^{196}Pt(d,2nγ),(p,nγ) 2000Gr32

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Huang Xiaolong	NDS 108, 1093 (2007)	1-Jan-2006

E=9.1-11.7 MeV,Measured Eγ, Iγ, $\gamma\gamma$, ceγ coin, $\gamma\gamma(\theta)$, ceγ(t), excitation functions, using YRAST ball consisting of 4 four-element Clover detectors, 17 single-crystal HPGe detectors and two LEPS detectors. Conversion electrons were detected by iron-free orange spectrometers and plastic scintillators.

^{196}Au Levels

E(level)[†]	J$^{\pi}$[‡]	$T_{1/2}$	Comments
0.0	2^-	6.1669 d *6*	$T_{1/2}$: From 2001Li17. J$^{\pi}$: From adopted level.
6.48 *4*	1^-		
41.86 *5*	0^-		J$^{\pi}$: L(p,n)=0.
84.63 *6*	5^+	8.1 s *2*	$T_{1/2}$: From Adopted Levels.
162.56 *4*	2^-,3^-		J$^{\pi}$: M1 γ to 2^-,g.s.
166.40 *4*	1^-	291 ps *50*	$T_{1/2}$: From ce time spectra in (d,2nγ). J$^{\pi}$: M1 γ to 0^-,42.
167.43 *4*	1^-,2^-		J$^{\pi}$: M1 γ to 1^-,6.5; population from 3^-,490.
197.97 *4*	1^-,2^-		J$^{\pi}$: γ to 0^-,42.
212.80 *4*	4^-	1.79 ns *15*	$T_{1/2}$: From ce time spectra in (d,2nγ).
232.49 *9*	7^+		
234.53 *4*	3^-	≤200 ps	$T_{1/2}$: From ce time spectra in (d,2nγ). J$^{\pi}$: M1 γ to 2^-,g.s.
252.58 *4*	1^-		J$^{\pi}$: γ to 0^-,42.
258.61 *5*	1^-,2^-		J$^{\pi}$: γ to 0^-,42.
288.06 *4*	2^-		J$^{\pi}$: γ to 0^-,42.
298.56 *5*	1^-,2^-		J$^{\pi}$: γ to 0^-,42.
307.22 *4*	2^-		
323.83 *4*	1^-		J$^{\pi}$: M1 γ to 0^-,42.
326.09 *5*	1^-		J$^{\pi}$: γ to 3^-,235 and 0^-,42.
348.37 *7*	5^+,6^+		
349.17 *4*	2^-		J$^{\pi}$: M1 γ to 1^-,166; 3^-,235.
355.91? *11*	(0^-)		J$^{\pi}$: weak population in (p,nγ) and its γ decay suggests (0^-). 1999Me19 suggests 2^-,3^-.
370.11 *9*	$(6,7)^+$		
375.61 *4*	3^-		
388.21 *5*	3^+		
400.79 *9*	6^+		
403.79 *4*	3^-,4^-		J$^{\pi}$: γ to 2^-,3^-,4^-. (pol d,t) suggests 2^-,3^-,4^-, but 2^- inconsistent with the excitation function in (p,nγ).
408.36 *5*	0^- to 3^-		J$^{\pi}$: weak population in (p,nγ) and its γ decay suggests ≤2^-. (pol d,t) suggests ≤3^-.
413.74 *5*	2^-		
420.71 *10*	8^+		
423.63 *6*	4^+,5^+		
456.44 *5*	2^-		
467.09 *6*	3^+,4^+		
480.29 *4*	(2^-)		
490.19 *4*	3^-		J$^{\pi}$: M1 γ to 2^-,349.
491.19 *8*	1^- to 4^-		
491.62 *12*			
499.69 *14*			
501.63 *11*			
502.75 *11*			
518.02 *6*	4^+,5^+		
520.50 *6*	3^-		J$^{\pi}$: L(pol d,t)=3.
542.40 *6*			

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^{196}Pt(d,2nγ),(p,nγ) 2000Gr32 (continued)

^{196}Au Levels (continued)

E(level)†	Jπ‡	Comments
550.79 *7*		
551.70 *11*		
564.04 *6*		
565.24 *7*		
568.62 *6*		
569.91 *6*	$1^-,2^-,3^-$	Jπ: γ to 1^-,324.
571.40 *6*	(4^-)	Jπ: γ to 3^-,235.
575.71 *6*		
587.54 *11*		
598.05 *12*		
625.19 *6*	(4^-)	Jπ: γ to 3^-,235.
627.09 *14*		
635.66 *6*		
636.56 *9*		
637.83 *5*		
640.61 *14*		
645.46 *12*		
645.51 *14*		
651.41 *7*		
657.89 *14*		
662.53 *12*		
668.73 *4*	(3^-)	Jπ: γ to 3^-,235.
672.79 *14*		
680.46 *5*	4^-	
688.55 *5*		
702.59 *5*	4^-	
704.39 *14*		
708.51 *7*	2^-	
713.89 *6*		
714.31 *14*		
716.48 *6*		
720.39 *5*		
720.66 *9*		
726.01 *11*		
733.30 *6*	1^-	
747.92 *6*		
749.5? *1*		
750.59 *5*		
753.05 *8*		
760.66 *12*		
769.28 *7*		
780.53 *9*		
785.72 *6*	(2^-)	
797.89 *9*		
799.53 *5*	4^-	
807.48 *8*		
807.81 *8*		
813.30 *8*		
815.41 *14*		
816.03 *8*		
816.59 *6*		
819.46 *7*		
841.29 *14*		
848.01 *14*		
848.06 *12*		
850.18 *8*		
851.41 *7*		

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^{196}Pt(d,2nγ),(p,nγ) 2000Gr32 (continued)

^{196}Au Levels (continued)

