^{51}V(n,γ) E=thermal 1991Mi08

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Yang Dong, Huo Junde	NDS 128, 185 (2015)	10-Jul-2015

$J^\pi(^{51}V)=7/2^-$.
1965Wh06: measured Eγ, Iγ, $\gamma\gamma$-coin, $\gamma\gamma$ angular correlation, bent crystal spectrometer.
1966Va03: measured Eγ, Iγ, curved crystal spectrometer.
1967Ar08: measured Eγ, Iγ, Ge(Li) detector.
1967Ca03: measured $\gamma\gamma$ angular correlation, NaI(Tl) detectors.
1969Ra10: measured Eγ, Iγ.
1972Bo59: measured Iγ, $T_{1/2}$, and α(exp) for 17-keV level, fast-slow delayed coincidence system.
1984De15: polarized neutrons, measured Eγ, γ(circ pol), Iγ(θ,H,t). Ge(Li) detectors.
1991Mi08: measured Eγ, Iγ, Ge(Li) detector (FWHM: 2.2 keV at 1.33 MeV), pair spectrometer (FWHM: 2.3 keV at 2 MeV and 5.1 keV at 8 MeV).
2012Sh16: measured Eγ, Iγ, Ge(Li) detector having an well-calibrated detection efficiency (22%).
Polarized (n,γ): see also 1965Ko10.
Resonance (n,γ): see 1970Ra47, 1966Go30.
Energy, intensity per 100 n-captures, and placement of gamma-rays are from 1991Mi08, except as noted.

^{52}V Levels

E(level)	J$^\pi$†	$T_{1/2}$	E(level)	J$^\pi$†
0.0	3^+		2987.30 *3*	
17.156 *6*	$2^+,3^+$‡	1.08# ns *22*	3009.16 *5*	
22.764 *3*	$(4,5)^+$		3059.53 *3*	
141.610 *6*			3184.34 *4*	
147.845 *3*	4^+‡		3194.266 *17*	4^+‡
436.636 *9*	2^+‡		3198.96 *5*	
793.542 *12*	3^+‡		3315.19 *5*	
845.940 *11*	4^+‡		3333.25 *4*	
1289.841 *21*			3449.99 *4*	
1418.816 *14*	3^+‡		3473.78 *4*	
1558.845 *16*	4^+‡		3538.48 *4*	
1579.16 *4*			3575.95 *3*	
1732.565 *17*	NOT 2‡		3644.96 *5*	
1759.623 *19*	3^+‡		3729.60 *4*	
1770.170 *19*			3733.14 *3*	
1795.117 *15*	2^+‡		3777.08 *3*	
2100.838 *13*	3^+‡		3808.50 *3*	
2168.633 *17*	4^+‡		4108.73 *4*	
2318.029 *25*	3^+‡		4278.61 *3*	
2427.653 *18*	$2^+,3^+$‡		4285.28 *5*	
2538.815 *21*	$(3,4,5)^+$‡		4419.81 *4*	
2559.37 *4*			4483.29 *4*	
2743.06 *4*			4518.88 *3*	
2775.82 *3*			4609.43 *4*	
2824.58 *3*			4755.05 *6*	
2858.875 *23*	$(2,3,4)^+$‡		5038.87 *4*	
2910.46 *5*			7311.24@ *13*	$3^-,4^-$&

† Based on $\gamma\gamma(\theta)$ work of 1965Wh06, 1968BoZY, and 1967Ca03, except as noted.

Continued on next page (footnotes at end of table)

^{51}V(n,γ) E=thermal 1991Mi08 (continued)

^{52}V Levels (continued)

‡ J: γ(circ pol) (1984De15). π: from L values in (d,p).
# From $\gamma\gamma$(t), see 1972Bo59.
@ Neutron capture state, from 2012Wa38.
& From s-wave neutron capture on $7/2^-$ target nucleus.

γ(^{52}V)

E_γ	I_γ	E_i(level)	J_i^π	E_f	J_f^π	Mult.	δ	α[b]	$I_{(\gamma+ce)}$	Comments
17.153 6	3.0 10	17.156	2+,3+	0.0	3+	M1		7 3		α(exp)=4.6 18 (1972Bo59) E_γ: from 1989Du03. δ: from α(exp) one gets δ=0.066 +34−66. From RUL one expects δ<0.0064.
22.764[‡] 3		22.764	(4,5)+	0.0	3+	E2(+M1)	>0.63	7.×10^1 4	24 4	α(exp)=65 +63−33 (1966Va03) δ: from α(exp). $I_{(\gamma+ce)}$: from ΣI(γ+ce) (feeding 22 level). I_γ: 1967Ar08 report 0.19<Iγ<0.45.
124.453[‡] 3	2.5[‡a]	141.610		17.156	2+,3+					
125.082[‡] 3	17.2[‡a]	147.845	4+	22.764	(4,5)+					
[x]137.50[‡] 4	0.025[‡a]									
[x]139.74 4										
147.845[‡] 4	3.0[‡a]	147.845	4+	0.0	3+					
295.004[‡] 9	2.6[‡a]	436.636	2+	141.610						
356.87[‡] 5	0.15[‡a]	793.542	3+	436.636	2+					
419.468[‡] 23	3.7[‡a]	436.636	2+	17.156	2+,3+					
436.61 3	5.3 11	436.636	2+	0.0	3+					
505.27 3	0.20 4	1795.117	2+	1289.841						
541.79 18	0.026 5	2100.838	3+	1558.845	4+					
572.89 5	0.092 18	1418.816	3+	845.940	4+					
645.69 3	13 3	793.542	3+	147.845	4+					
655.41 4	0.101 20	3194.266	4+	2538.815	(3,4,5)+					
[x]663.7[‡] 4	0.20[‡a]									
682.02 3	0.32 6	2100.838	3+	1418.816	3+					
698.13 3	0.80 16	845.940	4+	147.845	4+					
712.90 3	1.06 21	1558.845	4+	845.940	4+					
[x]749.5[‡] 10	<0.15[‡a]									
[x]754.2[‡] 10	<0.15[‡a]									
758.43 23	0.019 4	2858.875	(2,3,4)+	2100.838	3+					
[x]771.2[‡] 10	<0.15[‡a]									
776.41 4	0.16 3	793.542	3+	17.156	2+,3+					
[x]780.6[‡] 10	<0.15[‡a]									
793.54 3	3.7 7	793.542	3+	0.0	3+					
806.45 8	0.051 10	2538.815	(3,4,5)+	1732.565	NOT 2					
823.19 3	6.0 12	845.940	4+	22.764	(4,5)+					
845.98 3	5.59[@] 8	845.940	4+	0.0	3+					
886.66 3	0.33 7	1732.565	NOT 2	845.940	4+					
899.02 9	0.110 22	2318.029	3+	1418.816	3+					
[x]934.48 5	0.28 6									

$^{52}_{23}$V$_{29}$-3

γ(^{52}V) (continued)

