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Single-strand excitation for examining current sharing and ICR in cored and non-cored Nb₃Sn Rutherford Cable at 4.2 K up to 12 Tesla

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A rig was fabricated to test single-strand excitation and current sharing in Nb₃Sn Rutherford Cables. Measurements were performed on a 40 centimeters length of 27-strand cored and non-cored cables which were mounted on a U-shaped holder. Samples were reacted and epoxy impregnated using magnet-like protocols. Current was injected into a single strand at varying I/I_c and a heat pulse was used to initiate current sharing. Current-distribution was measured using voltage taps. These measurements were performed as a screening for cable and cable preparation protocol for larger scale measurements.

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