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Developing and evaluating kink finding method with BSM models in ILD

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Charged Long Lived Particles can produce a characteristic “kinked” track when they decay. Since the ILD-TPC can measure more than 200 hits along a particle’s trajectory, it is a very powerful tool to detect such kinked tracks. In this study, based on full detector simulation, a new improved kink finding method was developed for the TPC. The potential to constrain different BSM scenarios will also be presented.

Primary author: NAKAJIMA, Jurina (SOKENDAI/KEK)

Co-author: JEANS, Daniel (KEK / IPNS)

Presenter: NAKAJIMA, Jurina (SOKENDAI/KEK)

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