

Partikeldagarna 2018 (Lundmarksalen) + Discussion Session on the Swedish
Input to the European Strategy of Particle Physics (Sal A)



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Constraining EFT operators in the top sector (12'+3')

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The current model for particle physics, the SM, is very successful. However, there are many questions that are not answered by it and therefore the search for physics beyond the SM is one of the main focus of particle physicists. There are several searches for particular beyond the SM theories like supersymmetry. Experiments have unfortunately not found any of the new particles that are proposed by these theories. By assuming that new physics appears at a higher energy scale, we can use EFT to modify the SM interactions. With the LHC, we can study the couplings between the top quark and the neutral bosons, which has not be possible before. An appropriate framework for doing this is EFT. We are studying the associated production of a top quark pair and a W boson in order to constrain the EFT operators present in ttW.

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