTE/19)

Barranquilla, Colombia, 18 to 22 November 2019

Agenda Item 3: Review of the results of the analysis of large height deviations (LHDs)

e) Lessons learned by CAR/SAM States to reduce the number of LHDs

FAILURES OF COORDINATION IN THE SAM OCEANIC REGIONS

(Presented by CARSAMMA)

EXECUTIVE SUMMARY	
This working paper presents a summary of the IP/32 on traffic coordination failures between the SAM Oceanic Regions and Johannesburg FIR, presented by ARMA during the Fourteenth Meeting of the Regional Monitoring Agencies Coordination Group (RMACG14) held in Las Palmas, Gran Canaria, from 17 to 21 June 2019.	
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">• IP/32 presented by ARMA in RMACG14• Letter prepared to Manager of the ATS for FAOR by ARMA in 18 July 2019• LHD received by ARMA in 2018/2019 (Appendix A)• WP/258 presented by CARSAMMA in RMACG14

1. Introduction

1.1 The purpose of this Working Paper is to forward the IP/32 presented by ARMA during the Fourteenth Meeting of the Regional Monitoring Agencies Coordination Group (RMACG14) held in Las Palmas, Gran Canaria, from 17 to 21 June 2019, to the States responsible for the SAM Oceanic FIRs, with the request for clarification and even greater effort in the traffic coordination in this region.

1.2 A letter from ARMA, records of the LHD filed from January 2018 till March 2019 and the IP/32 are presented as to this Information Paper, to provide information regarding the situations in which coordination failures occurred in the oceanic space, according to the ARMA report (Johannesburg FIR).

2. Analysis

2.1 During the RMACG13 held in Salvador in June 2018, the African Regional Monitoring Agency (ARMA) presented a WP in which it reported some cases of coordination failure between the Montevideo and Johannesburg FIRs. In October 2018, CARSAMMA presented a WP during the GTE held in Mexico City about this and Uruguay presented a WP as clarification with mitigation measures to address the issues.

2.2 During the RMACG14 held in Las Palmas in June 2019, CARSAMMA presented the WP258 with the clarifications presented by FIR Montevideo in the GTE/18 to be appreciated by ARMA and Johannesburg FIR. Besides that, the African Regional Monitoring Agency (ARMA) presented the IP 32 in which it reported some cases of coordination failure between the Montevideo, Ezeiza, Atlantic and Johannesburg FIRs.

2.3 CARSAMMA affirmed that these facts would be presented again as a WP during the GTE/19 to take the position of the involved units and regarding on the progress of the promised mitigation measures.

2.4 It's important point out that:

- ARMA prepared a letter to Manager of the ATS for FAOR, Mr Sibusiso Nkabinde, talking about coordination failures between FIR-Montevideo and FIR-Johannesburg (attached);
- In this letter is the Appendix A with records of the reports filed from January 2018 till March 2019. CARSAMMA received these reports from ARMA in October 2019;
- CARSAMMA directs this matter for response and position of the State involved and learning from the other States that have ocean regions with ample space to be coordinate;
- CARSAMMA has asked ARMA for detailed reports LHD presented in Appendix A to send to FIR responsible.

3. Suggested Actions

3.1 The Meeting is invited to:

- a) Take note and review the contents of this note; and
- b) share experiences and express opinions on the actions of CARSAMMA in this matter, to be presented at the next RMACG15.

APPENDIX

RMACG/14-IP/32
17/06/2019



International Civil Aviation Organization
INFORMATION PAPER

**REGIONAL MONITORING AGENCIES (RMA)
FOURTEENTH RMA COORDINATION GROUP MEETING**

Las Palmas, Gran Canaria, 17 to 21 June 2019

Agenda Item 6: Operational performance and LHDs

COORDINATION FAILURES IN THE AFI REGION

(Presented by ARMA)

SUMMARY

This paper presents the coordination failures reported in the AFI Region for the year 2018, with special mention of the coordination and LHD hotspots in the region.

