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The Detector Calibration System for the Daya Bay Reactor Neutrino Experiment JIANGLAI LIU, California Institute of Technology, DAYA BAY REACTOR NEUTRINO COLLABORATION — The detector calibration system will be critical for the analysis of the Daya Bay Reactor Experiment. The experiment will use multiple detector modules at various baselines from the reactor cores to measure the neutrino mixing angle θ_{13} with a sensitivity to $\sin^2(2\theta_{13}) < 0.01$. The modules must be “identical,” therefore the detector properties need to be understood and calibrated accurately. In this talk, I will present some R&D work towards an automated full-volume calibration system, including the simulation studies with various radioactive sources, as well as a preliminary hardware design.

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