

## Energy deposit of EAS cores detected by the facilities of the Experimental Complex NEVOD

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The Experimental Complex (EC) NEVOD (MEPhI, Moscow) includes the NEVOD-EAS array, detecting electron-photon component of extensive air showers (EAS), and the Cherenkov water calorimeter (CWC), measuring energy deposit of particles passing through its operating volume.

Reconstruction of main EAS parameters (axis position, arrival direction, age and size) is performed according to the data of the NEVOD-EAS array, the clusters of which are installed around the building of the CWC. The System of Global Time Synchronization of the EC NEVOD provides timestamping events detected by the NEVOD-EAS and CWC with an accuracy of up to 25 ns, which makes it possible to select joint events in these facilities.

In this work, from all joint events in the NEVOD-EAS and CWC, we selected for the analysis only those events in which the EAS cores passed through the volume of the water detector. Since EAS cores include different types of particles, the response of CWC to electrons, muons and hadrons of various energies has been simulated in the Geant4 software package. Based on simulation, the estimates of the contribution of various components to the total energy deposit of EAS cores have been obtained. In the report we present the results of comparing simulation with experimental data.

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