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The new large-sized scintillation charged particles detector for extensive air shower experiments at Tien-Shan.

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Abstract content

For the newly build extensive air shower array of the Tien-Shan mountain complex ATHLET is designed the new type of a large-size charged particles detector on the basis of the thin molded polystyrene scintillator in conjunction with the wavelength shifting fibers. The 10 mm thick scintillation plates have a 1x1 m^2 sensitive area, a 99% registration efficiency of the charged particles and a homogeneity of the scintillation light output better than 90%. Due to their relatively low mass and cost characteristics, the absence of the external high-voltage feeding and a wide dynamic range of the registered signal amplitudes (about 10^6) detectors of the described type suit well for the use in wide-spread multi-channel extensive air shower installations.

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. 5 (HE part 2), pages 853-856

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