Ge02 Efficiency using ^{nat}Pb

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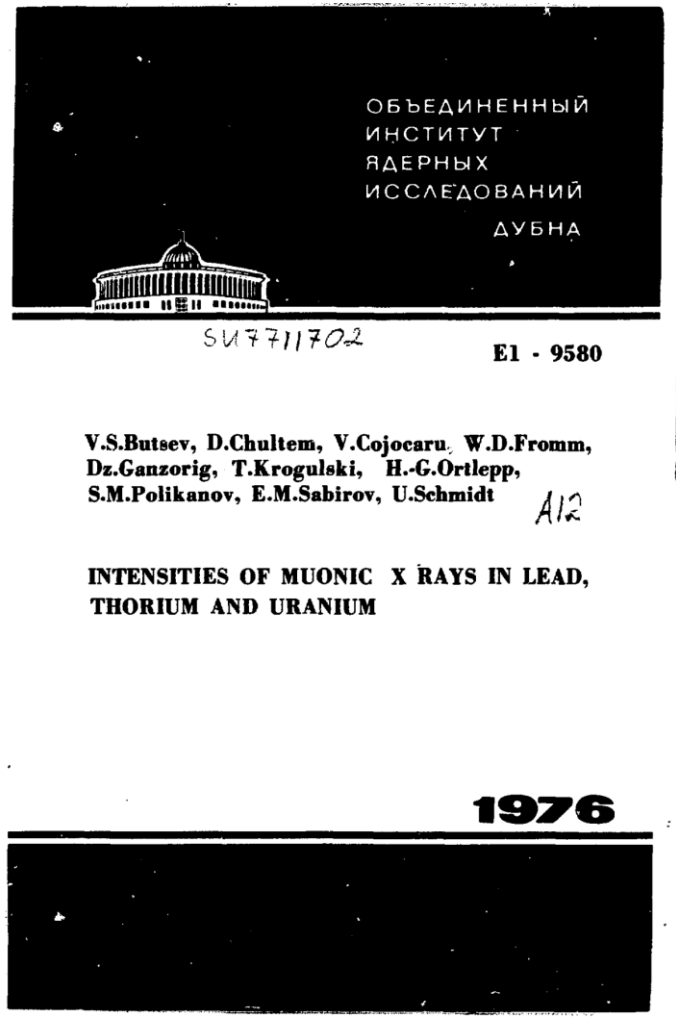
^{nat}Pb intensities

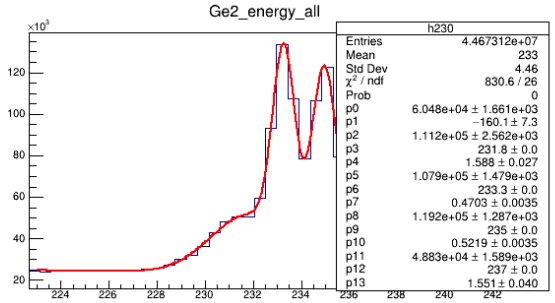


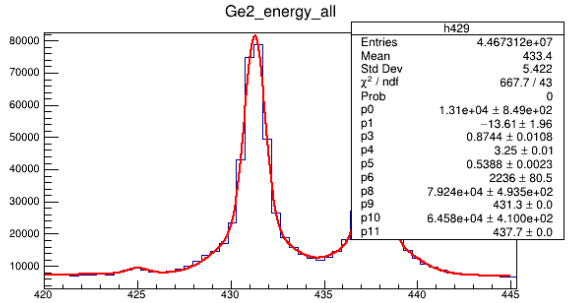
Intensities of radiative muonic transitions

