



IFAST Video Meeting, 18/10/2022

A. Ballarino, CERN

Update on HiTAT Workshop

A. Ballarino, L. Rossi

Selected dates: 9-10 March (preferred) or 16-17 March

Location: CERN or nearby, e.g. Archamps. If at CERN, a number of rooms will be reserved in the CERN hostel

Workshop announcement: before end of November 2022

Draft program in preparation. Focus is on REBCO tape

First day: conductor and cables (including characterization)

Social dinner

Second day: magnets and associated technology

Specification of REBCO Tape

HTS tape for the IFAST CCT

Geometry

4 mm width

2×20 μm/40 μm of Cu on both sides

40-50 μm substrate

Requirements based on presentation of
E. De Matteis and L. Rossi on 27th September 2022

Unit length

50 m or multiples

Electrical properties

Critical current ≥ 650 A @ 20 K and 5 T (B any direction) - 10 K of temperature margin

Critical current ≥ 800 A @ 10 K and 5 T (B any direction) – Operating conditions

Mechanical properties

Axial tensile strength ≥ 400 MPa (zero I_c reduction)

Minimum bending diameter: 40 mm (zero I_c reduction)

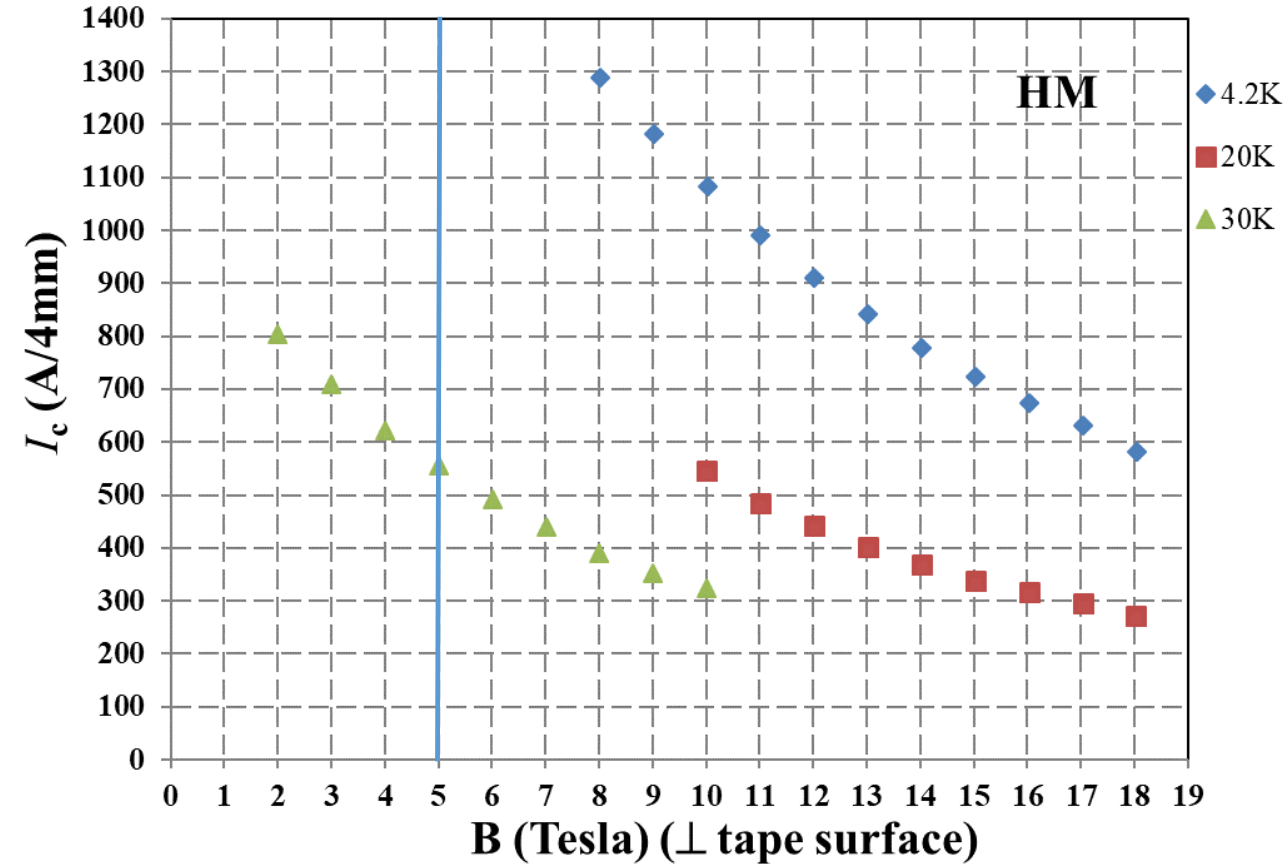
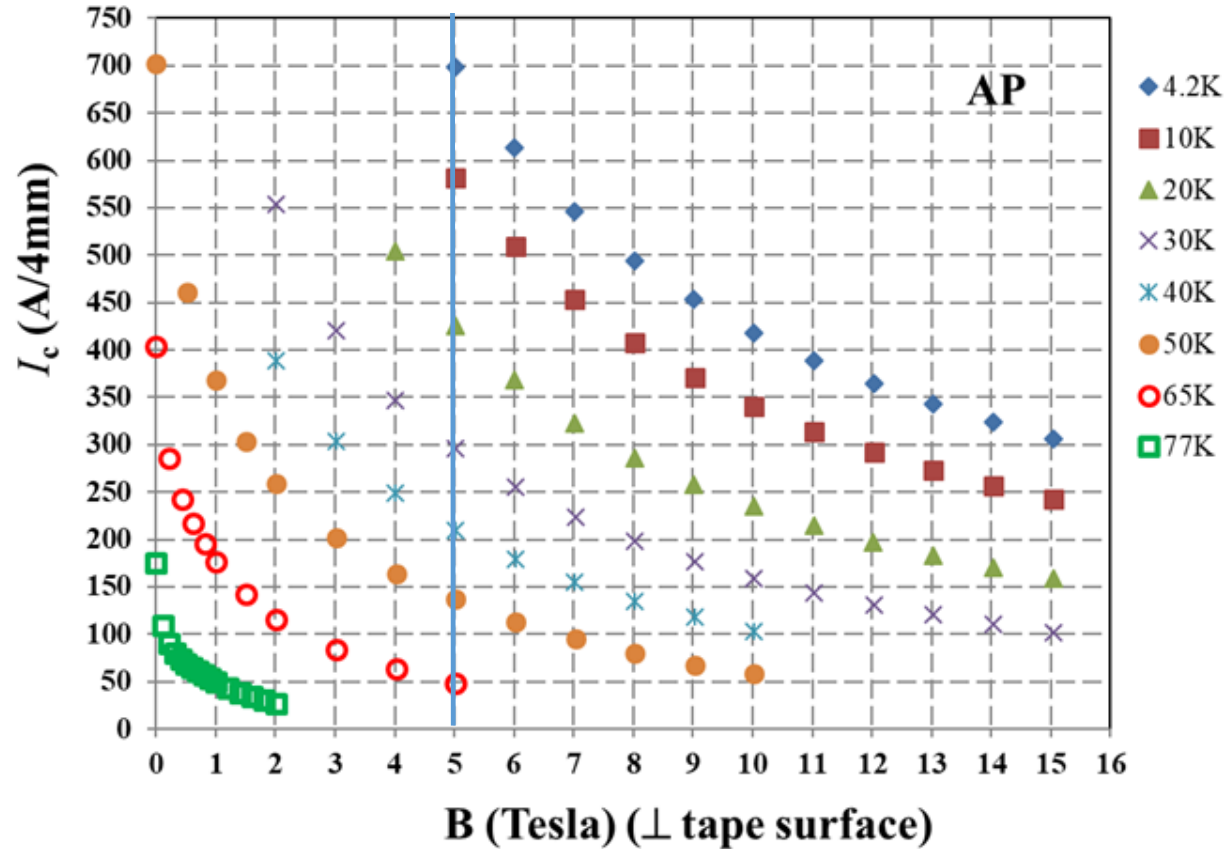
Total quantity

