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Large Area APDs in the EXO-200 neutrinoless double beta decay experiment RUSSELL NEILSON, Stanford University, EXO COLLABORATION
— EXO (Enriched Xenon Observatory) is a program aimed at building a ton-class neutrinoless double beta decay detector using xenon enriched to 80% in the isotope 136 as the source and detection medium. The first EXO experiment, known as EXO-200, is currently being commissioned in its underground location at the WIPP facility in Carlsbad, New Mexico. The centerpiece of EXO-200 is a liquid xenon TPC containing 200 kg of enriched xenon with simultaneous readout of ionization and scintillation. Scintillation photons are detected by 468 large area avalanche photodiodes (LAAPDs). This talk will briefly summarize the current status of EXO-200 and describe our study and characterization of more than 800 LAAPDs for selective installation in the EXO-200 detector.

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