



The Magnetospheric Multiscale Mission

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Magnetospheric Multiscale (MMS), a NASA four-spacecraft constellation mission scheduled for launch in March 2015, will investigate magnetic reconnection in the boundary regions of the Earth's magnetosphere, particularly along its dayside boundary with the solar wind and the neutral sheet in the magnetic tail. The most important goal of MMS is to conduct a definitive experiment to determine what causes magnetic field lines to reconnect in a collisionless plasma. MMS will make new multi-spacecraft measurements with unprecedented temporal and spatial resolution along with the ability to measure heavy ions within the intense fluxes of protons in the dayside magnetopause region. The science objectives, measurement requirements, instrument capabilities, orbital strategy, and data analysis of MMS will be discussed in detail in this paper. As available, preliminary data from the early commissioning phase of the mission will be discussed.