



MMS observations of MHD discontinuities and expansion waves in dayside magnetopause

Boryau Hsupeng (1) and Lou-Chuang Lee (2)

(1) Graduate Institute of Space Science, National Central University, Taoyuan City, Taiwan , (2) Institute of Earth Sciences, Academia Sinica, Taipei, Taiwan

Magnetic reconnection triggers jets in the outflow region by means of transforming magnetic field energy to plasma kinetic and thermal energy. The jets propagate outward from x -point and generate a leading magnetic bulge in the early stage after reconnection, and a quasi-steady reconnection layer in which several MHD discontinuities and expansion waves may form. Many simulations have been carried out to study the reconnection outflow region. However, there are only a few reports of slow shock signatures in the magnetopause in earlier missions before MMS. With high time resolution data, MMS enables us to study MHD discontinuities and expansion waves in dayside magnetopause.