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Analysis of the energy deposit of EAS cores in the Cherenkov water calorimeter NEVOD

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The Experimental complex NEVOD includes a set of facilities for the investigation of extensive air showers (EAS). Two of them are: the Cherenkov water calorimeter (CWC) NEVOD and the NEVOD-EAS air-shower array. The CWC measures energy deposit of EAS cores. The NEVOD-EAS detects the EAS electron-photon component in the primary energy range of 1015-1017 eV and allows reconstructing the main air-shower parameters: the size, the arrival direction and the core position.
According to the NEVOD-EAS data, it is possible to select EAS events, in which the air-shower core falls within the CWC NEVOD boundaries. The CWC response to these events can be observed within the time gate of up to 1 ⊠s starting from the NEVOD-EAS event timestamp. In such joint events, it is possible to measure the energy deposit of EAS core in the CWC NEVOD by the number of detected charged particles.
In the talk, the estimates of the CWC NEVOD counting rate, taking into account the muon flux integral intensity, obtained by simulation are discussed. Also, the spectrum of energy deposit in the CWC NEVOD in joint events with the NEVOD-EAS array are presented.

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