

# A 3D likelihood analysis for KM2A data

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The square kilometer array (KM2A) is the main array of the Large High Altitude Air Shower Observatory (LHAASO), which is the most sensitive gamma-ray detector for energies above a few tens of TeV. We are developing a software pipeline based on the experimental data, Monte-Carlo simulations and the pointing track of the arrays. The pipeline is able to perform 3D (sky images at different energies) fits of KM2A data, similar to those used for Fermi-LAT and DAMPE gamma-ray analysis. This 3D likelihood analysis could fit source models of arbitrary morphology to the sky images, and get energy spectra information and detection significances simultaneously. The analysis with this software could give consistent results with those using traditional method.

## Keywords

## Collaboration

Lhaaso

## other Collaboration

## Subcategory

Experimental Methods & Instrumentation

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