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Design, Construction, and Performance of the Antineutrino Detectors for the Daya Bay Reactor θ_{13} Experiment KARSTEN M. HEEGER, University of Wisconsin, DAYA BAY COLLABORATION — The Daya Bay reactor experiment is designed to search for the yet unknown neutrino mixing angle θ_{13} and make a precise measurement of $\sin^2 2\theta_{13}$ with a sensitivity of < 0.01 at 90% CL. The experiment utilizes the inverse beta-decay reaction of electron antineutrinos on protons to measure the flux of reactor antineutrinos in eight detectors at different distances from the reactors and measure the disappearance of $\overline{\nu}_e$. We will describe the design of the antineutrino detectors and report progress on the construction of the Daya Bay experiment. The expected performance of the antineutrino detectors and control of the detector systematics will be discussed.

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