

Neutrinoless Double Beta Decay and the Baryon Asymmetry of the Universe

Friday, 23 March 2018 13:00 (1 hour)

I will discuss the impact of the observation of neutrinoless double beta decay on the washout of lepton number in the early universe. Neutrinoless double beta decay can be triggered by a large number of mechanisms that can be encoded in terms of SM effective operators which violate lepton number. Such operators, or the underlying UV processes would also be responsible for the washout of an asymmetry in the lepton number in the early universe. Combined with SM sphaleron transitions, this would render many baryogenesis mechanisms at higher scales ineffective. I will highlight potential caveats to this argument, and the role of high energy colliders.

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