



Contribution ID: 1034 Contribution code: THU-PO3-710-06

Type: Poster

## Minimum Quench Energy of Nb<sub>3</sub>Sn Wires and Rutherford Cables with High Specific Heat

*Thursday, 18 November 2021 10:00 (20 minutes)*

A major problem of state-of-the-art Nb<sub>3</sub>Sn accelerator magnets is their long training due to thermo-mechanical perturbations. Increasing the specific heat,  $C_p$ , of the Rutherford cable would reduce and/or eliminate training by limiting its temperature rise. This paper studies feasibility of increasing the  $C_p$  of Nb<sub>3</sub>Sn Rutherford-type cables by using composite Cu/Gd<sub>2</sub>O<sub>3</sub> and Cu/Gd<sub>2</sub>O<sub>2</sub>S tapes produced by Hyper Tech Research, Inc. Nb<sub>3</sub>Sn wire and cable samples outfitted with these high- $C_p$  ribbons, or tapes, were prepared and tested at FNAL for the Minimum Quench Energy (MQE). The experiment was performed for both cases of localized and distributed disturbances.

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**Session Classification:** THU-PO3-710 Stability