March 2009

Localization of the SiegrfriedII segments by means of the characteristic 121keV Europium peak

Abstract

The Gerdalinchen experiment at the "Max Planck Institut für Physik München" makes use of segmented Germanium detectors to prepare the search for the neutrinoless double β-decay at LNGS. Cylindric detectors are therefore divided along their phi- and z-axes into $6 \cdot 3$ parts. In order to localize the position of the segments in the whole setup a Europium source was moved around the detector. Here the results of the measurement along the phi-axes are reported.

1 Results

angle	N_{core}	N_{13}	N_{14}	N_{15}
5	406 ± 60	18 ± 149	52 ± 23	552 ± 105
10	438 ± 60	-136 ± 102	24 ± 17	581 ± 119
15	390 ± 64	69 ± 21	-24 ± 79	145 ± 70
20	321 ± 66	24 ± 195	482 ± 158	175 ± 132
25	336 ± 60	39 ± 235	307 ± 58	147 ± 90
30	445 ± 74	26 ± 13	436 ± 42	65 ± 29
35	285 ± 47	-21 ± 220	466 ± 44	29 ± 22
40	490 ± 75	144 ± 50	423 ± 40	33 ± 17
45	446 ± 78	45 ± 58	488 ± 43	22 ± 179
50	395 ± 59	22 ± 247	515 ± 39	30 ± 14
55	442 ± 61	25 ± 271	572 ± 44	0 ± 3
60	452 ± 66	51 ± 20	317 ± 71	x ± x
65	602 ± 69	24 ± 15	423 ± 84	16 ± 30
70	529 ± 66	81 ± 29	445 ± 107	2 ± 477
80	454 ± 54	422 ± 99	196 ± 7346	15 ± 110
85	663 ± 73	508 ± 76	19 ± 415	46 ± 107
90	425 ± 58	633 ± 196	6 ± 212	33 ± 43

Table 1: results