

# eeFACT 2025 - 70th ICFA Advanced Beam Dynamics Workshop on High Luminosity Circular e+e-Colliders



Contribution ID: 77

Type: **Invited Oral Presentation**

## 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  $0.5 \times 10^{35} \text{ cm}^{-2} \text{ s}^{-1}$  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

### I have read and accept the Privacy Policy Statement

Yes

**Primary author:** ZHANG, Ailin (University of Science and Technology of China)

**Co-authors:** GU, Duan (Shanghai Advanced Research Institute); PEI, Guoxi (Institute of High Energy Physics); TANG, Jingyu (University of Science and Technology of China); Dr HU, Tongning (Huazhong University of Science and Technology); YUAN, Youjin (University of Chinese Academy of Sciences)

**Presenter:** ZHANG, Ailin (University of Science and Technology of China)

**Session Classification:** Injector, Injection

**Track Classification:** WG6 : Injector, Injection