

EGNOS



EGNOS Operations and Performance Monitoring

**ESESA Aviation Workshop
26th - 27th October 2010**

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2. EGNOS Operation
3. EGNOS Performance

1. *ESSP Introduction*



AENA

DFS

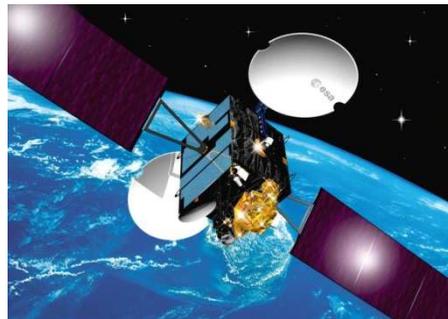
DGAC

ENAV

NATS

SKYGUIDE

NAV

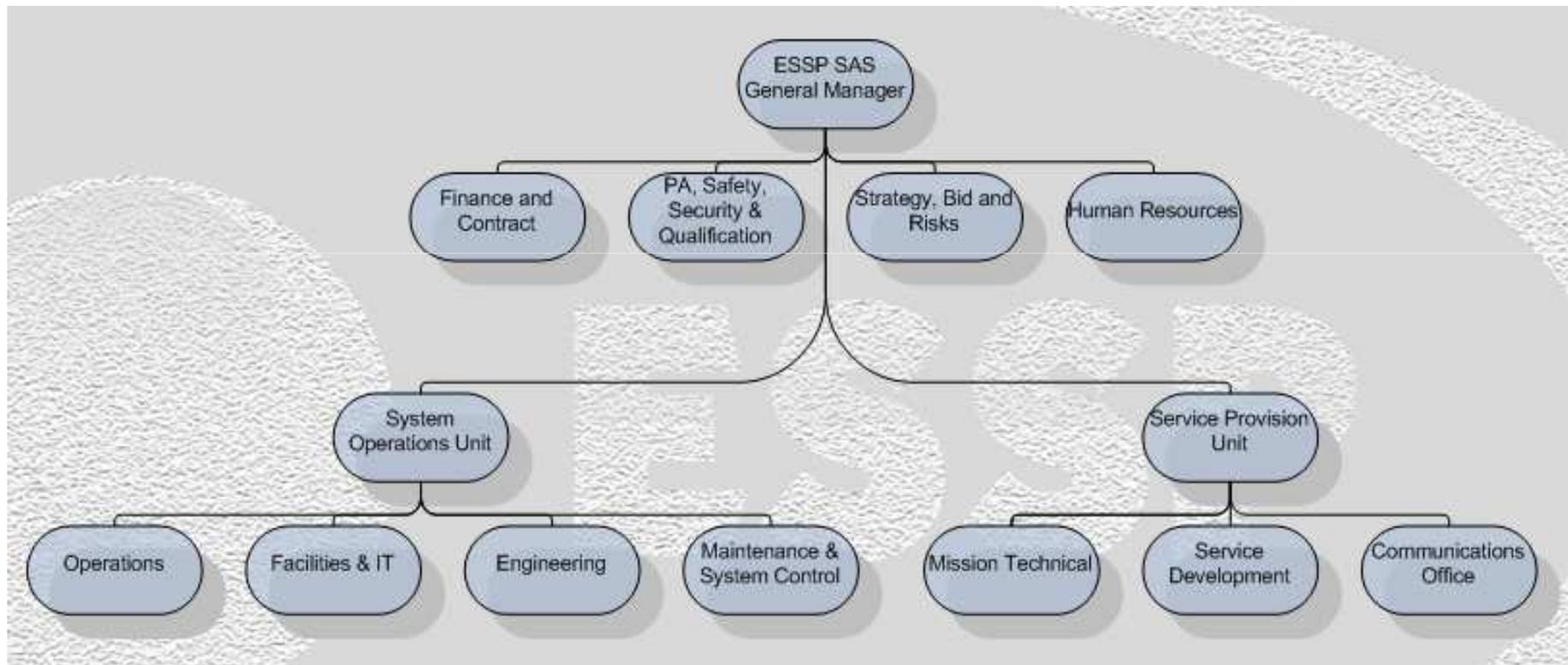




ESSP Mission

*To provide the **EGNOS** Open Service and **Safety of Life Service** compliant with **ICAO SARPS** throughout the **ECAC region***

