

Summary Information Sheet

The SUN



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The Sun is our nearest star. It is a huge, luminous ball of gas like all the other stars. It consists mostly of hydrogen and helium, with tiny amounts of other elements



The Corona is the outer envelope of the Sun's atmosphere. It is extremely hot with temperatures up to 2 million degrees

The Radiative Zone Here energy is transported outwards by radiation. It covers about 70% of the Sun's diameter

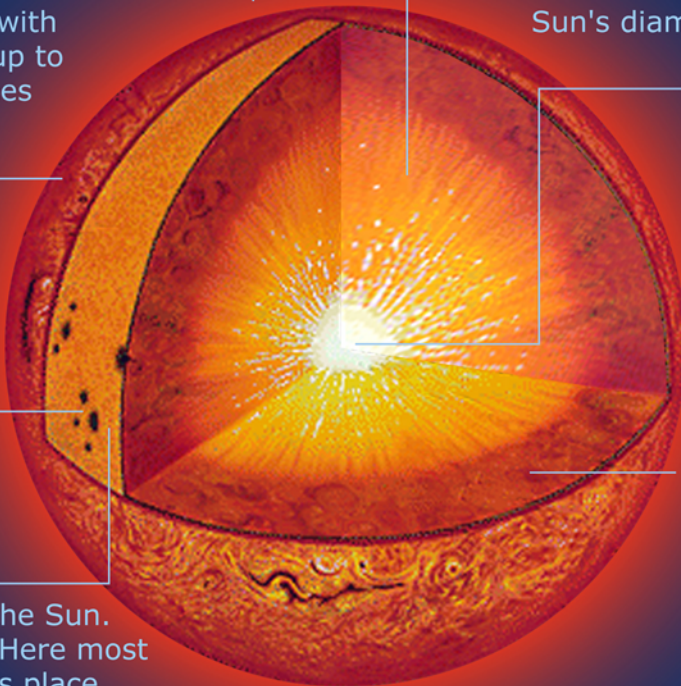
The Core In the centre of the Sun the energy is produced by fusion processes through which hydrogen nuclei are fused to produce helium nuclei

The Chromosphere is a transparent layer above the photosphere. It extends up to 2000 km with temperatures around 10,000 degrees

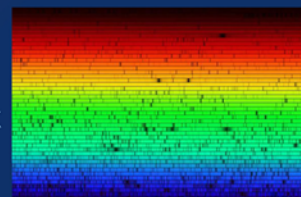
Sunspots

The Photosphere is the visible 'surface' of the Sun. It is about 300 km thick. Here most of the Sun's activity takes place, e.g., sunspots

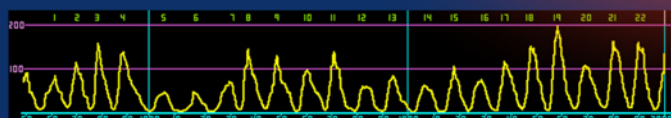
The Convective Zone It extends roughly over 30% of the Sun's diameter. Here energy is mainly transported upwards by convective streams of gas



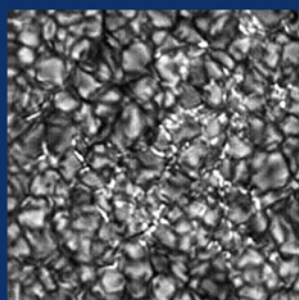
The spectrum of the Sun not only shows the rainbow colours: It also displays dark lines named absorption lines or Fraunhofer lines



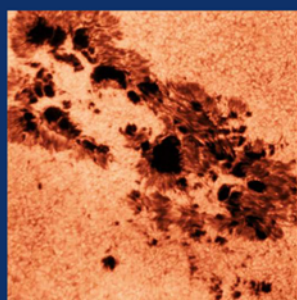
Spectrum of the Sun



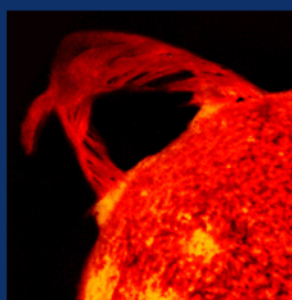
The solar cycle: sunspots and other forms of solar activity vary with an average period of 11 years



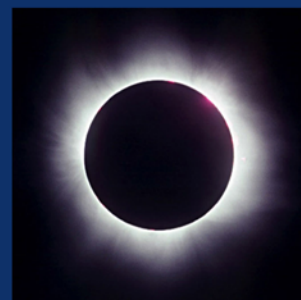
Granulation



Sunspots



Eruption



The Sun's corona during a solar eclipse

Physical Data

Property
Distance from the Sun
Rotation period
Equatorial radius
Mass
Density

Sun
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27 days
695,000 km
2×10^{30} kg
1400 kg/m ³

For comparison

Earth
150 million km
23 hrs 56 min
6378 km
5.97×10^{24} kg
5520 kg/m ³

Jupiter
779 million km
9 hrs 55 min
71500 km
1.899×10^{27} kg
1330 kg/m ³