

Polarisation measurement of the same-sign WW vector boson scattering with the ATLAS detector

Saturday, 1 November 2025 16:20 (20 minutes)

This proposal describes measurements of the polarised same-sign W boson pairs with 140 fb^{-1} of data recorded at 13 TeV central energy by the ATLAS detector at the LHC. The analysis selects a pair of same-sign leptons produced in association with two jets. The selected jet pair is required to have a large invariant mass and a significant rapidity gap. Machine learning methods are used to extract polarisation fractions, including at least one longitudinally W boson and the doubly polarised longitudinal W boson pair, in both the WW and partonic centre-of-mass reference frames.

Primary author: 周, 展航

Presenter: 周, 展航

Session Classification: Parallel 2

Track Classification: ATLAS