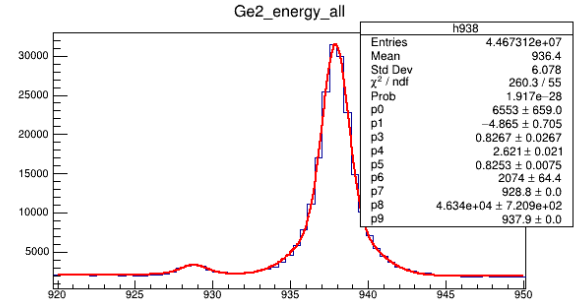
Transitions	Pb(nat) E(keV)	Pb(nat) I_{exp}	Pb(nat) I_{calc} (α=-0.14)	^{232}Th E(keV)	^{232}Th I_{exp}	^{238}U E(keV)	^{238}U I_{exp}
Σ 7i-6h						166-182	0.367±0.025
9j-7i 9i-7h				181-191	0.034±0.004	190-200	0.040±0.004
8i-6h						285-295	0.043±0.007
Σ 6h-5g	230-237	0.436±0.035	0.405	274-281	0.315±0.022	285-304	0.391±0.027
7h-5g	370-375	0.060±0.005	0.075	443-456	0.035±0.003	464-477	0.050±0.006
$5g_{9/2}-4f_{7/2}$	429-432	0.265±0.016	0.239		0.176±0.014		0.228±0.016
$5g_{7/2}-4f_{5/2}$	437-441	0.192±0.013	0.211		0.139±0.009		0.173±0.010
Σ 5g-4f	429-441	0.457±0.032	0.450	514-535	0.315±0.022	537-560	0.401±0.026
6g-4f	662-673	0.055±0.005	0.080	794-816	0.033±0.004	831-854	0.048±0.005
$4f_{5/2}-3d_{5/2}$	929	0.024±0.003	0.016				
$4f_{7/2}-3d_{5/2}$	938	0.298±0.021	0.320	1115-1151	0.205±0.015	1170-1210	0.260±0.020
$4f_{5/2}-3d_{3/2}$	965-972	0.224±0.016	0.284	1174-1193	0.135±0.010	1230-1260	0.180±0.012
Σ 4f-3d		0.546±0.040	0.570		0.340±0.025		0.440±0.032
$3d_{5/2}-2p_{3/2}$	2501	0.298±0.022	0.435	2730-2740 2792-2825 2892-2927	0.074±0.012	2810-2850 2860-3035	0.142±0.020
$3d_{3/2}-2p_{1/2}$	2642	0.176±0.014	0.245	3088-3157	0.159±0.013	3215-3242	0.185±0.020
Σ 3d-2p		0.474±0.038	0.680		0.233±0.025		0.327±0.040
$2p_{1/2}-1s_{1/2}$	5781	0.259±0.026	0.295	6000-6120	0.230±0.024	6050-6200	0.312±0.030
$2p_{3/2}-1s_{1/2}$	5967	0.336±0.029	0.585	6280-6470	0.230±0.024	6380-6580	0.237±0.024
Σ 2p-1s		0.595±0.060	0.880		0.460±0.048		0.550±0.055

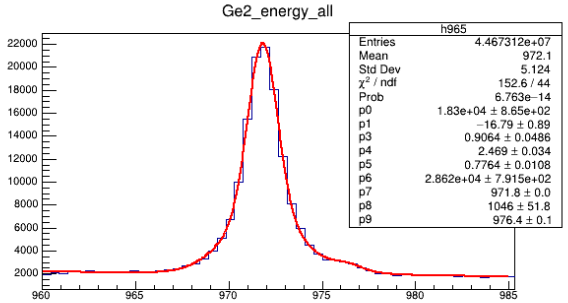
^{nat}Pb lines fit by double_gauss function

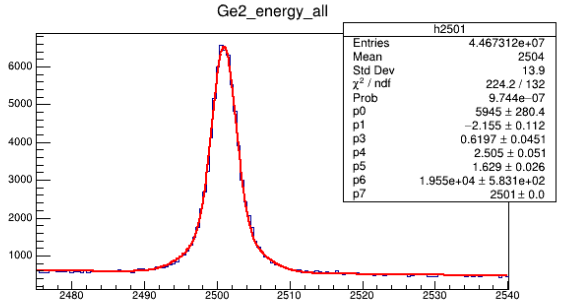
(oct 20 data)

