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## **Pulsed field stability and AC loss of Nb<sub>3</sub>Sn CICC by quantitative modeling and experiments**

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The performance during an operating plasma scenario of Nb<sub>3</sub>Sn Cable-in-Conduit Conductors (CICCs) designs envisaged for the ITER Central Solenoid has been analyzed with the code JackPot-ACDC. At present there is no experimental facility available to test the stability of the conductors under relevant pulsed plasma operating conditions. Only limited experimental data is existing that is suitable for quantitative analysis but the time and magnetic field amplitude scales are different from the actual ITER operating conditions. Nevertheless, such tests are particularly useful for benchmarking of the code. To better assess the stability margins for the ITER magnets, the computed local electric field on the strands at most severe conditions during the plasma scenario is compared with the one obtained from the single harmonic pulse test performed in the SULTAN facility and DC transport current tests determining the current sharing temperature. The results of the stability test with the single harmonic magnetic field pulse is scaled to the ITER plasma operating conditions by using the numerical model. The first results are presented and discussed.

**Primary author:** NIJHUIS, Arend (University of Twente)

**Co-authors:** DEVRED, Arnaud (DAPNIA); Dr DIJKSTRA, Marcel (University of Twente); BAGNI, Tommaso (University of Twente)

**Presenter:** NIJHUIS, Arend (University of Twente)

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