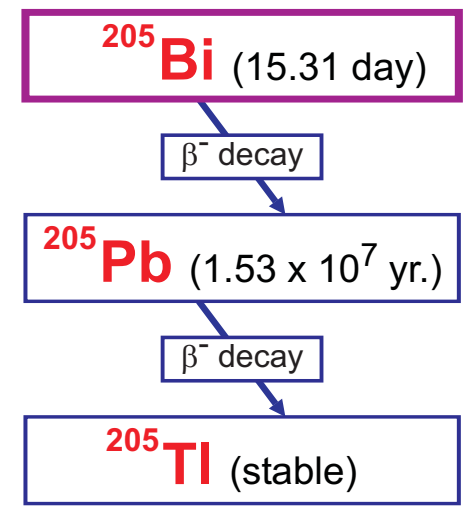
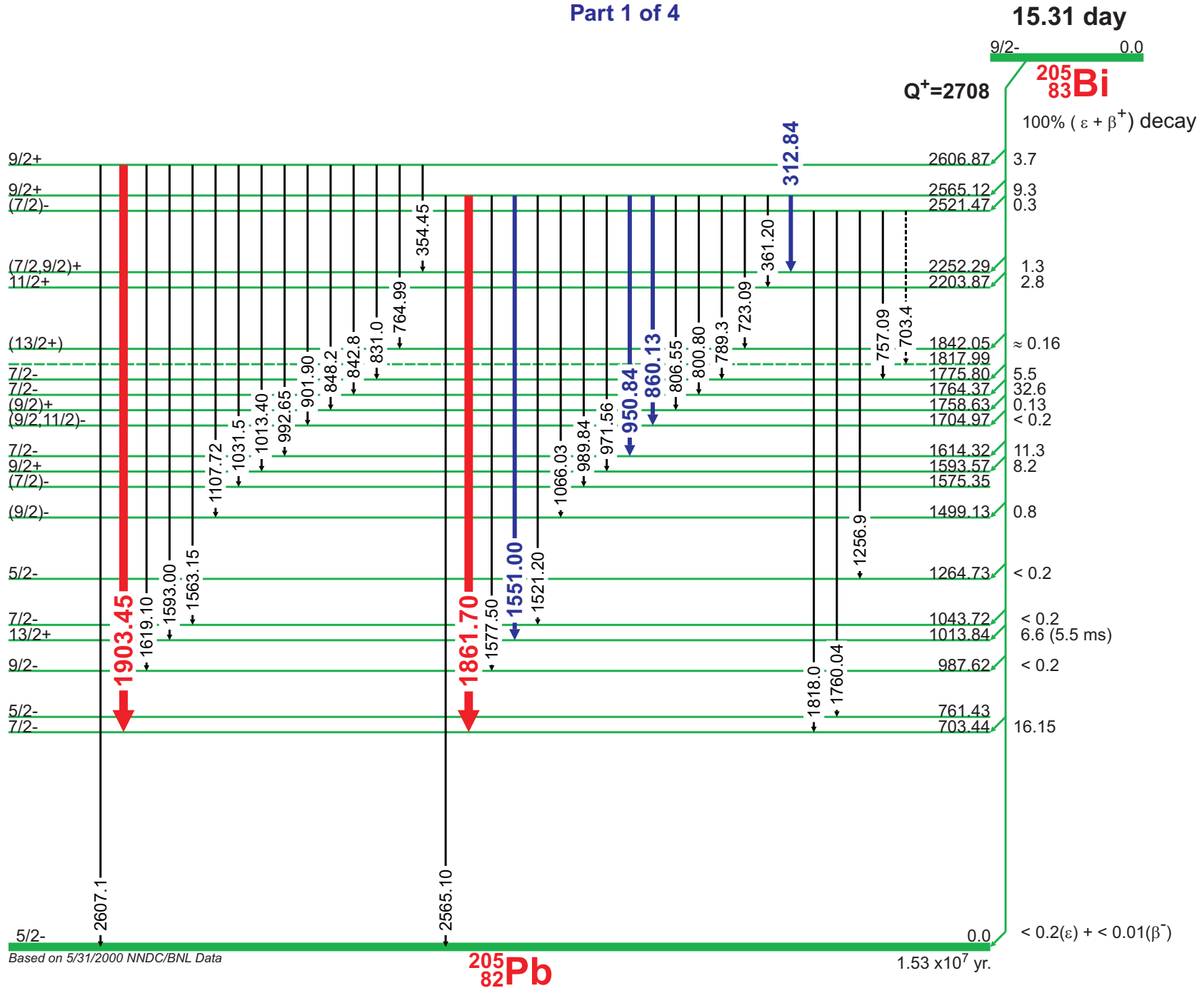


