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Near or Far Detectors? Optimizing Long-Lived Particle Searches at Electron-Positron Colliders

Wednesday 25 May 2022 09:30 (20 minutes)

In this talk, I will explore the discovery potential for long-lived particles at the 250-GeV ILC. I will discuss possible gains of a dedicated far detector over the main detector for sub-GeV axion-like particles a, produced via e+ e− ⟶ aγ or e+ e− ⟶ Zγ ⟶ (aγ)γ and decaying into pairs of charged leptons. Our conclusions can also help optimizing long-lived particle searches at the FCC-ee and other high-energy e+ e- colliders. [2202.11714]

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