

Nuclear Wallet Cards

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Introduction

This booklet serves as an update to the 2011 booklet [1] of the same name. Included in the booklet are selected properties of all known nuclides and their long-lived isomeric states. Properties of ionized atoms are not included.

This evaluation relied heavily on the data from the Adopted Levels properties as given in the Evaluated Nuclear Structure Data File (ENSDF) [2] and the compilation of data in the eXperimental Unevaluated Nuclear Data List (XUNDL) [3]. The main bibliographic source for new measurements was the NSR database [4].

Data are updated to December 1, 2022.

Explanation of Table

Column 1-2, Nuclide (A,El) :

Nuclides are listed in order of increasing atomic number (Z), and within a given element ordered by increasing mass number (A). All known nuclides, as well as all isomers with a half-life larger than 0.1s, are included. Isomeric states are indicated with the symbol, “m”, “n” following the mass number and are given in the order of increasing excitation energy. The names and symbols for elements (El) are as adopted by the International Union of Pure and Applied Chemistry (2022) [5].

Column 3, J^π :

Spin (J) and parity (π) assignments are provided as definite (without parentheses) and tentative (with parentheses). The assignments are based upon strong and weak arguments, respectively, as detailed in the policies [6] of the Nuclear Data Sheets journal.

Column 4, Mass Excess, Δ :

Mass excess values are adopted from the 2020 Atomic Mass Evaluation [7]. The mass excess is defined as $M-A$, with $\Delta(^{12}\text{C})=0$ by definition, and are given in keV units. For isomers, the values are determined by adding the excitation energy of the isomeric state to the mass excess of the ground state. In cases where the excitation energy is not known, the mass excess for the ground state is given. Uncertainties are in the last significant figure, that is -88836.0 *14* means -88836.0 ± 1.4 keV. The notation “SY” indicates that the mass excess value is derived from systematics.

Column 5, $T_{1/2}$, Γ , or Abundance:

Half-life, width or abundance of a given state is provided, when measured. Half-lives are followed by their units (s: second, m: minute, h: hour, d: day, y: year). The uncertainty follows the unit and is given in *italics*. Abundances are given in bold face, from Ref. [8], followed by “%”, with the uncertainty given in *italics*. Abundances given as an interval reflect the variability of those isotopes in normal materials. For very short-lived nuclei, level widths are given instead of half-lives. The width is followed by the unit (eV, keV, or MeV) followed by the uncertainty in *italics*. Uncertainties are in the last significant figure, that is 2.5 h *10* means 2.5 ± 1.0 hours.

Column 6, Decay Mode:

Decay modes are given in order of decreasing strength from left to right, followed by their percentage, if known. If there is no competing decay mode or no other mode has been observed, the percentage branching (i.e. $\% \beta = 100$) is not indicated. A “?” indicates an expected decay mode which has yet to be observed. The types of decay modes are detailed below.

β^-	Beta-minus (β^-) decay
$\epsilon + \beta^+$	Electron capture (ϵ), positron decay (β^+), or the sum $\epsilon + \beta^+$
IT	Internal transition from an isomeric level, via gamma and/or conversion-electron decay
n, p, α	neutron, proton, alpha decay
SF	spontaneous fission decay
$2\beta^-$	double beta-minus decay
$\beta^- n, \beta^- p, \beta^- \alpha$	delayed n, p, α decay following β^- decay
$\epsilon p, \epsilon \alpha, \epsilon SF$	delayed p, α, SF decay following ϵ or β^+ decay

NNDC Web Services

The NNDC maintains several databases and related web applications that can be reached through www.nndc.bnl.gov.

Nuclear Wallet Cards for Radioactive Nuclei

Nuclear Wallet Cards for Radioactive Nuclei is a reference for gamma-rays produced following the decay of long-lived radionuclides. Half-lives and decay modes in that booklet are based on the data in this evaluation. Copies of the booklet are available in printed form from the NNDC.

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References

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A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
1	n	1/2 ⁺	8071.31806 <i>44</i>	608.9 s <i>3</i>	β ⁻
1	H	1/2 ⁺	7288.971064 <i>13</i>	99.972-99.999%	
2	H	1 ⁺	13135.722895 <i>15</i>	0.001-0.028%	
3	H	1/2 ⁺	14949.81090 <i>8</i>	12.322 y <i>11</i>	β ⁻
4	H	2 ⁻	2.462×10 ⁴ <i>10</i>	3.3 MeV <i>3</i>	n
5	H	(1/2 ⁺)	3.289×10 ⁴ <i>9</i>	5.3 MeV <i>4</i>	2n≈100%
6	H		4.188×10 ⁴ <i>25</i>	1.5 MeV <i>3</i>	
7	H	1/2 ⁺	4.91×10 ⁴ <i>SY</i>	0.18 MeV <i>+47-13</i>	2n?
3	He	1/2 ⁺	14931.21888 <i>6</i>	0.0002% 2	
4	He	0 ⁺	2424.91587 <i>15</i>	99.9998% 2	
5	He	3/2 ⁻	11231 <i>20</i>	719 keV <i>48</i>	n
6	He	0 ⁺	17592.10 <i>5</i>	807.12 ms <i>17</i>	β ⁻
7	He	(3/2 ⁻)	26073 <i>8</i>	195 keV <i>4</i>	n
8	He	0 ⁺	31609.68 <i>9</i>	119.0 ms <i>16</i>	β ⁻ , β ⁻ n=16%
9	He	1/2 ⁺	40936 <i>47</i>	1.8×10 ² keV <i>10</i>	n
10	He	0 ⁺	4.920×10 ⁴ <i>9</i>	1.8 MeV <i>3</i>	2n
4	Li	2 ⁻	2.532×10 ⁴ <i>21</i>	5.0 MeV <i>5</i>	p
5	Li	3/2 ⁻	1.168×10 ⁴ <i>5</i>	1.23 MeV	p
6	Li	1 ⁺	14086.8804 <i>14</i>	1.9-7.8%	
7	Li	3/2 ⁻	14907.1046 <i>42</i>	92.2-98.1%	
8	Li	2 ⁺	20945.805 <i>47</i>	838.79 ms <i>35</i>	β ⁻ , β ⁻ α
9	Li	3/2 ⁻	24954.91 <i>19</i>	178.0 ms <i>3</i>	β ⁻ , β ⁻ α=12.3%, β ⁻ n=51.0%
10	Li	(1 ⁻ , 2 ⁻)	33053 <i>13</i>	≤0.23 MeV	n
11	Li	3/2 ⁻	40728.3 <i>6</i>	8.75 ms <i>10</i>	β ⁻ , β ⁻ n=84.3%, β ⁻ 2n=4.2%, β ⁻ 3n=1.9%, β ⁻ α=1.7%
12	Li	(1 ⁻ , 2 ⁻)	49010 <i>30</i>		n
13	Li		5.698×10 ⁴ <i>7</i>	1.3×10 ² keV <i>+6-4</i>	2n
6	Be	0 ⁺	18375 <i>5</i>	92 keV <i>6</i>	2p
7	Be	3/2 ⁻	15769.00 <i>7</i>	53.30 d <i>10</i>	ε
8	Be	0 ⁺	4941.672 <i>35</i>	5.57 eV <i>25</i>	α
9	Be	3/2 ⁻	11348.45 <i>8</i>	100%	
10	Be	0 ⁺	12607.49 <i>8</i>	1.386×10 ⁶ y <i>12</i>	β ⁻
11	Be	1/2 ⁺	20177.17 <i>24</i>	13.77 s <i>7</i>	β ⁻ , β ⁻ α=3.3%
12	Be	0 ⁺	25077.8 <i>19</i>	21.46 ms <i>5</i>	β ⁻ , β ⁻ n=0.50%
13	Be	(1/2 ⁻)	33659 <i>10</i>	450 keV <i>30</i>	n?
14	Be	0 ⁺	3.995×10 ⁴ <i>13</i>	4.65 ms <i>12</i>	β ⁻ , β ⁻ n=86%, β ⁻ 2n=5%, β ⁻ α<0.004%
15	Be	(5/2 ⁺)	4.983×10 ⁴ <i>17</i>	5.8×10 ² keV <i>20</i>	n
16	Be	0 ⁺	5.745×10 ⁴ <i>17</i>	0.8 MeV <i>+1-2</i>	2n

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
7	B	(3/2 ⁻)	27677 <i>25</i>	801 keV <i>20</i>	p≈100%
8	B	2 ⁺	22921.6 <i>10</i>	772.1 ms <i>11</i>	ε+β ⁺ , εα
9	B	3/2 ⁻	12416.5 <i>9</i>	5.4×10 ² eV <i>21</i>	p
10	B	3 ⁺	12050.611 <i>15</i>	18.9-20.4%	
11	B	3/2 ⁻	8667.708 <i>12</i>	79.6-81.1%	
12	B	1 ⁺	13369.4 <i>13</i>	20.22 ms <i>4</i>	β ⁻ , β ⁻ α=0.60%
13	B	3/2 ⁻	16561.9 <i>10</i>	17.16 ms <i>18</i>	β ⁻ , β ⁻ n=0.266%
14	B	2 ⁻	23664 <i>21</i>	12.34 ms <i>27</i>	β ⁻ , β ⁻ n=6.04%
15	B	3/2 ⁻	28957 <i>21</i>	10.18 ms <i>35</i>	β ⁻ , β ⁻ n=99.7%, β ⁻ 2n<1.5%
16	B		37112 <i>25</i>	<100 keV	n
17	B	(3/2 ⁻)	4.372×10 ⁴ <i>20</i>	5.07 ms <i>5</i>	β ⁻ , β ⁻ n=63%, β ⁻ 2n=12%, β ⁻ 3n=3.5%, β ⁻ 4n=0.4%
18	B	(2 ⁻)	5.179×10 ⁴ <i>20</i>		n
19	B	(3/2 ⁻)	5.98×10 ⁴ <i>5</i>	2.92 ms <i>13</i>	β ⁻ , β ⁻ n=72%, β ⁻ 2n=16%, β ⁻ 3n<9.1%
20	B	(1 ⁻ , 2 ⁻)	6.94×10 ⁴ <i>5</i>	≤500 keV	n
21	B	(3/2 ⁻)	7.84×10 ⁴ <i>6</i>	≤600 keV	2n
8	C	0 ⁺	35064 <i>18</i>	1.3×10 ² keV <i>5</i>	2p
9	C	3/2 ⁻	28911.0 <i>21</i>	126.5 ms <i>9</i>	ε+β ⁺ , εp=62.0%, εα=38%
10	C	0 ⁺	15698.67 <i>7</i>	19.3015 s <i>18</i>	ε+β ⁺
11	C	3/2 ⁻	10649.40 <i>6</i>	20.3401 m <i>41</i>	ε+β ⁺
12	C	0 ⁺	0.0	98.84-99.04%	
13	C	1/2 ⁻	3125.00933 <i>23</i>	0.96-1.16%	
14	C	0 ⁺	3019.8933 <i>38</i>	5686 y <i>22</i>	β ⁻
15	C	1/2 ⁺	9873.1 <i>8</i>	2.451 s <i>4</i>	β ⁻
16	C	0 ⁺	13694.1 <i>36</i>	750 ms <i>5</i>	β ⁻ , β ⁻ n=99.28%
17	C	3/2 ⁺	21032 <i>17</i>	193 ms <i>5</i>	β ⁻ , β ⁻ n=28.4%, β ⁻ 2n?
18	C	0 ⁺	24919 <i>30</i>	92 ms <i>2</i>	β ⁻ , β ⁻ n=31.5%, β ⁻ 2n?
19	C	(1/2 ⁺)	3.241×10 ⁴ <i>10</i>	46.3 ms <i>23</i>	β ⁻ , β ⁻ n=47%, β ⁻ 2n=7%
20	C	0 ⁺	3.750×10 ⁴ <i>23</i>	16.0 ms <i>30</i>	β ⁻ , β ⁻ n=66%, β ⁻ 2n<18.6%
22	C	0 ⁺	5.361×10 ⁴ <i>23</i>	6.1 ms <i>+14-12</i>	β ⁻ , β ⁻ n=61%, β ⁻ 2n<37%
10	N	(1 ⁻)	3.880×10 ⁴ <i>40</i>	2.5 MeV <i>+20-15</i>	p
11	N	1/2 ⁺	24366 <i>5</i>	780 keV <i>10</i>	p
12	N	1 ⁺	17338.1 <i>10</i>	10.996 ms <i>15</i>	ε+β ⁺ , εα=1.93%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
13	N	1/2 ⁻	5345.48 27	9.967 m 4	ε+β ⁺
14	N	1 ⁺	2863.41683 22	99.578-99.663%	
15	N	1/2 ⁻	101.4381 6	0.337-0.422%	
16	N	2 ⁻	5683.9 23	7.13 s 1	β ⁻ , β ⁻ α=0.00154%
17	N	1/2 ⁻	7870 15	4.171 s 3	β ⁻ , β ⁻ n=95.1%, β ⁻ α=0.0025%
18	N	1 ⁻	13113 19	619 ms 2	β ⁻ , β ⁻ α=12.2%, β ⁻ n=8.3%, β ⁻ 2n?
19	N	1/2 ⁻	15856 16	336 ms 3	β ⁻ , β ⁻ n=41.8%
20	N	(2 ⁻)	2.177×10 ⁴ 8	136 ms 3	β ⁻ , β ⁻ n=42.9%, β ⁻ 2n≈4.5%
21	N	(1/2 ⁻)	2.523×10 ⁴ 13	85.3 ms 45	β ⁻ , β ⁻ n=86.5%, β ⁻ 2n?
22	N	(0 ⁻)	3.176×10 ⁴ 21	20.9 ms 21	β ⁻ , β ⁻ n=34%, β ⁻ 2n=12%
23	N		3.672×10 ⁴ 42	14.1 ms +12-15	β ⁻ , β ⁻ n=42%, β ⁻ 2n=8%, β ⁻ 3n<3.4%
24	N		4.694×10 ⁴ SY	<52 ns	n?
11	O	(3/2 ⁻)	4.774×10 ⁴ 6	2.31 MeV 14	2p
12	O	0 ⁺	32013 12	51 keV 19	2p
13	O	(3/2 ⁻)	23115 10	8.58 ms 7	ε+β ⁺ , εp=10.8%
14	O	0 ⁺	8007.781 25	70.618 s 7	ε+β ⁺
15	O	1/2 ⁻	2855.62 49	122.268 s 43	ε+β ⁺
16	O	0 ⁺	-4737.00217 30	99.738-99.776%	
17	O	5/2 ⁺	-808.7642 6	0.0367-0.04%	
18	O	0 ⁺	-782.8163 6	0.187-0.222%	
19	O	5/2 ⁺	3332.9 26	26.470 s 6	β ⁻
20	O	0 ⁺	3796.2 9	13.51 s 4	β ⁻
21	O	(5/2 ⁺)	8062 12	3.42 s 10	β ⁻
22	O	0 ⁺	9.28×10 ³ 6	2.19 s 16	β ⁻ , β ⁻ n<22%
23	O	1/2 ⁺	1.462×10 ⁴ 12	96 ms 8	β ⁻ , β ⁻ n=7%
24	O	0 ⁺	1.850×10 ⁴ 16	72 ms 4	β ⁻ , β ⁻ n=41%
25	O	(3/2 ⁺)	2.733×10 ⁴ 17	88 keV 6	n
26	O	0 ⁺	3.466×10 ⁴ 16	0.0045 ns +32-34	2n
28	O	0 ⁺	5.21×10 ⁴ SY	<100 ns	2n?
14	F	2 ⁻	31964 41	9.1×10 ² keV 10	p
15	F	1/2 ⁺	16567 14	0.38 MeV 21	p
16	F	0 ⁻	10675 5	23.1 keV 38	p
17	F	5/2 ⁺	1951.70 25	64.368 s 25	ε+β ⁺
18	F	1 ⁺	873.11 46	109.734 m 8	ε+β ⁺
19	F	1/2 ⁺	-1487.4451 8	100%	
20	F	2 ⁺	-17.463 30	11.006 s 8	β ⁻
21	F	5/2 ⁺	-47.6 18	4.158 s 20	β ⁻

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
22	F	4 ⁺	2793 <i>12</i>	4.23 s <i>4</i>	β ⁻ , β ⁻ n<11%
23	F	(5/2 ⁺)	3285 <i>33</i>	2.23 s <i>14</i>	β ⁻ , β ⁻ n<14%
24	F	(3 ⁺)	7.54×10 ³ <i>10</i>	384 ms <i>15</i>	β ⁻ , β ⁻ n<5.9%
25	F	(5/2 ⁺)	1.133×10 ⁴ <i>10</i>	81 ms <i>10</i>	β ⁻ , β ⁻ n=23.6%, β ⁻ 2n?
26	F	1 ⁺	1.867×10 ⁴ <i>11</i>	8.6 ms <i>7</i>	β ⁻ , β ⁻ n=14%, β ⁻ 2n?
26m	F	(4 ⁺)	1.932×10 ⁴ <i>11</i>	2.2 ms <i>1</i>	IT=82%, β ⁻ =18%, β ⁻ n=12%
27	F	(5/2 ⁺)	2.513×10 ⁴ <i>12</i>	5.3 ms <i>3</i>	β ⁻ , β ⁻ n=90%, β ⁻ 2n?
28	F	(4 ⁻)	3.340×10 ⁴ <i>12</i>	180 keV <i>40</i>	n
29	F		4.02×10 ⁴ <i>5</i>	3.3 ms <i>4</i>	β ⁻ , β ⁻ n=60%, β ⁻ 2n?
30	F		4.90×10 ⁴ <i>SY</i>	<250 ns	n?
31	F		5.68×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
15	Ne	(3/2 ⁻)	4.022×10 ⁴ <i>7</i>	0.59 MeV <i>23</i>	2p
16	Ne	0 ⁺	23987 <i>20</i>	<80 keV	2p
17	Ne	1/2 ⁻	16500.45 <i>35</i>	109.1 ms <i>5</i>	ε+β ⁺ , εp=94.4%, εα=3.51%
18	Ne	0 ⁺	5317.62 <i>36</i>	1.6643 s <i>6</i>	ε+β ⁺
19	Ne	1/2 ⁺	1752.05 <i>16</i>	17.2569 s <i>19</i>	ε+β ⁺
20	Ne	0 ⁺	-7041.9322 <i>15</i>	90.48% 3	
21	Ne	3/2 ⁺	-5731.776 <i>38</i>	0.27% 1	
22	Ne	0 ⁺	-8024.716 <i>18</i>	9.25% 3	
23	Ne	5/2 ⁺	-5154.05 <i>10</i>	37.148 s <i>32</i>	β ⁻
24	Ne	0 ⁺	-5951.6 <i>5</i>	3.38 m <i>2</i>	β ⁻
25	Ne	1/2 ⁺	-2036 <i>29</i>	602 ms <i>8</i>	β ⁻
26	Ne	0 ⁺	481 <i>18</i>	196 ms <i>2</i>	β ⁻ , β ⁻ n=0.13%
27	Ne	(3/2 ⁺)	7.05×10 ³ <i>9</i>	30.9 ms <i>11</i>	β ⁻ , β ⁻ n=2.0%, β ⁻ 2n?
28	Ne	0 ⁺	1.130×10 ⁴ <i>13</i>	18.7 ms <i>2</i>	β ⁻ , β ⁻ n=12%, β ⁻ 2n=3.7%
29	Ne	(3/2 ⁻)	1.840×10 ⁴ <i>15</i>	14.0 ms <i>5</i>	β ⁻ , β ⁻ n=28%, β ⁻ 2n=4%
30	Ne	0 ⁺	2.328×10 ⁴ <i>25</i>	7.3 ms <i>3</i>	β ⁻ , β ⁻ n=13%, β ⁻ 2n=8.9%
31	Ne	(3/2 ⁻)	3.118×10 ⁴ <i>27</i>	3.4 ms <i>8</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
32	Ne	0 ⁺	3.70×10 ⁴ <i>SY</i>	4.5 ms <i>7</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
33	Ne		4.61×10 ⁴ <i>SY</i>	<180 ns	n?
34	Ne	0 ⁺	5.28×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
17	Na	(1/2 ⁺)	3.472×10 ⁴ <i>6</i>		p
18	Na	(1 ⁻)	2.504×10 ⁴ <i>9</i>	≤0.2 MeV	p≈100%
19	Na	(5/2 ⁺)	12929 <i>11</i>	<40 keV	p≈100%
20	Na	2 ⁺	6850.5 <i>11</i>	448 ms <i>2</i>	ε+β ⁺ , εα=19.9%
21	Na	3/2 ⁺	-2184.857 <i>42</i>	22.455 s <i>5</i>	ε+β ⁺

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
22	Na	3 ⁺	-5181.39 <i>13</i>	2.60188 y <i>46</i>	ε+β ⁺
23	Na	3/2 ⁺	-9529.8535 <i>18</i>	100%	
24	Na	4 ⁺	-8417.901 <i>17</i>	14.9578 h <i>11</i>	β ⁻
25	Na	5/2 ⁺	-9357.8 <i>12</i>	58.9 s <i>6</i>	β ⁻
26	Na	3 ⁺	-6860.8 <i>35</i>	1.07128 s <i>25</i>	β ⁻
27	Na	5/2 ⁺	-5517.8 <i>37</i>	301 ms <i>5</i>	β ⁻ , β ⁻ n=0.13%
28	Na	1 ⁺	-988 <i>10</i>	34.6 ms <i>10</i>	β ⁻ , β ⁻ n=0.58%
29	Na	3/2 ⁺	2680 <i>7</i>	43.2 ms <i>4</i>	β ⁻ , β ⁻ n=24.7%, β ⁻ 2n?
30	Na	2 ⁺	8474.7 <i>47</i>	44.8 ms <i>12</i>	β ⁻ , β ⁻ n=30%, β ⁻ 2n=1.15%, β ⁻ α=0.000055%
31	Na	3/2 ⁺	12246 <i>14</i>	17.0 ms <i>2</i>	β ⁻ , β ⁻ n=38.8%, β ⁻ 2n=0.87%
32	Na	(3 ⁻ , 4 ⁻)	18640 <i>37</i>	13.2 ms <i>3</i>	β ⁻ , β ⁻ n=24%, β ⁻ 2n=8.3%
33	Na	3/2 ⁺	2.378×10 ⁴ <i>45</i>	8.2 ms <i>2</i>	β ⁻ , β ⁻ n=47%, β ⁻ 2n=13%
34	Na		3.17×10 ⁴ <i>6</i>	5.5 ms <i>10</i>	β ⁻ , β ⁻ n≈15%, β ⁻ 2n≈50%
35	Na		3.78×10 ⁴ <i>SY</i>	2.4 ms <i>4</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
37	Na		5.31×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
18	Mg	0 ⁺		1.2×10 ² keV <i>10</i>	2p≈100%
19	Mg	1/2 ⁻	3.184×10 ⁴ <i>6</i>	3.5×10 ³ fs <i>28</i>	2p≈100%
20	Mg	0 ⁺	17477.7 <i>19</i>	90.4 ms <i>8</i>	ε+β ⁺ , εp=29.9%
21	Mg	5/2 ⁺	10903.9 <i>8</i>	120.0 ms <i>8</i>	ε+β ⁺ , εα=0.115%, εp=20.9%
22	Mg	0 ⁺	-399.99 <i>16</i>	3.8745 s <i>7</i>	ε+β ⁺
23	Mg	3/2 ⁺	-5473.675 <i>32</i>	11.3042 s <i>35</i>	ε+β ⁺
24	Mg	0 ⁺	-13933.578 <i>13</i>	78.88-79.05%	
25	Mg	5/2 ⁺	-13192.782 <i>47</i>	9.988-10.034%	
26	Mg	0 ⁺	-16214.544 <i>29</i>	10.96-11.09%	
27	Mg	1/2 ⁺	-14586.594 <i>47</i>	9.435 m <i>27</i>	β ⁻
28	Mg	0 ⁺	-15019.95 <i>26</i>	20.915 h <i>9</i>	β ⁻
29	Mg	3/2 ⁺	-10612.36 <i>35</i>	1.31 s <i>13</i>	β ⁻
30	Mg	0 ⁺	-8881.4 <i>13</i>	314 ms <i>5</i>	β ⁻ , β ⁻ n<0.06%
31	Mg	1/2 ⁺	-3122.2 <i>31</i>	270 ms <i>2</i>	β ⁻ , β ⁻ n=6.2%
32	Mg	0 ⁺	-828.9 <i>33</i>	80.4 ms <i>4</i>	β ⁻ , β ⁻ n=5.5%
33	Mg	3/2 ⁻	4962.9 <i>27</i>	90.2 ms <i>9</i>	β ⁻ , β ⁻ n=14%, β ⁻ 2n?
34	Mg	0 ⁺	8323 <i>7</i>	44.9 ms <i>4</i>	β ⁻ , β ⁻ n=21%, β ⁻ 2n?
35	Mg	(5/2 ⁻)	1.564×10 ⁴ <i>27</i>	11.3 ms <i>6</i>	β ⁻ , β ⁻ n=52%, β ⁻ 2n?
36	Mg	0 ⁺	2.04×10 ⁴ <i>7</i>	7.2 ms <i>12</i>	β ⁻ , β ⁻ n=48%, β ⁻ 2n?
37	Mg	(3/2 ⁻)	2.82×10 ⁴ <i>7</i>	6.4 ms <i>15</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
38	Mg	0 ⁺	3.41×10 ⁴ <i>SY</i>	3.1 ms <i>5</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
40	Mg	0 ⁺	4.96×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
21	Al	(5/2 ⁺)	2.71×10 ⁴ <i>SY</i>	<35 ns	p?
22	Al	(4) ⁺	1.820×10 ⁴ <i>SY</i>	88.6 ms <i>25</i>	ε+β ⁺ , εp=57.7%, ε2p=1.17%, εα=0.079%
23	Al	5/2 ⁺	6748.07 <i>35</i>	447 ms <i>36</i>	ε+β ⁺ , εp=1.04%
24	Al	4 ⁺	-48.81 <i>23</i>	2.053 s <i>4</i>	ε+β ⁺ , εα=0.035%, εp=0.0016%
24m	Al	1 ⁺	376.99 <i>25</i>	130.7 ms <i>11</i>	ε+β ⁺ =29.4%, IT=70.6%, εα=0.028%
25	Al	5/2 ⁺	-8915.97 <i>7</i>	7.1666 s <i>25</i>	ε+β ⁺
26	Al	5 ⁺	-12210.14 <i>7</i>	7.17×10 ⁵ y <i>17</i>	ε+β ⁺
26m	Al	0 ⁺	-11981.83 <i>7</i>	6.3460 s <i>5</i>	ε+β ⁺
27	Al	5/2 ⁺	-17196.864 <i>47</i>	100%	
28	Al	3 ⁺	-16850.719 <i>49</i>	2.2483 m <i>9</i>	β ⁻
29	Al	5/2 ⁺	-18207.76 <i>35</i>	6.56 m <i>6</i>	β ⁻
30	Al	3 ⁺	-15864.1 <i>19</i>	3.61 s <i>4</i>	β ⁻
31	Al	5/2 ⁽⁺⁾	-14950.7 <i>22</i>	0.644 s <i>25</i>	β ⁻ , β ⁻ n<1.6%
32	Al	1 ⁺	-11099 <i>7</i>	31.7 ms <i>3</i>	β ⁻ , β ⁻ n=0.7%
33	Al	5/2 ⁺	-8497 <i>7</i>	41.5 ms <i>1</i>	β ⁻ , β ⁻ n=8.5%
34	Al	4 ⁺	-2997.6 <i>21</i>	53.73 ms <i>13</i>	β ⁻ , β ⁻ n=25%, β ⁻ 2n?
34m	Al	1 ⁺	-2951.1 <i>21</i>	22.1 ms <i>2</i>	β ⁻ , β ⁻ n=11%, β ⁻ 2n?
35	Al	(5/2 ⁺)	-224 <i>7</i>	38.4 ms <i>3</i>	β ⁻ , β ⁻ n=38%, β ⁻ 2n?
36	Al		5.95×10 ³ <i>15</i>	90 ms <i>40</i>	β ⁻ , β ⁻ n<31%, β ⁻ 2n?
37	Al	(5/2 ⁺)	9.81×10 ³ <i>18</i>	11.4 ms <i>3</i>	β ⁻ , β ⁻ n=52%, β ⁻ 2n>1%
38	Al	(0 ⁻)	1.647×10 ⁴ <i>SY</i>	9.0 ms <i>7</i>	β ⁻ , β ⁻ n=84%, β ⁻ 2n?
39	Al		2.149×10 ⁴ <i>SY</i>	7.23 ms <i>30</i>	β ⁻ , β ⁻ n=97%, β ⁻ 2n?
40	Al		2.882×10 ⁴ <i>SY</i>	5.7 ms <i>4</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
41	Al		3.459×10 ⁴ <i>SY</i>	3.5 ms <i>9</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
42	Al		4.20×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
43	Al		4.83×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
22	Si	0 ⁺	3.36×10 ⁴ <i>SY</i>	28.4 ms <i>11</i>	ε+β ⁺ , εp=67%, ε2p=0.8%
23	Si	(5/2 ⁺)	2.40×10 ⁴ <i>SY</i>	47 ms <i>1</i>	ε+β ⁺ , εp=81.8%, ε2p=7.73%, ε3p=0.029%
24	Si	0 ⁺	10745 <i>19</i>	141.4 ms <i>12</i>	ε+β ⁺ , εp=32.4%
25	Si	5/2 ⁺	3827 <i>10</i>	219.2 ms <i>+13-11</i>	ε+β ⁺ , εp=35%
26	Si	0 ⁺	-7141.00 <i>11</i>	2.2452 s <i>9</i>	ε+β ⁺
27	Si	5/2 ⁺	-12384.51 <i>11</i>	4.111 s <i>2</i>	ε+β ⁺
28	Si	0 ⁺	-21492.7971 <i>5</i>	92.191-92.318%	

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
29	Si	1/2 ⁺	-21895.0815 <i>6</i>	4.645-4.699%	
30	Si	0 ⁺	-24432.962 <i>22</i>	3.037-3.11%	
31	Si	3/2 ⁺	-22949.037 <i>43</i>	157.24 m <i>16</i>	β ⁻
32	Si	0 ⁺	-24077.69 <i>30</i>	163 y <i>6</i>	β ⁻
33	Si	3/2 ⁺	-20514.3 <i>7</i>	6.17 s <i>17</i>	β ⁻
34	Si	0 ⁺	-19991.7 <i>8</i>	2.77 s <i>20</i>	β ⁻
35	Si	7/2 ⁻	-14391 <i>36</i>	0.78 s <i>12</i>	β ⁻ , β ⁻ n<5.3%
36	Si	0 ⁺	-1.244×10 ⁴ <i>7</i>	503 ms <i>2</i>	β ⁻ , β ⁻ n=12.4%
37	Si	(5/2 ⁻)	-6.57×10 ³ <i>11</i>	141 ms <i>5</i>	β ⁻ , β ⁻ n=17%, β ⁻ 2n?
38	Si	0 ⁺	-4.17×10 ³ <i>10</i>	63 ms <i>8</i>	β ⁻ , β ⁻ n=25%
39	Si	(5/2 ⁻)	2.32×10 ³ <i>14</i>	38.7 ms <i>12</i>	β ⁻ , β ⁻ n=33%, β ⁻ 2n?
40	Si	0 ⁺	5.67×10 ³ <i>12</i>	30.3 ms <i>27</i>	β ⁻ , β ⁻ n=38%, β ⁻ 2n?
41	Si		1.320×10 ⁴ <i>SY</i>	20.0 ms <i>25</i>	β ⁻ , β ⁻ n>0%, β ⁻ 2n?
42	Si	0 ⁺	1.684×10 ⁴ <i>SY</i>	15.0 ms <i>14</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
43	Si		2.433×10 ⁴ <i>SY</i>	13 ms <i>5</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
44	Si	0 ⁺	2.93×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
25	P	(1/2 ⁺)	2.019×10 ⁴ <i>SY</i>	<30 ns	p
26	P	(3 ⁺)	1.097×10 ⁴ <i>SY</i>	43.6 ms <i>3</i>	ε+β ⁺ , εp=35.2%, ε2p=1.99%
27	P	1/2 ⁺	-659 <i>9</i>	2.6×10 ² ms <i>8</i>	ε+β ⁺ , εp≈0.07%
28	P	3 ⁺	-7147.9 <i>11</i>	270.3 ms <i>5</i>	ε+β ⁺ , εp=0.0013%, εα=0.00086%
29	P	1/2 ⁺	-16952.85 <i>36</i>	4.102 s <i>6</i>	ε+β ⁺
30	P	1 ⁺	-20200.86 <i>7</i>	2.500 m <i>2</i>	ε+β ⁺
31	P	1/2 ⁺	-24440.5444 <i>8</i>	100%	
32	P	1 ⁺	-24304.876 <i>40</i>	14.267 d <i>6</i>	β ⁻
33	P	1/2 ⁺	-26337.4 <i>11</i>	25.35 d <i>11</i>	β ⁻
34	P	1 ⁺	-24548.7 <i>8</i>	12.43 s <i>8</i>	β ⁻
35	P	1/2 ⁺	-24857.8 <i>19</i>	47.3 s <i>7</i>	β ⁻
36	P	4 ⁻	-20251 <i>13</i>	5.6 s <i>3</i>	β ⁻ , β ⁻ n?
37	P	(1/2 ⁺)	-18996 <i>38</i>	2.31 s <i>13</i>	β ⁻ , β ⁻ n?
38	P	(2 ⁻)	-1.462×10 ⁴ <i>7</i>	6.4×10 ² ms <i>14</i>	β ⁻ , β ⁻ n=12%
39	P	(1/2 ⁺)	-1.277×10 ⁴ <i>11</i>	204 ms <i>39</i>	β ⁻ , β ⁻ n=26%
40	P	(2 ⁻)	-8.14×10 ³ <i>8</i>	150 ms <i>8</i>	β ⁻ , β ⁻ n=15.8%, β ⁻ 2n?
41	P	(1/2 ⁺)	-4.98×10 ³ <i>12</i>	101 ms <i>5</i>	β ⁻ , β ⁻ n=30%, β ⁻ 2n?
42	P		1.09×10 ³ <i>10</i>	48.5 ms <i>15</i>	β ⁻ , β ⁻ n=50%, β ⁻ 2n?
43	P	1/2 ⁺	5.04×10 ³ <i>SY</i>	36.5 ms <i>15</i>	β ⁻ , β ⁻ n, β ⁻ 2n?
44	P		1.111×10 ⁴ <i>SY</i>	18.2 ms <i>8</i>	β ⁻ , β ⁻ n=75%, β ⁻ 2n?
45	P		1.60×10 ⁴ <i>SY</i>	24 ms <i>11</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
46	P		2.28×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
47	P		2.88×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?

A	El	J $^{\pi}$	Δ (keV)	T $_{1/2}$, Γ , Abundance	Decay Modes
26	S	0 $^{+}$	2.77 $\times 10^4$ SY	<79 ns	p?
27	S	(5/2 $^{+}$)	1.749 $\times 10^4$ SY	16.3 ms 2	$\epsilon + \beta^{+}$, ϵp =61%, $\epsilon 2p$ =3.0%
28	S	0 $^{+}$	4.07 $\times 10^3$ 16	125 ms 10	$\epsilon + \beta^{+}$, ϵp =20.7%
29	S	(5/2 $^{+}$)	-3094 13	188 ms 4	$\epsilon + \beta^{+}$, ϵp =47%
30	S	0 $^{+}$	-14059.25 21	1.1798 s 6	$\epsilon + \beta^{+}$
31	S	1/2 $^{+}$	-19042.53 23	2.5534 s 18	$\epsilon + \beta^{+}$
32	S	0 $^{+}$	-26015.5371 13	94.41-95.29%	
33	S	3/2 $^{+}$	-26585.8583 13	0.729-0.797%	
34	S	0 $^{+}$	-29931.689 45	3.96-4.77%	
35	S	3/2 $^{+}$	-28846.21 4	87.35 d 7	β^{-}
36	S	0 $^{+}$	-30664.14 19	0.0129-0.0187%	
37	S	7/2 $^{-}$	-26896.43 20	5.05 m 2	β^{-}
38	S	0 $^{+}$	-26861 7	170.3 m 7	β^{-}
39	S	(7/2 $^{-}$)	-2.316 $\times 10^4$ 5	11.5 s 5	β^{-}
40	S	0 $^{+}$	-22837.9 40	8.8 s 22	β^{-}
41	S	(5/2 $^{-}$, 7/2 $^{-}$)	-19008.6 41	2.6 s 14	β^{-} , βn ?
42	S	0 $^{+}$	-17637.7 28	1.016 s 13	β^{-} , βn <1%
43	S	3/2 $^{-}$	-12195.5 50	265 ms 13	β^{-} , βn =40%
44	S	0 $^{+}$	-9204 5	124.5 ms 23	β^{-} , βn =29%
45	S	(3/2 $^{-}$)	-3.34 $\times 10^3$ SY	68 ms 2	β^{-} , βn =54%, $\beta^{-} 2n$?
46	S	0 $^{+}$	6.4 $\times 10^2$ SY	50 ms 8	β^{-} , βn ?, $\beta^{-} 2n$?
47	S		7.20 $\times 10^3$ SY		β^{-} , βn ?, $\beta^{-} 2n$?
48	S	0 $^{+}$	1.24 $\times 10^4$ SY		β^{-} , βn ?, $\beta^{-} 2n$?
49	S		2.04 $\times 10^4$ SY		β^{-} , βn ?, $\beta^{-} 2n$?
28	Cl		2.83 $\times 10^4$ SY		p
29	Cl	(1/2 $^{+}$)	1.402 $\times 10^4$ SY	<20 ns	p
30	Cl	(3 $^{+}$)	4675 24	<30 ns	p
31	Cl	3/2 $^{+}$	-7034.6 34	190 ms 1	$\epsilon + \beta^{+}$, ϵp =2.4%
32	Cl	1 $^{+}$	-13334.7 6	299.1 ms 10	$\epsilon + \beta^{+}$, ϵp =0.026%, $\epsilon \alpha$ =0.054%
33	Cl	3/2 $^{+}$	-21003.34 39	2.5060 s 22	$\epsilon + \beta^{+}$
34	Cl	0 $^{+}$	-24440.086 49	1.5265 s 4	$\epsilon + \beta^{+}$
34m	Cl	3 $^{+}$	-24293.73 6	31.99 m 3	$\epsilon + \beta^{+}$ =55.4%, IT=44.6%
35	Cl	3/2 $^{+}$	-29013.532 35	75.5-76.1%	
36	Cl	2 $^{+}$	-29522.008 36	3.013 $\times 10^5$ y 15	β^{-} =98.1%, $\epsilon + \beta^{+}$ =1.9%
37	Cl	3/2 $^{+}$	-31761.55 5	23.9-24.5%	
38	Cl	2 $^{-}$	-29798.12 10	37.236 m 12	β^{-}
38m	Cl	5 $^{-}$	-29126.75 10	715 ms 3	IT
39	Cl	3/2 $^{+}$	-29800.2 17	56.2 m 6	β^{-}
40	Cl	2 $^{-}$	-27558 32	1.33 m 3	β^{-}
41	Cl	(1/2 $^{+}$)	-2.731 $\times 10^4$ 7	38.4 s 8	β^{-}

A	El	J $^{\pi}$	Δ (keV)	T _{1/2} , Γ , Abundance	Decay Modes
42	Cl	(2)	-2.483 $\times 10^4$ 6	6.8 s 3	β^- , β^-n ?
43	Cl	(3/2 ⁺)	-2.416 $\times 10^4$ 6	3.13 s 9	β^- , β^-n ?
44	Cl	(2)	-2.048 $\times 10^4$ 9	5.4 $\times 10^2$ ms 11	β^- , $\beta^-n < 8\%$
45	Cl	(3/2 ⁺)	-1.826 $\times 10^4$ 14	413 ms 25	β^- , $\beta^-n = 24\%$
46	Cl		-1.373 $\times 10^4$ 10	232 ms 2	β^- , $\beta^-n = 60\%$, β^-2n ?
47	Cl	(1/2 ⁺ , 3/2 ⁺)	-9.58 $\times 10^3$ SY	101 ms 6	β^- , $\beta^-n < 3\%$, β^-2n ?
48	Cl		-4.3 $\times 10^3$ SY		β^- , β^-n ?, β^-2n ?
49	Cl		7.4 $\times 10^2$ SY		β^- , β^-n ?, β^-2n ?
50	Cl		7.70 $\times 10^3$ SY		β^- , β^-n ?, β^-2n ?
51	Cl		1.43 $\times 10^4$ SY		β^- , β^-n ?, β^-2n ?
52	Cl		2.24 $\times 10^4$ SY		β^- , β^-n ?, β^-2n ?
29	Ar		3.797 $\times 10^4$ SY		2p
30	Ar	0 ⁺	2.207 $\times 10^4$ SY	<10 ps	2p
31	Ar	5/2 ⁺	1.133 $\times 10^4$ SY	15.0 ms 3	$\epsilon + \beta^+$, $\epsilon p = 68.3\%$, $\epsilon 2p = 8.9\%$, $\epsilon 3p = 0.07\%$, 2p < 0.0006%, $\epsilon \alpha p < 0.38\%$, $\epsilon \alpha < 0.03\%$
32	Ar	0 ⁺	-2200.4 18	98 ms 2	$\epsilon + \beta^+$, $\epsilon p = 35.58\%$
33	Ar	1/2 ⁺	-9384.30 40	173 ms 2	$\epsilon + \beta^+$, $\epsilon p = 38.7\%$
34	Ar	0 ⁺	-18378.29 8	846.46 ms 35	$\epsilon + \beta^+$
35	Ar	3/2 ⁺	-23047.3 7	1.7754 s 10	$\epsilon + \beta^+$
36	Ar	0 ⁺	-30231.542 27	0.334% 21	
37	Ar	3/2 ⁺	-30947.68 21	35.01 d 2	ϵ
38	Ar	0 ⁺	-34714.83 20	0.063% 7	
39	Ar	7/2 ⁻	-33242 5	268 y 8	β^-
40	Ar	0 ⁺	-35039.9000 22	99.604% 25	
41	Ar	7/2 ⁻	-33067.51 35	109.61 m 4	β^-
42	Ar	0 ⁺	-34423 6	32.9 y 11	β^-
43	Ar	5/2 ⁽⁻⁾	-32010 5	5.37 m 6	β^-
44	Ar	0 ⁺	-32673.3 16	11.87 m 5	β^-
45	Ar	7/2 ⁻	-29770.8 5	21.48 s 15	β^-
46	Ar	0 ⁺	-29771.3 23	8.4 s 5	β^-
47	Ar	3/2 ⁻	-25367.3 12	1.23 s 3	β^- , $\beta^-n < 0.2\%$
48	Ar	0 ⁺	-22355 17	416 ms 16	β^- , $\beta^-n = 38\%$
49	Ar		-1.706 $\times 10^4$ SY	236 ms 8	β^- , $\beta^-n = 29\%$, β^-2n ?
50	Ar	0 ⁺	-1.32 $\times 10^4$ SY	105 ms 6	β^- , $\beta^-n = 37\%$, β^-2n ?
51	Ar		-6.49 $\times 10^3$ SY		β^- , β^-n ?, β^-2n ?
52	Ar	0 ⁺	-1.4 $\times 10^3$ SY		β^- , β^-n ?, β^-2n ?
53	Ar		6.8 $\times 10^3$ SY		β^- , β^-n ?, β^-2n ?
54	Ar	0 ⁺	1.26 $\times 10^4$ SY		β^- , β^-n ?, β^-2n ?
31	K		3.426 $\times 10^4$ SY	<0.01 ns	3p

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
35	K	(3/2) ⁺	-11172.9 <i>5</i>	178 ms <i>8</i>	ε+β ⁺ , εp=0.37%
36	K	2 ⁺	-17417.18 <i>33</i>	341 ms <i>3</i>	ε+β ⁺ , εp=0.048%, εα=0.0034%
37	K	3/2 ⁺	-24800.20 <i>9</i>	1.23647 s <i>41</i>	ε+β ⁺
38	K	3 ⁺	-28800.76 <i>20</i>	7.645 m <i>20</i>	ε+β ⁺
38m	K	0 ⁺	-28670.54 <i>25</i>	924.40 ms <i>21</i>	ε+β ⁺ =99.9670%, IT=0.0330%
39	K	3/2 ⁺	-33807.1954 <i>46</i>	93.2581% 44	
40	K	4 ⁻	-33535.50 <i>6</i>	1.2480×10 ⁹ y <i>30</i> 0.0117% 1	β ⁻ =89.28%, ε+β ⁺ =10.72%
41	K	3/2 ⁺	-35559.5488 <i>38</i>	6.7302% 44	
42	K	2 ⁻	-35022.03 <i>11</i>	12.359 h <i>4</i>	β ⁻
43	K	3/2 ⁺	-36575.39 <i>41</i>	22.28 h <i>11</i>	β ⁻
44	K	2 ⁻	-35781.50 <i>42</i>	22.13 m <i>19</i>	β ⁻
45	K	3/2 ⁺	-36615.6 <i>5</i>	17.79 m <i>43</i>	β ⁻
46	K	2 ⁻	-35413.9 <i>7</i>	96.31 s <i>8</i>	β ⁻
47	K	1/2 ⁺	-35712.0 <i>14</i>	17.38 s <i>3</i>	β ⁻
48	K	1 ⁽⁻⁾	-32284.5 <i>8</i>	6.8 s <i>2</i>	β ⁻ , β ⁻ n=1.14%
49	K	1/2 ⁺	-29611.5 <i>8</i>	1.26 s <i>5</i>	β ⁻ , β ⁻ n=86%
50	K	0 ⁽⁻⁾	-25728 <i>8</i>	472 ms <i>4</i>	β ⁻ , β ⁻ n=29%, β ⁻ 2n?
51	K	3/2 ⁺	-22515 <i>13</i>	365 ms <i>5</i>	β ⁻ , β ⁻ n=65%, β ⁻ 2n?
52	K	2 ⁻	-17138 <i>34</i>	110 ms <i>4</i>	β ⁻ , β ⁻ n=74%, β ⁻ 2n=2.3%
53	K	(3/2 ⁺)	-1.230×10 ⁴ <i>11</i>	30 ms <i>5</i>	β ⁻ , β ⁻ n=75%, β ⁻ 2n<10%
54	K		-5.15×10 ³ <i>SY</i>	10 ms <i>5</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
55	K		5×10 ² <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
56	K		8.0×10 ³ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
57	K		1.41×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
59	K		2.88×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
35	Ca	(1/2 ⁺)	5.19×10 ³ <i>SY</i>	25.7 ms <i>2</i>	ε+β ⁺ , εp=95.9%, ε2p=4.1%
36	Ca	0 ⁺	-6451 <i>40</i>	100.8 ms <i>13</i>	ε+β ⁺ , εp=51.2%
37	Ca	(3/2 ⁺)	-13136.1 <i>6</i>	181.0 ms <i>9</i>	ε+β ⁺ , εp=72.0%
38	Ca	0 ⁺	-22058.50 <i>19</i>	443.77 ms <i>25</i>	ε+β ⁺
39	Ca	3/2 ⁺	-27282.7 <i>6</i>	860.3 ms <i>8</i>	ε+β ⁺
40	Ca	0 ⁺	-34846.402 <i>20</i>	96.94% 16	
41	Ca	7/2 ⁻	-35137.91 <i>14</i>	9.94×10 ⁴ y <i>15</i>	ε
42	Ca	0 ⁺	-38547.29 <i>15</i>	0.647% 23	
43	Ca	7/2 ⁻	-38408.87 <i>23</i>	0.135% 10	
44	Ca	0 ⁺	-41468.73 <i>33</i>	2.09% 11	
45	Ca	7/2 ⁻	-40812.23 <i>37</i>	162.61 d <i>9</i>	β ⁻
46	Ca	0 ⁺	-43139.6 <i>22</i>	0.004% 3	
47	Ca	7/2 ⁻	-42344.7 <i>22</i>	4.536 d <i>2</i>	β ⁻

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
48	Ca	0 ⁺	-44224.868 <i>18</i>	5.6×10 ¹⁹ y <i>+14-11</i>	2β ⁻ >0%, β ⁻ ?
				0.187% 21	
49	Ca	3/2 ⁻	-41300.00 <i>18</i>	8.718 m <i>6</i>	β ⁻
50	Ca	0 ⁺	-39589.2 <i>16</i>	13.45 s <i>7</i>	β ⁻
51	Ca	3/2 ⁽⁻⁾	-36332.3 <i>5</i>	10.0 s <i>8</i>	β ⁻ , β ⁻ n?
52	Ca	0 ⁺	-34266.3 <i>7</i>	4.6 s <i>3</i>	β ⁻ , β ⁻ n<2%
53	Ca	(1/2 ⁻)	-29388 <i>44</i>	4.6×10 ² ms <i>9</i>	β ⁻ , β ⁻ n=40%
54	Ca	0 ⁺	-25161 <i>48</i>	90 ms <i>8</i>	β ⁻ , β ⁻ n?
55	Ca		-1.865×10 ⁴ <i>16</i>	22 ms <i>2</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
56	Ca	0 ⁺	-1.351×10 ⁴ <i>25</i>	11 ms <i>2</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
57	Ca		-6.56×10 ³ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
58	Ca	0 ⁺	-1.5×10 ³ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
59	Ca		5.8×10 ³ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
60	Ca	0 ⁺	1.10×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
39	Sc		-14173 <i>24</i>		P
40	Sc	4 ⁻	-20523.4 <i>28</i>	182.4 ms <i>8</i>	ε+β ⁺ , εp=0.44%, εα=0.017%
41	Sc	7/2 ⁻	-28642.36 <i>8</i>	596.3 ms <i>17</i>	ε+β ⁺
42	Sc	0 ⁺	-32121.00 <i>15</i>	680.79 ms <i>28</i>	ε+β ⁺
42m	Sc	7 ⁺	-31504.23 <i>17</i>	61.7 s <i>3</i>	ε+β ⁺
43	Sc	7/2 ⁻	-36188.2 <i>19</i>	3.891 h <i>12</i>	ε+β ⁺
44	Sc	2 ⁺	-37816.0 <i>18</i>	4.0420 h <i>24</i>	ε+β ⁺
44m	Sc	6 ⁺	-37544.8 <i>18</i>	58.62 h <i>9</i>	ε+β ⁺ =1.20%, IT=98.80%
45	Sc	7/2 ⁻	-41072.3 <i>7</i>	100%	
45m	Sc	3/2 ⁺	-41059.9 <i>7</i>	325.8 ms <i>42</i>	IT
46	Sc	4 ⁺	-41761.6 <i>7</i>	83.808 d <i>29</i>	β ⁻
46m	Sc	1 ⁻	-41619.1 <i>7</i>	18.746 s <i>40</i>	IT
47	Sc	7/2 ⁻	-44336.8 <i>19</i>	3.3491 d <i>6</i>	β ⁻
48	Sc	6 ⁺	-44504.1 <i>50</i>	43.71 h <i>8</i>	β ⁻
49	Sc	7/2 ⁻	-46562.4 <i>23</i>	57.20 m <i>15</i>	β ⁻
50	Sc	5 ⁺	-44537.1 <i>25</i>	102.5 s <i>5</i>	β ⁻
50m	Sc	2 ⁺	-44280.2 <i>25</i>	0.35 s <i>3</i>	IT>99%, β ⁻ <1%
51	Sc	(7/2 ⁻)	-43250.4 <i>25</i>	12.5 s <i>1</i>	β ⁻ , β ⁻ n?
52	Sc	3 ⁽⁺⁾	-40523.6 <i>31</i>	8.2 s <i>2</i>	β ⁻ , β ⁻ n?
53	Sc	(7/2 ⁻)	-38770 <i>18</i>	2.4 s <i>6</i>	β ⁻ , β ⁻ n?
54	Sc	(3 ⁺)	-34438 <i>14</i>	526 ms <i>15</i>	β ⁻ , β ⁻ n=16%
55	Sc	(7/2 ⁻)	-3.084×10 ⁴ <i>6</i>	92 ms <i>4</i>	β ⁻ , β ⁻ n=17%
56	Sc	(1 ⁺)	-2.552×10 ⁴ <i>26</i>	26 ms <i>6</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
57	Sc		-2.138×10 ⁴ <i>18</i>	20 ms <i>4</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
58	Sc		-1.548×10 ⁴ <i>19</i>	12 ms <i>5</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
59	Sc		-1.083×10 ⁴ <i>25</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
60	Sc		-4.6×10 ³ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
61	Sc		5×10 ² <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
62	Sc		7.3×10 ³ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
39	Ti		2.50×10 ³ <i>SY</i>	28.5 ms <i>9</i>	ε+β ⁺ , εp=93.7%, ε2p>0%
40	Ti	0 ⁺	-8.99×10 ³ <i>7</i>	52.4 ms <i>3</i>	ε+β ⁺ , εp=95.8%
41	Ti	3/2 ⁺	-15698 <i>28</i>	81.9 ms <i>5</i>	ε+β ⁺ , εp≈100%
42	Ti	0 ⁺	-25104.35 <i>27</i>	208.3 ms <i>6</i>	ε+β ⁺
43	Ti	7/2 ⁻	-29316 <i>6</i>	509 ms <i>5</i>	ε+β ⁺ , εp?
44	Ti	0 ⁺	-37548.6 <i>7</i>	59.1 y <i>3</i>	ε
45	Ti	7/2 ⁻	-39010.3 <i>8</i>	184.8 m <i>5</i>	ε+β ⁺
46	Ti	0 ⁺	-44128.27 <i>9</i>	8.25% 3	
47	Ti	5/2 ⁻	-44937.61 <i>8</i>	7.44% 2	
48	Ti	0 ⁺	-48492.95 <i>7</i>	73.72% 3	
49	Ti	7/2 ⁻	-48564.01 <i>8</i>	5.41% 2	
50	Ti	0 ⁺	-51431.87 <i>8</i>	5.18% 2	
51	Ti	3/2 ⁻	-49732.97 <i>48</i>	5.756 m <i>9</i>	β ⁻
52	Ti	0 ⁺	-49477.7 <i>27</i>	1.7 m <i>1</i>	β ⁻
53	Ti	3/2 ⁻	-46881.4 <i>29</i>	32.7 s <i>9</i>	β ⁻
54	Ti	0 ⁺	-45744 <i>16</i>	1.6 s <i>4</i>	β ⁻
55	Ti	(1/2) ⁻	-41832 <i>29</i>	1.3 s <i>1</i>	β ⁻
56	Ti	0 ⁺	-3.942×10 ⁴ <i>10</i>	199 ms <i>6</i>	β ⁻ , β ⁻ n?
57	Ti		-3.440×10 ⁴ <i>21</i>	94 ms <i>8</i>	β ⁻ , β ⁻ n?
58	Ti	0 ⁺	-3.092×10 ⁴ <i>18</i>	55 ms <i>6</i>	β ⁻ , β ⁻ n?
59	Ti		-2.588×10 ⁴ <i>SY</i>	28.5 ms <i>19</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
60	Ti	0 ⁺	-2.210×10 ⁴ <i>24</i>	22.2 ms <i>16</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
61	Ti		-1.637×10 ⁴ <i>SY</i>	15 ms <i>4</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
62	Ti	0 ⁺	-1.220×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
63	Ti		-5.9×10 ³ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
64	Ti	0 ⁺	-1.5×10 ³ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
42	V		-7.62×10 ³ <i>SY</i>		p?
43	V		-17916 <i>43</i>	79.3 ms <i>24</i>	ε+β ⁺ , εp?
44	V	2 ⁺	-23808 <i>7</i>	111 ms <i>7</i>	ε+β ⁺ , εα?, εp?
44m	V	6 ⁺	-23541 <i>12</i>	150 ms <i>3</i>	ε+β ⁺
45	V	7/2 ⁻	-31886.4 <i>9</i>	546 ms <i>6</i>	ε+β ⁺
46	V	0 ⁺	-37075.90 <i>13</i>	422.62 ms <i>5</i>	ε+β ⁺
47	V	3/2 ⁻	-42007.07 <i>11</i>	32.6 m <i>3</i>	ε+β ⁺
48	V	4 ⁺	-44478.0 <i>10</i>	15.974 d <i>2</i>	ε+β ⁺
49	V	7/2 ⁻	-47962.2 <i>8</i>	330 d <i>15</i>	ε
50	V	6 ⁺	-49223.24 <i>9</i>	2.68×10 ¹⁷ y <i>11</i> 0.25% 1	ε+β ⁺ >98.6%, β ⁻ <1.4%
51	V	7/2 ⁻	-52203.11 <i>10</i>	99.75% 1	
52	V	3 ⁺	-51443.03 <i>16</i>	3.743 m <i>5</i>	β ⁻
53	V	7/2 ⁻	-51851.7 <i>31</i>	1.537 m <i>14</i>	β ⁻

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
54	V	3 ⁺	-49898 <i>11</i>	49.8 s <i>5</i>	β ⁻
55	V	(7/2 ⁻)	-49125 <i>27</i>	6.54 s <i>15</i>	β ⁻
56	V	1 ⁺	-4.618×10 ⁴ <i>18</i>	218 ms <i>6</i>	β ⁻ , β ⁻ n?
57	V		-4.444×10 ⁴ <i>8</i>	347 ms <i>9</i>	β ⁻ , β ⁻ n?
58	V		-4.043×10 ⁴ <i>10</i>	192 ms <i>7</i>	β ⁻ , β ⁻ n?
59	V		-3.761×10 ⁴ <i>14</i>	96 ms <i>4</i>	β ⁻ , β ⁻ n>3%
60	V		-3.309×10 ⁴ <i>18</i>	122 ms <i>18</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
60m	V		-3.309×10 ⁴ <i>18</i>	40 ms <i>15</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?, IT?
61	V	(3/2 ⁻)	-3.018×10 ⁴ <i>23</i>	48.2 ms <i>6</i>	β ⁻ , β ⁻ n=14.5%, β ⁻ 2n?
62	V		-2.521×10 ⁴ <i>26</i>	33.6 ms <i>23</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
63	V	(3/2 ⁻ , 5/2 ⁻)	-2.174×10 ⁴ <i>34</i>	19.6 ms <i>9</i>	β ⁻ , β ⁻ n>35%
64	V	(1, 2)	-1.632×10 ⁴ <i>SY</i>	15 ms <i>2</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
65	V		-1.21×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
66	V		-6.3×10 ³ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
67	V		-1.7×10 ³ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
42	Cr	0 ⁺	7.06×10 ³ <i>SY</i>	13.3 ms <i>10</i>	ε+β ⁺ , εp=94%, 2p?
43	Cr	(3/2 ⁺)	-1.97×10 ³ <i>SY</i>	21.1 ms <i>3</i>	ε+β ⁺ , εp=79.3%, ε2p=11.6%, ε3p=0.13%
44	Cr	0 ⁺	-1.342×10 ⁴ <i>5</i>	42.8 ms <i>6</i>	ε+β ⁺ , εp=12.0%
45	Cr	(7/2 ⁻)	-19515 <i>35</i>	60.9 ms <i>4</i>	ε+β ⁺ , εp=34.4%
46	Cr	0 ⁺	-29472 <i>11</i>	244.3 ms <i>13</i>	ε+β ⁺
47	Cr	3/2 ⁻	-34563 <i>5</i>	460.6 ms <i>16</i>	ε+β ⁺
48	Cr	0 ⁺	-42821 <i>7</i>	21.56 h <i>3</i>	ε+β ⁺
49	Cr	5/2 ⁻	-45332.4 <i>22</i>	42.3 m <i>1</i>	ε+β ⁺
50	Cr	0 ⁺	-50261.36 <i>9</i>	4.345% 13	
51	Cr	7/2 ⁻	-51450.72 <i>17</i>	27.7004 d <i>22</i>	ε
52	Cr	0 ⁺	-55419.51 <i>11</i>	83.789% 18	
53	Cr	3/2 ⁻	-55287.62 <i>12</i>	9.501% 17	
54	Cr	0 ⁺	-56935.38 <i>13</i>	2.365% 7	
55	Cr	3/2 ⁻	-55110.32 <i>23</i>	3.498 m <i>4</i>	β ⁻
56	Cr	0 ⁺	-55285.1 <i>6</i>	5.94 m <i>10</i>	β ⁻
57	Cr	3/2 ⁻	-52525.0 <i>19</i>	21.1 s <i>10</i>	β ⁻
58	Cr	0 ⁺	-51991.8 <i>30</i>	7.0 s <i>3</i>	β ⁻
59	Cr	(1/2 ⁻)	-48115.9 <i>7</i>	1.05 s <i>9</i>	β ⁻
60	Cr	0 ⁺	-46908.5 <i>11</i>	490 ms <i>10</i>	β ⁻ , β ⁻ n?
61	Cr	(3/2 ⁻)	-42496.5 <i>19</i>	243 ms <i>10</i>	β ⁻ , β ⁻ n?
62	Cr	0 ⁺	-40852.6 <i>34</i>	206 ms <i>11</i>	β ⁻ , β ⁻ n?
63	Cr		-3.618×10 ⁴ <i>7</i>	129 ms <i>2</i>	β ⁻ , β ⁻ n?
64	Cr	0 ⁺	-3.364×10 ⁴ <i>30</i>	43 ms <i>1</i>	β ⁻ , β ⁻ n?

