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Minimal scoto-seesaw mechanism for neutrino masses with spontaneous CP violation

Friday, 19 February 2021 17:30 (20 minutes)

I will discuss our recent work on a simple scoto-seesaw model that accounts for dark matter and neutrino masses with spontaneous CP violation. This is achieved with a single horizontal $\mathcal{Z}_8$ discrete symmetry, broken to a residual $\mathcal{Z}_2$ subgroup responsible for stabilizing dark matter. CP is broken spontaneously via the complex vacuum expectation value of a scalar singlet, inducing leptonic CP-violating effects. We find that the imposed $\mathcal{Z}_8$ symmetry pushes the values of the Dirac CP phase and the lightest neutrino mass to ranges already probed by ongoing experiments.

Collaboration name

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