### Simplified Decay Chain



# <sup>205</sup>Bi (15 day) Decay Scheme

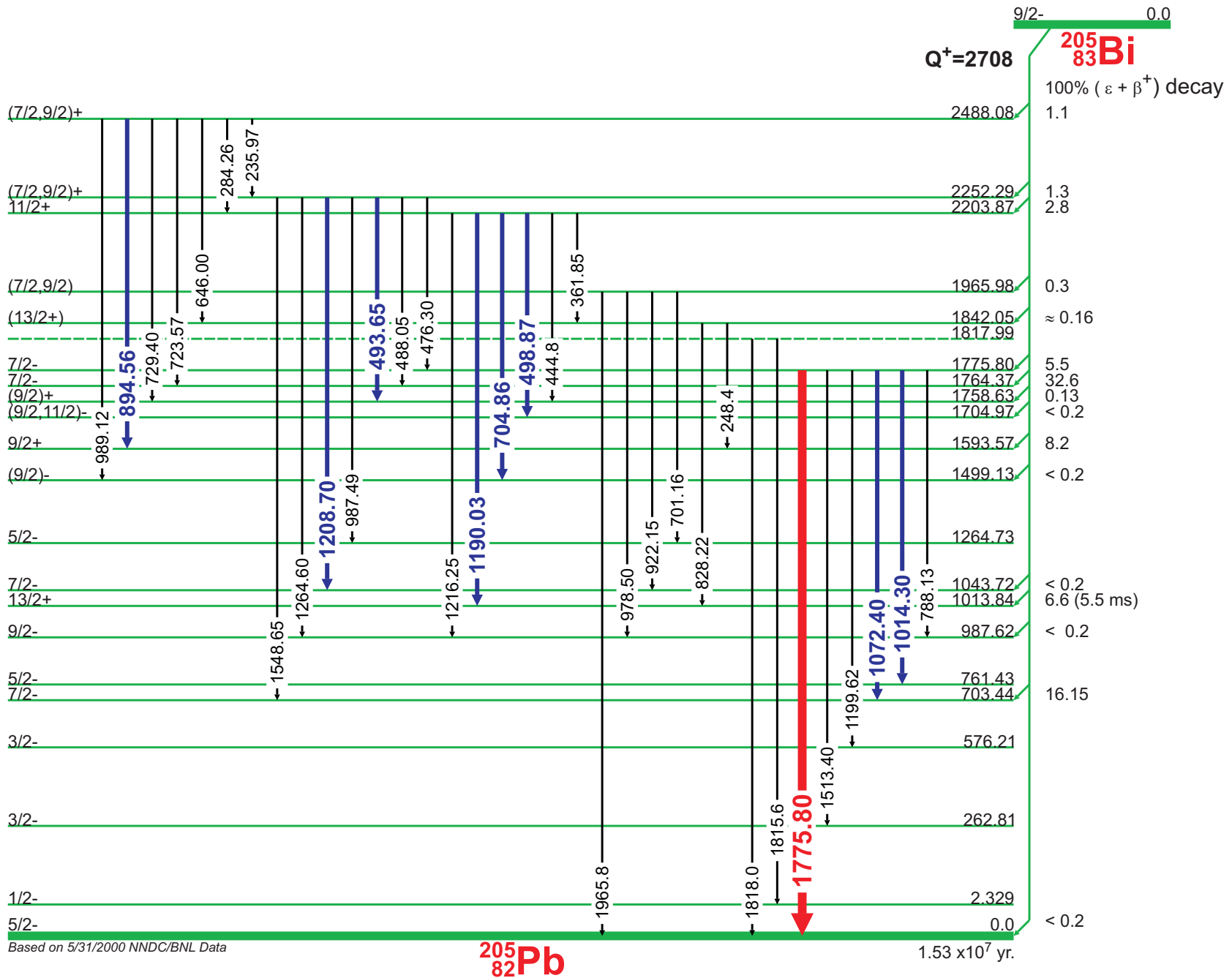
Part 1 of 4



