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The SECCHI experiment on the STEREO mission

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The Sun Earth Connection Coronal and Heliospheric Investigation (SECCHI) on the NASA Solar Terrestrial Relations Observatory (STEREO) mission is a suite of remote sensing instruments consisting of an extreme ultraviolet (EUV) imager, two white light coronagraphs, and two telescopes that comprise the heliospheric imager. SECCHI will observe coronal mass ejections (CMEs) from their birth at the sun, through the corona and into the heliosphere. A complete instrument suite is being carried on each of the two STEREO spacecraft, which will provide the first sampling of a CME from two vantage points. The spacecraft, launched 25 October 2006, are orbiting the Sun, one Ahead of the Earth and the other Behind, each separating from Earth at about 22 degrees per year. The varying separation means that we will have different observational capabilities as the spacecraft separate and therefore differing science goals. The primary science objectives all are focused on understanding the physics of the CME process - their initiation, 3D morphology, propagation, interaction with the interplanetary medium and space weather effects. By observing the CME from multiple viewpoints with UV and coronagraphic telescopes and by combining these observations with ra-

dio and in-situ observations from the other instruments on STEREO as well as from other satellites and ground based observatories operating at the same time, answers to some of the outstanding questions will be obtained. All of the telescopes are working very well and have been producing spectacular images. We will show examples of some of the data and some of the initial results.