

## Probing the reactor neutrino flux below the IBD threshold with CEvNS

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Most antineutrinos produced in a nuclear reactor have energies below the inverse beta decay (IBD) threshold, and have not yet been detected. We show that a coherent elastic neutrino-nucleus scattering (CEvNS) experiment with an ultra-low energy threshold like NUCLEUS can measure the flux of reactor neutrinos below the IBD threshold. Using a regularized unfolding procedure, we find that a meaningful upper bound can be placed on the low energy flux with CEvNS. However, it is difficult to establish the existence of the neutron capture component.

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