# <sup>205</sup>Bi (15 day) Decay Scheme

Part 2 of 4

15.31 day



**<sup>205</sup>Pb**

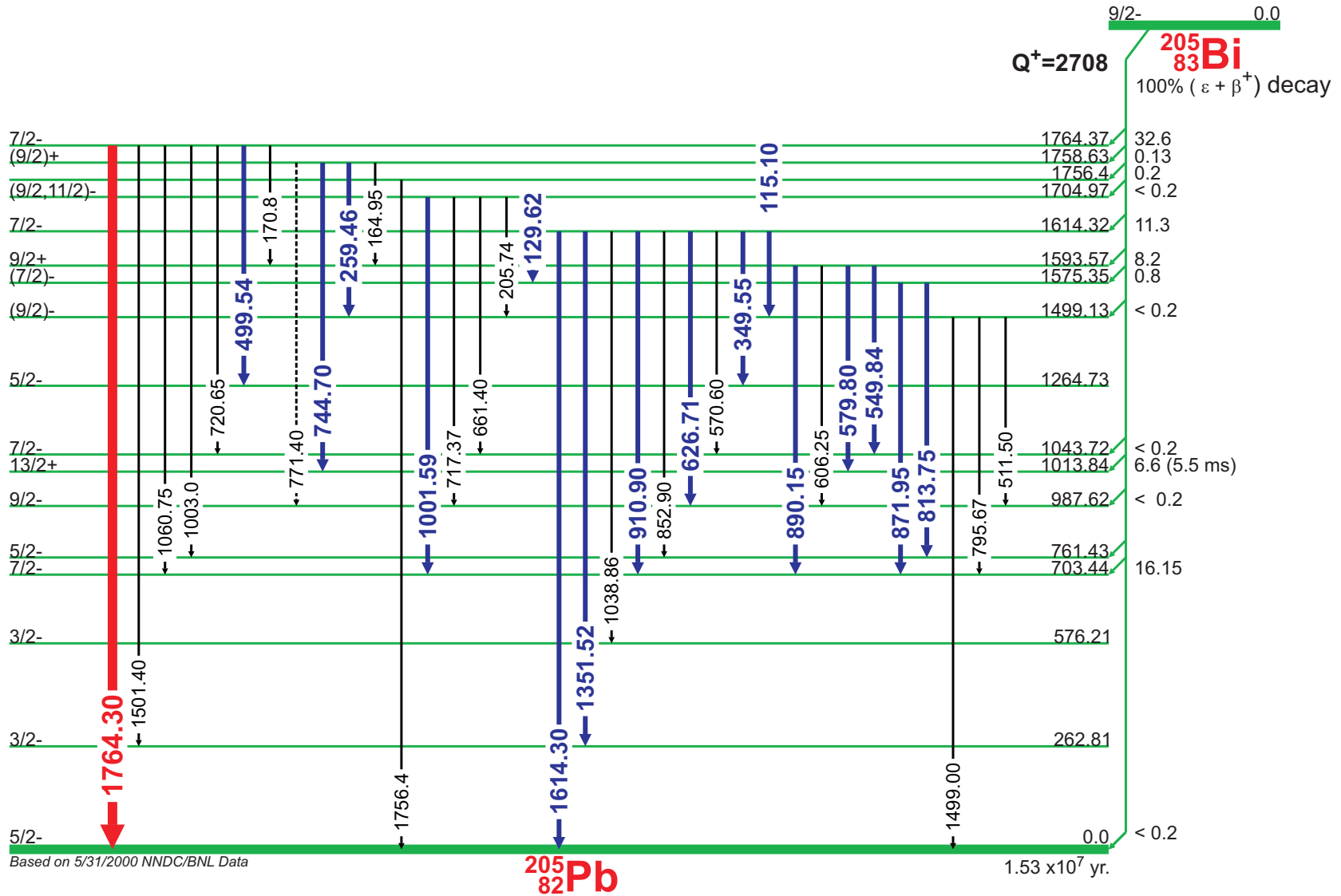
1.53 x 10<sup>7</sup> yr.



