

$^{183}\text{W}(\text{n},\gamma)$ E=thermal: $\gamma\gamma$ coin 2003Bo52

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 111,275 (2010)	1-Oct-2009

2003Bo52: E=thermal; measured (primary γ)-(secondary γ) coin spectra (5-6 keV resolution) for two-photon cascades; determined E_γ , intermediate level energies and photon branching.

See 2003Bo52 for 40 additional coincidence pairs that authors were unable to place in the level scheme.

 ^{184}W Levels

E(level) [†]	E(level) [†]	E(level) [†]	E(level) [†]	J $^\pi$
0.0	2404.2 3	3022.9 3	3352.6 6	
111.2 [‡]	2439.8 2	3029.0 1	3372.9 5	
364.1 [‡]	2458.4 2	3037.1 6	3377.5 3	
903.3 2	2509.4 2	3053.4 2	3384.3 6	
1002.4 1	2520.7 3	3068.5 3	3392.0 9	
1006.0 [‡]	2555.0 2	3071.2 3	3413.7 5	
1121.5 1	2573.4 3	3104.2 3	3422.4 4	
1386.3 2	2613.3 3	3134.6 5	3427.2 4	
1431.1 2	2618.8 3	3136.8 4	3448.2 3	
1613.5	2630.7 4	3164.1 8	3455.6 9	
1614.8	2649.0 3	3166.2 8	3466.2 6	
1627.6 1	2655.8 4	3169.1 2	3473.3 5	
1713.8 2	2694.4 3	3177.9 5	3488.2 4	
1808.9 5	2706.7 4	3183.8 1	3500.7 4	
1877.8 8	2719.8 2	3187.1 3	3516.2 6	
1995.8 4	2732.5 6	3193.3 3	3522.5 4	
2012.6 4	2757.6 2	3201.8 6	3618.1 5	
2030.7 2	2763.2 2	3224.6 7	3634.7 3	
2035.4 5	2767.6 6	3226.3 5	3649.2 4	
2055.7 3	2798.2 4	3233.7 8	3654.2 3	
2061.9 4	2802.7 1	3248.8 3	3670.3 5	
2097.7 3	2815.0 2	3264.0 5	3684.5 4	
2102.4 2	2825.1 3	3266.4 5	3706.6 5	
2124.6 7	2836.9 4	3288.3 6	3715.6 4	
2126.4 1	2870.5 2	3290.0 4	3962.4 2	
2168.3 2	2892.1 2	3293.5 6	4278.8 3	
2246.5 3	2905.8 7	3304.3 4	6543.5 2	
2294.5 9	2919.5 2	3307.4 5	6580.8 2	
2320.4 3	2946.8 4	3318.5 4	6622.7 4	
2349.9 5	2951.0 5	3329.2 3	(7411.7)	0 ⁻ ,1 ⁻ #
2370.3 2	2968.7 2	3341.4 5		
2390.3 2	2983.6 4	3345.1 2		
2395.8 4	3017.1 1	3349.1 6		

[†] Authors' best values; based on measured E_γ values for two-photon cascade(S) in which this is the intermediate level, except as noted.

[‡] Rounded value from Adopted Levels.

s-wave capture on J $^\pi$ =1/2⁻ target.

$^{183}\text{W}(\text{n},\gamma)$ E=thermal: $\gamma\gamma$ coin 2003Bo52 (continued)

