



Prospective Out-of-ecliptic White-light Imaging of CIRs and CMEs through the Corona and Heliosphere

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Interplanetary corotating interaction regions (CIRs) and coronal mass ejections (CMEs) can be remotely imaged in white light (WL), as demonstrated by the in-flight performance of the Coriolis/SMEI and STEREO/HI instruments. Because of the in-ecliptic locations of both the STEREO and Coriolis spacecraft, the longitudinal dimension of interplanetary CIRs and CMEs has, up to now, always been integrated in WL imagery. To synthesize the WL radiance patterns of CIRs and CMEs from an out-of-ecliptic (OOE) vantage point, we perform forward magneto-hydrodynamic (MHD) modeling of the background solar wind flow at solar maximum and a halo CME at solar minimum. We assert that a panoramic OOE view in WL would be highly beneficially in revealing the morphology and kinematics of CIRs and CMEs in the hitherto unresolved longitudinal dimension, and hence for monitoring the propagation and evolution of inecliptic CMEs for space weather operations.