

News – 25.7.2024

Preparation for ASC

We have an invited oral on the muon collider magnets, see below:

Session Date & Time: September 2, 2024 from 4:15 PM to 5:45 PM

Session ID & Title: 1L0r2E - Accelerator Magnets: Muon Collider and Detector Magnets

Presentation ID: 1L0r2E-01

Presentation Time: 4:15 PM to 4:45 PM

I will ask for contributions (draft outline in ten days). This is on Monday, so it is an excellent opportunity to point to all other orals and posters in the conferences. Please, corresponding authors, send me (LB) the ID of your contribution, final title, date and time.

Topics for future meetings (proposal)

Critical current properties of HTS tapes procured for the muon collider. Note that we have in house now several km lengths of 4 mm tapes from Fujikura, SST, Faraday, they all meet procurement specs, and in some cases approach target specs (announce yourself for availability).

Scaling of critical current data for design purposes.

Mechanical properties of HTS tapes and windings. A first balance of the studies and measurements on-going, from microscopic scale to macroscopic properties.

Magnetization effects: field quality, losses, forces.

Cooling demonstrator magnet optimization and design.

Status of final cooling solenoid and pancake testing.

Accelerator magnet options. See next point.

Accelerators

As part of the preparation for the ESPP cycle, options are being considered for rapid cycled synchrotrons in the SPS and LHC tunnel. A scenario is appearing that could avoid one RCS, and possibly reduce magnet requirements to the point that a HTS pulsed synchrotron, albeit very challenging, may appear a very interesting option.