

## Reactor antineutrino flux from neutrino- $^{13}\text{C}$ neutral current interactions

*Tuesday, 4 June 2024 16:00 (20 minutes)*

We focus on the potential of neutrino -  $^{13}\text{C}$  neutral current interactions in clarifying the reactor antineutrino flux around the 6 MeV region. The interactions produce 3.685 MeV photon line via the process of de-excitation of  $^{13}\text{C}$  in organic liquid scintillators, which can be observed in reactor neutrino experiments. We expect the future measurements of neutrino -  $^{13}\text{C}$  cross section in JUNO and IsoDAR@Yemilab at low energies might help testing the reactor flux models with the assistance of excellent particle identification.

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**Session Classification:** Contributed talks I