



PROGRAMME OF THE  
EUROPEAN UNION



# EGNOS Monthly Performance Report

July 2024



#EUSpace

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# 1 INTRODUCTION

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This document is the EGNOS Services Monthly Performance Report for July 2024. The public issues of the EGNOS Services “Service Definition Documents” ([RD-1], [RD-2], [RD-3], [RD-4]) are the reference documents for the present performance report.

This document reports on the EGNOS Services performance parameters with respect to the performance specified in the SDDs.

The document comprises the following sections:

**Section 1:** is an introduction to this report.

**Section 2:** Provides an executive summary of the achieved performance.

**Section 3:** Presents the EGNOS SiS availability.

**Section 4:** Presents the performance of the EGNOS Open Service.

**Section 5:** Presents the performance of the Safety-of-Life Service for aviation.

**Section 6:** Presents the performance of the EGNOS Data Access Service.

**Section 7:** Presents the performance of the EGNOS Time Service.

**Section 8:** Lists the reference documents.

The document is completed by annexes:

- Annex A Receiver Monitoring network - Provides additional information on the monitoring network.
- Annex B EGNOS APV-I Performance at airports provides the EGNOS APV-I Performance at airports.
- Annex C EGNOS LPV-200 Performance at airports - provides the EGNOS LPV-200 Performance at airports.
- Annex D List of acronyms - provides list of acronyms.



## FOR MORE INFORMATION

To get more information about EGNOS performance:

Please visit the EGNOS User Support website:

<https://egnos.gsc-europa.eu>

To get more information about EDAS and EGNOS SoL assisted service for Maritime Users (ESMAS) performance:

Please visit the EDAS and Maritime User Support website:

<https://edas-maritime.gsc-europa.eu/>

or

Contact the EGNOS helpdesk:

[helpdesk@egnos.gsc-europa.eu](mailto:helpdesk@egnos.gsc-europa.eu)

Contact the EDAS and Maritime Helpdesk:

[helpdesk@edas-maritime.gsc-europa.eu](mailto:helpdesk@edas-maritime.gsc-europa.eu)

+34 911 236 555

Or

Download the EGNOS app from the [App Store](#) or [Google Play](#)

## 2 EXECUTIVE SUMMARY

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This report presents the EGNOS services performance during July. The report contains global results for the reported period, including maps and tables with the performance observed at different locations in Europe using GEO-combined values for EGNOS operational GEOs. A list of the stations analysed in this report, including their location, can be found in 0. Additional and more detailed information about EGNOS performance can be found at the EGNOS User Support website (<https://egnos.gsc-europa.eu>).

### **Safety of Life Service (SoL)**

The percentage<sup>1</sup> of ECAC landmasses covered by APV-I and LPV200 Availability (99%) performance was 99.76% for APV-I (section 5.2.1) and 100% for LPV200 (section 5.3.1). The achieved coverage for Continuity ( $5 \times 10^{-4}/15s$ ) against the SDD commitment was 99.62% for APV-I (section 0) and 99.18% for LPV200 (section 5.3.2).

The performance at all airports with approach operations based on the APV-I or LPV200 service levels (0 and 0) presented Availability and Continuity values in line with their respective commitments as defined in the SoL SDD [RD-2] except for LGKO / Kos (Greece).

The Horizontal and Vertical Safety Indexes remained below 0.44 and 0.35 respectively for both APV-I (section 0) and LPV200 (section 0) service levels at all the analysed sites, which represents a good integrity margin.

NPA Availability above 99% (section 5.1.1) was delivered in the 100% of the NPA service area (limited by the boundaries defined by MT27).

### **Open Service**

The monitored stations presented an Open Service Availability higher than 99% for this month (section 4.2) except RIMS LPI (96.26%), CNR (93.99%), AGA (95.12%), and DJA (98.82%)

The horizontal and vertical accuracy results for all the sites remained below 3 meters (95% HPE) and 4 meters (95% VPE) respectively.

### **EDAS Service**

In terms of availability and latency, the observed performance for all the EDAS services fulfilled the targets (section 6) [RD-3].

### **ESMAS Service**

The EGNOS SoL assisted service for Maritime Users (ESMAS) SiS commitment was met, SiS availability was 100% (section 3).

### **EGNOS Time Service**

The EGNOS Time Service availability presented for the combination of both operational GEOs was 100% during all month.

The offset between the EGNOS Network Time and GPS time remained below 15 nanoseconds over the three previous months: April to June 2024.

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<sup>1</sup> The coverage percentages presented represent the ratio of area after applying the mapping projection, there may be a difference compared to the actual geographical area.

### 3 EGNOS SIS AVAILABILITY

In this document, **EGNOS SIS Availability** is defined as the percentage of time in the month during which at least one geostationary satellite broadcasts EGNOS messages.

In addition to the individual SIS Availability for PRN123 and PRN136, the following values are also reported:

- percentage of time in the month during which at least one geostationary satellite broadcasts EGNOS messages (PRN123 or PRN136);
- percentage of time in the month during which both operational geostationary satellites broadcast EGNOS messages.

EGNOS SIS monitoring for EGNOS Services Monthly Performance Report July-2024, reports the following reception percentage of an SBAS message:

- SIS – PRN123 or PRN136: **100%**
- SIS – PRN123 and PRN136: **99.99%**
- PRN123 Availability: **99.99%**
- PRN136 Availability: **99.99%**

The following Figure 1 presents the Availability of the signal in both EGNOS GEO satellites (PRN123 and PRN136). Red lines correspond to unavailability periods.

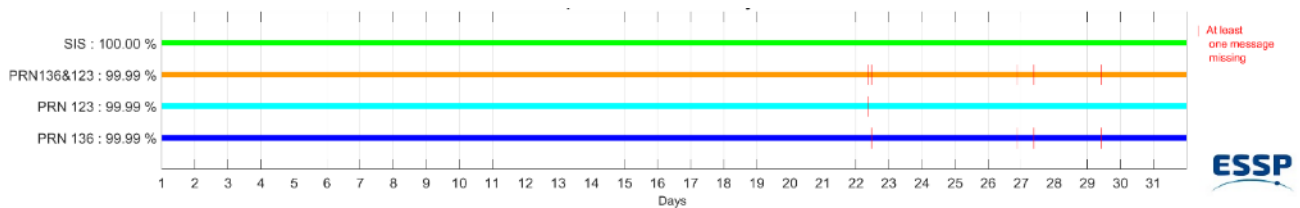


Figure 1 - EGNOS SIS & PRN Availability for July 2024



Figure 2 – Trend of EGNOS SIS Availability per GEO for the past 6 months (in green PRN 136; in purple PRN 123)

| Availability (%)                 | 2024-02 | 2024-03 | 2024-04 | 2024-05 | 2024-06 | 2024-07 |
|----------------------------------|---------|---------|---------|---------|---------|---------|
| PRN123                           | 99.99   | 99.99   | 99.99   | 99.92   | 99.99   | 99.99   |
| PRN136                           | 99.99   | 99.99   | 99.99   | 99.99   | 99.99   | 99.99   |
| At least one EGNOS GEO satellite | 100     | 100     | 100     | 100     | 100     | 100     |

Table 1 – EGNOS SIS Availability (%) on EGNOS GEO satellites

## 4 EGNOS OPEN SERVICE (OS)

### 4.1 Open Service Horizontal and Vertical Accuracy

Accuracy is a measure of the position error, which is the difference between the estimated navigation position and the actual position.

**EGNOS OS Horizontal (resp. Vertical) Accuracy** is reported as the 95<sup>th</sup> percentile of the Horizontal (resp. Vertical) Navigation System Error – HNSE (resp. VNSE) over the month, at the monitored sites when applying EGNOS messages.

The Table 2 provides the values of accuracy (95%) in meters measured for this month. See 0 for details of the stations where OS Accuracy is reported.

| Station                | HNSE 95% (m) | VNSE 95% (m) |
|------------------------|--------------|--------------|
| Agadir                 | 2.7          | 3.1          |
| Alberg                 | 0.8          | 1.4          |
| Athens                 | 1.2          | 2.2          |
| Berlin                 | 1.1          | 1.7          |
| Canary Islands         | 2.4          | 3.9          |
| Cork                   | 1.0          | 1.4          |
| Catania                | 1.2          | 2.4          |
| Djerba                 | 2.1          | 3.0          |
| Egilsstadir            | 0.8          | 1.5          |
| Glasgow                | 0.9          | 1.4          |
| Golbasi                | 1.2          | 2.0          |
| Gavle                  | 0.8          | 1.5          |
| Haifa                  | 0.0          | 0.0          |
| Jan Mayen              | 1.0          | 2.1          |
| Kirkenes               | 0.8          | 1.7          |
| Kuusamo                | 0.7          | 1.6          |
| Lappeenranta           | 0.8          | 1.5          |
| La Palma               | 2.4          | 3.2          |
| Lisboa                 | 1.3          | 2.3          |
| Madere                 | 1.7          | 2.4          |
| Malaga                 | 1.3          | 2.4          |
| Palma de Mallorca      | 1.1          | 2.0          |
| Reykjavik              | 1.0          | 1.9          |
| Roma                   | 1.1          | 1.9          |
| Santiago de Compostela | 1.2          | 1.7          |
| Sofia                  | 1.3          | 2.1          |
| Swanwick               | 1.2          | 1.6          |
| Toulouse               | 1.1          | 1.5          |
| Trondheim              | 0.8          | 1.5          |
| Tromsoe                | 0.8          | 1.8          |
| Warsaw                 | 1.1          | 1.5          |
| Zurich                 | 1.1          | 1.4          |

**Table 2 - EGNOS Open Service accuracy (95%)**

The Figure 3 and Figure 4 show the histograms and cumulative distribution functions of HNSE (Horizontal Navigation System Error) and VNSE (Vertical Navigation System Error) computed at the RIMS listed in Table 2 for each second of the reported month.

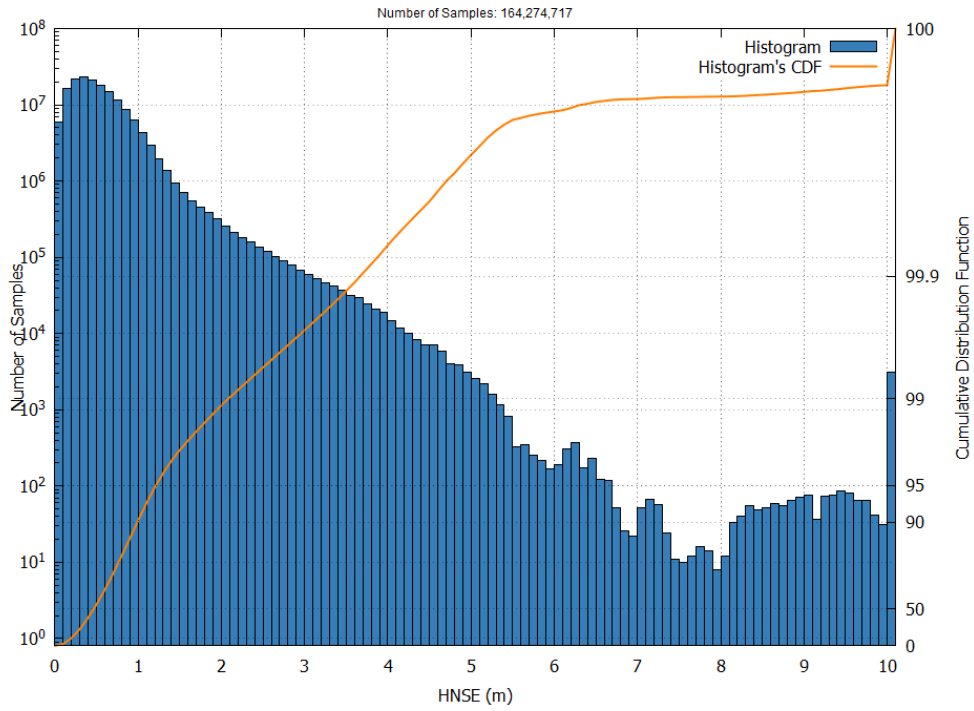


Figure 3 – EGNOS Open Service HNSE Histogram and Cumulative Probability in July 2024

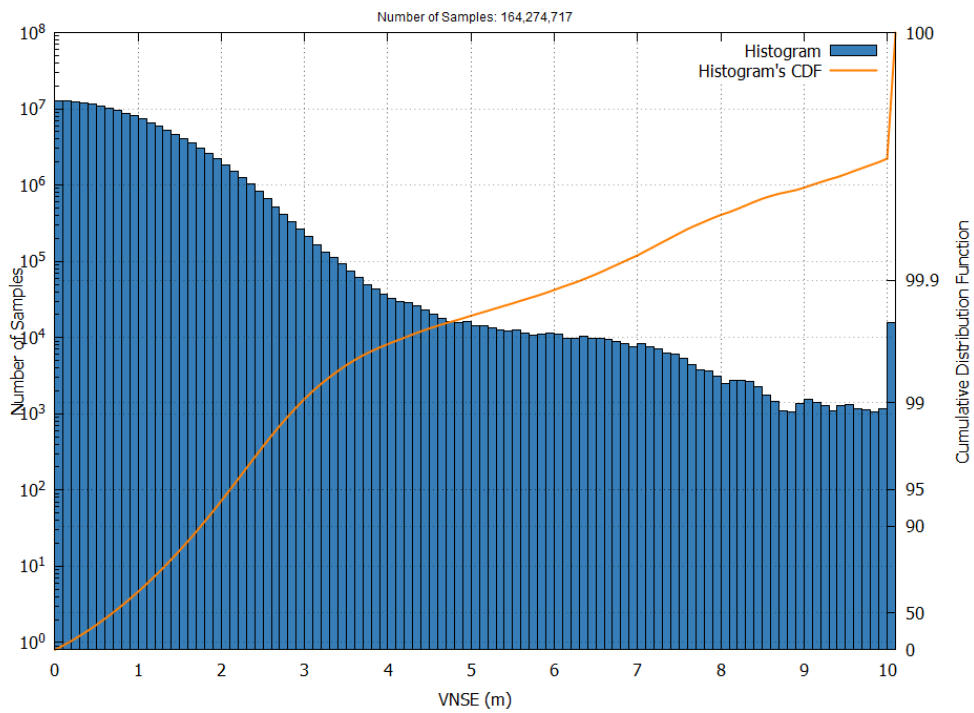


Figure 4 – EGNOS Open Service VNSE Histogram and Cumulative Probability in July 2024

## 4.2 EGNOS Open Service Availability

**EGNOS OS Availability performance** is defined in the present document as the percentage of time when the instantaneous HNSE is lower than 3 meters and the instantaneous VNSE is lower than 4 meters over the total number of samples with valid PA navigation solution.

The following Figure 5 presents the Open Service Availability measured by the monitoring stations for the reported month (RIMS sites with OS Availability lower than 99%, if any, are in red and RIMS sites with no data are in blue). See 0 for further details of the stations where OS Accuracy is reported.

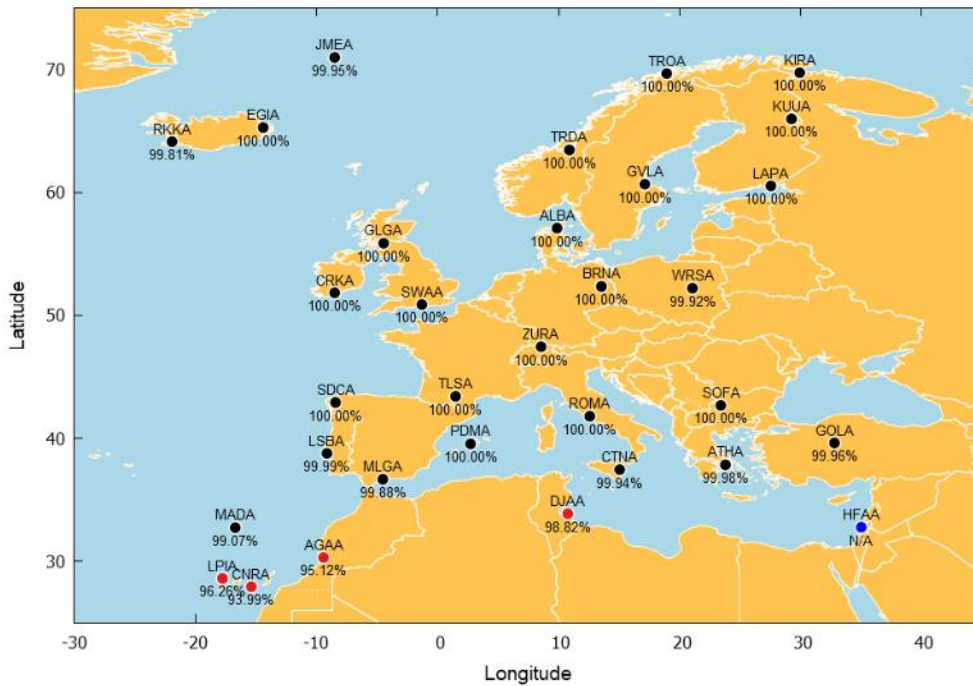


Figure 5 – EGNOS Open Service Availability at reference stations in July 2024

# 5 EGNOS SAFETY-OF-LIFE SERVICE (SOL)

## 5.1 EGNOS Non-Precision Approach (NPA)

### 5.1.1 EGNOS NPA Availability

**EGNOS NPA Availability** is defined as the percentage of samples in which the Horizontal Protection Level is below Alert Limit for NPA (HPL below 556m) over the total period. This value corresponds to the performance obtained under fault-free conditions using all satellites in view.

The Figure 6 presents EGNOS NPA Availability over the reported month. It must be noted that NPA Availability considering RAIM is not taken into account in this report.

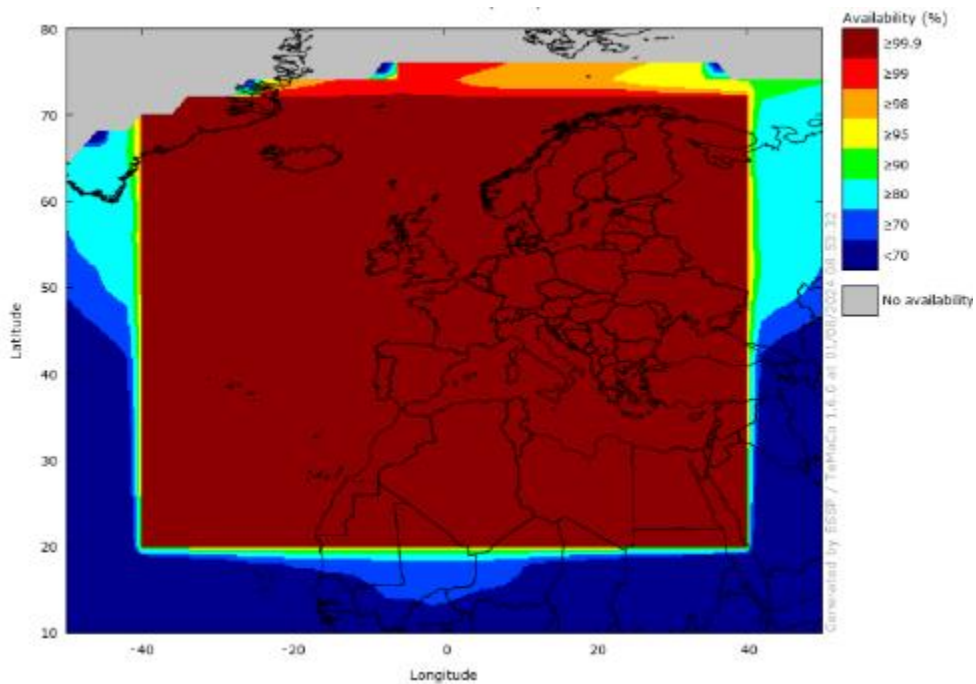


Figure 6 – EGNOS NPA Availability in July 2024

## 5.1.2 EGNOS NPA Continuity

**EGNOS NPA Continuity** is reported as the result of dividing the total number of single continuity events using a time-sliding window of 1 hour by the number samples with valid and available NPA navigation solution. A single continuity event occurs if the system is available at the start of the operation and in at least one second inside the following time-sliding window of 1 hour the system becomes not available. This value corresponds to the performance obtained under fault-free conditions using all satellites in view.

The Figure 7 presents the EGNOS NPA Continuity Risk measured for the last 6 months (in order to observe the minimum NPA Continuity performance committed in the SoL SDD  $-1 \times 10^{-3}/\text{hour}$ -, at least 6 months of data need to be evaluated due to the discrete nature of discontinuity events). It must be noted that NPA Continuity is computed in this report using only the EGNOS NPA solution and not considering the GPS RAIM solution when the EGNOS one is not available.

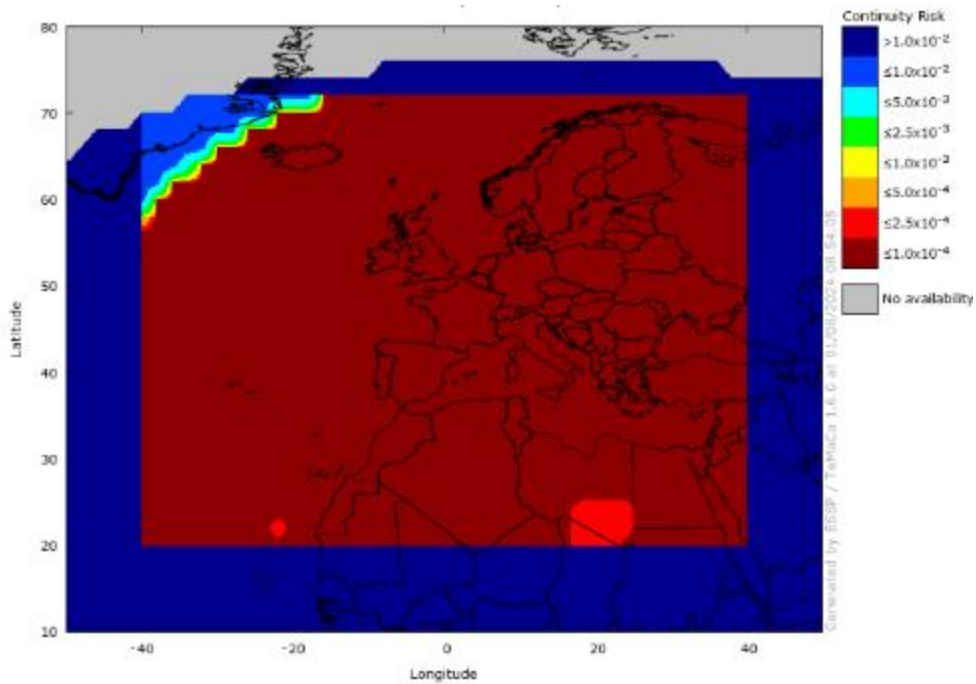


Figure 7 – EGNOS NPA Continuity over the last 6 months



### 5.1.3 EGNOS NPA Integrity Events

**EGNOS NPA Integrity Event** is defined as an event when the Navigation System Error is greater or equal to the corresponding Protection Level for NPA.

No integrity event was detected during the reported month.

**Safety Index** is defined as the relation between Navigation System Error and Protection Level (assuming NPA algorithms to compute  $xNSE$  and  $xPL$ ) for each second. Case of ratio  $xNSE/xPL$  is over 1, it indicates that a Misleading Information situation has occurred.

The Figure 8 shows the distribution of HSI (Horizontal Safety Index), which is computed at the different EGNOS stations for each second over the reported month. This histogram takes into account the epochs in which the NPA service was available (Protection Level < NPA Alarm Limit).

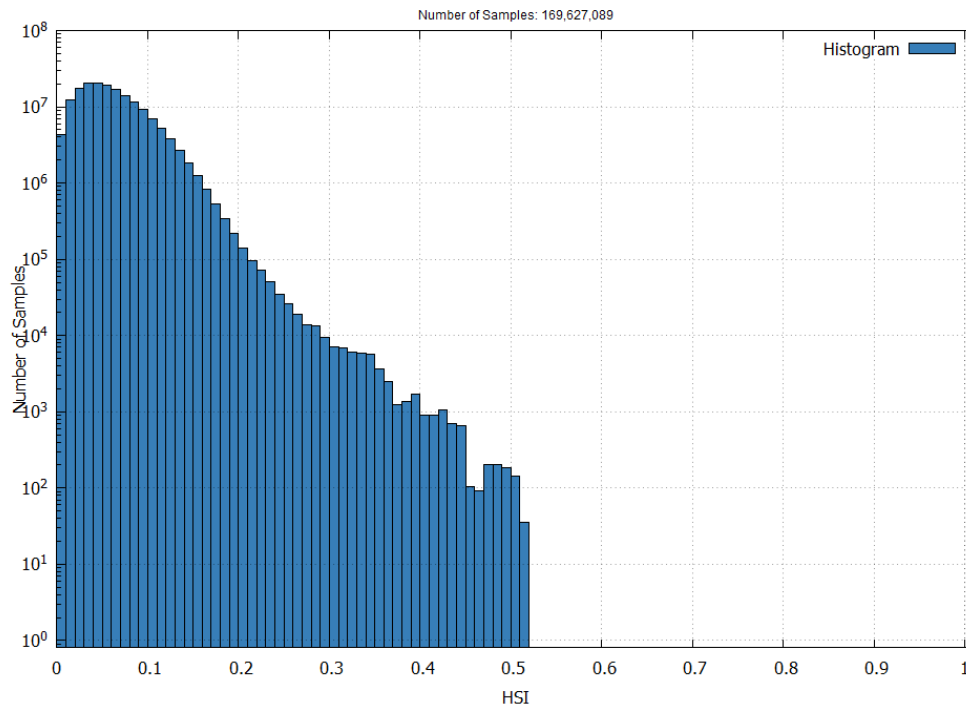


Figure 8 – EGNOS NPA Horizontal Safety Index in July 2024

### 5.1.4 EGNOS NPA Accuracy

**EGNOS NPA Accuracy** is reported as the 95<sup>th</sup> percentile of the Horizontal Navigation System Error (HNSE) over the month, at the monitored sites when the NPA service is available (HPL below 556 m).

The Figure 3 shows the NPA Accuracy values in meters. See 0 for further details of the stations where NPA Accuracy is reported.

| Station                | HNSE 95% (m) | % of samples in NPA available |
|------------------------|--------------|-------------------------------|
| Azores                 | 2.6          | 100.00%                       |
| Agadir                 | 2.9          | 100.00%                       |
| Alberg                 | 0.8          | 100.00%                       |
| Athens                 | 1.2          | 100.00%                       |
| Berlin                 | 1.1          | 100.00%                       |
| Canary Islands         | 2.4          | 100.00%                       |
| Cork                   | 1.0          | 100.00%                       |
| Catania                | 1.3          | 100.00%                       |
| Djerba                 | 3.7          | 100.00%                       |
| Egilsstadir            | 0.8          | 100.00%                       |
| Glasgow                | 0.9          | 100.00%                       |
| Golbasi                | 1.3          | 100.00%                       |
| Gavle                  | 0.8          | 100.00%                       |
| Haifa                  | N/A          | N/A                           |
| Jan Mayen              | 1.0          | 100.00%                       |
| Kirkenes               | 0.8          | 100.00%                       |
| Kuusamo                | 0.7          | 100.00%                       |
| Lappeenranta           | 0.8          | 100.00%                       |
| La Palma               | 2.4          | 100.00%                       |
| Lisboa                 | 1.3          | 100.00%                       |
| Madere                 | 1.7          | 100.00%                       |
| Malaga                 | 1.4          | 100.00%                       |
| Palma de Mallorca      | 1.1          | 100.00%                       |
| Reykjavik              | 1.0          | 100.00%                       |
| Roma                   | 1.1          | 100.00%                       |
| Santiago de Compostela | 1.2          | 100.00%                       |
| Sofia                  | 1.3          | 100.00%                       |
| Swanwick               | 1.2          | 100.00%                       |
| Toulouse               | 1.1          | 100.00%                       |
| Trondheim              | 0.8          | 100.00%                       |
| Tromsoe                | 0.8          | 100.00%                       |
| Warsaw                 | 1.1          | 100.00%                       |
| Zurich                 | 1.1          | 100.00%                       |

**Table 3 - EGNOS NPA Horizontal Accuracy (95%) and percentage of time in NPA available**

The Figure 9 shows the histogram and cumulative probability function of HNSE (Horizontal Navigation System Error) computed at RIMS sites listed in Table 3 for each second of the reported month.

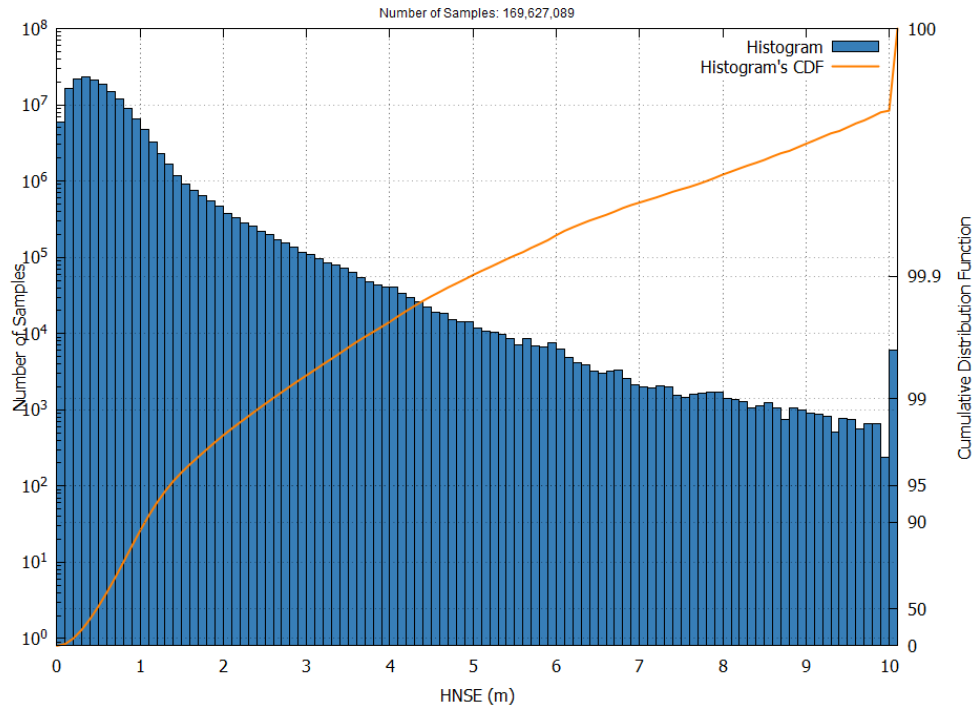


Figure 9 – EGNOS NPA HNSE Histogram and Cumulative Probability in July 2024

## 5.2 EGNOS Approach with Vertical guidance (APV-I)

### 5.2.1 EGNOS APV-I Availability

**EGNOS APV-I Availability** is defined as the percentage of epochs in a month in which the Protection Level are below Alert Limits for this APV-I service (HPL<40m and VPL<50m) over the total period. This value corresponds to the performance obtained under fault-free conditions using all satellites in view.

