Application of Semiconductor Detectors for Dose Rate Measurement of Fission Products Mixture

Vladislav Pisa[1, a)], Bruno Sopko[2] and Vit Sopko[2]

[1]*Czech Technical University in Prague, Faculty of Mechanical Engineering, Technicka 4, CZ-166 36 Prague, Czech Republic*
[2]*Czech Technical University in Prague, Faculty of Nuclear Science, Brehova 7, CZ-115 19 Prague, Czech Republic*

[a)] Corresponding author: ladapix@seznam.cz

Abstract. This paper presents the results of the energy and angular dependence calculations and experimental verification of the military dosimetric device DP-86 probe. This device was designed to measure the gamma radiation dose rate of nuclear weapons fall out, that means the fission products mixture. The beta emission can also be roughly estimated. Based on these results was calculated the time dependence of the device response to nuclear weapon fallout.