

Abstract Submitted
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Three Flavor State Neutrino Oscillations¹ ANDREW NELSON,
CHAD KISHIMOTO, University of San Diego — The quantum kinetic equations (QKEs) simultaneously describe the quantum mechanical coherent development of phase and the damping of phase due to scattering. We study the evolution of neutrinos in the early universe where both quantum and scattering effects impact their behavior. The quantum-kinetic evolution of the two-neutrino system is well described by a “polarization” vector in three-dimensional space. In this poster, we search for geometric analogies to describe the evolution of the three-neutrino system, the evolution of which is described mathematically in eight-dimensional space.

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