



## **A study of Interplanetary Coronal Mass Ejections and Stream Interaction Regions at 0.72 AU**

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The study of two classes of large-scale solar-wind structures, interplanetary coronal mass ejections (ICMEs) and stream interaction regions (SIRs), using 10 years data at 1 AU, finds a higher occurrence rate of SIRs than Lindsay et al. [1994, 1999] obtained using Pioneer Venus Orbiter (PVO) observations at 0.72 AU. Further there are many more shocks associated with either ICMEs or SIRs at 1 AU than at 0.72 AU. In our 1 AU studies we have found that the total perpendicular pressure ( $P_{\text{tp}}$ ), the sum of magnetic and thermal pressures, is a very effective complementary criterion to distinguish these two structures, and provides a quantitative measure of the interaction strength. Herein we extend our 1 AU identifications to 0.72 AU with the PVO data, using  $P_{\text{tp}}$  as a diagnostic parameter together with other traditional indicators of the features of ICMEs and SIRs. The comparison of the 0.72 and 1 AU properties can improve our understanding of how the solar wind structures evolve with the heliocentric distance, through the variation in the occurrence rate of events, the properties of shocks and their interaction strength as a function of heliocentric distance.