# <sup>205</sup>Bi (15 day) Decay Scheme

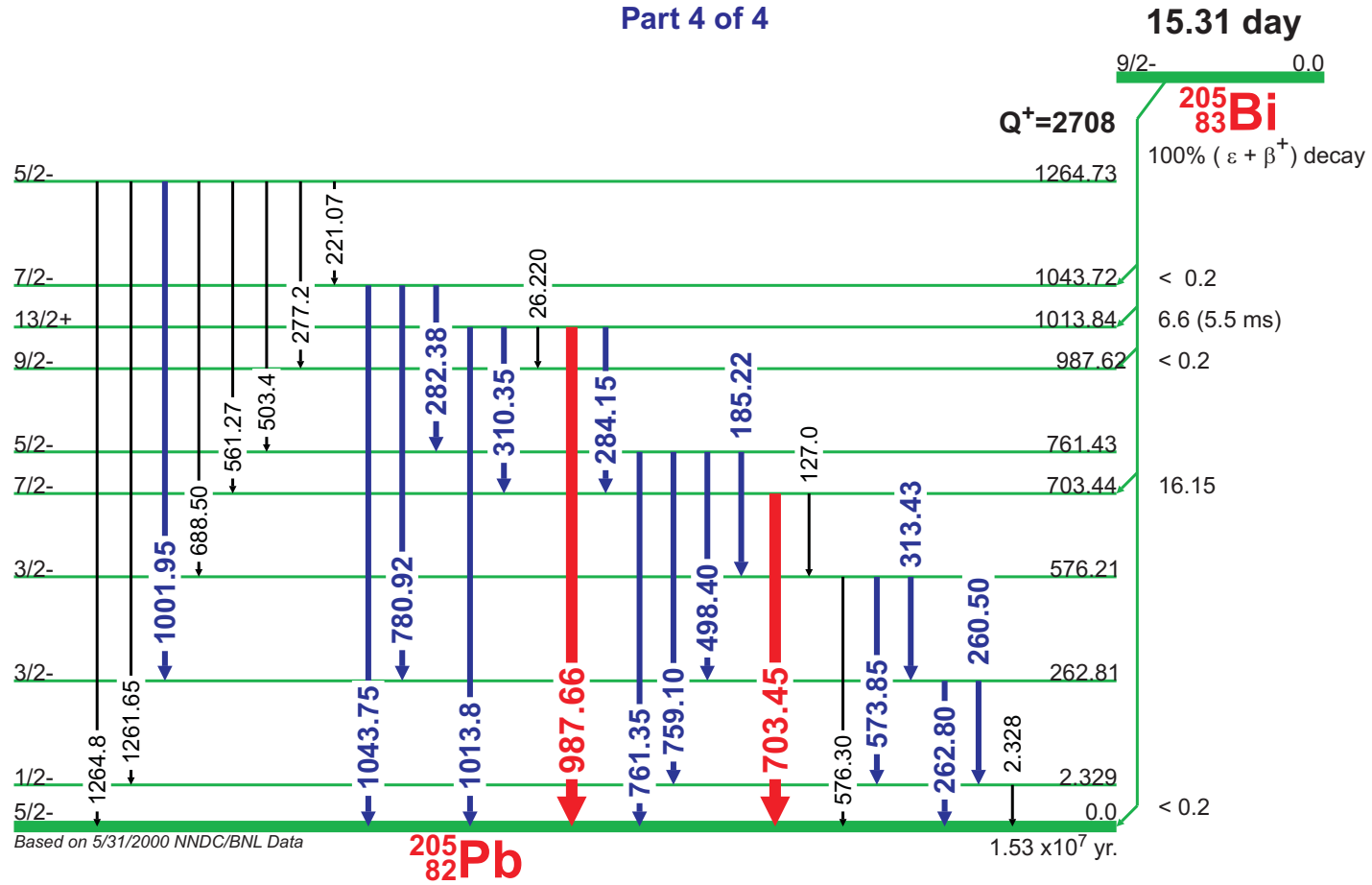
Part 3 of 4

15.31 day



# <sup>205</sup>Bi (15 day) Decay Scheme

Part 4 of 4



# GAMMA-RAY ENERGIES AND INTENSITIES (page 1 of 3)

Nuclide: **<sup>205</sup>Bi**E<sub>γ</sub>, σE<sub>γ</sub>, I<sub>γ</sub>, σI<sub>γ</sub>, Levels- from ENSDF Database as of May 31, 2000

