

Proton decay, a fresh look into their RG effects and possible UV models

Tuesday 4 June 2024 16:40 (20 minutes)

I will discuss an agnostic, model-independent analysis of baryon number violation using the power of Effective Field Theory. In my presentation, I show the contribution of dimension six and seven effective operators to $|\Delta(B-L)|=0$, 2 nucleon decays taking into account the effects of Renormalisation Group Evolution and we will find lower limits on the energy scale of each operator and correlations between different decay modes. Furthermore, I will also discuss possible UV theories responsible for the phenomena of proton decay and/or (Majorana) neutrino masses and the implications on the masses of the particles in the UV.

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