

Internal use only

Abstract number: S2-400

The active Sun and its implication for the heliosphere
no preference

MHD Simulation of a CME from an Anemone Active Region and Comparison with EUV Images

Lugaz, Noé¹, Downs, Cooper¹, Roussev, Ilia¹, Kazunari, Shibata², Asai, Ayumi² and Gombosi, Tamas³

¹Institute for Astronomy Univ. of Hawaii

²Kwasan Observ. Kyoto Univ.

³CSEM Univ. of Michigan

We present a numerical investigation of the coronal evolution of the coronal mass ejection (CME) on 2005 August 22 using a 3-D thermodynamics MHD model, the SWMF. The source region of the eruption was anemone AR 10798, which emerged inside a coronal hole. We validate our modeled corona by producing synthetic EUV images, which we compare to EIT images. The eruption yields a mix of open and closed field lines due to interchange reconnection. We discuss the CME reconnection process with the ambient magnetic field of the AR and the surrounding coronal hole and show how it is related to a long-lasting dimming region.