

# Constraining Gluonic Quartic Gauge Coupling Operators with $gg \rightarrow \gamma\gamma$

*Thursday, 20 December 2018 16:30 (15 minutes)*

Gluon-gluon to photon-photon scattering  $gg \rightarrow \gamma\gamma$  offers to the LHC experiments a uniquely powerful probe of dimension-8 operators in the Standard Model Effective Field Theory (SMEFT) that are quadratic in both the electromagnetic and gluonic field-strength tensors, such as would appear in the Born-Infeld extension of the Standard Model (SM). We use 13-TeV ATLAS data on the production of isolated photon pairs to set lower limits on the scales of dimension-8 operators  $M \gtrsim 1\text{TeV}$ , and discuss the prospective sensitivities of possible future hadron colliders.

## Type

Parallel talk

## Sessions (parallel only)

Beyond Standard Model

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