

EGNOS SERVICE NOTICE

Number: 026

Version: 3.0

To: All EGNOS Users

Date: 29/08/2023

Subject: EGNOS Space Segment changes in the Second and Third Quarters of 2023

Internal ESSP classification:

BLUE

This Service Notice informs EGNOS users about the successful completion of the two GEO swaps, which occurred on the EGNOS Space segment from the 21st June 2023 to 24th August 2023.

After the second GEO swap finalised on 24th August 2023, the Space Segment is back to nominal configuration with both ASTRA GEOs (i.e. PRN136 and PRN123) in the EGNOS operational platform. More information on the GEO swaps can be found in the ANNEX 1 of this Service Notice.

The current configuration of the Operational EGNOS Space Segment is composed of:

- ASTRA SES-5 (GEO-1/PRN136)
- ASTRA 5-B (GEO2/PRN 123)

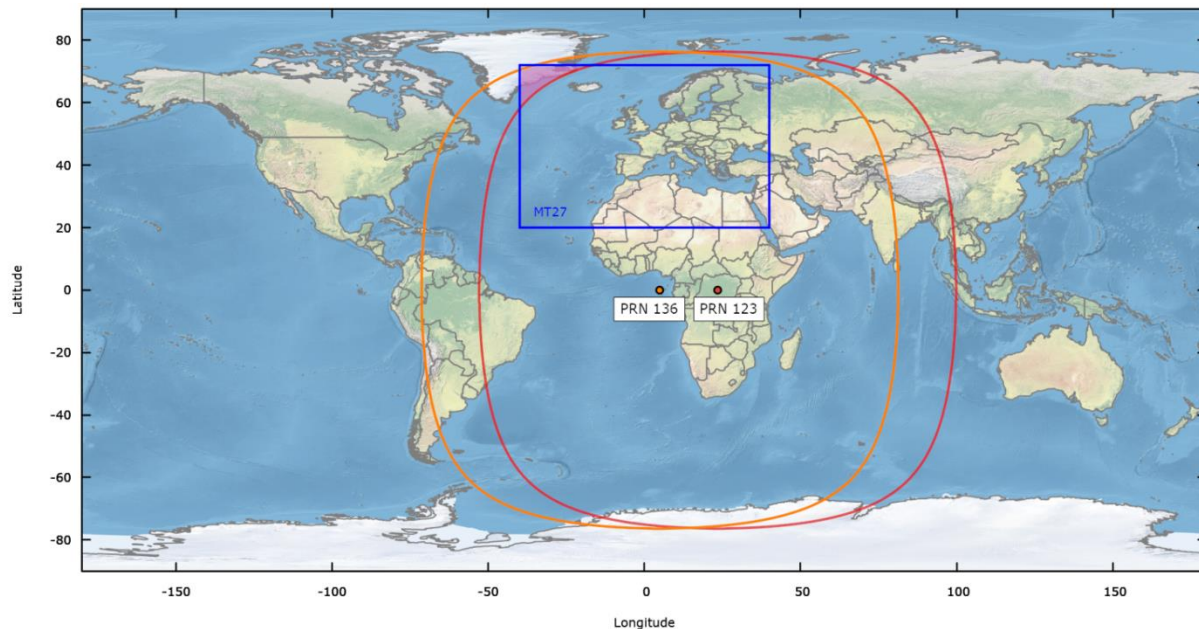


Figure 1. Coverage of EGNOS GEOs with 5° masking angle after 2nd GEO swap

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In this final configuration, the North-West corner of the EGNOS service area (the pink area in Figure 1) is covered by a single GEO: SES-5 (GEO1/PRN 136). Only SoL “en-route to NPA” users could be concerned by this situation. The entire SoL APV-I and LPV200 service areas will remain covered by two GEOs.

According to the GEO coverage depicted in Figure 1, depending on the masking angle receiver configuration, “en-route to NPA” users in the North-West corner of the EGNOS service area could experience periods of EGNOS unavailability in case of SES-5 (GEO1/PRN136) outages. Nevertheless, the navigation should not be affected as MOPS compliant receivers should always automatically switch to GPS RAIM during those interruptions, ensuring the “en-route to NPA” service when EGNOS is not available.

The EGNOS SoL service integrity has remained unaffected at all times and locations within the EGNOS coverage area.

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1 EGNOS STATUS AND PERFORMANCES

Latest information on EGNOS system status and performances can be found at the EGNOS User Support website <https://egnos-user-support.essp-sas.eu>

Users can subscribe to notifications about planned GEO outages and configuration changes and to real-time notifications of unplanned GEO SIS outages and recoveries in the EGNOS User Support website (<https://egnos-user-support.essp-sas.eu>).

2 CONFIGURATION GUIDELINES FOR OPEN SERVICE EQUIPMENT

Guidance material can be found in the Resources and Tools section of the EGNOS User Support Website: <https://egnos-user-support.essp-sas.eu/resources-tools/guidance-material>

This section contains several documents among others which describe how to configure some EGNOS capable receivers, including examples and detailed pictures.

