

Neutrino decoupling in standard and non-standard scenarios

We discuss the phenomenology of neutrino decoupling in the early universe, by summarising the details of the calculation in standard and non-standard scenarios. We present the state-of-the-art calculation of the effective number of neutrino species in the early universe (N_{eff}) in the three-neutrino case, which gives $N_{\text{eff}}=3.044$, and show how the result can change when additional particles, non-standard neutrino properties or a non-standard cosmological evolution are considered.

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