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Latest Results of the Reactor Fuel Evolution Study at Daya Bay

The poster presents the first measurement of the individual ^{235}U and ^{239}Pu antineutrino flux and spectra. The antineutrinos were generated by six nuclear reactors with 2.9 GW thermal power each and detected by eight antineutrino detectors deployed in two near and one far underground experimental halls. The ^{235}U and the ^{239}Pu flux and spectra are obtained by fitting the flux and spectrum evolution as a function of fission fractions. Both flux and spectra measurements of ^{235}U exhibit significant deviations from the prediction of the Hueber-Muller model. What's more, a deviation in the measured positron prompt energy spectrum was found with the comparison to the reactor flux predictions.

Mini-abstract

Measurement of the individual ^{235}U and ^{239}Pu antineutrino flux and spectra at Daya Bay

Experiment/Collaboration

Daya Bay Collaboration

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