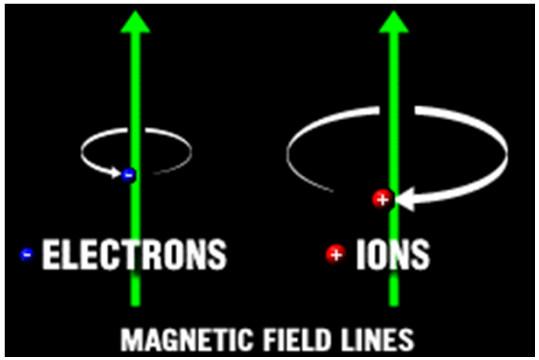
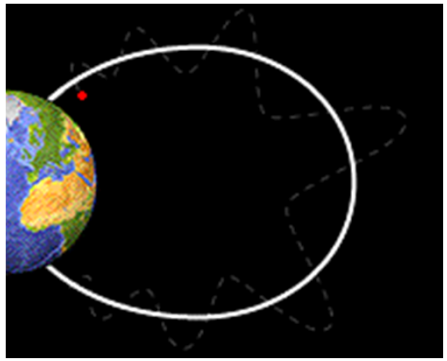
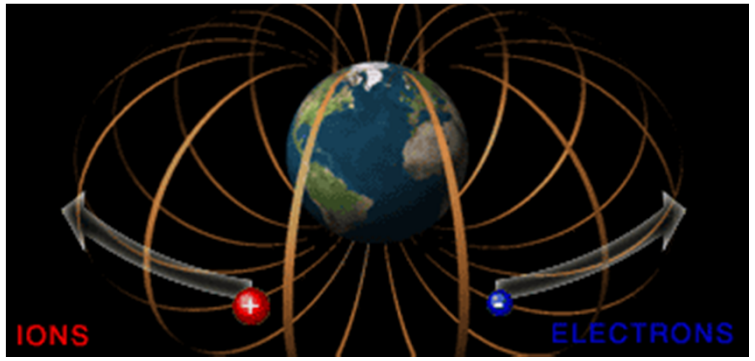
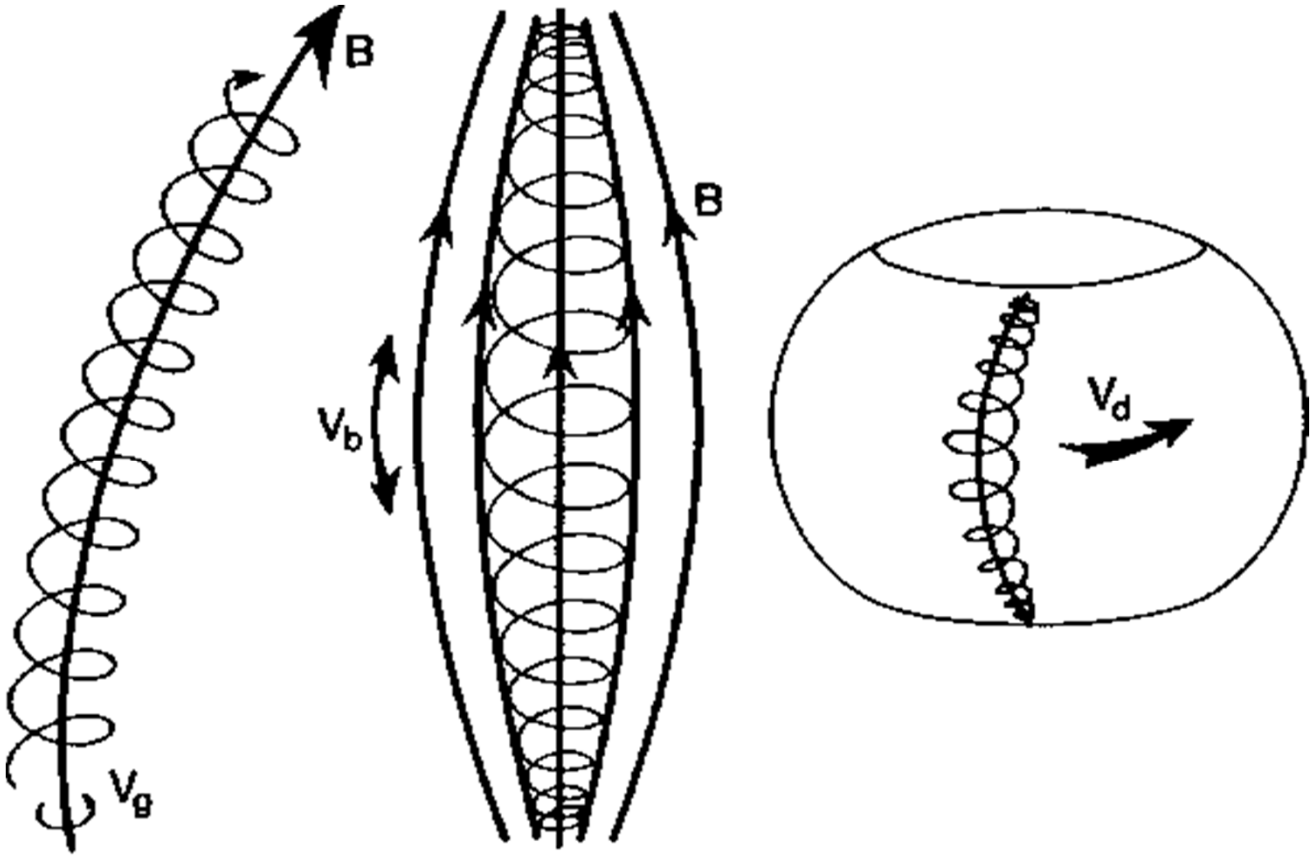


