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The progress of Super Tau Charm Facility in China

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The proposed STCF is a symmetric electron-positron beam collider designed to provide e^+e^- interactions at a center-of-mass energy from 2.0 to 7.0 GeV. The peaking luminosity is expected to be $0.5 \times 10^{35} \text{ cm}^{-2}\text{s}^{-1}$. STCF is expected to deliver more than 1 ab^{-1} of integrated luminosity per year. The huge samples could be used to make precision measurements of the properties of XYZ particles; search for new sources of CP violation in the strange-hyperon and tau-lepton sectors; make precise independent measurements of the Cabibbo angle (θ_c) to test the unitarity of the CKM matrix; search for anomalous decays with sensitivities extending down to the level of SM-model expectations and so on. In this talk, the physics interests will be introduced as well as the recent progress on the project R&D.

Consent

I consent to recording/broadcasting my presentation.

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