

Estimation of the spectrum of atmospheric neutrons at sea level in the energy range 0.05-1 GeV

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The neutron spectra induced by the flux of primary cosmic radiation, taking into account its absorption in the atmosphere and the generation of neutrons in the energy range 0.05-1 GeV has been estimated. An estimate of the neutron flux with energy above 1 GeV is approximately $0.3 \text{ particle}/\text{m}^2/\text{s}/\text{sr}$. An evaluation of the neutron flux has been conducted to realize a ground-based experiment to monitoring the operation of nuclear installations. These calculations will be taken into account to calculate the background events for the ground-based laboratory science run.

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