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Electroweak Symmetry Restoration in Extended Higgs Sectors via Domain Walls

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Domain walls are a type of topological defects that can arise in the

early universe after the spontaneous breaking of a discrete symmetry. This occurs in several beyond Standard Model theories with an

extended Higgs sector such as the Next-to-Two-Higgs-Doublet model

(N2HDM). In this talk I will discuss the domain wall solution related

to the singlet scalar of the N2HDM as well as demonstrate the possibility of restoring the electroweak symmetry in the vicinity of the

domain wall. Such symmetry restoration can have profound implications on the early universe cosmology as the sphaleron rate inside the

domain wall would, in principle, be unsuppressed compared with the rate outside the wall.

Alternate track

1. Astro-particle Physics and Cosmology

I read the instructions above

Yes

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