E_γ	I_γ	E_i(level)	J_i^π	E_f	J_f^π
965.6 *4*	0.011 *2*	1759.623	3+	793.542	3+
972.6 *3*	0.012 *2*	2743.06		1770.170	
979.94 *12*	0.051 *10*	2538.815	(3,4,5)+	1558.845	4+
981.98 *8*	0.41 *8*	1418.816	3+	436.636	2+
1001.62 *4*	1.16 *23*	1795.117	2+	793.542	3+
1065.77 *18*	0.023 *5*	3808.50		2743.06	
1093.38 *5*	0.108 *22*	3194.266	4+	2100.838	3+
[x]1097.2[†] *10*	1.2[†&]				
1120.04 *14*	0.030 *6*	2538.815	(3,4,5)+	1418.816	3+
1131.99 *11*	0.041 *8*	3449.99		2318.029	3+
1148.28[c] *5*	0.094[c] *19*	1289.841		141.610	
1148.28[c] *5*	0.094[c] *19*	3575.95		2427.653	2+,3+
[x]1166.64 *5*	0.16 *3*				
[x]1181.71 *4*	0.18 *4*				
1254.87 *3*	0.46 *9*	2100.838	3+	845.940	4+
1270.91 *4*	0.24 *5*	1418.816	3+	147.845	4+
1272.64 *4*	0.27 *5*	1289.841		17.156	2+,3+
1301.95 *9*	0.037 *7*	3729.60		2427.653	2+,3+
1307.28 *3*	0.75 *15*	2100.838	3+	793.542	3+
1322.92 *3*	0.44 *9*	1759.623	3+	436.636	2+
1325[†] *1*	0.5[†&]	2168.633	4+	845.940	4+
1333.60 *5*	0.62 *12*	1770.170		436.636	2+
1358.50 *3*	3.1 *6*	1795.117	2+	436.636	2+
1375.06 *3*	0.20 *4*	2168.633	4+	793.542	3+
1399.44 *11*	0.037 *7*	3194.266	4+	1795.117	2+
1401.65 *3*	1.4 *3*	1418.816	3+	17.156	2+,3+
[x]1405.45 *4*	0.111 *22*				
1410.97 *3*	0.18 *4*	1558.845	4+	147.845	4+
1418.78 *3*	1.4 *3*	1418.816	3+	0.0	3+
1424.11 *3*	0.26 *5*	3194.266	4+	1770.170	
[x]1438.18 *4*	0.17 *4*				
1472.05 *6*	0.084 *17*	2318.029	3+	845.940	4+
1486.20 *15*	0.016 *3*	2775.82		1289.841	
1508.49 *10*	0.026 *5*	4419.81		2910.46	
1524.56 *5*	0.088 *18*	2318.029	3+	793.542	3+
[x]1526.93 *3*	0.25 *5*				
[x]1530.66 *4*	0.106 *21*				
1536.17 *9*	0.062 *12*	1558.845	4+	22.764	(4,5)+
1537.6 *3*	0.014 *3*	3333.25		1795.117	2+
1541.77 *8*	0.034 *7*	1558.845	4+	17.156	2+,3+
1558.79 *3*	7.07[@] *10*	1558.845	4+	0.0	3+
1564.55 *5*	0.068 *14*	3733.14		2168.633	4+
1571.54 *19*	0.018 *4*	4483.29		2910.46	
1573.54 *14*	0.024 *5*	3333.25		1759.623	3+
1579.12 *4*	0.104 *21*	1579.16		0.0	3+
1584.70 *5*	0.076 *15*	1732.565	NOT 2	147.845	4+
1591.6 *3*	0.015 *3*	1732.565	NOT 2	141.610	
1611.77 *4*	0.48 *10*	1759.623	3+	147.845	4+
1618.05 *9*	0.025 *5*	1759.623	3+	141.610	
1622.42 *5*	0.52 *11*	1770.170		147.845	4+
1634.04 *3*	0.53 *11*	2427.653	2+,3+	793.542	3+
1635.42 *4*	0.21 *4*	3194.266	4+	1558.845	4+
1641.6 *3*	0.010 *2*	3059.53		1418.816	3+
1643.77 *16*	0.022 *4*	4419.81		2775.82	
1647.30 *10*	0.024 *5*	1795.117	2+	147.845	4+
1653.46 *4*	0.121 *24*	1795.117	2+	141.610	
1664.18 *3*	1.08 *22*	2100.838	3+	436.636	2+
1692.96 *4*	0.096 *19*	2538.815	(3,4,5)+	845.940	4+
[x]1693.9[†] *10*	1.08				
1695.74 *14*	0.019 *4*	4755.05		3059.53	
1709.78 *3*	0.26 *5*	1732.565	NOT 2	22.764	(4,5)+
1726.14 *16*	0.014 *3*	4285.28		2559.37	
1732.53 *4*	0.33 *7*	1732.565	NOT 2	0.0	3+
1739.95 *3*	0.009 *2*	4278.61		2538.815	(3,4,5)+
1740.0 *3*	0.009 *2*	4483.29		2743.06	
1742.50 *4*	0.14 *3*	1759.623	3+	17.156	2+,3+
1744.92 *22*	0.021 *4*	2538.815	(3,4,5)+	793.542	3+
1747.33 *4*	0.25 *5*	1770.170		22.764	(4,5)+
1749.9 *4*	0.008 *2*	4609.43		2858.875	(2,3,4)+
1765.42 *6*	0.045 *9*	3184.34		1418.816	3+
1769.70 *4*	0.093 *19*	3059.53		1289.841	
[x]1772.73 *4*	0.18 *4*				
1775.42 *3*	0.81 *16*	3194.266	4+	1418.816	3+
1777.91 *6*	3.3 *7*	1795.117	2+	17.156	2+,3+
1795.05 *3*	0.26 *5*	1795.117	2+	0.0	3+
[x]1820.66 *4*	0.103 *21*				
1833.75 *7*	0.033 *7*	4609.43		2775.82	
1853.8 *5*	0.008 *2*	5038.87		3184.34	
1860.8 *5*	0.004 *1*	4419.81		2559.37	
1891.38 *21*	0.012 *2*	3449.99		1558.845	4+
1894.11[c] *23*	0.012[c] *2*	3184.34		1289.841	
1894.11[c] *23*	0.012[c] *2*	3473.78		1579.16	
1897.58 *25*	0.012 *2*	2743.06		845.940	4+
1914.27 *8*	0.045 *9*	3333.25		1418.816	3+
1930.04 *10*	0.056 *11*	2775.82		845.940	4+
1952.92 *4*	1.4 *3*	2100.838	3+	147.845	4+

$^{52}_{23}$V$_{29}$-4

γ(^{52}V) (continued)

E_γ	I_γ	E_i(level)	J^π_i	E_f	J^π_f
[x]1960.1[†] 10	0.75				
1973.48 6	0.054 11	3733.14		1759.623	3$^+$
1979.96 5	0.060 12	4518.88		2538.815	(3,4,5)$^+$
1991.44 15	0.015 3	2427.653	2$^+$,3$^+$	436.636	2$^+$
1996.78[c] 14	0.019[c] 4	3575.95		1579.16	
1996.78[c] 14	0.019[c] 4	3729.60		1732.565	NOT 2
[x]2002.0[†] 10	0.82				
[x]2004.83 4	0.35 4				
2006.95 6	0.126 13	3777.08		1770.170	
2020.76 4	0.51 5	2168.633	4$^+$	147.845	4$^+$
2030.75 9	0.044 4	2824.58		793.542	3$^+$
2038.29 5	0.148 15	3808.50		1770.170	
[x]2051.0[†] 10	0.54				
2054.98 15	0.021 2	3473.78		1418.816	3$^+$
2065.27 5	0.085 9	2858.875	(2,3,4)$^+$	793.542	3$^+$
2070.48 6	0.062 6	4609.43		2538.815	(3,4,5)$^+$
2076.00 7	0.052 5	3808.50		1732.565	NOT 2
2083.64 3	0.77 8	2100.838	3$^+$	17.156	2$^+$,3$^+$
2100.83 4	0.59 6	2100.838	3$^+$	0.0	3$^+$
2109.81 11	0.071 7	4278.61		2168.633	4$^+$
2122.66 7	0.068 7	2559.37		436.636	2$^+$
2145.84 3	3.3 3	2168.633	4$^+$	22.764	(4,5)$^+$
2151.41 6	0.082 8	2168.633	4$^+$	17.156	2$^+$,3$^+$
2163.20 6	0.090 9	3009.16		845.940	4$^+$
2168.59 5	0.248 25	2168.633	4$^+$	0.0	3$^+$
2170.24 6	0.159 16	2318.029	3$^+$	147.845	4$^+$
2213.96 21	0.017 2	5038.87		2824.58	
2216.3 4	0.014 1	3009.16		793.542	3$^+$
2218.2 3	0.014 1	3777.08		1558.845	4$^+$
2249.39 9	0.034 3	3808.50		1558.845	4$^+$
2266.06 9	0.032 3	3059.53		793.542	3$^+$
2272.33 6	0.26 3	7311.24	3$^-$,4$^-$	5038.87	
2286.03 4	0.207 21	2427.653	2$^+$,3$^+$	141.610	
2300.76 6	0.070 7	2318.029	3$^+$	17.156	2$^+$,3$^+$
2313.69[c] 23	0.013[c] 1	3733.14		1418.816	3$^+$
2313.69[c] 23	0.013[c] 1	4108.73		1795.117	2$^+$
2317.79 8	0.165 17	2318.029	3$^+$	0.0	3$^+$
2319.08 9	0.143 14	4419.81		2100.838	3$^+$
2338.16 9	0.034 3	3184.34		845.940	4$^+$
2348.21 8	0.104 10	3194.266	4$^+$	845.940	4$^+$
2352.76 16	0.016 2	3198.96		845.940	4$^+$
2382.67 14	0.018 2	4483.29		2100.838	3$^+$

