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## Introduction and results of the Bonding Experiments (BOX).

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BONDing eXperiments (BOX) are a novel, affordable and fast benchmarking solution aiming to reproduce specific mechanisms of training and performance limitations in Nb<sub>3</sub>Sn and Nb-Ti superconducting magnets. The BOX samples are tested at the University of Twente at 4.2 K within a solenoidal background field with sufficiently high magnetic forces. Following conventional manufacturing processes, the fully instrumented BOX samples have been shown to exhibit training and memory behavior similar to their respective full-scale magnets. Improvements to the fabrication of the BOX samples have successfully reduced training and more unconventional impregnation systems such as paraffin wax have reached the estimated ISSL with no training quenches at all. In this contribution we will discuss in detail the experimental results of the first test series of BOX samples.

**Primary author:** DALY, Michael (PSI - Paul Scherrer Institute)

**Co-authors:** AUCHMANN, Bernhard (PSI - Paul Scherrer Institute); HUG, Christoph (PSI - Paul Scherrer Institute); Mr SIDOROV, Serguei (PSI - Paul Scherrer Institute); KARIO, Anna (University of Twente); DHALLÉ, Marc (University of Twente); OTTEN, Simon; TEN KATE, Herman

**Presenter:** DALY, Michael (PSI - Paul Scherrer Institute)

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