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Searches for dark matter in CMS in non-hadronic final states

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Searches for a weakly interacting particle candidate (WIMP) for dark matter at the Large hadron Collider complement the WIMP direct detection experiments and is one of the major physics goals of the LHC. A series of analyses in CMS (and ATLAS) are aimed at detecting events where a pair of WIMPs may have been produced and recoiled against a visible particle. Such events give rise to final states with large Missing ET and a high pT object, e.g. a jet, a photon, or a weakly interacting gauge boson. Searches for dark matter in final states with invisible particles recoiling against leptons and photons are presented in this talk. Various topologies are explored where several dark-matter production modes are covered. The talk focuses on the recent results obtained using the data collected during 2016 run of the LHC.

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