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Contribution of the dipole moments of the tau-neutrino in the stellar energy loss rates

Friday 31 July 2020 13:30 (3 minutes)

Within the context of a $U(1)_{B-L}$ model, we develop and present novel analytical formulas to assess the effects of the anomalous magnetic moment and electric dipole moment of the tau-neutrino on the stellar energy loss rates through some common physical process of pair-annihilation $e^+e^- \to (\gamma, Z, Z') \to \nu\bar{\nu}$. Our results show that the stellar energy loss rates strongly depends on both momenta of the neutrino, but also on the parameters which characterize the adopted $U(1)_{B-L}$ model.

Secondary track (number)

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