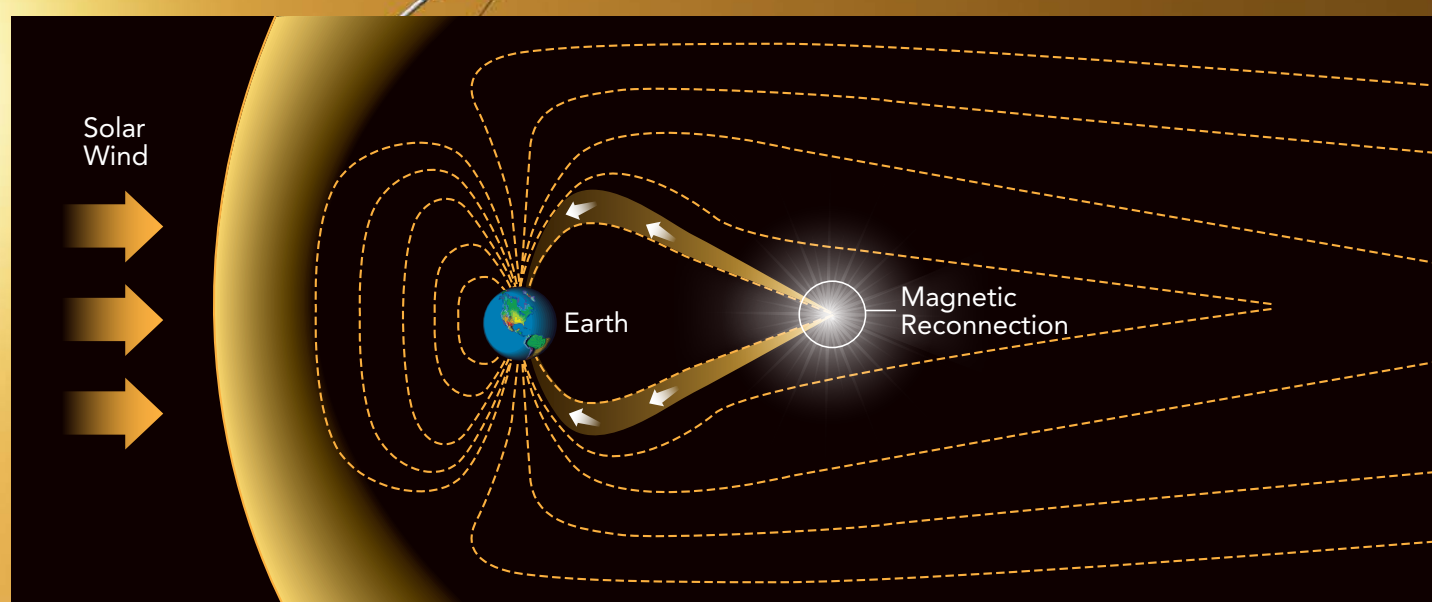


MMS

MAGNETOSPHERIC MULTISCALE MISSION



MMS studies magnetic reconnection—an explosive event caused by the clash and entanglement of magnetic field lines from Earth and the Sun.



Flying at 22,300 mph, MMS speeds around Earth in an elliptical orbit. It holds the Guinness World Record for highest altitude fix of a GPS signal—recorded at 43,500 miles above the surface.

Exploring Earth's Magnetic Horizons

Launched in 2015, MMS uses four identical spacecraft flying in a pyramid formation to study Earth's magnetic environment in 3D at small scales with unprecedented time resolution.



MMS's discoveries reveal the workings of a fundamental plasma process that helps us understand the space weather around Earth. It also revealed the mechanisms driving magnetic reconnection are complex electron motions that carry electric currents, which push plasma flows. MMS also has observed plasma waves and turbulence, helping us understand reconnection in near-Earth space, across the universe, and even in nuclear fusion research.