The following Figure 10 presents the EGNOS APV-I Availability over the reported month using GEO-combined maps for the operational EGNOS GEOs.

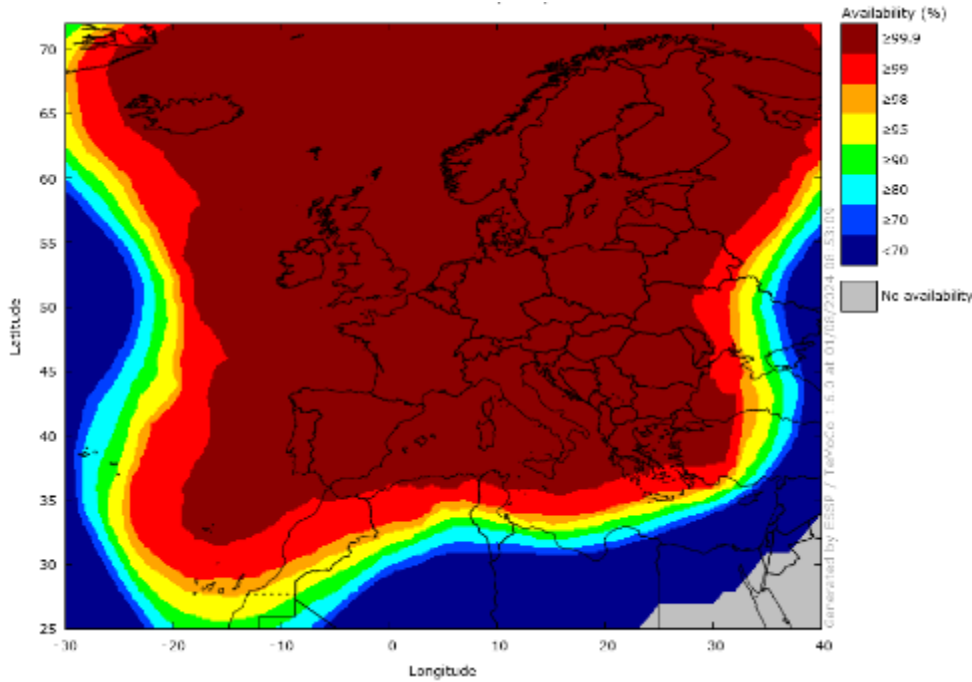


Figure 10 – EGNOS APV-I Availability in July 2024

Figure 11 here below presents the evolution of the daily APV-I Availability (99%) compliance area. The percentage is computed with respect to ECAC Landmasses as specified in the EGNOS Safety of Life SDD [RD-2]. The information is presented for the last 3 months before July 2024.

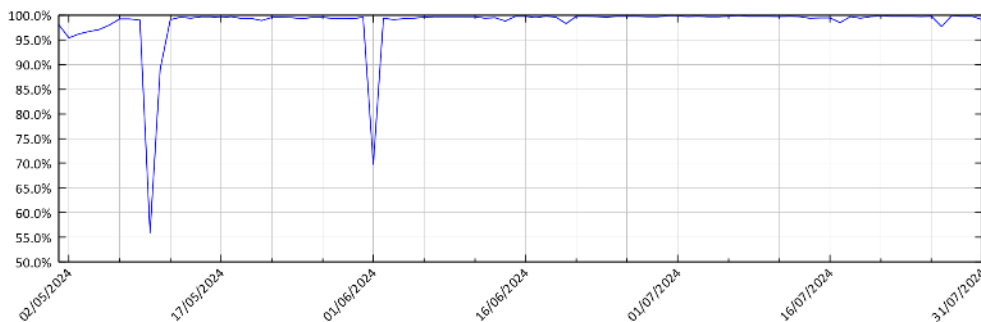


Figure 11 – EGNOS APV-I Availability compliance trend (compliance area percentage with regards to ECAC landmasses)

## 5.2.2 EGNOS APV-I Continuity Risk

**EGNOS APV-I Continuity Risk** is defined as the result of dividing the total number of single continuity events using a time-sliding window of 15 seconds by the number of samples with valid and available APV-I navigation solution. A single continuity event occurs if the system is available at the start of the operation and in at least one of the following 15 seconds the system becomes not available. This value corresponds to the performance obtained under fault-free conditions using all satellites in view.

The following Figure 12 presents the EGNOS APV-I Continuity over the reported month using GEO-combined maps for the operational EGNOS GEOs.

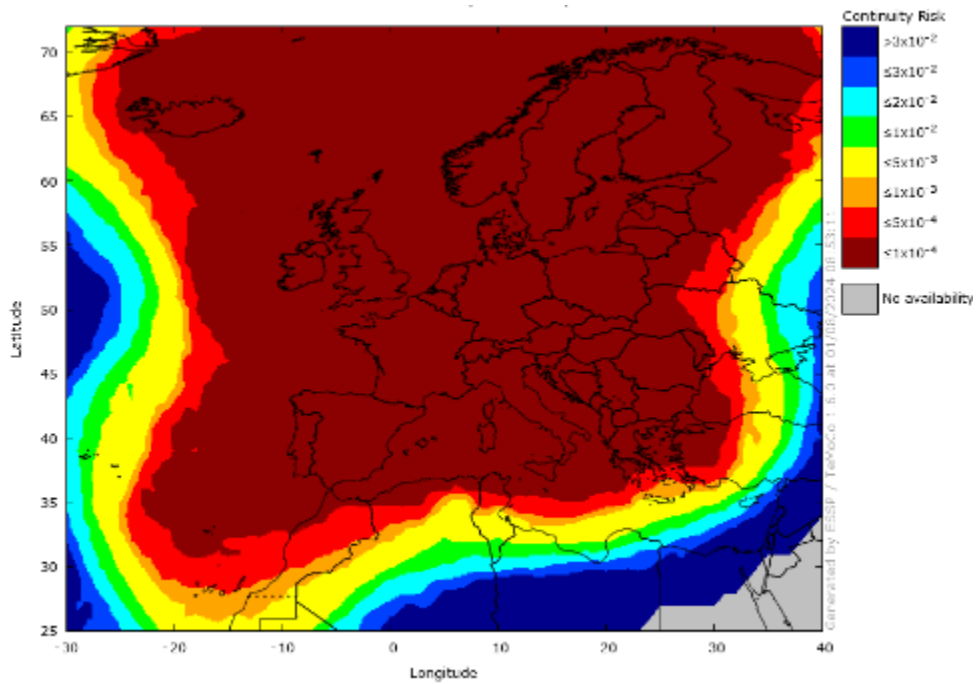


Figure 12 – EGNOS APV-I Continuity in July 2024

### 5.2.3 EGNOS APV-I Integrity

**EGNOS APV-I Integrity Event** is defined as an event when the Navigation System Error is greater or equal to the corresponding Protection Level for APV-I.

No integrity event was detected during the reported month.

**Safety Index** is defined as the relation between Navigation System Error versus Protection Level (assuming PA algorithms to compute  $xNSE$  and  $xPL$ ) for each second. In case of ratio  $xPE/xPL$  is over 1; it indicates that a Misleading Information situation has occurred.

The Figure 13 and Figure 14, her after, provide the histogram for HSI (Horizontal Safety Index) and VSI (Vertical Safety Index) for each second when accumulating measurements from the different EGNOS stations over the reported month. Only those samples whose Protection Level is below the APV-I Alarm Limit have been considered in the histograms.

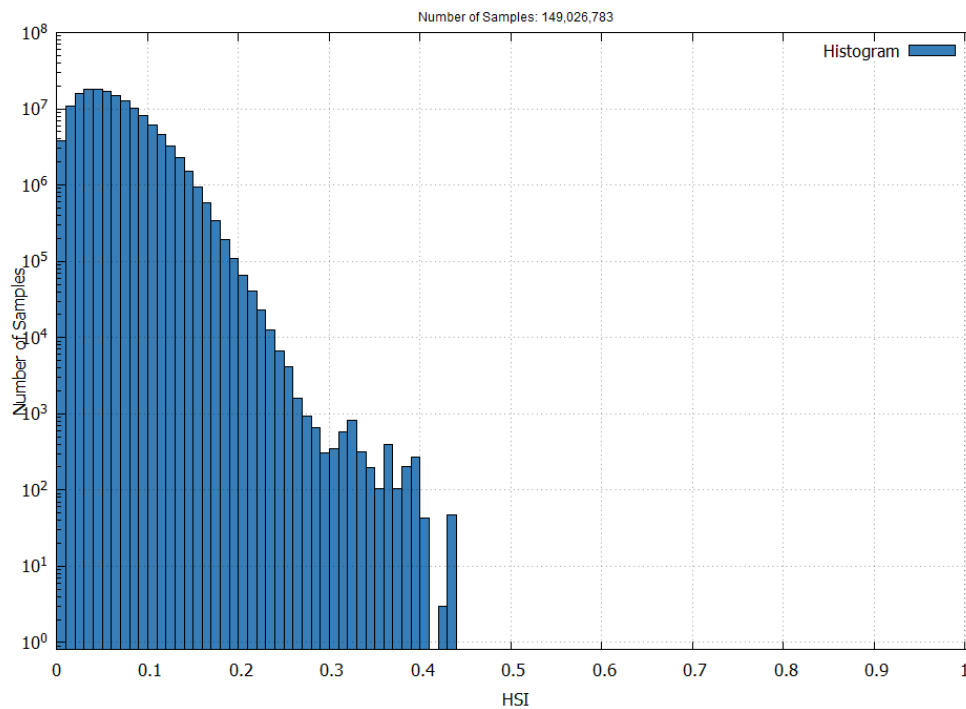


Figure 13 – EGNOS APV-I Horizontal Safety Index in July 2024

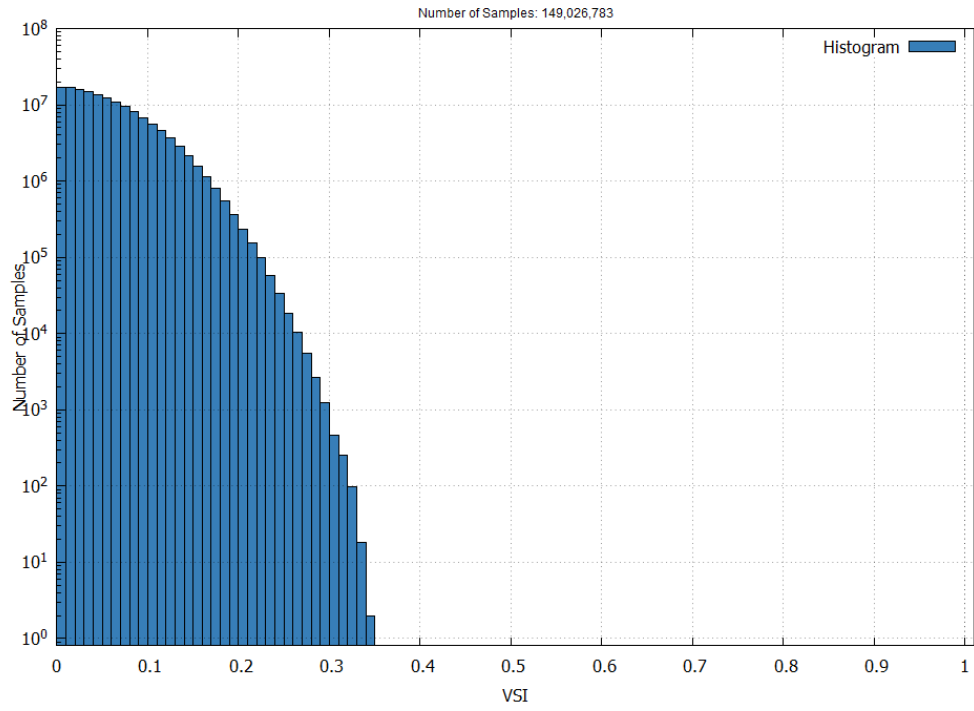


Figure 14 – EGNOS APV-I Vertical Safety Index in July 2024

## 5.2.4 EGNOS APV-I Accuracy

**EGNOS APV-I Accuracy** is reported as the 95<sup>th</sup> percentile of the Horizontal and Vertical Navigation System Error over the month, at the monitored sites when the APV-I service is available (HPL<40m and VPL<50m).

The following Table 4 shows the monthly APV-I Accuracy values in meters for the combined GEO satellite signal. See 0 for further details of the stations where APV-I Accuracy is reported.

| Station                | HNSE 95% (m) | VNSE 95% (m) | % of samples in APV-I service available |
|------------------------|--------------|--------------|-----------------------------------------|
| Alberg                 | 0.8          | 1.4          | 100.00%                                 |
| Athens                 | 1.2          | 2.2          | 99.99%                                  |
| Berlin                 | 1.1          | 1.7          | 100.00%                                 |
| Cork                   | 1.0          | 1.4          | 100.00%                                 |
| Catania                | 1.2          | 2.4          | 99.94%                                  |
| Djerba                 | 2.0          | 3.0          | 98.38%                                  |
| Egilsstadir            | 0.8          | 1.5          | 100.00%                                 |
| Glasgow                | 0.9          | 1.4          | 100.00%                                 |
| Golbasi                | 1.2          | 2.0          | 99.13%                                  |
| Gavle                  | 0.8          | 1.5          | 100.00%                                 |
| Jan Mayen              | 1.0          | 2.1          | 100.00%                                 |
| Kirkenes               | 0.8          | 1.7          | 100.00%                                 |
| Kuusamo                | 0.7          | 1.6          | 100.00%                                 |
| Lappeenranta           | 0.8          | 1.5          | 100.00%                                 |
| Lisboa                 | 1.3          | 2.3          | 100.00%                                 |
| Madere                 | 1.7          | 2.4          | 99.96%                                  |
| Malaga                 | 1.3          | 2.4          | 99.96%                                  |
| Palma de Mallorca      | 1.1          | 2.0          | 100.00%                                 |
| Reykjavik              | 0.9          | 1.9          | 99.95%                                  |
| Roma                   | 1.1          | 1.9          | 100.00%                                 |
| Santiago de Compostela | 1.2          | 1.7          | 100.00%                                 |
| Sofia                  | 1.3          | 2.1          | 100.00%                                 |
| Swanwick               | 1.2          | 1.6          | 100.00%                                 |
| Toulouse               | 1.1          | 1.5          | 100.00%                                 |
| Trondheim              | 0.8          | 1.5          | 100.00%                                 |
| Tromsoe                | 0.8          | 1.8          | 100.00%                                 |
| Warsaw                 | 1.1          | 1.5          | 100.00%                                 |
| Zurich                 | 1.1          | 1.4          | 100.00%                                 |

**Table 4 - EGNOS APV-I Accuracy (95%) and percentage of time in APV-I mode at reference stations**

The Figure 15 and Figure 16, her after, show the histogram and cumulative distribution function of HNSE (Horizontal Navigation System Error) and VNSE (Vertical Navigation System Error) computed at the RIMS listed in Table 4 for each second of the reported month.



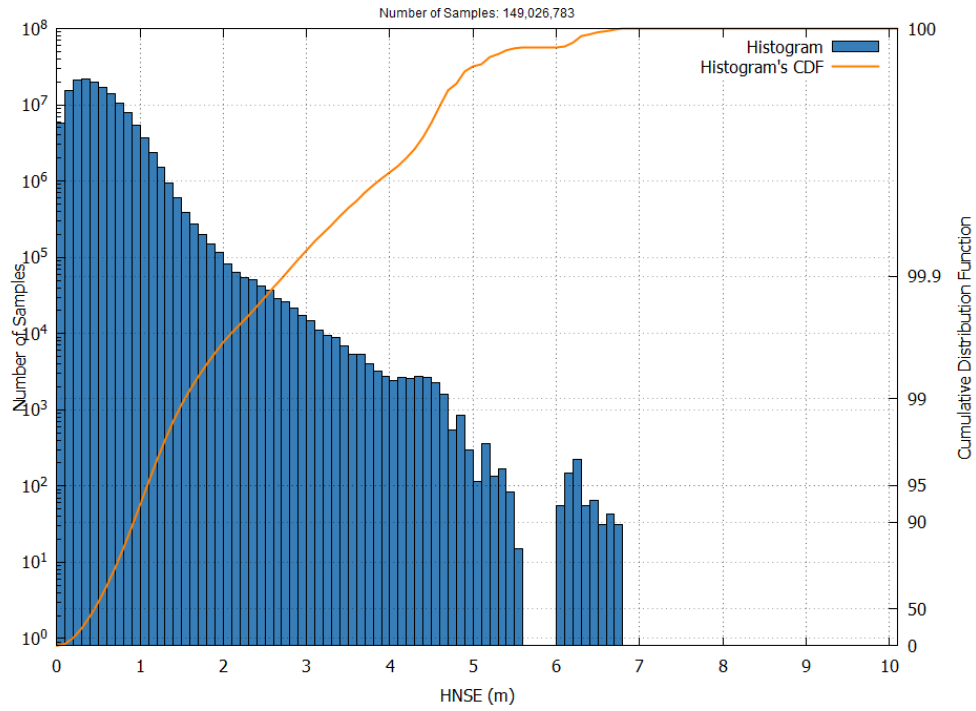


Figure 15 – EGNOS APV-I HNSE Histogram and Cumulative Probability in July 2024

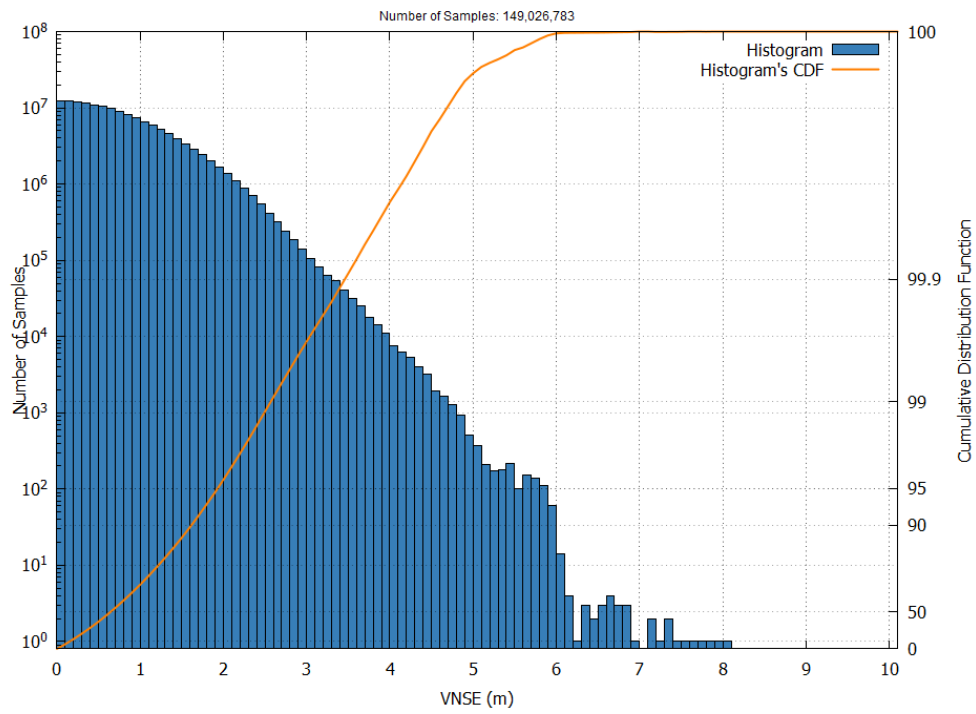


Figure 16 – EGNOS APV-I VNSE Histogram and Cumulative Probability in July 2024

### 5.2.5 EGNOS APV-I Performance at airports

For the reported month the Availability at airports with EGNOS-based procedures for APV-I service are shown in Figure 17 and the number of outages is shown in Figure 18.

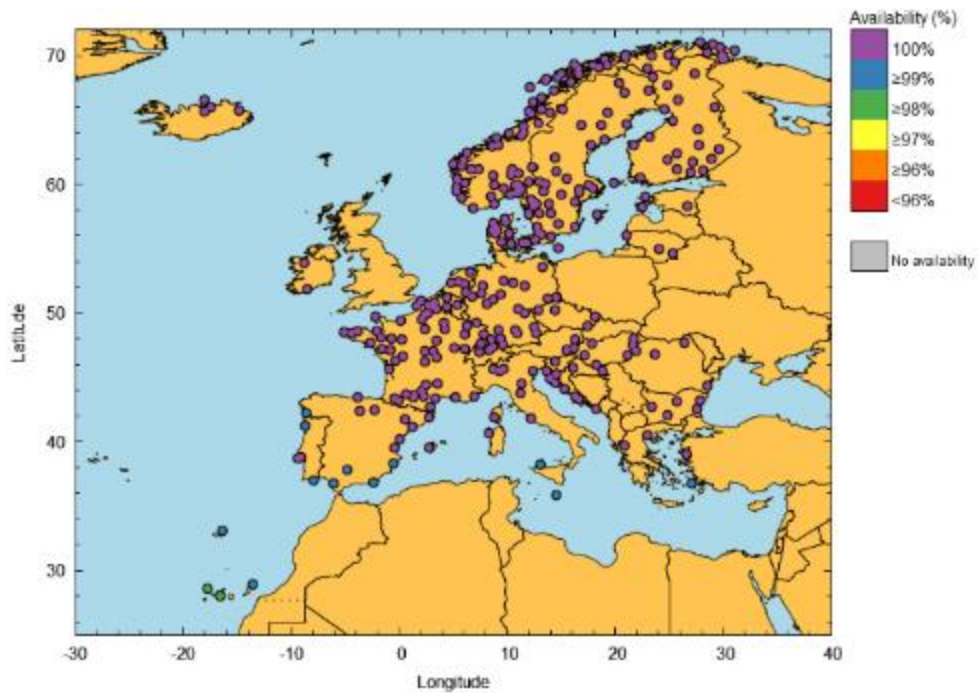


Figure 17 – EGNOS APV-I Availability at airports in July 2024

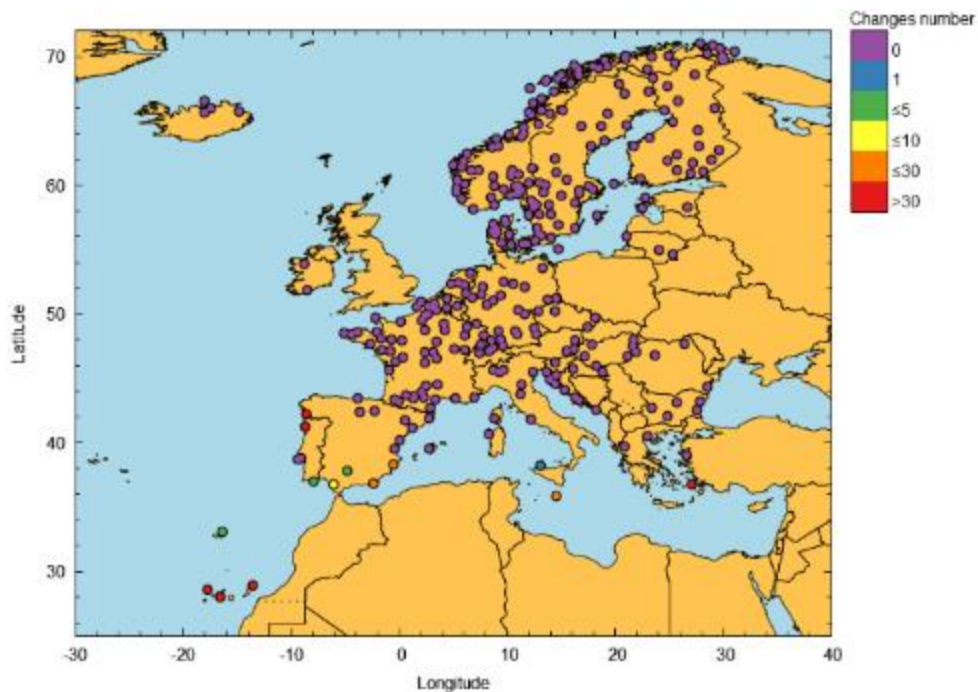


Figure 18 – EGNOS APV-I outages in July 2024

See 0 for details of the APV-I Availability and Continuity at airports with published procedures using EGNOS.

## 5.3 EGNOS Localizer Performance with Vertical Guidance to a decision altitude of 200ft (LPV-200)

### 5.3.1 EGNOS LPV-200 Availability

**EGNOS LPV-200 Availability** is defined as the percentage of epochs in a month in which the Protection Level are below Alert Limits for this LPV-200 service (HPL<40m and VPL<35m) over the total period. This value corresponds to the performance obtained under fault-free conditions using all satellites in view.

The following Figure 19 presents the EGNOS LPV-200 Availability over the reported month using GEO-combined maps for the operational EGNOS GEOs.

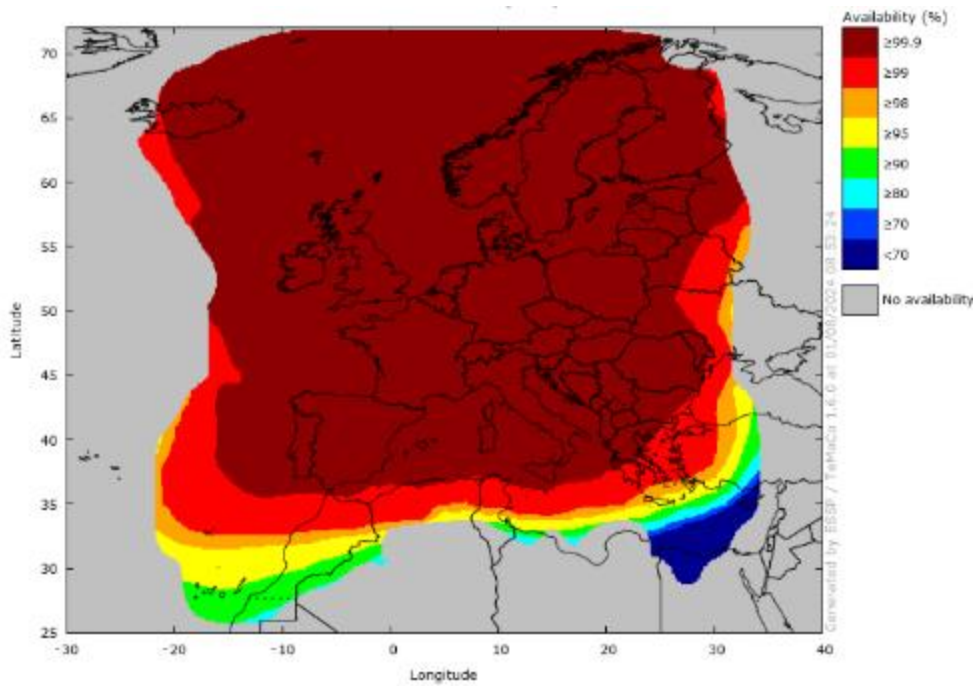


Figure 19 – EGNOS LPV-200 Availability in July 2024

Below, the evolution of the daily LPV200 Availability (99%) compliance area is presented. The percentage is computed with respect to ECAC Landmasses as specified in the EGNOS Safety of Life SDD [RD-2]. The information is presented for the last 3 months before July 2024.

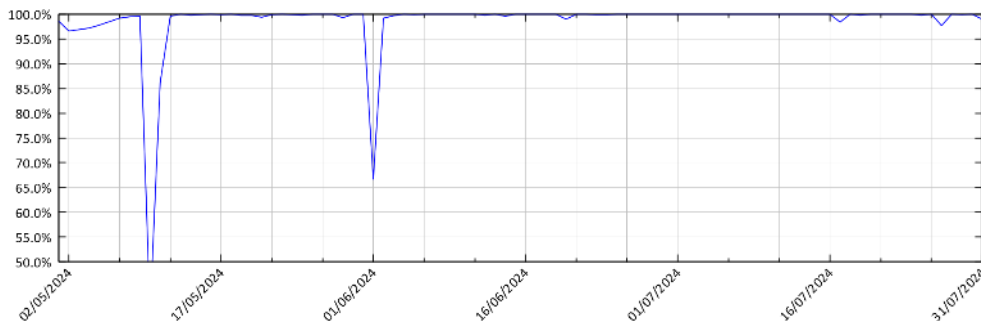


Figure 20 – EGNOS LPV-200 Availability compliance trend for the last 3 months before July 2024

### 5.3.2 EGNOS LPV-200 Continuity Risk

**EGNOS LPV-200 Continuity Risk** is defined as the result of dividing the total number of single continuity events using a time-sliding window of 15 seconds by the number of samples with valid and available LPV-200 navigation solution. A single continuity event occurs if the system is available at the start of the operation and in at least one of the following 15 seconds the system becomes not available. This value corresponds to the performance obtained under fault-free conditions using all satellites in view.

The following Figure 21 presents the EGNOS LPV-200 Continuity over the reported month using GEO-combined maps for the operational EGNOS GEOs.

