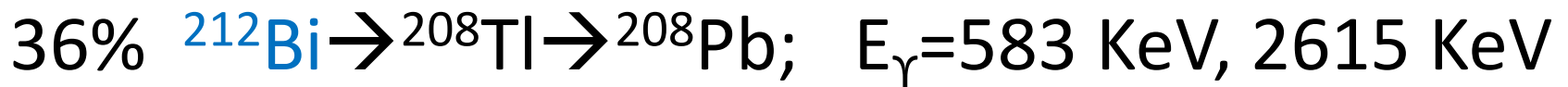
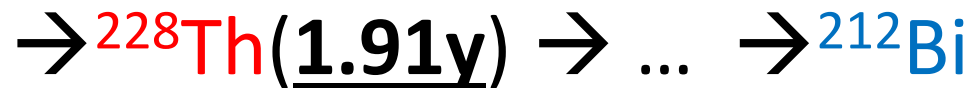
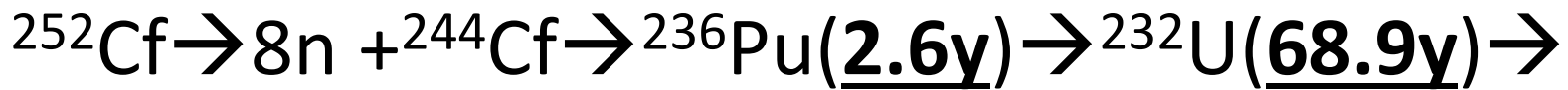


Does the “Octaneutron” exist?

G. Ayvazyan, H.Gulkanian, L.Poghosyan,
V.Pogosov

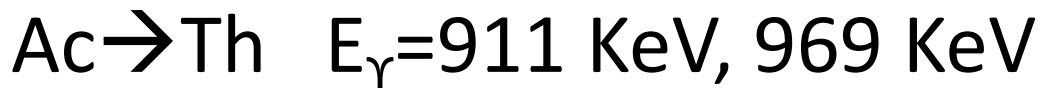
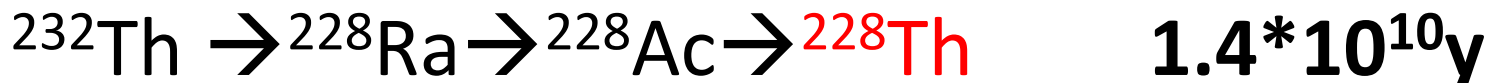
Table 1

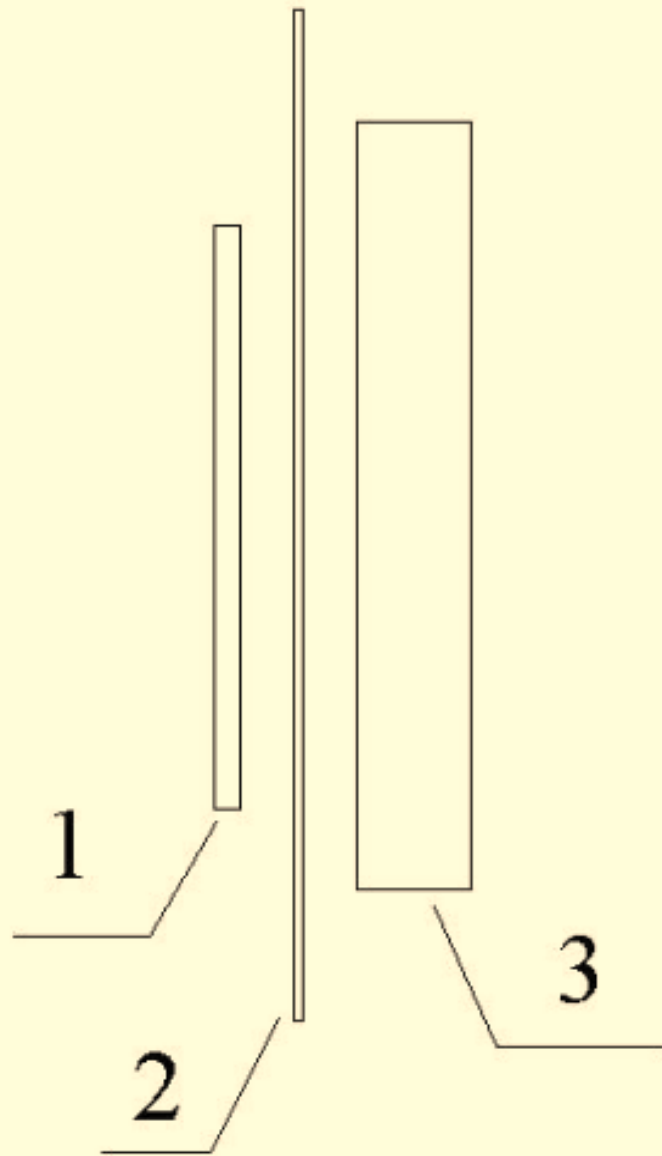
- ^{252}Cf : 97% alfa, 3% fission; $T_{1/2} = \underline{2.645\text{y}}$



