

3D Reconstructions of Solar Coronal Mass Ejections Observed During the *STEREO* Mission

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ABSTRACT

Analysis of numerous CME observations by *STEREO*, via the 3D elliptical tie-pointing reconstruction technique - building on Byrne et al. (2010).

Subject headings: Sun: coronal mass ejections (CMEs) — Methods: miscellaneous — Techniques: image processing

1. Introduction

2. Observations

3. Elliptical Tie-Pointing Technique

3.1. Flux-Rope Model

A model flux-rope CME is generated, as outlined in Morgan et al. (2012), such that synthetic images can be created for any observer location. This allowed the generation of fits files that correspond to a specified *STEREO* spacecraft separation, for a chosen flux-rope orientation, moving in a given direction away from the Sun. An example of a model flux-rope CME, with orientation normal to the ecliptic ($\zeta = 0^\circ$), moving along the Sun-Earth line with the *STEREO* spacecraft situated at 90° separation.

4. Floating material and so forth

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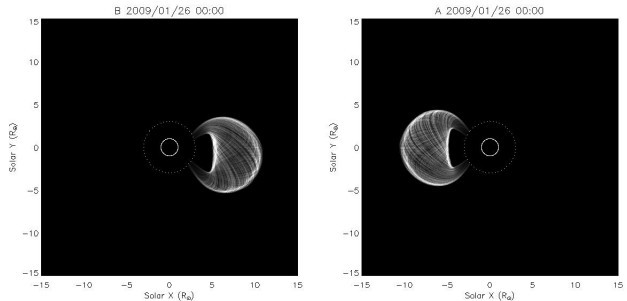


Fig. 1.— Model flux-rope CME

oratory (UK), University of Birmingham (UK), Max-Planck-Institut für Sonnen-systemforschung (Germany), Centre Spatial de Liege (Belgium), Institut d'Optique Théorique et Appliquée (France), and Institut d'Astrophysique Spatiale (France).

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