

NEOS-II sensitivity for a light sterile neutrino

Friday 25 August 2023 11:25 (25 minutes)

NEOS is an experiment to search for a sterile neutrino oscillation from a nuclear reactor core at a short baseline. The detector was deployed at a 24-m distance from a 2.8 gigawatt-thermal-power reactor core in the tendon gallery of the Hanbit-5 reactor. NEOS-II has recorded 388 (112) live-days of reactor-on (-off) data including a full reactor operation cycle and the reactor maintenance periods before and after the operation cycle. The sensitivity of finding the neutrino mass-squared-split and the mixing angle for the active-to-sterile neutrino oscillation has been studied, considering the statistical and systematic uncertainties of NEOS-II.

Primary author: KIM, Jonggeon (SungKyunKwan university)

Presenter: KIM, Jonggeon (SungKyunKwan university)

Session Classification: parallel (room#101)

Track Classification: WG1: Neutrino Oscillation Physics