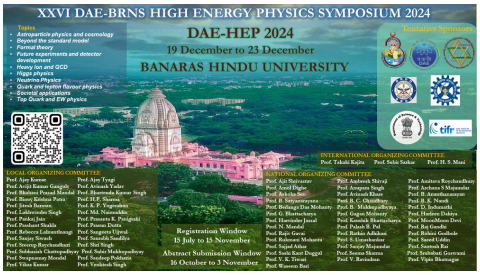

Contribution ID: **253** Type: **Oral**

Coherency Effects in Neutrino-Nucleus Elastic Scattering

Neutrino nucleus elastic scattering (νAel) is a direct test of electroweak theory in the Standard Model of particle physics [1]. The νAel cross-section has been measured with the stopped pions neutrinos, whereas the cross-section measurement for low-energy solar and reactor neutrinos has not yet been accomplished [2]. Using state-of-the-art point contact Germanium detector technology, the TEXONO research program at Kuo-Sheng Neutrino Laboratory (KSNL) explores this interaction at reactors [3]. We will highlight the status and results of the νAel searches at the TEXONO experiment. The studies of analytical formulation of coherence parameters and their constraints will be presented.

[1] S. Kerman et al. In: Phys. Rev. D 93, 113006 (2016).
[2] V. Sharma et al. In: Phys. Rev. D 103, 092002 (2021).
[3] V. Sharma et al. In: Indian J. of Phys. 92, 1145 (2018).

Field of contribution

Experiment

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