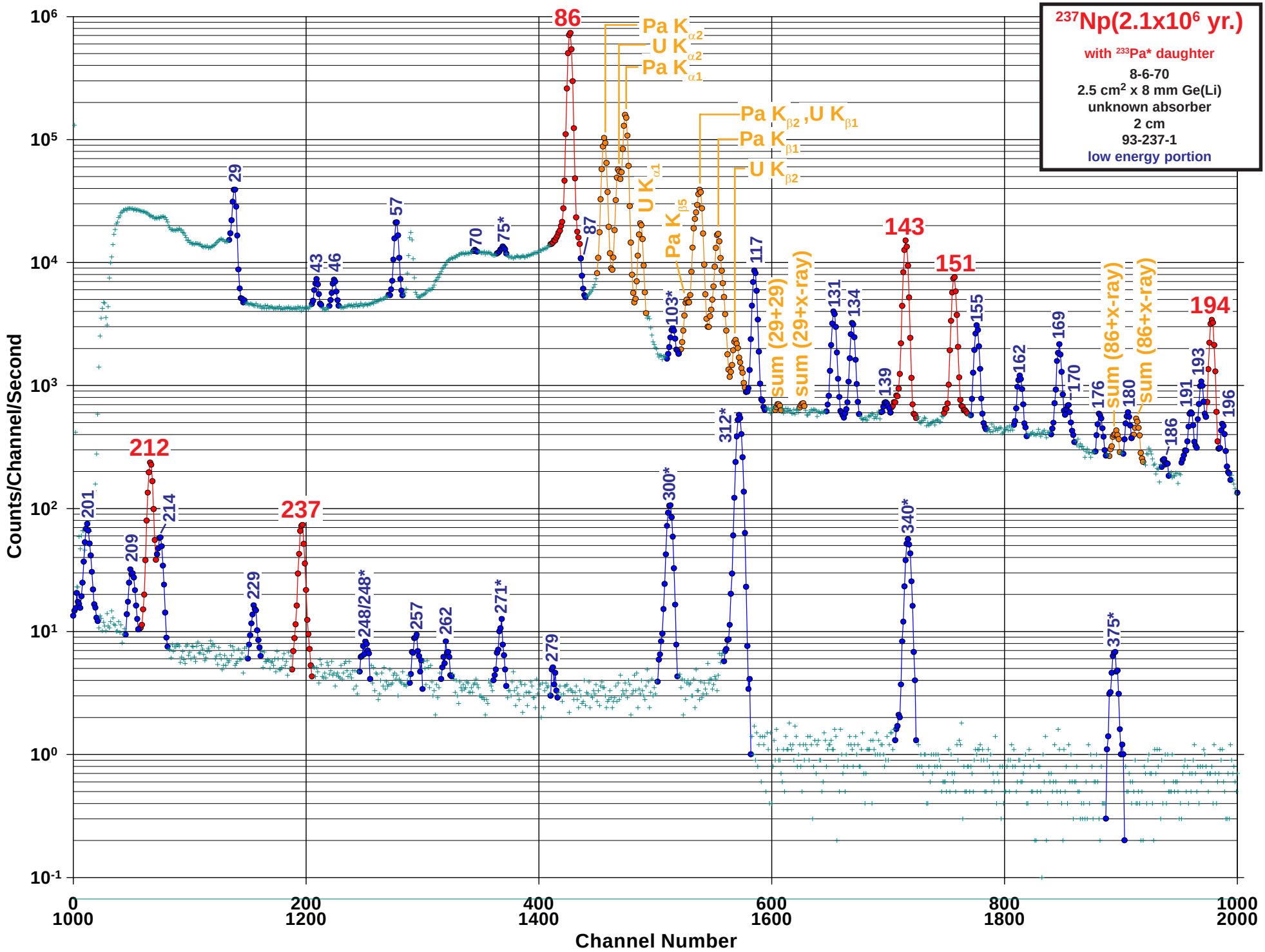
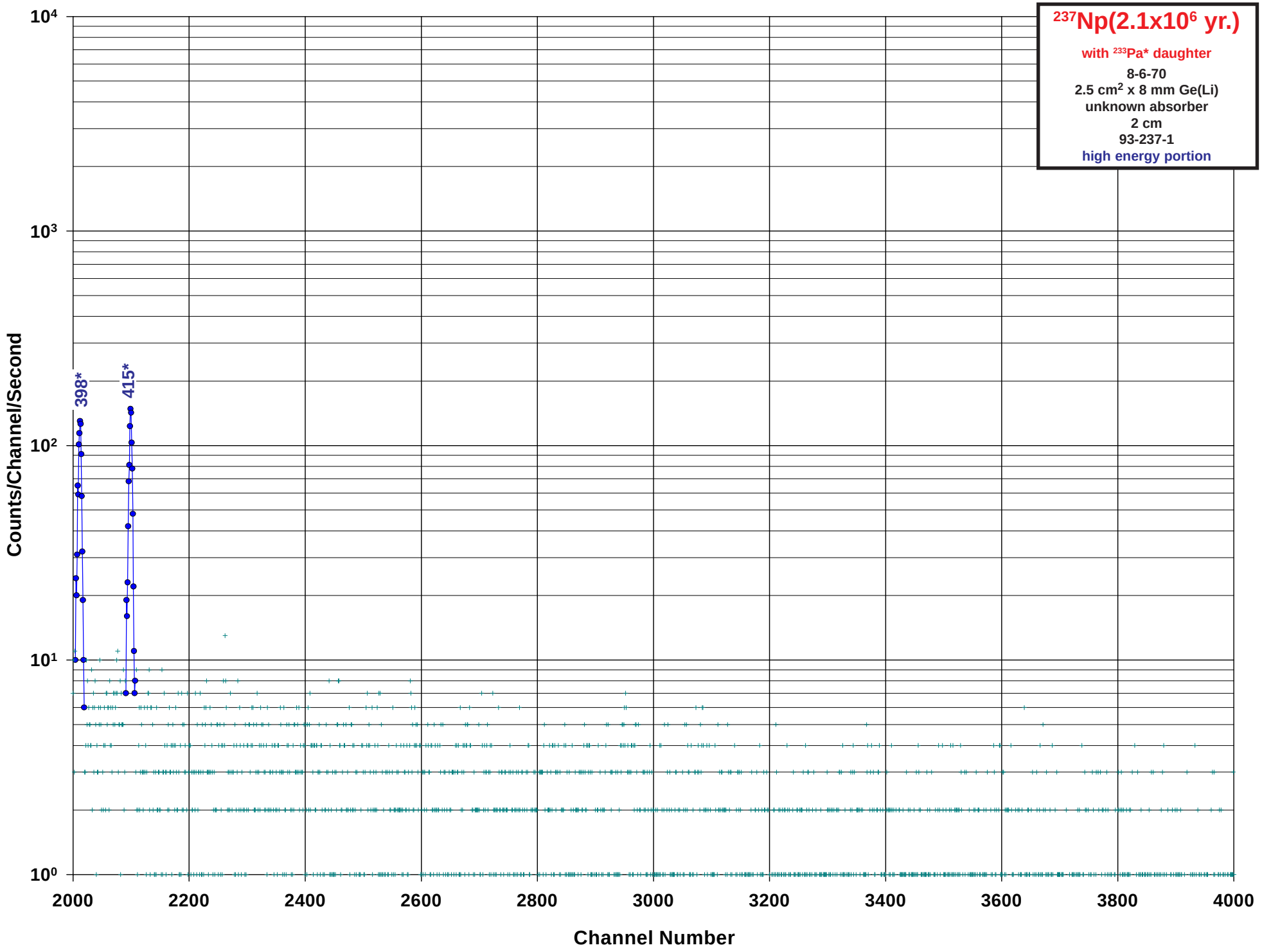
