

Abstract Submitted
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Nonlinear Simulation of Alfvén Eigenmodes driven by Energetic Particles: Comparison between HMGC and TAEFL Codes¹ ANDREAS BIERWAGE, University of California, Irvine, DONALD A. SPONG, Oak Ridge National Laboratory, SCIDAC GSEP TEAM, ENEA/FRASCATI PLASMA THEORY TEAM — Hybrid-MHD-Gyrokinetic Code (HMGC) [1] and the gyrofluid code TAEFL [2,3] are used for nonlinear simulation of Alfvén Eigenmodes in Tokamak plasma. We compare results obtained in two cases: (I) a case designed for cross-code benchmark of TAE excitation; (II) a case based on a dedicated DIII-D shot #132707 where RSAE and TAE activity is observed. Differences between the numerical simulation results are discussed and future directions are outlined. [1] S. Briguglio, G. Vlad, F. Zonca and C. Kar, Phys. Plasmas 2 (1995) 3711. [2] D.A. Spong, B.A. Carreras and C.L. Hedrick, Phys. Fluids B4 (1992) 3316. [3] D.A. Spong, B.A. Carreras and C.L. Hedrick, Phys. Plasmas 1 (1994) 1503.

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