3 km

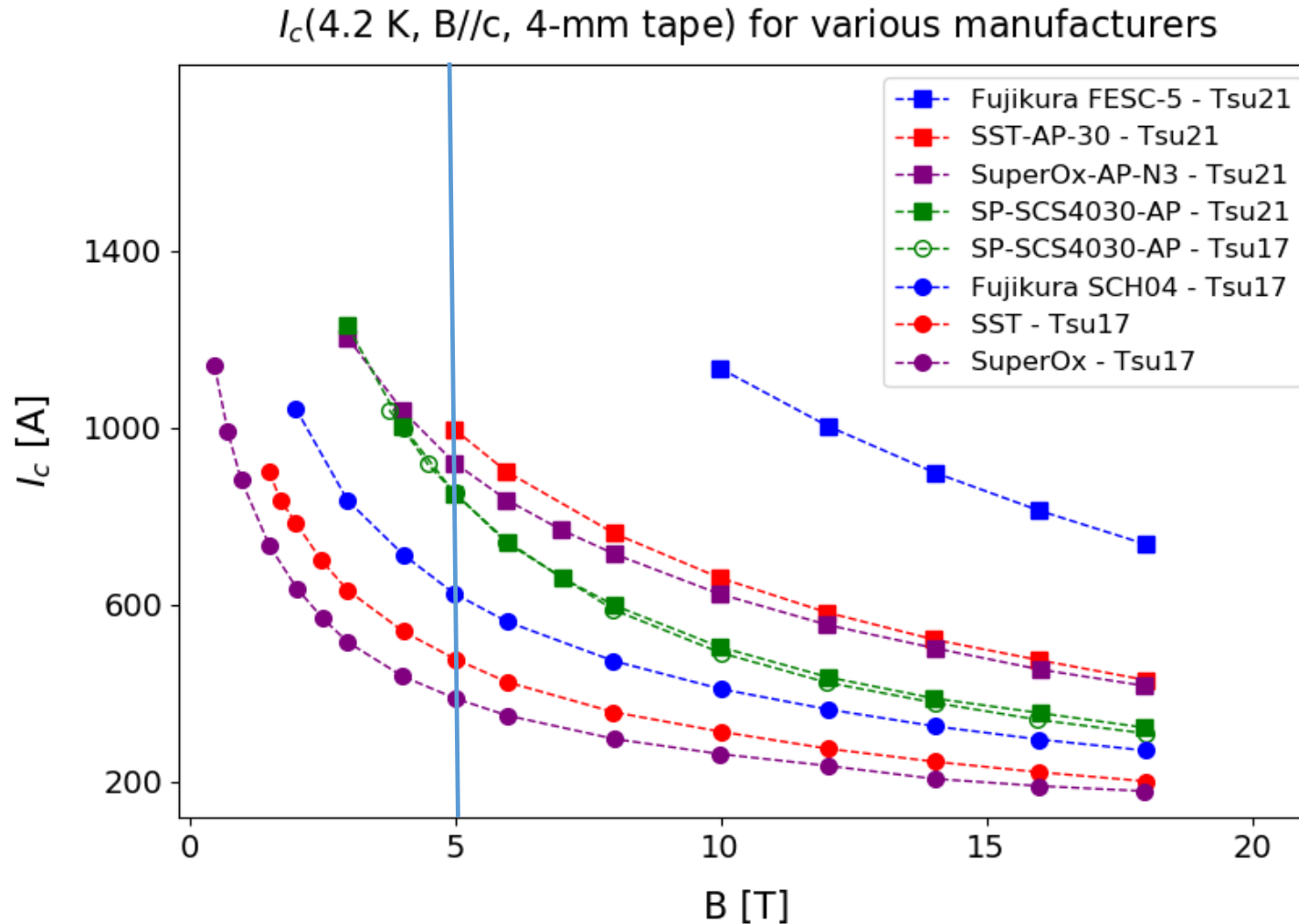
Cable: two tapes co-wound. Operational current ~ 1100 A

Potential suppliers: SuperPower, Theva, Shangai Superconductors, Fujikura, SuperOx (Japan) A. Ballarino, 18/10/2022

Critical current of SuperPower tape (4 mm width)



Critical current of REBCO tapes (4 mm width)



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