E_γ	I_γ	E_i(level)	J^π_i	E_f	J^π_f
2387.93 4	0.188 19	2824.58		436.636	2$^+$
2390.82 5	0.093 9	3184.34		793.542	3$^+$
[x]2397.18 13	0.020 2				
[x]2401.08 5	0.100 10				
2410.44 5	0.65 6	2427.653	2$^+$,3$^+$	17.156	2$^+$,3$^+$
2417.83[c] 9	0.032[c] 3	2559.37		141.610	
2417.83[c] 9	0.032[c] 3	4518.88		2100.838	3$^+$
2420[†] 1	1.2[†&]	2858.875	(2,3,4)$^+$	436.636	2$^+$
2427.59 4	0.26 3	2427.653	2$^+$,3$^+$	0.0	3$^+$
2439.27 24	0.011 1	3729.60		1289.841	
2442.86 19	0.013 1	3733.14		1289.841	
2469.05 8	0.034 3	3315.19		845.940	4$^+$
2472.73 6	0.065 7	2910.46		436.636	2$^+$
[x]2499.53 4	0.136 14				
2515.98 7	0.346 35	2538.815	(3,4,5)$^+$	22.764	(4,5)$^+$
[x]2523.68 5	0.113 11				
2529.66 24	0.010 1	4108.73		1579.16	
2546.09 20	0.012 1	4278.61		1732.565	NOT 2
2550.60 19	0.012 1	2987.30		436.636	2$^+$
2556.22 7	0.047 5	7311.24	3$^-$,4$^-$	4755.05	
2559.36 9	0.034 3	2559.37		0.0	3$^+$
2586.54 19	0.014 1	4755.05		2168.633	4$^+$
2601.43 10	0.025 3	2743.06		141.610	
2622.73 7	0.085 9	3059.53		436.636	2$^+$
2627.70 8	0.053 5	3473.78		845.940	4$^+$
2649.13 24	0.009 1	4419.81		1770.170	
2656.46 9	0.093 9	3449.99		793.542	3$^+$
2660.6 4	0.005 1	4419.81		1759.623	3$^+$
[x]2681.30 7	0.145 15				
2692.74 17	0.020 2	3538.48		845.940	4$^+$
2701.76 6	0.069 7	7311.24	3$^-$,4$^-$	4609.43	
2706.0 5	0.005 1	4285.28		1579.16	
2710.97 4	0.41 4	2858.875	(2,3,4)$^+$	147.845	4$^+$
2724.14[c] 20	0.026[c] 3	4483.29		1759.623	3$^+$
2724.14[c] 20	0.026[c] 3	4518.88		1795.117	2$^+$
2725.83 9	0.065 7	2743.06		17.156	2$^+$,3$^+$
2742.96 6	0.124 12	2743.06		0.0	3$^+$
2744.8 5	0.014 1	3538.48		793.542	3$^+$
2747.42 21	0.015 2	3184.34		436.636	2$^+$
2758.61 4	0.181 18	2775.82		17.156	2$^+$,3$^+$
[x]2762.8[†] 10	0.35				
2786.63 14	0.015 2	4518.88		1732.565	NOT 2

$^{52}_{23}$V$_{29}$-5

γ(^{52}V) (continued)

