

## The NIKA2 instrument at the IRAM 30m-telescope: state-of-the-art KID performance in the mm range

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**Abstract**—The New IRAM KID Array 2 (NIKA2) is a state-of-the-art mm-wave continuum camera that has been installed on the IRAM 30-m telescope since October 2015. Its focal planes consist of 3 lumped-element kinetic-inductance detector arrays (2896 pixels) cooled down to 100 mK using a closed-cycle dilution refrigerator. These arrays permit simultaneous observation of the 260 GHz and 150 GHz sky with a 6.5 arcmin field of view and 11 and 18 arcsec resolution, respectively, as well as a polarization capability for the 260 GHz band. The total-power commissioning stage of the instrument has recently come to an end, and the instrument is now opened for astronomical observations.

I will describe the general characteristics of the instrument, its performance as determined during the commissioning stage, and finally I will discuss possible future improvements of the performances, mostly from a detector point of view.