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The Coherent Neutrino-Nucleus Interaction Experiment GUILLERMO FERMANDEZ MORONI, Fermilab CONICET, FOR THE CONNIE COLLABORATION, Fermilab — The Coherent Neutrino-Nucleus Interaction Experiment (CONNIE) uses fully depleted high-resistivity CCDs as particle detectors with the goal of measuring the Coherent Elastic Neutrino-Nucleus Scattering (CENNS) of reactor antineutrinos with silicon nuclei. The CONNIE detector operates at a distance of 30m from the core of the Angra II 3.8 GW nuclear reactor in Brazil. The detector has demonstrated stable operation, low noise of less than $2e^-$ RMS, and low background contamination levels. CENNS provides a test of the Standard Model (SM) and may be a probe of physics beyond the SM. Also, in astrophysics, understanding the coherent interaction is relevant for the energy transport in supernovae and is a limiting factor in ongoing efforts for developing new supernovae models. On the other hand there has been a growing interest in recent years on nuclear reactor monitoring using neutrinos and CCDs could make compact/portable detectors. In this talk, the current status of the experiment will be presented together with the recent results after two years of data taking. The talk will also cover our constraintsto more exotic models like the neutrino magnetic moment.We will also discuss the prospects of neutrino detection with CCDs for the upcoming years using the Skipper CCD technology.

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