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# Alfvén Eigenmode Evolution in ITER Steady-State Scenario

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Alfvén eigenmode instability analysis in ITER steady-state plasma scenarios with reversed magnetic shear was performed with the NOVA and TAEFL codes [1]. In our work for this scenario we explore the stability of Alfvén eigenmodes with the KINX code [2]. Both isotropic fusion alphas and beam ions contribute into the mode drive. Fast particle dynamics, linear growth rate, mode amplitude evolution and the wave nonlinear saturation level are computed with the VENUS+df [3] orbit following code. Anysotropic beam particle distribution is computed from realistic geometry of ITER NBI. Calculation results give the estimations of the Alfvén stability linear growth rates and nonlinear saturation level of the mode amplitude for ITER steady state scenario.

[1] M.A. Van Zeeland et al, Nucl. Fusion 52(2012)094023.
[2] L. Degtyarev et al, Comp. Phys. Comm., 103(1997)10.
[3] W.A. Cooper et al, Plasma Phys. Contr. Fus. 53(2011)024001.

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