

Abstract Submitted
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Looking for evidence of magnetosheath current as suggested by LFM global MHD simulations¹ SOPHIA COCKRELL, PHYLLIS WHITTLESEY, ELIZABETH MITCHELL, RAMON LOPEZ, UT Arlington — The ability to predict the effects of the solar wind on the near-Earth space environment is receiving attention due to the increased use of satellites for business, consumers, and the military. Determining if there is a current in the magnetosheath is part of a larger project to predict these effects. Solar magnetic field lines drape themselves along the magnetosheath, a subsonic region outside the boundary of the Earth's magnetic field. Using data from two satellites, Geotail and Interball, in the magnetosheath during geomagnetic storm times, we look for unexpected reverses in the magnetic field direction, known as reverse draping, which indicate a current flowing in the magnetosheath. Simulations done by our group suggest that during periods of strongly southward interplanetary magnetic field we might expect reverse draping. We will be presenting case studies indicating when reverse draping is occurring in the magnetosheath.

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