

The Energy and Accuracy Frontier

Thursday, April 18, 2019 9:00 AM (30 minutes)

Accurate measurements of high-energy reactions are potentially powerful indirect probes of heavy new physics parametrised by the SMEFT. I will summarise the status of the design of searches implementing this idea in di-lepton and in di-boson final states at the LHC and HL-LHC and I will illustrate their potential mass reach on concrete new physics scenarios. A substantial progress is possible at the LHC and HL-LHC compared with present-day EW precision tests, while similar probes performed at high energy future hadron, lepton (including muon) colliders would extend the reach to tens or hundreds of TeV's. I will also outline, time permitting, the potential advantages of multivariate analyses in the di-boson channel, possibly exploiting Machine Learning techniques.

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