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Abstract for an Invited Paper
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Tanaka Dissertation Award Talk: Evidence for Neutrino Flavor Oscillations in the Sudbury Neutrino Observatory

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This talk will discuss the evidence for neutrino oscillations, with an emphasis on the results from the Sudbury Neutrino Observatory (SNO). With its unique heavy-water volume, SNO can simultaneously measure the electron neutrino flux and the total active neutrino flux coming from the Sun. The SNO results provide compelling model-independent evidence for neutrino flavor changes, providing a solution to the long-standing “solar neutrino problem.” While these results solve one mystery, there are many remaining questions about neutrinos. This talk will conclude with a discussion of the potential of current and future neutrino experiments.