				$\gamma(^{184}\text{W})$				
$E_i(\text{level})$	E_γ^\dagger	$I(\gamma_1\gamma_2)^\oplus$	E_f	$E_i(\text{level})$	E_γ^\dagger	$I(\gamma_1\gamma_2)^\oplus$	E_f	Mult.
903.3	792.0	4.8 3	111.2	2395.8	2395.8	3.4 3	0.0	
	903.3	4.5 3	0.0	2404.2	1500.9	1.14 15	903.3	
1002.4	891.2	42.6 10	111.2		2292.9	0.56 14	111.2	
1121.5	757.4	9.8 5	364.1	2439.8	2328.6	1.40 21	111.2	
	1010.3	9.7 4	111.2	2458.4	2347.1	0.60 14	111.2	
	1121.5	4.0 3	0.0		2458.4	3.2 3	0.0	D
1386.3	1275.1	17.3 6	111.2	2509.4	1606.1	0.40 13	903.3	
	1386.3	13.5 6	0.0		2398.1	1.81 23	111.2	
1431.1	1319.9	1.69 21	111.2	2520.7	2409.5	0.51 14	111.2	
	1431.1	1.69 21	0.0	2555.0	2443.8	1.09 18	111.2	
1613.5	607.6	3.21 20	1006.0	2573.4	2462.2	0.51 14	111.2	
	710.3	3.5 6	903.3	2613.3	1710.0	0.57 15	903.3	
	1502.3	0.78	111.2		2502.1	0.31 12	111.2	
1614.8	711.5	6.9 6	903.3	2618.8	2618.8	0.52 15	0.0	
	1503.6	4.2	111.2	2630.7	2519.4	0.47 12	111.2	
	1614.6	0.27 10	0.0		2630.7	1.40 24	0.0	
1627.6	724.3	2.05 18	903.3	2649.0	2537.8	0.54 14	111.2	
1713.8	810.5	0.55 13	903.3	2655.8	2544.5	0.22 9	111.2	
1808.9	1697.7	0.25 9	111.2		2655.8	0.57 15	0.0	
	1810.0	0.24 11	0.0	2694.4	2694.4	0.90 20	0.0	D
1877.8	757.6	0.52 13	1121.5	2706.7	1803.4	1.11 15	903.3	
	1765.9	0.91 14	111.2		2595.5	0.36 12	111.2	
	1877.2	1.78 21	0.0		2706.7	0.29 14	0.0	
1995.8	1995.8	0.38 14	0.0	2719.8	1816.5	0.78 15	903.3	
2012.6	1901.4	0.38 12	111.2	2732.5	2621.3	0.33 16	111.2	
2030.7	1127.1	0.65 13	903.3	2757.6	2646.4	1.23 25	111.2	
	1919.7	0.74 16	111.2	2763.2	2397.1 [#]	0.68 18	364.1	
2035.4	1132.1	0.54 13	903.3		2651.9	2.8 4	111.2	
	1924.2	0.60 14	111.2		2763.2	3.4 4	0.0	D
	2035.4	1.46 24	0.0	2767.6	2656.3	1.9 3	111.2	
2055.7	1944.5	0.42 14	111.2		2767.6	0.48 17	0.0	
2061.9	1950.7	0.45 12	111.2	2798.2	2798.2	0.53 17	0.0	
2097.7	1986.4	0.67 16	111.2	2802.7	2691.5	4.4 5	111.2	
	2097.7	1.66 24	0.0	2815.0	2450.9	0.97 20	364.1	
2102.4	1099.9	0.48 8	1002.4		2703.7	3.9 4	111.2	
2124.6	1121.4	1.02 9	1002.4	2825.1	1921.8	0.41 16	903.3	
	1222.0	0.48 18	903.3		2713.9	0.65 18	111.2	
2126.4	2015.2	6.2 4	111.2	2836.9	2725.7	0.47 16	111.2	
2168.3	1265.0	0.51 19	903.3	2870.5	1967.2	0.87 16	903.3	
	2057.0	1.78 23	111.2	2892.1	2780.9	0.33 16	111.2	
	2168.3	1.10 17	0.0		2892.1	1.32 25	0.0	D
2246.5	2135.2	2.23 27	111.2	2905.8	2000.8	0.63 16	903.3	
	2246.5	1.17 17	0.0		2905.6	0.31 16	0.0	
2294.5	1173.1	0.53 10	1121.5	2919.5	2808.3	2.2 3	111.2	
	1391.2	3.51 21	903.3	2946.8	2043.5	0.34 16	903.3	
	2183.3	6.3 5	111.2		2835.5	0.31 16	111.2	
	2294.5	0.31 14	0.0	2951.0	2839.7	0.29 16	111.2	
2320.4	1417.1	0.46 13	903.3		2951.0	0.86 21	0.0	D
2349.9	2349.9	0.35 14	0.0	2968.7	2857.4	1.09 23	111.2	
2370.3	2259.0	0.54 14	111.2		2968.7	3.3 8	0.0	
	2370.3	1.60 24	0.0	2983.6	2983.6	0.54 17	0.0	
2390.3	2279.1	0.42 14	111.2	3017.1	3017.1	2.9 3	0.0	
	2390.3	1.54 24	0.0	3022.9	2911.6	0.49 16	111.2	
2395.8	1274.3	1.46 13	1121.5		3022.9	0.69 20	0.0	
	2031.7	1.16 22	364.1	3029.0	2917.8	2.0 3	111.2	
	2284.5	7.1 4	111.2	3037.1	1915.7	0.49 11	1121.5	

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$^{183}\text{W}(\text{n},\gamma)\text{E=thermal: } \gamma\gamma \text{ coin } \mathbf{2003Bo52}$ (continued) $\gamma(^{184}\text{W})$ (continued)

