Contribution ID: **1172** Contribution code: **MOPS142** Type: **Poster Presentation**

Design of the beam transport lines for Super Tau-Charm Facility

Monday 2 June 2025 16:00 (2 hours)

The Super Tau-Charm Facility (STCF) is an electron-position collider proposed in China. The injector of STCF provides high quality electron and position beams at an energy up to 2.5 GeV at a repetition rate of 30 Hz. The beam transport system is composed of the electron bypass transport line, the transport lines from positron Linac to Damping Ring and from Damping Ring to positron Linac, and the injection lines from Linac to the collider ring. The low emittance preservation for both beams as well as the complex composition raise challenges for beam dynamics. The design and simulation of the beam transport system is presented in this report.

Footnotes

Paper preparation format

LaTeX

Region represented

Asia

Funding Agency

Author: HUANG, Ruixuan (University of Science and Technology of China)

Co-authors: ZHANG, Ailin (University of Science and Technology of China); GU, Duan (Shanghai Advanced Research Institute); XU, Jianhao (University of Science and Technology of China); TANG, Jingyu (University of Science and Technology of China); LIU, Xiaoyu (University of Science and Technology of China); YUAN, Youjin (University of Chinese Academy of Sciences)

Presenters: XU, Jianhao (University of Science and Technology of China); LIU, Xiaoyu (University of Science and Technology of China)

Session Classification: Monday Poster Session

Track Classification: MC1 :Colliders and Related Accelerators: MC1.T12 Beam Injection/Extraction and Transport