7.2: Cyclones

Cyclones

For those who have lived through a hurricane or tornado, you know what these storms can be like firsthand. The devastation from a direct-strike major hurricane can literally erase a city like a huge pencil eraser. Large tornadoes can and have had similar effects. But imagine a cyclone twice the size of Earth that has been going for at least 300 years!

Hurricane Katrina as photographed from Earth orbit, August 2005. [" Hurricane Katrina August 28 2005 NASA " by Jeff Schmaltz, in the Public Domain]

Cyclones

Tropical cyclones like Hurricanes Andrew, Katrina, Matthew, and Irma show several distinctive characteristics:

- Formation with favorable conditions over warm water, lack of wind shear and land
- Rapidly-rotating storm with a low-pressure center
- Strong winds, heavy rains, storm surges
- Possible outer band spin-up tornadoes

Do tropical storms occur on other planets in our Solar System? Well, first the basis for Earth's tropical cyclones is water; hot water. So, what we know as hurricanes are an Earth-based phenomenon.