

The CONUS+ experiment

Friday 24 March 2023 09:00 (15 minutes)

The CONUS+ experiment is a new project which aims to detect coherent elastic neutrino-nucleus scattering (CEvNS) of reactor antineutrinos on germanium nuclei in the fully coherent regime, continuing in this way the CONUS physics program. The CONUS+ experiment will be installed during 2023 in the Leibstadt nuclear power plant, Switzerland, at a distance of about 20 m from the 3.6 GWth reactor core. The CEvNS signature will possibly be measured with the four 1 kg point-contact high-purity germanium (HPGe) detectors of the former experiment, which have been refurbished, further improving their energy thresholds.

The CONUS+ design will be presented here for the first time, together with the background characterization of the new experimental location and the physics potential of the project.

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Session Classification: Experiments