

Abstract Submitted
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Pair production with neutrinos in an intense, background magnetic field TODD TINSLEY, Rice University — We present a detailed calculation of the electron-positron production rate for the process $\nu \rightarrow \nu e\bar{e}$ in an intense, homogenous, background magnetic field. We compute rates for all neutrino flavors and within the framework of the Standard Model. Such an interaction could be relevant in astrophysical phenomena where neutrinos play a dominant role in energy transport and there exist large magnetic fields. Our presentation includes results for various combinations of Landau-levels over a range of possible incoming neutrino energies and relevant magnetic field strengths.

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