$E_i(\text{level})$	E_γ^\dagger	$I(\gamma_1\gamma_2)^\oplus$	E_f	Mult.	$E_i(\text{level})$	J_i^π	E_γ^\dagger	$I(\gamma_1\gamma_2)^\oplus$	E_f
3037.1	2925.9	0.38 12	111.2		3522.5		3411.3	0.49 18	111.2
	3037.1	0.44 15	0.0		3618.1		3618.1	0.48 18	0.0
3053.4	2942.2	1.00 23	111.2		3634.7		3523.5	0.76 18	111.2
3068.5	2957.3	0.67 21	111.2				3634.7	0.61 18	0.0
3071.2	3071.2	0.64 18	0.0	D	3649.2		3538.0	0.62 18	111.2
3104.2	2200.9	1.04 18	903.3		3654.2		3543.0	0.83 21	111.2
	2992.9	0.69 18	111.2		3670.3		3559.1	0.45 18	111.2
	3104.2	2.5 3	0.0		3684.5		3573.3	0.47 18	111.2
3134.6	2231.3	0.45 17	903.3		3706.6		3595.4	0.60 21	111.2
3136.8	3136.8	0.61 20	0.0		3715.6		3604.4	0.69 21	111.2
3164.1	3052.9	0.56 23	111.2		3962.4		3851.2	0.47 16	111.2
	3164.1	0.72 20	0.0				3962.4	1.28 25	0.0
3166.2	3055.0	0.8 3	111.2		4278.8		4167.5	0.45 16	111.2
3169.1	3057.9	2.3 4	111.2				4278.8	0.88 22	0.0
3177.9	3177.9	0.53 18	0.0		6543.5		6543.5	0.42 11	0.0
3183.8	3072.6	3.1 4	111.2		6580.8		6580.8	0.45 11	0.0
3187.1	3075.9	1.4 3	111.2		6622.7		6511.5	0.25 9	111.2
3193.3	3082.1	0.69 21	111.2		(7411.7)	$0^-, 1^-$	789.0		6622.7
3201.8	3090.6	0.40 18	111.2				830.9		6580.8
3224.6	3113.4	0.27 14	111.2				868.2		6543.5
3226.3	2323.0	0.46 18	903.3				3132.9		4278.8
3233.7	2330.4	0.35 18	903.3				3449.3		3962.4
	3122.4	0.45 16	111.2				3696.1		3715.6
3248.8	3137.6	0.71 18	111.2				3705.1		3706.6
3264.0	3264.0	0.45 20	0.0				3727.2		3684.5
3266.4	3155.2	0.40 16	111.2				3741.4		3670.3
3288.3	2385.0	0.43 18	903.3				3757.5		3654.2
3290.0	3290.0	0.78 22	0.0				3762.5		3649.2
3293.5	3293.5	0.52 20	0.0				3777.0		3634.7
3304.3	2401.4	0.52 18	903.3				3793.6		3618.1
3307.4	3196.2	0.54 18	111.2				3889.2		3522.5
3318.5	3207.3	0.60 18	111.2				3895.5		3516.2
3329.2	3218.0	0.67 18	111.2				3911.0		3500.7
3341.4	3230.2	0.40 16	111.2				3923.5		3488.2
3345.1	2223.7	0.75 13	1121.5				3938.4		3473.3
3349.1	3237.9	0.40 16	111.2				3945.5		3466.2
3352.6	3241.4	0.47 16	111.2				3956.1		3455.6
	3352.6	0.69 20	0.0				3963.5		3448.2
3372.9	3261.7	0.42 16	111.2				3984.5		3427.2
3377.5	3266.3	0.65 18	111.2				3989.3		3422.4
3384.3	3273.1	0.31 14	111.2				3998.0		3413.7
3392.0	3280.8	0.31 14	111.2				4019.7		3392.0
	3392.0	0.37 17	0.0				4027.4		3384.3
3413.7	3302.5	0.38 14	111.2				4034.2		3377.5
3422.4	3311.2	0.49 16	111.2				4038.8		3372.9
	3422.4	0.35 15	0.0				4059.1		3352.6
3427.2	3316.0	0.51 16	111.2				4062.6		3349.1
3448.2	3337.0	0.62 18	111.2				4066.6		3345.1
3455.6	3344.4	0.45 16	111.2				4070.3		3341.4
	3455.6	0.44 17	0.0				4082.5		3329.2
3466.2	3466.2	0.38 17	0.0				4093.2		3318.5
3473.3	3362.1	0.31 14	111.2				4104.3		3307.4
	3473.3	0.33 15	0.0				4107.0		3304.3
3488.2	3377.0	0.51 16	111.2				4118.2		3293.5
3500.7	3389.5	0.47 16	111.2				4121.7		3290.0
	3500.7	0.48 18	0.0				4123.4		3288.3
3516.2	3405.0	0.7 3	111.2				4145.3		3266.4

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$^{183}\text{W}(\text{n},\gamma)$ E=thermal: $\gamma\gamma$ coin **2003Bo52** (continued) $\gamma(^{184}\text{W})$ (continued)

$E_i(\text{level})$	E_γ^\dagger	E_f	$E_i(\text{level})$	E_γ^\dagger	E_f	$E_i(\text{level})$	E_γ^\dagger	E_f
(7411.7)	4147.7	3264.0	(7411.7)	4519.6	2892.1	(7411.7)	5041.4	2370.3
	4162.9	3248.8		4541.2	2870.5		5061.8	2349.9
	4178.0	3233.7		4574.8	2836.9		5091.3	2320.4
	4185.4	3226.3		4586.6	2825.1		5117.2	2294.5
	4187.1	3224.6		4596.7	2815.0		5165.2	2246.5
	4209.9	3201.8		4609.0	2802.7		5243.4	2168.3
	4218.4	3193.3		4613.5	2798.2		5285.3	2126.4
	4224.6	3187.1		4644.1	2767.6		5287.1	2124.6
	4227.9	3183.8		4648.5	2763.2		5309.3	2102.4
	4242.6	3169.1		4654.1	2757.6		5314.0	2097.7
	4245.5	3166.2		4679.2 [‡]	2732.5		5349.8	2061.9
	4247.6	3164.1		4691.9	2719.8		5356.0	2055.7
	4274.9	3136.8		4705.7	2706.7		5376.3	2035.4
	4277.1	3134.6		4717.3	2694.4		5381.3	2030.7
	4307.5	3104.2		4755.9	2655.8		5399.1	2012.6
	4340.5	3071.2		4762.7	2649.0		5415.9	1995.8
	4343.2	3068.5		4781.0	2630.7		5533.9	1877.8
	4358.3	3053.4		4792.9	2618.8		5602.8	1808.9
	4374.6	3037.1		4798.4	2613.3		5697.9	1713.8
	4382.7	3029.0		4838.3	2573.4		5784.1	1627.6
	4388.8	3022.9		4856.7	2555.0		5797.1	1614.8
	4394.6	3017.1		4891.0	2520.7		5798.4	1613.5
	4428.1	2983.6		4902.3	2509.4		5980.6	1431.1
	4443.0	2968.7		4953.3	2458.4		6025.4	1386.3
	4460.7	2951.0		4971.9	2439.8		6290.2	1121.5
	4464.9	2946.8		5007.5	2404.2		6409.3	1002.4
	4492.2	2919.5		5015.9	2395.8		6508.4	903.3
	4506.1	2905.8		5021.4	2390.3			

[†] From **2003Bo52**; uncertainty unstated by authors.

[‡] Misprinted As 4979.2 In **2003Bo52**.

