International Civil Aviation Organization
CAR/SAM Regional Planning and Implementation Group (GREPECAS)

INFORMATION PAPER

GTE/26 — IP/03
05/10/26

Twenty-Sixth Scrutiny Working Group Meeting (GTE/26)
of the CAR/SAM Regional Planning and Implementation Group (GREPECAS)
Mexico City, Mexico, 12 to 16 October 2026

Agenda Item 3: **Review of the Results of the Analysis of Large Height Deviations (LHDs) and of the Collision Risk Model (CRM)**
3.2 Actions taken to improve data capture of LHD events and to improve RVSM status capture by States of Registry or the Operator

LHD REPORTING AND VALIDATION IN THE CAR/SAM REGIONS: 2025 DATA QUALITY AND PoC FILTERING

(Presented by CARSAMMA)

EXECUTIVE SUMMARY

This information paper examines the treatment of 439 reports submitted to CARSAMMA as potential LHD occurrences in 2025. It explains the supplementary administrative classifications applied to 182 reports, the resulting dataset of 257 validated occurrences, and the 69 additional code L records generated by CARSAMMA through RVSM approval-status checks. It also identifies issues concerning reporting timeliness, PoC filtering and the consistent treatment of reports during validation.

Strategic Objectives:	• Every Flight is Safe and Secure
References:	• DOC 9574 – Manual on a minimum vertical separation of 300 m (1000 ft) between FL290 and FL410 inclusive. Third Edition, 2012 • DOC 9937 – Operational procedures and methods for regional surveillance agencies regarding the use of a minimum vertical separation of 300m (1000 feet) between FL290 and FL410 inclusive. Second Edition, 2019

1. Introduction

1.1 During 2025, CARSAMMA received 439 reports submitted as potential LHD occurrences. After technical review, CARSAMMA did not count 182 reports as separate validated occurrences, and it included 257 in the validated dataset. In addition, CARSAMMA generated 69 code L records through RVSM approval-status checks, resulting in a final analytical dataset of 326 LHD records.

1.2 The purpose of this paper is to examine the reporting and validation process itself. A separate paper presents the operational safety assessment of the validated LHD population, including risk value, level of safety, and geographical distribution.

2. Discussion

Reports received and LHDs validated

2.1 Appendix 1 presents, by month, the number of reports received, the number of validated occurrences and the additional code L records generated by CARSAMMA. The proportion of reports included as validated occurrences ranged from 43.1% in October to 78.1% in April. These percentages should not be interpreted as rejection rates, since the difference also includes late reports, reports outside RVSM airspace, reports that did not meet the LHD criteria, and self-reports consolidated with reports of the same occurrence.

2.2 Accordingly, reports received, validated LHD occurrences, and generated code L records represent different stages and units within the process. Reports received represent individual submissions; validated occurrences represent the events retained after technical review and consolidation; and generated code L records result from approval-status checks conducted by CARSAMMA.

Reasons for non-inclusion in the validated dataset

2.3 CARSAMMA applied supplementary administrative classifications to document why certain reports received were not counted as separate validated LHD occurrences. These classifications are not LHD occurrence codes contained in the GTE coding table and should not be interpreted as additional operational categories. They provide traceability regarding the treatment of reports during the validation process.

2.4 Of the 439 reports received, 182 were not counted as separate validated LHD occurrences: 115 were classified as late submissions, indicating submission after the deadline established in the applicable reporting manual; 16 as NO LHD, because the reported information did not meet the applicable LHD criteria; four as NO RVSM, because the occurrences did not take place within RVSM airspace; and the remaining 47 asself-reports relating to occurrences already reported through another source. In self-report cases, link them to the corresponding occurrence and retain them as complementary information rather than counting them as an independent LHD occurrence.

2.5 Separately from the reports received, CARSAMMA generated 69 code L records after identifying aircraft that did not hold a current RVSM approval in the relevant database on the date of flight but received RVSM separation. These records increased the analytical dataset from 257 validated occurrences to 326 LHD records. Since code L may be recorded for each FIR traversed, the 69 records should not be interpreted as 69 additional independently reported occurrences. The results indicate that the reporting gap should be considered from multiple perspectives.

2.6 The results indicate that the reporting gap should be considered from more than one perspective. In particular, the following questions should be examined:

a) What factors caused 115 reports to be submitted after the deadline, and can the reporting workflow be improved to support timely transmission?
b) Are PoCs consistently verifying that an occurrence took place within RVSM airspace and meets the applicable LHD definition before submitting it to CARSAMMA?

c) Are the distinctions between GTE LHD occurrence codes, code L records generated through RVSM approval-status checks, and CARSAMMA administrative classifications clearly understood?
d) Do submitted reports contain sufficient information to support validation without repeated exchanges with the reporting authority?
e) Are self-reports and other reports concerning the same occurrence consistently linked and consolidated, while preserving the information provided by each reporting source?

2.7 The difference between reports received and validated LHD occurrences in 2025 resulted from distinct circumstances and should not be interpreted solely as evidence that PoCs applied the LHD concept incorrectly. Late submission was the principal factor, while other reports concerned occurrences outside RVSM airspace, did not meet the applicable LHD criteria, or duplicated an occurrence reported through another source. Effective regional RVSM monitoring depends on States and their PoCs providing timely, complete and accurate information and on CARSAMMA, as the responsible RMA, maintaining the relevant databases and applying documented and consistent validation and consolidation procedures.

