



Estimation of true speed and direction of propagation of CMEs using SECCHI/STEREO observations

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We have reconstructed the leading edge of coronal mass ejections (CMEs) observed by COR1 and COR2 coronagraphs aboard SECCHI/STEREO spacecraft. The reconstruction of the leading edge of the CMEs is achieved using tie-pointing method based on epipolar geometry. The true speeds have been estimated from the reconstruction of the leading edge. These estimated true speeds are then compared with the projected plane-of-sky speeds of the leading edge of the CME derived from LASCO aboard SoHO as well as from STEREO A and B images individually. The results show that a better estimation of the true speed of the CME in the Sun-Earth direction is achieved from the 3-D reconstruction. We also discuss the implication of these estimated true speeds on space weather prediction.