E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	E(level)†
852.81 *14*		967.49 *9*		1093.46 *8*	1296.11 *12*
852.82 *9*		968.94 *8*		1095.22 *11*	1298.00 *11*
853.95 *7*		980.20 *8*		1096.34 *11*	1337.70 *9*
856.49 *7*		989.04 *11*		1100.90 *8*	1347.63 *11*
876.23 *8*		990.91 *11*	(3⁻)	1107.76 *8*	1350.93 *11*
877.07 *6*		991.86 *11*		1120.50 *13*	1361.79 *11*
881.68 *8*		992.05 *9*		1121.46 *11*	1364.47 *12*
882.63 *8*		993.42 *12*		1134.39 *11*	1387.29 *12*
883.50 *11*		995.53 *11*		1140.39 *12*	1403.13 *12*
893.22 *8*	(3⁻)	1003.86 *11*		1146.93 *11*	1416.29 *12*
895.80 *9*		1004.29 *11*		1152.90 *8*	1426.83 *12*
902.04 *6*	1⁻	1014.65 *8*		1156.60 *12*	1431.23 *12*
907.25 *9*		1017.84 *11*		1174.92 *11*	1432.24 *9*
908.27 *7*		1018.53 *11*		1188.79 *12*	1457.31 *12*
921.52 *6*		1025.05 *8*		1196.20 *12*	1491.80 *13*
925.64 *9*		1045.74 *11*		1198.00 *9*	1522.63 *12*
931.62 *14*		1046.28 *7*		1203.41 *8*	1552.39 *12*
931.68 *10*		1053.25 *9*		1207.23 *11*	1568.83 *12*
934.22 *8*		1053.30 *8*		1213.55 *8*	1599.47 *9*
938.37 *7*		1053.31 *14*		1229.19 *11*	1632.19 *12*
940.30 *11*		1056.24 *9*		1248.70 *8*	1634.43 *12*
944.20? *11*		1058.46 *11*		1268.65 *9*	1640.41 *12*
946.20 *12*		1065.92 *8*		1279.03 *11*	1657.13 *12*
948.71 *14*		1070.79 *11*		1280.90 *12*	1664.89 *12*
951.18 *8*		1074.85 *9*		1292.02 *11*	1672.93 *12*
962.46 *9*		1088.90 *11*		1295.83 *11*	

† From least-squares fit to Eγ′s.
‡ Based primarily on population and depopulation of levels, and on γ-ray multipolarities,except as noted.

γ(^{196}Au)

E_i(level)	J_i^π	E_γ#	I_γ†	E_f	J_f^π	Mult.@
84.63	5⁺	84.7 *1*		0.0	2⁻	
162.56	2⁻,3⁻	120.7& *1*	≤2	41.86	0⁻	
		156.1& *1*	≤5	6.48	1⁻	
		162.6 *1*	100	0.0	2⁻	M1
166.40	1⁻	124.5 *1*	4.4	41.86	0⁻	M1
		159.8& *1*	≤1	6.48	1⁻	
		166.4 *1*	100	0.0	2⁻	M1
167.43	1⁻,2⁻	125.6& *1*	≤6	41.86	0⁻	
		160.9 *1*	100	6.48	1⁻	M1
		167.5& *1*	≤10	0.0	2⁻	
197.97	1⁻,2⁻	31.6& *1*	6‡	166.40	1⁻	(M1)
		156.4 *1*	20	41.86	0⁻	
		191.5 *1*	100	6.48	1⁻	
		198.0 *1*	44	0.0	2⁻	
212.80	4⁻	50.2& *1*	0.1‡	162.56	2⁻,3⁻	(E2)
		170.9& *1*	≤1	41.86	0⁻	
		206.3& *1*	≤1	6.48	1⁻	

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^{196}Pt(d,2nγ),(p,nγ) 2000Gr32 (continued)

γ(^{196}Au) (continued)

E_i(level)	J_i^π	E_γ[#]	I_γ[†]	E_f	J_f^π	Mult.[@]	Comments
212.80	4⁻	212.8 *1*	100	0.0	2⁻	E2	
232.49	7⁺	147.8 *1*		84.63	5⁺		
234.53	3⁻	192.7[&] *1*	≤1	41.86	0⁻		
		228.0 *1*	18	6.48	1⁻	E2	
		234.5 *1*	100	0.0	2⁻	M1	
252.58	1⁻	18.1[&] *1*	0.005[‡]	234.53	3⁻		
		86.2 *1*	30	166.40	1⁻		
		90.0 *1*	15	162.56	2⁻,3⁻		
		210.7 *1*	≈10	41.86	0⁻		
		246.1 *1*	100	6.48	1⁻		
		252.6 *1*	64	0.0	2⁻		
258.61	1⁻,2⁻	91.2 *1*		167.43	1⁻,2⁻		
		216.7 *1*	100	41.86	0⁻		
		252.1 *1*	70	6.48	1⁻		
		258.6 *1*	25	0.0	2⁻		
288.06	2⁻	120.6 *1*	5	167.43	1⁻,2⁻		
		121.8[&] *1*	≤2	166.40	1⁻		
		125.5[&] *1*	≤2	162.56	2⁻,3⁻		
		246.2 *1*	19	41.86	0⁻		
		281.6 *1*	100	6.48	1⁻	M1	
		288.2[&] *1*	≤2	0.0	2⁻		
298.56	1⁻,2⁻	131.2 *1*	≈15	167.43	1⁻,2⁻		
		132.2 *1*	42	166.40	1⁻		
		256.6 *1*	71	41.86	0⁻		
		292.1 *1*	100	6.48	1⁻		
		298.4 *1*	≈20	0.0	2⁻		
307.22	2⁻	139.7 *1*	15	167.43	1⁻,2⁻		
		140.8[&] *1*	≤5	166.40	1⁻		
		144.5[&] *1*	≤1	162.56	2⁻,3⁻		
		265.4[&] *1*	≤2	41.86	0⁻		E_γ: 258.8 in 2000Gr32 seems to be a misprint.
		300.7 *1*	100	6.48	1⁻		
		307.2[&] *1*	≤5	0.0	2⁻		
323.83	1⁻	110.9[&] *1*	≤3	212.80	4⁻		
		125.9 *1*	4	197.97	1⁻,2⁻		
		156.4 *1*	9	167.43	1⁻,2⁻		
		157.3 *1*	24	166.40	1⁻		
		161.1[&] *1*	≤6	162.56	2⁻,3⁻		
		281.9 *1*	100	41.86	0⁻	M1	
		317.2[&] *1*	8	6.48	1⁻		
		323.8[&] *1*	8	0.0	2⁻		
326.09	1⁻	91.6 *1*		234.53	3⁻		
		158.7[&] *1*	≤2	167.43	1⁻,2⁻		
		159.8[&] *1*	≤2	166.40	1⁻		
		163.5 *1*	8	162.56	2⁻,3⁻		
		284.2[&] *1*	≤3	41.86	0⁻		
		319.6 *1*	70	6.48	1⁻		
		326.2 *1*	100	0.0	2⁻		
348.37	5⁺,6⁺	263.7 *1*		84.63	5⁺		
349.17	2⁻	114.6 *1*	≈2	234.53	3⁻	M1	
		136.3[&] *1*	≤1	212.80	4⁻		
		151.2[&] *1*	≈4	197.97	1⁻,2⁻		

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^{196}Pt(d,2nγ),(p,nγ) 2000Gr32 (continued)

γ(^{196}Au) (continued)

