



Propagation Directions and Kinematics of the Coronal Mass Ejections of August 2010

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The Solar TERrestrial RELations Observatory (STEREO) offers the possibility to observe coronal mass ejections (CMEs) up to a distance of 1 AU. If an Earth directed event could be measured in situ of the Wind spacecraft it is possible to link its arrival time - identified as a sudden increase of the proton density number - to the remote density signal observed by the heliospheric imager (HI).

We analyzed the ICME events of 01 - 04 August 2010 by measuring several distinct ICME features within a time - elongation plot (Jplot). The direction of the different tracks was calculated with two elongation - fitting methods. Near Earth, the leading shock, which was followed by two magnetic clouds, was detected in situ by Wind and it was possible to derive its kinematics by using two different methods to convert elongation into distance, Fixed - Phi (Kahler & Webb, 2007) and Harmonic Mean (Lugaz et al., 2009). The results of the conversion methods were compared to the in situ measured velocity at arrival time. If possible, the same method is applied to in situ observations by STEREO-B.