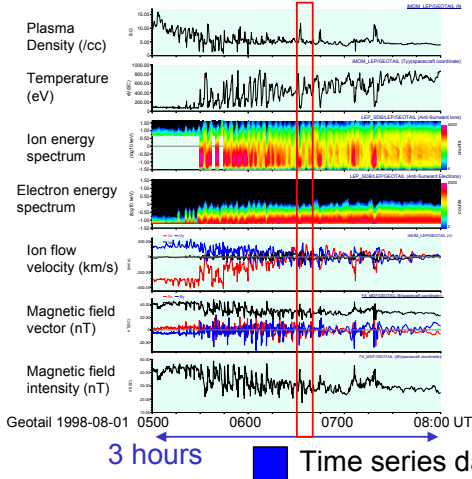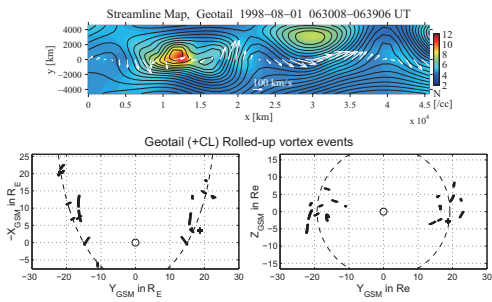# 4.2.3   GEOTAIL, CLUSTER, & CEF

GEOTAIL
– In-depth and long-period observations of Earth's magnetosphere

In situ measurements of particles, magnetic & electric fields, and waves

Geotail 1998-08-01 0500   0600   0700   08:00 UT
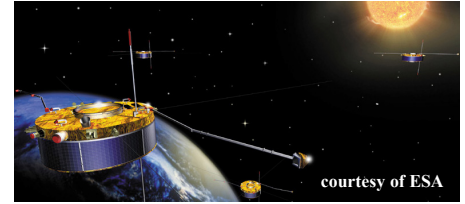
3 hours   Time series data

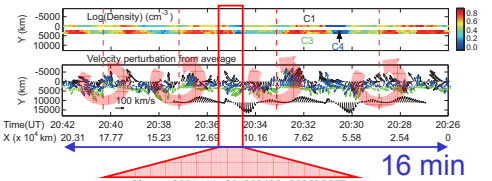2D image of plasma structures (vortices)

Large-scale vortices—an agent for plasma transport/mixing—identified from more than 10 years of GEOTAIL observations
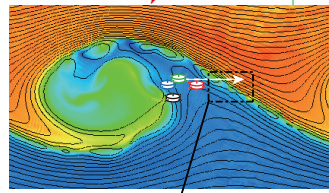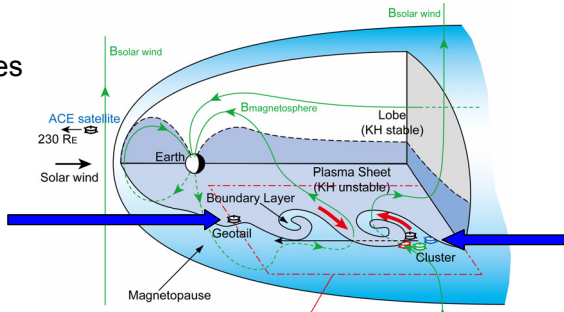

CLUSTER
– Capture by four spacecraft of spatio-temporal evolution of the magnetosphere

courtesy of ESA

Capture of the spatial structure of the magnetopause boundary layer

16 min

Cluster 2001−11−20 203435−203535 UT

1 min
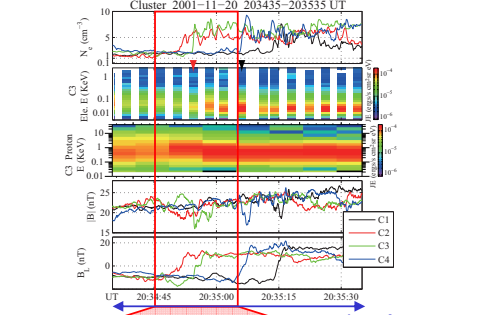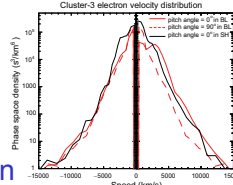
Cluster-3 2001−11−20 203445−203505 UT

20 sec

Reconnection jet

Understanding the transport/mixing process of collisionless plasmas from the multi-scale coupling viewpoint
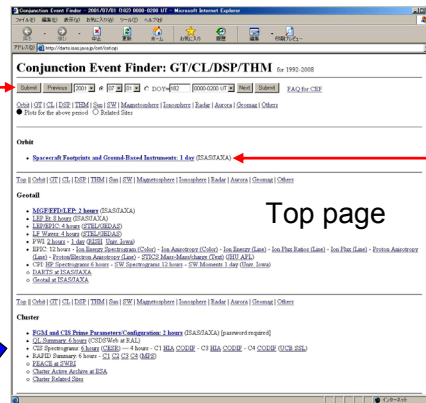– Toward the next generation "Cross-Scale" mission

Electron acceleration

Conjunction Event Finder (CEF)
– Powerful tool for browsing various Quick Look data in Solar-Terrestrial Physics

1. Input "date" and "time interval"

2. Links to various Quick Look plots are generated.

3. One can inspect solar wind, magnetospheric, ionospheric, and ground data, taken by various satellites and ground observatories, for the selected interval.

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URL: http://darts.isas.jaxa.jp/stp/cef/cef.cgi

Orbits and ionospheric footprints of satellites (incl. predicted ones) and field-of-view of ground observatories, to help search for conjugate events