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
65	Cr		-2.831×10 ⁴ <i>SY</i>	28 ms <i>2</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
66	Cr	0 ⁺	-2.514×10 ⁴ <i>SY</i>	24 ms <i>2</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
67	Cr		-1.927×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
68	Cr	0 ⁺	-1.57×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n>0%, β ⁻ 2n?
69	Cr		-9.6×10 ³ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
70	Cr	0 ⁺	-5.6×10 ³ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
44	Mn		7.46×10 ³ <i>SY</i>	<105 ns	p?
46	Mn	(4 ⁺)	-1.242×10 ⁴ <i>9</i>	36.2 ms <i>4</i>	ε+β ⁺ , εp=57.0%
47	Mn	(5/2 ⁻)	-22566 <i>32</i>	88.0 ms <i>13</i>	ε+β ⁺ , εp≤1.7%
48	Mn	4 ⁺	-29297 <i>7</i>	157.7 ms <i>21</i>	ε+β ⁺ , εp=0.28%, εα<0.0006%
49	Mn	5/2 ⁻	-37619.9 <i>22</i>	382 ms <i>7</i>	ε+β ⁺
50	Mn	0 ⁺	-42626.89 <i>12</i>	283.19 ms <i>8</i>	ε+β ⁺
50m	Mn	5 ⁺	-42401.61 <i>15</i>	1.75 m <i>2</i>	ε+β ⁺
51	Mn	5/2 ⁻	-48243.23 <i>30</i>	45.84 m <i>24</i>	ε+β ⁺
52	Mn	6 ⁺	-50711.39 <i>13</i>	5.591 d <i>3</i>	ε+β ⁺
52m	Mn	2 ⁺	-50333.64 <i>13</i>	21.4 m <i>4</i>	ε+β ⁺ =98.22%, IT=1.78%
53	Mn	7/2 ⁻	-54690.35 <i>35</i>	3.62×10 ⁶ y <i>38</i>	ε
54	Mn	3 ⁺	-55558.2 <i>10</i>	312.10 d <i>4</i>	ε+β ⁺ =99.999907%, β ⁻ =0.000093%
55	Mn	5/2 ⁻	-57712.54 <i>26</i>	100%	
56	Mn	3 ⁺	-56911.67 <i>29</i>	2.5788 h <i>2</i>	β ⁻
57	Mn	5/2 ⁻	-57486.3 <i>15</i>	85.4 s <i>18</i>	β ⁻
58	Mn	1 ⁺	-55827.6 <i>27</i>	3.0 s <i>1</i>	β ⁻
58m	Mn	4 ⁺	-55755.8 <i>27</i>	65.4 s <i>5</i>	β ⁻ ≈90%, IT≈10%
59	Mn	5/2 ⁻	-55525.3 <i>23</i>	4.59 s <i>4</i>	β ⁻
60	Mn	1 ⁺	-52967.9 <i>23</i>	0.28 s <i>2</i>	β ⁻
60m	Mn	4 ⁺	-52696.1 <i>23</i>	1.77 s <i>2</i>	β ⁻ =88.5%, IT=11.5%
61	Mn	(5/2 ⁻)	-51742.1 <i>25</i>	0.709 s <i>6</i>	β ⁻ , β ⁻ n<0.2%
62	Mn	1 ⁺	-48524 <i>7</i>	92 ms <i>13</i>	β ⁻ , β ⁻ n?
62m	Mn	4 ⁺	-48176 <i>10</i>	671 ms <i>7</i>	β ⁻ , β ⁻ n?, IT?
63	Mn	5/2 ⁽⁻⁾	-46887.1 <i>37</i>	277 ms <i>5</i>	β ⁻ , β ⁻ n?
64	Mn	1 ⁽⁺⁾	-42989.0 <i>35</i>	90 ms <i>3</i>	β ⁻ , β ⁻ n=2.7%
65	Mn	(5/2 ⁻)	-40967.3 <i>37</i>	91.7 ms <i>10</i>	β ⁻ , β ⁻ n=7.9%
66	Mn	(1 ⁺ , 2 ⁺)	-36750 <i>11</i>	63.9 ms <i>9</i>	β ⁻ , β ⁻ n=7.3%, β ⁻ 2n?
67	Mn		-3.358×10 ⁴ <i>SY</i>	47 ms <i>3</i>	β ⁻ , β ⁻ n>5%, β ⁻ 2n?
68	Mn		-2.892×10 ⁴ <i>SY</i>	33.9 ms <i>17</i>	β ⁻ , β ⁻ n=18%, β ⁻ 2n?
69	Mn		-2.536×10 ⁴ <i>SY</i>	22.1 ms <i>25</i>	β ⁻ , β ⁻ n=40%, β ⁻ 2n?
70	Mn		-2.05×10 ⁴ <i>SY</i>	19.9 ms <i>17</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
71	Mn		-1.66×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?

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72	Mn		-1.12×10 ⁴ SY		β ⁻ , β ⁻ n?, β ⁻ 2n?
73	Mn		-6.7×10 ³ SY		β ⁻ , β ⁻ n?, β ⁻ 2n?
45	Fe	(3/2 ⁺)	1.441×10 ⁴ SY	2.6 ms 2	2p=70%, ε+β ⁺ =30%, εp=19%, ε2p=8%, ε3p=3%
46	Fe	0 ⁺	1.21×10 ³ SY	13.9 ms 15	ε+β ⁺ , εp=72%, ε2p<1%
47	Fe	(7/2 ⁻)	-7.1×10 ³ SY	21.9 ms 2	ε+β ⁺ , εp=88.4%
48	Fe	0 ⁺	-1.801×10 ⁴ 9	45.5 ms 8	ε+β ⁺ , εp=15.3%
49	Fe	(7/2 ⁻)	-24751 24	64.7 ms 3	ε+β ⁺ , εp=56.7%
50	Fe	0 ⁺	-34476 8	152.0 ms 6	ε+β ⁺ , εp≈0%
51	Fe	5/2 ⁻	-40189.2 14	305 ms 2	ε+β ⁺
52	Fe	0 ⁺	-48332.10 18	8.273 h 9	ε+β ⁺
52m	Fe	12 ⁺	-41373.70 44	45.9 s 6	ε+β ⁺ =99.979%, IT=0.021%
53	Fe	7/2 ⁻	-50947.5 17	8.51 m 2	ε+β ⁺
53m	Fe	19/2 ⁻	-47907.1 17	2.54 m 3	IT
54	Fe	0 ⁺	-56254.62 34	5.85% 11	
55	Fe	3/2 ⁻	-57481.42 31	2.7558 y 14	ε
56	Fe	0 ⁺	-60607.16 27	91.75% 11	
57	Fe	1/2 ⁻	-60182.02 27	2.119% 29	
58	Fe	0 ⁺	-62155.27 32	0.282% 12	
59	Fe	3/2 ⁻	-60664.96 33	44.495 d 9	β ⁻
60	Fe	0 ⁺	-61413.2 34	2.609×10 ⁶ y 38	β ⁻
61	Fe	(3/2 ⁻)	-58920.5 26	6.03 m 5	β ⁻
62	Fe	0 ⁺	-58878.1 28	68 s 2	β ⁻
63	Fe	(5/2 ⁻)	-55635.6 43	6.1 s 6	β ⁻
64	Fe	0 ⁺	-54970 5	2.0 s 3	β ⁻
65	Fe	(1/2 ⁻)	-51218 5	0.803 s 18	β ⁻ , β ⁻ n?
65m	Fe	(9/2 ⁺)	-50824 5	1.15 s 12	β ⁻ , β ⁻ n?
66	Fe	0 ⁺	-50067.8 41	472 ms 33	β ⁻ , β ⁻ n?
67	Fe		-45708.4 38	398 ms 9	β ⁻ , β ⁻ n?
68	Fe	0 ⁺	-4.390×10 ⁴ SY	186 ms 4	β ⁻ , β ⁻ n?
69	Fe	(1/2 ⁻)	-3.920×10 ⁴ SY	162 ms 7	β ⁻ , β ⁻ n?
70	Fe	0 ⁺	-3.689×10 ⁴ SY	61.5 ms 9	β ⁻ , β ⁻ n?
71	Fe		-3.193×10 ⁴ SY	34 ms 7	β ⁻ , β ⁻ n?, β ⁻ 2n?
72	Fe	0 ⁺	-2.93×10 ⁴ SY	19 ms 4	β ⁻ , β ⁻ n?, β ⁻ 2n?
73	Fe		-2.40×10 ⁴ SY	12.9 ms 16	β ⁻ , β ⁻ n?, β ⁻ 2n?
74	Fe	0 ⁺	-2.07×10 ⁴ SY	8 ms +3-7	β ⁻ , β ⁻ n?, β ⁻ 2n?
75	Fe		-1.47×10 ⁴ SY		β ⁻ , β ⁻ n?, β ⁻ 2n?
76	Fe	0 ⁺	-1.06×10 ⁴ SY		β ⁻ , β ⁻ n?, β ⁻ 2n?
50	Co	(6 ⁺)	-1.759×10 ⁴ 13	38.8 ms 3	ε+β ⁺ , εp=70.5%

A	El	J $^{\pi}$	Δ (keV)	T $_{1/2}$, Γ , Abundance	Decay Modes
51	Co	7/2 $^{-}$	-27342 <i>48</i>	68.8 ms <i>19</i>	$\varepsilon+\beta^{+}$, $\varepsilon p<3.8\%$
52	Co	(6 $^{+}$)	-34344 <i>5</i>	111 ms <i>2</i>	$\varepsilon+\beta^{+}$, $\varepsilon p?$
52m	Co	2 $^{+}$	-33964 <i>10</i>	102 ms <i>5</i>	$\varepsilon+\beta^{+}\approx 100\%$
53	Co	(7/2 $^{-}$)	-42659.4 <i>17</i>	244 ms <i>3</i>	$\varepsilon+\beta^{+}$
53m	Co	(19/2 $^{-}$)	-39485.0 <i>24</i>	248 ms <i>8</i>	$\varepsilon+\beta^{+}\approx 98.5\%$, p $\approx 1.5\%$
54	Co	0 $^{+}$	-48010.07 <i>36</i>	193.27 ms <i>4</i>	$\varepsilon+\beta^{+}$
54m	Co	7 $^{+}$	-47813.0 <i>5</i>	1.48 m <i>2</i>	$\varepsilon+\beta^{+}$
55	Co	7/2 $^{-}$	-54030.00 <i>41</i>	17.53 h <i>2</i>	$\varepsilon+\beta^{+}$
56	Co	4 $^{+}$	-56040.52 <i>48</i>	77.236 d <i>26</i>	$\varepsilon+\beta^{+}$
57	Co	7/2 $^{-}$	-59345.7 <i>5</i>	271.80 d <i>3</i>	ε
58	Co	2 $^{+}$	-59847.3 <i>12</i>	70.883 d <i>22</i>	$\varepsilon+\beta^{+}$
58m	Co	5 $^{+}$	-59822.3 <i>12</i>	8.856 h <i>23</i>	IT=99.99880%, $\varepsilon=0.00120\%$
59	Co	7/2 $^{-}$	-62229.84 <i>40</i>	100%	
60	Co	5 $^{+}$	-61650.44 <i>40</i>	5.2711 y <i>10</i>	β^{-}
60m	Co	2 $^{+}$	-61591.85 <i>40</i>	10.467 m <i>+6-5</i>	IT=99.75%, $\beta^{-}=0.25\%$
61	Co	7/2 $^{-}$	-62898.2 <i>8</i>	1.650 h <i>5</i>	β^{-}
62	Co	(2) $^{+}$	-61424 <i>19</i>	1.51 m <i>4</i>	β^{-}
62m	Co	(5) $^{+}$	-61402 <i>19</i>	13.90 m <i>4</i>	$\beta^{-}>99\%$, IT<1%
63	Co	7/2 $^{-}$	-61852 <i>19</i>	26.9 s <i>4</i>	β^{-}
64	Co	1 $^{+}$	-59792 <i>20</i>	300 ms <i>30</i>	β^{-}
64m	Co		-59685 <i>28</i>	>280 ms	$\beta^{-}?$, IT?
65	Co	(7/2) $^{-}$	-59185.2 <i>21</i>	1.16 s <i>3</i>	β^{-}
66	Co	(1 $^{+}$)	-56409 <i>14</i>	200 ms <i>15</i>	β^{-} , $\beta^{-}n?$
67	Co	(7/2 $^{-}$)	-55322 <i>6</i>	329 ms <i>28</i>	β^{-} , $\beta^{-}n?$
67m	Co	(1/2 $^{-}$)	-54830 <i>7</i>	496 ms <i>34</i>	IT>80%, $\beta^{-}<20\%$, $\beta^{-}n?$
68	Co	(7 $^{-}$)	-51642.6 <i>39</i>	222 ms <i>28</i>	β^{-} , $\beta^{-}n?$
68m	Co	(2 $^{-}$)	-51642.6 <i>39</i>	1.6 s <i>3</i>	β^{-} , $\beta^{-}n>2.6\%$
69	Co	(7/2 $^{-}$)	-5.039 $\times 10^4$ <i>9</i>	210 ms <i>9</i>	β^{-} , $\beta^{-}n?$
69m	Co	(1/2 $^{-}$)	-5.021 $\times 10^4$ <i>10</i>	0.75 s <i>25</i>	β^{-} , $\beta^{-}n?$
70	Co	(6 $^{-}$, 7 $^{-}$)	-46525 <i>11</i>	114 ms <i>4</i>	β^{-} , $\beta^{-}n?$, $\beta^{-}2n?$
70m	Co	(1 $^{+}$, 2 $^{+}$)	-46525 <i>11</i>	507 ms <i>7</i>	β^{-} , $\beta^{-}n?$, $\beta^{-}2n?$
72	Co	(6 $^{-}$, 7 $^{-}$)	-4.030 $\times 10^4$ <i>SY</i>	51.9 ms <i>8</i>	β^{-} , $\beta^{-}n\geq 6\%$, $\beta^{-}2n?$
72m	Co	(0 $^{+}$, 1 $^{+}$)	-4.030 $\times 10^4$ <i>SY</i>	47.8 ms <i>5</i>	β^{-} , $\beta^{-}n\geq 6\%$, $\beta^{-}2n?$
72n	Co	(3 $^{+}$)	-4.030 $\times 10^4$ <i>SY</i>	180 ms <i>10</i>	β^{-} , $\beta^{-}n?$
73	Co	(7/2 $^{-}$)	-3.797 $\times 10^4$ <i>SY</i>	42.0 ms <i>7</i>	β^{-} , $\beta^{-}n=6\%$, $\beta^{-}2n?$
74	Co		-3.354 $\times 10^4$ <i>SY</i>	31.3 ms <i>13</i>	β^{-} , $\beta^{-}n=18\%$, $\beta^{-}2n?$
75	Co		-3.056 $\times 10^4$ <i>SY</i>	26.5 ms <i>12</i>	β^{-} , $\beta^{-}n\geq 15\%$, $\beta^{-}2n?$
76	Co	(1 $^{-}$)	-2.57 $\times 10^4$ <i>SY</i>	16 ms <i>4</i>	β^{-} , $\beta^{-}n?$, $\beta^{-}2n?$
76m	Co	(8 $^{-}$)	-2.57 $\times 10^4$ <i>SY</i>	22 ms <i>+7-5</i>	β^{-} , $\beta^{-}n?$, $\beta^{-}2n?$

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
77	Co		-2.19×10 ⁴ <i>SY</i>	13 ms <i>+7-4</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
78	Co		-1.53×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
48	Ni	0 ⁺	1.818×10 ⁴ <i>SY</i>	2.1 ms <i>+14-6</i>	2p=70%, εp=30%
49	Ni		8.5×10 ³ <i>SY</i>	7.5 ms <i>10</i>	ε+β ⁺ , εp=83%
50	Ni	0 ⁺	-3.5×10 ³ <i>SY</i>	17.6 ms <i>22</i>	ε+β ⁺ , εp=73%, ε2p=14%
51	Ni		-1.17×10 ⁴ <i>SY</i>	23.8 ms <i>2</i>	ε+β ⁺ , εp=87.2%, ε2p=0.5%
52	Ni	0 ⁺	-2.256×10 ⁴ <i>8</i>	41.4 ms <i>9</i>	ε+β ⁺ , εp=31.4%
53	Ni	(7/2 ⁻)	-29631 <i>25</i>	55.2 ms <i>7</i>	ε+β ⁺ , εp=22.7%
54	Ni	0 ⁺	-39278.3 <i>47</i>	114.1 ms <i>3</i>	ε+β ⁺ , εp?
55	Ni	7/2 ⁻	-45336.0 <i>7</i>	203.9 ms <i>26</i>	ε+β ⁺
56	Ni	0 ⁺	-53907.65 <i>40</i>	6.081 d <i>15</i>	ε+β ⁺
57	Ni	3/2 ⁻	-56084.0 <i>6</i>	35.60 h <i>6</i>	ε+β ⁺
58	Ni	0 ⁺	-60228.87 <i>35</i>	68.077% 19	
59	Ni	3/2 ⁻	-61156.83 <i>35</i>	8.1×10 ⁴ y <i>9</i>	ε+β ⁺
60	Ni	0 ⁺	-64473.24 <i>35</i>	26.223% 15	
61	Ni	3/2 ⁻	-64222.03 <i>36</i>	1.1399% 13	
62	Ni	0 ⁺	-66746.44 <i>43</i>	3.6345% 40	
63	Ni	1/2 ⁻	-65512.89 <i>43</i>	100.8 y <i>12</i>	β ⁻
64	Ni	0 ⁺	-67099.03 <i>46</i>	0.9256% 19	
65	Ni	5/2 ⁻	-65125.80 <i>48</i>	2.5175 h <i>5</i>	β ⁻
66	Ni	0 ⁺	-66006.3 <i>14</i>	54.6 h <i>3</i>	β ⁻
67	Ni	(1/2 ⁻)	-63742.7 <i>29</i>	21 s <i>1</i>	β ⁻
68	Ni	0 ⁺	-63463.8 <i>30</i>	29 s <i>2</i>	β ⁻
69	Ni	(9/2 ⁺)	-59978.7 <i>37</i>	11.4 s <i>3</i>	β ⁻
69m	Ni	(1/2 ⁻)	-59657.7 <i>42</i>	3.5 s <i>4</i>	β ⁻ ≈100%, IT<0.01%
70	Ni	0 ⁺	-59213.9 <i>21</i>	6.0 s <i>3</i>	β ⁻
71	Ni	(9/2 ⁺)	-55406.2 <i>22</i>	2.55 s <i>4</i>	β ⁻
71m	Ni	(1/2 ⁻)	-54907.2 <i>25</i>	2.3 s <i>3</i>	β ⁻
72	Ni	0 ⁺	-54226.1 <i>22</i>	1.57 s <i>5</i>	β ⁻ , β ⁻ n?
73	Ni	(9/2 ⁺)	-50108.2 <i>24</i>	838 ms <i>28</i>	β ⁻ , β ⁻ n?
74	Ni	0 ⁺	-4.870×10 ⁴ <i>SY</i>	507.7 ms <i>46</i>	β ⁻ , β ⁻ n?
75	Ni		-4.424×10 ⁴ <i>SY</i>	332.2 ms <i>31</i>	β ⁻ , β ⁻ n=10.0%
76	Ni	0 ⁺	-4.219×10 ⁴ <i>SY</i>	234.7 ms <i>27</i>	β ⁻ , β ⁻ n=14.0%
77	Ni		-3.735×10 ⁴ <i>SY</i>	158.5 ms <i>42</i>	β ⁻ , β ⁻ n=26%, β ⁻ 2n?
78	Ni	0 ⁺	-3.488×10 ⁴ <i>SY</i>	122 ms <i>5</i>	β ⁻ , β ⁻ n?
79	Ni		-2.82×10 ⁴ <i>SY</i>	43 ms <i>+9-8</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
80	Ni	0 ⁺	-2.32×10 ⁴ <i>SY</i>	24 ms <i>+26-17</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
81	Ni		-1.61×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
82	Ni	0 ⁺	-1.07×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
53	Cu		-1.31×10 ⁴ <i>SY</i>	<130 ns	p?

A	El	J $^{\pi}$	Δ (keV)	T _{1/2} , Γ , Abundance	Decay Modes
54	Cu		-2.124 $\times 10^4$ <i>SY</i>	<75 ns	p?
55	Cu	(3/2 ⁻)	-3.164 $\times 10^4$ <i>16</i>	55.9 ms <i>15</i>	$\epsilon + \beta^+$, ϵp ?
56	Cu	4 ⁺	-38630 <i>6</i>	80.8 ms <i>13</i>	$\epsilon + \beta^+$, $\epsilon p=0.40\%$
57	Cu	3/2 ⁻	-47309.0 <i>5</i>	196.4 ms <i>7</i>	$\epsilon + \beta^+$
58	Cu	1 ⁺	-51667.9 <i>6</i>	3.205 s <i>7</i>	$\epsilon + \beta^+$
59	Cu	3/2 ⁻	-56358.5 <i>5</i>	82.0 s <i>4</i>	$\epsilon + \beta^+$
60	Cu	2 ⁺	-58345.3 <i>16</i>	23.74 m <i>35</i>	$\epsilon + \beta^+$
61	Cu	3/2 ⁻	-61984.1 <i>10</i>	3.339 h <i>7</i>	$\epsilon + \beta^+$
62	Cu	1 ⁺	-62787.5 <i>6</i>	9.672 m <i>8</i>	$\epsilon + \beta^+$
63	Cu	3/2 ⁻	-65579.87 <i>43</i>	69.15% 15	
64	Cu	1 ⁺	-65424.42 <i>43</i>	12.7007 h <i>13</i>	$\beta^- = 38.5\%$, $\epsilon + \beta^+ = 61.5\%$
65	Cu	3/2 ⁻	-67263.7 <i>6</i>	30.85% 15	
66	Cu	1 ⁺	-66258.3 <i>6</i>	5.090 m <i>9</i>	β^-
67	Cu	3/2 ⁻	-67319.6 <i>9</i>	61.81 h <i>10</i>	β^-
68	Cu	1 ⁺	-65567.0 <i>16</i>	30.8 s <i>6</i>	β^-
68m	Cu	6 ⁻	-64845.8 <i>16</i>	3.77 m <i>4</i>	$\beta^- = 14\%$, IT=86%
69	Cu	3/2 ⁻	-65736.2 <i>14</i>	2.9 m <i>1</i>	β^-
70	Cu	6 ⁻	-62976.4 <i>11</i>	44.5 s <i>3</i>	β^-
70m	Cu	3 ⁻	-62875.3 <i>11</i>	33 s <i>2</i>	$\beta^- = 52\%$, IT=48%
70n	Cu	1 ⁺	-62729.8 <i>12</i>	6.4 s <i>4</i>	$\beta^- = 93.2\%$, IT=6.8%
71	Cu	3/2 ⁻	-62711.1 <i>15</i>	19.4 s <i>14</i>	β^-
72	Cu	2 ⁻	-59783.0 <i>14</i>	6.63 s <i>3</i>	β^-
73	Cu	3/2 ⁻	-58987.4 <i>19</i>	4.20 s <i>12</i>	β^- , $\beta^- n = 0.029\%$
74	Cu	2 ⁻	-56006 <i>6</i>	1.606 s <i>12</i>	β^- , $\beta^- n = 0.075\%$
75	Cu	5/2 ⁽⁻⁾	-54470.2 <i>7</i>	1.224 s <i>3</i>	β^- , $\beta^- n = 2.7\%$
76	Cu	3 ⁻	-50981.6 <i>9</i>	637 ms <i>8</i>	β^- , $\beta^- n = 7.2\%$
77	Cu	5/2 ⁻	-48862.8 <i>12</i>	469.8 ms <i>18</i>	β^- , $\beta^- n = 30.1\%$
78	Cu	(6 ⁻)	-44789 <i>13</i>	331.3 ms <i>19</i>	β^- , $\beta^- n = 51\%$, $\beta^- 2n$?
79	Cu		-4.241 $\times 10^4$ <i>10</i>	241.0 ms <i>33</i>	β^- , $\beta^- n = 66\%$, $\beta^- 2n$?
80	Cu		-3.668 $\times 10^4$ <i>SY</i>	113 ms <i>6</i>	β^- , $\beta^- n = 58\%$, $\beta^- 2n$?
81	Cu		-3.191 $\times 10^4$ <i>SY</i>	73 ms <i>7</i>	β^- , $\beta^- n = 81\%$, $\beta^- 2n$?
82	Cu		-2.573 $\times 10^4$ <i>SY</i>	33 ms <i>+7-6</i>	β^- , $\beta^- n$?, $\beta^- 2n$?
83	Cu		-2.04 $\times 10^4$ <i>SY</i>		β^- , $\beta^- n$?, $\beta^- 2n$?
54	Zn	0 ⁺	-5.70 $\times 10^3$ <i>SY</i>	1.6 ms <i>+6-4</i>	2p=92%, $\epsilon + \beta^+$?
55	Zn		-1.427 $\times 10^4$ <i>SY</i>	19.8 ms <i>13</i>	$\epsilon + \beta^+$, $\epsilon p=91\%$
56	Zn	0 ⁺	-2.539 $\times 10^4$ <i>SY</i>	32.0 ms <i>7</i>	$\epsilon + \beta^+$, $\epsilon p=86.0\%$
57	Zn		-3.255 $\times 10^4$ <i>SY</i>	45.6 ms <i>7</i>	$\epsilon + \beta^+$, $\epsilon p=87\%$
58	Zn	0 ⁺	-4.230 $\times 10^4$ <i>5</i>	86 ms <i>2</i>	$\epsilon + \beta^+$, $\epsilon p=0.7\%$
59	Zn	3/2 ⁻	-47215.7 <i>8</i>	182.1 ms <i>8</i>	$\epsilon + \beta^+$, $\epsilon p=0.10\%$
60	Zn	0 ⁺	-54174.5 <i>5</i>	2.41 m <i>3</i>	$\epsilon + \beta^+$
61	Zn	3/2 ⁻	-56349 <i>16</i>	88.8 s <i>5</i>	$\epsilon + \beta^+$
62	Zn	0 ⁺	-61168.1 <i>6</i>	9.193 h <i>12</i>	$\epsilon + \beta^+$

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
63	Zn	3/2 ⁻	-62213.4 <i>16</i>	38.38 m <i>7</i>	ε+β ⁺
64	Zn	0 ⁺	-66004.0 <i>6</i>	49.2% 8	
65	Zn	5/2 ⁻	-65912.0 <i>6</i>	243.93 d <i>8</i>	ε+β ⁺
66	Zn	0 ⁺	-68899.2 <i>7</i>	27.7% 10	
67	Zn	5/2 ⁻	-67880.4 <i>8</i>	4.04% 16	
68	Zn	0 ⁺	-70007.2 <i>8</i>	18.5% 6	
69	Zn	1/2 ⁻	-68417.9 <i>8</i>	56.4 m <i>7</i>	β ⁻
69m	Zn	9/2 ⁺	-67979.3 <i>8</i>	13.748 h <i>10</i>	IT=99.967%, β ⁻ =0.033%
70	Zn	0 ⁺	-69564.7 <i>19</i>	0.61% 10	
71	Zn	1/2 ⁻	-67328.8 <i>27</i>	2.42 m <i>8</i>	β ⁻
71m	Zn	9/2 ⁺	-67171.1 <i>30</i>	4.137 h <i>31</i>	β ⁻ , IT<0.05%
72	Zn	0 ⁺	-68145.5 <i>21</i>	46.5 h <i>1</i>	β ⁻
73	Zn	1/2 ⁻	-65593.4 <i>19</i>	24.5 s <i>2</i>	β ⁻
74	Zn	0 ⁺	-65756.7 <i>25</i>	96 s <i>1</i>	β ⁻
75	Zn	7/2 ⁺	-62558.9 <i>20</i>	10.2 s <i>2</i>	β ⁻
76	Zn	0 ⁺	-62303.0 <i>15</i>	5.3 s <i>4</i>	β ⁻
77	Zn	7/2 ⁺	-58789.2 <i>20</i>	2.09 s <i>5</i>	β ⁻
77m	Zn	1/2 ⁻	-58016.8 <i>20</i>	1.05 s <i>10</i>	β ⁻ =66%, IT=34%
78	Zn	0 ⁺	-57483.2 <i>19</i>	1.47 s <i>15</i>	β ⁻ , β ⁻ n<55%
79	Zn	9/2 ⁺	-53432.3 <i>22</i>	746 ms <i>42</i>	β ⁻ , β ⁻ n=1.8%
79m	Zn	1/2 ⁺	-5.233×10 ⁴ <i>15</i>	>200 ms	β ⁻ ?, IT?
80	Zn	0 ⁺	-51648.6 <i>26</i>	561.9 ms <i>29</i>	β ⁻ , β ⁻ n=1.36%
81	Zn	(5/2 ⁺)	-46200 <i>5</i>	299.4 ms <i>42</i>	β ⁻ , β ⁻ n=22%, β ⁻ 2n?
82	Zn	0 ⁺	-42314.0 <i>31</i>	177.7 ms <i>25</i>	β ⁻ , β ⁻ n=69%, β ⁻ 2n?
83	Zn		-3.629×10 ⁴ <i>SY</i>	119 ms <i>16</i>	β ⁻ , β ⁻ n≈71%, β ⁻ 2n?
84	Zn	0 ⁺	-3.183×10 ⁴ <i>SY</i>	54 ms <i>8</i>	β ⁻ , β ⁻ n=73%, β ⁻ 2n?
85	Zn		-2.51×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
59	Ga		-3.376×10 ⁴ <i>SY</i>	<43 ns	p?
60	Ga	(2 ⁺)	-3.959×10 ⁴ <i>SY</i>	69.4 ms <i>3</i>	ε+β ⁺ , εp=1.6%, εα<0.023%
61	Ga	3/2 ⁻	-47135 <i>38</i>	166 ms <i>2</i>	ε+β ⁺ , εp<0.25%
62	Ga	0 ⁺	-51987.0 <i>6</i>	116.123 ms <i>23</i>	ε+β ⁺
63	Ga	3/2 ⁻	-56547.1 <i>13</i>	32.1 s <i>4</i>	ε+β ⁺
64	Ga	0 ⁺	-58832.8 <i>14</i>	2.627 m <i>8</i>	ε+β ⁺
65	Ga	3/2 ⁻	-62657.5 <i>8</i>	15.134 m <i>28</i>	ε+β ⁺
66	Ga	0 ⁺	-63723.7 <i>11</i>	9.304 h <i>8</i>	ε+β ⁺
67	Ga	3/2 ⁻	-66879.2 <i>12</i>	3.2615 d <i>4</i>	ε
68	Ga	1 ⁺	-67086.1 <i>14</i>	67.843 m <i>17</i>	ε+β ⁺
69	Ga	3/2 ⁻	-69327.8 <i>12</i>	60.11% 5	
70	Ga	1 ⁺	-68910.2 <i>12</i>	21.14 m <i>3</i>	β ⁻ =99.59%, ε=0.41%
71	Ga	3/2 ⁻	-70139.1 <i>8</i>	39.89% 5	

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
72	Ga	3 ⁻	-68588.3 <i>8</i>	14.03 h <i>6</i>	β ⁻
73	Ga	1/2 ⁻	-69699.3 <i>17</i>	4.87 h <i>2</i>	β ⁻
74	Ga	(3 ⁻)	-68049.6 <i>30</i>	8.10 m <i>6</i>	β ⁻
74m	Ga	(0 ⁺)	-67990.1 <i>30</i>	9.5 s <i>10</i>	IT=75%, β ⁻ =25%
75	Ga	3/2 ⁻	-68460.6 <i>7</i>	126 s <i>2</i>	β ⁻
76	Ga	2 ⁽⁻⁾	-66296.6 <i>20</i>	31.0 s <i>8</i>	β ⁻
77	Ga	3/2 ⁽⁻⁾	-65992.4 <i>24</i>	13.2 s <i>2</i>	β ⁻
78	Ga	2 ⁽⁻⁾	-63704.1 <i>11</i>	5.09 s <i>5</i>	β ⁻
79	Ga	3/2 ⁽⁻⁾	-62548.4 <i>12</i>	2.848 s <i>3</i>	β ⁻ , β ⁻ n=0.089%
80	Ga	6 ⁻	-59223.7 <i>29</i>	1.9 s <i>1</i>	β ⁻ , β ⁻ n=0.86%
80m	Ga	3 ⁻	-59201.2 <i>29</i>	1.3 s <i>2</i>	β ⁻ , β ⁻ n?
81	Ga	5/2 ⁻	-57628.0 <i>33</i>	1.217 s <i>5</i>	β ⁻ , β ⁻ n=12.7%
82	Ga	(2 ⁻)	-52930.7 <i>24</i>	600 ms <i>4</i>	β ⁻ , β ⁻ n=20.6%, β ⁻ 2n?
83	Ga		-49257.1 <i>26</i>	310 ms <i>1</i>	β ⁻ , β ⁻ n=68%, β ⁻ 2n?
84	Ga	(0 ⁻)	-44094 <i>30</i>	97.6 ms <i>12</i>	β ⁻ , β ⁻ n=43%, β ⁻ 2n=1.6%
85	Ga	(5/2 ⁻)	-39744 <i>37</i>	95.1 ms <i>10</i>	β ⁻ , β ⁻ n=77%, β ⁻ 2n=1.3%
86	Ga		-3.376×10 ⁴ <i>SY</i>	49 ms <i>2</i>	β ⁻ , β ⁻ n=67%, β ⁻ 2n=16.2%
87	Ga		-2.89×10 ⁴ <i>SY</i>	29 ms <i>4</i>	β ⁻ , β ⁻ n=81%, β ⁻ 2n=10.2%
59	Ge		-1.637×10 ⁴ <i>SY</i>	13.3 ms <i>17</i>	ε+β ⁺ , εp=93%, 2p<0.2%
60	Ge	0 ⁺	-2.753×10 ⁴ <i>SY</i>	25.0 ms <i>3</i>	ε+β ⁺ , εp=67%, ε2p<14%
61	Ge	(3/2 ⁻)	-3.379×10 ⁴ <i>SY</i>	40.7 ms <i>4</i>	ε+β ⁺ , εp=87%
62	Ge	0 ⁺	-4.214×10 ⁴ <i>SY</i>	73.5 ms <i>1</i>	ε+β ⁺ , εp?
63	Ge		-46921 <i>37</i>	153.3 ms <i>10</i>	ε+β ⁺ , εp?
64	Ge	0 ⁺	-54315.5 <i>37</i>	63.7 s <i>25</i>	ε+β ⁺ , εp?
65	Ge	3/2 ⁻	-56478.2 <i>22</i>	30.8 s <i>4</i>	ε+β ⁺ , εp=0.011%
66	Ge	0 ⁺	-61607.0 <i>24</i>	2.26 h <i>4</i>	ε+β ⁺
67	Ge	1/2 ⁻	-62673.7 <i>43</i>	18.9 m <i>3</i>	ε+β ⁺
68	Ge	0 ⁺	-66978.8 <i>19</i>	271.04 d <i>9</i>	ε
69	Ge	5/2 ⁻	-67100.7 <i>13</i>	38.90 h <i>7</i>	ε+β ⁺
70	Ge	0 ⁺	-70562.0 <i>8</i>	20.52% 19	
71	Ge	1/2 ⁻	-69906.7 <i>8</i>	11.42 d <i>4</i>	ε
72	Ge	0 ⁺	-72585.91 <i>8</i>	27.45% 15	
73	Ge	9/2 ⁺	-71297.53 <i>6</i>	7.76% 8	
73m	Ge	1/2 ⁻	-71230.81 <i>6</i>	0.449 s <i>11</i>	IT
74	Ge	0 ⁺	-73422.451 <i>13</i>	36.52% 12	
75	Ge	1/2 ⁻	-71856.97 <i>5</i>	82.78 m <i>6</i>	β ⁻

A	El	J $^{\pi}$	Δ (keV)	T $_{1/2}$, Γ , Abundance	Decay Modes
75m	Ge	7/2 $^{+}$	-71717.28 <i>6</i>	48.1 s <i>5</i>	IT=99.970%, β^{-} =0.030%
76	Ge	0 $^{+}$	-73212.898 <i>18</i>	1.89 $\times 10^{21}$ y <i>8</i> 7.75% 12	2 β^{-}
77	Ge	7/2 $^{+}$	-71212.87 <i>5</i>	11.211 h <i>3</i>	β^{-}
77m	Ge	1/2 $^{-}$	-71053.16 <i>8</i>	53.7 s <i>3</i>	β^{-} =81%, IT=19%
78	Ge	0 $^{+}$	-71862.1 <i>35</i>	87 m <i>1</i>	β^{-}
79	Ge	(1/2) $^{-}$	-69527 <i>37</i>	18.97 s <i>4</i>	β^{-}
79m	Ge	(7/2 $^{+}$)	-69341 <i>37</i>	39.7 s <i>9</i>	β^{-} =96%, IT=4%
80	Ge	0 $^{+}$	-69535.3 <i>21</i>	29.5 s <i>4</i>	β^{-}
81	Ge	(9/2 $^{+}$)	-66291.7 <i>21</i>	6.4 s <i>2</i>	β^{-}
81m	Ge	(1/2 $^{+}$)	-65612.6 <i>21</i>	8.6 s <i>6</i>	β^{-}
82	Ge	0 $^{+}$	-65415.1 <i>22</i>	4.48 s <i>31</i>	β^{-}
83	Ge	(5/2 $^{+}$)	-60976.4 <i>24</i>	1.85 s <i>6</i>	β^{-} , $\beta^{-}n$?
84	Ge	0 $^{+}$	-58148.4 <i>32</i>	952 ms <i>8</i>	β^{-} , $\beta^{-}n$ =10.6%
85	Ge	(3/2 $^{+}$, 5/2 $^{+}$)	-53123.4 <i>37</i>	514 ms <i>17</i>	β^{-} , $\beta^{-}n$ =16.2%, $\beta^{-}2n$?
86	Ge	0 $^{+}$	-4.940 $\times 10^4$ <i>44</i>	226 ms <i>21</i>	β^{-} , $\beta^{-}n$ =45%
87	Ge		-4.359 $\times 10^4$ <i>SY</i>	103 ms <i>4</i>	β^{-} , $\beta^{-}n$?, $\beta^{-}2n$?
88	Ge	0 $^{+}$	-3.952 $\times 10^4$ <i>SY</i>	61 ms <i>6</i>	β^{-} , $\beta^{-}n$?, $\beta^{-}2n$?
89	Ge		-3.304 $\times 10^4$ <i>SY</i>		β^{-} , $\beta^{-}n$?, $\beta^{-}2n$?
90	Ge	0 $^{+}$	-2.85 $\times 10^4$ <i>SY</i>		β^{-} , $\beta^{-}n$?, $\beta^{-}2n$?
63	As		-3.350 $\times 10^4$ <i>SY</i>	<43 ns	p?
64	As		-3.953 $\times 10^4$ <i>SY</i>	69.2 ms <i>14</i>	$\varepsilon + \beta^{+}$, εp ?
65	As		-4.694 $\times 10^4$ <i>8</i>	130.3 ms <i>6</i>	$\varepsilon + \beta^{+}$, εp ?
66	As	(0 $^{+}$)	-52025 <i>6</i>	95.77 ms <i>23</i>	$\varepsilon + \beta^{+}$, εp ?
67	As	(5/2 $^{-}$)	-56587.23 <i>44</i>	42.5 s <i>12</i>	$\varepsilon + \beta^{+}$
68	As	3 $^{+}$	-58894.5 <i>18</i>	151.6 s <i>8</i>	$\varepsilon + \beta^{+}$
69	As	5/2 $^{-}$	-63112 <i>32</i>	15.2 m <i>2</i>	$\varepsilon + \beta^{+}$
70	As	4 $^{+}$	-64334.0 <i>14</i>	52.6 m <i>3</i>	$\varepsilon + \beta^{+}$
71	As	5/2 $^{-}$	-67893.3 <i>42</i>	65.30 h <i>7</i>	$\varepsilon + \beta^{+}$
72	As	2 $^{-}$	-68229.8 <i>41</i>	26.0 h <i>1</i>	$\varepsilon + \beta^{+}$
73	As	3/2 $^{-}$	-70952.8 <i>39</i>	80.30 d <i>6</i>	ε
74	As	2 $^{-}$	-70860.1 <i>17</i>	17.78 d <i>4</i>	β^{-} =34%, $\varepsilon + \beta^{+}$ =66%
75	As	3/2 $^{-}$	-73034.2 <i>9</i>	100%	
76	As	2 $^{-}$	-72291.4 <i>9</i>	26.24 h <i>9</i>	β^{-}
77	As	3/2 $^{-}$	-73916.3 <i>17</i>	38.79 h <i>4</i>	β^{-}
78	As	2 $^{-}$	-72817 <i>10</i>	90.7 m <i>2</i>	β^{-}
79	As	3/2 $^{-}$	-73636 <i>5</i>	9.01 m <i>15</i>	β^{-}
80	As	1 $^{+}$	-72214.6 <i>33</i>	15.2 s <i>2</i>	β^{-}
81	As	3/2 $^{-}$	-72533.3 <i>26</i>	33.3 s <i>8</i>	β^{-}
82	As	(2 $^{-}$)	-70105.4 <i>37</i>	19.1 s <i>5</i>	β^{-}
82m	As	(5 $^{-}$)	-69973.8 <i>38</i>	13.6 s <i>3</i>	β^{-}

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
83	As	(5/2 ⁻)	-69669.3 28	14.1 s 11	β ⁻
84	As	(2 ⁻)	-65853.6 32	3.2 s 6	β ⁻ , β ⁻ n=0.28%
85	As	(5/2 ⁻)	-63189.2 31	2.023 s 7	β ⁻ , β ⁻ n=62.2%
86	As	(1 ⁻ , 2 ⁻)	-58962.2 35	944 ms 8	β ⁻ , β ⁻ n=35.5%, β ⁻ 2n?
87	As	(3/2 ⁻ , 5/2 ⁻)	-55617.9 30	484 ms 26	β ⁻ , β ⁻ n=15.4%, β ⁻ 2n?
88	As		-5.045×10 ⁴ SY	2.0×10 ² ms +20-9	β ⁻ , β ⁻ n?, β ⁻ 2n?
89	As		-4.653×10 ⁴ SY		β ⁻ , β ⁻ n?, β ⁻ 2n?
90	As		-4.099×10 ⁴ SY		β ⁻ , β ⁻ n?, β ⁻ 2n?
91	As		-3.650×10 ⁴ SY		β ⁻ , β ⁻ n?, β ⁻ 2n?
92	As		-3.04×10 ⁴ SY		β ⁻ , β ⁻ n?, β ⁻ 2n?
63	Se		-1.69×10 ⁴ SY	13.2 ms 39	ε+β ⁺ ≈100%, εp=89%, 2p<0.5%
64	Se	0 ⁺	-2.69×10 ⁴ SY	22.6 ms 2	ε+β ⁺ , εp?
65	Se	(3/2 ⁺)	-3.302×10 ⁴ SY	34.2 ms 7	ε+β ⁺ , εp=88%
66	Se	0 ⁺	-4.166×10 ⁴ SY	51 ms 4	ε+β ⁺ , εp?
67	Se		-4.658×10 ⁴ 7	133 ms 4	ε+β ⁺ , εp=0.5%
68	Se	0 ⁺	-54189.45 50	35.5 s 7	ε+β ⁺
69	Se	1/2 ⁻	-56434.7 15	27.4 s 2	ε+β ⁺ , εp=0.052%
70	Se	0 ⁺	-61929.9 16	41.1 m 3	ε+β ⁺
71	Se	(5/2 ⁻)	-63146.5 28	4.78 m 6	ε+β ⁺
72	Se	0 ⁺	-67868.2 20	8.40 d 8	ε
73	Se	9/2 ⁺	-68227 7	7.18 h 2	ε+β ⁺
73m	Se	3/2 ⁻	-68202 7	39.8 m 13	ε+β ⁺ =27.4%, IT=72.6%
74	Se	0 ⁺	-72213.210 15	0.86% 3	
75	Se	5/2 ⁺	-72169.49 7	119.779 d 11	ε
76	Se	0 ⁺	-75251.959 16	9.23% 7	
77	Se	1/2 ⁻	-74599.50 6	7.60% 7	
77m	Se	7/2 ⁺	-74437.57 6	17.38 s 4	IT
78	Se	0 ⁺	-77025.95 18	23.69% 22	
79	Se	7/2 ⁺	-75917.47 22	3.27×10 ⁵ y 29	β ⁻
79m	Se	1/2 ⁻	-75821.70 23	3.92 m 1	IT=99.944%, β ⁻ =0.056%
80	Se	0 ⁺	-77759.5 9	49.80% 36	
81	Se	1/2 ⁻	-76389.0 10	18.5 m 1	β ⁻
81m	Se	7/2 ⁺	-76286.0 10	57.28 m 2	IT=99.949%, β ⁻ =0.051%
82	Se	0 ⁺	-77593.90 47	8.77×10 ¹⁹ y 30	2β ⁻
83	Se	9/2 ⁺	-75340.5 30	8.82% 15	
83m	Se	1/2 ⁻	-75111.6 30	22.25 m 5	β ⁻
84	Se	0 ⁺	-75947.7 20	3.3 m 1	β ⁻

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
85	Se	(5/2) ⁺	-72413.6 <i>26</i>	32.9 s <i>3</i>	β ⁻
86	Se	0 ⁺	-70503.2 <i>25</i>	14.3 s <i>3</i>	β ⁻
87	Se	(3/2 ⁺)	-66426.1 <i>22</i>	5.51 s <i>12</i>	β ⁻ , β ⁻ n=0.36%
88	Se	0 ⁺	-63884.2 <i>34</i>	1.51 s <i>3</i>	β ⁻ , β ⁻ n=0.99%
89	Se	(3/2 ⁺)	-58992.4 <i>37</i>	0.41 s <i>3</i>	β ⁻ , β ⁻ n=6.7%
90	Se	0 ⁺	-5.580×10 ⁴ <i>33</i>	2.0×10 ² ms <i>+10-7</i>	β ⁻ , β ⁻ n?
91	Se		-5.058×10 ⁴ <i>43</i>	2.7×10 ² ms <i>5</i>	β ⁻ , β ⁻ n=21%, β ⁻ 2n?
92	Se	0 ⁺	-4.672×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
93	Se		-4.086×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
94	Se	0 ⁺	-3.68×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
95	Se		-3.05×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
68	Br		-3.879×10 ⁴ <i>SY</i>	35 ns <i>5</i>	p?
69	Br	(5/2 ⁻)	-46259 <i>42</i>	<24 ns	p
70	Br	0 ⁺	-51426 <i>15</i>	78.88 ms <i>31</i>	ε+β ⁺ , εp?
70m	Br	9 ⁺	-49133 <i>15</i>	2.16 s <i>5</i>	ε+β ⁺ , εp?
71	Br	(5/2 ⁻)	-56502 <i>5</i>	21.4 s <i>6</i>	ε+β ⁺
72	Br	1 ⁺	-59061.8 <i>10</i>	78.6 s <i>24</i>	ε+β ⁺
72m	Br	3 ⁻	-58960.6 <i>10</i>	10.3 s <i>6</i>	IT≈100%, ε+β ⁺ ?
73	Br	1/2 ⁻	-63646 <i>7</i>	3.4 m <i>2</i>	ε+β ⁺
74	Br	(0 ⁻)	-65288 <i>6</i>	25.4 m <i>3</i>	ε+β ⁺
74m	Br	4 ⁽⁺⁾	-65275 <i>6</i>	44.0 m <i>22</i>	ε+β ⁺
75	Br	3/2 ⁻	-69107.0 <i>43</i>	96.7 m <i>13</i>	ε+β ⁺
76	Br	1 ⁻	-70289 <i>9</i>	16.16 h <i>17</i>	ε+β ⁺
76m	Br	4 ⁺	-70186 <i>9</i>	1.40 s <i>7</i>	IT>99.4%, ε+β ⁺ <0.6%
77	Br	3/2 ⁻	-73234.8 <i>28</i>	57.04 h <i>12</i>	ε+β ⁺
77m	Br	9/2 ⁺	-73129.0 <i>28</i>	4.25 m <i>8</i>	IT
78	Br	1 ⁺	-73452.2 <i>36</i>	6.45 m <i>3</i>	ε+β ⁺ >99.99%, β ⁻ <0.01%
79	Br	3/2 ⁻	-76068.1 <i>10</i>	50.5-50.8%	
79m	Br	9/2 ⁺	-75860.5 <i>10</i>	4.85 s <i>3</i>	IT
80	Br	1 ⁺	-75889.0 <i>10</i>	17.68 m <i>2</i>	β ⁻ =91.7%, ε+β ⁺ =8.3%
80m	Br	5 ⁻	-75803.2 <i>10</i>	4.4204 h <i>9</i>	IT
81	Br	3/2 ⁻	-77977.1 <i>10</i>	49.2-49.5%	
82	Br	5 ⁻	-77498.7 <i>10</i>	35.284 h <i>7</i>	β ⁻
82m	Br	2 ⁻	-77452.7 <i>10</i>	6.13 m <i>5</i>	IT=97.6%, β ⁻ =2.4%
83	Br	3/2 ⁻	-79013.7 <i>38</i>	2.374 h <i>4</i>	β ⁻
84	Br	2 ⁻	-77783 <i>26</i>	31.76 m <i>7</i>	β ⁻
84m	Br	(6 ⁻)	-7.746×10 ⁴ <i>10</i>	6.0 m <i>2</i>	β ⁻
85	Br	3/2 ⁻	-78575.5 <i>31</i>	2.94 m <i>6</i>	β ⁻
86	Br	1 ⁻	-75632.3 <i>31</i>	55.1 s <i>4</i>	β ⁻
87	Br	5/2 ⁻	-73891.7 <i>32</i>	55.68 s <i>12</i>	β ⁻ , β ⁻ n=2.60%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
88	Br	(1 ⁻)	-70716.0 <i>32</i>	16.34 s <i>8</i>	β ⁻ , β ⁻ n=6.62%
89	Br	(5/2 ⁻)	-68274.3 <i>33</i>	4.348 s <i>22</i>	β ⁻ , β ⁻ n=13.5%
90	Br		-64000.3 <i>34</i>	1.91 s <i>1</i>	β ⁻ , β ⁻ n=25.3%
91	Br		-61107.3 <i>35</i>	544 ms <i>10</i>	β ⁻ , β ⁻ n=29.8%
92	Br		-56233 <i>7</i>	344 ms <i>15</i>	β ⁻ , β ⁻ n=33.1%, β ⁻ 2n?
93	Br		-5.289×10 ⁴ <i>43</i>	152 ms <i>8</i>	β ⁻ , β ⁻ n=64%, β ⁻ 2n?
94	Br		-4.765×10 ⁴ <i>SY</i>	70 ms <i>20</i>	β ⁻ , β ⁻ n=30%, β ⁻ 2n?
95	Br		-4.385×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
96	Br		-3.821×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
97	Br		-3.400×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
98	Br		-2.805×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
101	Br				β ⁻ , β ⁻ n?, β ⁻ 2n?
67	Kr		-1.555×10 ⁴ <i>SY</i>	7.4 ms <i>30</i>	2p=37%, ε+β ⁺ ?
68	Kr	0 ⁺	-2.56×10 ⁴ <i>SY</i>	21.6 ms <i>33</i>	ε+β ⁺ , εp=89%
69	Kr	(5/2 ⁻)	-3.214×10 ⁴ <i>SY</i>	27.9 ms <i>8</i>	ε+β ⁺ , εp=95%
70	Kr	0 ⁺	-4.110×10 ⁴ <i>SY</i>	45.19 ms <i>14</i>	ε+β ⁺ , εp=0.545%
71	Kr	(5/2 ⁻)	-4.633×10 ⁴ <i>13</i>	95.0 ms <i>4</i>	ε+β ⁺ , εp=3.06%
72	Kr	0 ⁺	-53941 <i>8</i>	17.1 s <i>2</i>	ε+β ⁺
73	Kr	(3/2 ⁻)	-56552 <i>7</i>	27.3 s <i>10</i>	ε+β ⁺ , εp=0.25%
74	Kr	0 ⁺	-62331.8 <i>20</i>	11.50 m <i>10</i>	ε+β ⁺
75	Kr	5/2 ⁺	-64324 <i>8</i>	4.55 m <i>9</i>	ε+β ⁺
76	Kr	0 ⁺	-69013.7 <i>40</i>	14.8 h <i>1</i>	ε+β ⁺
77	Kr	5/2 ⁺	-70169.5 <i>20</i>	71.25 m <i>42</i>	ε+β ⁺
78	Kr	0 ⁺	-74178.28 <i>31</i>	0.355% 3	
79	Kr	1/2 ⁻	-74442.3 <i>35</i>	34.96 h <i>3</i>	ε+β ⁺
79m	Kr	7/2 ⁺	-74312.5 <i>35</i>	50 s <i>3</i>	IT
80	Kr	0 ⁺	-77893.5 <i>7</i>	2.286% 10	
81	Kr	7/2 ⁺	-77696.2 <i>11</i>	2.29×10 ⁵ y <i>11</i>	ε
81m	Kr	1/2 ⁻	-77505.6 <i>11</i>	13.21 s <i>11</i>	IT=99.99753%, ε=0.00247%
82	Kr	0 ⁺	-80591.795 <i>6</i>	11.593% 31	
83	Kr	9/2 ⁺	-79990.643 <i>9</i>	11.500% 19	
83m	Kr	1/2 ⁻	-79949.086 <i>9</i>	1.83 h <i>2</i>	IT
84	Kr	0 ⁺	-82439.3453 <i>38</i>	56.987% 15	
85	Kr	9/2 ⁺	-81480.3 <i>20</i>	10.735 y <i>12</i>	β ⁻
85m	Kr	1/2 ⁻	-81175.5 <i>20</i>	4.480 h <i>8</i>	β ⁻ =78.8%, IT=21.2%
86	Kr	0 ⁺	-83265.6759 <i>37</i>	17.279% 41	
87	Kr	5/2 ⁺	-80709.53 <i>25</i>	76.09 m <i>36</i>	β ⁻
88	Kr	0 ⁺	-79691.3 <i>26</i>	2.803 h <i>9</i>	β ⁻
89	Kr	3/2 ⁽⁺⁾	-76535.8 <i>21</i>	3.147 m <i>35</i>	β ⁻
90	Kr	0 ⁺	-74959.3 <i>19</i>	32.32 s <i>9</i>	β ⁻

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
91	Kr	5/2 ⁽⁺⁾	-70974.0 <i>22</i>	8.57 s <i>4</i>	β ⁻ , β ⁻ n?
92	Kr	0 ⁺	-68769.3 <i>27</i>	1.841 s <i>8</i>	β ⁻ , β ⁻ n=0.0332%
93	Kr	1/2 ⁺	-64136.0 <i>25</i>	1.284 s <i>10</i>	β ⁻ , β ⁻ n=2.0%
94	Kr	0 ⁺	-61348 <i>12</i>	212 ms <i>4</i>	β ⁻ , β ⁻ n=1.11%
95	Kr	1/2 ⁽⁺⁾	-56159 <i>19</i>	114 ms <i>7</i>	β ⁻ , β ⁻ n=2.87%, β ⁻ 2n?
96	Kr	0 ⁺	-53082 <i>19</i>	80 ms <i>6</i>	β ⁻ , β ⁻ n=3.7%
97	Kr		-4.742×10 ⁴ <i>13</i>	62 ms <i>3</i>	β ⁻ , β ⁻ n=6.7%, β ⁻ 2n?
98	Kr	0 ⁺	-4.412×10 ⁴ <i>SY</i>	43 ms <i>4</i>	β ⁻ , β ⁻ n=7%, β ⁻ 2n?
99	Kr		-3.840×10 ⁴ <i>SY</i>	13 ms + <i>34-6</i>	β ⁻ , β ⁻ n=11%, β ⁻ 2n?
100	Kr	0 ⁺	-3.447×10 ⁴ <i>SY</i>	7 ms + <i>11-3</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
101	Kr		-2.86×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
102	Kr	0 ⁺			β ⁻ , β ⁻ n?, β ⁻ 2n?
72	Rb		-3.83×10 ⁴ <i>SY</i>	103 ns <i>22</i>	p?
73	Rb	(3/2 ⁻)	-46012 <i>41</i>	<81 ns	p≈100%, ε+β ⁺ ?
74	Rb	0 ⁺	-51916.0 <i>30</i>	64.777 ms <i>29</i>	ε+β ⁺ , εp?
75	Rb	3/2 ⁽⁻⁾	-57218.7 <i>12</i>	19.0 s <i>12</i>	ε+β ⁺
76	Rb	1 ⁻	-60479.1 <i>9</i>	36.5 s <i>5</i>	ε+β ⁺ , εα=3.8×10 ⁻⁷ %
77	Rb	3/2 ⁻	-64830.5 <i>13</i>	3.78 m <i>4</i>	ε+β ⁺
78	Rb	0 ⁺	-66935.4 <i>32</i>	17.66 m <i>4</i>	ε+β ⁺
78m	Rb	4 ⁽⁻⁾	-66824.2 <i>32</i>	5.75 m <i>3</i>	ε+β ⁺ =91%, IT=9%
79	Rb	5/2 ⁺	-70802.8 <i>19</i>	22.8 m <i>3</i>	ε+β ⁺
80	Rb	1 ⁺	-72175.5 <i>19</i>	33.4 s <i>7</i>	ε+β ⁺
81	Rb	3/2 ⁻	-75456.7 <i>49</i>	4.571 h <i>3</i>	ε+β ⁺
81m	Rb	9/2 ⁺	-75370.4 <i>49</i>	30.41 m <i>19</i>	IT=97.6%, ε+β ⁺ =2.4%
82	Rb	1 ⁺	-76187.8 <i>30</i>	1.2577 m <i>9</i>	ε+β ⁺
82m	Rb	5 ⁻	-76118.8 <i>34</i>	6.472 h <i>6</i>	ε+β ⁺ , IT<0.33%
83	Rb	5/2 ⁻	-79070.6 <i>23</i>	86.2 d <i>1</i>	ε
84	Rb	2 ⁻	-79759.0 <i>22</i>	32.82 d <i>7</i>	ε+β ⁺ =96.1%, β ⁻ =3.9%
84m	Rb	6 ⁻	-79295.4 <i>22</i>	20.26 m <i>8</i>	IT
85	Rb	5/2 ⁻	-82167.341 <i>5</i>	72.17% 2	
86	Rb	2 ⁻	-82747.00 <i>20</i>	18.671 d <i>10</i>	β ⁻ =99.9948%, ε=0.0052%
86m	Rb	6 ⁻	-82190.95 <i>27</i>	1.017 m <i>3</i>	IT>99.7%, β ⁻ <0.3%
87	Rb	3/2 ⁻	-84597.802 <i>6</i>	4.967×10 ¹⁰ y <i>32</i>	β ⁻
88	Rb	2 ⁻	-82609.00 <i>16</i>	27.83% 2 17.775 m <i>17</i>	β ⁻
89	Rb	3/2 ⁻	-81712 <i>5</i>	15.39 m <i>10</i>	β ⁻

A	El	J $^{\pi}$	Δ (keV)	T $_{1/2}$, Γ , Abundance	Decay Modes
90	Rb	0 $^{-}$	-79366 <i>6</i>	158 s <i>4</i>	β^{-}
90m	Rb	3 $^{-}$	-79259 <i>6</i>	258 s <i>3</i>	β^{-} =97.5%, IT=2.5%
91	Rb	3/2 $^{(-)}$	-77745 <i>8</i>	58.0 s <i>2</i>	β^{-} , $\beta^{-}n$?
92	Rb	0 $^{-}$	-74772 <i>6</i>	4.48 s <i>3</i>	β^{-} , $\beta^{-}n$ =0.0109%
93	Rb	5/2 $^{-}$	-72620 <i>8</i>	5.85 s <i>2</i>	β^{-} , $\beta^{-}n$ =1.46%
94	Rb	3 $^{-}$	-68562.8 <i>20</i>	2.704 s <i>5</i>	β^{-} , $\beta^{-}n$ =10.29%
95	Rb	5/2 $^{-}$	-65890 <i>20</i>	379.9 ms <i>16</i>	β^{-} , $\beta^{-}n$ =8.75%
96	Rb	2 $^{(-)}$	-61354.4 <i>34</i>	201.6 ms <i>10</i>	β^{-} , $\beta^{-}n$ =13.8%, $\beta^{-}2n$?
97	Rb	3/2 $^{+}$	-58519.1 <i>19</i>	169.1 ms <i>6</i>	β^{-} , $\beta^{-}n$ =25.5%, $\beta^{-}2n$?
98	Rb	0 $^{(-)}$	-54369 <i>16</i>	115 ms <i>6</i>	β^{-} , $\beta^{-}n$ =14.3%, $\beta^{-}2n$ =0.054%
98m	Rb	(3 $^{+}$)	-54299 <i>34</i>	96 ms <i>3</i>	β^{-} , $\beta^{-}n$?, IT?
99	Rb	(3/2 $^{+}$)	-51121.2 <i>40</i>	53.8 ms <i>27</i>	β^{-} , $\beta^{-}n$ =19.8%, $\beta^{-}2n$?
100	Rb	(4 $^{-}$)	-46266 <i>13</i>	52 ms <i>2</i>	β^{-} , $\beta^{-}n$ =6%, $\beta^{-}2n$ =0.15%
101	Rb	(3/2 $^{+}$)	-42567 <i>20</i>	32 ms <i>+4-3</i>	β^{-} , $\beta^{-}n$ =27%, $\beta^{-}2n$?
102	Rb	(4 $^{+}$)	-3.725 $\times 10^4$ <i>8</i>	37 ms <i>4</i>	β^{-} , $\beta^{-}n$ =65%, $\beta^{-}2n$?
103	Rb		-3.316 $\times 10^4$ <i>SY</i>	23 ms <i>+13-9</i>	β^{-} , $\beta^{-}n$?, $\beta^{-}2n$?
104	Rb		-2.75 $\times 10^4$ <i>SY</i>		β^{-} , $\beta^{-}n$?, $\beta^{-}2n$?
105	Rb				β^{-} , $\beta^{-}n$?, $\beta^{-}2n$?
106	Rb				β^{-} , $\beta^{-}n$?, $\beta^{-}2n$?
73	Sr	(5/2 $^{-}$)	-3.195 $\times 10^4$ <i>SY</i>	23.3 ms <i>13</i>	ϵ + β^{+} $\approx$ 100%, ϵp $\approx$ 100%
74	Sr	0 $^{+}$	-4.083 $\times 10^4$ <i>SY</i>	27.6 ms <i>26</i>	ϵ + β^{+} , ϵp ?
75	Sr	(3/2 $^{-}$)	-4.662 $\times 10^4$ <i>22</i>	85.2 ms <i>22</i>	ϵ + β^{+} , ϵp =5.2%
76	Sr	0 $^{+}$	-54248 <i>34</i>	7.89 s <i>7</i>	ϵ + β^{+} , ϵp =0.000034%
77	Sr	5/2 $^{(+)}$	-57803 <i>8</i>	9.0 s <i>2</i>	ϵ + β^{+} , ϵp =0.08%
78	Sr	0 $^{+}$	-63174 <i>7</i>	156 s <i>3</i>	ϵ + β^{+}
79	Sr	3/2 $^{(-)}$	-65480 <i>7</i>	2.23 m <i>7</i>	ϵ + β^{+}
80	Sr	0 $^{+}$	-70311.5 <i>35</i>	106.3 m <i>15</i>	ϵ + β^{+}
81	Sr	1/2 $^{-}$	-71528.1 <i>31</i>	22.29 m <i>38</i>	ϵ + β^{+}
82	Sr	0 $^{+}$	-76010 <i>6</i>	25.35 d <i>2</i>	ϵ
83	Sr	7/2 $^{+}$	-76798 <i>7</i>	32.41 h <i>3</i>	ϵ + β^{+}
83m	Sr	1/2 $^{-}$	-76538 <i>7</i>	4.95 s <i>12</i>	IT
84	Sr	0 $^{+}$	-80649.6 <i>12</i>	0.56% <i>2</i>	
85	Sr	9/2 $^{+}$	-81103.3 <i>28</i>	64.849 d <i>4</i>	ϵ
85m	Sr	1/2 $^{-}$	-80864.5 <i>28</i>	67.63 m <i>4</i>	IT=86.6%, ϵ =13.4%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
86	Sr	0 ⁺	-84523.100 <i>5</i>	9.86% 20	
87	Sr	9/2 ⁺	-84880.076 <i>5</i>	7.0% 2	
87m	Sr	1/2 ⁻	-84491.548 <i>6</i>	2.815 h <i>11</i>	IT=99.70%, ε=0.30%
88	Sr	0 ⁺	-87921.629 <i>6</i>	82.58% 35	
89	Sr	5/2 ⁺	-86209.03 <i>9</i>	50.56 d <i>3</i>	β ⁻
90	Sr	0 ⁺	-85950.9 <i>14</i>	28.905 y <i>23</i>	β ⁻
91	Sr	5/2 ⁺	-83652 <i>5</i>	9.68 h <i>2</i>	β ⁻
92	Sr	0 ⁺	-82867.4 <i>34</i>	2.610 h <i>20</i>	β ⁻
93	Sr	5/2 ⁺	-80086 <i>8</i>	7.43 m <i>3</i>	β ⁻
94	Sr	0 ⁺	-78845.7 <i>17</i>	75.3 s <i>2</i>	β ⁻
95	Sr	1/2 ⁺	-75117 <i>6</i>	23.90 s <i>14</i>	β ⁻
96	Sr	0 ⁺	-72918 <i>8</i>	1.065 s <i>15</i>	β ⁻ , β ⁻ n?
97	Sr	1/2 ⁺	-68580.7 <i>34</i>	431 ms <i>5</i>	β ⁻ , β ⁻ n=0.03%
98	Sr	0 ⁺	-66422.4 <i>32</i>	653 ms <i>2</i>	β ⁻ , β ⁻ n=0.23%
99	Sr	3/2 ⁺	-62518.5 <i>47</i>	269 ms <i>1</i>	β ⁻ , β ⁻ n=0.100%
100	Sr	0 ⁺	-59818 <i>7</i>	201 ms <i>1</i>	β ⁻ , β ⁻ n=1.09%
101	Sr	(5/2 ⁻)	-55325 <i>8</i>	114 ms <i>2</i>	β ⁻ , β ⁻ n=2.52%
102	Sr	0 ⁺	-5.216×10 ⁴ <i>7</i>	72 ms <i>6</i>	β ⁻ , β ⁻ n=5.5%
103	Sr		-4.728×10 ⁴ <i>SY</i>	56 ms <i>9</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
104	Sr	0 ⁺	-4.376×10 ⁴ <i>SY</i>	51 ms <i>4</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
105	Sr		-3.82×10 ⁴ <i>SY</i>	39 ms <i>5</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
106	Sr	0 ⁺	-3.43×10 ⁴ <i>SY</i>	20 ms <i>+8-7</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
107	Sr		-2.83×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
108	Sr	0 ⁺			β ⁻ , β ⁻ n?, β ⁻ 2n?
76	Y		-3.825×10 ⁴ <i>SY</i>	24 ms <i>+12-6</i>	ε+β ⁺ ?, p?, εp?
77	Y		-4.644×10 ⁴ <i>SY</i>	57 ms <i>+22-12</i>	ε+β ⁺ ?, εp?, p?
78	Y	(0 ⁺)	-5.217×10 ⁴ <i>SY</i>	50 ms <i>3</i>	ε+β ⁺ , εp?
78m	Y	(5 ⁺)	-5.217×10 ⁴ <i>SY</i>	5.8 s <i>6</i>	ε+β ⁺ , εp?
79	Y	(5/2 ⁺)	-5.780×10 ⁴ <i>8</i>	14.8 s <i>6</i>	ε+β ⁺ , εp?
80	Y	(4 ⁻)	-61148 <i>6</i>	30.1 s <i>5</i>	ε+β ⁺ , εp?
80m	Y	(1 ⁻)	-60920 <i>6</i>	4.8 s <i>3</i>	IT=81%, ε+β ⁺ =19%, εp?
81	Y	(5/2 ⁺)	-65713 <i>5</i>	70.4 s <i>10</i>	ε+β ⁺
82	Y	1 ⁺	-68064 <i>5</i>	8.3 s <i>2</i>	ε+β ⁺
83	Y	(9/2 ⁺)	-72206 <i>19</i>	7.08 m <i>6</i>	ε+β ⁺
83m	Y	(3/2 ⁻)	-72144 <i>19</i>	2.85 m <i>2</i>	ε+β ⁺ =60%, IT=40%
84	Y	(6 ⁺)	-73894.4 <i>43</i>	40.1 m <i>11</i>	ε+β ⁺
84m	Y	1 ⁺	-73827.4 <i>43</i>	4.6 s <i>2</i>	ε+β ⁺
85	Y	(1/2 ⁻)	-77842 <i>19</i>	2.67 h <i>5</i>	ε+β ⁺
85m	Y	(9/2 ⁺)	-77822 <i>19</i>	4.9 h <i>1</i>	ε+β ⁺ ≈100%
86	Y	4 ⁻	-79283 <i>14</i>	14.74 h <i>2</i>	ε+β ⁺

