TRANSP - TGLF predictions for ITER

R.V. BUDNY, X. YUAN, B. GRIERSON, PPPL, G. STAEBLER, GA — The GLF23 [1] and TGLF [2] quasi-linear gyrofluid transport simulation models have been installed in TRANSP for analysis of experiments and for generating self-consistent integrated predictions [3]. A new parallel module PT-SOLVER was developed [4] for efficient solution of these and other numerically challenging transport models. A new spectral shift paradigm was added to TGLF [5] to strengthen the physics basis of toroidal rotation and flow shear simulations. Predictions of density, temperatures, and toroidal rotation are being verified and validated [6,7] with experimental data from JET and DIII-D. Verification and validation results, and predictions for ITER H-mode and hybrid plasmas are given. The ITER predictions are compared with previous TRANSP predictions [8] using the GLF23 model.

[7] B. Grierson, et al., this conf

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