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【363】 Exploring the hadronic landscapes, a novel search in multijet Events at the ATLAS Experiment

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In this talk I will present a new search for Beyond Standard Model (BSM) physics at the ATLAS experiment in an all-hadronic final state. The latter poses major challenges: the QCD interactions have the highest cross-sections at LHC, and are remarkably complex to simulate. Two analysis strategies were developed to deal with this difficult background, a cut-and-count analysis approach and a search for resonances using Transformers. These methods were used to search for resonant pair production of massive particles decaying into SM quarks each. SUSY gluinos decaying via RPV couplings were considered as benchmark models. I will discuss the results obtained, showing how sensitivity was improved from previous ATLAS searches.

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