Particle Theory Seminar

C. Englert

U. Karlsruhe

"Higgsless Vector Boson Fusion at the LHC beyond Leading Order"

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Abstract:

Warped Higgsless models provide an appealing approach to electroweak symmetry breaking that exhibits a specifically interesting phenomenology at the upcoming generation of colliders. At the LHC, particularly vector boson fusion (VBF) processes are sensitive to the mechanism of EWSB as they access longitudinal vector boson scattering via experimentally clear and distinct signatures, thus being potentially able to reveal the origin of EWSB in the near future.
After an introduction to the Higgsless scenario I will present the VBF signatures and the discovery reach of a typical Higgsless model with ideal fermion delocalization, focusing on gold- and silver-plated VBF channels at the LHC using a fully-flexible next-to-leading order QCD parton-level Monte-Carlo program.