E_i(level)	J_i^π	E_γ[#]	I_γ[†]	E_f	J_f^π	Mult.[@]	Comments
349.17	2^-	181.7[&] *1*	≈8	167.43	$1^-,2^-$		
		182.8 *1*	100	166.40	1^-	M1	(183γ)(166γ)(θ): A_2=−0.15 *9*, A_4=+0.06 *10*.
		186.5[&] *1*	≤2	162.56	$2^-,3^-$		
		307.3[&] *1*	≤2	41.86	0^-		
		342.8 *1*	19	6.48	1^-		
		349.2 *1*	13	0.0	2^-		
355.91?	(0^-)	97.3[&] *1*	100	258.61	$1^-,2^-$		
370.11	$(6,7)^+$	137.6 *1*		232.49	7^+		
		285.5 *1*		84.63	5^+		
375.61	3^-	141.0 *1*	2.9	234.53	3^-		
		162.7 *1*	16	212.80	4^-	M1	I_γ: 6 for 162.7γ and 16 for 208.3γ in figure 12 of 2000Gr32 are misprints confirmed by e-mail in July 2001 from one of the authors (Guenther).
		208.3 *1*	6	167.43	$1^-,2^-$		
		375.7 *1*	100	0.0	2^-		
388.21	3^+	175.4 *1*	0.90 *9*	212.80	4^-		
		303.6 *1*	100	84.63	5^+		
		388.2 *1*	4.8 *5*	0.0	2^-		
400.79	6^+	30.7 *1*		370.11	$(6,7)^+$		
		168.3 *1*		232.49	7^+		
		316.2 *1*		84.63	5^+		
403.79	$3^-,4^-$	169.3 *1*	≈2	234.53	3^-		
		191.0 *1*	≈4	212.80	4^-		
		236.3[&] *1*	≤1	167.43	$1^-,2^-$		
		237.4[&] *1*	≤1	166.40	1^-		
		241.1 *1*	11	162.56	$2^-,3^-$		
		361.9[&] *1*	≤2	41.86	0^-		
		397.2[&] *1*	≤2	6.48	1^-		
		403.8 *1*	100	0.0	2^-		
408.36	0^- to 3^-	120.3 *1*	≈5	288.06	2^-		
		155.8 *1*		252.58	1^-		
		210.4 *1*	100	197.97	$1^-,2^-$		
		240.6 *1*	≈25	167.43	$1^-,2^-$		E_γ: level-energy difference=240.9.
		242.2 *1*	≈25	166.40	1^-		
413.74	2^-	106.6 *1*		307.22	2^-		
		125.6 *1*	≈2	288.06	2^-		
		215.8 *1*	100	197.97	$1^-,2^-$		
		247.2 *1*	≈15	166.40	1^-		
420.71	8^+	19.9 *1*		400.79	6^+		
		50.6 *1*		370.11	$(6,7)^+$		
		188.2 *1*		232.49	7^+		
423.63	$4^+,5^+$	339.0 *1*		84.63	5^+		
456.44	2^-	107.5 *1*		349.17	2^-		
		132.7 *1*	≈10	323.83	1^-		
		197.8 *1*	41	258.61	$1^-,2^-$		
		203.8 *1*	49	252.58	1^-		
		221.7 *1*	8	234.53	3^-		
		289.0 *1*	34	167.43	$1^-,2^-$		
		290.0 *1*	100	166.40	1^-		
		293.8[&] *1*	≤8	162.56	$2^-,3^-$		
467.09	$3^+,4^+$	78.9 *1*		388.21	3^+		
		382.5 *1*		84.63	5^+		
480.29	(2^-)	104.6 *1*		375.61	3^-		

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^{196}Pt(d,2nγ),(p,nγ) 2000Gr32 (continued)

γ(^{196}Au) (continued)

E_i(level)	J_i^π	E_γ[#]	I_γ[†]	E_f	J_f^π	Mult.[@]
480.29	(2⁻)	131.2 *1*	≈3	349.17	2⁻	
		192.3 *1*	≈3	288.06	2⁻	
		227.7 *1*	16	252.58	1⁻	
		245.8 *1*	≈5	234.53	3⁻	
		312.9[&] *1*	≤3	167.43	1⁻,2⁻	
		473.8 *1*	7	6.48	1⁻	
		480.2 *1*	100	0.0	2⁻	
490.19	3⁻	141.0 *1*	20	349.17	2⁻	M1
		183.2 *1*	≤12	307.22	2⁻	
		202.0 *1*	18	288.06	2⁻	
		237.6 *1*	20	252.58	1⁻	
		255.7 *1*	≤5	234.53	3⁻	
		322.7 *1*	≈15	167.43	1⁻,2⁻	
		323.7 *1*	≈15	166.40	1⁻	
		327.7 *1*	≈13	162.56	2⁻,3⁻	
		448.3[&] *1*	≤5	41.86	0⁻	
		483.7 *1*	9	6.48	1⁻	
		490.2 *1*	100	0.0	2⁻	
491.19	1⁻ to 4⁻	115.5 *1*		375.61	3⁻	
		293.3 *1*	100	197.97	1⁻,2⁻	
491.62		259.1 *1*		232.49	7⁺	
499.69		98.9 *1*		400.79	6⁺	
501.63		177.8 *1*		323.83	1⁻	
		242.9[&] *1*		258.61	1⁻,2⁻	
502.75		102.0 *1*		400.79	6⁺	
		132.6 *1*		370.11	(6,7)⁺	
518.02	4⁺,5⁺	94.3 *1*		423.63	4⁺,5⁺	
		129.8 *1*		388.21	3⁺	
		169.7 *1*		348.37	5⁺,6⁺	
		433.4 *1*		84.63	5⁺	
520.50	3⁻	144.8		375.61	3⁻	
		171.4 *1*		349.17	2⁻	
		213.2 *1*		307.22	2⁻	
		267.8 *1*		252.58	1⁻	
		307.8 *1*		212.80	4⁻	
542.40		218.4 *1*		323.83	1⁻	
		283.9 *1*		258.61	1⁻,2⁻	
		375.0 *1*		167.43	1⁻,2⁻	
		376.0 *1*		166.40	1⁻	
550.79		127.2 *1*		423.63	4⁺,5⁺	
		162.6 *1*		388.21	3⁺	
		202.4[&] *1*		348.37	5⁺,6⁺	
551.70		338.9[&] *1*		212.80	4⁻	
		385.3 *1*		166.40	1⁻	
564.04		214.7 *1*		349.17	2⁻	
		240.2 *1*		323.83	1⁻	
		256.9 *1*		307.22	2⁻	
		366.2 *1*		197.97	1⁻,2⁻	
		397.6 *1*		166.40	1⁻	
565.24		151.3[&] *1*		413.74	2⁻	
		216.0 *1*		349.17	2⁻	
		277.2 *1*		288.06	2⁻	
		352.5 *1*		212.80	4⁻	
568.62		193.1 *1*		375.61	3⁻	

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^{196}Pt(d,2nγ),(p,nγ) 2000Gr32 (continued)

γ(^{196}Au) (continued)

