

# Notes for Auroras

## Solar Winds

- Sun's corona sheds positively and negatively charged particles
- Charged particles collect to form solar winds that travel to Earth

## Earth's Magnetosphere

- Earth's iron core creates a giant magnet with a magnetic field that extends far into space
- As particles in solar wind encounter the Earth's magnetosphere, the charged particles are directed around and away from Earth

## Auroras

- Occasionally the Sun ejects a large mass of plasma.
- Earth's magnetosphere becomes overwhelmed and some charged particles are directed towards Earth's poles.
- In the thermosphere, the charged particles collide with nitrogen and oxygen atoms releasing small bursts of colored light.

- **Oxygen – green and bright red lights**
- **Nitrogen – Blue and deep red lights**
- **Northern lights – Aurora Borealis**
- **Southern lights – Aurora Australis**