## Reactor antineutrino flux and spectrum measurement at Daya Bay

Thursday 30 July 2020 08:15 (15 minutes)

This talk presents the latest results of reactor antineutrino flux and spectrum measurement at Daya Bay. The Daya Bay Reactor Neutrino Experiment uses an array of eight underground detectors to study antineutrinos from six reactor cores at different baselines. Four antineutrino detectors in the two near experimental halls are used for the measurements. The reactor antineutrino flux measurement is improved by reducing the systematic uncertainty of neutron detection efficiency. A new measurement of the prompt energy spectrum of reactor antineutrinos with 1958 days of data shows a significant discrepancy in the shape of the spectrum compared with the Huber-Mueller model prediction. The individual IBD yield and spectra of U-235 and Pu-239 are also extracted for the first time from the time evolution of IBD prompt energy spectra as the reactor fuel composition changes.

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## Secondary track (number)

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