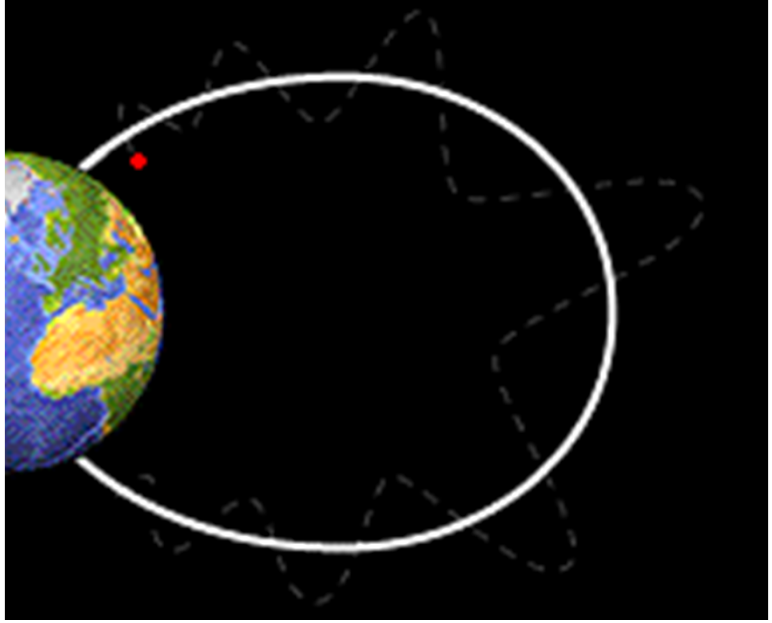


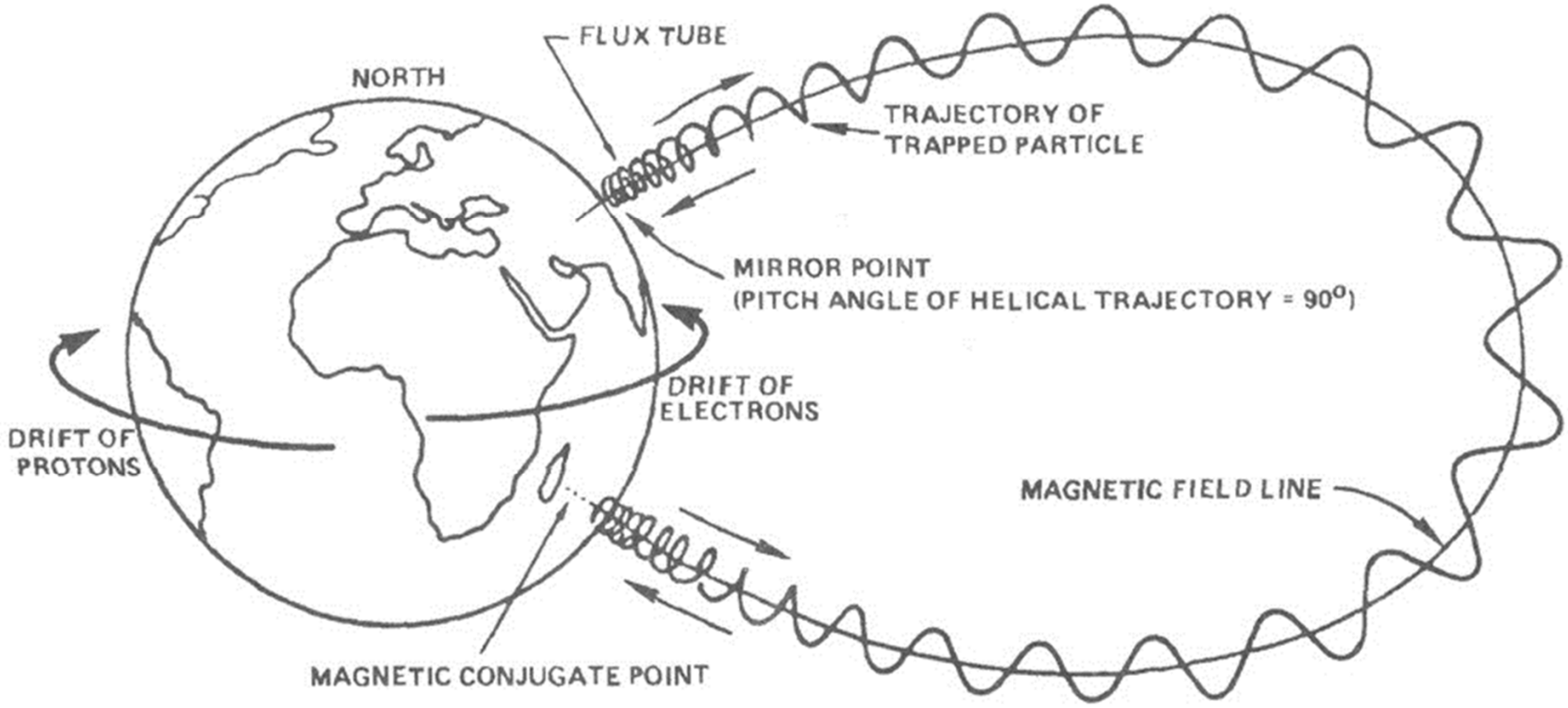




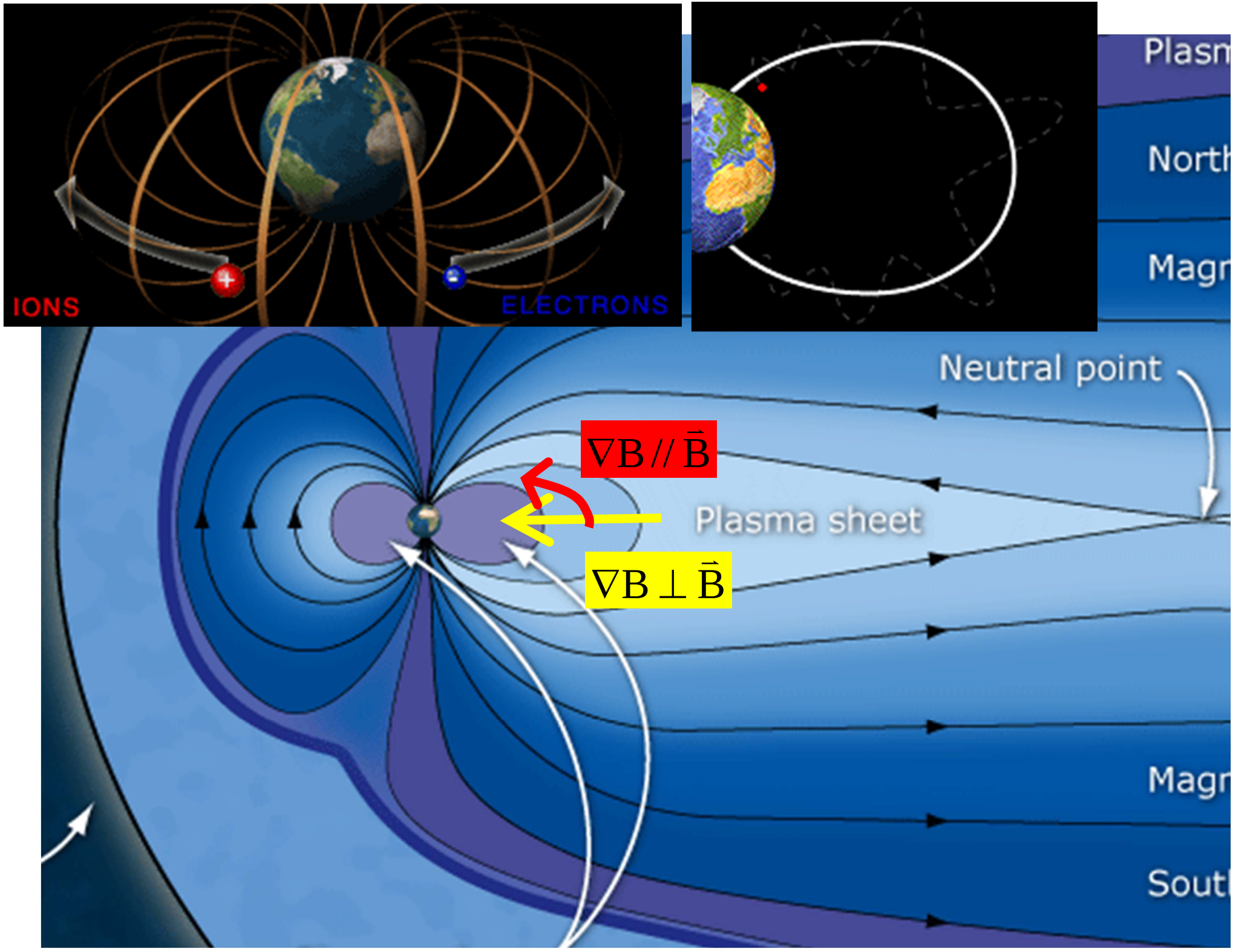
迴旋運動　來回彈跳運動　漂移運動

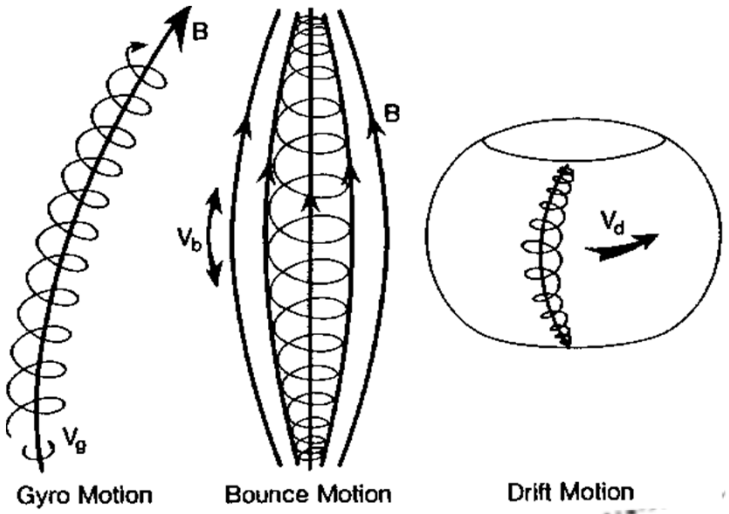
http://www.windows2universe.org/glossary/particle_motion.html&edu=high
http://www-ssc.igpp.ucla.edu/personnel/russell/papers/magsphere/msphere07.gif

