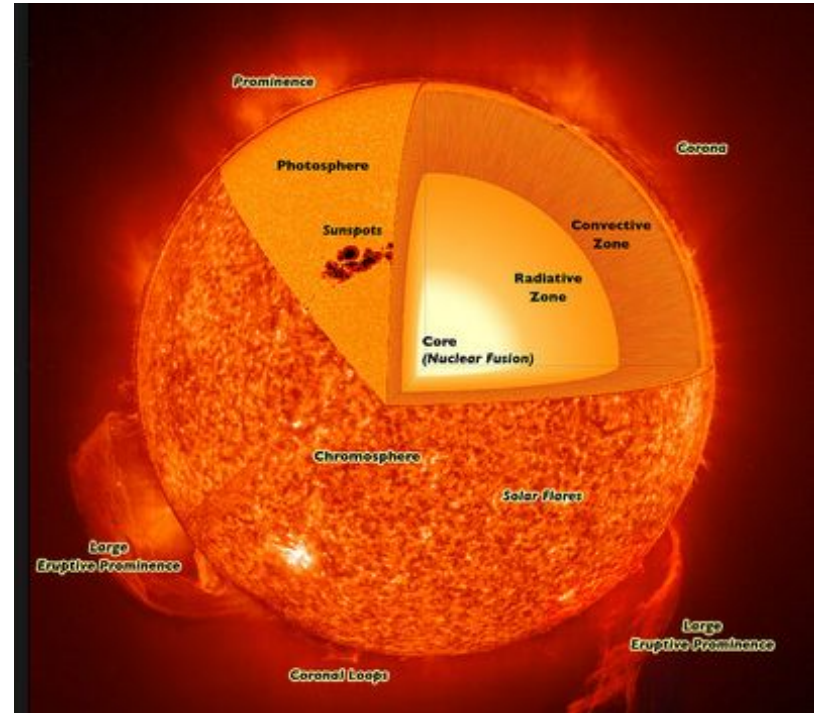


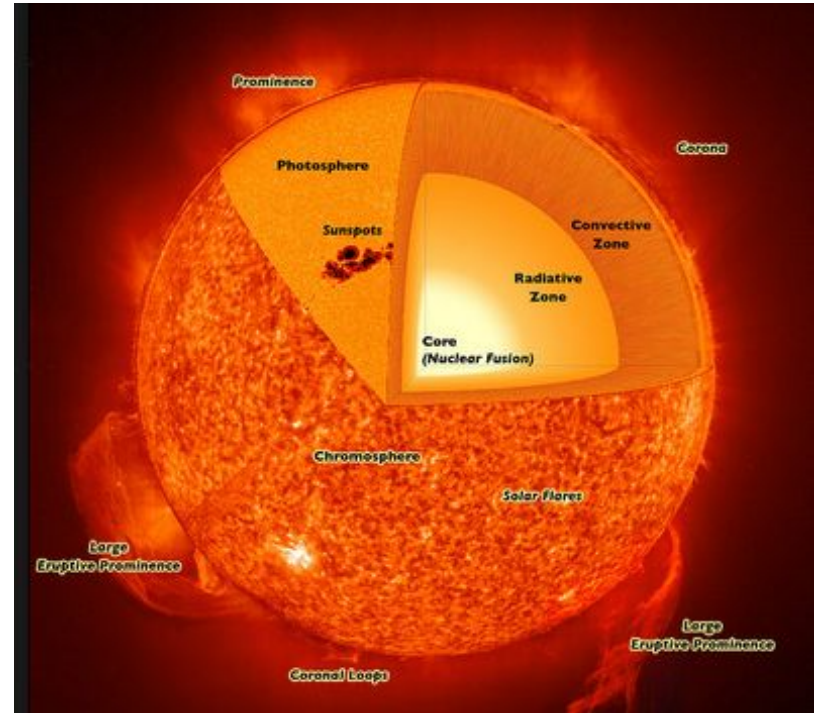
U1L1 B THE SUN'S ATMOSPHERE



I. THE SUN'S ATMOSPHERE

A. The sun's atmosphere includes

1. photosphere,
2. the chromosphere and
3. the corona.



