



A Catalogue of Coronal Mass Ejections Observed by the Heliospheric Imagers throughout the STEREO Mission

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Understanding the evolution of the solar wind is fundamental to advancing our knowledge of energy and mass transport in the solar system, rendering it crucial to space weather and its prediction. The advent of truly wide-angle heliospheric imaging has revolutionised the study of Coronal Mass Ejections (CMEs) by enabling their direct and continuous observation out to 1 AU and beyond. A catalogue of CMEs has been compiled using data from the Heliospheric Imagers (HIs) on board the two STEREO spacecraft, which began as part of the FP7 HELCATS project. The mission was launched in 2006 and continues to provide data, therefore spanning 12 years, over which more than two-thousand CMEs have been observed by HI. To these CMEs, we apply geometric models that make use of both single-spacecraft and stereoscopic observations in order to determine their kinematic properties. These include CME speed, acceleration, propagation direction and launch time. The resulting kinematic properties and their statistics are discussed in the context of existing CME catalogues produced from coronagraph observations. This is done with emphasis on how the different models we apply influence our results and how these differences evolve over the solar cycle and as the angular separation of the STEREO spacecraft increases throughout the mission.