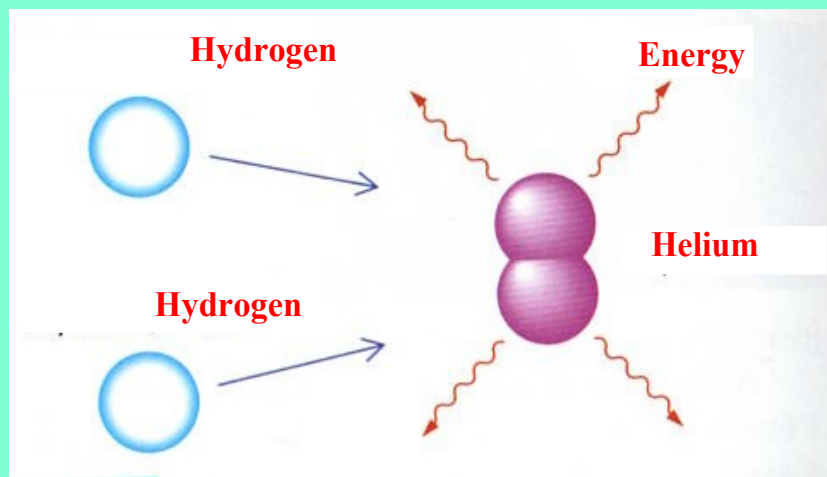
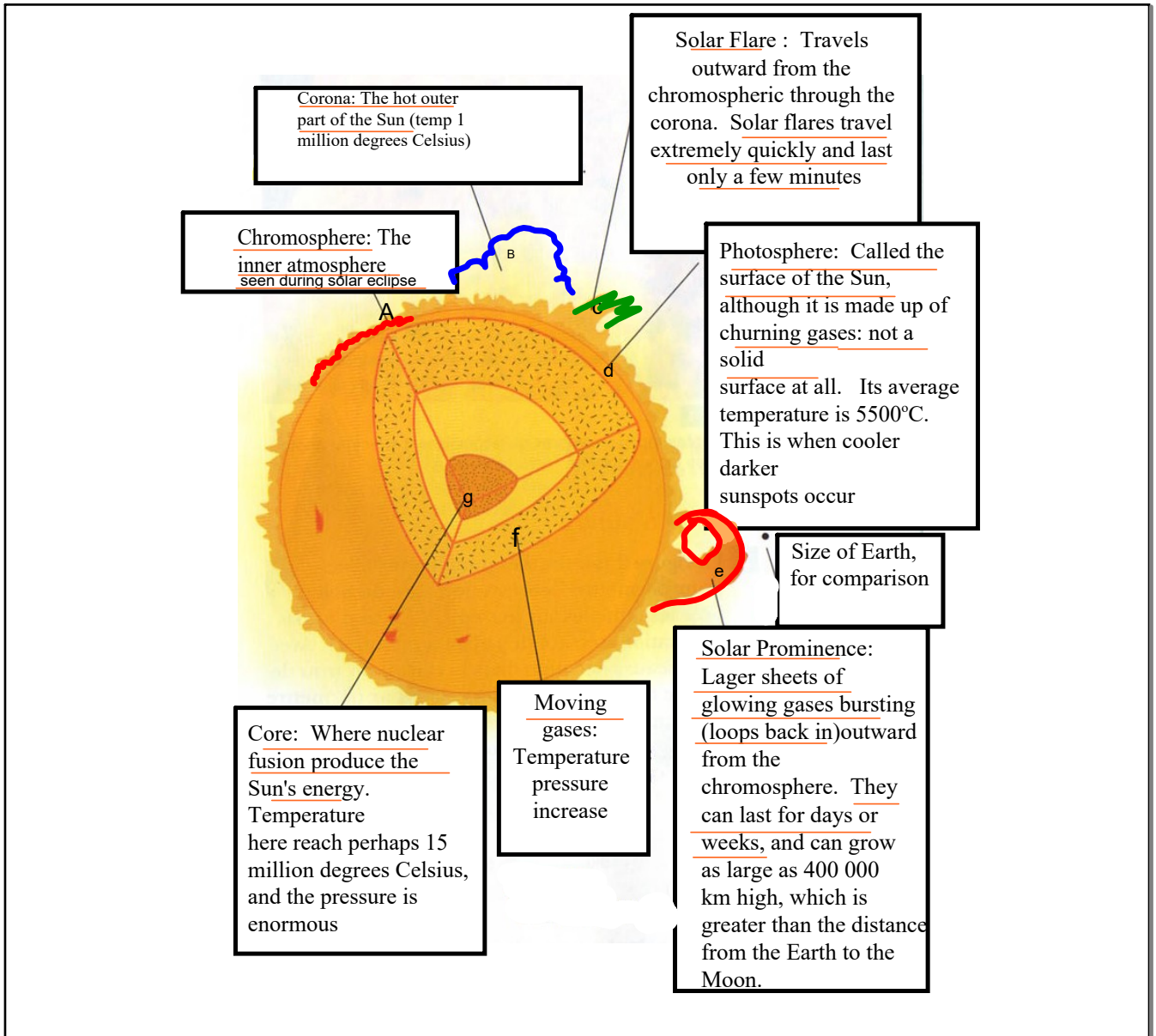


The Sun produces energy by a process called nuclear fusion. In the Sun's core, there is so much pressure and temperature that 2 hydrogen atoms fuse together to form 1 helium atom. This process produces large amounts of energy in the form of heat, light and other forms.





