

Abstract Submitted
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Applying Empirical Magnetopause Prediction to Results Obtained from MHD Simulations KEVIN PHAM, ROBERT BRUNTZ, RAMON LOPEZ — One unresolved issue with the Lyon-Fedder-Mobarry (LFM) magnetohydrodynamics (MHD) simulation is which ionospheric conductivity best fits with real data. The boundary between the Earth's magnetic field and the surrounding solar wind plasma is known as the magnetopause. The location of the magnetopause as a function of interplanetary magnetic field has previously been empirically determined. Using this empirical magnetopause fit, we superimposed the magnetopause prediction onto various LFM simulations. The LFM simulations are run with a constant ionospheric conductivity of 5mhos and 10mhos. By normalizing the subsolar point of the magnetopause fit to the subsolar point in the LFM simulation, we have found that the magnetopause fit aligns better with the 10mhos than the 5mhos simulations. This provides additional evidence that the real ionospheric conductivity is closer to 10mhos.

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