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Search for top quark pair resonances with ATLAS VENKATESH KAUSHIK, University of Arizona, ATLAS COLLABORATION — Several Beyond the Standard Model (BSM) theories predict the existence of new resonances that decay into top-antitop quark pairs. We describe a search for such resonances using ATLAS data in the lepton plus jets decay channel produced in pp collisions at $\sqrt{s} = 8$ TeV. The selection criteria and search method are presented. In the absence of signal we will produce 95% CL limits on the production cross section times branching ratio of resonances predicted by a number of benchmark BSM models.

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