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High Voltage New Interface Studies

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The SuperCDMS collaboration uses advanced high voltage Neganov-Luke phonon-assisted detectors for low mass dark matter detection. The leakage current associated with high voltages limits the ultimate sensitivity reach for this large mass detector technology. Although the current leakage performance of the detectors is sufficient for SuperCDMS SNOLAB requirements, improvements are needed to reach the ultimate single electron resolution expected using this technology. We report on recent progress toward understanding the leakage in SuperCDMS-style high voltage detectors and efforts to improve our metal-semiconductor interface design.

Less than 5 years of experience since completion of Ph.D

Y

Student (Ph.D., M.Sc. or B.Sc.)

Y

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