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The latest Daya Bay oscillation results and reactor neutrino flux and spectrum results

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The Daya Bay Reactor Neutrino Experiment is located next to six commercial nuclear reactors, each of which has a max thermal power of 2.9 GW. The experiment consists of two near experimental halls and one far experimental hall. The power-weighted baselines to the six power reactors are about 500 m and 1.7 km for the near and far halls, respectively. Each near hall has two antineutrino detectors (ADs) and the far hall has four ADs. All eight ADs have an identically designed nested structure with 20 tons of gadolinium-loaded liquid scintillator in the center, 22 tons of liquid scintillator in the middle, and mineral oil outside for shielding. The Daya Bay Reactor Neutrino Experiment discovered a non-zero value for the neutrino mixing angle θ_{13} in 2012. Since then, Daya Bay continues to provide the leading determination of this small mixing angle. With the data, the experiment also presents the crucial measurements of the reactor neutrino flux and spectrum. In this talk, I will present the latest Daya Bay oscillation results and reactor neutrino flux and spectrum results.

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