

Recent searches for new phenomena with the ATLAS detector

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Many theories beyond the Standard Model (BSM) have been proposed to address several of the Standard Model shortcomings, such as the origin of dark matter and neutrino masses, the fine-tuning of the Higgs boson mass, or the observed pattern of masses and mixing angles in the quark and lepton sectors. Many of these BSM extensions predict new particles or interactions directly accessible at the LHC. This talk will present some highlights on recent searches based on the the full Run 2 data collected by the ATLAS detector at the LHC with a centre-of-mass energy of 13 TeV. These include searches for leptoquarks and vector-like fermions, new high mass resonances and lepton flavour violating decays, dark sector searches, as well as searches for new phenomena giving unconventional and/or long-lived particle signatures.

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