

Group 01

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| WP10-TRA-01-02-xx-01/MEdC Zonal flow generation and particle trapping in the structure of the turbulent potential Further studies of a newly proposed model of zonal flows including DC electric fields. | MEdC | 0.40 | 0.00 | 0.00 |
| WP10-TRA-01-04-xx-01/MEdC Quasi-coherent precursors and generation of filaments in the H-mode rotation layer Study of the quasi-coherent modes and and of the stationary state of the Edge Localized Modes Study of the stationary parallel dynamics and saturation of the filaments generated in strong Kelvin-Helmholtz events in the H-mode regime. | MEdC | 0.40 | 0.00 | 0.00 |
| WP10-TRA-01-05-xx-01/MEdC Stochastic reduced models of different plasma regimes and description of the transition in term of global parameters Elaboration and study of two different scenarios (S-shape bifurcation and stochasticity induced bifurcation) in the framework of stochastic reduced models of plasma turbulence. Comparative study of predictions on the hysteresis effects in the framework of reduced stochastic models of the L/H transitions. In both class of models the dependence of the edge turbulent transport on the main parameter- the fuelling rate, will be studied. The results will be compared with experimental aspects of L/H transitions. | MEdC | 0.20 | 0.00 | 0.00 |

Group 03

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| <p>WP10-TRA-03-01-xx-01/MEdC Numerical experiments with low dimensional kinetic models of the impurity transport Perform studies of particle transport including impurities with: - statistical properties of the electric field extracted from gyrokinetic simulations without impurity. - stochastic electric field, with given statistical properties, numerically generated. The simulations will be performed on the 2 and 3 dimensional versions of the gyrokinetic code GYSELA with Landau collision term. The computing facilities from ULB and CEA-Cadarache will be used.</p> | MEdC | 0.20 | 0.00 | 0.00 |
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| <p>WP10-TRA-03-03-xx-01/MEdC Impact of central electron heating on both electron and ion temperatures, and on particle and impurity densities Improvements in analytical description of power density deposition profile of ICRH for diverse species obtained previously will be used to describe the variation of the density of particles, both electrons and ions, due to turbulence in presence of radio frequency heating. The analysis of the dispersion equation of ITG instability for a multi-species plasma with a radio-frequency heating (ECRH and ICRH) will be continued both by analytic and numeric way. The modification of particle and impurity densities due to both turbulent transport and influence of the radio-frequency heating will be described.</p> | MEdC | 0.30 | 0.00 | 0.00 |
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Group 05

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| <p>WP10-TRA-05-01-xx-01/MEdC Study of the turbulent structures and intermittency by stochastic differential equations Stochastic models of the intermittent events of the edge plasma turbulence will be studied. Characterization of the intermittent events and particle transport on the plasma boundary in term of the singularity structure of the stationary probability density function will be performed.</p> | MEdC | 0.20 | 0.00 | 0.00 |
| <p>WP10-TRA-05-01-xx-02/MEdC Effects of filamentary structures on impurity and density transport A test particle approach will be used to study structures and impurity dynamics at the plasma edge.</p> | MEdC | 0.30 | 0.00 | 0.00 |
| <p>WP10-TRA-05-03-xx-01/MEdC Test particles simulations for impurities in the edge region with focus on particle and heat transport Use the DCT method and test particle simulations to study impurity transport, as well as runaway electrons.</p> | MEdC | 0.30 | 0.00 | 0.00 |