

FINAL REPORT



INTERNATIONAL CIVIL AVIATION ORGANIZATION

**REPORT OF THE TENTH MEETING/WORKSHOP OF THE
SCRUTINY WORKING GROUP**

(GTE/10)

Mexico City, Mexico 13-17 December 2010

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HISTORY OF THE MEETING

ii.1 Place and Duration of the Meeting

The Tenth Meeting of the Scrutiny Working Group (GTE/10) was held at the ICAO NACC office in Mexico City, Mexico, from 13 to 17 December 2010.

ii.2 Opening Ceremony and Other Matters

Mr. Madison Walton, Rapporteur of the GTE, greeted the participants, and emphasized the importance of the issues to be addressed during the week. Ms. Loretta J. Martin, Regional Director of the ICAO NACC Regional Office, welcomed the participants and expressed her appreciation for the safety work undertaken by the group and officially opened the Meeting.

Mr. Victor Hernandez, Regional Officer Air Traffic Management and Search and Rescue, representing the ICAO NACC office and the host of the meeting, welcomed the participants highlighting the importance of the work to be accomplished and its positive effect on the reduction of risk in the airspace of the Regions. Mr. Hernandez also highlighted the importance of the Group's contribution to the 10-year operational trend analysis and review of its Terms of Reference (TORs) in support of the GREPECAS safety initiatives.

A total of four working papers, two information papers and one flimsy were submitted for discussion. A list of working papers was presented in IP/1 and included in this section. The Rapporteur noted that LHD analysis is an important function of the Group. Considering the large number of events to be analyzed, the Rapporteur recommended that papers be presented after completion of LHD analysis. Discussion of papers was conducted under Agenda Item 4: Other Business.

ii.3 Schedule, Organization, Working Methods, Officers and Secretariat

The Meeting agreed to hold its sessions from 0900 to 1500 hours, with appropriate breaks. The work was completed within the Meeting as a Single Committee. Mr. Madison Walton, delegate from United States, and Rapporteur, served as Chairman of the Meeting. Mr. Victor Hernandez Regional Officer Air Traffic Management and Search and Rescue, acted as the secretary of the Meeting assisted by Adolfo Zavala and Jacques Boursiquot, both Regional Air Traffic Management Officers from the NACC Regional Office.

ii.4 Working Languages

The working languages of the Meeting were Spanish and English with simultaneous translation provided.

ii.5 Agenda

The following agenda was adopted.

Agenda Item 1: History of RVSM, Regional Monitoring Agencies and Scrutiny Groups

- a) Roles and responsibilities
- b) Overview of Target Levels of Safety

Agenda Item 2: GTE Overview – CARSAMMA & Rapporteur

- a) Terms of Reference
- b) Background
- c) Composition
- d) Objectives
- e) Methodology
- f) Reporting

Agenda Item 3: Large Height Deviation (LHD) Analysis – CARSAMMA

- a) Application of GTE methodology to LHD events
- b) Summarize parameter values
- c) Identify operational trends from data base

Agenda Item 4: Other business

ii.6 Attendance

The Meeting was attended by 31 participants. A list of the participants is included in this section.

LIST OF WORKING AND INFORMATION PAPERS

WORKING PAPERS				
Number	Agenda Item	Title	Date	Prepared and Presented by
WP/01	---	Draft Agenda and Schedule of the Meeting	10/11/10	Secretariat
WP/02	1	Transition of the Caribbean and South American (CARSAM) Grupo de Trabajo Escrutinio (GTE) Rapporteur	27/10/10	United States
NE/03 REV.	4	LHD CAR/SAM (2004-2010) (<i>Available in Spanish only</i>)	10/12/10	CARSAMMA
WP/04	2	Proposal of a New Work Methodology for the GTE	10/12/10	Secretariat

INFORMATION PAPERS				
Number	Agenda Item	Title	Date	Prepared and Presented by
IP/01	--	List of Working and Information papers	10/12/10	Secretariat
IP/02	4	ATM/CNS Trilateral Meeting among Argentina, Brazil and Uruguay, to Analyse LHD in the South Atlantic	03/11/10	Secretariat

PRESENTATIONS

Agenda Item	Title	Presented by
3	LHD CAR/SAM (2004-2010)	CARSAMMA

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LIST OF PARTICIPANTS / LISTA DE PARTICIPANTES

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Agenda Item 1: History of RVSM, Regional Monitoring Agencies and Scrutiny Groups

1.1 CARSAMMA presented WP/03 highlighting the introduction and benefits of RVSM and the importance of the work of the GTE. The meeting first reviewed details of a fatal event and discussed how future GTE analysis results can contribute to reducing the probability that a similar event will take place in the future

1.2 The Meeting also reviewed the need for system performance monitoring and the evaluation of events in relation to a complex air traffic system. GTE also emphasized the need for obtaining accurate data and highlighted the importance of reporting LHD in connection with the Safety Management System (SMS) in the ATC units. The Meeting recognized the necessity of Air Navigation Service Providers (ANSPs) to conduct safety assessment of all ATS incident and ATC errors based on ICAO SMS provisions.

