

Searches for long-lived particles with the CMS experiment

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Most searches for new physics at the Large Hadron Collider assume that a new particle produced in pp-collisions decays almost immediately or is non-interacting and escapes the detector. However, a variety of new physics models predict particles that decay inside the detector at a discernible distance from the interaction point. Such long-lived particles would create spectacular signatures that evade many prompt searches. This talk will present recent CMS searches for new long-lived particles using Run 2 data. This talk will also highlight the experimental challenges that these signatures pose for the trigger, offline reconstruction, and non-standard backgrounds.

Are you are a member of the APS Division of Particles and Fields?

Yes

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