
ICMEs Associated with Major Geomagnetic Storms Over the Solar Cycle 24.

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Abstract

The on-going Solar Cycle has brought a low geomagnetic activity compared with the previous one. A lower number of fast coronal mass ejections (CMEs) as well as a non-favourable magnetic configuration may be the cause of this phenomenon. In this study, we present the main characteristics of the Interplanetary CMEs (ICMEs) associated with the major Geomagnetic Storms ($Dst < -100\text{nT}$) over the ascending phase of solar cycle 24 (2009-2012). We combine observations obtained by the different coronagraphs and EUV telescopes to track back the CME structure and kinematics from its source region up to 15 solar radii. The complementary part of this study is based on interplanetary medium observations through white light images, type II radio burst and in-situ measurements of the geoeffective ICMEs.

Keywords: ICMEs, Geomagnetic storms, Magnetic clouds

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