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General Purpose Terahertz Imaging Systems With Lumped Element KIDs

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We are developing a terahertz imaging system based on arrays of lumped element kinetic inductance detectors (LEKIDs) for general purpose commercial/industrial applications. The recent demonstration of KID-Cam [1] has proven that this detector technology is suitable for deployment in a range of fields where high sensitivity, fast response, broad spectral coverage and low susceptibility to EMI are desirable.

In this talk, I will present some of the results from our demonstration system and I will describe our progress - so far - towards the commercially ready system which we aim to have complete within the next 18-24 months.

[1] Rowe, S., Pascale, E., Doyle, et al, "A passive terahertz video camera based on lumped element kinetic inductance detectors", Review of Scientific Instruments, 87(3), p.033105., 2016

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