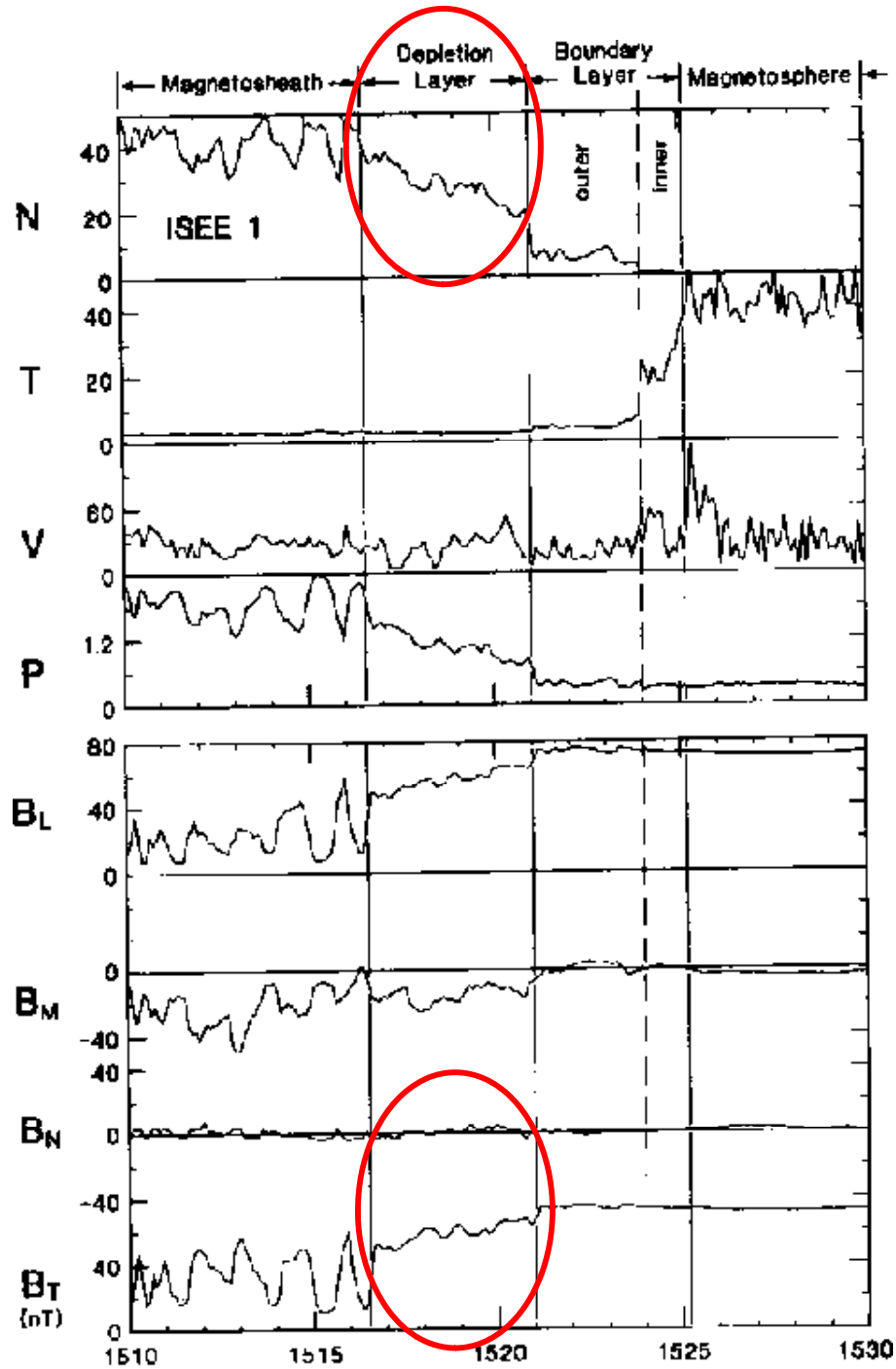


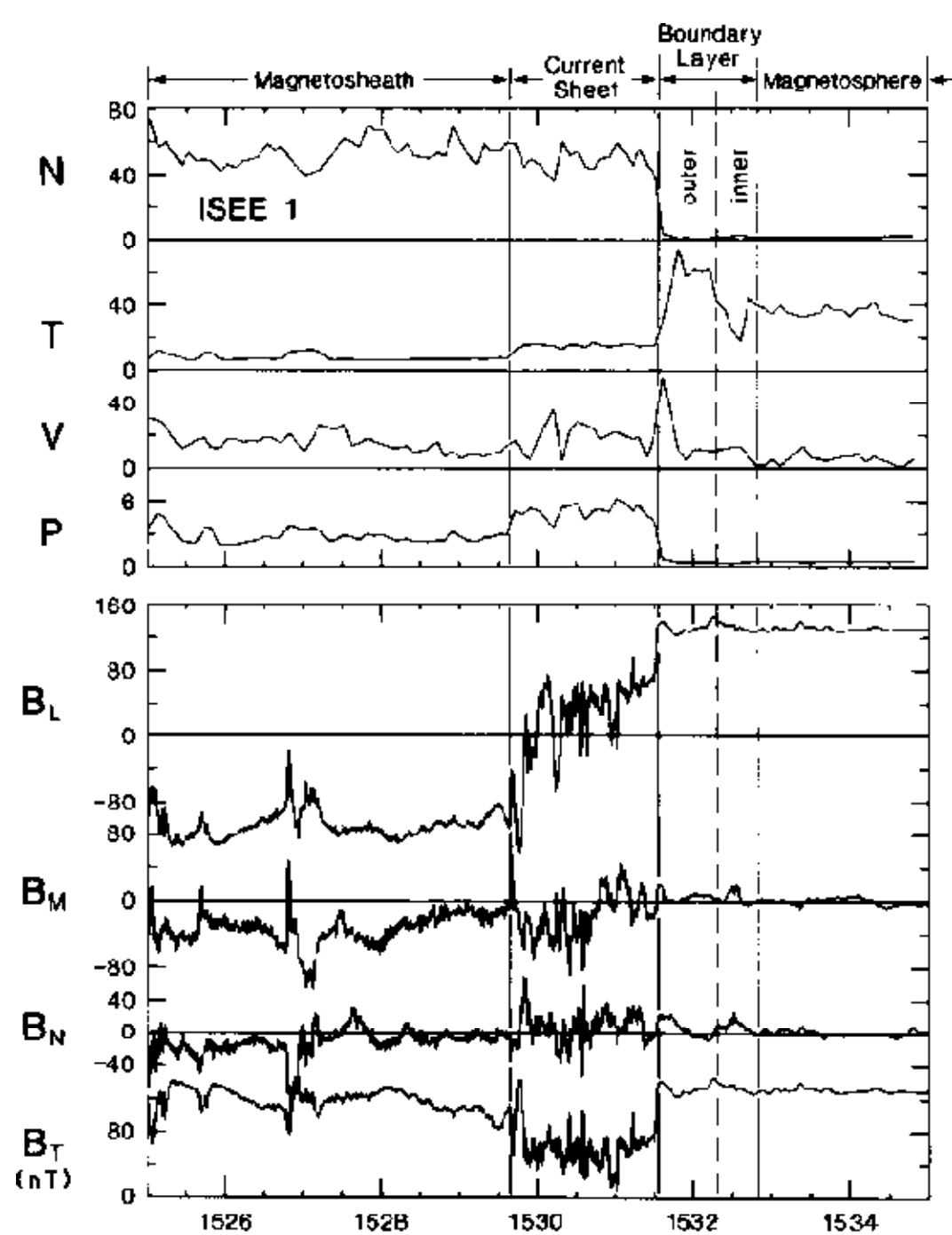
# Northward IMF



Nov. 1, 1978