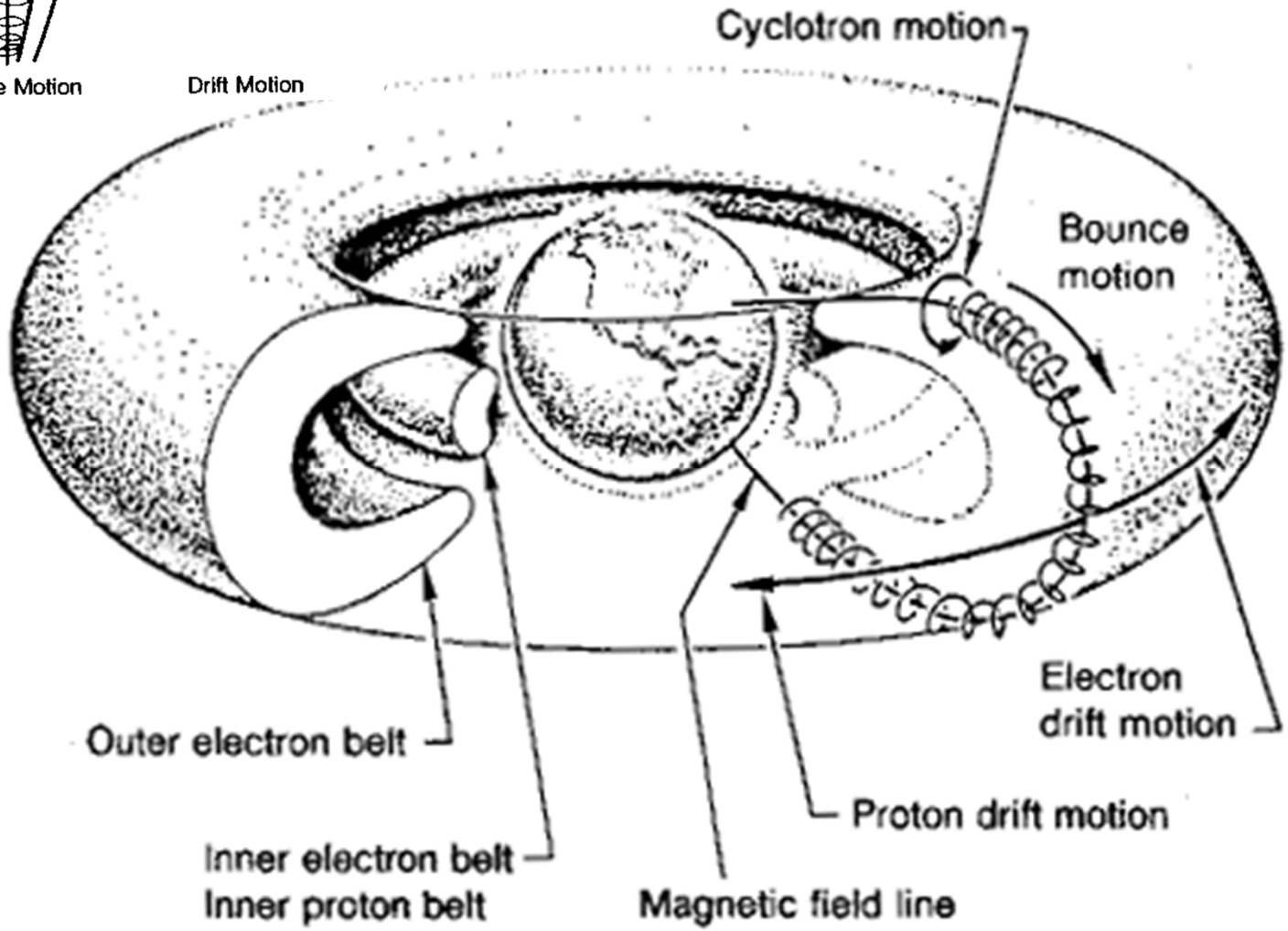




http://astronauticsnow.com/ENA/rsi1997_fig/fig_03.jpg

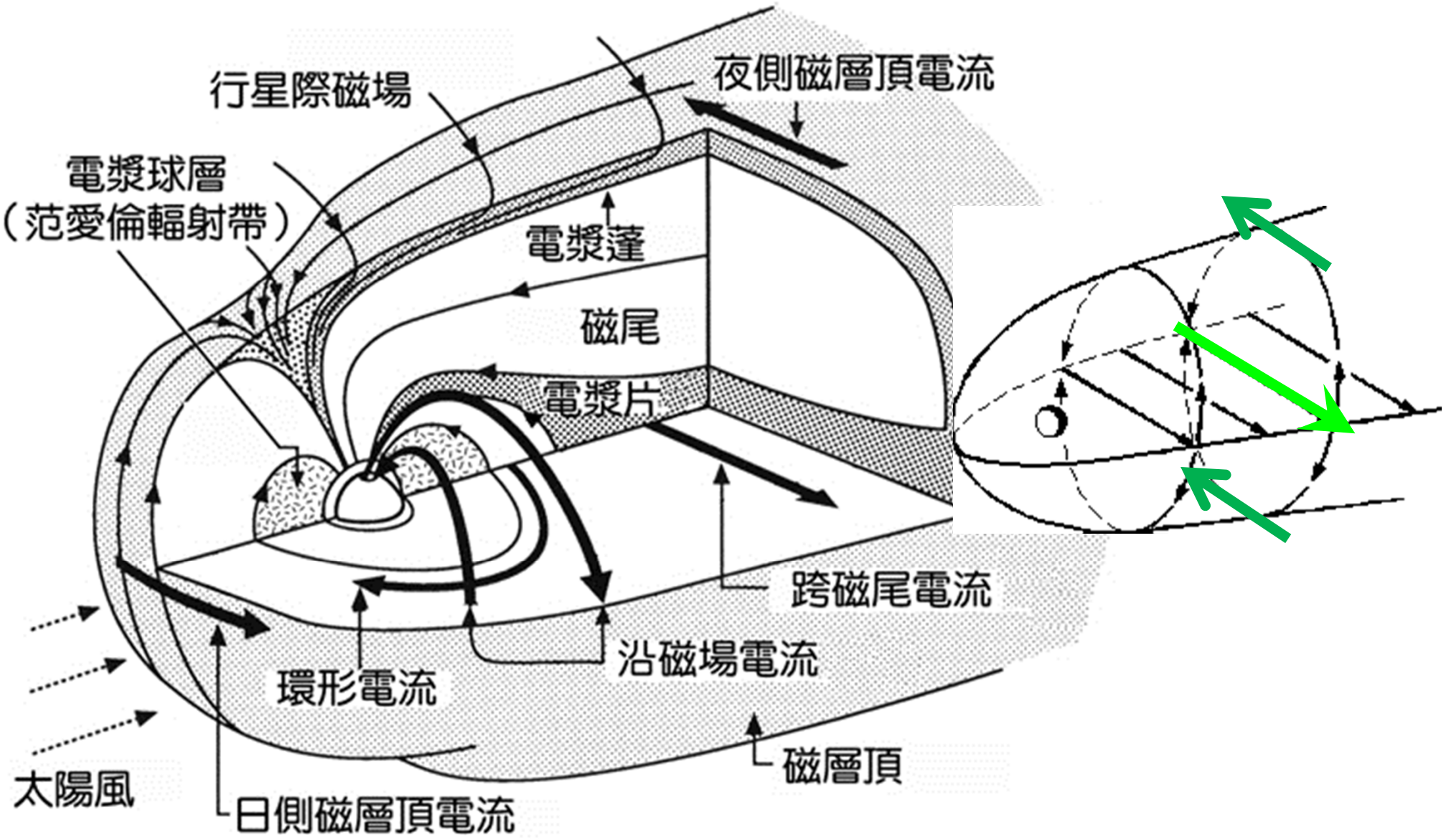

IONS
ELECTRONS
Plasm
North
Magn
Neutral point
$\nabla B // \vec{B}$
Plasma sheet
$\nabla B \perp \vec{B}$
Magn
South



