$^{241}_{95}\mathrm{Am}_{146}$

1 Decay Scheme

Am-241 decays 100% by alpha transitions to Np-237. Most of the decay (84.6 %) populate the excited level of Np-237 with energy of 59.54 keV. Branching of Am-241 decay by spontaneous fission is 3,6 (9) E-10 %.

L'américium 241 se désintègre à 100 % par émission alpha vers le neptunium 237. Le branchement principal (84,6 %) se fait vers le niveau excité de 59 keV. Un faible branchement (3,6 (9) E-10 %) par fission spontanée a été observé.

2 Nuclear Data

$T_{1/2}(^{241}\mathrm{Am})$	:	432,6	(6)	a
$T_{1/2}(^{237}\mathrm{Np})$	:	2,144	(7)	10^6 a
$Q^{\alpha}(^{241}\mathrm{Am})$	:	5637,82	(12)	keV

2.1 α Transitions

	Energy keV	Probability × 100	F
$\alpha_{0,36}$	4838,00 (13)	0,00004 (3)	47
$\alpha_{0,34}$	4882,14 (13)	0,000086	44
$\alpha_{0,33}$	4915,86 (13)	0,0007	9,5
$\alpha_{0,32}$	4971,62 (15)		
$\alpha_{0,30}$	5039,83 (15)		
$\alpha_{0,29}$	5045,49 (14)		
$\alpha_{0,28}$	5047,73 (13)		
$\alpha_{0,27}$	5091,70 (14)	0,0001	1000
$\alpha_{0,25}$	5140,81 (13)		
$\alpha_{0,24}$	5151,60 (15)	0,00011	2300
$\alpha_{0,23}$	5178,13 (13)	$\sim$ 0,0004	$\sim$ 1000
$\alpha_{0,22}$	5185,27 (13)	$\sim$ 0,0004	$\sim$ 1000
$\alpha_{0,21}$	5193,04 (16)		
$\alpha_{0,20}$	5203,70 (13)	0,0004	1400

	Energy keV	Probability × 100	F
$\alpha_{0,19}$	5219,6 (2)		
$\alpha_{0,18}$	5242,25 (13)	0,0007	1400
$\alpha_{0,17}$	5266,89 (13)	0,0003	4600
$\alpha_{0,16}$	5269,21 (13)	0,0009	1600
$\alpha_{0,15}$	5277,90 (23)	0,0006	2700
$\alpha_{0,14}$	5305,44 (13)		
$\alpha_{0,13}$	5313,40 (13)	0,0013	2100
$\alpha_{0,12}$	5321,0 (3)		
$\alpha_{0,11}$	5332,77 (13)	0,0022 (3)	1600
$\alpha_{0,9}$	5370,25 (13)	0,0005	12000
$\alpha_{0,8}$	5411,82 (13)	0,014 (3)	770
$\alpha_{0,6}$	5479,32 (13)	1,66 (3)	16,4
$\alpha_{0,5}$	5507,83 (13)	$\sim$ 0,01	$\approx$ 4000
$\alpha_{0,4}$	5534,86 (12)	13,23 (10)	4,3
$\alpha_{0,3}$	5561,92 (12)	$<$ 0,04	$>$ 2000
$\alpha_{0,2}$	5578,28 (12)	84,45 (10)	1,3
$\alpha_{0,1}$	5604,62 (12)	0,23 (1)	600
$\alpha_{0,0}$	5637,82 (12)	0,38 (1)	610

2.2 Gamma Transitions and Internal Conversion Coefficients

	Energy keV	$P_{\gamma+ce}$ × 100	Multipolarity	α_K	α_L	α_M	α_T
$\gamma_{10,9}$(Np)	13,81 (2)		M1 + 0,10 % E2			365 (7)	494 (10)
$\gamma_{2,1}$(Np)	26,34460 (24)	21 (5)	E1 anomalous		6 (2)	1,6 (2)	8 (2)
$\gamma_{4,3}$(Np)	27,06 (1)						
$\gamma_{27,26}$(Np)	31,92 (8)						
$\gamma_{(-1,1)}$(Np)	32,183	0,0174 (4)					
$\gamma_{1,0}$(Np)	33,1963 (3)	21,3 (30)	M1 + 1,66 % E2		131 (17)	33 (5)	175 (24)
$\gamma_{17,14}$(Np)	38,54 (3)		M1 + $>$ 30 % E2		$>$ 94	$>$ 345	$>$ 472
$\gamma_{3,1}$(Np)	42,704 (5)	$\approx$ 0,42 (9)	(M1 + $\approx$ 1,7 % E2)		$\approx$ 56 (5)	$\approx$ 13,9 (14)	$\approx$ 75 (7)
$\gamma_{4,2}$(Np)	43,420 (3)	12,1 (16)	M1 + 16,6 % E2		132 (17)	35 (5)	180 (23)
$\gamma_{14,10}$(Np)	51,01 (3)	0,000046 (21)	E1		0,564 (11)	0,141 (3)	0,753 (11)
$\gamma_{5,3}$(Np)	54,09 (3)						
$\gamma_{6,4}$(Np)	55,56 (2)	1,19 (16)	M1 + 17,5 % E2		48 (4)	12,6 (11)	65 (6)
$\gamma_{13,9}$(Np)	56,86 (3)						
$\gamma_{(-1,2)}$(Np)	57,85 (5)						
$\gamma_{2,0}$(Np)	59,5409 (1)	77,6 (25)	E1 anomalous		0,84 (6)	0,226 (7)	1,16 (7)
$\gamma_{7,5}$(Np)	61,56 (7)						
$\gamma_{14,9}$(Np)	64,83 (2)	0,000196 (28)	E1		0,301 (6)	0,0744 (15)	0,400 (8)
$\gamma_{8,6}$(Np)	67,50 (2)	0,013 (4)	(M1 + 17 % E2)		22 (5)	5,7 (13)	29 (6)
$\gamma_{4,1}$(Np)	69,76 (3)	0,0039 (5)	(E1)		0,248 (5)	0,0612 (12)	0,330 (7)
$\gamma_{3,0}$(Np)	75,90 (1)	0,032	(E2)		38,6 (8)	10,76 (22)	53,1 (11)
$\gamma_{36,33}$(Np)	77,86 (4)						
$\gamma_{11,8}$(Np)	79,05 (3)						
$\gamma_{15,9}$(Np)	92,35 (20)						
$\gamma_{5,1}$(Np)	96,79 (3)	0,000047 (16)					
$\gamma_{6,2}$(Np)	98,97 (2)	0,329 (10)	E2		11,07 (22)	3,08 (6)	15,2 (3)

