

OPTIMIZATION OF PSD METHOD FOR BEGe DETECTORS

Rumyantseva N.S. on the behalf of the GERDA collaboration
Joint Institute for Nuclear Research, Dubna, Russia
E-mail: rumyantseva.nads@gmail.com

The GERmanium Detector Array (GERDA) experiment [1] at the Gran Sasso Laboratory (Italy) searching for neutrinoless double beta decay of the isotope ^{76}Ge . The background reduction of experiment deals with the pulse shape discrimination (PSD) of the BEGe detectors [2], which will be the most part of next phase of GERDA experiment. This work gives some details of optimization current PSD analysis used in experiment for the exposition $Mt = 2.4 \text{ kg}\cdot\text{yr}$. In analysis was used power-law energy dependence of acceptance band of A/E parameter. Results obtained indicate that reduction factor can be enlarge on 10-20% depending from confidence level. Such analysis will be useful for Phase II of experiment.

1. GERDA collaboration, I.Abt *et al.* // Letter of Intent (2004), hep-ex/0404039v1.
2. M.Agostini *et al.* // Eur. Phys. J. C. 2003. V.73. P.2583.