



Contribution ID: 8

Type: **Talk**

[212] MHD simulations of runaway electron avalanche in ITER mitigated disruptions

Thursday 12 September 2024 17:15 (15 minutes)

The avalanche of high-energy runaway electrons (RE) during ITER disruptions could potentially generate several MA's of RE current which might damage the plasma-facing components. Previous studies have suggested that avoiding the formation of such a large RE current would be difficult. However, before their quantity increases to a large value, some REs might be lost due to the scraping-off of the flux surfaces on the wall during the plasma's vertical displacement or the magnetic stochasticity from the growth of MHD instabilities. In our work, this process is simulated with the JOREK code, using a reduced MHD model self-consistently coupled to a RE fluid description.

Author: WANG, Chizhou (Swiss Plasma Center, EPFL)

Co-authors: NARDON, Eric; Mr ARTOLA, Javier (ITER Organisation); Mr GRAVES, Jonathan (Swiss Plasma Center, EPFL); Mr HOELZL, Matthias (Max Planck Institute for Plasma Physics); Ms KONG, Mengdi (Swiss Plasma Center, EPFL); Mr BANDARU, Vinodh (Indian Institute of Technology Guwahati)

Presenter: WANG, Chizhou (Swiss Plasma Center, EPFL)

Session Classification: Applied Physics

Track Classification: Applied Physics; Plasma Physics