The performances of the LHAASO-KM2A tested by the observation of cosmic-ray Moon shadow

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on behalf of the LHAASO collaboration

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- Long-term stability

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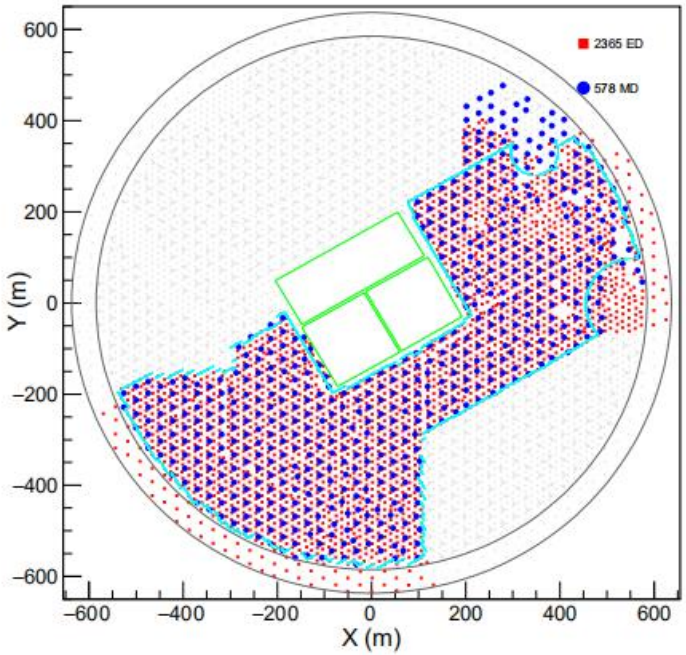
1. Introduction

LHAASO at 4410m altitude on Haizi Mountain, China

LHAASO-1/2KM2A

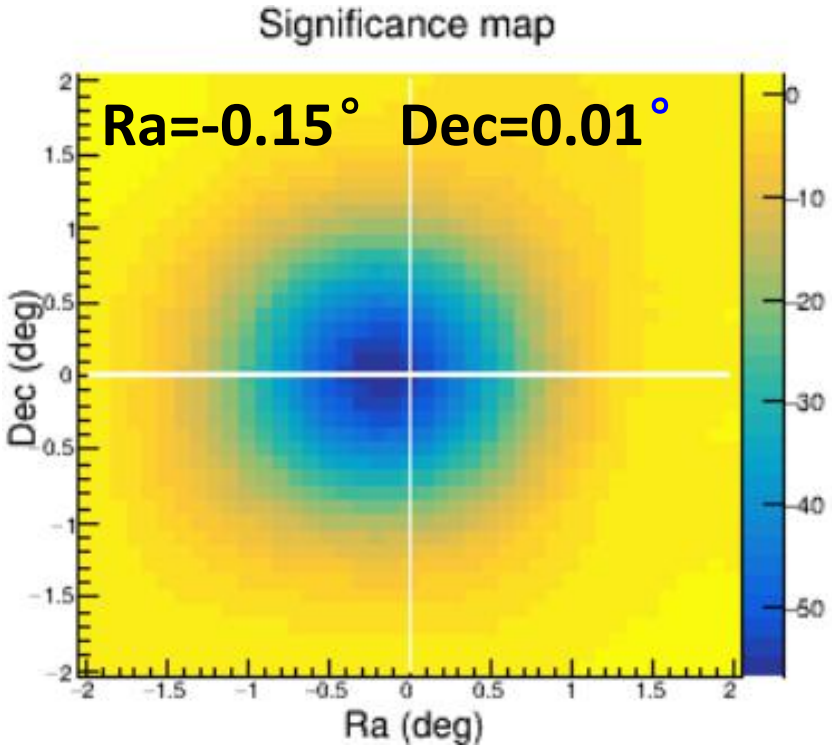
- Time range: Nov 2019-Dec 2020
- Average duty circle: 90%



