

# Measurement of the improved angular resolution of GRAPES-3 EAS array by the observation of the Moon shadow

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The Moon prevents cosmic rays along its direction from reaching Earth, giving rise to a deficit in the flux of cosmic rays. The observed deficit can be used for obtaining the absolute calibration of the angular resolution and to verify the pointing accuracy of the array. GRAPES-3 is an extensive air shower experiment located at Ooty, India consisting of a dense array of scintillator detectors. It records  $\sim 10^9$  showers per year with a median energy of 10 TeV. With the precise determination of the arrival time of shower particles and an accurate correction for the shower front curvature, a major improvement in the angular resolution of the array has been achieved. We present a verification of the angular resolution estimated using the division of the array into left-right and even-odd sub-arrays as well as the pointing accuracy by observing the shadow of the Moon.

## Keywords

Angular resolution; Moon shadow; EAS; cosmic rays; gamma rays; GRAPES-3;

## Collaboration

other (fill field below)

## other Collaboration

GRAPES-3

## Subcategory

Experimental Results

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