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Search for new phenomena in final states with an energetic photon or jet and large missing transverse momentum in pp collisions with the ATLAS detector

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Searches for new phenomena in final states with an energetic photon or jet and large missing transverse momentum (MET) are presented. The searches use 20 fb^{-1} of $\sqrt{s} = 8 \text{ TeV}$ data collected with the ATLAS detector at the LHC. Good agreement is observed between the number of events in data and Standard Model expectations. The results are interpreted as exclusion limits on the pair production of weakly interacting dark matter candidates, on models with large extra spatial dimensions, and on the production of very light gravitinos in a gauge-mediated supersymmetric model. Also presented are prospects for dark matter searches at $\sqrt{s} = 14 \text{ TeV}$, together with an overview of the models in which Run 2 searches in the photon + MET and jet + MET channels will be interpreted.

Oral or Poster Presentation

Oral

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