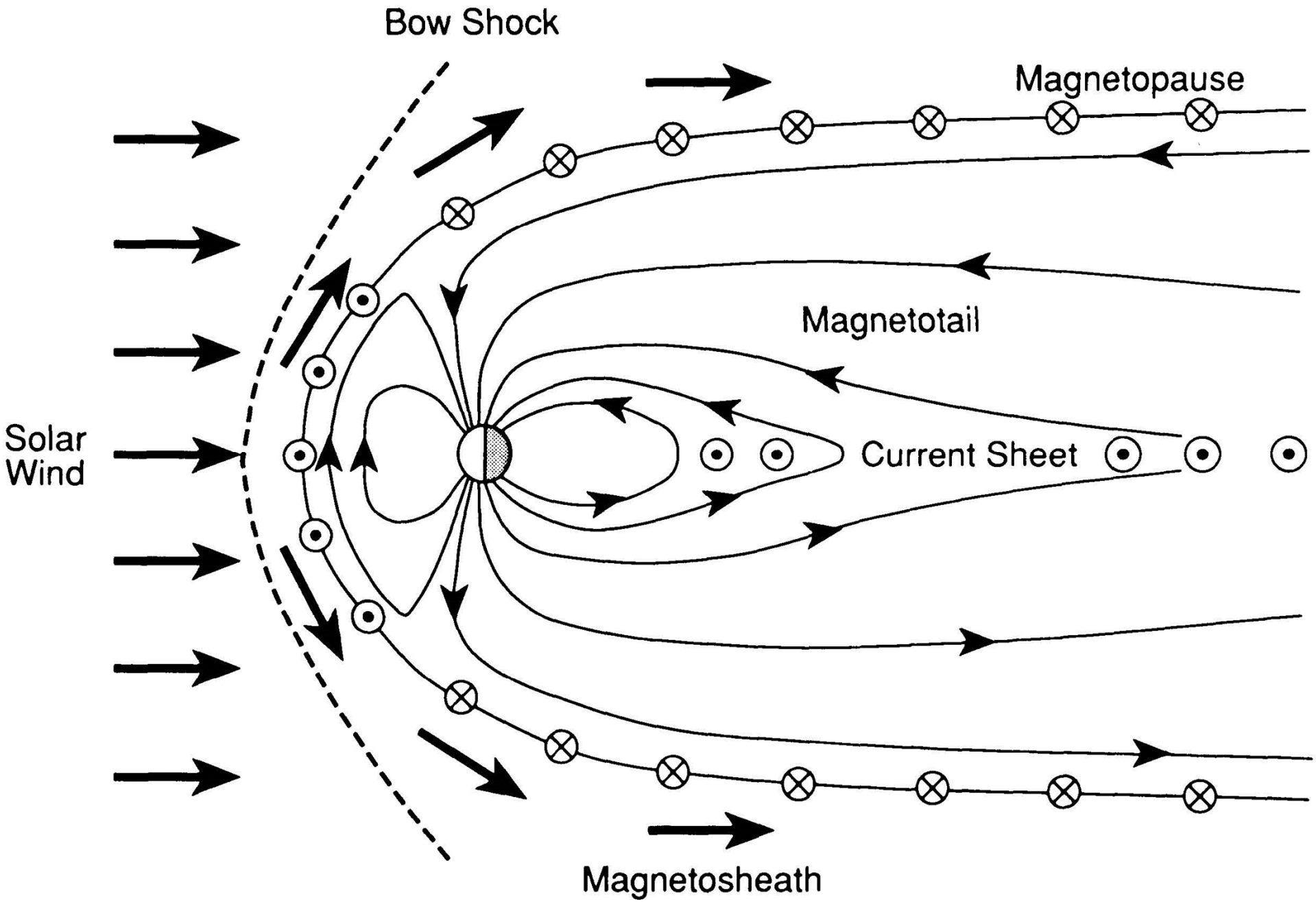


http://www.nss.org/settlement/nasa/spaceresvol2/images/fig13.GIF

地球磁層電流系統

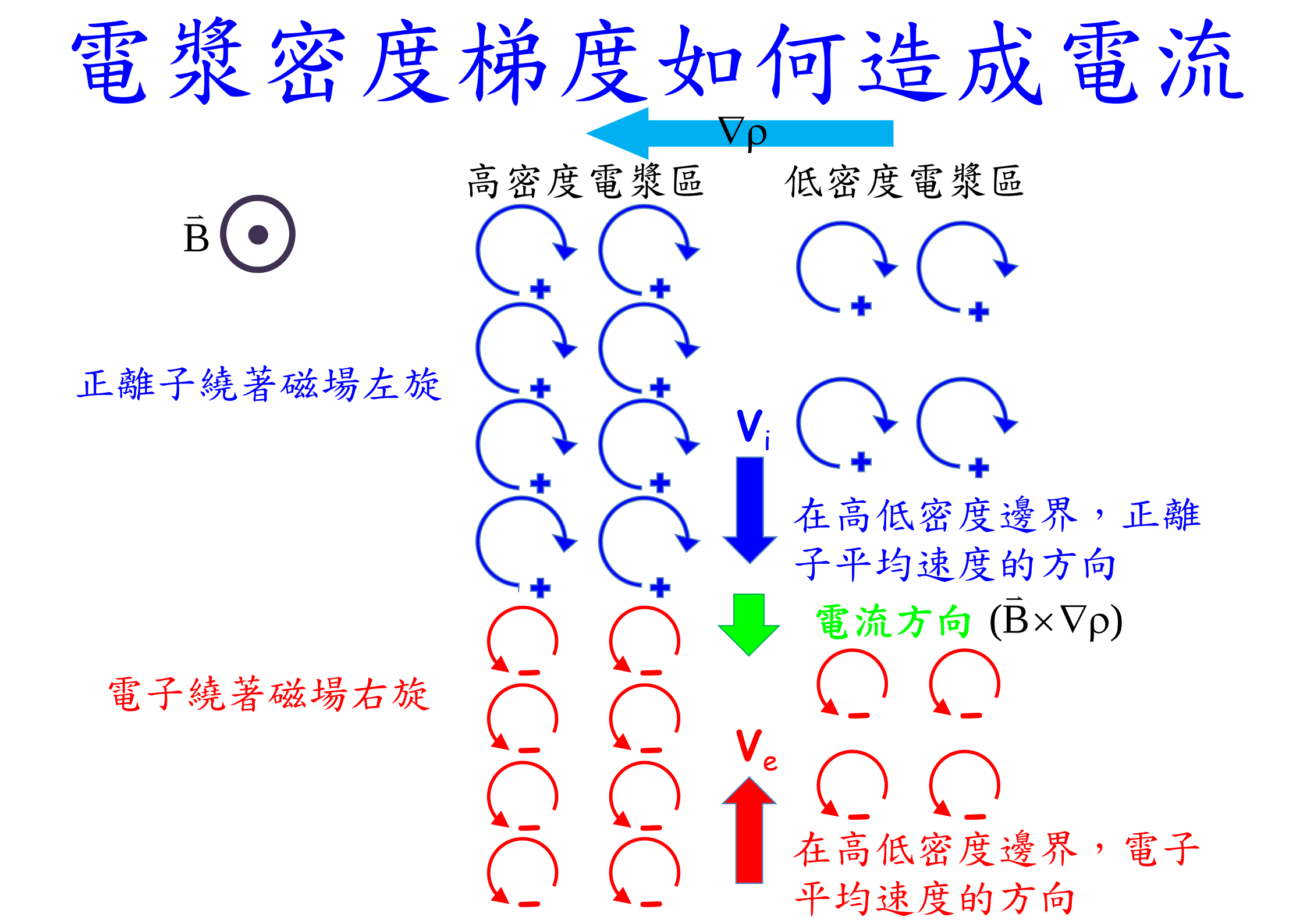


觀測資料顯示，磁層中大多數的電流都位於"電漿密度梯度"較大的區域。


Bow Shock
Magnetopause
Magnetotail
Solar
Wind
Current Sheet
Magnetosheath

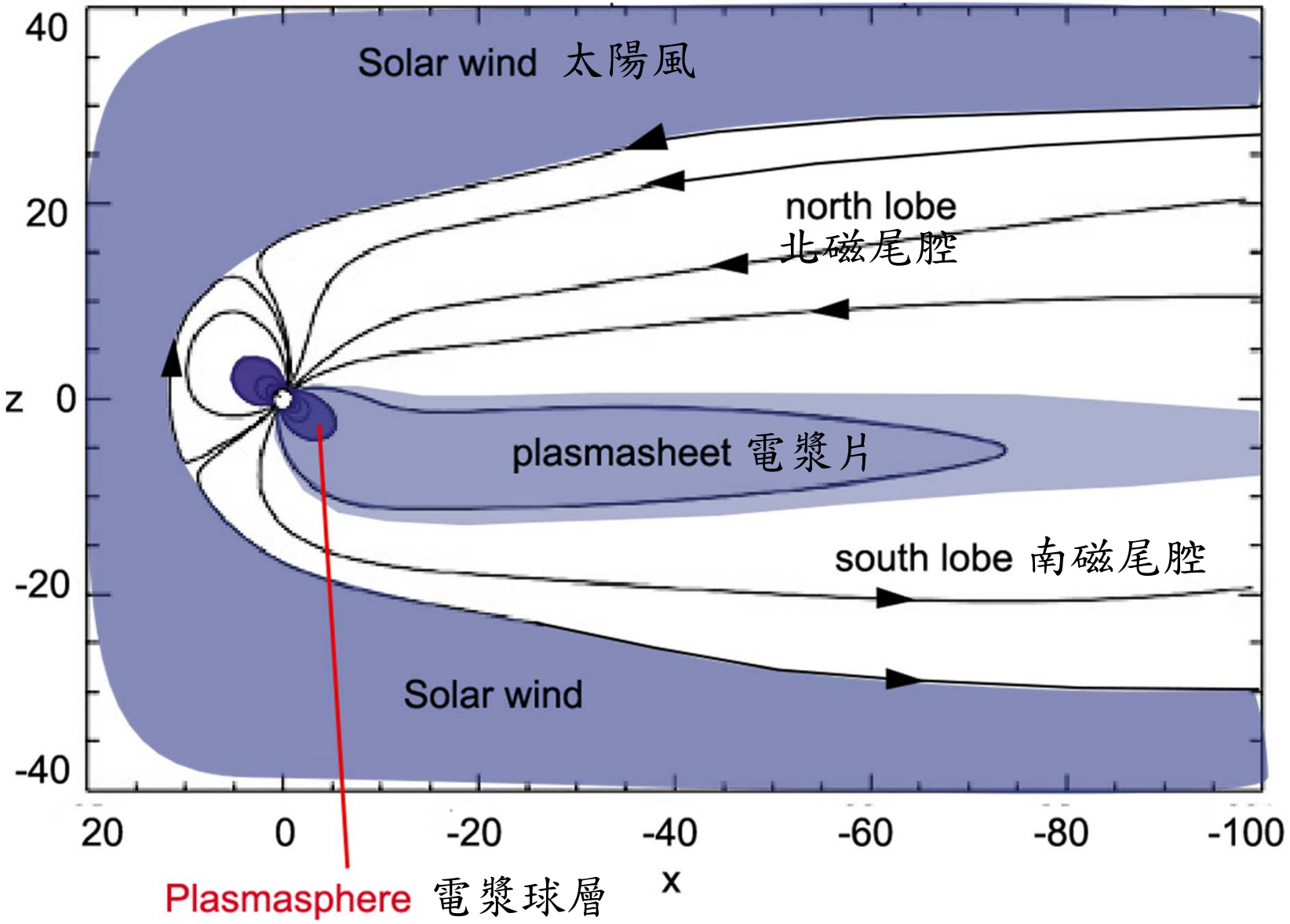
磁層子午面

電漿密度梯度如何造成電流



地球磁層子午面剖面圖

