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Statistical Analysis of Magnetopause Crossings at Lunar Distances

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Measurements of the ARTEMIS missions' magnetometers are used to determine characteristics of magnetopause transitions in form of position, normal direction and various plasma parameters about 60 Earth radii downtail at lunar distances. A total of 237 magnetopause crossings within a time range of five years has been analyzed. For comparison with predictions by the Shue et al. (1997) model OMNI solar wind data is used. Comparison of magnetopause normal direction and position as predicted by the Shue et al. model and actually observed values using the ARTEMIS dataset allows to expand the model to lunar distances in a basic way.