



Propagation of IP shocks in the geospace

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Several studies have been devoted to the interaction of interplanetary (IP) shocks with both characteristic Earth's magnetospheric boundaries: the bow shock and magnetopause. Non-stationarity of this interaction requires multi-spacecraft observations with good space and temporal coverages. In this contribution, we analyze propagation of several IP shocks with different orientations of normals to the solar wind velocity. For this purpose, we used a large set of spacecraft orbiting in the solar wind, near the bow shock as well as in the magnetosheath and in the magnetosphere at the magnetopause vicinity. We discuss the IP shock deformation, changes of its orientation and speed as well as the properties of a new discontinuity generated by the IP shock – bow shock interaction and a role of the magnetopause in this process.