^{192}Pt(^{10}B,5nγ) 1986Ch01

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Huang Xiaolong, Zhou Chunmei	NDS 104, 283 (2005)	1-Jan-2002

E=50-80 MeV, measured Eγ, Iγ, $\gamma\gamma$(t), $\gamma(\theta)$, γ(t) with Ge(Li).

^{197}Bi Levels

E(level)[†]	J^{π}[‡]	$T_{1/2}$[#]	Comments
0	9/2$^-$		
1000.73 *16*	13/2$^-$		
1009.23 *16*	11/2$^-$		
1196.25 *15*	13/2$^+$		
1600.95 *25*	17/2$^+$		
1968.6 *4*	21/2$^+$		
2065.5 *4*	25/2$^+$	60 ns *22*	
2129.3 *4*	(23/2$^-$)	204 ns *18*	
2360.4 *5*	27/2$^{(+)}$		
2384.5 *5*	(25/2)		
2360.4+x *5*	(29/2$^-$)	263 ns *13*	Additional information 1. An E1 transition would be expected from the systematics of 29/2 isomers observed in the heavier odd Bi isotopes. A search for low energy delayed γ rays with the planar Ge detector produced no candidates for this transition, suggesting that X≤40 keV.
2688.7 *5*	27/2		
2846.00+x *20*	(31/2$^-$)		
2929.5 *5*	(31/2$^-$)	209 ns *30*	
3284.9+x *3*	(33/2$^-$)		
3558.3 *7*			

† From level scheme and Eγ's using least-squares fit to data.
‡ From $\gamma(\theta)$ and systematics for the heavier odd-mass Bi isotopes.
# From $\gamma\gamma$(t) or γ(t) measurements.

^{192}Pt(^{10}B,5nγ) 1986Ch01 (continued)

γ(^{197}Bi)