ESSP Structure and Organisation



ESSP Status (1/2)

ESSP EEIG founded in 2001

Mission: Operation of EGNOS

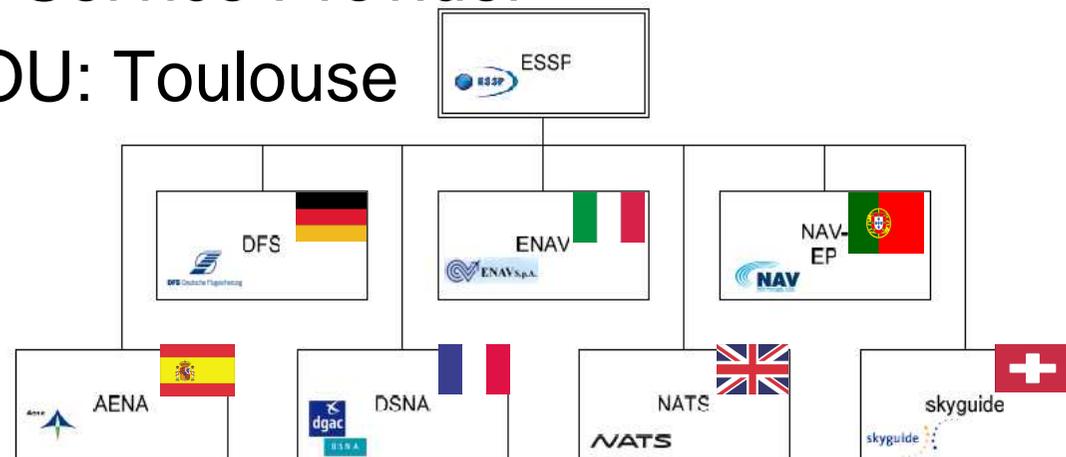
Based in Brussels

ESSP SAS created in 2008

Mission: EGNOS Service Provider

HQ,PASSQ & SOU: Toulouse

SPU: Madrid



ESSP Status (2/2)

ESA Initial Operation Phase (IOP)

Ended April 2009



EGNOS Signal Continuity Provision (ESCP)

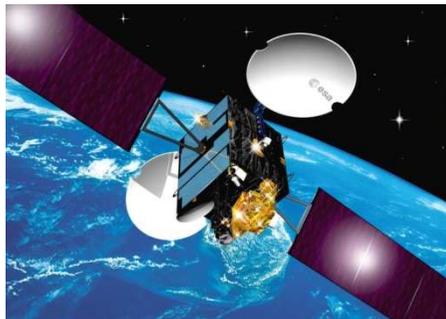
6 Months: Ended in October 2009



EGNOS Service Provision (ESP)

Contract signed 30 September 2009 for 51 months

2. *EGNOS Operations*



EGNOS

ESSP Past Milestones

April 2009: Transition of the EGNOS Service Provision and Operations from the ESSP EEIG organisation to the new **ESSP SAS**.

April 2009 – September 2009: execution of the **EGNOS Signal Continuity Provision Contract** with the EC. Completed the “hand over” of the EGNOS system of the EGNOS program from the ESA ARTES 9 program to the European Commission GNSS Program

> October 2009: enter **EGNOS Service Provision** period, On that date the EC formally declared the **EGNOS Open Service** available

July 2010: Certification of the ESSP as a Navigation Service Provider under the SES regulation

ESSP Future Milestones

Preparation of Safety of Life service provision

November 2010: Message Type 0 off

End 2010: SoL Service Declaration to users

Operations & Maintenance

Strong confidence from ESSP Operations & Maintenance proved by continuity of EGNOS SIS provision ensured at 99,999% since beginning 2009 in parallel with :

Company re-organisation (from ESSP EEIG to ESSP SAS)

Support to SES Certification process,

Negotiation of new contracts (with EC & with \approx 30 subcontractors),

Management of recurrent EGNOS obsolescence issues,

Support to major system evolutions (e.g. EWAN migration)

ESSP also demonstrated its ability to purchase system upgrades from Industry in parallel to System Releases delivered by EC

E.g. PSS1 ESR purchased to TAS in Dec. 2009

EGNOS User Support

The EGNOS User Support activities are aimed at providing the user with

- an interface with the ESSP and EGNOS for technical subjects

- a primary source of information on the status and performances of the EGNOS services.

