

专刊

A future project at tibet: the large high altitude air shower observatory (LHAASO)

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摘要

Gamma ray source detection above 30 TeV is an encouraging approach for finding galactic cosmic ray sources. All sky survey for gamma ray sources using wide field of view detector is essential for population accumulation for various types of sources above 100~GeV. In order to target those goals, a large air shower particle detector array of 1 km² (the LHAASO project) at 4300 m a.s.l. is proposed. By adding two MagicII-type telescopes in the array as proposed, LHAASO will be enhanced in source morphologic investigation power. The proposed array will be utilized also for energy spectrum measurement for individual cosmic ray species above 30 TeV. By re-configuring the wide field of view telescopes into fluorescence light detector array, the aperture of the detector array can be enlarged to cover an energy region above 100 PeV where the second knee is located. Cosmic ray spectrum and composition will be measured in order to transfer an energy scale to ultra high energy cosmic ray experiments.

关键词

[air shower, detector array, gamma ray astronomy, cosmic ray](#)

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