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Studies of new GaInP based Geiger-mode APD arrays GRACE CUMMINGS, ROBERT HIROSKY, U. Virginia — Devices composed of wide band gap semiconductors such as GaInP have the theoretical potential to withstand many orders of magnitude larger radiation exposures compared to silicon. The demonstration of functional devices with new semiconductor materials and epitaxies is a prerequisite to evaluating this potential. We will discuss results from measurements of performance properties and radiation damage studies of two recent generations of prototype devices and discuss plans for future work.

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