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Instrumentation and performance of the Water Cerenkov detector array at Sierra La Negra site

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Abstract content

We present results from the operation of the high mountain array of 4 water Cherenkov detectors located at 4550 m. a.s.l. located at Sierra Negra mountain (N 18 59.1, W 97 18.76) near of Puebla city in Mexico. The detectors consist of 4 light-tight cylindrical containers of 4 m2 cross section separated 25m. The vertices of the array form a triangle with one detector in the middle. The detector containers are filled with 5000 l of purified water and have a 5" photomultiplier (EMI model 9030 A) facing down along the cylindrical axes. The acquisition electronics consists of scalers counting the number of particles every 5 ms, and an osciloscope used to fully record the traces of the four signals coming from the water Cherenkov detectors. The trigger signals correspond to photon candidate coming from a selected direction with an accuracy lower than one degree. Data and preliminary analysis are described corresponding to the last six months when operation of this detector array has been stable.

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

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. 2 (OG part 1), pages 491-494

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