

Electroweak Symmetry Restoration in Extended Higgs Sectors via Domain Walls

Thursday 18 July 2024 20:40 (20 minutes)

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

Primary author: SASSI, Mohamed Younes (2.Institute for theoretical Physics Hamburg)

Co-author: Prof. MOORTGAT-PICK, Gudrid

Presenter: Prof. MOORTGAT-PICK, Gudrid

Session Classification: Poster Session 1

Track Classification: 08. Astro-particle Physics and Cosmology