	Energy keV	$P_{\gamma+ce}$ × 100	Multipolarity	α_K	α_L	α_M	α_T
$\gamma_{4,0}$(Np)	102,98 (2)	0,0218 (5)	E1		0,0895 (18)	0,0219 (4)	0,1189 (24)
$\gamma_{(-1,3)}$(Np)	106,42 (5)						
$\gamma_{20,13}$(Np)	109,70 (7)	0,000051	[E2]		6,86 (14)	1,91 (4)	9,44 (19)
$\gamma_{7,3}$(Np)	115,65 (6)						
$\gamma_{21,13}$(Np)	120,36 (8)						
$\gamma_{8,4}$(Np)	123,05 (1)	0,00675 (30)	E2	0,184 (4)	4,05 (8)	1,127 (23)	5,75 (12)
$\gamma_{6,1}$(Np)	125,30 (2)	0,00533 (26)	(E1)	0,228 (5)	0,0538 (11)	0,0132 (3)	0,299 (6)
$\gamma_{(-1,4)}$(Np)	128,05						
$\gamma_{20,11}$(Np)	129,07 (6)						
$\gamma_{23,13}$(Np)	135,27 (4)						
$\gamma_{(-1,5)}$(Np)	136,7						
$\gamma_{30,23}$(Np)	138,30 (9)						
$\gamma_{29,22}$(Np)	139,44 (8)	0,000023 (5)	[E2]	0,211 (4)	2,29 (5)	0,638 (13)	3,37 (7)
$\gamma_{11,6}$(Np)	146,55 (3)	0,00172 (5)	E2	0,210 (4)	1,83 (4)	0,51 (1)	2,73 (6)
$\gamma_{8,3}$(Np)	150,04 (3)	0,000087 (6)	[E1]	0,152 (3)	0,0339 (7)	0,00827 (17)	0,197 (4)
$\gamma_{26,15}$(Np)	154,27 (20)	0,000004	[M1]	5,59 (11)	1,108 (22)	0,269 (6)	7,06 (14)
$\gamma_{(-1,6)}$(Np)	156,4 (3)						
$\gamma_{29,20}$(Np)	159,26 (20)	0,0000016 (6)	[E1]	0,132 (3)	0,0292 (6)	0,00711 (14)	0,171 (4)
$\gamma_{24,13}$(Np)	161,54 (10)	0,000011	[M1]	4,91 (10)	0,971 (19)	0,236 (5)	6,20 (12)
$\gamma_{9,4}$(Np)	164,61 (2)	0,000178 (9)	E2	0,195 (4)	1,095 (22)	0,304 (6)	1,70 (4)
$\gamma_{13,6}$(Np)	165,81 (6)	0,00011 (5)	[M1 + E2]	2,4 (22)	0,98 (8)	0,26 (4)	3,7 (22)
$\gamma_{18,8}$(Np)	169,56 (3)	0,000427 (26)	E2	0,189 (4)	0,961 (19)	0,267 (6)	1,51 (3)
$\gamma_{11,5}$(Np)	175,07 (4)	0,000021 (3)	[E1]	0,1066 (21)	0,0230 (5)	0,00560 (11)	0,137 (3)
$\gamma_{(-1,7)}$(Np)	190,4						
$\gamma_{25,11}$(Np)	191,96 (4)	0,0000415 (20)	[E2]	0,162 (3)	0,561 (11)	0,155 (3)	0,932 (19)
$\gamma_{29,18}$(Np)	196,76 (8)	0,00000054	[E1]	0,0816 (16)	0,0172 (4)	0,00418 (9)	0,1045 (21)
$\gamma_{(-1,8)}$(Np)	201,70 (14)	0,0000008					
$\gamma_{18,7}$(Np)	204,06 (6)	0,00000226 (7)	[E1]	0,0752 (15)	0,0157 (3)	0,00382 (8)	0,0960 (19)
$\gamma_{9,2}$(Np)	208,005 (23)	0,00313 (6)	M1 + 2,38 % E2	2,35 (5)	0,473 (9)	0,1149 (23)	2,98 (6)
$\gamma_{13,4}$(Np)	221,46 (3)	0,00011 (5)	[M1 + E2]	1,1 (10)	0,35 (5)	0,090 (7)	1,5 (10)
$\gamma_{26,10}$(Np)	232,81 (5)	0,0000155 (4)	[M1]	1,76 (4)	0,345 (7)	0,0837 (17)	2,22 (5)
$\gamma_{9,1}$(Np)	234,40 (4)	0,0000080 (8)	M2	5,60 (11)	1,95 (4)	0,511 (10)	8,24 (17)
$\gamma_{26,9}$(Np)	246,73 (10)	0,00000703 (22)	[M1]	1,49 (3)	0,294 (6)	0,0711 (14)	1,88 (4)
$\gamma_{13,3}$(Np)	248,52 (3)	0,00000155 (3)	[E1]	0,0482 (10)	0,00975 (20)	0,00236 (5)	0,0612 (12)
$\gamma_{24,8}$(Np)	260,22 (9)						
$\gamma_{22,7}$(Np)	261,00 (7)	0,00000169 (8)	[E2]	0,0979 (20)	0,156 (3)	0,0428 (9)	0,312 (6)
$\gamma_{27,10}$(Np)	264,76 (7)						
$\gamma_{13,2}$(Np)	264,88 (3)	0,000018 (7)	[M1 + E2]	0,7 (6)	0,19 (5)	0,049 (9)	0,9 (7)
$\gamma_{9,0}$(Np)	267,54 (4)	0,000055 (2)	E1 + 19,4 % M2	0,74 (4)	0,238 (12)	0,062 (2)	1,06 (6)
$\gamma_{(-1,9)}$(Np)	270,63 (15)						
$\gamma_{(-1,10)}$(Np)	271,54						
$\gamma_{20,6}$(Np)	275,77 (8)	0,000011 (4)	[M1 + E2]	0,6 (5)	0,17 (5)	0,043 (9)	0,8 (6)
$\gamma_{27,9}$(Np)	278,04 (15)	0,00000270 (8)	[M1]	1,072 (21)	0,210 (4)	0,0509 (10)	1,35 (3)
$\gamma_{13,1}$(Np)	291,3 (2)	0,00000318 (8)	[E1]	0,0341 (7)	0,00671 (14)	0,00162 (3)	0,0430 (9)
$\gamma_{16,3}$(Np)	292,77 (6)	0,0000173 (4)	[E2]	0,0796 (16)	0,0991 (20)	0,0270 (6)	0,215 (4)
$\gamma_{15,2}$(Np)	300,13 (6)						
$\gamma_{20,5}$(Np)	304,21 (20)	0,000000966 (21)	[E1]	0,0310 (6)	0,00607 (12)	0,00147 (3)	0,0391 (8)
$\gamma_{16,2}$(Np)	309,1 (3)	0,00000210 (31)	[E1]	0,0300 (6)	0,00585 (12)	0,00142 (3)	0,0377 (8)
$\gamma_{12,0}$(Np)	316,8 (2)						
$\gamma_{28,9}$(Np)	322,52 (4)						
$\gamma_{22,5}$(Np)	322,56 (3)	0,000257 (7)	(M1 + 26,5 % E2)	0,541 (8)	0,1204 (17)	0,0297 (5)	0,702 (12)
$\gamma_{(-1,11)}$(Np)	324,69	0,0000018 (3)					
$\gamma_{(-1,12)}$(Np)	329,69	0,0000011 (2)					
$\gamma_{14,0}$(Np)	332,35 (3)	0,000172 (5)	E2	0,0631 (13)	0,0611 (12)	0,0165 (4)	0,147 (3)
$\gamma_{16,1}$(Np)	335,37 (3)	0,00084 (4)	M1 + 17,3 % E2	0,54 (7)	0,113 (8)	0,0278 (10)	0,69 (8)
$\gamma_{17,1}$(Np)	337,7 (2)	0,00000556 (10)	(E2)	0,0612 (12)	0,0575 (11)	0,0156 (3)	0,140 (3)
$\gamma_{(-1,13)}$(Np)	350,71	0,00000139 (5)					
$\gamma_{20,3}$(Np)	358,25 (20)	0,00000133 (5)	[E1]	0,0220 (4)	0,00419 (8)	0,00101 (2)	0,0275 (6)
$\gamma_{16,0}$(Np)	368,62 (3)	0,000347 (9)	(M1)	0,494 (10)	0,0963 (19)	0,0233 (5)	0,622 (12)

	Energy keV	$P_{\gamma+ce}$ × 100	Multipolarity	α_K	α_L	α_M	α_T
$\gamma_{17,0}$(Np)	370,94 (3)	0,000080 (4)	M1 + 16 % E2	0,42 (6)	0,086 (8)	0,0211 (10)	0,53 (7)