Solar Flares



A flare is defined as a sudden, rapid, and intense variation in brightness. A solar flare occurs when magnetic energy that has built up in the solar atmosphere is suddenly released in the form of radiation.

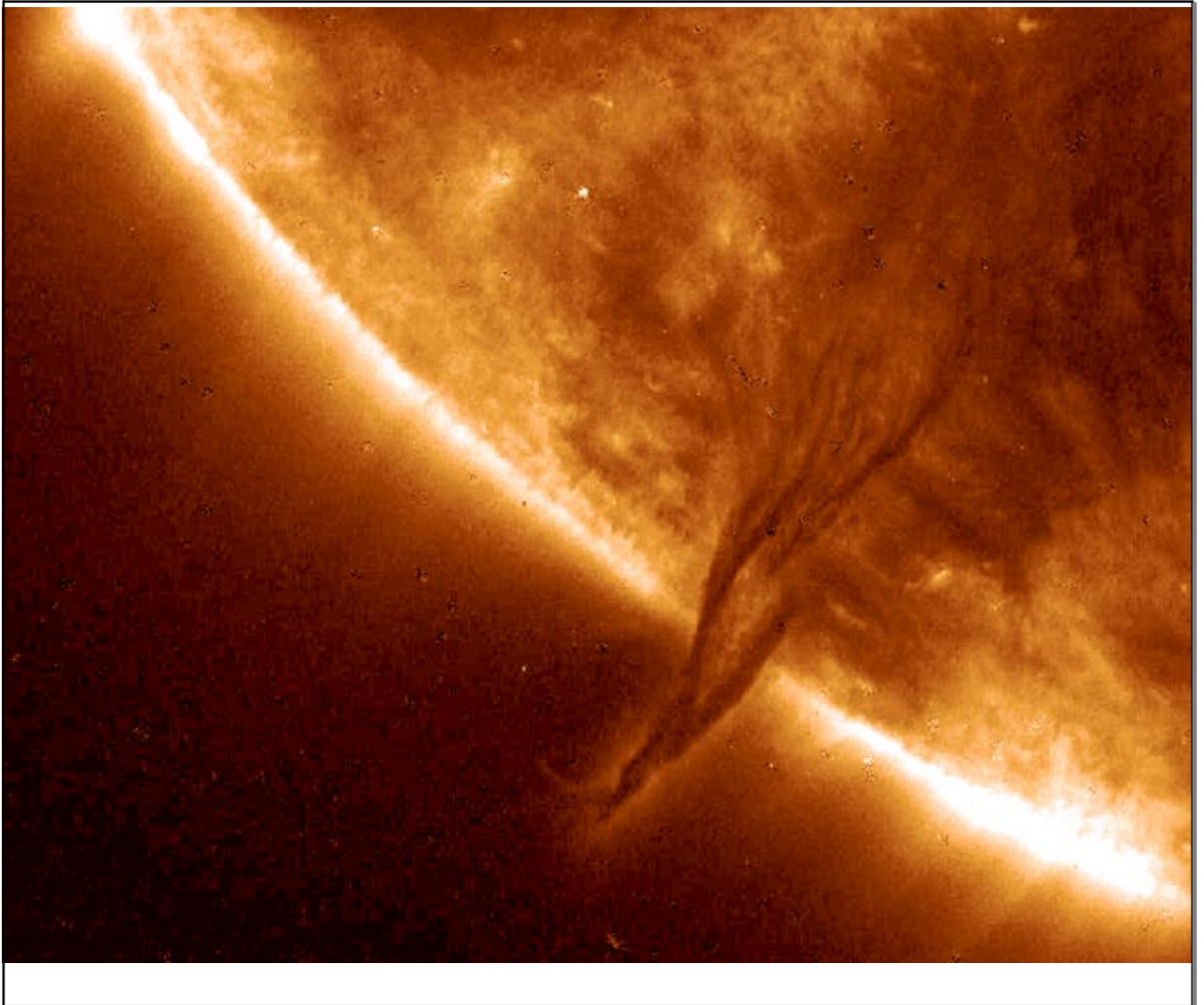
Solar flares cause the Northern Lights & interference with radio transmissions, satellites, transformers

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https://www.youtube.com/watch?v=Uj2u2_siU80

<https://www.youtube.com/watch?v=5O-wAYKBBSsc>

<https://www.youtube.com/watch?v=Pz870WqsN78>



Brightness of Stars

Scientists use the word magnitude to describe a star's brightness.

Apparent magnitude: Refers to the brightness of a star as it appears to us.

Absolute magnitude: Refers to the actual amount of light given off by a star.

The Universe

We know that planets orbit the stars, but the Sun and the other stars are also moving. Stars are gathered in large groups, surrounded by gas and dust.

The groups of stars that our Sun belongs to is called the Milky Way Galaxy. A galaxy is a huge collection of gas, dust, and hundreds of billions of stars and planets.

Milky Way Galaxy

Top View

Orion arm
Carina arm
Sagittarius arm
Centaurus arm
Central Hub
Perseus arm
Cygnus arm

You are here

Side View

ASA

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The Milky Way is disk-shaped with our solar system located near the outer part of the disk. The thicker inner layer is called the central bulge. The entire Milky way Galaxy rotates around the bulge.

Shapes of Galaxies:

- Spiral
- Elliptical
- Irregular

Elliptical

R I V U X