E_i(level)	J_i^π	E_γ[#]	E_f	J_f^π	Comments
568.62		334.2 *1*	234.53	3^-	(334γ)(234γ)(θ): A_2=−0.19 *9*, A_4=+0.02 *12*.
		355.9[&] *1*	212.80	4^-	
		401.1 *1*	167.43	1^-,2^-	
		406.0 *1*	162.56	2^-,3^-	
569.91	1^-,2^-,3^-	245.9 *1*	323.83	1^-	(246γ)(282γ)(θ): A_2=−0.17 *9*, A_4=+0.08 *12*.
		372.1 *1*	197.97	1^-,2^-	
		402.5 *1*	167.43	1^-,2^-	
		403.5 *1*	166.40	1^-	
571.40	(4^-)	336.8 *1*	234.53	3^-	(337γ)(234γ)(θ): A_2=−0.23 *9*, A_4=+0.08 *11*.
		358.6 *1*	212.80	4^-	(359γ)(213γ)(θ): A_2=−0.38 *10*, A_4=−0.12 *10*.
		408.9 *1*	162.56	2^-,3^-	
575.71		226.6 *1*	349.17	2^-	
		268.4 *1*	307.22	2^-	
		323.4 *1*	252.58	1^-	
		377.6 *1*	197.97	1^-,2^-	
		409.4[&] *1*	166.40	1^-	
587.54		186.8 *1*	400.79	6^+	
		355.0 *1*	232.49	7^+	
598.05		177.3 *1*	420.71	8^+	
		365.6 *1*	232.49	7^+	
625.19	(4^-)	221.4 *1*	403.79	3^-,4^-	
		299.0 *1*	326.09	1^-	
		390.6 *1*	234.53	3^-	(391γ)(228γ)(θ): A_2=−0.23 *10*, A_4=−0.10 *11*. (391γ)(234γ)(θ): A_2=+0.03 *9*, A_4=+0.24 *12*.
		462.7 *1*	162.56	2^-,3^-	(463γ)(163γ)(θ): A_2=−0.26 *9*, A_4=+0.17 *11*.
627.09		226.3 *1*	400.79	6^+	
635.66		227.2 *1*	408.36	0^- to 3^-	
		260.0 *1*	375.61	3^-	
		286.4 *1*	349.17	2^-	
		311.9 *1*	323.83	1^-	
		469.4 *1*	166.40	1^-	
636.56		118.5 *1*	518.02	4^+,5^+	
		213.0 *1*	423.63	4^+,5^+	
637.83		224.1 *1*	413.74	2^-	
		234.2 *1*	403.79	3^-,4^-	
		288.6 *1*	349.17	2^-	
		349.8 *1*	288.06	2^-	
		385.2 *1*	252.58	1^-	
		425.0 *1*	212.80	4^-	
		470.3 *1*	167.43	1^-,2^-	
640.61		219.9 *1*	420.71	8^+	
645.46		297.1 *1*	348.37	5^+,6^+	
645.51		275.4 *1*	370.11	$(6,7)^+$	
651.41		327.6 *1*	323.83	1^-	
		392.7 *1*	258.61	1^-,2^-	
		453.5 *1*	197.97	1^-,2^-	
657.89		425.4 *1*	232.49	7^+	
662.53		238.9 *1*	423.63	4^+,5^+	
		314.1[&] *1*	348.37	5^+,6^+	
668.73	(3^-)	178.5 *1*	490.19	3^-	
		254.7 *1*	413.74	2^-	
		293.2 *1*	375.61	3^-	
		319.6 *1*	349.17	2^-	
		342.7 *1*	326.09	1^-	
		361.7[&] *1*	307.22	2^-	

Continued on next page (footnotes at end of table)

^{196}Pt(d,2nγ),(p,nγ) 2000Gr32 (continued)

γ(^{196}Au) (continued)

E_i(level)	J_i^π	E_γ[#]	E_f	J_f^π	Comments
668.73	(3$^-$)	380.8 *1*	288.06	2$^-$	
		416.1 *1*	252.58	1$^-$	
		434.3 *1*	234.53	3$^-$	(434γ)(234γ)(θ): A_2=+0.06 *10*, A_4=+0.36 *14*.
		456.0 *1*	212.80	4$^-$	
		470.7 *1*	197.97	1$^-$,2$^-$	
		501.2 *1*	167.43	1$^-$,2$^-$	
		506.2 *1*	162.56	2$^-$,3$^-$	
672.79		302.6[&] *1*	370.11	(6,7)$^+$	
		440.3 *1*	232.49	7$^+$	
680.46	4$^-$	190.4 *1*	490.19	3$^-$	
		276.7 *1*	403.79	3$^-$,4$^-$	
		304.9 *1*	375.61	3$^-$	
		331.2[&] *1*	349.17	2$^-$	
		445.9 *1*	234.53	3$^-$	
		467.5 *1*	212.80	4$^-$	
		513.0 *1*	167.43	1$^-$,2$^-$	
688.55		274.7 *1*	413.74	2$^-$	
		339.4 *1*	349.17	2$^-$	
		364.8 *1*	323.83	1$^-$	
		381.4 *1*	307.22	2$^-$	
		389.9 *1*	298.56	1$^-$,2$^-$	
		490.6 *1*	197.97	1$^-$,2$^-$	
702.59	4$^-$	212.4[&] *1*	490.19	3$^-$	
		222.2 *1*	480.29	(2$^-$)	
		326.9 *1*	375.61	3$^-$	
		395.2[&] *1*	307.22	2$^-$	
		414.6 *1*	288.06	2$^-$	
		468.0 *1*	234.53	3$^-$	
		489.8 *1*	212.80	4$^-$	
		540.2 *1*	162.56	2$^-$,3$^-$	
704.39		303.6[&] *1*	400.79	6$^+$	
		471.9 *1*	232.49	7$^+$	
708.51	2$^-$	294.8 *1*	413.74	2$^-$	
		359.4 *1*	349.17	2$^-$	
		449.8 *1*	258.61	1$^-$,2$^-$	
713.89		246.8 *1*	467.09	3$^+$,4$^+$	(714)(382γ)(θ): A_2=−0.17 *9*, A_4=+0.08 *12*.
		290.3 *1*	423.63	4$^+$,5$^+$	
		325.7 *1*	388.21	3$^+$	
		713.8 *1*	0.0	2$^-$	
714.31		293.6 *1*	420.71	8$^+$	
716.48		302.9 *1*	413.74	2$^-$	
		340.8 *1*	375.61	3$^-$	
		367.2 *1*	349.17	2$^-$	
		409.3 *1*	307.22	2$^-$	
		463.9 *1*	252.58	1$^-$	
720.39		316.5 *1*	403.79	3$^-$,4$^-$	
		394.4 *1*	326.09	1$^-$	
		485.8 *1*	234.53	3$^-$	(486γ)(234γ)(θ): A_2=−0.21 *9*, A_4=−0.06 *12*.
		507.6 *1*	212.80	4$^-$	
		557.8 *1*	162.56	2$^-$,3$^-$	
720.66		297.1 *1*	423.63	4$^+$,5$^+$	
		332.4 *1*	388.21	3$^+$	
726.01		355.9 *1*	370.11	(6,7)$^+$	
		493.5 *1*	232.49	7$^+$	

