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## Searches for mono-X at the LHC

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If Dark Matter interacts weakly with Standard Model particles it can be produced at the LHC and identified via initial state radiation (ISR) of the incoming partons. The signature left in the detector is that of the ISR particle (jet, photon, Z or W) recoiling off of the invisible Dark Matter particles, resulting in a large momentum imbalance. Similar signatures result from the compactification of extra spatial dimensions in the Arkani-Hamed, Dimopoulos, and Dvali model resulting in a Kaluza-Klein tower of massive graviton modes. The mono-X signature is also sensitive to a large class of SUSY models. However, since the scalar interaction between DM particles and quarks is proportional to the quark mass, the sensitivity for this case can be further improved in searches with final states including the top quark. The talk presents results from searches for new physics in final states containing a single jet, photon, W or Z boson, and a single or a pair of top quarks accompanied by missing transverse energy studied by the ATLAS and CMS experiments at the LHC.

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