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
86m	Y	(8 ⁺)	-79065 <i>14</i>	47.4 m <i>4</i>	IT=99.31%, ε+β ⁺ =0.69%
87	Y	1/2 ⁻	-83018.4 <i>11</i>	79.89 h <i>25</i>	ε+β ⁺
87m	Y	9/2 ⁺	-82637.6 <i>11</i>	13.38 h <i>3</i>	IT=98.43%, ε+β ⁺ =1.57%
88	Y	4 ⁻	-84299.0 <i>15</i>	106.626 d <i>20</i>	ε+β ⁺
89	Y	1/2 ⁻	-87711.20 <i>34</i>	100%	
89m	Y	9/2 ⁺	-86802.23 <i>34</i>	15.663 s <i>3</i>	IT
90	Y	2 ⁻	-86496.91 <i>35</i>	64.046 h <i>49</i>	β ⁻
90m	Y	7 ⁺	-85814.90 <i>36</i>	3.232 h <i>10</i>	IT=99.9982%, β ⁻ =0.0018%
91	Y	1/2 ⁻	-86351.3 <i>18</i>	58.56 d <i>9</i>	β ⁻
91m	Y	9/2 ⁺	-85795.7 <i>18</i>	49.72 m <i>9</i>	IT>98.5%, β ⁻ <1.5%
92	Y	2 ⁻	-84816 <i>9</i>	3.54 h <i>1</i>	β ⁻
93	Y	1/2 ⁻	-84227 <i>10</i>	10.17 h <i>8</i>	β ⁻
93m	Y	9/2 ⁺	-83468 <i>10</i>	0.82 s <i>4</i>	IT
94	Y	2 ⁻	-82351 <i>6</i>	18.7 m <i>1</i>	β ⁻
95	Y	1/2 ⁻	-81208 <i>7</i>	10.4 m <i>1</i>	β ⁻
96	Y	0 ⁻	-78330 <i>6</i>	5.35 s <i>4</i>	β ⁻
96m	Y	8 ⁺	-76789 <i>6</i>	9.7 s <i>2</i>	β ⁻
97	Y	(1/2 ⁻)	-76115 <i>7</i>	3.75 s <i>3</i>	β ⁻ , β ⁻ n=0.055%
97m	Y	(9/2 ⁺)	-75448 <i>7</i>	1.17 s <i>3</i>	β ⁻ >99.3%, β ⁻ n<0.08%, IT<0.7%
97n	Y	(27/2 ⁻)	-72593 <i>7</i>	142 ms <i>8</i>	IT=94.8%, β ⁻ =5.2%
98	Y	0 ⁻	-72289 <i>8</i>	548 ms <i>1</i>	β ⁻ , β ⁻ n=0.33%
98m	Y	(7 ⁺ , 6 ⁺)	-71823 <i>8</i>	2.32 s <i>8</i>	β ⁻ , β ⁻ n=3.4%, IT?
99	Y	(5/2 ⁺)	-70644 <i>7</i>	1.483 s <i>6</i>	β ⁻ , β ⁻ n=1.77%
100	Y	(1 ⁻)	-67321 <i>11</i>	729 ms <i>8</i>	β ⁻ , β ⁻ n=1.02%
100m	Y	4 ⁺	-67176 <i>19</i>	0.94 s <i>3</i>	β ⁻ , β ⁻ n?
101	Y	(5/2 ⁺)	-65055 <i>7</i>	429 ms <i>19</i>	β ⁻ , β ⁻ n=1.88%
102	Y	(5 ⁻)	-61172.6 <i>41</i>	396 ms <i>24</i>	β ⁻ , β ⁻ n=6.0%
102m	Y	(0, 1, 2)	-61172.6 <i>41</i>	300 ms <i>10</i>	β ⁻ , β ⁻ n=4.0%
103	Y	(5/2 ⁺)	-58457 <i>11</i>	236 ms <i>12</i>	β ⁻ , β ⁻ n=8%
104	Y		-5.408×10 ⁴ <i>SY</i>	197 ms <i>4</i>	β ⁻ , β ⁻ n=34%, β ⁻ 2n?
105	Y		-5.057×10 ⁴ <i>SY</i>	107 ms <i>+6-9</i>	β ⁻ , β ⁻ n<82%, β ⁻ 2n?
106	Y		-4.58×10 ⁴ <i>SY</i>	81 ms <i>+8-5</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
107	Y		-4.20×10 ⁴ <i>SY</i>	33.5 ms <i>30</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
108	Y		-3.68×10 ⁴ <i>SY</i>	30 ms <i>5</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
109	Y		-3.25×10 ⁴ <i>SY</i>	25 ms <i>5</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
110	Y				β ⁻ , β ⁻ n?, β ⁻ 2n?
111	Y				β ⁻ , β ⁻ n?, β ⁻ 2n?

A	El	J $^{\pi}$	Δ (keV)	T $_{1/2}$, Γ , Abundance	Decay Modes
77	Zr		-3.160 $\times 10^4$ SY		$\varepsilon + \beta^+?$, $\varepsilon p?$, p?
78	Zr	0 $^+$	-4.085 $\times 10^4$ SY		$\varepsilon + \beta^+?$, $\varepsilon p?$
79	Zr		-4.677 $\times 10^4$ SY	56 ms 30	$\varepsilon + \beta^+$, $\varepsilon p?$
80	Zr	0 $^+$	-5.476 $\times 10^4$ SY	4.6 s 6	$\varepsilon + \beta^+$, $\varepsilon p?$
81	Zr	(3/2 $^-$)	-5.752 $\times 10^4$ 9	5.0 s 2	$\varepsilon + \beta^+$, $\varepsilon p=0.12\%$
82	Zr	0 $^+$	-63614.1 16	32 s 5	$\varepsilon + \beta^+$, $\varepsilon p?$
83	Zr	(1/2 $^-$)	-65912 6	41.5 s 21	$\varepsilon + \beta^+$, $\varepsilon p?$
84	Zr	0 $^+$	-71422 5	26.0 m 6	$\varepsilon + \beta^+$
85	Zr	(7/2 $^+$)	-73175 6	7.86 m 4	$\varepsilon + \beta^+$
85m	Zr	(1/2 $^-$)	-72883 6	10.9 s 3	$\varepsilon + \beta^+ > 0\%$, IT
86	Zr	0 $^+$	-77969.0 36	16.5 h 1	$\varepsilon + \beta^+$
87	Zr	9/2 $^+$	-79347.1 41	1.68 h 1	$\varepsilon + \beta^+$
87m	Zr	1/2 $^-$	-79011.3 42	14.0 s 2	IT
88	Zr	0 $^+$	-83629 5	83.4 d 3	ε
89	Zr	9/2 $^+$	-84878.0 28	78.364 h 15	$\varepsilon + \beta^+$
89m	Zr	1/2 $^-$	-84290.2 28	4.161 m 12	IT=93.77%, $\varepsilon + \beta^+ = 6.23\%$
90	Zr	0 $^+$	-88772.55 12	51.45% 4	
90m	Zr	5 $^-$	-86453.55 12	809.2 ms 20	IT
91	Zr	5/2 $^+$	-87895.59 10	11.22% 5	
92	Zr	0 $^+$	-88459.02 9	17.15% 3	
93	Zr	5/2 $^+$	-87122.03 46	1.61 $\times 10^6$ y 5	β^-
94	Zr	0 $^+$	-87269.33 16	17.38% 4	
95	Zr	5/2 $^+$	-85659.9 9	64.032 d 6	β^-
96	Zr	0 $^+$	-85438.86 11	2.29 $\times 10^{19}$ y 19 2.80% 2	2 β^-
97	Zr	1/2 $^+$	-82936.69 12	16.749 h 8	β^-
98	Zr	0 $^+$	-81282 8	30.7 s 4	β^-
99	Zr	(1/2 $^+$)	-77617 10	2.1 s 1	β^-
100	Zr	0 $^+$	-76373 8	7.1 s 4	β^-
101	Zr	3/2 $^+$	-73161 8	2.32 s 7	β^-
102	Zr	0 $^+$	-71581 9	2.01 s 8	β^-
103	Zr	(5/2 $^-$)	-67809 9	1.38 s 7	β^- , $\beta^- n < 1\%$
104	Zr	0 $^+$	-65718 9	922 ms 28	β^- , $\beta^- n < 1\%$
105	Zr		-61458 12	670 ms 28	β^- , $\beta^- n < 2\%$
106	Zr	0 $^+$	-5.875 $\times 10^4$ SY	178 ms 6	β^- , $\beta^- n < 7\%$
107	Zr		-5.402 $\times 10^4$ SY	146 ms 4	β^- , $\beta^- n \leq 23\%$
108	Zr	0 $^+$	-5.095 $\times 10^4$ SY	77.4 ms 22	β^- , $\beta^- n?$
109	Zr		-4.57 $\times 10^4$ SY	56 ms 3	β^- , $\beta^- n?$, $\beta^- 2n?$
110	Zr	0 $^+$	-4.22 $\times 10^4$ SY	37.6 ms 17	β^- , $\beta^- n?$, $\beta^- 2n?$
111	Zr		-3.65 $\times 10^4$ SY	24 ms 5	β^- , $\beta^- n?$, $\beta^- 2n?$
112	Zr	0 $^+$	-3.24 $\times 10^4$ SY	30 ms + 30-10	β^- , $\beta^- n?$, $\beta^- 2n?$
113	Zr		-2.634 $\times 10^4$ SY		β^- , $\beta^- n?$, $\beta^- 2n?$
81	Nb		-4.636 $\times 10^4$ SY	<40 ns	$\varepsilon + \beta^+?$, $\varepsilon p?$, p?

A	El	J $^{\pi}$	$\Delta(\text{keV})$	T $_{1/2}$, Γ , Abundance	Decay Modes
82	Nb	(0 $^{+}$)	-5.181 $\times 10^4$ <i>SY</i>	50 ms <i>3</i>	$\varepsilon + \beta^{+}$, εp ?
83	Nb	(5/2 $^{+}$)	-5.761 $\times 10^4$ <i>16</i>	3.9 s <i>2</i>	$\varepsilon + \beta^{+}$, εp ?
84	Nb	(1 $^{+}$)	-61193.84 <i>40</i>	9.8 s <i>9</i>	$\varepsilon + \beta^{+}$, εp ?
85	Nb	(9/2 $^{+}$)	-66279.7 <i>41</i>	20.5 s <i>12</i>	$\varepsilon + \beta^{+}$
85m	Nb	(1/2 $^{-}$, 3/2 $^{-}$)	-66279.7 <i>41</i>	3.3 s <i>9</i>	$\varepsilon + \beta^{+}$?, IT?
86	Nb	(6 $^{+}$)	-69134 <i>5</i>	88 s <i>1</i>	$\varepsilon + \beta^{+}$
87	Nb	(1/2 $^{-}$)	-73874 <i>7</i>	3.7 m <i>1</i>	$\varepsilon + \beta^{+}$
87m	Nb	(9/2 $^{+}$)	-73871 <i>7</i>	2.6 m <i>1</i>	$\varepsilon + \beta^{+}$
88	Nb	(8 $^{+}$)	-7.617 $\times 10^4$ <i>6</i>	14.50 m <i>9</i>	$\varepsilon + \beta^{+}$
88m	Nb	(4 $^{+}$)	-7.617 $\times 10^4$ <i>6</i>	7.7 m <i>1</i>	$\varepsilon + \beta^{+}$
89	Nb	(9/2 $^{+}$)	-80626 <i>24</i>	2.03 h <i>7</i>	$\varepsilon + \beta^{+}$
89m	Nb	(1/2 $^{-}$)	-80611 <i>28</i>	66 m <i>2</i>	$\varepsilon + \beta^{+}$
90	Nb	8 $^{+}$	-82661.5 <i>33</i>	14.60 h <i>5</i>	$\varepsilon + \beta^{+}$
90m	Nb	4 $^{-}$	-82536.9 <i>33</i>	18.91 s <i>5</i>	IT
91	Nb	9/2 $^{+}$	-86638.0 <i>29</i>	6.8 $\times 10^2$ y <i>13</i>	$\varepsilon + \beta^{+}$
91m	Nb	1/2 $^{-}$	-86533.4 <i>29</i>	60.86 d <i>22</i>	IT=96.6%, $\varepsilon + \beta^{+}$ =3.4%
92	Nb	7 $^{+}$	-86453.3 <i>18</i>	3.47 $\times 10^7$ y <i>24</i>	$\varepsilon + \beta^{+}$
92m	Nb	(2 $^{+}$)	-86317.8 <i>18</i>	10.12 d <i>2</i>	$\varepsilon + \beta^{+}$
93	Nb	9/2 $^{+}$	-87212.8 <i>15</i>	100%	
93m	Nb	1/2 $^{-}$	-87182.1 <i>15</i>	16.12 y <i>12</i>	IT
94	Nb	6 $^{+}$	-86369.1 <i>15</i>	2.038 $\times 10^4$ y <i>39</i>	β^{-}
94m	Nb	3 $^{+}$	-86328.2 <i>15</i>	6.263 m <i>4</i>	IT=99.50%, β^{-} =0.50%
95	Nb	9/2 $^{+}$	-86786.3 <i>5</i>	34.991 d <i>10</i>	β^{-}
95m	Nb	1/2 $^{-}$	-86550.6 <i>5</i>	3.61 d <i>3</i>	IT=94.4%, β^{-} =5.6%
96	Nb	6 $^{+}$	-85602.83 <i>15</i>	23.35 h <i>5</i>	β^{-}
97	Nb	9/2 $^{+}$	-85602.8 <i>42</i>	72.1 m <i>4</i>	β^{-}
97m	Nb	1/2 $^{-}$	-84859.4 <i>42</i>	58.7 s <i>18</i>	IT
98	Nb	1 $^{+}$	-83525 <i>5</i>	2.86 s <i>6</i>	β^{-}
98m	Nb	(5 $^{+}$)	-83441 <i>6</i>	51.1 m <i>3</i>	β^{-} >99.8%, IT<0.2%
99	Nb	9/2 $^{+}$	-82335 <i>12</i>	15.0 s <i>2</i>	β^{-}
99m	Nb	1/2 $^{-}$	-81970 <i>12</i>	2.5 m <i>1</i>	β^{-} >96.2%, IT<3.8%
100	Nb	1 $^{+}$	-79791 <i>8</i>	1.4 s <i>1</i>	β^{-}
100m	Nb	(5 $^{+}$)	-79477 <i>24</i>	2.99 s <i>11</i>	β^{-}
101	Nb	5/2 $^{+}$	-78891.5 <i>37</i>	7.2 s <i>2</i>	β^{-}
102	Nb	(4 $^{+}$)	-76298.3 <i>25</i>	4.3 s <i>4</i>	β^{-}
102m	Nb	1 $^{+}$	-76205 <i>23</i>	1.31 s <i>16</i>	β^{-}
103	Nb	(5/2 $^{+}$)	-75028.7 <i>39</i>	1.36 s <i>5</i>	β^{-} , βn ?
104	Nb	(1 $^{+}$)	-71811.0 <i>18</i>	4.9 s <i>3</i>	β^{-} , βn =0.06%
104m	Nb		-71596 <i>12</i>	0.98 s <i>5</i>	β^{-} , βn =0.05%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
105	Nb	(5/2 ⁺)	-69915.5 <i>40</i>	2.92 s <i>9</i>	β ⁻ , β ⁻ n=1.7%
106	Nb	(2)	-66202.7 <i>14</i>	1.097 s <i>19</i>	β ⁻ , β ⁻ n=4.8%
107	Nb	(5/2 ⁺)	-63724 <i>8</i>	287 ms <i>8</i>	β ⁻ , β ⁻ n=7.4%
108	Nb	(2 ⁺)	-59545 <i>8</i>	194 ms <i>6</i>	β ⁻ , β ⁻ n=6.3%, β ⁻ 2n?
109	Nb		-5.669×10 ⁴ <i>43</i>	107 ms <i>5</i>	β ⁻ , β ⁻ n=31%
110	Nb	(6 ⁻)	-5.23×10 ⁴ <i>8</i>	75 ms <i>1</i>	β ⁻ , β ⁻ n=40%, β ⁻ 2n?
110m	Nb	(2 ⁻)	-5.23×10 ⁴ <i>8</i>	94 ms <i>9</i>	β ⁻ , β ⁻ n=40%, β ⁻ 2n?
111	Nb		-4.896×10 ⁴ <i>SY</i>	54 ms <i>2</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
112	Nb		-4.407×10 ⁴ <i>SY</i>	38 ms <i>2</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
113	Nb		-4.021×10 ⁴ <i>SY</i>	32 ms <i>4</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
114	Nb		-3.50×10 ⁴ <i>SY</i>	17 ms <i>5</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
115	Nb		-3.09×10 ⁴ <i>SY</i>	23 ms <i>8</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
116	Nb		-2.523×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
117	Nb				β ⁻ , β ⁻ n?, β ⁻ 2n?
81	Mo		-3.15×10 ⁴ <i>SY</i>		ε+β ⁺ ?, εp?
82	Mo	0 ⁺	-4.037×10 ⁴ <i>SY</i>		ε+β ⁺ , εp?
83	Mo		-4.634×10 ⁴ <i>SY</i>	6 ms <i>+30-3</i>	ε+β ⁺ , εp?
84	Mo	0 ⁺	-5.417×10 ⁴ <i>SY</i>	2.3 s <i>4</i>	ε+β ⁺ , εp?
85	Mo	(1/2 ⁺)	-57510 <i>16</i>	3.2 s <i>2</i>	ε+β ⁺ , εp≈0.14%
86	Mo	0 ⁺	-64110.9 <i>29</i>	19.1 s <i>3</i>	ε+β ⁺
87	Mo	(7/2 ⁺)	-66884.8 <i>29</i>	14.1 s <i>3</i>	ε+β ⁺ , εp=15%
87m	Mo	(1/2 ⁺)	-66575 <i>30</i>		ε+β ⁺ ?, εp?
88	Mo	0 ⁺	-72686.6 <i>38</i>	8.0 m <i>2</i>	ε+β ⁺
89	Mo	(9/2 ⁺)	-75014.9 <i>39</i>	2.04 m <i>11</i>	ε+β ⁺
89m	Mo	(1/2 ⁻)	-74627.4 <i>39</i>	190 ms <i>15</i>	IT
90	Mo	0 ⁺	-80172.5 <i>35</i>	5.56 h <i>9</i>	ε+β ⁺
91	Mo	9/2 ⁺	-82209 <i>6</i>	15.49 m <i>1</i>	ε+β ⁺
91m	Mo	1/2 ⁻	-81556 <i>6</i>	65.0 s <i>7</i>	ε+β ⁺ =50.0%, IT=50.0%
92	Mo	0 ⁺	-86808.59 <i>16</i>	14.65% 11	
93	Mo	5/2 ⁺	-86807.08 <i>18</i>	4.0×10 ³ y <i>8</i>	ε
93m	Mo	21/2 ⁺	-84382.13 <i>19</i>	6.85 d <i>7</i>	IT=99.88%, ε+β ⁺ =0.12%
94	Mo	0 ⁺	-88414.08 <i>14</i>	9.187% 33	
95	Mo	5/2 ⁺	-87711.87 <i>12</i>	15.873% 30	
96	Mo	0 ⁺	-88794.89 <i>12</i>	16.673% 8	
97	Mo	5/2 ⁺	-87544.70 <i>17</i>	9.582% 15	
98	Mo	0 ⁺	-88115.98 <i>17</i>	24.29% 8	
99	Mo	1/2 ⁺	-85970.11 <i>23</i>	65.936 h <i>9</i>	β ⁻
100	Mo	0 ⁺	-86193.03 <i>30</i>	7.07×10 ¹⁸ y <i>+16-15</i> 9.74% 7	2β ⁻
101	Mo	1/2 ⁺	-83519.95 <i>31</i>	14.61 m <i>3</i>	β ⁻
102	Mo	0 ⁺	-83561 <i>8</i>	11.3 m <i>2</i>	β ⁻

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
103	Mo	(3/2 ⁺)	-80954 <i>9</i>	67.5 s <i>15</i>	β ⁻
104	Mo	0 ⁺	-80344 <i>9</i>	59.4 s <i>11</i>	β ⁻
105	Mo	(5/2 ⁻)	-77331 <i>9</i>	36.3 s <i>8</i>	β ⁻
106	Mo	0 ⁺	-76128 <i>9</i>	8.73 s <i>12</i>	β ⁻
107	Mo	1/2 ⁺	-72545 <i>9</i>	3.5 s <i>5</i>	β ⁻
108	Mo	0 ⁺	-70749 <i>9</i>	1.106 s <i>10</i>	β ⁻
109	Mo	1/2 ⁺	-66659 <i>11</i>	700 ms <i>14</i>	β ⁻ , β ⁻ n=1.3%
110	Mo	0 ⁺	-64536 <i>24</i>	287 ms <i>10</i>	β ⁻ , β ⁻ n=2.0%
111	Mo	(1/2 ⁺ , 3/2 ⁺)	-59940 <i>13</i>	186 ms <i>9</i>	β ⁻ , β ⁻ n<12%
111m	Mo	(7/2 ⁻ , 9/2 ⁻)	-59940 <i>13</i>	≈200 ms	β ⁻ , β ⁻ n?
112	Mo	0 ⁺	-5.748×10 ⁴ <i>SY</i>	125 ms <i>5</i>	β ⁻ , β ⁻ n?
113	Mo		-5.265×10 ⁴ <i>SY</i>	80 ms <i>2</i>	β ⁻ , β ⁻ n?
114	Mo	0 ⁺	-4.968×10 ⁴ <i>SY</i>	58 ms <i>2</i>	β ⁻ , β ⁻ n?
115	Mo		-4.455×10 ⁴ <i>SY</i>	45.6 ms <i>20</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
116	Mo	0 ⁺	-4.12×10 ⁴ <i>SY</i>	32 ms <i>4</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
117	Mo		-3.57×10 ⁴ <i>SY</i>	22 ms <i>5</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
118	Mo	0 ⁺	-3.24×10 ⁴ <i>SY</i>	19 ms <i>+7-4</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
119	Mo		-2.658×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
85	Tc		-4.585×10 ⁴ <i>SY</i>	<100 ns	p?
86	Tc	(0 ⁺)	-5.157×10 ⁴ <i>SY</i>	55 ms <i>7</i>	ε+β ⁺ , εp?
87	Tc		-57690.1 <i>42</i>	2.1 s <i>2</i>	ε+β ⁺ , εp<0.7%
88	Tc	(2 ⁺)	-61670.3 <i>41</i>	6.4 s <i>8</i>	ε+β ⁺ , εp?
88m	Tc	(6 ⁺)	-61600 <i>5</i>	5.8 s <i>2</i>	ε+β ⁺ , εp?
89	Tc	(9/2 ⁺)	-67394.9 <i>38</i>	12.8 s <i>9</i>	ε+β ⁺
89m	Tc	(1/2 ⁻)	-67332.3 <i>39</i>	12.9 s <i>8</i>	ε+β ⁺ ≈100%
90	Tc	(8 ⁺)	-70724.7 <i>10</i>	49.2 s <i>4</i>	ε+β ⁺
90m	Tc	1 ⁺	-70580.6 <i>20</i>	8.7 s <i>2</i>	ε+β ⁺
91	Tc	(9/2 ⁺)	-75986.7 <i>24</i>	3.14 m <i>2</i>	ε+β ⁺
91m	Tc	(1/2 ⁻)	-75847.4 <i>24</i>	3.3 m <i>1</i>	ε+β ⁺
92	Tc	(8 ⁺)	-78925.7 <i>31</i>	4.23 m <i>15</i>	ε+β ⁺
93	Tc	9/2 ⁺	-83606.1 <i>10</i>	2.78 h <i>5</i>	ε+β ⁺
93m	Tc	1/2 ⁻	-83214.3 <i>10</i>	43.4 m <i>6</i>	IT=77.4%, ε+β ⁺ =22.6%
94	Tc	7 ⁺	-84158.3 <i>41</i>	293 m <i>1</i>	ε+β ⁺
94m	Tc	(2 ⁺)	-84082 <i>5</i>	51.0 m <i>7</i>	ε+β ⁺ ≈100%, IT<0.18%
95	Tc	9/2 ⁺	-86021 <i>5</i>	19.258 h <i>26</i>	ε+β ⁺
95m	Tc	1/2 ⁻	-85982 <i>5</i>	61.94 d <i>7</i>	ε+β ⁺ =96.12%, IT=3.88%
96	Tc	7 ⁺	-85822 <i>5</i>	4.27 d <i>5</i>	ε+β ⁺
96m	Tc	4 ⁺	-85787 <i>5</i>	51.6 m <i>9</i>	IT=95.90%, ε+β ⁺ =4.10%
97	Tc	9/2 ⁺	-87224.4 <i>41</i>	4.21×10 ⁶ y <i>16</i>	ε

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
97m	Tc	1/2 ⁻	-87127.9 <i>41</i>	91.0 d <i>6</i>	IT=96.06%, ε=3.94%
98	Tc	(6) ⁺	-86432.2 <i>34</i>	4.20×10 ⁶ y <i>30</i>	β ⁻
99	Tc	9/2 ⁺	-87327.9 <i>9</i>	2.111×10 ⁵ y <i>12</i>	β ⁻
99m	Tc	1/2 ⁻	-87185.2 <i>9</i>	6.0073 h <i>7</i>	IT=99.9963%, β ⁻ =0.0037%
100	Tc	1 ⁺	-86021.0 <i>14</i>	15.65 s <i>12</i>	β ⁻ =99.9974%, ε=0.0026%
101	Tc	9/2 ⁺	-86345 <i>24</i>	14.12 m <i>9</i>	β ⁻
102	Tc	1 ⁺	-84573 <i>9</i>	5.28 s <i>15</i>	β ⁻
102m	Tc	(4, 5)	-84573 <i>9</i>	4.35 m <i>7</i>	β ⁻ ≈100%, IT?
103	Tc	5/2 ⁺	-84604 <i>10</i>	54.2 s <i>8</i>	β ⁻
104	Tc	(3 ⁺)	-82499 <i>25</i>	18.2 m <i>2</i>	β ⁻
105	Tc	(3/2 ⁻)	-82286 <i>35</i>	7.64 m <i>6</i>	β ⁻
106	Tc	(1, 2)	-79776 <i>12</i>	35.7 s <i>5</i>	β ⁻
107	Tc	(3/2 ⁻)	-78750 <i>9</i>	21.2 s <i>2</i>	β ⁻
108	Tc	(2) ⁺	-75923 <i>9</i>	5.15 s <i>7</i>	β ⁻
109	Tc	(5/2 ⁺)	-74283 <i>10</i>	0.88 s <i>3</i>	β ⁻ , β ⁻ n=0.08%
110	Tc	(2, 3 ⁺)	-71035 <i>9</i>	0.911 s <i>13</i>	β ⁻ , β ⁻ n=0.04%
111	Tc	(5/2 ⁺)	-69025 <i>11</i>	350 ms <i>21</i>	β ⁻ , β ⁻ n=0.85%
112	Tc	(2 ⁺)	-65259 <i>6</i>	323 ms <i>6</i>	β ⁻ , β ⁻ n=1.5%
113	Tc	(5/2 ⁺)	-62811.5 <i>34</i>	152 ms <i>8</i>	β ⁻ , β ⁻ n=2.1%
114	Tc	(4)	-5.860×10 ⁴ <i>43</i>	118 ms <i>8</i>	β ⁻ , β ⁻ n=1.3%
114m	Tc	(1 ⁺)	-5.860×10 ⁴ <i>43</i>	90 ms <i>20</i>	β ⁻ , β ⁻ n=1.3%
115	Tc		-5.580×10 ⁴ <i>SY</i>	78 ms <i>2</i>	β ⁻ , β ⁻ n=19%
116	Tc		-5.121×10 ⁴ <i>SY</i>	57 ms <i>3</i>	β ⁻ , β ⁻ n=17%, β ⁻ 2n?
117	Tc		-4.814×10 ⁴ <i>SY</i>	44.5 ms <i>30</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
118	Tc		-4.329×10 ⁴ <i>SY</i>	30 ms <i>4</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
119	Tc		-4.02×10 ⁴ <i>SY</i>	22 ms <i>3</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
120	Tc		-3.50×10 ⁴ <i>SY</i>	21 ms <i>5</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
121	Tc		-3.15×10 ⁴ <i>SY</i>	22 ms <i>6</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
122	Tc		-2.631×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
85	Ru		-3.06×10 ⁴ <i>SY</i>		p?, ε+β ⁺ ?, εp?
86	Ru	0 ⁺	-3.977×10 ⁴ <i>SY</i>		ε+β ⁺ ?, εp?
87	Ru		-4.573×10 ⁴ <i>SY</i>		ε+β ⁺ ?, εp?
88	Ru	0 ⁺	-5.434×10 ⁴ <i>SY</i>	1.4 s <i>3</i>	ε+β ⁺ , εp<3.6%
89	Ru	(9/2 ⁺)	-58369 <i>24</i>	1.33 s <i>6</i>	ε+β ⁺ , εp=3.1%
90	Ru	0 ⁺	-64883.8 <i>37</i>	11.7 s <i>9</i>	ε+β ⁺ , εp?
91	Ru	(9/2 ⁺)	-68239.8 <i>22</i>	8.00 s <i>40</i>	ε+β ⁺ , εp?
91m	Ru	(1/2 ⁻)	-67808 <i>31</i>	7.6 s <i>8</i>	ε+β ⁺ ≈100%, εp?, IT?
92	Ru	0 ⁺	-74301.2 <i>27</i>	3.65 m <i>5</i>	ε+β ⁺
93	Ru	(9/2 ⁺)	-77216.7 <i>21</i>	59.7 s <i>6</i>	ε+β ⁺

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
93m	Ru	(1/2) ⁻	-76482.3 <i>21</i>	10.8 s <i>3</i>	ε+β ⁺ =78.0%, IT=22.0%, εp=0.027%
94	Ru	0 ⁺	-82583.6 <i>31</i>	52.1 m <i>5</i>	ε+β ⁺
95	Ru	5/2 ⁺	-83458 <i>10</i>	1.607 h <i>9</i>	ε+β ⁺
96	Ru	0 ⁺	-86080.39 <i>17</i>	5.54% 14	
97	Ru	5/2 ⁺	-86120.6 <i>28</i>	2.8376 d <i>10</i>	ε+β ⁺
98	Ru	0 ⁺	-88225 <i>6</i>	1.87% 3	
99	Ru	5/2 ⁺	-87625.39 <i>34</i>	12.76% 14	
100	Ru	0 ⁺	-89227.39 <i>34</i>	12.60% 7	
101	Ru	5/2 ⁺	-87958.11 <i>41</i>	17.06% 2	
102	Ru	0 ⁺	-89106.44 <i>42</i>	31.55% 14	
103	Ru	3/2 ⁺	-87267.17 <i>44</i>	39.247 d <i>11</i>	β ⁻
104	Ru	0 ⁺	-88095.8 <i>25</i>	18.62% 27	
105	Ru	3/2 ⁺	-85934.5 <i>25</i>	4.44 h <i>1</i>	β ⁻
106	Ru	0 ⁺	-86323 <i>5</i>	371.8 d <i>18</i>	β ⁻
107	Ru	(5/2) ⁺	-83863 <i>9</i>	3.73 m <i>6</i>	β ⁻
108	Ru	0 ⁺	-83661 <i>9</i>	4.55 m <i>4</i>	β ⁻
109	Ru	(5/2) ⁺	-80738 <i>9</i>	34.4 s <i>2</i>	β ⁻
110	Ru	0 ⁺	-80073 <i>9</i>	12.04 s <i>17</i>	β ⁻
111	Ru	(5/2) ⁺	-76785 <i>10</i>	2.12 s <i>7</i>	β ⁻
112	Ru	0 ⁺	-75631 <i>10</i>	1.75 s <i>7</i>	β ⁻
113	Ru	(1/2) ⁺	-71868 <i>38</i>	0.80 s <i>5</i>	β ⁻
113m	Ru	(7/2) ⁻	-71738 <i>49</i>	510 ms <i>30</i>	β ⁻ ≈100%, IT?
114	Ru	0 ⁺	-70221.2 <i>36</i>	543 ms <i>34</i>	β ⁻ , β ⁻ n?
115	Ru	(1/2 ⁺ , 3/2 ⁺)	-66105 <i>25</i>	318 ms <i>19</i>	β ⁻ , β ⁻ n?
116	Ru	0 ⁺	-64068.9 <i>37</i>	203 ms <i>5</i>	β ⁻ , β ⁻ n<0.8%
117	Ru		-5.949×10 ⁴ <i>43</i>	152 ms <i>3</i>	β ⁻ , β ⁻ n=2.4%
118	Ru	0 ⁺	-5.700×10 ⁴ <i>SY</i>	99 ms <i>3</i>	β ⁻ , β ⁻ n<4.6%
119	Ru		-5.208×10 ⁴ <i>SY</i>	69.2 ms <i>20</i>	β ⁻ , β ⁻ n=6%
120	Ru	0 ⁺	-4.972×10 ⁴ <i>SY</i>	45 ms <i>2</i>	β ⁻ , β ⁻ n=6%
121	Ru		-4.462×10 ⁴ <i>SY</i>	30 ms <i>3</i>	β ⁻ , β ⁻ n=13%, β ⁻ 2n?
122	Ru	0 ⁺	-4.18×10 ⁴ <i>SY</i>	25 ms <i>1</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
123	Ru		-3.66×10 ⁴ <i>SY</i>	19 ms <i>2</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
124	Ru	0 ⁺	-3.36×10 ⁴ <i>SY</i>	15 ms <i>3</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
125	Ru		-2.837×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
89	Rh		-4.565×10 ⁴ <i>SY</i>	<120 ns	ε+β ⁺ ?, εp?, p?
90	Rh	(0 ⁺)	-5.163×10 ⁴ <i>SY</i>	29 ms <i>3</i>	ε+β ⁺ , εp<0.7%
90m	Rh	(6, 7, 8)	-5.163×10 ⁴ <i>SY</i>	560 ms <i>20</i>	ε+β ⁺ , εp=9.6%
91	Rh	(9/2 ⁺)	-5.857×10 ⁴ <i>SY</i>	1.47 s <i>22</i>	ε+β ⁺ , εp=1.3%
91m	Rh	(1/2 ⁻)	-5.840×10 ⁴ <i>SY</i>	≈1.5 s	ε+β ⁺ ?, IT?, εp?
92	Rh	(6 ⁺)	-62999.1 <i>44</i>	5.64 s <i>6</i>	ε+β ⁺ , εp=2.1%
92m	Rh	(2 ⁺)	-62999.1 <i>44</i>	3.18 s <i>22</i>	ε+β ⁺ , εp=1.7%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
93	Rh	(9/2 ⁺)	-69011.8 <i>26</i>	12.2 s <i>7</i>	ε+β ⁺
93m	Rh	(1/2 ⁻)	-68745 <i>48</i>		ε+β ⁺ ?
94	Rh	(4 ⁺)	-72907.6 <i>34</i>	70.6 s <i>6</i>	ε+β ⁺ , εp=1.8%
94m	Rh	(8 ⁺)	-72907.6 <i>34</i>	25.8 s <i>2</i>	ε+β ⁺
95	Rh	9/2 ⁺	-78340.6 <i>39</i>	5.02 m <i>10</i>	ε+β ⁺
95m	Rh	(1/2 ⁻)	-77797.3 <i>39</i>	1.96 m <i>4</i>	IT=88%, ε+β ⁺ =12%
96	Rh	6 ⁺	-79688 <i>10</i>	9.57 m <i>23</i>	ε+β ⁺
96m	Rh	3 ⁺	-79636 <i>10</i>	1.51 m <i>2</i>	ε+β ⁺ =40%, IT=60%
97	Rh	9/2 ⁺	-82598 <i>35</i>	30.8 m <i>6</i>	ε+β ⁺
97m	Rh	1/2 ⁻	-82339 <i>35</i>	45.8 m <i>17</i>	ε+β ⁺ =94.4%, IT=5.6%
98	Rh	(2 ⁺)	-83175 <i>12</i>	8.74 m <i>16</i>	ε+β ⁺
98m	Rh	(5 ⁺)	-83119 <i>12</i>	3.6 m <i>2</i>	IT=89%, ε+β ⁺ =11%
99	Rh	1/2 ⁻	-85585 <i>19</i>	16.1 d <i>2</i>	ε+β ⁺
99m	Rh	9/2 ⁺	-85520 <i>19</i>	4.7 h <i>1</i>	ε+β ⁺ >99.84%, IT<0.16%
100	Rh	1 ⁻	-85591 <i>18</i>	20.5 h <i>3</i>	ε+β ⁺
100m	Rh	(5 ⁺)	-85484 <i>18</i>	4.6 m <i>2</i>	IT≈98.3%, ε+β ⁺ ≈1.7%
101	Rh	1/2 ⁻	-87412 <i>6</i>	4.07 y <i>5</i>	ε
101m	Rh	9/2 ⁺	-87255 <i>6</i>	4.34 d <i>1</i>	ε=92.80%, IT=7.20%
102	Rh	(2 ⁻)	-86783 <i>6</i>	207.3 d <i>12</i>	ε+β ⁺ =78%, β ⁻ =22%
102m	Rh	6 ⁽⁺⁾	-86643 <i>6</i>	3.47 y <i>4</i>	ε+β ⁺ =99.767%, IT=0.233%
103	Rh	1/2 ⁻	-88031.7 <i>23</i>	100%	
103m	Rh	7/2 ⁺	-87992.0 <i>23</i>	56.118 m <i>9</i>	IT
104	Rh	1 ⁺	-86959.3 <i>23</i>	42.3 s <i>4</i>	β ⁻ =99.55%, ε+β ⁺ =0.45%
104m	Rh	5 ⁺	-86830.4 <i>23</i>	4.36 m <i>3</i>	IT=99.87%, β ⁻ =0.13%
105	Rh	7/2 ⁺	-87851.3 <i>25</i>	35.341 h <i>22</i>	β ⁻
105m	Rh	1/2 ⁻	-87721.5 <i>25</i>	42.8 s <i>3</i>	IT
106	Rh	1 ⁺	-86363 <i>5</i>	30.07 s <i>35</i>	β ⁻
106m	Rh	(6 ⁺)	-86226 <i>14</i>	131 m <i>2</i>	β ⁻
107	Rh	7/2 ⁺	-86864 <i>12</i>	21.7 m <i>7</i>	β ⁻
108	Rh	1 ⁺	-85031 <i>14</i>	17.0 s <i>4</i>	β ⁻
108m	Rh	(5 ⁺)	-85031 <i>14</i>	5.9 m <i>2</i>	β ⁻ , IT?
109	Rh	7/2 ⁺	-84999.3 <i>40</i>	80.8 s <i>6</i>	β ⁻
110	Rh	(1 ⁺)	-82829 <i>18</i>	3.3 s <i>1</i>	β ⁻

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
110m	Rh	(6 ⁺)	-82791 18	28.5 s 15	β ⁻
111	Rh	(7/2 ⁺)	-82304 7	11 s 1	β ⁻
112	Rh	(1 ⁺)	-79731 44	3.5 s 4	β ⁻
112m	Rh	(6 ⁺)	-79693 44	6.90 s 7	β ⁻
113	Rh	(7/2 ⁺)	-78767 7	2.80 s 12	β ⁻
114	Rh	1 ⁺	-7.571×10 ⁴ 7	1.82 s 5	β ⁻
114m	Rh	(7 ⁻)	-7.560×10 ⁴ 7	1.85 s 5	β ⁻
115	Rh	(7/2 ⁺)	-74229 7	0.99 s 5	β ⁻ , β ⁻ n?
116	Rh	1 ⁺	-7.074×10 ⁴ 7	685 ms 38	β ⁻ , β ⁻ n<2.1%
116m	Rh	(6 ⁻)	-7.061×10 ⁴ 7	0.57 s 5	β ⁻ , β ⁻ n<2.1%
117	Rh	(7/2 ⁺)	-68897 9	421 ms 30	β ⁻ , β ⁻ n<7.6%
118	Rh	(1 ⁺)	-64887 24	286 ms 8	β ⁻ , β ⁻ n=2.4%
118m	Rh	(6, 7, 8)	-64698 25	310 ms 30	β ⁻ , β ⁻ n=2.4%
119	Rh	(7/2 ⁺)	-62823 9	189 ms 5	β ⁻ , β ⁻ n=4.1%
120	Rh		-5.862×10 ⁴ SY	133 ms 4	β ⁻ , β ⁻ n=7.2%
121	Rh		-5.63×10 ⁴ 6	73 ms 2	β ⁻ , β ⁻ n=13.4%
122	Rh		-5.188×10 ⁴ SY	52.3 ms 15	β ⁻ , β ⁻ n=11.3%, β ⁻ 2n?
123	Rh		-4.919×10 ⁴ SY	42.2 ms 16	β ⁻ , β ⁻ n=24.2%, β ⁻ 2n?
124	Rh		-4.471×10 ⁴ SY	32 ms 2	β ⁻ , β ⁻ n=28%, β ⁻ 2n?
125	Rh		-4.18×10 ⁴ SY	26.5 ms 20	β ⁻ , β ⁻ n?, β ⁻ 2n?
126	Rh		-3.72×10 ⁴ SY	19 ms 3	β ⁻ , β ⁻ n?, β ⁻ 2n?
127	Rh		-3.37×10 ⁴ SY	20 ms +20-7	β ⁻ , β ⁻ n?, β ⁻ 2n?
128	Rh		-2.734×10 ⁴ SY		β ⁻ , β ⁻ n?, β ⁻ 2n?
90	Pd	0 ⁺	-3.971×10 ⁴ SY		ε+β ⁺ ?, εp?, 2p?
91	Pd		-4.617×10 ⁴ SY	32 ms 3	ε+β ⁺ , εp=3.0%
92	Pd	0 ⁺	-5.478×10 ⁴ 35	1.06 s 3	ε+β ⁺ , εp=1.6%
93	Pd	(9/2 ⁺)	-5.898×10 ⁴ 37	1.17 s 2	ε+β ⁺ , εp=7.4%
94	Pd	0 ⁺	-66102.3 43	9.4 s 2	ε+β ⁺ , εp<0.13%
95	Pd	(9/2 ⁺)	-69965.9 30	7.4 s 5	ε+β ⁺ , εp=0.23%
95m	Pd	(21/2 ⁺)	-68090.8 30	13.3 s 2	ε+β ⁺ =89%, IT=11%, εp=0.71%
95n	Pd	(1/2 ⁻)	-69162 39		ε+β ⁺ ?
96	Pd	0 ⁺	-76183.4 42	122 s 2	ε+β ⁺
97	Pd	(5/2 ⁺)	-77805.9 48	3.1 m 1	ε+β ⁺
98	Pd	0 ⁺	-81321.0 47	17.7 m 3	ε+β ⁺
99	Pd	(5/2 ⁺)	-82183 5	21.4 m 2	ε+β ⁺
100	Pd	0 ⁺	-85213 18	3.63 d 9	ε
101	Pd	5/2 ⁺	-85432.1 46	8.47 h 6	ε+β ⁺
102	Pd	0 ⁺	-87902.96 42	1.02% 1	
103	Pd	5/2 ⁺	-87457.0 9	17.000 d 33	ε

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
104	Pd	0 ⁺	-89395.1 <i>13</i>	11.14% 8	
105	Pd	5/2 ⁺	-88417.9 <i>11</i>	22.33% 8	
106	Pd	0 ⁺	-89907.5 <i>11</i>	27.33% 3	
107	Pd	5/2 ⁺	-88372.7 <i>12</i>	6.50×10 ⁶ y <i>30</i>	β ⁻
107m	Pd	11/2 ⁻	-88158.1 <i>12</i>	21.4 s <i>5</i>	IT
108	Pd	0 ⁺	-89524.2 <i>11</i>	26.46% 9	
109	Pd	5/2 ⁺	-87606.5 <i>11</i>	13.437 h <i>13</i>	β ⁻
109m	Pd	11/2 ⁻	-87417.5 <i>11</i>	4.694 m <i>2</i>	IT
110	Pd	0 ⁺	-88330.9 <i>6</i>	11.72% 9	
111	Pd	5/2 ⁺	-85985.9 <i>7</i>	23.6 m <i>1</i>	β ⁻
111m	Pd	11/2 ⁻	-85813.7 <i>7</i>	5.565 h <i>12</i>	IT=76.8%, β ⁻ =23.2%
112	Pd	0 ⁺	-86321 <i>7</i>	21.027 h <i>19</i>	β ⁻
113	Pd	(5/2 ⁺)	-83591 <i>7</i>	89 s <i>3</i>	β ⁻
113m	Pd	(9/2 ⁻)	-83509 <i>7</i>	0.3 s <i>1</i>	IT
114	Pd	0 ⁺	-83490 <i>7</i>	2.42 m <i>6</i>	β ⁻
115	Pd	(1/2 ⁺)	-80426 <i>14</i>	25 s <i>2</i>	β ⁻
115m	Pd	(7/2 ⁻)	-80337 <i>14</i>	50 s <i>3</i>	β ⁻ =92%, IT=8%
116	Pd	0 ⁺	-79831 <i>7</i>	11.7 s <i>6</i>	β ⁻
117	Pd	(3/2 ⁺)	-76424 <i>7</i>	4.3 s <i>3</i>	β ⁻
118	Pd	0 ⁺	-75388.4 <i>25</i>	1.9 s <i>1</i>	β ⁻
119	Pd	(1/2 ⁺ , 3/2 ⁺)	-71407 <i>8</i>	0.88 s <i>2</i>	β ⁻ , β ⁻ n?
119m	Pd	(11/2 ⁻)	-7.096×10 ⁴ <i>20</i>	0.85 s <i>1</i>	β ⁻ ?, IT?
120	Pd	0 ⁺	-70279.6 <i>23</i>	492 ms <i>33</i>	β ⁻ , β ⁻ n≤0.7%
121	Pd		-66182.3 <i>34</i>	290 ms <i>1</i>	β ⁻ , β ⁻ n≤0.8%
122	Pd	0 ⁺	-64616 <i>20</i>	195 ms <i>4</i>	β ⁻ , β ⁻ n<2.2%
123	Pd		-6.04×10 ⁴ <i>8</i>	109 ms <i>2</i>	β ⁻ , β ⁻ n=1.4%
123m	Pd		-6.04×10 ⁴ <i>8</i>		β ⁻ , IT?
124	Pd	0 ⁺	-5.840×10 ⁴ <i>SY</i>	94 ms <i>4</i>	β ⁻ , β ⁻ n=0.89%
125	Pd	(3/2 ⁺)	-5.396×10 ⁴ <i>SY</i>	64.2 ms <i>17</i>	β ⁻ , β ⁻ n=3.7%
126	Pd	0 ⁺	-5.179×10 ⁴ <i>SY</i>	48.6 ms <i>6</i>	β ⁻ , β ⁻ n=4.9%
126m	Pd	(10 ⁺)	-4.938×10 ⁴ <i>SY</i>	23 ms <i>1</i>	β ⁻ =72%, IT=28%
127	Pd		-4.72×10 ⁴ <i>SY</i>	38 ms <i>2</i>	β ⁻ , β ⁻ n=9%, β ⁻ 2n?
128	Pd	0 ⁺	-4.44×10 ⁴ <i>SY</i>	36 ms <i>5</i>	β ⁻ , β ⁻ n=10%
129	Pd		-3.79×10 ⁴ <i>SY</i>	31 ms <i>7</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
130	Pd	0 ⁺	-3.273×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
131	Pd		-2.574×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
92	Ag		-3.753×10 ⁴ <i>SY</i>		ε+β ⁺ ?, εp?, p?
93	Ag		-4.640×10 ⁴ <i>SY</i>	228 ns <i>16</i>	ε+β ⁺ ?, εp?, p?
94	Ag	(0 ⁺)	-5.240×10 ⁴ <i>SY</i>	27 ms <i>2</i>	ε+β ⁺ , εp<0.2%
94m	Ag	(7 ⁺)	-5.240×10 ⁴ <i>SY</i>	0.47 s <i>1</i>	ε+β ⁺ , εp=17.0%
94n	Ag	(21 ⁺)	-4.57×10 ⁴ <i>SY</i>	0.40 s <i>4</i>	ε+β ⁺ =95.9%, εp≈27%, p=4.1%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
95	Ag	(9/2 ⁺)	-5.991×10 ⁴ <i>SY</i>	1.81 s <i>5</i>	ε+β ⁺ , εp=2.3%
96	Ag	(8) ⁺	-6.451×10 ⁴ <i>9</i>	4.435 s <i>31</i>	ε+β ⁺ , εp=4.8%
96m	Ag	(2 ⁺)	-6.451×10 ⁴ <i>9</i>	6.9 s <i>5</i>	ε+β ⁺ , εp=14.9%
97	Ag	(9/2 ⁺)	-70904 <i>12</i>	25.5 s <i>3</i>	ε+β ⁺
98	Ag	(6 ⁺)	-73066 <i>33</i>	47.5 s <i>3</i>	ε+β ⁺ , εp=0.0011%
99	Ag	(9/2) ⁺	-76712 <i>6</i>	124 s <i>3</i>	ε+β ⁺
99m	Ag	(1/2 ⁻)	-76206 <i>6</i>	10.5 s <i>5</i>	IT
100	Ag	(5) ⁺	-78138 <i>5</i>	2.01 m <i>9</i>	ε+β ⁺
100m	Ag	(2) ⁺	-78122 <i>5</i>	2.24 m <i>13</i>	ε+β ⁺ ?, IT?
101	Ag	9/2 ⁺	-81334.4 <i>48</i>	11.1 m <i>2</i>	ε+β ⁺
101m	Ag	(1/2) ⁻	-81060.3 <i>48</i>	3.09 s <i>7</i>	IT
102	Ag	5 ⁽⁺⁾	-82247 <i>8</i>	12.9 m <i>3</i>	ε+β ⁺
102m	Ag	2 ⁺	-82237 <i>8</i>	7.7 m <i>5</i>	ε+β ⁺ =51%, IT=49%
103	Ag	7/2 ⁺	-84802.7 <i>41</i>	65.8 m <i>6</i>	ε+β ⁺
103m	Ag	1/2 ⁻	-84668.3 <i>41</i>	5.8 s <i>3</i>	IT
104	Ag	5 ⁺	-85116.5 <i>42</i>	69.3 m <i>9</i>	ε+β ⁺
104m	Ag	2 ⁺	-85109.6 <i>42</i>	33.5 m <i>20</i>	ε+β ⁺ ≈100%, IT<0.07%
105	Ag	1/2 ⁻	-87070.8 <i>45</i>	41.29 d <i>7</i>	ε+β ⁺
105m	Ag	7/2 ⁺	-87045.4 <i>45</i>	7.23 m <i>16</i>	IT=99.66%, ε+β ⁺ =0.34%
106	Ag	1 ⁺	-86942.4 <i>30</i>	23.96 m <i>4</i>	ε+β ⁺ >99%, β ⁻ <1%
106m	Ag	6 ⁺	-86852.7 <i>30</i>	8.28 d <i>2</i>	ε+β ⁺
107	Ag	1/2 ⁻	-88406.7 <i>24</i>	51.839% 8	
107m	Ag	7/2 ⁺	-88313.6 <i>24</i>	44.2 s <i>2</i>	IT
108	Ag	1 ⁺	-87606.8 <i>24</i>	2.39 m <i>1</i>	β ⁻ =97.15%, ε+β ⁺ =2.85%
108m	Ag	6 ⁺	-87497.3 <i>24</i>	435.9 y <i>37</i>	ε+β ⁺ =92.55%, IT=7.45%
109	Ag	1/2 ⁻	-88719.4 <i>13</i>	48.161% 8	
109m	Ag	7/2 ⁺	-88631.4 <i>13</i>	39.8 s <i>2</i>	IT
110	Ag	1 ⁺	-87457.3 <i>13</i>	24.56 s <i>11</i>	β ⁻ =99.70%, ε=0.30%
110m	Ag	6 ⁺	-87339.7 <i>13</i>	249.86 d <i>5</i>	β ⁻ =98.67%, IT=1.33%
111	Ag	1/2 ⁻	-88215.4 <i>15</i>	7.421 d <i>10</i>	β ⁻
111m	Ag	7/2 ⁺	-88155.6 <i>15</i>	64.8 s <i>8</i>	IT=99.3%, β ⁻ =0.7%
112	Ag	2 ⁽⁻⁾	-86583.7 <i>24</i>	3.15 h <i>1</i>	β ⁻
113	Ag	1/2 ⁻	-87027 <i>17</i>	5.37 h <i>5</i>	β ⁻
113m	Ag	7/2 ⁺	-86983 <i>17</i>	67.8 s <i>21</i>	β ⁻ =36%, IT=64%

