Geophysical Research Abstracts,
Vol. 10, EGU2008-A-05360, 2008
SRef-ID: 1607-7962/gra/EGU2008-A-05360
EGU General Assembly 2008

Detection of plasmaspheric wind by analysis of ion measurements obtained onboard the Cluster spacecraft

I. Dandouras (1)

(1) Centre d'Etude Spatiale des Rayonnements, CNRS/UPS, Toulouse, France

The existence of a plasmaspheric wind, steadily transporting cold plasmaspheric plasma outwards across the geomagnetic field lines, has been predicted on theoretical basis (Lemaire and Shunk, 1992; André and Lemaire, 2006). Direct detection of this wind has, however, eluded observation in the past. Analysis of ion measurements, acquired in the outer plasmasphere by the CIS experiment onboard the Cluster spacecraft (Retarding Potential Analyzer mode), provide now the first experimental confirmation of a plasmaspheric wind. This wind was systematically detected during quiet and moderately active conditions, and could provide a substantial contribution to the magnetospheric populations outside the Earth's plasmasphere.