$\gamma_{(-1,14)}$(Np)	374,83	0,00000313 (5)					
$\gamma_{22,3}$(Np)	376,65 (3)	0,000225 (9)	(M1)	0,466 (9)	0,0908 (18)	0,0220 (5)	0,586 (12)
$\gamma_{23,3}$(Np)	383,81 (3)	0,000037 (7)	[M1 + E2]	0,25 (20)	0,06 (3)	0,015 (6)	0,33 (23)
$\gamma_{(-1,15)}$(Np)	389,0 (3)	0,0000005					
$\gamma_{(-1,16)}$(Np)	390,61 (5)	0,00000573 (8)					
$\gamma_{32,9}$(Np)	398,64 (15)						
$\gamma_{29,7}$(Np)	400,78 (10)	0,00000018 (5)	[M1 + E2]	0,22 (18)	0,054 (23)	0,013 (6)	0,29 (21)
$\gamma_{30,7}$(Np)	406,35 (15)	0,00000175 (28)	[M1 + E2]	0,21 (17)	0,052 (22)	0,013 (5)	0,28 (20)
$\gamma_{(-1,17)}$(Np)	411,27	0,00000018 (4)					
$\gamma_{22,1}$(Np)	419,33 (4)	0,000036 (5)	[M1 + E2]	0,19 (16)	0,047 (21)	0,012 (5)	0,26 (18)
$\gamma_{23,1}$(Np)	426,47 (4)	0,000039 (9)	[M1 + E2]	0,19 (15)	0,045 (20)	0,011 (5)	0,25 (18)
$\gamma_{(-1,18)}$(Np)	429,9 (1)	0,00000109 (5)					
$\gamma_{(-1,19)}$(Np)	440,63	0,00000056 (3)					
$\gamma_{(-1,20)}$(Np)	442,81 (7)	0,00000331 (7)					
$\gamma_{35,13}$(Np)	446,15 (6)	0,00000011 (2)					
$\gamma_{22,0}$(Np)	452,6 (2)	0,00000251 (7)	[E2]	0,0357 (7)	0,0205 (4)	0,00543 (11)	0,0635 (13)
$\gamma_{26,2}$(Np)	454,66 (8)	0,0000129 (2)	[M1]	0,279 (6)	0,0542 (11)	0,0131 (3)	0,351 (7)
$\gamma_{23,0}$(Np)	459,68 (10)	0,0000043 (5)	[M1 + E2]	0,15 (12)	0,036 (17)	0,009 (4)	0,20 (14)
$\gamma_{29,5}$(Np)	462,34 (8)	0,0000012	[M1 + E2]	0,15 (12)	0,035 (17)	0,009 (4)	0,20 (14)
$\gamma_{30,5}$(Np)	468,12 (15)	0,0000032 (4)	[M1 + E2]	0,15 (12)	0,034 (16)	0,008 (4)	0,19 (14)
$\gamma_{(-1,21)}$(Np)	486,05	0,00000105 (6)					
$\gamma_{28,4}$(Np)	487,13 (4)	0,00000080 (6)	[M1]	0,232 (6)	0,0449 (9)	0,0109 (2)	0,291 (6)
$\gamma_{(-1,22)}$(Np)	494,39	0,00000010 (2)					
$\gamma_{(-1,23)}$(Np)	501,39	0,00000014 (2)					
$\gamma_{27,1}$(Np)	512,5 (3)	0,00000210 (41)	[E1]	0,0107 (2)	0,00195 (4)	0,00047 (1)	0,0133 (3)
$\gamma_{26,0}$(Np)	514,0 (5)	0,0000039 (2)	[E1]	0,0106 (2)	0,00194 (4)	0,00047 (1)	0,0132
$\gamma_{30,3}$(Np)	522,06 (15)	0,00000113 (11)	[M1 + E2]	0,11 (9)	0,025 (13)	0,006 (3)	0,14 (10)
$\gamma_{(-1,24)}$(Np)	525,14	0,00000016 (3)					
$\gamma_{38,13}$(Np)	529,17 (20)	0,00000072 (5)	[E2]	0,0269 (5)	0,0124 (2)	0,00324 (6)	0,0437 (9)
$\gamma_{(-1,25)}$(Np)	532,44	0,00000008 (2)					
$\gamma_{27,0}$(Np)	546,12 (6)	0,00000025 (3)	[E1]	0,00947 (19)	0,00171 (3)	0,00041 (1)	0,0117 (2)
$\gamma_{(-1,26)}$(Np)	548,15	0,00000005 (2)					
$\gamma_{(-1,27)}$(Np)	555,25	0,00000009 (2)					
$\gamma_{33,6}$(Np)	563,46 (2)	0,000000460 (21)	[E2]	0,0241 (5)	0,0102 (2)	0,00266 (5)	0,0378 (8)
$\gamma_{36,8}$(Np)	573,94 (20)	0,00000142 (12)	[M1 + E2]	0,09 (7)	0,019 (10)	0,0027 (16)	0,11 (8)
$\gamma_{(-1,28)}$(Np)	582,89	0,00000101 (6)					
$\gamma_{31,2}$(Np)	586,59 (20)	0,00000128 (5)	[E2]	0,0224 (4)	0,00903 (18)	0,00235 (5)	0,0346 (7)
$\gamma_{28,0}$(Np)	590,09 (4)	0,00000283 (6)	[E1]	0,00818 (16)	0,00147 (3)	0,000351 (7)	0,0101 (2)
$\gamma_{34,6}$(Np)	597,19 (2)	0,0000080 (5)	[M1 + E2]	0,08 (6)	0,017 (9)	0,0042 (20)	0,10 (7)
$\gamma_{(-1,29)}$(Np)	600,26	0,00000022 (3)					
$\gamma_{33,4}$(Np)	619,01 (2)	0,000065 (5)	[M1 + E2]	0,07 (5)	0,016 (8)	0,0037 (10)	0,09 (7)
$\gamma_{38,8}$(Np)	627,18 (20)	0,00000056 (4)	[M1 + E2]	0,07 (5)	0,015 (8)	0,0037 (10)	0,09 (6)
$\gamma_{32,1}$(Np)	632,93 (15)	0,00000124 (5)					
$\gamma_{(-1,30)}$(Np)	636,9	0,00000021 (3)					
$\gamma_{36,6}$(Np)	641,32 (4)	0,0000076 (5)	[M1 + E2]	0,06 (5)	0,014 (8)	0,0035 (10)	0,08 (6)
$\gamma_{34,4}$(Np)	652,73 (2)	0,0000410 (25)	[M1 + E2]	0,06 (5)	0,013 (7)	0,0033 (10)	0,08 (6)
$\gamma_{33,2}$(Np)	662,40 (2)	0,00045 (10)	(E0+M1+E2)	0,18 (4)	0,045 (15)		0,23 (5)
$\gamma_{32,0}$(Np)	666,2 (2)	0,00000095 (7)					
$\gamma_{36,5}$(Np)	669,83 (2)	0,00000051 (7)	[E1]	0,00647 (13)	0,00114 (2)	0,00073 (1)	0,0080 (2)
$\gamma_{37,5}$(Np)	675,78 (13)	0,00000091 (7)	[E2,M1]	0,06 (4)	0,012 (7)	0,0030 (15)	0,07 (5)
$\gamma_{34,3}$(Np)	679,79 (2)	0,00000334 (8)	[E1]	0,00630 (13)	0,00111 (2)	0,000265 (5)	0,00776 (16)
$\gamma_{33,1}$(Np)	688,72 (4)	0,0000325 (6)	[E1]	0,00615 (12)	0,00108 (2)	0,000259 (5)	0,00758 (16)
$\gamma_{(-1,31)}$(Np)	693,46	0,00000354 (7)					
$\gamma_{34,2}$(Np)	696,14 (2)	0,0000055 (3)	[M1 + E2]	0,05 (4)	0,011 (6)	0,0028 (10)	0,07 (5)
$\gamma_{(-1,32)}$(Np)	709,42 (5)	0,00000641 (18)					
$\gamma_{(-1,33)}$(Np)	712,5	0,00000020 (3)					
$\gamma_{33,0}$(Np)	721,96 (2)	0,000197 (5)	[E1]	0,0056 (1)	0,00099 (2)	0,00024 (1)	0,0070 (2)
$\gamma_{37,3}$(Np)	729,72 (15)	0,00000151 (6)	[M1]	0,079 (2)	0,0151 (4)	0,0036 (1)	0,099 (2)