A	El	J $^{\pi}$	Δ (keV)	T $_{1/2}$, Γ , Abundance	Decay Modes
114	Ag	1 $^{+}$	-84930.8 <i>46</i>	4.59 s <i>10</i>	β^{-}
115	Ag	1/2 $^{-}$	-84983 <i>18</i>	20.0 m <i>5</i>	β^{-}
115m	Ag	7/2 $^{+}$	-84941 <i>18</i>	18.0 s <i>7</i>	β^{-} =79.0%, IT=21.0%
116	Ag	(0 $^{-}$)	-82542.7 <i>33</i>	3.83 m <i>8</i>	β^{-}
116m	Ag	(3 $^{+}$)	-82494.8 <i>33</i>	20 s <i>1</i>	β^{-} =93%, IT=7%
116n	Ag	(6 $^{-}$)	-82412.9 <i>33</i>	9.8 s <i>1</i>	β^{-} =92%, IT=8%
117	Ag	(1/2 $^{-}$)	-82182 <i>14</i>	72.8 s <i>+20-7</i>	β^{-}
117m	Ag	(7/2 $^{+}$)	-82153 <i>14</i>	5.34 s <i>5</i>	β^{-} =94.0%, IT=6.0%
118	Ag	(2 $^{-}$)	-79553.8 <i>25</i>	3.87 s <i>9</i>	β^{-}
118m	Ag	(5 $^{+}$)	-79426.2 <i>25</i>	2.0 s <i>1</i>	β^{-} =59%, IT=41%
119	Ag	(1/2 $^{-}$)	-78646 <i>15</i>	6.0 s <i>5</i>	β^{-}
119m	Ag	(7/2 $^{+}$)	-78612 <i>15</i>	2.1 s <i>1</i>	β^{-}
120	Ag	(4 $^{+}$)	-75651.5 <i>45</i>	1.52 s <i>7</i>	β^{-} , $\beta^{-}n$ <0.003%
120m	Ag	(7 $^{-}$)	-75448.4 <i>45</i>	0.38 s <i>3</i>	IT=68%, β^{-} =32%
120n	Ag	(0 $^{-}$, 1 $^{-}$)	-75651.5 <i>45</i>	0.94 s <i>10</i>	β^{-} ?, IT?
121	Ag	(7/2 $^{+}$)	-74403 <i>12</i>	0.781 s <i>15</i>	β^{-} , $\beta^{-}n$ =0.080%
122	Ag	(1 $^{-}$)	-71106 <i>38</i>	0.55 s <i>5</i>	β^{-} , $\beta^{-}n$ =0.186%
122m	Ag	(9 $^{-}$)	-7.103 $\times 10^4$ <i>6</i>	0.20 s <i>5</i>	β^{-} , $\beta^{-}n$?
123	Ag	(7/2 $^{+}$)	-69569 <i>33</i>	300 ms <i>8</i>	β^{-} , $\beta^{-}n$ =0.79%
124	Ag	(2 $^{-}$)	-6.623 $\times 10^4$ <i>25</i>	182 ms <i>4</i>	β^{-} , $\beta^{-}n$ =1.7%
124m	Ag	(8 $^{-}$)	-6.623 $\times 10^4$ <i>25</i>	144 ms <i>20</i>	β^{-} , $\beta^{-}n$?
125	Ag	(9/2 $^{+}$)	-6.452 $\times 10^4$ <i>43</i>	176 ms <i>3</i>	β^{-} , $\beta^{-}n$ =1.1%
125m	Ag	(1/2 $^{-}$)	-6.442 $\times 10^4$ <i>43</i>	159 ms <i>21</i>	β^{-} , $\beta^{-}n$ =4.6%
126	Ag	(3 $^{+}$)	-6.072 $\times 10^4$ <i>SY</i>	52 ms <i>10</i>	β^{-} , $\beta^{-}n$ =3.8%
126m	Ag	(8, 9)	-6.072 $\times 10^4$ <i>SY</i>	92 ms <i>9</i>	β^{-} , $\beta^{-}n$ =3.8%
127	Ag	(9/2 $^{+}$)	-5.865 $\times 10^4$ <i>SY</i>	89.1 ms <i>9</i>	β^{-} , $\beta^{-}n$ =5.5%
127m	Ag	(27/2 $^{+}$)	-5.671 $\times 10^4$ <i>SY</i>	67.5 s <i>9</i>	β^{-} =91.2%, IT=8.8%
128	Ag		-5.471 $\times 10^4$ <i>SY</i>	66.6 ms <i>24</i>	β^{-} , $\beta^{-}n$ =9.3%, $\beta^{-}2n$?
129	Ag	(9/2 $^{+}$)	-5.187 $\times 10^4$ <i>SY</i>	52 ms <i>2</i>	β^{-} , $\beta^{-}n$ =17.9%
129m	Ag	(1/2 $^{-}$)	-5.185 $\times 10^4$ <i>SY</i>	1.3 $\times 10^2$ ms <i>+9-5</i>	β^{-} $\approx$ 100%, $\beta^{-}n$?
130	Ag		-4.590 $\times 10^4$ <i>SY</i>	41 ms <i>4</i>	β^{-} , $\beta^{-}n$?, $\beta^{-}2n$?
131	Ag		-4.08 $\times 10^4$ <i>SY</i>	35 ms <i>8</i>	β^{-} , $\beta^{-}n$?, $\beta^{-}2n$?
132	Ag		-3.44 $\times 10^4$ <i>SY</i>	28 ms <i>+15-12</i>	β^{-} , $\beta^{-}n$?, $\beta^{-}2n$?
94	Cd	0 $^{+}$	-4.04 $\times 10^4$ <i>SY</i>		ε + β^{+} ?, εp ?
95	Cd		-4.71 $\times 10^4$ <i>SY</i>	32 ms <i>3</i>	ε + β^{+} , εp =4.5%
96	Cd	0 $^{+}$	-5.557 $\times 10^4$ <i>SY</i>	1.01 s <i>5</i>	ε + β^{+} , εp =1.6%
96m	Cd	16 $^{+}$	-4.98 $\times 10^4$ <i>SY</i>	0.51 s <i>4</i>	ε + β^{+} , εp =15.2%
97	Cd	(9/2 $^{+}$)	-6.073 $\times 10^4$ <i>42</i>	1.16 s <i>5</i>	ε + β^{+} , εp =9.7%
97m	Cd	(25/2 $^{+}$)	-5.81 $\times 10^4$ <i>7</i>	3.86 s <i>6</i>	ε + β^{+} , εp =25.1%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
97n	Cd	(1/2 ⁻)	-6.073×10 ⁴ 42	0.73 s 7	ε+β ⁺ ?, εp?, IT?
98	Cd	0 ⁺	-6.764×10 ⁴ 5	9.3 s 1	ε+β ⁺ , εp<0.029%
99	Cd	(5/2 ⁺)	-69931.1 16	17 s 1	ε+β ⁺ , εp=0.21%
100	Cd	0 ⁺	-74194.6 17	49.1 s 5	ε+β ⁺
101	Cd	5/2 ⁺	-75836.5 15	1.36 m 5	ε+β ⁺
102	Cd	0 ⁺	-79659.7 17	5.5 m 5	ε+β ⁺
103	Cd	(5/2 ⁺)	-80651.6 18	7.50 m 20	ε+β ⁺
104	Cd	0 ⁺	-83968.4 17	57.8 m 8	ε+β ⁺
105	Cd	5/2 ⁺	-84333.8 14	55.4 m 4	ε+β ⁺
106	Cd	0 ⁺	-87132.2 11	1.245% 22	
107	Cd	5/2 ⁺	-86990.3 17	6.52 h 2	ε+β ⁺
108	Cd	0 ⁺	-89252.4 11	0.888% 11	
109	Cd	5/2 ⁺	-88504.3 15	461.98 d 31	ε
110	Cd	0 ⁺	-90347.97 38	12.47% 6	
111	Cd	1/2 ⁺	-89252.25 36	12.795% 12	
111m	Cd	11/2 ⁻	-88856.03 36	48.50 m 9	IT
112	Cd	0 ⁺	-90574.86 25	24.109% 7	
113	Cd	1/2 ⁺	-89043.29 25	8.04×10 ¹⁵ y 5	β ⁻
				12.227% 7	
113m	Cd	11/2 ⁻	-88779.75 25	13.89 y 16	β ⁻ =99.9036%, IT=0.0964%
114	Cd	0 ⁺	-90014.93 28	28.75% 8	
115	Cd	1/2 ⁺	-88084.5 7	53.40 h 4	β ⁻
115m	Cd	11/2 ⁻	-87903.5 8	44.6 d 3	β ⁻
116	Cd	0 ⁺	-88712.49 16	2.68×10 ¹⁹ y 9	2β ⁻
				7.512% 5	
117	Cd	1/2 ⁺	-86418.4 10	2.503 h 5	β ⁻
117m	Cd	11/2 ⁻	-86282.0 10	3.437 h 13	β ⁻
118	Cd	0 ⁺	-86702 20	50.3 m 2	β ⁻
119	Cd	1/2 ⁺	-83977 38	2.69 m 2	β ⁻
119m	Cd	11/2 ⁻	-83830 38	2.20 m 2	β ⁻
120	Cd	0 ⁺	-83957.4 37	50.80 s 21	β ⁻
121	Cd	3/2 ⁺	-81073.8 19	13.5 s 3	β ⁻
121m	Cd	11/2 ⁻	-80859.0 19	8.3 s 8	β ⁻
122	Cd	0 ⁺	-80612.4 23	5.24 s 3	β ⁻
123	Cd	3/2 ⁽⁺⁾	-77414.2 27	2.10 s 2	β ⁻
123m	Cd	11/2 ⁽⁻⁾	-77270.2 48	1.80 s 3	β ⁻
124	Cd	0 ⁺	-76699.4 26	1.25 s 2	β ⁻
125	Cd	3/2 ⁺	-73348.1 29	680 ms 40	β ⁻
125m	Cd	11/2 ⁻	-73159.5 29	480 ms 30	β ⁻
126	Cd	0 ⁺	-72255.7 23	512 ms 5	β ⁻
127	Cd	3/2 ⁺	-68741 6	0.45 s +12-8	β ⁻ , β ⁻ n<1.2%
127m	Cd	11/2 ⁻	-68458 8	360 ms 40	β ⁻ , β ⁻ n<1.2%
128	Cd	0 ⁺	-67238 6	245.9 ms 19	β ⁻ , β ⁻ n=1.9%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
129	Cd	11/2 ⁻	-63122 5	151 ms 4	β ⁻ , β ⁻ n=1.84%
129m	Cd	3/2 ⁺	-62779 10	152 ms 6	β ⁻ , β ⁻ n>0%
130	Cd	0 ⁺	-61118 22	129 ms 3	β ⁻ , β ⁻ n=3.0%
131	Cd	(7/2 ⁻)	-55212 19	98 ms 2	β ⁻ , β ⁻ n=3.5%, β ⁻ 2n?
132	Cd	0 ⁺	-5.047×10 ⁴ 6	84 ms 5	β ⁻ , β ⁻ n=60%, β ⁻ 2n?
133	Cd		-4.414×10 ⁴ SY	61 ms 6	β ⁻ , β ⁻ n?, β ⁻ 2n?
134	Cd	0 ⁺	-3.946×10 ⁴ SY	65 ms 15	β ⁻ , β ⁻ n?, β ⁻ 2n?
96	In		-3.81×10 ⁴ SY		ε+β ⁺ ?, εp?, p?
97	In	(9/2 ⁺)	-4.739×10 ⁴ SY	36 ms 6	ε+β ⁺ , εp=1.7%
98	In	(0 ⁺)	-5.391×10 ⁴ SY	30 ms 1	ε+β ⁺ , εp<0.13%
98m	In	(9 ⁺)	-5.31×10 ⁴ SY	0.89 s 2	ε+β ⁺ , εp=44%
99	In	(9/2 ⁺)	-6.138×10 ⁴ SY	3.11 s 6	ε+β ⁺ , εp=0.29%
100	In	(6 ⁺)	-64178.1 22	5.66 s 5	ε+β ⁺ , εp=1.66%
101	In	(9/2 ⁺)	-68545 12	15.1 s 11	ε+β ⁺ , εp<1.7%
101m	In	(1/2 ⁻)	-6.793×10 ⁴ 6		ε+β ⁺ ?, IT?
102	In	(6 ⁺)	-70694.9 46	23.3 s 1	ε+β ⁺ , εp=0.0093%
103	In	(9/2 ⁺)	-74632 9	65 s 7	ε+β ⁺
103m	In	(1/2 ⁻)	-74001 9	34 s 2	ε+β ⁺ =67%, IT=33%
104	In	(5 ⁺ , 6 ⁺)	-76183 6	1.80 m 3	ε+β ⁺
104m	In	(3 ⁺)	-76089 6	15.7 s 5	IT=80%, ε+β ⁺ =20%
105	In	9/2 ⁺	-79641 10	5.07 m 7	ε+β ⁺
105m	In	(1/2 ⁻)	-78966 10	48 s 6	IT
106	In	7 ⁺	-80608 12	6.23 m 8	ε+β ⁺
106m	In	(2 ⁺)	-80580 12	5.31 m 3	ε+β ⁺
107	In	9/2 ⁺	-83567 10	32.4 m 3	ε+β ⁺
107m	In	1/2 ⁻	-82888 10	50.5 s 6	IT
108	In	7 ⁺	-84120 9	58.0 m 10	ε+β ⁺
108m	In	2 ⁺	-84090 9	39.6 m 6	ε+β ⁺
109	In	9/2 ⁺	-86489.5 40	4.159 h 10	ε+β ⁺
109m	In	1/2 ⁻	-85839.7 40	1.34 m 6	IT
109n	In	19/2 ⁺	-84387.7 40	210 ms 1	IT
110	In	7 ⁺	-86470 12	4.9 h 1	ε+β ⁺
110m	In	2 ⁺	-86408 12	69.0 m 5	ε+β ⁺
111	In	9/2 ⁺	-88392.1 34	2.8048 d 1	ε
111m	In	1/2 ⁻	-87855.1 34	7.7 m 3	IT
112	In	1 ⁺	-87990.1 43	14.88 m 15	ε+β ⁺ =62%, β ⁻ =38%
112m	In	4 ⁺	-87833.5 43	20.67 m 8	IT
113	In	9/2 ⁺	-89367.12 19	4.28% 5	
113m	In	1/2 ⁻	-88975.42 19	99.48 m 2	IT

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
114	In	1 ⁺	-88569.81 30	71.9 s 1	β ⁻ =99.50%, ε+β ⁺ =0.50%
114m	In	5 ⁺	-88379.54 30	49.51 d 1	IT=96.75%, ε+β ⁺ =3.25%
115	In	9/2 ⁺	-89536.357 12	4.41×10 ¹⁴ y 25	β ⁻
115m	In	1/2 ⁻	-89200.113 21	95.72% 5 4.485 h 4	IT=95.0%, β ⁻ =5.0%
116	In	1 ⁺	-88249.76 22	14.10 s 5	β ⁻ =99.9762%, ε=0.0238%
116m	In	5 ⁺	-88122.49 22	54.14 m 4	β ⁻
116n	In	8 ⁻	-87960.10 22	2.18 s 4	IT
117	In	9/2 ⁺	-88943.0 49	43.2 m 3	β ⁻
117m	In	1/2 ⁻	-88627.7 49	116.1 m 2	β ⁻ =52.9%, IT=47.1%
118	In	1 ⁺	-87228 8	5.4 s 3	β ⁻
118m	In	5 ⁺	-87168 8	4.40 m 3	β ⁻
118n	In	8 ⁻	-87028 8	8.5 s 3	IT=98.6%, β ⁻ =1.4%
119	In	9/2 ⁺	-87699 7	2.4 m 1	β ⁻
119m	In	1/2 ⁻	-87387 7	18.0 m 3	β ⁻ =97.5%, IT=2.5%
120	In	1 ⁺	-85728 40	3.08 s 8	β ⁻
120m	In	(8 ⁻)	-85728 40	47.3 s 5	β ⁻
120n	In	(5 ⁺)	-85728 40	46.2 s 8	β ⁻
121	In	9/2 ⁺	-85835 27	23.1 s 6	β ⁻
121m	In	1/2 ⁻	-85521 27	3.88 m 10	β ⁻ =98.8%, IT=1.2%
122	In	1 ⁺	-8.357×10 ⁴ 5	1.5 s 3	β ⁻
122m	In	5 ⁺	-8.353×10 ⁴ 8	10.3 s 6	β ⁻
122n	In	8 ⁻	-8.328×10 ⁴ 15	10.8 s 4	β ⁻
123	In	9/2 ⁺	-83429 20	6.17 s 5	β ⁻
123m	In	1/2 ⁻	-83102 20	47.4 s 8	β ⁻
124	In	(3 ⁺)	-80868 31	3.12 s 9	β ⁻
124m	In	(8 ⁻)	-80843 39	3.67 s 3	β ⁻
125	In	9/2 ⁺	-80412.3 18	2.36 s 4	β ⁻
125m	In	1/2 ⁻	-80052.2 18	12.2 s 2	β ⁻
126	In	3 ⁽⁺⁾	-77809.4 42	1.53 s 1	β ⁻
126m	In	(8 ⁻)	-77719 8	1.64 s 5	β ⁻
127	In	(9/2 ⁺)	-76880 10	1.087 s 11	β ⁻ , β ⁻ n≤0.03%
127m	In	(1/2 ⁻)	-76471 10	3.618 s 32	β ⁻ , β ⁻ n=0.70%
127n	In	(21/2 ⁻)	-75136 13	1.04 s 10	β ⁻ , β ⁻ n?
128	In	(3 ⁺)	-74190.1 13	0.84 s 6	β ⁻ , β ⁻ n=0.038%
128m	In	(8 ⁻)	-73905.0 28	0.72 s 10	β ⁻ , β ⁻ n=0.038%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
128n	In	(16 ⁺)	-72393.5 <i>24</i>	>0.3 s	β ⁻ ≈100%, β ⁻ n?, IT?
129	In	(9/2 ⁺)	-72834.9 <i>20</i>	629 ms <i>24</i>	β ⁻ , β ⁻ n=0.23%
129m	In	(1/2 ⁻)	-72378.9 <i>45</i>	1.2 s <i>10</i>	β ⁻ >99.7%, β ⁻ n=3.61%, IT<0.3%
129n	In	(23/2 ⁻)	-71195 <i>46</i>	651 ms <i>20</i>	β ⁻ ≈100%, IT?
129o	In	(29/2 ⁺)	-7.092×10 ⁴ <i>6</i>	98 ms <i>13</i>	IT≈100%, β ⁻ ?
130	In	1 ⁽⁻⁾	-69906.5 <i>18</i>	277 ms <i>12</i>	β ⁻ , β ⁻ n=0.93%
130m	In	(10 ⁻)	-69840 <i>10</i>	541 ms <i>6</i>	β ⁻ , β ⁻ n=1.65%
130n	In	(5 ⁺)	-69522 <i>5</i>	541 ms <i>6</i>	β ⁻ , β ⁻ n=1.65%
131	In	(9/2 ⁺)	-68024.4 <i>22</i>	261 ms <i>3</i>	β ⁻ , β ⁻ n=2.3%
131m	In	(1/2 ⁻)	-67657 <i>7</i>	328 ms <i>15</i>	β ⁻ , β ⁻ n=2.3%
131n	In	(21/2 ⁺)	-64253 <i>15</i>	322 ms <i>41</i>	β ⁻ , β ⁻ n=12%
132	In	(7 ⁻)	-6.241×10 ⁴ <i>6</i>	200 ms <i>2</i>	β ⁻ , β ⁻ n=12.3%, β ⁻ 2n?
133	In	(9/2 ⁺)	-5.769×10 ⁴ <i>SY</i>	162 ms <i>2</i>	β ⁻ , β ⁻ n=90%, β ⁻ 2n?
133m	In	(1/2 ⁻)	-5.705×10 ⁴ <i>SY</i>	167 ms <i>11</i>	β ⁻ , β ⁻ n=93%, β ⁻ 2n?
134	In	(6 ⁻ , 7 ⁻)	-5.197×10 ⁴ <i>SY</i>	121 ms <i>5</i>	β ⁻ , β ⁻ n=89%, β ⁻ 2n=9%
135	In		-4.711×10 ⁴ <i>SY</i>	97 ms <i>5</i>	β ⁻ , β ⁻ n>0%, β ⁻ 2n>0%
136	In		-4.097×10 ⁴ <i>SY</i>	85 ms <i>+10-8</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
137	In		-3.583×10 ⁴ <i>SY</i>	65 ms <i>+40-30</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
99	Sn		-4.80×10 ⁴ <i>SY</i>	24 ms <i>4</i>	ε+β ⁺ , εp=3.9%
100	Sn	0 ⁺	-5.715×10 ⁴ <i>24</i>	1.18 s <i>7</i>	ε+β ⁺ , εp<17%
101	Sn	(7/2 ⁺)	-6.031×10 ⁴ <i>30</i>	2.20 s <i>5</i>	ε+β ⁺ , εp=23.0%
102	Sn	0 ⁺	-6.493×10 ⁴ <i>10</i>	3.8 s <i>2</i>	ε+β ⁺ , εp?
103	Sn	(5/2 ⁺)	-6.709×10 ⁴ <i>SY</i>	7.0 s <i>2</i>	ε+β ⁺ , εp=1.2%
104	Sn	0 ⁺	-71627 <i>6</i>	20.9 s <i>4</i>	ε+β ⁺
105	Sn	(5/2 ⁺)	-73338.0 <i>40</i>	32.7 s <i>5</i>	ε+β ⁺ , εp=0.011%
106	Sn	0 ⁺	-77354 <i>5</i>	1.92 m <i>8</i>	ε+β ⁺
107	Sn	(5/2 ⁺)	-78512 <i>5</i>	2.90 m <i>5</i>	ε+β ⁺
108	Sn	0 ⁺	-82070 <i>5</i>	10.50 m <i>17</i>	ε+β ⁺
109	Sn	5/2 ⁺	-82630 <i>8</i>	18.1 m <i>1</i>	ε+β ⁺
110	Sn	0 ⁺	-85842 <i>14</i>	4.154 h <i>4</i>	ε
111	Sn	7/2 ⁺	-85939 <i>5</i>	35.3 m <i>4</i>	ε+β ⁺
112	Sn	0 ⁺	-88655.05 <i>29</i>	0.97% 1	
113	Sn	1/2 ⁺	-88328.1 <i>16</i>	115.08 d <i>3</i>	ε+β ⁺
113m	Sn	7/2 ⁺	-88250.7 <i>16</i>	21.4 m <i>4</i>	IT=91.1%, ε+β ⁺ =8.9%
114	Sn	0 ⁺	-90559.735 <i>29</i>	0.66% 1	
115	Sn	1/2 ⁺	-90033.846 <i>15</i>	0.34% 1	

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
116	Sn	0 ⁺	-91525.98 <i>10</i>	14.54% 9	
117	Sn	1/2 ⁺	-90397.74 <i>48</i>	7.68% 7	
117m	Sn	11/2 ⁻	-90083.16 <i>48</i>	13.94 d <i>3</i>	IT
118	Sn	0 ⁺	-91652.84 <i>50</i>	24.22% 9	
119	Sn	1/2 ⁺	-90065.0 <i>7</i>	8.59% 4	
119m	Sn	11/2 ⁻	-89975.5 <i>7</i>	293.0 d <i>13</i>	IT
120	Sn	0 ⁺	-91097.7 <i>9</i>	32.58% 9	
121	Sn	3/2 ⁺	-89196.6 <i>10</i>	27.05 h <i>4</i>	β ⁻
121m	Sn	11/2 ⁻	-89190.3 <i>10</i>	43.9 y <i>5</i>	IT=77.6%, β ⁻ =22.4%
122	Sn	0 ⁺	-89940.0 <i>24</i>	4.63% 3	
123	Sn	11/2 ⁻	-87814.7 <i>25</i>	129.2 d <i>4</i>	β ⁻
123m	Sn	3/2 ⁺	-87790.1 <i>25</i>	40.06 m <i>1</i>	β ⁻
124	Sn	0 ⁺	-88231.5 <i>13</i>	5.79% 5	
125	Sn	11/2 ⁻	-85893.7 <i>13</i>	9.634 d <i>15</i>	β ⁻
125m	Sn	3/2 ⁺	-85866.2 <i>13</i>	10.01 m <i>8</i>	β ⁻
126	Sn	0 ⁺	-86015 <i>11</i>	1.98×10 ⁵ y <i>6</i>	β ⁻
127	Sn	11/2 ⁻	-83470 <i>9</i>	2.10 h <i>3</i>	β ⁻
127m	Sn	3/2 ⁺	-83465 <i>9</i>	4.13 m <i>3</i>	β ⁻
128	Sn	0 ⁺	-83361 <i>18</i>	59.6 m <i>3</i>	β ⁻
128m	Sn	(7 ⁻)	-81270 <i>18</i>	6.5 s <i>5</i>	IT
129	Sn	3/2 ⁺	-80591 <i>17</i>	2.23 m <i>4</i>	β ⁻
129m	Sn	11/2 ⁻	-80555 <i>17</i>	7.2 m <i>1</i>	β ⁻
130	Sn	0 ⁺	-80132.2 <i>19</i>	3.73 m <i>6</i>	β ⁻
130m	Sn	(7 ⁻)	-60665.3 <i>19</i>	1.7 m <i>1</i>	β ⁻
131	Sn	3/2 ⁺	-77264.6 <i>36</i>	56.0 s <i>5</i>	β ⁻
131m	Sn	11/2 ⁻	-77199.5 <i>36</i>	58.4 s <i>5</i>	β ⁻ ≈100%, IT?
132	Sn	0 ⁺	-76546.6 <i>20</i>	39.7 s <i>5</i>	β ⁻
133	Sn	7/2 ⁻	-70873.9 <i>19</i>	1.38 s <i>7</i>	β ⁻ , β ⁻ n=0.0294%
134	Sn	0 ⁺	-66433.8 <i>32</i>	1.02 s <i>6</i>	β ⁻ , β ⁻ n=17%
135	Sn		-60632.3 <i>31</i>	515 ms <i>5</i>	β ⁻ , β ⁻ n=21%, β ⁻ 2n?
136	Sn	0 ⁺	-5.617×10 ⁴ <i>SY</i>	355 ms <i>13</i>	β ⁻ , β ⁻ n=27%, β ⁻ 2n?
137	Sn		-5.015×10 ⁴ <i>SY</i>	228 ms <i>16</i>	β ⁻ , β ⁻ n=44%, β ⁻ 2n?
138	Sn	0 ⁺	-4.551×10 ⁴ <i>SY</i>	148 ms <i>9</i>	β ⁻ , β ⁻ n=36%, β ⁻ 2n?
139	Sn		-3.931×10 ⁴ <i>SY</i>	120 ms <i>38</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
140	Sn	0 ⁺	-3.449×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
104	Sb		-5.930×10 ⁴ <i>SY</i>	0.49 s <i>+10-9</i>	ε+β ⁺ , εp<7%, p<1%
105	Sb		-64015 <i>22</i>	1.12 s <i>16</i>	ε+β ⁺ , p?, εp?
106	Sb	(2 ⁺)	-66473 <i>7</i>	0.6 s <i>2</i>	ε+β ⁺ , εp?
107	Sb		-70653.2 <i>41</i>	4.0 s <i>2</i>	ε+β ⁺
108	Sb	(4 ⁺)	-72445 <i>5</i>	7.4 s <i>3</i>	ε+β ⁺
109	Sb	(5/2 ⁺)	-76251 <i>5</i>	17.24 s <i>47</i>	ε+β ⁺
110	Sb	(3 ⁺)	-77450 <i>6</i>	23.6 s <i>3</i>	ε+β ⁺

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
111	Sb	(5/2 ⁺)	-80837 <i>9</i>	74.9 s <i>7</i>	ε+β ⁺
112	Sb	(3 ⁺)	-81599 <i>18</i>	53.6 s <i>8</i>	ε+β ⁺
113	Sb	(5/2 ⁺)	-84417 <i>17</i>	6.67 m <i>7</i>	ε+β ⁺
114	Sb	3 ⁺	-84497 <i>20</i>	3.49 m <i>3</i>	ε+β ⁺
115	Sb	5/2 ⁺	-87003 <i>16</i>	32.0 m <i>2</i>	ε+β ⁺
116	Sb	3 ⁺	-86822 <i>5</i>	15.8 m <i>8</i>	ε+β ⁺
116m	Sb	8 ⁻	-86442 <i>40</i>	60.4 m <i>6</i>	ε+β ⁺
117	Sb	5/2 ⁺	-88640 <i>8</i>	2.80 h <i>1</i>	ε+β ⁺
118	Sb	1 ⁺	-87996.2 <i>30</i>	3.6 m <i>3</i>	ε+β ⁺
118m	Sb	8 ⁻	-87746 <i>7</i>	5.01 h <i>3</i>	ε+β ⁺
119	Sb	5/2 ⁺	-89476 <i>7</i>	38.2 h <i>3</i>	ε
119m	Sb	(25/2 ⁺)	-86677 <i>31</i>	0.84 s <i>8</i>	IT
120	Sb	1 ⁺	-88417 <i>7</i>	15.89 m <i>4</i>	ε+β ⁺
120m	Sb	8 ⁻	-88417 <i>7</i>	5.76 d <i>2</i>	ε+β ⁺
121	Sb	5/2 ⁺	-89599.2 <i>25</i>	57.21% 5	
122	Sb	2 ⁻	-88334.2 <i>25</i>	2.69413 d <i>32</i>	β ⁻ =97.59%, ε+β ⁺ =2.41%
122m	Sb	(8) ⁻	-88170.6 <i>25</i>	4.191 m <i>3</i>	IT
123	Sb	7/2 ⁺	-89222.9 <i>14</i>	42.79% 5	
124	Sb	3 ⁻	-87619.1 <i>14</i>	60.209 d <i>10</i>	β ⁻
124m	Sb	5 ⁺	-87608.2 <i>14</i>	93 s <i>5</i>	IT=75%, β ⁻ =25%
124n	Sb	(8) ⁻	-87582.2 <i>14</i>	20.2 m <i>2</i>	IT
125	Sb	7/2 ⁺	-88255.1 <i>25</i>	2.7577 y <i>8</i>	β ⁻
126	Sb	(8) ⁻	-86393 <i>32</i>	12.3 d <i>1</i>	β ⁻
126m	Sb	(5 ⁺)	-86375 <i>32</i>	19.1 m <i>1</i>	β ⁻ =81.4%, IT=18.6%
126n	Sb	(3 ⁻)	-86353 <i>32</i>	≈11 s	IT
127	Sb	7/2 ⁺	-86698 <i>5</i>	3.84 d <i>3</i>	β ⁻
128	Sb	8 ⁻	-84630 <i>19</i>	9.05 h <i>4</i>	β ⁻
128m	Sb	5 ⁺	-84620 <i>21</i>	10.4 m <i>2</i>	β ⁻ =96.4%, IT=3.6%
129	Sb	7/2 ⁺	-84629 <i>21</i>	4.40 h <i>2</i>	β ⁻
129m	Sb	(19/2 ⁻)	-82778 <i>21</i>	17.7 m <i>1</i>	β ⁻ =85%, IT=15%
130	Sb	(8) ⁻	-82286 <i>14</i>	40.5 m <i>4</i>	β ⁻
130m	Sb	(4 ⁺ , 5 ⁺)	-82281 <i>14</i>	6.44 m <i>10</i>	β ⁻
131	Sb	(7/2 ⁺)	-81981.4 <i>21</i>	23.03 m <i>4</i>	β ⁻
132	Sb	(4 ⁺)	-79635.3 <i>25</i>	2.79 m <i>5</i>	β ⁻
132m	Sb	(8) ⁻	-7.944×10 ⁴ <i>5</i>	4.10 m <i>5</i>	β ⁻
133	Sb	7/2 ⁺	-78923.5 <i>31</i>	2.41 m <i>8</i>	β ⁻
134	Sb	(0 ⁻)	-74019.0 <i>31</i>	675 ms <i>5</i>	β ⁻ , β ⁻ n?
134m	Sb	7 ⁻	-73740.0 <i>32</i>	10.01 s <i>9</i>	β ⁻ , β ⁻ n=0.088%
135	Sb	(7/2 ⁺)	-69690.3 <i>26</i>	1.668 s <i>9</i>	β ⁻ , β ⁻ n=16.6%
136	Sb	(1 ⁻)	-64507 <i>6</i>	924 ms <i>14</i>	β ⁻ , β ⁻ n=27%, β ⁻ 2n=0.14%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
137	Sb		-6.006×10 ⁴ 5	506 ms 17	β ⁻ , β ⁻ n=49%, β ⁻ 2n>2.7%
138	Sb	(3 ⁻)	-5.465×10 ⁴ SY	314 ms 5	β ⁻ , β ⁻ n=72%, β ⁻ 2n?
139	Sb		-5.005×10 ⁴ SY	182 ms 9	β ⁻ , β ⁻ n=90%, β ⁻ 2n?
140	Sb	(3 ⁻ , 4 ⁻)	-4.44×10 ⁴ SY	171 ms 6	β ⁻ , β ⁻ n=23%, β ⁻ 2n=7.6%
141	Sb		-3.95×10 ⁴ SY	103 ms 29	β ⁻ , β ⁻ n?, β ⁻ 2n?
142	Sb		-3.361×10 ⁴ SY	5×10 ¹ ms +7-3	β ⁻ , β ⁻ n?, β ⁻ 2n?
104	Te	0 ⁺	-4.963×10 ⁴ 32	<18 ns	α
105	Te	(7/2 ⁺)	-5.281×10 ⁴ 30	0.63 μs 6	α≈100%
106	Te	0 ⁺	-5.822×10 ⁴ 10	69 μs +11-8	α
107	Te		-6.066×10 ⁴ SY	3.6 ms 2	α=70%, ε+β ⁺ =30%
108	Te	0 ⁺	-65782 5	2.1 s 1	α=49%, ε+β ⁺ =51%, εp=2.4%
109	Te	(5/2 ⁺)	-67715.4 44	4.4 s 2	ε+β ⁺ =96.1%, εp=9.4%, α=3.9%, εα=0.0043%
110	Te	0 ⁺	-72230 7	18.6 s 8	ε+β ⁺ ≈100%, α?
111	Te	(5/2 ⁺)	-73587 6	26.2 s 6	ε+β ⁺ , εp?
112	Te	0 ⁺	-77568 8	2.0 m 2	ε+β ⁺
113	Te	(7/2 ⁺)	-78347 28	1.8 m 2	ε+β ⁺
114	Te	0 ⁺	-81890 24	16.4 m 9	ε+β ⁺
115	Te	7/2 ⁺	-82063 28	5.9 m 1	ε+β ⁺
115m	Te	(1/2 ⁺)	-82053 29	7.2 m 4	ε+β ⁺ ≈100%, IT?
116	Te	0 ⁺	-85264 24	2.49 h 4	ε+β ⁺
117	Te	1/2 ⁺	-85096 13	62 m 1	ε+β ⁺
117m	Te	(11/2 ⁻)	-84799 13	103 ms 3	IT
118	Te	0 ⁺	-87691 18	6.00 d 2	ε
119	Te	1/2 ⁺	-87183 7	16.05 h 5	ε+β ⁺
119m	Te	11/2 ⁻	-86922 7	4.69 d 4	ε+β ⁺
120	Te	0 ⁺	-89362.2 18	0.09% 1	
121	Te	1/2 ⁺	-88543 26	19.27 d 8	ε+β ⁺
121m	Te	11/2 ⁻	-88249 26	164.7 d 5	IT=83.1%, ε+β ⁺ =16.9%
122	Te	0 ⁺	-90313.3 14	2.55% 12	
123	Te	1/2 ⁺	-89171.0 14	0.89% 3	
123m	Te	11/2 ⁻	-88923.5 14	119.3 d 1	IT
124	Te	0 ⁺	-90524.1 14	4.74% 14	
125	Te	1/2 ⁺	-89021.8 14	7.07% 15	
125m	Te	11/2 ⁻	-88877.0 14	57.40 d 15	IT
126	Te	0 ⁺	-90064.2 14	8.84% 25	
127	Te	3/2 ⁺	-88280.5 14	9.35 h 6	β ⁻

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
127m	Te	11/2 ⁻	-88192.3 <i>14</i>	106.1 d <i>7</i>	IT=97.86%, β ⁻ =2.14%
128	Te	0 ⁺	-88993.8 <i>7</i>	2.34×10 ²⁴ y <i>24</i>	2β ⁻
129	Te	3/2 ⁺	-87004.9 <i>7</i>	31.74% 8 69.5 m <i>4</i>	β ⁻
129m	Te	11/2 ⁻	-86899.4 <i>7</i>	33.48 d <i>13</i>	IT=64%, β ⁻ =36%
130	Te	0 ⁺	-87352.960 <i>11</i>	7.90×10 ²⁰ y <i>20</i>	2β ⁻
131	Te	3/2 ⁺	-85211.02 <i>6</i>	34.1% 6 25.0 m <i>1</i>	β ⁻
131m	Te	11/2 ⁻	-85028.76 <i>6</i>	32.86 h <i>39</i>	β ⁻ =74.1%, IT=25.9%
131n	Te	(23/2 ⁺)	-83271.02 <i>40</i>	93 ms <i>12</i>	IT
132	Te	0 ⁺	-85188.2 <i>35</i>	3.204 d <i>13</i>	β ⁻
133	Te	(3/2 ⁺)	-82937.1 <i>21</i>	12.5 m <i>3</i>	β ⁻
133m	Te	(11/2 ⁻)	-82602.9 <i>21</i>	55.4 m <i>4</i>	β ⁻ =83.5%, IT=16.5%
134	Te	0 ⁺	-82533.8 <i>27</i>	41.8 m <i>8</i>	β ⁻
135	Te	(7/2 ⁻)	-77728.8 <i>17</i>	19.0 s <i>2</i>	β ⁻
136	Te	0 ⁺	-74425.3 <i>23</i>	17.66 s <i>8</i>	β ⁻ , β ⁻ n=1.37%
137	Te		-69303.8 <i>21</i>	2.48 s <i>3</i>	β ⁻ , β ⁻ n=2.99%
138	Te	0 ⁺	-65696.0 <i>38</i>	1.46 s <i>25</i>	β ⁻ , β ⁻ n=6.3%
139	Te		-60205.1 <i>35</i>	0.72 s <i>8</i>	β ⁻ , β ⁻ n?
140	Te	0 ⁺	-56367 <i>14</i>	351 ms <i>5</i>	β ⁻ , β ⁻ n>0%
141	Te		-5.067×10 ⁴ SY	193 ms <i>16</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
142	Te	0 ⁺	-4.66×10 ⁴ SY	147 ms <i>7</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
143	Te		-4.05×10 ⁴ SY	120 ms <i>8</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
144	Te	0 ⁺	-3.622×10 ⁴ SY	9×10 ¹ ms <i>6</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
145	Te		-3.001×10 ⁴ SY		β ⁻ , β ⁻ n?, β ⁻ 2n?
108	I	(1)	-5.277×10 ⁴ SY	26.4 ms <i>8</i>	α=99.50%, p=0.50%, ε+β ⁺ ?
109	I	(1/2 ⁺ , 3/2 ⁺)	-57673 <i>7</i>	92.7 μs <i>7</i>	p=99.986%, α=0.014%
110	I	(1 ⁺)	-6.047×10 ⁴ <i>6</i>	0.67 s <i>2</i>	α=17%, ε+β ⁺ =83%, εp=11%, εα=1.1%
111	I	(5/2 ⁺)	-64953.8 <i>48</i>	2.5 s <i>2</i>	ε+β ⁺ ≈99.9%, α≈0.1%, εp?
112	I	(1 ⁺)	-67063 <i>10</i>	3.34 s <i>11</i>	ε+β ⁺ ≈99.9988%, εp=0.88%, εα=0.104%, α≈0.0012%
113	I	(5/2 ⁺)	-71120 <i>8</i>	5.9 s <i>5</i>	ε+β ⁺
114	I	1 ⁺	-72639 <i>20</i>	2.1 s <i>2</i>	ε+β ⁺ , εp?

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
114m	I	(7)	-72373 20	6.2 s 5	ε+β ⁺ =91%, IT=9%
115	I	(5/2 ⁺)	-76338 29	1.3 m 2	ε+β ⁺
116	I	1 ⁺	-7.742×10 ⁴ 8	2.91 s 15	ε+β ⁺
117	I	(5/2 ⁺)	-80439 26	2.22 m 4	ε+β ⁺
118	I	2 ⁺	-80971 20	13.8 m 4	ε+β ⁺
118m	I	(7 ⁻)	-80782 20	8.5 m 5	ε+β ⁺ ≈100%, IT>0%
119	I	5/2 ⁺	-83778 22	18.8 m 4	ε+β ⁺
120	I	2 ⁻	-83747 15	81.7 m 2	ε+β ⁺
120m	I	(7 ⁻)	-8.343×10 ⁴ 15	51 m 2	ε+β ⁺
121	I	5/2 ⁺	-86245.6 47	2.12 h 1	ε+β ⁺
122	I	1 ⁺	-86079 5	3.63 m 6	ε+β ⁺
123	I	5/2 ⁺	-87942.6 37	13.2229 h 14	ε+β ⁺
124	I	2 ⁻	-87364.6 23	4.1760 d 3	ε+β ⁺
125	I	5/2 ⁺	-88836.0 14	59.398 d 12	ε
126	I	2 ⁻	-87910.5 38	12.93 d 5	β ⁻ =47.3%, ε+β ⁺ =52.7%
127	I	5/2 ⁺	-88983.2 36	100%	
128	I	1 ⁺	-87738.0 36	25.00 m 2	β ⁻ =93.1%, ε+β ⁺ =6.9%
129	I	7/2 ⁺	-88507.2 32	1.613×10 ⁷ y 18	β ⁻
130	I	5 ⁺	-86936.2 32	12.36 h 1	β ⁻
130m	I	2 ⁺	-86896.2 32	8.83 m 5	IT=84%, β ⁻ =16%
131	I	7/2 ⁺	-87442.7 6	8.0247 d 15	β ⁻
132	I	4 ⁺	-85703.5 41	2.2839 h 17	β ⁻
132m	I	(8 ⁻)	-85584 20	1.387 h 15	IT=86%, β ⁻ =14%
133	I	7/2 ⁺	-85857 6	20.8 h 1	β ⁻
133m	I	(19/2 ⁻)	-84223 6	9 s 2	IT
134	I	(4 ⁺)	-84043.4 49	52.6 m 2	β ⁻
134m	I	(8 ⁻)	-83727.0 49	3.53 m 4	IT=97.7%, β ⁻ =2.3%
135	I	7/2 ⁺	-83779.2 21	6.55 h 3	β ⁻
136	I	(1 ⁻)	-79545 14	83.4 s 4	β ⁻
136m	I	(6 ⁻)	-79345 33	46.6 s 11	β ⁻
137	I	(7/2 ⁺)	-76356 8	24.13 s 12	β ⁻ , β ⁻ n=7.66%
138	I	(1 ⁻)	-71980 6	6.303 s 41	β ⁻ , β ⁻ n=5.39%
139	I	(7/2 ⁺)	-68471.0 40	2.29 s 2	β ⁻ , β ⁻ n=9.64%
140	I	(2 ⁻ , 3)	-63606 12	380 ms 20	β ⁻ , β ⁻ n=8.8%, β ⁻ 2n?
140m	I	(0 ⁻ , 1)	-63606 12	9.1×10 ² ms 5	β ⁻ , β ⁻ n?
140n	I	(4 ⁻ , 5)	-63606 12	470 ms 40	β ⁻ , β ⁻ n?
141	I		-59927 16	418 ms 8	β ⁻ , β ⁻ n=21.2%
142	I		-54803.0 49	235 ms 11	β ⁻ , β ⁻ n?, β ⁻ 2n?

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
143	I		-5.079×10 ⁴ <i>SY</i>	182 ms <i>8</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
144	I		-4.533×10 ⁴ <i>SY</i>	94 ms <i>8</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
145	I		-4.11×10 ⁴ <i>SY</i>	90 ms <i>9</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
146	I		-3.554×10 ⁴ <i>SY</i>	94 ms <i>26</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
147	I		-3.120×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
108	Xe	0 ⁺	-4.263×10 ⁴ <i>38</i>	6×10 ¹ μs +11-2	α
109	Xe	(7/2 ⁺)	-4.617×10 ⁴ <i>30</i>	13 ms <i>2</i>	α
110	Xe	0 ⁺	-5.192×10 ⁴ <i>10</i>	93 ms <i>3</i>	α=64%, ε+β ⁺ =36%, εp?
111	Xe		-5.452×10 ⁴ <i>SY</i>	0.74 s <i>20</i>	ε+β ⁺ =89.6%, α=10.4%, εp?
112	Xe	0 ⁺	-60026 <i>8</i>	2.7 s <i>8</i>	ε+β ⁺ =99.2%, α=0.8%, εp?
113	Xe	(5/2 ⁺)	-62204 <i>7</i>	2.74 s <i>8</i>	ε+β ⁺ ≈100%, εp=7%, εα=0.007%, α?
114	Xe	0 ⁺	-67086 <i>11</i>	10.0 s <i>4</i>	ε+β ⁺ , εp?
115	Xe	(5/2 ⁺)	-68657 <i>12</i>	18 s <i>4</i>	ε+β ⁺ , εp=0.34%, εα=0.0003%
116	Xe	0 ⁺	-73047 <i>13</i>	58 s <i>2</i>	ε+β ⁺
117	Xe	5/2 ⁺	-74185 <i>10</i>	61 s <i>2</i>	ε+β ⁺ , εp=0.0029%
118	Xe	0 ⁺	-78079 <i>10</i>	3.8 m <i>9</i>	ε+β ⁺
119	Xe	(5/2 ⁺)	-78794 <i>10</i>	5.8 m <i>3</i>	ε+β ⁺
120	Xe	0 ⁺	-82172 <i>12</i>	46.0 m <i>6</i>	ε+β ⁺
121	Xe	5/2 ⁽⁺⁾	-82481 <i>10</i>	39.1 m <i>10</i>	ε+β ⁺
122	Xe	0 ⁺	-85355 <i>11</i>	20.1 h <i>1</i>	ε
123	Xe	1/2 ⁽⁺⁾	-85248 <i>10</i>	2.050 h <i>14</i>	ε+β ⁺
124	Xe	0 ⁺	-87667.4 <i>14</i>	0.095% 5	
125	Xe	1/2 ⁺	-87199.4 <i>14</i>	16.96 h <i>6</i>	ε+β ⁺
125m	Xe	9/2 ⁻	-86946.8 <i>14</i>	56 s <i>3</i>	IT
126	Xe	0 ⁺	-89146.387 <i>6</i>	0.089% 3	
127	Xe	1/2 ⁺	-88320.9 <i>41</i>	36.344 d <i>5</i>	ε
127m	Xe	9/2 ⁻	-88023.8 <i>41</i>	69.5 s <i>8</i>	IT
128	Xe	0 ⁺	-89860.534 <i>5</i>	1.910% 13	
129	Xe	1/2 ⁺	-88696.070 <i>5</i>	26.40% 14	
129m	Xe	11/2 ⁻	-88459.930 <i>30</i>	8.88 d <i>2</i>	IT
130	Xe	0 ⁺	-89880.474 <i>9</i>	4.071% 22	
131	Xe	3/2 ⁺	-88413.575 <i>5</i>	21.232% 15	
131m	Xe	11/2 ⁻	-88249.645 <i>9</i>	11.931 d <i>16</i>	IT
132	Xe	0 ⁺	-89278.975 <i>5</i>	26.91% 6	
133	Xe	3/2 ⁺	-87643.6 <i>24</i>	5.2474 d <i>5</i>	β ⁻
133m	Xe	11/2 ⁻	-87410.4 <i>24</i>	2.191 d <i>26</i>	IT
134	Xe	0 ⁺	-88125.834 <i>6</i>	10.436% 35	

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
134m	Xe	7 ⁻	-86160.3 <i>5</i>	290 ms <i>17</i>	IT
135	Xe	3/2 ⁺	-86413.4 <i>37</i>	9.168 h <i>7</i>	β ⁻
135m	Xe	11/2 ⁻	-85886.8 <i>37</i>	15.287 m <i>20</i>	IT=99.70%, β ⁻ =0.30%
136	Xe	0 ⁺	-86429.170 <i>7</i>	2.188×10 ²¹ y <i>49</i> 8.86% 7	2β ⁻
137	Xe	7/2 ⁻	-82383.41 <i>10</i>	3.821 m <i>11</i>	β ⁻
138	Xe	0 ⁺	-79972.2 <i>28</i>	14.14 m <i>5</i>	β ⁻
139	Xe	3/2 ⁻	-75644.6 <i>21</i>	39.72 s <i>13</i>	β ⁻
140	Xe	0 ⁺	-72986.5 <i>23</i>	13.6 s <i>1</i>	β ⁻
141	Xe	5/2 ⁽⁻⁾	-68197.3 <i>29</i>	1.720 s <i>13</i>	β ⁻ , β ⁻ n=0.044%
142	Xe	0 ⁺	-65229.6 <i>27</i>	1.227 s <i>17</i>	β ⁻ , β ⁻ n=0.37%
143	Xe	5/2 ⁻	-60202.9 <i>47</i>	511 ms <i>6</i>	β ⁻ , β ⁻ n=1.00%
144	Xe	0 ⁺	-56872 <i>5</i>	388 ms <i>7</i>	β ⁻ , β ⁻ n=3.0%
145	Xe		-51493 <i>11</i>	188 ms <i>4</i>	β ⁻ , β ⁻ n=5.0%, β ⁻ 2n?
146	Xe	0 ⁺	-47955 <i>24</i>	146 ms <i>5</i>	β ⁻ , β ⁻ n=6.9%
147	Xe		-4.240×10 ⁴ <i>SY</i>	88 ms <i>14</i>	β ⁻ , β ⁻ n<8%, β ⁻ 2n?
148	Xe	0 ⁺	-3.865×10 ⁴ <i>SY</i>	85 ms <i>15</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
149	Xe		-3.300×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
150	Xe	0 ⁺	-2.899×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
112	Cs	(1 ⁺)	-4.642×10 ⁴ <i>SY</i>	488 μs <i>35</i>	p
113	Cs	(3/2 ⁺)	-51765 <i>9</i>	16.9 μs <i>1</i>	p
114	Cs	(1 ⁺)	-5.469×10 ⁴ <i>9</i>	0.57 s <i>2</i>	ε+β ⁺ =99.982%, εp=8.7%, εα=0.19%, α=0.018%
115	Cs		-5.970×10 ⁴ <i>SY</i>	1.03 s <i>10</i>	ε+β ⁺ , εp≈0.07%
116	Cs	(1 ⁺)	-6.204×10 ⁴ <i>SY</i>	0.70 s <i>3</i>	ε+β ⁺ , εp=0.28%, εα=0.049%
116m	Cs	(7)	-6.204×10 ⁴ <i>SY</i>	3.9 s <i>1</i>	ε+β ⁺ , εp=0.51%, εα=0.005%
117	Cs	(9/2 ⁺)	-6.649×10 ⁴ <i>6</i>	8.4 s <i>6</i>	ε+β ⁺
117m	Cs	(3/2 ⁺)	-6.649×10 ⁴ <i>6</i>	6.5 s <i>4</i>	ε+β ⁺
118	Cs	2 ⁽⁻⁾	-68409 <i>13</i>	14 s <i>2</i>	ε+β ⁺ , εp<0.042%, εα<0.0024%
118m	Cs	(7 ⁻)	-68409 <i>13</i>	17 s <i>3</i>	ε+β ⁺ , εp<0.042%, εα<0.0024%
119	Cs	3/2 ⁺	-72305 <i>14</i>	29.1 s <i>7</i>	ε+β ⁺
119m	Cs	9/2 ⁺	-72219 <i>14</i>	43.0 s <i>2</i>	ε+β ⁺
120	Cs	2 ⁽⁺⁾	-73889 <i>10</i>	60.4 s <i>6</i>	ε+β ⁺ , εp<0.00001%, εα<0.000024%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
120m	Cs	(7 ⁻)	-73889 10	57 s 6	ε+β ⁺ , εp<0.00001%, εα<0.000024%
121	Cs	3/2 ⁺	-77102 14	155 s 4	ε+β ⁺
121m	Cs	9/2 ⁽⁺⁾	-77034 14	122 s 3	ε+β ⁺ ≈83%, IT≈17%
122	Cs	1 ⁺	-78145 34	21.18 s 19	ε+β ⁺
122m	Cs	(5) ⁻	-78018 34	0.36 s 2	IT
122n	Cs	8 ⁽⁻⁾	-78005 39	3.70 m 11	ε+β ⁺
123	Cs	1/2 ⁽⁺⁾	-81044 12	5.91 m 6	ε+β ⁺
123m	Cs	11/2 ⁽⁻⁾	-80887 12	1.7 s 1	IT
124	Cs	1 ⁺	-81741 9	30.9 s 4	ε+β ⁺
124m	Cs	(7) ⁺	-81278 9	6.40 s 7	IT=99.89%, ε+β ⁺ =0.11%
125	Cs	1/2 ⁺	-84090 8	44.35 m 29	ε+β ⁺
126	Cs	1 ⁺	-84351 10	1.643 m 17	ε+β ⁺
127	Cs	1/2 ⁺	-86240 6	6.25 h 10	ε+β ⁺
128	Cs	1 ⁺	-85932 5	3.64 m 2	ε+β ⁺
129	Cs	1/2 ⁺	-87499.1 46	32.13 h 10	ε+β ⁺
130	Cs	1 ⁺	-86900 8	29.20 m 4	ε+β ⁺ ≈98.4%, β ⁻ ≈1.6%
130m	Cs	5 ⁻	-86737 8	3.46 m 6	IT=99.84%, ε+β ⁺ =0.16%
131	Cs	5/2 ⁺	-88055.57 18	9.688 d 4	ε
132	Cs	2 ⁺	-87152.7 10	6.480 d 6	ε+β ⁺ =98.13%, β ⁻ =1.87%
133	Cs	7/2 ⁺	-88070.943 8	100%	
134	Cs	4 ⁺	-86891.165 16	2.06562 y 49	β ⁻ =99.9997%, ε=0.0003%
134m	Cs	8 ⁻	-86752.421 16	2.912 h 2	IT
135	Cs	7/2 ⁺	-87581.96 36	1.33×10 ⁶ y 19	β ⁻
135m	Cs	19/2 ⁻	-85949.1 11	53 m 2	IT
136	Cs	5 ⁺	-86338.9 19	13.01 d 5	β ⁻
136m	Cs	8 ⁻	-85821.0 19	17.5 s 2	IT>0%, β ⁻ ?
137	Cs	7/2 ⁺	-86545.77 30	30.007 y 23	β ⁻
138	Cs	3 ⁻	-82887 9	32.48 m 20	β ⁻
138m	Cs	6 ⁻	-82807 9	2.91 m 7	IT=81.5%, β ⁻ =18.5%
139	Cs	7/2 ⁺	-80701.1 31	9.25 m 6	β ⁻
140	Cs	1 ⁻	-77050 8	64.0 s 4	β ⁻
141	Cs	7/2 ⁺	-74477 9	24.86 s 10	β ⁻ , β ⁻ n=0.036%
142	Cs	0 ⁻	-70515 7	1.687 s 9	β ⁻ , β ⁻ n=0.0906%
143	Cs	3/2 ⁺	-67676 8	1.795 s 8	β ⁻ , β ⁻ n=1.65%
144	Cs	1 ⁽⁻⁾	-63271 20	0.993 s 7	β ⁻ , β ⁻ n=3.02%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
145	Cs	3/2 ⁺	-60054 <i>9</i>	588 ms <i>5</i>	β ⁻ , β ⁻ n=12.84%
146	Cs	1 ⁻	-55310.4 <i>29</i>	322 ms <i>1</i>	β ⁻ , β ⁻ n=14.2%, β ⁻ 2n?
147	Cs	(3/2 ⁺)	-51920 <i>8</i>	232 ms <i>2</i>	β ⁻ , β ⁻ n=28.5%
148	Cs		-46911 <i>13</i>	151 ms <i>2</i>	β ⁻ , β ⁻ n=28.7%, β ⁻ 2n?
149	Cs		-4.330×10 ⁴ <i>SY</i>	112 ms <i>3</i>	β ⁻ , β ⁻ n=25%, β ⁻ 2n?
150	Cs		-3.817×10 ⁴ <i>SY</i>	80.8 ms <i>28</i>	β ⁻ , β ⁻ n≈44%, β ⁻ 2n?
151	Cs		-3.43×10 ⁴ <i>SY</i>	59 ms <i>19</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
152	Cs		-2.91×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
114	Ba	0 ⁺	-4.591×10 ⁴ <i>10</i>	0.41 s <i>+15-10</i>	ε+β ⁺ =99.1%, εp=20%, α=0.9%
115	Ba	(5/2 ⁺)	-4.892×10 ⁴ <i>SY</i>	0.45 s <i>5</i>	ε+β ⁺ , εp>15%
116	Ba	0 ⁺	-5.438×10 ⁴ <i>SY</i>	1.3 s <i>2</i>	ε+β ⁺ , εp=3%
117	Ba	(3/2 ⁺)	-5.746×10 ⁴ <i>25</i>	1.75 s <i>6</i>	ε+β ⁺ , εp=13%, εα=0.024%
118	Ba	0 ⁺	-6.220×10 ⁴ <i>SY</i>	5.2 s <i>2</i>	ε+β ⁺ , εp?
119	Ba	(5/2 ⁺)	-6.459×10 ⁴ <i>20</i>	5.4 s <i>3</i>	ε+β ⁺ , εp=25%
120	Ba	0 ⁺	-6.889×10 ⁴ <i>30</i>	24 s <i>2</i>	ε+β ⁺
121	Ba	5/2 ⁺	-7.074×10 ⁴ <i>14</i>	29.7 s <i>15</i>	ε+β ⁺ , εp=0.02%
122	Ba	0 ⁺	-74609 <i>28</i>	1.95 m <i>15</i>	ε+β ⁺
123	Ba	5/2 ⁽⁺⁾	-75655 <i>12</i>	2.4 m <i>4</i>	ε+β ⁺
124	Ba	0 ⁺	-79090 <i>12</i>	10.8 m <i>6</i>	ε+β ⁺
125	Ba	1/2 ⁺	-79669 <i>11</i>	3.3 m <i>3</i>	ε+β ⁺
126	Ba	0 ⁺	-82670 <i>12</i>	98.6 m <i>15</i>	ε+β ⁺
127	Ba	1/2 ⁺	-82818 <i>11</i>	12.8 m <i>3</i>	ε+β ⁺
127m	Ba	7/2 ⁻	-82738 <i>11</i>	1.93 s <i>7</i>	IT
128	Ba	0 ⁺	-85369.2 <i>16</i>	2.43 d <i>5</i>	ε
129	Ba	1/2 ⁺	-85061 <i>11</i>	2.23 h <i>10</i>	ε+β ⁺
129m	Ba	7/2 ⁺	-85052 <i>11</i>	2.142 h <i>8</i>	ε+β ⁺ ≈100%, IT?
130	Ba	0 ⁺	-87256.78 <i>29</i>	0.11% 1	
131	Ba	1/2 ⁺	-86678.96 <i>42</i>	11.52 d <i>1</i>	ε+β ⁺
131m	Ba	9/2 ⁻	-86490.96 <i>42</i>	14.26 m <i>9</i>	IT
132	Ba	0 ⁺	-88434.9 <i>11</i>	0.10% 1	
133	Ba	1/2 ⁺	-87553.5 <i>10</i>	10.5358 y <i>42</i>	ε
133m	Ba	11/2 ⁻	-87265.3 <i>10</i>	38.87 h <i>7</i>	IT=99.9896%, ε=0.0104%
134	Ba	0 ⁺	-88950.00 <i>25</i>	2.42% 15	
135	Ba	3/2 ⁺	-87850.66 <i>25</i>	6.59% 10	
135m	Ba	11/2 ⁻	-87582.44 <i>25</i>	28.12 h <i>6</i>	IT
136	Ba	0 ⁺	-88887.08 <i>25</i>	7.85% 24	
136m	Ba	7 ⁻	-86856.54 <i>25</i>	302 ms <i>6</i>	IT
137	Ba	3/2 ⁺	-87721.40 <i>25</i>	11.23% 23	

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
137m	Ba	11/2 ⁻	-87059.74 <i>25</i>	2.5518 m <i>10</i>	IT
138	Ba	0 ⁺	-88261.81 <i>25</i>	71.70% 29	
139	Ba	7/2 ⁻	-84913.92 <i>25</i>	82.89 m <i>14</i>	β ⁻
140	Ba	0 ⁺	-83268 <i>8</i>	12.7526 d <i>14</i>	β ⁻
141	Ba	3/2 ⁻	-79732 <i>5</i>	18.24 m <i>8</i>	β ⁻
142	Ba	0 ⁺	-77842 <i>6</i>	10.51 m <i>15</i>	β ⁻
143	Ba	5/2 ⁻	-73937 <i>7</i>	14.38 s <i>21</i>	β ⁻
144	Ba	0 ⁺	-71767 <i>7</i>	11.7 s <i>1</i>	β ⁻
145	Ba	5/2 ⁻	-67516 <i>8</i>	3.99 s <i>19</i>	β ⁻
146	Ba	0 ⁺	-64866.3 <i>18</i>	2.16 s <i>4</i>	β ⁻
147	Ba	(5/2 ⁻)	-60264 <i>20</i>	894 ms <i>7</i>	β ⁻ , β ⁻ n=0.071%
148	Ba	0 ⁺	-57544.9 <i>15</i>	619 ms <i>4</i>	β ⁻ , β ⁻ n=0.39%
149	Ba	(5/2 ⁻ , 3/2 ⁻)	-52830.6 <i>25</i>	352 ms <i>5</i>	β ⁻ , β ⁻ n=3.9%
150	Ba	0 ⁺	-49890 <i>6</i>	258 ms <i>5</i>	β ⁻ , β ⁻ n=1.0%
151	Ba		-4.494×10 ⁴ <i>SY</i>	167 ms <i>5</i>	β ⁻ , β ⁻ n?
152	Ba	0 ⁺	-4.161×10 ⁴ <i>SY</i>	140 ms <i>7</i>	β ⁻ , β ⁻ n?
153	Ba		-3.647×10 ⁴ <i>SY</i>	113 ms <i>39</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
154	Ba	0 ⁺	-3.29×10 ⁴ <i>SY</i>	53 ms <i>48</i>	β ⁻ , β ⁻ n?
117	La	(3/2 ⁺)	-4.627×10 ⁴ <i>SY</i>	21.7 ms <i>18</i>	p
120	La		-5.757×10 ⁴ <i>SY</i>	2.8 s <i>2</i>	ε+β ⁺ , εp>0%
121	La		-6.219×10 ⁴ <i>SY</i>	5.3 s <i>2</i>	ε+β ⁺ , εp?
122	La		-6.454×10 ⁴ <i>SY</i>	8.7 s <i>7</i>	ε+β ⁺ , εp?
123	La		-6.865×10 ⁴ <i>SY</i>	16.3 s <i>3</i>	ε+β ⁺
124	La	(1, 2, 3)	-7.026×10 ⁴ <i>6</i>	21 s <i>4</i>	ε+β ⁺
124m	La	(8 ⁻)	-7.026×10 ⁴ <i>6</i>	29.21 s <i>17</i>	ε+β ⁺
125	La	(11/2 ⁻)	-73759 <i>26</i>	64.8 s <i>12</i>	ε+β ⁺
125m	La	(3/2 ⁺)	-73652 <i>26</i>	0.39 s <i>4</i>	IT
126	La	(4, 5)	-7.497×10 ⁴ <i>9</i>	54 s <i>2</i>	ε+β ⁺
126m	La	(0 ⁺ , 1 ⁺ , 2 ⁺)	-7.497×10 ⁴ <i>9</i>	<50 s	ε+β ⁺ ?, IT?
127	La	(11/2 ⁻)	-77896 <i>26</i>	5.1 m <i>1</i>	ε+β ⁺
127m	La	(3/2 ⁺)	-77882 <i>26</i>	3.7 m <i>4</i>	ε+β ⁺
128	La	(5 ⁺)	-7.863×10 ⁴ <i>5</i>	5.1 m <i>2</i>	ε+β ⁺
128m	La	(1 ⁺ , 2 ⁺)	-7.863×10 ⁴ <i>5</i>	<1.4 m	ε+β ⁺
129	La	(3/2 ⁺)	-81324 <i>21</i>	11.6 m <i>2</i>	ε+β ⁺
129m	La	(11/2 ⁻)	-81151 <i>21</i>	0.56 s <i>5</i>	IT
130	La	3 ⁽⁺⁾	-81627 <i>26</i>	8.7 m <i>1</i>	ε+β ⁺
131	La	3/2 ⁺	-83769 <i>28</i>	59 m <i>2</i>	ε+β ⁺
132	La	2 ⁻	-83724 <i>36</i>	4.58 h <i>9</i>	ε+β ⁺
132m	La	6 ⁻	-83535 <i>36</i>	24.3 m <i>5</i>	ε+β ⁺ ≈24%, IT≈76%
133	La	5/2 ⁺	-85494 <i>28</i>	3.89 h <i>3</i>	ε+β ⁺
134	La	1 ⁺	-85219 <i>20</i>	6.45 m <i>16</i>	ε+β ⁺
135	La	5/2 ⁺	-86643 <i>9</i>	18.95 h <i>13</i>	ε+β ⁺