The means to provide this service are mainly:

- EGNOS User Support Helpdesk**

- EGNOS User Support Website**

EGNOS User Support Helpdesk (1/3)

Via e-mail: egnos-helpdesk@essp-sas.eu

primary user interface with EGNOS

In order to complement the sources of information, the EGNOS Helpdesk interacts with several entities, among them:

GSA for EGNOS applications requests, particularly from EGNOS applications developers.

EC for programmatic aspects

EGNOS User Support Helpdesk (2/3)

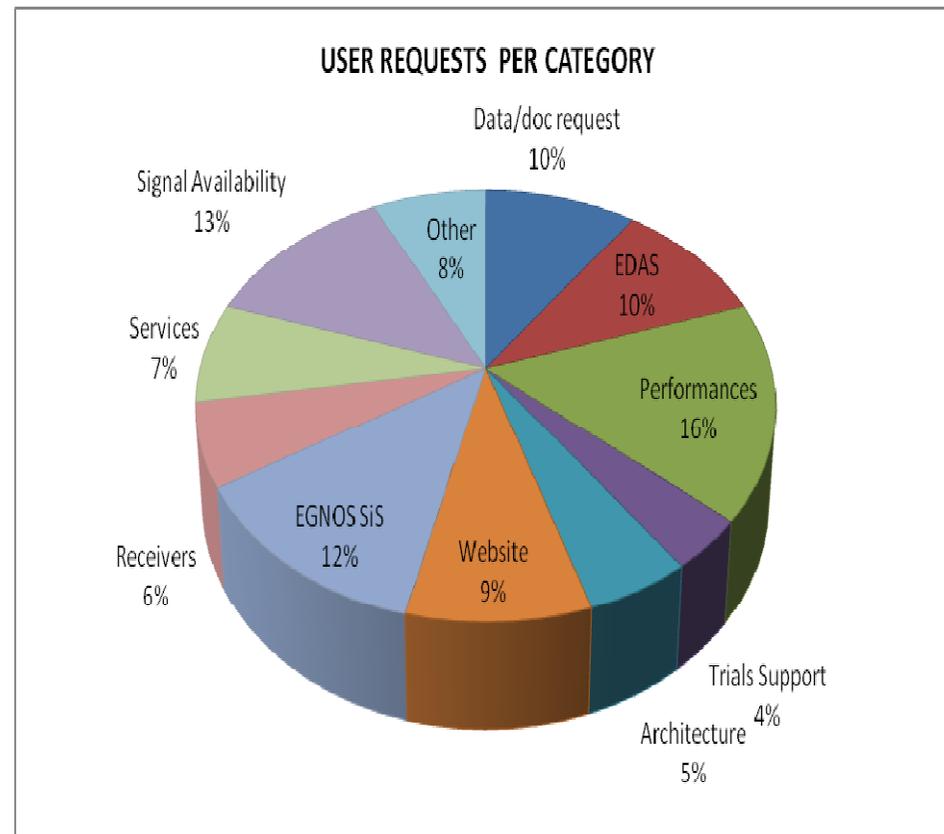
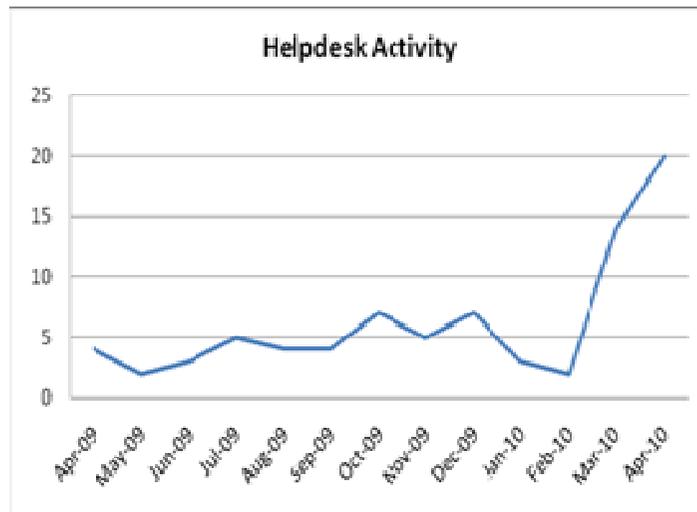
The main objectives of this service are:

