



Calculating the propagation direction of coronal mass ejections by connecting in situ observations with heliospheric images

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We determined the propagation direction of two coronal mass ejections by using data provided by the Heliospheric Imagers (HI) and the PLASTIC and IMPACT instruments onboard the two STEREO satellites. To facilitate the tracking of the CME's leading edge we made time-elongation plots (J-plots) for the investigated events and tracked the apparent leading edge therein several times in order to estimate the measurement error. For converting elongation to distance we compared several methods (Point-P, Fixed-Phi and their harmonic mean). To determine the direction of the CME's propagation in the ecliptic we connected the CME-track derived from HI J-plots with the measured in situ arrival time by modifying the propagation direction within the used model equations. The resulting directions and their errors are discussed with respect to the different assumptions used for each technique.