

Stability of the electroweak vacuum in the early universe

Monday, 27 May 2019 14:25 (20 minutes)

Non-equilibrium processes during inflation and reheating could have triggered a fatal transition away from the metastable electroweak vacuum. The fact that this did not happen is a non-trivial consistency test of the Standard Model of particle physics and its extensions. I review the vacuum stability analysis and discuss how the survival of the electroweak vacuum constrains the non-minimal curvature coupling of the Higgs field, the last unknown parameter of the Standard Model.

Presenter: NURMI, Sami