The Earth's Plasmasphere: Pending Questions and Issues

Lemaire, J.L., (1)

(1) Royal Belgian Institute for Space Aeronomy, Brussels ; e-mail : joseph.lemaire@UCLouvain.be

Since its discovery in the 60's a wide range of the dynamical properties of the Plasmasphere have already been revealed thanks to ground based whistler observations, as well as the plentyof in-situ spacecraft measurements. After a review of the most important properties already identified, I will outline some features and properties that would need closer examination in future studies, and tentative physical solutions from experimental and theoretical points of view: e.g. the Plasma Boundary Layer, the Plasmaspheric Wind, Plasma Plumes, Plasmaspheric Depressions ...