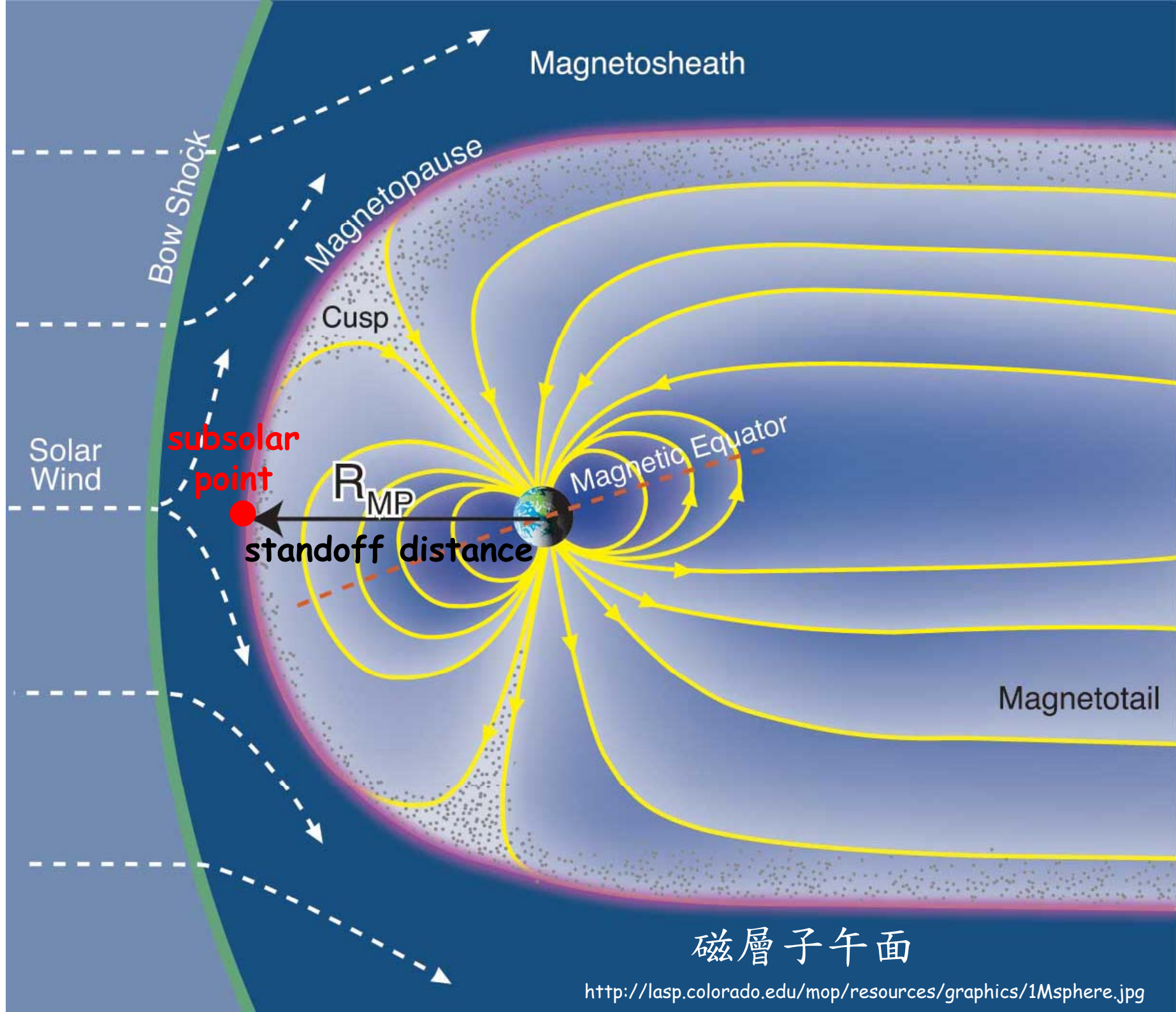
Universal Time

# Southward IMF



Nov. 25, 1978

Universal Time



### 磁層子午面

$$\text{total pressure } P_{\dagger} = \rho