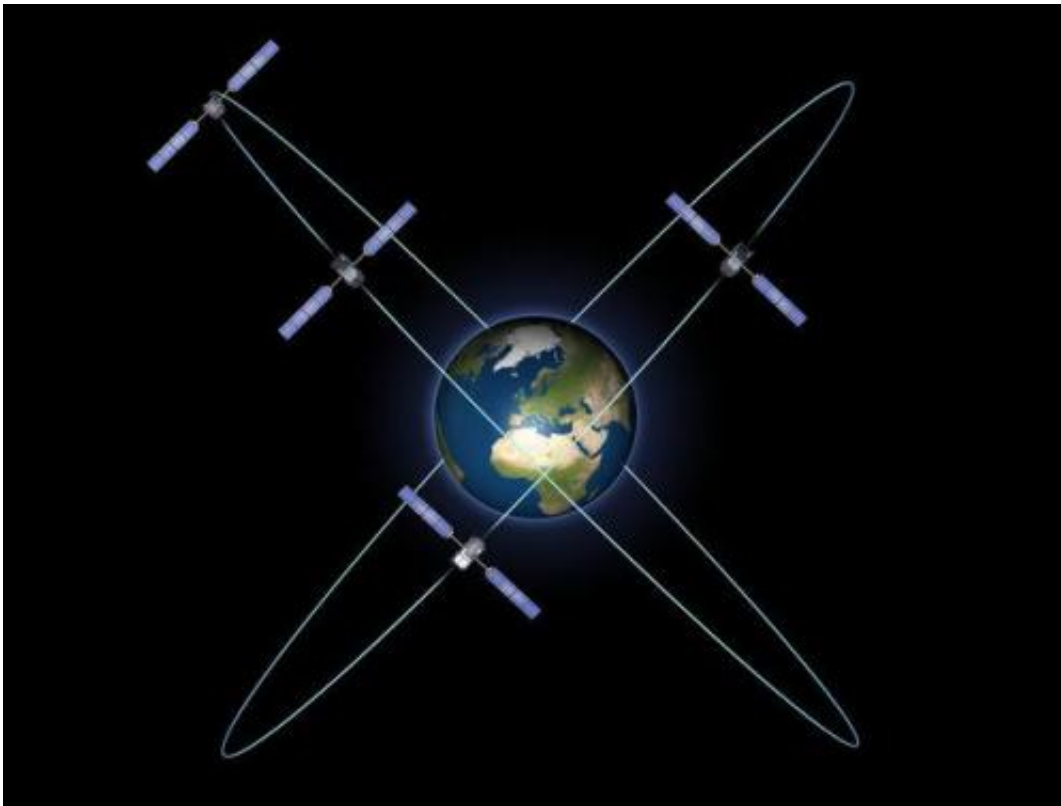


Galileo's secure service tested by Member States

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Galileo IOV in orbit. Credit: ESA - P. Carril

EU Member States have begun their independent testing of the most accurate and secure signal broadcast by the four Galileo navigation satellites in orbit.

Transmitted on two [frequency bands](#) with enhanced protection, the

Public Regulated Service (PRS) offers a highly accurate positioning and timing service, with access strictly restricted to authorised users.

"Galileo is in its In-Orbit Validation phase, planned to include experimental demonstrations of PRS capabilities in terms of positioning and access control," explained Miguel Manteiga Bautista, heading ESA's Galileo Security Office.

PRS access was initially considered for Galileo's Full Operational Capability phase, but it has been enabled in 2013 in response to the strong interest of Member States in this service. To allow early access to PRS during the current phase, the European Commission and ESA began the joint project 'PRS Participants To IOV' (PPTI) in July 2012.

ESA ensured the availability of several tools developed under ESA contracts, including test receivers and other qualification equipment. ESA also provided the critical knowhow and expertise required to conduct these experimental campaigns.

ESA's PRS Laboratory, based at the Agency's ESTEC technical centre in Noordwijk, the Netherlands, was used to provide training, demonstrations and sample data.

"As a result, Belgium, France, Italy and the UK have now performed independent PRS acquisition and positioning tests. In parallel, ESA, through collaboration with Dutch and Italian authorities, is also conducting PRS fixed and mobile validation in several locations in the Netherlands and Italy," added Miguel Manteiga.

The PRS tests have demonstrated a current autonomous positioning accuracy below 10 m when in the correct geometrical configuration. This is an impressive result considering the small number of Galileo satellites in [orbit](#) and the limited ground infrastructure so far deployed.

In the case of Italy, which has developed its own PRS receiver, the tests have already confirmed the feasibility of independent PRS receiver development and verification based on specifications provided by ESA.

"But the PPTI project is still ongoing in order to test more advanced functionalities this coming autumn and to run the first aeronautical PRS tests in collaboration with the Dutch authorities. Other Member States have also expressed their willingness to join the IOV PRS experimentation campaigns soon," concluded Miguel Manteiga.

The project is the first step to ensure the use of the PRS service as soon as it is operational. It will be complemented by the PRS Pilot Projects, focused on PRS applications, which are currently under definition in a common effort between the EU Member States, the European Commission, ESA and the European Global Navigation Satellite System Agency.

In addition to the qualification of the PRS service, these initiatives will allow the timely availability of competitive PRS receivers in Europe and the setting up of organisations in the Member States required to handle PRS.

Provided by European Space Agency

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