1.3 In addition, the meeting reviewed the ICAO endorsed target level of safety (TLS) applicable to Reduced Vertical Separation Minimum (RVSM) airspace and the effect of large height deviations (LHD) on the outcome of collision risk calculations.

Agenda Item 2: GTE Overview

2.1 The GTE analysis methodology, objectives and reporting requirements outlined in the GTE Reference Guide were analyzed. The Meeting concurred in the necessity to review and update the GTE reference guide in a future meeting based on proposal from the Meeting.

Agenda Item 3: Large Height Deviation (LHD) Analysis –

3.1 CARSAMMA presented all events reported during the period of 1 January 2010 through 30 June 2010. A total of 456 reports were submitted by the CAR and SAM Regions. The Meeting analyzed each event, determined parameter values necessary for collision risk estimation. A summary of reported events and GTE analysis is included in **Appendix A**.

3.2 The top two categories, M and N, account for approximately 94% of the reported LHDs. Figure 1 presents Summary of Error Codes assigned to each event.

3.3 It was noted that several events were considered NO-LHDs when aircraft concerned was about 20NM in the adjacent FIR within radar coverage, equivalent to 3 minutes prior communication's establishment. The percentage of these events was (122 of the 456 events) 26.8%. Figure 2 provides a summary of the rate of occurrence of large height deviations at the top reported positions.

3.4 As the Group analyzed reports of large height deviations, several questions were raised concerning established analysis guidelines and policies. Application of the 3-minute Interfacility Buffer rule, longitudinal error rule and reporting procedures format, and the five-minute coordination requirement identified in paragraph 10.14 of ICAO document 4444 were discussed.

3.5 It was further noted that clarification regarding the event time field of the LHD Reporting Form is required. In addition, the Group noted that it should respect the input of the reporter and consider consulting the reporters when feasible.

3.6 The Meeting noted that several bilateral and multilateral meetings took place to address adverse trends identified between two or three FIRS according to Conclusion 15/36 of GREPECAS.

3.7 A bilateral meeting between Trinidad and Tobago and Venezuela took place in September 2010 to improve ATS safety and establish a positive working relationship between the facilities. The meeting resulted in the improving the ATS Letters of Agreement and short and long-term ATC error mitigation actions.

3.8 A trilateral meeting between Dominican Republic, Santo Domingo ACC, San Juan CERAP and Miami ARTCC took place. The primary focus of the meeting was to improve safety and establish a positive working relationship between the facilities. The meeting resulted in Letters of Agreement and short and long-term mitigation actions.

3.9 It was noted also that a multilateral meeting between Haiti, Netherlands Antilles and Dominican Republic convened in September 2010. The meeting reviewed and evaluated the number of incidents reported within the airspace and also addressed communication issues between the respective States. Letters of Agreement between the facilities were updated and concurred on the following agreements:

- a) to establish a point of contact in each country to share information monthly for the LHDs and other types of incidents and thus be able to take measures that would reduce or eliminate such situations.
- b) Dominican Republic, at the request of Netherlands Antilles, is committed to urge the controllers about the need to READ BACK the critical information at the time of receipt, as well Netherlands Antilles commits to strengthen their controllers on the need to comply with prescribed phraseology for coordination, specifically to mention the word APPROVED when approving the time and level of an estimate or revision.

3.10 The Meeting was informed about a multilateral meeting between Brazil and the United Kingdom. The purpose of the meeting was to reduce the occurrence of operational errors and large height deviations within the relevant airspace. CARSAMMA conducted a two-month review of events reported after the meeting concluding and reporting a significant reduction in reported events.

3.11 Argentina, Brazil and Uruguay held a meeting to analyze LHD in the South Atlantic. The main objective of the Meeting was to analyze the result of the Ninth Meeting of the Scrutiny Group (GTE/9), with respect to the South Atlantic airspace (AORRA), the communication means ground-ground between ATS and ground-air units in the South Atlantic, and ATS and SAR procedures were analyzed. Several actions were agreed upon and as a result a two-month observation has revealed a reduction in reports of uncoordinated aircraft in South Atlantic airspace. The Group encouraged Brazil to share data with Montevideo and all neighboring FIRs as needed.