To provide a single point of contact for EGNOS related requests

To get direct feedback from the EGNOS user on the way EGNOS is used To channel all the EGNOS operationally relevant information to the user.

Integration of the EDAS Service Helpdesk managing user questions and registration requests related to EDAS

EGNOS User Support Helpdesk (3/3)



EGNOS User Support Website (1/2)

[*http://egnos-user-support.essp-sas.eu*](http://egnos-user-support.essp-sas.eu)

Provides users with information on the status of the EGNOS signal and its performances

As part of the website evolution program, additional contents are being developed in order to provide each user with the specific information for their activity:

- Open Service user

- Safety of Life Service user

- Technical user

EGNOS User Support Website (2/2)

The main contents currently provided by this website are:

Signal in Space Status (PRN status, broadcast schedule, MT0 on/off)

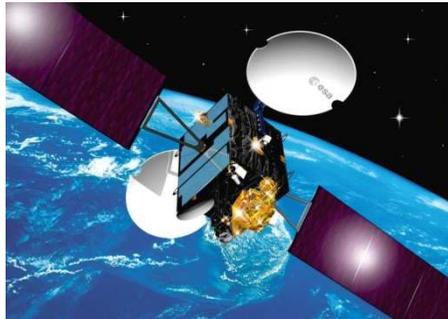
EGNOS performances (availability, continuity, protection levels, perf. forecast)

Additionally, the registered users can subscribe to the following services:

SiS outage alerts service (automatic information of SiS outages by email)

SiS advisory service (relevant information on SiS performances by email)

