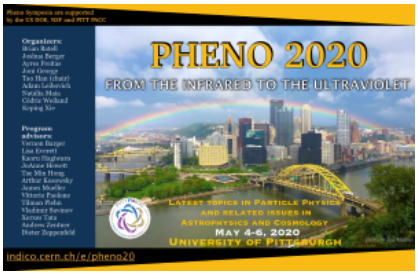

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Search for dark matter at CMS

Monday 4 May 2020 14:30 (15 minutes)

A large body of cosmological evidence points to the existence of dark matter in the Universe which cannot originate from standard model (SM) particles. Hence unraveling its origin remains one of the outstanding problems of particle physics and cosmology. The dark matter search program at the LHC covers a wide range of final states and targets a variety of possible interactions between dark matter and SM particles. A summary of the dark matter searches performed at the CMS experiment, using proton-proton collision data collected at a center-of-mass energy of 13 TeV, is presented. Searches performed in various final states are described, and results interpreted in terms of several dark matter models are presented. These results are also compared to the results from direct and indirect dark matter searches.

Summary

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