

IPS RADIO AND SPACE SERVICES

FACTS ON AURORAE

Auroral displays are some of the most impressive spectacles of nature. *Curtains of light, rays, arcs, pulsating, and dancing* are all terms that are used to describe these red, green, or sometimes purple light shows. Despite the magic of these events there is no longer any mystery. We now know that they arise from events on the sun such as solar flares and coronal mass ejects. These blast streams of charged particles into the solar wind and outwards towards the earth. The particles are directed by the magnetic field of the earth where they collide with atoms in the atmosphere. It is these collisions which generate the light. The patterns and shapes of the aurora are determined by the changing flow of charged particles and the varying magnetic fields.

Aurorae are most commonly visible at high north or south latitudes. However, at times when the earth is most affected by activity on the sun, they can be seen at lower latitudes. In Australia, aurorae have been seen on rare occasions from as far north as southern Queensland. But they are much more likely to be seen from the south of the continent.

Aurorae are commonly called the *northern lights* or the *southern lights*; or more technically the *aurora borealis* (north) or *aurora australis* (south).



Images of Aurorae

(courtesy John Hicks, New Forest Solar Observatory, Ontario, Canada)



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