

Characteristics of Interplanetary Magnetic Clouds during Ascending Phase of 23rd Solar Cycle

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A magnetic cloud(MC)is a transient ejection into the solar wind whose magnetic field direction rotates smoothly through a large angle over approximately 0.25 AU at 1 AU. The force-free flux rope model has often been used to represent the magnetic field configuration. Intense storms are often caused by MCs due to their strong and long lasting southward IMF. We have made a extensive analysis by fitting the flux rope model to observed MCs during ascending phase of the 23rd solar cycle. It is important for space weather forecasting to predict magnetic structure inside a MC as well as it's arrival at Earth. Several studies deal with the relationship between magnetic structure in a MC and solar magnetic structure. We check the validity of the studies by analyzing our set of MCs.