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Monojets and Monophotons at ATLAS

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Studies of events with single high energy jet or photon and large missing transverse momentum at the Large Hadron Collider is

one of the most direct way to search for physics beyond the Standard Model.

The backgrounds from Standard Model processes are dominated by jets/photons production associated with Z or W

bosons that undergo leptonic decays to neutrinos and/or unidentified electrons or muons.

The sensitivity to new physics signals relies on the good understanding and the accurate estimation of these backgrounds, and therefore the use of data-driven techniques is often required.

In this talk I will present a compilation of the latest results from the monojets and monophotons searches based on the analysis of the 2011 and 2012 pp collision data

collected with the ATLAS detector at a center-of-mass energy of 7 TeV and 8 TeV respectively.

The results are interpreted in the context of various models Beyond the Standard Model but

a particular attention is put on the standard "WIMP miracle" dark matter scenario, and the comparisons with the Direct and Indirect Detection experiments.

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