Magnetic Island Behavior under Non-axisymmetric Halo Current at Vertical Displacement Event

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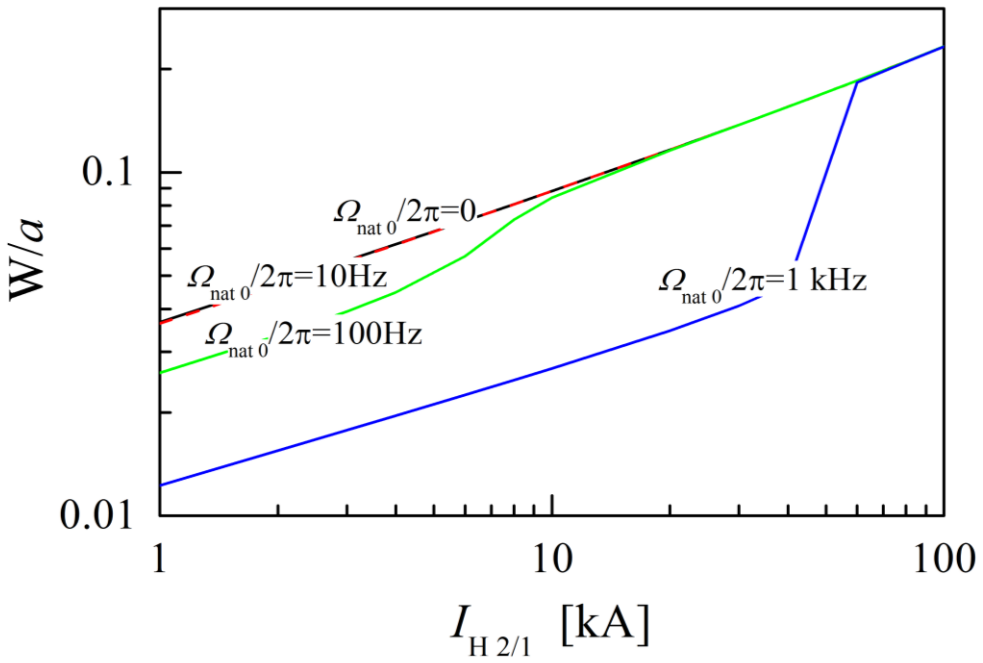

Dependences of magnetic island width on the amplitude of halo current resonant harmonic at different values of natural plasma rotation frequency

- **Magnetic island generation under RMP induced by non-axisymmetric halo current at the cold Current Quench stage of disruption in an ITER-scale tokamak was numerically investigated**
- **The width of magnetic islands produced by resonant halo-current component does not heavily depend on intrinsic stability of the tearing mode**
- **These islands occupy a considerable part of plasma volume and presumably deteriorate confinement of energetic Runaway Electrons. Therefore, these islands can be helpful in preventing the RE development**