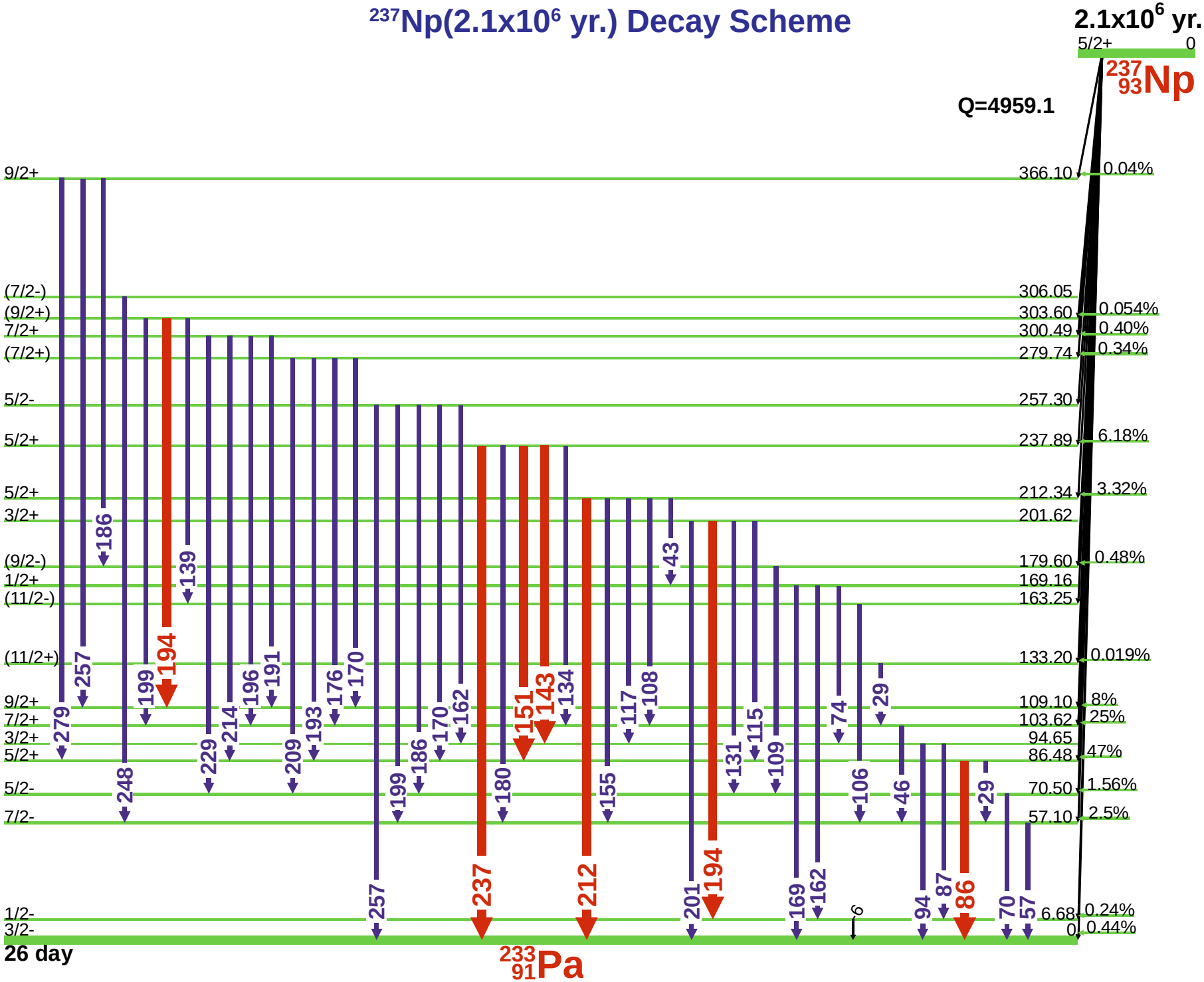

