

20th SYMPOSIUM ON SMALL SATELLITE MISSIONS (B4)  
Small Earth Observation Missions (4)

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## PROBA-V, THE GLOBAL VEGETATION TRACKER

**Abstract**

PROBA-V is an end-to-end Earth observation mission, based on a PROBA small satellite platform. The mission has been introduced to guarantee the continuity of Vegetation data after decommissioning of SPOT-5. The PROBA-V satellite bus is based on PROBA-2 and has been expanded with an X-band transmitter and a flash-based mass memory. The 160 kg satellite is equipped with a state-of-the-art 4-band multi-spectral imager. With a swath width of 2250 km, the satellite is able to image the whole Earth in 2 days with a resolution ranging from 100 m in nadir to 300 m at the edge of the swath. The high level of autonomy, embedded in the on-board software and the ground segment, allow for a user-friendly and low cost operation of the mission. The mission is designed for an operational life of 2.5 years, with a possible extension to 5 years. The satellite is launched on the first VERTA flight of VEGA in April 2013.

This paper presents the system design of the satellite, including the Vegetation Instrument, a description of the development phase, and an overview of the first in-flight results of the mission.