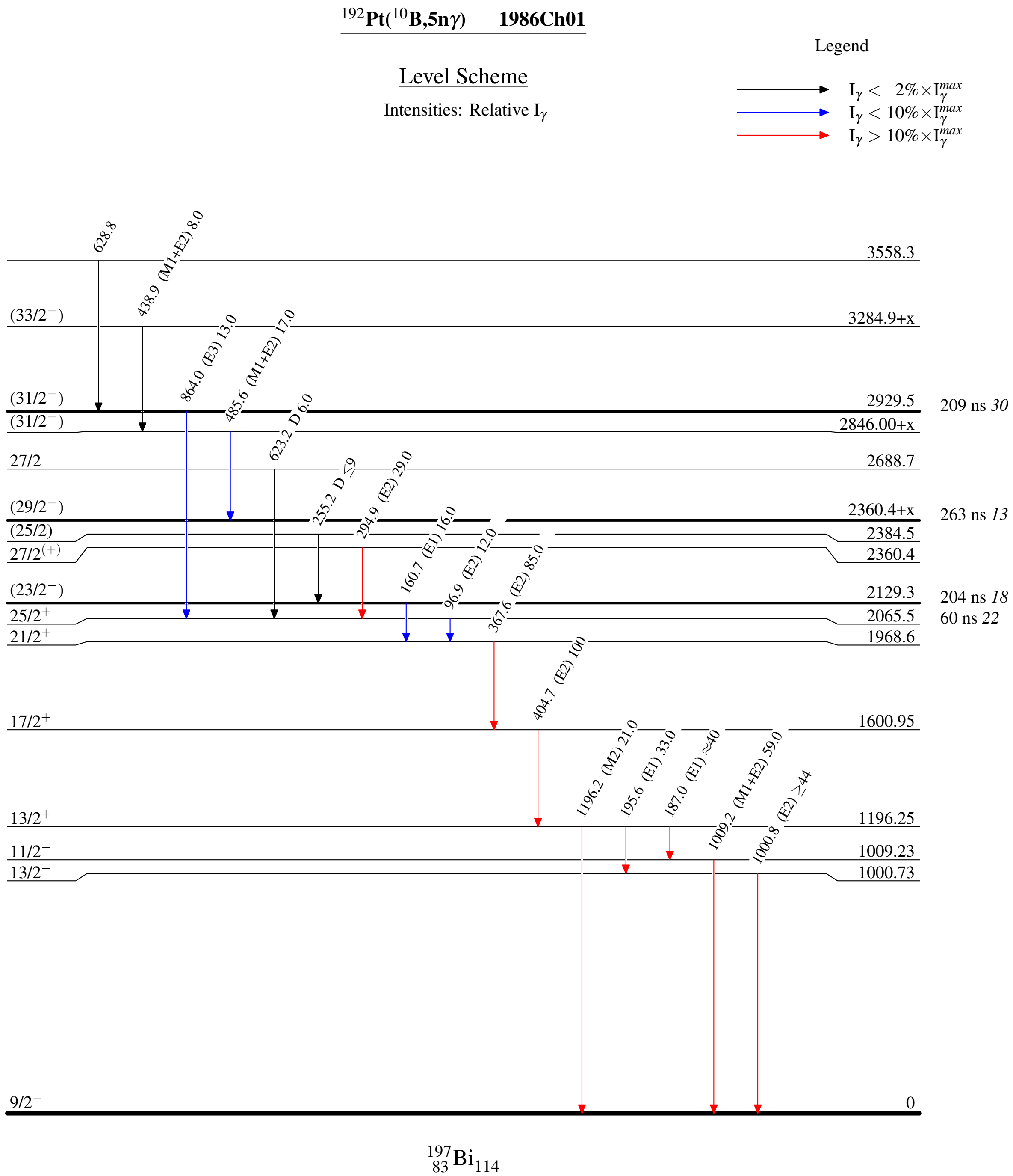
E_γ	I_γ[†]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[@]	δ[a]	α[b]	Comments
96.9 *2*	12.0 *24*	2065.5	25/2$^+$	1968.6	21/2$^+$	(E2)[&]		7.90	α(K)= 0.465; α(L)= 5.49; α(M)= 1.456; α(N+..)= 0.486 $\gamma(\theta)$: A_2=+0.36 *11*, A_4=−0.13 *16*.
160.7 *2*	16.0 *16*	2129.3	(23/2$^-$)	1968.6	21/2$^+$	(E1)		0.1385	α(K)= 0.1115; α(L)=0.02060; α(M)=0.00485; α(N+..)=0.00158 $\gamma(\theta)$: A_2=−0.08 *2*, A_4=−0.02 *3*.
187.0 *2*	≈40[‡]	1196.25	13/2$^+$	1009.23	11/2$^-$	(E1)		0.0951	α(K)= 0.0768; α(L)=0.01392; α(M)=0.00327; α(N+..)=0.00106
195.6 *2*	33.0 *66*	1196.25	13/2$^+$	1000.73	13/2$^-$	(E1)		0.0852	α(K)= 0.0689; α(L)=0.01240; α(M)=0.00291; α(N+..)=0.00095 $\gamma(\theta)$: A_2=+0.19 *2*, A_4=−0.00 *2*.
255.2 *2*	≤9[#]	2384.5	(25/2)	2129.3	(23/2$^-$)	D			α(K)=0.616, α(L)=0.1066, α(M)=0.0251, α(N+..)=0.00837, α=0.756 if mult=M1; α(K)=0.0364, α(L)=0.00635, α(M)=0.00149, α(N+..)=0.00048, α=0.0447 if mult=E1. $\gamma(\theta)$: A_2=−0.19 *6*, A_4=−0.01 *1*.
294.9 *2*	29.0 *29*	2360.4	27/2$^{(+)}$	2065.5	25/2$^+$	(E2)[&]		0.1286	α(K)= 0.0693; α(L)= 0.0441; α(M)=0.01140; α(N+..)=0.00377 $\gamma(\theta)$: A_2=−0.21 *1*, A_4=−0.01 *2*.
367.6 *2*	85.0 *85*	1968.6	21/2$^+$	1600.95	17/2$^+$	(E2)[&]		0.0682	α(K)= 0.0420; α(L)=0.01962; α(M)=0.00501; α(N+..)=0.00166 $\gamma(\theta)$: A_2=+0.10 *3*, A_4=+0.00 *4*.
404.7 *2*	100 *10*	1600.95	17/2$^+$	1196.25	13/2$^+$	(E2)[&]		0.0527	α(K)= 0.0339; α(L)=0.01406; α(M)=0.00356; α(N+..)=0.00118 $\gamma(\theta)$: A_2=+0.41 *1*, A_4=−0.02 *1*.
438.9 *2*	8.0 *8*	3284.9+x	(33/2$^-$)	2846.00+x	(31/2$^-$)	(M1+E2)	−0.37 *21*	0.158 *18*	α(K)= 0.128 *15*; α(L)= 0.0226 *18*; α(M)= 0.0053 *4*; α(N+..)=0.00178 *14* $\gamma(\theta)$: A_2=−0.38 *3*, A_4=+0.02 *5*.
485.6 *2*	17.0 *17*	2846.00+x	(31/2$^-$)	2360.4+x	(29/2$^-$)	(M1+E2)	−0.33 *18*	0.123 *11*	α(K)= 0.100 *10*; α(L)= 0.0174 *12*; α(M)= 0.0041 *3*; α(N+..)=0.00137 *9* $\gamma(\theta)$: A_2=−0.38 *2*, A_4=−0.04 *2*.
623.2 *2*	6.0 *6*	2688.7	27/2	2065.5	25/2$^+$	D			α(K)=0.0561, α(L)=0.00953, α=0.0688 if mult=M1; α(K)=0.00526, α(L)=0.00084, α=0.00638 if mult=E1. $\gamma(\theta)$: A_2=−0.24 *5*, A_4=−0.02 *9*.
628.8 *5*		3558.3		2929.5	(31/2$^-$)				
864.0 *2*	13.0 *13*	2929.5	(31/2$^-$)	2065.5	25/2$^+$	(E3)		0.02337	α(K)=0.01639; α(L)=0.00525 $\gamma(\theta)$=+0.08 *3*, A_4=−0.03 *4*.
1000.8 *2*	≥44[‡]	1000.73	13/2$^-$	0	9/2$^-$	(E2)[&]		0.00706	α(K)=0.00558; α(L)=0.00111 $\gamma(\theta)$: A_2=+0.19 *3*, A_4=−0.07 *5*.
1009.2 *2*	59.0 *59*	1009.23	11/2$^-$	0	9/2$^-$	(M1+E2)	−0.38 *14*	0.0182 *12*	α(K)= 0.0148 *10*; α(L)=0.00251 *14* $\gamma(\theta)$: A_2=−0.37 *1*, A_4=+0.03 *2*.