E$_γ$	I$_γ$	E$_i$(level)	J^π_i	E$_f$	J^π_f
2792.31 5	0.111 11	7311.24	$3^-,4^-$	4518.88	
2799.00 23	0.009 1	3644.96		845.940	4^+
2807.35 4	0.152 15	2824.58		17.156	$2^+,3^+$
2818.56 18	0.015 2	4108.73		1289.841	
2827.89 6	0.171 17	7311.24	$3^-,4^-$	4483.29	
2839.24[c] 20	0.027[c] 3	2987.30		147.845	4^+
2839.24[c] 20	0.027[c] 3	4609.43		1770.170	
2841.64 4	0.71 7	2858.875	$(2,3,4)^+$	17.156	$2^+,3^+$
2851.24 11	0.022 2	3644.96		793.542	3^+
2858.62 13	0.035 4	2858.875	$(2,3,4)^+$	0.0	3^+
2860.59 24	0.027 3	3009.16		147.845	4^+
2876.4 3	0.007 1	4609.43		1732.565	NOT 2
2883.73 10	0.049 5	3729.60		845.940	4^+
[x]2887.48 4	0.33 3				
2891.23 4	0.202 20	7311.24	$3^-,4^-$	4419.81	
2896.37 13	0.018 2	3333.25		436.636	2^+
2904.14 18	0.011 1	4483.29		1579.16	
2911.64 9	0.028 3	2910.46		0.0	3^+
2931.07 4	0.130 13	3777.08		845.940	4^+
2939.54 6	0.067 7	3733.14		793.542	3^+
2962.46 5	0.184 3	3808.50		845.940	4^+
2970.15 5	0.083 8	2987.30		17.156	$2^+,3^+$
2987.13 4	0.141 14	2987.30		0.0	3^+
3008.96 13	0.018 1	3009.16		0.0	3^+
3014.96 7	0.135 7	3808.50		793.542	3^+
3022.76 22	0.012 1	4755.05		1732.565	NOT 2
3025.83 7	0.138 7	7311.24	$3^-,4^-$	4285.28	
3032.99 6	0.266 13	7311.24	$3^-,4^-$	4278.61	
3046.30 5	0.259 13	3194.266	4^+	147.845	4^+
3051.05 8	0.044 2	3198.96		147.845	4^+
3059.33 7	0.081 4	3059.53		0.0	3^+
3101.71 6	0.136 7	3538.48		436.636	2^+
3139.26 6	0.140 7	3575.95		436.636	2^+
3171.35 7	0.043 2	3194.266	4^+	22.764	$(4,5)^+$
3176.07 11	0.069 3	3198.96		22.764	$(4,5)^+$
3184.14 25	0.007 1	3184.34		0.0	3^+
3198.29 25	0.009 1	3198.96		0.0	3^+
3202.37 6	0.161 8	7311.24	$3^-,4^-$	4108.73	
[x]3264.41 6	0.125 6				
3292.42 10	0.024 1	3315.19		22.764	$(4,5)^+$
3296.54 11	0.071 4	3733.14		436.636	2^+
3310.48 10	0.022 1	3333.25		22.764	$(4,5)^+$
3315.34 14	0.014 1	3315.19		0.0	3^+
3326.3 3	0.008 1	3473.78		147.845	4^+
3333.12 10	0.112 6	3333.25		0.0	3^+
[x]3334.55 10	0.107 5				
3340.8 5	0.004 1	3777.08		436.636	2^+
3390.61 7	0.096 5	3538.48		147.845	4^+
[x]3419.6[†] 10	0.15				
3427.15 7	0.092 5	3449.99		22.764	$(4,5)^+$
3432.46[c] 18	0.010[c] 1	3449.99		17.156	$2^+,3^+$
3432.46[c] 18	0.010[c] 1	4278.61		845.940	4^+
[x]3442[#] 3	0.2[#]				
3473.75 8	0.050 3	3473.78		0.0	3^+
3479.85 21	0.014 1	5038.87		1558.845	4^+
3484.64 10	0.025 1	4278.61		793.542	3^+
3491.43 9	0.026 1	4285.28		793.542	3^+
3502.68 7	0.69 4	7311.24	$3^-,4^-$	3808.50	
3534.13 6	0.54 3	7311.24	$3^-,4^-$	3777.08	
3558.69 6	0.136 7	3575.95		17.156	$2^+,3^+$
3578.05 6	0.76 4	7311.24	$3^-,4^-$	3733.14	
3581.53 6	0.192 10	7311.24	$3^-,4^-$	3729.60	
3584.9 3	0.011 1	3733.14		147.845	4^+
3593.5 7	0.007 1	3733.14		141.610	
3622.06 8	0.035 2	3644.96		22.764	$(4,5)^+$
3629.06 7	0.066 3	3777.08		147.845	4^+
3645.00 13	0.016 1	3644.96		0.0	3^+
3666.17 8	0.035 2	7311.24	$3^-,4^-$	3644.96	
3671.83 6	0.128 6	4108.73		436.636	2^+
3706.71 7	0.067 3	3729.60		22.764	$(4,5)^+$
3715.80 6	0.273 14	3733.14		17.156	$2^+,3^+$
3725.39 10	0.028 1	4518.88		793.542	3^+
3735.27 7	0.313 16	7311.24	$3^-,4^-$	3575.95	
3754.05 7	0.126 6	3777.08		22.764	$(4,5)^+$
3760.03 12	0.018 1	3777.08		17.156	$2^+,3^+$
3772.71 7	0.299 15	7311.24	$3^-,4^-$	3538.48	
3776.78 20	0.012 1	3777.08		0.0	3^+
3785.48 8	0.042 2	3808.50		22.764	$(4,5)^+$
3815.21 22	0.008 1	4609.43		793.542	3^+
3837.33 6	0.192 10	7311.24	$3^-,4^-$	3473.78	
3861.22 7	0.197 10	7311.24	$3^-,4^-$	3449.99	
[x]3915.0[†] 10	0.17				
3967.06 12	0.018 1	4108.73		141.610	
3977.69 7	0.197 10	7311.24	$3^-,4^-$	3333.25	
3983.01 12	0.020 1	4419.81		436.636	2^+
3995.91 8	0.040 2	7311.24	$3^-,4^-$	3315.19	

$^{51}V(n,\gamma)$ E=thermal 1991Mi08 (continued)

$\gamma(^{52}V)$ (continued)

E_γ	I_γ	E_i(level)	J_i^π	E_f	J_f^π
4046.2 *6*	0.004 *1*	4483.29		436.636	2^+
x4076.9† *10*	0.16				
4091.70 *15*	0.013 *1*	4108.73		17.156	$2^+,3^+$
4108.59 *15*	0.018 *1*	4108.73		0.0	3^+
4112.03 *8*	0.069 *3*	7311.24	$3^-,4^-$	3198.96	
4116.92 *8*	1.88 *9*	7311.24	$3^-,4^-$	3194.266	4^+
4126.65 *7*	0.133 *7*	7311.24	$3^-,4^-$	3184.34	
4129.82 *18*	0.054 *3*	4278.61		147.845	4^+
4137.30 *16*	0.014 *1*	4285.28		147.845	4^+
4192.79 *7*	0.200 *10*	5038.87		845.940	4^+
4251.56 *7*	0.182 *9*	7311.24	$3^-,4^-$	3059.53	
4255.08 *15*	0.021 *1*	4278.61		22.764	$(4,5)^+$
4267.8 *3*	0.006 *1*	4285.28		17.156	$2^+,3^+$
x4282.3† *10*	0.18				
4285.11 *8*	0.049 *2*	4285.28		0.0	3^+
4301.87 *8*	0.138 *7*	7311.24	$3^-,4^-$	3009.16	
4317.9 *4*	0.005 *1*	4755.05		436.636	2^+
4323.70 *7*	0.179 *9*	7311.24	$3^-,4^-$	2987.30	
4341.49 *10*	0.028 *1*	4483.29		141.610	
4370.86 *13*	0.017 *1*	4518.88		147.845	4^+
4399.4 *3*	0.018 *1*	7311.24	$3^-,4^-$	2910.46	
4452.19 *7*	1.13 *6*	7311.24	$3^-,4^-$	2858.875	$(2,3,4)^+$
4461.18 *19*	0.011 *1*	4609.43		147.845	4^+
4466.00 *8*	0.072 *4*	4483.29		17.156	$2^+,3^+$
4486.48 *7*	0.350 *18*	7311.24	$3^-,4^-$	2824.58	
x4503.0† *10*	0.15				
4535.29 *7*	0.164 *8*	7311.24	$3^-,4^-$	2775.82	
4567.95 *7*	0.219 *11*	7311.24	$3^-,4^-$	2743.06	
4586.63 *10*	0.026 *1*	4609.43		22.764	$(4,5)^+$
4606.74 *20*	0.009 *1*	4755.05		147.845	4^+
x4693.1† *10*	0.22				
4751.67 *8*	0.077 *4*	7311.24	$3^-,4^-$	2559.37	
4771.94 *8*	0.333 *17*	7311.24	$3^-,4^-$	2538.815	$(3,4,5)^+$
4883.30 *8*	1.41 *7*	7311.24	$3^-,4^-$	2427.653	$2^+,3^+$
x4990.18 *10*	0.111 *6*				
4992.91 *8*	0.73 *4*	7311.24	$3^-,4^-$	2318.029	3^+
5015.81 *12*	0.047 *2*	5038.87		22.764	$(4,5)^+$
5038.80 *16*	0.016 *1*	5038.87		0.0	3^+
5142.28 *8*	3.86 *19*	7311.24	$3^-,4^-$	2168.633	4^+
5210.07 *8*	4.81 *24*	7311.24	$3^-,4^-$	2100.838	3^+
x5267.8† *10*	0.22				
x5297.6† *10*	0.16				
x5445.7† *10*	0.11				
5515.76 *9*	7.9 *4*	7311.24	$3^-,4^-$	1795.117	2^+
5540.74 *16*	0.048 *2*	7311.24	$3^-,4^-$	1770.170	
5551.21 *9*	0.55 *3*	7311.24	$3^-,4^-$	1759.623	3^+
x5562# *3*	0.50#				
5578.31 *9*	0.428 *21*	7311.24	$3^-,4^-$	1732.565	NOT 2
5731.70 *9*	0.115 *6*	7311.24	$3^-,4^-$	1579.16	
5752.03 *9*	7.5 *4*	7311.24	$3^-,4^-$	1558.845	4^+
5892.05 *9*	2.45 *12*	7311.24	$3^-,4^-$	1418.816	3^+
x5944.5† *10*	0.09				
x6037.1† *10*	0.09				
x6084.7† *10*	0.13				
x6253.9† *10*	0.09				
x6278.4† *10*	0.16				
x6319.7† *10*	0.25				
x6342.5† *10*	0.15				
x6372.6† *10*	0.12				
6464.84 *10*	8.96 *45*	7311.24	$3^-,4^-$	845.940	4^+
6517.26 *10*	16.97@ *25*	7311.24	$3^-,4^-$	793.542	3^+
x6555.6† *10*	0.12				
x6599.7† *10*	0.17				
x6625.9† *10*	0.16				
x6642.1† *10*	0.12				
x6676.0† *10*	0.12				
x6706.2† *10*	0.16				
6874.12 *11*	10.63@ *17*	7311.24	$3^-,4^-$	436.636	2^+
x6956.6† *10*	0.16				
x7069.1† *10*	0.27				
7162.84 *11*	12.7 *6*	7311.24	$3^-,4^-$	147.845	4^+
7287.89 *11*	1.26 *6*	7311.24	$3^-,4^-$	22.764	$(4,5)^+$
7293.54 *11*	2.07 *10*	7311.24	$3^-,4^-$	17.156	$2^+,3^+$
7310.66 *11*	5.02 *25*	7311.24	$3^-,4^-$	0.0	3^+

