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CICENNS: 300-kg CsI(Na) Detector for Coherent Elastic Neutrino-Nucleus Scattering (CEvNS)

A recent observation of CEvNS has opened a new avenue for probing extremely low-energy neutrino interactions, via neutrino wave scattering with the entire nucleons in a nucleus coherently. The CICENNS detector under construction expects to provide a sufficient CEvNS signal from neutrinos produced by the Chinese Spallation Neutron Source. This project aims to make a precise measurement of the CEvNS cross section and the mean radius of neutron distribution inside a nucleus. It will also explore new physics phenomena including searches for non-standard neutrino interactions and new particles. In this presentation, we report the status of detector construction efforts and physics sensitivities.

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