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Overview of dark matter & exotics searches and prospects at the ATLAS experiment

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Despite the recent discovery of the Higgs boson contributing to the success of the Standard Model, the large excess of dark matter in the Universe remains one of the outstanding questions in science. This excess cannot be explained by Standard Model particles. A compelling hypothesis is that dark matter is comprised of particles can be produced at the LHC, called Weakly Interacting Massive Particles (WIMPs). This talk presents a number of ATLAS searches for WIMP dark matter, outlining the main theoretical benchmarks and issues in terms of complementarity with direct and indirect detection experiments, and presents the prospects for dark matter searches at future LHC runs.

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