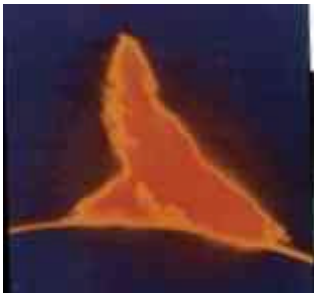
Aurorae

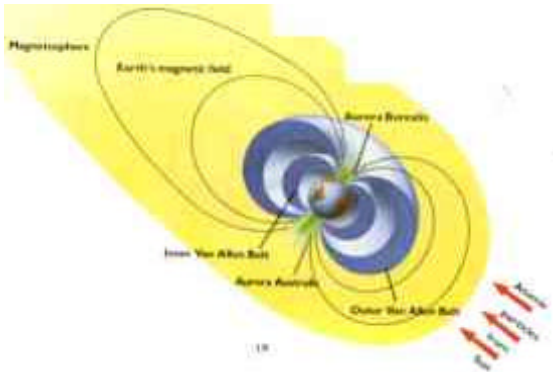
An aurora is an eerie natural effect where the Earth's upper atmosphere glows like a colourful neon tube. Aurorae have been interpreted in the past as ghostly spirits or portents of doom. In fact they are a sign that the Earth is being bombarded by high-speed atomic particles from space.

A common type of aurora looks like a greenish-yellow arch or curtain, stretching east and west for thousands of kilometres, often with folds that seem to move and shimmer. Other types appear like bands of light or a fiery red glow.

They occur from 100 kilometres up to about 1000 kilometres above the Earth. Normally they only appear near the Arctic and Antarctic circles. In the northern hemisphere the aurora is known as the Aurora Borealis, or northern lights. In the southern hemisphere it is called the Aurora Australis or southern lights.



Eruptions on the Sun's boiling surface throw out streams of atomic particles which speed through space at up to 1000 kilometres per second, taking about 2 days to cross the 150 million kilometre gap to the Earth!



The atomic particles enter the magnetic shell around the Earth, called the magnetosphere. The magnetosphere acts like a gigantic television tube, focusing the beams of atomic particles towards the Earth's poles where they hit the upper atmosphere. When they hit the air they cause the oxygen and nitrogen atoms to glow colourfully.