A	El	J $^{\pi}$	Δ (keV)	T $_{1/2}$, Γ , Abundance	Decay Modes
136	La	1 $^{+}$	-8.604 $\times 10^4$ 5	9.87 m 3	$\varepsilon + \beta^{+}$
136m	La	(7)	-8.578 $\times 10^4$ 5	113 ms 4	IT
137	La	7/2 $^{+}$	-87140.9 16	6.0 $\times 10^4$ y 20	ε
138	La	5 $^{+}$	-86513.41 42	1.028 $\times 10^{11}$ y 11 0.0888% 7	β^{-} =34.5%, $\varepsilon + \beta^{+}$ =65.5%
139	La	7/2 $^{+}$	-87222.4 6	99.9112% 7	
140	La	3 $^{-}$	-84312.1 6	40.284 h 3	β^{-}
141	La	(7/2 $^{+}$)	-82929.8 41	3.93 h 3	β^{-}
142	La	2 $^{-}$	-80024 6	91.8 m 5	β^{-}
143	La	(7/2 $^{+}$)	-78171 7	14.09 m 7	β^{-}
144	La	3 $^{-}$	-74850 13	40.8 s 4	β^{-}
145	La	(5/2 $^{+}$)	-72835 12	24.8 s 20	β^{-}
146	La	(2 $^{-}$)	-69221.2 17	6.1 s 3	β^{-}
146m	La	(5 $^{-}$, 6 $^{-}$)	-69079.7 29	9.8 s 4	β^{-} , IT?
147	La	(5/2 $^{+}$)	-66678 11	4.024 s 11	β^{-} , β^{-} n=0.043%
148	La	(2 $^{-}$)	-62709 19	1.411 s 28	β^{-} , β^{-} n=0.192%
149	La	(3/2 $^{-}$)	-6.022 $\times 10^4$ 20	1.085 s 26	β^{-} , β^{-} n=1.41%
150	La	(3 $^{+}$)	-56311.1 25	0.510 s +10-22	β^{-} , β^{-} n=2.69%
151	La		-5.331 $\times 10^4$ 44	0.457 s +30-18	β^{-} , β^{-} n?
152	La		-4.929 $\times 10^4$ SY	298 ms +6-23	β^{-} , β^{-} n?
153	La		-4.606 $\times 10^4$ SY	244 ms 18	β^{-} , β^{-} n?
154	La		-4.153 $\times 10^4$ SY	163 ms 15	β^{-} , β^{-} n?, β^{-} 2n?
155	La		-3.793 $\times 10^4$ SY	100 ms 25	β^{-} , β^{-} n?, β^{-} 2n?
156	La		-3.305 $\times 10^4$ SY	8 $\times 10^4$ ms 8	β^{-} , β^{-} n?, β^{-} 2n?
157	La		-2.907 $\times 10^4$ SY		β^{-} , β^{-} n?, β^{-} 2n?
121	Ce	(5/2)	-5.269 $\times 10^4$ SY	1.1 s 1	$\varepsilon + \beta^{+}$, ε p $\approx$ 1%
122	Ce	0 $^{+}$	-5.787 $\times 10^4$ SY		$\varepsilon + \beta^{+}$, ε p?
123	Ce	(5/2)	-6.029 $\times 10^4$ SY	3.8 s 2	$\varepsilon + \beta^{+}$, ε p>0%
124	Ce	0 $^{+}$	-6.492 $\times 10^4$ SY	9.1 s 23	$\varepsilon + \beta^{+}$
125	Ce	(7/2 $^{-}$)	-6.666 $\times 10^4$ SY	9.7 s 3	$\varepsilon + \beta^{+}$, ε p?
125m	Ce	(1/2 $^{+}$)	-6.656 $\times 10^4$ SY	$\approx$ 3 s	IT
126	Ce	0 $^{+}$	-70821 28	51.0 s 4	$\varepsilon + \beta^{+}$
127	Ce	(1/2 $^{+}$)	-71979 29	34 s 2	$\varepsilon + \beta^{+}$
127m	Ce	(5/2 $^{+}$)	-71972 29	28.6 s 7	$\varepsilon + \beta^{+}$
128	Ce	0 $^{+}$	-75534 28	4.0 m 1	$\varepsilon + \beta^{+}$
129	Ce	(5/2 $^{+}$)	-76288 28	3.5 m 3	$\varepsilon + \beta^{+}$
130	Ce	0 $^{+}$	-79423 28	22.9 m 5	$\varepsilon + \beta^{+}$
131	Ce	7/2 $^{+}$	-79708 33	10.3 m 3	$\varepsilon + \beta^{+}$
131m	Ce	(1/2 $^{+}$)	-79645 33	5 m 1	$\varepsilon + \beta^{+}$
132	Ce	0 $^{+}$	-82469 20	3.51 h 11	$\varepsilon + \beta^{+}$
133	Ce	1/2 $^{+}$	-82418 16	97 m 4	$\varepsilon + \beta^{+}$
133m	Ce	9/2 $^{-}$	-82381 16	5.326 h 11	$\varepsilon + \beta^{+} \approx$ 100%, IT?
134	Ce	0 $^{+}$	-84833 20	3.22 d 4	ε

A	El	J ^{π}	Δ (keV)	T _{1/2} , Γ , Abundance	Decay Modes
135	Ce	1/2 ⁽⁺⁾	-84616 10	17.7 h 2	$\varepsilon+\beta^+$
135m	Ce	(11/2 ⁻)	-84170 10	20 s 1	IT
136	Ce	0 ⁺	-86508.55 32	0.186% 2	
137	Ce	3/2 ⁺	-85918.77 36	9.11 h 3	$\varepsilon+\beta^+$
137m	Ce	11/2 ⁻	-85664.48 36	34.80 h 3	IT=99.23%, $\varepsilon+\beta^+=0.77\%$
138	Ce	0 ⁺	-87565.87 50	0.251% 2	
138m	Ce	7 ⁻	-85436.6 5	8.73 ms 20	IT
139	Ce	3/2 ⁺	-86957.7 21	137.64 d 2	ε
139m	Ce	11/2 ⁻	-86203.5 21	57.58 s 32	IT
140	Ce	0 ⁺	-88074.2 13	88.45% 5	
141	Ce	7/2 ⁻	-85431.1 13	32.504 d 11	β^-
142	Ce	0 ⁺	-84532.9 24	11.11% 5	
143	Ce	3/2 ⁻	-81606.4 24	33.037 h 8	β^-
144	Ce	0 ⁺	-80431.9 28	284.886 d 30	β^-
145	Ce	(5/2 ⁻)	-77067 34	3.02 m 5	β^-
146	Ce	0 ⁺	-75626 15	13.22 m 9	β^-
147	Ce	(5/2 ⁻)	-72014 9	56.4 s 11	β^-
148	Ce	0 ⁺	-70398 11	56.8 s 3	β^-
149	Ce	(3/2 ⁻)	-66670 10	5.2 s 3	β^-
150	Ce	0 ⁺	-64847 12	6.05 s 7	β^-
151	Ce	(3/2 ⁻)	-61225 18	1.74 s 5	β^-
152	Ce	0 ⁺	-5.898 $\times 10^4$ SY	1.42 s 2	β^-
153	Ce		-5.491 $\times 10^4$ SY	865 ms 25	β^- , β^-n ?
154	Ce	0 ⁺	-5.222 $\times 10^4$ SY	722 ms 14	β^- , β^-n ?
155	Ce		-4.778 $\times 10^4$ SY	313 ms 7	β^- , β^-n ?
156	Ce	0 ⁺	-4.482 $\times 10^4$ SY	233 ms 9	β^- , β^-n ?
157	Ce		-3.993 $\times 10^4$ SY	175 ms 41	β^- , β^-n ?
158	Ce	0 ⁺	-3.654 $\times 10^4$ SY	1.0 $\times 10^2$ ms 9	β^- , β^-n ?
121	Pr	(3/2)	-4.16 $\times 10^4$ SY	10 ms +6-3	p $\approx$ 100%
124	Pr		-5.315 $\times 10^4$ SY	1.2 s 2	$\varepsilon+\beta^+$, $\varepsilon p>0\%$
125	Pr	(3/2 ⁺)	-5.807 $\times 10^4$ SY	3.3 s 7	$\varepsilon+\beta^+$, εp ?
126	Pr	(4, 5, 6)	-6.032 $\times 10^4$ SY	3.12 s 18	$\varepsilon+\beta^+$, εp ?
127	Pr		-6.454 $\times 10^4$ SY	4.2 s 3	$\varepsilon+\beta^+$, εp ?
128	Pr	(3 ⁺)	-66331 30	2.8 s 1	$\varepsilon+\beta^+$, $\varepsilon p>0\%$
129	Pr	(3/2 ⁺)	-69774 30	31 s 2	$\varepsilon+\beta^+$
130	Pr	(5, 6, 7)	-7.118 $\times 10^4$ 6	40.0 s 4	$\varepsilon+\beta^+$
130m	Pr	(1, 2, 3)	-7.118 $\times 10^4$ 6		$\varepsilon+\beta^+$?
131	Pr	(3/2 ⁺)	-74301 47	1.49 m 2	$\varepsilon+\beta^+$
131m	Pr	(11/2 ⁻)	-74148 47	5.7 s 2	IT=96.4%, $\varepsilon+\beta^+=3.6\%$
132	Pr	(2 ⁺)	-75227 29	1.6 m 3	$\varepsilon+\beta^+$
133	Pr	(5/2 ⁺)	-77938 12	6.5 m 3	$\varepsilon+\beta^+$

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
133m	Pr	(11/2 ⁻)	-77745 <i>12</i>	1.1 s <i>2</i>	IT
134	Pr	2 ⁻	-78528 <i>20</i>	17 m <i>2</i>	ε+β ⁺
134m	Pr	(6 ⁻)	-78460 <i>20</i>	≈11 m	ε+β ⁺
135	Pr	3/2 ⁽⁺⁾	-80936 <i>12</i>	25.4 m <i>5</i>	ε+β ⁺
136	Pr	2 ⁺	-81340 <i>11</i>	13.1 m <i>1</i>	ε+β ⁺
137	Pr	5/2 ⁺	-83202 <i>8</i>	1.28 h <i>3</i>	ε+β ⁺
138	Pr	1 ⁺	-83129 <i>10</i>	1.45 m <i>4</i>	ε+β ⁺
138m	Pr	7 ⁻	-82765 <i>25</i>	2.03 h <i>2</i>	ε+β ⁺
139	Pr	5/2 ⁺	-84828.7 <i>36</i>	4.41 h <i>4</i>	ε+β ⁺
140	Pr	1 ⁺	-84686 <i>6</i>	3.39 m <i>1</i>	ε+β ⁺
141	Pr	5/2 ⁺	-86014.5 <i>15</i>	100%	
142	Pr	2 ⁻	-83786.4 <i>15</i>	19.12 h <i>4</i>	β ⁻ =99.9836%, ε=0.0164%
142m	Pr	5 ⁻	-83782.7 <i>15</i>	14.6 m <i>5</i>	IT
143	Pr	7/2 ⁺	-83068.2 <i>18</i>	13.57 d <i>2</i>	β ⁻
144	Pr	0 ⁻	-80750.6 <i>27</i>	17.28 m <i>3</i>	β ⁻
144m	Pr	3 ⁻	-80691.6 <i>27</i>	7.2 m <i>3</i>	IT≈99.93%, β ⁻ ≈0.07%
145	Pr	7/2 ⁺	-79626 <i>7</i>	5.982 h <i>9</i>	β ⁻
146	Pr	(2 ⁻)	-76673 <i>34</i>	24.09 m <i>10</i>	β ⁻
147	Pr	(3/2 ⁺)	-75444 <i>16</i>	13.35 m <i>10</i>	β ⁻
148	Pr	1 ⁻	-72535 <i>15</i>	2.29 m <i>2</i>	β ⁻
148m	Pr	4 ⁻	-72459 <i>15</i>	2.01 m <i>7</i>	β ⁻ =64%, IT=36%
149	Pr	(5/2 ⁺)	-71039 <i>10</i>	2.26 m <i>7</i>	β ⁻
150	Pr	(1 ⁻)	-68301 <i>9</i>	6.19 s <i>16</i>	β ⁻
151	Pr	(3/2 ⁻)	-66780 <i>12</i>	18.90 s <i>7</i>	β ⁻
152	Pr	(4 ⁺)	-63758 <i>19</i>	3.57 s <i>18</i>	β ⁻
153	Pr	(3/2 ⁻)	-61568 <i>12</i>	4.29 s <i>7</i>	β ⁻ , β ⁻ n?
154	Pr	(3 ⁺)	-5.786×10 ⁴ <i>10</i>	2.30 s <i>9</i>	β ⁻ , β ⁻ n?
155	Pr		-55415 <i>17</i>	1.47 s <i>3</i>	β ⁻ , β ⁻ n?
156	Pr		-51449.3 <i>10</i>	444 ms <i>6</i>	β ⁻ , β ⁻ n?
157	Pr		-48434.8 <i>32</i>	295 ms <i>+29-11</i>	β ⁻ , β ⁻ n?
158	Pr		-4.415×10 ⁴ <i>SY</i>	181 ms <i>14</i>	β ⁻ , β ⁻ n?
159	Pr		-4.077×10 ⁴ <i>SY</i>	134 ms <i>43</i>	β ⁻ , β ⁻ n?
160	Pr		-3.620×10 ⁴ <i>SY</i>	1.7×10 ² ms <i>14</i>	β ⁻ , β ⁻ n?, β ⁻ 2n?
161	Pr		-3.25×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?, β ⁻ 2n?
125	Nd	(5/2)	-4.807×10 ⁴ <i>SY</i>	0.65 s <i>15</i>	ε+β ⁺ , εp>0%
126	Nd	0 ⁺	-5.338×10 ⁴ <i>SY</i>		ε+β ⁺ , εp?
127	Nd		-5.591×10 ⁴ <i>SY</i>	1.8 s <i>4</i>	ε+β ⁺ , εp?
128	Nd	0 ⁺	-6.053×10 ⁴ <i>SY</i>		ε+β ⁺ , εp?
129	Nd		-6.238×10 ⁴ <i>SY</i>	6.7 s <i>4</i>	ε+β ⁺ , εp>0%
129m	Nd		-6.238×10 ⁴ <i>SY</i>	2.6 s <i>4</i>	ε+β ⁺ ?, εp?, IT?
130	Nd	0 ⁺	-66596 <i>28</i>	21 s <i>3</i>	ε+β ⁺
131	Nd	(5/2 ⁺)	-67768 <i>28</i>	25.4 s <i>9</i>	ε+β ⁺ , εp>0%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
132	Nd	0 ⁺	-71426 <i>24</i>	94 s <i>8</i>	ε+β ⁺
133	Nd	(7/2 ⁺)	-72332 <i>47</i>	70 s <i>10</i>	ε+β ⁺
133m	Nd	(1/2 ⁺)	-72204 <i>47</i>	≈70 s	ε+β ⁺ ?, IT?
134	Nd	0 ⁺	-75646 <i>12</i>	8.5 m <i>15</i>	ε+β ⁺
135	Nd	9/2 ⁻	-76214 <i>19</i>	12.4 m <i>6</i>	ε+β ⁺
135m	Nd	(1/2 ⁺)	-76149 <i>19</i>	5.5 m <i>5</i>	ε+β ⁺ ≈100%, IT?
136	Nd	0 ⁺	-79199 <i>12</i>	50.65 m <i>33</i>	ε+β ⁺
137	Nd	1/2 ⁺	-79584 <i>12</i>	38.5 m <i>15</i>	ε+β ⁺
137m	Nd	11/2 ⁻	-79065 <i>12</i>	1.60 s <i>15</i>	IT
138	Nd	0 ⁺	-82017 <i>12</i>	5.11 h <i>8</i>	ε+β ⁺
139	Nd	3/2 ⁺	-82017 <i>28</i>	29.7 m <i>5</i>	ε+β ⁺
139m	Nd	11/2 ⁻	-81786 <i>28</i>	5.5 h <i>2</i>	ε+β ⁺ =87%, IT=13%
140	Nd	0 ⁺	-84257.2 <i>33</i>	3.37 d <i>2</i>	ε
141	Nd	3/2 ⁺	-84191.5 <i>32</i>	2.49 h <i>3</i>	ε+β ⁺
141m	Nd	11/2 ⁻	-83435.0 <i>32</i>	62.0 s <i>8</i>	IT>99.95%, ε+β ⁺ <0.05%
142	Nd	0 ⁺	-85950.1 <i>13</i>	27.153% 40	
143	Nd	7/2 ⁻	-84002.3 <i>13</i>	12.173% 26	
144	Nd	0 ⁺	-83748.0 <i>13</i>	2.29×10 ¹⁵ y <i>16</i>	α
145	Nd	7/2 ⁻	-81432.0 <i>13</i>	23.798% 19	
146	Nd	0 ⁺	-80925.9 <i>13</i>	8.293% 12	
147	Nd	5/2 ⁻	-78146.8 <i>13</i>	17.189% 32	
147	Nd	5/2 ⁻	-78146.8 <i>13</i>	11.12 d <i>7</i>	β ⁻
148	Nd	0 ⁺	-77408.1 <i>21</i>	5.756% 21	
149	Nd	5/2 ⁻	-74375.5 <i>21</i>	1.728 h <i>2</i>	β ⁻
150	Nd	0 ⁺	-73680.0 <i>11</i>	9.3×10 ¹⁸ y <i>7</i>	2β ⁻
151	Nd	3/2 ⁺	-70943.2 <i>11</i>	5.638% 28	
151	Nd	3/2 ⁺	-70943.2 <i>11</i>	12.44 m <i>7</i>	β ⁻
152	Nd	0 ⁺	-70150 <i>24</i>	11.4 m <i>2</i>	β ⁻
153	Nd	(3/2 ⁻)	-67330.4 <i>27</i>	31.6 s <i>10</i>	β ⁻
154	Nd	0 ⁺	-65579.6 <i>10</i>	25.9 s <i>2</i>	β ⁻
155	Nd	(3/2 ⁻)	-62284 <i>9</i>	8.9 s <i>2</i>	β ⁻
156	Nd	0 ⁺	-60202.1 <i>13</i>	5.27 s <i>23</i>	β ⁻
157	Nd		-56494.1 <i>21</i>	1.15 s <i>3</i>	β ⁻
158	Nd	0 ⁺	-53835.1 <i>13</i>	820 ms <i>+15-36</i>	β ⁻ , β ⁻ n?
159	Nd		-49724 <i>30</i>	485 ms <i>+39-20</i>	β ⁻ , β ⁻ n?
160	Nd	0 ⁺	-46725 <i>47</i>	439 ms <i>37</i>	β ⁻ , β ⁻ n?
161	Nd		-4.223×10 ⁴ <i>SY</i>	2.2×10 ² ms <i>8</i>	β ⁻ , β ⁻ n?
162	Nd	0 ⁺	-3.901×10 ⁴ <i>SY</i>	310 ms <i>20</i>	β ⁻ , β ⁻ n?
163	Nd		-3.41×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?
128	Pm	(5, 6, 7)	-4.822×10 ⁴ <i>SY</i>	1.0 s <i>3</i>	ε+β ⁺ ≈100%, εp?
129	Pm	(5/2 ⁻)	-5.318×10 ⁴ <i>SY</i>	2.4 s <i>9</i>	ε+β ⁺ ≈100%, εp?, p?

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
130	Pm	(4, 5, 6)	-5.547×10 ⁴ <i>SY</i>	2.6 s <i>2</i>	ε+β ⁺ , εp?
131	Pm	(11/2 ⁻)	-5.977×10 ⁴ <i>SY</i>	6.3 s <i>8</i>	ε+β ⁺
132	Pm	(3 ⁺)	-6.163×10 ⁴ <i>SY</i>	6.9 s <i>19</i>	ε+β ⁺ , εp≈0.00005%
133	Pm	(3/2 ⁺)	-6.541×10 ⁴ <i>5</i>	14 s <i>2</i>	ε+β ⁺
133m	Pm	(11/2 ⁻)	-6.528×10 ⁴ <i>5</i>	<8.8 s	ε+β ⁺ ?, IT?
134	Pm	(2 ⁺)	-66764 <i>42</i>	≈5 s	ε+β ⁺
134m	Pm	(5 ⁺)	-66764 <i>42</i>	24 s <i>1</i>	ε+β ⁺
135	Pm	(3/2 ⁺ , 5/2 ⁺)	-7.006×10 ⁴ <i>8</i>	49 s <i>3</i>	ε+β ⁺
135m	Pm	(11/2 ⁻)	-7.006×10 ⁴ <i>8</i>	45 s <i>+4-5</i>	ε+β ⁺
136	Pm	(5 ⁻)	-7.117×10 ⁴ <i>7</i>	107 s <i>6</i>	ε+β ⁺
136m	Pm	(2 ⁻)	-7.089×10 ⁴ <i>23</i>	5.0 m <i>8</i>	ε+β ⁺
137	Pm		-74073 <i>13</i>		ε+β ⁺
137m	Pm	(11/2 ⁻)	-7.391×10 ⁴ <i>5</i>	2.4 m <i>1</i>	ε+β ⁺
138	Pm	(5 ⁻)	-74914 <i>12</i>	3.25 m <i>5</i>	ε+β ⁺
139	Pm	(5/2 ⁺)	-77501 <i>14</i>	4.14 m <i>5</i>	ε+β ⁺
139m	Pm	(11/2 ⁻)	-77312 <i>14</i>	180 ms <i>20</i>	IT≈100%
140	Pm	1 ⁺	-78212 <i>24</i>	9.2 s <i>2</i>	ε+β ⁺
140m	Pm	8 ⁻	-77781 <i>37</i>	5.84 m <i>9</i>	ε+β ⁺
141	Pm	5/2 ⁺	-80523 <i>14</i>	20.90 m <i>5</i>	ε+β ⁺
142	Pm	1 ⁺	-81142 <i>24</i>	40.5 s <i>4</i>	ε+β ⁺
143	Pm	5/2 ⁺	-82960.7 <i>29</i>	265 d <i>7</i>	ε+β ⁺
144	Pm	5 ⁻	-81416.1 <i>29</i>	363 d <i>14</i>	ε
145	Pm	5/2 ⁺	-81267.5 <i>28</i>	17.7 y <i>4</i>	ε, α=2.8×10 ⁻⁷ %
146	Pm	3 ⁻	-79454.4 <i>43</i>	5.53 y <i>5</i>	β ⁻ =34.3%, ε=65.7%
147	Pm	7/2 ⁺	-79042.0 <i>13</i>	2.62344 y <i>22</i>	β ⁻
148	Pm	1 ⁻	-76866 <i>6</i>	5.368 d <i>7</i>	β ⁻
148m	Pm	5 ⁻ , 6 ⁻	-76728 <i>6</i>	41.29 d <i>11</i>	β ⁻ =95.8%, IT=4.2%
149	Pm	7/2 ⁺	-76064.4 <i>22</i>	53.08 h <i>5</i>	β ⁻
150	Pm	(1 ⁻)	-73597 <i>20</i>	2.698 h <i>15</i>	β ⁻
151	Pm	5/2 ⁺	-73386.3 <i>46</i>	28.40 h <i>4</i>	β ⁻
152	Pm	1 ⁺	-71254 <i>26</i>	4.1 m <i>1</i>	β ⁻
152m	Pm	4 ⁻	-7.110×10 ⁴ <i>9</i>	7.52 m <i>7</i>	β ⁻
152n	Pm	(8 ⁻)	-71254 <i>26</i>	15 m <i>1</i>	β ⁻ , IT≥0%
153	Pm	5/2 ⁻	-70648 <i>9</i>	5.25 m <i>2</i>	β ⁻
154	Pm	(3, 4)	-68267 <i>25</i>	2.68 m <i>7</i>	β ⁻
154m	Pm	(0 ⁻ , 1 ⁻)	-6.807×10 ⁴ <i>7</i>	1.7 m <i>1</i>	β ⁻
155	Pm	5/2 ⁻	-66940.0 <i>47</i>	41.5 s <i>2</i>	β ⁻
156	Pm	4 ⁽⁺⁾	-64166.8 <i>12</i>	27.8 s <i>8</i>	β ⁻
156m	Pm	1 ⁽⁺⁾	-64016.5 <i>12</i>	<5 s	IT≈98%, β ⁻ ≈2%
157	Pm	(5/2 ⁻)	-62297 <i>7</i>	10.56 s <i>10</i>	β ⁻

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
158	Pm		-59106.1 <i>9</i>	4.8 s <i>5</i>	β ⁻
159	Pm		-56554 <i>10</i>	1.634 s <i>40</i>	β ⁻ , β ⁻ n≤0.6%
160	Pm		-52894.6 <i>20</i>	0.73 s <i>6</i>	β ⁻ , β ⁻ n≤0.1%
160m	Pm		-52704 <i>11</i>	>700 ms	β ⁻ ?, IT?
161	Pm	(5/2 ⁻)	-50087 <i>9</i>	730 ms +43-33	β ⁻ , β ⁻ n=1.09%
162	Pm		-4.604×10 ⁴ <i>SY</i>	474 ms +37-23	β ⁻ , β ⁻ n=1.79%
163	Pm		-4.296×10 ⁴ <i>SY</i>	363 ms +42-30	β ⁻ , β ⁻ n=5.0%
164	Pm		-3.836×10 ⁴ <i>SY</i>	280 ms +38-33	β ⁻ , β ⁻ n=6.2%
165	Pm		-3.47×10 ⁴ <i>SY</i>	0.30 s +11-10	β ⁻ , β ⁻ n=13%
166	Pm			0.23 s +13-11	β ⁻ , β ⁻ n<52%, β ⁻ 2n?
129	Sm	(1/2 ⁺ , 3/2 ⁺)	-4.23×10 ⁴ <i>SY</i>	0.55 s <i>10</i>	ε+β ⁺ , εp>0%
130	Sm	0 ⁺	-4.770×10 ⁴ <i>SY</i>		ε+β ⁺ ?
131	Sm		-5.028×10 ⁴ <i>SY</i>	1.2 s <i>2</i>	ε+β ⁺ , εp>0%
132	Sm	0 ⁺	-5.514×10 ⁴ <i>SY</i>	4.0 s <i>3</i>	ε+β ⁺ , εp?
133	Sm	(5/2 ⁺)	-5.723×10 ⁴ <i>SY</i>	2.9 s <i>2</i>	ε+β ⁺ , εp>0%
133m	Sm	(1/2 ⁻)	-5.723×10 ⁴ <i>SY</i>	3.4 s <i>5</i>	ε+β ⁺ ?, εp?, IT?
134	Sm	0 ⁺	-6.138×10 ⁴ <i>SY</i>	9.5 s <i>7</i>	ε+β ⁺
135	Sm	(3/2 ⁺ , 5/2 ⁺)	-6.286×10 ⁴ <i>15</i>	10.3 s <i>5</i>	ε+β ⁺ , εp=0.02%
136	Sm	0 ⁺	-66811 <i>12</i>	45 s <i>2</i>	ε+β ⁺
137	Sm	(9/2 ⁻)	-67992 <i>29</i>	45 s <i>4</i>	ε+β ⁺
138	Sm	0 ⁺	-71498 <i>12</i>	3.1 m <i>2</i>	ε+β ⁺
139	Sm	1/2 ⁺	-72380 <i>11</i>	2.57 m <i>9</i>	ε+β ⁺
139m	Sm	11/2 ⁻	-71923 <i>11</i>	10.7 s <i>6</i>	IT=93.7%, ε+β ⁺ =6.3%
140	Sm	0 ⁺	-75456 <i>12</i>	14.78 m <i>8</i>	ε+β ⁺
141	Sm	1/2 ⁺	-75934 <i>9</i>	10.4 m <i>5</i>	ε+β ⁺
141m	Sm	11/2 ⁻	-75758 <i>9</i>	22.6 m <i>2</i>	ε+β ⁺ =99.69%, IT=0.31%
142	Sm	0 ⁺	-78981.9 <i>19</i>	72.48 m <i>4</i>	ε+β ⁺
143	Sm	3/2 ⁺	-79517.1 <i>28</i>	8.83 m <i>1</i>	ε+β ⁺
143m	Sm	11/2 ⁻	-78763.1 <i>28</i>	66 s <i>1</i>	IT=99.76%, ε+β ⁺ =0.24%
144	Sm	0 ⁺	-81965.6 <i>15</i>	3.08% 4	
145	Sm	7/2 ⁻	-80651.4 <i>15</i>	340 d <i>3</i>	ε
146	Sm	0 ⁺	-80996.4 <i>30</i>	6.8×10 ⁷ y <i>7</i>	α
147	Sm	7/2 ⁻	-79266.0 <i>13</i>	1.068×10 ¹¹ y <i>7</i>	α
148	Sm	0 ⁺	-79336.1 <i>12</i>	15.00% 14 6.8×10 ¹⁵ y <i>10</i>	α
149	Sm	7/2 ⁻	-77135.9 <i>12</i>	13.82% 10	
150	Sm	0 ⁺	-77051.3 <i>11</i>	7.37% 9	
151	Sm	5/2 ⁻	-74576.5 <i>11</i>	94.6 y <i>6</i>	β ⁻
152	Sm	0 ⁺	-74763.0 <i>10</i>	26.74% 9	
153	Sm	3/2 ⁺	-72560.1 <i>10</i>	46.283 h <i>2</i>	β ⁻
154	Sm	0 ⁺	-72455.6 <i>13</i>	22.74% 14	

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
155	Sm	3/2 ⁻	-70191.2 <i>13</i>	22.18 m <i>5</i>	β ⁻
156	Sm	0 ⁺	-69361 <i>9</i>	9.4 h <i>2</i>	β ⁻
157	Sm	(3/2 ⁻)	-66677.7 <i>44</i>	8.04 m <i>6</i>	β ⁻
158	Sm	0 ⁺	-65251.8 <i>48</i>	5.32 m <i>5</i>	β ⁻
159	Sm	5/2 ⁻	-62208 <i>6</i>	11.37 s <i>15</i>	β ⁻
160	Sm	0 ⁺	-60233.2 <i>20</i>	9.6 s <i>3</i>	β ⁻
161	Sm	(7/2 ⁺)	-56672 <i>7</i>	4.63 s <i>29</i>	β ⁻
162	Sm	0 ⁺	-54379.1 <i>35</i>	3.09 s <i>27</i>	β ⁻
163	Sm		-50600 <i>7</i>	1.67 s <i>+18-19</i>	β ⁻ , β ⁻ n<0.1%
164	Sm	0 ⁺	-47925.3 <i>41</i>	1.42 s <i>6</i>	β ⁻ , β ⁻ n<0.7%
165	Sm		-4.351×10 ⁴ <i>SY</i>	6.1×10 ² ms <i>9</i>	β ⁻ , β ⁻ n=1.36%
166	Sm	0 ⁺	-4.045×10 ⁴ <i>SY</i>	4.0×10 ² ms <i>6</i>	β ⁻ , β ⁻ n=4.4%
167	Sm		-3.53×10 ⁴ <i>SY</i>	3.3×10 ² ms <i>8</i>	β ⁻ , β ⁻ n<16%
168	Sm	0 ⁺	-3.164×10 ⁴ <i>SY</i>	0.35 s <i>+21-16</i>	β ⁻ , β ⁻ n<21%
130	Eu	(1 ⁺)	-3.35×10 ⁴ <i>SY</i>	0.90 ms <i>+49-29</i>	p≈100%
131	Eu	3/2 ⁺	-3.946×10 ⁴ <i>SY</i>	17.8 ms <i>19</i>	p>0%, ε+β ⁺ ?
132	Eu		-4.220×10 ⁴ <i>SY</i>		p>0%, ε+β ⁺ ?, εp?
134	Eu		-4.980×10 ⁴ <i>SY</i>	0.5 s <i>2</i>	ε+β ⁺ , εp>0%
135	Eu		-5.415×10 ⁴ <i>SY</i>	1.5 s <i>2</i>	ε+β ⁺ , εp?
136	Eu	(7 ⁺)	-5.624×10 ⁴ <i>SY</i>	3.3 s <i>3</i>	ε+β ⁺ , εp≈0.09%
136m	Eu	(3 ⁺)	-5.624×10 ⁴ <i>SY</i>	3.8 s <i>3</i>	ε+β ⁺ , εp≈0.09%
137	Eu	(11/2 ⁻)	-60145.9 <i>44</i>	11 s <i>2</i>	ε+β ⁺
138	Eu	(6 ⁻)	-61750 <i>28</i>	12.1 s <i>5</i>	ε+β ⁺
139	Eu	(11/2 ⁻)	-65398 <i>13</i>	17.9 s <i>6</i>	ε+β ⁺
140	Eu	1 ⁺	-6.699×10 ⁴ <i>5</i>	1.51 s <i>2</i>	ε+β ⁺
140m	Eu	(5 ⁻)	-6.678×10 ⁴ <i>5</i>	125 ms <i>2</i>	IT>99%, ε+β ⁺ <1%
141	Eu	5/2 ⁺	-69926 <i>13</i>	40.7 s <i>7</i>	ε+β ⁺
141m	Eu	11/2 ⁻	-69829 <i>13</i>	3.0 s <i>3</i>	IT=87%, ε+β ⁺ =13%
142	Eu	1 ⁺	-71309 <i>30</i>	2.36 s <i>10</i>	ε+β ⁺
142m	Eu	8 ⁻	-7.079×10 ⁴ <i>6</i>	1.223 m <i>7</i>	ε+β ⁺
143	Eu	5/2 ⁺	-74241 <i>11</i>	2.60 m <i>2</i>	ε+β ⁺
144	Eu	1 ⁺	-75619 <i>11</i>	10.2 s <i>1</i>	ε+β ⁺
145	Eu	5/2 ⁺	-77991.5 <i>31</i>	5.93 d <i>3</i>	ε+β ⁺
146	Eu	4 ⁻	-77118 <i>6</i>	4.61 d <i>3</i>	ε+β ⁺
147	Eu	5/2 ⁺	-77544.6 <i>26</i>	24.1 d <i>6</i>	ε=99.9978%, α=0.0022%
148	Eu	5 ⁻	-76297 <i>10</i>	54.4 d <i>4</i>	ε+β ⁺ , α=9.4×10 ⁻⁷ %
149	Eu	5/2 ⁺	-76441.3 <i>39</i>	93.1 d <i>4</i>	ε
150	Eu	5 ⁻	-74792 <i>6</i>	36.6 y <i>7</i>	ε+β ⁺
150m	Eu	0 ⁻	-74751 <i>6</i>	12.8 h <i>1</i>	β ⁻ =89%, ε+β ⁺ =11%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
151	Eu	5/2 ⁺	-74653.1 <i>12</i>	4.6×10 ¹⁸ y <i>12</i> 47.81% 6	α
152	Eu	3 ⁻	-72888.5 <i>12</i>	13.517 y <i>9</i>	ε+β ⁺ =72.08%, β ⁻ =27.92%
152m	Eu	0 ⁻	-72842.9 <i>12</i>	9.3116 h <i>13</i>	β ⁻ =73%, ε+β ⁺ =27%
152n	Eu	8 ⁻	-72740.6 <i>12</i>	95.8 m <i>4</i>	IT
153	Eu	5/2 ⁺	-73367.5 <i>12</i>	52.19% 6	
154	Eu	3 ⁻	-71738.4 <i>12</i>	8.5911 y <i>36</i>	β ⁻ =99.982%, ε+β ⁺ =0.018%
154m	Eu	8 ⁻	-71593.1 <i>12</i>	46.3 m <i>3</i>	IT
155	Eu	5/2 ⁺	-71818.3 <i>13</i>	4.742 y <i>8</i>	β ⁻
156	Eu	0 ⁺	-70082.8 <i>35</i>	15.16 d <i>2</i>	β ⁻
157	Eu	5/2 ⁺	-69459.1 <i>42</i>	15.18 h <i>3</i>	β ⁻
158	Eu	(1 ⁻)	-67270.5 <i>20</i>	45.9 m <i>2</i>	β ⁻
159	Eu	5/2 ⁺	-66043.4 <i>43</i>	18.10 m <i>10</i>	β ⁻
160	Eu	(5 ⁻)	-63493.4 <i>9</i>	42.6 s <i>5</i>	β ⁻
160m	Eu	(1 ⁻)	-63400.4 <i>15</i>	30.8 s <i>5</i>	β ⁻
161	Eu	(5/2 ⁺)	-61792 <i>10</i>	26 s <i>2</i>	β ⁻
162	Eu	(1 ⁺)	-58722.9 <i>13</i>	11.7 s <i>12</i>	β ⁻
162m	Eu	(6 ⁺)	-58563.1 <i>21</i>	12.0 s <i>2</i>	β ⁻
163	Eu		-56573.8 <i>9</i>	7.7 s <i>4</i>	β ⁻
164	Eu	(3 ⁻)	-53232.1 <i>21</i>	4.08 s <i>16</i>	β ⁻
165	Eu		-50729 <i>5</i>	2.25 s <i>14</i>	β ⁻ , β ⁻ n<0.4%
166	Eu		-4.675×10 ⁴ <i>SY</i>	1.29 s <i>+7-8</i>	β ⁻ , β ⁻ n=0.63%
167	Eu		-4.377×10 ⁴ <i>SY</i>	8.6×10 ² ms <i>+8-6</i>	β ⁻ , β ⁻ n=1.95%
168	Eu		-3.925×10 ⁴ <i>SY</i>	440 ms <i>48</i>	β ⁻ , β ⁻ n=4.0%
169	Eu		-3.57×10 ⁴ <i>SY</i>	3.9×10 ² ms <i>9</i>	β ⁻ , β ⁻ n=15%
170	Eu		-3.09×10 ⁴ <i>SY</i>	2.0×10 ² ms <i>7</i>	β ⁻ , β ⁻ n<24%
134	Gd	0 ⁺	-4.153×10 ⁴ <i>SY</i>		ε+β ⁺ ?, εp?
135	Gd	(5/2 ⁺)	-4.425×10 ⁴ <i>SY</i>	1.1 s <i>2</i>	ε+β ⁺ , εp≈2%
136	Gd	0 ⁺	-4.909×10 ⁴ <i>SY</i>		ε+β ⁺ ?, εp?
137	Gd	(7/2)	-5.121×10 ⁴ <i>SY</i>	2.2 s <i>2</i>	ε+β ⁺ , εp≈2%
138	Gd	0 ⁺	-5.566×10 ⁴ <i>SY</i>	4.7 s <i>9</i>	ε+β ⁺ , εp?
139	Gd	(9/2 ⁻)	-5.763×10 ⁴ <i>SY</i>	5.6 s <i>3</i>	ε+β ⁺ , εp>0%
139m	Gd	(1/2 ⁺)	-5.738×10 ⁴ <i>SY</i>	4.8 s <i>9</i>	ε+β ⁺ , εp>0%
140	Gd	0 ⁺	-61782 <i>28</i>	15.8 s <i>4</i>	ε+β ⁺
141	Gd	1/2 ⁺	-63224 <i>20</i>	17 s <i>3</i>	ε+β ⁺ , εp=0.03%
141m	Gd	11/2 ⁻	-62846 <i>20</i>	24.4 s <i>5</i>	ε+β ⁺ =89%, IT=11%
142	Gd	0 ⁺	-66960 <i>28</i>	70.2 s <i>6</i>	ε+β ⁺
143	Gd	(1/2 ⁺)	-6.823×10 ⁴ <i>20</i>	39 s <i>2</i>	ε+β ⁺
143m	Gd	11/2 ⁻	-6.808×10 ⁴ <i>20</i>	110 s <i>2</i>	ε+β ⁺
144	Gd	0 ⁺	-71760 <i>28</i>	4.48 m <i>5</i>	ε+β ⁺

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
145	Gd	1/2 ⁺	-72927 20	23.2 m 5	ε+β ⁺
145m	Gd	11/2 ⁻	-72178 20	85 s 3	IT=94.3%, ε+β ⁺ =5.7%
146	Gd	0 ⁺	-76085.8 41	48.27 d 9	ε+β ⁺
147	Gd	7/2 ⁻	-75356.9 19	38.06 h 12	ε+β ⁺
148	Gd	0 ⁺	-76269.4 15	86.9 y 39	α
149	Gd	7/2 ⁻	-75127.2 33	9.28 d 9	ε+β ⁺ , α=0.00042%
150	Gd	0 ⁺	-75764 6	1.79×10 ⁶ y 8	α
151	Gd	7/2 ⁻	-74188.9 30	124.5 d 9	ε, α≈8×10 ⁻⁷ %
152	Gd	0 ⁺	-74707.3 10	1.08×10 ¹⁴ y 8	α
153	Gd	3/2 ⁻	-72882.9 10	0.20% 3 240.4 d 9	ε
154	Gd	0 ⁺	-73706.4 10	2.18% 2	
155	Gd	3/2 ⁻	-72070.3 10	14.80% 9	
156	Gd	0 ⁺	-72535.3 10	20.47% 3	
157	Gd	3/2 ⁻	-70823.9 10	15.65% 4	
158	Gd	0 ⁺	-70690.0 10	24.84% 8	
159	Gd	3/2 ⁻	-68561.9 10	18.479 h 4	β ⁻
160	Gd	0 ⁺	-67942.1 11	21.86% 3	
161	Gd	5/2 ⁻	-65506.1 15	3.66 m 5	β ⁻
162	Gd	0 ⁺	-64280.7 40	8.39 m 20	β ⁻
163	Gd	(7/2 ⁺)	-61388.6 8	68 s 3	β ⁻
163m	Gd	(1/2 ⁻)	-61250.8 8	23.5 s 10	β ⁻ ?, IT?
164	Gd	0 ⁺	-59693.7 10	45 s 3	β ⁻
165	Gd		-56525.8 13	11.6 s 10	β ⁻
166	Gd	0 ⁺	-54370.9 16	5.0 s 8	β ⁻
167	Gd		-50776 5	4.26 s +18-32	β ⁻
168	Gd	0 ⁺	-4.815×10 ⁴ SY	3.02 s 15	β ⁻
169	Gd		-4.389×10 ⁴ SY	0.89 s 9	β ⁻ , β ⁻ n≤0.7%
170	Gd	0 ⁺	-4.09×10 ⁴ SY	0.62 s 11	β ⁻ , β ⁻ n≤3%
171	Gd		-3.62×10 ⁴ SY	0.39 s +15-14	β ⁻ , β ⁻ n≤10%
172	Gd	0 ⁺	-3.297×10 ⁴ SY	0.16 s +11-10	β ⁻ , β ⁻ n≤50%
135	Tb	(7/2 ⁻)	-3.305×10 ⁴ SY	0.94 ms +33-22	p≈100%
138	Tb		-4.360×10 ⁴ SY		ε+β ⁺ ?, εp?
139	Tb		-4.813×10 ⁴ SY	1.6 s 2	ε+β ⁺ , εp?
140	Tb	(7 ⁺)	-5.05×10 ⁴ 8	2.3 s 1	ε+β ⁺ , εp=0.26%
141	Tb	(5/2 ⁻)	-5.454×10 ⁴ 11	3.5 s 2	ε+β ⁺ , εp?
142	Tb	1 ⁺	-5.66×10 ⁴ 7	597 ms 17	ε+β ⁺ , εp=0.0022%
142m	Tb	5 ⁻	-5.63×10 ⁴ 7	303 ms 17	IT
143	Tb	(11/2 ⁻)	-6.042×10 ⁴ 5	12 s 1	ε+β ⁺
143m	Tb		-6.042×10 ⁴ 5	17 s 4	ε+β ⁺ ?, IT?
144	Tb	1 ⁺	-62368 28	≈1 s	ε+β ⁺

A	El	J $^{\pi}$	$\Delta(\text{keV})$	T $_{1/2}$, Γ , Abundance	Decay Modes
144m	Tb	(6 $^-$)	-61971 28	4.29 s 14	$\varepsilon+\beta^+\approx 34\%$, IT $\approx 66\%$
145	Tb	(11/2 $^-$)	-6.640 $\times 10^4$ 11	30.9 s 6	$\varepsilon+\beta^+$
146	Tb	1 $^+$	-67764 45	8 s 4	$\varepsilon+\beta^+$
146m	Tb	5 $^-$	-67764 45	24.1 s 5	$\varepsilon+\beta^+$
147	Tb	(1/2 $^+$)	-70743 8	1.64 h 3	$\varepsilon+\beta^+$
147m	Tb	(11/2 $^-$)	-70692 8	1.83 m 6	$\varepsilon+\beta^+$
148	Tb	2 $^-$	-70537 12	60 m 1	$\varepsilon+\beta^+$
148m	Tb	(9) $^+$	-70447 12	2.21 m 5	$\varepsilon+\beta^+$
149	Tb	1/2 $^+$	-71488.6 36	4.12 h 2	$\varepsilon+\beta^+=83.3\%$, $\alpha=16.7\%$
149m	Tb	11/2 $^-$	-71452.9 36	4.17 m 5	$\varepsilon+\beta^+=99.978\%$, $\alpha=0.022\%$
150	Tb	(2) $^-$	-71106 7	3.48 h 16	$\varepsilon+\beta^+$
150m	Tb	9 $^+$	-70645 28	5.8 m 2	$\varepsilon+\beta^+\approx 100\%$, IT?
151	Tb	1/2 $^{(+)}$	-71623.5 41	17.609 h 14	$\varepsilon+\beta^+=99.9905\%$, $\alpha=0.0095\%$
151m	Tb	(11/2 $^-$)	-71524.0 41	25 s 3	IT=93.4%, $\varepsilon+\beta^+=6.6\%$
152	Tb	2 $^-$	-70717 40	17.48 h 9	$\varepsilon+\beta^+$
152m	Tb	8 $^+$	-70216 40	4.1 m 1	IT=78.9%, $\varepsilon+\beta^+=21.1\%$
153	Tb	5/2 $^+$	-71313.6 39	2.34 d 1	$\varepsilon+\beta^+$
154	Tb	0	-70157 45	21.50 h 36	$\varepsilon+\beta^+\approx 100\%$
154m	Tb	3 $^-$	-70145 46	9.994 h 39	$\varepsilon+\beta^+=78.2\%$, IT=21.8%
154n	Tb	7 $^-$	-6.996 $\times 10^4$ 16	22.7 h 5	$\varepsilon+\beta^+=98.2\%$, IT=1.8%
155	Tb	3/2 $^+$	-71250 10	5.32 d 6	ε
156	Tb	3 $^-$	-70091.0 38	5.35 d 10	$\varepsilon+\beta^+$
156m	Tb	(7 $^-$)	-70091.0 38	24.4 h 10	IT
156n	Tb	(0 $^+$)	-70002.6 38	5.2 h 2	$\varepsilon+\beta^+>0\%$, IT
157	Tb	3/2 $^+$	-70763.8 10	71 y 7	ε
158	Tb	3 $^-$	-69470.9 13	180 y 11	$\varepsilon+\beta^+=83.4\%$, $\beta^-=16.6\%$
158m	Tb	0 $^-$	-69360.6 17	10.7 s 2	IT, $\beta^-<0.6\%$, $\varepsilon+\beta^+<0.01\%$
159	Tb	3/2 $^+$	-69532.6 11	100%	
160	Tb	3 $^-$	-67836.5 11	72.3 d 2	β^-
161	Tb	3/2 $^+$	-67461.8 12	6.958 d 5	β^-
162	Tb	1 $^-$	-65879.5 20	7.60 m 17	β^-
162m	Tb		-65594.0 38		$\beta^-?$, IT?
163	Tb	3/2 $^+$	-64595.8 41	19.5 m 3	β^-
164	Tb	(5 $^+$)	-62105.0 19	3.0 m 1	β^-

A	El	J $^{\pi}$	Δ (keV)	T _{1/2} , Γ , Abundance	Decay Modes
164m	Tb		-61960 <i>12</i>		β^- ?, IT?
165	Tb	(3/2 ⁺)	-60588.8 <i>15</i>	2.11 m <i>10</i>	β^-
166	Tb	(1 ⁻)	-57808.8 <i>15</i>	27.1 s <i>15</i>	β^-
167	Tb	(3/2 ⁺)	-55883.1 <i>19</i>	18.9 s <i>16</i>	β^-
168	Tb	(4 ⁻)	-52781.2 <i>42</i>	9.4 s <i>4</i>	β^-
169	Tb		-5.048 $\times 10^4$ <i>SY</i>	5.13 s <i>32</i>	β^-
170	Tb		-4.671 $\times 10^4$ <i>SY</i>	0.96 s <i>8</i>	β^- , β^- n?
171	Tb		-4.377 $\times 10^4$ <i>SY</i>	1.24 s <i>+9-10</i>	β^- , β^- n?
172	Tb		-3.97 $\times 10^4$ <i>SY</i>	0.76 s <i>19</i>	β^- , β^- n?
173	Tb		-3.65 $\times 10^4$ <i>SY</i>		β^- , β^- n?
174	Tb		-3.20 $\times 10^4$ <i>SY</i>		β^- , β^- n?
139	Dy	(7/2 ⁺)	-3.77 $\times 10^4$ <i>SY</i>	0.6 s <i>2</i>	$\epsilon+\beta^+$, $\epsilon p \approx 11\%$
140	Dy	0 ⁺	-4.283 $\times 10^4$ <i>SY</i>		$\epsilon+\beta^+$?, ϵp ?
141	Dy	(9/2 ⁻)	-4.538 $\times 10^4$ <i>SY</i>	1.0 s <i>1</i>	$\epsilon+\beta^+$, ϵp ?
142	Dy	0 ⁺	-5.01 $\times 10^4$ <i>SY</i>	2.3 s <i>3</i>	$\epsilon+\beta^+$, $\epsilon p = 0.06\%$
143	Dy	(1/2 ⁺)	-52169 <i>13</i>	4.3 s <i>7</i>	$\epsilon+\beta^+$, ϵp ?
143m	Dy	(11/2 ⁻)	-51858 <i>13</i>	3.0 s <i>3</i>	$\epsilon+\beta^+$, ϵp ?
144	Dy	0 ⁺	-56570 <i>7</i>	9.1 s <i>4</i>	$\epsilon+\beta^+$, ϵp ?
145	Dy	(1/2 ⁺)	-58243 <i>7</i>	9.5 s <i>11</i>	$\epsilon+\beta^+$, $\epsilon p \approx 50\%$
145m	Dy	(11/2 ⁻)	-58124 <i>7</i>	14.3 s <i>7</i>	$\epsilon+\beta^+$, $\epsilon p \approx 50\%$
146	Dy	0 ⁺	-62555 <i>7</i>	33.2 s <i>7</i>	$\epsilon+\beta^+$
146m	Dy	10 ⁺	-59620 <i>7</i>	150 ms <i>20</i>	IT
147	Dy	(1/2 ⁺)	-64196 <i>9</i>	67 s <i>7</i>	$\epsilon+\beta^+ = 99.95\%$, $\epsilon p = 0.05\%$
147m	Dy	(11/2 ⁻)	-63446 <i>9</i>	55.2 s <i>4</i>	$\epsilon+\beta^+ = 68.9\%$, IT=31.1%
148	Dy	0 ⁺	-67859 <i>9</i>	3.2 m <i>2</i>	$\epsilon+\beta^+$
149	Dy	7/2 ⁻	-67694 <i>9</i>	4.2 m <i>1</i>	$\epsilon+\beta^+$
149m	Dy	(27/2 ⁻)	-65033 <i>9</i>	0.490 s <i>15</i>	IT=99.3%, $\epsilon+\beta^+ = 0.7\%$
150	Dy	0 ⁺	-69309.6 <i>43</i>	7.17 m <i>5</i>	$\epsilon+\beta^+ = 63\%$, $\alpha = 37\%$
151	Dy	7/2 ⁽⁻⁾	-68752.4 <i>32</i>	18.0 m <i>4</i>	$\epsilon+\beta^+ = 94.4\%$, $\alpha = 5.6\%$
152	Dy	0 ⁺	-70118.0 <i>46</i>	2.38 h <i>2</i>	$\epsilon+\beta^+ = 99.900\%$, $\alpha = 0.100\%$
153	Dy	7/2 ⁽⁻⁾	-69143.2 <i>40</i>	6.42 h <i>12</i>	$\epsilon+\beta^+ = 99.9906\%$, $\alpha = 0.0094\%$
154	Dy	0 ⁺	-70394 <i>7</i>	2.8 $\times 10^6$ y <i>15</i>	α
155	Dy	3/2 ⁻	-69156 <i>10</i>	9.92 h <i>14</i>	$\epsilon+\beta^+$
156	Dy	0 ⁺	-70529.4 <i>10</i>	0.056% 3	
157	Dy	3/2 ⁻	-69425 <i>5</i>	8.14 h <i>4</i>	$\epsilon+\beta^+$
158	Dy	0 ⁺	-70407.2 <i>23</i>	0.095% 3	

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
159	Dy	3/2 ⁻	-69167.2 <i>14</i>	145.3 d <i>14</i>	ε
160	Dy	0 ⁺	-69672.4 <i>7</i>	2.329% 18	
161	Dy	5/2 ⁺	-68055.5 <i>7</i>	18.889% 42	
162	Dy	0 ⁺	-68181.2 <i>7</i>	25.475% 36	
163	Dy	5/2 ⁻	-66380.9 <i>7</i>	24.896% 42	
164	Dy	0 ⁺	-65967.6 <i>7</i>	28.26% 5	
165	Dy	7/2 ⁺	-63612.3 <i>7</i>	2.331 h <i>4</i>	β ⁻
165m	Dy	1/2 ⁻	-63504.1 <i>7</i>	1.258 m <i>6</i>	IT=97.76%, β ⁻ =2.24%
166	Dy	0 ⁺	-62584.5 <i>8</i>	81.63 h <i>17</i>	β ⁻
167	Dy	(1/2 ⁻)	-59911.5 <i>40</i>	6.20 m <i>8</i>	β ⁻
168	Dy	0 ⁺	-5.856×10 ⁴ <i>14</i>	8.7 m <i>3</i>	β ⁻
169	Dy	(5/2 ⁻)	-5.560×10 ⁴ <i>30</i>	39 s <i>8</i>	β ⁻
170	Dy	0 ⁺	-5.371×10 ⁴ <i>SY</i>	55 s <i>8</i>	β ⁻
171	Dy		-5.001×10 ⁴ <i>SY</i>	4.1 s <i>4</i>	β ⁻
172	Dy	0 ⁺	-4.776×10 ⁴ <i>SY</i>	3.52 s <i>23</i>	β ⁻
172m	Dy	(8 ⁻)	-4.648×10 ⁴ <i>SY</i>	0.70 s <i>4</i>	IT=81%, β ⁻ =19%
173	Dy		-4.374×10 ⁴ <i>SY</i>	1.43 s <i>20</i>	β ⁻
174	Dy	0 ⁺	-4.11×10 ⁴ <i>SY</i>		β ⁻
175	Dy		-3.67×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?
176	Dy	0 ⁺	-3.36×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?
140	Ho	(6 ⁻ , 0 ⁻ , 8 ⁺)	-2.93×10 ⁴ <i>SY</i>	6 ms <i>3</i>	p≈100%
141	Ho	(7/2 ⁻)	-3.436×10 ⁴ <i>SY</i>	4.1 ms <i>1</i>	p≈100%
142	Ho	(7 ⁻ , 8 ⁺)	-3.725×10 ⁴ <i>SY</i>	0.4 s <i>1</i>	ε+β ⁺ ≈100%, εp>0%, p≈0%
143	Ho	(11/2 ⁻)	-4.205×10 ⁴ <i>SY</i>		ε+β ⁺ ?, εp?
144	Ho	(5 ⁻)	-44610 <i>8</i>	0.7 s <i>1</i>	ε+β ⁺ , εp?
145	Ho	(11/2 ⁻)	-49120 <i>7</i>	2.4 s <i>1</i>	ε+β ⁺ , εp?
146	Ho	(6 ⁻)	-51238 <i>7</i>	3.3 s <i>2</i>	ε+β ⁺ , εp?
147	Ho	(11/2 ⁻)	-55757 <i>5</i>	5.8 s <i>4</i>	ε+β ⁺ , εp?
148	Ho	(1 ⁺)	-5.799×10 ⁴ <i>8</i>	2.2 s <i>11</i>	ε+β ⁺ , εp?
148m	Ho	(5 ⁻)	-5.774×10 ⁴ <i>13</i>	9.60 s <i>13</i>	ε+β ⁺ , εp=0.08%
149	Ho	(11/2 ⁻)	-61646 <i>12</i>	21.0 s <i>2</i>	ε+β ⁺
149m	Ho	(1/2 ⁺)	-61597 <i>12</i>	56 s <i>3</i>	ε+β ⁺
150	Ho	(2 ⁻)	-61946 <i>14</i>	77 s <i>2</i>	ε+β ⁺
150m	Ho	(9 ⁺)	-61946 <i>14</i>	23.5 s <i>3</i>	ε+β ⁺
151	Ho	11/2 ⁽⁻⁾	-63623 <i>8</i>	35.2 s <i>2</i>	ε+β ⁺ =78%, α=22%
151m	Ho	1/2 ⁽⁺⁾	-63582 <i>8</i>	47.2 s <i>11</i>	α=80%, ε+β ⁺ =20%
152	Ho	2 ⁻	-63605 <i>13</i>	147.0 s <i>48</i>	ε+β ⁺ =88%, α=12%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
152m	Ho	9 ⁺	-63445 13	49.8 s 2	ε+β ⁺ =89.2%, α=10.8%
153	Ho	11/2 ⁻	-65012 5	2.01 m 2	ε+β ⁺ =99.949%, α=0.051%
153m	Ho	1/2 ⁺	-64943 5	9.3 m 5	ε+β ⁺ =99.82%, α=0.18%
154	Ho	2 ⁻	-64639 8	11.76 m 18	ε+β ⁺ =99.982%, α=0.018%
154m	Ho	8 ⁺	-64391 29	3.10 m 14	ε+β ⁺ , IT≈0%, α<0.001%
155	Ho	5/2 ⁺	-66040 17	48 m 1	ε+β ⁺
156	Ho	4 ⁻	-65538 38	56 m 1	ε+β ⁺
156m	Ho	1 ⁻	-65486 38	9.5 s 15	IT
156n	Ho	9 ⁺	-65538 38	7.57 m 27	ε+β ⁺ ≈75%, IT≈25%
157	Ho	7/2 ⁻	-66833 23	12.7 m 3	ε+β ⁺
158	Ho	5 ⁺	-66187 27	11.3 m 4	ε+β ⁺
158m	Ho	2 ⁻	-66120 27	28 m 1	ε+β ⁺ <19%, IT>81%
158n	Ho	(9 ⁺)	-66007 27	21.1 m 15	ε+β ⁺ ≥93%, IT≤7%
159	Ho	7/2 ⁻	-67329.6 30	33.05 m 11	ε+β ⁺
159m	Ho	1/2 ⁺	-67123.7 30	8.30 s 8	IT
160	Ho	5 ⁺	-66382 15	25.6 m 3	ε+β ⁺
160m	Ho	2 ⁻	-66322 15	4.98 h 7	ε+β ⁺ =23.8%, IT=76.2%
160n	Ho	(9 ⁺)	-66187 29	3.2 s 2	IT
161	Ho	7/2 ⁻	-67196.3 22	2.48 h 5	ε
161m	Ho	1/2 ⁺	-66985.1 22	6.77 s 7	IT
162	Ho	1 ⁺	-66040.6 31	15 m 1	ε+β ⁺
162m	Ho	6 ⁻	-65934.7 31	67.1 m 8	ε+β ⁺ =38%, IT=62%
163	Ho	7/2 ⁻	-66378.0 7	4570 y 25	ε
163m	Ho	1/2 ⁺	-66080.1 7	1.09 s 3	IT
164	Ho	1 ⁺	-64980.5 14	28.8 m 4	β ⁻ =40%, ε+β ⁺ =60%
164m	Ho	6 ⁻	-64840.7 14	36.6 m 3	IT
165	Ho	7/2 ⁻	-64898.0 8	100%	
166	Ho	0 ⁻	-63070.3 8	26.808 h 8	β ⁻
166m	Ho	7 ⁻	-63064.4 8	1132.6 y 39	β ⁻
167	Ho	7/2 ⁻	-62279 5	2.968 h 36	β ⁻
168	Ho	3 ⁺	-60059 30	2.99 m 7	β ⁻
168m	Ho	(6 ⁺)	-60000 30	132 s 4	IT≈100%
169	Ho	7/2 ⁻	-58796 20	4.7 m 1	β ⁻

A	El	J $^{\pi}$	Δ (keV)	T $_{1/2}$, Γ , Abundance	Decay Modes
170	Ho	(6 $^{+}$)	-5.624 $\times 10^4$ 5	2.76 m 5	β^{-}
170m	Ho	(1 $^{+}$)	-5.612 $\times 10^4$ 9	43 s 2	β^{-}
171	Ho		-5.45 $\times 10^4$ 6	53 s 2	β^{-}
172	Ho		-5.148 $\times 10^4$ SY	25 s 3	β^{-}
173	Ho		-4.935 $\times 10^4$ SY	7.1 s 4	β^{-}
174	Ho	(8 $^{-}$)	-4.587 $\times 10^4$ SY	3.5 s 5	β^{-}
175	Ho		-4.330 $\times 10^4$ SY	1.9 s 6	β^{-} , $\beta^{-}\text{n?}$
176	Ho		-3.94 $\times 10^4$ SY		β^{-} , $\beta^{-}\text{n?}$
177	Ho		-3.63 $\times 10^4$ SY		β^{-} , $\beta^{-}\text{n?}$
178	Ho		-3.21 $\times 10^4$ SY		β^{-} , $\beta^{-}\text{n?}$
143	Er		-3.116 $\times 10^4$ SY		$\varepsilon+\beta^{+?}$, $\varepsilon\text{p?}$
144	Er	0 $^{+}$	-3.661 $\times 10^4$ SY		$\varepsilon+\beta^{+?}$, $\varepsilon\text{p?}$
145	Er	(1/2 $^{+}$)	-3.924 $\times 10^4$ SY	0.9 s 3	$\varepsilon+\beta^{+}$, $\varepsilon\text{p?}$
145m	Er	(11/2 $^{-}$)	-3.899 $\times 10^4$ SY	1.0 s 2	$\varepsilon+\beta^{+}$, $\varepsilon\text{p?}$
146	Er	0 $^{+}$	-44322 7	1.7 s 6	$\varepsilon+\beta^{+}$, $\varepsilon\text{p?}$
147	Er	(1/2 $^{+}$)	-46608 38	3.2 s 12	$\varepsilon+\beta^{+}$, $\varepsilon\text{p}>0\%$
147m	Er	(11/2 $^{-}$)	-4.651 $\times 10^4$ 6	1.6 s 2	$\varepsilon+\beta^{+}$, $\varepsilon\text{p}>0\%$
148	Er	0 $^{+}$	-51479 10	4.6 s 1	$\varepsilon+\beta^{+}$, $\varepsilon\text{p}\approx 0.15\%$
149	Er	(1/2 $^{+}$)	-53742 28	4 s 2	$\varepsilon+\beta^{+}$, $\varepsilon\text{p}=7\%$
149m	Er	(11/2 $^{-}$)	-53000 28	8.9 s 2	$\varepsilon+\beta^{+}=96.5\%$, $\varepsilon\text{p}=0.18\%$, IT=3.5%
150	Er	0 $^{+}$	-57831 17	18.7 s 7	$\varepsilon+\beta^{+}$
151	Er	(7/2 $^{-}$)	-58266 16	23.5 s 13	$\varepsilon+\beta^{+}$
151m	Er	(27/2 $^{-}$)	-55680 16	0.58 s 2	IT=95.3%, $\varepsilon+\beta^{+}=4.7\%$
152	Er	0 $^{+}$	-60500 9	10.2 s 1	$\alpha=90\%$, $\varepsilon+\beta^{+}=10\%$
153	Er	(7/2 $^{-}$)	-60467 9	37.1 s 2	$\alpha=53\%$, $\varepsilon+\beta^{+}=47\%$
154	Er	0 $^{+}$	-62605.0 50	3.73 m 9	$\varepsilon+\beta^{+}=99.53\%$, $\alpha=0.47\%$
155	Er	7/2 $^{-}$	-62209 6	5.3 m 3	$\varepsilon+\beta^{+}=99.978\%$, $\alpha=0.022\%$
156	Er	0 $^{+}$	-64212 25	19.5 m 10	$\varepsilon+\beta^{+}\approx 100\%$, $\alpha=0.000012\%$
157	Er	3/2 $^{-}$	-63414 27	18.65 m 10	$\varepsilon+\beta^{+}$
158	Er	0 $^{+}$	-65304 25	2.26 h 6	ε
159	Er	3/2 $^{-}$	-64561.1 36	36 m 1	$\varepsilon+\beta^{+}$
160	Er	0 $^{+}$	-66064 24	28.58 h 9	ε
161	Er	3/2 $^{-}$	-65201 9	3.21 h 3	$\varepsilon+\beta^{+}$
162	Er	0 $^{+}$	-66334.2 8	0.139% 5	
163	Er	5/2 $^{-}$	-65167.4 46	75.0 m 4	$\varepsilon+\beta^{+}$

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
164	Er	0 ⁺	-65942.6 7	1.601% 3	
165	Er	5/2 ⁻	-64521.4 9	10.36 h 4	ε
166	Er	0 ⁺	-64924.15 33	33.503% 36	
167	Er	7/2 ⁺	-63289.26 29	22.869% 9	
167m	Er	1/2 ⁻	-63081.46 29	2.269 s 6	IT
168	Er	0 ⁺	-62989.23 26	26.978% 18	
169	Er	1/2 ⁻	-60921.16 30	9.39 d 2	β ⁻
170	Er	0 ⁺	-60107.5 14	14.910% 36	
171	Er	5/2 ⁻	-57717.8 14	7.516 h 2	β ⁻
172	Er	0 ⁺	-56482.6 40	49.3 h 3	β ⁻
173	Er	(7/2 ⁻)	-5.365×10 ⁴ SY	1.4 m 1	β ⁻
174	Er	0 ⁺	-5.195×10 ⁴ SY	3.2 m 2	β ⁻
174m	Er	8 ⁻	-5.084×10 ⁴ SY	3.90 s 31	IT
175	Er		-4.865×10 ⁴ SY	1.2 m 3	β ⁻
176	Er	0 ⁺	-4.663×10 ⁴ SY		β ⁻
177	Er		-4.29×10 ⁴ SY		β ⁻
178	Er	0 ⁺	-4.03×10 ⁴ SY		β ⁻
179	Er		-3.61×10 ⁴ SY		β ⁻
180	Er	0 ⁺	-3.32×10 ⁴ SY		β ⁻ , β ⁻ n?
144	Tm	(10 ⁺)	-2.216×10 ⁴ SY	1.9 μs +12-5	p≈100%
145	Tm	(11/2 ⁻)	-2.758×10 ⁴ SY	3.16 μs 16	p
146	Tm	(1 ⁺)	-3.106×10 ⁴ SY	155 ms 20	p≈100%, ε+β ⁺ ?, εp?
146m	Tm	(5 ⁻)	-3.076×10 ⁴ SY	75 ms 12	p≈100%, ε+β ⁺ ?, εp?
146n	Tm	(10 ⁺)	-3.062×10 ⁴ SY	198 ms 3	p≈100%, ε+β ⁺ ?, εp?
147	Tm	11/2 ⁻	-35974 7	0.58 s 3	ε+β ⁺ =85%, p=15%
148	Tm	(10 ⁺)	-38765 10	0.7 s 2	ε+β ⁺ , εp?
149	Tm	(11/2 ⁻)	-4.394×10 ⁴ SY	0.9 s 2	ε+β ⁺ , εp=0.2%
150	Tm	(1 ⁺)	-4.649×10 ⁴ SY	2.20 s 6	ε+β ⁺ , εp?
150m	Tm	(6 ⁻)	-4.649×10 ⁴ SY	2.20 s 6	ε+β ⁺ , εp=1.2%
151	Tm	(11/2 ⁻)	-50772 19	4.17 s 10	ε+β ⁺
151m	Tm	(1/2 ⁺)	-50675 21	6.6 s 14	ε+β ⁺
152	Tm	(9 ⁺)	-5.172×10 ⁴ 5	5.2 s 6	ε+β ⁺
152m	Tm	(2 ⁻)	-5.172×10 ⁴ 5	8 s 1	ε+β ⁺
153	Tm	(11/2 ⁻)	-53973 12	1.48 s 1	α=91%, ε+β ⁺ =9%
153m	Tm	(1/2 ⁺)	-53929 12	2.5 s 2	α=92%, ε+β ⁺ =8%
154	Tm	(2 ⁻)	-54427 14	8.1 s 3	α=54%, ε+β ⁺ =46%
154m	Tm	9 ⁺	-5.436×10 ⁴ 5	3.30 s 7	α=58%, ε+β ⁺ =42%, IT?