$$\lambda_{8n} / \lambda_{\text{alfa}} = 1.74 * 10^{-6}$$

Background? :

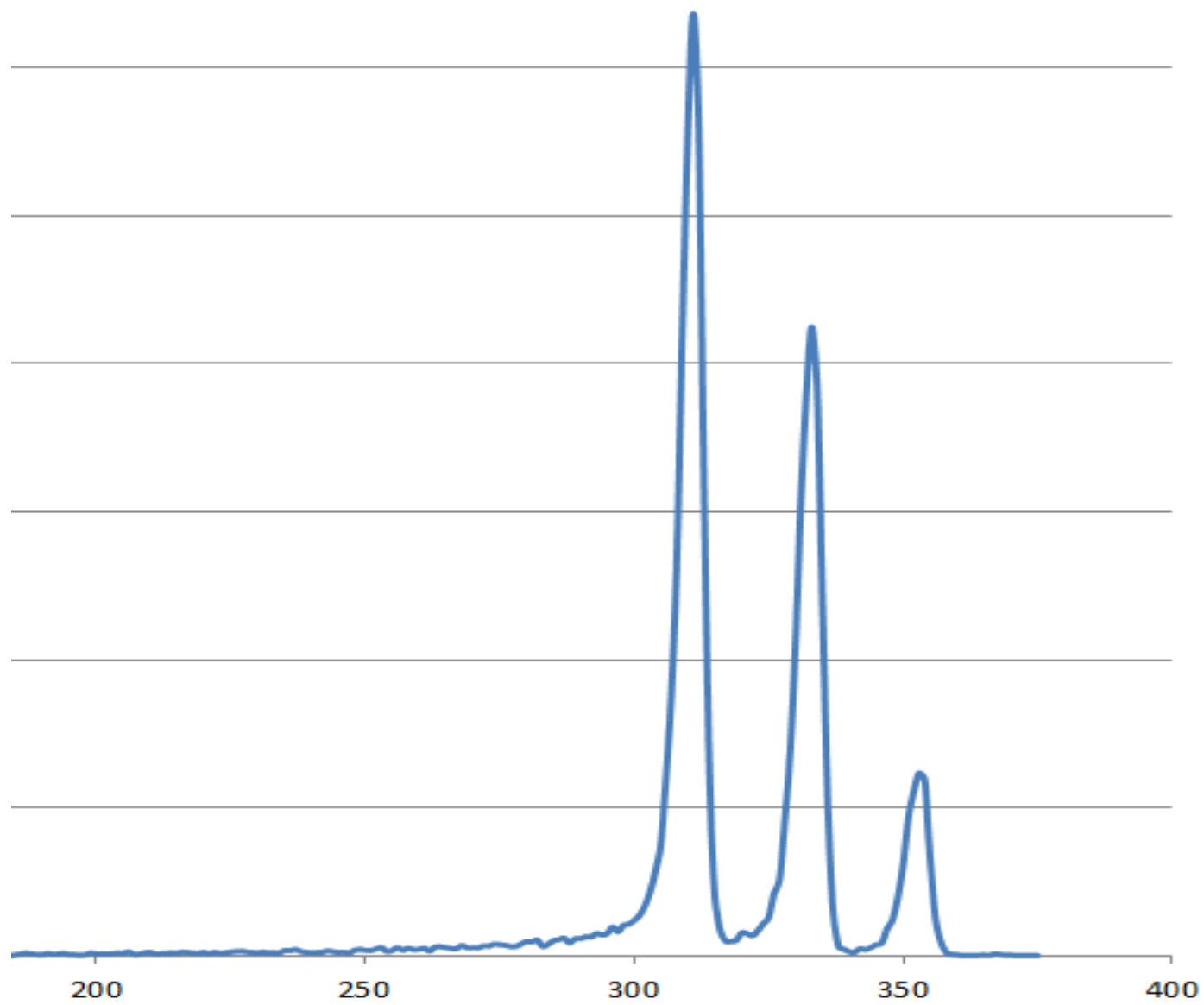


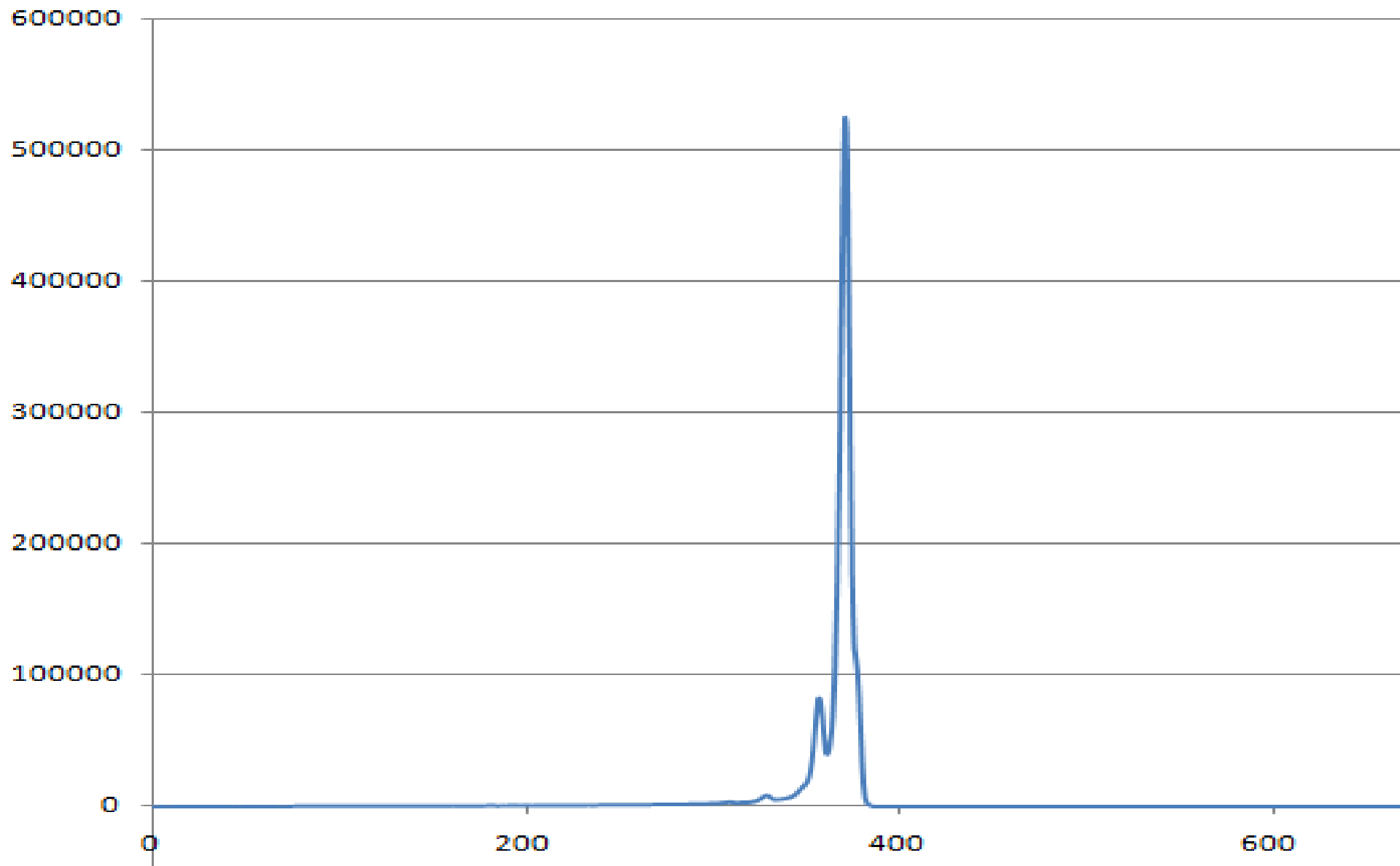


