## Phenomenology 2018 Symposium



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## Georgi-Machacek Model Beyond Tree Level

Tuesday 8 May 2018 15:30 (15 minutes)

Renormalization for the Georgi-Machacek model is performed based on the on-shell scheme with the use of the minimal subtraction scheme only for the hhh vertex. We explicitly show the gauge dependence in the counterterms of the scalar mixing parameters in the general  $R_{\xi}$  gauge, and that the dependence can be removed by using the pinch technique in physical scattering processes. We then discuss the possible allowed deviations in these one-loop corrected Higgs couplings from the standard model predictions by scanning model parameters under the constraints of perturbative unitarity and vacuum stability as well as those from experimental data.

## Summary

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