

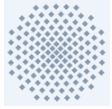
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Flow and momentum transport (Hidalgo)

- Different level of theory (Ida's tutorial talk)
- Importance of perturbative exp. and role of magnetic topology
- NC viscosity optimization (what extent?), Coupling between NC and AN viscosities, ZF physics
- Turbulence measurements in mirror and QHS in HSX, tendency is in agreement from NC, but the absolute value is larger. → NC and AN coupling ?
- Coupling between sheared flow and level of turbulence
- Diagnostic improvement → trigger of new physics

Projections of ITER/optimized stellarator plasma performance require better understanding of rotation



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Actions

Link NC vs AN

- ZF (LHD/CHS/TJ-II/....), we can change the damping rate
- NC vs AN viscosity (HSX/TJ-II/H-J/....), iota window for H mode in W7-AS, (H-J ?)

Perturative exp.

- Diffusivity and convection velocity (tokamaks vs LHD/TJ-II/....)

Diagnostic development

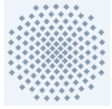
- Dual HIBP/probes
- Fast cameras : damping physics (H-J/TJ-II), filaments (LHD vs JET/....)

Poloidal/toroidal flows, turbulence and electric fields

- Symmetry breaking, magnetic topology
- Spontaneous flow in helical systems

Inter-linkage between flow, impurity and edge physics

Edge structure difference between helical systems and tokamaks



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NC plasma flow(Spong)

- Hidden variable in the DB ? , relation to ZF ?
- Moments methods → 3D flow variations and flow-shearing rates, efforts underway
- local poloidal flow shear on effective ripple: no clear trend so far
- NC EXB shearing provides non-negligible background
- Inclusion of flow characteristics into the DB ?**
- Inclusion of beam momentum input ? (being discussed in benchmarking collaboration.)