

Abstract Submitted
for the DPP11 Meeting of
The American Physical Society

ITG turbulence and role of the impurities in the RFP I. PREDEBON, L. CARRARO, S.C. GUO, F. SATTIN, Consorzio RFX, Padova, Italy, S.F. LIU, Nankai University, Tianjin, P. R. China — ITG modes have been found to be rarely unstable in reversed-field pinch pure-hydrogen plasmas, close to marginality only in correspondence to the transport barriers arising during single helicity states. We revisit this topic considering more realistic multi-species plasmas, to understand the possible excitement of ITG or impurity-drift instabilities. Furthermore, the back-reaction of microturbulence on the impurity transport is investigated. We present linear and nonlinear gyrokinetic simulations with the codes GS2 and HD7 (integral eigenmode equation solver), alongside with a comparison with gyrofluid 2-species nonlinear simulations.

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Date submitted: 14 Jul 2011

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