Continued on next page (footnotes at end of table)

^{196}Pt(d,2nγ),(p,nγ) 2000Gr32 (continued)

γ(^{196}Au) (continued)

E_i(level)	J_i^π	E_γ[#]	E_f	J_f^π
733.30	1⁻	319.6 *1*	413.74	2⁻
		384.1 *1*	349.17	2⁻
		409.5 *1*	323.83	1⁻
		565.8 *1*	167.43	1⁻,2⁻
747.92		372.2 *1*	375.61	3⁻
		459.9 *1*	288.06	2⁻
		549.9 *1*	197.97	1⁻,2⁻
		580.6 *1*	167.43	1⁻,2⁻
		581.5 *1*	166.40	1⁻
749.5?		461.4[&] *1*	288.06	2⁻
750.59		175.0 *1*	575.71	
		260.3 *1*	490.19	3⁻
		346.9 *1*	403.79	3⁻,4⁻
		375.0 *1*	375.61	3⁻
		424.4 *1*	326.09	1⁻
		588.0 *1*	162.56	2⁻,3⁻
753.05		403.9 *1*	349.17	2⁻
		518.5 *1*	234.53	3⁻
		585.8[&] *1*	167.43	1⁻,2⁻
760.66		269.0 *1*	491.62	
		528.2 *1*	232.49	7⁺
769.28		393.6 *1*	375.61	3⁻
		420.1 *1*	349.17	2⁻
		481.3 *1*	288.06	2⁻
		606.7[&] *1*	162.56	2⁻,3⁻
780.53		262.5[&] *1*	518.02	4⁺,5⁺
		392.4 *1*	388.21	3⁺
		432.1 *1*	348.37	5⁺,6⁺
785.72	(2⁻)	461.7 *1*	323.83	1⁻
		551.2 *1*	234.53	3⁻
		587.8 *1*	197.97	1⁻,2⁻
		618.4 *1*	167.43	1⁻,2⁻
797.89		409.7 *1*	388.21	3⁺
799.53	4⁻	279.0 *1*	520.50	3⁻
		309.2 *1*	490.19	3⁻
		319.4 *1*	480.29	(2⁻)
		395.7 *1*	403.79	3⁻,4⁻
		473.5 *1*	326.09	1⁻
		565.0 *1*	234.53	3⁻
807.48		519.3 *1*	288.06	2⁻
		641.2 *1*	166.40	1⁻
807.81		289.5[&] *1*	518.02	4⁺,5⁺
		340.8 *1*	467.09	3⁺,4⁺
		384.1 *1*	423.63	4⁺,5⁺
		419.6 *1*	388.21	3⁺
813.30		295.4 *1*	518.02	4⁺,5⁺
		389.6 *1*	423.63	4⁺,5⁺
		464.9 *1*	348.37	5⁺,6⁺
815.41		394.7 *1*	420.71	8⁺
816.03		492.2 *1*	323.83	1⁻
		557.4 *1*	258.61	1⁻,2⁻
		648.9[&] *1*	167.43	1⁻,2⁻
816.59		490.6 *1*	326.09	1⁻
		509.3[&] *1*	307.22	2⁻
816.59		582.1 *1*	234.53	3⁻
		603.7 *1*	212.80	4⁻
		648.9[&] *1*	167.43	1⁻,2⁻
		654.0 *1*	162.56	2⁻,3⁻
819.46		250.9 *1*	568.62	
		606.6 *1*	212.80	4⁻
		656.9 *1*	162.56	2⁻,3⁻
841.29		440.5 *1*	400.79	6⁺
848.01		477.9 *1*	370.11	(6,7)⁺
848.06		499.7 *1*	348.37	5⁺,6⁺
850.18		474.6 *1*	375.61	3⁻
		615.6 *1*	234.53	3⁻
851.41		502.3 *1*	349.17	2⁻
		544.0 *1*	307.22	2⁻
		684.1 *1*	167.43	1⁻,2⁻
852.81		482.7 *1*	370.11	(6,7)⁺
852.82		334.8 *1*	518.02	4⁺,5⁺
		429.2 *1*	423.63	4⁺,5⁺
853.95		546.7 *1*	307.22	2⁻
		619.5 *1*	234.53	3⁻
		641.1 *1*	212.80	4⁻
856.49		622.0 *1*	234.53	3⁻
		643.7 *1*	212.80	4⁻
		693.9 *1*	162.56	2⁻,3⁻
876.23		358.2 *1*	518.02	4⁺,5⁺
		452.7[&] *1*	423.63	4⁺,5⁺
		488.0 *1*	388.21	3⁺
877.07		156.6 *1*	720.39	
		305.7 *1*	571.40	(4⁻)
		473.3 *1*	403.79	3⁻,4⁻
		664.3 *1*	212.80	4⁻
881.68		557.9 *1*	323.83	1⁻
		647.1 *1*	234.53	3⁻
882.63		392.5 *1*	490.19	3⁻
		533.4 *1*	349.17	2⁻
		575.4[&] *1*	307.22	2⁻
883.50		513.4 *1*	370.11	(6,7)⁺
		651.0 *1*	232.49	7⁺
893.22	(3⁻)	403.0 *1*	490.19	3⁻
		725.8 *1*	167.43	1⁻,2⁻
895.80		472.1 *1*	423.63	4⁺,5⁺
		547.5 *1*	348.37	5⁺,6⁺
902.04	1⁻	421.7 *1*	480.29	(2⁻)
		667.6 *1*	234.53	3⁻
		703.8[&] *1*	197.97	1⁻,2⁻
		734.6 *1*	167.43	1⁻,2⁻
		735.6 *1*	166.40	1⁻
907.25		440.1 *1*	467.09	3⁺,4⁺
		483.7 *1*	423.63	4⁺,5⁺
908.27		601.1 *1*	307.22	2⁻
		673.8 *1*	234.53	3⁻
		745.6 *1*	162.56	2⁻,3⁻
921.52		441.2 *1*	480.29	(2⁻)
		517.6 *1*	403.79	3⁻,4⁻

Continued on next page (footnotes at end of table)

^{196}Pt(d,2nγ),(p,nγ) 2000Gr32 (continued)

γ(^{196}Au) (continued)