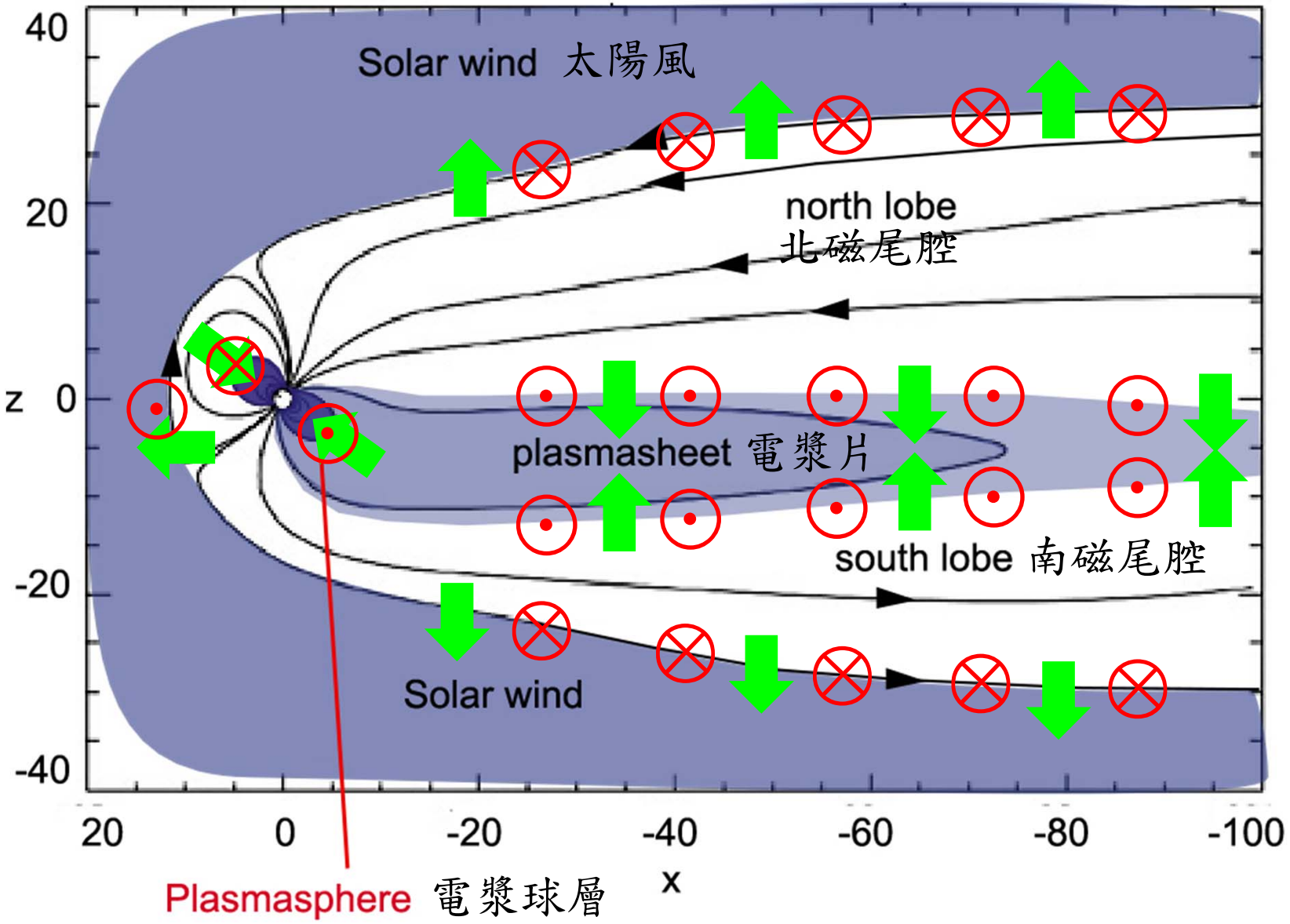
（顏色深淺表電漿密度高低）



http://www.ss.ncu.edu.tw/~lyu/lecture_files/IntroSpace.html

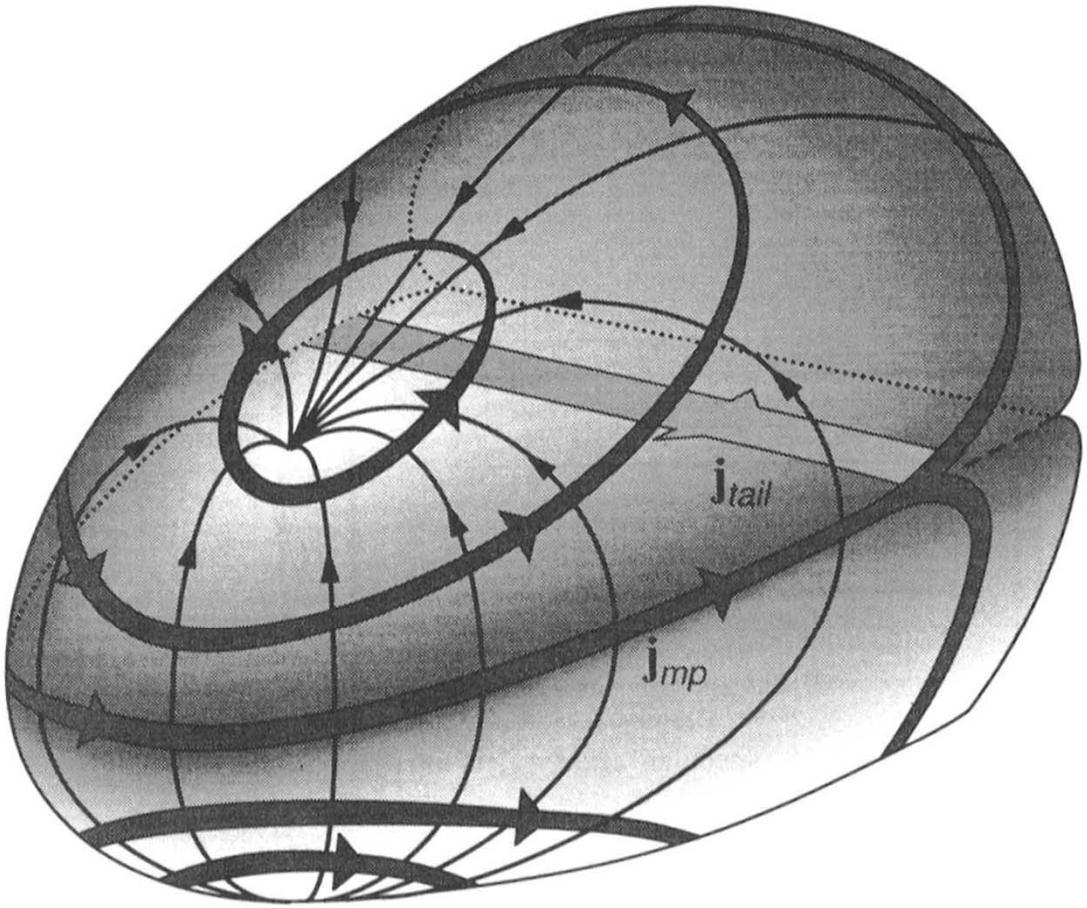
地球磁層子午面剖面圖

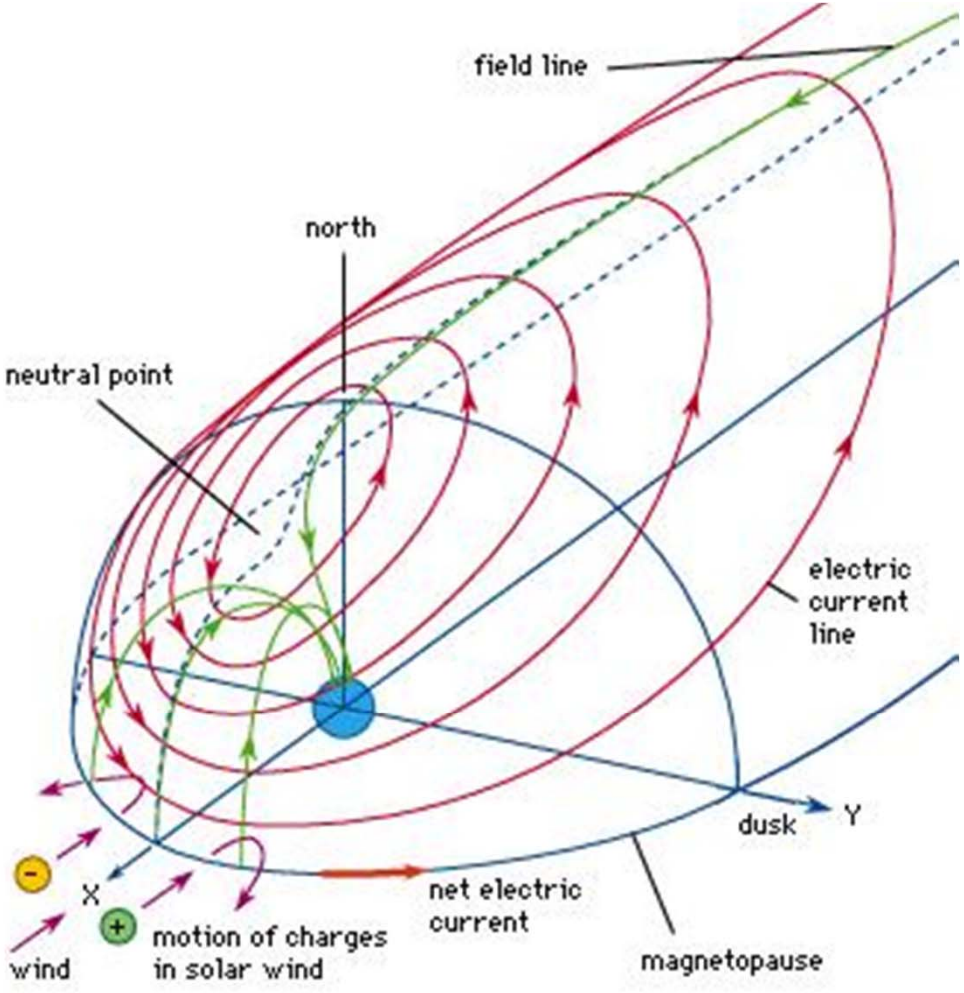
（綠色:電漿密度由小到大的方向，紅色:電流方向）



http://www.ss.ncu.edu.tw/~lyu/lecture_files/IntroSpace.html

Magnetopause Current (or Chapman-Ferraro Current)

