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## Status of the RENE experiment

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The Reactor Experiment for Neutrinos and Exotics (RENE) is designed to search for sterile neutrinos in the  $\Delta m_41$  square ~ 2 eV square region by measuring electron antineutrino oscillations at a short baseline. The RENE experiment is proposed to take place at the Hanbit Nuclear Power Plant in Yeonggwang, Korea, owing to the sufficient electron antineutrino flux generated by the facility. The RENE prototype detector comprises an acrylic target with a liquid scintillator that contains 0.5% gadolinium and 10% diisopropylnaphthalene (DIPN), along with a box-shaped gamma catcher filled with a non-doped liquid scintillator. Two 20-inch photomultiplier tubes (PMTs) are utilized to observe inverse beta decay events occurring in the target. Surrounding the detector are plastic scintillators that serve to discriminate inverse beta decay events from the cosmic-ray background. In this presentation, we will provide an update on the current status of the RENE experiment and discuss its future prospects.

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