

Domain Walls in Extended Higgs Models

Friday, 26 December 2025 15:30 (20 minutes)

Extended Higgs models provide the possibility of new discrete symmetries, which can be spontaneously broken leading to the possibility of creating topological defects such as domain walls in the early universe. In this talk, I discuss some types of domain walls arising in extended Higgs models such as the Two-Higgs-Doublet-Model (2HDM) and the Next-to-Two-Higgs-Doublet-Model (N2HDM) and show how these domain walls can influence the early universe via electric charge breaking scalar field configurations, electroweak symmetry restoration inside the wall, and electroweak vacuum decay.

Primary author: Dr SASSI, Mohamed Younes (Tsung-Dao Lee Institute)

Presenter: Dr SASSI, Mohamed Younes (Tsung-Dao Lee Institute)