

Initial Results from Parker Solar Probe

The solar corona is the recipient of massive amounts of energy coming from the Sun's interior, resulting in a plasma temperature in the corona that is much hotter than the plasma near the photosphere. The result of this heating is a supersonic, super-Alfvenic solar wind that is accelerated away from the Sun. The fundamental processes by which this energy is transported to and deposited in the corona are not understood. To answer these outstanding questions the Parker Solar Probe was launched on a mission to fly through the Sun's corona and directly sample the plasma environment using a suite of instruments called "SWEAP" (Solar Wind Electrons, Alphas, and Protons). The suite consists of three electrostatic analyzers and the Solar Probe Cup, a Faraday Cup instrument that measures both ions and electrons. This talk will describe the science objectives for the mission, introduce the Parker Solar Probe instrument payload (with a specific emphasis on the Solar Probe Cup and its engineering challenges), and show some initial results from the first few solar encounters.

**Thursday, February 20th**

4:00-5:00 p.m.

725 Commonwealth Ave | Room 502

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