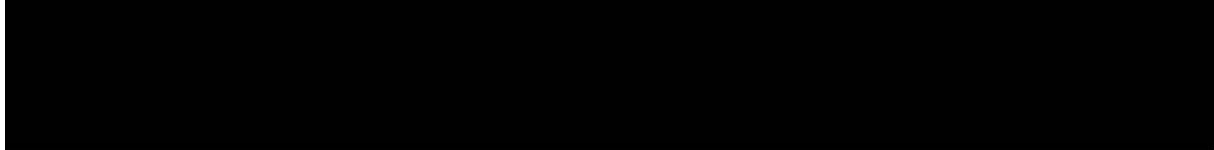
Ref: ARMA LHD Reports

1. INTRODUCTION

1.1. The ARMA receives reports on large height deviations within AFI as well as from other RMAs, the coordination issues in the region are addressed on a regular basis with local coordination meetings between neighboring sectors.

1.2. Correspondence has been forwarded to relevant States as well as other RMAs with regards to the LHD challenges in the region and a multitude of issues have been identified as the contributing factors in the occurrence of these events.

2. DISCUSSION



RMACG/14-IP/32

2.1. There has been a severe increase in LHD reports in the Asmara, Mogadishu and Djibouti FIRs, as reported by the Neighboring RMAs as well as the reports from the southern FIRs. At some point the ARMA received a combined total of over a 100 coordination failure reports in one month where traffic entered the adjacent centre airspace without any prior coordination.

2.2. There has been a constant number of reports in the Atlantic Oceanic Random Routing Area with special reference to Montevideo and Johannesburg Oceanic, we have just come from a SAT coordination meeting to address these challenges.

2.3. A total number of 9 coordination failures were reported by Johannesburg Oceanic Control Centre where Monte Video had failed to pass traffic estimates and these have been forwarded to the relevant FIR.

3. ACTION BY THE MEETING

3.1. The Meeting is invited to note the contents of this working paper, and continue the exchange of LHDs between RMAs.

— END —





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Subject: Trans-Regional ATCC RVSM Coordination Failures

Action Required: Take necessary action to ensure that air traffic services providers effectively address causal and contributing factors of air traffic coordination failure incidents whenever they exist

Dear Sir/Madam

ARMA, acting on behalf of ICAO, wishes to refer to the ICAO Standards and Recommended Practices (SRPs) particularly those in Annex 1 I to the Convention on International Civil Aviation (Chicago Convention), the Procedures for Air Navigation Services — Air Traffic Management (PANS-ATM, Doc 4444) especially Chapter 10 thereof, Operating Procedures for Regional Monitoring Agencies (Doc 9937), other supporting documents and regional requirements.

The attention of your Administration is drawn to the prevailing rates of air traffic management (ATM) incidents of traffic coordination failures, which negatively affect safety in the Reduced Vertical Separation Minimum (RVSM) airspace (between FL290 and FL410). From the monthly analysis carried out by AFI Regional Monitoring Agency, the coordination failures include one or a combination of the following:

- a) No notification of the flight to the receiving ATCC
- b) Flight not notified to the receiving area control centre (ACC)
- c) No time estimates relayed to the receiving ATCC
- d) Flight time estimates not relayed to the receiving ACC
- e) Incorrect flight time estimates relayed to the receiving ACC
- f) No revision of time estimates to the receiving ACC
- g) Flight level not relayed to the receiving ACC
- h) Incorrect flight level relayed to the receiving ACC
- i) No revision of flight level to the receiving ATCC

ARMA/RVSM

18 July 2019 1

The importance of effectively addressing this trend cannot be overemphasized. In this respect, Africa Indian Ocean Monitoring Agency (AFIRMA) has over the years proposed to concerned RMA and their air navigation service providers (ANSPs) remedial actions, and in some cases provided assistance. Several other recommendations have come from the SAT Meeting and Regional Monitoring Agency Co-ordination Group (RMACG) Meeting, which convene every second quarter of the year to review and analyse incidents that occurred over the previous year. While significant progress and improvements have been achieved from such efforts, much remains to be achieved to attain sustainable results.

Between the year 2018 and 2019, 9 reports have been submitted regarding trans-regional co-ordination failures between CARSAMMA and AFIRMA. There is no LOP in place between air traffic control units of FAJO (Johannesburg Oceanic) and Monte Video. Communication agreements need to be in place so that these events can be mitigated in future. Appendix A has been attached that has records of the reports filed from January 2018 till March 2019.

