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Passage of the solar wind discontinuity through magnetosheath: How they evolve?

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This paper is aimed at the evolutions of solar wind discontinuities propagating in the terrestrial magnetosheath. The work is based on the magnetic field and plasma gathered with the INTERBALL-1 spacecraft and relevant WIND spacecraft, which serves as a real time monitor of the solar wind conditions. The GDCF model is used as a reference for the magnetosheath plasma and magnetic field parameters under varying interplanetary conditions. Solar wind, modeling and observational data allows to reveal how the structure of the rotational and tangential discontinuities is “splinted” due to the interaction with the bow shock and magnetopause in the Earth’s magnetosheath.

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