Theoretical Plasmaphysics

Bachelor Thesis

Zonal Flows and the convergence of the wavelength with the Box Size

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Information

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Bibliography

Diamond, P H, Itoh, S-I, Itoh, K & Hahm, T S 2005 Zonal flows in plasma - a review. *Plasma Physics and Controlled Fusion* 47 (5), R35–R161.

Garbet, X., Idomura, Y., Villard, L. & Watanabe, T.H. 2010 Gyrokinetic simulations of turbulent transport. *Nuclear Fusion* 50 (4), 043002.

Peeters, A. G., Rath, F., Buchholz, R., Camenen, Y., Candy, J., Casson, F. J., Grosshauser, S. R., Hornsby, W. A., Strintzi, D. & Weikl, A. 2016 Gradient-driven flux-tube simulations of ion temperature gradient turbulence close to the non-linear threshold. *Physics of Plasmas* 23 (8), 082517.

Rath, F., Peeters, A. G., Buchholz, R., Grosshauser, S. R., Migliano, P., Weikl, A. & Strintzi, D. 2016 Comparison of gradient and flux driven gyro-kinetic turbulent transport. *Physics of Plasmas* 23 (5), 052309.