Half Life: 15.31(4) day

E <sub>γ</sub> (keV)	σ E <sub>γ</sub>	I <sub>γ</sub>	σ I <sub>γ</sub>	Level		E <sub>γ</sub> (keV)	σ E <sub>γ</sub>	I <sub>γ</sub>	σ I <sub>γ</sub>	Level	
2.328	0.007			2.329	ε	498.40	0.15	0.093	0.016	761.43	ε
26.220	0.010	0.001 37	0.000 12	1,013.84	ε	498.87	0.20	0.040	0.025	2,203.87	ε
90.04	0.04	0.109	0.022		ε	499.54	0.20	0.062	0.016	1,764.37	ε
112.7	0.1	0.008 7	0.000 6		ε	503.4	0.5	0.008	0.005	1,264.73	ε
115.10	0.10	0.075	0.003	1,614.32	ε	511.50	0.05	0.855	0.016	1,499.13	ε
122.6	1.0	0.006 8	0.000 6		ε	549.84	0.04	2.95	0.03	1,593.57	ε
127.0	0.2	0.003 1	0.000 6	703.44	ε	561.27	0.05	0.053	0.005	1,264.73	ε
129.62	0.10	0.006 2	0.000 6	1,704.97	ε	570.60	0.05	4.33	0.062	1,614.32	ε
148.8	0.2	0.005 3	0.001 6		ε	573.85	0.05	0.622	0.012	576.21	ε
164.95	0.10	0.015 6	0.000 9	1,758.63	ε	576.30	0.10	0.188	0.006	576.21	ε
170.8	0.2	0.004 0	0.000 9	1,764.37	ε	579.80	0.10	5.44	0.06	1,593.57	ε
185.22	0.10	0.095	0.006	761.43	ε	606.25	0.15	0.025	0.004	1,593.57	ε
205.74	0.07	0.025	0.003	1,704.97	ε	626.71	0.10	0.585	0.006	1,614.32	ε
221.07	0.07	0.031 1	0.001 9	1,264.73	ε	646.00	0.10	0.065	0.003	2,488.08	ε
235.97	0.06	0.057	0.003	2,488.08	ε	661.40	0.15	0.028	0.005	1,704.97	ε
248.4	0.2	0.001 9	0.001 2	1,842.05	ε	668.6	0.6	0.019	0.012		ε
259.46	0.20	0.050	0.025	1,758.63	ε	669.8	1.2	0.009	0.012		ε
260.50	0.05	1.09	0.03	262.81	ε	683.5	0.3	0.026	0.003		ε
262.80	0.05	0.364	0.012	262.81	ε	688.50	0.05	0.227	0.009	1,264.73	ε
277.2	0.5	0.016	0.003	1,264.73	ε	701.16	0.20	0.16	0.06	1,965.98	ε
282.38	0.07	0.426	0.006	1,043.72	ε	703.4				2,521.47	ε
284.15	0.10	1.692	0.022	987.62	ε	703.45	0.05	31.1		703.44	ε
284.26	0.10	0.031	0.009	2,488.08	ε	704.86	0.20	0.38	0.09	2,203.87	ε
310.35	0.05	0.104	0.003	1,013.84	ε	717.37	0.05	0.311	0.006	1,704.97	ε
312.84	0.20	0.025	0.009	2,565.12	ε	720.65	0.10	0.143	0.009	1,764.37	ε
313.43	0.20	0.034	0.009	576.21	ε	723.09	0.20	0.028	0.012	2,565.12	ε
339.25	0.20	0.010 9	0.001 6		ε	723.57	0.05	0.152	0.012	2,488.08	ε
349.55	0.05	0.563	0.009	1,614.32	ε	729.40	0.05	0.065	0.004	2,488.08	ε
354.45	0.10	0.017 1	0.001 9	2,606.87	ε	744.70	0.10	0.697	0.016	1,758.63	ε
361.20	0.20	0.031	0.009	2,565.12	ε	757.09	0.20	0.12	0.05	2,521.47	ε
361.85	0.20	0.030	0.009	2,203.87	ε	759.10	0.10	1.04	0.05	761.43	ε
444.8	0.7	0.014	0.006	2,203.87	ε	761.35	0.10	0.68	0.03	761.43	ε
476.30	0.15	0.023	0.003	2,252.29	ε	764.99	0.20	0.009	0.004	2,606.87	ε
488.05	0.15	0.039	0.005	2,252.29	ε	771.40	0.15	0.047	0.004	1,758.63	ε
493.65	0.05	0.373	0.008	2,252.29	ε	777.85	0.15	0.073	0.009		ε

① These I<sub>γ</sub> are per 100 Decays of <sup>205</sup>Bi.

② For total uncertainty add systematic component of 0.3% in quadrature, based on the normalization factor 0.000 311(1)

# GAMMA-RAY ENERGIES AND INTENSITIES (page 2 of 3)

Nuclide: **<sup>205</sup>Bi**E<sub>γ</sub>, σE<sub>γ</sub>, I<sub>γ</sub>, σI<sub>γ</sub>, Levels- from ENSDF Database as of May 31, 2000

