Search for new physics in final states with an energetic jet or a hadronically decaying W or Z boson using 35.9 fb$^{-1}$ of data at $\sqrt{s} = 13$ TeV

Abstract

A search for dark matter and extra dimensions are presented using events containing an imbalance in transverse momentum and one or more energetic jets. The data of proton-proton collisions at the LHC were collected with the CMS detector, and correspond to an integrated luminosity of 35.9 fb$^{-1}$. Results are presented in terms of limits on the dark matter production in association with jets or vector bosons in a simplified models, nonthermal dark matter models, and fermion portal dark matter models. Results are also interpreted in terms of the decay of the standard model Higgs boson to invisible particles and as limits on the Planck scale in the ADD model with large extra spatial dimensions.


See Rouzbeh’s talk and Sonaina’s talk.