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Sommario/riassunto

Converters of neutron radiation play a determining role in the development of detectors of these radiations. They determine the basic characteristics of detectors: the efficiency of registration, energy, time and spatial resolution. Among solid-state converters on the basis of gadolinium, ^{157}Gd isotopes are especially allocated, which possess abnormally high cross sections of interaction with thermal neutrons. This book discusses the theoretical bases of registration of neutron radiation by converters from gadolinium. Also described herein are the processes of neutron absorption in the material of a converter and the probability of secondary electron escapes.