v^2 + \rho RT + \frac{B^2}{2\mu_0}$$

動壓  
dynamic pressure

熱壓  
thermal pressure

磁壓  
magnetic pressure

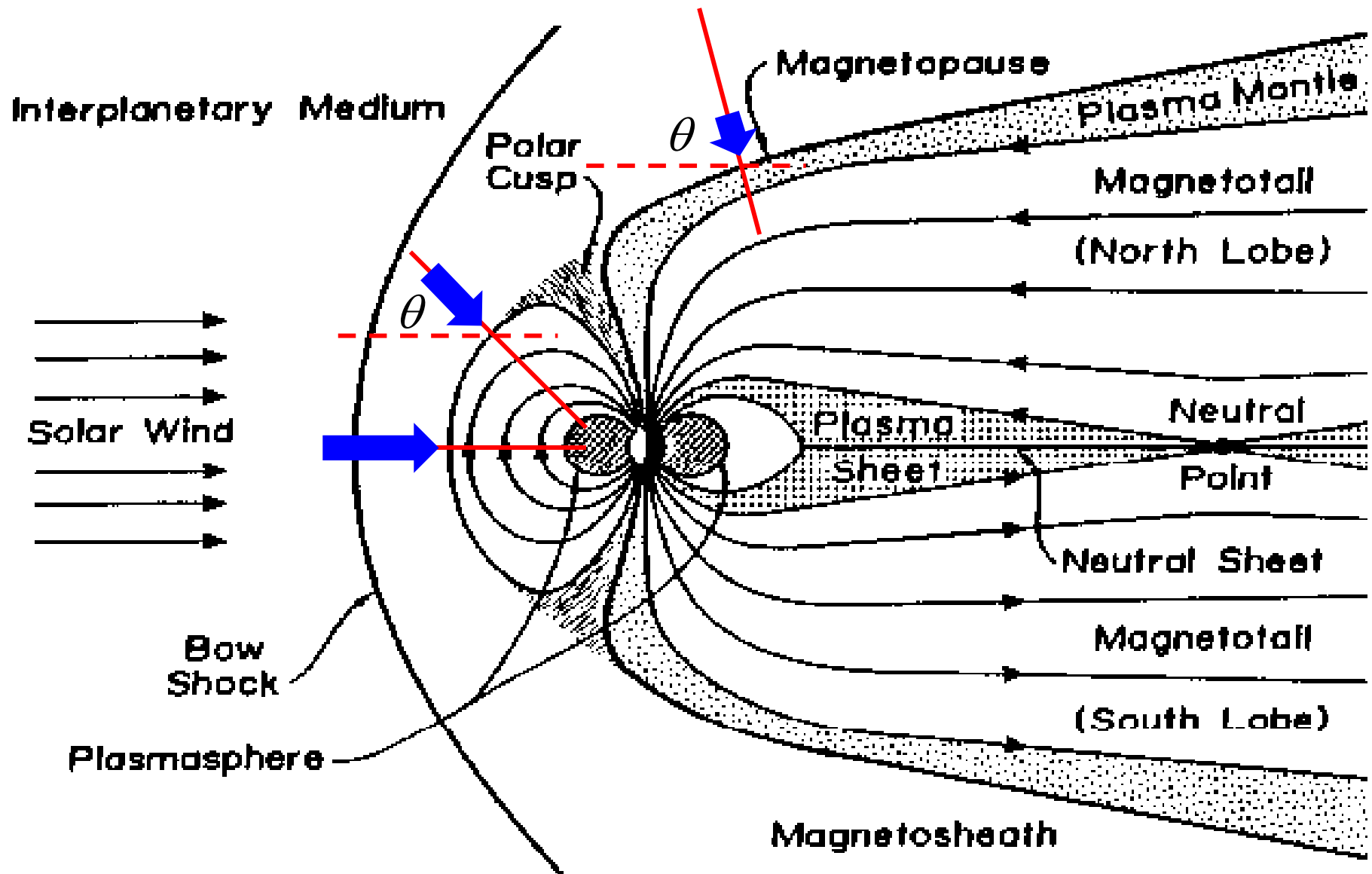
$$(P_{\dagger})_{\text{solar wind}} = (P_{\dagger})_{\text{magnetosheath}} = (P_{\dagger})_{\text{magnetosphere}}$$

