

Turkish Journal of Physics

Turkish Journal

of

Physics

On some properties of the neutrino in the early universe

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 [Keywords](#)
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Abstract: Properties of the neutrino in the early universe have been investigated incorporating a small inhomogeneity in the mass density of the early universe. Dependence on this factor is found in studying mean free path and mass bound of neutrinos. The mass bound of neutrino is found to be in the range between 14 MeV and 76 MeV corresponding to the radiation and matter dominated eras respectively. The oscillation length for neutrinos have been estimated to be 86 km for beam energy 2.754 MeV and 220 km for beam energy 7 MeV.



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Turk. J. Phys., **33**, (2009), 271-280.

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