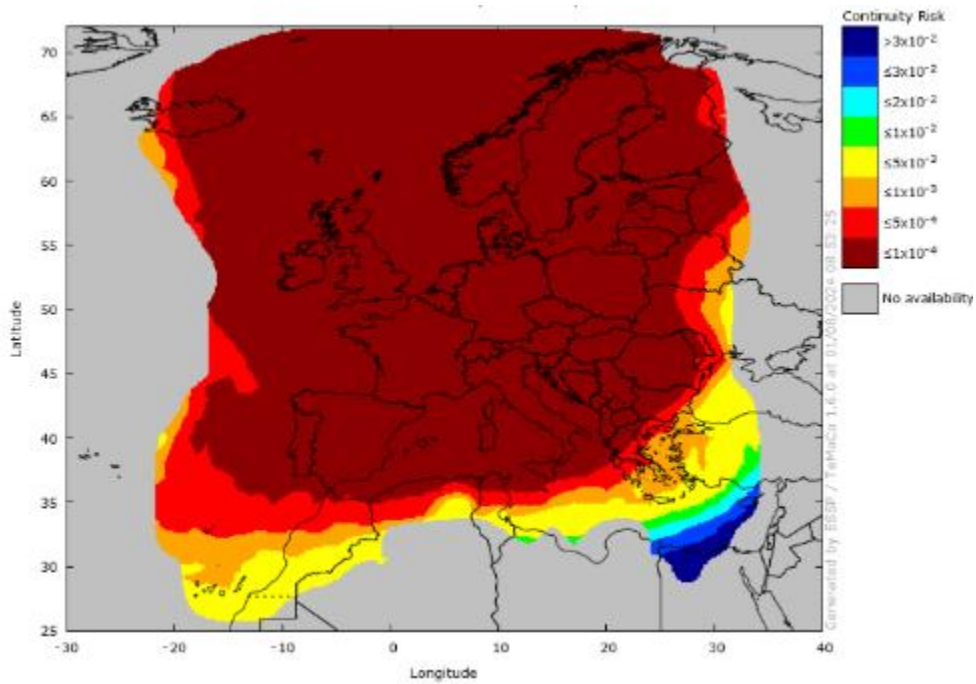


Figure 21 – EGNOS LPV-200 Continuity<sup>2</sup> in July 2024

<sup>2</sup> The lack of additional performance levels in grey areas is due to the non-compliance in this region with the accuracy requirements imposed to LPV-200 service level. For more details please refer to section 6.3.3.1 of the EGNOS Safety of Life SDD [RD-2].

### 5.3.3 EGNOS LPV-200 Integrity

**EGNOS LPV-200 Integrity Event** is defined as an event when the Navigation System Error is greater or equal to the corresponding Protection Level for LPV-200.

No integrity event was detected during the reported month.

**Safety Index** is defined as the relation between Navigation System Error versus Protection Level (assuming PA algorithms to compute  $xNSE$  and  $xPL$ ) for each second. In case of ratio  $xPE/xPL$  is over 1; it indicates that a Misleading Information situation has occurred.

The Figure 22 and Figure 23, here after, provide the histograms for HSI (Horizontal Safety Index) and VSI (Vertical Safety Index) for each second when accumulating measurements from the different EGNOS stations over the reported month. Only those samples whose Protection Level is below the LPV-200 Alarm Limit have been considered in the histograms.

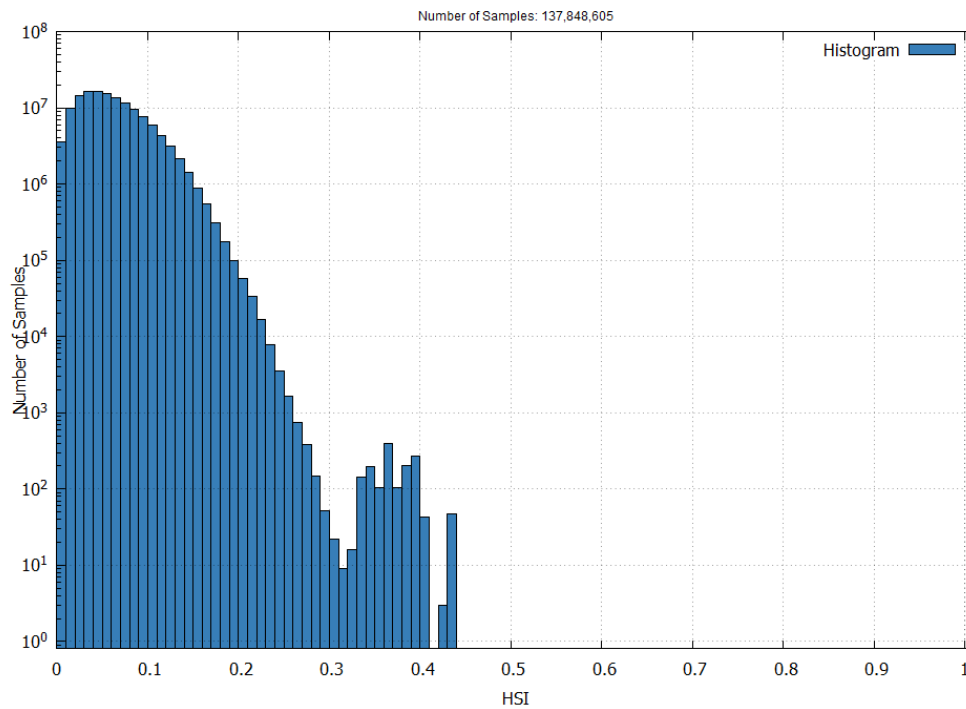


Figure 22 – EGNOS LPV-200 Horizontal Safety Index in July 2024

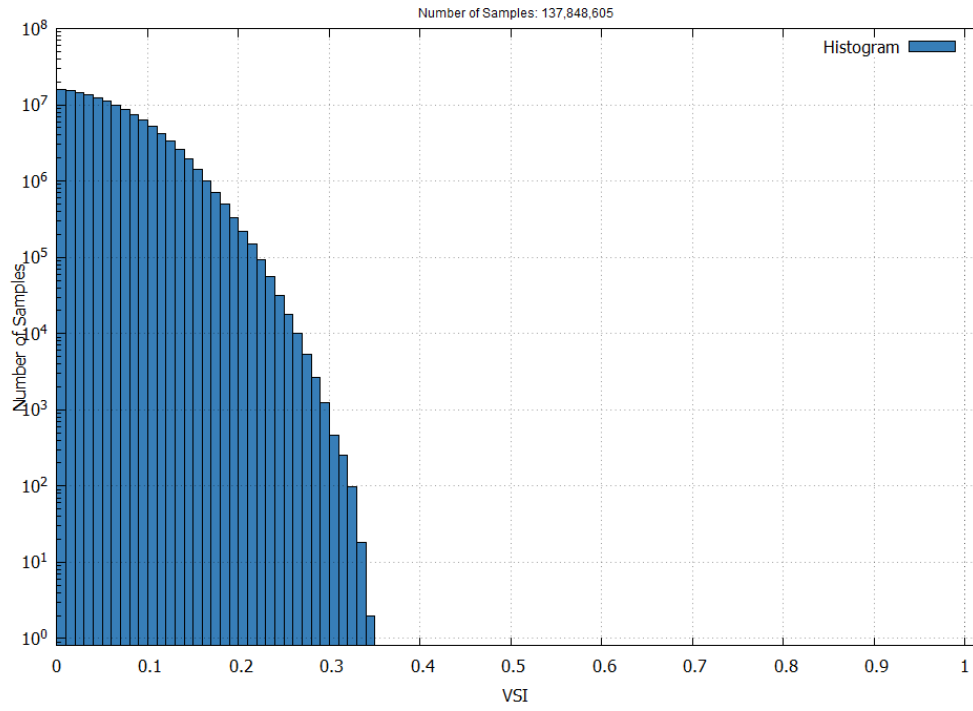


Figure 23 – EGNOS LPV-200 Vertical Safety Index in July 2024

### 5.3.4 EGNOS LPV-200 Accuracy

**EGNOS LPV-200 Accuracy** is reported as the 95<sup>th</sup> percentile of the Horizontal and Vertical Navigation System Error over the month, at the monitored sites when the LPV-200 service is available (HPL<40m and VPL<35m).

The following table shows the monthly LPV-200 Accuracy values in meters for the combined GEO satellite signal. See 0 for further details of the stations where LPV-200 Accuracy are reported.

| Station                | HNSE 95% (m) | VNSE 95% (m) | % of samples in LPV-200 service available |
|------------------------|--------------|--------------|-------------------------------------------|
| Alberg                 | 0.8          | 1.4          | 100.00%                                   |
| Athens                 | 1.2          | 2.2          | 99.83%                                    |
| Berlin                 | 1.1          | 1.7          | 100.00%                                   |
| Cork                   | 1.0          | 1.4          | 100.00%                                   |
| Catania                | 1.2          | 2.4          | 99.94%                                    |
| Djerba                 | 2.0          | 3.0          | 97.82%                                    |
| Egilsstadir            | 0.8          | 1.5          | 99.99%                                    |
| Glasgow                | 0.9          | 1.4          | 100.00%                                   |
| Golbasi                | 1.2          | 2.0          | 95.59%                                    |
| Gavle                  | 0.8          | 1.5          | 100.00%                                   |
| Jan Mayen              | 1.0          | 2.1          | 99.98%                                    |
| Kuusamo                | 0.7          | 1.6          | 99.91%                                    |
| Lappeenranta           | 0.8          | 1.5          | 100.00%                                   |
| Lisboa                 | 1.3          | 2.3          | 100.00%                                   |
| Malaga                 | 1.3          | 2.4          | 99.95%                                    |
| Palma de Mallorca      | 1.1          | 2.0          | 100.00%                                   |
| Reykjavik              | 0.9          | 1.8          | 99.72%                                    |
| Roma                   | 1.1          | 1.9          | 100.00%                                   |
| Santiago de Compostela | 1.2          | 1.7          | 100.00%                                   |
| Sofia                  | 1.3          | 2.1          | 100.00%                                   |
| Swanwick               | 1.2          | 1.6          | 100.00%                                   |
| Toulouse               | 1.1          | 1.5          | 100.00%                                   |
| Trondheim              | 0.8          | 1.5          | 100.00%                                   |
| Tromsoe                | 0.8          | 1.8          | 100.00%                                   |
| Warsaw                 | 1.1          | 1.5          | 100.00%                                   |
| Zurich                 | 1.1          | 1.4          | 100.00%                                   |

**Table 5 – EGNOS LPV-200 Accuracy (95%) and percentage of time in LPV-200 mode at reference stations**

The Figure 24 and Figure 25, here after, show the histogram and cumulative distribution function of HNSE (Horizontal Navigation System Error) and VNSE (Vertical Navigation System Error) computed at the RIMS sites of Table 5 for each second of the reported month.

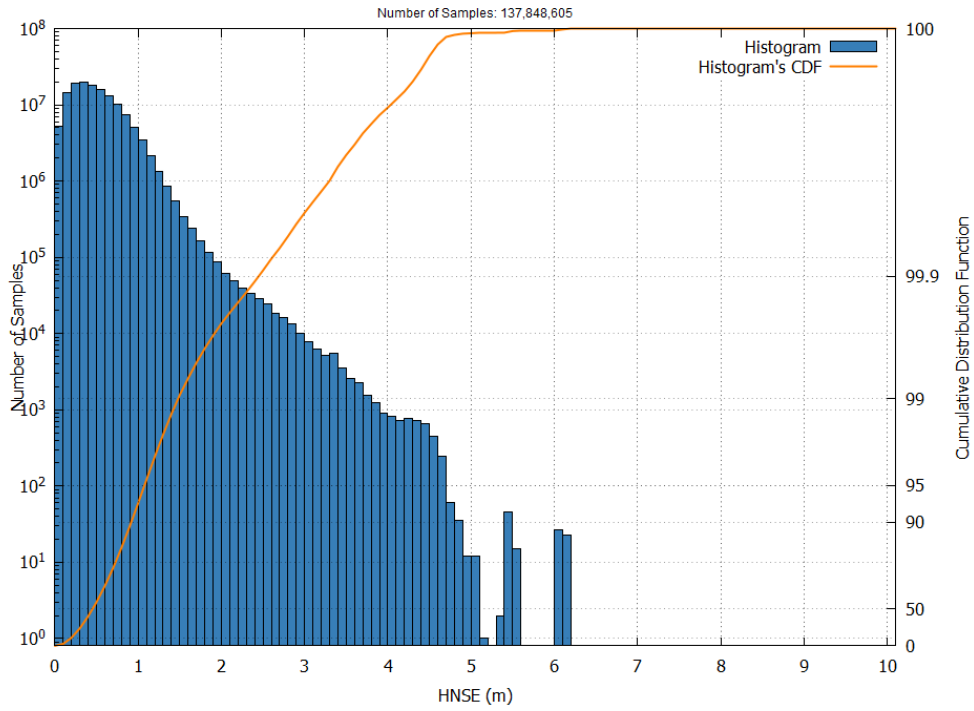


Figure 24 – EGNOS LPV-200 HNSE Histogram and Cumulative Probability in July 2024

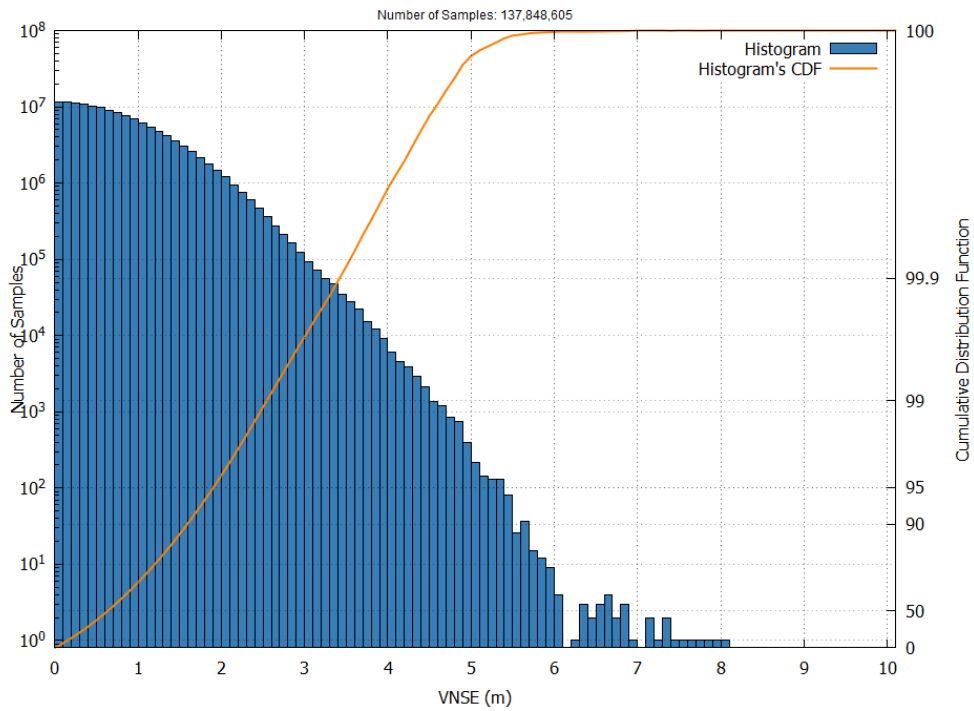


Figure 25 – EGNOS LPV-200 VNSE Histogram and Cumulative Probability in July 2024



### 5.3.5 EGNOS LPV-200 Performance at airports

For the reported month the Availability at airports with EGNOS-based procedures for LPV-200 service are shown in Figure 26 and the number of outages is shown in Figure 27.

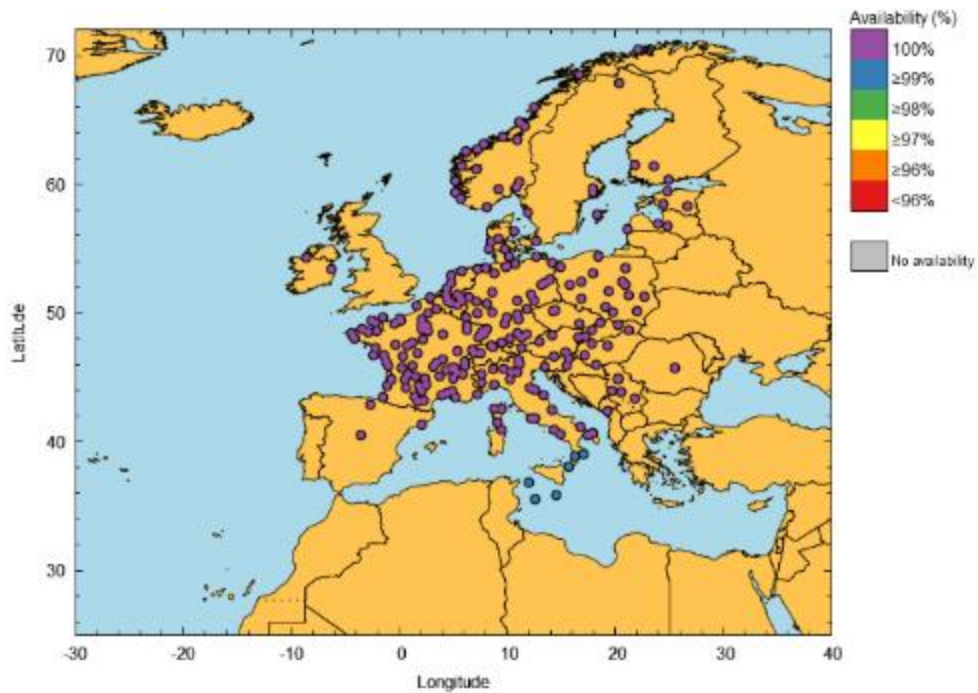


Figure 26 – EGNOS LPV-200 Availability at airports in July 2024

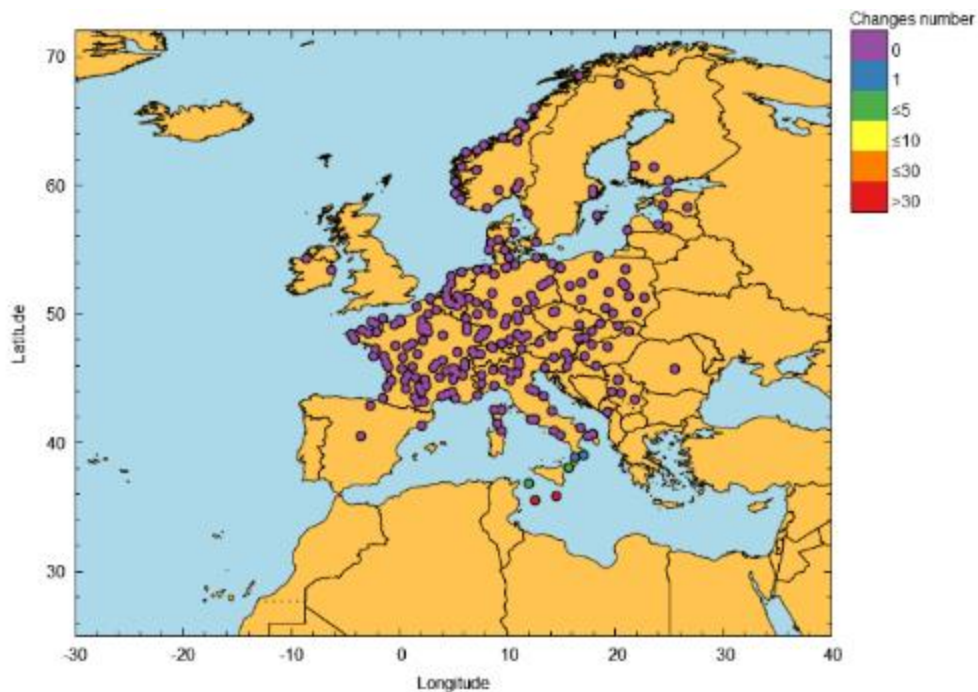


Figure 27 – EGNOS LPV-200 outages in July 2024

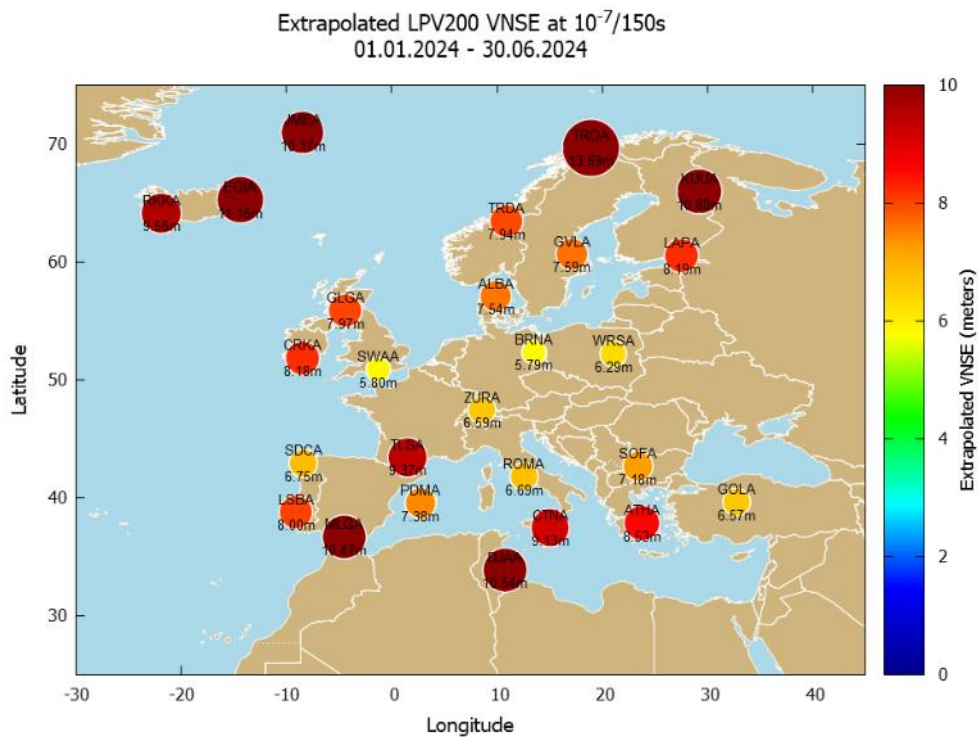
See 0 for details of the LPV-200 Availability and Continuity at airports with published procedures using EGNOS.

### 5.3.6 EGNOS LPV-200 accuracy extrapolated at 10-7/150s

This section presents the results of extrapolating the accuracy results for every station to 10-7/150 sec. This consists on the characterization of the accuracy distribution tails by means of a Gaussian extrapolation applied to the vertical navigation error.

This information will be updated every six months within the monthly reports of January and July and containing the reporting period corresponding to each semester of the year.

The following results present the values obtained from 1st January 2024 to 30th June 2024. For this period, not all the RIMS within LPV200 commitment map present extrapolated accuracy values within the requirement:  $Pr(VNSE > 10m) < 10^{-7}/150s$ . The exceptions are RIMS EGIA, JMEA, TROA, KUUA, MLGA and DJAA. Next map shows this information from a geographical point of view:



**Figure 28 – Extrapolated VNSE at 10-7/150s in the RIMS within the LPV200 commitment**

For detailed information of VNSE histogram data extrapolated at 10-7/150s for each RIMS location, please refer to 0

## 6 EGNOS DATA ACCESS SERVICE (EDAS)

EDAS (EGNOS Data Access Service) offers internet-based access to EGNOS data [RD-3]. It is the single point of access for the data collected and generated by the EGNOS infrastructure composed of ground stations distributed over Europe and North Africa.

The main data provided by EDAS are:

- Raw GPS, GLONASS and EGNOS GEO observations and navigation data collected by the entire network of Ranging and Integrity Monitoring Stations (RIMS) and Navigation Land Earth Stations (NLES).
- EGNOS augmentation messages, as normally received by users via the EGNOS Geostationary satellites.

These data are provided through different EDAS Services, and in different formats, to satisfy the complete set of applications and needs. For a description of the EDAS services, please refer to the EDAS SDD [RD-3].

Additional information on the EDAS services is available in the EDAS section of the EGNOS User Support website (<https://edas-maritime.gsc-europa.eu>) including the [EDAS services status in real-time](#).

Table 6 presents the performance of EDAS Services (please refer to the EDAS SDD [RD-3] for definition details) corresponding to EGNOS Services Monthly Performance Report July-2024:

- Availability: Percentage of time during which the service provides the data according to the specifications.
- Latency: Average of the percentile 95% latencies monitored for every 5 minutes period within the month.

| EDAS Service           |                   | Availability | Latency (ms) |
|------------------------|-------------------|--------------|--------------|
| Service Level 0        | -                 | 99.99%       | 638.84       |
| Service Level 2        | -                 | 99.99%       | 641.06       |
| Ntrip Service          | -                 | 99.99%       | 602.65       |
| SISNeT Service         | GEO Operational 1 | 99.98%       | 48.06        |
|                        | GEO Operational 2 | 99.98%       | 48.35        |
| Data Filtering Service | RIMS A            | 99.99%       | 572.23       |
|                        | Central           | 99.99%       | 442.23       |
|                        | MEDA              | 99.99%       | 471.97       |
|                        | North-East        | 99.99%       | 269.48       |
|                        | North-West        | 99.99%       | 516.55       |
|                        | South-West        | 99.99%       | 502.52       |
| FTP Service            | -                 | 100.00%      | N/A          |

**Table 6 – Performance of EDAS Services**

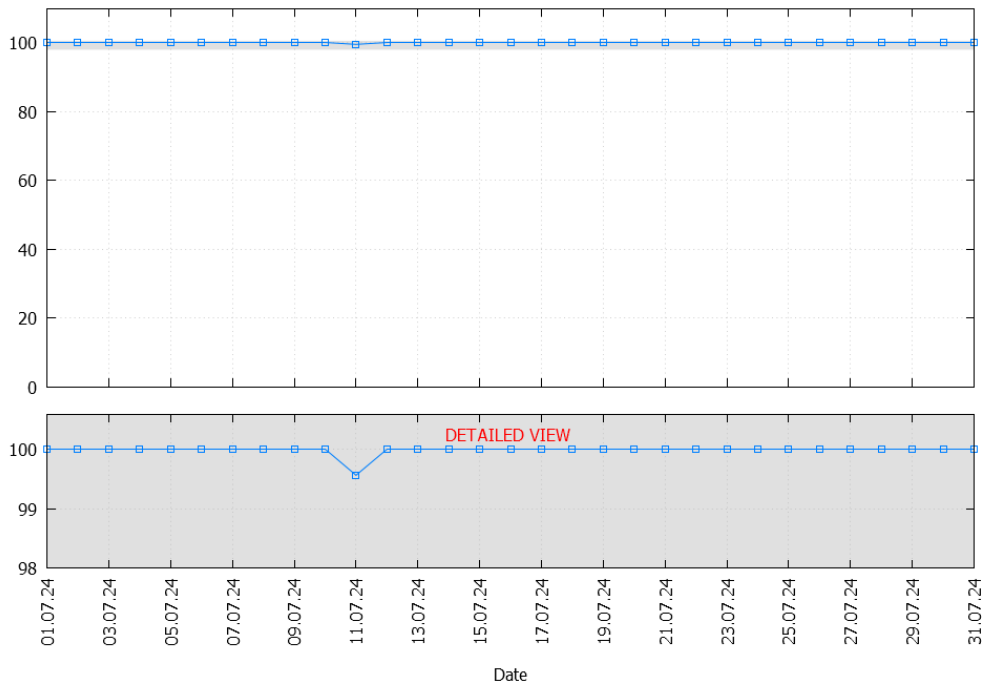
The availability figures reported in the table above were affected by a sporadic EDAS Outage during a notified maintenance activity on July 31<sup>st</sup>.

# 7 EGNOS TIME SERVICE

The EGNOS Time Service supports timing application by providing specific corrections that allow the tracing of EGNOS Network Time (ENT) to the physical realisation of the Coordinated Universal Time by Observatoire de Paris, UTC.

The **EGNOS Time Service Availability**<sup>3</sup> is computed as the percentage of time per day in which it is possible to obtain the time solution referred to UTC scale by applying a valid offset between the EGNOS Network Time (ENT) and the UTC scale, provided through the EGNOS Message Type 12.

The EGNOS Time Service availability presented for the combination of both operational GEOs was 100% during all month.



**Figure 29 – EGNOS Time Service Availability in July 2024**

The EGNOS Network Time is computed assuring its alignment with the GPS timescale. Due to this requirement, the offset between both timescales is below 50ns. The Figure 30 shows the relative consistency of both ENT and GPS timescales for the three months previous to the reported months, i.e., from April to June 2024. It can be observed that the offset between them remains below 15 nanoseconds.

<sup>3</sup> EGNOS Time Service Availability is computed taking into account that it is not possible to obtain the time solution if the navigation solution cannot be computed. Therefore, if a SiS outage longer than 3 seconds happens the MT12 data will be set as invalid in order to simulate the unavailability of the receiver to compute the PVT solution and no Time Service will be available until a new valid MT12 is received. In order to take into account the user capability of switching from one operational GEO to the other in case of SiS outage, the EGNOS Time Service availability is computed over the combination of both GEOs.