3.12 The Meeting emphasized the benefits of conducting multilateral meetings and discussions and the effect such discussions have on increasing safety, reducing operational errors and promoting communication between facilities. The Meeting encouraged participants to continue to promote bilateral/multilateral discussions between them to further increase safety within the CAR/SAM Regions.

3.13 It was further noted that many reports lacked details, specifically a comprehensive summary, necessary to accurately assign parameter values. The Group agreed it would appeal to ICAO to urge States, Territories and International Organizations to accurately report vertical events including as many details as possible.

3.14 Upon conclusion of report evaluation, the GTE noted that the primary cause of reported LHD in the CAR/SAM Regions are still categories “M”, error in ATC unit to ATC unit in transition message, and “N”, Negative transfer received from transitioning ATC-unit. In an effort to eliminate errors associated with the largest contributing LHD error categories, States, Territories and International Organizations are reminded of the action from the Fifteenth Meeting of the CAR/SAM Regional Planning and Implementation Group (GREPECAS/15) that encouraged urgent action to wit:

**GREPECAS
CONCLUSION 15/36**

**MEASURES TO REDUCE OPERATIONAL ERRORS IN THE ATC
COORDINATION LOOP BETWEEN ADJACENT ACCs**

That taking into account the impact of operational errors in the ATC coordination loop between adjacent ACCs on air operations safety:

- a) *CAR/SAM States/Territories/International Organizations apply, on an urgent basis among other measures, the appropriate ATS Safety Programme for the prevention of errors in the coordination loop between adjacent ACCs described in Appendix F to this part of the Report in order to reduce LHDs caused by operational errors in traffic coordination messages between ATC units to achieve an acceptable target level of safety;*
- b) *CAR/SAM States/Territories/International Organizations gradually implement the interface for data exchange among ATC units (AIDC); and*
- c) *ICAO coordinate, provides assistance, and conduct follow-up on the implementation of these corrective measures.*

3.15 The Group would like to congratulate the States, Territories and International Organizations for their effort in submitting the monthly LHD reports. Compliance with this request has improved with each meeting.

Agenda Item 4: Other Business

4.1 The Rapporteur presented WP/02 and reviewed the history of RVSM and the establishment of the GTE. It was noted that the GTE has met 10 times since its inception and the benefits and accomplishments of the GTE were highlighted. Recognizing the Group's efforts and accomplishments, the Rapporteur expressed his sentiments and sincere gratitude for having led this group in the essential work of overseeing and promoting airspace safety within the CAR/SAM Regions. However due to assigned additional responsibilities, he requested the Group to consider and encourage new leadership through the election of a new Rapporteur.

4.2 The Group thanked Mr. Walton for his dedication and ability to lead the Group in a positive direction, emphasizing the progress achieved under his leadership.

4.3 To lead the GTE, the Group unanimously elected Mr. Johann Estrada Pelletier from the Dominican Republic as the new CAR/SAM GTE Rapporteur.

4.4 WP/04 was presented by the Secretariat with proposal for a new working mechanism for the Scrutiny Working Group (GTE) taking into account the need to maintain efficiency and reduce the cost and time involved with physical meetings. The group has also significantly contributed to maintain the required TLS in the CAR/SAM Regions. The achievement of its work has fostered bilateral and multilateral discussions among air navigation service providers (ANSPs) within the CAR/SAM and neighboring regions. Each Meeting has generated mitigation measures in relation to observed trends, which are then considered by ANSPs for corrective or mitigation actions to reduce frequently occurring errors.

4.5 With the significant level of maturity and experience of experts in the handling of the occurrences and factors which affect the estimate of collision risk in the RVSM airspace in both regions, it is recommended that specific tasks could be completed electronically (virtual meetings) among the participants according to the types of errors needing to be categorized, reviewed, analyzed and classified. Subsequently, the group could meet physically once a year as necessary, to analyze new procedures or other mitigation strategies to reduce occurrences of LHDs and examine the post-implementation record of performance to assure that operational errors are kept below the required level. Training session would also be held as necessary based on coordination from the Rapporteur.

4.6 The GTE supported the concept of virtual meetings and took the following decision:

DECISION 10/1

NEW WORKING MECHANISM TO ANALYZE LHD REPORTS FOR GTE

That, taking into consideration the high number of LHD reports received, and also the need to increase efficient review of these reports in a timely manner:

- a) the GTE will increase the frequency of reviewing LHD reports by using virtual meetings; and,
- b) Virtual meetings will be coordinated by GTE Rapporteur as needed, based on the number of reports to be reviewed.

