

Aurora

A Celestial Majesty

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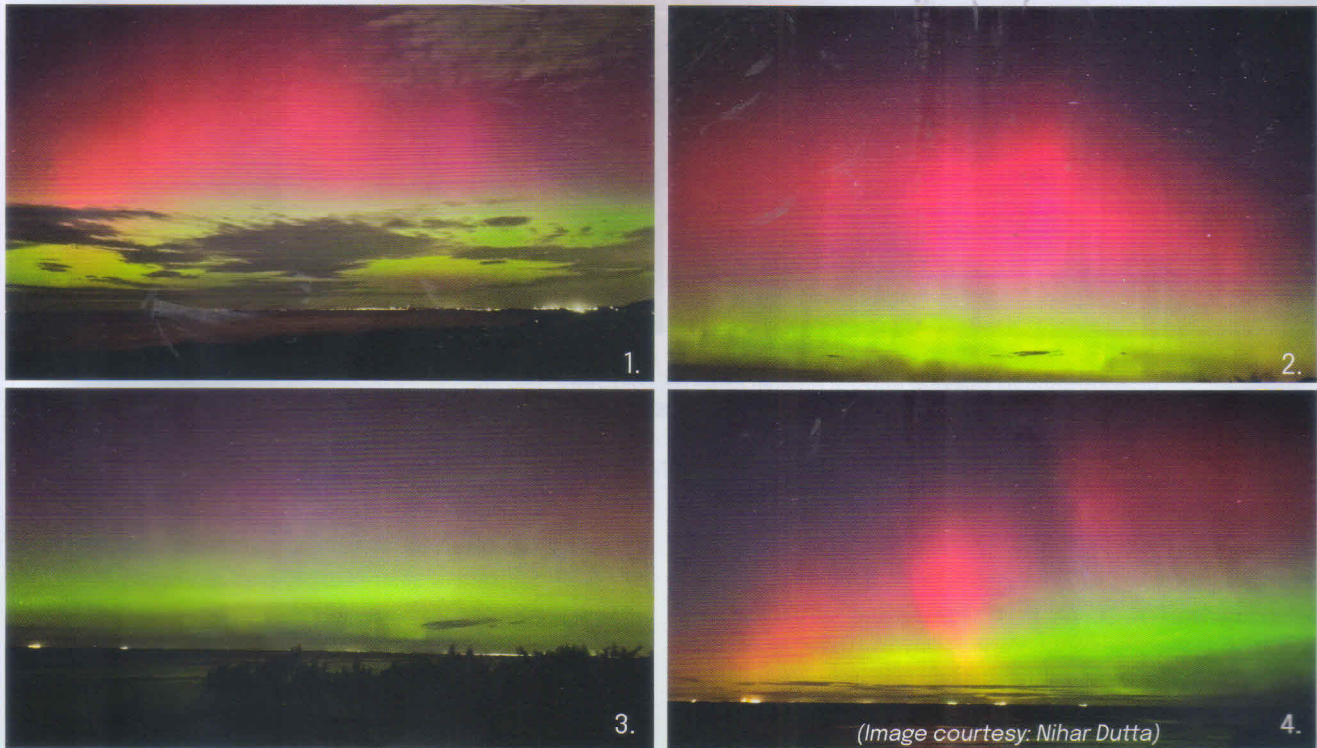


Fig.1-4

Photographs of the real auroral display of Southern Lights. The images were captured from Cambell Cove Beach, Point Cook, Victoria, Australia

(Image courtesy: Nihar Dutta)

IT was a chilly night, some thousands of years ago. A group of people were camped around a frozen lake in what would later be Norway. The sky was clear, and the people gathered were watching the natural picture of a field of stars. All of a sudden, a mesmerising sight appeared on the horizon. The sky lit up in shades of green, pink, yellow, red and purple that seemed to dance across the starry sky. The exact time and date of the first occurrence of such colourful shades of light is not known, but now it has been named aurora and a scientific explanation exists behind this celestial show of light. Aurora has been a subject of great curiosity among the common people throughout history.

Aurora and Auroral Oval

A natural display of light sometimes shimmers in the Earth's sky and is predominantly seen in the high latitude regions, i.e. lower polar zones (around the Arctic and Antarctic area). It demonstrates dynamic patterns of colourful and brilliant lights that appear as curtains, spirals, rays, or dynamic flickers covering the entire sky of Polar Regions. This magnificent

luminous light display is commonly known as aurora or polar light.

It has been observed from the study of the last three centuries that the occurrences of aurora are concentrated around the polar zones of the Earth's surface, depicting a gigantic oval shape called 'auroral oval'. The aurora of the North Polar Region most commonly occurs within the geographic area beneath the auroral oval. It encompasses latitudes between 60 and 75 degrees and takes in Iceland, northern parts of Sweden, Finland, Norway, Russia, Canada, Alaska, and southern Greenland. Similarly, southern auroral lights are noticed in the southernmost landmasses, including Tasmania, New Zealand, Antarctica, and Australia. The auroral luminescence is prominent in places where light pollution is low.

Northern Lights & Southern Lights

The phenomenon of aurora can be classified into two categories based on its location of occurrence. It is called Aurora Borealis or the Northern Lights in the Arctic Circle,