

Machine learning techniques applications for the ENDA experiment data analysis

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Using of machine learning (ML) and deep learning (DL) techniques in data analysis becomes a mainstream today and is presented in papers of leading experiments. These modern methods allow sometimes to increase the accuracy of for example mass composition reconstruction significantly. In current work ML and DL are applied for core location, zenith angle estimation, primary energy and mass reconstruction based on data of ENDA experiment and corresponding CORSIKA + GEANT4 Monte-Carlo simulations. ENDA (Electron Neutron Detector Array) is an extensive air shower (EAS) experiment based on idea of simultaneous recording of electromagnetic component of EAS and thermal neutrons produced by the hadron component of the shower. Results of the analysis are presented.

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