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【211】Analysis of natural disruptions on JET with JOREK

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Tokamak disruptions pose significant challenges in fusion research. Although it has been widely accepted that natural disruptions are caused by the growth of tearing or neoclassical tearing modes[1], studies have shown that the finite resistivity of the wall can have a significant effect on the thermal loss of the plasma[2]. This study investigates the chain of events leading to disruptions, focusing on the role of tearing modes and their dependence on wall resistivity. JOREK-STARWALL[3] simulations are being conducted based on a JET discharge in which natural disruption was observed. These simulations serve to benchmark previous studies based on M3D simulations and to conduct further analysis of Resistive Wall Tearing Modes.

Author: EDES, Lili (EPFl SPC)

Co-authors: GRAVES, Jonathan (Swiss Plasma Center, EPFL); Dr KONG, Mengdi

Presenter: EDES, Lili (EPFl SPC)

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