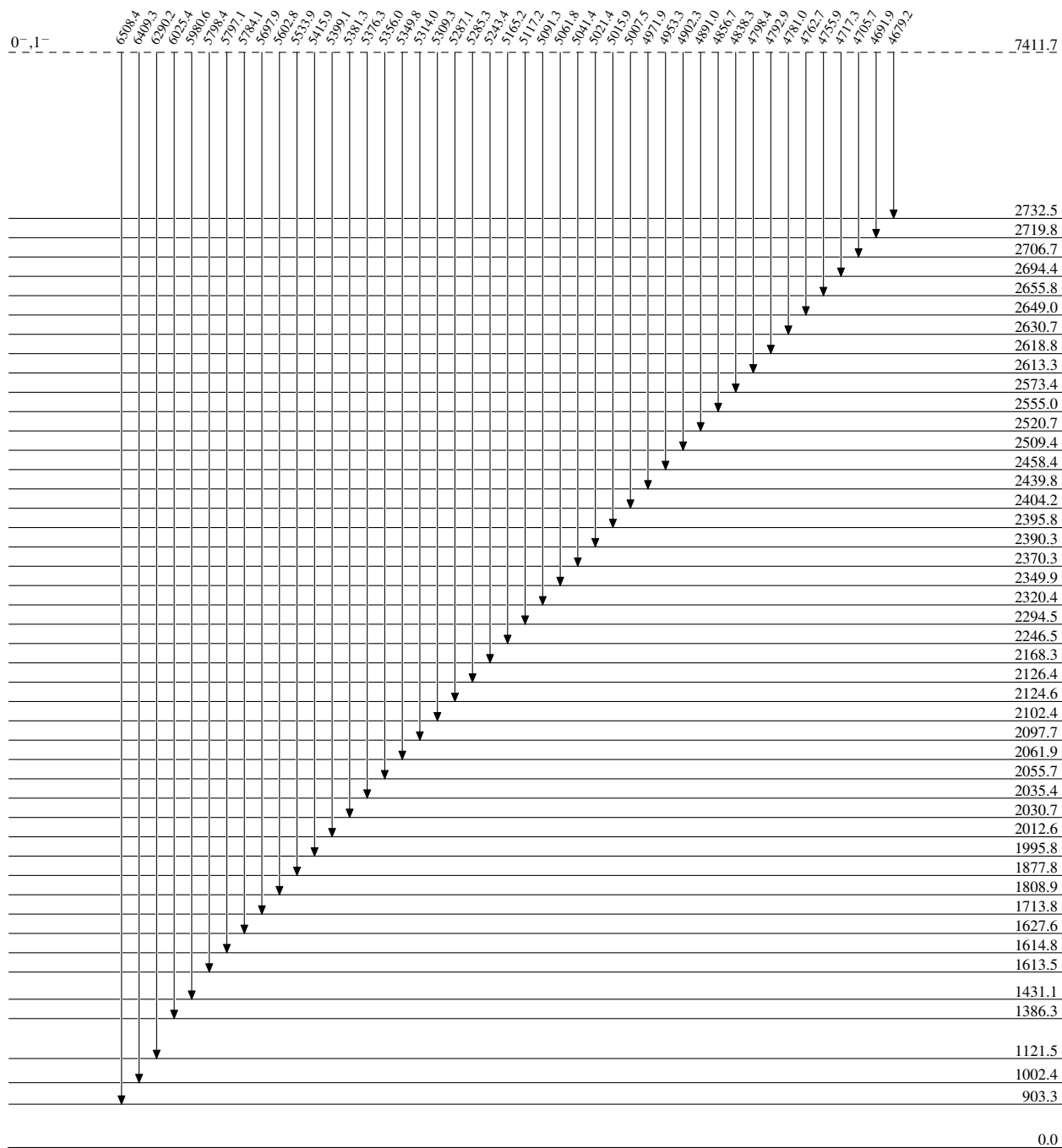
[#] Fits placement poorly.

[@] Measured two-photon cascade intensity; relative units. this is proportional to both the primary and the secondary transition's photon intensities and provides photon branching information for the intermediate level.

$^{183}\text{W}(n,\gamma)\text{E=thermal: } \gamma\gamma \text{ coin } 2003\text{Bo52}$

Level Scheme

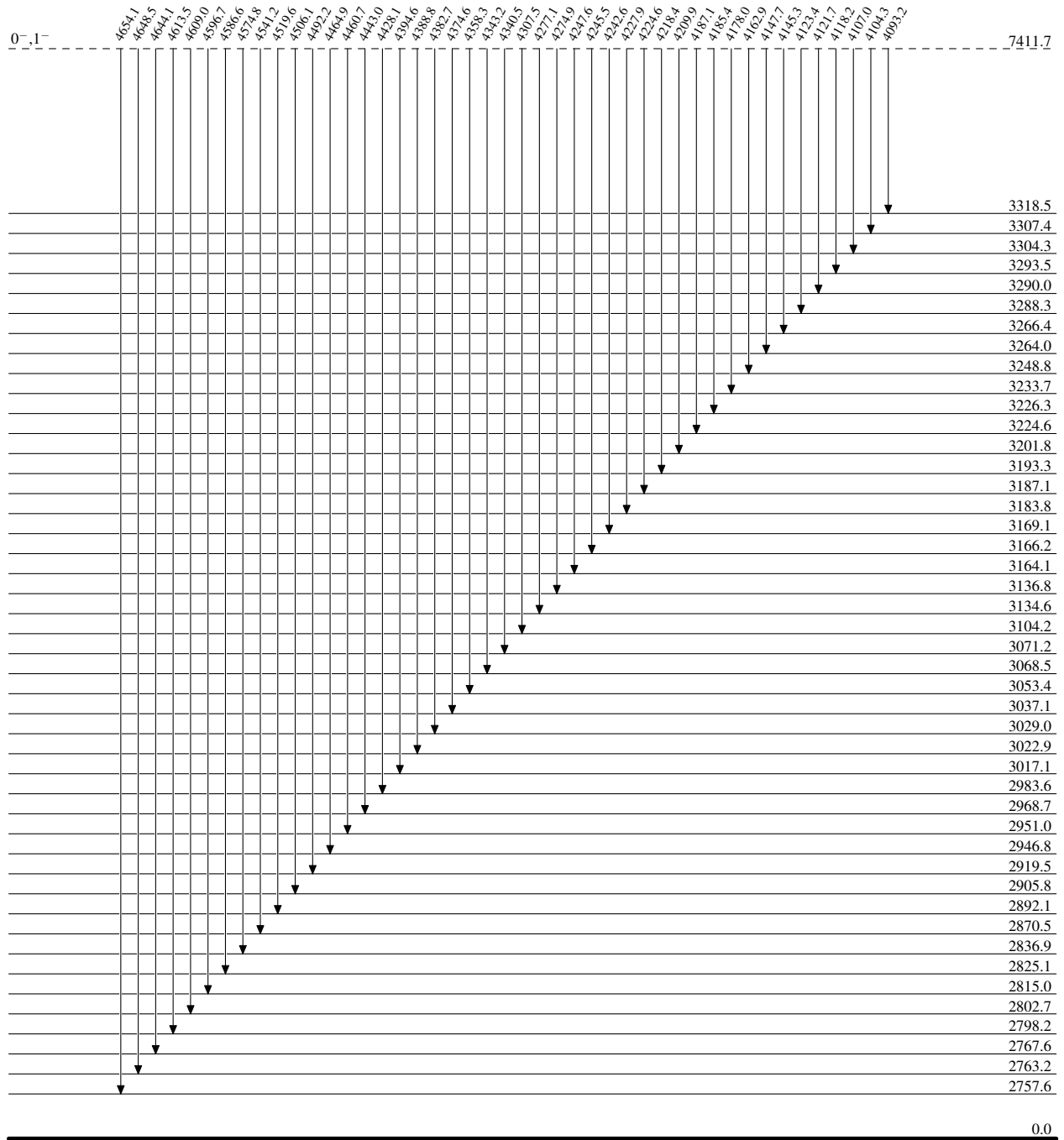
Intensities: Two-photon cascade intensities