† From 1969Ra10.
‡ From 1966Va03.

γ(^{52}V) (continued)

[#] From 1967Ar08.
[@] Intensity per 100 n-captures, from 2012Sh16.
[&] Photons per 100 n-captures in natural V from 1969Ra10. These numbers have not been corrected to photons per 100 captures in ^{51}V since the difference (≈4%) is statistically insignificant. It should be noted that Iγ(1443) (^{52}Cr) is given by 1969Ra10 as 69 *14*. Under equilibrium conditions this number should be ≈100 (see above). There is, however, no evidence of systematic ≈45% discrepancies among the Iγ data of 1969Ra10 and those of other work; thus, no effort has been made to correct for this ≈2 standard deviation anomaly. Uncertainties are reported as ≈±15%.
[a] Relative to the Iγ=100 for the 1434γ in ^{52}V β^- decay to ^{52}Cr. Uncertainties≈15-20%.
[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.
[c] Multiply placed with undivided intensity.
[x] γ ray not placed in level scheme.

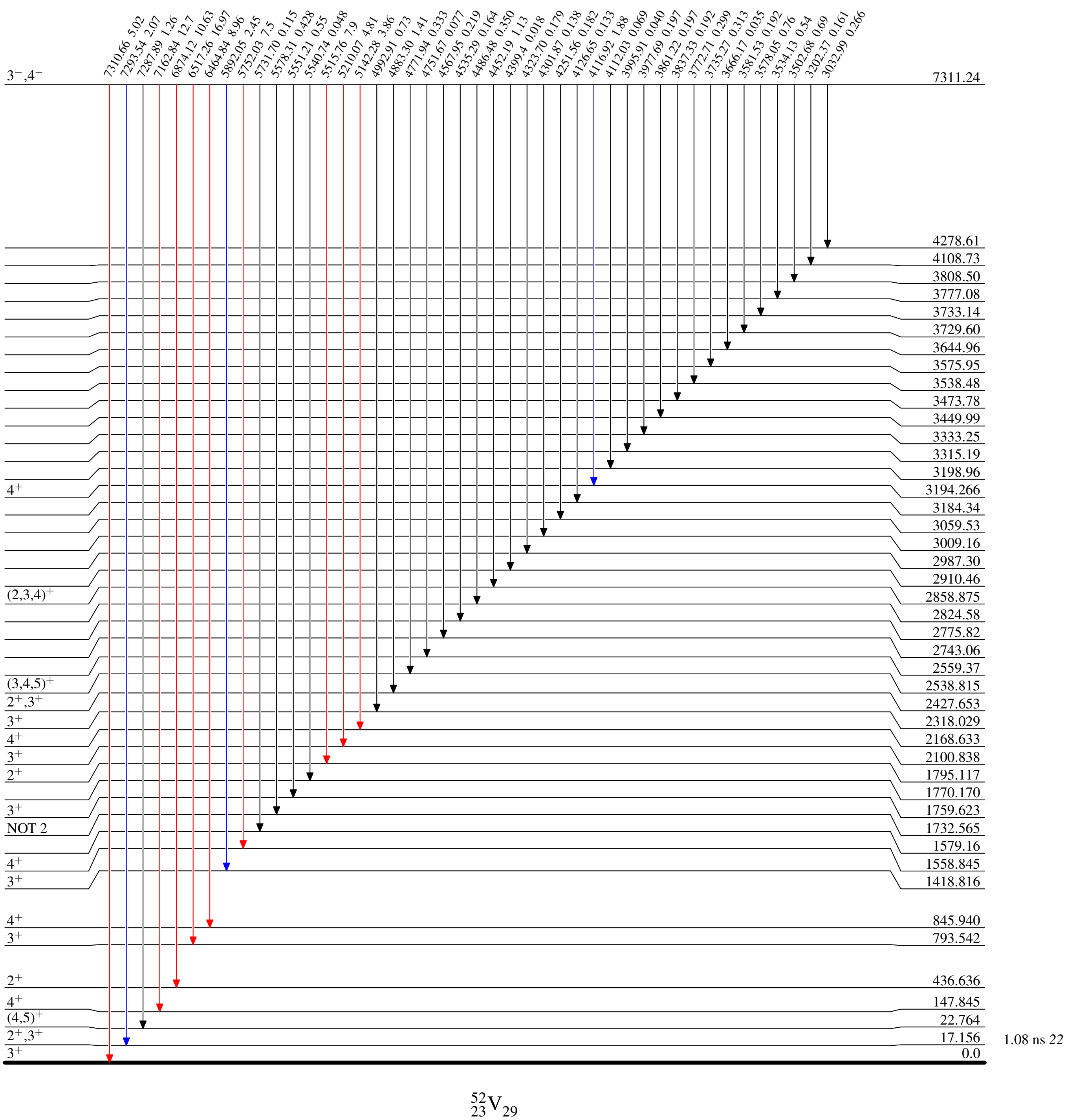
$^{51}V(n,\gamma)$ E=thermal 1991Mi08

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$

Level Scheme

Intensities: Relative I_γ



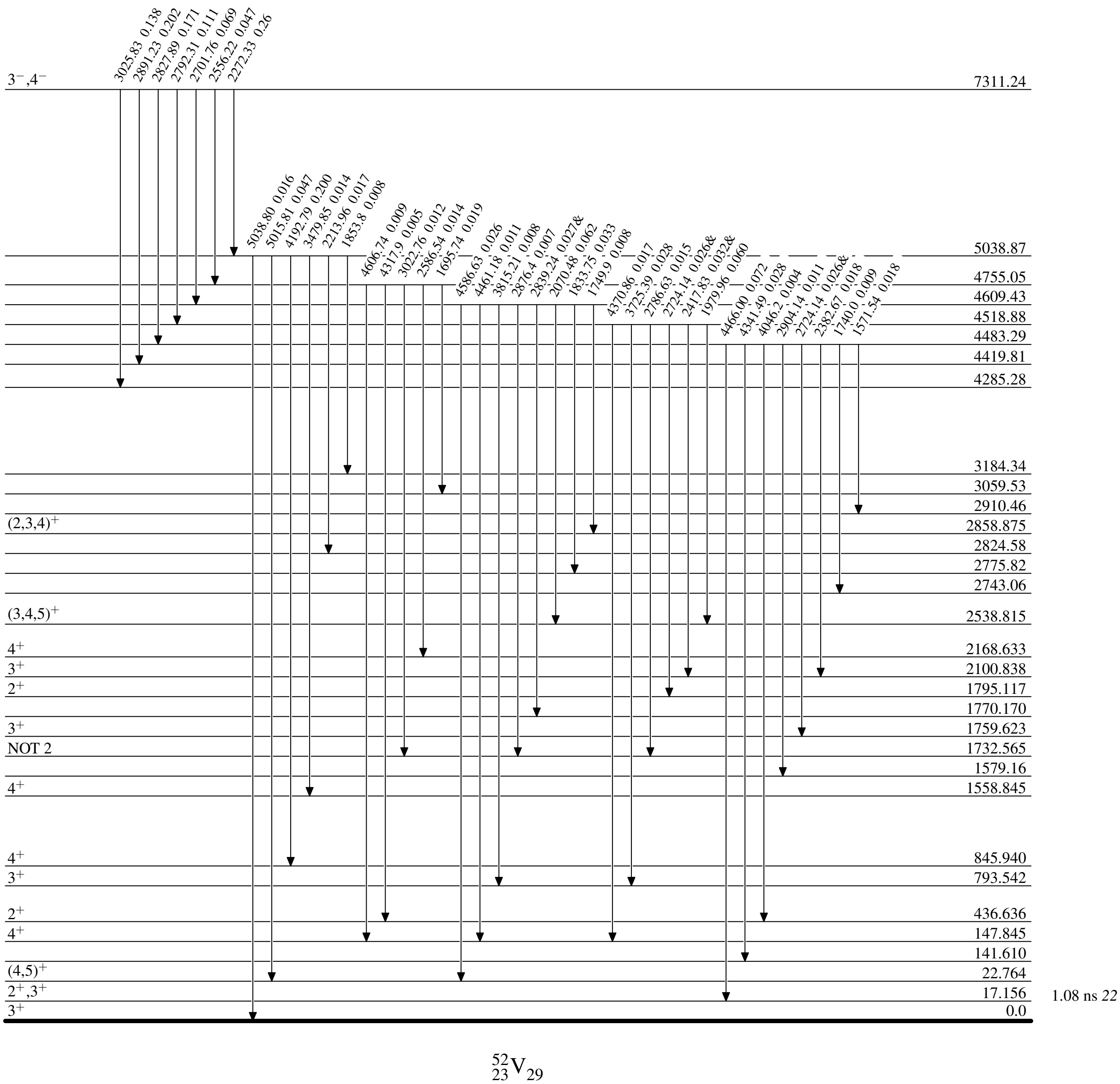
$^{52}_{23}V_{29}$

^{51}V(n,γ) E=thermal 1991Mi08

Level Scheme (continued)

Intensities: Relative I_γ
& Multiply placed: undivided intensity given

Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$



$^{51}V(n,\gamma)$ E=thermal 1991Mi08

Level Scheme (continued)

Intensities: Relative I_γ

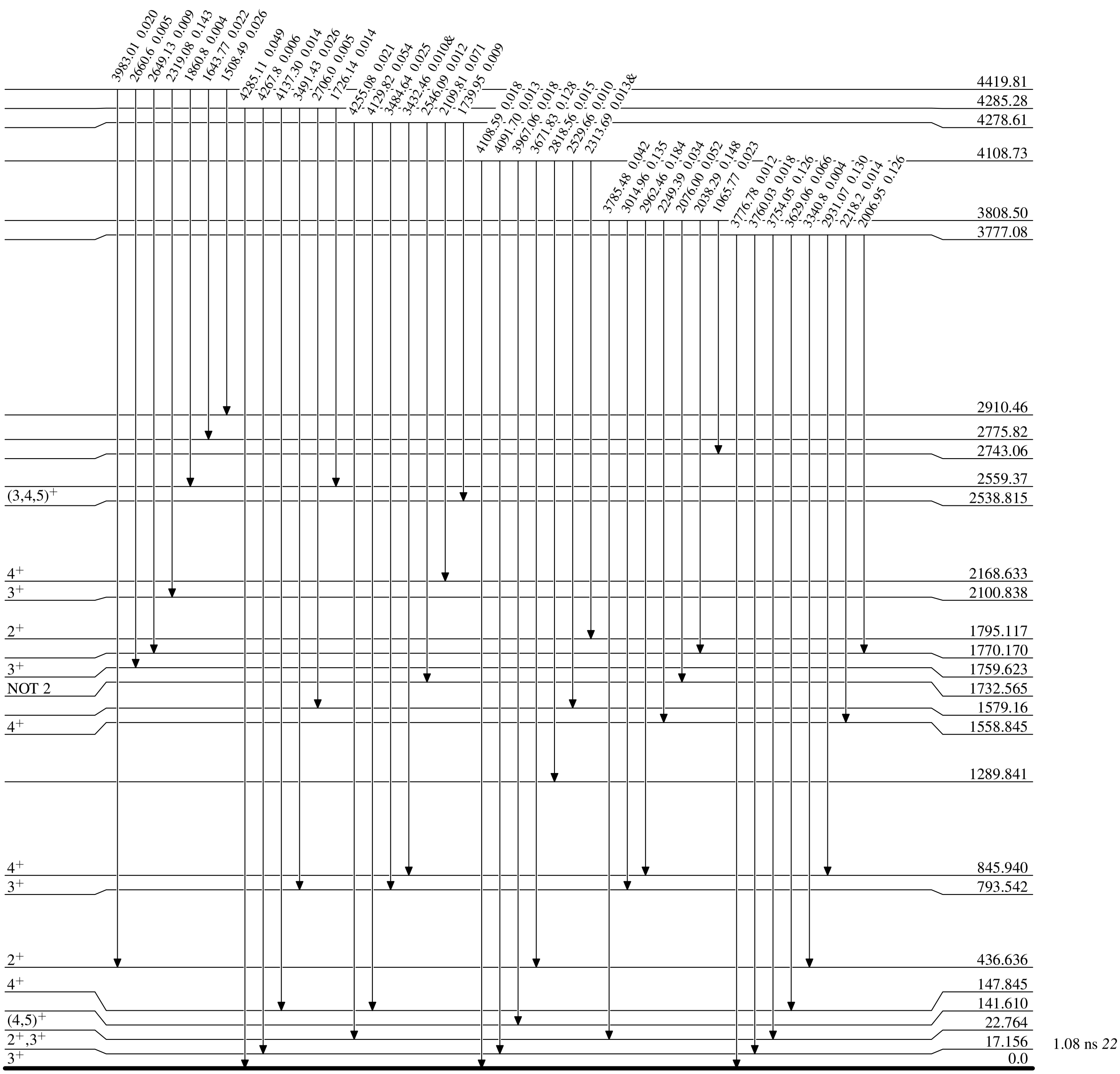
& Multiply placed: undivided intensity given