	Energy keV	$P_{\gamma+ce}$ × 100	Multipolarity	α_K	α_L	α_M	α_T
$\gamma_{(-1,34)}$(Np)	731,44	0,00000046 (4)					
$\gamma_{(-1,35)}$(Np)	736,68	0,00000128 (5)					
$\gamma_{35,1}$(Np)	737,34 (5)	0,00000794 (8)					
$\gamma_{(-1,36)}$(Np)	740,51	0,00000019 (3)					
$\gamma_{(-1,37)}$(Np)	742,9 (3)	0,00000035					
$\gamma_{(-1,38)}$(Np)	745,02	0,00000009 (2)					
$\gamma_{(-1,39)}$(Np)	750,39	0,00000006 (2)					
$\gamma_{34,0}$(Np)	755,68 (2)	0,00000789 (11)	[E1]	0,0052 (1)	0,00091 (1)	0,000217 (4)	0,0064 (1)
$\gamma_{(-1,40)}$(Np)	759,5 (1)	0,00000181 (5)					
$\gamma_{(-1,41)}$(Np)	763,31	0,00000023 (2)					
$\gamma_{36,1}$(Np)	766,62 (4)	0,00000504 (6)	[E1]	0,00507 (10)	0,00088 (2)	0,000211 (4)	0,00623 (12)
$\gamma_{35,0}$(Np)	770,57 (10)	0,00000481 (5)					
$\gamma_{37,1}$(Np)	772,57 (12)	0,00000303 (5)	[M1]	0,0675 (14)	0,0129 (3)	0,00312 (6)	0,0847 (17)
$\gamma_{(-1,42)}$(Np)	774,67	0,00000011 (2)					
$\gamma_{(-1,43)}$(Np)	777,39	0,00000015 (2)					
$\gamma_{(-1,44)}$(Np)	780,53	0,00000031 (2)					
$\gamma_{(-1,45)}$(Np)	782,2 (5)	0,00000015					
$\gamma_{39,3}$(Np)	786,00 (15)	0,00000062 (0)					
$\gamma_{(-1,46)}$(Np)	789,0 (3)	0,00000042 (6)					
$\gamma_{(-1,47)}$(Np)	792,6	0,00000003 (1)					
$\gamma_{(-1,48)}$(Np)	794,92 (20)	0,00000094					
$\gamma_{39,2}$(Np)	801,94 (20)	0,00000123 (7)					
$\gamma_{(-1,49)}$(Np)	803,19	0,00000016 (3)					
$\gamma_{37,0}$(Np)	805,77 (12)	0,00000033	[M1,E2]	0,037 (24)	0,008 (4)	0,0019 (10)	0,05 (3)
$\gamma_{(-1,50)}$(Np)	811,9 (3)	0,00000063 (6)					
$\gamma_{(-1,51)}$(Np)	819,33	0,00000043 (6)					
$\gamma_{(-1,52)}$(Np)	822,21	0,00000024 (6)					
$\gamma_{39,1}$(Np)	828,60 (12)	0,00000021 (4)					
$\gamma_{(-1,53)}$(Np)	835,21	0,00000003 (1)					
$\gamma_{(-1,54)}$(Np)	838,88	0,00000004 (1)					
$\gamma_{(-1,55)}$(Np)	841,14	0,00000010 (3)					
$\gamma_{(-1,56)}$(Np)	843,7	0,00000097 (8)					
$\gamma_{(-1,57)}$(Np)	846,86	0,00000016 (3)					
$\gamma_{(-1,58)}$(Np)	847,4 (5)	0,0000003					
$\gamma_{(-1,59)}$(Np)	851,6 (10)	0,00000041 (6)					
$\gamma_{(-1,60)}$(Np)	854,95	0,00000023 (4)					
$\gamma_{(-1,61)}$(Np)	856,26	0,00000010 (3)					
$\gamma_{40,2}$(Np)	861,34 (20)	0,00000008					
$\gamma_{39,0}$(Np)	861,80 (12)	0,00000061 (6)					
$\gamma_{(-1,62)}$(Np)	870,63	0,00000150 (3)					
$\gamma_{(-1,63)}$(Np)	882	0,00000004 (1)					
$\gamma_{(-1,64)}$(Np)	886,53	0,00000015 (3)					
$\gamma_{40,1}$(Np)	887,68 (20)	0,00000033 (6)					
$\gamma_{(-1,65)}$(Np)	890,38	0,00000032 (5)					
$\gamma_{(-1,66)}$(Np)	894,47	0,00000003 (1)					
$\gamma_{(-1,67)}$(Np)	898,17	0,00000006 (2)					
$\gamma_{(-1,68)}$(Np)	902,61	0,00000033 (3)					
$\gamma_{(-1,69)}$(Np)	909,95	0,00000005 (1)					
$\gamma_{(-1,70)}$(Np)	912,4	0,00000028 (3)					
$\gamma_{40,0}$(Np)	920,88 (20)	0,00000019 (3)					
$\gamma_{(-1,71)}$(Np)	928,95	0,00000009 (2)					
$\gamma_{(-1,72)}$(Np)	939,2	0,00000005 (1)					
$\gamma_{41,0}$(Np)	946,06	0,000000010 (3)					
$\gamma_{(-1,73)}$(Np)	952,72	0,00000003 (1)					
$\gamma_{(-1,74)}$(Np)	955,91	0,00000060 (5)					
$\gamma_{42,0}$(Np)	962,19	0,00000004 (1)					
$\gamma_{(-1,75)}$(Np)	969,09	0,00000003 (1)					
$\gamma_{(-1,76)}$(Np)	980,84	0,00000003 (1)					
$\gamma_{43,0}$(Np)	1014,33	0,0000010 (2)					

