

## Beam Background Study for the CEPC Silicon Tracker

*Wednesday, 23 October 2024 21:32 (1 minute)*

The hit rate study for the CEPC silicon tracking system, induced by beam background processes such as pair production, will impact irradiation, data rates, and the design of the detector, particularly for the CEPC operating in high-luminosity Z-pole mode. In addition to beam properties, the hit rate is influenced by factors such as the distribution of materials near the interaction point, detector materials, sensor granularity, and hit response. This presentation will provide a detailed analysis of the hit rate for the CEPC silicon tracker using simulations with the CEPC software CEPSCW.

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**Session Classification:** Poster

**Track Classification:** Detector and System: 12: Silicon Detector