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The Ashra Project

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Abstract content

Ashra (All-sky Survey High Resolution Air-shower detector) is a project to build an unconventional optical telescope complex that images very wide field of view, covering 80% of the sky, yet with the angle pixel resolution of 1.2 arcsin, sensitive to the blue to UV light with the use of image intensifier and CMOS technology. The project primarily aims to observe Cherenkov and fluorescence lights from the lateral and longitudinal developments of very-high energy cosmic rays in the atmosphere. It can also be used to monitor optical transients in the wide field of sky. In 2004 we built prototype telescopes to verify and develop techniques at Haleakala in Hawaii, needed for the development of the full-scale telescopes. Construction of the main detector station has begun at Mauna Loa on the Hawaii Island in the summer of 2005. The pilot observation data have been taken.

We will present the project status, and expected scientific impacts on the observational objectives such as optical transients, unidentified TeV gamma- ray and PeV neutrino sources, and the propagation of EeV cosmic rays.

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If this papers is presented for a collaboration, please specify the collaboration

Ashra

Summary

Reference

Proceedings of the 30th International Cosmic Ray Conference; Rogelio Caballero, Juan Carlos D'Olivo, Gustavo Medina-Tanco, Lukas Nellen, Federico A. Sánchez, José F. Valdés-Galicia (eds.); Universidad Nacional Autónoma de México, Mexico City, Mexico, 2008; Vol. 3 (OG part 2), pages 1559-1562

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