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Analysis of the TAIGA-HiSCORE data

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TAIGA-HiSCORE is an extensive air shower array of 121 Cherenkov detectors spread over an area of 1 $\rm km^2$. It is designed to detect cosmic rays with energies from 50 TeV to 1000 PeV. Also TAIGA-HiSCORE is planned to use for gamma-ray astronomy in cooperation with the other setups of the TAIGA observatory. This work is dedicated to the analysis of the TAIGA-HiSCORE single-mode data. We consider a possibility to detect gamma-ray point source with excess of events from the source direction. For this purpose we propose a method for estimating the signal significance. It takes into account the angular acceptance of the TAIGA-HiSCORE setup. The method is tested on the Monte-Carlo toy model.

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