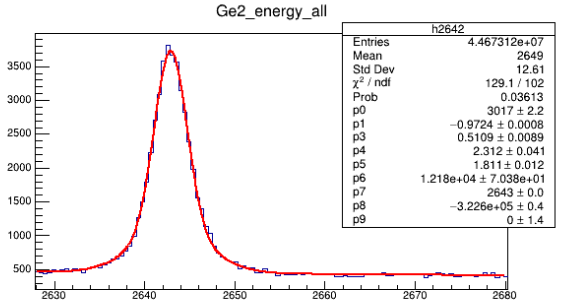


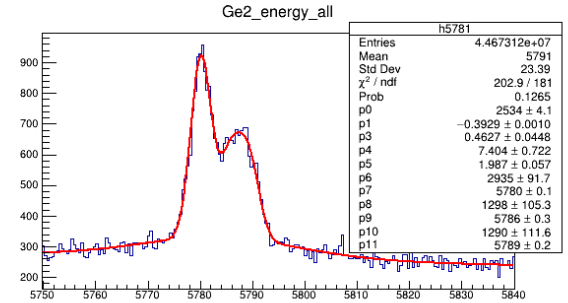


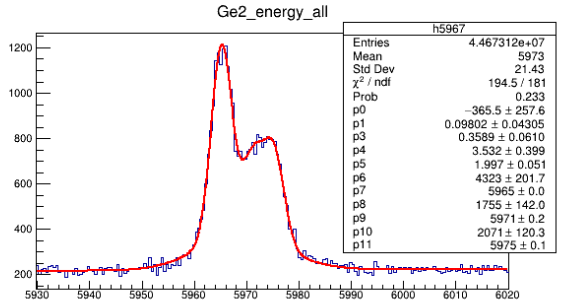


