

# Telescope Array Cloud Ranging Test

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The Telescope Array (TA) experiment detects air-showers induced by ultra high energy cosmic rays. The TA atmospheric Fluorescence telescopic Detector(TAFD) observes cosmic ray airshower, which is incident very far from the telescope. The observation does not take place in overcast night. However, the cloud status changes quickly and sometimes there are some isolated clouds. If the cloud is behind the airshower as viewed from the TAFD, the cloud presents no problem for airshower reconstruction. However if the cloud obscures the airshower, it does create a problem for airshower reconstruction. The problematic event can be rejected by airshower profile at reconstruction. However, the estimation of exposure with isolated cloud is difficult. And it should be affected more at higher energy event with relatively further from the telescope, which is lower statistics and more important for the ultra high energy cosmic ray physics. Therefore, to test the method for evaluating the correction of exposure, we installed stereo cloud cameras near one of FD sites. I report the status of the study of the Telescope Array Cloud Ranging Test.

## Keywords

Airshower; Fluorescence Detector; Cloud

## Collaboration

Telescope Array

## other Collaboration

## Subcategory

Experimental Methods & Instrumentation

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