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Measurement of Electron Thermal Transport Induced by ETG Modes in the Transition from the Slab to the Toroidal Branch of Mode[1]
VLADIMIR SOKOLOV, ABED BALBAKY, AMIYA K. SEN, Columbia University
— Transition from the slab to the toroidal branch of the electron temperature gradient (ETG) mode has been successfully achieved in a basic experiment in Columbia Linear Machine CLM [1]. The measurement of the radial electron thermal conductivity shows its increase with transition from slab to the toroidal ETG mode. A miniature triple probe was used for these measurements [2] and the value of thermal $\chi_{\perp e}$ conductivity is found to be about $2-12$ m^2/s. The corresponding gyrobohm diffusion coefficient $\chi_{\perp e,GB} \sim 2-4$ m^2/s. A similar result of the transport measurement was obtained by using a novel diagnostic system.

[1] A. Balbaky, V. Sokolov and A.K. Sen, Bulletin of 55th APS DPP, PP8.98, 2013.
[2] V.Sokolov and A.K.Sen, Phys.Rev.Lett.,107, 155001 (2011).

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Vladimir Sokolov
Columbia University

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