



Contribution ID: 212

Type: not specified

## Parameter space of baryogenesis in the $\nu$ MSM

*Wednesday, 23 October 2019 14:15 (20 minutes)*

The Standard Model accompanied with two right-handed neutrinos with masses below the weak scale can explain the observed baryon asymmetry of the Universe. Moreover, this model is at least partially testable in the forthcoming experiments such as NA62, SHiP, and MATHUSLA. The remarkable progress in understanding of various rates entering the kinetic equations describing the asymmetry generation along with considerable improvements of the numerical procedures allow us to perform a comprehensive analysis of the parameter space of the model. We find that the region of parameters leading to successful baryogenesis is notably larger than it was previously obtained. Our results are presented in a way that they can be readily used for studies of sensitivity of various experiments searching for the right-handed neutrinos responsible for the baryon asymmetry of the Universe. We also present a detailed comparison with the studies by other groups.

**Presenter:** TIMIRYASOV, Inar (EPFL)

**Session Classification:** Baryogenesis