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Abstract for an Invited Paper  
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**Henry Primakoff Award: The Mixed-Up Neutrino: Precision Measurement of Oscillation at Daya Bay<sup>1</sup>**  
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It is estimated that there are more neutrinos in the universe than all of the atoms in the stars, the planets, and us. Yet until recently this particle was poorly understood. Neutrinos are nearly decoupled from the universe we know, tied only by the rare weak interaction. The Daya Bay Experiment in Southern China provided an ideal location to characterize these elusive particles. Six identical detectors measured the relative flux versus distance of electron antineutrinos emitted by nuclear reactors. The disappearance of electron antineutrinos revealed an unexpectedly large mixing of neutrino flavor, and also provided an independent estimate of the larger neutrino mass difference. I will present the details of this measurement, including expected and unexpected obstacles faced along the way. I will then discuss the implications of our observations and future steps in neutrino physics.

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