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
155	Tm	11/2 ⁻	-56626 <i>10</i>	21.6 s <i>2</i>	ε+β ⁺ =99.17%, α=0.83%
155m	Tm	1/2 ⁺	-56585 <i>12</i>	45 s <i>3</i>	ε+β ⁺ ≈100%, α?
156	Tm	2 ⁻	-56834 <i>14</i>	83 s <i>2</i>	ε+β ⁺ =99.936%, α=0.064%
157	Tm	1/2 ⁺	-58709 <i>28</i>	3.63 m <i>9</i>	ε+β ⁺ , α=0.00075%
158	Tm	2 ⁻	-58703 <i>25</i>	3.98 m <i>6</i>	ε+β ⁺
159	Tm	5/2 ⁺	-60570 <i>28</i>	9.13 m <i>16</i>	ε+β ⁺
160	Tm	1 ⁻	-60301 <i>33</i>	9.4 m <i>3</i>	ε+β ⁺
160m	Tm	5	-60231 <i>38</i>	74.5 s <i>15</i>	ε+β ⁺ =15%, IT=85%
161	Tm	7/2 ⁺	-61899 <i>28</i>	30.2 m <i>8</i>	ε+β ⁺
161m	Tm	(1/2 ⁺)	-61891 <i>28</i>	7 m <i>2</i>	ε+β ⁺ ?, IT?
162	Tm	1 ⁻	-61477 <i>26</i>	21.80 m <i>24</i>	ε+β ⁺
162m	Tm	5 ⁺	-61347 <i>48</i>	24.3 s <i>17</i>	ε+β ⁺ =19%, IT=81%
163	Tm	1/2 ⁺	-62728 <i>6</i>	1.810 h <i>5</i>	ε+β ⁺
164	Tm	1 ⁺	-61909 <i>25</i>	1.95 m <i>6</i>	ε+β ⁺
164m	Tm	6 ⁻	-61899 <i>26</i>	5.1 m <i>1</i>	ε+β ⁺ ≈20%, IT≈80%
165	Tm	1/2 ⁺	-62930.0 <i>17</i>	30.06 h <i>3</i>	ε+β ⁺
166	Tm	2 ⁺	-61886 <i>12</i>	7.70 h <i>3</i>	ε+β ⁺
166m	Tm	(6 ⁻)	-61764 <i>17</i>	348 ms <i>21</i>	IT
167	Tm	1/2 ⁺	-62543.1 <i>13</i>	9.28 d <i>4</i>	ε
168	Tm	3 ⁺	-61312.4 <i>17</i>	93.1 d <i>2</i>	ε+β ⁺ =99.990%, β ⁻ =0.010%
169	Tm	1/2 ⁺	-61274.7 <i>7</i>	100%	
170	Tm	1 ⁻	-59795.3 <i>7</i>	128.4 d <i>3</i>	β ⁻ =99.869%, ε=0.131%
171	Tm	1/2 ⁺	-59210.3 <i>10</i>	701.5 d <i>33</i>	β ⁻
172	Tm	2 ⁻	-57374 <i>5</i>	63.6 h <i>2</i>	β ⁻
173	Tm	(1/2 ⁺)	-56256.1 <i>44</i>	8.24 h <i>8</i>	β ⁻
174	Tm	4 ⁻	-53865 <i>45</i>	5.4 m <i>1</i>	β ⁻
174m	Tm	0 ⁺	-53612 <i>45</i>	2.29 s <i>1</i>	IT>98.5%, β ⁻ <1.5%
175	Tm	(1/2 ⁺)	-5.231×10 ⁴ <i>5</i>	15.2 m <i>5</i>	β ⁻
176	Tm	(4 ⁺)	-4.937×10 ⁴ <i>10</i>	1.853 m <i>27</i>	β ⁻
177	Tm	(1/2 ⁺)	-4.757×10 ⁴ <i>SY</i>	95 s <i>7</i>	β ⁻
177m	Tm	(7/2 ⁻)	-4.757×10 ⁴ <i>SY</i>	77 s <i>11</i>	β ⁻ ≈100%, IT?
178	Tm		-4.424×10 ⁴ <i>SY</i>		β ⁻
179	Tm		-4.190×10 ⁴ <i>SY</i>		β ⁻
180	Tm		-3.817×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?
181	Tm		-3.54×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
149	Yb	(1/2 ⁺)	-3.333×10 ⁴ <i>SY</i>	0.7 s 2	ε+β ⁺ , εp>0%
150	Yb	0 ⁺	-3.883×10 ⁴ <i>SY</i>		ε+β ⁺ , εp?
151	Yb	(1/2 ⁺)	-4.154×10 ⁴ <i>30</i>	1.6 s 1	ε+β ⁺ , εp>0%
151m	Yb	(11/2 ⁻)	-4.086×10 ⁴ <i>32</i>	1.6 s 1	ε+β ⁺ ≈100%, εp?, IT?
152	Yb	0 ⁺	-4.627×10 ⁴ <i>15</i>	3.1 s 2	ε+β ⁺ , εp?
153	Yb	(7/2 ⁻)	-4.716×10 ⁴ <i>SY</i>	4.2 s 1	α?, ε+β ⁺ ?
154	Yb	0 ⁺	-49932 <i>17</i>	409 ms 2	α=92.6%, ε+β ⁺ =7.4%
155	Yb	(7/2 ⁻)	-50503 <i>17</i>	1.79 s 2	α=89%, ε+β ⁺ =11%
156	Yb	0 ⁺	-53266 <i>9</i>	25.0 s 11	α=10%, ε+β ⁺ =90%
157	Yb	7/2 ⁻	-53420 <i>11</i>	38.6 s 10	ε+β ⁺ ≈100%, α?
158	Yb	0 ⁺	-56010 <i>8</i>	1.49 m 13	ε+β ⁺ =99.9979%, α=0.0021%
159	Yb	5/2 ⁽⁻⁾	-55834 <i>18</i>	1.73 m 9	ε+β ⁺
160	Yb	0 ⁺	-58163 <i>5</i>	4.8 m 2	ε+β ⁺
161	Yb	3/2 ⁻	-57834 <i>15</i>	4.2 m 2	ε+β ⁺
162	Yb	0 ⁺	-59821 <i>15</i>	18.89 m 18	ε+β ⁺
163	Yb	3/2 ⁻	-59294 <i>15</i>	11.05 m 25	ε+β ⁺
164	Yb	0 ⁺	-61012 <i>15</i>	75.8 m 17	ε
165	Yb	5/2 ⁻	-60295 <i>27</i>	9.8 m 5	ε+β ⁺
166	Yb	0 ⁺	-61594 <i>7</i>	56.7 h 1	ε
167	Yb	5/2 ⁻	-60589.9 <i>40</i>	17.5 m 1	ε+β ⁺
168	Yb	0 ⁺	-61579.87 <i>9</i>	0.123% 3	
169	Yb	7/2 ⁺	-60375.53 <i>18</i>	32.015 d 9	ε
169m	Yb	1/2 ⁻	-60351.33 <i>18</i>	46 s 2	IT
170	Yb	0 ⁺	-60763.929 <i>10</i>	2.982% 39	
171	Yb	1/2 ⁻	-59306.818 <i>13</i>	14.09% 14	
172	Yb	0 ⁺	-59255.456 <i>14</i>	21.69% 13	
173	Yb	5/2 ⁻	-57551.234 <i>11</i>	16.10% 6	
174	Yb	0 ⁺	-56944.521 <i>11</i>	32.03% 8	
175	Yb	7/2 ⁻	-54695.56 <i>7</i>	4.1615 d 30	β ⁻
176	Yb	0 ⁺	-53491.322 <i>14</i>	13.00% 8	
176m	Yb	8 ⁻	-52441.5 <i>6</i>	11.4 s 3	IT
177	Yb	9/2 ⁺	-50986.40 <i>22</i>	1.911 h 3	β ⁻
177m	Yb	1/2 ⁻	-50654.90 <i>37</i>	6.50 s 2	IT
178	Yb	0 ⁺	-49677 <i>7</i>	74 m 3	β ⁻
179	Yb	(1/2 ⁻)	-4.664×10 ⁴ <i>SY</i>	8.0 m 4	β ⁻
180	Yb	0 ⁺	-4.472×10 ⁴ <i>SY</i>	2.4 m 5	β ⁻
181	Yb		-4.109×10 ⁴ <i>SY</i>		β ⁻
182	Yb	0 ⁺	-3.890×10 ⁴ <i>SY</i>		β ⁻
183	Yb		-3.500×10 ⁴ <i>SY</i>		β ⁻

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
184	Yb	0 ⁺	-3.26×10 ⁴ <i>SY</i>		β ⁻
185	Yb		-2.85×10 ⁴ <i>SY</i>		β ⁻
150	Lu	(2 ⁺)	-2.477×10 ⁴ <i>SY</i>	45 ms <i>3</i>	p≈100%
151	Lu	11/2 ⁻	-3.030×10 ⁴ <i>SY</i>	79 ms <i>1</i>	ε+β ⁺ >0%, p>0%
151m	Lu	3/2 ⁺	-3.024×10 ⁴ <i>SY</i>	16.0 μs <i>5</i>	p
152	Lu	(4 ⁻ , 5 ⁻ , 6 ⁻)	-3.342×10 ⁴ <i>SY</i>	6.5×10 ² ms <i>7</i>	ε+β ⁺ , εp=15%
153	Lu	11/2 ⁻	-3.838×10 ⁴ <i>15</i>	0.9 s <i>2</i>	α?, ε+β ⁺ ?
154	Lu	(2 ⁻)	-3.967×10 ⁴ <i>SY</i>		ε+β ⁺ ?, εp?, α?
154m	Lu	(9 ⁺)	-3.961×10 ⁴ <i>SY</i>	1.12 s <i>8</i>	ε+β ⁺ ≈100%, εp?, α?
155	Lu	11/2 ⁻	-42545 <i>19</i>	67 ms <i>2</i>	α=88%, ε+β ⁺ =12%
155m	Lu	1/2 ⁺	-42484 <i>28</i>	138 ms <i>8</i>	α=76%, ε+β ⁺ =24%
156	Lu	(2 ⁻)	-4.370×10 ⁴ <i>5</i>	494 ms <i>12</i>	α≈100%
156m	Lu	(10 ⁺)	-4.370×10 ⁴ <i>5</i>	198 ms <i>2</i>	α
157	Lu	(1/2 ⁺ , 3/2 ⁺)	-46440 <i>12</i>	7.6 s <i>+20-19</i>	α>0%, ε+β ⁺ ?
157m	Lu	(11/2 ⁻)	-46413 <i>13</i>	4.79 s <i>12</i>	ε+β ⁺ =94%, α=6%
158	Lu	(2 ⁻)	-47212 <i>15</i>	10.6 s <i>3</i>	ε+β ⁺ =99.09%, α=0.91%
159	Lu		-49709 <i>38</i>	12.1 s <i>10</i>	ε+β ⁺
160	Lu		-5.027×10 ⁴ <i>6</i>	36.1 s <i>3</i>	ε+β ⁺ , α<0.0001%
160m	Lu		-5.027×10 ⁴ <i>6</i>	40 s <i>1</i>	ε+β ⁺ , α?
161	Lu	1/2 ⁺	-52562 <i>28</i>	77 s <i>2</i>	ε+β ⁺
162	Lu	1 ⁻	-5.283×10 ⁴ <i>8</i>	1.37 m <i>2</i>	ε+β ⁺
162m	Lu	(4 ⁻)	-5.283×10 ⁴ <i>8</i>	1.5 m	ε+β ⁺ , IT?
162n	Lu	(9 ⁻)	-5.283×10 ⁴ <i>8</i>	1.9 m	ε+β ⁺ , IT?
163	Lu	1/2 ⁺	-54791 <i>28</i>	4.01 m <i>11</i>	ε+β ⁺
164	Lu	1 ⁽⁻⁾	-54642 <i>28</i>	3.15 m <i>2</i>	ε+β ⁺
165	Lu	1/2 ⁺	-56442 <i>27</i>	10.74 m <i>10</i>	ε+β ⁺
166	Lu	6 ⁻	-56021 <i>30</i>	2.65 m <i>10</i>	ε+β ⁺
166m	Lu	3 ⁽⁻⁾	-55987 <i>30</i>	1.41 m <i>10</i>	ε+β ⁺ =58%, IT=42%
166n	Lu	0 ⁻	-55978 <i>30</i>	2.12 m <i>10</i>	ε+β ⁺ >80%, IT<20%
167	Lu	7/2 ⁺	-57526 <i>37</i>	52.0 m <i>9</i>	ε+β ⁺
167m	Lu	1/2 ⁺	-57493 <i>37</i>	≥1 m	ε+β ⁺ ?, IT?
168	Lu	6 ⁻	-57073 <i>38</i>	5.5 m <i>1</i>	ε+β ⁺
168m	Lu	3 ⁺	-5.691×10 ⁴ <i>6</i>	6.6 m <i>4</i>	ε+β ⁺ =99.6%, IT=0.4%
169	Lu	7/2 ⁺	-58082.5 <i>30</i>	34.06 h <i>5</i>	ε+β ⁺
169m	Lu	1/2 ⁻	-58053.5 <i>30</i>	160 s <i>10</i>	IT
170	Lu	0 ⁺	-57306 <i>17</i>	2.01 d <i>2</i>	ε+β ⁺

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
170m	Lu	(4) ⁻	-57213 17	0.67 s 10	IT
171	Lu	7/2 ⁺	-57828.5 19	8.25 d 2	ε+β ⁺
171m	Lu	1/2 ⁻	-57757.3 19	78 s 2	IT
172	Lu	4 ⁻	-56736.1 23	6.702 d 17	ε+β ⁺
172m	Lu	1 ⁻	-56694.2 23	3.7 m 5	IT
173	Lu	7/2 ⁺	-56881.0 16	1.37 y 1	ε
174	Lu	1 ⁻	-55570.3 16	3.31 y 5	ε+β ⁺
174m	Lu	6 ⁻	-55399.5 16	142 d 2	IT=99.38%, ε=0.62%
175	Lu	7/2 ⁺	-55165.7 12	97.401% 13	
176	Lu	7 ⁻	-53382.3 12	3.714×10 ¹⁰ y 19	β ⁻
176m	Lu	1 ⁻	-53259.5 12	2.599% 13 3.675 h 6	β ⁻ =99.905%, ε=0.095%
177	Lu	7/2 ⁺	-52383.9 12	6.6472 d 16	β ⁻
177m	Lu	23/2 ⁻	-51413.7 12	160.35 d 28	β ⁻ =77.30%, IT=22.70%
178	Lu	1 ⁽⁺⁾	-50337.9 23	28.4 m 2	β ⁻
178m	Lu	(9 ⁻)	-50214.1 34	23.2 m 3	β ⁻
179	Lu	7/2 ⁺	-49059 5	4.59 h 6	β ⁻
180	Lu	5 ⁺	-4.668×10 ⁴ 7	5.6 m 2	β ⁻
181	Lu		-4.480×10 ⁴ 13	3.5 m 3	β ⁻
182	Lu		-4.177×10 ⁴ SY	2.0 m 2	β ⁻
183	Lu		-3.972×10 ⁴ 8	58 s 4	β ⁻
184	Lu	(3 ⁺)	-3.630×10 ⁴ SY	19 s 2	β ⁻
185	Lu		-3.396×10 ⁴ SY		β ⁻
186	Lu		-3.032×10 ⁴ SY		β ⁻
187	Lu		-2.777×10 ⁴ SY		β ⁻ , β ⁻ n?
188	Lu		-2.382×10 ⁴ SY		β ⁻ , β ⁻ n?
153	Hf		-2.730×10 ⁴ SY	>60 ns	ε+β ⁺ ?, εp?
154	Hf	0 ⁺	-3.273×10 ⁴ SY	2 s 1	ε+β ⁺ ≈100%, α≈0%
155	Hf	(7/2 ⁻)	-3.431×10 ⁴ SY	840 ms 30	ε+β ⁺
156	Hf	0 ⁺	-3.782×10 ⁴ 15	23 ms 1	α≈100%
157	Hf	(7/2 ⁻)	-3.886×10 ⁴ SY	115 ms 1	α=94%, ε+β ⁺ =6%
158	Hf	0 ⁺	-42102 17	2.9 s 2	α=44.3%, ε+β ⁺ =55.7%
159	Hf	7/2 ⁻	-42853 17	5.2 s 1	ε+β ⁺ =88%, α=12%
160	Hf	0 ⁺	-45939 10	13.6 s 2	ε+β ⁺ =99.3%, α=0.7%
161	Hf	(7/2 ⁻)	-46316 23	18.4 s 4	ε+β ⁺ =99.70%, α=0.30%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
162	Hf	0 ⁺	-49168 <i>9</i>	38.7 s <i>11</i>	ε+β ⁺ =99.992%, α=0.008%
163	Hf	(5/2 ⁻)	-49269 <i>26</i>	40.0 s <i>6</i>	ε+β ⁺
164	Hf	0 ⁺	-51818 <i>16</i>	111 s <i>8</i>	ε+β ⁺
165	Hf	(5/2 ⁻)	-51636 <i>28</i>	76 s <i>4</i>	ε+β ⁺
166	Hf	0 ⁺	-53859 <i>28</i>	6.77 m <i>30</i>	ε+β ⁺
167	Hf	(5/2 ⁻)	-53468 <i>28</i>	2.05 m <i>4</i>	ε+β ⁺
168	Hf	0 ⁺	-55361 <i>28</i>	25.95 m <i>20</i>	ε+β ⁺
169	Hf	5/2 ⁻	-54717 <i>28</i>	3.25 m <i>4</i>	ε+β ⁺
170	Hf	0 ⁺	-56254 <i>28</i>	16.01 h <i>15</i>	ε
171	Hf	7/2 ⁺	-55431 <i>29</i>	12.1 h <i>4</i>	ε+β ⁺
171m	Hf	1/2 ⁻	-55409 <i>29</i>	29.5 s <i>9</i>	IT≈100%
172	Hf	0 ⁺	-56402 <i>24</i>	1.87 y <i>3</i>	ε
173	Hf	1/2 ⁻	-55412 <i>28</i>	23.6 h <i>1</i>	ε+β ⁺
174	Hf	0 ⁺	-55844.6 <i>23</i>	7.0×10 ¹⁶ y <i>12</i>	α
				0.16% 12	
175	Hf	5/2 ⁽⁻⁾	-54481.8 <i>23</i>	70.67 d <i>19</i>	ε
176	Hf	0 ⁺	-54576.4 <i>15</i>	5.3% 7	
177	Hf	7/2 ⁻	-52880.7 <i>14</i>	18.60% 16	
177m	Hf	23/2 ⁺	-51565.3 <i>14</i>	1.09 s <i>5</i>	IT
177n	Hf	37/2 ⁻	-50140.7 <i>14</i>	51.4 m <i>5</i>	IT
178	Hf	0 ⁺	-52435.4 <i>14</i>	27.28% 28	
178m	Hf	8 ⁻	-51288.0 <i>14</i>	4.3 s <i>1</i>	IT
178n	Hf	16 ⁺	-49989.3 <i>14</i>	31 y <i>1</i>	IT
179	Hf	9/2 ⁺	-50463.0 <i>14</i>	13.62% 11	
179m	Hf	1/2 ⁻	-50088.0 <i>14</i>	18.67 s <i>4</i>	IT
179n	Hf	25/2 ⁻	-49357.3 <i>14</i>	24.86 d <i>20</i>	IT
180	Hf	0 ⁺	-49779.5 <i>14</i>	35.08% 33	
180m	Hf	8 ⁻	-48637.9 <i>14</i>	5.528 h <i>16</i>	IT=99.69%, β ⁻ =0.31%
181	Hf	1/2 ⁻	-47403.0 <i>14</i>	42.39 d <i>6</i>	β ⁻
182	Hf	0 ⁺	-46050 <i>6</i>	8.90×10 ⁶ y <i>9</i>	β ⁻
182m	Hf	(8 ⁻)	-44877 <i>6</i>	61.5 m <i>15</i>	β ⁻ =54%, IT=46%
183	Hf	(3/2 ⁻)	-43284 <i>30</i>	1.019 h <i>3</i>	β ⁻
184	Hf	0 ⁺	-41499 <i>40</i>	4.12 h <i>5</i>	β ⁻
184m	Hf	(8 ⁻)	-40227 <i>40</i>	48 s <i>10</i>	IT
184n	Hf	(15 ⁺)	-39022 <i>41</i>	12 m <i>+8-6</i>	IT?, β ⁻ ?
185	Hf		-3.832×10 ⁴ <i>6</i>	3.5 m <i>6</i>	β ⁻
186	Hf	0 ⁺	-3.642×10 ⁴ <i>5</i>	2.6 m <i>12</i>	β ⁻
186m	Hf		-3.346×10 ⁴ <i>7</i>	>20 s	β ⁻ ?, IT?
187	Hf		-3.300×10 ⁴ <i>SY</i>		β ⁻
188	Hf	0 ⁺	-3.083×10 ⁴ <i>SY</i>		β ⁻
189	Hf		-2.715×10 ⁴ <i>SY</i>		β ⁻
190	Hf	0 ⁺	-2.480×10 ⁴ <i>SY</i>		β ⁻

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
155	Ta	11/2 ⁻	-2.399×10 ⁴ <i>SY</i>	2.9 ms <i>+15-11</i>	p
156	Ta	(2 ⁻)	-2.600×10 ⁴ <i>SY</i>	106 ms <i>4</i>	p=71%, ε+β ⁺ =29%
156m	Ta	(9 ⁺)	-2.590×10 ⁴ <i>SY</i>	363 ms <i>42</i>	ε+β ⁺ =95.8%, p=4.2%
157	Ta	1/2 ⁺	-2.960×10 ⁴ <i>15</i>	10.2 ms <i>4</i>	α=96.6%, p=3.4%
158	Ta	(2 ⁻)	-3.112×10 ⁴ <i>SY</i>	49 ms <i>8</i>	α≈100%, ε+β ⁺ ?
159	Ta	1/2 ⁺	-34439 <i>20</i>	1.04 s <i>11</i>	α=34%, ε+β ⁺ =66%
159m	Ta	11/2 ⁻	-34375 <i>20</i>	0.553 s <i>45</i>	α=55%, ε+β ⁺ =45%
160	Ta		-3.582×10 ⁴ <i>5</i>	1.55 s <i>4</i>	α>0%, ε+β ⁺ ?
160m	Ta		-3.582×10 ⁴ <i>5</i>	1.7 s <i>2</i>	α>0%, ε+β ⁺ ?
161	Ta	(1/2 ⁺)	-38779 <i>24</i>		α?, ε+β ⁺ ?
161m	Ta	(11/2 ⁻)	-38684 <i>45</i>	3.09 s <i>10</i>	ε+β ⁺ =93%, α=7%
162	Ta		-3.978×10 ⁴ <i>6</i>	3.56 s <i>12</i>	ε+β ⁺ =99.926%, α=0.074%
163	Ta	(1/2 ⁺)	-42535 <i>38</i>	10.7 s <i>12</i>	ε+β ⁺ ≈100%
164	Ta	(3 ⁺)	-43283 <i>28</i>	14.2 s <i>4</i>	ε+β ⁺
165	Ta	(9/2 ⁻)	-45848 <i>14</i>	31.0 s <i>15</i>	ε+β ⁺
166	Ta	(2 ⁺)	-46098 <i>28</i>	34.4 s <i>5</i>	ε+β ⁺
167	Ta	(3/2 ⁺)	-48351 <i>28</i>	80 s <i>4</i>	ε+β ⁺
168	Ta	(2 ⁻ , 3 ⁺)	-48394 <i>28</i>	2.0 m <i>1</i>	ε+β ⁺
169	Ta	(5/2 ⁺)	-50290 <i>28</i>	4.9 m <i>4</i>	ε+β ⁺
170	Ta	(3 ⁺)	-50138 <i>28</i>	6.76 m <i>6</i>	ε+β ⁺
171	Ta	(5/2 ⁺)	-51720 <i>28</i>	23.3 m <i>3</i>	ε+β ⁺
172	Ta	(3 ⁺)	-51330 <i>28</i>	36.8 m <i>3</i>	ε+β ⁺
173	Ta	5/2 ⁻	-52397 <i>28</i>	3.14 h <i>13</i>	ε+β ⁺
174	Ta	3 ⁺	-51741 <i>28</i>	1.08 h <i>3</i>	ε+β ⁺
175	Ta	7/2 ⁺	-52409 <i>28</i>	10.5 h <i>2</i>	ε+β ⁺
176	Ta	(1 ⁻)	-51365 <i>31</i>	8.08 h <i>7</i>	ε+β ⁺
177	Ta	7/2 ⁺	-51714.7 <i>33</i>	56.56 h <i>6</i>	ε+β ⁺
178	Ta	7 ⁻	-5.060×10 ⁴ <i>SY</i>	2.41 h <i>7</i>	ε+β ⁺
178m	Ta	(21 ⁻)	-5.060×10 ⁴ <i>SY</i>	290 ms <i>12</i>	IT
178n	Ta	(1 ⁺)	-5.060×10 ⁴ <i>SY</i>	9.32 m <i>4</i>	ε+β ⁺
179	Ta	7/2 ⁺	-50357.5 <i>15</i>	1.815 y <i>30</i>	ε
180	Ta	1 ⁺	-48933.6 <i>21</i>	8.154 h <i>6</i>	ε=85%, β ⁻ =15%
180m	Ta	9 ⁻	-48856.8 <i>21</i>	0.01201% 32	
181	Ta	7/2 ⁺	-48439.1 <i>16</i>	99.98799% 32	
182	Ta	3 ⁻	-46430.7 <i>16</i>	114.80 d <i>11</i>	β ⁻
182m	Ta	5 ⁺	-46414.4 <i>16</i>	283 ms <i>3</i>	IT
182n	Ta	10 ⁻	-45911.1 <i>16</i>	15.85 m <i>10</i>	IT
183	Ta	7/2 ⁺	-45293.5 <i>16</i>	5.1 d <i>1</i>	β ⁻
184	Ta	(5 ⁻)	-42839 <i>26</i>	8.7 h <i>1</i>	β ⁻

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
185	Ta	(7/2 ⁺)	-41394 14	49.5 m 15	β ⁻
186	Ta	(3 ⁻)	-3.861×10 ⁴ 6	10.5 m 2	β ⁻
186m	Ta		-3.827×10 ⁴ 6	1.54 m 5	IT?, β ⁻
186n	Ta	(7 ⁺)	-3.826×10 ⁴ 6	17 s 2	IT
187	Ta	(7/2 ⁺)	-3.690×10 ⁴ 6	283 s 10	β ⁻
187m	Ta	(27/2 ⁻)	-3.511×10 ⁴ 6	7.3 s 9	IT>60%, β ⁻ <40%
187n	Ta	(41/2 ⁺)	-3.396×10 ⁴ 6	>5 m	β ⁻
188	Ta	(1 ⁻)	-3.391×10 ⁴ SY	19.6 s 20	β ⁻
188m	Ta	(7 ⁻)	-3.381×10 ⁴ SY	19.6 s 20	β ⁻ ?, IT?
189	Ta		-3.196×10 ⁴ SY		β ⁻
190	Ta	(3)	-2.872×10 ⁴ SY	5.3 s 7	β ⁻
191	Ta		-2.652×10 ⁴ SY		β ⁻
192	Ta	(1, 2)	-2.310×10 ⁴ SY	2.2 s 7	β ⁻
193	Ta		-2.081×10 ⁴ SY		β ⁻ , β ⁻ n?
194	Ta		-1.71×10 ⁴ SY		β ⁻ , β ⁻ n?
157	W	(7/2 ⁻)	-1.969×10 ⁴ SY	275 ms 40	ε+β ⁺ ≈100%
158	W	0 ⁺	-2.369×10 ⁴ SY	1.4 ms 2	α
159	W	(7/2 ⁻)	-2.543×10 ⁴ SY	8.5 ms 6	α≈100%
160	W	0 ⁺	-2.933×10 ⁴ 15	91 ms 5	α=87%, ε+β ⁺ =13%
161	W		-3.051×10 ⁴ SY	409 ms 18	α=73%, ε+β ⁺ =27%
162	W	0 ⁺	-33999 18	0.99 s 3	α=46%, ε+β ⁺ =54%
163	W	7/2 ⁻	-3.491×10 ⁴ 6	2.7 s 1	ε+β ⁺ =86%, α=14%
164	W	0 ⁺	-38236 10	6.34 s 15	ε+β ⁺ =96.2%, α=3.8%
165	W	(5/2 ⁻)	-38861 26	5.1 s 5	ε+β ⁺ =99.9%, α=0.1%
166	W	0 ⁺	-41887 9	19.2 s 6	ε+β ⁺ =99.965%, α=0.035%
167	W	(5/2 ⁻)	-42093 19	19.9 s 5	ε+β ⁺ =99.96%, α=0.04%
168	W	0 ⁺	-44893 13	50.9 s 19	ε+β ⁺ =99.9968%, α=0.0032%
169	W	(5/2 ⁻)	-44918 15	70 s 9	ε+β ⁺
170	W	0 ⁺	-47291 13	2.42 m 4	ε+β ⁺
171	W	(5/2 ⁻)	-47086 28	2.39 m 4	ε+β ⁺
172	W	0 ⁺	-49097 28	6.6 m 9	ε+β ⁺
173	W	5/2 ⁻	-48727 28	7.3 m 5	ε+β ⁺
174	W	0 ⁺	-50227 28	34.3 m 10	ε+β ⁺
175	W	(1/2 ⁻)	-49633 28	35.2 m 6	ε+β ⁺

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
176	W	0 ⁺	-50642 <i>28</i>	2.5 h <i>1</i>	ε
177	W	1/2 ⁻	-49702 <i>28</i>	132 m <i>2</i>	ε+β ⁺
178	W	0 ⁺	-50407 <i>15</i>	21.6 d <i>3</i>	ε
179	W	7/2 ⁻	-49295 <i>15</i>	37.05 m <i>16</i>	ε+β ⁺
179m	W	1/2 ⁻	-49073 <i>15</i>	6.42 m <i>7</i>	IT=99.71%, ε+β ⁺ =0.29%
180	W	0 ⁺	-49636.2 <i>14</i>	1.59×10 ¹⁸ y <i>5</i> 0.12% 1	α
181	W	9/2 ⁺	-48233.9 <i>14</i>	120.96 d <i>2</i>	ε
182	W	0 ⁺	-48246.1 <i>7</i>	26.50% 16	
183	W	1/2 ⁻	-46365.7 <i>7</i>	14.31% 4	
183m	W	11/2 ⁺	-46056.2 <i>7</i>	5.36 s <i>8</i>	IT
184	W	0 ⁺	-45705.5 <i>7</i>	30.64% 2	
185	W	3/2 ⁻	-43387.9 <i>7</i>	74.9 d <i>4</i>	β ⁻
185m	W	11/2 ⁺	-43190.5 <i>7</i>	1.67 m <i>3</i>	IT
186	W	0 ⁺	-42508.6 <i>12</i>	28.43% 19	
187	W	3/2 ⁻	-39904.0 <i>12</i>	23.80 h <i>3</i>	β ⁻
188	W	0 ⁺	-38667.9 <i>31</i>	69.77 d <i>5</i>	β ⁻
189	W		-3.581×10 ⁴ <i>SY</i>	11.6 m <i>2</i>	β ⁻
190	W	0 ⁺	-34369 <i>35</i>	30.0 m <i>15</i>	β ⁻
191	W		-31176 <i>42</i>		β ⁻
192	W	0 ⁺	-2.962×10 ⁴ <i>SY</i>		β ⁻
193	W		-2.619×10 ⁴ <i>SY</i>		β ⁻
194	W	0 ⁺	-2.441×10 ⁴ <i>SY</i>		β ⁻
195	W		-2.074×10 ⁴ <i>SY</i>		β ⁻
196	W	0 ⁺	-1.874×10 ⁴ <i>SY</i>		β ⁻
197	W		-1.487×10 ⁴ <i>SY</i>		β ⁻
159	Re	(1/2 ⁺)	-1.481×10 ⁴ <i>SY</i>		p?, α?
159m	Re	11/2 ⁻	-1.481×10 ⁴ <i>SY</i>	20 μs <i>4</i>	p=92.5%, α=7.5%
160	Re	(4 ⁻)	-1.688×10 ⁴ <i>SY</i>	0.612 ms <i>7</i>	p=89%, α=11%
161	Re	1/2 ⁺	-2.084×10 ⁴ <i>15</i>	0.44 ms <i>1</i>	p=99.3%, α=0.7%
161m	Re	11/2 ⁻	-2.072×10 ⁴ <i>15</i>	14.7 ms <i>3</i>	α=93.0%, p=7.0%
162	Re	(2 ⁻)	-2.245×10 ⁴ <i>SY</i>	107 ms <i>13</i>	α=94%, ε+β ⁺ =6%
162m	Re	(9 ⁺)	-2.228×10 ⁴ <i>SY</i>	76 ms <i>10</i>	α=91%, ε+β ⁺ =9%
163	Re	1/2 ⁺	-26002 <i>19</i>	3.9×10 ² ms <i>7</i>	ε+β ⁺ =68%, α=32%
163m	Re	11/2 ⁻	-25887 <i>19</i>	214 ms <i>5</i>	α=66%, ε+β ⁺ =34%
164	Re	(2 ⁻)	-2.747×10 ⁴ <i>5</i>	0.72 s <i>15</i>	α>0%, ε+β ⁺ ?
164m	Re	(9 ⁺)	-2.747×10 ⁴ <i>5</i>	0.86 s <i>+15-11</i>	ε+β ⁺ =97%, α=3%
165	Re	(1/2 ⁺)	-30659 <i>24</i>	1.6 s <i>6</i>	ε+β ⁺ =86%, α=14%
165m	Re	(11/2 ⁻)	-30609 <i>38</i>	1.74 s <i>6</i>	ε+β ⁺ =87%, α=13%

A	El	J $^{\pi}$	$\Delta(\text{keV})$	T $_{1/2}$, Γ , Abundance	Decay Modes
166	Re		-3.184 $\times 10^4$ 9	2.25 s 21	$\alpha < 24\%$, $\varepsilon + \beta^+ > 76\%$
167	Re	(9/2 $^-$)	-34834 SY	5.9 s 4	$\varepsilon + \beta^+ \approx 99\%$, $\alpha \approx 1\%$
167m	Re	(1/2 $^+$)	-34706 SY	3.4 s 4	$\alpha \approx 100\%$
168	Re	(7 $^+$)	-35795 31	4.4 s 1	$\varepsilon + \beta^+ \approx 99.995\%$, $\alpha \approx 0.005\%$
169	Re	(9/2 $^-$)	-38409 11	8.1 s 5	$\varepsilon + \beta^+ = 99.995\%$, $\alpha = 0.005\%$
169m	Re	(1/2 $^+$, 3/2 $^+$)	-38222 20	15.1 s 16	$\alpha \approx 0.2\%$, $\varepsilon + \beta^+?$, IT?
170	Re	(6, 7, 8, 9)	-38904 11	9.2 s 2	$\varepsilon + \beta^+$
170m	Re	(5 $^+$)	-38840 23	9.2 s 2	$\varepsilon + \beta^+?$, IT?
171	Re	(9/2 $^-$)	-41250 28	15.2 s 4	$\varepsilon + \beta^+$
172	Re	(5, 6, 7)	-41567 36	15 s 3	$\varepsilon + \beta^+$
172m	Re	(2)	-41567 36	55 s 5	$\varepsilon + \beta^+$
173	Re	(5/2 $^-$)	-43554 28	1.98 m 26	$\varepsilon + \beta^+$
174	Re		-43673 28	2.38 m 5	$\varepsilon + \beta^+$
175	Re	(5/2 $^-$)	-45288 28	5.89 m 5	$\varepsilon + \beta^+$
176	Re	(3 $^+$)	-45063 28	5.3 m 3	$\varepsilon + \beta^+$
177	Re	5/2 $^-$	-46269 28	14 m 1	$\varepsilon + \beta^+$
178	Re	(3 $^+$)	-45653 28	13.2 m 2	$\varepsilon + \beta^+$
179	Re	5/2 $^+$	-46584 25	19.5 m 1	$\varepsilon + \beta^+$
180	Re	(1 $^-$)	-45837 21	2.46 m 3	$\varepsilon + \beta^+$
181	Re	5/2 $^+$	-46517 13	19.95 h 37	$\varepsilon + \beta^+$
182	Re	7 $^+$	-4.545 $\times 10^4$ 10	64.2 h 4	$\varepsilon + \beta^+$
182m	Re	2 $^+$	-4.545 $\times 10^4$ 10	14.14 h 38	$\varepsilon + \beta^+$
183	Re	5/2 $^+$	-45810 8	70.0 d 14	ε
184	Re	3 $^{(-)}$	-44219.8 43	35.43 d 16	$\varepsilon + \beta^+$
184m	Re	8 $^{(+)}$	-44031.8 43	168 d 6	IT=74.5%, $\varepsilon = 25.5\%$
185	Re	5/2 $^+$	-43819.0 8	37.40% 5	
186	Re	1 $^-$	-41927.3 8	3.71847 d 44	$\beta^- = 92.53\%$, $\varepsilon = 7.47\%$
186m	Re	(8 $^+$)	-41779.1 10	≈ 200000 y	IT
187	Re	5/2 $^+$	-41216.5 7	4.12 $\times 10^{10}$ y 11	β^-
188	Re	1 $^-$	-39016.9 7	62.60% 5 17.004 h 2	β^-
188m	Re	6 $^-$	-38844.8 7	18.59 m 4	IT
189	Re	5/2 $^+$	-37979 8	24.2 h 4	β^-
190	Re	(2 $^-$)	-35583.0 49	3.0 m 3	β^-
190m	Re	(6 $^-$)	-35379 11	3.3 h 2	$\beta^- = 54.4\%$, IT=45.6%
191	Re	(3/2 $^+$)	-34350 10	9.8 m 5	β^-
192	Re	(0 $^-$)	-3.159 $\times 10^4$ 7	15.2 s 6	β^-

A	El	J $^{\pi}$	$\Delta(\text{keV})$	T $_{1/2}$, Γ , Abundance	Decay Modes
193	Re		-30232 <i>39</i>		β^-
194	Re	(0 $^+$, 1)	-2.726 $\times 10^4$ <i>SY</i>	5 s <i>1</i>	β^-
194m	Re	(11 $^-$)	-2.698 $\times 10^4$ <i>SY</i>	25 s <i>8</i>	$\beta^- \approx 100\%$, IT?
194n	Re		-2.643 $\times 10^4$ <i>SY</i>	100 s <i>10</i>	$\beta^- \approx 100\%$, IT?
195	Re		-2.556 $\times 10^4$ <i>SY</i>	6 s <i>1</i>	β^-
196	Re		-2.236 $\times 10^4$ <i>SY</i>	3 s <i>+1-2</i>	β^-
197	Re		-2.035 $\times 10^4$ <i>SY</i>		β^-
198	Re		-1.699 $\times 10^4$ <i>SY</i>		β^-
199	Re		-1.473 $\times 10^4$ <i>SY</i>		β^- , $\beta^- n$?
161	Os	(7/2 $^-$)	-1.020 $\times 10^4$ <i>SY</i>	0.64 ms <i>6</i>	$\alpha \approx 100\%$
162	Os	0 $^+$	-1.450 $\times 10^4$ <i>SY</i>	2.1 ms <i>1</i>	$\alpha \approx 100\%$
163	Os	(7/2 $^-$)	-1.634 $\times 10^4$ <i>SY</i>	5.8 ms <i>5</i>	$\alpha \approx 100\%$
164	Os	0 $^+$	-2.042 $\times 10^4$ <i>15</i>	21 ms <i>1</i>	$\alpha = 96\%$, $\varepsilon + \beta^+ = 4\%$
165	Os	(7/2 $^-$)	-2.175 $\times 10^4$ <i>SY</i>	71 ms <i>3</i>	$\alpha = 90\%$, $\varepsilon + \beta^+ = 10\%$
166	Os	0 $^+$	-25432 <i>18</i>	212 ms <i>5</i>	$\alpha = 83\%$, $\varepsilon + \beta^+ = 17\%$
167	Os	(7/2 $^-$)	-2.650 $\times 10^4$ <i>8</i>	839 ms <i>5</i>	$\alpha = 51\%$, $\varepsilon + \beta^+ = 49\%$
168	Os	0 $^+$	-29995 <i>10</i>	2.1 s <i>1</i>	$\alpha = 45\%$, $\varepsilon + \beta^+ = 55\%$
169	Os	(5/2 $^-$)	-30723 <i>26</i>	3.4 s <i>1</i>	$\alpha = 13.7\%$, $\varepsilon + \beta^+ = 86.3\%$
170	Os	0 $^+$	-33926 <i>10</i>	7.4 s <i>2</i>	$\varepsilon + \beta^+ = 90.5\%$, $\alpha = 9.5\%$
171	Os	(5/2 $^-$)	-34297 <i>18</i>	8.3 s <i>2</i>	$\varepsilon + \beta^+ = 98.2\%$, $\alpha = 1.8\%$
172	Os	0 $^+$	-37244 <i>13</i>	19.2 s <i>9</i>	$\varepsilon + \beta^+ = 98.8\%$, $\alpha = 1.2\%$
173	Os	5/2 $^-$	-37438 <i>15</i>	22.4 s <i>9</i>	$\varepsilon + \beta^+ = 99.6\%$, $\alpha = 0.4\%$
174	Os	0 $^+$	-39995 <i>10</i>	44 s <i>4</i>	$\varepsilon + \beta^+ = 99.980\%$, $\alpha = 0.020\%$
175	Os	(5/2 $^-$)	-40105 <i>12</i>	1.4 m <i>1</i>	$\varepsilon + \beta^+$
176	Os	0 $^+$	-42131 <i>11</i>	3.6 m <i>5</i>	$\varepsilon + \beta^+$
177	Os	1/2 $^-$	-41956 <i>15</i>	3.0 m <i>2</i>	$\varepsilon + \beta^+$
178	Os	0 $^+$	-43544 <i>14</i>	5.0 m <i>4</i>	$\varepsilon + \beta^+$
179	Os	1/2 $^-$	-43020 <i>16</i>	6.3 m <i>3</i>	$\varepsilon + \beta^+$
180	Os	0 $^+$	-44356 <i>16</i>	21.5 m <i>4</i>	$\varepsilon + \beta^+$
181	Os	1/2 $^-$	-43550 <i>25</i>	106 m <i>3</i>	$\varepsilon + \beta^+$
181m	Os	7/2 $^-$	-43501 <i>25</i>	2.7 m <i>1</i>	$\varepsilon + \beta^+ \approx 100\%$, IT?
182	Os	0 $^+$	-44609 <i>22</i>	22.04 h <i>16</i>	ε
183	Os	9/2 $^+$	-43664 <i>50</i>	13.0 h <i>5</i>	$\varepsilon + \beta^+$

A	El	J $^{\pi}$	Δ (keV)	T $_{1/2}$, Γ , Abundance	Decay Modes
183m	Os	1/2 $^{-}$	-43493 50	9.9 h 3	$\varepsilon+\beta^{+}=85\%$, IT=15%
184	Os	0 $^{+}$	-44252.6 8	1.12 $\times 10^{13}$ y 23 0.02% 2	$\alpha\approx 100\%$
185	Os	1/2 $^{-}$	-42805.9 8	92.95 d 9	ε
186	Os	0 $^{+}$	-43000.0 8	2.0 $\times 10^{15}$ y 11 1.6% 6	α
187	Os	1/2 $^{-}$	-41219.0 7	1.97% 17	
188	Os	0 $^{+}$	-41137.3 7	13.24% 27	
189	Os	3/2 $^{-}$	-38986.8 7	16.15% 23	
189m	Os	9/2 $^{-}$	-38956.0 7	5.81 h 11	IT
190	Os	0 $^{+}$	-38707.8 7	26.26% 20	
190m	Os	10 $^{-}$	-37002.1 7	9.86 m 3	IT
191	Os	9/2 $^{-}$	-36395.2 7	15.00 d 4	β^{-}
191m	Os	3/2 $^{-}$	-36320.9 7	13.12 h 7	IT
192	Os	0 $^{+}$	-35882.3 23	40.78% 32	
192m	Os	(10 $^{-}$)	-33866.9 23	6.1 s 2	IT $\approx 100\%$
193	Os	3/2 $^{-}$	-33394.4 23	29.830 h 18	β^{-}
194	Os	0 $^{+}$	-32435.2 24	6.0 y 2	β^{-}
195	Os	(3/2 $^{-}$)	-2.951 $\times 10^4$ 6	6.4 m 10	β^{-}
195m	Os	(13/2 $^{+}$)	-2.908 $\times 10^4$ 6	47 s 3	IT $\approx 100\%$
196	Os	0 $^{+}$	-28277 40	34.9 m 2	β^{-}
197	Os		-2.508 $\times 10^4$ SY	93 s 7	β^{-}
198	Os	0 $^{+}$	-2.360 $\times 10^4$ SY	125 s 28	β^{-}
199	Os		-2.027 $\times 10^4$ SY	5 s +4-2	β^{-}
200	Os	0 $^{+}$	-1.855 $\times 10^4$ SY	6 s +4-3	β^{-}
201	Os		-1.484 $\times 10^4$ SY		β^{-}
202	Os	0 $^{+}$	-1.253 $\times 10^4$ SY		β^{-}
203	Os		-7.27 $\times 10^3$ SY		β^{-} , $\beta^{-}n$?
164	Ir		-7.48 $\times 10^3$ SY		$\alpha?$, $\varepsilon+\beta^{+}?$, p?
165	Ir	(1/2 $^{+}$)	-1.160 $\times 10^4$ SY	<1 μ s	$\alpha?$, p?
165m	Ir	(11/2 $^{-}$)	-1.140 $\times 10^4$ SY	0.33 ms 3	p=88%, α =12%
166	Ir	(2 $^{-}$)	-1.331 $\times 10^4$ SY	11.7 ms 9	α =93%, p=7%
166m	Ir	(9 $^{+}$)	-1.313 $\times 10^4$ SY	15.0 ms 8	α =98.2%, p=1.8%
167	Ir	1/2 $^{+}$	-17072 18	30.0 ms 9	α =44%, $\varepsilon+\beta^{+}=17\%$, p=39.0%
167m	Ir	11/2 $^{-}$	-16897 18	28.6 ms 9	α =89%, $\varepsilon+\beta^{+}=9.6\%$, p=0.41%
168	Ir	(2 $^{-}$)	-1.867 $\times 10^4$ 6	2.2 $\times 10^2$ ms +6-4	α , $\varepsilon+\beta^{+}?$, p?
168m	Ir	(9 $^{+}$, 10 $^{+}$)	-1.867 $\times 10^4$ 6	160 ms +16-13	α =78%, $\varepsilon+\beta^{+}<22\%$, p?

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
169	Ir	(1/2 ⁺)	-22093 23	353 ms 4	α=53%, ε+β ⁺ =47%
169m	Ir	(11/2 ⁻)	-21940 33	280 ms 1	α=79%, ε+β ⁺ =21%
170	Ir	(3 ⁻)	-2.318×10 ⁴ SY	0.87 s +18-12	ε+β ⁺ =94.8%, α=5.2%
170m	Ir	(8 ⁺)	-2.318×10 ⁴ SY	811 ms 18	α=38%, ε+β ⁺ ≤62%, IT≤62%
171	Ir	(1/2 ⁺)	-26412 38	3.2 s +13-7	ε+β ⁺ =85%, α=15%
171m	Ir	(11/2 ⁻)	-26412 38	1.20 s 5	α=54%, ε+β ⁺ ≤46%, p≤46%
172	Ir	(3 ⁻ , 4 ⁻)	-27379 32	4.4 s 3	ε+β ⁺ ≈98%, α≈2%
172m	Ir	(7 ⁺)	-27240 34	2.19 s 7	ε+β ⁺ =90.5%, α=9.5%
173	Ir	(1/2 ⁺ , 3/2 ⁺)	-30268 11	9.0 s 9	ε+β ⁺ =96.5%, α=3.5%
173m	Ir	11/2 ⁻	-30055 19	2.20 s 5	ε+β ⁺ =89%, α=11%
174	Ir	(2 ⁺ , 3 ⁻)	-30786 11	7.9 s 6	ε=99.5%, α=0.5%
174m	Ir	(6, 7, 8, 9)	-30656 23	4.9 s 2	ε=97.5%, α=2.5%
175	Ir	(1/2 ⁺)	-33395 12	8.9 s 7	ε+β ⁺ =99.15%, α=0.85%
175m	Ir		-33395 12	33 s 4	ε+β ⁺ ?, IT?
176	Ir		-33882 8	8.9 s 5	ε+β ⁺ =96.9%, α=3.1%
177	Ir	5/2 ⁻	-36047 20	30 s 2	ε+β ⁺ =99.94%, α=0.06%
178	Ir		-36254 19	12 s 2	ε+β ⁺
179	Ir	(5/2 ⁻)	-38082 10	79 s 1	ε+β ⁺
180	Ir	(5 ⁺)	-37978 22	1.5 m 1	ε+β ⁺
181	Ir	5/2 ⁻	-39463 5	4.90 m 15	ε+β ⁺
182	Ir	3 ⁺	-39052 21	15 m 1	ε+β ⁺
183	Ir	5/2 ⁻	-40202 25	58 m 5	ε+β ⁺
184	Ir	5 ⁻	-39611 28	3.09 h 3	ε+β ⁺
185	Ir	5/2 ⁻	-40336 28	14.4 h 1	ε+β ⁺
186	Ir	5 ⁺	-39172 17	16.64 h 3	ε+β ⁺
186m	Ir	2 ⁻	-39172 17	1.87 h 4	ε+β ⁺ ≈75%, IT≈25%
187	Ir	3/2 ⁺	-39549 28	10.5 h 3	ε+β ⁺
187m	Ir	9/2 ⁻	-39363 28	30.3 ms 6	IT
188	Ir	1 ⁻	-38345 9	41.5 h 5	ε+β ⁺

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
189	Ir	3/2 ⁺	-38450 <i>13</i>	13.2 d <i>1</i>	ε
190	Ir	4 ⁻	-36753.6 <i>14</i>	11.78 d <i>10</i>	ε+β ⁺
190m	Ir	(1) ⁻	-36731.2 <i>14</i>	1.120 h <i>3</i>	IT
190n	Ir	11 ⁻	-36377.2 <i>14</i>	3.087 h <i>12</i>	ε+β ⁺ =91.4%, IT=8.6%
191	Ir	3/2 ⁺	-36708.8 <i>13</i>	37.3% 2	
191m	Ir	11/2 ⁻	-36537.5 <i>13</i>	4.89 s <i>2</i>	IT
191n	Ir	31/2 ⁽⁺⁾	-34607.7 <i>16</i>	5.7 s <i>5</i>	IT
192	Ir	4 ⁺	-34835.6 <i>13</i>	73.826 d <i>11</i>	β ⁻ =95.24%, ε=4.76%
192m	Ir	1 ⁻	-34778.9 <i>13</i>	1.44 m <i>4</i>	IT=99.9825%, β ⁻ =0.0175%
192n	Ir	(11) ⁻	-34667.5 <i>13</i>	241 y <i>9</i>	IT
193	Ir	3/2 ⁺	-34536.3 <i>13</i>	62.7% 2	
193m	Ir	11/2 ⁻	-34456.1 <i>13</i>	10.54 d <i>4</i>	IT
194	Ir	1 ⁻	-32531.8 <i>13</i>	19.20 h <i>2</i>	β ⁻
194m	Ir	(10, 11)	-3.219×10 ⁴ <i>10</i>	171 d <i>11</i>	β ⁻
195	Ir	3/2 ⁺	-31692.3 <i>13</i>	2.29 h <i>13</i>	β ⁻
195m	Ir	11/2 ⁻	-31592 <i>5</i>	3.74 h <i>14</i>	β ⁻ =95%, IT=5%
196	Ir	(1, 2 ⁻)	-29436 <i>38</i>	51.9 s <i>11</i>	β ⁻
196m	Ir	(10, 11 ⁻)	-2.903×10 ⁴ <i>12</i>	1.40 h <i>2</i>	β ⁻ ≈100%, IT<0.3%
197	Ir	3/2 ⁺	-28264 <i>20</i>	5.8 m <i>5</i>	β ⁻
197m	Ir	11/2 ⁻	-28149 <i>21</i>	8.9 m <i>3</i>	β ⁻ =99.75%, IT=0.25%
198	Ir	1 ⁻	-2.571×10 ⁴ <i>SY</i>	9.1 s <i>3</i>	β ⁻
199	Ir		-24399 <i>41</i>	6 s <i>4</i>	β ⁻
200	Ir	(2 ⁻ , 3 ⁻)	-2.157×10 ⁴ <i>SY</i>	43 s <i>6</i>	β ⁻
201	Ir		-1.984×10 ⁴ <i>SY</i>	21 s <i>5</i>	β ⁻
202	Ir	(1 ⁻ , 2 ⁻)	-1.664×10 ⁴ <i>SY</i>	11 s <i>3</i>	β ⁻
203	Ir		-1.437×10 ⁴ <i>SY</i>		β ⁻
204	Ir		-9.57×10 ³ <i>SY</i>		β ⁻ , β ⁻ n?
205	Ir		-5.6×10 ³ <i>SY</i>		β ⁻ , β ⁻ n?
165	Pt	(7/2 ⁻)	-3.2×10 ² <i>SY</i>	2.6×10 ² μs +26-9	α≈100%
166	Pt	0 ⁺	-4.78×10 ³ <i>SY</i>	2.8×10 ² μs +7-6	α
167	Pt	(7/2 ⁻)	-6.75×10 ³ <i>SY</i>	0.9 ms <i>1</i>	α
168	Pt	0 ⁺	-1.101×10 ⁴ <i>15</i>	2.02 ms <i>10</i>	α≈100%
169	Pt	(7/2 ⁻)	-1.246×10 ⁴ <i>SY</i>	6.99 ms <i>10</i>	α≈100%
170	Pt	0 ⁺	-16299 <i>18</i>	13.9 ms <i>2</i>	α≈100%
171	Pt	(7/2 ⁻)	-1.747×10 ⁴ <i>8</i>	46 ms <i>2</i>	α=90%, ε+β ⁺ =10%
172	Pt	0 ⁺	-21107 <i>10</i>	97.4 ms <i>12</i>	α=97%, ε+β ⁺ =3%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
173	Pt	(5/2 ⁻)	-2.194×10 ⁴ 6	374 ms 7	α=84%, ε+β ⁺ =16%
174	Pt	0 ⁺	-25318 10	0.868 s 10	α=75%, ε+β ⁺ =25%
175	Pt	7/2 ⁻	-25709 19	2.43 s 4	α=64%, ε+β ⁺ =36%
176	Pt	0 ⁺	-28934 13	6.32 s 14	ε+β ⁺ =60%, α=40%
177	Pt	5/2 ⁻	-29370 15	10.0 s 4	ε+β ⁺ =94.3%, α=5.7%
178	Pt	0 ⁺	-31997 10	21 s 1	ε+β ⁺ =92.3%, α=7.7%
179	Pt	1/2 ⁻	-32268 8	21.2 s 4	ε+β ⁺ =99.76%, α=0.24%
180	Pt	0 ⁺	-34430 10	56 s 3	ε+β ⁺ =99.48%, α=0.52%
181	Pt	1/2 ⁻	-34381 14	52.0 s 22	ε+β ⁺ =99.926%, α=0.074%
182	Pt	0 ⁺	-36168 13	2.7 m 1	ε+β ⁺ =99.962%, α=0.038%
183	Pt	1/2 ⁻	-35773 14	6.5 m 10	ε+β ⁺ =99.9904%, α=0.0096%
183m	Pt	7/2 ⁻	-35738 14	43 s 5	ε+β ⁺ =96.9%, IT=3.1%
184	Pt	0 ⁺	-37332 15	17.3 m 2	ε+β ⁺ =99.9983%, α=0.0017%
185	Pt	9/2 ⁺	-36688 26	70.9 m 24	ε+β ⁺ =99.995%, α=0.005%
185m	Pt	1/2 ⁻	-36585 26	33.0 m 8	ε+β ⁺ =99%, IT=1%
186	Pt	0 ⁺	-37864 22	2.08 h 5	ε+β ⁺ ≈99.99986%, α≈0.00014%
187	Pt	3/2 ⁻	-36685 24	2.35 h 3	ε+β ⁺
188	Pt	0 ⁺	-37821 5	10.2 d 2	ε+β ⁺ =99.999974%, α=0.000026%
189	Pt	3/2 ⁻	-36469 10	10.89 h 11	ε+β ⁺
190	Pt	0 ⁺	-37306.5 7	4.90×10 ¹¹ y 11	α
191	Pt	3/2 ⁻	-35698.3 41	0.012% 2 2.860 d 20	ε+β ⁺
192	Pt	0 ⁺	-36288.5 26	0.782% 24	
193	Pt	1/2 ⁻	-34479.7 14	50 y 6	ε
193m	Pt	13/2 ⁺	-34329.9 14	4.33 d 3	IT
194	Pt	0 ⁺	-34760.10 50	32.86% 41	
195	Pt	1/2 ⁻	-32793.9 5	33.77% 25	

