Non-linear MHD simulations of ITER VDE with runaway electrons

Non-linear MHD simulations of ITER VDE with simultaneous generation of runaway electrons using JOREK-STARWALL* code

- Cold VDE of a non-stochastic post thermal-quench plasma
- \( I_p = 15 \text{MA} \), constant density and constant temperature
- Effects of all conducting structures considered
- Fluid model for runaway electrons

Preliminary results

- RE current profile peaking leads to \( q < 1 \)
- \((1,1)\) mode observed to dominate in the presence of REs$

\* Hoelzl et. al. J. Phys 2012
\# Artola et. al. NF 2018
\$ Aleynikova et. al. PPR 2016