



The DSLP Langmuir Probe experiment on-board Proba2: instrument design and first in-flight operations

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The experiment Dual Segmented Langmuir Probe (DSLP) is part of the Plasma Measurements Equipment on board the mini-satellite Proba-2 of the European Space Agency. The Proba 2 satellite was successfully launched on 2nd November 2009. The DSLP instrument aims to test and verify a novel Langmuir probe design based on a segmented spherical sensor originally used on the experiment ISL (French satellite Demeter). From scientific point of view, DSLP will provide in situ observations of the ionospheric plasmas. Here we present an overall description of the instrument design and explain the data acquisition techniques and basic principles of measurements. In addition, we provide first measurements results from the initial in-flight operations of the DSLP instrument which were performed within the first three month of the Proba 2 mission during the commissioning phase of the overall payload.