3 Atomic Data

3.1 Np

ω_K : 0,971 (4)
$\bar{\omega}_L$: 0,511 (20)
n_{KL} : 0,791 (5)

3.1.1 X Radiations

		Energy keV		Relative probability
X_K				
	$K\alpha_2$	97,069		62,82
	$K\alpha_1$	101,059		100
	$K\beta_3$	113,303	}	
	$K\beta_1$	114,234	}	
	$K\beta_5''$	114,912	}	36,21
	$K\beta_2$	117,463	}	
	$K\beta_4$	117,876	}	12,47
	$KO_{2,3}$	118,429	}	
X_L				
	$L\ell$	11,89		
	$L\alpha$	13,76 – 13,944		
	$L\eta$	15,876		
	$L\beta$	16,13 – 17,79		
	$L\gamma$	20,12 – 22,2		

3.1.2 Auger Electrons

	Energy keV	Relative probability
Auger K		
KLL	73,50 – 83,13	100
KLX	90,36 – 97,28	60,2
KXY	107,10 – 114,58	9,06
Auger L	6,04 – 13,52	55000000

4 α Emissions

	Energy keV	Probability × 100
$\alpha_{0,36}$	4757,58 (13)	0,00004 (3)
$\alpha_{0,34}$	4800,99 (13)	0,000086
$\alpha_{0,33}$	4834,15 (13)	0,0007
$\alpha_{0,32}$	4888,98 (15)	
$\alpha_{0,30}$	4956,06 (15)	
$\alpha_{0,29}$	4961,63 (14)	
$\alpha_{0,28}$	4963,83 (13)	
$\alpha_{0,27}$	5007,07 (14)	0,0001
$\alpha_{0,25}$	5055,36 (13)	
$\alpha_{0,24}$	5065,97 (15)	0,00011
$\alpha_{0,23}$	5092,06 (13)	$\sim$ 0,0004
$\alpha_{0,22}$	5099,08 (13)	$\sim$ 0,0004
$\alpha_{0,21}$	5106,72 (16)	
$\alpha_{0,20}$	5117,21 (13)	0,0004
$\alpha_{0,19}$	5132,8 (2)	
$\alpha_{0,18}$	5155,12 (13)	0,0007
$\alpha_{0,17}$	5179,35 (13)	0,0003
$\alpha_{0,16}$	5181,63 (13)	0,0009
$\alpha_{0,15}$	5190,17 (23)	0,0006
$\alpha_{0,14}$	5217,26 (13)	
$\alpha_{0,13}$	5225,08 (13)	0,0013
$\alpha_{0,12}$	5232,6 (3)	
$\alpha_{0,11}$	5244,13 (13)	0,0022 (3)
$\alpha_{0,9}$	5280,99 (13)	0,0005
$\alpha_{0,8}$	5321,87 (13)	0,014 (3)
$\alpha_{0,6}$	5388,25 (13)	1,66 (3)
$\alpha_{0,5}$	5416,28 (13)	$\sim$ 0,01
$\alpha_{0,4}$	5442,86 (12)	13,23 (10)
$\alpha_{0,3}$	5469,47 (12)	$<$ 0,04
$\alpha_{0,2}$	5485,56 (12)	84,45 (10)
$\alpha_{0,1}$	5511,46 (12)	0,23 (1)
$\alpha_{0,0}$	5544,11 (12)	0,38 (1)

5 Electron Emissions

		Energy keV	Electrons per 100 disint.
e_{AL}	(Np)	6,04 - 13,52	33,4 (17)
e_{AK}	(Np)		0,000114 (16)
	KLL	73,50 - 83,13	}
	KLX	90,36 - 97,28	}
	KXY	107,10 - 114,58	}
$ec_{2,1\ L}$	(Np)	3,92 - 8,73	14 (5)
$ec_{1,0\ L}$	(Np)	10,769 - 15,590	15,9 (21)
$ec_{3,1\ L}$	(Np)	20,28 - 25,09	0,31 (7)
$ec_{2,1\ M}$	(Np)	20,606 - 22,681	3,7 (5)
$ec_{4,2\ L}$	(Np)	20,99 - 25,81	8,8 (12)
$ec_{1,0\ M}$	(Np)	27,46 - 29,53	4,0 (6)
$ec_{1,0\ N}$	(Np)	31,70 - 32,79	1,08 (16)
$ec_{6,4\ L}$	(Np)	33,13 - 37,95	0,87 (11)
$ec_{3,1\ M}$	(Np)	36,97 - 39,04	0,076 (17)
$ec_{2,0\ L}$	(Np)	37,114 - 41,930	30,2 (22)
$ec_{4,2\ M}$	(Np)	37,68 - 39,76	2,3 (4)
$ec_{4,2\ N}$	(Np)	41,92 - 43,02	0,65 (9)
$ec_{6,4\ M}$	(Np)	49,82 - 51,90	0,228 (30)
$ec_{2,0\ M}$	(Np)	53,802 - 55,877	8,12 (25)
$ec_{6,4\ N}$	(Np)	54,06 - 55,16	0,062 (8)
$ec_{6,2\ L}$	(Np)	76,54 - 81,36	0,225 (5)
$ec_{6,2\ M}$	(Np)	93,23 - 95,31	0,0625 (16)

6 Photon Emissions

6.1 X-Ray Emissions

		Energy keV		Photons per 100 disint.	
XL	(Np)	11,89 — 22,2		37,66 (17)	
$XK\alpha_2$	(Np)	97,069		0,001134 (30)	} $K\alpha$
$XK\alpha_1$	(Np)	101,059		0,00181 (5)	}
$XK\beta_3$	(Np)	113,303	}		
$XK\beta_1$	(Np)	114,234	}	0,000658 (21)	$K'\beta_1$
$XK\beta_5''$	(Np)	114,912	}		
$XK\beta_2$	(Np)	117,463	}		
$XK\beta_4$	(Np)	117,876	}	0,000226 (8)	$K'\beta_2$
$XKO_{2,3}$	(Np)	118,429	}		

6.2 Gamma Emissions

	Energy keV	Photons per 100 disint.
$\gamma_{2,1}$(Np)	26,3446 (2)	2,31 (8)
$\gamma_{(-1,1)}$(Np)	32,183	0,0174 (4)
$\gamma_{1,0}$(Np)	33,1963 (3)	0,1215 (28)
$\gamma_{3,1}$(Np)	42,704 (5)	0,0055 (11)
$\gamma_{4,2}$(Np)	43,420 (3)	0,0669 (29)
$\gamma_{14,10}$(Np)	51,01 (3)	0,000026 (12)
$\gamma_{6,4}$(Np)	55,56 (2)	0,0181 (18)
$\gamma_{(-1,2)}$(Np)	57,85 (5)	0,0052 (15)
$\gamma_{2,0}$(Np)	59,5409 (1)	35,92 (17)
$\gamma_{14,9}$(Np)	64,83 (2)	0,00014 (2)
$\gamma_{8,6}$(Np)	67,50 (2)	0,00042 (10)
$\gamma_{4,1}$(Np)	69,76 (3)	0,0029 (4)
$\gamma_{3,0}$(Np)	75,90 (1)	0,0006
$\gamma_{5,1}$(Np)	96,79 (3)	0,000047 (16)
$\gamma_{6,2}$(Np)	98,97 (2)	0,0203 (4)
$\gamma_{4,0}$(Np)	102,98 (2)	0,0195 (4)
$\gamma_{(-1,3)}$(Np)	106,42 (5)	0,000015
$\gamma_{20,13}$(Np)	109,70 (7)	0,0000049
$\gamma_{21,13}$(Np)	120,36 (8)	0,0000045
$\gamma_{8,4}$(Np)	123,05 (1)	0,00100 (4)
$\gamma_{6,1}$(Np)	125,30 (2)	0,0041 (2)
$\gamma_{29,22}$(Np)	139,44 (8)	0,0000053 (11)
$\gamma_{11,6}$(Np)	146,55 (3)	0,00046 (1)
$\gamma_{8,3}$(Np)	150,04 (3)	0,000073 (5)
$\gamma_{26,15}$(Np)	154,27 (20)	0,0000005
$\gamma_{29,20}$(Np)	159,26 (20)	0,0000014 (5)
$\gamma_{24,13}$(Np)	161,54 (10)	0,0000015
$\gamma_{9,4}$(Np)	164,61 (2)	0,000066 (3)
$\gamma_{13,6}$(Np)	165,81 (6)	0,000023 (1)
$\gamma_{18,8}$(Np)	169,56 (3)	0,00017 (1)
$\gamma_{11,5}$(Np)	175,07 (4)	0,000018 (3)
$\gamma_{(-1,7)}$(Np)	190,4	0,0000022 (5)
$\gamma_{25,11}$(Np)	191,96 (4)	0,0000215 (10)
$\gamma_{29,18}$(Np)	196,76 (8)	0,00000049
$\gamma_{(-1,8)}$(Np)	201,70 (14)	0,0000008
$\gamma_{18,7}$(Np)	204,06 (6)	0,00000206 (6)
$\gamma_{9,2}$(Np)	208,005 (23)	0,000786 (9)
$\gamma_{13,4}$(Np)	221,46 (3)	0,0000434 (8)
$\gamma_{26,10}$(Np)	232,81 (5)	0,00000482 (9)
$\gamma_{9,1}$(Np)	234,40 (4)	0,00000087 (8)
$\gamma_{26,9}$(Np)	246,73 (10)	0,00000244 (7)
$\gamma_{13,3}$(Np)	248,52 (3)	0,00000146 (3)
$\gamma_{22,7}$(Np)	261,00 (7)	0,00000129 (6)
$\gamma_{13,2}$(Np)	264,88 (3)	0,00000943 (12)
$\gamma_{9,0}$(Np)	267,54 (4)	0,0000268 (6)