These reports have presented in various regional meetings in an attempt to find corrective action. In 2018 a working paper was presented in the Regional Monitoring Agency Co-ordination meeting where CARSAMMA was present and they promised to revert with a response and possible solutions. In 2019 CARSAMMA returned at the RMACG 14 Meeting with a working paper which was a response to the working paper submitted by AFIRMA in 2018. Unfortunately, the response did not have an effective solution as the Monte Video airspace does not fall under their jurisdiction but belongs to Uruguay.

In view of the above, and taking into account the risk of mid-air collision presented by air traffic coordination failures, the purpose of this letter is to urge the State of Uruguay which has jurisdiction over the Monte Video FIR to help improve ATM services over that part of the airspace to help with RVSM Safety improvement and for other State regulatory organs to pay particular attention to this challenge, to investigate and assess its prevalence, and take decisive measures to address it.

For queries and further clarification on this matter, kindly send your communication to the afirma@atns.co.za, Head of Africa Indian Ocean Monitoring Agency Mrs Nonjabulo Gumede or Ricardo Rocha CARSAMMA, ricardordr@decea.gov.br.

I take this opportunity to express my confidence in your leadership to effectively address this matter as it may prevail.

Yours Sincerely



Nonjabulo Gumede
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Appendix A



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Date	Time	TYPE INCIDENT	FIR	SUMMARY
04/01/2018	01:20	CO-ORD FAILURE	FAJO	SAA223, estimate was passed to MONTE VIDEO and not FAJO. Fpl track was activated on the system but neither the controller nor ATSO knows who activated the track. MOR was filed JA-4-2018
06/01/2018	08:15	CO-ORD FAILURE	SBAO	TAM8162 was coordinated as F370 but aircraft maintained F350 on first contact. MOR filed JA-5-2018
02/02/2018	03:18	CO-ORD FAILURE	EZEIZA	No estimate received from Ezeiza for SGL202F. Atlantico was also unable to get hold of Ezeiza
12/04/2018	03:48	CO-ORD FAILURE	SBAO/FAJO	DENA05 SUMU - FYWH entered FAJO airspace. No est received from Monte Video/SBAO DENA05 contacted FYWH at 28S010E F330. No LOS. MOR JA-93-2018
14/05/2018	00:50	CO-ORD FAILURE	SBAO/MONTE VIDEO	Nil estimates received for N416DB, 10WEST F410.
01/08/2018	02:01	CO-ORD FAILURE	SBAO	Nil estimate passed for SAA223 by SBAO.
01/12/2018	22:20	CO-ORD FAILURE	MONTE VIDEO	LMG1 ADS Track observed on RADAR crossing 35S010W at 2208, F410. No Est was received
16/03/2019	03:09	CO-ORD FAILURE	SAEZ	SAEZ failed to pass estimates for CG-CUL, F410 position MUNES. No loss of separation. MOR was filed JA-72-2019. Upon phoning SAEZ, FAJO discovered that the aircraft was airborne at 20:00 the evening before and that FAEZ lost comms at 20:20 UTC. The Aircraft estimated FIMP at 07:35 UTC the next morning. FAJO only knew about the aircraft because Briefing phoned them to say that he operator of the aircraft phoned them to advise that the pilot was lost in FAJO airspace. FAJO gave Briefing the frequencies to relay to the operator for the aircraft. FAJO finally

				established comms with the aircraft at 02:34 UTC on freq 5565, SELCAL was then done and the aircraft connected via ADS/CPDLC.
28/03/2019	01:19	CO-ORD FAILURE	SAEZ	SAEZ failed to pass estimate for 3DCSDF

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WORKING PAPER

**REGIONAL MONITORING AGENCIES (RMA)
FOURTEENTH RMA COORDINATION GROUP MEETING**

Las Palmas, Gran Canaria, 17 to 21 June 2019

Agenda Item 6: Operational Performance and LHDS.

COORDINATION FAILURES BETWEEN ADJACENT ACC

(Presented by CARSAMMA)

SUMMARY

This paper presents the response of Montevideo FIR to the WP/09 submitted by CARSAMMA at Eighteen meeting of Grupo de Trabajo y Escrutinio (GTE18) at Mexico City, Mexico from October 22 to 26, 2018 and WP/250 submitted by the African Regional Monitoring Agency (ARMA) during the Thirteenth meeting of the Regional Monitoring Agencies Coordination Group (RMACG13) at Salvador, Brazil from June 11 to 15, 2018.

