

## Search for particle excess from the Cygnus Cocoon region direction during a hypothetical flare detected in the Baksan Crapet-2 experiment

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Sources of PeV cosmic rays (so called Pevatrons) can be identified by gamma and neutrino radiation with energy more than 100 TeV due to not destroyed trajectories by interstellar and galactic magnetic fields. In particular, one of such potential sources areas is considered to be the region of the double source PSR J2032+4127 in the Cocoon nebula in the constellation Cygnus. The neutrino event with energy 150 TeV was recorded in the Ice Cube experiment in November, 2020 from the Cygnus Cocoon direction. In the Capet 2 experiment (located in Baksan gorge), there was registered a sharp increase of photon fluxes with an energy of more than 300 TeV from the same direction as Ice Cube neutrino and temporal coincidence. This flux exceeds by 4 orders of magnitude the expected intensity obtained in gamma-ray astronomical experiments and it is comparable to the EAS hadron background.

In the TAIGA astrophysical experiment, the HiSCORE wide-angle Cherenkov installation (with an area of about 1 km<sup>2</sup> at present) is aimed at registering gamma quanta with an energy of more than 50 TeV with an angular resolution of at least 0.2 degrees. One can expect that such a powerful flare should be registered by HiSCORE array.

To check this hypothesis we have analyzed EAS events registered by HiSCORE array during 20 hr in October-November 2020 yr from the Cygnus Cocoon direction. The intensity of gamma-like particles with energy more than 200 TeV has been compared with an intensity of the nearest background region around the source. The upper limit of the expected excess flux will be presented.

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