## **AtmoHEAD 2022**



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## Passive measurement of distance to cloud

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The Telescope Array (TA) experiment detects airshowers induced by ultra high energy cosmic rays. The atmospheric Fluorescence telescopic Detector(FD) 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. For airshower reconstruction, the effect of cloud depends on whether the cloud is foreground or background to airshower. For the isolated foreground cloud, 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, I installed stereo cloud cameras near one of FD sites. I report the status of the study of this measurement.

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