

**GE-BGO ANTICOMPTON SPECTROMETER FOR NUCLEAR PHYSICS  
RESEARCH ON A HIGH FLUX IMPULSE NEUTRON SOURCE**

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An investigation of the resonance neutron induced fission of heavy nuclei is carried on in the Frank Laboratory of Neutron Physics, JINR, Dubna. Using the existing spectrometer with Ge(Li) detector one can not achieve the desirable accuracy of the experimental data [1]. To improve the research methods and increase experimental possibilities the new spectrometer on the basis of HP Ge detector with BGO anticompton shield is under development. The optimisation of the geometry is made using the CERN's program GEANT [2]. Detector response both on a monoenergetic gamma-ray and on the real gamma-spectrum from Pu-239 is calculated. The possibility of using the Ge-BGO spectrometer for experimental research on the reconstructed impulse neutron source IRCN [3] in Dubna is considered.

**References:**

- [1] N.A. Gundorin et al., Proc. Int. Workshop on Nuclear Fission and Fission-Product Spechscopy. Grenoble, 1994, p.231.
- [2] GEANT User's Guide. CERN, 1992.
- [3] V.L. Aksenov et al., Commun. JINR E-392 110. Dubna, 1992.