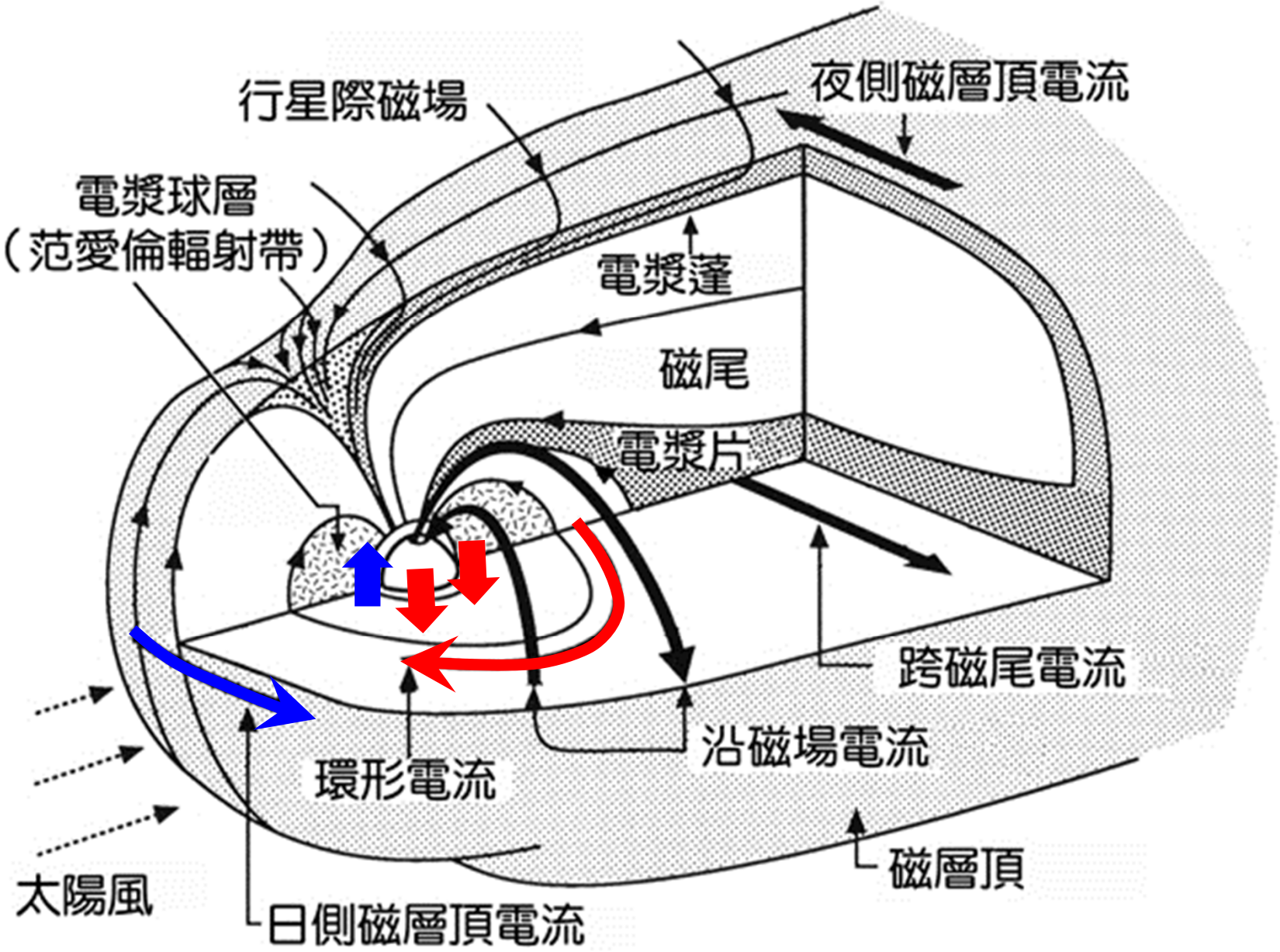




https://perswww.kuleuven.be/~u0052182/weather/les2/current.png

http://global.britannica.com/EBchecked/topic/229754/geomagnetic-field/9359/The-magnetopause-current

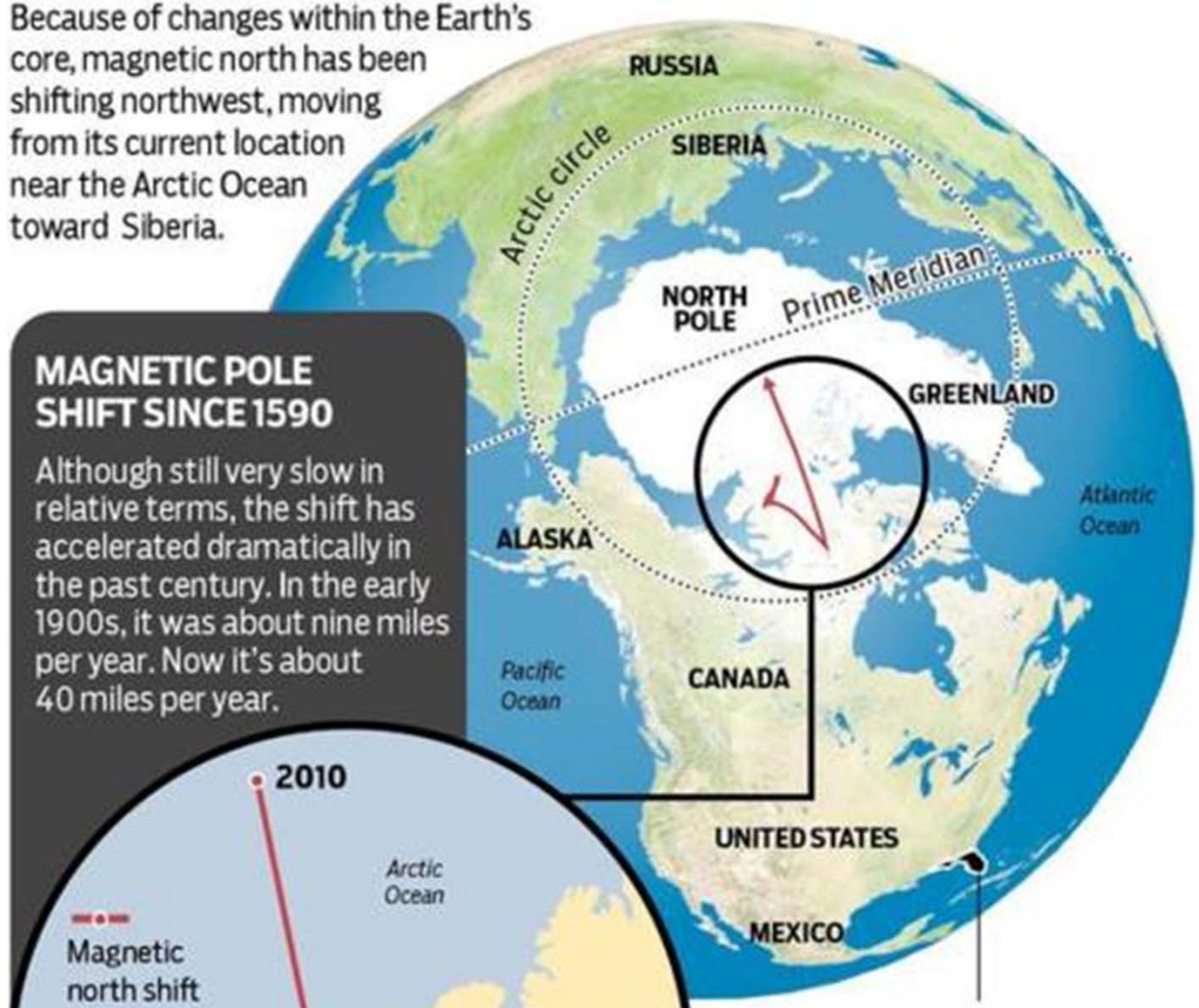
地球磁層電流系統



http://www.ss.ncu.edu.tw/~lyu/lecture_files/IntroSpace.html

Shift in magnetic north

Because of changes within the Earth's core, magnetic north has been shifting northwest, moving from its current location near the Arctic Ocean toward Siberia.



MAGNETIC POLE SHIFT SINCE 1590

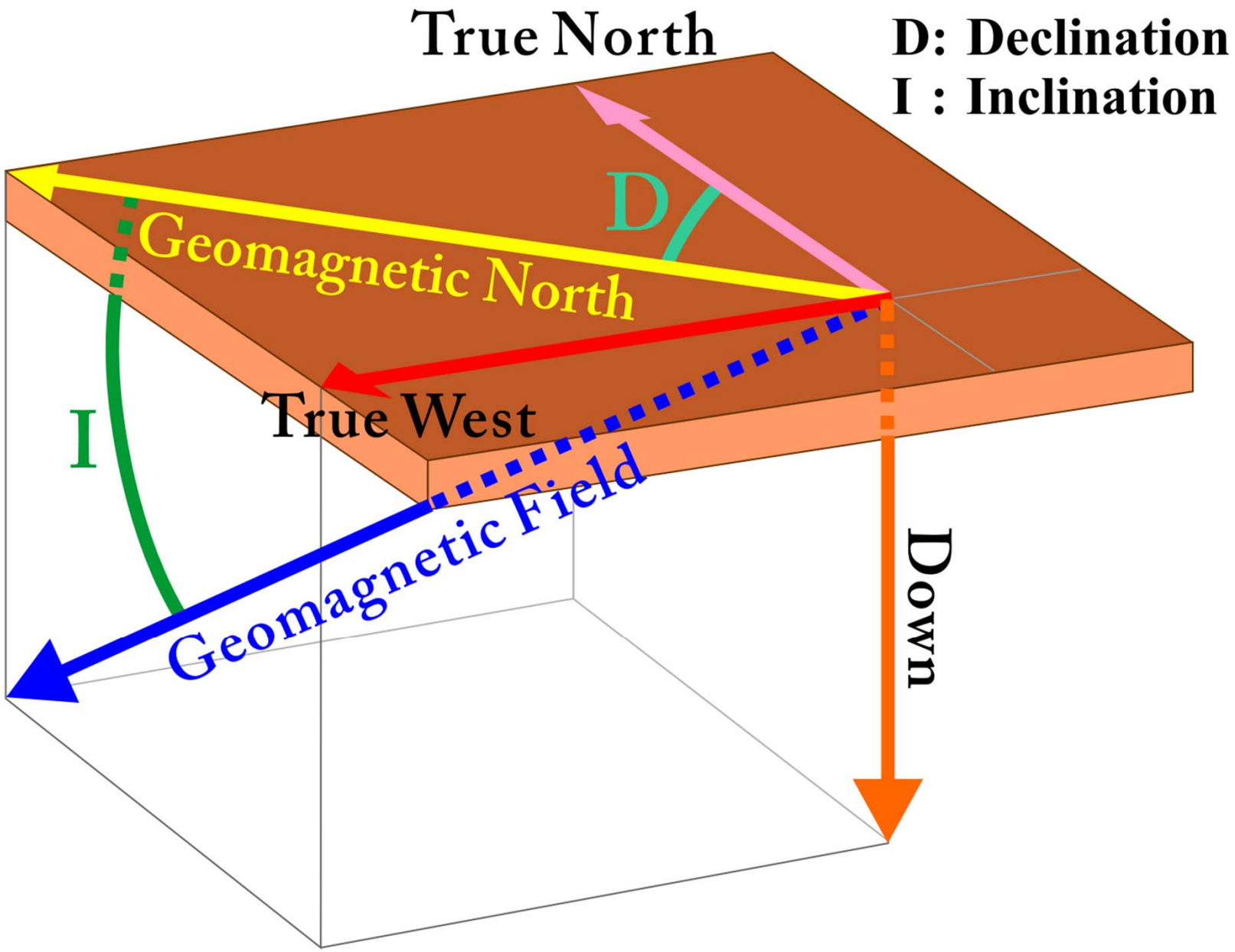
Although still very slow in relative terms, the shift has accelerated dramatically in the past century. In the early 1900s, it was about nine miles per year. Now it's about 40 miles per year.

