

Searching for new physics after the first two years of LHC Run II



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Hunting for Walking Technicolor using Z' Searches at the LHC

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In July 2012, a Higgs boson was discovered at the LHC, however many open questions regarding its nature are yet to be answered. For decades, theories of strong dynamics, such as Technicolor, have been proposed as alternatives to spontaneous electroweak symmetry breaking. Walking Technicolor (WTC) theory is a well motivated BSM theory, offering a solution to the hierarchy problem, a composite Higgs-boson like particle corresponding to observation, an alternative mechanism of mass generation, and a rich phenomenology. We explore WTC within the current limits of the LHC, searching for heavy neutral resonances to produce the strongest current limits on the WTC parameter space, with the ultimate aim of either discovering or disproving WTC.

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