1. INTRODUCTION

1.1. During RMACG13 the ARMA Agency presented through WP250 a request that the CARSAMMA solicit to the FIR Montevideo clarification of coordination failure event between FIR Montevideo and Johannesburg.

1.2. This request for clarification was made by CARSAMMA, through WP09 and presented during GTE18, held from October 22-26, 2018 in Mexico City.

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2. DISCUSSION

2.1. In order for the clarifications presented by FIR Montevideo to be appreciated mainly by ARMA and Johannesburg FIR, we have included in Appendix A the whole of WPI4 presented during the GTE18.

3. CONCLUSIONS

3.1. For the content presented in the cited WPs, CARSAMMA understands that in a short time, problems of communication failure between Montevideo and Johannesburg FIRs will tend to zero.

4. ACTION BY THE MEETING

4.1. The Meeting is invited to:

- (a) note the contents of this working paper: and
- (b) discuss any relevant matters as appropriate.

— END —



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APPENDIX A

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North American, Central American and Caribbean Office
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GTE/18 — WP/14
18/10/18

CAR/SAM Planning and Implementation Regional Group (GREPECAS) Eighteenth Scrutiny Working Group Meeting (GTE/18)
Mexico City, Mexico, 22 – 26 October 2018

Agenda Item 3: Large Height Deviation (LHD) analysis
b) Identify trends

COORDINATION FAILURES BETWEEN ADJACENT ACC
(Presented by Uruguay)

EXECUTIVE SUMMARY	
This WP refers to WP/09 submitted by CARSAMMA and WP/250 submitted by the African Regional Monitoring Agency (ARMA) during the Thirteenth meeting of the Regional Monitoring Agencies Coordination Group (RMACG13) at Salvador, Brazil from June 11 to 15, 2018.	
Action:	Suggested actions are included in Section 4 of this Working Paper.
Strategic Objectives:	<ul style="list-style-type: none"> • Safety
References:	<ul style="list-style-type: none"> • WP/250 submitted by ARMA at the RMACG13 • WP/09 submitted by CARSAMMA

1. Introduction

- 1.1 Since 9 April 2009, an Aeronautical Information Regulation and Control (AIRAC) Aeronautical information Publication (AIP)/Supplement (SUP) entered into force where it is published the Implementation of the Random RNAV Routes Area in the Atlantic Ocean, phase 2 of the AORRA airspace.
- 1.2 It is an airspace comprised from FL290 to FL410 in the FIRs: Atlántico, Dakar, Comodoro Rivadavia, Ezeiza, Oceanic Johannesburg, Oceanic Luanda and Montevideo, (see Appendix, available only in Spanish).

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- 1.3 Montevideo FIR is divided into: FIR Montevideo Océánico and Montevideo Oriental, classified as Class “G” airspace, in which Flight Information Service is provided as far as possible; therefore AIR TRAFFIC CONTROL SERVICE IS NOT PROVIDED.
- 1.4 Aircrafts flying in this airspace are mostly State or military aircrafts flying to and from Ascension Island and Malvinas/Falkands Islands.
- 1.5 Some companies use the departures from Montevideo into the Atlantic Ocean, and they contact Curitiba Center.
- 2. Analysis**
- 2.1 Montevideo FIR possesses a surveillance radar AIRCON2100 with a maximum coverage of 200NM; its communications are via VHF, therefore it lacks the necessary means to control aircrafts flying this AORRA.
- 2.2 During 2014 a contract was signed with SITA company in order to install the Automatic dependent surveillance - contract (ADS-C), controller-pilot data link communication (CPDLC), but due to radar integration issues it couldn't get operational. Nowadays a joint effort with Uruguayan CNS is taking place, trying to get it operational as soon as possible.
- 2.3 In spite of this significant drawback, there are provisional ATS coordination procedures implemented between:
- ATLANTICO FIR and MONTEVIDEO ORIENTAL FIR
 - EZEIZA FIR and MONTEVIDEO ORIENTAL FIR
- 2.4 These procedures take place via oral coordination or via Aeronautical Fixed Telecommunication Network (AFTN)/ Aeronautical Message Handling System (AMHS) with ATLANTICO FIR. There's also direct oral communication coordination with an AFTN/AMHS backup with EZEIZA FIR.
- 2.5 Regarding the WP/250 submitted by ARMA:
- During the year 2017 Montevideo FIR did not receive any LHD report from FACT (JOHANNESBURG) FIR;
 - There is no LOA nor any operational procedure signed or accorded with FACT
 - The entry/exit point to MONTEVIDEO OCEANICO and ORIENTAL FIR is position BIVEN.

