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Cosmological Constraints on Beyond Standard Model Neutrino Physics

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We present updated cosmological nucleosynthesis constraints on several models of neutrino beyond Standard Model Physics. Namely, first on the basis of the recent precise determination of the primordial abundance of He-4 we have updated the cosmological consraints on electron-sterile neutrino oscillations parameters. Second. we derive cosmological constraint on the lepton asymmetry in the model of degenerate primordial nucleosynthesis with neutrino oscillations and discuss a solution to the dark radiation problem in such a model. Third, we present updated constraints on the freezing temperature of the sterile neutrino in a model of right-handed neutrinos interacting with chiral tensor particles.

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