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Method of additional fluctuations for search of weak signals

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Abstract content

The new statistical method for search of weak signals of the various natures is offered. This method is applied, when average value of a signal does not give statistically significant excess over an average background of the device. The method uses property of statistical distributions to increase number of the large fluctuations in the mentioned above case. In result a noticeable change of distribution of a background is appeared in the field of far from average value. The offered method provides quantitative extraction of such deviations caused by a weak signal. The method of additional fluctuations is most useful in the search experiments working near to a limit of accuracy of the device. By this method the authors attemp to interpret some peculiar muon bursts observed at the Baksan Underground Scintillation Telescope in close correlation with a number of GLEs. The results received in this case can be used at planning new more precise experiments.

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. 1 (SH), pages 241-244

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