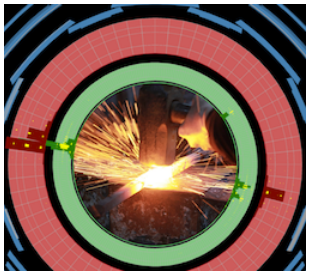

Contribution ID: **93** Type: **parallel talk**

Neutrinoless Double Beta Decay and High-Scale Baryogenesis

Tuesday 10 May 2016 17:15 (15 minutes)

In my talk I will discuss the relation between lepton number violation at high and low energies, particularly, the constraints on baryogenesis models obtained from an observation of neutrinoless double beta decay. Effective lepton number violating operators, which can underlie neutrinoless double beta decay, would together with sphaleron processes wash out a primordial (baryon) asymmetry (of the universe). Typically, if a mechanism of neutrinoless double beta decay other than the standard light neutrino exchange is observed, the usual scenarios of high-scale baryogenesis will be excluded. This can be experimentally achieved by different methods, e.g. through the observation of neutrinoless double beta decay in multiple isotopes or the measurement of the decay distribution. Apart from the effective field approach, I will also outline the possible extension of our arguments to a general UV-completed model.

Summary

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Session Classification: BSM V