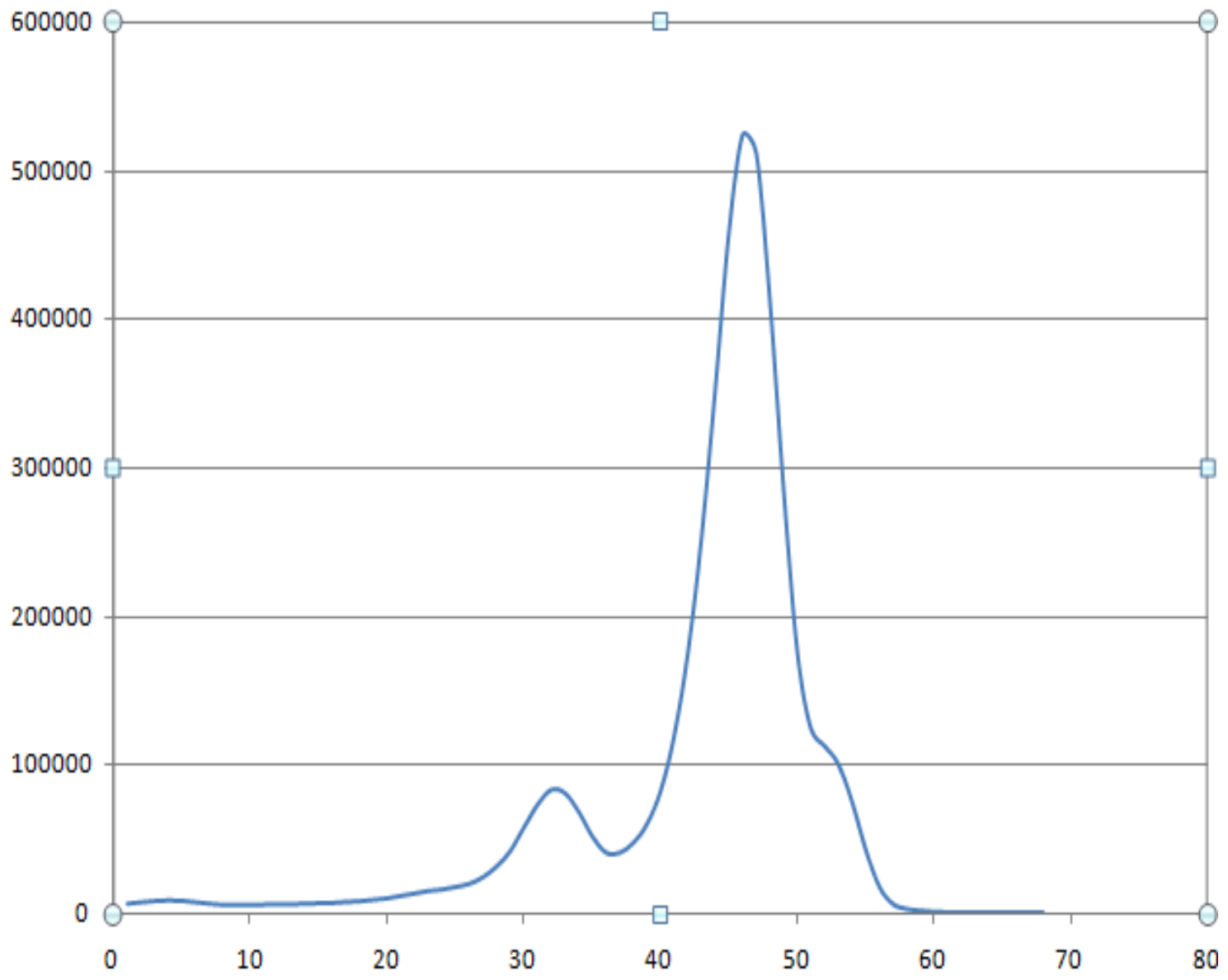
1. ^{252}Cf -source
2. mylar
3. Si-detector

