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CEvNS detection with CONUS

Coherent elastic neutrino nucleus scattering (CEvNS) has been predicted since 1973, but eluded detection for more than 4 decades mainly due to a lack of technology able to detect small nuclear recoils. The process was first observed in August 2017 using a spallation neutron source [1].
Complementary to it, new projects like CONUS try to detect CEvNS using reactor anti-neutrinos. CONUS is based on a novel Ge detector technology and a shield technique designed for operation at shallow depth close to a reactor core. For data acquisition in the initial phase of the experiment, a custom-made software framework has been developed. For a second phase, a new electronics based on the FlashCam DAQ [2] is in preparation.
This talk sheds light on the instrumentation, operation and upgrades of the CONUS setup and presents challenges and latest results from the experiment. An outlook will further summarize the physics potential of CEvNS-based detectors.

[1] Observation of Coherent Elastic Neutrino-Nucleus Scattering, Science 357 (2017) no.6356, 1123-1126
[2] A Trigger and Readout Scheme for future Cherenkov Telescope Arrays, arXiv:0812.0762

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