II. THE PHOTOSPHERE

A. Photosphere = definition – the inner layer of the sun's atmosphere.

B. Photo is the Greek word for light so the sun is is the sphere that gives off light.

C. Considered to be the sun's surface – what you see when you look at the sun.

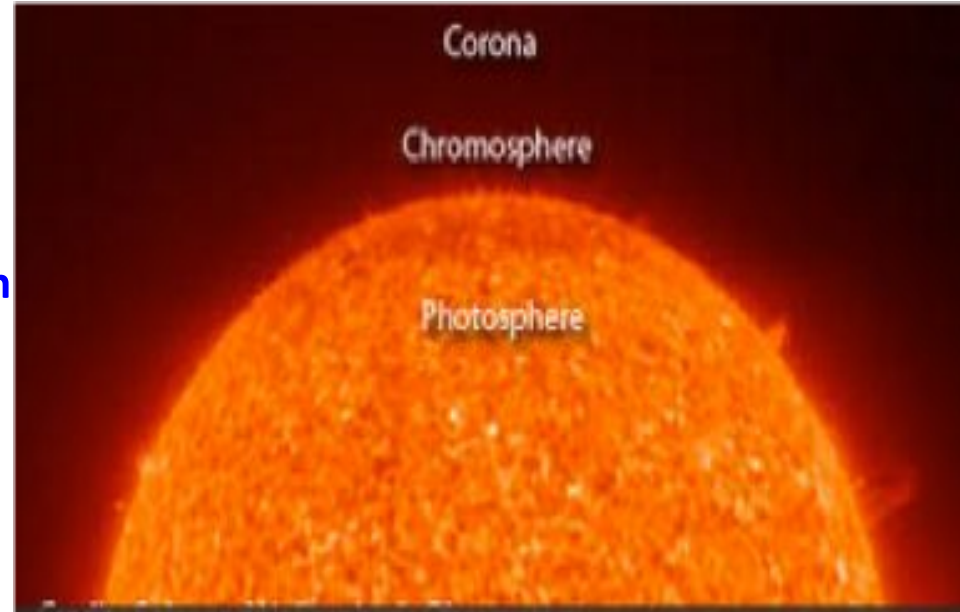


III. THE CHROMOSPHERE

A. During a total eclipse the chromosphere

Is not what you see.

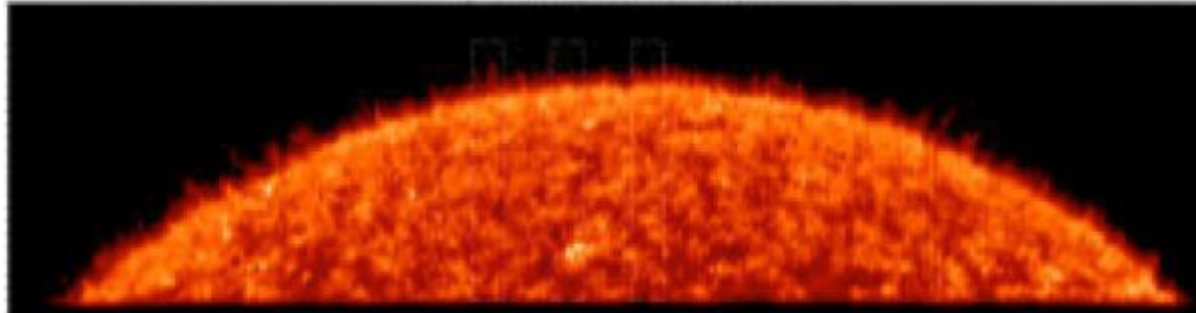
B. Chromosphere = definition – the middle layer of the sun's atmosphere that you see as a reddish glow during an eclipse.



