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Neutrino Oscillations: the RENO experiment KARLA TELLEZ GIRON FLORES, The University of Texas at El Paso, JESUS ESCAMILLA ROA, Instituto Politecnico Nacional, JORGE A. LOPEZ GALLARDO, The University of Texas at El Paso — Neutrinos are the Universe's second most common particles after the photons. The three flavor eigenstates are the mixture of the three mass eigenstates. This mixture of neutrinos can generally be parameterized by the three so-called mixing angles (θ_{12}, θ_{23}, θ_{13}) and a CP phase. A non-zero value for θ_{13} has opened up a window to eventually be able to measure the above-mentioned CP phase, which provide information about the existing matter-antimatter asymmetry in the Universe. RENO (Reactor Experiment for Neutrino Oscillation) is a South-Korean experiment which studies electron antineutrinos from nuclear power plants to directly determine the value of θ_{13}. In this work, we present an overview of the experiment as well as the results of the statistical analysis using the most updated data.

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