Scientific goals

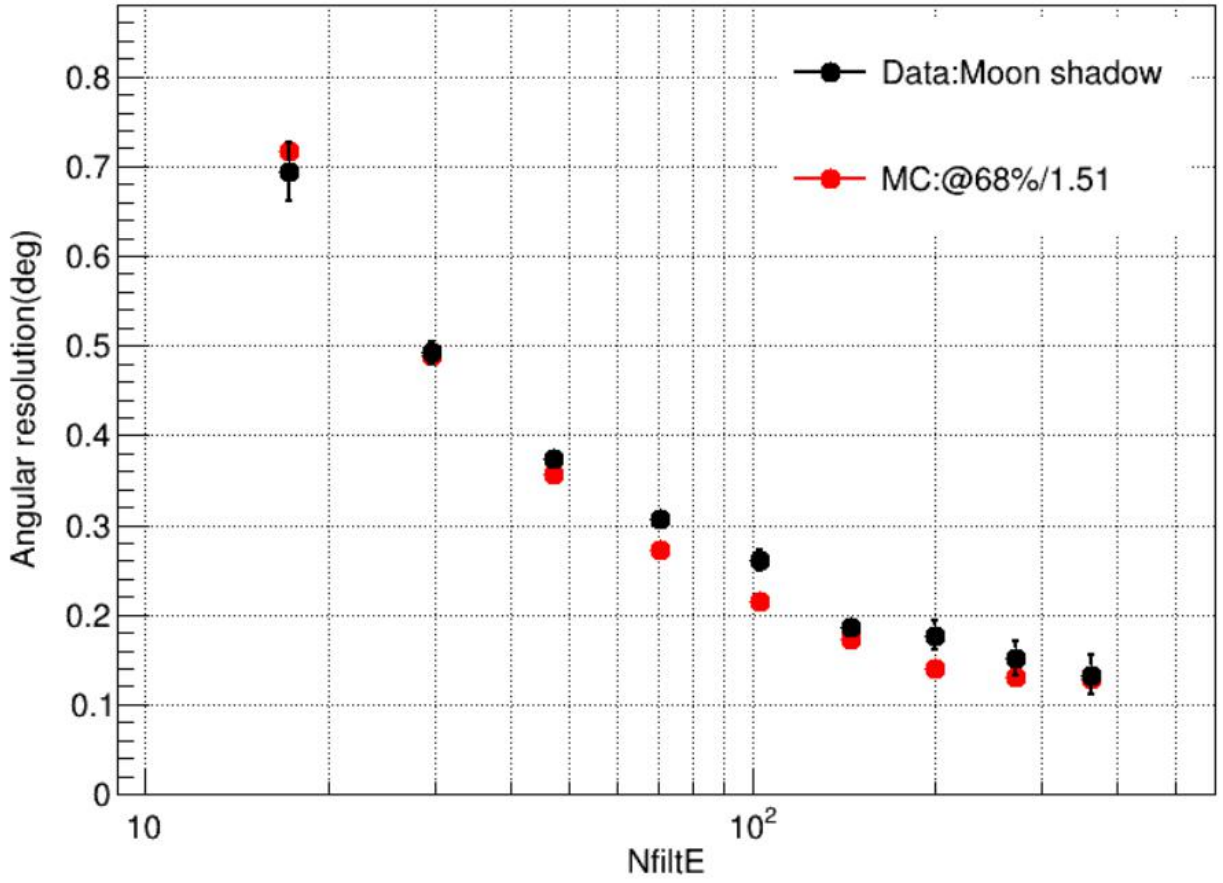
- Researches on cosmic rays around knees
- The ultra high energy gamma-ray astronomy
- Others(Anisotropy, Solar physics...)