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3. Mitigation Measures

3.1 The mitigating measures are:

- Install a direct telephone line with FAJO sector in order to use it as coordination means;
- Sign a letter of agreement or operational procedures with FAJO; and
- Get the ADS-C CPDLC operational.

4. Suggested Actions

4.1 The meeting is invited to:

- a) acknowledge this Working Paper;
- b) endorse the mitigating measures detailed in Section 3 of this Working Paper; and
- c) share experience and provide advice on the matter.

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ENR 3.3-12
02 JAN 2017AIP
URUGUAY

ENR 3.3 RUTAS DE NAVEGACIÓN DE ÁREA (RNAV)

1. Área de Rutas RNAV Aleatorias en el Océano Atlántico (AORRA)

1.1 DESCRIPCIÓN DEL ESPACIO AÉREO AORRA

- 1.1.1 El espacio aéreo comprendido entre el FL 290 y FL 410 inclusive será designado como **AORRA** dentro de los FIR's: Atlántico, Comodoro Rivadavia, Ezeiza, Sector Océanico de Johannesburgo, Sector Océanico de Luanda y Montevideo, limitadas por:

Línea que une las siguientes coordenadas:	
60° 00' 00" S	015° 00' 00" E
2° 30' 00" S	015° 00' 00" E
17° 30' 00" S	011° 13' 00" E
09° 40' 00" S	011° 24' 00" E
Luego la porción de un arco de 120 NM con centro sobre el VOR de Luanda a la posición:	
07° 48' 00" S	011° 30' 00" E
Luego una línea recta hacia la posición:	
05° 20' 00" S	010° 00' 00" E
05° 30' 00" S	008° 50' 00" E
04° 10' 00" S	006° 35' 00" E
05° 52' 00" S	006° 35' 00" E
12° 00' 00" S	010° 00' 00" W
19° 43' 00" S	034° 55' 00" W
26° 45' 00" S	043° 45' 00" W
34° 00' 00" S	050° 00' 00" W
34° 00' 00" S	051° 33' 20" W
36° 45' 30" S	053° 11' 47" W
58° 21' 00" S	053° 00' 00" W
60° 00' 00" S	053° 00' 00" W
Luego a:	
60° 00' 00" S	015° 00' 00" E
➡ (Ver ENR 3.3-15 AORRA - MAPA DE REFERENCIAS GEOGRÁFICAS)	

- 1.1.2 Aquellos vuelos que operen dentro del AORRA en la FIR Montevideo, deberán ingresar y salir de la misma ➡ a través del punto: BIVEN 36° 35' 00" S 053° 05' 10" W
- 1.1.3 Las aeronaves podrán operar a través de la trayectoria preferida estipulada en el plan de vuelo entre estos accesos (gates). Antes del ingreso o luego de la salida del AORRA en un acceso particular, las aeronaves cumplirán con la estructura de las rutas ATS asociadas con ese punto de entrada o salida o según sean instruidas por ATC, y se les requerirá un plan de vuelo de acuerdo con las normas.

