Geophysical Research Abstracts Vol. 14, EGU2012-7174, 2012 EGU General Assembly 2012 © Author(s) 2012



CME mass evolution derived from stereoscopic observations of STEREO/SECCHI instruments COR1 and COR2

B. Bein (1), M. Temmer (1), A. Vourlidas (2), and A. Veronig (1)

(1) IGAM/Institute of Physics, University of Graz, Graz, Austria (bianca.bein@uni-graz.at), (2) Space Sciences Division, Naval Research Laboratory, Washington DC, USA (angelos.vourlidas@nrl.navy.mil)

The STEREO mission consists of two nearly identical spacecraft STEREO-A and STEREO-B, which observe simultaneously the Sun from two different vantage points. We use observations from both coronagraphs, COR1 and COR2 of the SECCHI instrument suite aboard STEREO-A and STEREO-B, to derive the CME mass evolution for a height range from 1.4 to 15 RSun. Due to the fact that we have observations from two different vantage points, we measure not only the projected mass but can estimate the 'true' CME mass evolution with height. We developed a fit function, which considers the mass increase based on the geometry of the instrument (mass hidden behind the occulter) and a possible 'real' mass increase with height. The fit parameters are compared with characteristic CME quantities.