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Recent results of the CONUS experiment

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In coherent elastic neutrino nucleus scattering (CEνNS), the neutrino interacts with the nucleus as a whole. This leads to a tiny recoil that can be registered with suitable detector technologies. The detection is highly challenging and requires a neutrino source within the coherent energy regime such as a nuclear power plant, a low enough energy threshold of the detectors and an excellent background suppression.
The CONUS experiment, which was located at 17m distance to the reactor core of the Brokdorf nuclear power plant, employed four high-purity Germanium detectors inside an elaborate shield. After successfully upgrading the setup for the latest and final run of the experiment, the energy threshold could be successfully lowered to <250eV$_{ee}$, which significantly enhances the sensitivity for CEνNS. I will report on the preliminary CEνNS analysis results from this run.

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