Ion Foreshock and Magnetosheath Properties in Global Hybrid Simulations of Mercury's Magnetosphere

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Properties of the interaction between the solar wind and Mercury's magnetosphere are investigated using 3-D global hybrid simulations (Travnicek et al., 2009, 2010). We investigate the ion foreshock, formation and properties of the back-streaming proton population and the corresponding wave activity. We also investigate properties of the quasi-parallel shock and the adjacent magnetosheath. The properties of the quasi-parallel magnetosheath are compared with the properties of the quasi-perpendicular one.

References