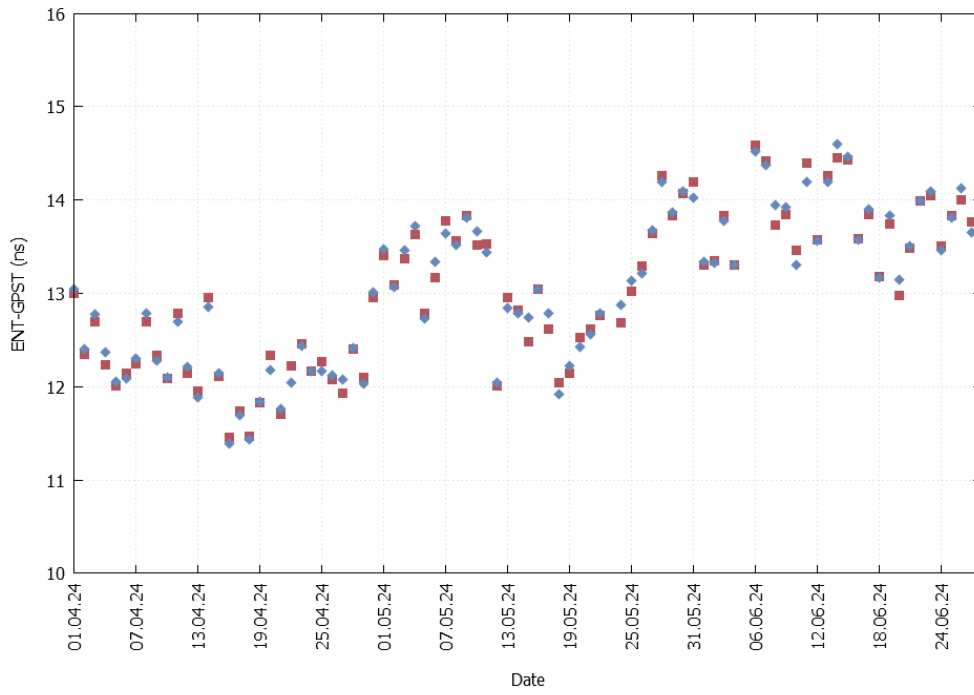


Figure 30 – ENT-GPS offset evolution from April to June 2024 (red PRN 123; PRN 136)

## 8 LIST OF REFERENCES

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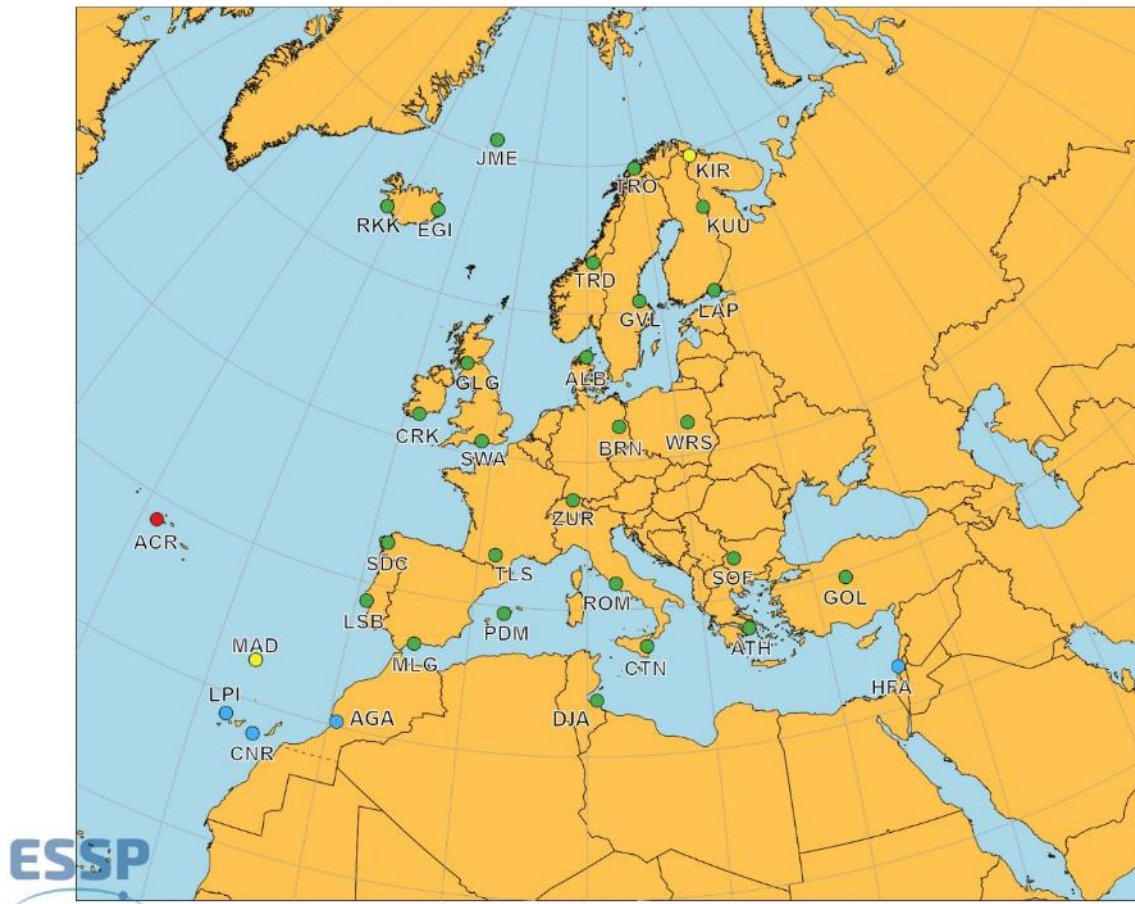
- [RD-1] Open Service Definition Document, EGN-SDD-OS; v.02-03  
([https://egnos.gsc-europa.eu/sites/default/files/documents/egnos\\_os\\_sdd\\_in\\_force.pdf](https://egnos.gsc-europa.eu/sites/default/files/documents/egnos_os_sdd_in_force.pdf))
- [RD-2] Safety Of Life Definition Document, EGN-SDD-SoL; v.03-05  
([https://egnos.gsc-europa.eu/sites/default/files/documents/egnos\\_sol\\_sdd\\_in\\_force.pdf](https://egnos.gsc-europa.eu/sites/default/files/documents/egnos_sol_sdd_in_force.pdf))
- [RD-3] EGNOS Data Access Service (EDAS) Service Definition Document, EGN-SDD-EDAS; v.02-03  
([https://edas-maritime.gsc-europa.eu/sites/default/files/documents/egnos\\_edas\\_sdd\\_in\\_force.pdf](https://edas-maritime.gsc-europa.eu/sites/default/files/documents/egnos_edas_sdd_in_force.pdf))
- [RD-4] EGNOS SoL assisted service for Maritime Users (ESMAS) Service Definition Document, EGN-SDD-ESMAS; v.01-00  
([https://edas-maritime.gsc-europa.eu/sites/default/files/documents/egnos\\_esmas\\_sdd\\_in\\_force.pdf](https://edas-maritime.gsc-europa.eu/sites/default/files/documents/egnos_esmas_sdd_in_force.pdf))



# ANNEX A RECEIVER MONITORING NETWORK

The receiver network used to report EGNOS performances in this document is based on the EGNOS monitoring stations (RIMS).

The map of Figure 31 shows the location of this receiver monitoring network, used in this report to present the EGNOS performances:



**Figure 31 – EGNOS RIMS sites used in this report**

The stations in green are used to report LPV-200.

The stations in green and the ones in yellow are used to report APV-I.

The stations in green, the ones in yellow and the ones in blue are used to report Open Service results.

Performances corresponding to NPA include all the stations (green, yellow, blue and red).

In Table 7, the name and location of each one of the stations is reported along with the service for which they are used.

| Id  | Location name          | Country        | APV-I | LPV-200 | OS | NPA |
|-----|------------------------|----------------|-------|---------|----|-----|
| ACR | RIMS Azores            | Portugal       |       |         |    | X   |
| ALB | RIMS Aalborg           | Denmark        | X     | X       | X  | X   |
| AGA | RIMS Agadir            | Morocco        |       |         | X  | X   |
| ATH | RIMS Athens            | Greece         | X     | X       | X  | X   |
| BRN | RIMS Berlin            | Germany        | X     | X       | X  | X   |
| CNR | RIMS Canary Isl.       | Spain          |       |         | X  | X   |
| CRK | RIMS Cork              | Ireland        | X     | X       | X  | X   |
| CTN | RIMS Catania           | Italy          | X     | X       | X  | X   |
| DJA | RIMS Djerba            | Tunisia        | X     | X       | X  | X   |
| EGI | RIMS Egilsstadir       | Iceland        | X     | X       | X  | X   |
| GLG | RIMS Glasgow           | United Kingdom | X     | X       | X  | X   |
| GOL | RIMS Golbasi           | Turkey         | X     | X       | X  | X   |
| GVL | RIMS Gavle             | Sweden         | X     | X       | X  | X   |
| HFA | RIMS Haifa             | Israel         |       |         | X  | X   |
| JME | RIMS Jan Mayen         | Norway         | X     | X       | X  | X   |
| KIR | RIMS Kirkenes          | Norway         | X     |         | X  | X   |
| KUU | RIMS Kuusamo           | Finland        | X     | X       | X  | X   |
| LAP | RIMS Lappeenranta      | Finland        | X     | X       | X  | X   |
| LPI | RIMS La Palma          | Spain          |       |         | X  | X   |
| LSB | RIMS Lisbon            | Portugal       | X     | X       | X  | X   |
| MAD | RIMS Madeira           | Portugal       | X     |         | X  | X   |
| MLG | RIMS Malaga            | Spain          | X     | X       | X  | X   |
| PDM | RIMS Palma de Mallorca | Spain          | X     | X       | X  | X   |
| RKK | RIMS Reykjavik         | Iceland        | X     | X       | X  | X   |
| ROM | RIMS Rome              | Italy          | X     | X       | X  | X   |
| SDC | RIMS S. de Compostela  | Spain          | X     | X       | X  | X   |
| SOF | RIMS Sofia             | Bulgaria       | X     | X       | X  | X   |
| SWA | RIMS Swanwick          | United Kingdom | X     | X       | X  | X   |
| TLS | RIMS Toulouse          | France         | X     | X       | X  | X   |
| TRD | RIMS Trondheim         | Norway         | X     | X       | X  | X   |
| TRO | RIMS Tromsoe           | Norway         | X     | X       | X  | X   |
| WRS | RIMS Warsaw            | Poland         | X     | X       | X  | X   |
| ZUR | RIMS Zurich            | Switzerland    | X     | X       | X  | X   |

**Table 7 – List of sites where performances are reported.**

Note that for the computation of the different histograms presented in this document, some periods may have been discarded. These periods correspond to periods of time during which stations presented bad quality of data due to local environment.



# ANNEX B EGNOS APV-I PERFORMANCE AT AIRPORTS

The Table 8 reports APV-I Availability and Continuity at airports with published procedures using EGNOS. These values correspond to the performance obtained under fault-free conditions using all satellites in view:

| Airports                          | Country | Monthly APV-I Availability | Monthly APV-I Continuity Risk | Outages | Publication date of first APV-I procedure | APV-I Availability since procedure publication | APV-I Continuity Risk since procedure publication |
|-----------------------------------|---------|----------------------------|-------------------------------|---------|-------------------------------------------|------------------------------------------------|---------------------------------------------------|
| BIAR / Akureyri                   | Iceland | 100.00%                    | 0.00e+00                      | 0       | 21/05/2020                                | 98.86%                                         | 6.07e-04                                          |
| BIGR / Grimsey                    | Iceland | 100.00%                    | 0.00e+00                      | 0       | 22/04/2021                                | 98.77%                                         | 6.37e-04                                          |
| BIHU / Husavik                    | Iceland | 100.00%                    | 0.00e+00                      | 0       | 28/03/2019                                | 99.01%                                         | 5.62e-04                                          |
| BIVO / Vopnafjörður               | Iceland | 100.00%                    | 0.00e+00                      | 0       | 22/04/2021                                | 99.40%                                         | 3.25e-04                                          |
| EBAW / Antwerpen                  | Belgium | 100.00%                    | 0.00e+00                      | 0       | 10/12/2015                                | 99.99%                                         | 8.06e-06                                          |
| EBCI / Charleroi / Brussels South | Belgium | 100.00%                    | 0.00e+00                      | 0       | 31/03/2016                                | 99.99%                                         | 6.77e-06                                          |
| EBKT / Kortrijk/Welvelgem         | Belgium | 100.00%                    | 0.00e+00                      | 0       | 09/11/2017                                | 99.99%                                         | 8.06e-06                                          |
| EBLG / Liège                      | Belgium | 100.00%                    | 0.00e+00                      | 0       | 13/10/2016                                | 99.99%                                         | 6.90e-06                                          |
| EDAB / Bautzen                    | Germany | 100.00%                    | 0.00e+00                      | 0       | 15/12/2011                                | 99.95%                                         | 1.39e-05                                          |
| EDBM / Magdeburg /City            | Germany | 100.00%                    | 0.00e+00                      | 0       | 15/12/2011                                | 99.95%                                         | 1.39e-05                                          |
| EDBN / Neubrandenburg             | Germany | 100.00%                    | 0.00e+00                      | 0       | 02/04/2015                                | 99.99%                                         | 1.10e-05                                          |
| EDDC / Dresden                    | Germany | 100.00%                    | 0.00e+00                      | 0       | 15/12/2011                                | 99.95%                                         | 1.32e-05                                          |
| EDDG / Münster/Osnabrück          | Germany | 100.00%                    | 0.00e+00                      | 0       | 15/12/2011                                | 99.95%                                         | 1.27e-05                                          |
| EDDL / Düsseldorf                 | Germany | 100.00%                    | 0.00e+00                      | 0       | 15/12/2011                                | 99.95%                                         | 1.11e-05                                          |

| Airports                        | Country | Monthly APV-I Availability | Monthly APV-I Continuity Risk | Outages | Publication date of first APV-I procedure | APV-I Availability since procedure publication | APV-I Continuity Risk since procedure publication |
|---------------------------------|---------|----------------------------|-------------------------------|---------|-------------------------------------------|------------------------------------------------|---------------------------------------------------|
| EDDR / Saarbrücken              | Germany | 100.00%                    | 0.00e+00                      | 0       | 01/03/2018                                | 99.99%                                         | 6.81e-06                                          |
| EDDS / Stuttgart                | Germany | 100.00%                    | 0.00e+00                      | 0       | 15/12/2011                                | 99.93%                                         | 1.68e-05                                          |
| EDDV / Hannover                 | Germany | 100.00%                    | 0.00e+00                      | 0       | 15/12/2011                                | 99.95%                                         | 1.35e-05                                          |
| EDFQ / Allendorf/ENDER          | Germany | 100.00%                    | 0.00e+00                      | 0       | 15/12/2011                                | 99.95%                                         | 1.13e-05                                          |
| EDGS / Siegerland               | Germany | 100.00%                    | 0.00e+00                      | 0       | 12/10/2017                                | 99.99%                                         | 7.73e-06                                          |
| EDLV / Niederrhein              | Germany | 100.00%                    | 0.00e+00                      | 0       | 23/06/2016                                | 99.99%                                         | 7.59e-06                                          |
| EDLW / Dortmund                 | Germany | 100.00%                    | 0.00e+00                      | 0       | 15/12/2011                                | 99.95%                                         | 1.20e-05                                          |
| EDMA / Augsburg                 | Germany | 100.00%                    | 0.00e+00                      | 0       | 15/12/2011                                | 99.95%                                         | 1.41e-05                                          |
| EDME / Eggenfelden              | Germany | 100.00%                    | 0.00e+00                      | 0       | 15/12/2011                                | 99.95%                                         | 1.49e-05                                          |
| EDMS / Straubing                | Germany | 100.00%                    | 0.00e+00                      | 0       | 15/12/2011                                | 99.95%                                         | 1.30e-05                                          |
| EDPR / Donauwörth               | Germany | 100.00%                    | 0.00e+00                      | 0       | 08/12/2016                                | 99.99%                                         | 8.15e-06                                          |
| EDQC / Coburg-Brandensteinebene | Germany | 100.00%                    | 0.00e+00                      | 0       | 15/12/2011                                | 99.95%                                         | 1.03e-05                                          |
| EDQD / Bayreuth                 | Germany | 100.00%                    | 0.00e+00                      | 0       | 15/12/2011                                | 99.95%                                         | 1.13e-05                                          |
| EDTD / Donaueschingen-Villingen | Germany | 100.00%                    | 0.00e+00                      | 0       | 15/12/2011                                | 99.95%                                         | 1.35e-05                                          |
| EDTL / Lahr                     | Germany | 100.00%                    | 0.00e+00                      | 0       | 23/06/2016                                | 99.99%                                         | 8.74e-06                                          |
| EDTM / Mengen-Hohentengen       | Germany | 100.00%                    | 0.00e+00                      | 0       | 15/12/2011                                | 99.95%                                         | 1.42e-05                                          |
| EDVE / Braunschweig-Wolfsburg   | Germany | 100.00%                    | 0.00e+00                      | 0       | 15/12/2011                                | 99.95%                                         | 1.37e-05                                          |

| Airports                     | Country | Monthly APV-I Availability | Monthly APV-I Continuity Risk | Outages | Publication date of first APV-I procedure | APV-I Availability since procedure publication | APV-I Continuity Risk since procedure publication |
|------------------------------|---------|----------------------------|-------------------------------|---------|-------------------------------------------|------------------------------------------------|---------------------------------------------------|
| EDVK / Kassel-Calden         | Germany | 100.00%                    | 0.00e+00                      | 0       | 04/04/2013                                | 99.98%                                         | 9.01e-06                                          |
| EEKA / Kärdla                | Estonia | 100.00%                    | 0.00e+00                      | 0       | 31/01/2019                                | 99.97%                                         | 2.30e-05                                          |
| EEKE / Kuressaare            | Estonia | 100.00%                    | 0.00e+00                      | 0       | 02/03/2017                                | 99.97%                                         | 2.08e-05                                          |
| EETU / Tartu                 | Estonia | 100.00%                    | 0.00e+00                      | 0       | 18/07/2019                                | 99.94%                                         | 4.18e-05                                          |
| EFET / Enontekiö             | Finland | 100.00%                    | 0.00e+00                      | 0       | 07/12/2017                                | 99.72%                                         | 1.78e-04                                          |
| EFHA / Halli                 | Finland | 100.00%                    | 0.00e+00                      | 0       | 03/12/2020                                | 99.89%                                         | 5.48e-05                                          |
| EFIV / Ivalo                 | Finland | 100.00%                    | 0.00e+00                      | 0       | 07/12/2017                                | 99.40%                                         | 4.03e-04                                          |
| EFJO / Joensuu               | Finland | 100.00%                    | 0.00e+00                      | 0       | 12/12/2013                                | 99.73%                                         | 1.66e-04                                          |
| EFJY / Jyväskylä             | Finland | 100.00%                    | 0.00e+00                      | 0       | 07/12/2017                                | 99.89%                                         | 6.92e-05                                          |
| EFKE / Kemi-Tornio           | Finland | 100.00%                    | 0.00e+00                      | 0       | 07/12/2017                                | 99.84%                                         | 1.22e-04                                          |
| EFKI / Kajaani               | Finland | 100.00%                    | 0.00e+00                      | 0       | 07/12/2017                                | 99.79%                                         | 1.42e-04                                          |
| EFKK / Kokkola - Pietarsaari | Finland | 100.00%                    | 0.00e+00                      | 0       | 07/12/2017                                | 99.91%                                         | 6.09e-05                                          |
| EFKS / Kuusamo               | Finland | 100.00%                    | 0.00e+00                      | 0       | 07/12/2017                                | 99.52%                                         | 3.43e-04                                          |
| EFKT / Kittilä               | Finland | 100.00%                    | 0.00e+00                      | 0       | 07/12/2017                                | 99.71%                                         | 1.89e-04                                          |
| EFKU / Kuopio                | Finland | 100.00%                    | 0.00e+00                      | 0       | 07/12/2017                                | 99.83%                                         | 1.09e-04                                          |
| EFLA / Lahti-Vesivehmaa      | Finland | 100.00%                    | 0.00e+00                      | 0       | 26/01/2023                                | 99.85%                                         | 6.63e-05                                          |
| EFLP / Lappeenranta          | Finland | 100.00%                    | 0.00e+00                      | 0       | 07/12/2017                                | 99.85%                                         | 9.12e-05                                          |
| EFMA / Mariehamn             | Finland | 100.00%                    | 0.00e+00                      | 0       | 28/03/2019                                | 99.96%                                         | 2.01e-05                                          |
| EFMI / Mikkeli               | Finland | 100.00%                    | 0.00e+00                      | 0       | 27/01/2022                                | 99.84%                                         | 7.73e-05                                          |
| EFOU / Oulu                  | Finland | 100.00%                    | 0.00e+00                      | 0       | 07/12/2017                                | 99.85%                                         | 1.04e-04                                          |
| EFRO / Rovaniemi             | Finland | 100.00%                    | 0.00e+00                      | 0       | 07/12/2017                                | 99.75%                                         | 1.81e-04                                          |

| Airports                        | Country     | Monthly APV-I Availability | Monthly APV-I Continuity Risk | Outages | Publication date of first APV-I procedure | APV-I Availability since procedure publication | APV-I Continuity Risk since procedure publication |
|---------------------------------|-------------|----------------------------|-------------------------------|---------|-------------------------------------------|------------------------------------------------|---------------------------------------------------|
| EFSA / Savonlinna               | Finland     | 100.00%                    | 0.00e+00                      | 0       | 07/12/2017                                | 99.80%                                         | 1.18e-04                                          |
| EFTU / Turku                    | Finland     | 100.00%                    | 0.00e+00                      | 0       | 07/12/2017                                | 99.95%                                         | 2.50e-05                                          |
| EFUT / Utti                     | Finland     | 100.00%                    | 0.00e+00                      | 0       | 28/01/2021                                | 99.89%                                         | 6.82e-05                                          |
| EFVA / Vaasa                    | Finland     | 100.00%                    | 0.00e+00                      | 0       | 07/12/2017                                | 99.93%                                         | 4.66e-05                                          |
| EGJA / Alderney                 | Guernsey    | 100.00%                    | 0.00e+00                      | 0       | 07/12/2011                                | 99.95%                                         | 1.25e-05                                          |
| EHAM / Amsterdam                | Netherlands | 100.00%                    | 0.00e+00                      | 0       | 21/06/2018                                | 99.99%                                         | 8.97e-06                                          |
| EHGG / Eelde                    | Netherlands | 100.00%                    | 0.00e+00                      | 0       | 13/11/2014                                | 99.99%                                         | 1.04e-05                                          |
| EHLE / Lelystad                 | Netherlands | 100.00%                    | 0.00e+00                      | 0       | 05/12/2019                                | 99.99%                                         | 7.20e-06                                          |
| EHTE / Teuge                    | Netherlands | 100.00%                    | 0.00e+00                      | 0       | 13/11/2014                                | 99.99%                                         | 8.79e-06                                          |
| EICK / Cork Airport             | Ireland     | 100.00%                    | 0.00e+00                      | 0       | 16/08/2018                                | 99.97%                                         | 2.38e-05                                          |
| EIKN / Ireland West Airport     | Ireland     | 100.00%                    | 0.00e+00                      | 0       | 25/03/2021                                | 99.99%                                         | 1.32e-05                                          |
| EKAL / Ålborg hospital          | Denmark     | 100.00%                    | 0.00e+00                      | 0       | 03/11/2022                                | 99.99%                                         | 1.38e-05                                          |
| EKHS / Saltum heliport          | Denmark     | 100.00%                    | 0.00e+00                      | 0       | 03/11/2022                                | 99.99%                                         | 1.31e-05                                          |
| EKKA / Karup                    | Denmark     | 100.00%                    | 0.00e+00                      | 0       | 02/04/2015                                | 99.98%                                         | 1.19e-05                                          |
| EKKH / Kolding Hospital         | Denmark     | 100.00%                    | 0.00e+00                      | 0       | 03/11/2022                                | 99.99%                                         | 1.19e-05                                          |
| EKNH / Holsterbro Hems          | Denmark     | 100.00%                    | 0.00e+00                      | 0       | 03/11/2022                                | 99.99%                                         | 1.46e-05                                          |
| EKOH / Odense Hospital          | Denmark     | 100.00%                    | 0.00e+00                      | 0       | 03/11/2022                                | 99.99%                                         | 1.27e-05                                          |
| EKRG / Gødstrup hospital        | Denmark     | 100.00%                    | 0.00e+00                      | 0       | 03/11/2022                                | 99.99%                                         | 1.38e-05                                          |
| EKRH / Rigshospitalet København | Denmark     | 100.00%                    | 0.00e+00                      | 0       | 03/11/2022                                | 99.99%                                         | 1.29e-05                                          |

| Airports                         | Country | Monthly APV-I Availability | Monthly APV-I Continuity Risk | Outages | Publication date of first APV-I procedure | APV-I Availability since procedure publication | APV-I Continuity Risk since procedure publication |
|----------------------------------|---------|----------------------------|-------------------------------|---------|-------------------------------------------|------------------------------------------------|---------------------------------------------------|
| EKRN / Bornholm/Roerne           | Denmark | 100.00%                    | 0.00e+00                      | 0       | 22/02/2024                                | 99.99%                                         | 5.39e-06                                          |
| EKRS / Ringsted Hems             | Denmark | 100.00%                    | 0.00e+00                      | 0       | 03/11/2022                                | 99.99%                                         | 1.29e-05                                          |
| EKSE / Slagelse Hospital         | Denmark | 100.00%                    | 0.00e+00                      | 0       | 03/11/2022                                | 99.99%                                         | 1.29e-05                                          |
| EKSH / Skejby Ålborg hospital    | Denmark | 100.00%                    | 0.00e+00                      | 0       | 03/11/2022                                | 99.99%                                         | 1.24e-05                                          |
| EKSK / SKive Hems                | Denmark | 100.00%                    | 0.00e+00                      | 0       | 03/11/2022                                | 99.99%                                         | 1.46e-05                                          |
| EKTH / Thisted hospital          | Norway  | 100.00%                    | 0.00e+00                      | 0       | 24/04/2023                                | 99.99%                                         | 1.74e-05                                          |
| ENAN / Andoya/Andenes            | Norway  | 100.00%                    | 0.00e+00                      | 0       | 02/04/2015                                | 99.77%                                         | 1.25e-04                                          |
| ENAR / Arendal hospital          | Norway  | 100.00%                    | 0.00e+00                      | 0       | 20/05/2021                                | 99.99%                                         | 9.81e-06                                          |
| ENAT / Alta                      | Norway  | 100.00%                    | 0.00e+00                      | 0       | 08/09/2022                                | 99.16%                                         | 3.57e-04                                          |
| ENAX / Alesund                   | Norway  | 100.00%                    | 0.00e+00                      | 0       | 18/05/2023                                | 99.97%                                         | 2.64e-05                                          |
| ENBG / Bergen Gronneviksoren     | Norway  | 100.00%                    | 0.00e+00                      | 0       | 20/05/2021                                | 99.99%                                         | 1.24e-05                                          |
| ENBL / Forde/Aringeland          | Norway  | 100.00%                    | 0.00e+00                      | 0       | 28/05/2015                                | 99.97%                                         | 2.04e-05                                          |
| ENBN / Bronnoysund/Bronnoy       | Norway  | 100.00%                    | 0.00e+00                      | 0       | 08/12/2016                                | 99.93%                                         | 4.98e-05                                          |
| ENBO / Bodo                      | Norway  | 100.00%                    | 0.00e+00                      | 0       | 06/12/2018                                | 99.86%                                         | 8.74e-05                                          |
| ENBS / Båtsfjord                 | Norway  | 100.00%                    | 0.00e+00                      | 0       | 02/12/2021                                | 98.33%                                         | 7.82e-04                                          |
| ENBV / Berlevåg                  | Norway  | 100.00%                    | 0.00e+00                      | 0       | 02/12/2021                                | 98.33%                                         | 7.81e-04                                          |
| ENBX / Haukeland Hospital Bergen | Norway  | 100.00%                    | 0.00e+00                      | 0       | 07/09/2023                                | 99.98%                                         | 2.87e-05                                          |

| Airports                     | Country | Monthly APV-I Availability | Monthly APV-I Continuity Risk | Outages | Publication date of first APV-I procedure | APV-I Availability since procedure publication | APV-I Continuity Risk since procedure publication |
|------------------------------|---------|----------------------------|-------------------------------|---------|-------------------------------------------|------------------------------------------------|---------------------------------------------------|
| ENDU / Bardufoss             | Norway  | 100.00%                    | 0.00e+00                      | 0       | 26/04/2018                                | 99.76%                                         | 1.42e-04                                          |
| ENEV / Harstad/Narvik/Evenes | Norway  | 100.00%                    | 0.00e+00                      | 0       | 30/03/2017                                | 99.80%                                         | 1.17e-04                                          |
| ENFL / Florø                 | Norway  | 100.00%                    | 0.00e+00                      | 0       | 02/04/2015                                | 99.97%                                         | 2.20e-05                                          |
| ENHT / Hattfjelldal          | Norway  | 100.00%                    | 0.00e+00                      | 0       | 20/05/2021                                | 99.89%                                         | 6.25e-05                                          |
| ENHX / Haugesund Hospital    | Norway  | 100.00%                    | 0.00e+00                      | 0       | 17/06/2021                                | 99.99%                                         | 1.26e-05                                          |
| ENKR / Kirkenes/Høybuktmoen  | Norway  | 100.00%                    | 0.00e+00                      | 0       | 27/04/2017                                | 98.73%                                         | 7.26e-04                                          |
| ENLH / Lillehammer Hospital  | Norway  | 100.00%                    | 0.00e+00                      | 0       | 17/06/2021                                | 99.98%                                         | 2.07e-05                                          |
| ENLK / Leknes                | Norway  | 100.00%                    | 0.00e+00                      | 0       | 02/02/2017                                | 99.84%                                         | 9.87e-05                                          |
| ENLX / Lorenskog             | Norway  | 100.00%                    | 0.00e+00                      | 0       | 18/05/2023                                | 99.99%                                         | 2.46e-05                                          |
| ENMH / Mehamn                | Norway  | 100.00%                    | 0.00e+00                      | 0       | 28/03/2019                                | 98.60%                                         | 7.86e-04                                          |
| ENMK / Mosjøen               | Norway  | 100.00%                    | 0.00e+00                      | 0       | 17/06/2021                                | 99.89%                                         | 6.31e-05                                          |
| ENMS / Mosjøen/Kjellerstad   | Norway  | 100.00%                    | 0.00e+00                      | 0       | 30/03/2017                                | 99.92%                                         | 5.51e-05                                          |
| ENNA / Lakselv/Banakk        | Norway  | 100.00%                    | 0.00e+00                      | 0       | 21/02/2022                                | 99.12%                                         | 3.90e-04                                          |
| ENNH / Namsos Hospital       | Norway  | 100.00%                    | 0.00e+00                      | 0       | 17/06/2021                                | 99.93%                                         | 3.92e-05                                          |
| ENRS / Rost                  | Norway  | 100.00%                    | 0.00e+00                      | 0       | 06/03/2014                                | 99.85%                                         | 9.24e-05                                          |
| ENRY / Moss/Rygge            | Norway  | 100.00%                    | 0.00e+00                      | 0       | 10/12/2015                                | 99.98%                                         | 1.52e-05                                          |
| ENSH / Svolvær/Helle         | Norway  | 100.00%                    | 0.00e+00                      | 0       | 08/12/2016                                | 99.83%                                         | 1.02e-04                                          |
| ENSK / Stokmarknes/Skagen    | Norway  | 100.00%                    | 0.00e+00                      | 0       | 08/12/2016                                | 99.81%                                         | 1.14e-04                                          |

