

# Search for new phenomena in low-mass diphoton final states with proton–proton collisions collected at $\sqrt{s} = 13$ TeV with the ATLAS detector

January 29, 2020

**Author:** Luis Pascual Domínguez

**Keywords:** Beyond the Standard Model, Standard Model

The Higgs boson discovery by ATLAS and CMS collaborations relied mainly on resonance searches in two different channels, one of them being the diphoton channel. Since then, both experiments have extended the resonance search range towards lower and higher diphoton invariant masses up to limits driven by experimental limitations.

This talk focuses on a novel diphoton resonance search in the invariant mass range below 60 GeV using all Run2 data from pp collisions collected with the ATLAS detector at the Large Hadron Collider. Some perspectives on future analyses in the same mass region will be discussed.