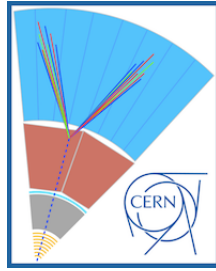


Searching for long-lived particles at the LHC: Sixth workshop of the LHC LLP Community



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Long live the Unification

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In light of null results from New Physics searches, we look at unification of the gauge couplings as a model-building principle. We present a comprehensive list of spectra that feature vector-like fermions in two distinct $SU(3)_C \times SU(2)_L \times U(1)_Y$ representations, in which precise gauge coupling unification is achieved. Complementarity of various experimental strategies allows us to probe many of the successful scenarios up to at least 10 TeV. We demonstrate that in this context the long-lived particle searches prove particularly effective, which provides strong motivation for their further development.

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