FLORIDA AIRPORTS

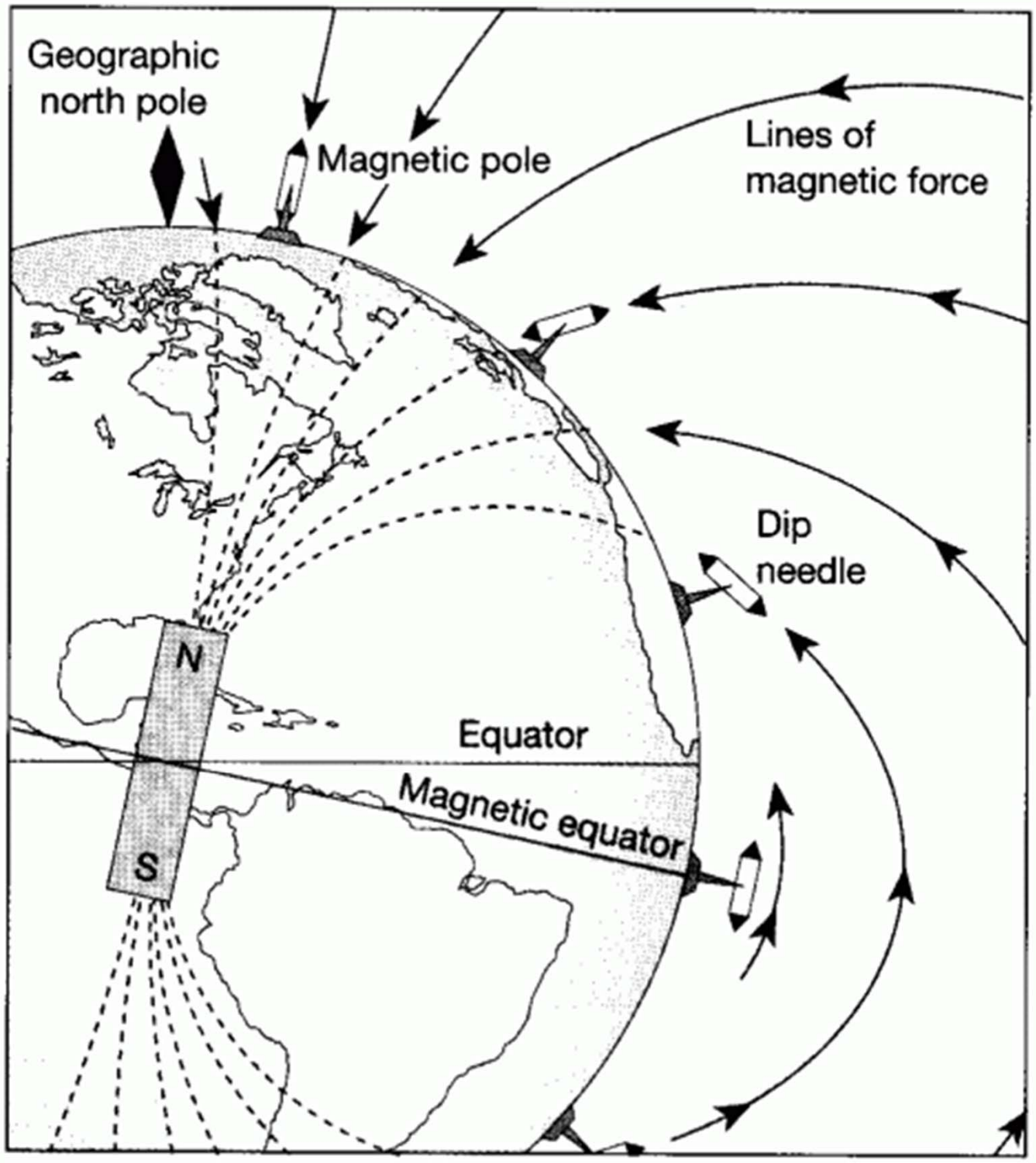
Several airports have changed or plan to change their runway numbers. Boaters who carry compasses are urged to have updated charts.

SOURCE: NOAA KWENCY NORMAN/STAFF GRAPHIC

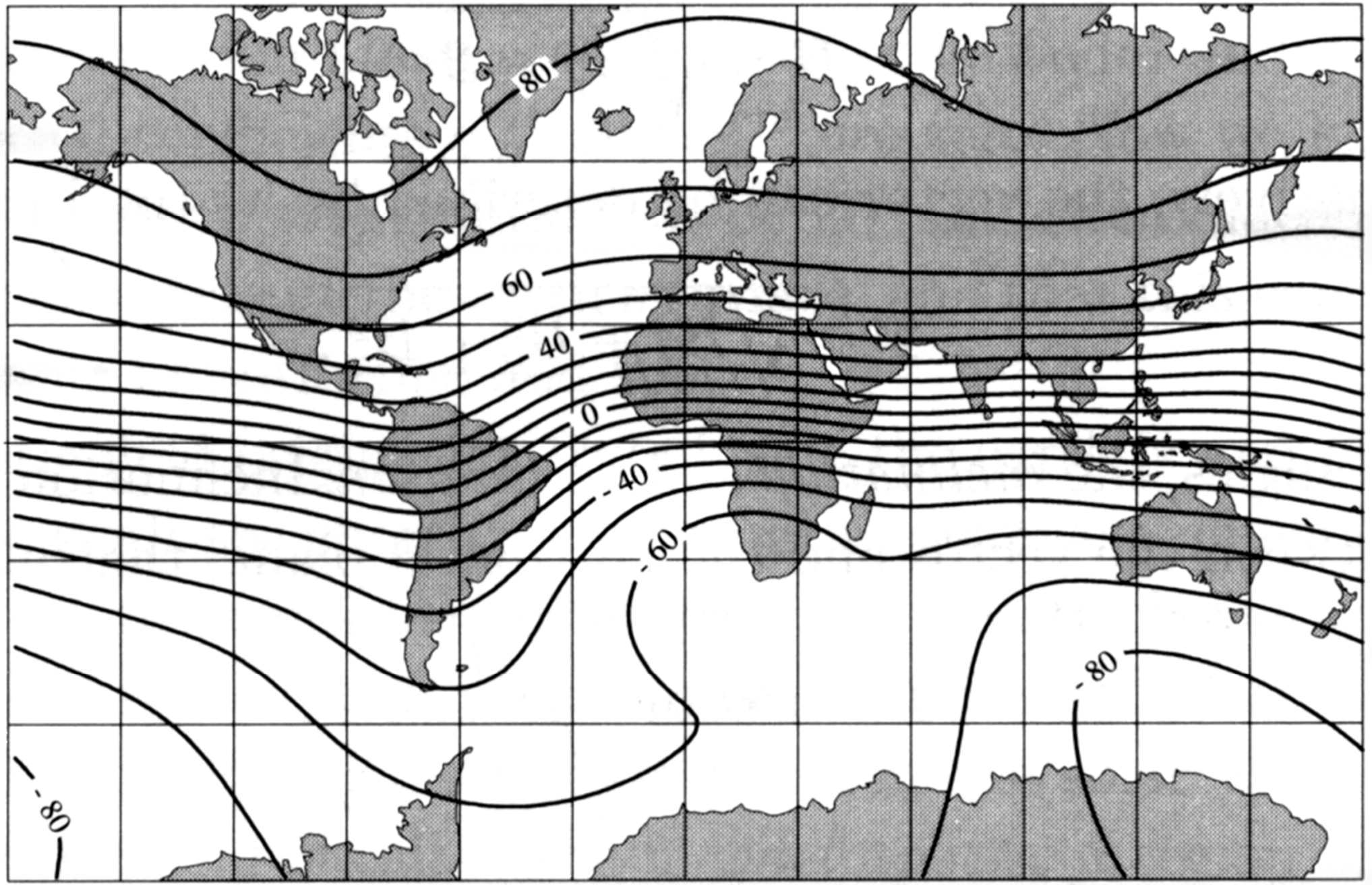
Geomagnetic Field



http://www.hko.gov.hk/gts/graphics/equake-graphics/geomagnetism05e.png



http://gravmag.ou.edu/mag_earth/mag_earth.html



Inclination

http://gravmag.ou.edu/mag_earth/mag_earth.html

Dst (Disturbance Storm Time) Index

Dst is derived from the average of H (northward) component disturbances of the geomagnetic field measured hourly at four low-latitude magnetic observatories and is expressed in nanoteslas.

Dst is a geomagnetic index which monitors the world-wide magnetic storm level and has long been used as an indirect measure of the ring current.

