

Magnetospheric Dynamic Cusp: Cluster Observations

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The magnetospheric cusp region is a very dynamic region. Cluster spacecraft often observed more than one cusp. Observed multiple cusps may be either explained as a funnel-shaped cusp trifurcated or swivelled into a complicated geometry in space or as a cusp which shifted back and forth many times in an interval. Observational evidence shows that the observed multiple cusp were a temporal sequence rather than a spatial effect. We suggest further that the solar wind azimuthal flow was the controlling factor of the cusp position and was stronger factor than the IMF By/Bz components. The importance of the solar wind azimuthal and north/south flow as a dynamic driver