



MEETING OF THE AMERICAN PHYSICAL SOCIETY DIVISION OF PARTICLES AND FIELDS

Contribution ID: 85

Type: **Presentation**

## Search for diphoton high-mass resonances with 36.7 fb<sup>-1</sup> of data collected at $\sqrt{s}=13$ TeV with the ATLAS experiment

*Tuesday, August 1, 2017 3:02 PM (12 minutes)*

A search for heavy resonances decaying into two photons in the ATLAS experiment is presented. The analysis uses proton-proton collision data accumulated at the Large Hadron Collider during 2015 and 2016 with a corresponding luminosity of 36.7 fb<sup>-1</sup> at 13 TeV. Two searches are shown, a search for spin-0 particles using a heavy Higgs-like particle as a benchmark model, and a search for spin-2 particles using a Randall-Sundrum graviton as a benchmark model. Limits on the production cross section times branching ratio to two photons for the two resonance types are reported.

**Primary author:** Mr SILVA, Manuel (University of Wisconsin, Madison)

**Presenter:** Mr SILVA, Manuel (University of Wisconsin, Madison)

**Session Classification:** Beyond Standard Model

**Track Classification:** Beyond Standard Model