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Geoeffective Interplanetary "Sheath"- Storm Events Associated with the Interaction of an ICME-Shock with High Speed Stream - Magnetic Field Turbulence. Walter D. Gonzalez,Rashmi Rawat,Ian Richardson,Erika Palmerio,Ezequiel Echer,Judith Palacios,Ramon Lopez and Alicia L. Clua-Gonzalez

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During solar cycles 23 and 24, 14 intense storm events ($Dst < -100$ nT) were identified, in which their main phases were totally or partially associated with the presence of intense interplanetary "Sheath-Bz" magnetic fields that seem to have originated from the interaction of an ICME-Shock with fluctuating (Alfvenic) - Bz fields of a simultaneously present High Speed Stream. This set of events represent a substantial fraction (30%) of geoeffective "Sheath" - events that led to the occurrence of intense storms during solar cycles 23 and 24.

In addition to such an interaction process to explain the origin of these largely geoeffective sheath-Bz field events, other candidate processes will be argued to may also have played a role for that origin, especially the Planar Magnetic Structures that were discussed in the recent literature.

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