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Measurements and interpretations of Simplified Template Cross Sections, differential and fiducial cross sections in Higgs boson decays to two photons with the ATLAS detector - REMOTE

Thursday, 10 November 2022 14:55 (15 minutes)

Higgs boson decays to two photons can be selected with high efficiency, and the very good invariant mass resolution allows a robust subtraction of the continuous backgrounds, making this channel an excellent tool both for precision measurements and searches for new phenomena involving the Higgs boson. This talk presents measurements of Simplified Template Cross Sections, differential and fiducial cross sections, as measured in the diphoton decay channel by the ATLAS experiment using the full Run 2 dataset of pp collision data collected at 13 TeV at the LHC, as well as generic searches for BSM phenomena where the Higgs boson is produced in association with other objects and decays in photon pairs. Measurements are further interpreted in the context of an Effective Field Theory.

Type of talk

Experimental measurements

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Session Classification: Thursday Session A

Track Classification: Physics Topics: Precision measurements