

Standard Model electroweak measurements with the ATLAS detector **CHiP Seminar**

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While the discovery of the Higgs boson further validated the Standard Model, the underlying dynamics of the electroweak symmetry breaking and the physical origin of its mass scale remain unclear, making it one of its most compelling remaining mysteries. The measurements of boson and multiboson productions via either inclusive processes or from weak vector boson scattering and fusion are able to probe the innermost structure of electroweak symmetry breaking. In addition, they allow to exhibit potential physics beyond the Standard Model, which can be tested via Effective Field Theories. By analysing up to 140/fb of LHC Run 2 data from proton-proton collisions at a center-of-mass of 13 TeV, the ATLAS experiment provided results consistent with the Standard Model. Investigations are followed up with the Run 3 of the LHC, while Run 4 is being prepared with an upgraded detector.



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