

HEP2023 - 40th Conference on Recent Developments in High Energy Physics and Cosmology, Ioannina, Greece



Contribution ID: 83

Type: **not specified**

Study of $pp \rightarrow ZZ \rightarrow 2l2\nu$ production using the full Run2 data with the ATLAS detector.

Wednesday 5 April 2023 18:40 (20 minutes)

This study presents an analysis of the $ZZ \rightarrow 2l2\nu$ interaction using the full Run2 data of 139 fb⁻¹ collected by the ATLAS detector at the LHC. The analysis includes a background estimation using a simultaneous fit method and a measurement of the cross section of the inclusive ZZ production, as well as in association with two jets, both differentially and inclusively. The $ZZ \rightarrow 2l2\nu$ process is an important test of the electroweak sector of the Standard Model, and this study provides precise measurements of the production cross section and differential distributions for this process. The results are compared with theoretical predictions and can be used to constrain models beyond the Standard Model.

Primary author: TSIAMIS, Angelos (Aristotle University of Thessaloniki (GR))

Co-authors: SAMPSONIDOU, Despoina (University of Oregon (US)); KORDAS, Kostas (Aristotle University of Thessaloniki (GR)); TZAMARIAS, Spyros (Aristotle University of Thessaloniki (GR))

Presenter: TSIAMIS, Angelos (Aristotle University of Thessaloniki (GR))

Session Classification: Parallel (Experiment)