

Light sterile neutrino search from Daya Bay

The standard three-neutrino mixing framework works very well with most of the neutrino oscillation experiments except for several “anomalies”, which may be caused by light sterile neutrinos at eV or sub-eV energy scale.

With millions of electron antineutrino candidates accumulated by multiple antineutrino detectors at hundred meters away from the reactors, Daya Bay has the best sensitivity for light sterile neutrino search at $\Delta m_{41}^2 < 0.2 \text{ eV}^2$ region. In addition, based on the 3(active)+1(sterile)-neutrino mixing model, a combined analysis using Daya Bay, Bugey-3 and MINOS experimental data is performed to constrain the sterile neutrino mixing phase space and compared with the results from the LSND and MiniBooNE experiments.

Authorship annotation

for the Daya Bay collaboration

Session and Location

Monday Session, Poster Wall #129 (Hölderlin-Room)

Poster included in proceedings:

yes

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Track Classification: Poster (not participating in poster prize competition)