



Structure of the wake of Titan from RPWS-LP observations

R. Modolo (1), J.-E. Wahlund (1), P. Canu (2), W.S. Kurth (3), A. Coates (4), C. Bertucci (5), M. Dougherty (5)

(1) IRF-Uppsala, Sweden, (2) CETP, Vélizy, France, (3), Dept of Physics and Astronomy, Univ. of Iowa, USA, (4), MSSL, Univ. College London, UK, (5) Space and Atmospheric Physics group, Imperial College, London, UK

Cassini revealed a dynamic and complex structure of the ionised environment in the vicinity of Titan. The upstream plasma conditions, combined with the orbital position of Titan, significantly affect the plasma environment near Titan. We focus this study on the analysis of Titan's plasma wake from the Radio and Plasma Wave Science (RPWS) data, and particularly the Langmuir Probe (LP) observations. The Langmuir Probe sensor provides the electron number density and a measurement of the ion outflow. Several flybys, having similar encounter geometries but different Saturn local times, are presented. The escaping outflow and its relation to the orbital position is investigated as well as the structure of the plasma wake .