



On the radial width of CMEs between 0.1 and 0.4 AU

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The launch of the two STEREO spacecraft in 2006 has heralded a new era of opportunities to make remote observations of interplanetary coronal mass ejections (ICMEs). An example CME on the 16th February 2008 with an approximately circular cross section was tracked through successive images obtained by the Heliospheric Imager (HI) instrument onboard the STEREO-A spacecraft. The cylindrical nature of force-free constant alpha flux ropes is used to determine the radial size of the CME. The radial velocity and longitude of propagation are determined. With these parameters known, the radial size is calculated from the images taking projection effects into account. A power law is obtained for the resulting radial width behaviour with heliocentric distance as the CME travels between 0.1 and 0.4 AU. We compare our results to those obtained in published studies based on in-situ spacecraft observations of ICMEs between 0.3 and 1.0 AU.