Contribution ID : **143** Type : **Poster**

LED calibration system for a high energy scintillation spectrometer

Tuesday, 11 October 2016 15:15 (30)

A calibration system based on two light-emitting diodes (LEDs) and finite difference technique is described. Pulses of the both LEDs have a complex shape like CsI(Tl) signals. The first LED has constant amplitude, while the amplitude of the second one varies all over the detector energy range. The differences between detector responses to summarized pulses of the both LEDs and pulses of the variable LED are measured. Then iterative fitting of the measured data is used for calculation of a detector response curve. This approach allowed us to design a calibration system for a scintillation detector with the energy range of 1-200 MeV, which is going to be part of the GRIS solar gamma ray spectrometer. The results of calibration and verification measurements are represented; the precision of the proposed method is discussed.

Primary author(s) : Mr. FARADZHAEV, Rodion (National Research Nuclear University MEPhI)

Co-author(s) : Mr. LUPAR, Evgeny (National Research Nuclear University MEPhI); Dr. YUROV, Vitaly (National Research Nuclear University MEPhI); Mr. TROFIMOV, Yury (NRNU MEPhI)

Presenter(s) : Mr. FARADZHAEV, Rodion (National Research Nuclear University MEPhI)

Session Classification : Poster session - II

Track Classification : Methods of experimental physics