$^{183}\text{W}(n,\gamma)\text{E=thermal: } \gamma\gamma \text{ coin } 2003\text{Bo52}$

Level Scheme (continued)

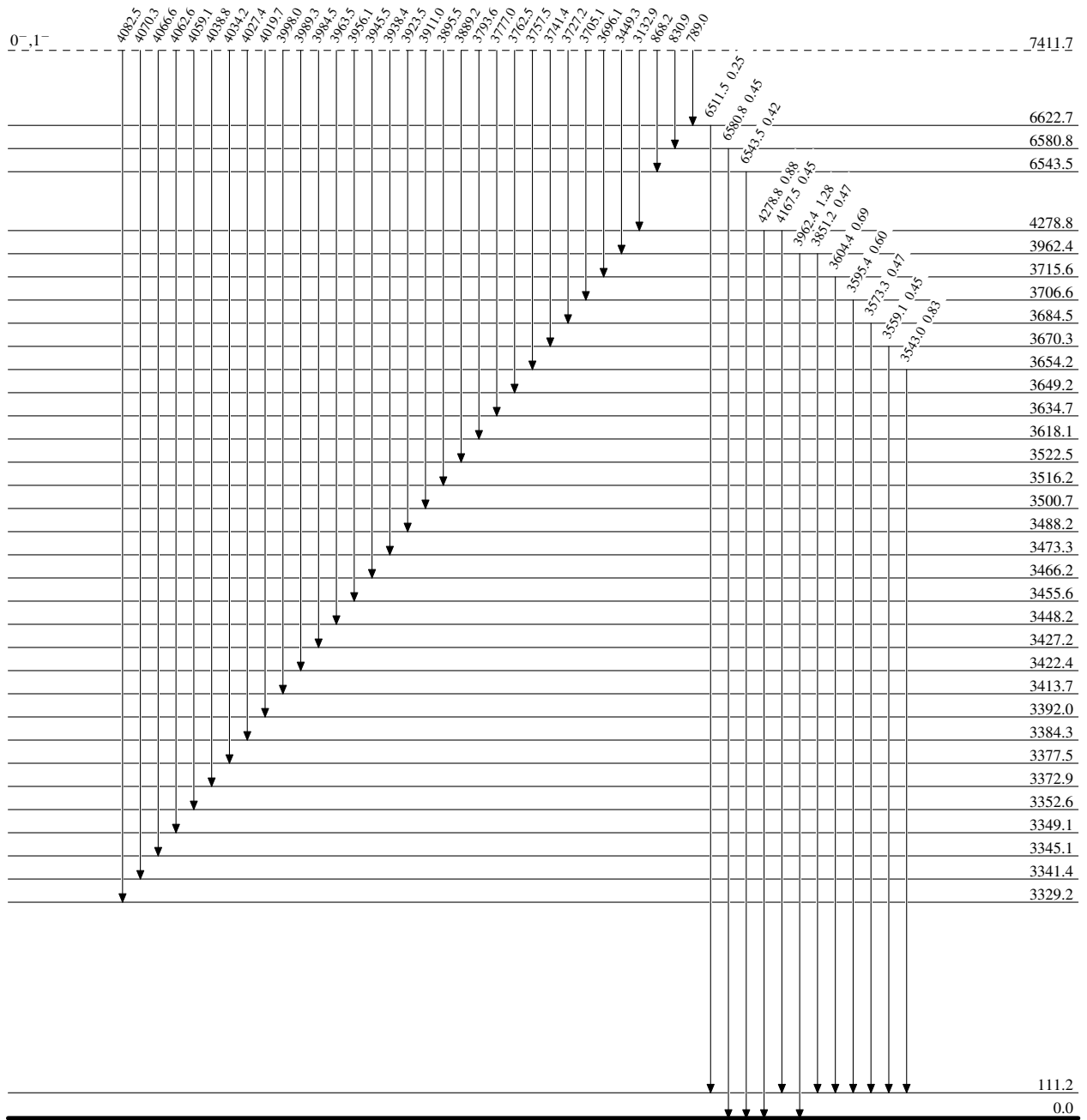
Intensities: Two-photon cascade intensities



