

Structure and Dynamics of the Jovian Magnetosphere from Five Spacecraft

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Abstract

We have embarked on a project of re-analyzing data from the five spacecraft that took very different trajectories through the Jupiter system (Voyagers 1 & 2, Galileo, Ulysses and New Horizons) to map out the plasma density, flow, temperature and composition in the middle/outer regions of the magnetosphere. The primary scientific objective is to test ideas about where the iogenic plasma decouples from the planet, how the plasma is ejected from the system and the role (if any) of Dungey-style reconnection in the dynamics of the outer magnetosphere. But in re-analyzing the data we have learned various lessons about making plasma measurements in the jovian system.