What kind of the solar wind discontinuities is the most destructive one?

S.Grib

Prof.-Dr.Central Astronomical Observatory at Pulkovo(anagri@nevsky.net/7-812-7231922)

Different discontinious plasma structures such as pressure balanced, directional and fast and slow shock waves inside the heliosphere are discussed. The nonlinear dynamics of the solar wind MHD discontinuities with the abrupt change of the type of the discontinuity and the appearance of the so called catastrophic reconstruction are discussed. The possibility to look at the existence of the solar wind slow shock waves and the contact discontinuities within the limits of their stability is indicated.