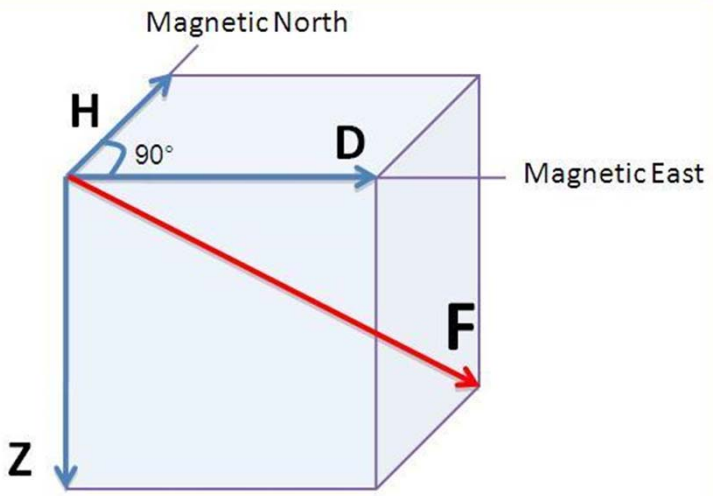


TABLE 1 - Coordinates of the Observatories

Observatory		Geographic Longitude (E)	Geographic Latitude	Geomagnetic Dipole latitude
Hermanus		19.22°	-34.40°	-33.3°
Kakioka		140.18°	36.23°	26.0°
Honolulu	to April 1960	201.90°	21.30°	21.0°
	after April 1960	201.98°	21.32°	21.1°
San Juan	to January 1965	293.88°	18.38°	29.9°
	after January 1965	293.85°	18.01°	29.9°

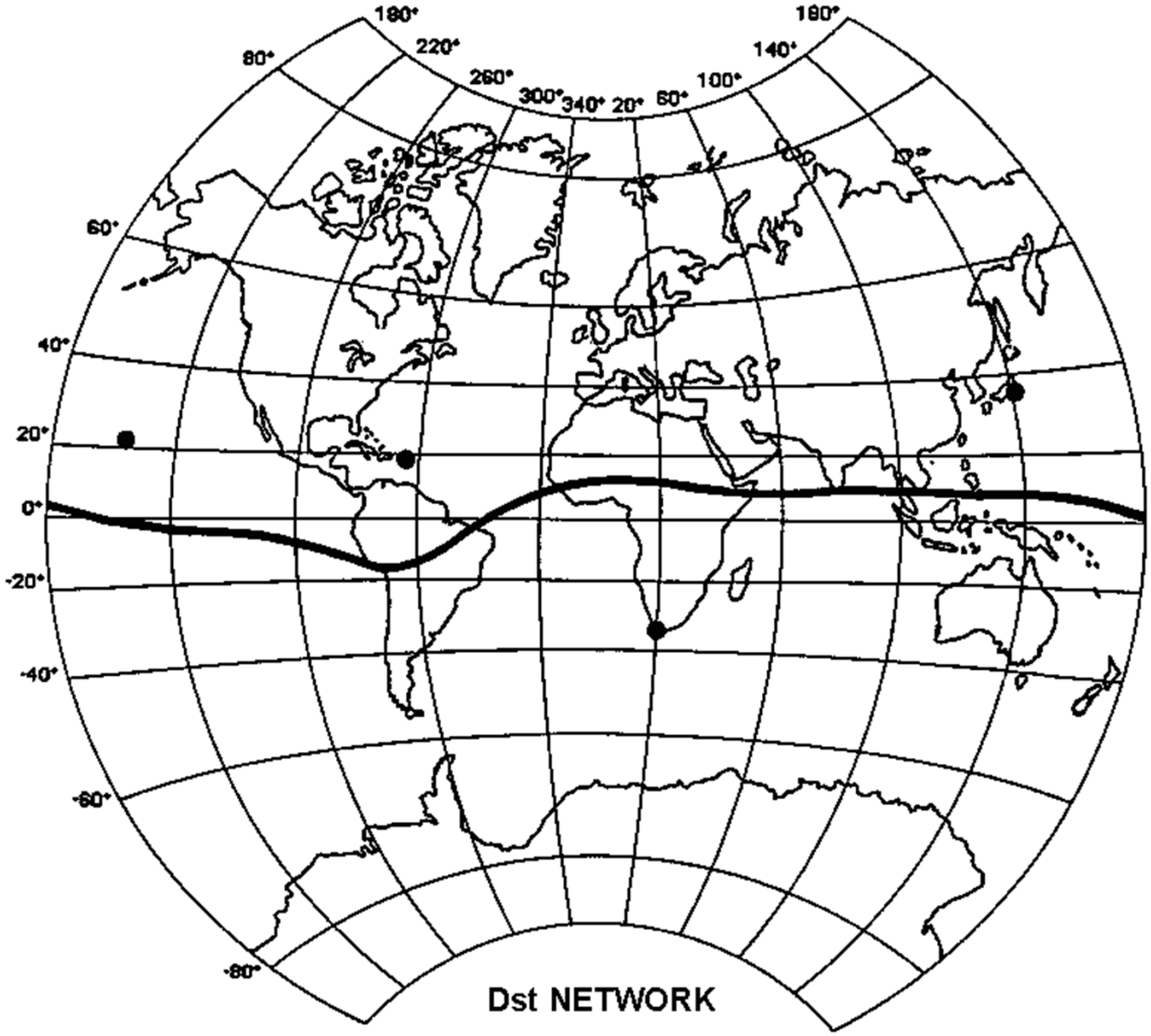
http://wdc.kugi.kyoto-u.ac.jp/dstdir/dst2/onDstindex.html

https://wiki.oulu.fi/display/SpaceWiki/Magnetic+activity+indices

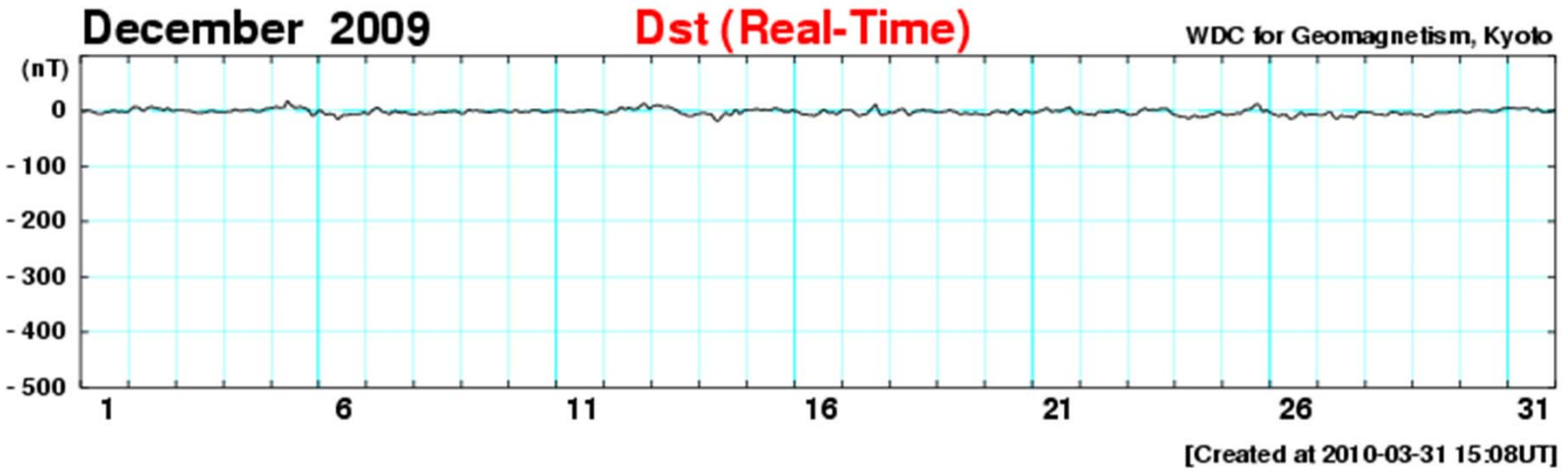
http://pluto.space.swri.edu/image/glossary/dst.html

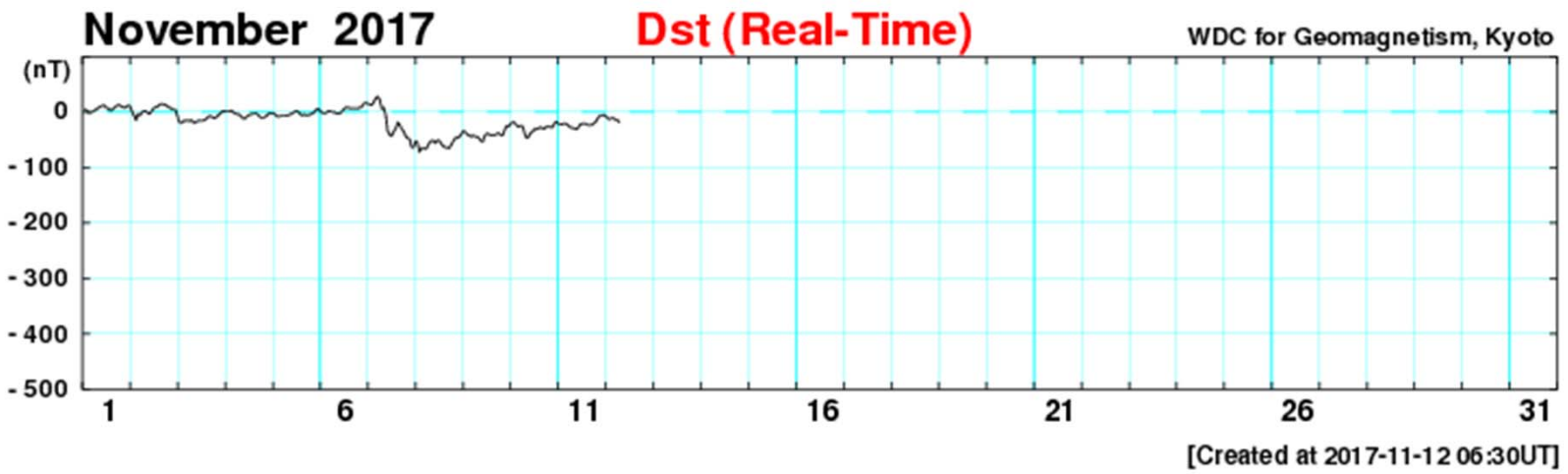
http://roma2.rm.ingv.it/en/themes/23/geomagnetic_indices/27/dst_index

Dst (Disturbance Storm Time) Index



http://wdc.kugi.kyoto-u.ac.jp/dstdir/dst2/DSTnetwork.gif





http://wdc.kugi.kyoto-u.ac.jp/dstdir/index.html