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
195m	Pt	13/2 ⁺	-32534.8 5	4.010 d 8	IT
196	Pt	0 ⁺	-32644.5 5	25.21% 34	
197	Pt	1/2 ⁻	-30419.8 5	19.8915 h 19	β ⁻
197m	Pt	13/2 ⁺	-30020.2 6	95.41 m 18	IT=96.7%, β ⁻ =3.3%
198	Pt	0 ⁺	-29904.0 21	7.36% 13	
199	Pt	5/2 ⁻	-27388.7 22	30.51 m 3	β ⁻
199m	Pt	(13/2) ⁺	-26964.7 29	13.5 s 3	IT
200	Pt	0 ⁺	-26599 20	12.6 h 3	β ⁻
201	Pt	(5/2 ⁻)	-2.374×10 ⁴ 5	2.5 m 1	β ⁻
202	Pt	0 ⁺	-22692 25	44 h 15	β ⁻
203	Pt	(1/2 ⁻)	-1.951×10 ⁴ SY	22 s 4	β ⁻
203m	Pt	(13/2 ⁺)	-1.814×10 ⁴ SY	12 s 5	β ⁻ ≈100%, IT?
204	Pt	0 ⁺	-1.762×10 ⁴ SY	10.7 s 13	β ⁻
205	Pt		-1.282×10 ⁴ SY		β ⁻
206	Pt	0 ⁺	-9.24×10 ³ SY		β ⁻ , β ⁻ n?
207	Pt		-4.14×10 ³ SY		β ⁻ , β ⁻ n?
208	Pt	0 ⁺	-5.0×10 ² SY		β ⁻ , β ⁻ n?
170	Au	(2 ⁻)	-3.70×10 ³ SY	0.29 ms +5-4	p=89%, α=11%
170m	Au	(9 ⁺)	-3.42×10 ³ SY	0.62 ms +5-4	p=58%, α=42%
171	Au	(1/2 ⁺)	-7562 21	22 μs +3-2	p
171m	Au	(11/2 ⁻)	-7303 24	1.036 ms 34	α=60%, p=40%
172	Au	(2, 3)	-9.32×10 ³ 6	22 ms +6-4	α≈100%, ε+β ⁺ ?, p?
172m	Au	(9, 10)	-9.32×10 ³ 6	8.2 ms +9-8	α≈100%, p<0.02%, ε+β ⁺ ?
173	Au	(1/2 ⁺)	-12832 23	26.3 ms 12	α=94%, ε+β ⁺ ?, p?
173m	Au	(11/2 ⁻)	-12618 32	12.2 ms 1	α=92%, ε+β ⁺ ?, p?
174	Au	(3 ⁻)	-1.406×10 ⁴ SY	139 ms 3	α=90%, ε+β ⁺ =10%
174m	Au	(9 ⁺)	-1.406×10 ⁴ SY	162 ms 3	α>0%, ε+β ⁺ ?
175	Au	(1/2 ⁺)	-17404 39	201 ms 3	α=90%, ε+β ⁺ =10%
175m	Au	(11/2 ⁻)	-17404 39	137 ms 1	α=90%, ε+β ⁺ =10%
176	Au	(2 ⁻ , 3 ⁻)	-18521 33	1.05 s 1	α=58%, ε+β ⁺ =42%
176m	Au	(7 ⁺ , 8 ⁺ , 9 ⁺)	-18521 33	1.36 s 2	ε+β ⁺ =71%, α=29%
177	Au	1/2 ⁺	-21546 10	1.454 s 46	α=54%, ε+β ⁺ =46%
177m	Au	11/2 ⁻	-21363 10	1.180 s 12	α=58%, ε+β ⁺ =42%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
178	Au	(2, 3)	-22303 10	3.4 s 5	ε+β ⁺ =84%, α=16%
178m	Au	(7, 8)	-22114 17	2.7 s 5	ε+β ⁺ =82%, α=18%
179	Au	1/2 ⁺	-24989 12	7.2 s 2	ε+β ⁺ =78.0%, α=22.0%
180	Au	(1 ⁺)	-25625.6 48	7.9 s 4	ε+β ⁺ =99.42%, α=0.58%
181	Au	(3/2 ⁻)	-27871 20	13.7 s 9	ε+β ⁺ =97.3%, α=2.7%
182	Au	(2 ⁺)	-28304 19	15.5 s 4	ε+β ⁺ =99.87%, α=0.13%
183	Au	(5/2 ⁻)	-30191 9	42.8 s 10	ε+β ⁺ =99.45%, α=0.55%
184	Au	5 ⁺	-30319 22	21 s 1	ε+β ⁺ , α<0.016%
184m	Au	2 ⁺	-30250 22	46.4 s 10	ε+β ⁺ =70%, IT=30%, α<0.016%
185	Au	5/2 ⁻	-31858.2 26	4.3 m 1	ε+β ⁺ =99.74%, α=0.26%
185m	Au		-31858.2 26	6.8 m 3	ε+β ⁺ ≈100%, IT?
186	Au	3 ⁻	-31715 21	10.7 m 4	ε+β ⁺ =99.9992%, α=0.0008%
187	Au	1/2 ⁽⁺⁾	-33029 22	8.3 m 2	ε+β ⁺ ≈100%, α?
187m	Au	9/2 ⁽⁻⁾	-32908 22	2.3 s 1	IT
188	Au	1 ⁻	-32371.3 27	8.84 m 6	ε+β ⁺
189	Au	1/2 ⁺	-33582 20	28.7 m 3	ε+β ⁺
189m	Au	11/2 ⁻	-33335 20	4.63 m 8	ε+β ⁺ ≈100%, IT?
190	Au	1 ⁻	-32833.5 34	42.8 m 10	ε+β ⁺
190m	Au	(11 ⁻)	-3.257×10 ⁴ 10	125 ms 20	IT≈100%
191	Au	3/2 ⁺	-33797.9 49	3.18 h 6	ε+β ⁺
191m	Au	(11/2 ⁻)	-33531.7 50	0.92 s 11	IT
192	Au	1 ⁻	-32772 16	4.94 h 9	ε+β ⁺
192m	Au	(11 ⁻)	-32341 16	160 ms 20	IT
193	Au	3/2 ⁺	-33405 9	17.65 h 15	ε+β ⁺
193m	Au	11/2 ⁻	-33115 9	3.9 s 3	IT≈99.97%, ε+β ⁺ ≈0.03%
194	Au	1 ⁻	-32212.0 21	38.06 h 23	ε+β ⁺
194m	Au	(5 ⁺)	-32104.6 22	600 ms 8	IT
194n	Au	(11 ⁻)	-31736.2 22	420 ms 8	IT
195	Au	3/2 ⁺	-32567.1 11	186.01 d 6	ε
195m	Au	11/2 ⁻	-32248.5 11	30.5 d 2	IT
196	Au	2 ⁻	-31138.7 30	6.156 d 11	ε+β ⁺ =93.0%, β ⁻ =7.0%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
196m	Au	5 ⁺	-31054.1 <i>30</i>	8.1 s <i>2</i>	IT
196n	Au	12 ⁻	-30543.1 <i>30</i>	9.607 h <i>34</i>	IT
197	Au	3/2 ⁺	-31139.8 <i>5</i>	100%	
197m	Au	11/2 ⁻	-30730.6 <i>5</i>	7.73 s <i>6</i>	IT
198	Au	2 ⁻	-29580.8 <i>5</i>	2.69469 d <i>25</i>	β ⁻
198m	Au	(12 ⁻)	-28768.9 <i>16</i>	2.28 d <i>2</i>	IT
199	Au	3/2 ⁺	-29093.8 <i>5</i>	3.135 d <i>3</i>	β ⁻
200	Au	(1 ⁻)	-27240 <i>27</i>	48.4 m <i>3</i>	β ⁻
200m	Au	12 ⁻	-2.630×10 ⁴ <i>8</i>	18.7 h <i>5</i>	β ⁻ =84%, IT=16%
201	Au	3/2 ⁺	-26400.7 <i>32</i>	26.0 m <i>8</i>	β ⁻
202	Au	(1 ⁻)	-24353 <i>23</i>	28.4 s <i>12</i>	β ⁻
203	Au	3/2 ⁺	-23143.4 <i>31</i>	60 s <i>6</i>	β ⁻
204	Au	(2 ⁻)	-2.039×10 ⁴ <i>SY</i>	38.4 s <i>8</i>	β ⁻
205	Au	(3/2 ⁺)	-1.857×10 ⁴ <i>SY</i>	32.0 s <i>11</i>	β ⁻
205m	Au	(11/2 ⁻)	-1.766×10 ⁴ <i>SY</i>	6 s <i>2</i>	IT, β ⁻ >0%
206	Au	(5 ⁺ , 6 ⁺)	-1.419×10 ⁴ <i>SY</i>	47 s <i>11</i>	β ⁻
207	Au		-1.064×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?
208	Au		-5.91×10 ³ <i>SY</i>		β ⁻ , β ⁻ n?
209	Au		-2.23×10 ³ <i>SY</i>		β ⁻ , β ⁻ n?
210	Au		2.68×10 ³ <i>SY</i>		β ⁻ , β ⁻ n?
170	Hg	0 ⁺	5.42×10 ³ <i>SY</i>	8×10 ¹ μs +40-4	α
171	Hg		3.34×10 ³ <i>SY</i>	59 μs +36-16	α≈100%
172	Hg	0 ⁺	-1.06×10 ³ <i>15</i>	231 μs <i>9</i>	α≈100%
173	Hg	(7/2 ⁻)	-2.66×10 ³ <i>SY</i>	0.80 ms <i>8</i>	α≈100%
174	Hg	0 ⁺	-6641 <i>19</i>	1.9 ms +4-3	α≈100%
175	Hg	(7/2 ⁻)	-7.97×10 ³ <i>8</i>	10.2 ms <i>3</i>	α
176	Hg	0 ⁺	-11785 <i>11</i>	20 ms <i>2</i>	α=94%, ε+β ⁺ =6%
177	Hg	7/2 ⁻	-1.278×10 ⁴ <i>8</i>	117 ms <i>7</i>	α
178	Hg	0 ⁺	-16315 <i>11</i>	266 ms <i>2</i>	α=89%, ε+β ⁺ =11%
179	Hg	7/2 ⁻	-16933 <i>28</i>	1.05 s <i>3</i>	α=75%, ε+β ⁺ =25%, εp=0.21%
180	Hg	0 ⁺	-20251 <i>13</i>	2.58 s <i>1</i>	α=48%, ε+β ⁺ =52%
181	Hg	1/2 ⁻	-20661 <i>15</i>	3.6 s <i>1</i>	α=24%, ε+β ⁺ =76%, εp=0.012%, εα=0.000009%
182	Hg	0 ⁺	-23577 <i>10</i>	10.88 s <i>8</i>	α=13.8%, ε+β ⁺ =86.2%
183	Hg	1/2 ⁻	-23805 <i>7</i>	8.9 s <i>2</i>	α=23.6%, ε+β ⁺ =76.4%, εp=0.00026%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
184	Hg	0 ⁺	-26345 <i>10</i>	30.9 s <i>3</i>	ε+β ⁺ =98.89%, α=1.11%
185	Hg	1/2 ⁻	-26184 <i>14</i>	48.2 s <i>15</i>	ε+β ⁺ =94%, α=6%
185m	Hg	13/2 ⁺	-26080 <i>14</i>	29 s <i>3</i>	ε+β ⁺ =42%, IT=58%, α≈0.03%
186	Hg	0 ⁺	-28539 <i>12</i>	1.38 m <i>6</i>	ε+β ⁺ =99.984%, α=0.016%
187	Hg	3/2 ⁽⁻⁾	-28119 <i>13</i>	1.9 m <i>3</i>	ε+β ⁺ ≈100%
187m	Hg	13/2 ⁽⁺⁾	-28119 <i>13</i>	2.4 m <i>3</i>	ε+β ⁺ ≈100%
188	Hg	0 ⁺	-30198 <i>7</i>	3.25 m <i>15</i>	ε+β ⁺ =99.999963%, α=0.000037%
189	Hg	3/2 ⁻	-29626 <i>32</i>	8.0 m <i>5</i>	ε+β ⁺
189m	Hg	13/2 ⁺	-29546 <i>44</i>	8.6 m <i>1</i>	ε+β ⁺
190	Hg	0 ⁺	-31371 <i>16</i>	20.0 m <i>5</i>	ε+β ⁺
191	Hg	3/2 ⁽⁻⁾	-30592 <i>22</i>	49 m <i>10</i>	ε+β ⁺
191m	Hg	13/2 ⁽⁺⁾	-30464 <i>24</i>	50.8 m <i>15</i>	ε+β ⁺
192	Hg	0 ⁺	-32011 <i>16</i>	4.85 h <i>20</i>	ε
193	Hg	3/2 ⁽⁻⁾	-31062 <i>16</i>	3.80 h <i>15</i>	ε+β ⁺
193m	Hg	13/2 ⁽⁺⁾	-30921 <i>16</i>	11.1 h <i>5</i>	ε+β ⁺ =92.8%, IT=7.2%
194	Hg	0 ⁺	-32184.0 <i>29</i>	4.5×10 ² y <i>5</i>	ε
195	Hg	1/2 ⁻	-31013 <i>23</i>	10.68 h <i>16</i>	ε+β ⁺
195m	Hg	13/2 ⁺	-30837 <i>23</i>	41.6 h <i>2</i>	ε+β ⁺ =45.8%, IT=54.2%
196	Hg	0 ⁺	-31825.9 <i>29</i>	0.15% 1	
197	Hg	1/2 ⁻	-30540.2 <i>32</i>	64.96 h <i>7</i>	ε+β ⁺
197m	Hg	13/2 ⁺	-30241.3 <i>32</i>	23.82 h <i>4</i>	IT=94.68%, ε+β ⁺ =5.32%
198	Hg	0 ⁺	-30954.32 <i>46</i>	10.04% 3	
199	Hg	1/2 ⁻	-29546.1 <i>5</i>	16.94% 12	
199m	Hg	13/2 ⁺	-29013.6 <i>5</i>	42.66 m <i>8</i>	IT
200	Hg	0 ⁺	-29503.3 <i>5</i>	23.14% 9	
201	Hg	3/2 ⁻	-27662.5 <i>7</i>	13.17% 9	
202	Hg	0 ⁺	-27345.3 <i>7</i>	29.74% 13	
203	Hg	5/2 ⁻	-25269.2 <i>16</i>	46.612 d <i>11</i>	β ⁻
204	Hg	0 ⁺	-24690.15 <i>50</i>	6.82% 4	
205	Hg	1/2 ⁻	-22287.7 <i>37</i>	5.1 m <i>1</i>	β ⁻
206	Hg	0 ⁺	-20946 <i>20</i>	8.32 m <i>12</i>	β ⁻
207	Hg	(9/2 ⁺)	-16487 <i>30</i>	2.9 m <i>2</i>	β ⁻
208	Hg	0 ⁺	-13265 <i>31</i>	135 s <i>10</i>	β ⁻
209	Hg	(9/2 ⁺)	-8.61×10 ³ <i>SY</i>	6.3 s <i>11</i>	β ⁻
210	Hg	0 ⁺	-5.30×10 ³ <i>SY</i>	64 s <i>12</i>	β ⁻ , β _n =2.2%
211	Hg		-3.9×10 ² <i>SY</i>	26 s <i>8</i>	β ⁻ , β _n =6%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
212	Hg	0 ⁺	3.02×10 ³ SY		β ⁻ , β ⁻ n?
213	Hg		8.20×10 ³ SY		β ⁻ , β ⁻ n?
214	Hg	0 ⁺	1.177×10 ⁴ SY		β ⁻ , β ⁻ n?
215	Hg		1.711×10 ⁴ SY		β ⁻ , β ⁻ n?
216	Hg	0 ⁺	2.092×10 ⁴ SY		β ⁻ , β ⁻ n?
176	Tl	(3 ⁻ , 4 ⁻ , 5 ⁻)	5.8×10 ² 8	5.2 ms +30-14	p≈100%
177	Tl	(1/2 ⁺)	-3340 22	18 ms 5	α=73%, p=27%
178	Tl	(4 ⁻ , 5 ⁻)	-4.61×10 ³ SY	254 ms +10-8	α=62%, ε+β ⁺ =38%, εSF=0.15%
179	Tl	1/2 ⁺	-8270 39	426 ms 9	α=60%, ε+β ⁺ =40%
180	Tl	(4 ⁻)	-9.39×10 ³ 7	1.09 s 1	ε+β ⁺ =94%, α=6%, εSF=0.0032%
181	Tl	1/2 ⁺	-12799 9	2.9 s 1	ε+β ⁺ =91.4%, α=8.6%
182	Tl	(4 ⁻)	-13327 12	1.9 s 1	ε+β ⁺ <99.5%, α>0.5%
182m	Tl	(7 ⁺)	-13327 12	3.1 s 10	ε+β ⁺ =97.5%, α=2.5%
183	Tl	1/2 ⁺	-16587 9	6.9 s 7	ε+β ⁺ >0%, α?
184	Tl	(2 ⁻)	-16883 10	9.5 s 2	ε+β ⁺ =98.78%, α=1.22%
184m	Tl	(7 ⁺)	-16883 10	10.1 s 5	ε+β ⁺ =99.53%, α=0.47%
184n	Tl	(10 ⁻)	-16883 10	47.1 ms 7	IT=99.911%, α=0.089%
185	Tl	1/2 ⁺	-19758 21	19.5 s 5	ε+β ⁺ ≈100%
185m	Tl	9/2 ⁻	-19303 21	1.8 s 1	IT≈100%
186	Tl	(2 ⁻)	-19883 21	3.4 s +5-4	α>0%, ε+β ⁺ ?
186m	Tl	(7 ⁺)	-1.981×10 ⁴ 6	27.6 s 8	ε+β ⁺ ≈99.994%, α≈0.006%
186n	Tl	(10 ⁻)	-19478 32	3.40 s 9	IT<94.1%, ε+β ⁺ >5.9%
187	Tl	(1/2 ⁺)	-22445 8	≈51 s	ε+β ⁺ ≈100%
187m	Tl	(9/2 ⁻)	-22111 9	15.60 s 12	α=0.15%, ε+β ⁺ ?, IT?
188	Tl	(2 ⁻)	-22336 30	71 s 2	ε+β ⁺
188m	Tl	7 ⁺	-22301 43	71.5 s 15	ε+β ⁺
189	Tl	(1/2 ⁺)	-24616 8	2.3 m 2	ε+β ⁺
189m	Tl	(9/2 ⁻)	-24335 11	1.4 m 1	ε+β ⁺ >96%, IT<4%
190	Tl	2 ⁻	-24366 7	2.8 m 2	ε+β ⁺

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
190m	Tl	7 ⁺	-24283 <i>12</i>	3.5 m <i>1</i>	ε+β ⁺
191	Tl	(1/2 ⁺)	-26283 <i>7</i>		ε+β ⁺ ?
191m	Tl	9/2 ⁽⁻⁾	-25984 <i>10</i>	5.30 m <i>14</i>	ε+β ⁺
192	Tl	2 ⁻	-25872 <i>32</i>	9.6 m <i>4</i>	ε+β ⁺
192m	Tl	7 ⁺	-25692 <i>37</i>	10.8 m <i>2</i>	ε+β ⁺
193	Tl	1/2 ⁽⁺⁾	-27477 <i>7</i>	21.6 m <i>8</i>	ε+β ⁺
193m	Tl	(9/2 ⁻)	-27105 <i>10</i>	2.11 m <i>15</i>	ε+β ⁺ ≥25%, IT≤75%
194	Tl	2 ⁻	-26937 <i>14</i>	33.3 m <i>4</i>	ε+β ⁺
194m	Tl	(7 ⁺)	-26677 <i>20</i>	32.8 m <i>2</i>	ε+β ⁺
195	Tl	1/2 ⁺	-28155 <i>11</i>	1.15 h <i>4</i>	ε+β ⁺
195m	Tl	9/2 ⁻	-27673 <i>11</i>	3.6 s <i>4</i>	IT
196	Tl	2 ⁻	-27497 <i>12</i>	1.84 h <i>3</i>	ε+β ⁺
196m	Tl	7 ⁺	-27102 <i>12</i>	1.41 h <i>2</i>	ε+β ⁺ =96.2%, IT=3.8%
197	Tl	1/2 ⁺	-28354 <i>14</i>	2.83 h <i>4</i>	ε+β ⁺
197m	Tl	9/2 ⁻	-27746 <i>14</i>	0.54 s <i>1</i>	IT
198	Tl	2 ⁻	-27529 <i>8</i>	5.3 h <i>5</i>	ε+β ⁺
198m	Tl	7 ⁺	-26985 <i>8</i>	1.87 h <i>3</i>	ε+β ⁺ =55.9%, IT=44.1%
199	Tl	1/2 ⁺	-28059 <i>28</i>	7.42 h <i>8</i>	ε+β ⁺
200	Tl	2 ⁻	-27047 <i>6</i>	26.1 h <i>1</i>	ε+β ⁺
201	Tl	1/2 ⁺	-27181 <i>14</i>	3.0421 d <i>15</i>	ε
202	Tl	2 ⁻	-25980.4 <i>18</i>	12.471 d <i>6</i>	ε
203	Tl	1/2 ⁺	-25761.3 <i>12</i>	29.44-29.59%	
204	Tl	2 ⁻	-24346.1 <i>12</i>	3.783 y <i>7</i>	β ⁻ =97.08%, ε+β ⁺ =2.92%
205	Tl	1/2 ⁺	-23820.8 <i>12</i>	70.41-70.56%	
206	Tl	0 ⁻	-22253.3 <i>13</i>	4.202 m <i>13</i>	β ⁻
206m	Tl	(12 ⁻)	-19610.2 <i>13</i>	3.74 m <i>3</i>	IT
207	Tl	1/2 ⁺	-21034 <i>5</i>	4.77 m <i>1</i>	β ⁻
207m	Tl	11/2 ⁻	-19686 <i>5</i>	1.33 s <i>11</i>	IT
208	Tl	5 ⁺	-16750.1 <i>19</i>	3.053 m <i>3</i>	β ⁻
209	Tl	1/2 ⁺	-13645 <i>6</i>	2.162 m <i>7</i>	β ⁻
210	Tl	(5 ⁺)	-9247 <i>12</i>	1.30 m <i>3</i>	β ⁻ , β ⁻ n=0.007%
211	Tl	(1/2 ⁺)	-6078 <i>42</i>	80 s <i>15</i>	β ⁻ , β ⁻ n=2.2%
212	Tl	(5 ⁺)	-1.55×10 ³ <i>SY</i>	31 s <i>8</i>	β ⁻ , β ⁻ n=1.8%
213	Tl	(1/2 ⁺)	1784 <i>27</i>	23.8 s <i>44</i>	β ⁻ , β ⁻ n=7.6%
214	Tl		6.47×10 ³ <i>SY</i>	11.0 s <i>24</i>	β ⁻ , β ⁻ n=34%
215	Tl		1.003×10 ⁴ <i>SY</i>	9.7 s <i>38</i>	β ⁻ , β ⁻ n=4.6%
216	Tl		1.487×10 ⁴ <i>SY</i>	5.9 s <i>33</i>	β ⁻ , β ⁻ n<11.5%
217	Tl		1.866×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?
178	Pb	0 ⁺	3573 <i>23</i>	0.20 ms <i>+12-8</i>	α≈100%
179	Pb	(9/2 ⁻)	2.05×10 ³ <i>8</i>	2.7 ms <i>2</i>	α≈100%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
180	Pb	0 ⁺	-1941 <i>12</i>	4.1 ms <i>3</i>	α≈100%
181	Pb	(9/2 ⁻)	-3.11×10 ³ <i>9</i>	36 ms <i>2</i>	α≈100%
182	Pb	0 ⁺	-6825 <i>12</i>	55 ms <i>5</i>	α≈100%
183	Pb	3/2 ⁻	-7580 <i>29</i>	535 ms <i>30</i>	α≈100%
183m	Pb	13/2 ⁺	-7487 <i>30</i>	415 ms <i>20</i>	α≈100%, IT?
184	Pb	0 ⁺	-11052 <i>13</i>	490 ms <i>25</i>	α=80%, ε+β ⁺ =20%
185	Pb	3/2 ⁻	-11541 <i>16</i>	6.3 s <i>4</i>	α=34%, ε+β ⁺ =66%
185m	Pb	13/2 ⁺	-11541 <i>16</i>	4.3 s <i>2</i>	α=50%, ε+β ⁺ =50%
186	Pb	0 ⁺	-14681 <i>11</i>	4.82 s <i>3</i>	α=40%, ε+β ⁺ =60%
187	Pb	(3/2 ⁻)	-14987 <i>5</i>	15.2 s <i>3</i>	ε+β ⁺ =90.5%, α=9.5%
187m	Pb	(13/2 ⁺)	-14954 <i>14</i>	18.0 s <i>2</i>	ε+β ⁺ =88%, α=12%
188	Pb	0 ⁺	-17811 <i>10</i>	25.5 s <i>1</i>	ε+β ⁺ =91.5%, α=8.5%
189	Pb	(3/2 ⁻)	-17844 <i>14</i>	39 s <i>8</i>	ε+β ⁺ ≈100%, α≤0.4%
189m	Pb	(13/2 ⁺)	-17804 <i>15</i>	51 s <i>2</i>	ε+β ⁺ ≈99.6%, α≈0.4%
190	Pb	0 ⁺	-20417 <i>13</i>	71 s <i>1</i>	ε+β ⁺ =99.60%, α=0.40%
191	Pb	(3/2 ⁻)	-20291 <i>7</i>	1.33 m <i>8</i>	ε+β ⁺ =99.949%, α=0.051%
191m	Pb	(13/2 ⁺)	-20236 <i>14</i>	2.18 m <i>8</i>	ε+β ⁺ ≈100%
192	Pb	0 ⁺	-22552 <i>6</i>	3.5 m <i>1</i>	ε+β ⁺ =99.9941%, α=0.0059%
193	Pb	(3/2 ⁻)	-22229 <i>10</i>		ε+β ⁺ ?
193m	Pb	(13/2 ⁺)	-22134 <i>30</i>	5.8 m <i>2</i>	ε+β ⁺
194	Pb	0 ⁺	-24208 <i>17</i>	10.7 m <i>7</i>	ε+β ⁺ ≈100%, α=0.0000073%
195	Pb	3/2 ⁻	-23738 <i>5</i>	≈15 m	ε+β ⁺
195m	Pb	13/2 ⁺	-23535 <i>5</i>	16.3 m <i>3</i>	ε+β ⁺
196	Pb	0 ⁺	-25348 <i>8</i>	37 m <i>3</i>	ε+β ⁺ ≈100%, α≤0.00003%
197	Pb	3/2 ⁻	-24745.4 <i>48</i>	8.1 m <i>19</i>	ε+β ⁺
197m	Pb	13/2 ⁺	-24426.1 <i>48</i>	43.3 m <i>9</i>	ε+β ⁺ =81%, IT=19%
198	Pb	0 ⁺	-26067 <i>9</i>	2.4 h <i>1</i>	ε+β ⁺
199	Pb	3/2 ⁻	-25232 <i>7</i>	90 m <i>10</i>	ε+β ⁺

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
199m	Pb	(13/2 ⁺)	-24803 8	12.2 m 3	IT≈93%, ε+β ⁺ ≈7%
200	Pb	0 ⁺	-26251 10	21.5 h 4	ε
201	Pb	5/2 ⁻	-25271 14	9.33 h 3	ε+β ⁺
201m	Pb	13/2 ⁺	-24642 14	60.8 s 18	IT
202	Pb	0 ⁺	-25940.6 38	5.25×10 ⁴ y 28	ε
202m	Pb	9 ⁻	-23770.8 38	3.54 h 2	IT=90.5%, ε+β ⁺ =9.5%
203	Pb	5/2 ⁻	-24786 7	51.93 h 2	ε
203m	Pb	13/2 ⁺	-23961 7	6.21 s 11	IT
203n	Pb	29/2 ⁻	-21837 7	480 ms 7	IT
204	Pb	0 ⁺	-25109.8 11	1.4% 6	
204m	Pb	9 ⁻	-22923.9 11	66.9 m 1	IT
205	Pb	5/2 ⁻	-23770.2 11	1.70×10 ⁷ y 9	ε
206	Pb	0 ⁺	-23785.5 11	24.1% 30	
207	Pb	1/2 ⁻	-22452.0 11	22% 5	
207m	Pb	13/2 ⁺	-20818.6 11	0.806 s 5	IT
208	Pb	0 ⁺	-21748.5 11	52% 7	
209	Pb	9/2 ⁺	-17614.6 17	3.235 h 5	β ⁻
210	Pb	0 ⁺	-14728.4 14	22.20 y 17	β ⁻ ≈100%, α=0.0000019%
211	Pb	9/2 ⁺	-10493.0 23	36.1648 m 15	β ⁻
212	Pb	0 ⁺	-7548.9 18	10.628 h 6	β ⁻
213	Pb	(9/2 ⁺)	-3204 7	10.2 m 3	β ⁻
214	Pb	0 ⁺	-183.0 20	27.06 m 7	β ⁻
215	Pb		4.34×10 ³ 5	142 s 12	β ⁻
216	Pb	0 ⁺	7.51×10 ³ SY	99 s 12	β ⁻
217	Pb		1.226×10 ⁴ SY	20 s 5	β ⁻
218	Pb	0 ⁺	1.563×10 ⁴ SY	15 s 7	β ⁻
219	Pb		2.062×10 ⁴ SY		β ⁻
220	Pb	0 ⁺	2.413×10 ⁴ SY		β ⁻
184	Bi	(10 ⁻)	1.25×10 ³ SY	13 ms 2	α≈100%
185	Bi	1/2 ⁺	-2.24×10 ³ SY	2.8 μs +23-10	p=92%, α=8%
186	Bi	(3 ⁺)	-3145 17	14.8 ms 8	α≈100%, εSF≈0.02%, ε+β ⁺ ?
187	Bi	(9/2 ⁻)	-6383 10	37 ms 2	α
188	Bi	(3 ⁺)	-7195 11	60 ms 3	α≈100%, εSF=0.14%
188m	Bi	(10 ⁻)	-7195 11	265 ms 15	α≈100%, εSF=0.46%
189	Bi	(9/2 ⁻)	-10065 21	685 ms 7	α≈100%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
190	Bi	(3 ⁺)	-10596 21	6.3 s 1	α=90%, ε+β ⁺ =10%, εSF=0.00002%
190m	Bi	(10 ⁻)	-1.040×10 ⁴ 7	6.2 s 1	α=70%, ε+β ⁺ =30%, εSF=0.000013%
191	Bi	(9/2 ⁻)	-13239 7	12.4 s 3	α=51%, ε+β ⁺ =49%
191m	Bi	(1/2 ⁺)	-12999 8	126 ms 7	α=68%, IT=32%, ε+β ⁺ ?
192	Bi	(3 ⁺)	-13535 30	34.6 s 9	ε+β ⁺ =88%, α=12%
192m	Bi	(10 ⁻)	-13388 45	39.8 s 4	ε+β ⁺ =90%, α=10%
193	Bi	9/2 ⁻	-15885 8	63.0 s 24	ε+β ⁺ =96.5%, α=3.5%
193m	Bi	1/2 ⁺	-15580 10	3.20 s 20	α=90%, ε+β ⁺ =10%
194	Bi	(3 ⁺)	-16023 5	100 s 3	ε+β ⁺ =99.54%, α=0.46%
194m	Bi	(6 ⁺ , 7 ⁺)	-1.588×10 ⁴ 5	125 s 2	ε+β ⁺
194n	Bi	(10 ⁻)	-15862 10	116 s 3	ε+β ⁺ =99.80%, α=0.20%
195	Bi	9/2 ⁻	-18026 5	183 s 4	ε+β ⁺ =99.97%, α=0.03%
195m	Bi	1/2 ⁺	-17625 9	87 s 1	ε+β ⁺ =67%, α=33%
196	Bi	(3 ⁺)	-18009 24	5.13 m 20	ε+β ⁺ =99.99885%, α=0.00115%
196m	Bi	(7 ⁺)	-17840 25	0.6 s 5	ε+β ⁺ ?, IT?
196n	Bi	(10 ⁻)	-17738 25	4.00 m 5	ε+β ⁺ =74.2%, IT=25.8%, α=0.00034%
197	Bi	9/2 ⁻	-19687 8	9.3 m 5	ε+β ⁺ , α?
197m	Bi	(1/2 ⁺)	-19157 22	5.0 m 5	α=55%, ε+β ⁺ =45%, IT?
198	Bi	3 ⁺	-19374 28	10.3 m 3	ε+β ⁺
198m	Bi	7 ⁺	-19094 49	11.6 m 3	ε+β ⁺
198n	Bi	10 ⁻	-18844 49	7.7 s 5	IT
199	Bi	9/2 ⁻	-20798 11	27 m 1	ε+β ⁺
199m	Bi	(1/2 ⁺)	-20131 11	24.70 m 15	ε+β ⁺ >98%, IT<2%, α≈0.01%
200	Bi	7 ⁺	-20371 23	36.4 m 5	ε+β ⁺
200m	Bi	(2 ⁺)	-2.027×10 ⁴ 9	31 m 2	ε+β ⁺ , IT?

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
200m	Bi	(10 ⁻)	-19942 <i>23</i>	0.40 s <i>5</i>	IT
201	Bi	9/2 ⁻	-21429 <i>12</i>	111 m <i>4</i>	ε+β ⁺
201m	Bi	1/2 ⁺	-20583 <i>12</i>	58.5 m <i>14</i>	IT≤8.6%, ε+β ⁺ ≥91.4%, α?
202	Bi	5 ⁺	-20751 <i>14</i>	1.71 h <i>4</i>	ε+β ⁺
203	Bi	9/2 ⁻	-21525 <i>13</i>	11.76 h <i>5</i>	ε+β ⁺
203m	Bi	1/2 ⁺	-20427 <i>13</i>	305 ms <i>5</i>	IT
204	Bi	6 ⁺	-20646 <i>9</i>	11.28 h <i>9</i>	ε+β ⁺
205	Bi	9/2 ⁻	-21065.6 <i>48</i>	14.91 d <i>7</i>	ε+β ⁺
206	Bi	6 ⁺	-20028 <i>8</i>	6.243 d <i>3</i>	ε+β ⁺
207	Bi	9/2 ⁻	-20054.6 <i>24</i>	31.22 y <i>17</i>	ε+β ⁺
208	Bi	5 ⁺	-18870.2 <i>23</i>	3.680×10 ⁵ y <i>40</i>	ε+β ⁺
209	Bi	9/2 ⁻	-18258.6 <i>14</i>	2.01×10 ¹⁹ y <i>8</i>	α
				100%	
210	Bi	1 ⁻	-14791.9 <i>14</i>	5.012 d <i>5</i>	β ⁻ =99.999868%, α=0.000132%
210m	Bi	9 ⁻	-14520.6 <i>14</i>	3.14×10 ⁶ y <i>15</i>	α
211	Bi	9/2 ⁻	-11859 <i>5</i>	2.14 m <i>3</i>	α=99.724%, β ⁻ =0.276%
212	Bi	1 ⁽⁻⁾	-8117.9 <i>19</i>	60.55 m <i>6</i>	α=35.94%, β ⁻ =64.06%
212m	Bi	(8 ⁻ , 9 ⁻)	-7879 <i>30</i>	25.1 m <i>4</i>	α=67%, β ⁻ =33%, β ⁻ α=30%
212n	Bi	(18 ⁻)	-6640 <i>38</i>	7.2 m <i>4</i>	β ⁻ <25%, IT>75%
213	Bi	9/2 ⁻	-5232 <i>5</i>	45.607 m <i>38</i>	β ⁻ =97.872%, α=2.128%
214	Bi	1 ⁻	-1201 <i>11</i>	19.71 m <i>2</i>	β ⁻ =99.9790%, α=0.0210%
214m	Bi	(8 ⁻)	-662 <i>32</i>	9.39 m <i>10</i>	β ⁻ ≈100%, IT?
215	Bi	(9/2 ⁻)	1629 <i>6</i>	7.6 m <i>2</i>	β ⁻
215m	Bi	(25/2 ⁻)	3.02×10 ³ <i>8</i>	36.9 s <i>4</i>	β ⁻ =23.1%, IT=76.9%
216	Bi	(6 ⁻ , 7 ⁻)	5874 <i>11</i>	2.25 m <i>5</i>	β ⁻
216m	Bi	(3)	5898 <i>22</i>	6.6 m <i>21</i>	β ⁻
217	Bi	(9/2 ⁻)	8730 <i>18</i>	98.5 s <i>13</i>	β ⁻
218	Bi	(6 ⁻ , 7 ⁻ , 8 ⁻)	13216 <i>27</i>	33 s <i>1</i>	β ⁻
219	Bi		1.632×10 ⁴ <i>SY</i>	8.7 s <i>29</i>	β ⁻
220	Bi		2.096×10 ⁴ <i>SY</i>	10 s <i>6</i>	β ⁻
221	Bi		2.420×10 ⁴ <i>SY</i>		β ⁻ , β ⁿ ?
222	Bi		2.895×10 ⁴ <i>SY</i>		β ⁻ , β ⁿ ?
223	Bi		3.224×10 ⁴ <i>SY</i>		β ⁻ , β ⁿ ?
224	Bi		3.707×10 ⁴ <i>SY</i>		β ⁻ , β ⁿ ?
186	Po	0 ⁺	4102 <i>18</i>	28 μs <i>+16-6</i>	α≈100%
187	Po	(1/2 ⁻ , 5/2 ⁻)	2824 <i>33</i>	1.40 ms <i>25</i>	α≈100%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
188	Po	0 ⁺	-544 <i>20</i>	270 μs <i>30</i>	α≈100%
189	Po	(5/2 ⁻)	-1422 <i>22</i>	3.5 ms <i>5</i>	α
190	Po	0 ⁺	-4563 <i>13</i>	2.45 ms <i>5</i>	α
191	Po	(3/2 ⁻)	-5069 <i>7</i>	22 ms <i>1</i>	α≈100%, ε+β ⁺ ?
192	Po	0 ⁺	-8066 <i>11</i>	32.2 ms <i>3</i>	α≈100%
193	Po	3/2 ⁻	-8325 <i>15</i>	407 ms <i>31</i>	α≈100%
193m	Po	13/2 ⁺	-8230 <i>16</i>	246 ms <i>11</i>	α≈100%
194	Po	0 ⁺	-11005 <i>13</i>	392 ms <i>4</i>	α=93%, ε+β ⁺ =7%
195	Po	3/2 ⁻	-11117 <i>6</i>	4.64 s <i>9</i>	α=94%, ε+β ⁺ =6%
195m	Po	13/2 ⁺	-10967 <i>12</i>	1.92 s <i>2</i>	α≈100%
196	Po	0 ⁺	-13469 <i>5</i>	5.63 s <i>7</i>	α=94%, ε+β ⁺ =6%
197	Po	(3/2 ⁻)	-13393 <i>10</i>	54 s <i>1</i>	α=44%, ε+β ⁺ =56%
197m	Po	13/2 ⁽⁺⁾	-13194 <i>15</i>	25.8 s <i>2</i>	α=84%, ε+β ⁺ =16%, IT?
198	Po	0 ⁺	-15473 <i>17</i>	1.76 m <i>2</i>	α=57%, ε+β ⁺ =43%
199	Po	3/2 ⁻	-15239 <i>5</i>	5.5 m <i>2</i>	ε+β ⁺ =92.5%, α=7.5%
199m	Po	(13/2 ⁺)	-14929 <i>6</i>	4.17 m <i>4</i>	α=24%, ε+β ⁺ =73.5%, IT=2.5%
200	Po	0 ⁺	-16942 <i>8</i>	11.5 m <i>1</i>	ε+β ⁺ =88.7%, α=11.3%
201	Po	3/2 ⁻	-16521.2 <i>49</i>	15.5 m <i>2</i>	ε+β ⁺ =98.87%, α=1.13%
201m	Po	13/2 ⁺	-16079 <i>5</i>	9.0 m <i>1</i>	ε+β ⁺ =41.4%, IT=56.2%, α=2.4%
202	Po	0 ⁺	-17942 <i>9</i>	44.6 m <i>4</i>	ε+β ⁺ =98.08%, α=1.92%
203	Po	5/2 ⁻	-17310.8 <i>46</i>	36.7 m <i>5</i>	ε+β ⁺ =99.89%, α=0.11%
203m	Po	13/2 ⁺	-16669.2 <i>46</i>	45 s <i>2</i>	IT
204	Po	0 ⁺	-18341 <i>10</i>	3.518 h <i>13</i>	ε+β ⁺ =99.327%, α=0.673%
205	Po	5/2 ⁻	-17521 <i>10</i>	1.79 h <i>11</i>	ε+β ⁺ =99.96%, α=0.04%
206	Po	0 ⁺	-18188.7 <i>40</i>	8.8 d <i>1</i>	ε+β ⁺ =94.55%, α=5.45%
207	Po	5/2 ⁻	-17146 <i>7</i>	5.80 h <i>2</i>	ε+β ⁺ =99.979%, α=0.021%
207m	Po	19/2 ⁻	-15763 <i>7</i>	2.79 s <i>8</i>	IT

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
208	Po	0 ⁺	-17469.2 <i>17</i>	2.898 y <i>2</i>	α=99.9960%, ε+β ⁺ =0.0040%
209	Po	1/2 ⁻	-16366.0 <i>18</i>	124.0 y <i>29</i>	α=99.545%, ε+β ⁺ =0.455%
210	Po	0 ⁺	-15953.1 <i>11</i>	138.378 d <i>4</i>	α
211	Po	9/2 ⁺	-12432.5 <i>13</i>	0.516 s <i>3</i>	α
211m	Po	(25/2 ⁺)	-10970 <i>5</i>	25.3 s <i>4</i>	α=99.984%, IT=0.016%
212	Po	0 ⁺	-10369.4 <i>12</i>	295.0 ns <i>4</i>	α
212m	Po	(18 ⁺)	-7439 <i>10</i>	45.1 s <i>6</i>	α=99.93%, IT=0.07%
213	Po	9/2 ⁺	-6653.5 <i>31</i>	3.706 μs <i>1</i>	α
214	Po	0 ⁺	-4470.0 <i>14</i>	163.48 μs <i>4</i>	α
215	Po	9/2 ⁺	-541.8 <i>21</i>	1.781 ms <i>3</i>	α=99.99977%, β=0.00023%
216	Po	0 ⁺	1782.3 <i>18</i>	144.0 ms <i>6</i>	α
217	Po	(9/2 ⁺)	5883 <i>7</i>	1.53 s <i>5</i>	α=97.5%, β=2.5%
218	Po	0 ⁺	8356.7 <i>20</i>	3.097 m <i>10</i>	α=99.978%, β=0.022%
219	Po	(9/2 ⁺)	12681 <i>16</i>	10.3 m <i>10</i>	β=71.8%, α=28.2%
220	Po	0 ⁺	15263 <i>18</i>		β ⁻
221	Po		19774 <i>20</i>	1.9 m <i>+10-5</i>	β ⁻
222	Po	0 ⁺	22486 <i>40</i>	2 m <i>+12-1</i>	β ⁻
223	Po		2.708×10 ⁴ <i>SY</i>		β ⁻
224	Po	0 ⁺	2.991×10 ⁴ <i>SY</i>		β ⁻
225	Po		3.458×10 ⁴ <i>SY</i>		β ⁻
226	Po	0 ⁺	3.755×10 ⁴ <i>SY</i>		β ⁻
227	Po		4.228×10 ⁴ <i>SY</i>		β ⁻
191	At	(1/2 ⁺)	3864 <i>16</i>	1.7 ms <i>+11-5</i>	α≈100%
192	At	(9 ⁻ , 10 ⁻)	2926 <i>28</i>	88 ms <i>6</i>	α, εSF<0.5%
192m	At		2926 <i>28</i>	11.5 ms <i>6</i>	α, εSF<0.5%
193	At	(1/2 ⁺)	-67 <i>22</i>	28 ms <i>+5-4</i>	α≈100%
194	At	(4 ⁻ , 5 ⁻)	-716 <i>24</i>	286 ms <i>7</i>	α≈100%, εSF≈0.8%, ε+β ⁺ ?
194m	At	(9 ⁻ , 10 ⁻)	-706 <i>38</i>	323 ms <i>7</i>	α≈100%, εSF≈0.8%, ε+β ⁺ ?, IT?
195	At	(1/2 ⁺)	-3470 <i>10</i>	309 ms <i>19</i>	α
195m	At	(7/2 ⁻)	-3437 <i>10</i>	144 ms <i>3</i>	α=88%, IT=12%
196	At	(3 ⁺)	-3913 <i>30</i>	377 ms <i>4</i>	α=97.5%, ε+β ⁺ =2.5%, εSF=0.009%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
197	At	(9/2 ⁻)	-6355 <i>8</i>	388 ms <i>6</i>	α=96.1%, ε+β ⁺ =3.9%
197m	At	(1/2 ⁺)	-6303 <i>13</i>	2.0 s <i>2</i>	α≈100%, ε+β ⁺ ?, IT?
198	At	(3 ⁺)	-6708.7 <i>49</i>	4.47 s <i>10</i>	α=90%, ε+β ⁺ =10%
198m	At	(10 ⁻)	-6444 <i>6</i>	1.22 s <i>5</i>	α=84%, ε+β ⁺ =16%
199	At	(9/2 ⁻)	-8823 <i>5</i>	6.97 s <i>13</i>	α=92%, ε+β ⁺ =8%
199m	At	(1/2 ⁺)	-8579 <i>6</i>	273 ms <i>9</i>	IT≈99%, α≈1%
200	At	(3 ⁺)	-8988 <i>24</i>	43 s <i>1</i>	α=53%, ε+β ⁺ =47%
200m	At	(7 ⁺)	-8876 <i>25</i>	47 s <i>1</i>	α=43%, ε+β ⁺ =57%
200n	At	(10 ⁺)	-8644 <i>25</i>	6.4 s <i>5</i>	α=10.5%, IT=89.5%, ε+β ⁺ ?
201	At	(9/2 ⁻)	-10789 <i>8</i>	85 s <i>2</i>	α=71%, ε+β ⁺ =29%
202	At	3 ⁽⁺⁾	-10595 <i>28</i>	184 s <i>1</i>	ε+β ⁺ =88%, α=12%
202m	At	7 ⁽⁺⁾	-10405 <i>49</i>	182 s <i>2</i>	ε+β ⁺ =91.4%, α=8.6%
202n	At	10 ⁽⁻⁾	-10005 <i>49</i>	0.46 s <i>5</i>	IT=99.904%, α=0.096%
203	At	9/2 ⁻	-12163 <i>11</i>	7.4 m <i>1</i>	ε+β ⁺ =69%, α=31%
204	At	7 ⁺	-11875 <i>23</i>	9.2 m <i>1</i>	ε+β ⁺ =96.1%, α=3.9%
204m	At	10 ⁻	-11288 <i>23</i>	108 ms <i>10</i>	IT
205	At	9/2 ⁻	-12985 <i>12</i>	26.9 m <i>8</i>	ε+β ⁺ =90%, α=10%
206	At	(6) ⁺	-12439 <i>14</i>	30.5 m <i>6</i>	ε+β ⁺ =99.1%, α=0.90%
207	At	9/2 ⁻	-13227 <i>12</i>	1.81 h <i>3</i>	ε+β ⁺ ≈90%, α≈10%
208	At	6 ⁺	-12470 <i>9</i>	1.63 h <i>3</i>	ε+β ⁺ =99.45%, α=0.55%
209	At	9/2 ⁻	-12883.8 <i>47</i>	5.42 h <i>5</i>	ε+β ⁺ =95.9%, α=4.1%
210	At	(5) ⁺	-11972 <i>8</i>	8.1 h <i>4</i>	ε+β ⁺ =99.825%, α=0.175%
211	At	9/2 ⁻	-11647.2 <i>27</i>	7.216 h <i>6</i>	α=41.78%, ε=58.22%
212	At	(1 ⁻)	-8628.1 <i>24</i>	314 ms <i>2</i>	α≈100%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
212m	At	(9 ⁻)	-8405.2 <i>24</i>	121 ms <i>2</i>	α=99.5%, IT=0.5%
213	At	9/2 ⁻	-6579.5 <i>49</i>	124 ns <i>6</i>	α
214	At	1 ⁻	-3379.2 <i>40</i>	558 ns <i>10</i>	α
215	At	9/2 ⁻	-1257 <i>7</i>	37 μs <i>3</i>	α
216	At	1 ⁻	2256.7 <i>36</i>	0.30 ms <i>3</i>	α≈100%
217	At	9/2 ⁻	4395 <i>5</i>	32.6 ms <i>2</i>	α=99.993%, β ⁻ =0.007%
218	At	(3 ⁻ , 2 ⁻)	8100 <i>12</i>	1.28 s <i>5</i>	α=99.95%, β ⁻ =0.05%
219	At	(9/2 ⁻)	10396.0 <i>32</i>	56 s <i>3</i>	α=93.6%, β ⁻ =6.4%
220	At	3	14376 <i>14</i>	3.71 m <i>4</i>	β ⁻ =92%, α=8%
221	At		16783 <i>14</i>	2.3 m <i>2</i>	β ⁻
222	At		20953 <i>16</i>	54 s <i>10</i>	β ⁻
223	At		23428 <i>14</i>	50 s <i>7</i>	β ⁻
224	At		27711 <i>22</i>	1.3 m + <i>23-4</i>	β ⁻
225	At		3.030×10 ⁴ <i>SY</i>		β ⁻
226	At		3.466×10 ⁴ <i>SY</i>		β ⁻
227	At		3.743×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?
228	At		4.188×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?
229	At		4.489×10 ⁴ <i>SY</i>		β ⁻ , β ⁻ n?
193	Rn		9043 <i>25</i>	1.15 ms <i>27</i>	α≈100%
194	Rn	0 ⁺	5725 <i>17</i>	0.78 ms <i>16</i>	α≈100%
195	Rn	3/2 ⁻	5.05×10 ³ <i>5</i>	6 ms + <i>3-2</i>	α≈100%
195m	Rn	13/2 ⁺	5.11×10 ³ <i>7</i>	5 ms + <i>3-2</i>	α≈100%
196	Rn	0 ⁺	1975 <i>14</i>	4.4 ms + <i>13-9</i>	α≈100%, ε+β ⁺ ?
197	Rn	(3/2 ⁻)	1510 <i>16</i>	55 ms + <i>6-5</i>	α≈100%
198	Rn	0 ⁺	-1230 <i>13</i>	65 ms <i>2</i>	α=90%, ε+β ⁺ =10%
199	Rn	(3/2 ⁻)	-1560 <i>7</i>	0.60 s <i>2</i>	α≈100%
199m	Rn	(13/2 ⁺)	-1338 <i>15</i>	0.312 s <i>15</i>	α≈100%
200	Rn	0 ⁺	-4000 <i>6</i>	1.03 s <i>2</i>	α=86%, ε+β ⁺ =14%
201	Rn	(3/2 ⁻)	-4107 <i>10</i>	7.0 s <i>4</i>	α>0%, ε+β ⁺ ?
201m	Rn	(13/2 ⁺)	-3859 <i>21</i>	3.8 s <i>1</i>	α>0%, ε+β ⁺ ?
202	Rn	0 ⁺	-6275 <i>18</i>	9.75 s <i>13</i>	α=78%, ε+β ⁺ =22%
203	Rn	3/2 ⁻	-6184 <i>6</i>	44 s <i>2</i>	α=66%, ε+β ⁺ =34%
203m	Rn	13/2 ⁺	-5822 <i>7</i>	26.9 s <i>5</i>	α=75%, ε+β ⁺ =25%
204	Rn	0 ⁺	-7970 <i>7</i>	74 s <i>1</i>	α=72%, ε+β ⁺ =28%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
205	Rn	5/2 ⁻	-7710 <i>5</i>	170 s <i>3</i>	α=25%, ε+β ⁺ =75%
206	Rn	0 ⁺	-9133 <i>9</i>	6.29 m <i>20</i>	α=62%, ε+β ⁺ =38%
207	Rn	5/2 ⁻	-8634.7 <i>47</i>	9.25 m <i>17</i>	α=21%, ε+β ⁺ =79%
208	Rn	0 ⁺	-9655 <i>10</i>	24.28 m <i>16</i>	α=62%, ε+β ⁺ =38%
209	Rn	5/2 ⁻	-8941 <i>10</i>	28.7 m <i>9</i>	α=17%, ε+β ⁺ =83%
210	Rn	0 ⁺	-9604.8 <i>46</i>	2.42 h <i>4</i>	α=96%, ε+β ⁺ =4%
211	Rn	1/2 ⁻	-8755 <i>7</i>	14.7 h <i>2</i>	α=27.4%, ε=72.6%
212	Rn	0 ⁺	-8659.2 <i>31</i>	23.9 m <i>12</i>	α
213	Rn	(9/2 ⁺)	-5695.9 <i>34</i>	19.38 ms <i>19</i>	α
214	Rn	0 ⁺	-4320 <i>9</i>	259 ns <i>3</i>	α
215	Rn	9/2 ⁺	-1169 <i>6</i>	2.3 μs <i>1</i>	α
216	Rn	0 ⁺	253 <i>6</i>	29 μs <i>4</i>	α
217	Rn	9/2 ⁺	3658.6 <i>42</i>	0.59 ms <i>6</i>	α
218	Rn	0 ⁺	5217.4 <i>23</i>	33.75 ms <i>15</i>	α
219	Rn	5/2 ⁺	8829.3 <i>21</i>	3.96 s <i>1</i>	α
220	Rn	0 ⁺	10612.0 <i>18</i>	55.6 s <i>1</i>	α
221	Rn	7/2 ⁺	14471 <i>6</i>	25.7 m <i>5</i>	α=20%, β ⁻ =80%
222	Rn	0 ⁺	16372.0 <i>19</i>	3.82146 d <i>16</i>	α
223	Rn	7/2	20390 <i>8</i>	24.3 m <i>10</i>	β ⁻
224	Rn	0 ⁺	22445 <i>10</i>	114 m <i>6</i>	β ⁻
225	Rn	7/2 ⁻	26534 <i>11</i>	4.66 m <i>4</i>	β ⁻
226	Rn	0 ⁺	28747 <i>10</i>	7.4 m <i>1</i>	β ⁻
227	Rn	(3/2 ⁺)	32886 <i>14</i>	20.8 s <i>7</i>	β ⁻
228	Rn	0 ⁺	35243 <i>18</i>	65 s <i>2</i>	β ⁻
229	Rn	(5/2 ⁺)	39362 <i>13</i>	12.0 s <i>+12-13</i>	β ⁻
230	Rn	0 ⁺	4.217×10 ⁴ <i>SY</i>		β ⁻
231	Rn		4.655×10 ⁴ <i>SY</i>		β ⁻
197	Fr	(7/2 ⁻)	1.025×10 ⁴ <i>6</i>	0.6 ms <i>+30-3</i>	α≈100%
198	Fr		9578 <i>31</i>	15 ms <i>3</i>	α≈100%
198m	Fr		9578 <i>31</i>	1.1 ms <i>7</i>	α≈100%
199	Fr	(1/2 ⁺)	6771 <i>14</i>	4.5 ms <i>+31-13</i>	α≈100%
200	Fr	(3 ⁺)	6134 <i>31</i>	50 ms <i>2</i>	α≈100%, εSF>1.4%
201	Fr	(9/2 ⁻)	3589 <i>9</i>	63 ms <i>3</i>	α≈100%
201m	Fr	(1/2 ⁺)	3719 <i>17</i>	27 ms <i>9</i>	α≈100%
202	Fr	(3 ⁺)	3102 <i>6</i>	364 ms <i>15</i>	α≈100%
202m	Fr	(10 ⁻)	3359 <i>9</i>	286 ms <i>13</i>	α≈100%
203	Fr	9/2 ⁻	876 <i>6</i>	550 ms <i>10</i>	α≈100%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
203m	Fr	1/2 ⁺	1237 9	43 ms 4	IT=80%, α=20%
204	Fr	3 ⁺	607 25	1.8 s 3	α=92%, ε+β ⁺ =8%
204m	Fr	7 ⁺	648 26	2.2 s 2	α=90%, ε+β ⁺ =10%
204n	Fr	10 ⁻	923 26	1.65 s 15	α=66%, ε+β ⁺ =24%
205	Fr	9/2 ⁻	-1310 8	3.90 s 7	α=98.5%, ε+β ⁺ =1.5%
206	Fr	3 ⁽⁺⁾	-1247 28	≈16 s	α=88.4%, ε+β ⁺ =11.6%
206m	Fr	7 ⁽⁺⁾	-1047 49	≈16 s	α=84.7%, ε+β ⁺ =15.3%
206n	Fr	10 ⁽⁻⁾	-517 49	0.7 s 1	IT=87%, α=13%
207	Fr	9/2 ⁻	-2849 18	14.8 s 1	α=95%, ε+β ⁺ =5%
208	Fr	7 ⁺	-2665 12	58.6 s 4	α=89%, ε+β ⁺ =11%
209	Fr	9/2 ⁻	-3782 12	50.5 s 7	α=89%, ε+β ⁺ =11%
210	Fr	6 ⁺	-3344 13	3.18 m 6	α=71%, ε+β ⁺ =29%
211	Fr	9/2 ⁻	-4140 12	3.10 m 2	α=87%, ε=13%
212	Fr	5 ⁺	-3516 9	20.3 m 6	α=43%, ε+β ⁺ =57%
213	Fr	9/2 ⁻	-3554.2 47	34.17 s 6	α=99.45%, ε+β ⁺ =0.55%
214	Fr	(1 ⁻)	-958 9	5.5 ms 2	α
215	Fr	9/2 ⁻	318 7	89 ns 5	α
216	Fr	(1 ⁻)	2971.0 42	0.70 μs 2	α
217	Fr	9/2 ⁻	4315 7	22 μs 5	α
218	Fr	1 ⁻	7059.4 42	1.1 ms 3	α
219	Fr	9/2 ⁻	8617 7	22 ms 4	α
220	Fr	1 ⁺	11482.3 40	27.4 s 3	α=99.65%, β ⁻ =0.35%
221	Fr	5/2 ⁻	13277.3 49	4.801 m 9	α=99.995%, β ⁻ =0.005%, ¹⁴ C=8.8×10 ⁻¹¹ %
222	Fr	2 ⁻	16378 7	14.2 m 3	β ⁻
223	Fr	3/2 ⁽⁻⁾	18382.3 19	21.99 m 7	β ⁻ =99.994%, α=0.006%
224	Fr	1 ⁽⁻⁾	21749 11	3.33 m 10	β ⁻
225	Fr	3/2 ⁻	23821 12	4.0 m 1	β ⁻
226	Fr	1 ⁻	27521 6	49 s 1	β ⁻
227	Fr	1/2 ⁺	29682 6	2.47 m 3	β ⁻
228	Fr	2 ⁻	33384 7	38 s 1	β ⁻

A	El	J $^{\pi}$	Δ (keV)	T $_{1/2}$, Γ , Abundance	Decay Modes
229	Fr	(1/2 $^{+}$)	35668 5	50.2 s 4	β^{-}
230	Fr		39487 7	19.1 s 5	β^{-}
231	Fr	(1/2 $^{+}$)	42081 8	17.6 s 5	β^{-}
232	Fr	(5)	46073 14	5.5 s 6	β^{-}
233	Fr		48920 20	0.9 s 1	β^{-} , $\beta^{-}n$?
201	Ra	(3/2 $^{-}$)	11937 20	8 ms +40-4	α
201m	Ra	(13/2 $^{+}$)	12197 36	2 ms +8-1	α
202	Ra	0 $^{+}$	9075 15	3.8 ms +16-11	$\alpha \approx 100\%$
203	Ra	3/2 $^{-}$	8601 10	31 ms +17-9	$\alpha \approx 100\%$
204	Ra	0 $^{+}$	6061 9	58 ms +9-8	$\alpha \approx 100\%$
205	Ra	(3/2 $^{-}$)	5804 23	215 ms +42-35	$\alpha \approx 100\%$
205m	Ra	(13/2 $^{+}$)	6.07 $\times 10^3$ 6	1.7 $\times 10^2$ ms +6-4	$\alpha \approx 100\%$
206	Ra	0 $^{+}$	3566 18	240 ms 17	$\alpha \approx 100\%$
207	Ra	(3/2 $^{-}$, 5/2 $^{-}$)	3.51 $\times 10^3$ 6	1.4 s 2	$\alpha \approx 86\%$, $\varepsilon + \beta^{+} \approx 14\%$
208	Ra	0 $^{+}$	1728 9	1.110 s 45	$\alpha = 87\%$, $\varepsilon + \beta^{+} = 13\%$
209	Ra	5/2 $^{-}$	1858 6	4.8 s 2	$\alpha \approx 100\%$
210	Ra	0 $^{+}$	443 9	3.9 s 1	$\alpha \approx 100\%$
211	Ra	5/2 $^{-}$	831.9 50	13 s 1	$\alpha \approx 100\%$
212	Ra	0 $^{+}$	-199 10	13.0 s 2	$\alpha \approx 100\%$
213	Ra	1/2 $^{-}$	346 10	2.73 m 5	$\alpha = 86\%$, $\varepsilon + \beta^{+} = 14\%$
214	Ra	0 $^{+}$	93 5	2.438 s 16	$\alpha = 99.940\%$, $\varepsilon = 0.060\%$
215	Ra	(9/2 $^{+}$)	2532 7	1.68 ms 1	α
216	Ra	0 $^{+}$	3291 8	172 ns 7	α
217	Ra	(9/2 $^{+}$)	5890 7	1.59 μ s 14	α
218	Ra	0 $^{+}$	6646 10	25.91 μ s 14	α
219	Ra	(7/2 $^{+}$)	9394 7	9 ms 2	α
220	Ra	0 $^{+}$	10272 8	18 ms 2	α
221	Ra	5/2 $^{+}$	12963.9 46	16 s 2	α , $^{14}\text{C} = 1.2 \times 10^{-10}\%$
222	Ra	0 $^{+}$	14320.2 45	33.6 s 4	α , $^{14}\text{C} = 2.9 \times 10^{-8}\%$
223	Ra	3/2 $^{+}$	17233.2 21	11.4352 d 10	α , $^{14}\text{C} = 8.9 \times 10^{-8}\%$
224	Ra	0 $^{+}$	18825.8 18	3.6313 d 12	α , $^{14}\text{C} = 4 \times 10^{-9}\%$
225	Ra	1/2 $^{+}$	21993.0 26	14.8 d 2	β^{-}
226	Ra	0 $^{+}$	23667.6 19	1600 y 7	α , $^{14}\text{C} = 2.6 \times 10^{-9}\%$
227	Ra	3/2 $^{+}$	27177.5 19	42.2 m 5	β^{-}
228	Ra	0 $^{+}$	28940.2 20	5.75 y 3	β^{-}
229	Ra	5/2 $^{+}$	32562 15	4.0 m 2	β^{-}
230	Ra	0 $^{+}$	34516 10	93 m 2	β^{-}
231	Ra	(5/2 $^{+}$)	38216 11	103.9 s 13	β^{-}
232	Ra	0 $^{+}$	40497 9	4.2 m 8	β^{-}
233	Ra	(1/2 $^{+}$)	44334 9	30 s 5	β^{-}