237Np(2.1x10^6 yr.)
with 233Pa* daughter
8-6-70
2.5 cm2 x 8 mm Ge(Li)
unknown absorber
2 cm
93-237-1
low energy portion
Counts/Channel/Second
Channel Number
86
Pa Kα2
U Kα2
Pa Kα1
U Kα1
Pa Kβ5
Pa Kβ2 ,U Kβ1
Pa Kβ1
U Kβ2
143
151
194
212
237
29
43
46
57
70
75*
87
103*
117
131
134
139
155
162
169
170
176
180
186
191
193
196
201
209
214
229
248/248*
257
262
271*
279
300*
312*
340*
375*
sum (29+29)
sum (29+x-ray)
sum (86+x-ray)
sum (86+x-ray)


^{237}Np(2.1x10^{6} yr.)
with ^{233}Pa* daughter
8-6-70
2.5 cm^{2} x 8 mm Ge(Li)
unknown absorber
2 cm
93-237-1
high energy portion
398*
415*
Counts/Channel/Second
Channel Number
10^{4}
10^{3}
10^{2}
10^{1}
10^{0}
2000
2200
2400
2600
2800
3000
3200
3400
3600
3800
4000

^{237}Np(2.1x10^{6} yr.) Decay Scheme



GAMMA-RAY ENERGIES AND INTENSITIES (page 1 of 2)

Nuclide: ^{237}Np

E_γ, σE_γ, I_γ, σI_γ - 1998 ENSDF Data

Half Life: 2.144(7) x10^6 yr.

