OP2.1-OP2.2 Electrostatic core turbulence proposals



Purpose

- Ensuring all proposal requirements are met and proposals are submitted on time
- Transparent development and sharing of information

 \rightarrow Please upload your slides to the Datashare folder

• Identify gaps in current experimental plan

Current timeline

- Current leader in next meeting scheduler: Wed., March 9th, 2022 15:30 CEST
- Proposal submission window:

- Mon., April 4th-April 30th, 2022
- Suggested deadline for proposal draft: Mon., March 28th, 2022
 - \rightarrow Opportunity for differentiation of proposals based on specific interest

 \rightarrow Ensuring all preparatory experiments are proposed

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Proposal sharing and development tools

MPCDF Datashare – Proposals folder: <u>https://datashare.mpcdf.mpg.de/s/DLSsZfZEU62SuW3</u>

- Can upload / download / edit with url
- Allows using track changes with word documents
- No backup tool or version control -> requires manual backups

• "Google docs" – OP2.1 proposals:

https://docs.google.com/document/d/1BxhXvOlpYEJVacZCE8z9zILV_fhgH6FMn-s1q16v9tM/edit?usp=sharing

- In browser / multi-user editing and version control with url
- Template with W7-X proposal requirements included
- Other suggestions? / Progress?

Notes for new or novel magnetic configurations in proposals



- Although we can change configurations mid-day, it is highly frowned upon (counts as a coil cycle)
 → One configuration per day, we may need to be able to fill a run-day
- "Very exotic" configurations will need to be analyzed by the engineering departments.
- E4 can help with some basic calculations / checks for higher heat loads and whether field lines intersect the pump gap / baffles. ... possibly not necessary for "low" heating powers
- It will be easier for session planning and proposal selection if the "zoo" of magnetic configurations can be reduced to a lower number of similar configurations:

→ If your proposal is interested in a "new" or "novel" configuration, please make a list of the different coil currents used in your configuration for our next meeting. We will attempt to identify similar configurations.

Agenda – 2nd coordination meeting – Proposals



	Proposal title	Presenter
5 mins	Intro	Weir
15 mins	Particle transport in ECRH plasmas (Steady state profiles and gas puff modulation experiments; also discussed in the TG Profiles)	Fuchert
	Investigation of the particle Pinch in ECRH plasmas (using ECRH deposition scan)	
	Density peaking at very high gas fueling with O2 heating	
15 mins	Te/Ti scans for core ITG growth rate control with ECRH	Beurskens
	Te/Ti scans for core ITG growth rate control with ECRH and ICRH	
	ITG growth rate control whilst varying the ratio of Te/Ti at constant Qi (ECRH deposition scan)	
10 mins	Massive LBO injection for edge profile control	Alcusón
	Boron injection and its effects on turbulence / impurity seeding and modif. of core heat/particle transport (HSX/LHD)	
5 mins	Search for / characterization of UI	Proll
	Testing the stabilization of CTEM with increasing quasi-isodynamicity by varying the plasma beta (moved to EM turbulence)	
15 mins	Electron temperature gradient control with off-axis ECRH power density scans for TEM/ETG studies	Weir
	The ITG-TEM transition and its dependence on collisionality	
	Stability survey of the density gradient driven TEM while holding collisionality	
	ECH density pump-out in W7-X and the ITG-TEM transition	
	Configuration comparison high/low/negative mirror (with matched profiles)	
	Matching physics parameters and fluxes to nonlinear gyrokinetic calculations at the ion-scale	

Preliminary Agenda – 3rd coordination meeting – Proposals



	Proposal title	Presenter
5 mins	Intro	Weir
10 mins	Turbulence during power step-down induced edge density gradients	Hansen
	ECH density pump-out in W7-X and the ITG-TEM transition	
15 mins	Localization of ion-scale fluctuations in the plasma core	
	Effect of increased elongation / iota on ITG turbulence localization and instability	Trimino-Mora /
	Shear stabilization of ion scale driftwave turbulence (part 1: flow shear, part2: magnetic shear)	Weir
	Symmetry and amplitude of ionscale fluctuations upon field reversal	
	Pending	Bähner
	Compilation of magnetic configurations and Open discussion of experimental holes	