calibr source

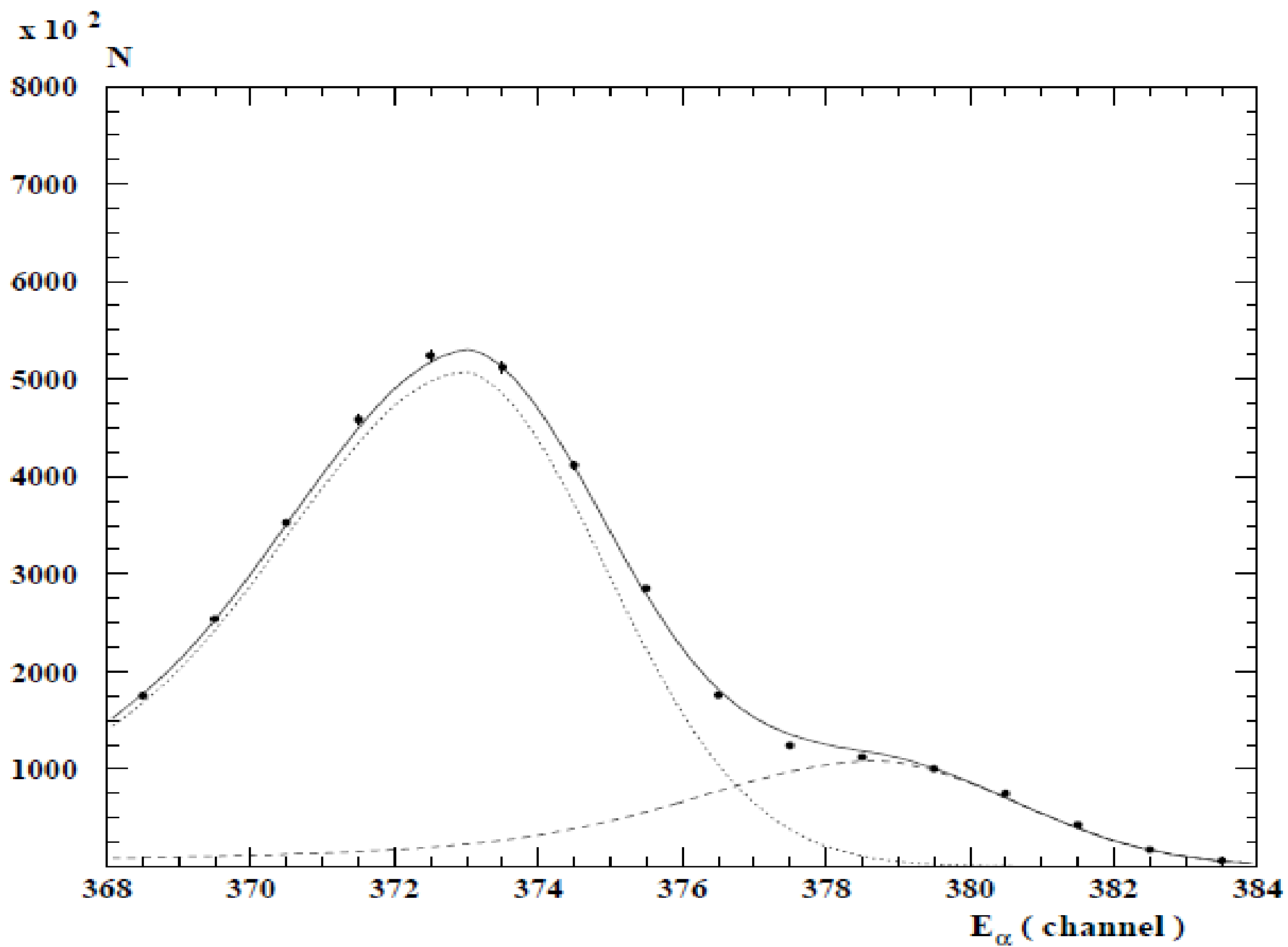
- ^{239}Pu 5105.5(.12), 5144.3(.17), 5156.6(.71)
- ^{238}Pu 5456.3(.29), 5499(.71)
- ^{244}Cm 5763 (.236), 5805 (.764)
- $E = 15.37^* (N_{\text{ch}} + 24.3)$