$$\underbrace{\left(\rho v^2 + \rho RT + \frac{B^2}{2\mu_0}\right)_{\text{sw}}}_{\text{small}} = \underbrace{\left(\rho v^2 + \rho RT + \frac{B^2}{2\mu_0}\right)_{\text{msp}}}_{\text{small}}$$

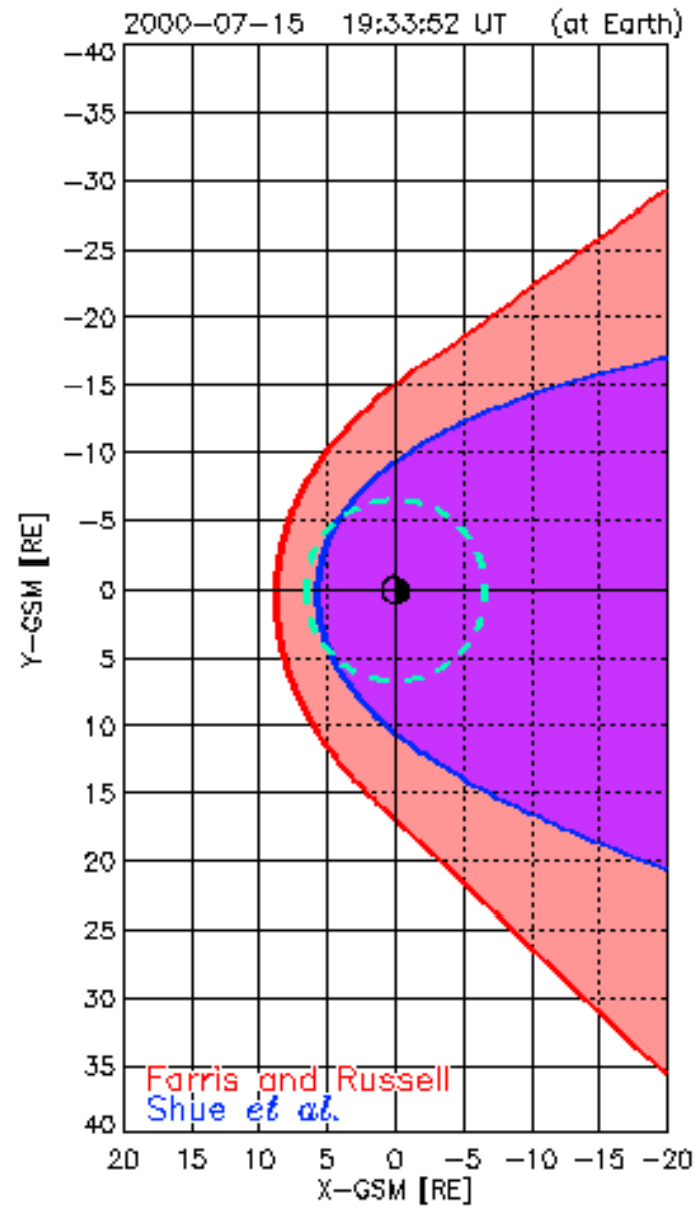
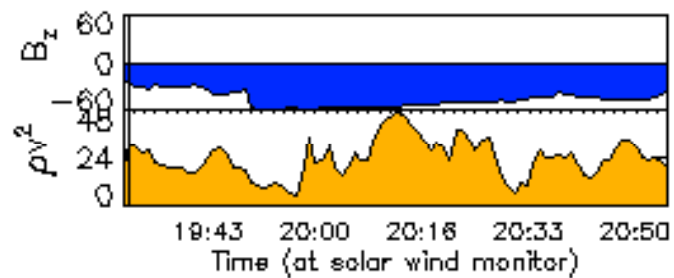
Dayside:

$$\Rightarrow (\rho v^2)_{\text{sw}} = \left(\frac{B^2}{2\mu_0}\right)_{\text{msp}}$$