Moon Shadow



2. The performances of the LHAASO-KM2A

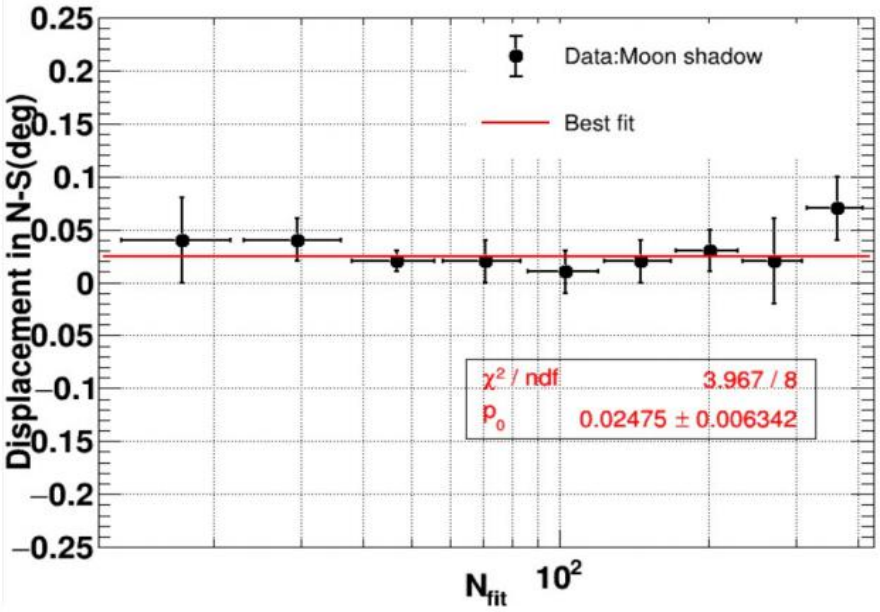
Angular resolution



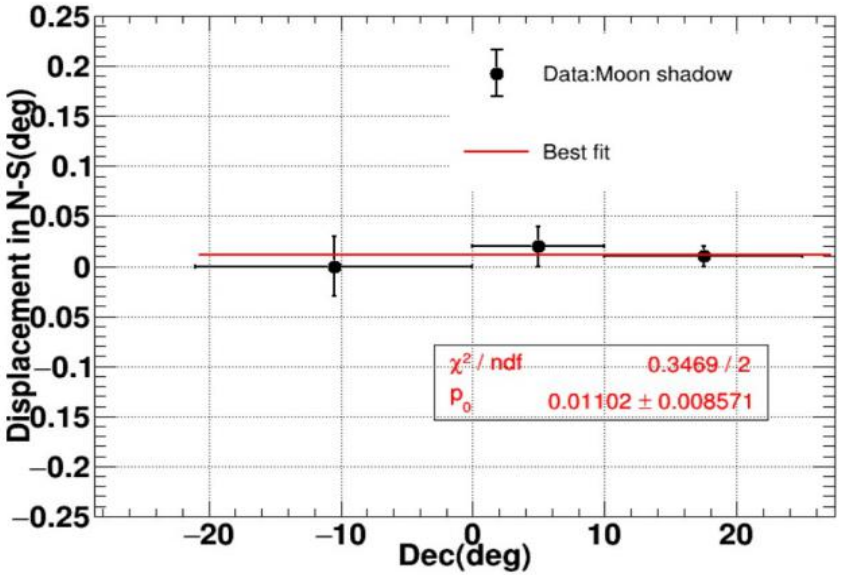
2. The performances of the LHAASO-KM2A

Pointing error

in N-S :