3. EGNOS Performances



EGNOS

EGNOS Performances

EGNOS has been designed to meet stringent requirements coming from **Aviation**

ICAO SARPS define performances in terms of

Accuracy

Availability

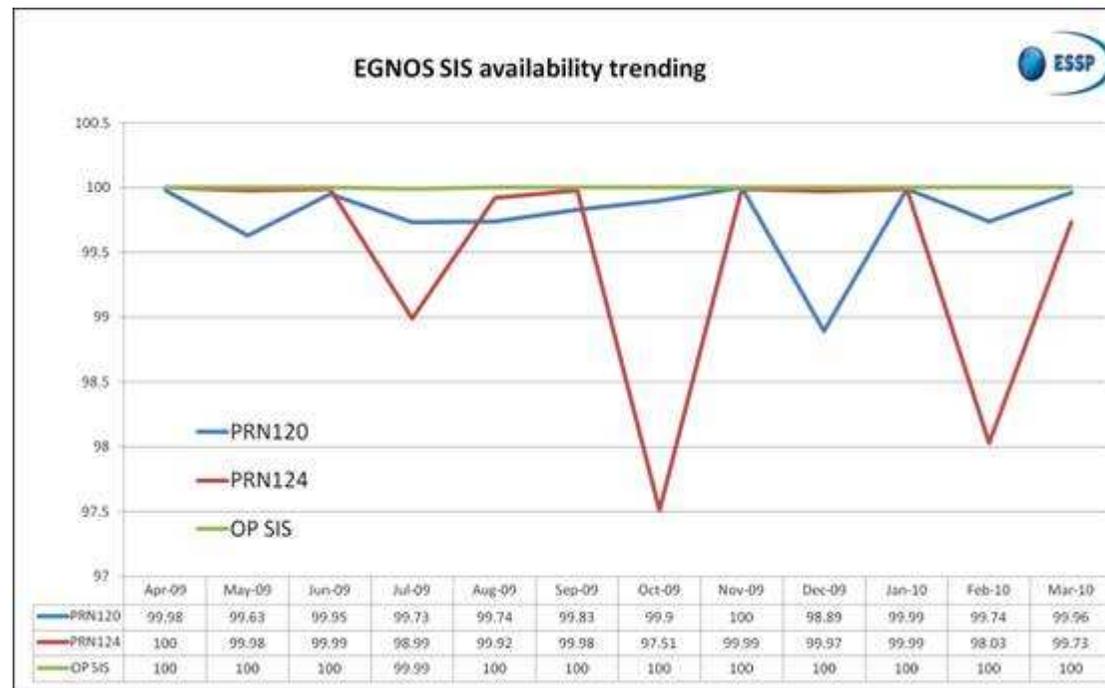
Continuity

Integrity

For given aeronautical operations such as **APV-1** (Approach Operations with Vertical Guidance), specific performances are defined

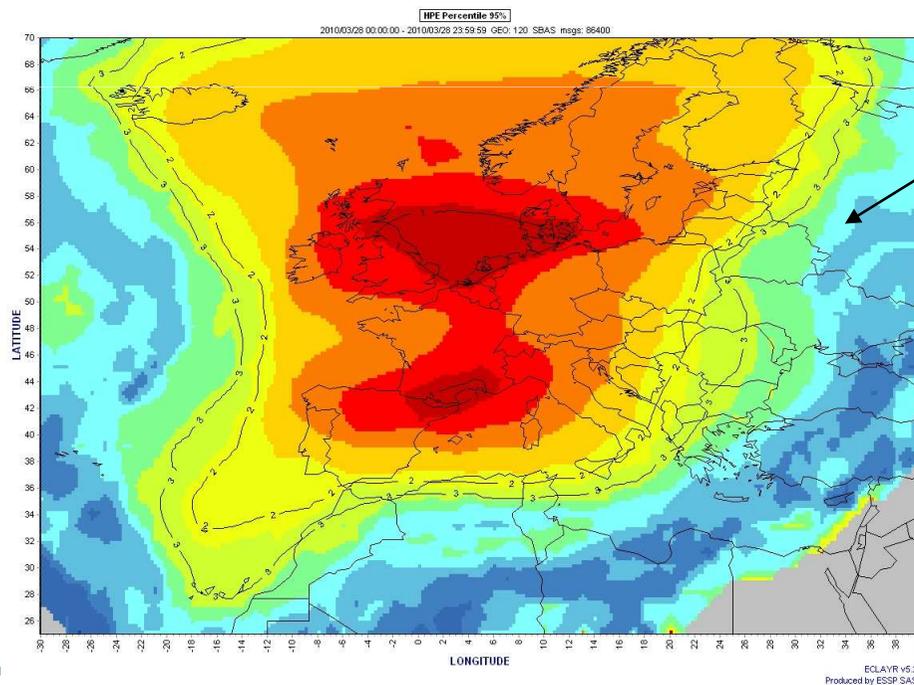
Signal In Space Availability

- Over last year, the reception percentage of EGNOS signal (at least one SIS GEO operational) was **99.999%**



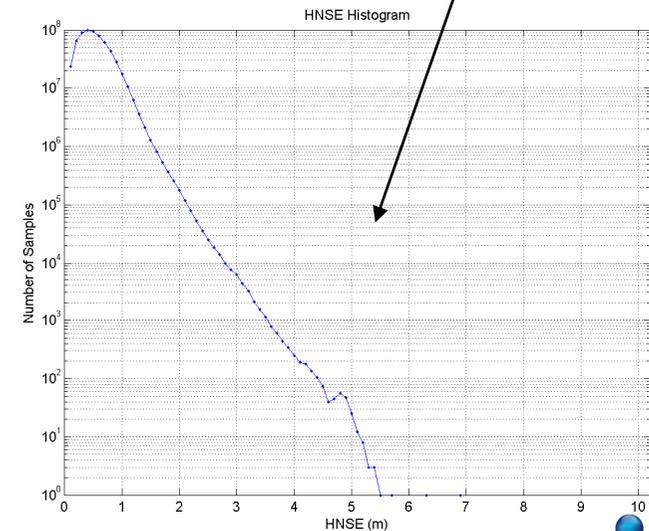
Accuracy

- The Horizontal/Vertical Navigation System Error (HNSE < 3m and VNSE < 4m) has always been above 99% for each month of the last year



