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## Results from the Daya Bay Experiment (On Behalf of the Daya Bay Experiment Collaboration)

Thursday 7 July 2016 14:00 (20 minutes)

The Daya Bay Experiment has been measuring reactor antineutrino disappearance on short baseline with unprecedented precision since 2011. It was the first experiment which in 2012 observed a non-zero value of mixing angle  $\theta_{13}$ . Experiment benefits from the large statistics, precise knowledge of background and unique layout with 8 functionally identical antineutrino detectors deployed in the three underground experimental halls near the nuclear power plant complex in Southern China.

We will present latest results on the measurement of the oscillation parameters  $\sin^2 2\theta_{13}$  and  $|\Delta m_{ee}^2|$ . The Daya Bay Experiment can go with its precise measurement beyond 3-flavour neutrino framework. We will show updated search for light sterile neutrino in the antineutrino oscillations.

Measurement of the absolute reactor anti-neutrino flux will be also presented. Being lower than the theoretical predictions, it favors the so called 'reactor anomaly' which is in an agreement with previous measurements of other short-baseline experiments. The result can be explained by existence of sterile neutrino at the scale of  $\Delta m^2 \sim 1 \text{ eV}^2$ .

Moreover, we will show recent search for time dependent sidereal modulation of the antineutrino oscillations as possible indication of the CPT and Lorentz Invariance violation.

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