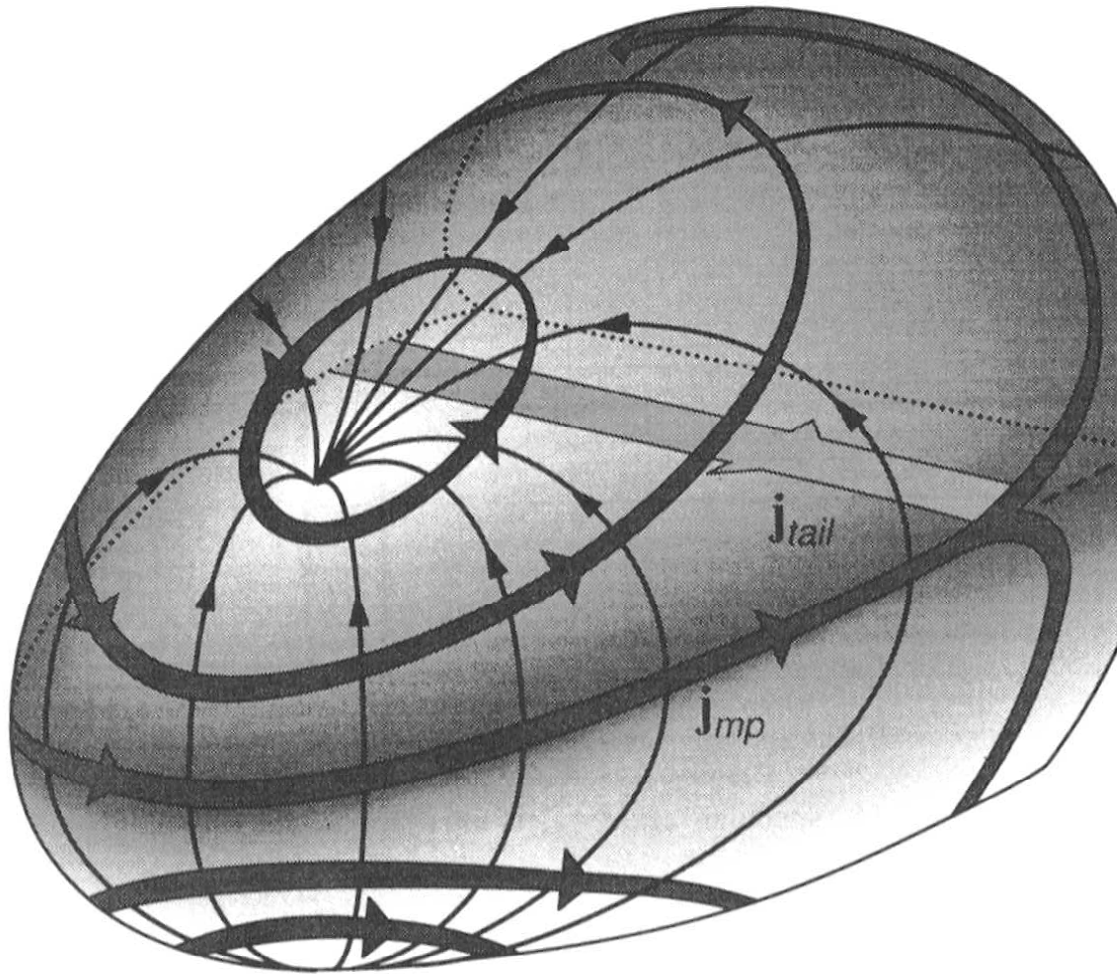
$$(\rho v^2)_{SW} = \rho_{SW} v_{SW}^2 \cos^2 \theta$$



