

## Correlative Magnetopause Boundary Layer Observations

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Recent wave and particle measurements made by instruments onboard the POLAR and GEOTAIL spacecraft have been compared for times when both spacecraft are crossing the same magnetic field lines, GEOTAIL is skimming the magnetopause, and POLAR is at or near one of the northern or southern polar cap boundary layers. The data taken during these times suggest that POLAR instrumentation is observing the effects of high altitude heating of upflowing ionospheric ions, through wave-particle interactions. GEOTAIL observes these same ions after they have propagated into the magnetopause boundary layer through heating and acceleration. These observations, together with solar wind plasma and interplanetary magnetic field measurements from WIND, images of the footprints of the magnetic field from POLAR, and ground-based, remote sensing measurements, will be discussed in order to gain a further understanding of the magnetopause boundary layer and the transport and acceleration processes that take place in and near the magnetopause region.

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