$^{183}\text{W}(n,\gamma)$ E=thermal: $\gamma\gamma$ coin 2003Bo52

Level Scheme (continued)

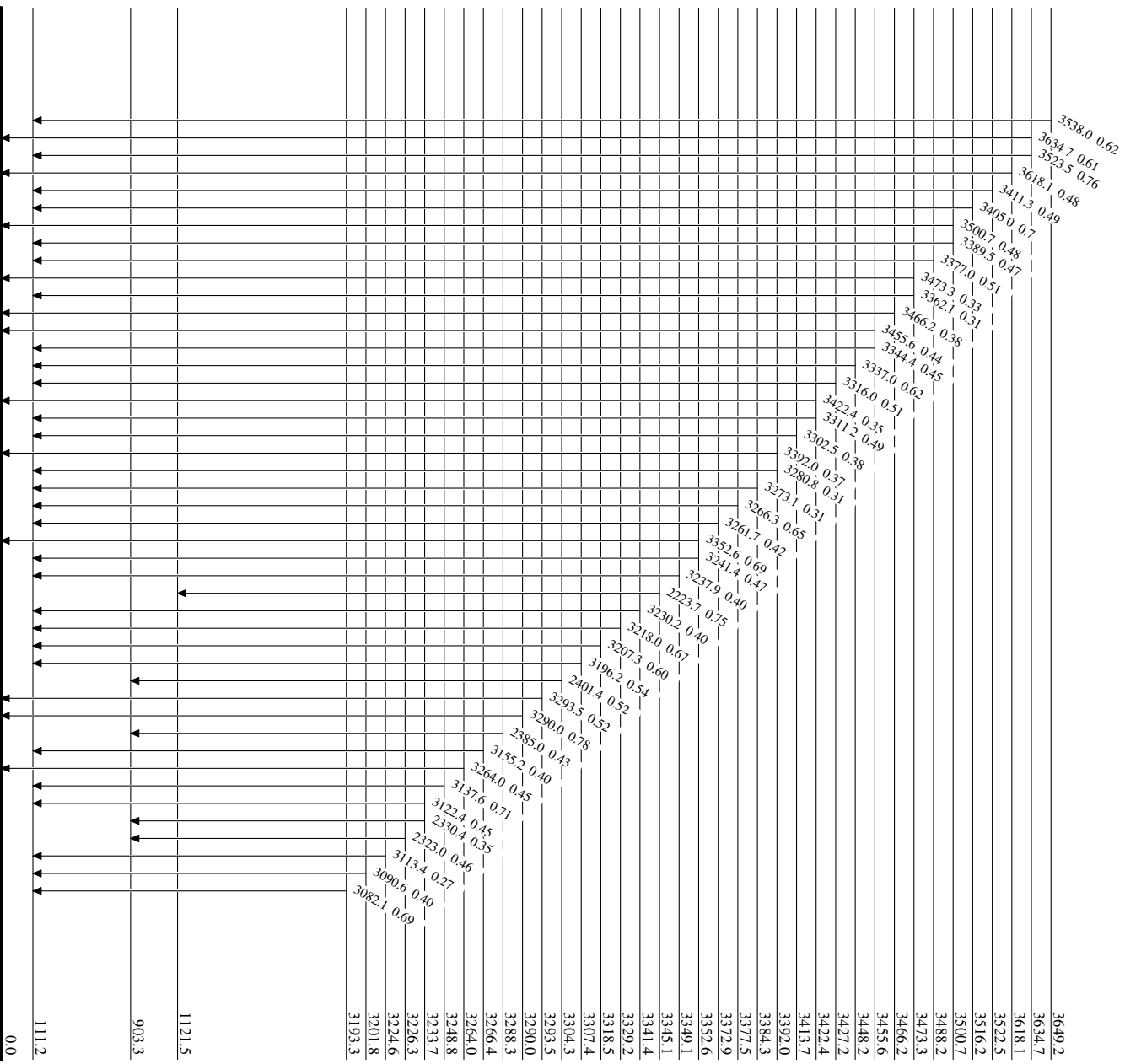
Intensities: Two-photon cascade intensities



$^{183}\text{W}(n,\gamma)\text{E=thermal}; \gamma\gamma$ coin 2003Bo52

Level Scheme (continued)

