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On the clustering method of large muon events on the LVD detector

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Hypotheses of detection and clustering of events at the LVD detector based on partially ordered time series of readings of scintillation counters are considered [1, 2]. Based on the ensemble technique, a method for separating events has been developed. A comparison of event fullness with respect to the fixed window method is discussed. The results can be useful in statistical analysis of the detector counters, automation of the search for neutrino bursts and high multiplicity muons.

[1] Agafonova, N.Y., Ryazhskaya, O.G. & LVD Collaboration. LVD—Multipurpose Russian–Italian Detector. *Phys. Atom. Nuclei* 85, 79–85 (2022)

[2] Agafonova, N., Aglietta, M., Antonioli, P., Bari, G., Bonardi, A., Boyarkin, V., Bruno, G., Fulgione, W., Galeotti, P., & Garbini, M. On-line recognition of supernova neutrino bursts in the LVD. *Astroparticle Physics*, 28(6), 516–522. (2008)

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