

Solar Wind:

- ↳ stream of charged particles which spreads out from corona
- mostly consists of electrons, protons and helium nuclei
- particles from corona can escape into space at supersonic speeds
- 'slow' solar wind: about 400km/s appears to come from region around equator of Sun
- 'fast' solar wind: originates from coronal holes, CME and solar flares

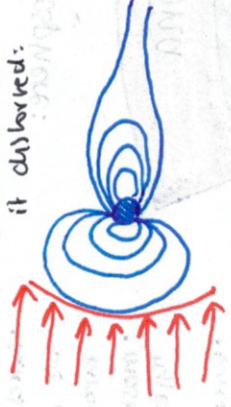
Van Allen belts:



- the Earth has two belts of charged particles around it
- particles captured from solar wind by Earth's magnetic field
- doughnut shaped

Magnetosphere - pattern of magnetic field around the Earth

when solar wind meets it they interact and make it distorted:



- inner belt mainly consists of protons and between 1500km - 10000km from surface
- outer belt consists mainly electrons and between 18000km and 60000km from surface

Solar Astronomy

responsible for aurora near poles

Geomagnetic storms - disturbances in Earth's magnetic field

radiation risk to astronauts and passengers generate noise in communication affect electronic equipment overloading power lines

Solar wind ionize gas to produce the ion tail of a comet and cause it to fluoresce

