Phenomenology 2019 Symposium



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Electroweak Sector Under Scrutiny: A Combined Analysis of LHC and Electroweak Precision Data

Tuesday 7 May 2019 14:30 (15 minutes)

We perform a comprehensive study of the Higgs couplings, gauge-boson couplings to fermions and triple gauge boson vertices. We work in the framework of effective theories including the effects of the dimensionsix operators contributing to these observables. We determine the presently allowed range for the coefficients of these operators via a 20 parameter global fit to the electroweak precision data, as well as electroweak diboson and Higgs production data from LHC Run 1 and 2. We also discuss and quantify the effect of keeping the terms quadratic in the Wilson coefficients in the analysis and we show the importance of the Higgs data to constrain some of the operators that modify the triple gauge boson couplings in the linear regime.

Summary

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