

A review of magnetopause and boundary layer studies in 2013-2015

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The presentation will review advances made for the last two years in our understanding of planetary magnetopauses, their boundary layers, their roles, and the processes occurring there. The topics to be covered include, but are not limited to, current sheet structures, magnetic reconnection, Kelvin-Helmholtz instability, ULF and high-frequency wave excitation, plasma heating, cold ion effects on magnetopause reconnection, polar cusps, plasma depletion layers, heliopause crossing by Voyager-1, and the prospects for the Magnetospheric Multi-Scale (MMS) mission that was successfully launched on 12 March 2015. This is an extended and more informative version of my presentation that was given in the IAGA Division III reporter review session at the IUGG 2015 meeting.