

STCF 模拟和离线事例重建软件

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With an electron-positron collider operating at center-of-mass-energy 2~7 GeV and a peak luminosity above $0.5 \times 10^{35} \text{ cm}^{-2} \text{ s}^{-1}$, the STCF physics program will provide a unique platform for in-depth studies of hadron structure and non-perturbative strong interaction, as well as probing physics beyond the Standard Model at the τ -Charm sector succeeding the present Beijing Electron-Positron Collider II (BEPCII). A performant, extendable and maintainable offline event processing software to reconstruct and identify particles and events is very crucial to the design and construction of the detectors, and to eventually fulfill the physics targets and to further maximize the physics potential at the STCF.

In this talk, I will give an overview of the STCF offline event processing software, focusing on the event reconstruction algorithms and physics analysis tools implemented for STCF and their performance. Innovative algorithms such as machine learning techniques which are exploited to maximize the overall performance will be highlighted.

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