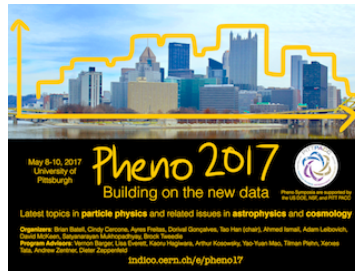


Phenomenology 2017 Symposium



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Searches for dark matter at CMS

Monday 8 May 2017 14:00 (15 minutes)

Dark matter (DM) is currently one of the most striking hints of new physics. Its existence is suggested by many astrophysical observations, yet the Standard Model of particle physics does not provide any candidate particle to explain its abundance in the universe. According to some theoretical models, DM is made of weakly interacting massive particles with masses at the TeV scale. This assumption is consistent with the observed DM density and implies the possible direct production of DM at hadron colliders.

The CMS experiment at the CERN Large Hadron Collider has an extensive search program focused on DM. This talk describes the analysis strategy and the current status of the search for DM at CMS based on almost 40 fb^{-1} of data collected at 13 TeV in 2016. The discovery potential, in view of the forthcoming LHC restart, is also discussed.

Summary

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