**Сalibration of ground-based neutron monitors using machine learning approach. Prospects and disadvantages.**

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Neutron monitors are located on the Earth's surface. They perform continuous measurements of the secondary component of cosmic rays (CR), formed after the interaction of primary CR with the Earth's atmosphere. Scientific instruments located on space satellites measure the primary flux of cosmic rays. However, outer space is characterized by a high radiation environment, which causes the degradation of electronic components and the efficiency of recording systems. Moreover, the equipment of space satellites may completely fail during solar flares, which can lead to data loss. As a result of all these factors, the calibration of neutron monitors on satellite data is an important task. Such methods will significantly expand the capabilities of the network of neutron monitors and would allow the possibility of restoring lost data due to the degradation of the electronics of the detection systems. Also, studying cosmic ray flows using ground-based detectors is significantly cheaper than satellite experiments. This research provides an overview of current attempts to develop such methods. The study also presents the result of a machine-learning model used to calibrate neutron monitors on primary cosmic ray proton flux with energies > 500 MeV.

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