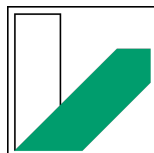


Theoretical Plasmaphysics

Bachelor Thesis

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

Manuel Lippert



Information

| | |
|-------------------|---|
| Day | May 23, 2022 |
| Place | Universität Bayreuth |
| Supervisor | Professor Arthur Peeters, Florian Rath |
| Author | Manuel Lippert (Manuel.Lippert@uni-bayreuth.de) |

Contents

| | | |
|----------|-------------------------------|----------|
| 1 | Introduction | 4 |
| 2 | Theoretical Background | 5 |
| 3 | Protocol | 6 |
| 4 | Evaluation | 7 |
| 5 | Closure | 8 |
| 6 | Bibliography | 9 |

1 Introduction

2 Theoretical Background

3 Protocol

4 Evaluation

5 Closure

6 Bibliography

- [1] 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.
- [2] GARBET, X., IDOMURA, Y., VILLARD, L. & WATANABE, T. H. 2010 Gyrokinetic simulations of turbulent transport. *Nuclear Fusion* 50 (4), 043002.
- [3] 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.
- [4] 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.