Securing High β_N JT-60SA Operational Space by MHD Stability and Active Control Modelling *T. Bolzonella et al., TH/P1-18*



- The research program of the new JT-60SA tokamak, being built jointly by Europe and Japan, is approaching its final elaboration. One of the main JT-60SA goals is to qualify high beta regimes for ITER and future reactors like DEMO.
- Strong joint efforts are ongoing to secure a wide operational space at high β_N by modeling MHD stability and its active control in relevant scenarios.

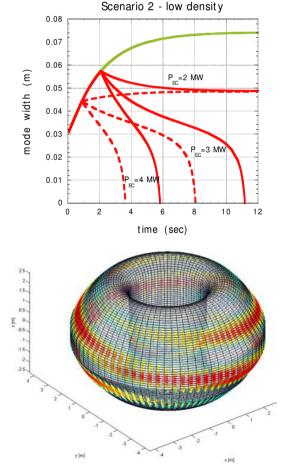


NTM stability and control by EC have been modeled in a full current, inductive H-mode scenario. Tools are part of the EU integrated modeling effort. This study opens the way to self consistent studies on NTM evolution, including effects on transport, in ITER relevant conditions.



RWM stability and control modeling is being developed in a **fully 3D environment**, including realistic description of passive boundaries, real time diagnostics, active coils and control software. Final aim is the identification of **robust** non-inductive scenarios for **DEMO** studies.





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