γ(^{197}Bi) (continued)

E_γ	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[@]	α[b]	Comments
1196.2 *2*	21.0 *21*	1196.25	13/2$^+$	0	9/2$^-$	(M2)[&]	0.0300	α(K)=0.02412; α(L)=0.00442 $\gamma(\theta)$: A_2=+0.21 *2*, A_4=+0.04 *3*.

[†] Relative intensity normalized to Iγ(404.7γ)=100 *10*.
[‡] Estimated from coincidence data.
[#] Estimated from pulsed beam data.
[@] ΔJ and $\Delta\pi$ between transition levels, except as noted.
[&] From $\gamma(\theta)$ characteristic of stretched quadrupoles.
[a] From $\gamma(\theta)$.
[b] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

$^{197}_{83}$Bi$_{114}$-3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Level Scheme
Intensities: Relative Iγ
Legend
Iγ < 2%×Iγ^max
Iγ < 10%×Iγ^max
Iγ > 10%×Iγ^max
628.8
438.9 (M1+E2) 8.0
864.0 (E3) 13.0
485.6 (M1+E2) 17.0
623.2 D 6.0
255.2 D ≤9
294.9 (E2) 29.0
160.7 (E1) 16.0
96.9 (E2) 12.0
367.6 (E2) 85.0
404.7 (E2) 100
1196.2 (M2) 21.0
195.6 (E1) 33.0
187.0 (E1) ≈40
1009.2 (M1+E2) 59.0
1000.8 (E2) ≥44
3558.3
(33/2⁻) 3284.9+x
(31/2⁻) 2929.5 209 ns 30
(31/2⁻) 2846.00+x
27/2 2688.7
(29/2⁻) 2360.4+x 263 ns 13
(25/2) 2384.5
27/2(+) 2360.4
(23/2⁻) 2129.3 204 ns 18
25/2+ 2065.5 60 ns 22
21/2+ 1968.6
17/2+ 1600.95
13/2+ 1196.25
11/2⁻ 1009.23
13/2⁻ 1000.73
9/2⁻ 0
$^{197}_{83}$Bi$_{114}$