

SELEX Galileo on board ESA satellite Proba-2 that successfully lofted into orbit last night

Proba-2 was launched last night from northern Russia. Proba-2 is a follow-on to the highly successful Proba-1 satellite launched in 2001. It will demonstrate 17 advanced satellite technologies, among which the SELEX Galileo newly developed star tracker.

SELEX Galileo of Finmeccanica started early in 2002 to develop a groundbreaking Star Tracker based on an APS (CMOS) detector. This new technology would reduce cost, mass and size compared to the CCD based star tracker, and significantly increase tolerance to harsh radiation environments. When ESA offered SELEX Galileo the opportunity to fly the sensor on Proba-2, the company developed a Flight Configuration Model (FCM) of the AA-Star Tracker based on the "High Accuracy Star-tracker" (HAS) APS detector.

Based on the HAS APS detector, SELEX Galileo has completed, in 2008, the development and on-ground qualification of the AA-STR star tracker for the AlphaBus GEO telecommunication satellite. The AA-STR has also been selected for scientific (Bepi Colombo - ESA, Astro-G - JAXA), Earth Observation (PRISMA) and other Commercial programmes.

Highly successful, the first ten units were sold within less than six months from qualification, and a second batch is now being produced to cover customer requests.

SELEX Galileo is a World leader in attitude sensors and has supplied these for use in hundreds of missions without a single failure in orbit.

Notes to the Editors:

With a launch mass of 135 kg, Proba-2 is a much smaller satellite, but like its predecessor Proba-1, it is aimed at demonstrating a wide range of technologies, both for future satellite systems and for space science instruments. Among these is a demonstration model of a miniaturised star tracker developed by SELEX Galileo for ESA's BepiColombo mission to Mercury and the future Solar Orbiter probe.

Other technologies to be demonstrated include a digital sun sensor, miniaturised wide angle camera, fibre sensors, a high-precision magnetometer, a dual frequency GPS space receiver, a xenon-fed resistojet thruster, a cold gas generator and many more.

In addition, Proba-2 carries two Belgian solar physics instruments and two Czech plasma physics experiments. Two more Proba missions are already in the design and development phase. Proba-V will carry a vegetation multispectral sensor to monitor vegetation cover, and Proba-3 is due to demonstrate formation flying.

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