(7.13) An absorption curve of a sample emitting β- and γ-rays was taken with aluminum absorber using a gas-flow proportional counter. The data obtained were:

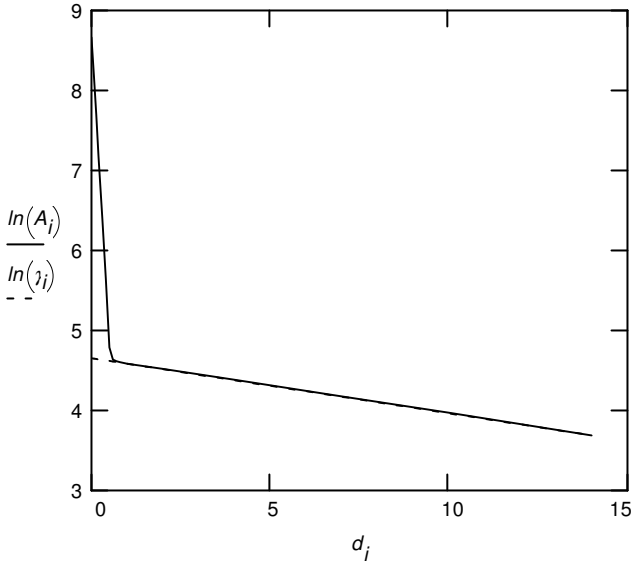
$i := 1..16$ $\quad g := 0.069$ $\quad R_0 := 105$ $\quad E_\gamma$ ca 1 MeV

$d_i :=$ $\quad A_i :=$

d_i	A_i
0	5800
0.070	3500
0.130	2200
0.200	1300
0.300	600
0.400	280
0.500	120
0.600	103
0.700	101
0.800	100
1.00	98
2.00	92
4.00	80
7.00	65
10.00	53
14.00	40

$\gamma_i := R_0 \cdot \exp(-g \cdot d_i)$ $\quad \beta_i := A_i - \gamma_i$

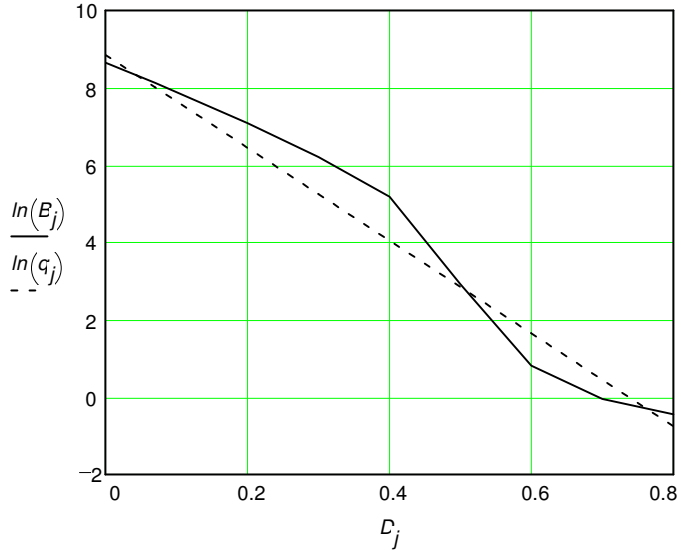
γ_i	β_i
105	$5.695 \cdot 10^3$
104.494	$3.396 \cdot 10^3$
104.062	$2.096 \cdot 10^3$
103.561	$1.196 \cdot 10^3$
102.849	497.151
102.142	177.858
101.439	18.561
100.742	2.258
100.049	0.951
99.361	0.639
97.999	$6.986 \cdot 10^{-4}$
91.465	0.535
79.675	0.325
64.778	0.222
52.665	0.335
39.963	0.037



$j := 1..10$ $\quad Z_0 := 7000$ $\quad p := 12$

$D_j := d_j$ $\quad B_j := \beta_j$ $\quad q_j := Z_0 \cdot \exp(-p \cdot D_j)$

D_j	B_j	q_j
0	$5.695 \cdot 10^3$	$7 \cdot 10^3$
0.07	$3.396 \cdot 10^3$	$3.022 \cdot 10^3$
0.13	$2.096 \cdot 10^3$	$1.471 \cdot 10^3$
0.2	$1.196 \cdot 10^3$	635.026
0.3	497.151	191.266
0.4	177.858	57.608
0.5	18.561	17.351
0.6	2.258	5.226
0.7	0.951	1.574
0.8	0.639	0.474



Answers: Range of β about 0.6 corresponding to ca 1.5 MeV, γ energy ca 1 MeV