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PhD Thesis Abstract

Experimental Study of Plasma Rotation during Tokamak Disruptions

An analysis of COMPASS data regarding the study of density limit disruptions (DLD) precursors has been initiated remotely. The presence of a secondary instability (SI) to the well-known m / n = 2 /1 tearing mode is observed for the first time in the DLD precursor of COMPASS plasmas. No poloidal 'n' or toroidal 'm' mode number could be assigned to this SI. Such an instability has already been observed in JET DLD at the onset of both minor as well as major disruptions. A further insight of such SI may lead to a better understanding of disruption physics, which is very important for the operation of future large reactors like ITER.