

P5.1102 Density profiles in low collisionality FTU plasmas

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See the full abstract here <http://ocs.ciemat.es/EPS2019ABS/pdf/P5.1102.pdf>

FTU offers the unique opportunity to explore a broad range of collisionality [1] expressed as $\nu_{\text{eff}} = 0.1 Z_{\text{eff}} \langle n_e \rangle R / \langle T_e \rangle^2$.

This work is devoted to study the dependence of the electron density profiles and peaking in a low collisionality regime, more interesting for comparison with other tokamaks [2]. With respect to those indeed, FTU features a wider scale of magnetic fields and densities. This allows to analyse the behaviour of the electron density profiles as a function of magnetic field and plasma current, investigating also more factors, such as: wall conditioning, plasma temperature.

[1] C. Mazzotta et al., Highly collisional regimes in FTU. Proceedings of the 44th EPS Conference on Plasma Physics, Belfast, Northern Ireland (UK). Paper P2.179 (2017). Vol. 41F ISBN: 979-10-96389-07

[2] C. Angioni et al., Plasma Phys. Control. Fus. 51 (2009) 124017

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