Abstract Submitted
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Experimental Investigation of the ETG Nonlinear Saturation Mechanism[1] XIAO WEI, VLADIMIR SOKOLOV, AMIYA K. SEN, Columbia University — We have produced and identified the slab electron temperature gradient (ETG) mode in the Columbia Linear Machine (CLM) [1]. Now we investigate the nonlinear saturation mechanism of the ETG modes. We study 3-wave coupling physics via the bi- coherence investigation and find signatures of the interaction between ETG modes and some low frequency modes. The saturation mechanism of the ETG modes is suspected to be related to the damping of low frequency modes. More detailed identification of the low frequency modes including their dispersion will be reported.

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