4.7 The meeting reviewed the GTE Terms of Reference based on a recommendation that they should be revised as contained in **Appendix B**. It was also noted that GREPECAS should update the CARSAMMA terms of Reference keeping in mind ATS Safety requirements to both CAR and SAM Regions.

APPENDIX A

SUMMARY OF REPORTED EVENTS AND GTE ANALYSIS

Figure 1

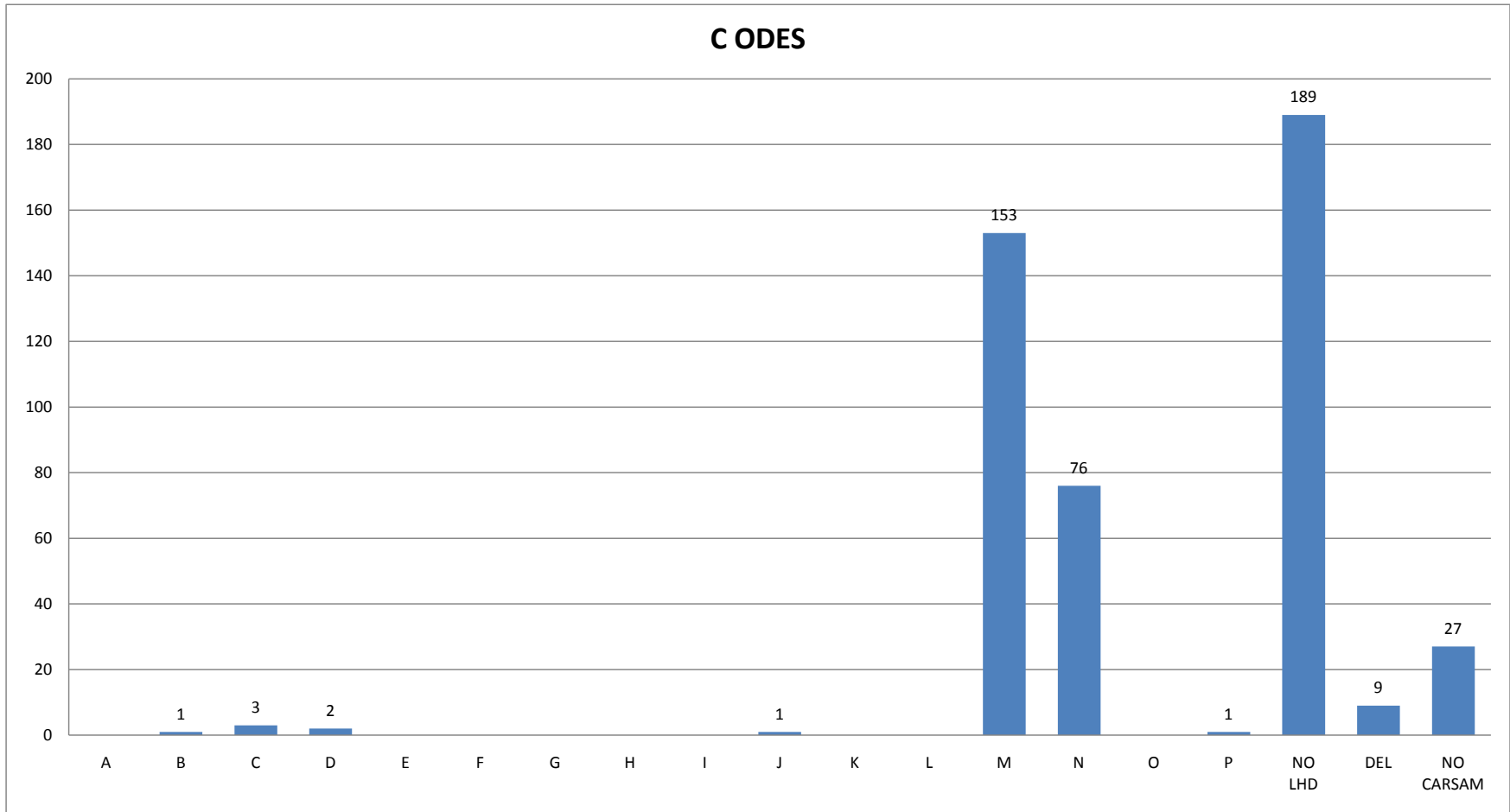
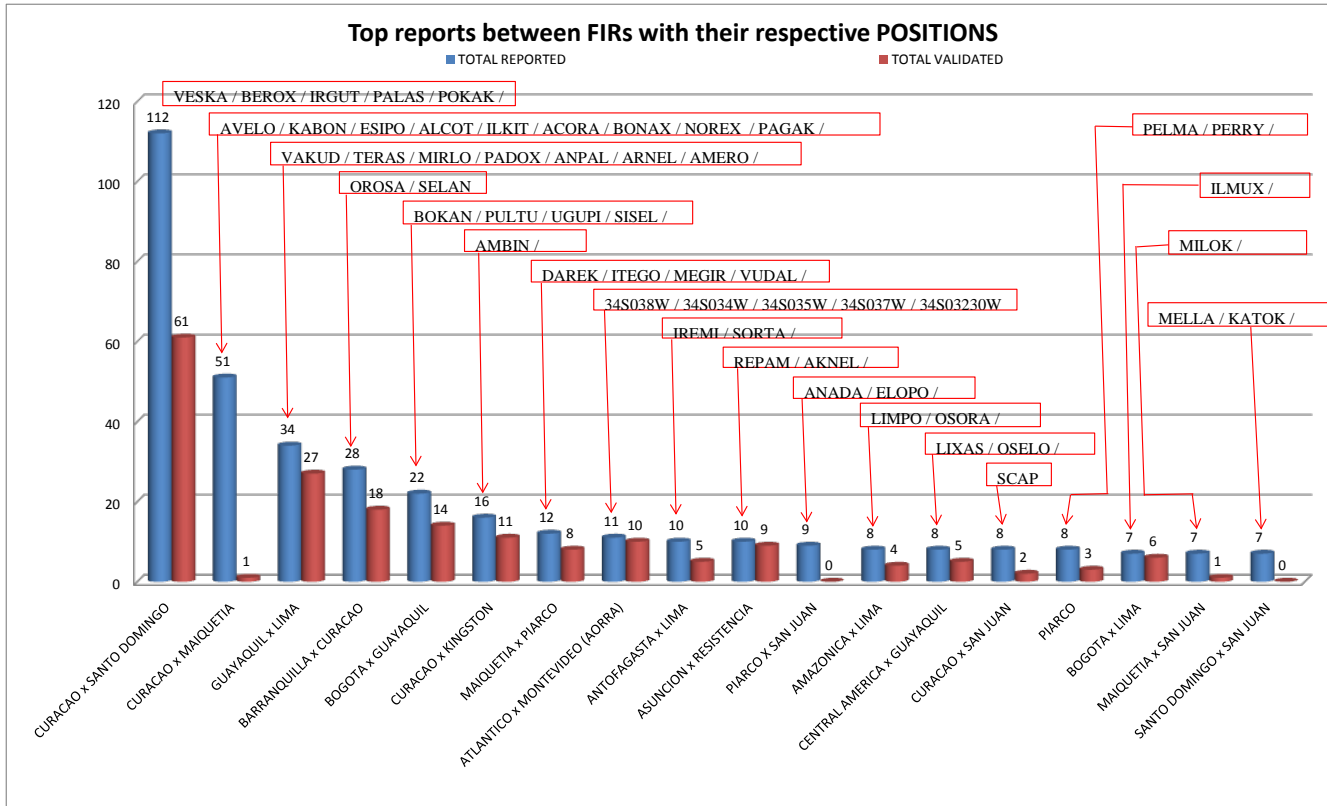


Figure 2



APPENDIX B
TERMS OF REFERENCE OF THE CAR/SAM RVSM SCRUTINY WORKING GROUP
(GTE)

- a. Convene a meeting as needed with experts in, air traffic control, aircraft operations and maintenance, regulation and certification of aircrafts, in order to analyze data and risk modeling of large height deviations (LHD) space of 300 ft or greater reported to the Regional Monitoring Agency;
- b. analyze and evaluate large height deviations (LHD) and produce an estimate of flight time away from the cleared flying level to be used as an estimate of risk by the Regional Monitoring Agency according to ICAO Doc 9574;
- c. identify large height deviation trends and to recommend remedial actions in order to improve safety;
- d. report results to GREPECAS mechanism
- e. accomplish other tasks as recommended by GREPECAS; and
- f. participate in the Regional Aviation Safety Group – Pan American (RASG-PA) to harmonize regional safety initiatives.

Composition: Curaçao, Dominican Republic, Mexico, Peru, United States, CARSAMMA, COCESNA, IATA, IFALPA and IFATCA as well as other CAR/SAM States who wish to participate.

RAPPORTEUR: Johann Estrada (Dominican Republic)

- END -