



Perspectives in the exploration of the jovian magnetosphere.

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The Jovian magnetosphere is characterized by a rapid rotation, strong magnetic field and prolific internal sources of plasma. If many microscopic plasma processes developing in this huge system are similar to those observed at Earth, the overall organization of the environment and activity may be compared to those of binary stellar systems and even pulsars. It is an accessible environment for studying the fundamental processes of general astrophysical interest: plasma/neutral and plasma/satellite interactions, magnetodisk stability, the relaxation of rotational energy and associated energetic processes, and loss of angular momentum by magnetoplasma interactions. On the basis of what was learnt with Galileo, we examine what could be the essential elements of a new exploration of the jovian magnetospheric system.