



## **Energetic charged particle sources in Saturn's and Jupiter's magnetospheres**

Elias Roussos

Max Planck Institute for Solar System Research (MPS), Göttingen, Germany (roussos@mps.mpg.de)

In this talk we review observations of high energy particle sources in the jovian and saturnian magnetospheres. We focus on both direct sources (e.g. CRAND, direct CME particle entry) and acceleration mechanisms (e.g. adiabatic heating, centrifugal interchange injections, wave particle interactions, impulsive events/transient radiation belts, reconnection etc.), using data mostly from Cassini, Galileo and Ulysses. We use a comparative approach, theoretical context and references to Earth observations to understand which of the sources and acceleration processes are fundamental for fast-rotating magnetospheres with internal plasma sources and which ones can be attributed to the specifics of each system.