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Characterizations of UV-sensitive large area SiPMs and its readout for nEXO[1] JIAZHAO LIN, Rensselaer Polytechnic Institute, JONATHAN ECHEVERS , LIANG YANG, University of Illinois at Urbana-Champaign — Silicon Photomultiplier (SiPM) has emerged as a new light sensor for noble liquid detectors. The next-generation Enriched Xenon Observatory (nEXO), a proposed experiment to search for neutrino-less double beta decay, will use SiPMs for detecting Xenon scintillation light. Detailed analysis on the performances of SiPMs under cryogenic experimental conditions is required for future nEXO experiment. In the poster, we will describe the experimental setups and present the results of characterization of SiPMs from FBK. In particular, we present the large-area readout analysis for the resolution, gain and dark noise rate of SiPM under cryogenic condition.

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