Contribution ID: **65** Type: **Talk**

Status of Neutrino Elastic-scattering Observation with NaI(Tl) experiment

Thursday 27 October 2022 10:25 (15 minutes)

Coherent elastic neutrino-nucleus scattering (CEvNS) can provide interesting physics such as measuring neutrino properties and proving non-standard interactions.
Neutrino Elastic-scattering Observation with NaI(Tl) experiment (NEON) aims to detect this CEvNS in a NaI(Tl) crystal using reactor anti-electron neutrino at Hanbit nuclear power plant.
NEON detector consists of a total of 16 kg NaI(Tl) target mass which is installed 24 meters from the reactor core.
Shields include a 40 cm liquid scintillator, 10 cm leads, and 30 cm Poly-ethylene for vetoing various background radiations.
Phase 1 operated ˜ 1 year from December 2020 which includes 1-month reactor-off data.
Phase 2 was started in April 2022 after the detector encapsulation design upgrade to improve the performance of the liquid scintillator veto and the stability
In this talk, we report the current status of the NEON experiment.

Primary author: Dr LEE, InSoo (IBS)

Presenter: Dr LEE, InSoo (IBS)

Session Classification: Coherent Neutrino Scattering