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



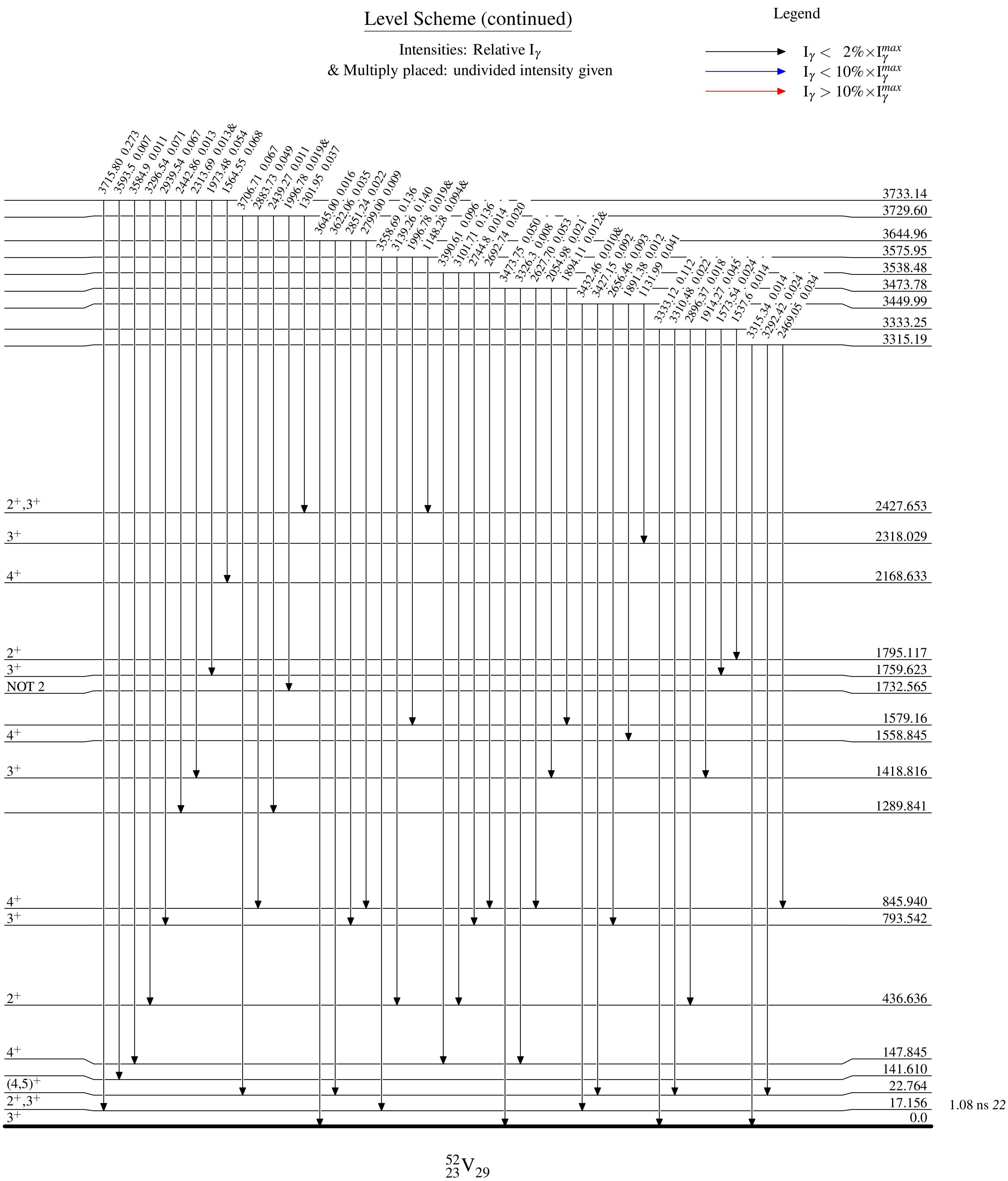
$^{52}_{23}V_{29}$

$^{51}V(n,\gamma)$ E=thermal 1991Mi08

Level Scheme (continued)

Intensities: Relative I_γ

& Multiply placed: undivided intensity given



^{51}V(n,γ) E=thermal 1991Mi08

Level Scheme (continued)

Intensities: Relative I_γ

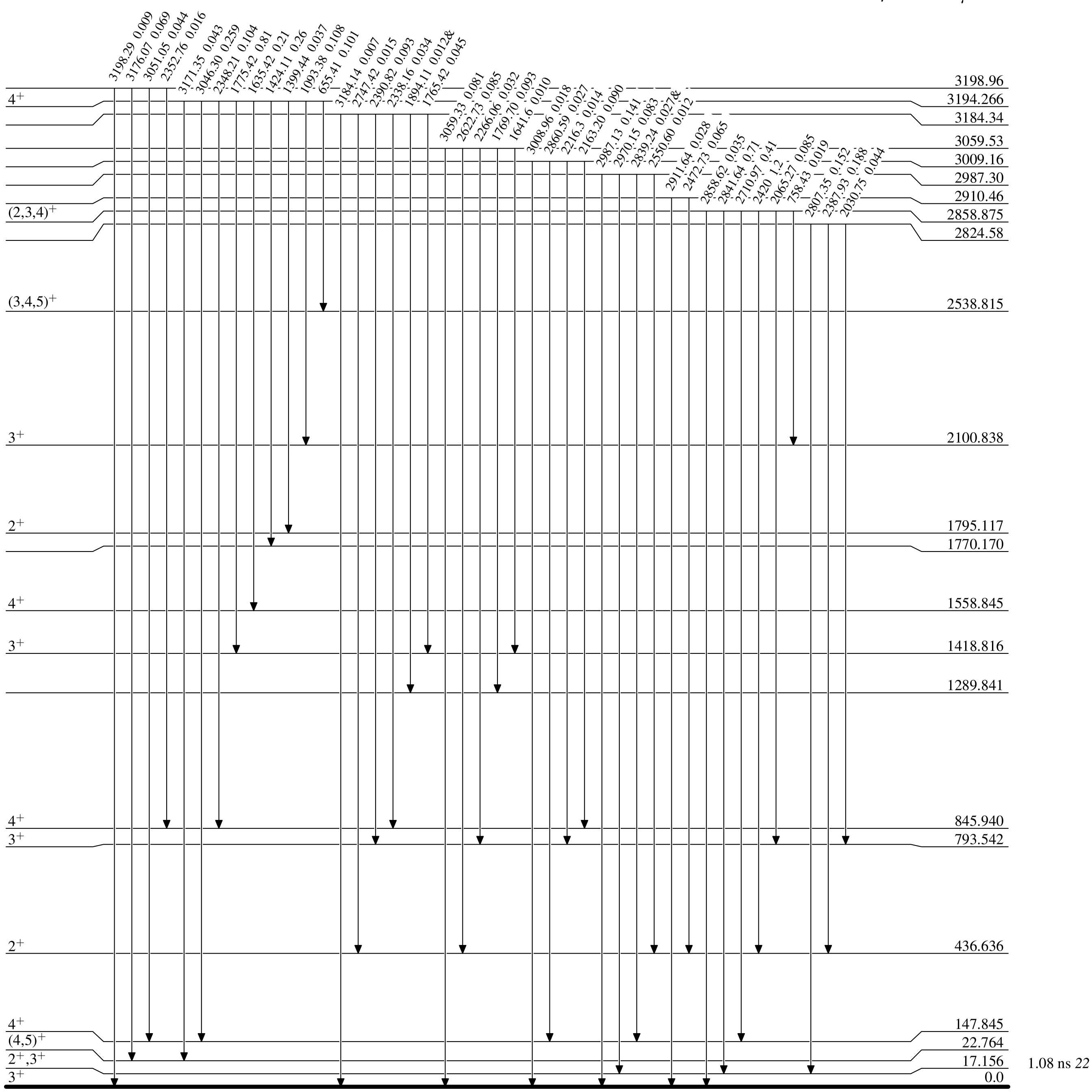
& Multiply placed: undivided intensity given

