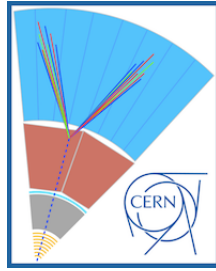


Searching for long-lived particles at the LHC: Sixth workshop of the LHC LLP Community



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Searching for long-lived particles with the CMS High Granularity Calorimeter

Wednesday, 27 November 2019 17:15 (15 minutes)

We focus on a new tool, the Phase-2 Upgrade of the CMS endcap calorimeter which is a high granularity silicon-based calorimeter (HGCAL). It is a nice stand-alone detector, which has its own trigger, tracker, calorimeters. It also has intrinsic high-precision timing capabilities due to silicon sensor. We study the long-lived particle signal from Higgs decay at the HGCAL, from gluon fusion and vector boson fusion Higgs production. The track based variables have been developed to suppress QCD and fake track backgrounds. The final results depends on trigger performance and are generally promising.

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