

Abstract Submitted
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Effects of Systematic Uncertainties on Short-Baseline Reactor Antineutrino Experiments ARTHUR FRANKE, Columbia University — The forthcoming generation of short-baseline reactor antineutrino experiments will attempt to measure the small neutrino oscillation amplitude $\sin^2(2\theta_{13})$ with an order of magnitude better sensitivity than their predecessors. These experiments will be limited by systematic uncertainties. We will present a method for calculating the sensitivity of a typical reactor antineutrino experiment based on a “pulls” approach. We will survey common sources of systematic uncertainty in reactor experiments and quantitatively examine their impacts on experimental sensitivity to $\sin^2(2\theta_{13})$.

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