

Abstract Submitted  
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**Location, Structure, and Motion of Jupiter's Dusk Magnetospheric Boundary from  $\sim 1625$  to  $2550 R_J$**  R.W. EBERT, UTSA/SwRI, D.J. MCCOMAS, SwRI/UTSA, F. BAGENAL, CU-Boulder, H.A. ELLIOTT, SwRI — We examine plasma observations along Jupiter's dusk magnetospheric flank from  $\sim 1625$  to  $2550 R_J$  using measurements from the SWAP instrument on New Horizons (NH). NH made sixteen magnetopause (MP) crossings that were identified by transitions between magnetotail/boundary layer and magnetosheath plasma. These transitions were either sharp, with the MP clearly separating two distinct plasmas, or comparatively gradual, where it was difficult to distinguish between different populations. The sheath distributions had high counts, were relatively wide in energy/charge (E/Q) and steadily decreased in speed. Flow speeds in the sheath were always higher (lower) when NH entered (exited) this region. A boundary layer was observed inside of the MP at several crossings. Its plasma was composed of light ions and the counts and mean E/Q were generally lower than sheath values indicating a lower density and speed. Estimates of angular displacement of the tail boundary compared favorably with a study of near Jupiter solar wind flow cone angle distributions. We propose that the outward crossings resulted from downward deflection and contraction of the tail from forward shocks/compression regions in the solar wind, the inward crossings from the duskward deflection and expansion of the tail from reverse shocks/rarefaction regions.

Robert Ebert  
UTSA/SwRI

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