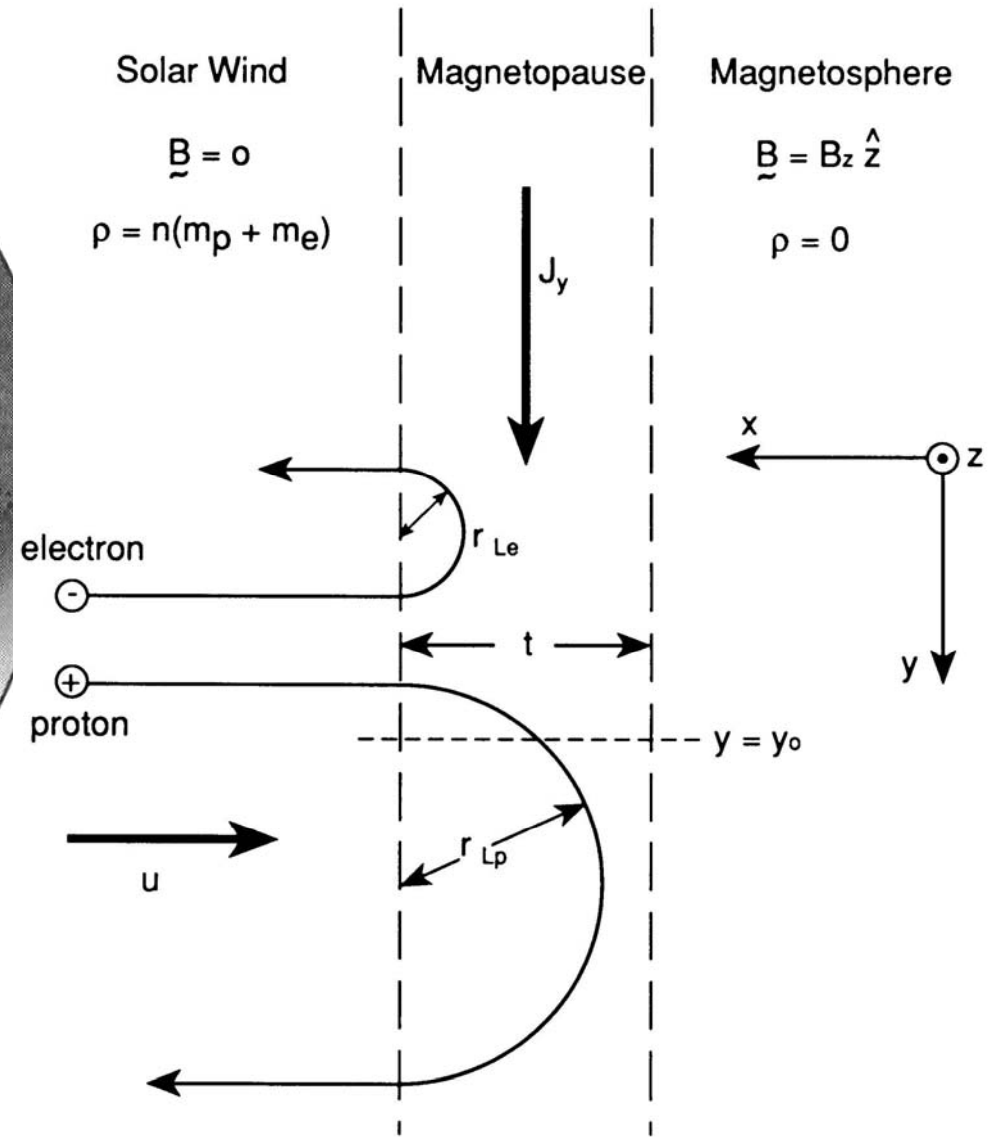
磁層子午面



# Magnetopause Current



global



local