

Searching for long-lived particles at the LHC and beyond: Ninth workshop of the LLP Community



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Dark photon from scalar boson decays at FASER

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FASER is one of the promising experiments which search for long-lived particles beyond the Standard Model. In this talk, we focus on dark photon associating with an additional $U(1)$ gauge symmetry, and also a scalar boson breaking this $U(1)$ symmetry. The sensitivity to the dark photon originated from $U(1)$ breaking scalar decays is studied. We show that a sizable number of dark photon signatures can be expected in wider parameter space than previous studies.

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