

## **MAGNETIC TOPOLOGY OF THE MAGNETOPAUSE AND LOW-LATITUDE BOUNDARY LAYER DEDUCED FROM THEMIS HIGH-RESOLUTION ELECTRON AND ION MEASUREMENTS**

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We will present burst-mode observations by the THEMIS spacecraft at the dayside magnetopause and boundary layer. During its Dayside Phase, the THEMIS burst-mode is triggered by the encounter of the magnetopause, and full 3-D ion and distributions at 3-s resolution are transmitted to the ground. The high-resolution electron measurements allow the unambiguous determination of the field-line topology throughout the entire magnetopause/boundary layer crossings. In this talk we will discuss how the boundary layer topology depends on the magnetic shear, and in particular whether the entire dayside magnetopause/boundary layer is on open field lines during high-shear conditions. The information on field-line topology could shed light on the solar wind entry mechanisms.

magnetic reconnection, magnetopause, boundary layers

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