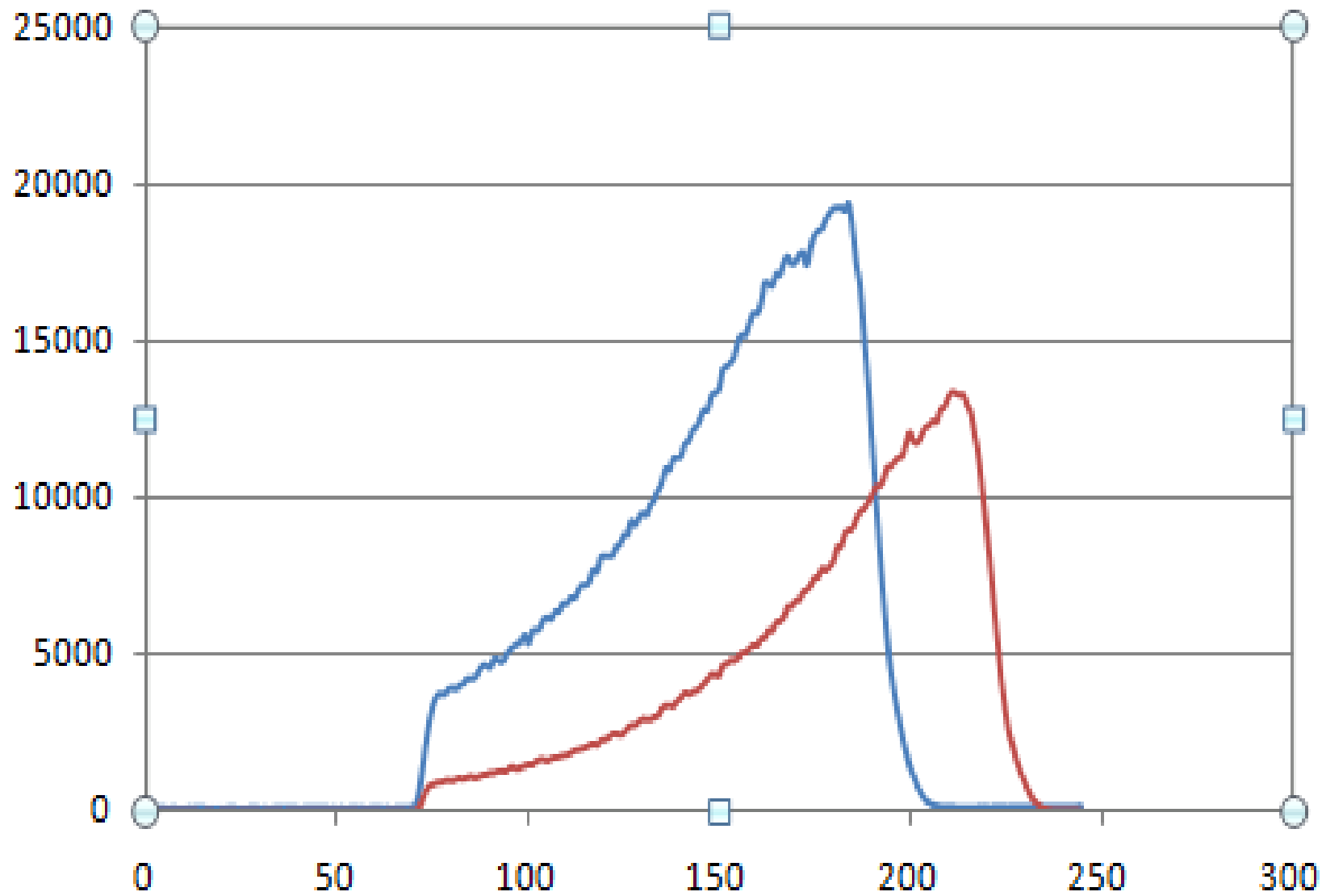


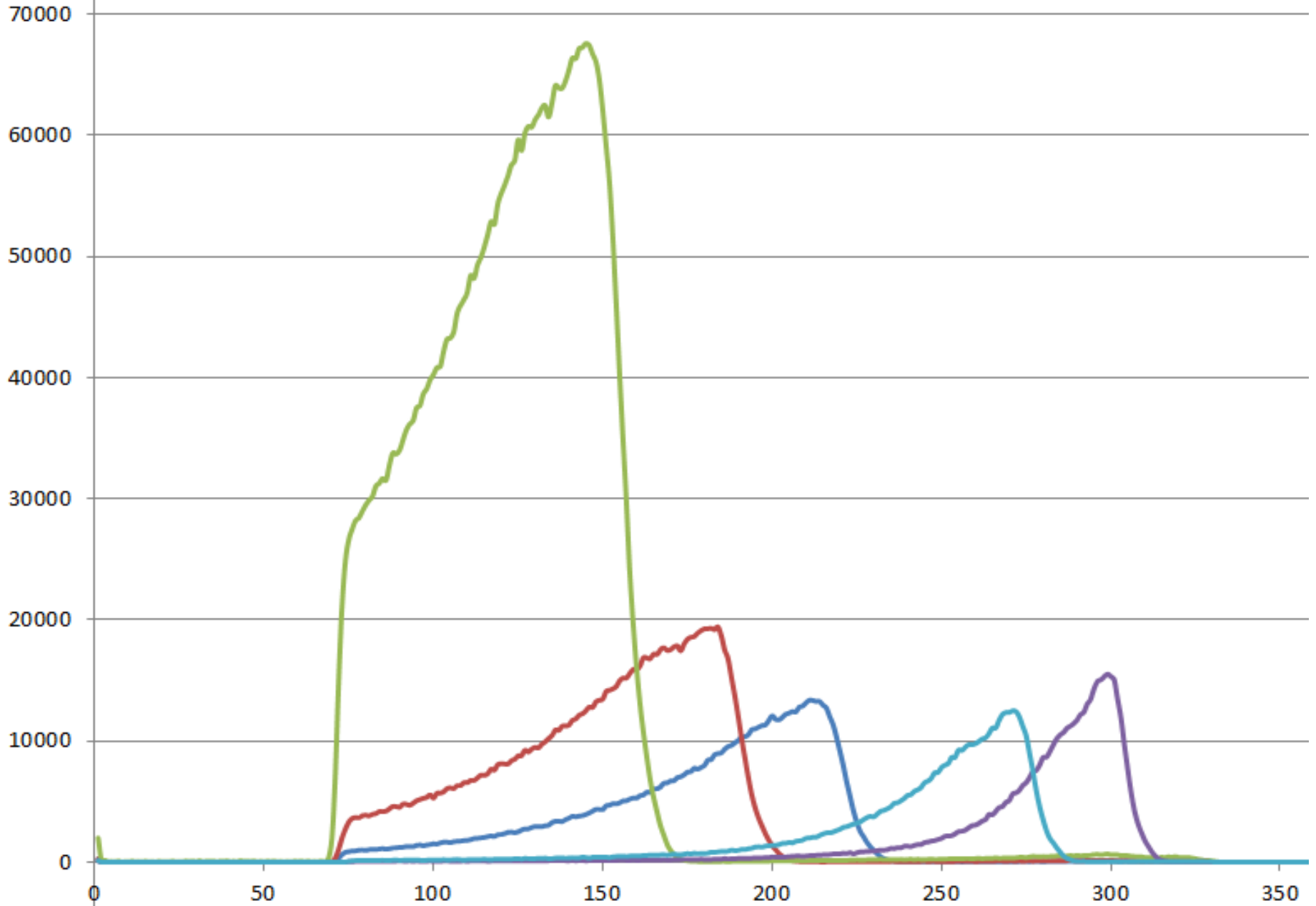




- ^{252}Cf 6075 KeV(.15), 6118 KeV(.82) 2.645 y
 - ^{250}Cf 5989 KeV(.17), 6031 KeV(.83) 13.08 y
 - ^{249}Cf 5813 KeV(.82) 351 y
 - ^{251}Cf 5677(.36), 5851(.28), 6013(.12) 900 y
-
- $T = 172.7 \text{ Ksec}$
 - $N_{\alpha} (^{252}\text{Cf}) = (6.0 \pm 0.1) * 10^5$







10mkm, 13mkm, 20mkm, 23mkm, 26mkm

a) 20mkm - $(2.68 \pm 0.07) \text{mg/cm}^2$;

b) 23mkm - $(3.15 \pm 0.08) \text{mg/cm}^2$

