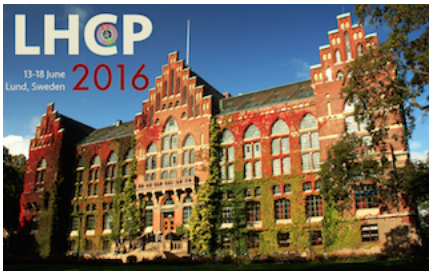

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Effective Field Theory and Unitarity in Vector Boson Scattering

Weak vector boson scattering at high energies will be one of the key measurements in current and upcoming LHC runs. It is most sensitive to any new physics associated with electroweak symmetry breaking. However, a conventional EFT analysis will fail at high energies.

To address this problem, we present a parameter-free prescription valid for arbitrary perturbative and non-perturbative models: the T-matrix unitarization. We describe its implementation as an asymptotically consistent reference model matched to the low-energy effective theory.

We study typical observables of vector-boson scattering at the LHC in our unitarized framework. For many strongly-coupled models like composite Higgs models, dimension-8 operators might be actually the leading operators. In addition to those longitudinal and transversal dimension eight EFT operators, the effects of generic tensor and scalar resonances within a simplified model are considered.

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