Contribution ID: **64** Type: **not specified**

Strong thermal SO(10)-inspired leptogenesis in the light of recent results from long-baseline neutrino experiments

Wednesday 23 May 2018 14:40 (20 minutes)

We confront recent experimental results on neutrino mixing parameters with the requirements from strong thermal $SO(10)$-inspired leptogenesis. There is a nice agreement with latest global analyses supporting $\sin\delta < 0$ and normal ordering at $\sim 95\%$ C.L. On the other hand, the more stringent experimental lower bound on the atmospheric mixing angle starts to corner this paradigm. Prompted and encouraged by this rapid experimental advance, we obtain a precise determination of the allowed region in the plane δ versus θ_{23}. Though most of the solutions are found outside the 95% C.L. experimental region, there is still a big allowed fraction that does not require a too fine-tuned choice of the Majorana phases so that the neutrinoless double beta decay effective neutrino mass allowed range is still $m_{ee} \simeq [10, 30]\,\mathrm{meV}$. We also show how the constraints depend on some parameters such as the initial pre-existing $B-L$ asymmetry and the intermediate neutrino Dirac mass.

Presenter: Dr CHIANESE, Marco (University of Southampton)

Session Classification: Parallel Session on Neutrinos and Baryogenesis