



SPEAKER: OCHOA, P. (Pontifical Catholic University of Chile (CL))
TITLE: **New and Improved Results from Daya Bay**
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ABSTRACT

Despite the great progress achieved in the last decades, neutrinos remain among the least understood fundamental particles to have been experimentally observed. The Daya Bay Reactor Neutrino Experiment consists of eight identically designed detectors placed underground at different baselines from three groups of nuclear reactors in China, a configuration that is ideally suited for studying the properties of these elusive particles. In this talk I will review the improved results released last summer by the Daya Bay collaboration. These results include (i) a precision measurement of the θ_{13} mixing angle and the effective mass splitting in the electron antineutrino disappearance channel with a dataset comprising more than 2.5 million antineutrino interactions, (ii) a high-statistics measurement of the absolute flux and spectrum of reactor-produced electron antineutrinos, and (iii) a search for light sterile neutrino mixing performed with more than three times the statistics of the previous result. I will also discuss a new analysis performed jointly with the MINOS collaboration and its implications on the sterile neutrino interpretation of some of the anomalies seen in experimental neutrino physics.