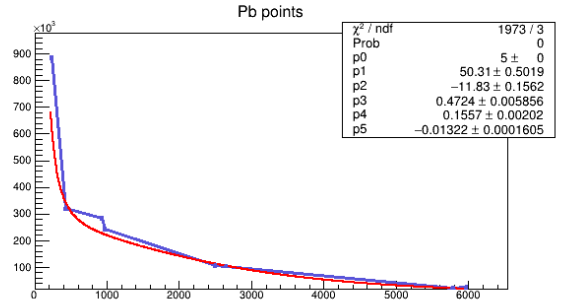




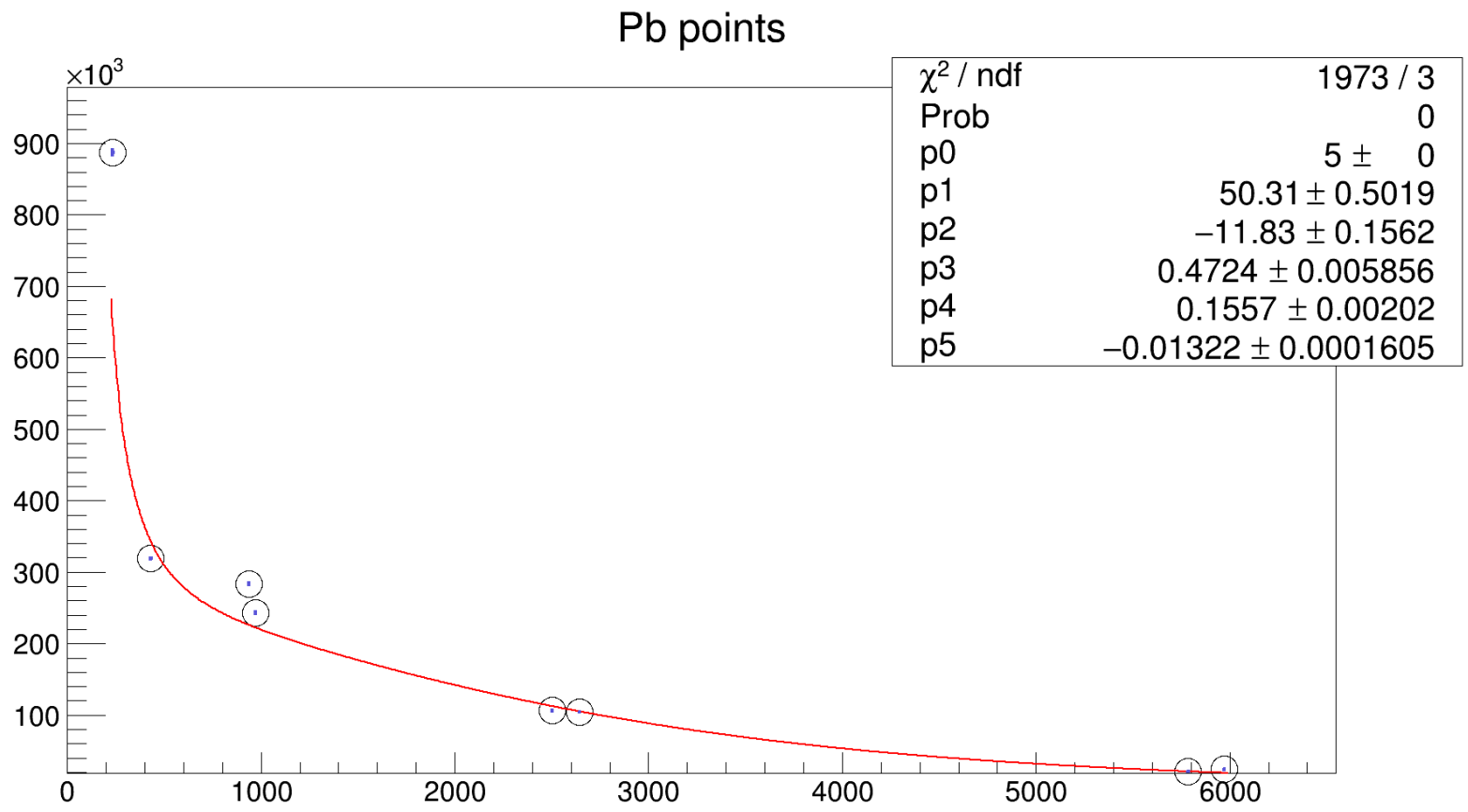




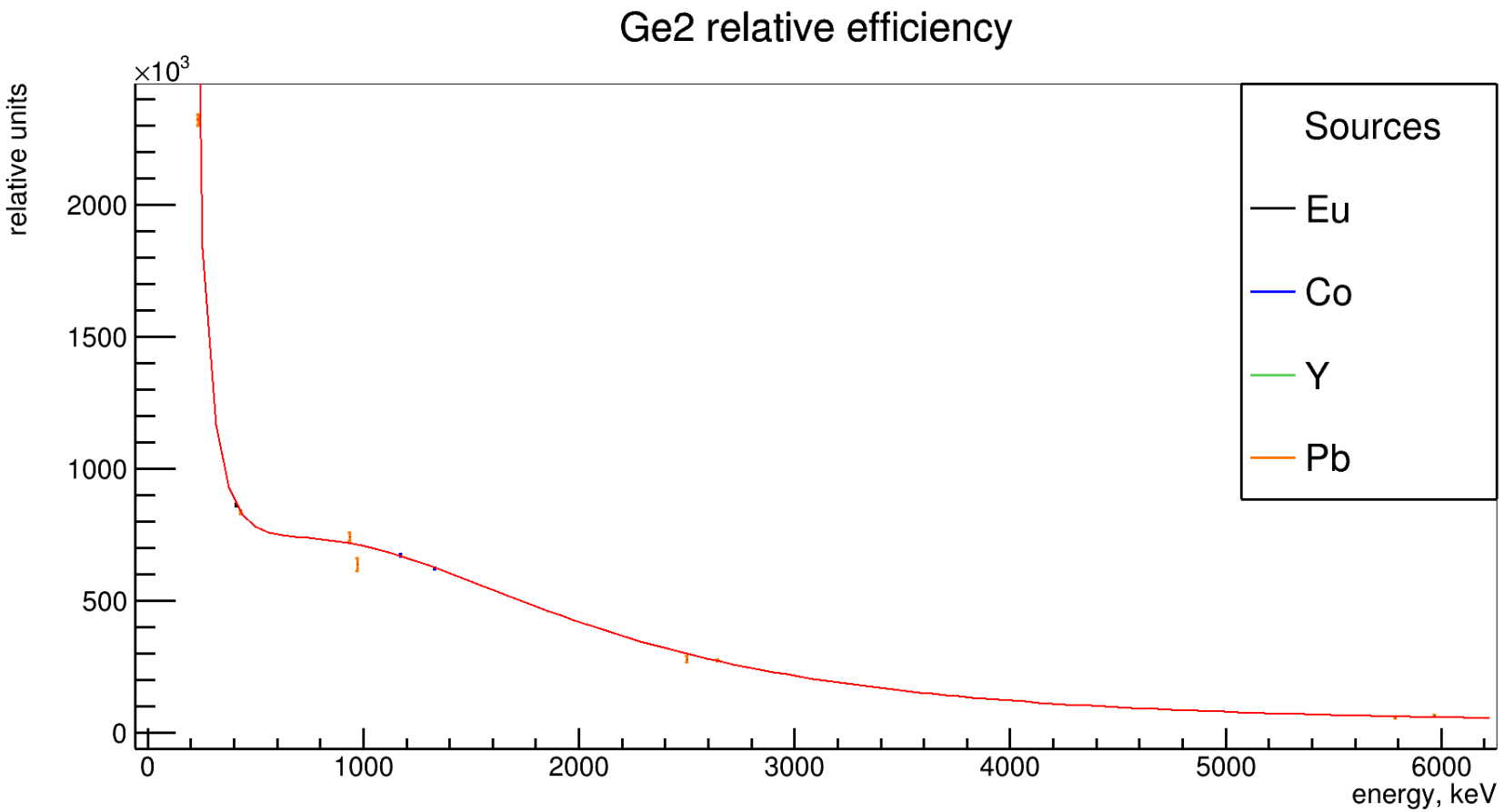




Efficiency curve [$\xi(E)=\frac{1}{E}\sum_i C_i \ln(E)^i$, i$\epsilon$[0,4]]



Combine fit with ^{60}Co and ^{88}Y (**wrong**)

