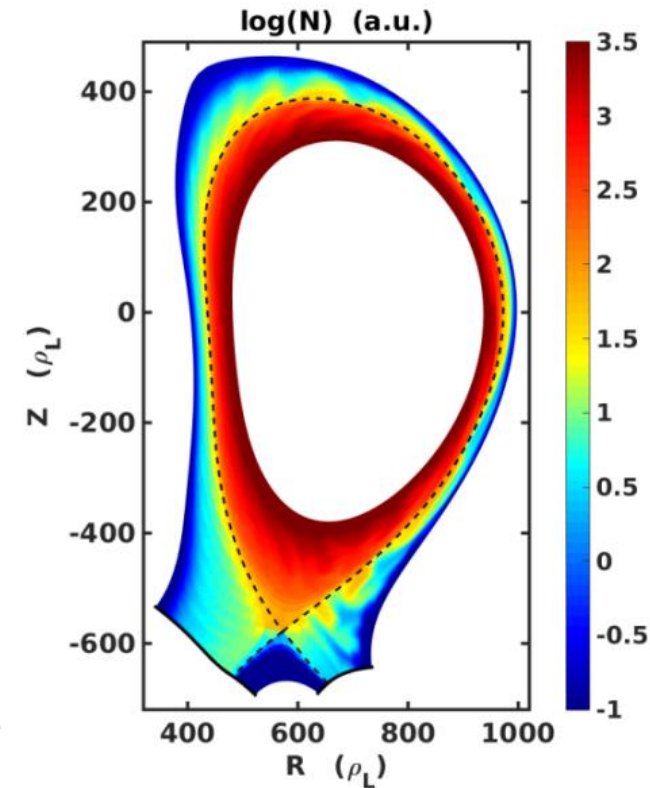- Progress in development of **2 complementary plasma edge modelling tools**:

  1) **SOLEDGE2D-EIRENE**, 2D mean-field code
     - multi-species simulations
     - perpendicular drifts

  2) **TOKAM3X**, 3D global turbulence code
     - first fluid flux-driven 3D turbulent simulation in divertor geometry
     - coupling with EIRENE for kinetic neutrals

- Intermediate approach proposed to allow **self-consistent description of transverse transport in mean-field simulations**:

  - inspired from **fluid dynamics' Reynolds-Average Navier Stokes** approaches
  - successful **transposal to interchange turbulence** model $\Rightarrow$ first ever recovery of ballooning properties of transport in mean-field simulation

TOKAM3X simulation in diverted geometry (electron density field)