| Airports                          | Country | Monthly APV-I Availability | Monthly APV-I Continuity Risk | Outages | Publication date of first APV-I procedure | APV-I Availability since procedure publication | APV-I Continuity Risk since procedure publication |
|-----------------------------------|---------|----------------------------|-------------------------------|---------|-------------------------------------------|------------------------------------------------|---------------------------------------------------|
| ENSO / Stord/Sorstokken           | Norway  | 100.00%                    | 0.00e+00                      | 0       | 03/03/2016                                | 99.97%                                         | 1.73e-05                                          |
| ENSP / Kalnes Hospital            | Norway  | 100.00%                    | 0.00e+00                      | 0       | 17/06/2021                                | 99.99%                                         | 1.14e-05                                          |
| ENSR / Sorkjosen                  | Norway  | 100.00%                    | 0.00e+00                      | 0       | 20/05/2021                                | 99.54%                                         | 2.28e-04                                          |
| ENSS / Vardø/Svarthnes            | Norway  | 100.00%                    | 0.00e+00                      | 0       | 03/12/2020                                | 98.30%                                         | 8.31e-04                                          |
| ENSX / Stavenger                  | Norway  | 100.00%                    | 0.00e+00                      | 0       | 18/05/2023                                | 99.99%                                         | 1.90e-05                                          |
| ENTO / Sandefjord/Torp            | Norway  | 100.00%                    | 0.00e+00                      | 0       | 20/08/2015                                | 99.98%                                         | 1.47e-05                                          |
| ENTU / Tromsø Univeristy Hospital | Norway  | 100.00%                    | 0.00e+00                      | 0       | 17/06/2021                                | 99.60%                                         | 1.78e-04                                          |
| ENUH / Ullevaal                   | Norway  | 100.00%                    | 0.00e+00                      | 0       | 20/05/2021                                | 99.99%                                         | 1.18e-05                                          |
| ENVD / Vadsø                      | Norway  | 100.00%                    | 0.00e+00                      | 0       | 23/03/2023                                | 99.03%                                         | 5.05e-04                                          |
| ENXXXZAE / Aenes                  | Norway  | 100.00%                    | 0.00e+00                      | 0       | 18/05/2023                                | 99.98%                                         | 2.23e-05                                          |
| ENXXXZAF / Aafjord                | Norway  | 100.00%                    | 0.00e+00                      | 0       | 25/01/2024                                | 99.99%                                         | 2.39e-06                                          |
| ENXXXZBK / Bjarkoy                | Norway  | 100.00%                    | 0.00e+00                      | 0       | 20/05/2021                                | 99.70%                                         | 1.28e-04                                          |
| ENXXXZES / Evenskjaer             | Norway  | 100.00%                    | 0.00e+00                      | 0       | 20/05/2021                                | 99.73%                                         | 1.30e-04                                          |
| ENXXXZFI / Finnsnes               | Norway  | 100.00%                    | 0.00e+00                      | 0       | 20/05/2021                                | 99.66%                                         | 1.47e-04                                          |
| ENXXXZFN / Fodnes                 | Norway  | 100.00%                    | 0.00e+00                      | 0       | 18/05/2023                                | 99.98%                                         | 2.70e-05                                          |
| ENXXXZFS / Farsund                | Norway  | 100.00%                    | 0.00e+00                      | 0       | 20/04/2023                                | 99.99%                                         | 1.70e-05                                          |
| ENXXXZGS / Vega                   | Norway  | 100.00%                    | 0.00e+00                      | 0       | 25/01/2024                                | 99.99%                                         | 4.84e-06                                          |
| ENXXXZHI / Fillan Hitra           | Norway  | 100.00%                    | 0.00e+00                      | 0       | 21/03/2024                                | 99.99%                                         | 3.05e-06                                          |
| ENXXXZH M / Hamar Hospital        | Norway  | 100.00%                    | 0.00e+00                      | 0       | 17/06/2021                                | 99.98%                                         | 1.80e-05                                          |
| ENXXXZHO / Hov                    | Norway  | 100.00%                    | 0.00e+00                      | 0       | 03/11/2022                                | 99.98%                                         | 2.66e-05                                          |

| Airports                                  | Country | Monthly APV-I Availability | Monthly APV-I Continuity Risk | Outages | Publication date of first APV-I procedure | APV-I Availability since procedure publication | APV-I Continuity Risk since procedure publication |
|-------------------------------------------|---------|----------------------------|-------------------------------|---------|-------------------------------------------|------------------------------------------------|---------------------------------------------------|
| ENXXXXIH /<br>Innhavet                    | Norway  | 100.00%                    | 0.00e+00                      | 0       | 17/06/2021                                | 99.78%                                         | 1.15e-04                                          |
| ENXXXXKA<br>/<br>Kautokeino               | Norway  | 100.00%                    | 0.00e+00                      | 0       | 20/05/2021                                | 99.56%                                         | 2.03e-04                                          |
| ENXXXXKB<br>/<br>Kongsberg<br>Hospital    | Norway  | 100.00%                    | 0.00e+00                      | 0       | 17/06/2021                                | 99.99%                                         | 1.09e-05                                          |
| ENXXXXKG<br>/<br>Kongsvinge<br>r Hospital | Norway  | 100.00%                    | 0.00e+00                      | 0       | 17/06/2021                                | 99.99%                                         | 1.96e-05                                          |
| ENXXXXKK<br>/<br>Kirkenes                 | Norway  | 100.00%                    | 0.00e+00                      | 0       | 18/05/2023                                | 99.19%                                         | 4.39e-04                                          |
| ENXXXXKS<br>/<br>Karasjok                 | Norway  | 100.00%                    | 0.00e+00                      | 0       | 20/05/2021                                | 99.34%                                         | 3.43e-04                                          |
| ENXXXXLK<br>/<br>Lofoten<br>Hospital      | Norway  | 100.00%                    | 0.00e+00                      | 0       | 17/06/2021                                | 99.80%                                         | 1.08e-04                                          |
| ENXXXXLV<br>/<br>Lovund                   | Norway  | 100.00%                    | 0.00e+00                      | 0       | 18/05/2023                                | 99.86%                                         | 6.65e-05                                          |
| ENXXXXMY<br>/<br>Mysen                    | Norway  | 100.00%                    | 0.00e+00                      | 0       | 17/06/2021                                | 99.99%                                         | 1.11e-05                                          |
| ENXXXXNF<br>/<br>Nordfjordei<br>d Hopital | Norway  | 100.00%                    | 0.00e+00                      | 0       | 25/01/2024                                | 99.99%                                         | 9.19e-07                                          |
| ENXXXXNK<br>/<br>Narvik                   | Norway  | 100.00%                    | 0.00e+00                      | 0       | 17/06/2021                                | 99.80%                                         | 1.08e-04                                          |
| ENXXXXRD<br>/<br>Rindal                   | Norway  | 100.00%                    | 0.00e+00                      | 0       | 20/04/2023                                | 99.94%                                         | 3.77e-05                                          |
| ENXXXXRJ<br>/<br>Rjukan                   | Norway  | 100.00%                    | 0.00e+00                      | 0       | 20/04/2023                                | 99.99%                                         | 2.00e-05                                          |
| ENXXXXRY<br>/<br>Rodoy                    | Norway  | 100.00%                    | 0.00e+00                      | 0       | 18/05/2023                                | 99.86%                                         | 6.42e-05                                          |
| ENXXXXSK<br>/<br>Steinkjer                | Norway  | 100.00%                    | 0.00e+00                      | 0       | 20/04/2023                                | 99.91%                                         | 4.32e-05                                          |
| ENXXXXSL<br>/<br>Surnadal                 | Norway  | 100.00%                    | 0.00e+00                      | 0       | 20/04/2023                                | 99.95%                                         | 3.42e-05                                          |
| ENXXXXSO<br>/<br>Storsteinne<br>s         | Norway  | 100.00%                    | 0.00e+00                      | 0       | 20/05/2021                                | 99.64%                                         | 1.60e-04                                          |
| ENXXXXSV<br>/<br>Skjervoy                 | Norway  | 100.00%                    | 0.00e+00                      | 0       | 25/01/2024                                | 99.98%                                         | 2.44e-05                                          |
| ENXXXXTG<br>/<br>Treungen                 | Norway  | 100.00%                    | 0.00e+00                      | 0       | 18/05/2023                                | 99.99%                                         | 2.21e-05                                          |



| Airports                                   | Country | Monthly APV-I Availability | Monthly APV-I Continuity Risk | Outages | Publication date of first APV-I procedure | APV-I Availability since procedure publication | APV-I Continuity Risk since procedure publication |
|--------------------------------------------|---------|----------------------------|-------------------------------|---------|-------------------------------------------|------------------------------------------------|---------------------------------------------------|
| ENXXXZTL / Trysil                          | Norway  | 100.00%                    | 0.00e+00                      | 0       | 20/04/2023                                | 99.96%                                         | 3.44e-05                                          |
| ENXXXZTN / Trones                          | Norway  | 100.00%                    | 0.00e+00                      | 0       | 17/06/2021                                | 99.92%                                         | 4.61e-05                                          |
| ENXXXZTP / Torpomoen                       | Norway  | 100.00%                    | 0.00e+00                      | 0       | 07/09/2023                                | 99.97%                                         | 3.25e-05                                          |
| ENXXXZVB / Vrangerbotn                     | Norway  | 100.00%                    | 0.00e+00                      | 0       | 18/05/2023                                | 99.24%                                         | 3.83e-04                                          |
| ENXXXZVG / Vangsnes                        | Norway  | 100.00%                    | 0.00e+00                      | 0       | 20/04/2023                                | 99.98%                                         | 2.34e-05                                          |
| ENYY / Levanger Hospital                   | Norway  | 100.00%                    | 0.00e+00                      | 0       | 17/06/2021                                | 99.94%                                         | 3.12e-05                                          |
| ESCM / Uppsala                             | Sweden  | 100.00%                    | 0.00e+00                      | 0       | 21/05/2020                                | 99.97%                                         | 1.96e-05                                          |
| ESEB / Boras Hospital                      | Sweden  | 100.00%                    | 0.00e+00                      | 0       | 01/12/2022                                | 99.99%                                         | 1.52e-05                                          |
| ESEN / Trollhattan / Nal sjukhus           | Sweden  | 100.00%                    | 0.00e+00                      | 0       | 16/06/2022                                | 99.99%                                         | 1.36e-05                                          |
| ESGJ / Jönköping                           | Sweden  | 100.00%                    | 0.00e+00                      | 0       | 09/11/2017                                | 99.99%                                         | 1.14e-05                                          |
| ESGT / Trollhättan - Vänersborgs flygplats | Sweden  | 100.00%                    | 0.00e+00                      | 0       | 29/03/2018                                | 99.99%                                         | 1.07e-05                                          |
| ESHB / Gothenburg DSBUS Östra Hospital     | Sweden  | 100.00%                    | 0.00e+00                      | 0       | 23/03/2023                                | 99.99%                                         | 1.73e-05                                          |
| ESHO / Skovde Hospital                     | Sweden  | 100.00%                    | 0.00e+00                      | 0       | 01/12/2022                                | 99.99%                                         | 1.93e-05                                          |
| ESHS / Sahlgrenska hospital heliport       | Sweden  | 100.00%                    | 0.00e+00                      | 0       | 16/06/2022                                | 99.99%                                         | 1.15e-05                                          |
| ESIB / Satenas                             | Sweden  | 100.00%                    | 0.00e+00                      | 0       | 01/12/2022                                | 99.99%                                         | 1.66e-05                                          |

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|-----------------------------|---------|----------------------------|-------------------------------|---------|-------------------------------------------|------------------------------------------------|---------------------------------------------------|
| ESJD / Backefors Hospital   | Sweden  | 100.00%                    | 0.00e+00                      | 0       | 01/12/2022                                | 99.99%                                         | 1.76e-05                                          |
| ESKM / Mora/Siljan          | Sweden  | 100.00%                    | 0.00e+00                      | 0       | 30/01/2020                                | 99.98%                                         | 1.69e-05                                          |
| ESMK / Kristianstad         | Sweden  | 100.00%                    | 0.00e+00                      | 0       | 06/12/2018                                | 99.99%                                         | 9.77e-06                                          |
| ESMQ / Kalmar Öland Airport | Sweden  | 100.00%                    | 0.00e+00                      | 0       | 28/03/2019                                | 99.99%                                         | 9.58e-06                                          |
| ESMT / Halmstad             | Sweden  | 100.00%                    | 0.00e+00                      | 0       | 08/11/2018                                | 99.99%                                         | 9.20e-06                                          |
| ESMX / Växjö Kronoberg      | Sweden  | 100.00%                    | 0.00e+00                      | 0       | 25/04/2019                                | 99.99%                                         | 1.02e-05                                          |
| ESND / Sveg                 | Sweden  | 100.00%                    | 0.00e+00                      | 0       | 31/01/2019                                | 99.96%                                         | 2.27e-05                                          |
| ESNG / Lapland Airport      | Sweden  | 100.00%                    | 0.00e+00                      | 0       | 20/06/2019                                | 99.81%                                         | 1.18e-04                                          |
| ESNK / Kramfors-Solleftea   | Sweden  | 100.00%                    | 0.00e+00                      | 0       | 13/08/2020                                | 99.94%                                         | 3.40e-05                                          |
| ESNL / Lycksele Airport     | Sweden  | 100.00%                    | 0.00e+00                      | 0       | 15/08/2019                                | 99.91%                                         | 5.36e-05                                          |
| ESNO / Örnsköldsvik         | Sweden  | 100.00%                    | 0.00e+00                      | 0       | 07/12/2017                                | 99.95%                                         | 3.28e-05                                          |
| ESNQ / Kiruna               | Sweden  | 100.00%                    | 0.00e+00                      | 0       | 25/01/2024                                | 99.99%                                         | 6.86e-06                                          |
| ESNS / Skelleftea Airport   | Sweden  | 100.00%                    | 0.00e+00                      | 0       | 28/03/2019                                | 99.89%                                         | 6.62e-05                                          |
| ESNV / Vilhelmina           | Sweden  | 100.00%                    | 0.00e+00                      | 0       | 27/02/2020                                | 99.91%                                         | 5.43e-05                                          |
| ESNX / Arvidsjaur           | Sweden  | 100.00%                    | 0.00e+00                      | 0       | 05/12/2019                                | 99.87%                                         | 7.76e-05                                          |
| ESOE / Örebro Airport       | Sweden  | 100.00%                    | 0.00e+00                      | 0       | 16/08/2018                                | 99.98%                                         | 1.42e-05                                          |
| ESOH / Hagfors              | Sweden  | 100.00%                    | 0.00e+00                      | 0       | 30/01/2020                                | 99.98%                                         | 1.62e-05                                          |
| ESOK / Karlstad             | Sweden  | 100.00%                    | 0.00e+00                      | 0       | 05/11/2020                                | 99.99%                                         | 1.78e-05                                          |

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|-----------------------------------|-----------|----------------------------|-------------------------------|---------|-------------------------------------------|------------------------------------------------|---------------------------------------------------|
| ESOW / Stockholm/ Västerås        | Sweden    | 100.00%                    | 0.00e+00                      | 0       | 30/01/2020                                | 99.98%                                         | 1.86e-05                                          |
| ESSA / Stockholm/ Arlanda         | Sweden    | 100.00%                    | 0.00e+00                      | 0       | 02/11/2023                                | 99.97%                                         | 1.19e-05                                          |
| ESSD / Borlänge Dala              | Sweden    | 100.00%                    | 0.00e+00                      | 0       | 05/11/2020                                | 99.97%                                         | 1.90e-05                                          |
| ESSP / Norrköping Kungsängen      | Sweden    | 100.00%                    | 0.00e+00                      | 0       | 29/03/2018                                | 99.98%                                         | 1.23e-05                                          |
| ESST / Torsby                     | Sweden    | 100.00%                    | 0.00e+00                      | 0       | 23/05/2019                                | 99.98%                                         | 1.66e-05                                          |
| ESSU / Eskilstuna                 | Sweden    | 100.00%                    | 0.00e+00                      | 0       | 10/09/2020                                | 99.98%                                         | 2.17e-05                                          |
| ESSV / Visby                      | Sweden    | 100.00%                    | 0.00e+00                      | 0       | 17/06/2021                                | 99.99%                                         | 1.29e-05                                          |
| ESTA / Ängelholm                  | Sweden    | 100.00%                    | 0.00e+00                      | 0       | 19/07/2018                                | 99.99%                                         | 9.82e-06                                          |
| ESTL / Ljungbyhed                 | Sweden    | 100.00%                    | 0.00e+00                      | 0       | 07/12/2017                                | 99.99%                                         | 1.40e-05                                          |
| ESUP / Pajala                     | Sweden    | 100.00%                    | 0.00e+00                      | 0       | 31/12/2020                                | 99.74%                                         | 1.25e-04                                          |
| ESUT / Hemavan Tärnaby Airport AB | Sweden    | 100.00%                    | 0.00e+00                      | 0       | 11/10/2018                                | 99.91%                                         | 6.05e-05                                          |
| EYKA / Kaunas                     | Lithuania | 100.00%                    | 0.00e+00                      | 0       | 09/09/2021                                | 99.98%                                         | 1.64e-05                                          |
| EYPA / Palanga                    | Lithuania | 100.00%                    | 0.00e+00                      | 0       | 25/03/2021                                | 99.99%                                         | 1.31e-05                                          |
| EYVI / Vilnius                    | Lithuania | 100.00%                    | 0.00e+00                      | 0       | 16/07/2020                                | 99.96%                                         | 2.57e-05                                          |
| GCLA / La Palma                   | Spain     | 98.94%                     | 4.15e-04                      | 193     | 14/07/2022                                | 90.38%                                         | 1.66e-03                                          |
| GCCR / Lanzarote AD               | Spain     | 99.11%                     | 3.15e-04                      | 115     | 23/05/2019                                | 96.50%                                         | 6.39e-04                                          |
| GCTS / Tenerife Sur               | Spain     | 98.36%                     | 6.23e-04                      | 307     | 05/10/2023                                | 87.79%                                         | 1.68e-03                                          |
| LBBG / Burgas                     | Bulgaria  | 100.00%                    | 0.00e+00                      | 0       | 04/11/2021                                | 99.88%                                         | 1.62e-04                                          |

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|--------------------------|----------|----------------------------|-------------------------------|---------|-------------------------------------------|------------------------------------------------|---------------------------------------------------|
| LBGO / Gorna Oryahovitsa | Bulgaria | 100.00%                    | 0.00e+00                      | 0       | 04/11/2021                                | 99.92%                                         | 8.82e-05                                          |
| LBPD / Plovdiv           | Bulgaria | 100.00%                    | 0.00e+00                      | 0       | 04/11/2021                                | 99.92%                                         | 9.68e-05                                          |
| LBSF / Sofia             | Bulgaria | 100.00%                    | 0.00e+00                      | 0       | 21/03/2024                                | 99.91%                                         | 2.61e-06                                          |
| LBWN / Varna             | Bulgaria | 100.00%                    | 0.00e+00                      | 0       | 16/06/2022                                | 99.91%                                         | 1.13e-04                                          |
| LDDU / Dubrovnik         | Croatia  | 100.00%                    | 0.00e+00                      | 0       | 10/12/2015                                | 99.97%                                         | 2.57e-05                                          |
| LDLO / Losinj            | Croatia  | 100.00%                    | 0.00e+00                      | 0       | 22/02/2024                                | 99.94%                                         | 9.14e-06                                          |
| LDOS / Osijek/Klisa      | Croatia  | 100.00%                    | 0.00e+00                      | 0       | 29/03/2018                                | 99.97%                                         | 2.19e-05                                          |
| LDPL / Pula              | Croatia  | 100.00%                    | 0.00e+00                      | 0       | 26/04/2018                                | 99.98%                                         | 1.47e-05                                          |
| LDRI / Rijeka            | Croatia  | 100.00%                    | 0.00e+00                      | 0       | 12/09/2019                                | 99.98%                                         | 1.33e-05                                          |
| LDSB / Brac              | Croatia  | 100.00%                    | 0.00e+00                      | 0       | 05/12/2019                                | 99.96%                                         | 1.96e-05                                          |
| LDSP / Split/Kastela     | Croatia  | 100.00%                    | 0.00e+00                      | 0       | 10/10/2019                                | 99.96%                                         | 1.79e-05                                          |
| LDZA / Zagreb/Pleso      | Croatia  | 100.00%                    | 0.00e+00                      | 0       | 29/03/2018                                | 99.98%                                         | 1.23e-05                                          |
| LDZD / Zadar             | Croatia  | 100.00%                    | 0.00e+00                      | 0       | 11/10/2018                                | 99.97%                                         | 1.50e-05                                          |
| LEAL / Alicante          | Spain    | 99.98%                     | 1.27e-05                      | 14      | 25/01/2024                                | 99.91%                                         | 3.24e-05                                          |
| LEAM / Almeria           | Spain    | 99.97%                     | 4.26e-05                      | 16      | 02/02/2017                                | 99.88%                                         | 4.72e-05                                          |
| LEBA / Córdoba           | Spain    | 99.99%                     | 1.19e-05                      | 3       | 15/06/2023                                | 99.83%                                         | 7.49e-05                                          |
| LEBG / Burgos            | Spain    | 100.00%                    | 0.00e+00                      | 0       | 20/04/2023                                | 99.94%                                         | 3.20e-05                                          |
| LECH / Castellón         | Spain    | 100.00%                    | 0.00e+00                      | 0       | 21/04/2021                                | 99.87%                                         | 4.65e-05                                          |
| LEDA / Lleida            | Spain    | 100.00%                    | 0.00e+00                      | 0       | 03/11/2022                                | 99.89%                                         | 4.64e-05                                          |
| LEGE / Girona            | Spain    | 100.00%                    | 0.00e+00                      | 0       | 24/03/2022                                | 99.91%                                         | 2.76e-05                                          |
| LEJR / Jerez             | Spain    | 99.97%                     | 2.58e-05                      | 10      | 02/12/2021                                | 99.72%                                         | 1.10e-04                                          |
| LEPA / Palma de Mallorca | Spain    | 100.00%                    | 0.00e+00                      | 0       | 01/03/2018                                | 99.94%                                         | 2.21e-05                                          |
| LERJ / Logroño           | Spain    | 100.00%                    | 0.00e+00                      | 0       | 20/04/2023                                | 99.94%                                         | 3.27e-05                                          |

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|--------------------------------|---------|----------------------------|-------------------------------|---------|-------------------------------------------|------------------------------------------------|---------------------------------------------------|
| LERS / Reus                    | Spain   | 100.00%                    | 0.00e+00                      | 0       | 01/12/2022                                | 99.87%                                         | 4.43e-05                                          |
| LEVC / Valencia Airport        | Spain   | 100.00%                    | 0.00e+00                      | 0       | 01/02/2018                                | 99.94%                                         | 2.29e-05                                          |
| LEVX / Vigo                    | Spain   | 99.99%                     | 2.50e-05                      | 31      | 05/12/2019                                | 99.92%                                         | 3.65e-05                                          |
| LEXJ / Santander               | Spain   | 100.00%                    | 0.00e+00                      | 0       | 17/10/2013                                | 99.95%                                         | 2.98e-05                                          |
| LFAC / Calais                  | France  | 100.00%                    | 0.00e+00                      | 0       | 20/09/2012                                | 99.97%                                         | 1.18e-05                                          |
| LFAQ / Albert Bray             | France  | 100.00%                    | 0.00e+00                      | 0       | 15/11/2017                                | 99.97%                                         | 1.01e-05                                          |
| LFAT / Le Touquet Paris Plage  | France  | 100.00%                    | 0.00e+00                      | 0       | 04/02/2016                                | 99.99%                                         | 7.60e-06                                          |
| LFAV / Valenciennes Denain     | France  | 100.00%                    | 0.00e+00                      | 0       | 19/09/2013                                | 99.99%                                         | 8.45e-06                                          |
| LFAY / Ammiens Glisy           | France  | 100.00%                    | 0.00e+00                      | 0       | 27/06/2013                                | 99.97%                                         | 9.27e-06                                          |
| LFBI / Poitiers Biard          | France  | 100.00%                    | 0.00e+00                      | 0       | 12/11/2015                                | 99.99%                                         | 8.09e-06                                          |
| LFBK / Montluçon Gueret        | France  | 100.00%                    | 0.00e+00                      | 0       | 17/12/2013                                | 99.98%                                         | 1.18e-05                                          |
| LFBN / Niort Marais Poitevin   | France  | 100.00%                    | 0.00e+00                      | 0       | 02/03/2017                                | 99.99%                                         | 9.46e-06                                          |
| LFBO / Toulouse Blagnac        | France  | 100.00%                    | 0.00e+00                      | 0       | 03/05/2012                                | 99.94%                                         | 1.69e-05                                          |
| LFBP / Pau-Pyrénées            | France  | 100.00%                    | 0.00e+00                      | 0       | 17/03/2011                                | 99.93%                                         | 2.04e-05                                          |
| LFBR / Muret Lherm             | France  | 100.00%                    | 0.00e+00                      | 0       | 15/10/2015                                | 99.98%                                         | 1.20e-05                                          |
| LFBT / Tarbes Lourdes Pyrenees | France  | 100.00%                    | 0.00e+00                      | 0       | 28/05/2015                                | 99.97%                                         | 1.24e-05                                          |
| LFCI / Albi Le Sequestre       | France  | 100.00%                    | 0.00e+00                      | 0       | 27/05/2016                                | 99.98%                                         | 1.25e-05                                          |

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| LFCK / Castres Mazamet            | France  | 100.00%                    | 0.00e+00                      | 0       | 22/08/2013                                | 99.97%                                         | 1.63e-05                                          |
| LFGR / Rodez Marcillac            | France  | 100.00%                    | 0.00e+00                      | 0       | 31/05/2012                                | 99.94%                                         | 1.63e-05                                          |
| LFCY / Royan Medis                | France  | 100.00%                    | 0.00e+00                      | 0       | 30/04/2015                                | 99.98%                                         | 1.00e-05                                          |
| LFDH / Auch Lamothe               | France  | 100.00%                    | 0.00e+00                      | 0       | 28/05/2015                                | 99.98%                                         | 1.18e-05                                          |
| LFEC / Ouessant                   | France  | 100.00%                    | 0.00e+00                      | 0       | 11/12/2014                                | 99.98%                                         | 1.18e-05                                          |
| LFHY / Moulins Montbeugny         | France  | 100.00%                    | 0.00e+00                      | 0       | 01/05/2014                                | 99.99%                                         | 8.14e-06                                          |
| LFJL / Metz Nancy Lorraine        | France  | 100.00%                    | 0.00e+00                      | 0       | 04/04/2013                                | 99.98%                                         | 1.13e-05                                          |
| LFKJ / Ajaccio Napoleon Bonaparte | France  | 100.00%                    | 0.00e+00                      | 0       | 23/06/2016                                | 99.97%                                         | 1.35e-05                                          |
| LFJA / Auxerre Branches           | France  | 100.00%                    | 0.00e+00                      | 0       | 21/08/2014                                | 99.99%                                         | 8.27e-06                                          |
| LFLL / Bourges                    | France  | 100.00%                    | 0.00e+00                      | 0       | 18/08/2016                                | 99.99%                                         | 7.15e-06                                          |
| LFMD / Cannes Mandelieu           | France  | 100.00%                    | 0.00e+00                      | 0       | 05/02/2015                                | 99.98%                                         | 1.21e-05                                          |
| LFML / Marseille Provence         | France  | 100.00%                    | 0.00e+00                      | 0       | 08/01/2015                                | 99.98%                                         | 1.17e-05                                          |
| LFMP / Perpignan Rivesaltes       | France  | 100.00%                    | 0.00e+00                      | 0       | 15/10/2015                                | 99.97%                                         | 1.25e-05                                          |
| LFMU / Beziers Vias               | France  | 100.00%                    | 0.00e+00                      | 0       | 18/10/2012                                | 99.96%                                         | 1.56e-05                                          |
| LFNB / Mende                      | France  | 100.00%                    | 0.00e+00                      | 0       | 17/12/2013                                | 99.98%                                         | 1.33e-05                                          |
| LFBO / Beauvais                   | France  | 100.00%                    | 0.00e+00                      | 0       | 20/09/2012                                | 99.97%                                         | 1.08e-05                                          |