	Energy keV	Photons per 100 disint.
$\gamma_{(-1,9)}$(Np)	270,63 (15)	0,0000005 (2)
$\gamma_{(-1,10)}$(Np)	271,54	0,00000144 (5)
$\gamma_{20,6}$(Np)	275,77 (8)	0,00000632 (10)
$\gamma_{27,9}$(Np)	278,04 (15)	0,00000115 (3)
$\gamma_{13,1}$(Np)	291,3 (2)	0,00000305 (8)
$\gamma_{16,3}$(Np)	292,77 (6)	0,0000142 (3)
$\gamma_{20,5}$(Np)	304,21 (20)	0,00000093 (2)
$\gamma_{16,2}$(Np)	309,1 (3)	0,0000020 (3)
$\gamma_{22,5}$(Np)	322,56 (3)	0,000151 (4)
$\gamma_{(-1,11)}$(Np)	324,69	0,0000018 (3)
$\gamma_{(-1,12)}$(Np)	329,69	0,0000011 (2)
$\gamma_{14,0}$(Np)	332,35 (3)	0,000150 (4)
$\gamma_{16,1}$(Np)	335,37 (3)	0,000496 (7)
$\gamma_{17,1}$(Np)	337,7 (2)	0,00000488 (9)
$\gamma_{(-1,13)}$(Np)	350,71	0,00000139 (5)
$\gamma_{20,3}$(Np)	358,25 (20)	0,00000129 (5)
$\gamma_{16,0}$(Np)	368,62 (3)	0,000214 (5)
$\gamma_{17,0}$(Np)	370,94 (3)	0,0000520 (8)
$\gamma_{(-1,14)}$(Np)	374,83	0,00000313 (6)
$\gamma_{22,3}$(Np)	376,65 (3)	0,000137 (3)
$\gamma_{23,3}$(Np)	383,81 (3)	0,0000281 (6)
$\gamma_{(-1,15)}$(Np)	389,0 (3)	0,00000049
$\gamma_{(-1,16)}$(Np)	390,61 (5)	0,00000573 (10)
$\gamma_{29,7}$(Np)	400,78 (10)	0,00000014 (3)
$\gamma_{30,7}$(Np)	406,35 (15)	0,00000137 (5)
$\gamma_{(-1,17)}$(Np)	411,27	0,00000018 (4)
$\gamma_{22,1}$(Np)	419,33 (4)	0,0000284 (4)
$\gamma_{23,1}$(Np)	426,47 (4)	0,000031 (6)
$\gamma_{(-1,18)}$(Np)	429,9 (1)	0,00000109 (5)
$\gamma_{(-1,19)}$(Np)	440,63	0,00000056 (3)
$\gamma_{(-1,20)}$(Np)	442,81 (7)	0,00000331 (8)
$\gamma_{35,13}$(Np)	446,15 (6)	0,00000011 (2)
$\gamma_{22,0}$(Np)	452,6 (2)	0,00000236 (7)
$\gamma_{26,2}$(Np)	454,66 (8)	0,00000953 (12)
$\gamma_{23,0}$(Np)	459,68 (10)	0,00000355 (7)
$\gamma_{29,5}$(Np)	462,34 (8)	0,000001
$\gamma_{30,5}$(Np)	468,12 (15)	0,00000269 (6)
$\gamma_{(-1,21)}$(Np)	486,05	0,00000105 (6)
$\gamma_{28,4}$(Np)	487,13 (4)	0,00000062 (5)
$\gamma_{(-1,22)}$(Np)	494,39	0,00000010 (2)
$\gamma_{(-1,23)}$(Np)	501,39	0,00000014 (2)
$\gamma_{27,1}$(Np)	512,5 (3)	0,0000021 (4)
$\gamma_{26,0}$(Np)	514,0 (5)	0,0000038 (2)
$\gamma_{30,3}$(Np)	522,06 (15)	0,00000099 (5)
$\gamma_{(-1,24)}$(Np)	525,14	0,00000016 (3)
$\gamma_{38,13}$(Np)	529,17 (20)	0,00000069 (5)
$\gamma_{(-1,25)}$(Np)	532,44	0,00000008 (2)

	Energy keV	Photons per 100 disint.
$\gamma_{27,0}$(Np)	546,12 (6)	0,00000025 (3)
$\gamma_{(-1,26)}$(Np)	548,15	0,00000005 (2)
$\gamma_{(-1,27)}$(Np)	555,25	0,00000009 (2)
$\gamma_{33,6}$(Np)	563,46 (2)	0,00000044 (2)
$\gamma_{36,8}$(Np)	573,94 (20)	0,00000128 (5)
$\gamma_{(-1,28)}$(Np)	582,89	0,00000101 (6)
$\gamma_{31,2}$(Np)	586,59 (20)	0,00000124 (5)
$\gamma_{28,0}$(Np)	590,09 (4)	0,00000280 (6)
$\gamma_{34,6}$(Np)	597,19 (2)	0,00000729 (11)
$\gamma_{(-1,29)}$(Np)	600,26	0,00000022 (3)
$\gamma_{33,4}$(Np)	619,01 (2)	0,000060 (2)
$\gamma_{38,8}$(Np)	627,18 (20)	0,00000051 (2)
$\gamma_{32,1}$(Np)	632,93 (15)	0,00000124 (5)
$\gamma_{(-1,30)}$(Np)	636,9	0,00000021 (3)
$\gamma_{36,6}$(Np)	641,32 (4)	0,00000704 (10)
$\gamma_{34,4}$(Np)	652,73 (2)	0,0000376 (9)
$\gamma_{33,2}$(Np)	662,40 (2)	0,000367 (6)
$\gamma_{32,0}$(Np)	666,2 (2)	0,00000095 (7)
$\gamma_{36,5}$(Np)	669,83 (2)	0,00000051 (7)
$\gamma_{37,5}$(Np)	675,78 (13)	0,00000085 (5)
$\gamma_{34,3}$(Np)	679,79 (2)	0,00000331 (8)
$\gamma_{33,1}$(Np)	688,72 (4)	0,0000323 (6)
$\gamma_{(-1,31)}$(Np)	693,46	0,00000354 (8)
$\gamma_{34,2}$(Np)	696,14 (2)	0,00000517 (8)
$\gamma_{(-1,32)}$(Np)	709,42 (5)	0,00000641 (19)
$\gamma_{(-1,33)}$(Np)	712,5	0,00000020 (3)
$\gamma_{33,0}$(Np)	721,96 (2)	0,000196 (5)
$\gamma_{37,3}$(Np)	729,72 (15)	0,00000137 (5)
$\gamma_{(-1,34)}$(Np)	731,44	0,00000046 (4)
$\gamma_{(-1,35)}$(Np)	736,68	0,00000128 (5)
$\gamma_{35,1}$(Np)	737,34 (5)	0,00000794 (11)
$\gamma_{(-1,36)}$(Np)	740,51	0,00000019 (3)
$\gamma_{(-1,37)}$(Np)	742,9 (3)	0,00000035
$\gamma_{(-1,38)}$(Np)	745,02	0,00000009 (2)
$\gamma_{(-1,39)}$(Np)	750,39	0,00000006 (2)
$\gamma_{34,0}$(Np)	755,68 (2)	0,00000784 (11)
$\gamma_{(-1,40)}$(Np)	759,5 (1)	0,00000181 (5)
$\gamma_{(-1,41)}$(Np)	763,31	0,00000023 (2)
$\gamma_{36,1}$(Np)	766,62 (4)	0,00000501 (6)
$\gamma_{35,0}$(Np)	770,57 (10)	0,00000481 (7)
$\gamma_{37,1}$(Np)	772,57 (12)	0,00000279 (4)
$\gamma_{(-1,42)}$(Np)	774,67	0,00000011 (2)
$\gamma_{(-1,43)}$(Np)	777,39	0,00000015 (2)
$\gamma_{(-1,44)}$(Np)	780,53	0,00000031 (2)
$\gamma_{(-1,45)}$(Np)	782,2 (5)	0,00000015
$\gamma_{39,3}$(Np)	786,00 (15)	0,00000062
$\gamma_{(-1,46)}$(Np)	789,0 (3)	0,00000042 (6)

	Energy keV	Photons per 100 disint.
$\gamma_{(-1,47)}$(Np)	792,6	0,00000003 (1)
$\gamma_{(-1,48)}$(Np)	794,92 (20)	0,00000094
$\gamma_{39,2}$(Np)	801,94 (20)	0,00000123 (7)
$\gamma_{(-1,49)}$(Np)	803,19	0,00000016 (3)
$\gamma_{37,0}$(Np)	805,77 (12)	0,00000031
$\gamma_{(-1,50)}$(Np)	811,9 (3)	0,00000063 (6)
$\gamma_{(-1,51)}$(Np)	819,33	0,00000043 (6)
$\gamma_{(-1,52)}$(Np)	822,21	0,00000024 (6)
$\gamma_{39,1}$(Np)	828,60 (12)	0,00000021 (4)
$\gamma_{(-1,53)}$(Np)	835,21	0,00000003 (1)
$\gamma_{(-1,54)}$(Np)	838,88	0,00000004 (1)
$\gamma_{(-1,55)}$(Np)	841,14	0,00000010 (3)
$\gamma_{(-1,56)}$(Np)	843,7	0,00000097 (8)
$\gamma_{(-1,57)}$(Np)	846,86	0,00000016 (3)
$\gamma_{(-1,58)}$(Np)	847,4 (5)	0,00000027 (3)
$\gamma_{(-1,59)}$(Np)	851,6 (10)	0,00000041 (6)
$\gamma_{(-1,60)}$(Np)	854,95	0,00000023 (4)
$\gamma_{(-1,61)}$(Np)	856,26	0,00000010 (3)
$\gamma_{40,2}$(Np)	861,34 (20)	0,00000008 (3)
$\gamma_{39,0}$(Np)	861,80 (12)	0,00000061 (6)
$\gamma_{(-1,62)}$(Np)	870,63	0,00000150 (4)
$\gamma_{(-1,63)}$(Np)	882	0,00000004 (1)
$\gamma_{(-1,64)}$(Np)	886,53	0,00000015 (3)
$\gamma_{40,1}$(Np)	887,68 (20)	0,00000033 (6)
$\gamma_{(-1,65)}$(Np)	890,38	0,00000032 (5)
$\gamma_{(-1,66)}$(Np)	894,47	0,00000003 (1)
$\gamma_{(-1,67)}$(Np)	898,17	0,00000006 (2)
$\gamma_{(-1,68)}$(Np)	902,61	0,00000033 (3)
$\gamma_{(-1,69)}$(Np)	909,95	0,00000005 (1)
$\gamma_{(-1,70)}$(Np)	912,4	0,00000028 (3)
$\gamma_{40,0}$(Np)	920,88 (20)	0,00000019 (3)
$\gamma_{(-1,71)}$(Np)	928,95	0,00000009 (2)
$\gamma_{(-1,72)}$(Np)	939,2	0,00000005 (1)
$\gamma_{41,0}$(Np)	946,06	0,000000010 (2)
$\gamma_{(-1,73)}$(Np)	952,72	0,00000003 (1)
$\gamma_{(-1,74)}$(Np)	955,91	0,00000060 (5)
$\gamma_{42,0}$(Np)	962,19	0,00000004 (1)
$\gamma_{(-1,75)}$(Np)	969,09	0,00000003 (1)
$\gamma_{(-1,76)}$(Np)	980,84	0,00000003 (1)
$\gamma_{43,0}$(Np)	1014,33	0,0000010 (2)

