Contributions from “A multi-machine analysis of non-axisymmetric and rotating halo currents” (EX/P6-46)

- ITPA-initiated study of halo current non-axisymmetry and rotation in C-Mod, DIII-D, AUG, and NSTX
- Some portion of halo current pulses in each machine exhibit non-axisymmetric and rotating behavior
- a, Halo current rotation frequency scales as $f_h \sim 1/R_0 \rightarrow$ characteristic rotation velocity, $v_h \sim 3–7 \text{ km/s}$
- b, Halo current duration does not scale strongly with major radius
- Conclusion: The most dangerous rotation frequencies ($f_h < 40 \text{ Hz}$) are unlikely to complete the 2–3 full rotations required for the dynamic amplification of stresses in ITER