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Searches for New Physics with the ATLAS Detector using Jets

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The Dark Matter (DM) nature remains one of the great puzzles of particle physics; while we know that about 27% of the universe is in the form of DM, little is known about its properties. If produced at the LHC, it should couple to the standard model through some mediator. The mediator can decay into dark matter particles that escape the detector, leaving a large missing transverse momentum (MET) as their signature. Also the mediator can decay into two quarks, which would appear as a bump in the invariant dijet mass spectrum. Recent results from ATLAS based on the presence of significant MET along with a variety of objects, and a dijet mass-spectrum analysis will be discussed.

Summary

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