

EGNOS SERVICE NOTICE

Number: 002

Revision: 2.0

To: EGNOS SoL Service Users

Date: 23/04/2012

Subject: Status of EGNOS performances

This Service Notice updates the information on the evolution of the EGNOS SoL Service performances in the South of the APV-I Service Area (as defined in the EGNOS SoL Service Definition Document – SDD), which have been degraded from October 2011 due to the increase of the solar activity observed since that date. This revision updates and replaces the previous version (v1.0), with information about the current status of this degradation and the mitigation activities that have been put in place.

1 DESCRIPTION OF THE ISSUE

From the 30th of September 2011 onwards, APV-I performances over the Southwest of the EGNOS SoL Service Area defined in EGNOS SoL SDD presented progressive degraded values, with daily APV-I Availability values lower than 99% and daily APV-I Continuity risk figures above $5 \times 10^{-4}/15\text{sec}$ over the Southern part of Europe, affecting in particular to the Iberian Peninsula.

The performed investigations confirmed that the observed performance degradation was related to the combination of the following issues:

- Several satellites in the GPS constellation have been subject during the past months to unavailability notices, thus lowering the number of satellites available for SBAS operations.
- Solar activity has also been such that, in combination with the unavailable GPS satellites, the ionospheric monitoring capability of the system is degraded over the southern part of the service area.

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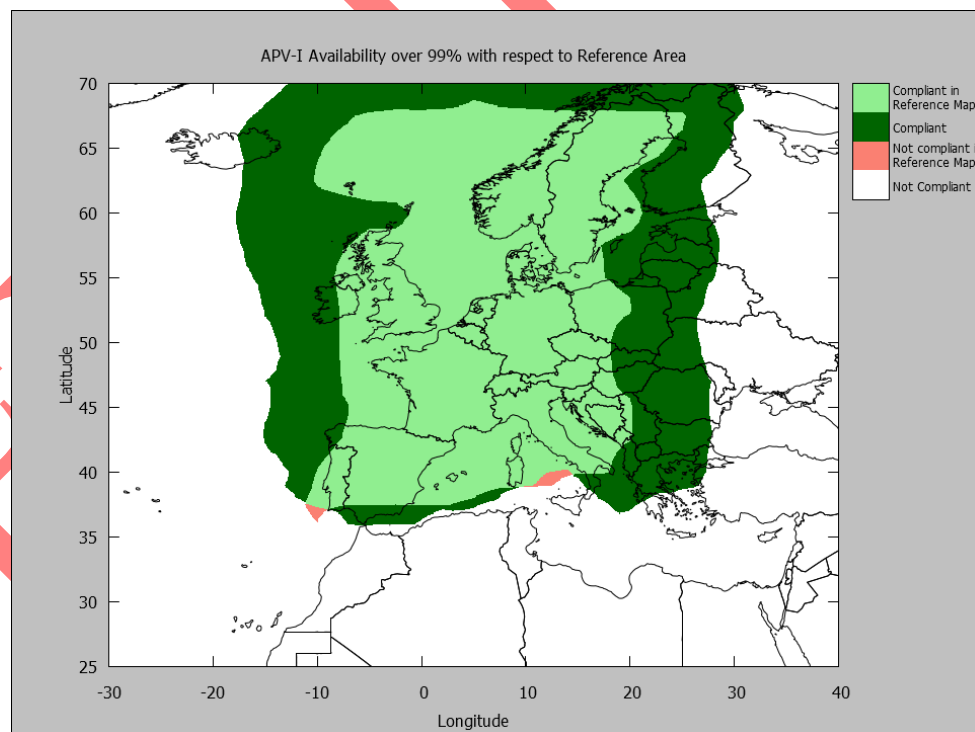
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2 STATUS ON THE EGNOS SERVICE AND MITIGATION ACTIONS

Since the identification of this degradation on October, ESSP has been actively working on this issue with the European Commission and the EGNOS Industry to mitigate the impact for the EGNOS users.

The activities oriented to minimise this impact are implemented in two different steps:

- On February 2012 a new EGNOS system release has been deployed. From that date, two additional GPS satellites are being used by EGNOS, increasing the number of satellites available for LPV SBAS-based operations.
- An operational workaround has been implemented from mid March 2012 to mitigate the temporary degradations over the Southern regions inside the APV-I Service area. From that date, a clear improvement has been observed in the performance levels. The next map shows the status of compliance (against the commitment published in the Safety of Life SDD, in light green) of the APV-I availability performances (99%) during the last two weeks of March 2012, after the implementation of the workaround.



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- In the short-term, a new EGNOS system release will be deployed, more robust to ionospheric disturbances. It is expected that this new release will be deployed by mid 2012.

The implementation of the Operational Work Around, along with the improvements implemented in the EGNOS system release deployed in February 2012 (see Service Notice #3) has demonstrated to reduce significantly the impacted area when high ionospheric activity is observed. However, until the new release addressing this issue is deployed by mid 2012, users should be aware that limited periods of APV-I unavailability could still be observed in the southern regions of Spain and Portugal.

Additional information, including the deployment of the new version of the system, will be provided in future Service Notices.

CONTACT US

Should you have any question related to this Service Notice or EGNOS Service Provision, please, contact Egnos-helpdesk@essp-sas.eu

For more information about EGNOS Service Provision, please, visit ESSP website at www.essp-sas.eu and user support website at <http://egnos-user-support.essp-sas.eu>