Contribution ID: **86** Type: **talk**

Measurement of the properties of Higgs boson production at $\sqrt{s} = 13$ TeV in the diphoton decay channel using 139 fb^{-1} of pp collision data with the ATLAS experiment

Monday 12 July 2021 14:30 (15 minutes)

Measurements of Higgs boson production cross sections are carried out in the diphoton decay channel using 139 fb^{-1} of pp collision data at $\sqrt{s}$ =13 TeV collected by the ATLAS experiment. Cross-sections for gluon fusion, weak vector boson fusion, associated production with a W or Z boson, and top quark associated production processes are reported. An upper limit of eight times the Standard Model prediction is set for the associated production of a Higgs boson with a single top quark process. Higgs boson production is further characterized through measurements of the Simplified Template Cross-Sections (STXS) in 27 fiducial regions. All the measurement results are compatible with the Standard Model predictions.

Are you are a member of the APS Division of Particles and Fields?

No

Primary author: ZHOU, Chen (University of Wisconsin Madison (US))

Presenter: ZHOU, Chen (University of Wisconsin Madison (US))

Session Classification: Higgs & Electroweak Physics

Track Classification: Higgs & Electroweak Physics