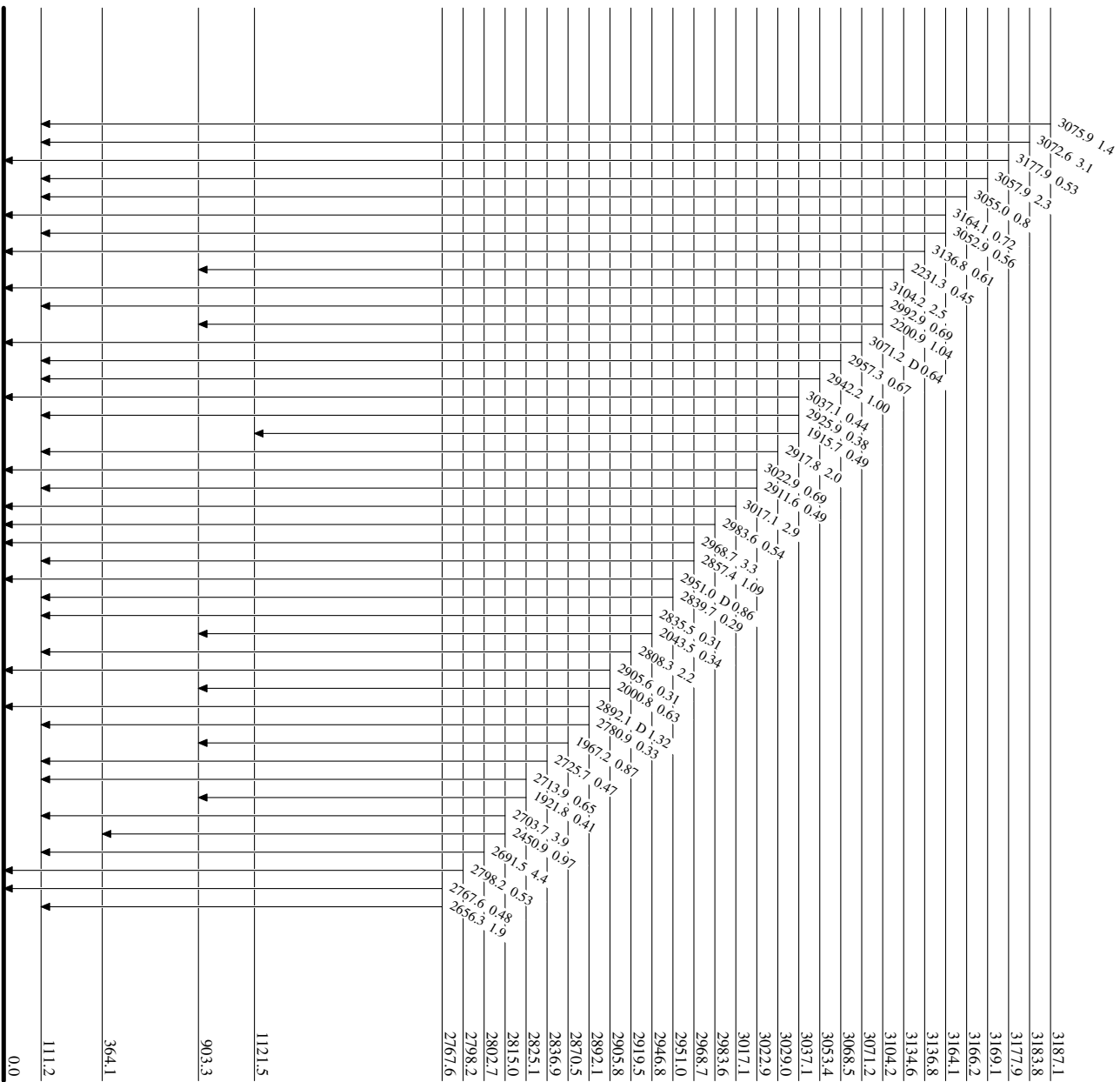
Intensities: Two-photon cascade intensities

 ^{184}W
74 110

¹⁸³W(n, γ) E=thermal: $\gamma\gamma$ coin 2003Bo52

Level Scheme (continued)

