

Influence of neutron detector structural materials on fast neutron detection

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Some nuclear reactions on nuclei in neutron detector structural details even so as aluminium are induced with energy increasing. Nuclear reactions induced by neutrons between 5 and 20 MeV energy are under consideration. They causes background events in gaseous and scintillation detectors with ^3He , ^7Li and ^{10}B isotopes. The events and neutron scattering and nucleus activation disturbs measurement results, leads to detector excitation without neutrons.

Interaction of neutron with an energy of more than 5 MeV with aluminum, silicon and oxygen nuclei as the main materials of new position-sensitive detector is considered. Interaction of neutron with converter nuclei: ^3He , ^7Li and ^{10}B is considered also.

The speaker is a student or young scientist

No

Section

1. Applications of nuclear methods in science and technology

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