



ID contributo: 68

Tipo: Parallel Talk

Cosmological radiation density with non-standard neutrino physics

sabato 9 luglio 2022 09:00 (15 minuti)

Non-standard neutrino properties can modify the picture of neutrino decoupling from the cosmic plasma. We have calculated the impact on the contribution of neutrinos to the cosmological radiation density, parameterized via the effective number of neutrinos (N_{eff}), for some particular cases, including the presence of neutrino non-standard interactions (NSI) with electrons or mixing with a fourth, sterile neutrino state. We show the corresponding bounds on these scenarios from present analyses and future measurements of N_{eff} . For instance, we find that future cosmological data would provide competitive and complementary constraints on some of the NSI parameters and their combinations (<https://doi.org/10.1016/j.physletb.2021.136508>)

In-person participation

Yes

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