

Abstract Submitted
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Muon Veto System and Expected Backgrounds at DayaBay¹

HONGSHAN ZHANG, BNL, DAYABAY COLLABORATION — To reach the goal of the sensitivity of $\theta_{13} < 0.01$ in the DayaBay experiment, we need to reduce various backgrounds to a very low level. DayaBay implements two tagging systems to detect cosmic ray induced background: 2.5 meter thick two-section water shield and RPCs. They combine to contribute a overall muon efficiency exceeding 99.5% with an uncertainty $< 0.25\%$. The muon system can also provide a spatial resolution $\sim 50\text{cm}$ to help distinguish fast neutron background generated from muon interactions. This talk introduces the DayaBay muon system and gives an estimate of possible background rates at DayaBay.

¹DayaBay Experiment

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