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The KID Interferometric-Spectrum Survey (KISS) experiment

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Mapping millimeter continuum emission of the astronomical sky has become a key issue in modern multi-wavelength astrophysics. Spectrum-imaging at low frequency resolution is necessary, today, for characterizing the cluster of galaxies. In this context, we built the KISS ground-based spectro-imager.

This instrument is based on 600-pixel arrays of Kinetic Inductance Detector, cooled to 150 mK thanks to a ^3He - ^4He dilution refrigerator. By using Ti-Al and Al films for the absorbers we can cover a wide band between 80 and 300 GHz. The spectrometer is based on a Fourier Transform interferometer, a technological challenge due to the fast scanning speeds that are needed to overcome the effects of background atmospheric fluctuations. KISS is installed at the QUIJOTE 2.5 m telescope in Tenerife since January 2019 and is, currently, in its commissioning phase. We present an overview of the instrument and the latest results.

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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