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## Current sharing, quench, and normal zone propagation in YBCO CORC and Roebel cables

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A two layer CORC (Cable on Round Conductor) cable, 156 cm long, was tested for stability and normal zone propagation at 77 K in liquid nitrogen bath. The cable was instrumented with potential taps and wires on each strand covering its central portion (i.e. excluding the end connections of the cable with the outside world). A heater was placed on top of the cable which allowed pulses of various powers and durations to be generated. DC transport currents of some percentage of the cable critical current were applied. During and after the heat pulse NZP was measured by a high speed data acquisition card (DAQ) controlled via LabView software. Shrinking as well as expanding normal zones have been detected. The cable showed a high degree of stability. It was able to carry a current of  $0.58I_c$  with maximum temperature of 250 K for nearly 6 minutes and  $0.635I_c$  with maximum temperature of 300 K for 1 minute without damage. The cable had relatively low current sharing, even with uninsulated strands. These results were compared to a Roebel cable measured for quench at 4.2 K in liquid helium and 10 T. It was mounted on a u-shaped holder and instrumented with voltage taps and a heater. This cable had intentional solder connections between the strands.

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