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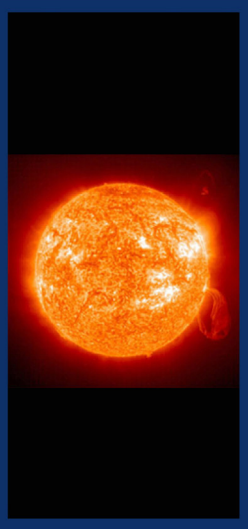
Summary Information Sheet

The SUN

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

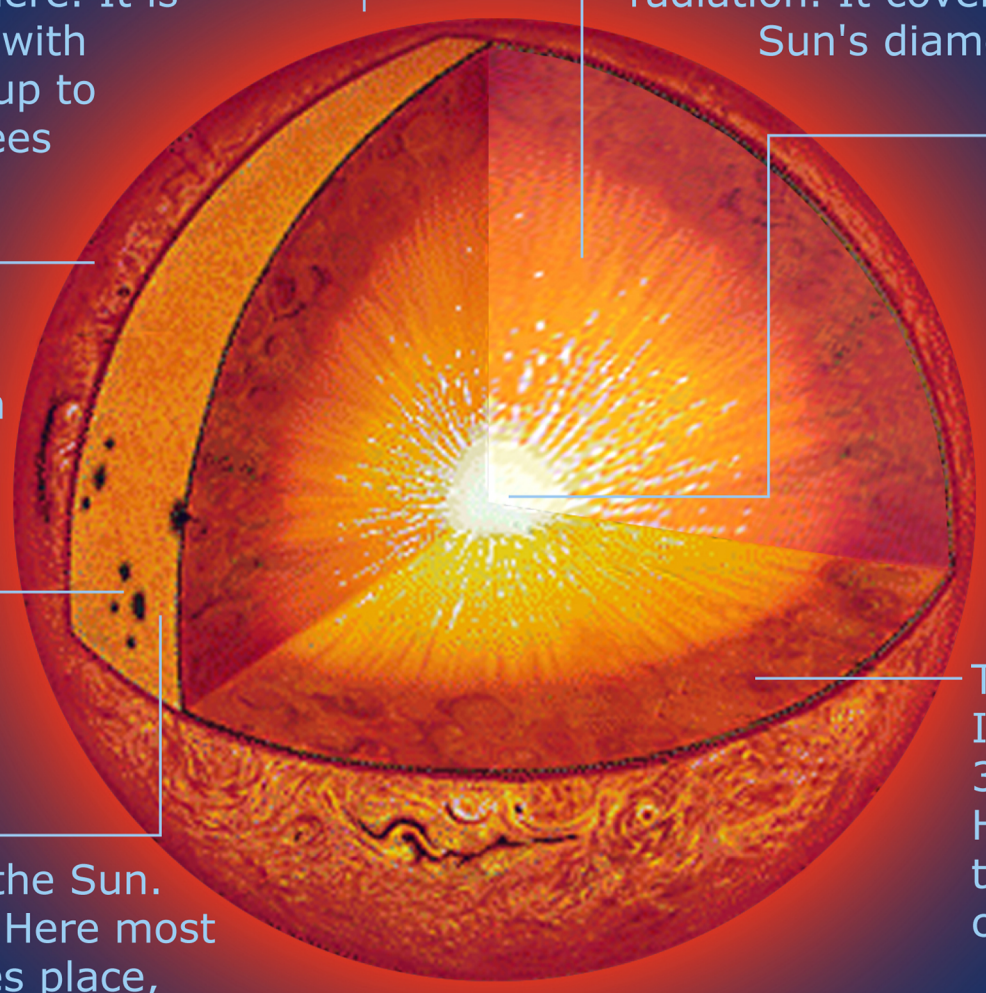


The Corona
is the outer envelope of the Sun's atmosphere. It is extremely hot with temperatures up to 2 million degrees

