



Contribution ID: 400

Type: **Poster Presentation of 1h45m**

## Effect of Background Magnetic Field on the Critical Current Degradation under Tensile Fatigue Loading for YBCO Tapes

*Thursday 31 August 2017 13:45 (1h 45m)*

YBCO tapes are subjected to various stresses such as tension, compression, bending, twisting and fatigue in practical application. The influence of mechanical fatigue on the critical current decay behavior has been studied by several research teams. The impact of background magnetic field on the critical current degradation under tensile fatigue loading, however, has been rarely investigated. In this work, strain controlled fatigue behavior including strains up to 0.746% and strain ratios of 0.3, 0.5 and 0.7 will be studied. In addition, the effect of mechanical fatigue strain on critical current under background magnetic field was evaluated at different field angles and fields.

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**Session Classification:** Thu-Af-Po4.08

**Track Classification:** F4 - ReBCO Wires and Cables