Half Life: 15.31(4) day

E <sub>γ</sub> (keV)	σ E <sub>γ</sub>	I <sub>γ</sub>	σ I <sub>γ</sub>	Level		E <sub>γ</sub> (keV)	σ E <sub>γ</sub>	I <sub>γ</sub>	σ I <sub>γ</sub>	Level	
780.92	0.05	0.572 2	0.009 3	1,043.72	ε	1,038.86	0.24	0.113	0.009	1,614.32	ε
788.13	0.15	0.099 5	0.015 6	1,775.80	ε	1,043.75	0.05	7.511	0.093	1,043.72	ε
789.3	0.2	0.018 7	0.009 3	2,565.12	ε	1,060.75	0.15	0.044	0.005	1,764.37	ε
795.67	0.05	0.140 0	0.006 2	1,499.13	ε	1,063.90	0.15	0.025	0.005		ε
800.80	0.05	0.189 7	0.006 2	2,565.12	ε	1,066.03	0.15	0.109	0.005	2,565.12	ε
806.55	0.10	0.158 6	0.012 4	2,565.12	ε	1,072.40	0.10	0.302	0.006	1,775.80	ε
813.75	0.10	0.469 6	0.012 4	1,575.35	ε	1,075.10	0.10	0.011	0.005		ε
828.22	0.05	0.289 2	0.012 4	1,842.05	ε	1,107.72	0.10	0.099	0.009	2,606.87	ε
831.0	0.3	0.040 4	0.009 3	2,606.87	ε	1,190.03	0.05	2.26	0.06	2,203.87	ε
842.8	0.3	0.021 8	0.006 2	2,606.87	ε	1,199.62	0.10	0.190	0.012	1,775.80	ε
848.2	0.3	0.026 4	0.003 7	2,606.87	ε	1,208.70	0.05	0.512	0.009	2,252.29	ε
852.90	0.05	0.072 2	0.004 7	1,614.32	ε	1,216.25	0.10	0.101	0.005	2,203.87	ε
860.13	0.05	0.435 4	0.007 8	2,565.12	ε	1,256.9	0.5	0.022	0.011	2,521.47	ε
871.95	0.05	0.416 7	0.009 3	1,575.35	ε	1,261.65	0.20	0.062	0.006	1,264.73	ε
890.15	0.05	0.678 0	0.009 3	1,593.57	ε	1,264.60	0.20	0.050	0.022	2,252.29	ε
894.56	0.05	0.622 0	0.009 3	2,488.08	ε	1,264.8	0.2	0.124	0.022	1,264.73	ε