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

Sunspots

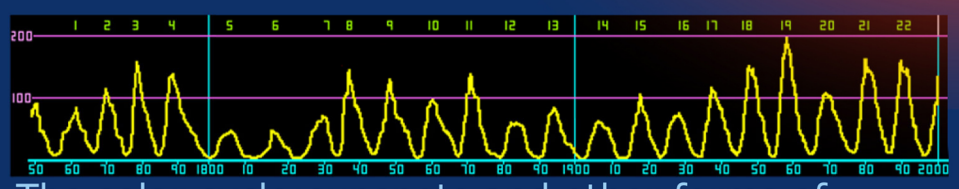
The Photosphere
is the visible 'surface' of the Sun. It is about 300 km thick. Here most of the Sun's activitiy takes place, e.g., sunspots



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

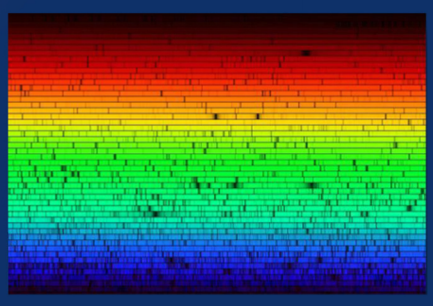
The Core
In the centre of the Sun the energy is produced by fusion processes through which hydrogen nuclei are fused to produce helium nuclei

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

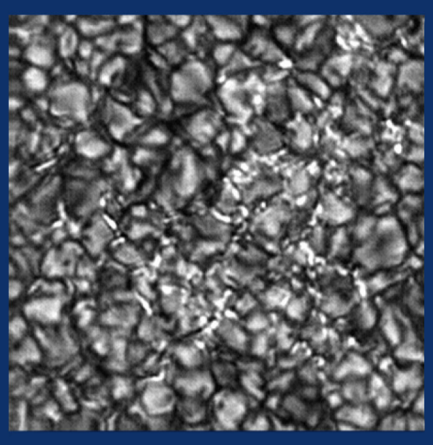


The solar cycle:sunspots and other forms of solar activity vary with an average period of 11 years

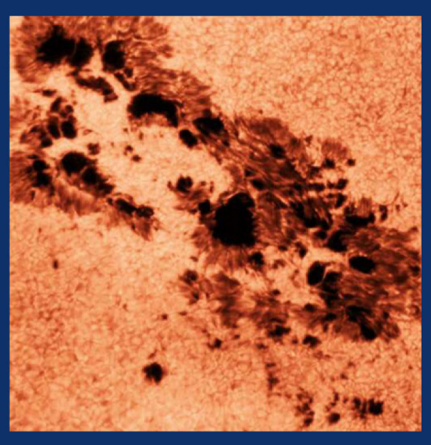
The spectrum of the Sun not only shows the rainbow colours: It also displays dark lines named absorption lines or Fraunhofer lines



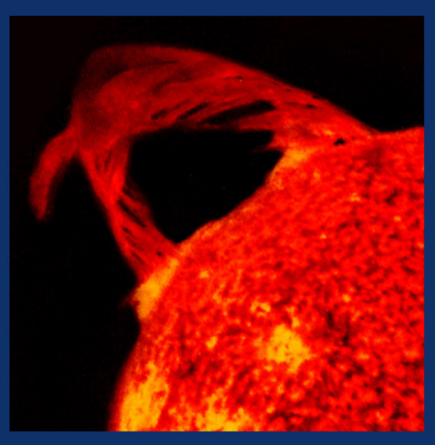
Spectrum of the Sun



Granulation



Sunspots



Eruption

The Sun's corona during a solar eclipse

Physical Data

Property	Sun	Earth	Jupiter
Distance from the Sun	--	150 million km	779 million km
Rotation period	27 days	23 hrs 56 min	9 hrs 55 min
Equatorial radius	695,000 km	6378 km	71500 km
Mass	2×10^{30} kg	5.97×10^{24} kg	1.899×10^{27} kg
Density	1400 kg/m^3	5520 kg/m^3	1330 kg/m^3

For comparison

Images: ESO, ESA, NASA, except otherwise stated

Concept: B. Mackowiak