

Neutrino oscillations and decoherence: insights from microscopic models

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Decoherence plays a key role in neutrino oscillations by describing how environmental interactions—such as with matter or gravity—can alter flavor oscillation patterns and reveal aspects of neutrino quantum behavior. Typically, studies of neutrino oscillations encode decoherence by making a phenomenological ansatz for the dissipator. Such decoherence effects can also be systematically derived from first principles using microscopic interaction models. In this talk, I will show how some assumptions in the microscopic models and the phenomenological models can be related.

Working Group

WG2 - High Energy QG Experiment

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