7 Main Production Modes

$\mathrm{Pu}-241(\beta^-)\mathrm{Am}-241$

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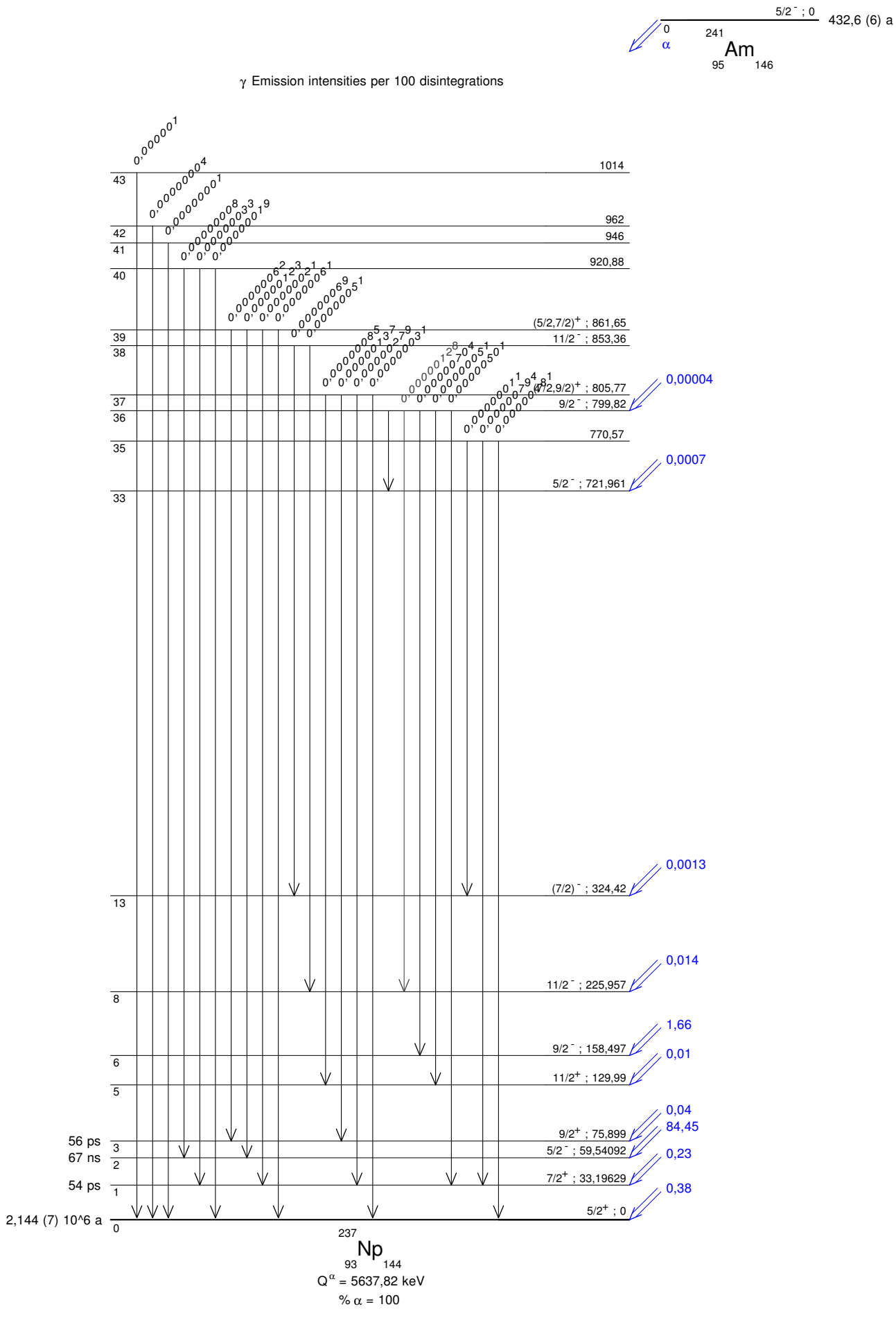
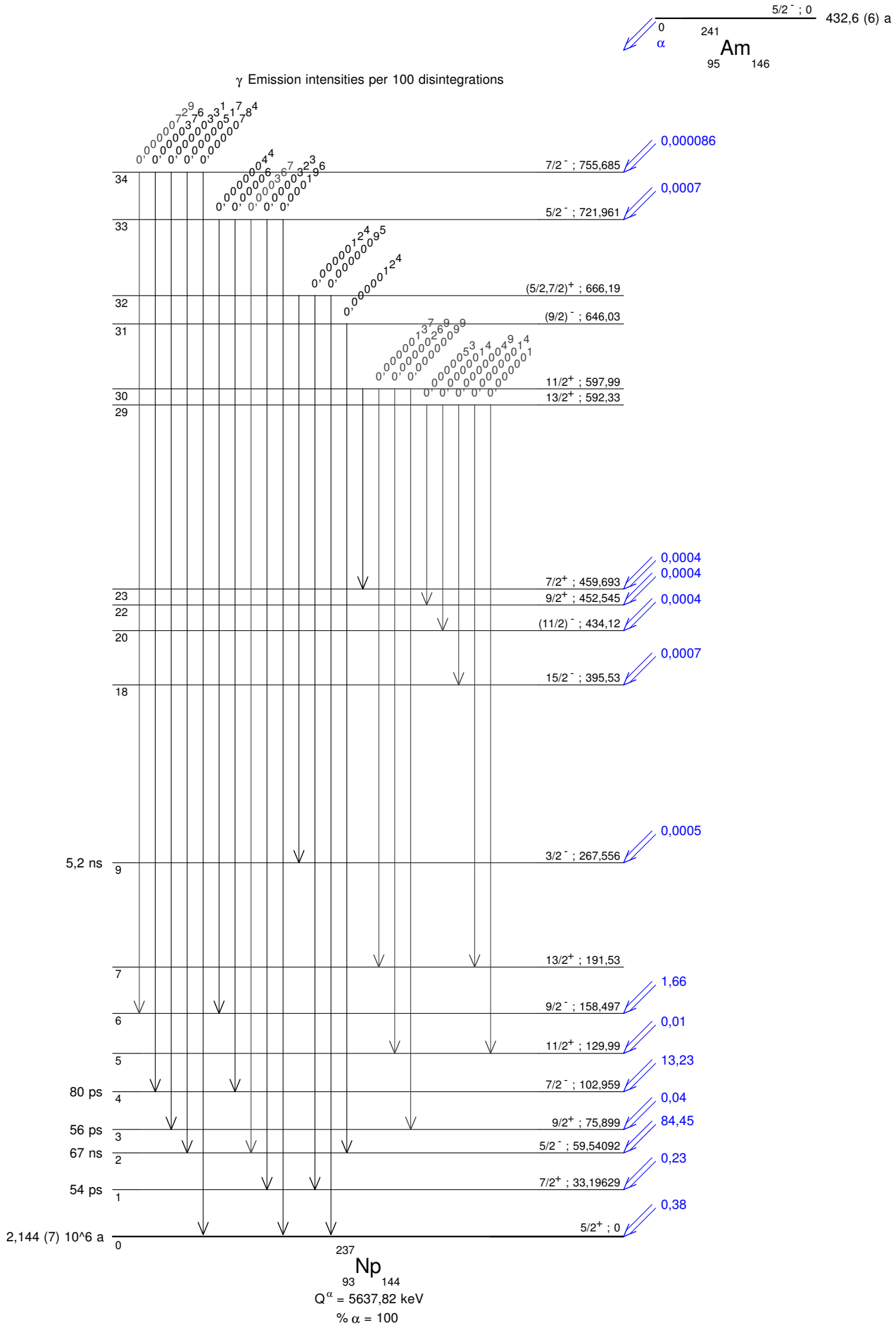
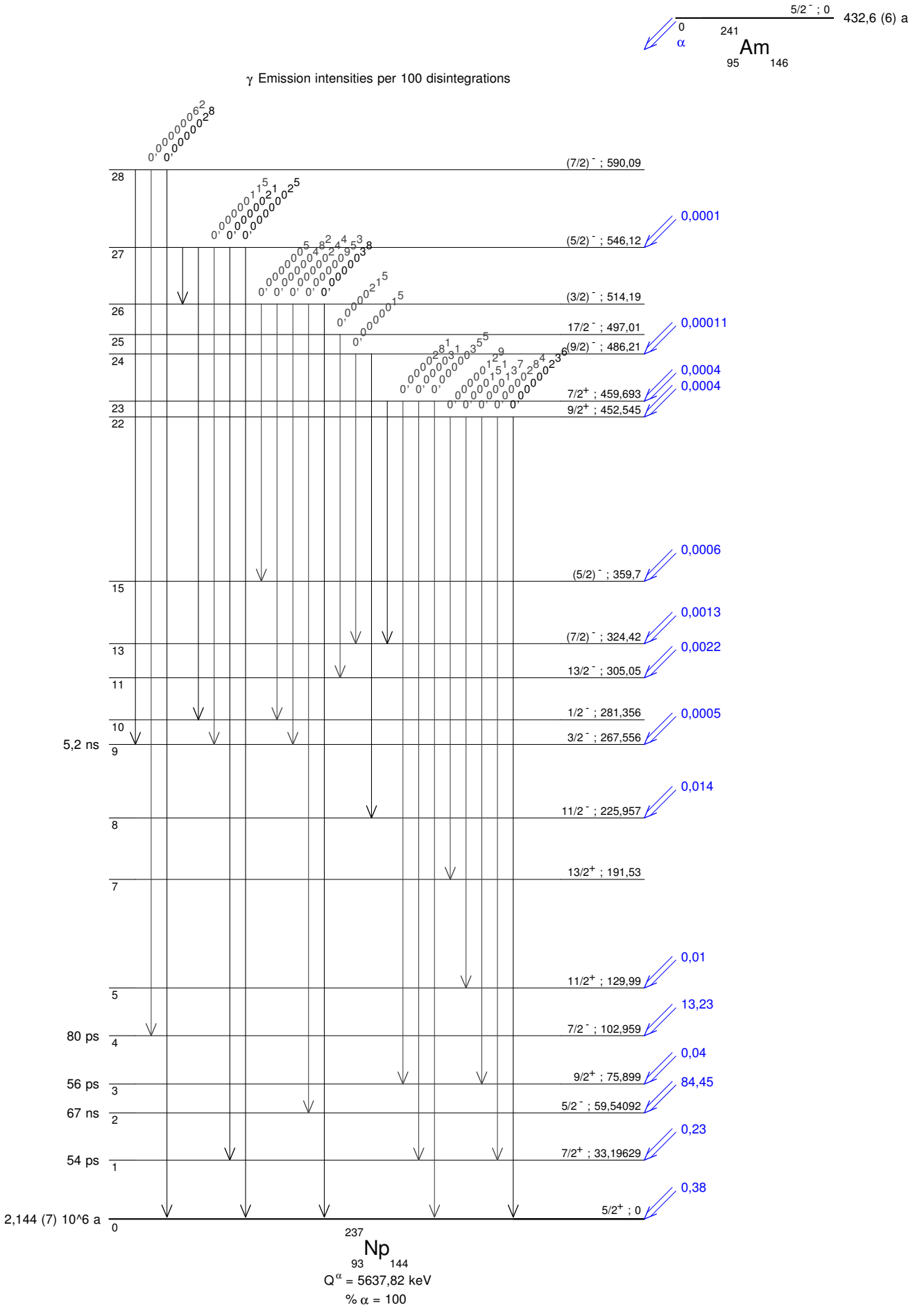
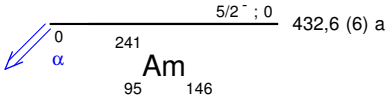
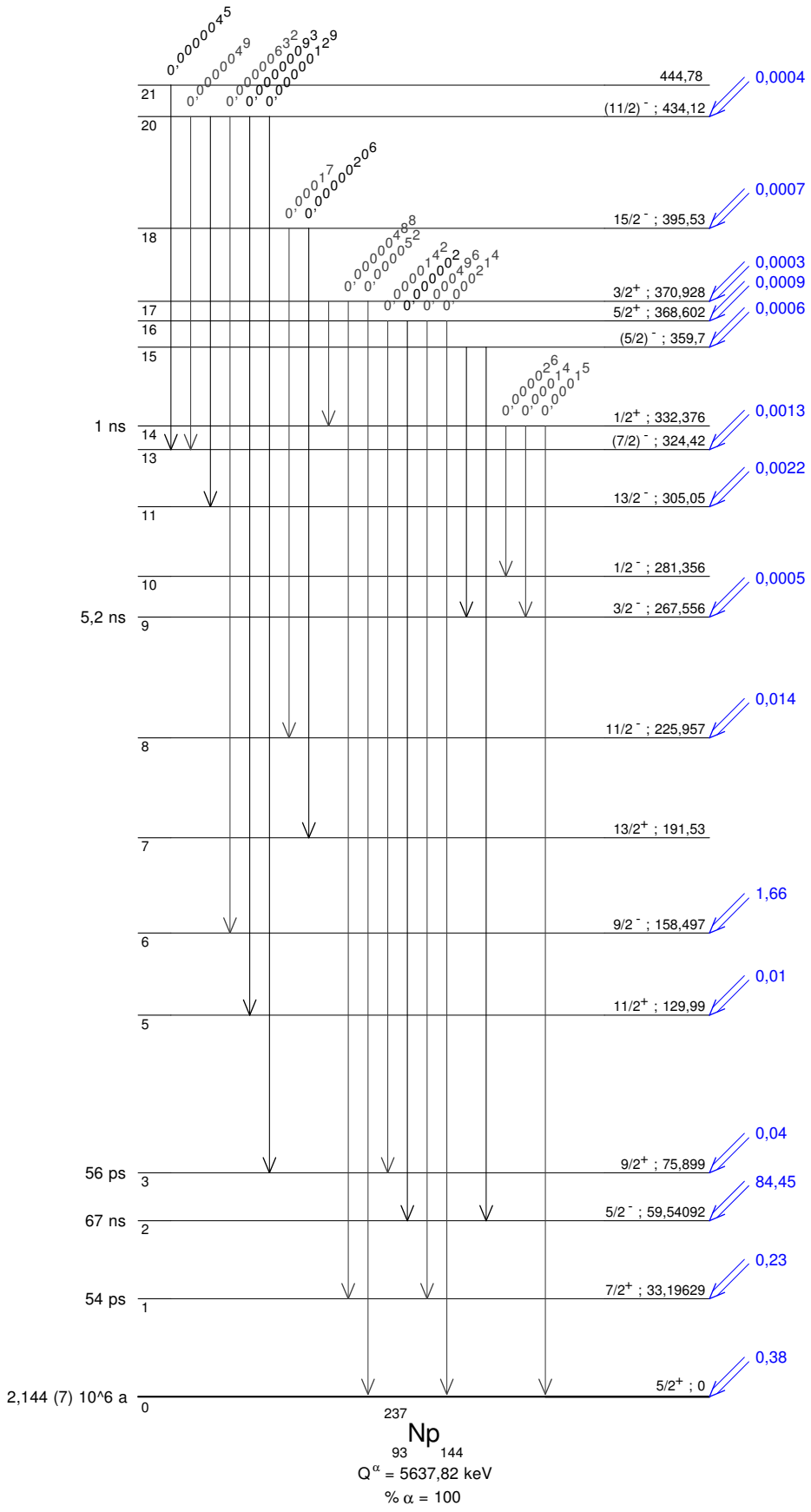