Intensities: Two-photon cascade intensities

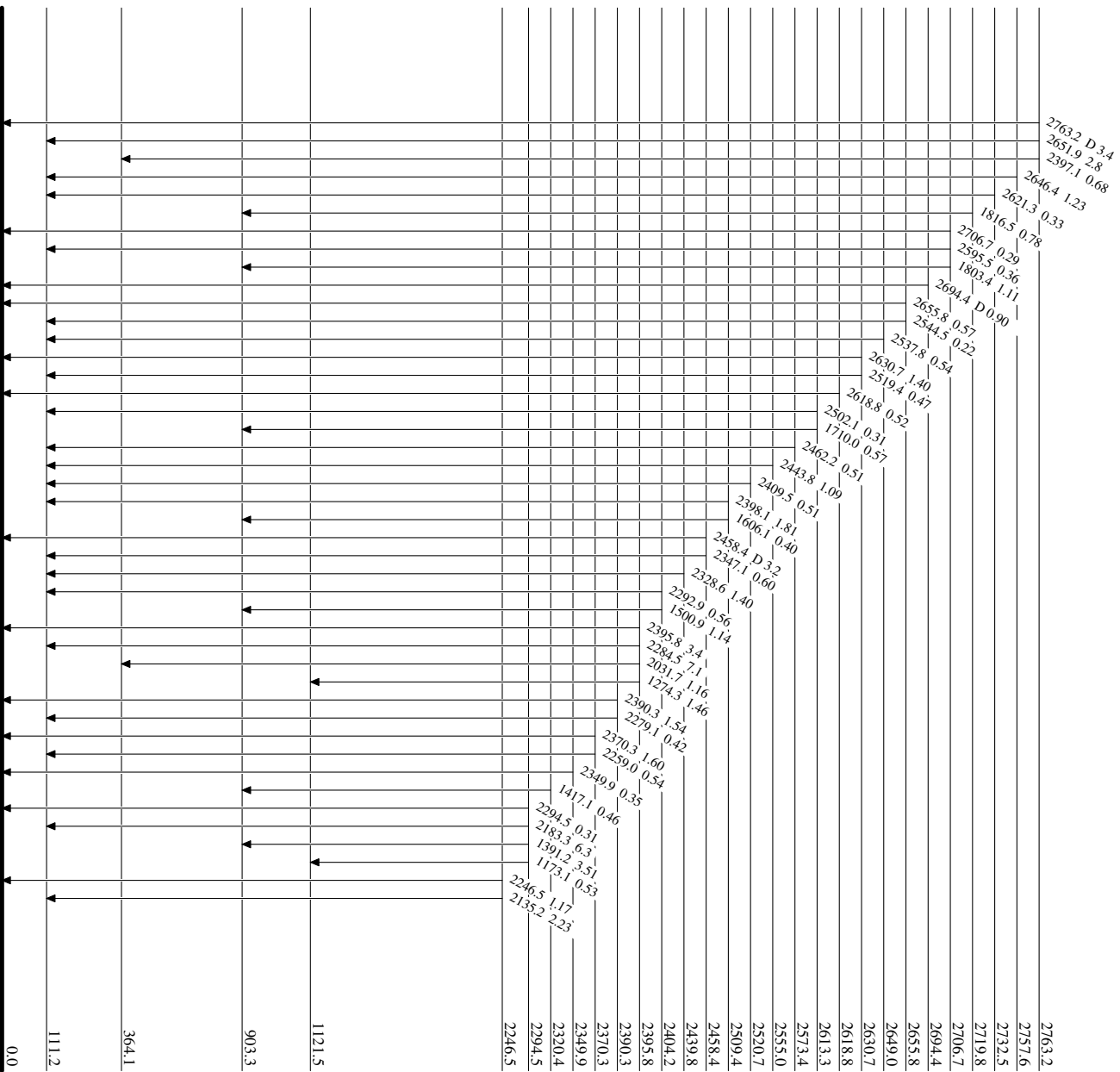


¹⁸⁴W
⁷⁴W 110

¹⁸³W(n,γ) E=thermal: γγ coin 2003Bo52

Level Scheme (continued)

Intensities: Two-photon cascade intensities

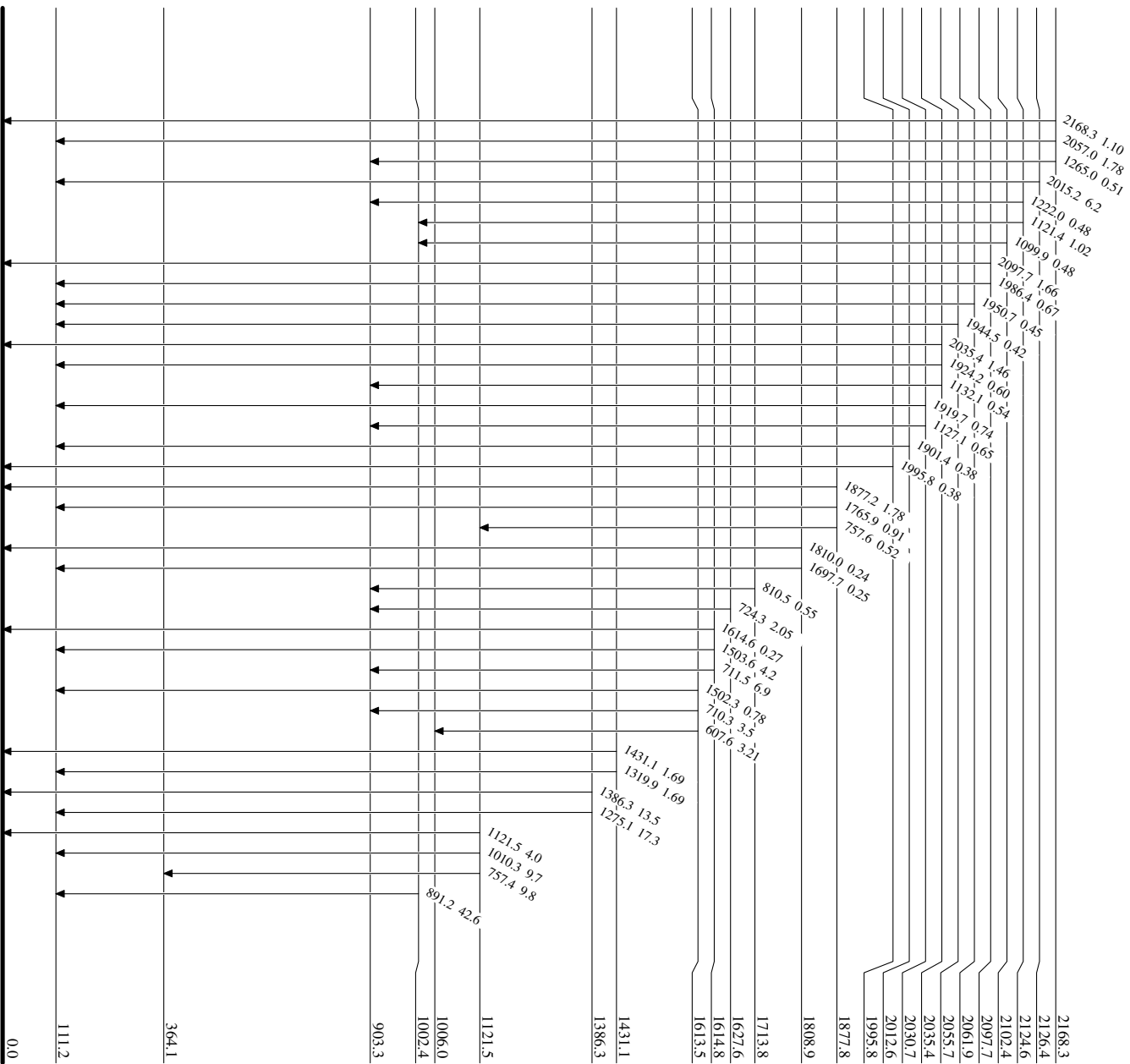


¹⁸⁴W
₇₄W₁₁₀

¹⁸³W(n, γ)E=thermal: $\gamma\gamma$ coin 2003Bo52

Level Scheme (continued)

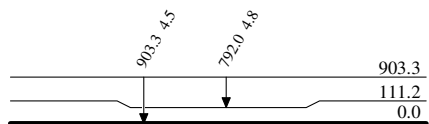
Intensities: Two-photon cascade intensities



¹⁸⁴W
₇₄W 110

 $^{183}\text{W}(\text{n},\gamma)$ E=thermal: $\gamma\gamma$ coin 2003Bo52Level Scheme (continued)

Intensities: Two-photon cascade intensities

 $^{184}_{74}\text{W}_{110}$