

Search for high mass resonance in di-jet and di-b-jet events using 139 fb⁻¹ of pp collisions at $\sqrt{s}=13$ TeV with the ATLAS detector

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New resonances decaying into pairs of quarks or gluons appear in a variety of new physics models from simple gauge extensions of the standard model to Grand Unified Theories. The dijet final state at high transverse momentum can probe the highest energies reached in a collider experiment. This corresponds to the largest reach in mass for the production of new particles. Some BSM particles may preferentially decay into bb or bj, so besides of the search in generic di-jets, we also considered the case in which one or two jets identified as b-jets. This poster will show the latest results of search for new resonance in di-jet and di-b-jet events using the full Run 2 pp collision dataset at $\sqrt{s} = 13$ TeV, corresponding to an integrated luminosity of 139 fb⁻¹ collected from 2015 to 2018 with the ATLAS detector.

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