2.8 Supplementary administrative classifications and the relationships between reports concerning the same occurrence should be consistently managed to ensure traceability and comparability between reporting periods.

3. Suggested action

3.1 The Meeting is invited to:

a) take note of the difference between reports received and validated LHD occurrences in 2025 and the treatments applied during LHD reception;

b) note that late submission represented the principal component of that difference; and

c) discuss measures to improve the timeliness, completeness and applicability of reports submitted by PoCs.

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APPENDIX 1
List of Reports received and validated per month

MONTH	REPORTS RECEIVED	VALIDATED LHD REPORTS	GENERATED CODE L RECORDS	VALIDATED REPORTS + CODE L RECORDS
JANUARY	50	29	02	31
FEBRUARY	36	22	08	30
MARCH	27	18	06	24
APRIL	32	25	12	37
MAY	33	16	02	18
JUNE	16	07	00	07
JULY	36	18	00	18
AUGUST	37	24	04	28
SEPTEMBER	35	21	05	26
OCTOBER	51	22	09	31
NOVEMBER	37	25	19	44
DECEMBER	49	30	02	32
TOTAL	**439**	**257**	**69**	**326**

Table 1: Number of reports received, validated, code L, validated + code L and highest risk value by month

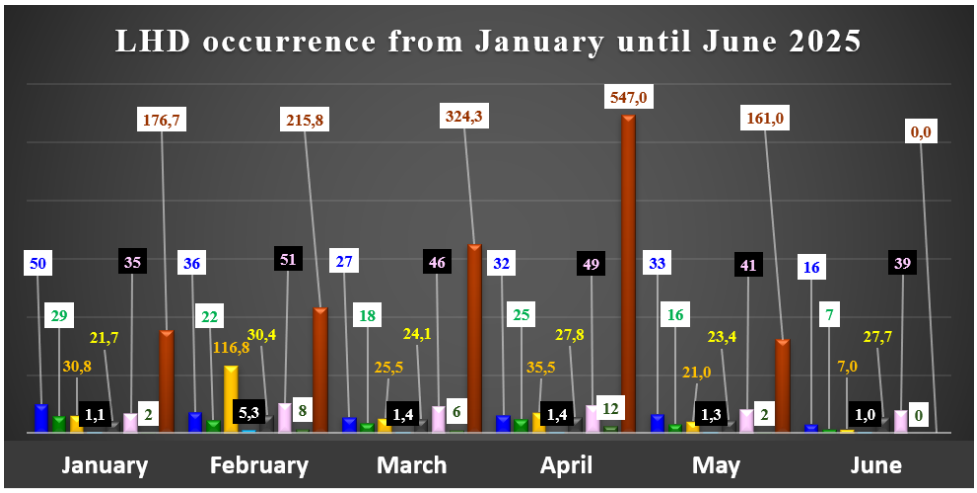
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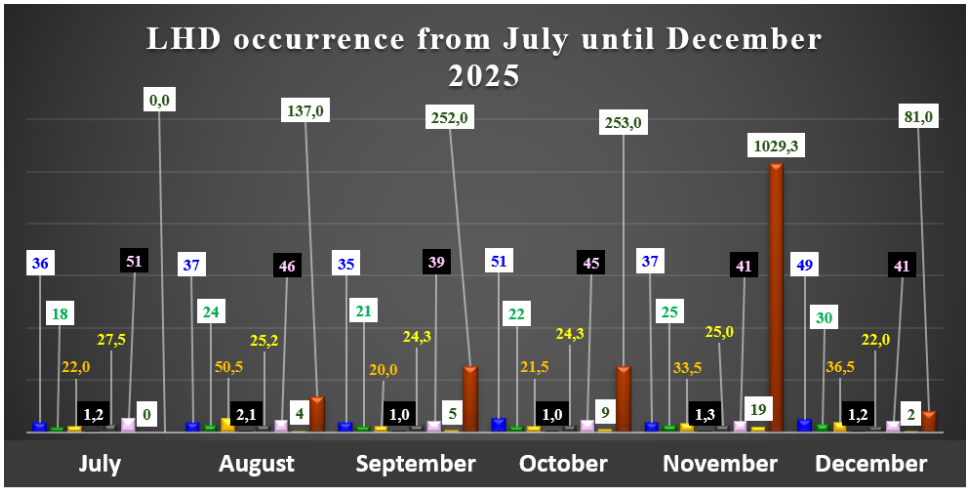
APPENDIX 2

MONTHLY COMPARISON OF REPORTS RECEIVED AND VALIDATED

Graph 1A and 1B show the summary of LHD occurrences validated by CARSAMMA and the duration (in minutes) associated with LHD per month.

- In blue – received LHD
- In green – validated LHD
- In yellow – total duration
- In black – average duration
- In gray – average RV
- In light pink – highest RV
- In dark yellow – L code
- In brown – total duration L code





Graph 1: Summary of CARSAMMA validated LHD occurrences from Jan til Dec

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