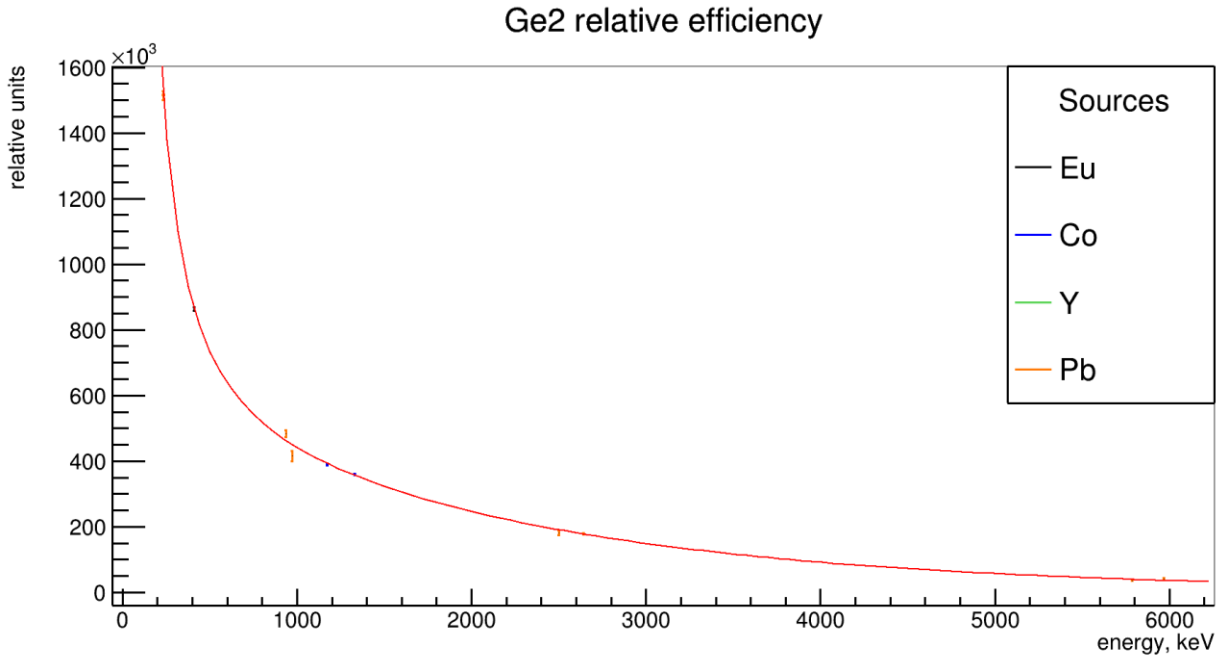


$$\xi(E)=e^{\sum_i C_i \ln(E)^i}$$

$i \epsilon [0,5]$

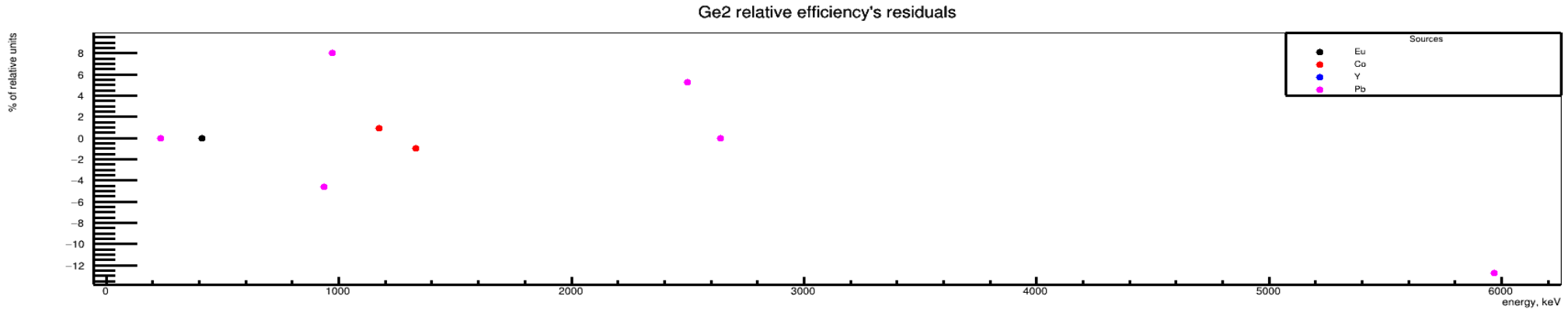
Combine fit with ^{60}Co and ^{88}Y

(exclude 429-441keV point)



$$\xi(E)=e^{\sum_i C_i \ln(E)^i}$$

$i \epsilon [0,5]$



TODO:

- Recheck ^{nat}Pb intensity points
- Add ^{152}Eu data
- Use intensities from fit with improved peak function
- Check carefully different functions for efficiency
- Analyze data for other HPGe detectors