# Studies on the performance of LACT based on Monte Carlo simulation

**Zhipeng Zhang,**[a,*] **RuiZhi Yang**[a] **and ShouShan Zhang**[b]

[a]*University of Science and Technology of China (USTC) Hefei, Anhui, Postal Code, China*

[b]*University, Department,*
*Street number, City, Country*

*E-mail:* zhipzhang@mail.ustc.edu.cn

The Large Array of Imaging Atmospheric Cherenkov Telescopes (LACT) is a next-generation IACT system intended to be constructed at the LHAASO-site. Benefiting from the advanced angular resolution of Cherenkov telescopes, it enables the study of source morphology identified by LHAASO. The current plan involves the establishment of four subclusters, each housing eight telescopes, across the LHAASO-KM2A area. These subclusters will observe distinct sources, thereby providing much more observation time compared to other IACT arrays. Additionally, combining all telescopes into a single large array is possible to enhance the energy threshold and telescope multiplity, ultimately improving angular resolution. By this way, we can maximize the muon detector capabilities. With muon dector, we can achieve an excellent background supreesion, which greatly aids the observation of extended sources. In this article, we present preliminary performance results of the LACT and discuss the advantages of various layout options

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*Speaker