

# **Energy characteristics of Forbush decreases accompanied by magnetic storms according to muon hodoscope URAGAN data**

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Muon hodoscope URAGAN operates in MEPhI since 2006 and allows to register muons at various zenith angles. In this work, the experimentally obtained temporal changes of the index of amplitude spectrum of Forbush decreases registered by muon hodoscope URAGAN are studied. To obtain the Forbush decrease amplitude energy spectrum in the flux of muons, the calculated coupling functions of primary and secondary cosmic ray fluxes for five zenith-angular intervals are used. Analysis of the energy characteristics is based on the dependence of the decrease amplitude in the intensity of cosmic ray muons on the mean log energy of primary particles, which influence to the change in the counting rate of the muon hodoscope URAGAN during Forbush decrease. Distributions of values of amplitude spectrum index of Forbush decreases accompanied by magnetic storms at different stages of their development are obtained. It is shown that the energy characteristics of Forbush decreases accompanied by magnetic storms are different for various values of the geomagnetic indices.

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