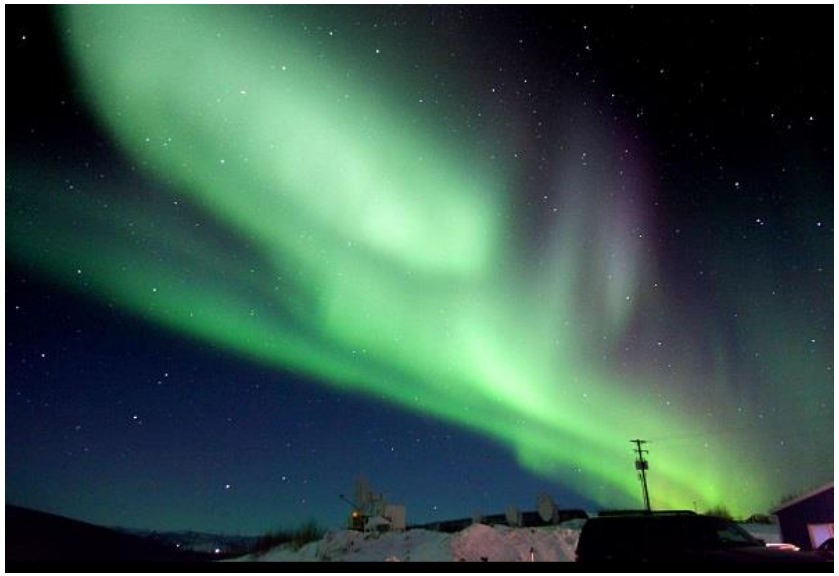
Aurora
Trivia Cards



NASA / Terry Zaperach

What is the aurora?

A luminous glow in the night sky, caused by energetic particles entering Earth's atmosphere.

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What kind of energetic particles?	Electrons and protons.
Where do the energetic particles come from?	The sun (solar wind).

What is the solar wind?	The Sun gives off a constant stream of gas and charged particles into space.
What is the magnetosphere?	A magnetic field surrounding a planet. It acts as a protective bubble, deflecting most of the Sun's charged particles back into space.

Where do the energetic particles go?	Most are deflected by our magnetosphere, but some follow Earth's magnetic field lines into the upper atmosphere, where they bump into atoms and molecules and excite them.
What does "excite" mean?	The atoms or molecules jump up to a higher energy state, and give off light as they fall back down to their original state.

What causes the different colors of the aurora?	*The different kinds of gases in the atmosphere and their height.* **RED =** **Oxygen, high** in the atmosphere **GREEN =** **Oxygen,** in the **middle** atmosphere **PURPLE =** **Nitrogen, low** in the atmosphere
What is the altitude of the aurora?	Lowest: 80 km (50 miles) Highest: 600 km (350 miles) the same height as the space shuttle flies! Typically, the bottom edge is at 100 km (60 miles).

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Why does the aurora sometimes look like curtains?	The aurora follows the curved shape of Earth's magnetic field lines.
How often is there an aurora?	An aurora is always happening somewhere on Earth, but we can't always see it. We need a dark, clear sky to view the aurora.

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Where is the best place to see the aurora borealis? **What time is best?**	High northern latitudes in winter (Alaska, Canada, Scandinavia). The best time to watch is around midnight.
Does the aurora occur in the Southern Hemisphere?	Yes! The aurora occurs in oval shapes around the north and south magnetic poles. In the north, it is called the **aurora borealis** (northern lights). In the south, it is called the **aurora australis** (southern lights).