5/2⁻ ; 0
432,6 (6) a
0
α
241
Am
95
146
γ Emission intensities per 100 disintegrations
1014
962
946
920,88
(5/2,7/2)+ ; 861,65
11/2⁻ ; 853,36
(7/2,9/2)+ ; 805,77
9/2⁻ ; 799,82
770,57
5/2⁻ ; 721,961
(7/2)⁻ ; 324,42
11/2⁻ ; 225,957
9/2⁻ ; 158,497
11/2+ ; 129,99
9/2+ ; 75,899
5/2⁻ ; 59,54092
7/2+ ; 33,19629
5/2+ ; 0
0,00004
0,0007
0,0013
0,014
1,66
0,01
0,04
84,45
0,23
0,38
56 ps
67 ns
54 ps
2,144 (7) 10^6 a
237
Np
93
144
Q^α = 5637,82 keV
% α = 100

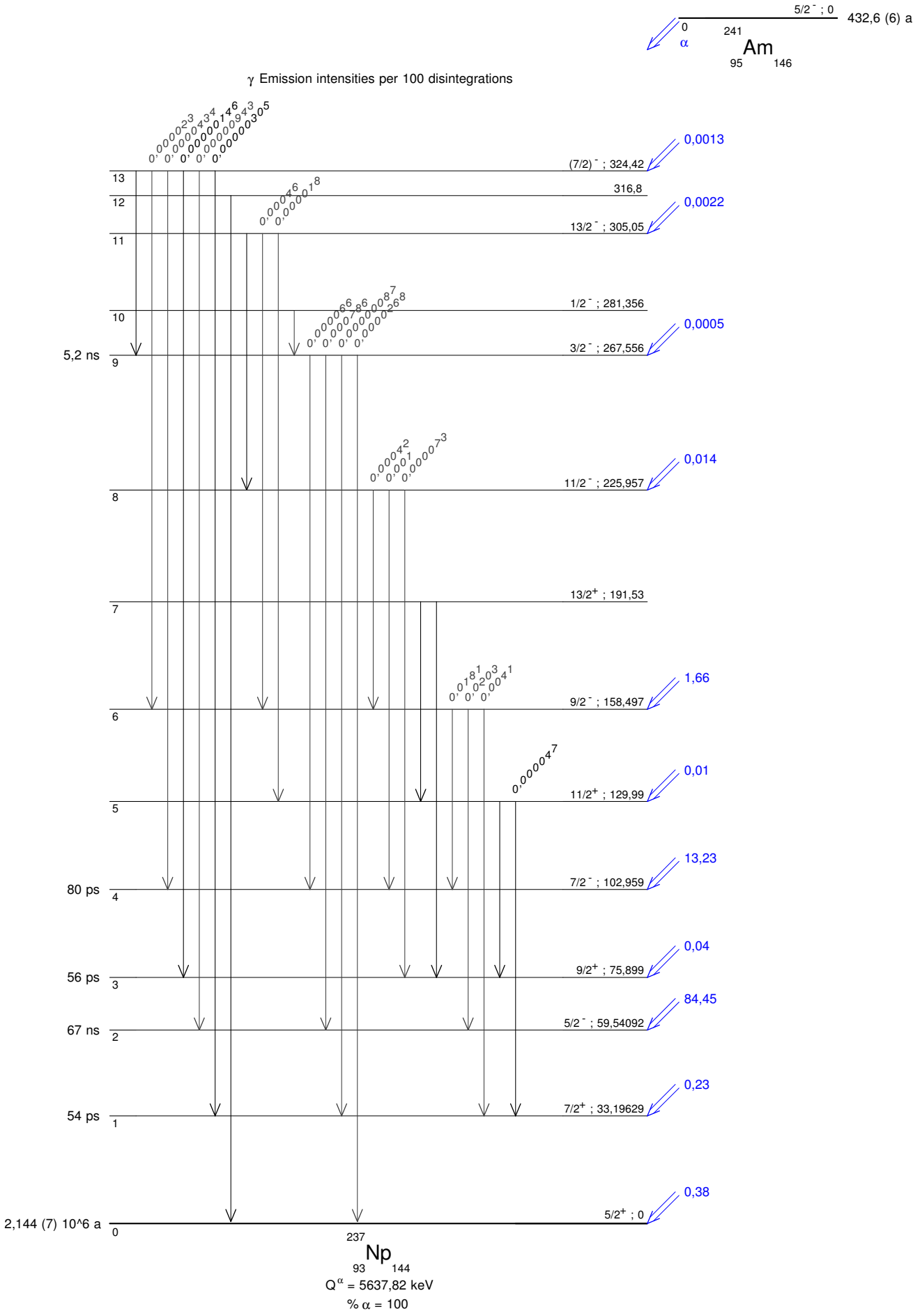

5/2⁻ ; 0
432,6 (6) a
0
α
241
Am
95
146
γ Emission intensities per 100 disintegrations
0,000086
7/2⁻ ; 755,685
0,0007
5/2⁻ ; 721,961
(5/2,7/2)⁺ ; 666,19
(9/2)⁻ ; 646,03
11/2⁺ ; 597,99
13/2⁺ ; 592,33
0,0004
7/2⁺ ; 459,693
0,0004
9/2⁺ ; 452,545
0,0004
(11/2)⁻ ; 434,12
0,0007
15/2⁻ ; 395,53
0,0005
3/2⁻ ; 267,556
13/2⁺ ; 191,53
1,66
9/2⁻ ; 158,497
0,01
11/2⁺ ; 129,99
13,23
7/2⁻ ; 102,959
0,04
9/2⁺ ; 75,899
84,45
5/2⁻ ; 59,54092
0,23
7/2⁺ ; 33,19629
0,38
5/2⁺ ; 0
5,2 ns
80 ps
56 ps
67 ns
54 ps
2,144 (7) 10^6 a
34
33
32
31
30
29
23
22
20
18
9
7
6
5
4
3
2
1
0
237
Np
93
144
Q^α = 5637,82 keV
% α = 100

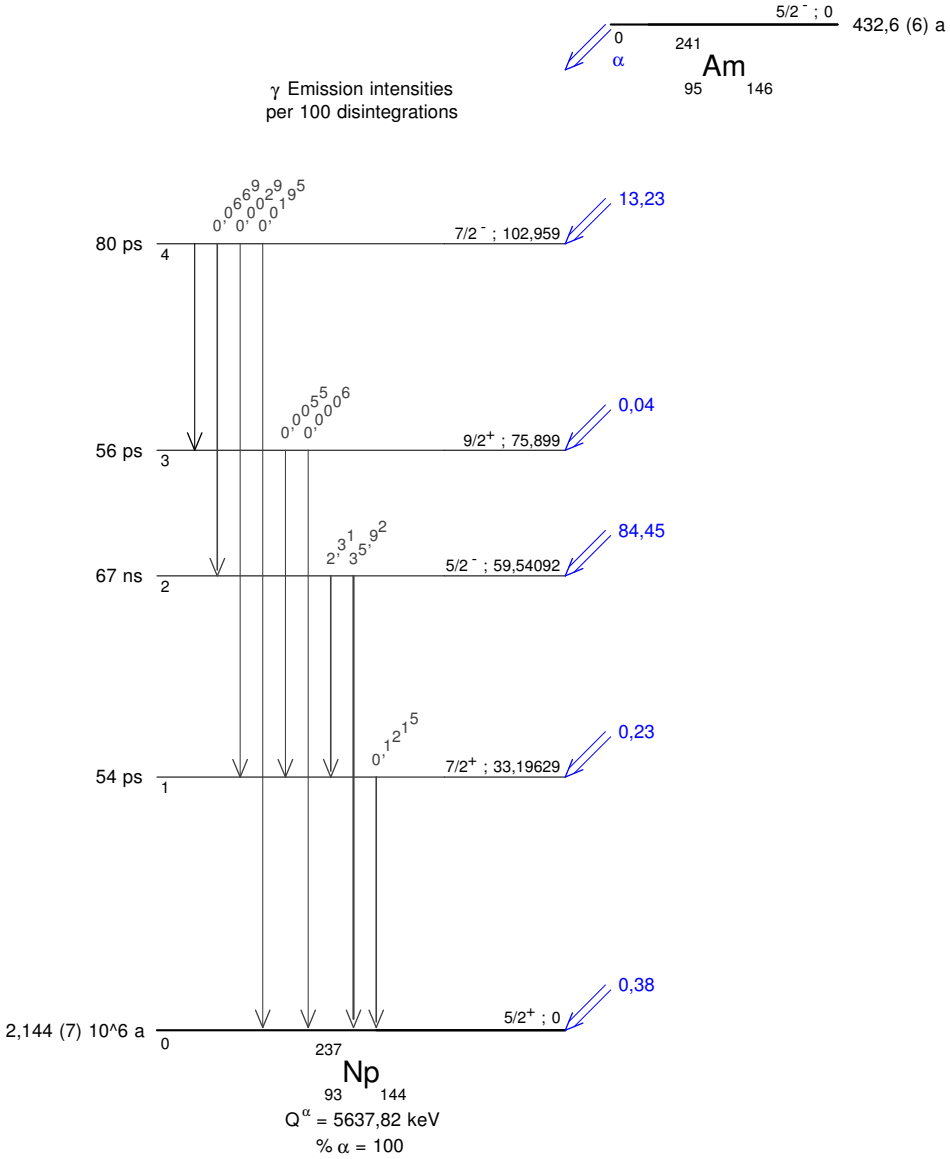

5/2⁻ ; 0
432,6 (6) a
0
α
241
Am
95
146
γ Emission intensities per 100 disintegrations
(7/2)⁻ ; 590,09
(5/2)⁻ ; 546,12
0,0001
(3/2)⁻ ; 514,19
17/2⁻ ; 497,01
0,00011
(9/2)⁻ ; 486,21
7/2⁺ ; 459,693
0,0004
0,0004
9/2⁺ ; 452,545
(5/2)⁻ ; 359,7
0,0006
(7/2)⁻ ; 324,42
0,0013
13/2⁻ ; 305,05
0,0022
1/2⁻ ; 281,356
3/2⁻ ; 267,556
0,0005
5,2 ns
11/2⁻ ; 225,957
0,014
13/2⁺ ; 191,53
11/2⁺ ; 129,99
0,01
7/2⁻ ; 102,959
13,23
80 ps
9/2⁺ ; 75,899
0,04
56 ps
5/2⁻ ; 59,54092
84,45
67 ps
7/2⁺ ; 33,19629
0,23
54 ps
5/2⁺ ; 0
0,38
2,144 (7) 10^6 a
237
Np
93
144
Q^α = 5637,82 keV
% α = 100



γ Emission intensities per 100 disintegrations




5/2⁻ ; 0
432,6 (6) a
0
α
241
Am
95
146
γ Emission intensities per 100 disintegrations
0,0013
(7/2)⁻ ; 324,42
13
316,8
12
0,0022
13/2⁻ ; 305,05
11
1/2⁻ ; 281,356
10
0,0005
3/2⁻ ; 267,556
5,2 ns
9
0,014
11/2⁻ ; 225,957
8
13/2⁺ ; 191,53
7
1,66
9/2⁻ ; 158,497
6
0,01
11/2⁺ ; 129,99
5
13,23
7/2⁻ ; 102,959
80 ps
4
0,04
9/2⁺ ; 75,899
56 ps
3
84,45
5/2⁻ ; 59,54092
67 ps
2
0,23
7/2⁺ ; 33,19629
54 ps
1
0,38
5/2⁺ ; 0
2,144 (7) 10^6 a
0
237
Np
93
144
Q^α = 5637,82 keV
% α = 100


5/2 - ; 0
432,6 (6) a
0
241
Am
95
146
α
γ Emission intensities
per 100 disintegrations
80 ps
4
7/2 - ; 102,959
13,23
56 ps
3
9/2+ ; 75,899
0,04
67 ns
2
5/2 - ; 59,54092
84,45
54 ps
1
7/2+ ; 33,19629
0,23
2,144 (7) 10^6 a
0
5/2+ ; 0
0,38
237
Np
93
144
Q α = 5637,82 keV
% α = 100