ICRF modelling with Non-Maxwellian distributions in JET*

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Ion Cyclotron Range of Frequency (ICRF) Heating is an important heating source on the Joint European Torus (JET). For the D-T campaign, various scenarios of ICRF heating are considered including second harmonic Tritium resonance and the three species hybrid resonance method [Y. Kazakov et al, Nature Physics 973 \textbf{13} (2017)]. The ICRF full wave modelling codes TORIC and AORSA have both been coupled to the Fokker-Planck solver, CQL3D, and are used routinely to model wave propagation and absorption and the generated fast ion distributions in C-Mod experiments with validation through experimental comparisons with synthetic diagnostics [J. Wright et al, Plasma Physics and Controlled Fusion, 025007 \textbf{56} (2014).] We will show parametric dependence of ion tail temperatures and neutron fusion rates on species concentration for various scenarios as well as comparisons between the finite Larmor radius TORIC code and the all orders Larmor radius AORSA code.

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