



Space weather monitor at the L5 point: a case study of a CME observed with STEREO B

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An important location for future space weather monitoring is the L5 Lagrange point of the Sun-Earth system. We test the performance of a space weather monitor located at this position using STEREO B observations of an Earth-directed coronal mass ejection (CME). The CME, seen as a partial halo by the SOHO/LASCO coronagraph located at L1, reached the Earth and produced active geomagnetic conditions ($K_p=4$). During the event, the STEREO B spacecraft was located close to the L5 Lagrangian point of the Sun-Earth system and the CME could be continuously tracked in the fields of view of its remote-sensing instruments (EUVI, COR1, COR2, HI1, and HI2). By using the L5 data, an improved and continuously updated estimation of the CME arrival time can be provided. In this work, the advantages of having a space weather monitor at the L5 point for tracking interplanetary propagation of CMEs are demonstrated in a direct case study.