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Seeing the Northern Lights Top 5 Tips to Your Success



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Tip 1: To see the northern lights or aurora borealis it's best to be in the arctic.

In the Northern Hemisphere, the auroral zone runs along the northern coast of Siberia, Scandinavia, Iceland, the southern tip of Greenland and northern Canada and Alaska. Auroras are visible south of the zone, but they are less likely to occur the farther away you go. The Southern Hemisphere auroral zone is mostly over Antarctica, or the Southern Ocean.



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Tip 2: Patience

The Northern Lights are a natural phenomenon and therefore cannot be guaranteed and you won't always see them.

They are a vivid demonstration of the Earth's magnetic field interacting with charged particles from the sun. It's also beautiful, and worth braving a cold night out when visiting the high northern latitudes.

Aurora displays are created when protons and electrons stream out from the solar surface and slam into the Earth's magnetic field. Since the particles are charged they move in spirals along the magnetic field lines, the protons in one direction and the electrons in the other. Those particles in turn hit the atmosphere. Since they follow the magnetic field lines, most of them enter the atmospheric gases in a ring around the magnetic poles, where the magnetic field lines come together.



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Tip 3: Location really matters!

Location, location, location – you need to be away from street lights and all types of light pollution. The further you can go away from all sources of light the better.

Laplanders thought the lights were the spirits of the dead. In the Southern Hemisphere, the Maori and Aboriginal people of Australia associated the southern lights with fires in the spirit world. Oddly, the Old Norse and Icelandic literature doesn't seem to mention auroras much. The Vikings thought the displays might be fires that surrounded the edge of the world, an emanation of flame from the northern ice, or reflections from the sun as it went around the other side of the Earth. All three ideas were considered rational, non-supernatural explanations in the Medieval Period.



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Tip 4: Wear suitable clothing!

This obviously doesn't influence the northern lights but if you're in inadequate clothing you won't want to stay outside for long periods in search of the aurora. It's important that you're comfortable in cold temperatures and so here are our clothing recommendations

We recommend:

- Thick gloves
- Outdoor boots/snow boots
- Thermal underwear / base layer
- Thick trousers
- Jumper (wool)
- Scarf
- Balaclava
- Hat

Auroras can be relatively dim, and the redder light is often at the limit of what human retinas can pick up. Cameras, though, are often more sensitive, and with a long-exposure setting and a clear dark sky you can pick up some spectacular shots.

For our tours, we include thermal clothing as standard for activities such as husky sledging and snowmobiling – ask for more information.



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Tip 5: Timing is everything

One of the most difficult problems in solar physics is knowing the shape of a magnetic field in a coronal mass ejection (CME), which is basically a huge blob of charged particles ejected from the sun. Such CMEs have their own magnetic fields. The problem is, it is nigh impossible to tell in what direction the CME field is pointing until it hits. A hit creates either a spectacular magnetic storm and dazzling aurora with it, or a fizzle. Currently there's no way to know ahead of time.

However, you're not going to see the Northern lights in the summer so you need to plan ahead. Depending on location – you're looking from early September through to late March but beware – you're not the only person who wants to see the Northern Lights so book early – leaving it to the last minute means availability is greatly reduced.

