

Abstract Submitted
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Antineutrino Stimulated Pair Production¹ TYLER WEBB, TODD TINSLEY, Hendrix College — I will present a calculation of the antineutrino-stimulated production rate of electron-positron pairs in an intense magnetic field and discuss how the calculation relates to a previous calculation of the neutrino case. The production rates are important in supernova-like conditions where stellar dynamics are sensitive to the rates of energy transfer within the star. The process could have implications in the collapse of type-II supernovae or large-scale events like magnetar bursts. I will demonstrate how computation reveals that the production rates in the antineutrino case are equivalent to the rates in the neutrino case, with an inversion of the electron and positron Landau levels.

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