
Frequently used concepts

By **J. De Keyser**

Corona

The corona is the rarefied, but extremely hot (millions of degrees) outer atmosphere of the Sun. Normally we can't see the corona, because it emits less light than the visible solar disk. Only during a total eclipse, when the lunar disk covers the solar disk exactly, the corona becomes visible.

Coronal hole

Large regions in the solar atmosphere with open magnetic field lines are called coronal holes. During periods of low solar activity, there are only two coronal holes: one near every pole. With higher solar activity these holes become more irregular, and can reach down to the solar equator; several coronal holes may then appear at all latitudes. The solar wind emanates from these coronal holes.

Heliosphere

The heliosphere is the region in our Milky Way in which the matter is mainly originating from the Sun. The heliosphere is like a large, elongated bubble of gas, inflated by the solar wind. The border between the heliosphere and the surrounding interstellar medium is called the heliopause. All planets remain within the heliosphere. One estimates that the heliopause is situated at a distance of a hundred times the distance between the Earth and the Sun.

Interstellar medium

This is the very rarefied gas in the spiral arms of our galaxy, the gas that fills the space between the stars.

Magnetosphere

A magnetosphere is that part of the environment of a planet (or moon) in which the gas is largely coming from the planet itself, and where the gas is completely ionized. In practice, one only finds a magnetosphere around planets (or moons) with a strong magnetic field, since it is the magnetic field that prohibits the mixing of gas originating from the non-ionized atmosphere of the planet with the surrounding interplanetary medium. For more details...

Plasma

A plasma is, basically, a gas that is at least partially ionized. This means that some of the atoms are not able to retain their electrons. We have to consider plasma therefore as a (mostly electrically neutral) collection of ions (atoms, which have lost one or more electrons, with a positive electric charge) and free electrons (which are negatively charged).

