

Abstract Submitted  
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**The Relationship Between Magnetosheath and Solar Wind Parameters**<sup>1</sup> PHYLLIS WHITTLESEY, CRYSTAL RED EAGLE, ELIZABETH MITCHELL, RAMON LOPEZ, UT Arlington — In general, the solar wind drives magnetospheric activity and is used to quantify it. In reality, it is the magnetosheath which is in contact with the magnetosphere. The magnetosheath therefore dictates magnetospheric activity. We expect that the relationship between solar wind and magnetosheath parameters will have a linear relationship at low solar wind magnetic field values. However, at high solar wind magnetic field values, the LFM Global MHD code predicts a non-linear relationship between the solar wind and magnetosheath parameters. Using simultaneous spacecraft observations from WIND and GEOTAIL, we examine two periods of magnetosheath and solar wind measurements to confirm the observed relationship between the magnetosheath and solar wind parameters. For low solar wind magnetic field, we examine a period of quiet solar wind and magnetospheric activity on January 5, 1995. For high solar wind magnetic field, we examine the well-known January 10, 1997 storm period.

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