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Tipo: **Oral Presentation**

## Applying the capacitor finger trimming technique on a kilo-pixel LEKID array

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Kinetic-inductance detectors have been developed rapidly thanks to their intrinsic frequency domain multiplexing property. However, the main limitation of the number of the usable detectors is found to be crosstalk in the frequency domain instead of fabrication yield. For example, the fraction of usable detectors of the NIKA2 instrument has been limited to 70-90% by the resonance overlapping under the atmospheric radiation. The technique of trimming of the capacitor fingers has been successfully applied on LEKID arrays with ~100 pixels, with an increase in usable pixel up to 96%. We applied this same technique on a 4-inch kilo-pixel LEKID array, designed for the NIKA2 1mm band. This array has ~2400 pixels with 8 feedlines. Each feedline has 500 MHz bandwidth to read out ~300 pixels. The trimming accuracy of the resonance frequency is expected to be 0.18-0.44 MHz. We present the characterization of this kilo-pixel array before and after trimming.

### 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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