E_i(level)	J_i^π	E_γ[#]	E_f	J_f^π
921.52		687.0 *1*	234.53	3^-
		759.1 *1*	162.56	$2^-,3^-$
925.64		458.6 *1*	467.09	$3^+,4^+$
		502.0 *1*	423.63	$4^+,5^+$
931.62		561.5 *1*	370.11	$(6,7)^+$
931.68		413.7 *1*	518.02	$4^+,5^+$
		583.3 *1*	348.37	$5^+,6^+$
934.22		220.3 *1*	713.89	
		383.5 *1*	550.79	
		546.0 *1*	388.21	3^+
938.37		589.3 *1*	349.17	2^-
		631.1 *1*	307.22	2^-
		650.3 *1*	288.06	2^-
940.30		727.5 *1*	212.80	4^-
944.20?		731.4[&] *1*	212.80	4^-
946.20		522.7[&] *1*	423.63	$4^+,5^+$
		558.0 *1*	388.21	3^+
948.71		528.0 *1*	420.71	8^+
951.18		575.7 *1*	375.61	3^-
		716.5 *1*	234.53	3^-
962.46		444.4 *1*	518.02	$4^+,5^+$
		495.6[&] *1*	467.09	$3^+,4^+$
		538.6[&] *1*	423.63	$4^+,5^+$
		574.3 *1*	388.21	3^+
967.49		342.2 *1*	625.19	(4^-)
		563.8 *1*	403.79	$3^-,4^-$
968.94		619.9 *1*	349.17	2^-
		802.4 *1*	166.40	1^-
980.20		462.1 *1*	518.02	$4^+,5^+$
		556.7 *1*	423.63	$4^+,5^+$
		592.0 *1*	388.21	3^+
		631.8 *1*	348.37	$5^+,6^+$
989.04		665.2 *1*	323.83	1^-
		823.0[&] *1*	166.40	1^-
990.91	(3^-)	615.3 *1*	375.61	3^-
		778.0[&] *1*	212.80	4^-
991.86		703.8 *1*	288.06	2^-
992.05		524.9 *1*	467.09	$3^+,4^+$
		603.9 *1*	388.21	3^+
993.42		569.8 *1*	423.63	$4^+,5^+$
995.53		761.0 *1*	234.53	3^-
1003.86		841.3 *1*	162.56	$2^-,3^-$
1004.29		678.2 *1*	326.09	1^-
1014.65		610.7 *1*	403.79	$3^-,4^-$
		802.0 *1*	212.80	4^-
1017.84		694.0 *1*	323.83	1^-
1018.53		784.0 *1*	234.53	3^-
1025.05		675.8 *1*	349.17	2^-
		790.6 *1*	234.53	3^-
1045.74		721.9 *1*	323.83	1^-
1046.28		248.4 *1*	797.89	
		332.3 *1*	713.89	
		495.4 *1*	550.79	
		658.2 *1*	388.21	3^+
1046.28		811.8 *1*	234.53	3^-
1053.25		586.2 *1*	467.09	$3^+,4^+$
		629.6 *1*	423.63	$4^+,5^+$
1053.30		765.2 *1*	288.06	2^-
		885.9 *1*	167.43	$1^-,2^-$
1053.31		683.2 *1*	370.11	$(6,7)^+$
1056.24		484.8 *1*	571.40	(4^-)
		652.5 *1*	403.79	$3^-,4^-$
		843.6[&] *1*	212.80	4^-
1058.46		895.9 *1*	162.56	$2^-,3^-$
1065.92		515.2 *1*	550.79	
		547.8 *1*	518.02	$4^+,5^+$
		641.9[&] *1*	423.63	$4^+,5^+$
		677.7 *1*	388.21	3^+
		717.6 *1*	348.37	$5^+,6^+$
1070.79		667.0 *1*	403.79	$3^-,4^-$
1074.85		607.8 *1*	467.09	$3^+,4^+$
		686.6 *1*	388.21	3^+
1088.90		876.1 *1*	212.80	4^-
1093.46		217.2 *1*	876.23	
		575.6 *1*	518.02	$4^+,5^+$
		626.4 *1*	467.09	$3^+,4^+$
		669.7 *1*	423.63	$4^+,5^+$
1095.22		788.0 *1*	307.22	2^-
		807.2[&] *1*	288.06	2^-
1096.34		772.5 *1*	323.83	1^-
1100.90		751.7 *1*	349.17	2^-
		793.7 *1*	307.22	2^-
1107.76		393.9 *1*	713.89	
		640.7 *1*	467.09	$3^+,4^+$
		719.5 *1*	388.21	3^+
1120.50		127.1[&] *1*	993.42	
		312.7 *1*	807.81	
		569.8[&] *1*	550.79	
		697.2[&] *1*	423.63	$4^+,5^+$
1121.46		958.9 *1*	162.56	$2^-,3^-$
1134.39		730.6 *1*	403.79	$3^-,4^-$
1140.39		673.3 *1*	467.09	$3^+,4^+$
1146.93		912.4 *1*	234.53	3^-
1152.90		749.0 *1*	403.79	$3^-,4^-$
		940.2 *1*	212.80	4^-
1156.60		585.2 *1*	571.40	(4^-)
1174.92		916.3 *1*	258.61	$1^-,2^-$
1188.79		721.7 *1*	467.09	$3^+,4^+$
1196.20		624.8 *1*	571.40	(4^-)
1198.00		774.4 *1*	423.63	$4^+,5^+$
		849.6 *1*	348.37	$5^+,6^+$
1203.41		896.2 *1*	307.22	2^-
		990.6 *1*	212.80	4^-
1207.23		972.7 *1*	234.53	3^-
1213.55		499.7 *1*	713.89	
		789.9 *1*	423.63	$4^+,5^+$
		825.3 *1*	388.21	3^+
1229.19		825.4 *1*	403.79	$3^-,4^-$

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^{196}Pt(d,2nγ),(p,nγ) 2000Gr32 (continued)

γ(^{196}Au) (continued)

