

## Improved Background Rate and Coincident Event Removal in SuperCDMS HVeV Run 3

*Monday 12 July 2021 15:00 (15 minutes)*

The third science run of SuperCDMS HVeV detectors (single-charge sensitive detectors with high Neganov-Trofimov-Luke phonon gain) took place at the NEXUS underground test facility in early 2021, incorporating two important changes to test background hypotheses and enhance sensitivity. First, this was the first HVeV dataset taken underground (300 mwe) and in a shielded environment. Second, the run utilized three detectors operated simultaneously to identify sources of background events that produce 2 or more electron-hole pairs. We will present preliminary results and interpretation from these tests as well as an estimate of the expected sensitivity of the dataset.

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No

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