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Recent results from the CONUS experiment

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The CONUS experiment looks for coherent elastic scattering of reactor antineutrinos on Ge nuclei. It is based on four 1 kg sized point contact Germanium detectors within an elaborated shield located at 17 m distance from the 3.9 GW_th reactor core of the nuclear power plant in Brokdorf, Germany. Data collection was initiated in April 2018 and stopped in December 2022. This talk presents new results from the final run occurred in the years 2021 and 2022. Compared to the previous runs, it includes a larger reactor ON and OFF statistics, an improved energy threshold based on a new DAQ system, the development of a pulse shape background discrimination method down to the sub-keV region as well an improved environment and detector stability. These improvements allowed to search for CEvNS reactions induced by reactor antineutrinos with unprecedented sensitivity.

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