- a) $N_1^{\text{ch}}(8785) = 438.5$; $N_2^{\text{ch}}(8785) = 443.5$

- $t = 82.5 \text{ Ksec}$

- N_{ch} : 419-2, 424, 428, 481 $\sigma = 7 \text{ch}$

-

- b) $N_1^{\text{ch}}(8785) = 417$; $N_2^{\text{ch}}(8785) = 425$

- $t = 143.2 \text{ Ksec}$

- N_{ch} : 393, 409, 419, 439 $\sigma = 7.5 \text{ ch}$

-

$$T_{\text{source}} = 25.5\text{y}; \quad t_{\text{alfa}}^{252\text{Cf}} = 172.7 \text{ Ksec}; \quad t_{8785} = 225.7 \text{ Ksec}$$

- $N_{\text{alfa}}^{252\text{Cf}} = (6.0 \pm 0.1) * 10^5$

- $N_{8785} \leq 6 \quad n_{\text{ch}}^{\text{expct}} - 21 \leq n_{\text{ch}} \leq n_{\text{ch}}^{\text{expct}} + 14$

- $\lambda_{8n} / \lambda_{\text{alfa}} \leq (0.47 \pm 0.19) * 10^{-6}$

- **Dudkin:** $\lambda_{8n} / \lambda_{\text{alfa}} = 1.74 * 10^{-6}$

планы

- 1. Продолжение измерений:
 - а) очистка внутреннего объема от загрязнений;
 - б) увеличение длительности измерений;
 - в) добавление ΔE -детектора.
- 2. Приобретение “старого” источника для поиска процесса по гамма линиям на подземной установке.