

Software framework for the Super Charm-Tau factory detector project

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The project of Super Charm-Tau (SCT) factory – a high-luminosity electron-positron collider for studying charmed hadrons and tau lepton – is proposed by Budker INP. The project implies single collision point equipped with a universal particle detector. The Aurora software framework has been developed for the SCT detector. It is based on trusted and widely used in high energy physics software packages, such as Gaudi, Geant4, and ROOT. At the same time, new ideas and developments are employed, in particular the Aurora project benefits a lot from the turnkey software for future colliders (Key4HEP) initiative. This paper describes the first release of the Aurora framework, summarizes its core technologies, structure and roadmap for the near future.

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