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EINLADUNG

im Rahmen des Teilchenphysikseminars

zum Vortrag

von

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"New Physics in the Higgs Sector – An Effective Theory Approach"

Abstract:

The properties of the Higgs boson will be investigated with increasing precision during the coming years in order to probe the dynamics of electroweak symmetry breaking. While the Higgs couplings are compatible with the Standard Model at present, deviations of order 10% or more are currently still allowed. With the precision goal for Higgs couplings of a few percent at LHC Run II and III, it will be possible to test a scenario, in which anomalous Higgs couplings are the dominant effects of new physics in the electroweak sector. Such a scenario leads to an effective field theory (EFT) that has the form of an electroweak chiral Lagrangian, including a light Higgs. We discuss the systematics and the power counting of this approach, its relation to an EFT organized in terms of the canonical dimension of operators, and phenomenological applications. We discuss in particular how the electroweak chiral EFT provides us with a quantum field theory justification for the usual kappa parametrization of Higgs couplings.

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Ort: Erwin Schrödinger-Hörsaal, Boltzmanngasse 5, 5. Stock

gez**.:** A. Hoang, H. Neufeld