

## Equator-S/Geotail Detection of Bi-Directional Plasma Jets and Extended Magnetic Reconnection Line at Earth's Magnetopause

Spacecraft: **Geotail** and **Equator-S**

*Location:* Dawn flank magnetopause

*Separation:* 4  $R_E$  north-south

3  $R_E$  east-west

Observations:

- First detection of bi-directional plasma jets emanating from an extended reconnection line

Implications:

- Conclusive evidence for magnetic reconnection
- Evidence for global-scale reconnection
- Substantial solar wind entry into the magnetosphere

Mass transfer =  $10^{28}$  particles/s (10% solar wind flux)

Energy transfer =  $2.5 \times 10^{12}$  Watts

