



Contribution ID: 120

Type: Oral

## NEXT-CRAB-0: a high pressure gaseous xenon time projection chamber with a direct VUV camera based readout

*Thursday, 9 November 2023 14:30 (15 minutes)*

The research and development (R&D) efforts to detect neutrinoless beta decay have made significant progress in recent years. One of the R&D directions involves the use of high-pressure gas xenon detectors, like those employed by the NEXT experiment. In this approach, a fast optical camera is utilized to convert the tracking information into digital form. The NEXT-CRAB (Camera Readout and Barium Tagging) is a prototype detector that records event topology in an electroluminescent xenon gas TPC via a VUV image-intensified camera. Our system has been characterized using alpha particles, which are decay products of Po-210. We have compared these results with simulation. Additionally, we have observed particle tracks of high-energy betas from Bi-214 and cosmic muons. In this presentation, we will present these findings.

### Early Career

No

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**Session Classification:** RDC6

**Track Classification:** RDC Parallel Sessions: RDC6: Gaseous Detectors