

## Solar Wind Control of the Polar Cusp Observed by the SuperDARN Radars

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The radars of SuperDARN observe the echo whose spectral width is extremely wide (more than 300[m/s]) in the region between 75 and 80 invariant latitudes around the magnetic local noon during winter. This region is normally considered to be the dayside cusp from the results of previous case studies. We have investigated this wide spectral width region statistically, and clarified the behavior of the cusp location determined by the SuperDARN radars.

In presentation we will show the dependence of the cusp location determined by the SuperDARN on the parameters of solar wind (IMF  $B_y$ ,  $B_z$ , and dynamic pressure).

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and POLAR (Zhou et al., 2000). In these studies, it is concluded that the latitudinal location of the cusp moves equatorward with the increasingly southward IMF. It is also found that the cusp shifts prenoon for IMF  $B_y$  negative case and postnoon for IMF  $B_y$  positive in northern hemisphere. In presentation we will show

the dependence of the cusp location determined by the SuperDARN on the parameters of solar wind (IMF  $B_y$ ,  $B_z$ , and dynamic pressure).