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| LFOK / Chalons Vatry       | France  | 100.00%                    | 0.00e+00                      | 0       | 02/02/2017                                | 99.99%                                         | 7.95e-06                                          |
| LFOU / Cholet Le Pontreau  | France  | 100.00%                    | 0.00e+00                      | 0       | 04/02/2016                                | 99.98%                                         | 8.41e-06                                          |
| LFOV / Laval Entrammes     | France  | 100.00%                    | 0.00e+00                      | 0       | 26/04/2018                                | 99.99%                                         | 8.56e-06                                          |
| LFPO / Paris Orly          | France  | 100.00%                    | 0.00e+00                      | 0       | 30/05/2013                                | 99.97%                                         | 1.05e-05                                          |
| LFQA / Reims               | France  | 100.00%                    | 0.00e+00                      | 0       | 03/04/2014                                | 99.99%                                         | 8.82e-06                                          |
| LFQG / Nevers Fouchambault | France  | 100.00%                    | 0.00e+00                      | 0       | 13/12/2012                                | 99.97%                                         | 1.14e-05                                          |
| LFQM / Besançon La Veze    | France  | 100.00%                    | 0.00e+00                      | 0       | 05/11/2014                                | 99.99%                                         | 9.19e-06                                          |
| LFQQ / Lille Lesquin       | France  | 100.00%                    | 0.00e+00                      | 0       | 26/06/2014                                | 99.99%                                         | 7.26e-06                                          |
| LFQT / Merville            | France  | 100.00%                    | 0.00e+00                      | 0       | 15/11/2012                                | 99.97%                                         | 1.02e-05                                          |
| LFRB / Brest Bretagne      | France  | 100.00%                    | 0.00e+00                      | 0       | 03/05/2012                                | 99.94%                                         | 1.55e-05                                          |
| LFRD / Dinard              | France  | 100.00%                    | 0.00e+00                      | 0       | 06/02/2014                                | 99.98%                                         | 9.96e-06                                          |
| LFRG / Deauville Normandie | France  | 100.00%                    | 0.00e+00                      | 0       | 05/11/2014                                | 99.99%                                         | 8.29e-06                                          |
| LFRM / Le Mans             | France  | 100.00%                    | 0.00e+00                      | 0       | 15/11/2012                                | 99.97%                                         | 1.21e-05                                          |
| LFRN / Rennes              | France  | 100.00%                    | 0.00e+00                      | 0       | 30/05/2013                                | 99.97%                                         | 1.21e-05                                          |
| LFRS / Nantes              | France  | 100.00%                    | 0.00e+00                      | 0       | 28/06/2012                                | 99.97%                                         | 1.37e-05                                          |
| LFRU / Morlaix Ploujean    | France  | 100.00%                    | 0.00e+00                      | 0       | 13/10/2016                                | 99.98%                                         | 9.63e-06                                          |
| LFRV / Vannes Meucon       | France  | 100.00%                    | 0.00e+00                      | 0       | 31/05/2012                                | 99.94%                                         | 1.38e-05                                          |
| LFSB / Bale-Mulhouse       | France  | 100.00%                    | 0.00e+00                      | 0       | 10/12/2015                                | 99.99%                                         | 8.03e-06                                          |

| Airports                              | Country | Monthly APV-I Availability | Monthly APV-I Continuity Risk | Outages | Publication date of first APV-I procedure | APV-I Availability since procedure publication | APV-I Continuity Risk since procedure publication |
|---------------------------------------|---------|----------------------------|-------------------------------|---------|-------------------------------------------|------------------------------------------------|---------------------------------------------------|
| LFSD / Dijon-Longvic                  | France  | 100.00%                    | 0.00e+00                      | 0       | 28/04/2016                                | 99.99%                                         | 7.35e-06                                          |
| LFSG / Epinal-Minecourt               | France  | 100.00%                    | 0.00e+00                      | 0       | 30/05/2013                                | 99.98%                                         | 1.18e-05                                          |
| LGIO / Ioannina                       | Greece  | 100.00%                    | 0.00e+00                      | 0       | 27/02/2020                                | 99.93%                                         | 8.19e-05                                          |
| LGKO / Kos                            | Greece  | 99.69%                     | 4.18e-04                      | 286     | 27/02/2020                                | 99.69%                                         | 2.65e-04                                          |
| LGMT / Mitiini                        | Greece  | 100.00%                    | 0.00e+00                      | 0       | 27/02/2020                                | 99.89%                                         | 1.37e-04                                          |
| LGTS / Thessaloniki                   | Greece  | 100.00%                    | 0.00e+00                      | 0       | 27/02/2020                                | 99.93%                                         | 9.71e-05                                          |
| LHBC / Békéscsaba Repülőtér           | Hungary | 100.00%                    | 0.00e+00                      | 0       | 28/01/2021                                | 99.97%                                         | 3.19e-05                                          |
| LHDC / Debrecen International Airport | Hungary | 100.00%                    | 0.00e+00                      | 0       | 30/01/2020                                | 99.97%                                         | 2.98e-05                                          |
| LHNY / Nyíregyháza Airport            | Hungary | 100.00%                    | 0.00e+00                      | 0       | 24/03/2022                                | 99.97%                                         | 3.19e-05                                          |
| LHPP / Pecs-Pogany                    | Hungary | 100.00%                    | 0.00e+00                      | 0       | 03/12/2020                                | 99.97%                                         | 1.90e-05                                          |
| LHPR / Győr-Pér                       | Hungary | 100.00%                    | 0.00e+00                      | 0       | 25/02/2021                                | 99.97%                                         | 1.44e-05                                          |
| LHSM / Heviz-Balaton                  | Hungary | 100.00%                    | 0.00e+00                      | 0       | 25/03/2021                                | 99.97%                                         | 1.32e-05                                          |
| LICJ / Palermo/Punta Raisi            | Italy   | 99.95%                     | 5.60e-06                      | 1       | 11/10/2018                                | 99.92%                                         | 2.84e-05                                          |
| LIEA / Alghero/Fertilia               | Italy   | 100.00%                    | 0.00e+00                      | 0       | 11/10/2018                                | 99.95%                                         | 1.75e-05                                          |
| LIMC / Milano/Malpensa                | Italy   | 100.00%                    | 0.00e+00                      | 0       | 21/08/2014                                | 99.99%                                         | 1.01e-05                                          |
| LIME / Bergamo/Orio al Serio          | Italy   | 100.00%                    | 0.00e+00                      | 0       | 20/07/2017                                | 99.99%                                         | 9.74e-06                                          |



| Airports                      | Country    | Monthly APV-I Availability | Monthly APV-I Continuity Risk | Outages | Publication date of first APV-I procedure | APV-I Availability since procedure publication | APV-I Continuity Risk since procedure publication |
|-------------------------------|------------|----------------------------|-------------------------------|---------|-------------------------------------------|------------------------------------------------|---------------------------------------------------|
| LIML / Milano/Linate          | Italy      | 100.00%                    | 0.00e+00                      | 0       | 13/12/2012                                | 99.97%                                         | 1.38e-05                                          |
| LIPE / Bologna Borgo Panigale | Italy      | 100.00%                    | 0.00e+00                      | 0       | 20/11/2014                                | 99.98%                                         | 1.45e-05                                          |
| LIPZ / Venezia/Tessera        | Italy      | 100.00%                    | 0.00e+00                      | 0       | 27/06/2013                                | 99.96%                                         | 1.72e-05                                          |
| LIRF / Roma/Fiumicino         | Italy      | 100.00%                    | 0.00e+00                      | 0       | 23/05/2019                                | 99.95%                                         | 1.63e-05                                          |
| LIRQ / Firenze/Peretola       | Italy      | 100.00%                    | 0.00e+00                      | 0       | 22/06/2017                                | 99.97%                                         | 1.30e-05                                          |
| LJU / Ljubljana               | Slovenia   | 100.00%                    | 0.00e+00                      | 0       | 16/05/2024                                | 100.00%                                        | 0.00e+00                                          |
| LJPZ / Portotoz               | Slovenia   | 100.00%                    | 0.00e+00                      | 0       | 01/12/2022                                | 99.96%                                         | 2.36e-05                                          |
| LKKU / Kunovice               | Czech Rep. | 100.00%                    | 0.00e+00                      | 0       | 07/12/2017                                | 99.98%                                         | 1.26e-05                                          |
| LKKV / Karlovy Vary           | Czech Rep. | 100.00%                    | 0.00e+00                      | 0       | 13/11/2014                                | 99.99%                                         | 8.65e-06                                          |
| LKMT / Ostrava                | Czech Rep. | 100.00%                    | 0.00e+00                      | 0       | 09/01/2014                                | 99.98%                                         | 1.33e-05                                          |
| LKVO / Praha/Vodochody        | Czech Rep. | 100.00%                    | 0.00e+00                      | 0       | 25/06/2015                                | 99.99%                                         | 9.36e-06                                          |
| LMML / Luka                   | Malta      | 99.93%                     | 2.20e-05                      | 13      | 11/10/2018                                | 99.84%                                         | 8.63e-05                                          |
| LOAV / Vöslau                 | Austria    | 100.00%                    | 0.00e+00                      | 0       | 28/02/2019                                | 99.98%                                         | 9.15e-06                                          |
| LODO / ÖAMTC-Oberwart         | Austria    | 100.00%                    | 0.00e+00                      | 0       | 28/02/2019                                | 99.98%                                         | 9.83e-06                                          |
| LOGH / Graz LKH               | Austria    | 100.00%                    | 0.00e+00                      | 0       | 27/01/2022                                | 99.95%                                         | 3.31e-06                                          |
| LPCS / Cascais                | Portugal   | 100.00%                    | 0.00e+00                      | 0       | 20/05/2021                                | 99.85%                                         | 4.94e-05                                          |
| LPFR / Faro                   | Portugal   | 99.99%                     | 1.12e-05                      | 2       | 18/07/2019                                | 99.85%                                         | 6.39e-05                                          |
| LPPR / Porto                  | Portugal   | 99.99%                     | 2.46e-05                      | 32      | 12/10/2017                                | 99.94%                                         | 3.47e-05                                          |
| LPPS / Porto Santo            | Portugal   | 99.96%                     | 1.68e-05                      | 3       | 08/09/2022                                | 97.24%                                         | 6.17e-04                                          |

| Airports                       | Country     | Monthly APV-I Availability | Monthly APV-I Continuity Risk | Outages | Publication date of first APV-I procedure | APV-I Availability since procedure publication | APV-I Continuity Risk since procedure publication |
|--------------------------------|-------------|----------------------------|-------------------------------|---------|-------------------------------------------|------------------------------------------------|---------------------------------------------------|
| LPPT / Lisboa                  | Portugal    | 100.00%                    | 0.00e+00                      | 0       | 28/05/2015                                | 99.93%                                         | 3.06e-05                                          |
| LRCK / Constanta               | Romania     | 100.00%                    | 0.00e+00                      | 0       | 07/09/2023                                | 99.90%                                         | 1.04e-04                                          |
| LRCL / Cluj-Napoca/Avram Iancu | Romania     | 100.00%                    | 0.00e+00                      | 0       | 10/11/2016                                | 99.94%                                         | 6.06e-05                                          |
| LROD / ORADEA/Oradea           | Romania     | 100.00%                    | 0.00e+00                      | 0       | 21/03/2024                                | 99.91%                                         | 5.84e-06                                          |
| LRSV / Suceava                 | Romania     | 100.00%                    | 0.00e+00                      | 0       | 07/09/2023                                | 99.91%                                         | 5.16e-05                                          |
| LSHI / Bern-Insel Hospital     | Switzerland | 100.00%                    | 0.00e+00                      | 0       | 18/05/2023                                | 99.99%                                         | 2.14e-05                                          |
| LSMD / Dübendorf               | Switzerland | 100.00%                    | 0.00e+00                      | 0       | 21/08/2014                                | 99.99%                                         | 9.86e-06                                          |
| LSME / Emmen                   | Switzerland | 100.00%                    | 0.00e+00                      | 0       | 03/04/2014                                | 99.99%                                         | 9.52e-06                                          |
| LSZR / St. Gallen-Altenrhein   | Switzerland | 100.00%                    | 0.00e+00                      | 0       | 17/11/2011                                | 99.95%                                         | 1.34e-05                                          |

**Table 8 - Monthly APV-I Availability at airports with published procedures using EGNOS in May 2024.**

# ANNEX C EGNOS LPV-200 PERFORMANCE AT AIRPORTS

The Table 9 reports LPV-200 Availability and Continuity at airports with published procedures using EGNOS. These values correspond to the performance obtained under fault-free conditions using all satellites in view:

| Airports                  | Country | Monthly LPV200 Availability | Monthly LPV200 Continuity Risk | Outages | Publication date of first LPV200 procedure | LPV200 Availability since procedure publication | LPV200 Continuity Risk since procedure publication |
|---------------------------|---------|-----------------------------|--------------------------------|---------|--------------------------------------------|-------------------------------------------------|----------------------------------------------------|
| EBAW / Antwerpen          | Belgium | 100.00%                     | 0.00e+00                       | 0       | 02/11/2023                                 | 100.00%                                         | 0.00e+00                                           |
| EBBE / Beauvechain        | Belgium | 100.00%                     | 0.00e+00                       | 0       | 07/09/2023                                 | 99.99%                                          | 2.19e-05                                           |
| EBBR / Brussels-National  | Belgium | 100.00%                     | 0.00e+00                       | 0       | 05/10/2023                                 | 99.99%                                          | 2.28e-05                                           |
| EBLG / Liège              | Belgium | 100.00%                     | 0.00e+00                       | 0       | 19/05/2022                                 | 99.99%                                          | 1.31e-05                                           |
| EBOS / Oostende/Brugge    | Belgium | 100.00%                     | 0.00e+00                       | 0       | 03/01/2019                                 | 99.98%                                          | 1.16e-05                                           |
| EDAC / Leipzig/Altenburg  | Germany | 100.00%                     | 0.00e+00                       | 0       | 28/03/2019                                 | 99.98%                                          | 1.37e-05                                           |
| EDAH / Heringsdorf        | Germany | 100.00%                     | 0.00e+00                       | 0       | 18/04/2024                                 | 99.98%                                          | 4.96e-06                                           |
| EDAY / Strausberg         | Germany | 100.00%                     | 0.00e+00                       | 0       | 17/06/2021                                 | 99.99%                                          | 9.40e-06                                           |
| EDAZ / Schoenhagen        | Germany | 100.00%                     | 0.00e+00                       | 0       | 11/10/2018                                 | 99.98%                                          | 1.30e-05                                           |
| EDBH / Barth              | Germany | 100.00%                     | 0.00e+00                       | 0       | 09/09/2021                                 | 99.99%                                          | 1.22e-05                                           |
| EDDB / Berlin Brandenburg | Germany | 100.00%                     | 0.00e+00                       | 0       | 08/10/2020                                 | 99.99%                                          | 8.48e-06                                           |
| EDDE / Erfurt-Weimar      | Germany | 100.00%                     | 0.00e+00                       | 0       | 09/09/2021                                 | 99.99%                                          | 1.03e-05                                           |

| Airports                    | Country | Monthly LPV200 Availability | Monthly LPV200 Continuity Risk | Outages | Publication date of first LPV200 procedure | LPV200 Availability since procedure publication | LPV200 Continuity Risk since procedure publication |
|-----------------------------|---------|-----------------------------|--------------------------------|---------|--------------------------------------------|-------------------------------------------------|----------------------------------------------------|
| EDDF / Frankfurt Main       | Germany | 100.00%                     | 0.00e+00                       | 0       | 13/07/2023                                 | 99.99%                                          | 2.00e-05                                           |
| EDDH / Hamburg              | Germany | 100.00%                     | 0.00e+00                       | 0       | 18/06/2020                                 | 99.99%                                          | 9.64e-06                                           |
| EDDK / Koeln/Bonn           | Germany | 100.00%                     | 0.00e+00                       | 0       | 12/09/2019                                 | 99.99%                                          | 1.05e-05                                           |
| EDDM / München              | Germany | 100.00%                     | 0.00e+00                       | 0       | 23/05/2019                                 | 99.98%                                          | 1.48e-05                                           |
| EDDN / Nürnberg             | Germany | 100.00%                     | 0.00e+00                       | 0       | 01/12/2022                                 | 99.99%                                          | 1.70e-05                                           |
| EDDP / Leipzig/Halle        | Germany | 100.00%                     | 0.00e+00                       | 0       | 30/01/2020                                 | 99.99%                                          | 1.34e-05                                           |
| EDDW / Bremen               | Germany | 100.00%                     | 0.00e+00                       | 0       | 30/03/2017                                 | 99.98%                                          | 1.34e-05                                           |
| EDFH / Frankfurt Hahn       | Germany | 100.00%                     | 0.00e+00                       | 0       | 14/09/2017                                 | 99.99%                                          | 1.07e-05                                           |
| EDGS / Siegerland           | Germany | 100.00%                     | 0.00e+00                       | 0       | 12/10/2017                                 | 99.99%                                          | 1.19e-05                                           |
| EDHI / Hamburg-Finkenwerder | Germany | 100.00%                     | 0.00e+00                       | 0       | 18/06/2020                                 | 99.99%                                          | 9.80e-06                                           |
| EDHK / Kiel-Holtenau        | Germany | 100.00%                     | 0.00e+00                       | 0       | 18/06/2020                                 | 99.99%                                          | 1.03e-05                                           |
| EDHL / Luebeck-Blankensee   | Germany | 100.00%                     | 0.00e+00                       | 0       | 18/06/2020                                 | 99.99%                                          | 9.24e-06                                           |
| EDJA / Memmingen            | Germany | 100.00%                     | 0.00e+00                       | 0       | 04/11/2021                                 | 99.99%                                          | 1.41e-05                                           |
| EDLN / Moenchengladbach     | Germany | 100.00%                     | 0.00e+00                       | 0       | 06/12/2018                                 | 99.99%                                          | 1.29e-05                                           |
| EDLP / Paderborn-Lippstadt  | Germany | 100.00%                     | 0.00e+00                       | 0       | 10/10/2019                                 | 99.99%                                          | 1.07e-05                                           |
| EDMA / Augsburg             | Germany | 100.00%                     | 0.00e+00                       | 0       | 11/10/2018                                 | 99.98%                                          | 1.36e-05                                           |

| Airports                               | Country | Monthly LPV200 Availability | Monthly LPV200 Continuity Risk | Outages | Publication date of first LPV200 procedure | LPV200 Availability since procedure publication | LPV200 Continuity Risk since procedure publication |
|----------------------------------------|---------|-----------------------------|--------------------------------|---------|--------------------------------------------|-------------------------------------------------|----------------------------------------------------|
| EDMO / Oberpfaffenhofen                | Germany | 100.00%                     | 0.00e+00                       | 0       | 23/05/2019                                 | 99.98%                                          | 1.47e-05                                           |
| EDNY / Friedrichshafen                 | Germany | 100.00%                     | 0.00e+00                       | 0       | 19/07/2018                                 | 99.98%                                          | 1.28e-05                                           |
| EDQA / Bamberg-Breitenau               | Germany | 100.00%                     | 0.00e+00                       | 0       | 02/12/2021                                 | 99.99%                                          | 1.18e-05                                           |
| EDQG / Giebelstadt                     | Germany | 100.00%                     | 0.00e+00                       | 0       | 02/12/2021                                 | 99.99%                                          | 1.10e-05                                           |
| EDQM / Hof-Plauen                      | Germany | 100.00%                     | 0.00e+00                       | 0       | 21/06/2018                                 | 99.99%                                          | 1.22e-05                                           |
| EDSB / Karlsruhe/Baden-Baden           | Germany | 100.00%                     | 0.00e+00                       | 0       | 27/04/2017                                 | 99.99%                                          | 1.12e-05                                           |
| EDTL / Lahr                            | Germany | 100.00%                     | 0.00e+00                       | 0       | 27/04/2017                                 | 99.99%                                          | 1.14e-05                                           |
| EDTY / Schwäbisch-Hall                 | Germany | 100.00%                     | 0.00e+00                       | 0       | 21/03/2024                                 | 100.00%                                         | 0.00e+00                                           |
| EDWE / Emden                           | Germany | 100.00%                     | 0.00e+00                       | 0       | 30/11/2023                                 | 99.99%                                          | 7.09e-07                                           |
| EDWI / Wilhelmshaven JadeWeser Airport | Germany | 100.00%                     | 0.00e+00                       | 0       | 30/11/2023                                 | 99.99%                                          | 7.09e-07                                           |
| EDXW / Sylt                            | Germany | 100.00%                     | 0.00e+00                       | 0       | 20/04/2023                                 | 99.99%                                          | 1.54e-05                                           |
| EEMU / Pärnu                           | Estonia | 100.00%                     | 0.00e+00                       | 0       | 03/11/2022                                 | 99.91%                                          | 1.04e-04                                           |
| EETN / Lennart Meri Tallinn            | Estonia | 100.00%                     | 0.00e+00                       | 0       | 06/12/2018                                 | 99.90%                                          | 1.27e-04                                           |
| EETU / Tartu                           | Estonia | 100.00%                     | 0.00e+00                       | 0       | 18/07/2019                                 | 99.87%                                          | 1.51e-04                                           |
| EFHK / Helsinki-Vantaa                 | Finland | 100.00%                     | 0.00e+00                       | 0       | 18/04/2024                                 | 99.95%                                          | 2.19e-05                                           |
| EFPO / Pori                            | Finland | 100.00%                     | 0.00e+00                       | 0       | 22/02/2024                                 | 99.97%                                          | 8.63e-06                                           |

| Airports                         | Country     | Monthly LPV200 Availability | Monthly LPV200 Continuity Risk | Outages | Publication date of first LPV200 procedure | LPV200 Availability since procedure publication | LPV200 Continuity Risk since procedure publication |
|----------------------------------|-------------|-----------------------------|--------------------------------|---------|--------------------------------------------|-------------------------------------------------|----------------------------------------------------|
| EFTP / Tampere/Pirkkala          | Finland     | 100.00%                     | 0.00e+00                       | 0       | 11/08/2022                                 | 99.79%                                          | 1.97e-04                                           |
| EGJB / Guernsey                  | Guernsey    | 100.00%                     | 0.00e+00                       | 0       | 10/10/2019                                 | 99.98%                                          | 1.30e-05                                           |
| EGJJ / Jersey                    | Jersey      | 100.00%                     | 0.00e+00                       | 0       | 23/05/2019                                 | 99.98%                                          | 1.27e-05                                           |
| EHAM / Amsterdam                 | Netherlands | 100.00%                     | 0.00e+00                       | 0       | 05/12/2019                                 | 99.99%                                          | 1.36e-05                                           |
| EHBD / Weert / Budel             | Netherlands | 100.00%                     | 0.00e+00                       | 0       | 31/12/2020                                 | 99.99%                                          | 9.34e-06                                           |
| EHBK / Maastricht Aachen Airport | Netherlands | 100.00%                     | 0.00e+00                       | 0       | 14/07/2022                                 | 99.99%                                          | 1.42e-05                                           |
| EHEH / Eindhoven                 | Netherlands | 100.00%                     | 0.00e+00                       | 0       | 28/01/2021                                 | 99.99%                                          | 9.13e-06                                           |
| EHKD / Den Helder - De Kooy      | Netherlands | 100.00%                     | 0.00e+00                       | 0       | 28/01/2021                                 | 99.99%                                          | 1.02e-05                                           |
| EHLW / Leeuwarden                | Netherlands | 100.00%                     | 0.00e+00                       | 0       | 28/01/2021                                 | 99.99%                                          | 1.09e-05                                           |
| EHRD / Rotterdam The Hague       | Netherlands | 100.00%                     | 0.00e+00                       | 0       | 03/11/2022                                 | 99.99%                                          | 1.31e-05                                           |
| EHWO / Woensdrecht               | Netherlands | 100.00%                     | 0.00e+00                       | 0       | 26/01/2023                                 | 99.99%                                          | 1.47e-05                                           |
| EIDW / Dublin Airport            | Ireland     | 100.00%                     | 0.00e+00                       | 0       | 08/09/2022                                 | 99.99%                                          | 1.69e-05                                           |
| EISG / Sligo                     | Ireland     | 100.00%                     | 0.00e+00                       | 0       | 01/12/2022                                 | 99.99%                                          | 2.16e-05                                           |
| EKAH / Aarhus                    | Denmark     | 100.00%                     | 0.00e+00                       | 0       | 22/02/2024                                 | 99.99%                                          | 5.39e-06                                           |
| EKBI / Billund                   | Denmark     | 100.00%                     | 0.00e+00                       | 0       | 20/07/2017                                 | 99.98%                                          | 1.56e-05                                           |
| EKCH / København/ Kastrup        | Denmark     | 100.00%                     | 0.00e+00                       | 0       | 22/02/2024                                 | 99.99%                                          | 1.09e-05                                           |
| EKEB / Esbjerg                   | Denmark     | 100.00%                     | 0.00e+00                       | 0       | 26/03/2020                                 | 99.99%                                          | 1.09e-05                                           |

| Airports                        | Country    | Monthly LPV200 Availability | Monthly LPV200 Continuity Risk | Outages | Publication date of first LPV200 procedure | LPV200 Availability since procedure publication | LPV200 Continuity Risk since procedure publication |
|---------------------------------|------------|-----------------------------|--------------------------------|---------|--------------------------------------------|-------------------------------------------------|----------------------------------------------------|
| EKSB / Sonderborg               | Denmark    | 100.00%                     | 0.00e+00                       | 0       | 30/12/2021                                 | 99.99%                                          | 1.05e-05                                           |
| ELLX / Luxembourg               | Luxembourg | 100.00%                     | 0.00e+00                       | 0       | 26/03/2020                                 | 99.99%                                          | 1.08e-05                                           |
| ENAL / Alesund-Vigra            | Norway     | 100.00%                     | 0.00e+00                       | 0       | 07/11/2019                                 | 99.95%                                          | 4.67e-05                                           |
| ENBL / Forde/Aringeland         | Norway     | 100.00%                     | 0.00e+00                       | 0       | 27/04/2017                                 | 99.96%                                          | 3.63e-05                                           |
| ENBR / Bergen-Flesland          | Norway     | 100.00%                     | 0.00e+00                       | 0       | 28/02/2019                                 | 99.97%                                          | 2.86e-05                                           |
| ENCN / Kristiansand/Kjevik      | Norway     | 100.00%                     | 0.00e+00                       | 0       | 23/02/2022                                 | 99.99%                                          | 2.42e-05                                           |
| ENEV / Harstad/Narvik/Evenes    | Norway     | 100.00%                     | 0.00e+00                       | 0       | 15/07/2021                                 | 99.28%                                          | 8.54e-04                                           |
| ENGM / Gardemoen                | Norway     | 100.00%                     | 0.00e+00                       | 0       | 10/11/2016                                 | 99.97%                                          | 2.58e-05                                           |
| ENHD / Haugesund/Karmoy         | Norway     | 100.00%                     | 0.00e+00                       | 0       | 13/08/2020                                 | 99.98%                                          | 2.31e-05                                           |
| ENHK / Hasvik                   | Norway     | 100.00%                     | 0.00e+00                       | 0       | 03/12/2020                                 | 98.32%                                          | 1.57e-03                                           |
| ENKB / Kristiansund/Kvernberget | Norway     | 100.00%                     | 0.00e+00                       | 0       | 31/12/2020                                 | 99.93%                                          | 5.92e-05                                           |
| ENML / Molde/Aro                | Norway     | 100.00%                     | 0.00e+00                       | 0       | 30/03/2017                                 | 99.95%                                          | 4.41e-05                                           |
| ENNM / Namsos                   | Norway     | 100.00%                     | 0.00e+00                       | 0       | 27/04/2017                                 | 99.90%                                          | 1.03e-04                                           |
| ENNO / Notodden                 | Norway     | 100.00%                     | 0.00e+00                       | 0       | 07/09/2023                                 | 99.97%                                          | 4.10e-05                                           |
| ENOL / Orland                   | Norway     | 100.00%                     | 0.00e+00                       | 0       | 12/10/2017                                 | 99.93%                                          | 7.11e-05                                           |
| ENRM / Rorvik/Ryum              | Norway     | 100.00%                     | 0.00e+00                       | 0       | 02/02/2017                                 | 99.90%                                          | 1.08e-04                                           |

| Airports                             | Country | Monthly LPV200 Availability | Monthly LPV200 Continuity Risk | Outages | Publication date of first LPV200 procedure | LPV200 Availability since procedure publication | LPV200 Continuity Risk since procedure publication |
|--------------------------------------|---------|-----------------------------|--------------------------------|---------|--------------------------------------------|-------------------------------------------------|----------------------------------------------------|
| ENSG / Sogndal/Haukasen              | Norway  | 100.00%                     | 0.00e+00                       | 0       | 14/09/2017                                 | 99.96%                                          | 2.91e-05                                           |
| ENST / Sandnessjøen/Stokka           | Norway  | 100.00%                     | 0.00e+00                       | 0       | 30/01/2020                                 | 99.78%                                          | 2.67e-04                                           |
| ENTX / Oslo Helikopterpass Taraldrud | Norway  | 100.00%                     | 0.00e+00                       | 0       | 15/07/2021                                 | 99.98%                                          | 2.59e-05                                           |
| ENVA / Trondheim/Værnes              | Norway  | 100.00%                     | 0.00e+00                       | 0       | 27/02/2020                                 | 99.92%                                          | 8.73e-05                                           |
| ENZV / Stavanger/Sola                | Norway  | 100.00%                     | 0.00e+00                       | 0       | 03/03/2016                                 | 99.97%                                          | 2.25e-05                                           |
| EPBY / Bydgoszcz - Szwederowo        | Poland  | 100.00%                     | 0.00e+00                       | 0       | 26/04/2018                                 | 99.98%                                          | 1.82e-05                                           |
| EPGD / Gdansk Lech Walesa            | Poland  | 100.00%                     | 0.00e+00                       | 0       | 26/04/2018                                 | 99.97%                                          | 1.79e-05                                           |
| EPKK / Kraków - Balice               | Poland  | 100.00%                     | 0.00e+00                       | 0       | 26/04/2018                                 | 99.97%                                          | 3.04e-05                                           |
| EPKT / Katowice                      | Poland  | 100.00%                     | 0.00e+00                       | 0       | 26/04/2018                                 | 99.97%                                          | 2.36e-05                                           |
| EPLB / Lublin                        | Poland  | 100.00%                     | 0.00e+00                       | 0       | 26/04/2018                                 | 99.94%                                          | 6.15e-05                                           |
| EPLL / Łódź-Lublinek                 | Poland  | 100.00%                     | 0.00e+00                       | 0       | 21/06/2018                                 | 99.97%                                          | 2.31e-05                                           |
| EPMO / Warszawa/Modlin               | Poland  | 100.00%                     | 0.00e+00                       | 0       | 26/04/2018                                 | 99.97%                                          | 2.63e-05                                           |
| EPPO / Poznan Lawica                 | Poland  | 100.00%                     | 0.00e+00                       | 0       | 18/07/2019                                 | 99.98%                                          | 1.56e-05                                           |
| EPRA / Warszawa-Radom                | Poland  | 100.00%                     | 0.00e+00                       | 0       | 10/08/2023                                 | 99.96%                                          | 2.78e-05                                           |



