THE IPERLITE HYPERSPECTRAL MISSION: A NEW SMALLSAT HYPERSPECTRAL SATELLITE

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IPERLITE is a new hyperspectral Earth observation mission launched on 25th November 2025 as result of an European Space Agency GSTP project and the ESA Earthwatch Proba-V programme, led by VITO.

In 2019, after 6 years in space, Proba-V largely fulfilled its primary mission objectives by ensuring continuation to SPOT-VGT long-term data series of global daily observations of land and coastal/inland water at 300m/1 km resolution and passed the baton to Sentinel-3. The satellite was still in excellent shape, so it was decided to extend the operation of Proba-V, providing complementary observations in the optical domain through a couple of small companion satellites.

BELSPO and VITO proposed a small satellite carrying the CSIMBA (Compact Smartspectral Imager for Monitoring Bio-agricultural Areas), instrument developed by AMOS, an innovative hyperspectral sensor based on thin-film interference filters directly deposited on a CMOS detector. The instrument acquires up to 154 spectral bands spanning the 465–900 nm visible and near-infrared (VNIR) spectral range with a 20 m ground sampling distance over an 80 km swath. Aerospacelab's VSP-150 platform was selected as platform for the instrument.

IPERLITE successfully achieved the platform IOCR in April 2026 and, at the time of writing this abstract, is currently under instrument calibration.

The main purpose of this presentation is to announce the availability of IPERLITE data and to start to build up a user community. Data are already available even if the full validation is expected in the last quarter of this year. The scientific community is invited to apply for access to its hyperspectral data.