

Abstract Submitted  
for the APR16 Meeting of  
The American Physical Society

**Search for new phenomena in dijet angular distributions in proton-proton collisions at  $\sqrt{s} = 13$  TeV measured with the ATLAS Detector.** MEGHAN FRATE, University of California, Irvine, ATLAS COLLABORATION — A search for new non-resonant phenomena produced in LHC proton-proton collisions with the first 3.6 fb<sup>-1</sup> of data collected at center-of-mass energy 13 TeV has been performed with the ATLAS detector. The angular distribution of the two highest transverse momentum jets, derived from the rapidity of the two jets, has been studied and compared against Standard Model QCD background. This distribution has been found to be consistent with the predictions of the Standard Model. In the presence of no new phenomena, we have been able to set limits on both quantum black hole (QBH) and contact interaction models. At 95% CL, we exclude quantum black holes with threshold masses below 8.1 TeV and 7.9 TeV in two different modeling scenarios, and we exclude contact interactions with a compositeness scale below 12.0 TeV and 17.5 TeV respectively for destructive and constructive interference between the new interactions and QCD processes. These results greatly surpass the current limits on both QBH scenarios and contact interactions, with previous limits on quantum black hole masses in the same models found to be 5.6 TeV and 5.7 TeV, and limits on contact interaction compositeness scale below 8.1 TeV and 12.0 TeV for destructive and constructive interference.

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Date submitted: 08 Jan 2016

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