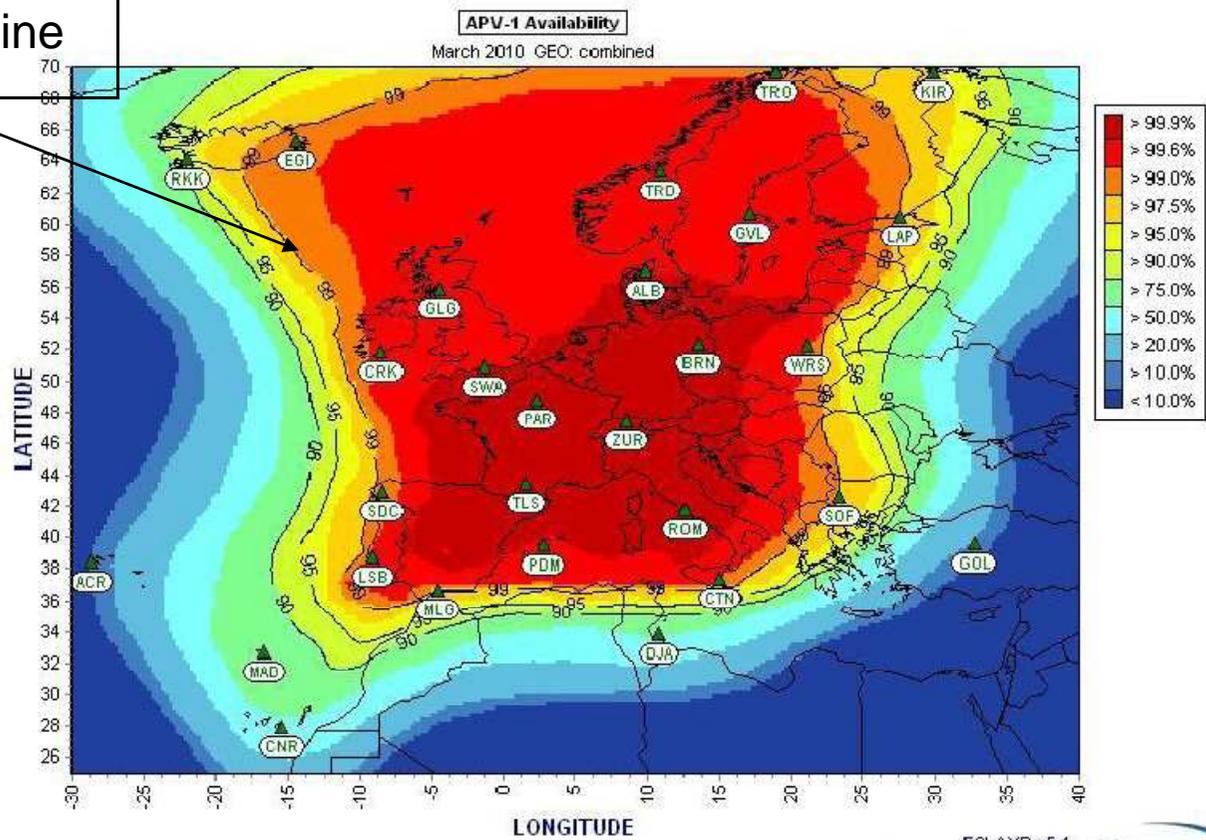
HPE on a day

HPE distribution on a year



APV-1 Availability(99%) over ECAC

99% isoline



EGNOS Performances

Current EGNOS V2.2ext achieving good levels of performance toward Aviation ICAO SARPS