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$

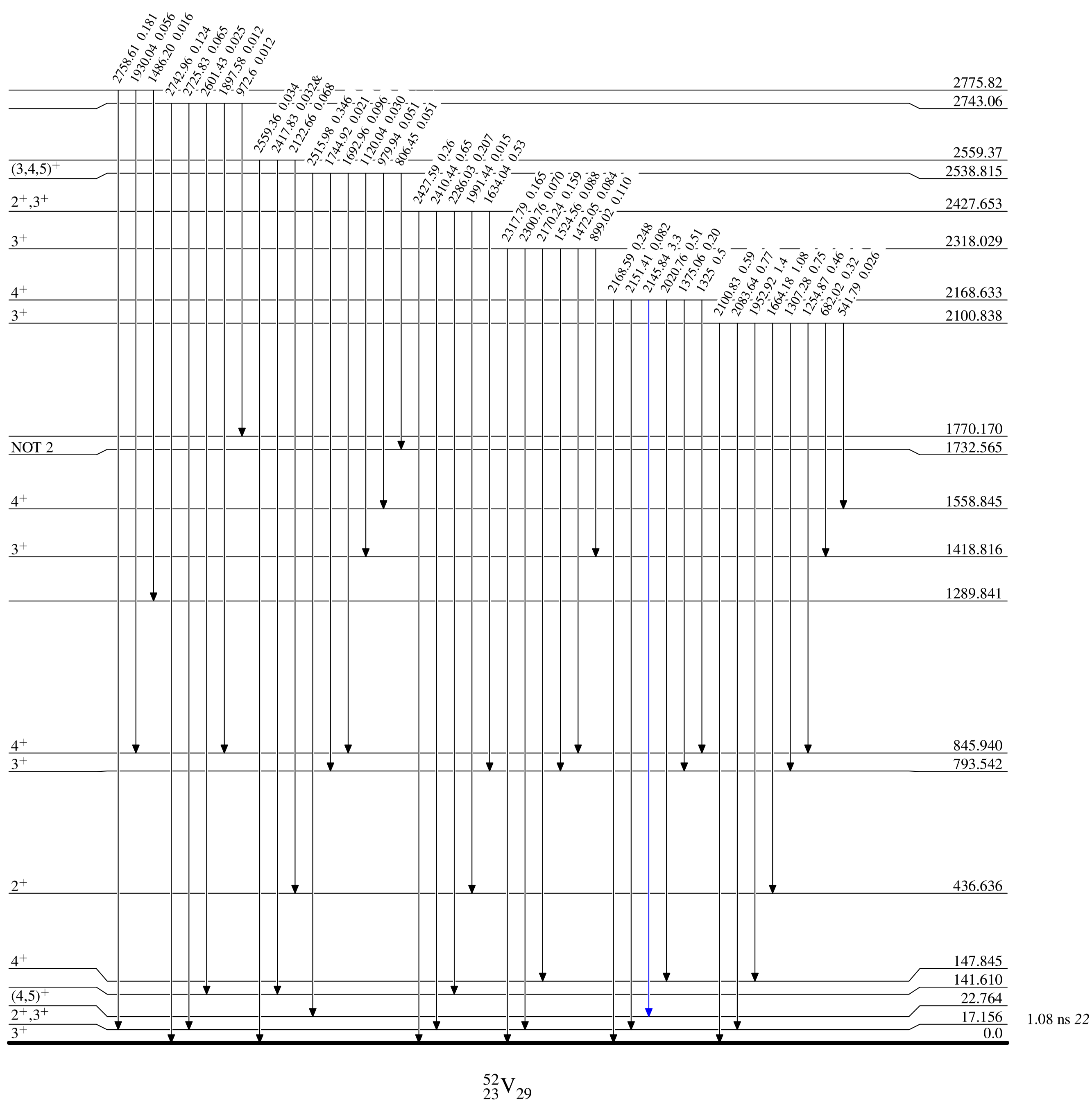


$^{52}_{23}V_{29}$

$^{51}V(n,\gamma)$ E=thermal 1991Mi08

Level Scheme (continued)

Intensities: Relative I_γ
& Multiply placed: undivided intensity given



$^{51}V(n,\gamma)$ E=thermal 1991Mi08

Level Scheme (continued)

Intensities: Relative I_γ

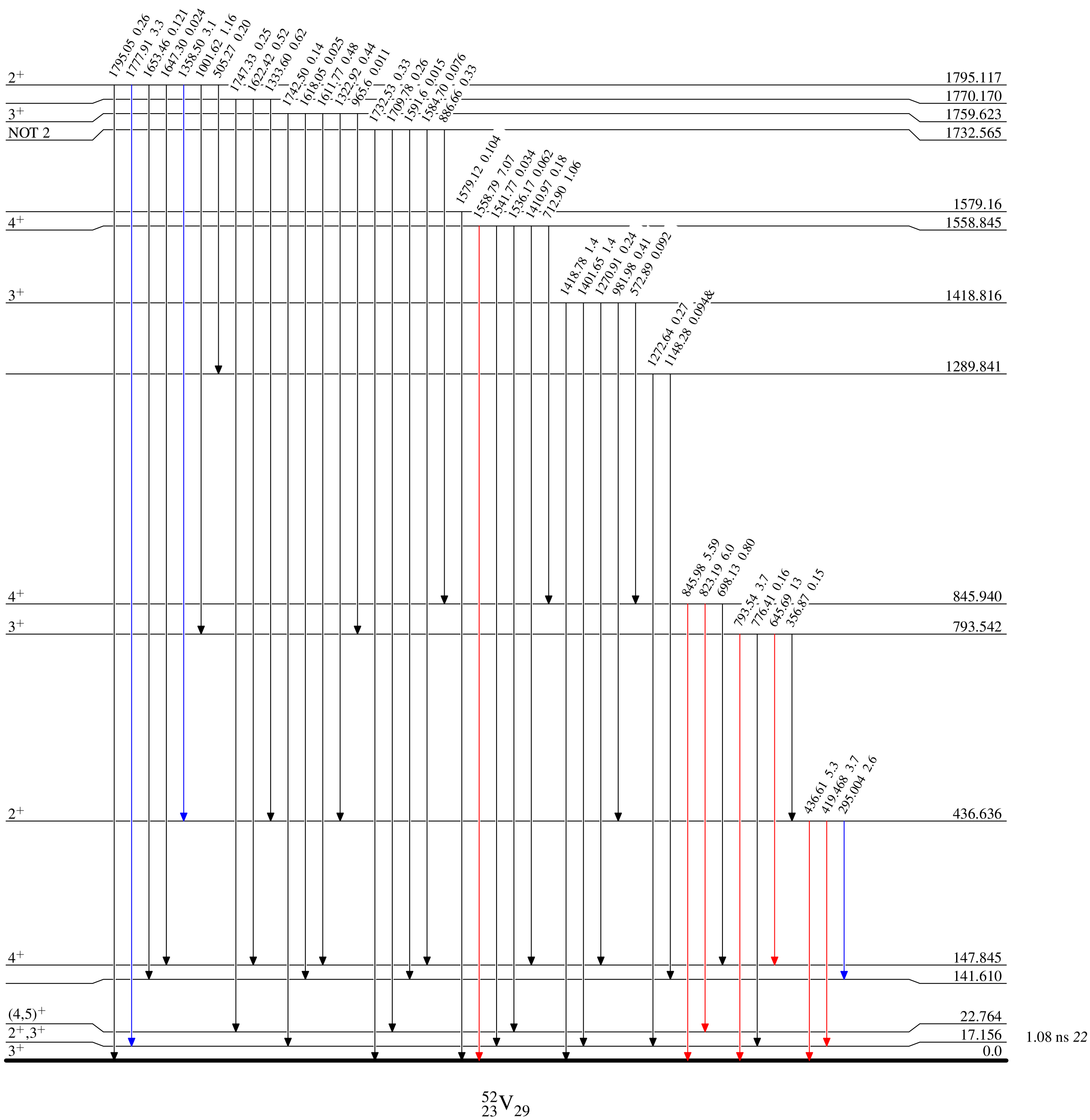
& Multiply placed: undivided intensity given

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



^{51}V(n,γ) E=thermal 1991Mi08

Level Scheme (continued)

Intensities: Relative I_γ
& Multiply placed: undivided intensity given