| Airports                                   | Country | Monthly LPV200 Availability | Monthly LPV200 Continuity Risk | Outages | Publication date of first LPV200 procedure | LPV200 Availability since procedure publication | LPV200 Continuity Risk since procedure publication |
|--------------------------------------------|---------|-----------------------------|--------------------------------|---------|--------------------------------------------|-------------------------------------------------|----------------------------------------------------|
| EPRZ / Rzeszów - Jasionka                  | Poland  | 100.00%                     | 0.00e+00                       | 0       | 26/04/2018                                 | 99.95%                                          | 5.52e-05                                           |
| EPSC / Szczecin - Goleniów                 | Poland  | 100.00%                     | 0.00e+00                       | 0       | 26/04/2018                                 | 99.98%                                          | 1.43e-05                                           |
| EPSY / Olsztyn - Mazury                    | Poland  | 100.00%                     | 0.00e+00                       | 0       | 26/04/2018                                 | 99.97%                                          | 2.55e-05                                           |
| EPWA / Warszawa-F. Chopin                  | Poland  | 100.00%                     | 0.00e+00                       | 0       | 26/04/2018                                 | 99.97%                                          | 2.83e-05                                           |
| EPWR / Wrocław/St radowice                 | Poland  | 100.00%                     | 0.00e+00                       | 0       | 26/04/2018                                 | 99.98%                                          | 1.58e-05                                           |
| EPZG / Zielona Góra-Babinost               | Poland  | 100.00%                     | 0.00e+00                       | 0       | 18/07/2019                                 | 99.98%                                          | 1.52e-05                                           |
| ESGP / Säve                                | Sweden  | 100.00%                     | 0.00e+00                       | 0       | 04/11/2021                                 | 99.99%                                          | 1.92e-05                                           |
| ESNQ / Kiruna                              | Sweden  | 100.00%                     | 0.00e+00                       | 0       | 25/01/2024                                 | 99.97%                                          | 3.51e-05                                           |
| ESSA / Stockholm/ Arlanda                  | Sweden  | 100.00%                     | 0.00e+00                       | 0       | 02/11/2023                                 | 99.96%                                          | 1.21e-05                                           |
| ESSB / Stockholm/ Bromm                    | Sweden  | 100.00%                     | 0.00e+00                       | 0       | 30/11/2023                                 | 99.98%                                          | 6.05e-06                                           |
| ESSV / Visby                               | Sweden  | 100.00%                     | 0.00e+00                       | 0       | 25/03/2021                                 | 99.98%                                          | 2.40e-05                                           |
| EVGA / Lielvarde                           | Latvia  | 100.00%                     | 0.00e+00                       | 0       | 27/01/2022                                 | 99.96%                                          | 4.56e-05                                           |
| EVLA / Liepaja                             | Latvia  | 100.00%                     | 0.00e+00                       | 0       | 16/06/2022                                 | 99.98%                                          | 2.05e-05                                           |
| EVRA / Riga                                | Latvia  | 100.00%                     | 0.00e+00                       | 0       | 27/01/2022                                 | 99.96%                                          | 4.32e-05                                           |
| LEBL / Josep Tarradellas Barcelona-El Prat | Spain   | 100.00%                     | 0.00e+00                       | 0       | 04/11/2021                                 | 99.91%                                          | 2.98e-05                                           |
| LEMD / AS Madrid-Barajas                   | Spain   | 100.00%                     | 0.00e+00                       | 0       | 23/02/2023                                 | 99.83%                                          | 6.06e-05                                           |

| Airports                         | Country | Monthly LPV200 Availability | Monthly LPV200 Continuity Risk | Outages | Publication date of first LPV200 procedure | LPV200 Availability since procedure publication | LPV200 Continuity Risk since procedure publication |
|----------------------------------|---------|-----------------------------|--------------------------------|---------|--------------------------------------------|-------------------------------------------------|----------------------------------------------------|
| LEVT / Vitoria                   | Spain   | 100.00%                     | 0.00e+00                       | 0       | 11/07/2024                                 | 100.00%                                         | 0.00e+00                                           |
| LFAQ / Albert Bray               | France  | 100.00%                     | 0.00e+00                       | 0       | 21/11/2017                                 | 99.99%                                          | 1.12e-05                                           |
| LFAT / Le Touquet Paris Plage    | France  | 100.00%                     | 0.00e+00                       | 0       | 21/11/2017                                 | 99.99%                                          | 1.19e-05                                           |
| LFAV / Valenciennes Denain       | France  | 100.00%                     | 0.00e+00                       | 0       | 21/11/2017                                 | 99.99%                                          | 1.19e-05                                           |
| LFBA / Agen La Garenne           | France  | 100.00%                     | 0.00e+00                       | 0       | 21/11/2017                                 | 99.97%                                          | 2.13e-05                                           |
| LFBD / Bordeaux Merignac         | France  | 100.00%                     | 0.00e+00                       | 0       | 08/03/2012                                 | 99.97%                                          | 1.80e-05                                           |
| LFBE / Bergerac                  | France  | 100.00%                     | 0.00e+00                       | 0       | 21/11/2017                                 | 99.98%                                          | 1.82e-05                                           |
| LFBF / Toulouse Francazal        | France  | 100.00%                     | 0.00e+00                       | 0       | 03/11/2022                                 | 99.91%                                          | 4.48e-05                                           |
| LFBH / La Rochelle               | France  | 100.00%                     | 0.00e+00                       | 0       | 04/11/2021                                 | 99.98%                                          | 1.79e-05                                           |
| LFBI / Poitiers Biard            | France  | 100.00%                     | 0.00e+00                       | 0       | 21/11/2017                                 | 99.98%                                          | 1.39e-05                                           |
| LFBL / Limoges                   | France  | 100.00%                     | 0.00e+00                       | 0       | 21/11/2017                                 | 99.98%                                          | 1.47e-05                                           |
| LFBS / Biscarrosse Parentis      | France  | 100.00%                     | 0.00e+00                       | 0       | 04/11/2021                                 | 99.96%                                          | 2.78e-05                                           |
| LFBU / Angoulême Brie Champniers | France  | 100.00%                     | 0.00e+00                       | 0       | 21/11/2017                                 | 99.98%                                          | 1.62e-05                                           |
| LFBX / Périgueux Bassillac       | France  | 100.00%                     | 0.00e+00                       | 0       | 25/05/2017                                 | 99.98%                                          | 1.60e-05                                           |
| LFBZ / Biarritz Bayonne Anglet   | France  | 100.00%                     | 0.00e+00                       | 0       | 26/04/2018                                 | 99.96%                                          | 2.37e-05                                           |
| LFCC / Cahors Lalbenque          | France  | 100.00%                     | 0.00e+00                       | 0       | 03/11/2022                                 | 99.94%                                          | 4.21e-05                                           |

| Airports                           | Country | Monthly LPV200 Availability | Monthly LPV200 Continuity Risk | Outages | Publication date of first LPV200 procedure | LPV200 Availability since procedure publication | LPV200 Continuity Risk since procedure publication |
|------------------------------------|---------|-----------------------------|--------------------------------|---------|--------------------------------------------|-------------------------------------------------|----------------------------------------------------|
| LFCI / Albi Le Sequestre           | France  | 100.00%                     | 0.00e+00                       | 0       | 21/11/2017                                 | 99.96%                                          | 2.31e-05                                           |
| LFGR / Rodez Marcillac             | France  | 100.00%                     | 0.00e+00                       | 0       | 21/11/2017                                 | 99.97%                                          | 2.01e-05                                           |
| LFDJ / Pamiers Les Pujols          | France  | 100.00%                     | 0.00e+00                       | 0       | 03/11/2022                                 | 99.90%                                          | 4.10e-05                                           |
| LFDN / Rochefort Charente Maritime | France  | 100.00%                     | 0.00e+00                       | 0       | 23/05/2018                                 | 99.98%                                          | 1.66e-05                                           |
| LFEY / Ile d Yeu                   | France  | 100.00%                     | 0.00e+00                       | 0       | 04/11/2021                                 | 99.99%                                          | 1.65e-05                                           |
| LFGA / Colmar Houssen              | France  | 100.00%                     | 0.00e+00                       | 0       | 21/06/2018                                 | 99.99%                                          | 1.25e-05                                           |
| LFGJ / Dole Tavaux                 | France  | 100.00%                     | 0.00e+00                       | 0       | 21/11/2017                                 | 99.99%                                          | 1.39e-05                                           |
| LFHP / Le Puy Loudes               | France  | 100.00%                     | 0.00e+00                       | 0       | 28/02/2019                                 | 99.98%                                          | 1.76e-05                                           |
| LFJL / Metz Nancy Lorraine         | France  | 100.00%                     | 0.00e+00                       | 0       | 21/11/2017                                 | 99.99%                                          | 1.19e-05                                           |
| LFJR / Angers Marce                | France  | 100.00%                     | 0.00e+00                       | 0       | 21/11/2017                                 | 99.98%                                          | 1.32e-05                                           |
| LFKB / Bastia Poretta              | France  | 100.00%                     | 0.00e+00                       | 0       | 07/12/2017                                 | 99.96%                                          | 2.37e-05                                           |
| LFKC / Calvi Sainte Catherine      | France  | 100.00%                     | 0.00e+00                       | 0       | 04/11/2021                                 | 99.92%                                          | 2.94e-05                                           |
| LFKF / Figari Sud Corse            | France  | 100.00%                     | 0.00e+00                       | 0       | 21/11/2017                                 | 99.95%                                          | 2.69e-05                                           |
| LFLL / Clermont-Ferrand Auvergne   | France  | 100.00%                     | 0.00e+00                       | 0       | 21/11/2017                                 | 99.98%                                          | 1.51e-05                                           |
| LFLG / Grenoble – Le Versoud       | France  | 100.00%                     | 0.00e+00                       | 0       | 01/12/2022                                 | 99.97%                                          | 2.47e-05                                           |
| LFLM / Lyon St.Exupery             | France  | 100.00%                     | 0.00e+00                       | 0       | 15/08/2019                                 | 99.98%                                          | 1.56e-05                                           |

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|---------------------------------|---------|-----------------------------|--------------------------------|---------|--------------------------------------------|-------------------------------------------------|----------------------------------------------------|
| LFLN / Saint Yan                | France  | 100.00%                     | 0.00e+00                       | 0       | 02/03/2017                                 | 99.98%                                          | 1.41e-05                                           |
| LFLP / Annecy Meythet           | France  | 100.00%                     | 0.00e+00                       | 0       | 04/11/2021                                 | 99.99%                                          | 1.70e-05                                           |
| LFLS / Grenoble Isere           | France  | 100.00%                     | 0.00e+00                       | 0       | 13/10/2016                                 | 99.98%                                          | 1.38e-05                                           |
| LFLU / Valence                  | France  | 100.00%                     | 0.00e+00                       | 0       | 21/11/2017                                 | 99.98%                                          | 1.57e-05                                           |
| LFLV / Vichy Charmeil           | France  | 100.00%                     | 0.00e+00                       | 0       | 26/04/2018                                 | 99.98%                                          | 1.30e-05                                           |
| LFLW / Aurillac                 | France  | 100.00%                     | 0.00e+00                       | 0       | 15/08/2019                                 | 99.98%                                          | 1.87e-05                                           |
| LFLX / Chateauroux              | France  | 100.00%                     | 0.00e+00                       | 0       | 15/08/2019                                 | 99.98%                                          | 1.29e-05                                           |
| LFLY / Lyon Bron                | France  | 100.00%                     | 0.00e+00                       | 0       | 28/09/2016                                 | 99.98%                                          | 1.40e-05                                           |
| LFMH / Saint Etienne Boutheon   | France  | 100.00%                     | 0.00e+00                       | 0       | 02/02/2017                                 | 99.98%                                          | 1.38e-05                                           |
| LFMK / Carcassonne Salvaza      | France  | 100.00%                     | 0.00e+00                       | 0       | 21/11/2017                                 | 99.96%                                          | 2.11e-05                                           |
| LFML / Marseille Provence       | France  | 100.00%                     | 0.00e+00                       | 0       | 03/11/2022                                 | 99.90%                                          | 3.67e-05                                           |
| LFMN / Nice Côte d'Azur         | France  | 100.00%                     | 0.00e+00                       | 0       | 25/04/2019                                 | 99.96%                                          | 2.05e-05                                           |
| LFMT / Montpellier Méditerranée | France  | 100.00%                     | 0.00e+00                       | 0       | 05/12/2019                                 | 99.96%                                          | 2.42e-05                                           |
| LFMV / Avignon Caumont          | France  | 100.00%                     | 0.00e+00                       | 0       | 21/06/2018                                 | 99.97%                                          | 1.85e-05                                           |
| LFOB / Beauvais                 | France  | 100.00%                     | 0.00e+00                       | 0       | 01/12/2022                                 | 99.99%                                          | 1.75e-05                                           |
| LFOH / Le Havre Octeville       | France  | 100.00%                     | 0.00e+00                       | 0       | 21/11/2017                                 | 99.98%                                          | 1.24e-05                                           |

| Airports                              | Country | Monthly LPV200 Availability | Monthly LPV200 Continuity Risk | Outages | Publication date of first LPV200 procedure | LPV200 Availability since procedure publication | LPV200 Continuity Risk since procedure publication |
|---------------------------------------|---------|-----------------------------|--------------------------------|---------|--------------------------------------------|-------------------------------------------------|----------------------------------------------------|
| LFOQ / Blois Le Breuil                | France  | 100.00%                     | 0.00e+00                       | 0       | 25/04/2019                                 | 99.98%                                          | 1.19e-05                                           |
| LFOT / Tour de Val Loire              | France  | 100.00%                     | 0.00e+00                       | 0       | 03/11/2022                                 | 99.99%                                          | 1.81e-05                                           |
| LFOZ / Orléans Saint Denis De L'Hotel | France  | 100.00%                     | 0.00e+00                       | 0       | 04/11/2021                                 | 99.99%                                          | 1.20e-05                                           |
| LFPB / Paris - Le Bourget             | France  | 100.00%                     | 0.00e+00                       | 0       | 07/12/2017                                 | 99.99%                                          | 1.10e-05                                           |
| LFPG / Paris Charles de Gaulle        | France  | 100.00%                     | 0.00e+00                       | 0       | 28/04/2016                                 | 99.98%                                          | 9.70e-06                                           |
| LFPM / Melun Villaroche               | France  | 100.00%                     | 0.00e+00                       | 0       | 07/12/2017                                 | 99.98%                                          | 1.15e-05                                           |
| LFPN / Toussus Le Noble               | France  | 100.00%                     | 0.00e+00                       | 0       | 27/04/2017                                 | 99.99%                                          | 1.05e-05                                           |
| LFPO / Paris Orly                     | France  | 100.00%                     | 0.00e+00                       | 0       | 07/12/2017                                 | 99.98%                                          | 1.11e-05                                           |
| LFPT / Pontoise Cormeilles en Vexin   | France  | 100.00%                     | 0.00e+00                       | 0       | 07/12/2017                                 | 99.98%                                          | 1.12e-05                                           |
| LFQB / Troyes Barberey                | France  | 100.00%                     | 0.00e+00                       | 0       | 18/08/2016                                 | 99.99%                                          | 1.01e-05                                           |
| LFRB / Brest Bretagne                 | France  | 100.00%                     | 0.00e+00                       | 0       | 04/11/2021                                 | 99.99%                                          | 1.83e-05                                           |
| LFRC / Cherbourg Maupertus            | France  | 100.00%                     | 0.00e+00                       | 0       | 23/06/2016                                 | 99.98%                                          | 1.13e-05                                           |
| LFRD / Dinard                         | France  | 100.00%                     | 0.00e+00                       | 0       | 07/12/2017                                 | 99.98%                                          | 1.35e-05                                           |
| LFRG / Deauville Normandie            | France  | 100.00%                     | 0.00e+00                       | 0       | 04/11/2021                                 | 99.99%                                          | 1.43e-05                                           |
| LFRI / La Roche Sur Yon               | France  | 100.00%                     | 0.00e+00                       | 0       | 10/11/2016                                 | 99.98%                                          | 1.38e-05                                           |

| Airports                     | Country | Monthly LPV200 Availability | Monthly LPV200 Continuity Risk | Outages | Publication date of first LPV200 procedure | LPV200 Availability since procedure publication | LPV200 Continuity Risk since procedure publication |
|------------------------------|---------|-----------------------------|--------------------------------|---------|--------------------------------------------|-------------------------------------------------|----------------------------------------------------|
| LFRK / Caen Carpiquet        | France  | 100.00%                     | 0.00e+00                       | 0       | 07/12/2017                                 | 99.98%                                          | 1.24e-05                                           |
| LFRO / Lannion Servel        | France  | 100.00%                     | 0.00e+00                       | 0       | 07/12/2017                                 | 99.98%                                          | 1.54e-05                                           |
| LFRQ / Quimper               | France  | 100.00%                     | 0.00e+00                       | 0       | 07/12/2017                                 | 99.97%                                          | 2.19e-05                                           |
| LFRT / Saint Briec Armor     | France  | 100.00%                     | 0.00e+00                       | 0       | 07/12/2017                                 | 99.98%                                          | 1.50e-05                                           |
| LFRZ / Saint Nazaire         | France  | 100.00%                     | 0.00e+00                       | 0       | 07/12/2017                                 | 99.98%                                          | 1.62e-05                                           |
| LFSL / Brive Souillac        | France  | 100.00%                     | 0.00e+00                       | 0       | 04/11/2021                                 | 99.98%                                          | 2.20e-05                                           |
| LFSN / Nancy Essey           | France  | 100.00%                     | 0.00e+00                       | 0       | 26/04/2018                                 | 99.99%                                          | 1.25e-05                                           |
| LFST / Strasbourg Entzheim   | France  | 100.00%                     | 0.00e+00                       | 0       | 07/12/2017                                 | 99.99%                                          | 1.17e-05                                           |
| LFTW / Nimes Garons          | France  | 100.00%                     | 0.00e+00                       | 0       | 07/12/2017                                 | 99.97%                                          | 1.87e-05                                           |
| LHBP / Budapest Liszt Ferenc | Hungary | 100.00%                     | 0.00e+00                       | 0       | 15/09/2016                                 | 99.95%                                          | 5.61e-05                                           |
| LHPP / Pecs-Pogany           | Hungary | 100.00%                     | 0.00e+00                       | 0       | 03/12/2020                                 | 99.95%                                          | 4.36e-05                                           |
| LHPR / Győr-Pér              | Hungary | 100.00%                     | 0.00e+00                       | 0       | 25/02/2021                                 | 99.97%                                          | 2.21e-05                                           |
| LHSM / Heviz-Balaton         | Hungary | 100.00%                     | 0.00e+00                       | 0       | 25/03/2021                                 | 99.96%                                          | 2.72e-05                                           |
| LIBC / Crotone               | Italy   | 99.97%                      | 5.60e-06                       | 1       | 02/11/2023                                 | 99.88%                                          | 1.62e-05                                           |
| LIBD / Bari/Palese           | Italy   | 100.00%                     | 0.00e+00                       | 0       | 25/03/2021                                 | 99.89%                                          | 6.83e-05                                           |
| LIBG / Taranti/Grottaglie    | Italy   | 100.00%                     | 0.00e+00                       | 0       | 20/05/2021                                 | 99.88%                                          | 7.66e-05                                           |
| LIBP / Pescara               | Italy   | 100.00%                     | 0.00e+00                       | 0       | 11/07/2024                                 | 100.00%                                         | 0.00e+00                                           |

| Airports                     | Country | Monthly LPV200 Availability | Monthly LPV200 Continuity Risk | Outages | Publication date of first LPV200 procedure | LPV200 Availability since procedure publication | LPV200 Continuity Risk since procedure publication |
|------------------------------|---------|-----------------------------|--------------------------------|---------|--------------------------------------------|-------------------------------------------------|----------------------------------------------------|
| LIBR / Brindisi/Casale       | Italy   | 100.00%                     | 0.00e+00                       | 0       | 07/09/2021                                 | 99.87%                                          | 7.31e-05                                           |
| LICA / Lamezia Terme         | Italy   | 99.97%                      | 5.60e-06                       | 1       | 08/09/2022                                 | 99.84%                                          | 6.69e-05                                           |
| LICD / Lampedusa             | Italy   | 99.88%                      | 1.17e-04                       | 63      | 30/01/2020                                 | 99.63%                                          | 2.77e-04                                           |
| LICG / Pantelleria           | Italy   | 99.93%                      | 1.68e-05                       | 3       | 23/05/2018                                 | 99.84%                                          | 1.12e-04                                           |
| LICR / Reggio Calabria       | Italy   | 99.96%                      | 5.60e-06                       | 2       | 19/07/2018                                 | 99.86%                                          | 1.22e-04                                           |
| LIDT / Trento/Mattarello     | Italy   | 100.00%                     | 0.00e+00                       | 0       | 18/04/2024                                 | 99.94%                                          | 3.72e-05                                           |
| LIEO / Olbia/Costa Smeralda  | Italy   | 100.00%                     | 0.00e+00                       | 0       | 11/08/2022                                 | 99.87%                                          | 4.61e-05                                           |
| LIKA / Arco Helipad          | Italy   | 100.00%                     | 0.00e+00                       | 0       | 18/04/2024                                 | 99.95%                                          | 3.66e-05                                           |
| LIKB / Fiemme Helipad        | Italy   | 100.00%                     | 0.00e+00                       | 0       | 18/04/2024                                 | 99.94%                                          | 3.74e-05                                           |
| LIKC / Cles Helipad          | Italy   | 100.00%                     | 0.00e+00                       | 0       | 18/04/2024                                 | 99.94%                                          | 3.64e-05                                           |
| LIMC / Milano/Malpensa       | Italy   | 100.00%                     | 0.00e+00                       | 0       | 23/04/2020                                 | 99.98%                                          | 1.67e-05                                           |
| LIME / Bergamo/Orio al Serio | Italy   | 100.00%                     | 0.00e+00                       | 0       | 08/10/2020                                 | 99.98%                                          | 1.36e-05                                           |
| LIMF / Torino/Caselle        | Italy   | 100.00%                     | 0.00e+00                       | 0       | 25/03/2021                                 | 99.98%                                          | 1.71e-05                                           |
| LIMJ / Genova/Sestri         | Italy   | 100.00%                     | 0.00e+00                       | 0       | 10/09/2020                                 | 99.97%                                          | 2.00e-05                                           |
| LIMP / Parma                 | Italy   | 100.00%                     | 0.00e+00                       | 0       | 23/05/2018                                 | 99.97%                                          | 1.84e-05                                           |
| LIMZ / Cuneo/Levaldigi       | Italy   | 100.00%                     | 0.00e+00                       | 0       | 23/05/2018                                 | 99.97%                                          | 1.65e-05                                           |

| Airports                            | Country    | Monthly LPV200 Availability | Monthly LPV200 Continuity Risk | Outages | Publication date of first LPV200 procedure | LPV200 Availability since procedure publication | LPV200 Continuity Risk since procedure publication |
|-------------------------------------|------------|-----------------------------|--------------------------------|---------|--------------------------------------------|-------------------------------------------------|----------------------------------------------------|
| LIPK / Forli                        | Italy      | 100.00%                     | 0.00e+00                       | 0       | 13/06/2024                                 | 100.00%                                         | 0.00e+00                                           |
| LIPO / Brescia/Montichiari          | Italy      | 100.00%                     | 0.00e+00                       | 0       | 13/06/2024                                 | 100.00%                                         | 0.00e+00                                           |
| LIPQ / Trieste/Ronchi dei Legionari | Italy      | 100.00%                     | 0.00e+00                       | 0       | 12/08/2021                                 | 99.97%                                          | 1.66e-05                                           |
| LIPR / Rimini/Miramare              | Italy      | 100.00%                     | 0.00e+00                       | 0       | 15/07/2021                                 | 99.94%                                          | 2.37e-05                                           |
| LIPX / Verona/Villafraanca          | Italy      | 100.00%                     | 0.00e+00                       | 0       | 11/07/2024                                 | 100.00%                                         | 0.00e+00                                           |
| LIPY / Ancona/Falconara             | Italy      | 100.00%                     | 0.00e+00                       | 0       | 03/01/2019                                 | 99.95%                                          | 4.33e-05                                           |
| LIRA / Roma/Ciampino                | Italy      | 100.00%                     | 0.00e+00                       | 0       | 21/05/2020                                 | 99.93%                                          | 3.35e-05                                           |
| LIRF / Roma/Fiumicino               | Italy      | 100.00%                     | 0.00e+00                       | 0       | 23/05/2019                                 | 99.94%                                          | 4.14e-05                                           |
| LIRI / Salerno/Pontecagnano         | Italy      | 100.00%                     | 0.00e+00                       | 0       | 11/07/2024                                 | 100.00%                                         | 0.00e+00                                           |
| LIRN / Napoli/Capodichino           | Italy      | 100.00%                     | 0.00e+00                       | 0       | 07/09/2021                                 | 99.89%                                          | 5.58e-05                                           |
| LJCE / Cerklje ob Krki              | Slovenia   | 100.00%                     | 0.00e+00                       | 0       | 16/05/2024                                 | 100.00%                                         | 0.00e+00                                           |
| LJMB / Maribor                      | Slovenia   | 100.00%                     | 0.00e+00                       | 0       | 16/05/2024                                 | 100.00%                                         | 0.00e+00                                           |
| LKPR / Prague                       | Czech Rep. | 100.00%                     | 0.00e+00                       | 0       | 05/12/2019                                 | 99.98%                                          | 1.57e-05                                           |
| LKTB / Brno/Turany                  | Czech Rep. | 100.00%                     | 0.00e+00                       | 0       | 21/03/2024                                 | 99.92%                                          | 4.88e-06                                           |
| LKVO / Praha/Vodochody              | Czech Rep. | 100.00%                     | 0.00e+00                       | 0       | 21/03/2024                                 | 99.97%                                          | 2.05e-05                                           |
| LMML / Luka                         | Malta      | 99.89%                      | 1.43e-04                       | 76      | 11/10/2018                                 | 99.72%                                          | 2.49e-04                                           |



| Airports                                                 | Country     | Monthly LPV200 Availability | Monthly LPV200 Continuity Risk | Outages | Publication date of first LPV200 procedure | LPV200 Availability since procedure publication | LPV200 Continuity Risk since procedure publication |
|----------------------------------------------------------|-------------|-----------------------------|--------------------------------|---------|--------------------------------------------|-------------------------------------------------|----------------------------------------------------|
| LOWG / Graz                                              | Austria     | 100.00%                     | 0.00e+00                       | 0       | 01/03/2018                                 | 99.97%                                          | 3.52e-05                                           |
| LOWI / Innsbruck                                         | Austria     | 100.00%                     | 0.00e+00                       | 0       | 01/02/2018                                 | 99.98%                                          | 1.76e-05                                           |
| LOWK / Klagenfurt                                        | Austria     | 100.00%                     | 0.00e+00                       | 0       | 11/10/2018                                 | 99.97%                                          | 2.66e-05                                           |
| LOWL / Linz                                              | Austria     | 100.00%                     | 0.00e+00                       | 0       | 02/02/2017                                 | 99.98%                                          | 2.00e-05                                           |
| LOWS / Salzburg                                          | Austria     | 100.00%                     | 0.00e+00                       | 0       | 23/04/2020                                 | 99.98%                                          | 1.46e-05                                           |
| LOWW / Wien-Schwechat                                    | Austria     | 100.00%                     | 0.00e+00                       | 0       | 02/02/2017                                 | 99.97%                                          | 3.03e-05                                           |
| LRBV / Braşov / Braşov-Ghimbav                           | Romania     | 100.00%                     | 0.00e+00                       | 0       | 13/07/2023                                 | 99.91%                                          | 9.19e-05                                           |
| LSGC / Les Eplatures                                     | Switzerland | 100.00%                     | 0.00e+00                       | 0       | 26/05/2016                                 | 99.99%                                          | 1.20e-05                                           |
| LSGG / Genève                                            | Switzerland | 100.00%                     | 0.00e+00                       | 0       | 13/09/2018                                 | 99.98%                                          | 1.49e-05                                           |
| LSMD / Dübendorf                                         | Switzerland | 100.00%                     | 0.00e+00                       | 0       | 30/01/2020                                 | 99.99%                                          | 1.45e-05                                           |
| LSMP / Payerne                                           | Switzerland | 100.00%                     | 0.00e+00                       | 0       | 05/12/2019                                 | 99.99%                                          | 1.40e-05                                           |
| LSZB / Bern-Belp                                         | Switzerland | 100.00%                     | 0.00e+00                       | 0       | 03/12/2020                                 | 99.99%                                          | 1.24e-05                                           |
| LSZH / Zurich                                            | Switzerland | 100.00%                     | 0.00e+00                       | 0       | 25/05/2017                                 | 99.99%                                          | 1.24e-05                                           |
| LYBE / Beograd/Nikola Tesla                              | Serbia      | 100.00%                     | 0.00e+00                       | 0       | 26/03/2020                                 | 99.91%                                          | 8.01e-05                                           |
| LYBT / Beograd/Batajnica-Pukovnik-pilot Milenko Pavlovic | Serbia      | 100.00%                     | 0.00e+00                       | 0       | 15/06/2023                                 | 99.93%                                          | 4.62e-05                                           |
| LYKV / Kraljevo/Morava                                   | Serbia      | 100.00%                     | 0.00e+00                       | 0       | 24/02/2022                                 | 99.91%                                          | 6.43e-05                                           |

| Airports                                   | Country     | Monthly LPV200 Availability | Monthly LPV200 Continuity Risk | Outages | Publication date of first LPV200 procedure | LPV200 Availability since procedure publication | LPV200 Continuity Risk since procedure publication |
|--------------------------------------------|-------------|-----------------------------|--------------------------------|---------|--------------------------------------------|-------------------------------------------------|----------------------------------------------------|
| LYNI / Niš/Konstantin Veliki               | Serbia      | 100.00%                     | 0.00e+00                       | 0       | 26/03/2020                                 | 99.88%                                          | 1.22e-04                                           |
| LYPG / Podgorica                           | Montenegro  | 100.00%                     | 0.00e+00                       | 0       | 26/03/2020                                 | 99.89%                                          | 9.80e-05                                           |
| LYUZ / Uzice/Ponikve                       | Serbia      | 100.00%                     | 0.00e+00                       | 0       | 18/04/2024                                 | 99.89%                                          | 3.31e-06                                           |
| LZIB / Bratislava-Milan Rastislav Štefánik | Slovak Rep. | 100.00%                     | 0.00e+00                       | 0       | 20/04/2023                                 | 99.96%                                          | 2.13e-05                                           |
| LZKZ / Košice                              | Slovakia    | 100.00%                     | 0.00e+00                       | 0       | 16/06/2022                                 | 99.96%                                          | 2.33e-05                                           |
| LZPP / Piestany                            | Slovak Rep. | 100.00%                     | 0.00e+00                       | 0       | 02/02/2017                                 | 99.97%                                          | 3.24e-05                                           |
| LZTT / Poprad-Tatry                        | Slovak Rep. | 100.00%                     | 0.00e+00                       | 0       | 29/03/2018                                 | 99.96%                                          | 5.17e-05                                           |
| LZZI / Zilina                              | Slovak Rep. | 100.00%                     | 0.00e+00                       | 0       | 25/05/2017                                 | 99.97%                                          | 3.09e-05                                           |

**Table 9 - Monthly LPV-200 Availability at airports with published procedures using EGNOS in May 2024.**

# ANNEX D LIST OF ACRONYMS

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| Acronym | Definition                                        |
|---------|---------------------------------------------------|
| APV     | Approach with Vertical Guidance                   |
| ASN     | Abstract Syntax Notation                          |
| ECAC    | European Civil Aviation Conference                |
| EDAS    | EGNOS Data Access Service                         |
| EGNOS   | European Geostationary Navigation Overlay Service |
| ENT     | EGNOS Network Time                                |
| ESSP    | European Satellite Services Provider              |
| FTP     | File Transfer Protocol                            |
| GEO     | Geostationary Satellite                           |
| GNSS    | Global Navigation Satellite System                |
| GPS     | Global Positioning System                         |
| HAL     | Horizontal Alert Limit                            |
| HNSE    | Horizontal Navigation System Error                |
| HPE     | Horizontal Position Error                         |
| HPL     | Horizontal Protection Level                       |
| HSI     | Horizontal Safety Index                           |
| LPV     | Localizer Performance with Vertical guidance      |
| MI      | Misleading Information                            |
| MT27    | Message Type 27                                   |
| NA      | Not Applicable/ Not Available                     |
| NLES    | Navigation Land Earth Station                     |
| NPA     | Non-Precision Approach                            |
| NTRIP   | Networked Transport of RTCM via Internet Protocol |
| OP      | Operation                                         |
| OPS     | Operations                                        |
| OS      | Open Service                                      |
| PA      | Precision Approach                                |
| PL      | Protection Level                                  |
| PRN     | Pseudo-Random Noise                               |
| RAIM    | Receiver Autonomous Integrity Monitoring          |
| RD      | Reference Document                                |
| RIMS    | Ranging and Integrity Monitoring Station          |
| RTCM    | Radio Technical Commission for Maritime Services  |
| SBAS    | Satellite-Based Augmentation System               |
| SDD     | Service Definition Document                       |
| SIS     | Signal-In-Space                                   |
| SL0     | Service Level 0                                   |
| SL2     | Service Level 2                                   |
| SoL     | Safety of Life                                    |
| UTC     | Universal Time Coordinated                        |
| VAL     | Vertical Alert Limit                              |
| VNSE    | Vertical Navigation System Error                  |
| VPE     | Vertical Position Error                           |
| VPL     | Vertical Protection Level                         |
| VSI     | Vertical Safety Index                             |

**Table 10 - Acronyms**

# ANNEX E VNSE HISTOGRAM DATA EXTRAPOLATED AT $10^{-7}/150s$ FOR EACH RIMS LOCATION

For each RIMS, accumulating measurements from both EGNOS GEO, the following figures present:

1. Accumulated VNSE histogram in dark blue and referenced to the vertical axis on the left.
2. Cumulative probability of the accuracy distribution in orange and referenced to the vertical axis on the right.
3. Cumulative probability of the over bounding Gaussian distribution in pink and referenced to the vertical axis on the right.
4. VNSE extrapolated to  $10^{-7}/150s$  in the right top corner.