901.90	0.05	0.129 1	0.004 7	2,606.87	ε	1,265.9	0.3	0.047	0.012		ε
910.90	0.05	1.642	0.031	1,614.32	ε	1,277.2	0.2	0.038	0.004		ε
922.15	0.10	0.052 9	0.003 1	1,965.98	ε	1,351.52	0.05	1.06	0.03	1,614.32	ε
931.50	0.15	0.038 9	0.004 7		ε	1,438.7	0.2	0.117	0.006		ε
950.84	0.05	0.388 8	0.009 3	2,565.12	ε	1,499.00	0.15	0.171	0.014	1,499.13	ε
971.56	0.05	0.279 9	0.006 2	2,565.12	ε	1,501.40	0.10	0.227	0.014	1,764.37	ε
978.50	0.10	0.040 4	0.006 2	1,965.98	ε	1,513.40	0.20	0.070	0.012	1,775.80	ε
987.49	0.20	0.09	0.03	2,252.29	ε	1,521.20	0.10	0.199	0.012	2,565.12	ε
987.66	0.05	16.135	0.156	987.62	ε	1,548.65	0.15	0.280	0.016	2,252.29	ε
989.12	0.20	0.031 1	<	2,488.08	ε	1,551.00	0.10	0.970	0.025	2,565.12	ε
989.84	0.20	0.074 6	0.024 9	2,565.12	ε	1,563.15	0.10	0.165	0.009	2,606.87	ε
992.65	0.20	0.087	0.031	2,606.87	ε	1,577.50	0.15	0.166	0.009	2,565.12	ε
1,001.59	0.20	0.255	0.044	1,704.97	ε	1,593.00	0.15	0.115	0.008	2,606.87	ε
1,001.95	0.20	0.274	0.044	1,264.73	ε	1,614.30	0.15	2.28	0.04	1,614.32	ε
1,003.0	0.3	0.072	0.031	1,764.37	ε	1,619.10	0.15	0.367	0.016	2,606.87	ε
1,013.40	0.15	0.082 4	0.018 7	2,606.87	ε	1,676.4	0.3	0.033	0.006		ε
1,013.8	0.1	0.057 5	0.012 4	1,013.84	ε	1,756.4	0.3	0.218	0.012	1,756.4	ε
1,014.30	0.05	0.914 3	0.018 7	1,775.80	ε	1,760.04	0.40	0.12	0.03	2,521.47	ε
1,031.5	0.3	0.034 2	0.010 9	2,606.87	ε	1,764.30	0.10	32.47	0.62	1,764.37	ε

① These I<sub>γ</sub> are per 100 Decays of <sup>205</sup>Bi.