III. THE CHROMOSPHERE (Cont'd)

C. The Greek word “chroma” means color so the chromosphere is the “color sphere.”

D. Spicules = definition – spikes of gases that rise through it



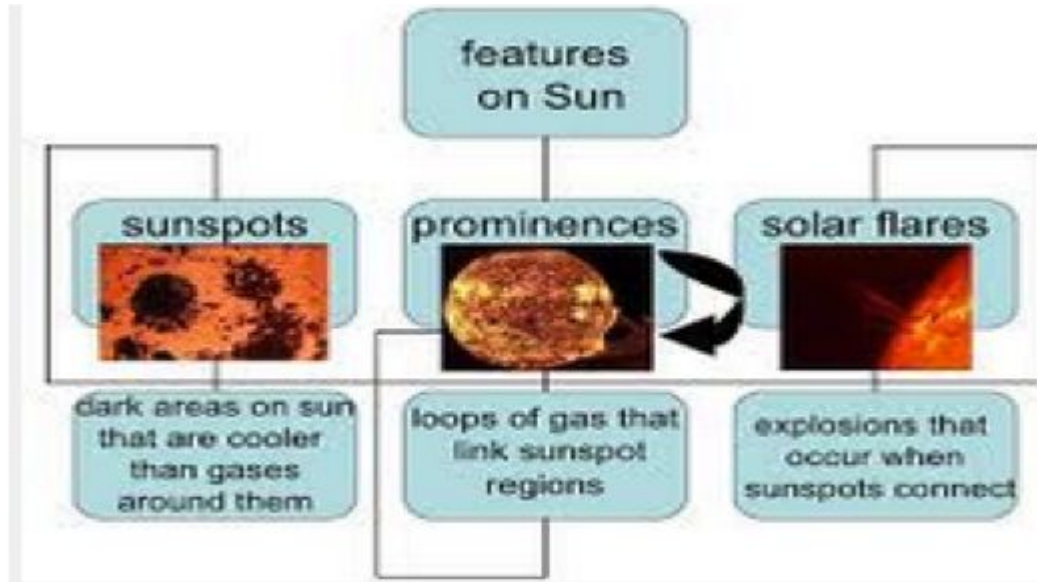
IV. THE CORONA

- A. During a total solar eclipse another layer becomes visible – like a halo around the sun that extends out into space.
- B. Corona = definition – the white layer around the sun and comes from the latin word that means “crown.”
- C. Solar wind = definition – the corona extends millions of kilometers and thins into streams of electrically charged particles.



V. FEATURES ON THE SUN

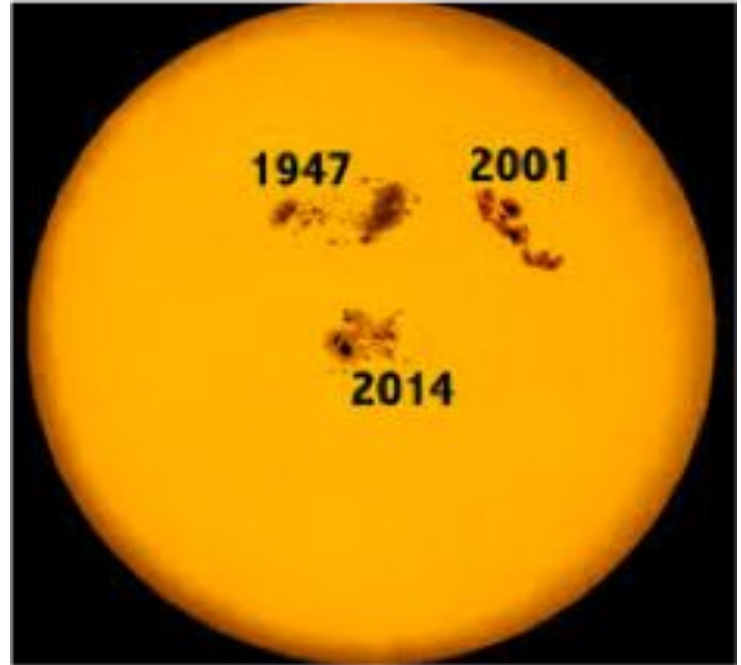
A. Features on or just above the sun's surface include sunspots, prominences, and solar flares.



VI. SUNSPOTS

- A. Observable dark spots on the sun that may be larger than Earth.
- B. Sunspots = definition – areas on the sun that are cooler than the gases around them and don't give off as much light.
- C. The spots move across the sun's surface, showing the sun rotates on an axis. (About 7.3%)

The number of sunspots have changed over the years.



VII. PROMINENCES

A. Prominences = definition - huge, reddish loops of gas that often link different parts of sunspot regions.



VIII. SOLAR WIND

- A. Solar Flare - an explosion on the sun. Solar flares can greatly increase the solar wind from the corona which will increase how many particles reach the Earth.**

- B. These particles can enter our atmosphere at the North and South poles and are the source of the auroras.**

GRAVITY ON THE SUN

The gravity of the Sun at the surface is 28 times the gravity of the Earth. So if you weigh 100 lbs on the earth you would weigh 2800 lbs on the sun

1,000,000 Earth's can fit in the sun.

Looking directly at the photosphere of the Sun (the bright disk of the Sun itself), even for just a few seconds, can cause permanent damage to the retina of the eye, because of the intense visible and invisible radiation that the photosphere emits. This damage can result in impairment of vision, up to and including blindness.

The retina has no sensitivity to pain, and the effects of retinal damage may not appear for hours, so there is no warning that injury is occurring. Viewing the Sun during partial and annular eclipses (and during total eclipses outside the brief period of totality) requires special eye protection, or indirect viewing methods, if eye damage is to be avoided. The Sun's disk can be viewed using appropriate filtration to block the harmful part of the Sun's radiation. Sunglasses do not make viewing the Sun safe.