in N-S & Dec

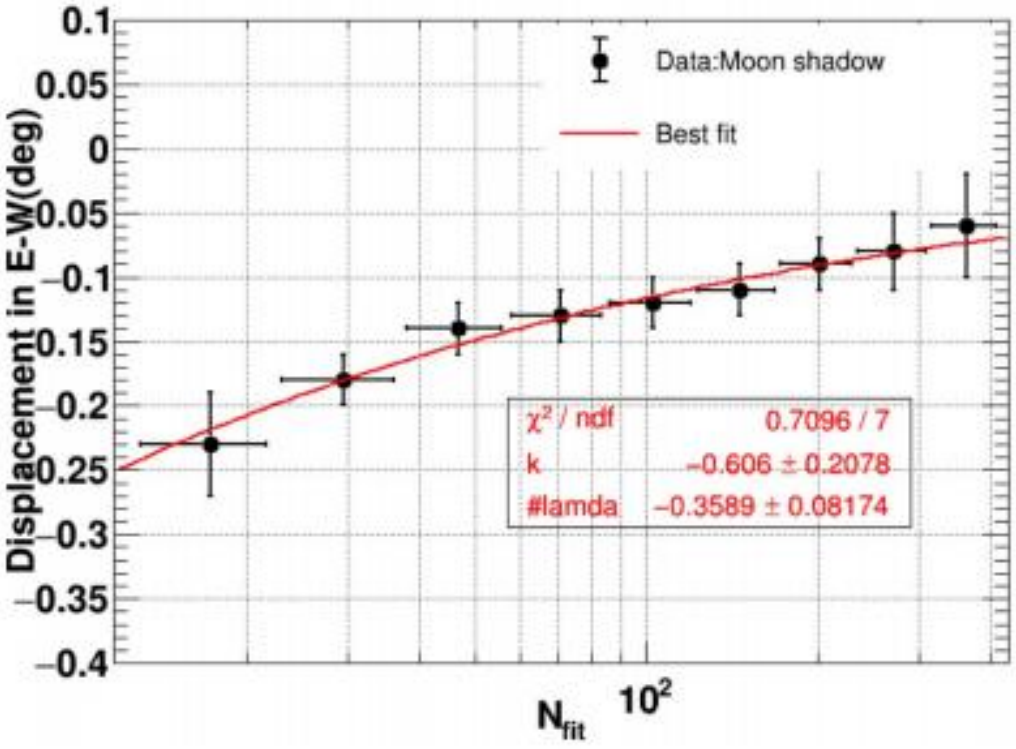


~0.02°

2. The performances of the LHAASO-KM2A

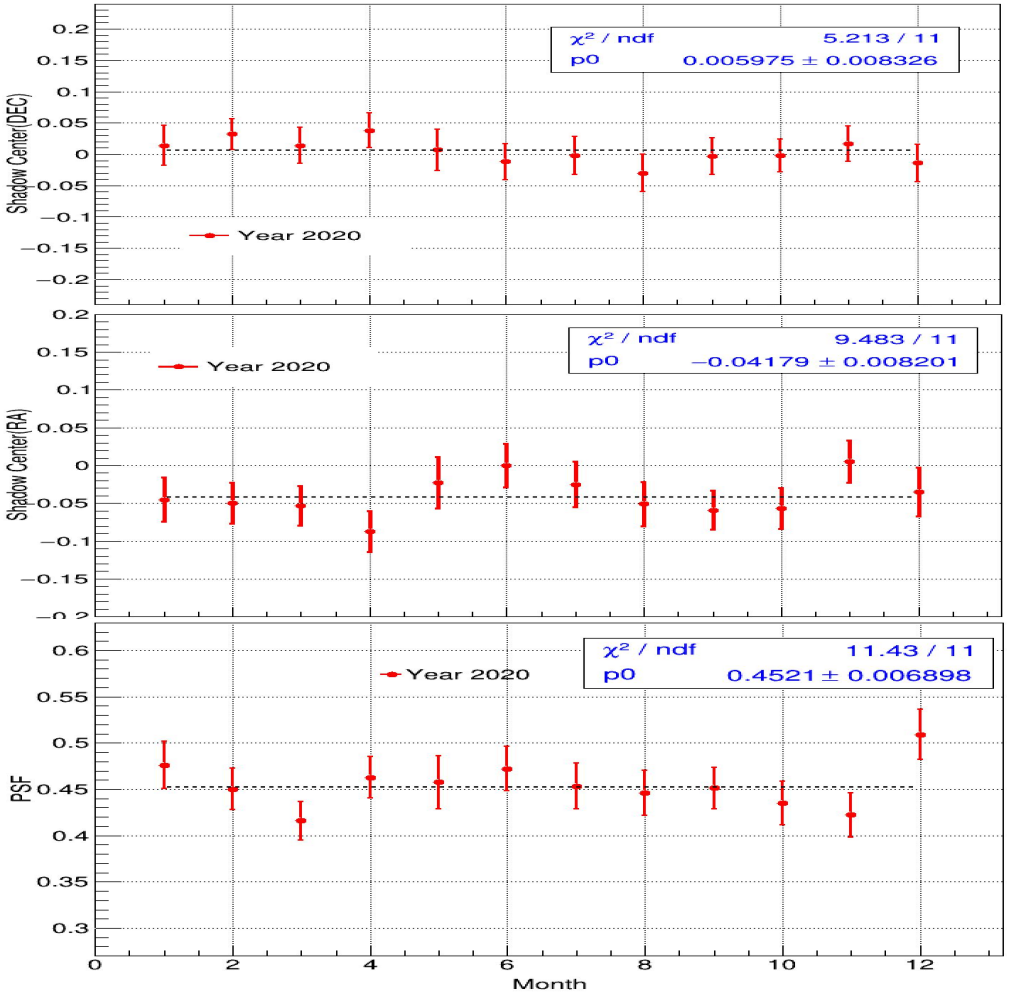
the absolute energy scale

△θ in E-W &Nfit：



2. The performances of the LHAASO-KM2A

the long-term stability



3. Summary

- **From our analysis：**

We check the performance of 1/2 KM2A by Moon shadow preliminarily, including the pointing error, the angular resolution, the long-term stability of the KM2A .

In the future:

The absolute energy scale of the primary cosmic-ray particles will be discussed combining with the simulation.

THANK YOU!