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Search for low mass dijet resonances in association with ISR at the ATLAS experiment

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A search for low mass resonances decaying to a jet pair in association with an ISR jet or photon in the context of a dark matter mediator. The ISR object acts as the event trigger, and the resonance jet pair is subsequently boosted and reconstructed as a large-radius jet. Novel jet substructure techniques allow for signal jets to be selected over the dominant QCD background. The search uses 36 fb of pp collision data at a center-of-mass energy of 13 TeV collected in 2015 and 2016 by the ATLAS detector at the LHC. Resonances are searched for in the mass range of 100-250 GeV, using a leptophobic Z' benchmark model.

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