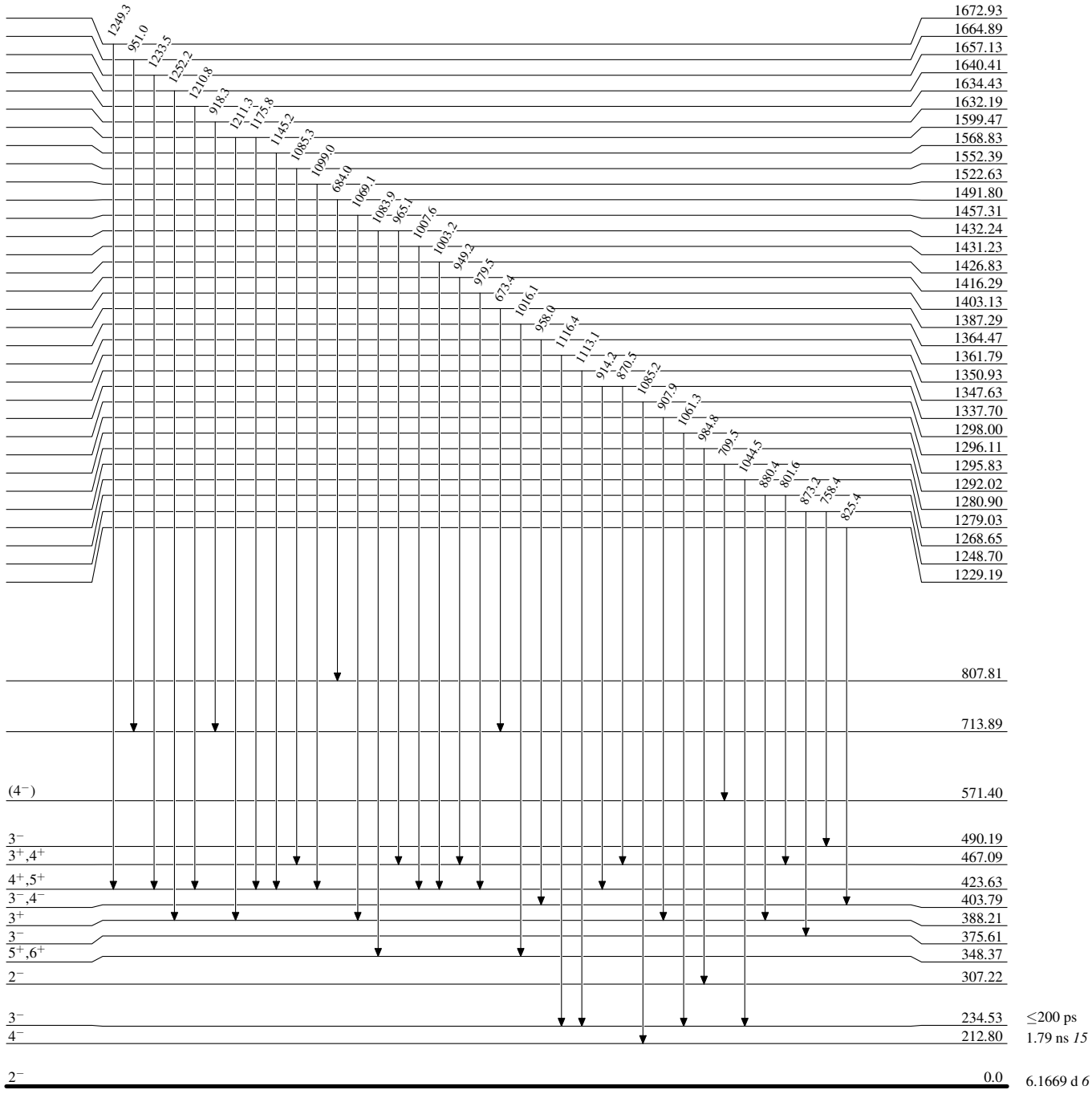
E_i(level)	J_i^π	E_γ[#]	E_f	J_f^π	E_i(level)	J_i^π	E_γ[#]	E_f	J_f^π	E_i(level)	E_γ[#]	E_f	J_f^π
1248.70		758.4 *1*	490.19	3^-	1347.63		1113.1 *1*	234.53	3^-	1491.80	684.0 *1*	807.81	
		873.2 *1*	375.61	3^-	1350.93		1116.4 *1*	234.53	3^-	1522.63	1099.0 *1*	423.63	$4^+,5^+$
1268.65		801.6 *1*	467.09	$3^+,4^+$	1361.79		958.0 *1*	403.79	$3^-,4^-$	1552.39	1085.3 *1*	467.09	$3^+,4^+$
		880.4 *1*	388.21	3^+	1364.47		1016.1 *1*	348.37	$5^+,6^+$	1568.83	1145.2 *1*	423.63	$4^+,5^+$
1279.03		1044.5 *1*	234.53	3^-	1387.29		673.4 *1*	713.89		1599.47	1175.8 *1*	423.63	$4^+,5^+$
1280.90		709.5 *1*	571.40	(4^-)	1403.13		979.5 *1*	423.63	$4^+,5^+$		1211.3 *1*	388.21	3^+
1292.02		984.8 *1*	307.22	2^-	1416.29		949.2 *1*	467.09	$3^+,4^+$	1632.19	918.3 *1*	713.89	
1295.83		1061.3 *1*	234.53	3^-	1426.83		1003.2 *1*	423.63	$4^+,5^+$	1634.43	1210.8 *1*	423.63	$4^+,5^+$
1296.11		907.9 *1*	388.21	3^+	1431.23		1007.6 *1*	423.63	$4^+,5^+$	1640.41	1252.2 *1*	388.21	3^+
1298.00		1085.2 *1*	212.80	4^-	1432.24		965.1 *1*	467.09	$3^+,4^+$	1657.13	1233.5 *1*	423.63	$4^+,5^+$
1337.70		870.5 *1*	467.09	$3^+,4^+$			1083.9 *1*	348.37	$5^+,6^+$	1664.89	951.0 *1*	713.89	
		914.2 *1*	423.63	$4^+,5^+$	1457.31		1069.1 *1*	388.21	3^+	1672.93	1249.3 *1*	423.63	$4^+,5^+$

† Uncertainty is 30% (2000Gr32).
‡ Estimated γ ray intensities from total intensities assuming M1 multipolarity for the 31.6 keV transition and E2 multipolarity for the 18.1 and 50.3 keV transitions.
# Δ Eγ=0.1keV (2000Gr32).
@ From singles ce and γ ray spectra in (d,2nγ).
& Placement of transition in the level scheme is uncertain.

