XVIII International Conference on Topics in Astroparticle and Underground Physics (TAUP 2023)



Contribution ID: 375 Type: Poster

Novel multi-channel skipper-CCD packages for the OSCURA experiment

Monday 28 August 2023 19:49 (1 minute)

The next generation of skipper-CCD experiments for rare-event searches will bring new challenges for the detector packaging and read-out. Scaling the active mass and simultaneously reducing the experimental backgrounds in two orders of magnitude will require a novel high-density Silicon-based package, that must be massively produced and stored. In this work, we present the design, first production, and testing of a 16-channel Silicon package, along with the outlook for the next steps towards producing 1500 wafers that will add up to a 10 kg skipper-CCD detector.

Submitted on behalf of a Collaboration?

No

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Presenter: BOTTI, Ana Martina (Fermilab) **Session Classification:** Poster session

Track Classification: Dark matter and its detection