② For total uncertainty add systematic component of 0.3% in quadrature, based on the normalization factor 0.000 311(1)



## GAMMA-RAY ENERGIES AND INTENSITIES (page 3 of 3)

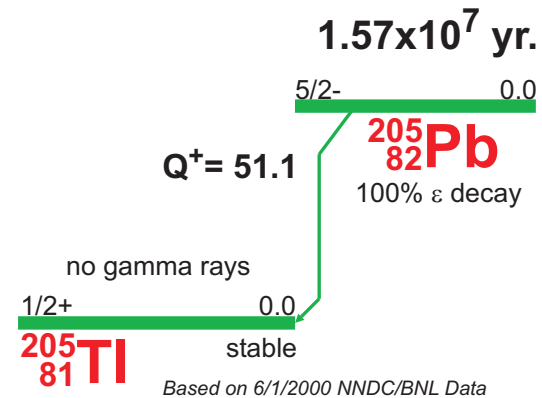
Nuclide: **<sup>205</sup>Bi**E<sub>γ</sub>, σE<sub>γ</sub>, I<sub>γ</sub>, σI<sub>γ</sub>, Levels- from ENSDF Database as of May 31, 2000

Half Life: 15.31(4) day

E <sub>γ</sub> (keV)	σ E <sub>γ</sub>	<sup>①</sup> I <sub>γ</sub>	<sup>②</sup> σ I <sub>γ</sub>	Level	
<b>1,775.80</b>	<b>0.10</b>	<b>3.99</b>	<b>0.08</b>	<b>1,775.80</b>	<b>ε</b>
1,815.6	0.4	0.014	0.005	1,817.99	ε
1,818.0	0.2	0.047	0.004	2,521.47	ε
1,818.0	0.2			1,817.99	ε
<b>1,861.70</b>	<b>0.10</b>	<b>6.17</b>	<b>0.09</b>	<b>2,565.12</b>	<b>ε</b>

E <sub>γ</sub> (keV)	σ E <sub>γ</sub>	<sup>①</sup> I <sub>γ</sub>	<sup>②</sup> σ I <sub>γ</sub>	Level	
<b>1,903.45</b>	<b>0.10</b>	<b>2.47</b>	<b>0.04</b>	<b>2,606.87</b>	<b>ε</b>
1,965.8	0.5	0.008 1	0.001 6	1,965.98	ε
2,003.3	0.5	0.003 7	0.001 6		ε
2,565.10	0.15	0.042 3	0.002 2	2,565.12	ε
2,607.1	0.2	0.018 7	0.001 9	2,606.87	ε

### <sup>205</sup>Pb (1.57 x 10<sup>7</sup> yr.) Decay Scheme



## GAMMA-RAY ENERGIES AND INTENSITIES

Nuclide: **<sup>205</sup>Pb**Half Life: 1.53x10<sup>7</sup> (7) yr.

E <sub>γ</sub> (keV)	σ E <sub>γ</sub>	<sup>①</sup> I <sub>γ</sub>	<sup>②</sup> σ I <sub>γ</sub>	Level	
no gamma rays					ε

E<sub>γ</sub>, σE<sub>γ</sub>, I<sub>γ</sub>, σI<sub>γ</sub>, Levels from ENSDF Database as of June 1, 2000① These I<sub>γ</sub> are per 100 Decays of <sup>205</sup>Bi.

② For total uncertainty add systematic component of 0.3% in quadrature, based on the normalization factor 0.000 311(1)