Magnetospheric Multiscale (MMS) mission and on-going sciences

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Abstract

NASA’s magnetospheric multiscale (MMS) mission aims to discover the electron-scale physics of magnetic reconnection, which is a dominant mechanism for eruptive processes in space plasma environment. The mission was launch on March 12th, 2015 UT, and contains four identical spacecraft forming a tetrahedron with about 10 km separation. More than 60 MMS articles were published in Science, PRL, GRL, and JGR. This talk will introduce the mission and particle and fields instruments onboard in detail. Also, the talk will summarize the science covered by the MMS publications, including electron diffusion region (EDR) and other small-scale signatures formed in flux ropes, Kelvin-Helmholtz waves, magnetosheath, and bow shock.

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