

26th International Conference on Supersymmetry and Unification of Fundamental Interactions (SUSY2018)



Contribution ID: 162

Type: **Talk (closed)**

Cosmological domain walls in the Standard Model and beyond

Thursday 26 July 2018 17:00 (20 minutes)

Cosmological domain walls have been widely studied in numerical lattice simulations in the past. The main effort was to understand the dynamics of domain walls in the case of spontaneous breaking of global discrete symmetries which are often present in supersymmetric theories. It was found that networks formed by cosmological domain walls are (meta)stable if vacua between which walls interpolate are connected by the (approximate) symmetry.

However, the scenario in which vacua belong to different orbits of the action of the symmetry group is possible too. It is realized, for example, by domain walls of the Higgs field in the Standard Model. Investigating the dynamics of Higgs domain walls in extensions of the Standard Model we found that degeneracy of minima of the potential is insufficient to ensure longevity of the networks.

Results of our studies on the influence of asymmetry of the potential on the dynamics of cosmological domain walls will be presented.

Parallel Session

Cosmology and Gravitational Waves

Authors: LALAK, Zygmunt Adam (University of Warsaw (PL)); LEWICKI, Marek (Kings College London); OLSZEWSKI, Pawel (University of Warsaw); KRAJEWSKI, Tomasz (University of Warsaw)

Presenter: KRAJEWSKI, Tomasz (University of Warsaw)

Session Classification: Cosmology and Gravitational Waves