

Enhancing the EJSM magnetospheric science by combining plasma imaging with in-situ observations

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Abstract

The WG at ISAS, JAXA is studying JMO (Jovian Magnetospheric Orbiter) as a companion to the ESA-NASA mission EJSM. One of the clearest gains that JMO will provide is the plasma imaging from a vantage point that is above the ecliptic plane. This, which will be made possible by raising the inclination of the orbit, enables global imaging of plasma dynamics “from above” while the ESA and NASA orbiters make in-situ observations of the local space environment surrounding the moons embedded in the perpetually changing global context. The plasma imaging includes ENA and EUV, the former being extremely successful onboard Cassini at Saturn and targeting at Europa torus and energetic particle injections, and the latter focusing on Io tours. I will show what synergistic science is expected by having the third spacecraft in the mission.