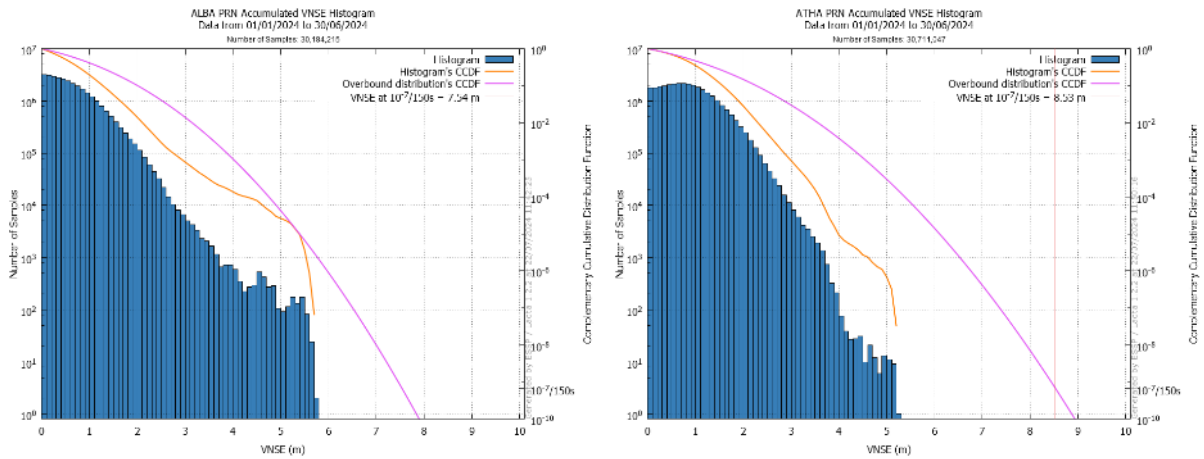


Figure 32: Extrapolated LPV200 VNSE at  $10^{-7}/150s$  in ALB (left) & ATH (right)

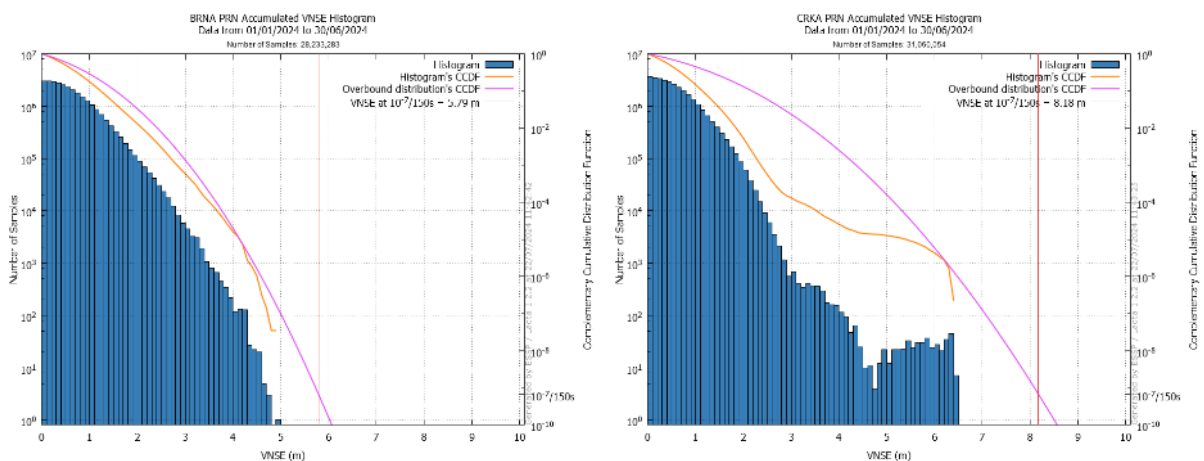


Figure 33: Extrapolated LPV200 VNSE at  $10^{-7}/150s$  in BRN (left) & CRK (right)

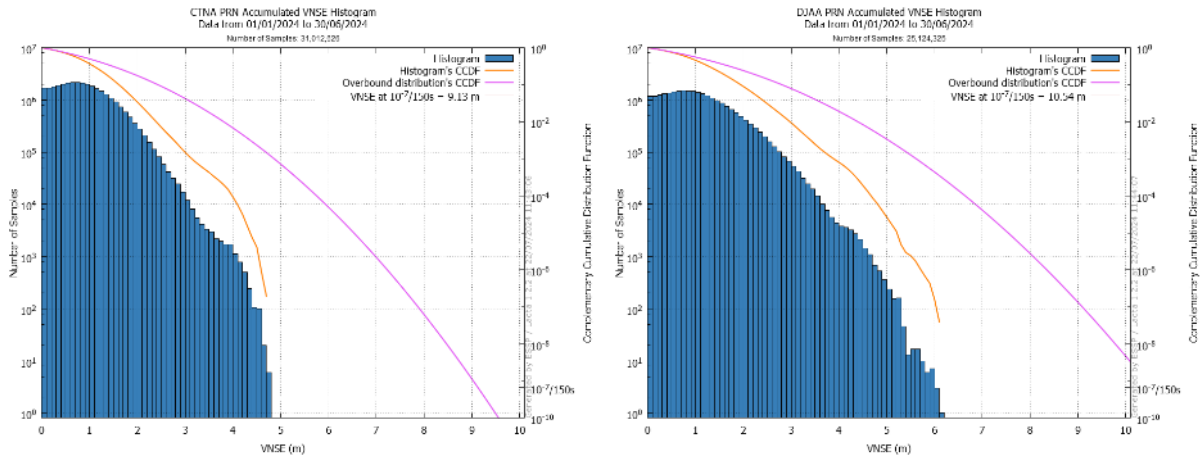


Figure 34: Extrapolated LPV200 VNSE at 10-7/150s in CTN (left) & DJA (right)

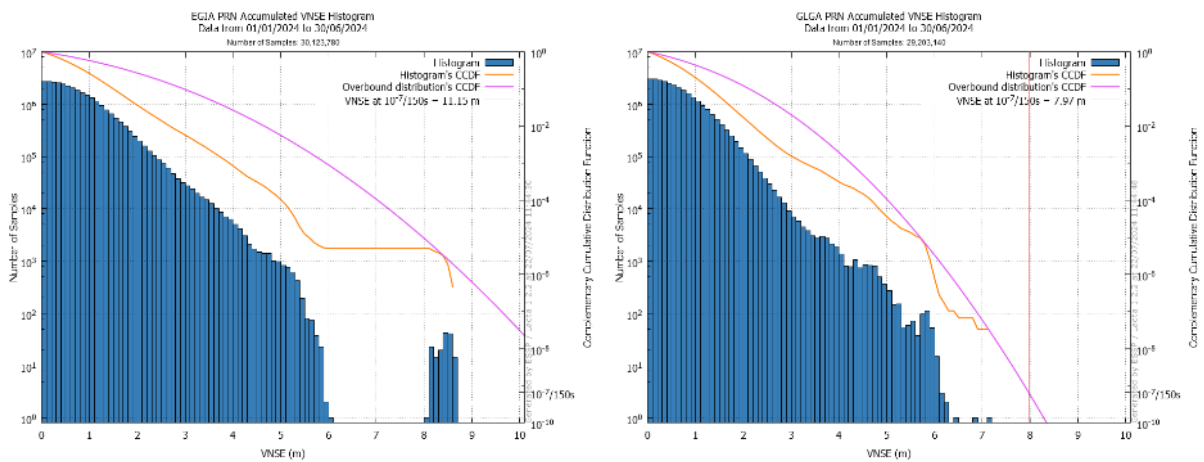


Figure 35: Extrapolated LPV200 VNSE at 10-7/150s in EGI (left) & GLG (right)

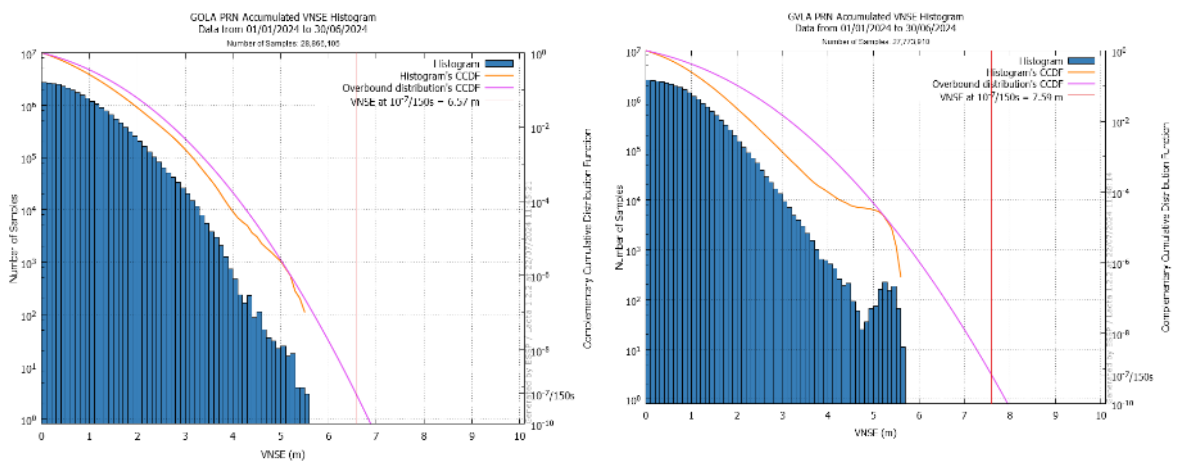


Figure 36: Extrapolated LPV200 VNSE at 10-7/150s in GOL (left) & GVL (right)

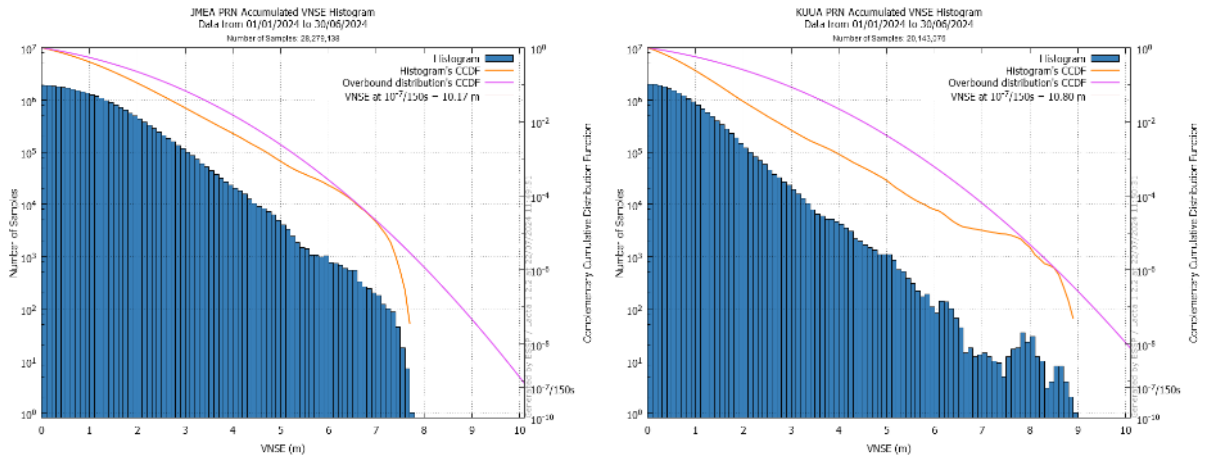


Figure 37: Extrapolated LPV200 VNSE at 10-7/150s in JME (left) & KUU (right)

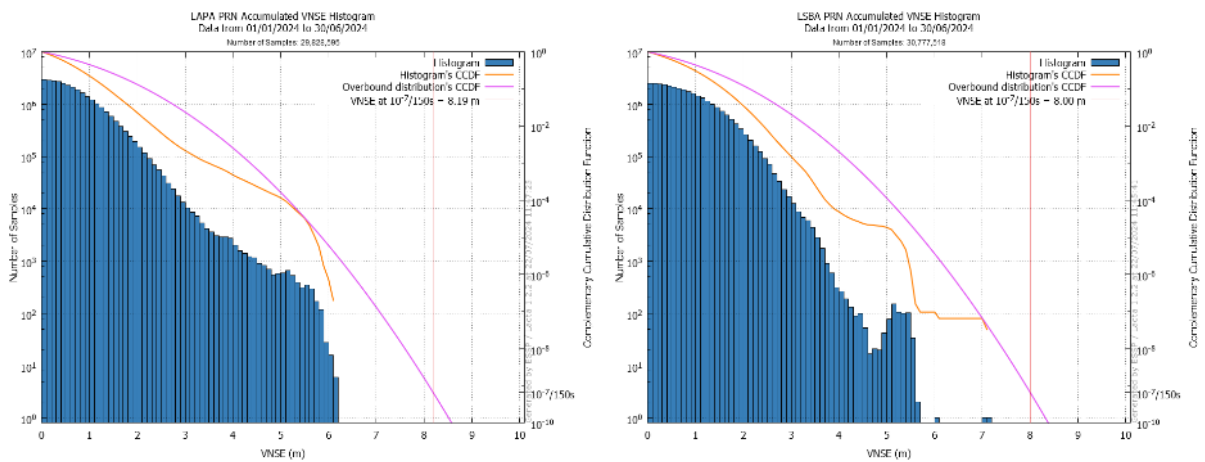


Figure 38: Extrapolated LPV200 VNSE at 10-7/150s in LAP (left) & LSB (right)

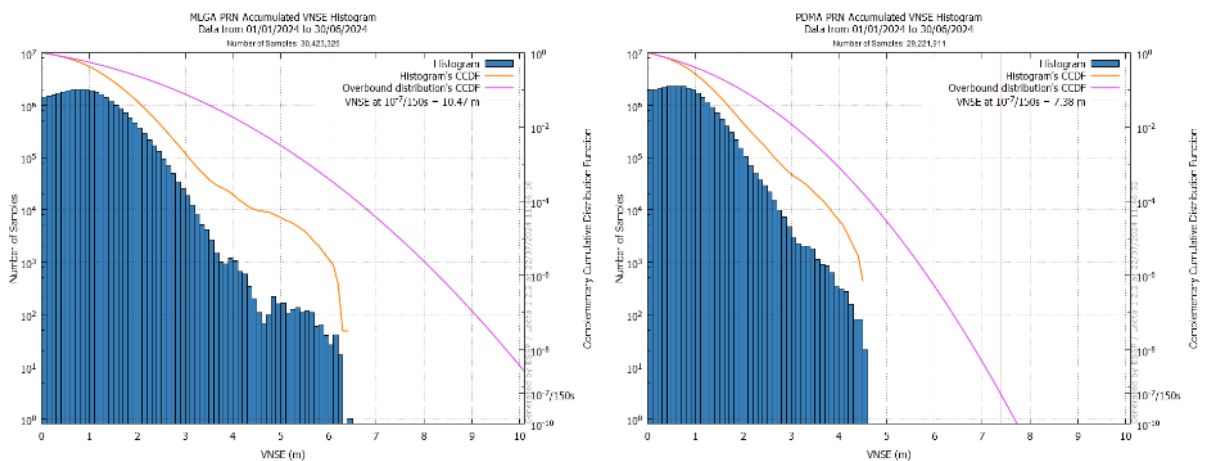


Figure 39: Extrapolated LPV200 VNSE at 10-7/150s in MLG (left) & PDM (right)

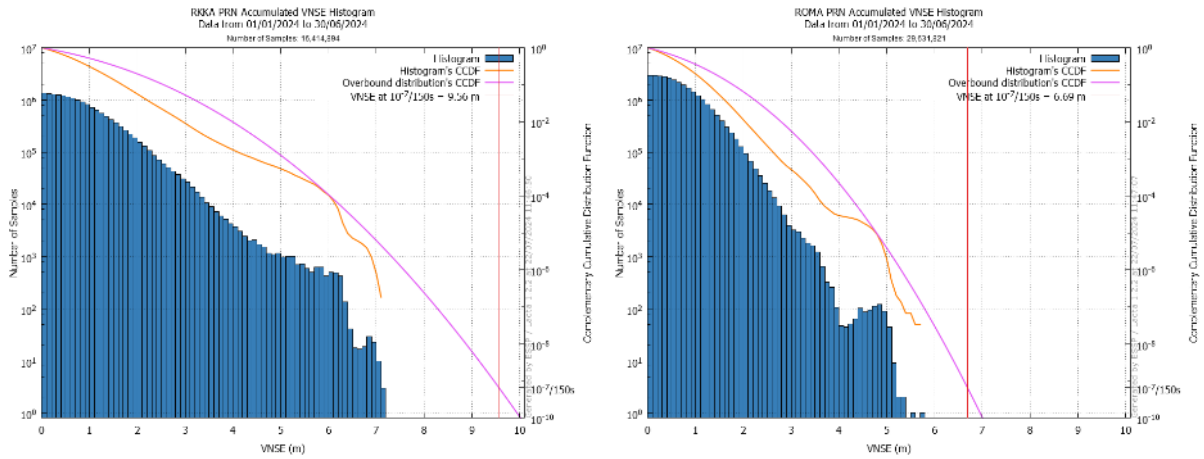


Figure 40: Extrapolated LPV200 VNSE at 10-7/150s in RKK (left) & ROM (right)

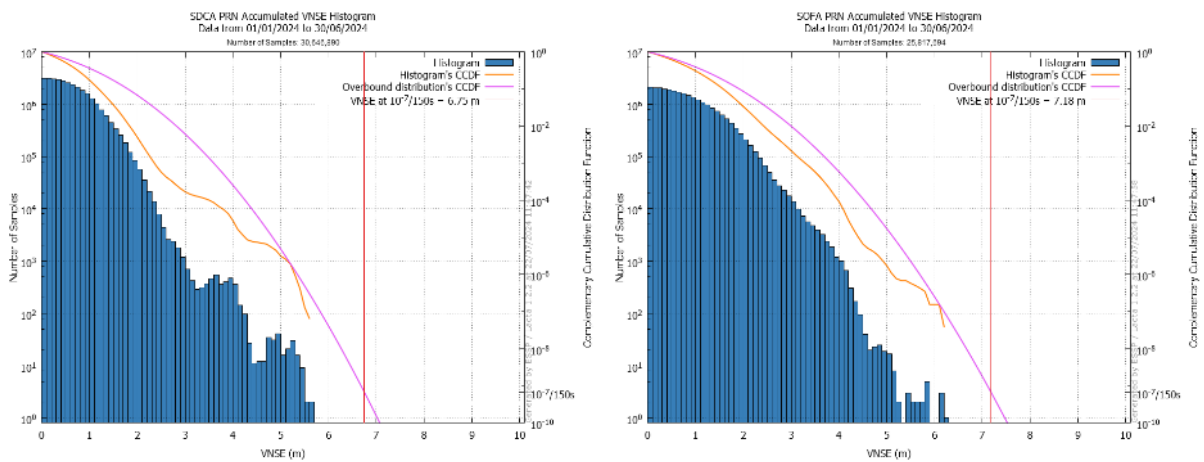


Figure 41: Extrapolated LPV200 VNSE at 10-7/150s in SDC (left) & SOF (right)

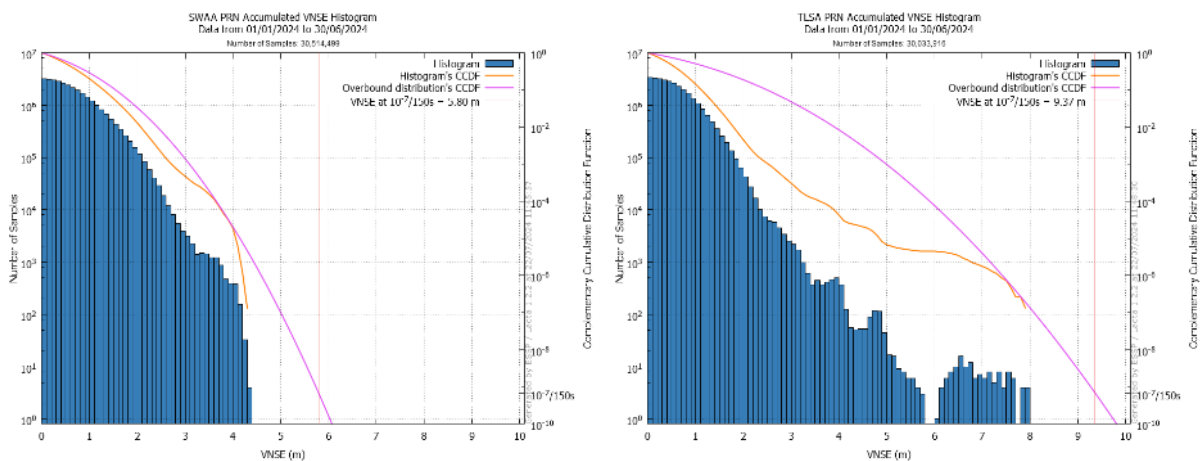


Figure 42: Extrapolated LPV200 VNSE at 10-7/150s in SWA (left) & TLS (right)

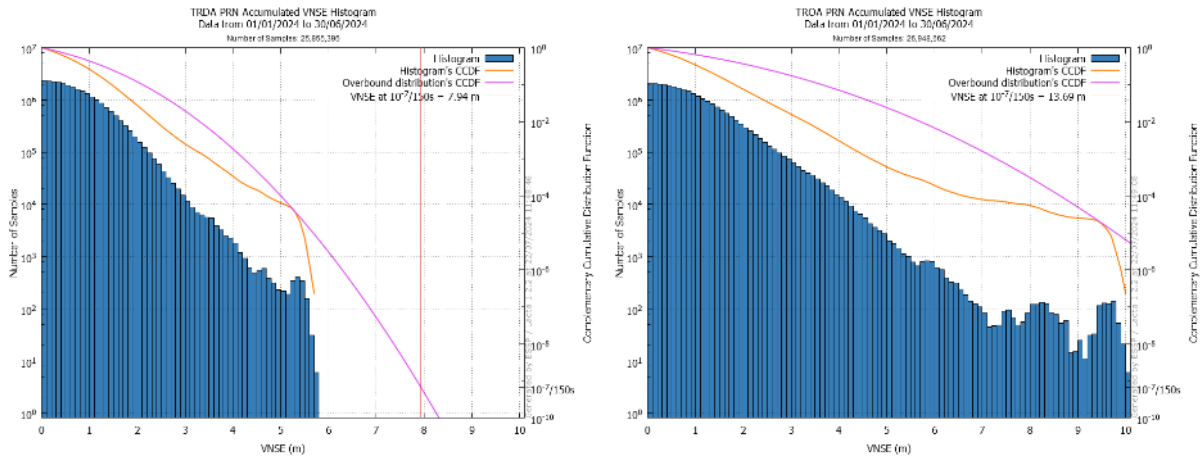


Figure 43: Extrapolated LPV200 VNSE at 10<sup>-7</sup>/150s in TRD (left) & TRO (right)

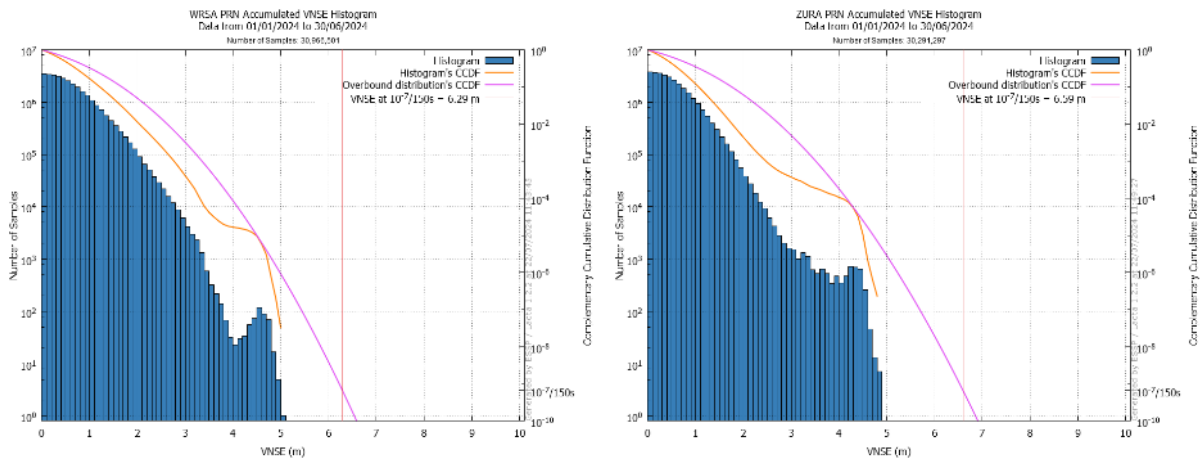


Figure 44: Extrapolated LPV200 VNSE at 10<sup>-7</sup>/150s in WRS (left) & ZUR (right)

Instead of analysing each RIMS site individually, it is possible to compute the extrapolated LPV200 VNSE at 10<sup>-7</sup>/150s in a global way, considering samples from all RIMS within LPV200 commitment all together.

Performing this analysis for each operational GEO, it is possible to obtain the extrapolated LPV200 VNSE that may be considered as characteristic for EGNOS. Those values would be 11.96m for GEO PRN123 and 11.74m for GEO PRN136 as observed in following histograms.



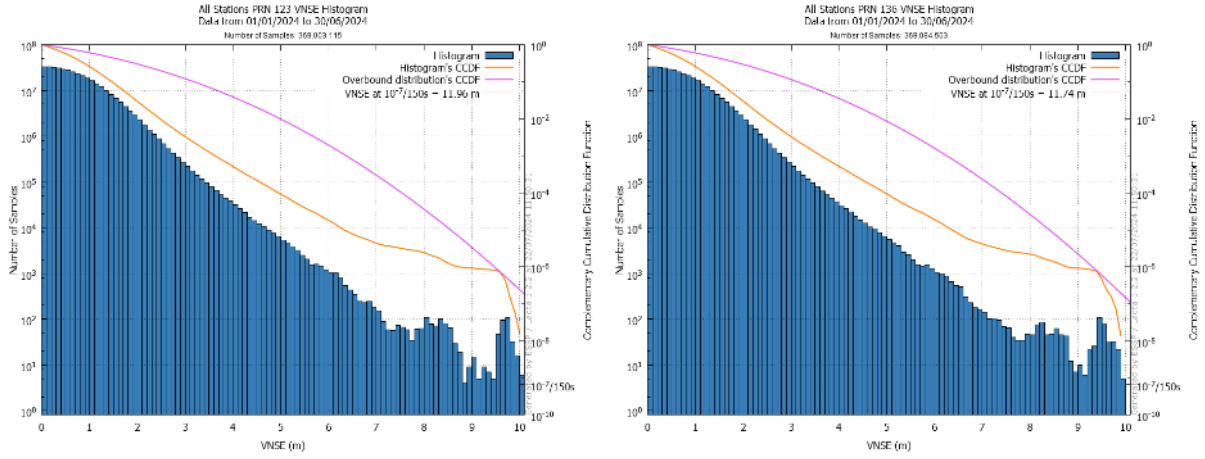


Figure 45: Extrapolated LPV200 VNSE at 10-7/150s - all RIMS - PRN123 (left) and PRN136 (right)



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