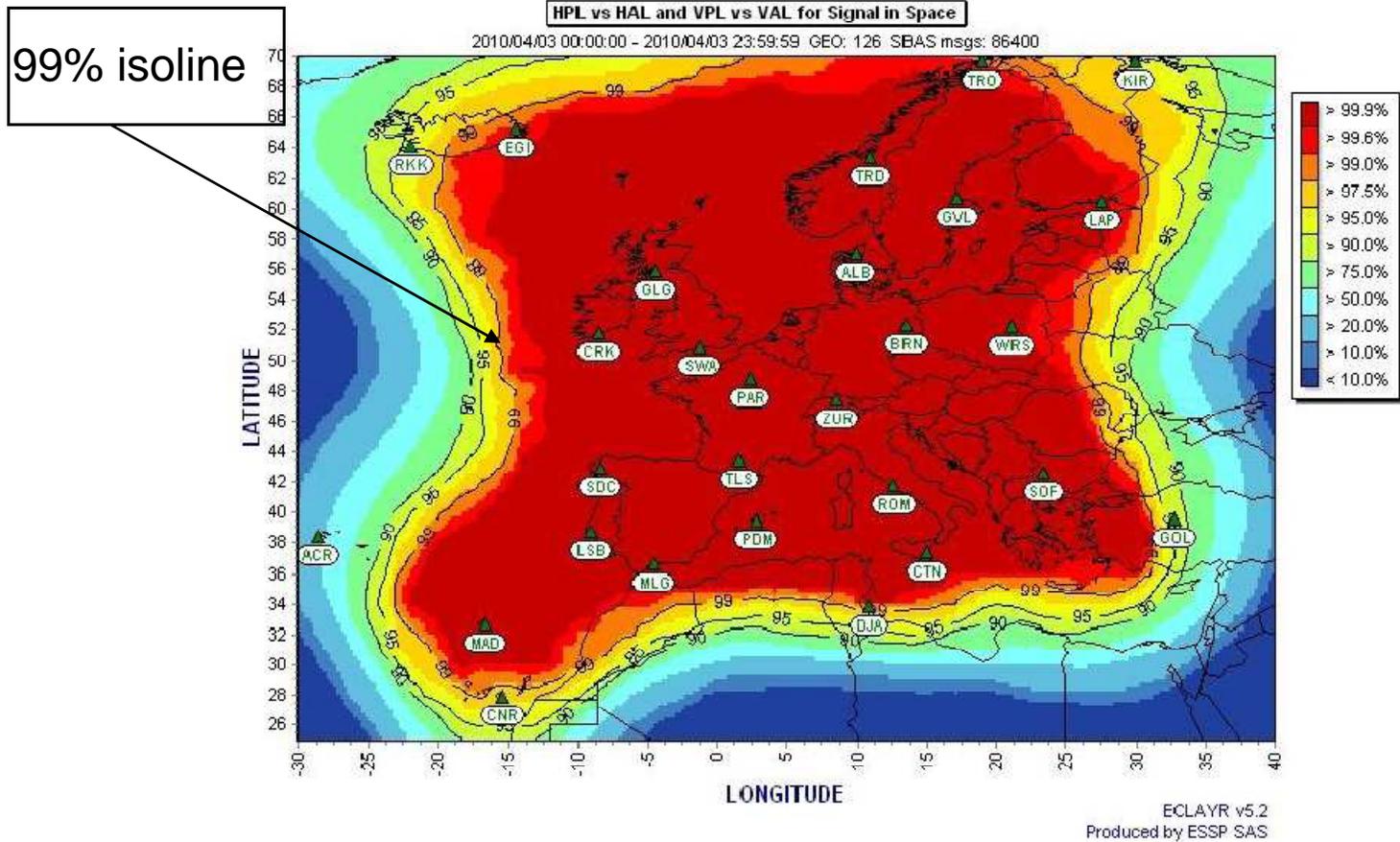
New EGNOS V2.3.1 (in 2011) with

- New RIMS stations (at least 4)

- Improvement EGNOS functions

Improve the service area and the service robustness in service border area

APV-1 Availability Extension (2011)



Contact ESSP

ESSP Website:

www.essp-sas.eu

EGNOS User Support:

Website: <http://egnos-user-support.essp-sas.eu/>

Helpdesk: Egnos-helpdesk@essp-sas.eu

ESSP SAS

18, avenue Edouard Belin - BPI 602

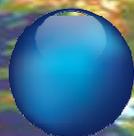
31401 Toulouse Cedex 9

FRANCE





Thank You!



ESSP

The EGNOS Services Provider

Questions?

