



## **Thermal plasma measurement unit for microsattellites**

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The Thermal Plasma Measurement Unit (TPMU) is proposed for the ESA PROBA II mission as well as for future scientific satellite projects. It uses radio-frequency (RF) probe for the electron temperature and floating potential measurement, and retarding potential analyzer (RPA) for the ion temperature and for ion and electron density measurement. The main purpose of the TPMU is to extend series of similar measurements carried out during last two decades onboard MAGION and Intercosmos satellites using the well known and proven measurement methods. Extended database of thermal plasma parameters could help to improve empirical models of electron temperature, density and ion composition in the topside ionosphere. The other aim is to develop a new more reliable and accurate but still low cost instrument suitable for microsattellites by implementing state of art electronic design. The launch is expected during the year 2007.