



Morphology of an ICME-event derived by Multi-point in Situ and Heliospheric Imaging Data

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We show the analysis of an outstanding fast interplanetary coronal mass ejection (ICME) of 07 March 2012, which has been observed stereoscopically from both STEREO spacecraft. Assuming self-similar expansion and constant direction of motion we derive the kinematical profiles for the eastern and the western part of the roughly Earth-directed ICME. As additional constraints we use the huge advantage of in situ measurements at various locations during the ICME's propagation, namely from Venus Express, Messenger, Wind and Mars Express.

We found that the eastern part of the ICME had a much higher propagation speed than its western part. Using the drag-based model, a model for the propagation of ICMEs in the inner heliosphere, we analyzed the influence of the drag on both sides of the ICME due to the surrounding solar wind conditions. These different solar wind conditions could have been the reason for the differing velocities and therefore for a distortion of the ICME front. These studies are fundamental in order to deepen the understanding of ICME evolution and to enhance existing forecasting methods.