EXTENSION OF MAGNETIC CLOUDS IN THE INNER HELIOSPHERE AS OBSERVATION FROM MULTI-SPACECRAFT

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Abstract

A large number of magnetic clouds was observed during the time operation of the Helios mission. Among the set of shocks driven by Interplanetary Coronal Mass Ejections, identified during this time, some of them had a magnetic cloud observed by at least one of the probes, Helios 1 and Helios 2. Others were observed by more than one probe/spacecraft contributing for a detailed study of the extension of these MCs in the inner heliosphere. In the present work, we compare the interplanetary features of some magnetic clouds that drove shock waves in the inner heliosphere. By using the Minimum Variance Analysis one gets the information of the cloud's axis, so we can infer the direction of the magnetic cloud in two different points. For those magnetic clouds observed by only one of the probes, the cloud's axis is again an important tool to explain why there was no observation at the two probes.