3 CONTACT US

Should you have any question related to this Service Notice or EGNOS, please, contact egnos-helpdesk@essp-sas.eu or [+34 911 236 555](tel:+34911236555) (H24/7)

For more information about EGNOS, please, visit the EGNOS User Support website at <https://egnos-user-support.essp-sas.eu>

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ANNEX 1. DESCRIPTION OF THE Q2-Q3 2023 GEO SWAPS

The two GEO swaps that the EGNOS Space segment configuration underwent during the second and third quarters of 2023 were the following:

- First GEO swap (21st June – 30th June): INMARSAT 4F2 (PRN 126) was introduced in the operational platform replacing satellite ASTRA 5-B (GEO2/PRN 123).
- Second GEO swap (14th August – 24th August): ASTRA 5-B (GEO2/PRN 123) was reintroduced in the operational platform replacing satellite INMARSAT 4F2 (PRN 126).

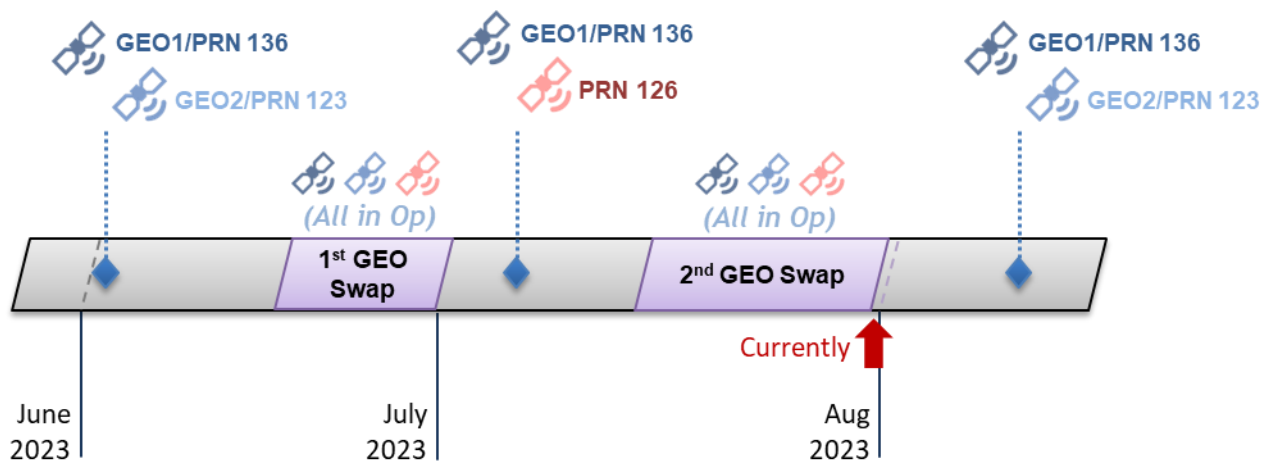


Figure 2. Satellites providing EGNOS operational service during the period of GEO swaps

It is important to remark that these changes in the EGNOS Space Segment were performed in a seamless manner without any interruption of the service from an EGNOS user point of view and without compromising at any moment the EGNOS performance. In particular, the EGNOS SoL service integrity was ensured at all times and locations within the EGNOS coverage area.

Please note that the process to swap two EGNOS GEOs included a temporary period with all the satellites providing EGNOS operational signal.

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FIRST GEO SWAP

The first GEO swap consisted in the following changes:

- On 21st June 2023, the GEO satellite INMARSAT 4F2 (PRN 126) became part of the EGNOS operational platform broadcasting the Operational Signal-In-Space (OP SIS).
- On 30th June 2023, the GEO satellite ASTRA 5-B (GEO2/PRN 123) became part of the EGNOS TEST Platform broadcasting the TEST SIS. Note that GEO2 payload was off since the 5th of July and continued on that status until the 17th of July 2023.

			1 st GEO swap		
EGNOS GEO Name	PRN Number	Orbital Slot	Status BEFORE 21 st June 2023	Status FROM 21 st June 2023 TO 30 th June 2023	Status FROM 30 th June 2023 TO 14 th August 2023
ASTRA SES-5 (GEO1)	PRN 136	5 E	Operational	Operational	Operational
ASTRA 5-B (GEO2)	PRN 123	31.5 E → 23.5 E	Operational	Operational	Test
INMARSAT 4F2	PRN 126	64 E	Test	Operational	Operational

Table 1 – 1st GEO swap period

SECOND GEO SWAP

The second GEO swap consisted in the following changes:

- On 14th August 2023, the GEO satellite ASTRA 5-B (GEO2/PRN 123) became part of the EGNOS operational platform broadcasting the OP SIS.
- On 24th August 2023, the GEO satellite INMARSAT 4F2 (PRN 126) became part of the EGNOS TEST Platform broadcasting the TEST SIS.

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			2 nd GEO swap		
EGNOS GEO Name	PRN Number	Orbital Slot	Status BEFORE 14 th August 2023	Status FROM 14 th August 2023 TO 24 th August 2023	Status FROM 24 th August 2023
ASTRA SES-5 (GEO1)	PRN 136	5 E	Operational	Operational	Operational
ASTRA 5-B (GEO2)	PRN 123	23.5 E	Test	Operational	Operational
INMARSAT 4F2	PRN 126	64 E	Operational	Operational	Test

Table 2 – 2nd GEO swap period