

## 2009 – PROBA 2 to take flight in 2009

Proba-2, currently under development and due for launch in the second quarter of 2009, is the second in ESA's series of small, low-cost satellites that are being used to validate new spacecraft technologies while also carrying scientific instruments.

Spur are completing 2 units for this satellites, firstly the AOCS(GPS) Unit consisting of 2 boards. Secondly a power supply for the satellite computer consisting of 20 boards, which is the smallest power supply ever made for a satellite.



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### Proba-2: Extending ESA's commitment to technological innovation

The Proba satellites are part of ESA's In-Orbit Technology Demonstration Programme, funded through the General Support Technology Programme (GSTP).

Proba-2 is being developed by a European consortium lead by the Prime Contractor, Verhaert Design and Development NV of Belgium, a subsidiary of QinetiQ (UK).

#### Technology demonstrations

The spacecraft infrastructure technologies are:

- a new type of lithium-ion battery (SPUR)
- an advanced data and power management system, containing many new component technologies
- combined carbon-fibre and aluminium structural panels
- new models of reaction wheels, star trackers and GPS receivers (SPUR)
- an upgraded telecommand system with a decoder largely implemented in software

The passenger technologies are:

- a digital Sun-sensor
- a dual-frequency GPS receiver (SPUR)
- a fibre-sensor system for monitoring temperatures and pressures around the spacecraft
- a new star-tracker development being test-flown before use on the BepiColombo mission
- a very high precision flux-gate magnetometer
- an experimental solar panel with a solar flux concentrator
- a xenon gas propulsion system using resistojet thrusters and a solid-state nitrogen gas generator to pressurise the propellant tanks
- an exploration micro-camera (X-CAM)