A	El	J π	Δ (keV)	T _{1/2} , Γ , Abundance	Decay Modes
234	Ra	0 ⁺	46931 8	30 s 10	β^-
204	Ac			7.4 ms +22-14	$\alpha \approx 100\%$
205	Ac	(9/2 ⁻)	1.411 $\times 10^4$ 6	7.7 ms +27-16	$\alpha \approx 100\%$
206	Ac	(3 ⁺)	1.348 $\times 10^4$ 7	27 ms 8	$\alpha \approx 100\%$
206m	Ac	(10 ⁻)	1.368 $\times 10^4$ 10	33 ms +22-9	$\alpha \approx 100\%$
207	Ac	(9/2 ⁻)	1.115 $\times 10^4$ 6	27 ms +11-6	$\alpha \approx 100\%$
208	Ac	(3 ⁺)	1.076 $\times 10^4$ 6	93 ms +16-12	$\alpha \approx 100\%$
209	Ac	(9/2 ⁻)	8.84 $\times 10^3$ 6	91 ms +10-9	$\alpha \approx 100\%$
210	Ac		8.76 $\times 10^3$ 6	344 ms +39-36	$\alpha \approx 100\%$
211	Ac	9/2 ⁻	7.14 $\times 10^3$ 5	210 ms 25	$\alpha \approx 100\%$
212	Ac	(7 ⁺)	7300 22	895 ms 28	$\alpha \approx 100\%$
213	Ac	9/2 ⁻	6141 12	738 ms 21	$\alpha \approx 100\%$
214	Ac	5 ⁽⁺⁾	6433 14	8.2 s 2	$\alpha \geq 89\%$, $\varepsilon + \beta^+ \leq 11\%$
215	Ac	9/2 ⁻	6031 12	170 ms 10	$\alpha = 99.91\%$, $\varepsilon + \beta^+ = 0.09\%$
216	Ac	(1 ⁻)	8150 9	360 μ s 7	α
217	Ac	9/2 ⁻	8702 11	69 ns 4	α
218	Ac	(1 ⁻)	1.085 $\times 10^4$ 6	1.02 μ s 5	α
219	Ac	9/2 ⁻	1.157 $\times 10^4$ 5	9.5 μ s 16	α
220	Ac	(3 ⁻)	13744 6	26.4 ms 2	α
221	Ac		1.453 $\times 10^4$ 6	52 ms 2	α
222	Ac	1 ⁻	16621.8 47	4.9 s 4	$\alpha = 99\%$, $\varepsilon + \beta^+ = 1\%$
222m	Ac		16652 30	63 s 2	$\alpha = 94\%$, $\varepsilon + \beta^+ = 1.4\%$, IT=5%
223	Ac	(5/2 ⁻)	17825 7	2.12 m 4	$\alpha = 99\%$, $\varepsilon = 1\%$
224	Ac	(0 ⁻)	20234.1 41	2.78 h 17	$\varepsilon + \beta^+ = 90.9\%$, $\alpha = 9.1\%$
225	Ac	(3/2 ⁻)	21637.3 48	9.9190 d 21	α , $^{14}\text{C} = 5.3 \times 10^{-10}\%$
226	Ac	(1 ⁻)	24309.2 31	29.37 h 12	$\beta^- = 83\%$, $\varepsilon = 17\%$, $\alpha = 0.006\%$
227	Ac	3/2 ⁻	25849.5 19	21.7725 y 26	$\beta^- = 98.6200\%$, $\alpha = 1.3800\%$
228	Ac	3 ⁺	28894.7 21	6.15 h 2	β^-
229	Ac	(3/2 ⁺)	30690 12	62.7 m 5	β^-
230	Ac	(1 ⁺)	33838 16	122 s 3	β^- , $\beta^- \text{SF} = 0.0000012\%$
231	Ac	1/2 ⁺	35763 13	7.5 m 1	β^-
232	Ac	(1 ⁺)	39154 13	119 s 5	β^-
233	Ac	(1/2 ⁺)	41308 13	143 s 9	β^-
234	Ac	(1 ⁺)	44841 14	44 s 7	β^-
235	Ac		47357 14	62 s 4	β^-
236	Ac		51221 38	1 m +6-1	β^-

A	El	J $^{\pi}$	$\Delta(\text{keV})$	T $_{1/2}$, Γ , Abundance	Decay Modes
207	Th			10 ms <i>+46-5</i>	$\alpha \approx 100\%$
208	Th	0 $^{+}$	16688 <i>32</i>	3.1 ms <i>13</i>	$\alpha \approx 100\%$
209	Th	(13/2 $^{+}$)	1.640 $\times 10^4$ <i>SY</i>	2.5 ms <i>+17-7</i>	$\alpha \approx 100\%$
210	Th	0 $^{+}$	14060 <i>19</i>	15.7 ms <i>35</i>	$\alpha \approx 100\%$
211	Th	(3/2 $^{-}$)	1.388 $\times 10^4$ <i>9</i>	37 ms <i>+28-11</i>	$\alpha \approx 100\%$
212	Th	0 $^{+}$	12111 <i>10</i>	31.7 ms <i>13</i>	$\alpha \approx 100\%$
213	Th	5/2 $^{-}$	12120 <i>9</i>	146 ms <i>22</i>	$\alpha \approx 100\%$
214	Th	0 $^{+}$	10695 <i>11</i>	100 ms <i>10</i>	α
215	Th	(1/2 $^{-}$)	10921 <i>6</i>	1.4 s <i>2</i>	α
216	Th	0 $^{+}$	10299 <i>11</i>	26.0 ms <i>2</i>	α
217	Th	(9/2 $^{+}$)	12206 <i>11</i>	254 μs <i>2</i>	α
218	Th	0 $^{+}$	12367 <i>11</i>	121 ns <i>6</i>	α
219	Th	(9/2 $^{+}$)	1.446 $\times 10^4$ <i>6</i>	1.02 μs <i>2</i>	α
220	Th	0 $^{+}$	14690 <i>14</i>	10.2 μs <i>3</i>	α
221	Th	(7/2 $^{+}$)	16940 <i>8</i>	1.73 ms <i>3</i>	α
222	Th	0 $^{+}$	17203 <i>10</i>	1.970 ms <i>14</i>	α
223	Th	(5/2 $^{+}$)	19385 <i>8</i>	0.60 s <i>2</i>	α
224	Th	0 $^{+}$	19996 <i>10</i>	1.04 s <i>2</i>	α
225	Th	(3/2 $^{+}$)	22310 <i>5</i>	8.72 m <i>4</i>	$\alpha \approx 90\%$, $\epsilon \approx 10\%$
226	Th	0 $^{+}$	23197.6 <i>45</i>	30.69 m <i>3</i>	α
227	Th	1/2 $^{+}$	25804.8 <i>21</i>	18.6936 d <i>36</i>	α
228	Th	0 $^{+}$	26770.9 <i>18</i>	1.9116 y <i>10</i>	α , $^{20}\text{O}=1.13 \times 10^{-11}\%$
229	Th	5/2 $^{+}$	29585.5 <i>24</i>	7908 y <i>20</i>	α
230	Th	0 $^{+}$	30862.5 <i>12</i>	7.540 $\times 10^4$ y <i>30</i> 0.02% 2	α , $^{24}\text{Ne}=5.8 \times 10^{-11}\%$
231	Th	5/2 $^{+}$	33815.8 <i>16</i>	25.52 h <i>1</i>	β^{-}
232	Th	0 $^{+}$	35446.7 <i>14</i>	1.407 $\times 10^{10}$ y <i>23</i> 99.98% 2	α , SF=1.1 $\times 10^{-9}\%$
233	Th	1/2 $^{+}$	38731.6 <i>14</i>	21.83 m <i>4</i>	β^{-}
234	Th	0 $^{+}$	40613.0 <i>26</i>	24.107 d <i>23</i>	β^{-}
235	Th	(1/2 $^{+}$)	44018 <i>13</i>	7.2 m <i>1</i>	β^{-}
236	Th	0 $^{+}$	46255 <i>14</i>	37.5 m <i>2</i>	β^{-}
237	Th		49955 <i>16</i>	4.8 m <i>5</i>	β^{-}
238	Th	0 $^{+}$	5.253 $\times 10^4$ <i>SY</i>	9.4 m <i>20</i>	β^{-}
211	Pa	(9/2 $^{-}$)	2.205 $\times 10^4$ <i>7</i>	3.8 ms <i>+46-14</i>	$\alpha \approx 100\%$, p?
212	Pa	(3 $^{+}$)	2.160 $\times 10^4$ <i>9</i>	5.0 ms <i>+20-11</i>	$\alpha \approx 100\%$
213	Pa	9/2 $^{-}$	1.965 $\times 10^4$ <i>6</i>	5.3 ms <i>+32-13</i>	α
214	Pa		1.946 $\times 10^4$ <i>8</i>	17 ms <i>3</i>	α
215	Pa	(9/2 $^{-}$)	1.780 $\times 10^4$ <i>8</i>	14 ms <i>2</i>	α
216	Pa		17824 <i>25</i>	118 ms <i>15</i>	$\alpha \approx 100\%$
217	Pa	(9/2 $^{-}$)	17055 <i>12</i>	3.7 ms <i>4</i>	α
218	Pa		18650 <i>18</i>	109 μs <i>4</i>	α
219	Pa	9/2 $^{-}$	1.858 $\times 10^4$ <i>7</i>	55 ns <i>8</i>	α

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
220	Pa	1 ⁻	20278 15	0.89 μs 6	α
221	Pa	9/2 ⁻	2.037×10 ⁴ 6	5.9 μs +15-14	α
222	Pa		2.206×10 ⁴ 9	3.9 ms 7	α
223	Pa	(9/2 ⁻)	2.234×10 ⁴ 8	5.3 ms 6	α
224	Pa	(5 ⁻)	23862 8	0.85 s 2	α
225	Pa		2.436×10 ⁴ 8	1.7 s 1	α
226	Pa		26034 11	1.8 m 2	α=74%, ε+β ⁺ =26%
227	Pa	(5/2 ⁻)	26830 7	38.3 m 3	α=85%, ε=15%
228	Pa	3 ⁺	28923.6 43	19.8 h 9	ε+β ⁺ =98.15%, α=1.85%
229	Pa	5/2 ⁺	29896.8 33	1.55 d 5	ε=99.49%, α=0.51%
230	Pa	2 ⁻	32173.5 30	17.4 d 4	β ⁻ =7.8%, ε+β ⁺ =92.2%, α=0.0035%
231	Pa	3/2 ⁻	33424.3 18	3.274×10 ⁴ y 21 100%	α, 21Ne=1.34×10 ⁻⁹ %
232	Pa	(2 ⁻)	35947 8	1.31 d 2	β ⁻
233	Pa	3/2 ⁻	37489.4 13	26.975 d 13	β ⁻
234	Pa	4 ⁺	40338.9 41	6.671 h 22	β ⁻
234m	Pa	(0 ⁻)	40415.4 41	1.159 m 11	β ⁻ =99.84%, IT=0.16%
235	Pa	(3/2 ⁻)	42289 14	24.4 m 2	β ⁻
236	Pa	1 ⁽⁺⁾	45334 14	9.1 m 1	β ⁻
237	Pa	(1/2 ⁺)	47528 13	8.7 m 2	β ⁻
238	Pa	(3 ⁻)	50894 16	2.3 m 1	β ⁻
239	Pa	(3/2 ⁻)	5.334×10 ⁴ SY	1.8 h 5	β ⁻
214	U	0 ⁺		0.5 ms +10-2	α
215	U		2.489×10 ⁴ 10	0.7 ms +13-3	α≈100%
216	U	0 ⁺	23066 28	4.5 ms +47-16	α≈100%
217	U		2.297×10 ⁴ SY	16 ms +21-6	α≈100%
218	U	0 ⁺	21895 14	0.63 ms +7-6	α
219	U	(9/2 ⁺)	23296 13	60 μs 7	α
221	U	(9/2 ⁺)	2.452×10 ⁴ 7	0.66 μs 14	α≈100%
222	U	0 ⁺	2.427×10 ⁴ 5	4.7 μs 7	α≈100%
223	U		2.605×10 ⁴ 6	62 μs +14-10	α
224	U	0 ⁺	25743 15	396 μs 17	α
225	U		27372 10	61 ms 3	α
226	U	0 ⁺	27329 11	267 ms 6	α
227	U	(3/2 ⁺)	29045 9	1.1 m 1	α
228	U	0 ⁺	29220 13	9.1 m 2	α>95%, ε<5%
229	U	(3/2 ⁺)	31211 6	57.8 m 5	α≈20%, ε≈80%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
230	U	0 ⁺	31615.0 <i>45</i>	20.23 d <i>2</i>	α, ²² Ne=4.8×10 ⁻¹² %
231	U	(5/2)	33806.0 <i>27</i>	4.2 d <i>1</i>	ε=99.996%, α=0.004%
232	U	0 ⁺	34609.4 <i>18</i>	68.90 y <i>28</i>	α, SF=2.7×10 ⁻¹² %, ²⁴ Ne=8.9×10 ⁻¹⁰ %
233	U	5/2 ⁺	36919.1 <i>23</i>	1.5919×10 ⁵ y <i>12</i>	α, ²⁴ Ne=7.2×10 ⁻¹¹ %
234	U	0 ⁺	38145.0 <i>11</i>	2.455×10 ⁵ y <i>6</i> 0.0054% 5	α, SF=1.64×10 ⁻⁹ %, ²⁸ Mg=1.4×10 ⁻¹¹ %, Ne=9×10 ⁻¹² %
235	U	7/2 ⁻	40918.8 <i>11</i>	7.040×10 ⁸ y <i>10</i> 0.7204% 6	α, SF=7×10 ⁻⁹ %, ²⁰ Ne=8×10 ⁻¹⁰ %, ²⁵ Ne=8×10 ⁻¹⁰ %, ²⁸ Mg=8×10 ⁻¹⁰ %
235m	U	1/2 ⁺	40918.9 <i>11</i>	27.3 m <i>20</i>	IT
236	U	0 ⁺	42444.6 <i>11</i>	2.3430×10 ⁷ y <i>30</i>	α, SF=9.4×10 ⁻⁸ %
237	U	1/2 ⁺	45390.1 <i>12</i>	6.752 d <i>5</i>	β ⁻
238	U	0 ⁺	47307.7 <i>15</i>	4.463×10 ⁹ y <i>5</i> 99.2742% 10	α, SF=0.0000544%, 2β ⁻ =2.2×10 ⁻¹⁰ %
239	U	5/2 ⁺	50572.7 <i>15</i>	23.45 m <i>2</i>	β ⁻
240	U	0 ⁺	52715.5 <i>26</i>	14.1 h <i>1</i>	β ⁻
241	U		5.620×10 ⁴ <i>SY</i>		β ⁻
242	U	0 ⁺	5.862×10 ⁴ <i>SY</i>	16.8 m <i>5</i>	β ⁻
219	Np		2.944×10 ⁴ <i>9</i>	2×10 ² μs <i>+7-1</i>	α≈100%
220	Np		30475 <i>31</i>	25 μs <i>+14-7</i>	α≈100%
222	Np		31275 <i>38</i>	3.8×10 ² ns <i>+26-11</i>	α
223	Np	(9/2 ⁻)	3.066×10 ⁴ <i>8</i>	2.2 μs <i>+10-5</i>	α≈100%
224	Np		32032 <i>29</i>	38 μs <i>+26-11</i>	α≈100%
225	Np		3.162×10 ⁴ <i>9</i>	4 ms <i>+5-2</i>	α≈100%
226	Np		3.282×10 ⁴ <i>10</i>	37 ms <i>7</i>	α
227	Np		3.258×10 ⁴ <i>8</i>	0.51 s <i>6</i>	α
228	Np		3.383×10 ⁴ <i>SY</i>	61.4 s <i>14</i>	ε+β ⁺ =60%, α=40%
229	Np		3.380×10 ⁴ <i>10</i>	4.0 m <i>2</i>	α=68%, ε+β ⁺ =32%
230	Np		3.524×10 ⁴ <i>6</i>	4.63 m <i>21</i>	ε+β ⁺ ≤97%, α≥3%
231	Np	(5/2 ⁻)	3.562×10 ⁴ <i>5</i>	48.8 m <i>2</i>	ε+β ⁺ =98%, α=2%
232	Np	(4 ⁺)	3.736×10 ⁴ <i>SY</i>	14.7 m <i>3</i>	ε+β ⁺
233	Np	(5/2 ⁺)	3.795×10 ⁴ <i>5</i>	36.2 m <i>1</i>	ε, α≤0.0007%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
234	Np	(0 ⁺)	39955 8	4.4 d 1	ε+β ⁺
235	Np	5/2 ⁺	41043.0 14	396.1 d 12	ε=99.99740%, α=0.00260%
236	Np	6 ⁽⁻⁾	4.338×10 ⁴ 5	1.550×10 ⁵ y 10	β ⁻ =12.0%, ε=87.84%, α=0.16%
236m	Np	1 ⁽⁻⁾	4.344×10 ⁴ 7	22.5 h 4	β ⁻ =49%, ε=51%
237	Np	5/2 ⁺	44871.6 11	2.144×10 ⁶ y 7	α
238	Np	2 ⁺	47454.6 11	2.0993 d 12	β ⁻
239	Np	5/2 ⁺	49311.0 13	2.3558 d 31	β ⁻
240	Np	(5 ⁺)	52316 17	61.9 m 2	β ⁻
240m	Np	(1 ⁺)	52334 22	7.22 m 2	β ⁻ =99.88%, IT=0.12%
241	Np	5/2 ⁺	5.432×10 ⁴ 10	13.9 m 2	β ⁻
242	Np	(1 ⁺)	5.742×10 ⁴ 20	2.2 m 2	β ⁻
242m	Np	(6 ⁺)	5.742×10 ⁴ 20	5.5 m 1	β ⁻
243	Np	(5/2)	59806 SY	1.85 m 15	β ⁻
244	Np	(7 ⁻)	6.324×10 ⁴ SY	2.29 m 16	β ⁻
228	Pu	0 ⁺	36108 23	1.1 s +20-5	α
229	Pu	(3/2 ⁺)	3.739×10 ⁴ 6	83 s +28-22	α=50%, ε+β ⁺ =50%
230	Pu	0 ⁺	36932 14	107 s 22	α
231	Pu	(3/2 ⁺)	38309 22	8.6 m 5	ε+β ⁺ =90%, α=10%
232	Pu	0 ⁺	38361 17	33.1 m 8	ε=89%, α=11%
233	Pu	(5/2)	4.005×10 ⁴ 5	20.9 m 4	ε+β ⁺ =99.88%, α=0.12%
234	Pu	0 ⁺	40350 7	8.8 h 1	ε≈94%, α≈6%
235	Pu	(5/2 ⁺)	42182 21	25.3 m 5	ε+β ⁺ =99.9972%, α=0.0028%
236	Pu	0 ⁺	42901.5 18	2.858 y 7	α, SF=1.9×10 ⁻⁷ %, ²⁸ Mg=2.7×10 ⁻¹² %
237	Pu	7/2 ⁻	45091.7 17	45.64 d 4	ε=99.9968%, α=0.0032%
237m	Pu	1/2 ⁺	45237.2 17	0.18 s 2	IT
238	Pu	0 ⁺	46163.1 11	87.7 y 1	α, SF=1.9×10 ⁻⁷ %, Si=1.4×10 ⁻¹⁴ %, Mg=6×10 ⁻¹⁵ %
239	Pu	1/2 ⁺	48588.2 11	24109 y 15	α, SF=3.0×10 ⁻¹⁰ %
240	Pu	0 ⁺	50125.3 11	6562 y 6	α, SF=0.000005796%
241	Pu	5/2 ⁺	52955.1 11	14.329 y 29	β ⁻ =99.99755%, α=0.00245%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
242	Pu	0 ⁺	54716.9 <i>12</i>	3.750×10 ⁵ y <i>20</i>	α, SF=0.000550%
243	Pu	7/2 ⁺	57754.6 <i>25</i>	4.955 h <i>2</i>	β ⁻
244	Pu	0 ⁺	59806.0 <i>23</i>	8.130×10 ⁷ y <i>30</i>	α=99.877%, SF=0.123%
244m	Pu	8 ⁻	61017.2 <i>25</i>	1.75 s <i>12</i>	IT
245	Pu	(9/2 ⁻)	63178 <i>14</i>	10.54 h <i>7</i>	β ⁻
246	Pu	0 ⁺	65395 <i>15</i>	10.84 d <i>2</i>	β ⁻
247	Pu	(1/2 ⁺)	6.921×10 ⁴ <i>SY</i>	2.27 d <i>23</i>	β ⁻
223	Am		4.270×10 ⁴ <i>SY</i>	5 ms <i>+12-4</i>	α≈100%
229	Am		4.218×10 ⁴ <i>11</i>	0.9 s <i>+21-7</i>	α≈100%
230	Am		4.287×10 ⁴ <i>SY</i>	36 s <i>+12-7</i>	ε+β ⁺ , εSF>30%
232	Am		4.342×10 ⁴ <i>SY</i>	1.31 m <i>4</i>	ε+β ⁺ ≈100%, εSF=0.069%
233	Am		4.329×10 ⁴ <i>SY</i>	3.2 m <i>8</i>	ε+β ⁺ =95.5%, α=4.5%
234	Am		4.446×10 ⁴ <i>SY</i>	2.32 m <i>8</i>	ε+β ⁺ , α<0.04%, εSF=0.0066%
235	Am	(5/2 ⁻)	4.462×10 ⁴ <i>5</i>	10.3 m <i>6</i>	ε+β ⁺ =99.60%, α=0.40%
236	Am	5 ⁻	4.604×10 ⁴ <i>SY</i>	3.6 m <i>2</i>	ε+β ⁺ , α<0.004%
236m	Am	(1 ⁻)	4.604×10 ⁴ <i>SY</i>	2.9 m <i>2</i>	ε+β ⁺ , α<0.004%
237	Am	5/2 ⁽⁻⁾	4.657×10 ⁴ <i>SY</i>	73 m <i>1</i>	ε+β ⁺ =99.975%, α=0.025%
238	Am	1 ⁺	4.842×10 ⁴ <i>6</i>	97.4 m <i>15</i>	ε+β ⁺ , α=0.00010%
239	Am	(5/2) ⁻	49390.4 <i>20</i>	11.9 h <i>1</i>	ε=99.990%, α=0.010%
240	Am	(3 ⁻)	51510 <i>14</i>	50.9 h <i>2</i>	ε+β ⁺ , α≈0.00019%
241	Am	5/2 ⁻	52934.3 <i>11</i>	432.6 y <i>6</i>	α, SF=3.6×10 ⁻¹⁰ %
242	Am	1 ⁻	55468.0 <i>11</i>	16.02 h <i>2</i>	β ⁻ =83.0%, ε=17.0%
242m	Am	5 ⁻	55516.6 <i>11</i>	141.9 y <i>17</i>	IT=99.55%, α=0.45%
243	Am	5/2 ⁻	57175.0 <i>14</i>	7345 y <i>14</i>	α, SF=3.7×10 ⁻⁹ %
244	Am	(6 ⁻)	59879.1 <i>15</i>	10.02 h <i>3</i>	β ⁻
244m	Am	1 ⁺	59968.6 <i>22</i>	26.13 m <i>43</i>	β ⁻ =99.9636%, ε=0.0364%
245	Am	(5/2 ⁺)	61900.4 <i>19</i>	2.047 h <i>8</i>	β ⁻
246	Am	(7 ⁻)	64994 <i>SY</i>	39 m <i>3</i>	β ⁻
246m	Am	2 ⁽⁻⁾	64994 <i>SY</i>	25.0 m <i>2</i>	β ⁻ , IT?
247	Am	(5/2)	6.715×10 ⁴ <i>SY</i>	23.0 m <i>13</i>	β ⁻

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
233	Cm		4.729×10 ⁴ 8	23 s +13-6	α=20%, ε+β ⁺ =80%
234	Cm	0 ⁺	46722 17	50 s +9-8	α≈27%, ε+β ⁺ ≈71%, SF≈2%
235	Cm		4.801×10 ⁴ SY	300 s +25-10	ε+β ⁺ =99.0%, α=1.0%
236	Cm	0 ⁺	47853 18	6.8 m 8	ε+β ⁺ =82%, α=18%
237	Cm		4.925×10 ⁴ 7		ε+β ⁺ ≈100%, α?
238	Cm	0 ⁺	49445 12	2.2 h 4	ε=96.16%, α=3.84%, SF=0.048%
239	Cm	(7/2 ⁻)	5.115×10 ⁴ 15	2.5 h 4	ε+β ⁺ ≈100%, α<0.001%
240	Cm	0 ⁺	51724.2 19	30.4 d 37	α>99.5%, ε<0.5%, SF=0.0000039%
241	Cm	1/2 ⁺	53701.8 16	32.8 d 2	ε=99.0%, α=1.0%
242	Cm	0 ⁺	54803.7 11	162.88 d 6	α, SF=0.0000062%, ³⁴ Si=1×10 ⁻¹⁴ %
243	Cm	5/2 ⁺	57181.9 18	29.18 y 12	α=99.71%, ε=0.29%, SF=5.3×10 ⁻⁹ %
244	Cm	0 ⁺	58451.8 11	18.112 y 25	α≈100%, SF=0.0001378%
245	Cm	7/2 ⁺	61004.5 11	8.25×10 ³ y 7	α, SF=6.1×10 ⁻⁷ %
246	Cm	0 ⁺	62616.9 15	4757 y 33	α=99.97385%, SF=0.02615%
246m	Cm	8 ⁻	63796.6 18	1.12 s 24	IT
247	Cm	9/2 ⁻	65533.1 38	1.56×10 ⁷ y 5	α
248	Cm	0 ⁺	67392.7 24	3.48×10 ⁵ y 6	α=91.61%, SF=8.39%
249	Cm	1/2 ⁺	70750.7 24	64.15 m 3	β ⁻
250	Cm	0 ⁺	72990 10	≈8300 y	SF≈74%, α?, β ⁻ ?
251	Cm	(1/2 ⁺ , 3/2 ⁺)	76648 23	16.8 m 2	β ⁻
233	Bk		5.277×10 ⁴ SY	21 s +48-17	α>0%, ε+β ⁺ ?
234	Bk		5.340×10 ⁴ SY	19 s +6-4	α≥80%, ε+β ⁺ ≤20%
236	Bk	(4 ⁺ , 6 ⁻)	5.354×10 ⁴ SY	22 s +13-6	ε+β ⁺ ≈83%, εSF=4%, α≈17%
237	Bk		5.321×10 ⁴ SY		ε+β ⁺ ?, α?
238	Bk		5.422×10 ⁴ SY	144 s 5	ε+β ⁺ , εSF=0.048%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
239	Bk	(3/2 ⁻ , 7/2 ⁺)	5.425×10 ⁴ SY		ε+β ⁺ , α<1%, SF<1%
240	Bk		5.566×10 ⁴ SY	4.8 m 8	ε+β ⁺ , εSF=0.0020%
241	Bk	(7/2 ⁺)	5.598×10 ⁴ SY	4.6 m 4	ε+β ⁺ >0%, α?
242	Bk		5.775×10 ⁴ SY	7.0 m 13	ε+β ⁺ ≈100%, α<1%, SF<0.03%
243	Bk	(3/2 ⁻)	58689.6 45	4.6 h 2	ε+β ⁺ ≈99.85%, α≈0.15%
244	Bk	(4 ⁻)	60714 14	5.02 h 3	ε+β ⁺ =99.994%, α=0.006%
245	Bk	3/2 ⁻	61813.8 18	4.96 d 3	ε=99.88%, α=0.12%
246	Bk	2 ⁽⁻⁾	6.397×10 ⁴ 6	1.80 d 2	ε+β ⁺
247	Bk	3/2 ⁻	65490 5	1.38×10 ³ y 25	α≈100%
248	Bk	(6 ⁺ , 8 ⁻)	6.813×10 ⁴ 5	>9 y	α?, ε?
248m	Bk	1 ⁽⁻⁾	6.813×10 ⁴ 5	23.7 h 2	β ⁻ =70%, ε=30%
249	Bk	7/2 ⁺	69846.3 12	327.2 d 3	β ⁻ =99.99863%, α=0.00137%, SF=4.7×10 ⁻⁸ %
250	Bk	2 ⁻	72952.0 29	3.212 h 5	β ⁻
251	Bk	(3/2 ⁻)	75228 11	56.0 m 9	β ⁻
252	Bk		7.854×10 ⁴ SY	1.8 m 5	β ⁻
253	Bk		8.093×10 ⁴ SY	>10 m	β ⁻
237	Cf		5.794×10 ⁴ 10	0.8 s 2	α=70%, SF=30%
238	Cf	0 ⁺	5.728×10 ⁴ SY	21.1 ms 13	SF>95%, α<5%
239	Cf		5.820×10 ⁴ SY	28 s 2	α=65%, ε+β ⁺ =35%
240	Cf	0 ⁺	57989 18	41.2 s 24	α=98.5%, SF=1.5%
241	Cf		5.933×10 ⁴ SY	3.8 m 7	ε+β ⁺ =85%, α=15%
242	Cf	0 ⁺	59387 13	3.49 m 15	α=61%, ε+β ⁺ =39%, SF≤0.014%
243	Cf	(1/2 ⁺)	6.099×10 ⁴ SY	10.6 m 4	ε+β ⁺ ≈86%, α≈14%
244	Cf	0 ⁺	61478.1 26	19.4 m 5	α=75%, ε=25%
245	Cf	1/2 ⁺	63385.2 24	45.0 m 14	ε+β ⁺ =64.7%, α=35.3%
246	Cf	0 ⁺	64090.2 15	35.7 h 5	α=99.9946%, SF=0.0054%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
247	Cf	(7/2 ⁺)	66109 <i>14</i>	3.11 h <i>3</i>	ε=99.965%, α=0.035%
248	Cf	0 ⁺	67238 <i>5</i>	333.5 d <i>28</i>	α=99.9971%, SF=0.0029%
249	Cf	9/2 ⁻	69722.7 <i>12</i>	350.7 y <i>20</i>	α, SF=5×10 ⁻⁷ %
250	Cf	0 ⁺	71170.3 <i>15</i>	13.08 y <i>9</i>	α=99.923%, SF=0.077%
251	Cf	1/2 ⁺	74135.0 <i>39</i>	898 y <i>43</i>	α≈100%, SF?
252	Cf	0 ⁺	76034.6 <i>24</i>	2.647 y <i>3</i>	α=96.898%, SF=3.102%
253	Cf	(7/2 ⁺)	79301.6 <i>43</i>	17.78 d <i>7</i>	β ⁻ =99.69%, α=0.31%
254	Cf	0 ⁺	81341 <i>11</i>	60.5 d <i>2</i>	SF=99.69%, α=0.31%
255	Cf	(7/2 ⁺)	8.481×10 ⁴ <i>SY</i>	85 m <i>18</i>	β ⁻
256	Cf	0 ⁺	8.704×10 ⁴ <i>SY</i>	12.3 m <i>12</i>	SF
240	Es	(1 ⁺)	6.423×10 ⁴ <i>SY</i>	6.7 s <i>13</i>	α=70%, ε+β ⁺ =30%, εSF=16%
241	Es		6.389×10 ⁴ <i>SY</i>	4.3 s <i>+24-12</i>	α?, ε+β ⁺ ?
242	Es		6.480×10 ⁴ <i>SY</i>	17.8 s <i>16</i>	α=57%, ε+β ⁺ =43%, εSF=0.7%
243	Es	(3/2 ⁻)	6.475×10 ⁴ <i>SY</i>	22 s <i>1</i>	α=61%, ε+β ⁺ =39%, SF<1%
244	Es		6.603×10 ⁴ <i>SY</i>	37 s <i>4</i>	ε+β ⁺ =96%, α=4%, εSF=0.011%
245	Es	(3/2 ⁻)	6.632×10 ⁴ <i>SY</i>	1.12 m <i>6</i>	α=54%, ε+β ⁺ =46%
246	Es		6.782×10 ⁴ <i>9</i>	7.5 m <i>5</i>	ε+β ⁺ =90.1%, α=9.9%, εSF≈0.003%
247	Es	(7/2 ⁺)	68578 <i>19</i>	4.55 m <i>26</i>	ε+β ⁺ ≈93%, α≈7%
248	Es	(2 ⁺ , 0 ⁺)	7.030×10 ⁴ <i>SY</i>	24 m <i>2</i>	ε+β ⁺ ≈99.7%, α≈0.3%, εSF=0.00035%
249	Es	7/2 ⁺	71175 <i>SY</i>	102.2 m <i>6</i>	ε+β ⁺ =99.43%, α=0.57%
250	Es	(6 ⁺)	7.323×10 ⁴ <i>SY</i>	8.5 h <i>1</i>	ε+β ⁺ >97%, α<3%
250m	Es	1 ⁽⁻⁾	7.323×10 ⁴ <i>SY</i>	2.21 h <i>5</i>	ε+β ⁺ ≈100%, α?
251	Es	3/2 ⁻	74512 <i>5</i>	33 h <i>1</i>	ε=99.5%, α=0.5%
252	Es	(5 ⁻)	7.729×10 ⁴ <i>5</i>	471.7 d <i>19</i>	α=78%, ε=22%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
253	Es	7/2 ⁺	79010.5 12	20.466 d 23	α, SF=0.000088%
254	Es	7 ⁽⁺⁾	81994.2 29	275.7 d 5	α≈100%, β ⁻ =0.000174%, SF<0.000003%
254m	Es	2 ⁺	82078.4 39	39.2 h 3	β ⁻ =98%, α=0.32%, ε=0.076%, IT<3%, SF<0.045%
255	Es	(7/2 ⁺)	84089 11	39.8 d 12	β ⁻ =92.0%, α=8.0%, SF=0.0041%
256	Es	(1 ⁺ , 0 ⁻)	8.719×10 ⁴ SY	25.4 m 12	β ⁻
256m	Es	(8 ⁺)	8.719×10 ⁴ SY	7.6 h	β ⁻ , β ⁺ SF=0.002%
257	Es		8.940×10 ⁴ SY	7.7 d 2	β ⁻ ≈100%, SF?, α?
241	Fm		6.922×10 ⁴ SY	0.73 ms 6	SF>78%, ε+β ⁺ <12%, α<14%
242	Fm	0 ⁺	6.840×10 ⁴ SY	0.8 ms 2	SF
243	Fm	(7/2 ⁻)	6.932×10 ⁴ SY	231 ms 9	α=91%, SF=9%, ε+β ⁺ <10%
244	Fm	0 ⁺	6.896×10 ⁴ SY	3.12 ms 8	SF>97%, α<1%, ε+β ⁺ <2%
245	Fm		7.019×10 ⁴ SY	5.4 s 6	α=89%, ε+β ⁺ =12%, SF<0.3%
246	Fm	0 ⁺	70191 14	1.53 s 4	α=93.6%, SF=6.4%, ε+β ⁺ ≤1.3%
247	Fm	(7/2 ⁺)	7.167×10 ⁴ SY	31 s 1	α=64%, ε+β ⁺ =36%
247m	Fm	(1/2 ⁺)	7.172×10 ⁴ SY	5.1 s 2	α=88%, IT=12%
248	Fm	0 ⁺	71898 8	34.5 s 12	α≈99.90%, SF=0.10%, ε+β ⁺ ?
249	Fm	(7/2 ⁺)	73519 6	1.6 m 1	ε+β ⁺ =84.4%, α=15.6%
250	Fm	0 ⁺	74072 8	30.9 m 10	α≈100%, SF=0.0069%, ε?
250m	Fm	(8 ⁻)	75271 8	1.90 s 5	IT≈100%, α?
251	Fm	(9/2 ⁻)	75959 14	5.30 h 8	ε+β ⁺ =98.20%, α=1.80%
252	Fm	0 ⁺	76817 5	25.38 h 12	α=99.9977%, SF=0.0023%
253	Fm	1/2 ⁺	79345.5 15	3.00 d 12	α=12%, ε=88%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
254	Fm	0 ⁺	80902.5 <i>18</i>	3.240 h <i>2</i>	α=99.9408%, SF=0.0592%
255	Fm	7/2 ⁺	83800.5 <i>39</i>	20.07 h <i>7</i>	α≈100%, SF=0.000024%
256	Fm	0 ⁺	85484.8 <i>30</i>	157.1 m <i>12</i>	SF=91.9%, α=8.1%
257	Fm	(9/2 ⁺)	88590.1 <i>44</i>	100.5 d <i>2</i>	α=99.790%, SF=0.210%
258	Fm	0 ⁺	9.043×10 ⁴ <i>SY</i>	370 μs <i>14</i>	SF≈100%
259	Fm		9.370×10 ⁴ <i>SY</i>	1.5 s <i>2</i>	SF
244	Md		7.560×10 ⁴ <i>SY</i>	0.39 s <i>+22-10</i>	α≈100%, ε+β ⁺ ≤14%
245	Md	(7/2 ⁻)	7.533×10 ⁴ <i>SY</i>	0.33 s <i>+15-8</i>	α≈100%
246	Md		7.612×10 ⁴ <i>SY</i>	0.9 s <i>2</i>	α, SF?, ε+β ⁺ ?
246m	Md		7.612×10 ⁴ <i>SY</i>	4.4 s <i>8</i>	α<23%, εSF>10%, ε+β ⁺ >77%
247	Md	(7/2 ⁻)	7.594×10 ⁴ <i>SY</i>	1.20 s <i>8</i>	α=99.14%, SF=0.86%
247m	Md	(1/2 ⁻)	7.609×10 ⁴ <i>SY</i>	0.24 s <i>2</i>	IT=80%, SF=20%
248	Md		7.695×10 ⁴ <i>SY</i>	7 s <i>3</i>	ε+β ⁺ =80%, α=20%
249	Md	(7/2 ⁻)	7.718×10 ⁴ <i>16</i>	25.6 s <i>9</i>	α=75%, ε+β ⁺ =25%
249m	Md	(1/2 ⁻)		1.5 s <i>+12-5</i>	α?, IT?
250	Md		7.840×10 ⁴ <i>9</i>	53.4 s <i>45</i>	ε+β ⁺ =93%, α=7%, εSF=0.02%
250m	Md		7.852×10 ⁴ <i>10</i>	42.4 s <i>45</i>	α?, ε+β ⁺ ?, IT?
251	Md	(7/2 ⁻)	78967 <i>19</i>	4.27 m <i>11</i>	ε+β ⁺ =90%, α=10%
251m	Md	(23/2 ⁺)	7.982×10 ⁴ <i>10</i>	1.37 s <i>6</i>	IT≈100%
252	Md	(1 ⁺)	8.047×10 ⁴ <i>9</i>	2.3 m <i>8</i>	ε+β ⁺ ≈100%, α?
253	Md	(7/2 ⁻)	81173 <i>SY</i>	6 m <i>+12-4</i>	ε+β ⁺ ≈99.3%, α≈0.7%
254	Md		8.345×10 ⁴ <i>SY</i>	10 m <i>3</i>	ε+β ⁺ ≈100%
254m	Md	(3 ⁻)	8.350×10 ⁴ <i>SY</i>	28 m <i>8</i>	ε+β ⁺ ≈100%
255	Md	(7/2 ⁻)	84842 <i>6</i>	27 m <i>2</i>	ε=93%, α=7%, SF<0.15%
256	Md	(1 ⁻)	8.746×10 ⁴ <i>SY</i>	77.7 m <i>15</i>	ε+β ⁺ =90.5%, α=9.5%, SF<3%
257	Md	(7/2 ⁻)	88992.5 <i>16</i>	5.52 h <i>5</i>	ε=85%, α=15%, SF<1%
258	Md	(8 ⁻)	91690.4 <i>35</i>	51.52 d <i>29</i>	α≈100%

A	El	J $^{\pi}$	$\Delta(\text{keV})$	T $_{1/2}$, Γ , Abundance	Decay Modes
258m	Md	(1 $^{-}$)	91690.4 <i>35</i>	57.5 m <i>11</i>	$\varepsilon=85\%$, $\alpha<1.2\%$, SF<15%
259	Md		9.356×10^4 <i>SY</i>	1.61 h <i>6</i>	SF $\approx 100\%$, $\alpha<1.3\%$
260	Md		9.655×10^4 <i>SY</i>	31.8 d <i>5</i>	$\alpha\leq 25\%$, $\beta^{-}\leq 10\%$, $\varepsilon\leq 23\%$, SF $\geq 42\%$
249	No	(7/2 $^{+}$)	8.179×10^4 <i>SY</i>	37.8 ms <i>25</i>	$\alpha\approx 100\%$, SF<0.23%
250	No	0 $^{+}$	8.157×10^4 <i>SY</i>	4.6 μs <i>3</i>	SF $\approx 100\%$
251	No	(7/2 $^{+}$)	8.285×10^4 <i>SY</i>	0.80 s <i>1</i>	$\alpha=90\%$, $\varepsilon+\beta^{+}>0\%$, SF=0.0014%
251m	No	(1/2 $^{+}$)	8.296×10^4 <i>SY</i>	1.00 s <i>4</i>	$\alpha\approx 100\%$
252	No	0 $^{+}$	82871 <i>9</i>	2.45 s <i>1</i>	$\alpha=65.3\%$, SF=33.0%, $\varepsilon+\beta^{+}=1.7\%$
252m	No	(8 $^{-}$)	84126 <i>9</i>	109 ms <i>3</i>	IT
253	No	9/2 $^{-}$	84359 <i>7</i>	1.61 m <i>5</i>	$\alpha=55\%$, $\varepsilon+\beta^{+}=45\%$
254	No	0 $^{+}$	84723 <i>10</i>	51.2 s <i>4</i>	$\alpha=90\%$, $\varepsilon=10\%$, SF=0.17%
254m	No	(8 $^{-}$)	86020 <i>10</i>	265 ms <i>1</i>	IT=99.980%, SF=0.020%, $\alpha<0.01\%$
255	No	(1/2 $^{+}$)	86812 <i>14</i>	3.52 m <i>18</i>	$\varepsilon+\beta^{+}=70\%$, $\alpha=30\%$
256	No	0 $^{+}$	87823 <i>8</i>	2.93 s <i>7</i>	$\alpha=99.47\%$, SF=0.53%
257	No	(3/2 $^{+}$)	90247 <i>6</i>	24.5 s <i>5</i>	$\alpha=85\%$, $\varepsilon=15\%$, SF<1.5%
258	No	0 $^{+}$	9.148×10^4 <i>SY</i>	1.23 ms <i>+12-11</i>	SF $\approx 100\%$
259	No	(9/2 $^{+}$)	94079 <i>6</i>	58 m <i>5</i>	$\alpha=75\%$, $\varepsilon=25\%$, SF<10%
260	No	0 $^{+}$	9.561×10^4 <i>SY</i>	107 ms <i>8</i>	SF
262	No	0 $^{+}$	1.0010×10^5 <i>SY</i>	≈ 5 ms	SF
251	Lr	(7/2 $^{-}$)	8.783×10^4 <i>SY</i>	24 ms <i>+7-5</i>	$\alpha\approx 100\%$
251m	Lr	(1/2 $^{-}$)	8.795×10^4 <i>SY</i>	42 ms <i>+42-14</i>	$\alpha\approx 100\%$
252	Lr	(7 $^{-}$)	8.854×10^4 <i>SY</i>	0.35 s <i>+8-7</i>	$\alpha>0\%$, SF<2%, $\varepsilon+\beta^{+}?$
253	Lr	(7/2 $^{-}$)	8.852×10^4 <i>16</i>	0.65 s <i>4</i>	$\alpha\approx 99.0\%$, SF=1.0%
253m	Lr	(1/2 $^{-}$)	8.852×10^4 <i>16</i>	1.44 s <i>10</i>	$\alpha\approx 88\%$, SF=12%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
254	Lr	(4 ⁺)	8.965×10 ⁴ <i>g</i>	11.9 s <i>g</i>	α=71.7%, ε+β ⁺ =28.3%, SF<0.1%
254m	Lr	(1 ⁻)	8.975×10 ⁴ <i>g</i>	20.3 s <i>42</i>	α>0%, IT?, ε+β ⁺ ?
255	Lr	(1/2 ⁻)	89947 <i>18</i>	31.1 s <i>11</i>	α=99.7%, ε+β ⁺ =0.3%, SF<0.1%
255m	Lr	(7/2 ⁻)	89985 <i>20</i>	2.54 s <i>4</i>	α≈40%, IT≈60%
256	Lr	(0 ⁺ , 3 ⁻)	9.175×10 ⁴ <i>8</i>	27.9 s <i>10</i>	α≈85%, ε+β ⁺ ≈15%
257	Lr		92665 <i>SY</i>	5.9 s <i>4</i>	α≈100%, ε+β ⁺ <15%, SF<0.033%
257m	Lr	(1/2)	92665 <i>SY</i>	0.20 s <i>+16-6</i>	α?, IT?
258	Lr		9.478×10 ⁴ <i>SY</i>	3.86 s <i>+24-23</i>	α=97.4%, ε+β ⁺ =2.6%
259	Lr		9.585×10 ⁴ <i>SY</i>	6.22 s <i>+28-27</i>	α=78%, SF=22%
260	Lr		9.828×10 ⁴ <i>SY</i>	3.0 m <i>5</i>	α>60%, ε+β ⁺ <40%
261	Lr		9.956×10 ⁴ <i>SY</i>	42 m <i>+9-8</i>	SF≈100%, α?
262	Lr		1.0211×10 ⁵ <i>SY</i>	≈4 h	SF<10%, α?, ε+β ⁺ ?
264	Lr		1.0638×10 ⁵ <i>SY</i>	4.9 h <i>+21-13</i>	SF≈100%
266	Lr		1.117×10 ⁵ <i>SY</i>	11 h <i>+21-5</i>	SF
253	Rf	(1/2 ⁺)	9.364×10 ⁴ <i>SY</i>	10.3 ms <i>11</i>	α≈13%, SF≈87%
254	Rf	0 ⁺	9.320×10 ⁴ <i>SY</i>	22.8 μs <i>10</i>	SF≈100%, α<1.5%
255	Rf	(9/2 ⁻)	9.433×10 ⁴ <i>SY</i>	1.67 s <i>2</i>	α=49.0%, SF=51.0%, ε+β ⁺ <0.08%
256	Rf	0 ⁺	94222 <i>18</i>	6.76 ms <i>6</i>	SF=99.69%, α=0.31%
257	Rf	(1/2 ⁺)	95866 <i>11</i>	4.5 s <i>2</i>	α=89.3%, ε+β ⁺ =9.4%, SF=1.3%
257m	Rf	(11/2 ⁻)	95941 <i>11</i>	4.38 s <i>5</i>	α=81%, IT=14%, ε+β ⁺ =4.6%, SF=0.4%
258	Rf	0 ⁺	96344 <i>16</i>	9.8 ms <i>7</i>	SF=95.1%, α=4.9%
259	Rf		9.837×10 ⁴ <i>SY</i>	2.5 s <i>+3-2</i>	α=85%, ε+β ⁺ =15%, SF<3%
260	Rf	0 ⁺	9.915×10 ⁴ <i>SY</i>	21.7 ms <i>8</i>	SF>65%, α<35%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
261	Rf		1.0132×10 ⁵ 7	70 s 3	α
261m	Rf		1.0132×10 ⁵ 7	2.2 s 3	SF=82%, α=18%
262	Rf	0 ⁺	1.0239×10 ⁵ SY	47 ms 35	SF≈100%
263	Rf		1.0476×10 ⁵ SY	14 m 7	SF≈100%, α?
265	Rf		1.0869×10 ⁵ SY	1.0 m +12-3	SF≈100%, α?
267	Rf		1.134×10 ⁵ SY	1.3 h +23-5	SF≈100%
255	Db		9.960×10 ⁴ SY	54 ms	SF≈67%, α?
255m	Db		9.960×10 ⁴ SY	2.8 ms	SF≈100%, α?
256	Db		1.0030×10 ⁵ SY	1.9 s +4-3	α=70%, ε+β ⁺ =30%, SF?
257	Db	(9/2 ⁺)	1.0015×10 ⁵ 16	2.3 s 2	α≥94%, SF≤6%
257m	Db	(1/2 ⁻)	1.0040×10 ⁵ 22	6.7×10 ² ms 6	α≥87%, SF≤13%
258	Db	(0 ⁻)	1.0151×10 ⁵ 9	2.08 s 29	α=64%, ε+β ⁺ =36%
258m	Db	(5 ⁺ , 10 ⁻)	1.0156×10 ⁵ 9	4.37 s 16	α=77%, ε+β ⁺ =23%
259	Db		1.0199×10 ⁵ 6	0.51 s 16	α
260	Db		1.0367×10 ⁵ SY	1.51 s 12	α=90%, SF=10%
261	Db		1.0431×10 ⁵ SY	4.1 s +14-8	α=27%, SF=73%
262	Db		1.0625×10 ⁵ SY	34.4 s +28-26	SF=54%, α=46%, ε+β ⁺ <5%
263	Db		1.0711×10 ⁵ SY	27 s +10-7	α=42%, SF=55%, ε+β ⁺ =3%
266	Db		1.1274×10 ⁵ SY	0.4 h +17-2	SF≈100%, α?, ε+β ⁺ ?
267	Db		1.1401×10 ⁵ SY	8×10 ¹ m +9-3	SF≈100%
268	Db		1.171×10 ⁵ SY	26.4 h 22	SF=45%, α=55%
270	Db		1.224×10 ⁵ SY	15 h +10-4	SF≈100%, α?
258	Sg	0 ⁺	1.0530×10 ⁵ SY	2.7 ms +5-4	SF≈100%, α<20%
259	Sg	(11/2 ⁻)	1.0652×10 ⁵ SY	0.40 s 6	α=97%, SF=3%, ε+β ⁺ ≤13%
259m	Sg	(1/2 ⁺)	1.0661×10 ⁵ SY	0.23 s 3	α=97%, SF=3%
260	Sg	0 ⁺	106547 21	4.83 ms 37	α=71%, SF=29%
261	Sg		108005 18	183 ms 5	α=98.1%, SF=0.6%, ε+β ⁺ =1.3%
262	Sg	0 ⁺	108369 22	11.4 ms 24	SF=94%, α=6%
263	Sg		1.1020×10 ⁵ SY	0.90 s +17-16	α=87%, SF=13%
263m	Sg		1.1025×10 ⁵ SY	4.3×10 ² ms 11	α≈100%, IT?, SF?
264	Sg	0 ⁺	1.1078×10 ⁵ SY	60 ms +26-20	SF>80%, α<20%
265	Sg		1.1279×10 ⁵ SY	16.0 s +24-21	α≥50%, SF≤50%
265m	Sg		1.1279×10 ⁵ SY	8.8 s +18-13	α≥49%, SF≤51%
266	Sg	0 ⁺	1.1362×10 ⁵ SY	0.34 s +12-9	SF

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
267	Sg		1.1581×10 ⁵ SY	1.4 m +9-4	SF≈83%, α≈17%
269	Sg		1.1969×10 ⁵ SY	2 m +10-1	α≈100%
271	Sg		1.246×10 ⁵ SY	1.6 m +15-5	α≈50%, SF≈50%
260	Bh		1.1312×10 ⁵ SY	35 ms +19-9	α≈100%, SF<18%, ε+β ⁺ <18%
261	Bh	(5/2 ⁻)	1.1308×10 ⁵ 18	11.7 ms +37-24	α≈100%, SF<10%
262	Bh		1.1425×10 ⁵ 9	88 ms +11-10	α≈100%
262m	Bh		1.1450×10 ⁵ 14	9.4 ms +17-16	α≈100%
264	Bh		1.1596×10 ⁵ SY	0.99 s +23-18	α≈85%, SF≈15%
265	Bh		1.1640×10 ⁵ SY	0.9 s +7-3	α≈100%
266	Bh		1.1810×10 ⁵ SY	10.0 s +26-17	α≈100%, SF?
267	Bh		1.1877×10 ⁵ SY	16 s +7-4	α≈100%
270	Bh		1.2423×10 ⁵ SY	1.0 m +49-5	α≈100%, SF?
271	Bh		1.2586×10 ⁵ SY	1.5 s +28-6	α≈100%
272	Bh		1.288×10 ⁵ SY	9.4 s 12	α≈100%
274	Bh		1.338×10 ⁵ SY	44 s +34-13	α≈100%, SF?
278	Bh		1.4437×10 ⁵ SY	2×10 ¹ m +6-1	SF≈100%, α<50%
263	Hs		1.1968×10 ⁵ SY	0.74 ms +48-21	α≈100%, SF?
264	Hs	0 ⁺	119563 29	0.63 ms +34-16	α=80%, SF=20%
265	Hs		120900 24	1.9 ms +2-1	α≈100%, SF<1%
266	Hs	0 ⁺	121140 27	3.0 ms +8-5	α=76%, SF=24%
266m	Hs		122340 27	7×10 ¹ ms +35-3	α≈100%
267	Hs		1.2266×10 ⁵ SY	53 ms +12-8	α≈100%
267m	Hs		1.2266×10 ⁵ SY	0.8 s +40-4	α?
268	Hs	0 ⁺	1.2297×10 ⁵ SY	0.4 s +18-2	α≈100%
269	Hs		1.2449×10 ⁵ SY	13 s +10-4	α≈100%
270	Hs	0 ⁺	1.2511×10 ⁵ SY	7.6 s +49-22	α>50%, SF<50%
271	Hs		1.2769×10 ⁵ SY		α≈100%
273	Hs		1.3177×10 ⁵ SY	0.51 s +30-13	α≈100%
275	Hs		1.365×10 ⁵ SY	0.2 s +19-7	α≈100%
277	Hs		1.4138×10 ⁵ SY	3 ms +15-1	SF≈100%
266	Mt		1.2767×10 ⁵ 10	2.1 ms 7	α>75%, SF<25%
268	Mt		1.2915×10 ⁵ SY	21 ms +8-5	α≈100%
270	Mt		1.3071×10 ⁵ SY	0.5 s +7-2	α≈100%
274	Mt		1.3725×10 ⁵ SY	0.4 s +8-2	α≈100%, SF?
275	Mt		1.3877×10 ⁵ SY	20 ms +24-7	α≈100%
276	Mt		1.413×10 ⁵ SY	0.62 s 8	α≈100%
276m	Mt		1.413×10 ⁵ SY	4 s +5-1	α≈100%
277	Mt		1.430×10 ⁵ SY	3.9 ms +36-13	SF≈100%
278	Mt		1.458×10 ⁵ SY	4.5 s +35-13	α≈100%, SF?
267	Ds		1.3388×10 ⁵ SY	3 μs +13-1	α≈100%
269	Ds		134835 31	1.8×10 ² μs +21-6	α≈100%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
270	Ds	0 ⁺	134682 <i>39</i>	0.19 ms <i>+5-4</i>	α≈100%, SF?
271	Ds		1.3595×10 ⁵ <i>SY</i>	1.6 ms <i>+4-3</i>	α≈100%
271m	Ds		1.3595×10 ⁵ <i>SY</i>	69 ms <i>+45-20</i>	α≈100%
273	Ds		1.3829×10 ⁵ <i>SY</i>	1.9×10 ² μs <i>+14-6</i>	α≈100%
277	Ds		1.4509×10 ⁵ <i>SY</i>	3.5 ms <i>+21-10</i>	α≈100%
279	Ds	0 ⁺	1.490×10 ⁵ <i>SY</i>	216 ms <i>+47-33</i>	SF≈88.5%, α≈12.5%
279m	Ds		1.492×10 ⁵ <i>SY</i>	1.7×10 ² ms <i>+30-7</i>	SF≈100%
280	Ds		1.503×10 ⁵ <i>SY</i>	0.4 ms <i>+17-2</i>	SF≈100%
281	Ds		1.5327×10 ⁵ <i>SY</i>	12 s <i>+4-2</i>	SF≈94%, α≈6%
282	Ds		1.5479×10 ⁵ <i>SY</i>	1 m <i>+5-1</i>	α≈100%, SF≤50%
272	Rg		1.4277×10 ⁵ <i>SY</i>	3.8 ms <i>+14-8</i>	α≈100%
274	Rg		1.4461×10 ⁵ <i>SY</i>	12 ms <i>+17-5</i>	α≈100%
278	Rg		1.5052×10 ⁵ <i>SY</i>	4 ms <i>+8-2</i>	α≈100%, SF?
279	Rg		1.5172×10 ⁵ <i>SY</i>	9×10 ¹ ms <i>+17-4</i>	α≈100%
280	Rg		1.539×10 ⁵ <i>SY</i>	3.87 s <i>37</i>	α≈100%
281	Rg	0 ⁺	1.553×10 ⁵ <i>SY</i>	11 s <i>+3-1</i>	SF=88%, α=12%
282	Rg		1.577×10 ⁵ <i>SY</i>	1.0×10 ² s <i>+7-3</i>	α≈100%, SF?
286	Rg		1.6651×10 ⁵ <i>SY</i>		α≈100%, SF≤54%
277	Cn		1.5233×10 ⁵ <i>SY</i>	0.61 ms <i>+46-18</i>	α≈100%
281	Cn		1.5795×10 ⁵ <i>SY</i>	1.8×10 ² ms <i>+10-5</i>	α≈100%
282	Cn		1.588×10 ⁵ <i>SY</i>	0.98 ms <i>+33-20</i>	SF≈100%, α≤7%
283	Cn		1.613×10 ⁵ <i>SY</i>	4.6 s <i>+10-7</i>	α≈85%, SF≈15%
284	Cn		1.624×10 ⁵ <i>SY</i>	121 ms <i>+20-15</i>	SF≈98%, α≈2%
285	Cn		1.651×10 ⁵ <i>SY</i>	33 s <i>+10-6</i>	α≈100%
286	Cn		1.665×10 ⁵ <i>SY</i>	1×10 ¹ m <i>+5-1</i>	α≈100%, SF≤50%
278	Nh	0 ⁺	1.5903×10 ⁵ <i>SY</i>	1.4 s <i>+19-5</i>	α≈100%
282	Nh		1.6373×10 ⁵ <i>SY</i>	7×10 ¹ ms <i>+13-3</i>	α≈100%, SF?
283	Nh		1.6456×10 ⁵ <i>SY</i>	7×10 ¹ ms <i>+14-3</i>	α≈100%
284	Nh		1.666×10 ⁵ <i>SY</i>	0.82 s <i>8</i>	α≈100%
285	Nh		1.678×10 ⁵ <i>SY</i>	2.1 s <i>+6-3</i>	α≈100%
286	Nh		1.700×10 ⁵ <i>SY</i>	10 s <i>+6-3</i>	α≈100%, SF?
290	Nh		1.7832×10 ⁵ <i>SY</i>	2 s <i>+10-1</i>	α≈100%, SF≤50%
284	Fl		1.688×10 ⁵ <i>SY</i>	2.5 ms <i>+18-8</i>	SF≈100%, α≤25%
285	Fl		1.7093×10 ⁵ <i>SY</i>	1.0×10 ² ms <i>+6-3</i>	α≈100%, SF≤12.5%
286	Fl		1.716×10 ⁵ <i>SY</i>	121 ms <i>+31-20</i>	α=60%, SF=40%
287	Fl	0 ⁺	1.739×10 ⁵ <i>SY</i>	4.0×10 ² ms <i>+13-8</i>	α≈100%
288	Fl		1.749×10 ⁵ <i>SY</i>	0.64 s <i>+14-10</i>	α≈100%, SF≤3%
289	Fl		1.775×10 ⁵ <i>SY</i>	2.4 s <i>+8-5</i>	α≈100%
290	Fl		1.787×10 ⁵ <i>SY</i>	2×10 ¹ s <i>+9-1</i>	ε+β ⁺ ≈100%, SF≤50%, α≤50%

A	El	J ^π	Δ(keV)	T _{1/2} , Γ, Abundance	Decay Modes
287	Mc		1.7775×10 ⁵ SY	37 ms +44-13	α≈100%
288	Mc		1.797×10 ⁵ SY	199 ms 20	α≈100%
289	Mc		1.807×10 ⁵ SY	277 ms +42-37	α≈100%
290	Mc		1.828×10 ⁵ SY	0.65 s +49-20	α≈100%, SF?
290	Lv	0 ⁺	1.850×10 ⁵ SY	8.3 ms +35-19	α≈100%, SF≤8%
291	Lv		1.872×10 ⁵ SY	19 ms +17-6	α≈100%
292	Lv	0 ⁺	1.881×10 ⁵ SY	13 ms +7-3	α≈100%, SF≤9%
293	Lv		1.906×10 ⁵ SY	1.0×10 ² ms +6-3	α≈100%
293	Ts		1.944×10 ⁵ SY	21 ms +7-4	α≈100%
294	Ts		1.964×10 ⁵ SY	51 ms +38-16	α≈100%
294	Og	0 ⁺	1.993×10 ⁵ SY	0.58 ms +44-18	α≈100%, SF≤20%

Known Elements

Z	Symbol	Name
0	n	Neutron
1	H	Hydrogen
2	He	Helium
3	Li	Lithium
4	Be	Beryllium
5	B	Boron
6	C	Carbon
7	N	Nitrogen
8	O	Oxygen
9	F	Fluorine
10	Ne	Neon
11	Na	Sodium
12	Mg	Magnesium
13	Al	Aluminium
14	Si	Silicon
15	P	Phosphorus
16	S	Sulfur
17	Cl	Chlorine
18	Ar	Argon
19	K	Potassium
20	Ca	Calcium
21	Sc	Scandium
22	Ti	Titanium
23	V	Vanadium
24	Cr	Chromium
25	Mn	Manganese
26	Fe	Iron
27	Co	Cobalt
28	Ni	Nickel
29	Cu	Copper
30	Zn	Zinc
31	Ga	Gallium
32	Ge	Germanium
33	As	Arsenic

Z	Symbol	Name
34	Se	Selenium
35	Br	Bromine
36	Kr	Krypton
37	Rb	Rubidium
38	Sr	Strontium
39	Y	Yttrium
40	Zr	Zirconium
41	Nb	Niobium
42	Mo	Molybdenum
43	Tc	Technetium
44	Ru	Ruthenium
45	Rh	Rhodium
46	Pd	Palladium
47	Ag	Silver
48	Cd	Cadmium
49	In	Indium
50	Sn	Tin
51	Sb	Antimony
52	Te	Tellurium
53	I	Iodine
54	Xe	Xenon
55	Cs	Cesium
56	Ba	Barium
57	La	Lanthanum
58	Ce	Cerium
59	Pr	Praseodymium
60	Nd	Neodymium
61	Pm	Promethium
62	Sm	Samarium
63	Eu	Europium
64	Gd	Gadolinium
65	Tb	Terbium
66	Dy	Dysprosium
67	Ho	Holmium

Z	Symbol	Name
68	Er	Erbium
69	Tm	Thulium
70	Yb	Ytterbium
71	Lu	Lutetium
72	Hf	Hafnium
73	Ta	Tantalum
74	W	Tungsten
75	Re	Rhenium
76	Os	Osmium
77	Ir	Iridium
78	Pt	Platinum
79	Au	Gold
80	Hg	Mercury
81	Tl	Thallium
82	Pb	Lead
83	Bi	Bismuth
84	Po	Polonium
85	At	Astatine
86	Rn	Radon
87	Fr	Francium
88	Ra	Radium
89	Ac	Actinium
90	Th	Thorium
91	Pa	Protactinium
92	U	Uranium
93	Np	Neptunium
94	Pu	Plutonium
95	Am	Americium
96	Cm	Curium
97	Bk	Berkelium
98	Cf	Californium
99	Es	Einsteinium
100	Fm	Fermium
101	Md	Mendelevium
102	No	Nobelium
103	Lr	Lawrencium

Z	Symbol	Name
104	Rf	Rutherfordium
105	Db	Dubnium
106	Sg	Seaborgium
107	Bh	Bohrium
108	Hs	Hassium
109	Mt	Meitnerium
110	Ds	Darmstadtium
111	Rg	Roentgenium
112	Cn	Copernicium
113	Nh	Nihonium
114	Fl	Flerovium
115	Mc	Moscovium
116	Lv	Livermorium
117	Ts	Tennessine
118	Og	Oganesson

