

Data processing and storage in Daya Bay

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The Daya Bay Reactor Neutrino Experiment reported the first observation of the non-zero neutrino mixing angle θ_{13} using the first 55 days of data. It has also provided the most precise measurement of θ_{13} with the extended data to 1230 days. Daya Bay will keep running for another 3 years or so. There is about 100TB raw data produced per year, as well as several copies of reconstruction data with similar data volume for each copy. The raw data is transferred to Daya Bay onsite and two offsite clusters: IHEP in Beijing and LBNL in California, with a short latency. There is quasi-real-time data processing at both onsite and offsite clusters, for the purpose of data quality monitoring, detector calibration and preliminary data analyses. The physics data production took place a couple of times per year according to the physics analysis plan. This talk will introduce the data transfer and storage, data processing and monitoring, and the automation of the calibration.

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