Abstract Submitted
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Effects of Thin Shell on the Resistive Wall Mode in Keda Torus eXperiment[1] WEI BAI, University of Science and Technology of China, PING ZHU, University of Science and Technology of China, University of Wisconsin-Madison, TAO LAN, HONG LI, JIN-LIN XIE, AH-DI LIU, University of Science and Technology of China, CHI-JIN XIAO, University of Saskatchewan, WEI-XING DING, University of California, Los Angeles, WAN-DONG LIU, University of Science and Technology of China — Keda Torus eXperiment (KTX) is a new reversed field pinch (RFP) with a copper thin shell. The stability of resistive wall modes (RWMs) is crucial for the sustained operation of KTX. The standard formulation of dispersion relation for RWM based on the MHD energy principle has been evaluated for a cylindrical $\alpha - \Theta_0$ model of KTX plasma equilibrium, in an effort to investigate the effects of thin shell on the RWM in KTX. Full MHD calculations of the linear RWM in KTX using the NIMROD code are also being developed. The detailed comparisons between theoretical analyses and NIMROD calculation results, for KTX equilibria with and without rotation, are to be presented and discussed.

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