



Contribution ID: 228

Type: talk

A Cosmological Solution to the Electroweak Hierarchy Problem

Saturday 25 July 2015 11:30 (25 minutes)

I present a new class of solutions to the electroweak hierarchy problem that does not require either weak scale dynamics or anthropics. In these solutions, dynamical evolution during the early universe drives the Higgs mass to a value much smaller than the cutoff. The simplest model has the particle content of the standard model plus a QCD axion and an inflation sector. In a model with additional fields, the highest cutoff achieved is 1,000,000 times the weak scale. I discuss the physical implication of these models and hopes for detection.

additional information

This work is based on our recent paper: <http://arxiv.org/abs/1504.07551>

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Session Classification: Higgs and New Physics

Track Classification: Higgs and New Physics