Detector: 2.5 cm^2 x 8 mm Ge (Li)

Method of Production: ^{241}Am decay

	E_γ (keV)	σE_γ	I_γ (rel)	I_γ (%)	σI_γ	S
	5.50					4
	6.68					4
	8.22	0.05				4
	9.00					4
	10.70					4
	17.40	0.05				4
	22.60					4
	24.14	0.10				4
^{233}Pa	28.375	0.005		0.11	0.04	
D	29.374	0.020	75.0	15.0	1.0	2
	29.60					
	32.46					4
	36.24	0.10				4
	43.20					4
	46.53	0.06		0.110	0.010	4
	48.96	0.10				4
	54.40	0.10				4
	57.104	0.020	6.25	0.390	0.010	3
	62.59	0.10		0.006	0.003	4
	63.90	0.10		0.012	0.002	4
	70.49	0.10		0.012	0.003	4
	74.54	0.10		0.011	0.003	4
^{233}Pa	75.354	0.004		1.39	0.08	
	86.477	0.010	100.	12.4	0.4	1
^{233}Pa	86.814	0.003		1.97	0.12	
	87.99	0.03		0.140	0.010	4
	94.64	0.05		0.60	0.20	4
^{233}Pa	103.971	0.009		0.87	0.03	
	106.15	0.25	0.81	0.053	0.005	4
	108.70			0.068	0.015	4
	109.10	0.10				4
	115.40	0.35		0.0026	0.0008	4
	117.702	0.020	1.40	0.160	0.010	2
	131.101	0.025	0.70	0.085	0.009	2
	134.285	0.020	0.60	0.067	0.007	2
	139.90	0.10		0.005		4
	141.74	0.10				4
	143.249	0.020	3.60	0.430	0.020	1

	E_γ (keV)	σE_γ	I_γ (rel)	I_γ (%)	σI_γ	S
	151.414	0.020	2.0	0.232	0.012	1
	153.37					4
	153.37	0.10		0.0050	0.0010	4
	155.239	0.020	0.80	0.092	0.009	2
D	162.41		0.30			3
	162.41	0.08		0.032	0.004	
	169.156	0.020	0.60	0.073	0.007	3
D	170.59		0.15			4
	170.59	0.06		0.020	0.004	
	176.12	0.06	0.04	0.018	0.003	4
	180.81	0.10	0.17	0.020	0.004	3
D	186.86		0.07			4
	186.86	0.35		0.003	0.003	
	191.46	0.05	0.24	0.025	0.004	3
	193.26	0.05	0.46	0.049	0.005	3
D	194.67	0.20	1.60			1
	194.95	0.03		0.184	0.010	
	196.86	0.05	0.20	0.020	0.003	3
D	199.95		0.04			4
	199.95	0.06		0.0040	0.0010	
	201.62	0.05	0.40	0.044	0.005	3
	202.90	0.20		0.0048	0.0019	4
	209.19	0.05	0.17	0.0160	0.0020	3
	212.29	0.05	1.40	0.155	0.010	1
	214.01	0.05	0.35	0.045	0.009	3
	219.80					4
	222.60	0.20		0.0020	0.0010	4
	229.94	0.05	0.08	0.014	0.004	3
	237.860	0.020	5.5	0.063	0.007	1
^{233}Pa	248.5	0.5		0.059	0.003	
	248.95	0.10	0.04	0.0050	0.0014	4
	250.58					4
D	257.09		0.05			4
	257.09	0.20		0.0064	0.0014	
^{233}Pa	258.2	00.2		0.0039	0.0016	
	262.44	0.20		0.0068	0.0014	4
^{233}Pa	271.48	0.08		0.328	0.012	
	279.65	0.20	0.02	0.0020	0.0020	4

GAMMA-RAY ENERGIES AND INTENSITIES (page 2 of 2)

Nuclide: ^{237}Np

E_γ, σE_γ, I_γ, σI_γ - 1998 ENSDF Data

Half Life: 2.144(7) x10^6 yr.

Detector: 2.5 cm^2 x 8 mm Ge (Li)

Method of Production: ^{241}Am decay

	E_γ (keV)	σE_γ	I_γ (rel)	I_γ (%)	σI_γ	S
^{233}Pa	295.8			0.035		
^{233}Pa	300.34	0.02		6.62	0.06	
^{233}Pa	312.17	0.02		38.6	0.4	
^{233}Pa	340.80	0.03		4.47	0.04	

	E_γ (keV)	σE_γ	I_γ (rel)	I_γ (%)	σI_γ	S
^{233}Pa	375.45	0.04		0.679	0.008	
^{233}Pa	398.62	0.08		1.390	0.012	
^{233}Pa	415.76	0.04		1.745	0.016	