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STCF injector and positron source design

The proposal for a new generation high-luminosity electron-positron collider, the Super Tau-Charm Facility (STCF), has been put forward in China. The STCF is expected to achieve a luminosity greater than 0.5×10ˆ35 cmˆ-2 sˆ-1 and operate within a center-of-mass energy range of 2 to 7 GeV. Considering the design challenges of the STCF collider ring, swap-out injection has been suggested as one of the alternative injection methods to achieve the desired luminosity. Therefore, the STCF injector will investigate both off-axis injection and swap-out injection methods concurrently. This paper will present the research progress on these two injection methods for STCF.

Footnotes

Funding Agency

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