



On the B_{max} - V_{max} relationship in ICMEs

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A relationship between the maximum solar wind speed V_{max} and maximum magnetic field strength B_{max} within the magnetic cloud (MC) boundaries has been found. It was observed that in general, faster MCs have higher B strength. This relationship was also recently confirmed analyzing a larger set of MCs. In the present work, we test if this relation is maintained for interplanetary coronal mass ejections (ICMEs) that do not have a clear MC topology. In order to conduct this study, we use the Cane and Richardson (2003) catalog, covering the 1996-2002 period. They have classified ICMEs in three types: '0', when the field in the ICME shows little evidence of rotation; '1', when a more subjective assessment suggests evidence of a relatively organized field rotation within the ICME, but a magnetic cloud has not been reported; and '2' when the ICME has been reported as a magnetic cloud which can be modeled by a force-free flux rope. The implications for geoeffectiveness of this relationship will also be discussed.