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Towards the precise description of Composite Higgs models at colliders

Monday 22 November 2021 16:30 (15 minutes)

We present a framework to study the interactions among Nambu-Goldstone bosons (NGB), pseudo-NGB (pNGBs) and gauge bosons in Composite Higgs (CH) models at high energies, including operators of order $\mathcal{O}(p^4)$ and $\mathcal{O}(p^2g^2)$ in the chiral expansion and topological terms.
The set of (p)NGBs comprises the longitudinal modes of electroweak bosons, the Higgs boson, and possibly other scalar states from the dynamical spontaneous electroweak symmetry breaking.
The framework is implemented in a collider simulation tool especially suited for the study of Goldstone Boson Scattering (GBS), which includes vector boson scattering (VBS), di-Higgs production via vector boson fusion (VBF) and the pair production of other pNGBs via VBF.

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