

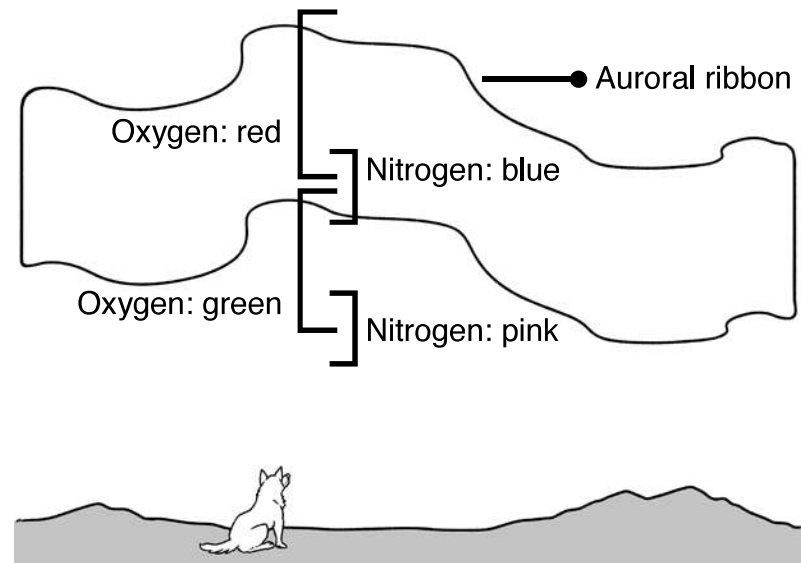
# Aurora

Auroras are beautiful lights that dance across the sky near the North and South Poles. They happen when energy and particles from the Sun run into and dance with Earth's magnetic field, and are pushed toward the North and South Poles. This interplay creates the auroras.

The colors we see (like green, red, or purple) come from different gases: **oxygen** makes green and red light, while **nitrogen** creates blue and pink. The basic colors can also mix and create other shades. Sometimes, the glowing light forms long, wavy shapes called **auroral ribbons** that stretch across the sky like curtains. Seeing an aurora is like watching Earth's atmosphere light up all the way out on the edge of space.

The mechanics of how auroras work are pretty exciting, too. When solar particles run into electrons of oxygen and nitrogen high in the atmosphere, these electrons are excited by the interaction with Earth's magnetosphere, which causes them to give off light as they "calm down." This is what causes the dazzling display of lights that we know and love.

It's also worth noting that stronger solar storms bring auroras that extend far beyond their normal northern and southern boundaries, and reach much closer to the equator. For one powerful solar storm in 1859, the auroras were visible as far south as Hawaii!



## Speaking of the Heliosphere...

Alaska's geographic location in the Northern Hemisphere offers overhead views of the aurora during long, dark, clear nights. The Iñupiaq and other Alaska Native groups have cultural stories that are handed down from one generation to the next through oral history, storytelling and songs. Have you heard any of these stories?



The Iñupiaq people use the word **kiuguyat** for *aurora*, or *Northern Lights*. Scan the QR code to listen to this and other Iñupiaq words spoken by a Native speaker.