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GTE/18 - WP/14

AIP URUGUAY	ENR 3.3-13 02 JAN 2017
1.2 VIGILANCIA DEPENDIENTE AUTOMÁTICA Y COMUNICACIONES POR ENLACES DE DATOS PILOTO CONTROL (ADS/CPDLC)	
1.2.1	ADS/CPDLC serán utilizadas en el espacio aéreo AORRA por los proveedores de servicio adecuadamente equipados para brindar un servicio ATS a las aeronaves capaces de utilizar esta forma de comunicación. Los operadores deberán tener en cuenta que en algunos sectores del espacio aéreo con rutas aleatorias, la ADS/CPDLC es la forma primaria de comunicación, siendo la HF un medio de comunicación secundaria.
1.3 PROCEDIMIENTOS DE PERFORMANCE DE NAVEGACION REQUERIDA (RNP 10) PARA OPERACIONES DE AERONAVES DENTRO DEL AORRA	
1.3.1	Solo aquellas aeronaves certificadas para operaciones RNP 10 podrán operar dentro del AORRA.
1.3.2	Ninguna aeronave deberá confeccionar un plan de vuelo para operar en el espacio aéreo AORRA a no ser que cuente con la certificación RNP 10 para operar en este espacio aéreo otorgada por el Estado de Registro o el Estado del operador, a excepción de las siguientes circunstancias:
	a) La aeronave ha sido entregada al Estado de registro o al Estado del operador por primera vez.
	b) La aeronave está certificada pero experimenta degradación de navegación y está siendo conducida a su base o hacia una instalación de mantenimiento para reparaciones.
	c) La aeronave se encuentra en misión humanitaria.
	d) Es una aeronave de Estado.
1.4 APROBACIÓN DE AERONAVEGABILIDAD/OPERACIONES	
1.4.1	Aprobación RNP 10 – Los que operen o intenten operar en el espacio aéreo AORRA deberán contar con la aprobación RNP 10 del registro del Estado de matrícula o del Estado del operador según corresponda y según el usuario cumpla con las siguientes condiciones:
	a) La aeronave satisface las especificaciones de "Especificaciones Mínimas de Performance del Sistema de Aeronaves" (MASPS) del registro del Estado de matrícula.
	b) La aeronave es operada bajo las condiciones indicadas por la aprobación RNP 10 otorgada por el Estado del usuario.
1.5 PLANES DE VUELO	
1.5.1	Cuando se intente operar con una aeronave en el espacio aéreo AORRA, se indicará el estado de aprobación RNP 10 colocando una "R" en el casillero 10 del formulario de plan de vuelo.
1.5.2	Los planes de vuelo contendrán el punto de ingreso y el de salida al del AORRA y el tiempo estimado de informe cada 5° de longitud.
1.5.3	En el caso de los planes de vuelo repetitivos la aprobación RNP 10 se indicará colocando la "R" en el casillero Q del RPL, haciendo caso omiso del nivel requerido, como se demuestra a continuación: EQPT/R.
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1.5.4 Aquellos que operen bajo las circunstancias estipuladas en el párrafo 1.3.2 deberán insertar STSNON RNP 10 en el casillero 18 del formulario FPL de OACI.

1.6 PROCEDIMIENTOS OPERACIONALES PREVIOS AL INGRESO AL ESPACIO AÉREO AORRA

1.6.1 Previo al ingreso al espacio aéreo AORRA el piloto al mando de la aeronave certificada RNP 10 comprobará que el equipamiento requerido para volar dentro de este espacio AORRA está funcionando con normalidad y verificará la posición de la aeronave con la mayor precisión posible a través de ayudas externas para la navegación aérea.

1.6.2 En el caso de que algunos de los equipos no se encuentren funcionando con normalidad, el piloto deberá notificar al ATC previo al ingreso al espacio aéreo AORRA.

1.6.3 Mientras se opera dentro del área definida del AORRA, los niveles de vuelo cumplirán con la tabla de niveles de crucero indicada en el Anexo 2 "Reglamento del Aire" de la OACI, Apéndice 3 (b). No se contemplará ninguna operación RVSM dentro de AORRA hasta próximo aviso.

1.6.4 Los procedimientos de transición RVSM deben considerarse desde el inicio del espacio aéreo RVSM en las FIRs donde las áreas de transición RVSM están definidas.

1.7 PROCEDIMIENTOS OPERACIONALES POSTERIORES AL INGRESO AL ESPACIO AÉREO AORRA**1.7.1 Procedimientos Generales**

1.7.1.1 Si una aeronave no puede continuar el vuelo de acuerdo a la autorización dada por el ATC y/o no puede mantener la precisión requerida para la performance de navegación específica en el espacio aéreo, deberá dar aviso de inmediato al ATC.

1.7.2 Se requerirá informe de posición al ATC en:

Puntos de Acceso de ingreso/salida

05° E
10° E
00° E/W
05° W
10° W
15° W
20° W
25° W
30° W
35° W
40° W
45° W
50° W

De igual manera, cualquier otra posición requerida por el ATC.

AMDT NR 51

AIS URUGUAY

