## Spatial correlation studies applied to gamma/hadron discrimination in the ARGO-YBJ experiment

While Cherenkov telescopes have been successful in identifying the gamma showers thanks to their ability to measure the shower image produced by Cherenkov photons, the air shower arrays which measure just charged particles, with no muon identification, still suffer from inability to discriminate gamma induced showers. As an example the ARGO-YBJ experiment is getting its results without any gamma/hadron separation, just basing on the pointing accuracy. Following recently proposed approaches, spatial correlations among secondary charged particles in extensive air showers have been studied for the case of ARGO-YBJ, which represents a particularly suited detector in this respect because of its "continuous-carpet" geometry. Two different types of statistics have been considered, namely the nearest-neighbour spacing distribution (NNSD) and the variance of the number of secondary particles at given distance. The results of this investigation will be reported.

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