ABOUT CALIBRATION OF DARK MATTER AND NEUTRINO DETECTORS BY REMOTE CONTROLLED NEUTRON SOURCE

A.V. Shchagin

Kharkov Institute of Physics and Technology, Kharkov,Ukraine

Belgorod National Research University, Belgorod, Russia

e-mail: [shchagin@kipt.kharkov.ua](mailto:shchagin@kipt.kharkov.ua)

At a calibration of dark matter or neutrino detectors /1/, an AmBe source of neutrons is usually temporary introduced into a scintillator of the detector for production of recoil nuclei /2/. Such sources usually consist of mixture of powders of 241Am и Be and emit neutrons continuously. A pyroelectric neutron source for calibration of the detectors has been proposed in /3/.

Here, we propose remote controlled neutron source. A layer of isotope source of alpha particles, for instance 241Am, is deposited on the surface of a substrate. A separate plate is produced of low-zeta element, for instance Be. The neutron source is turned on when the surfaces of Am and Be approach each other. The neutron source is turned off when the surfaces are separated in space. Besides, remote control is possible inserting a thin absorbing alpha particles plate between immovable surfaces of Am and Be. Such remotely controlled neutron source can be permanently installed in the scintillator and switched on remotely for calibration of the detector as needed.

ЛИТЕРАТУРА

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