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Three-flavor Neutrino Mixing ALEXANDRE SOUSA, Univ of Cincinnati

Understanding neutrino properties through measurements of neutrino flavor mixing has motivated the development of a rich worldwide experimental program. Detectors employing a wide variety of technologies measure neutrinos originating in the Earth's atmosphere, in the Sun, in nuclear reactors, or created with particle accelerators. Precision measurements of neutrino oscillations play a crucial role in probing CP violation in the leptonic sector, which could have fundamental implications in generating a baryon asymmetry in the early universe, in determining the neutrino mass ordering, and in potentially unveiling new symmetries governing the neutrino mixing matrix. In this talk, I will review the phenomenology of three-neutrino mixing, summarize the current experimental results, and discuss global plans to answer some of the most pressing questions in neutrino physics with present and future neutrino oscillation experiments.