FCC Week 2019



Contribution ID: 409

Type: Presentation

Advanced design study of superconducting septum magnet for FCC

Wednesday 26 June 2019 08:50 (20 minutes)

A novel high field septum magnet with truncated cosine theta concept is a key component of FCC. Due to extreme high beam rigidity of FCC, an adequate high field superconducting septum magnet is required to construct the extraction beam line with a reasonable length. By utilizing NbTi technology, a cross section and mechanical design concept for the coil-end of a 4 T septum magnet was presented at FCC Week 2018. It was proved that the concept is very promising. We present our advanced design work such as studies on manufacturing sensitivity to magnetic field quality as well as the 3-dimensional modeling and the magnetic-field evaluation.

Author: SUGITA, Kei (GSI)

Co-authors: ATANASOV, Miroslav Georgiev (CERN); BORBURGH, Jan (CERN); FISCHER, Egbert; SPILLER, Peter-Jurgen; SANZ ULL, Alejandro (Eindhoven Technical University (NL))

Presenter: SUGITA, Kei (GSI)

Session Classification: Special Technologies

Track Classification: FCC accelerator technologies