Contribution ID: **57** Type: **Invited Oral Presentation**

Progress of the IR superconducting magnets at STCF

Super Tau Charm Facility (STCF), a factory producing massive tau lepton and hadrons, to unravel the mystery of how quarks form matter and the symmetries of fundamental interactions, is under design in China. The STCF is designed to have energy of 2-7 GeV and luminosity higher than 0.5x1035 cm-2s-1 with circumference about 800-900 m. There are two dual-aperture final focus insertion region superconducting magnet (IRSM) systems sites symmetrically respective to Interaction Point (IP) at the center of detector magnet. The IRSM, to squeeze the beam for high luminosity, is the key component in the accelerator hardware elements. Each IRSM consists of 4 high field gradient and high field quality quadrupoles, 2 compensation solenoids and 6 orbit correctors. In this presentation, the progress of the IR superconducting magnet is reported.

Footnotes

Funding Agency

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Yes

Author: MA, Wenbin (High Magnetic Field Laboratory)

Presenter: MA, Wenbin (High Magnetic Field Laboratory)

Session Classification: Magnets, IR, Alignment

Track Classification: WG10 : Magnets, IR, Alignment