



The Mutual Impedance Probe (RPC-MIP) onboard ROSETTA

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The ROSETTA mission will reach the comet 67P/Churyumov–Gerasimenko in August 2014 and enable, for the first time, the in situ survey of a comet activity during along orbit. On board the ROSETTA orbiter, the Mutual Impedance Probe (MIP) is one of the instruments of the Rosetta Plasma Consortium (RPC) that aims at monitoring the cometary plasma environment. MIP is a quadrupolar probe that measures the frequency response of the coupling impedance between two emitting and two receiving dipoles. The electron density and temperature are derived from the resonance peak and the interference pattern of the mutual impedance spectrum. We will describe this instrument and discuss the preliminary results obtained during the third ROSETTA Earth flyby to show its expected capabilities. The RPC switch ON for the post-hibernation recommissioning is planned at the end of March. The health status of the instrument will be discussed.