Geophysical Research Abstracts,
Vol. 10, EGU2008-A-07526, 2008
SRef-ID: 1607-7962/gra/EGU2008-A-07526
EGU General Assembly 2008

Interhemispheric Comparison of the Dipole Tilt Angle Effects on Latitude of Mid-altitude Cusp

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A statistical study of the interhemispheric comparison of the dipole tilt angle effects on the latitude of the mid-altitude cusp is preformed by a data set of the Cluster cusp crossings over a 5-year period. The result shows that the dipole tilt angle has a clear control of the cusp latitudinal location. When the dipole tilts sunwards, the cusp is shifted poleward. The northern cusp moves 1degree ILAT for every 15.4 degree increase in the dipole tilt angle, while the southern cusp moves 1 degree ILAT for every 20.8 degree increase in the dipole tilt angle. That suggests an interhemispheric difference in the dependence of cusp latitudinal location on the dipole tilt angle.