^{196}Pt(d,2nγ),(p,nγ) 2000Gr32

Level Scheme

Intensities: Relative photon branching from each level

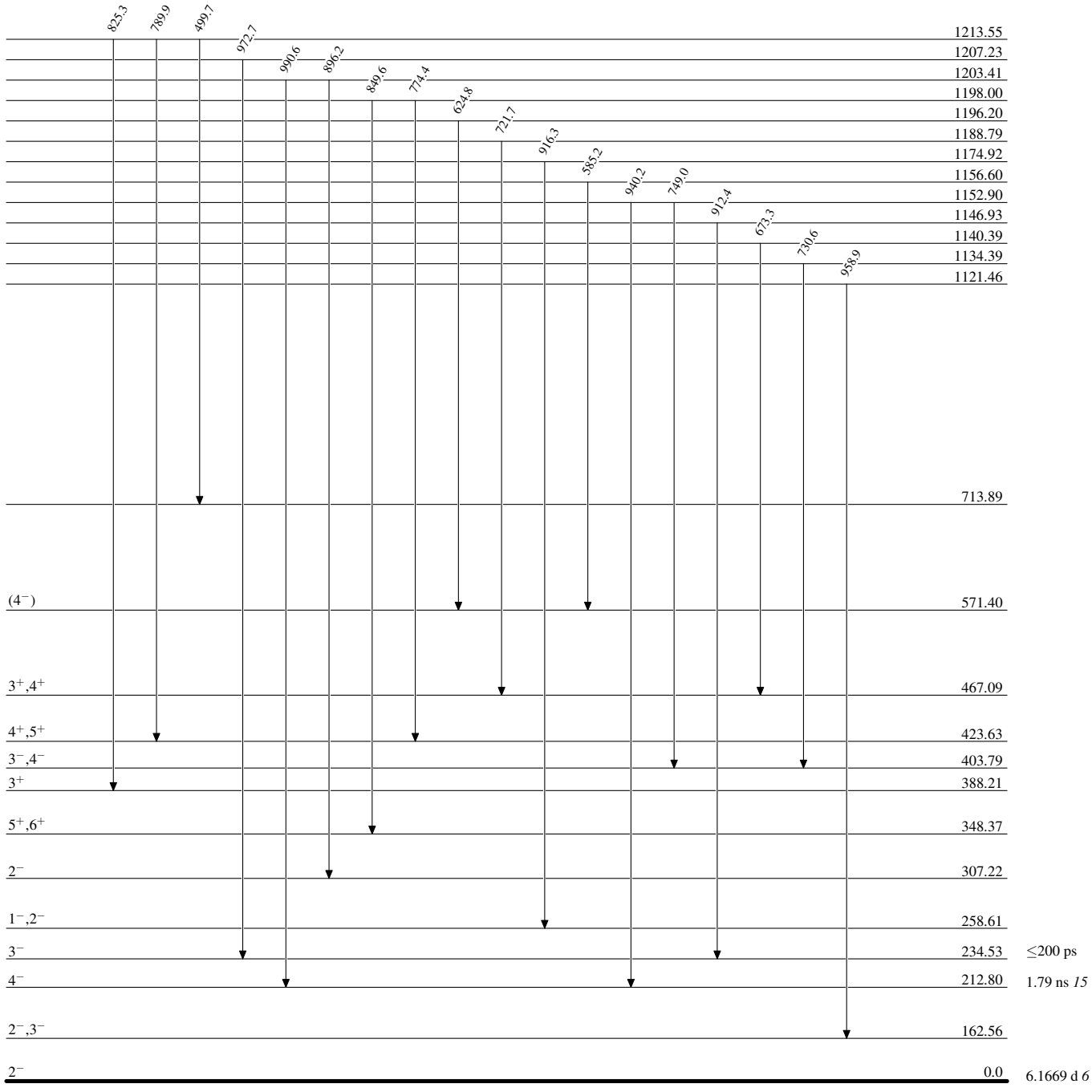


$^{196}_{79}Au_{117}$

^{196}Pt(d,2nγ),(p,nγ) 2000Gr32

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{196}_{79}Au_{117}$

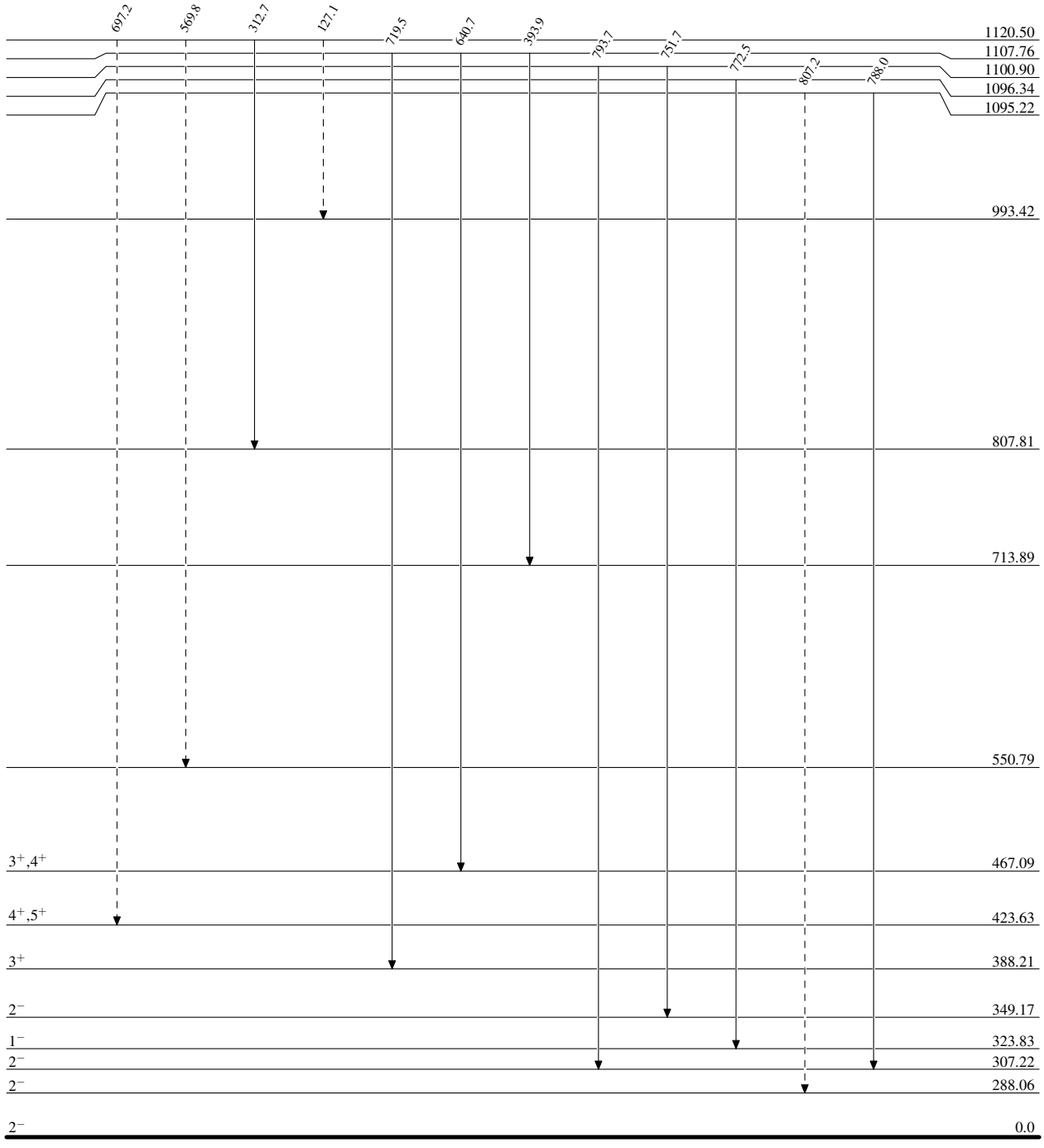
^{196}Pt(d,2nγ),(p,nγ) 2000Gr32

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



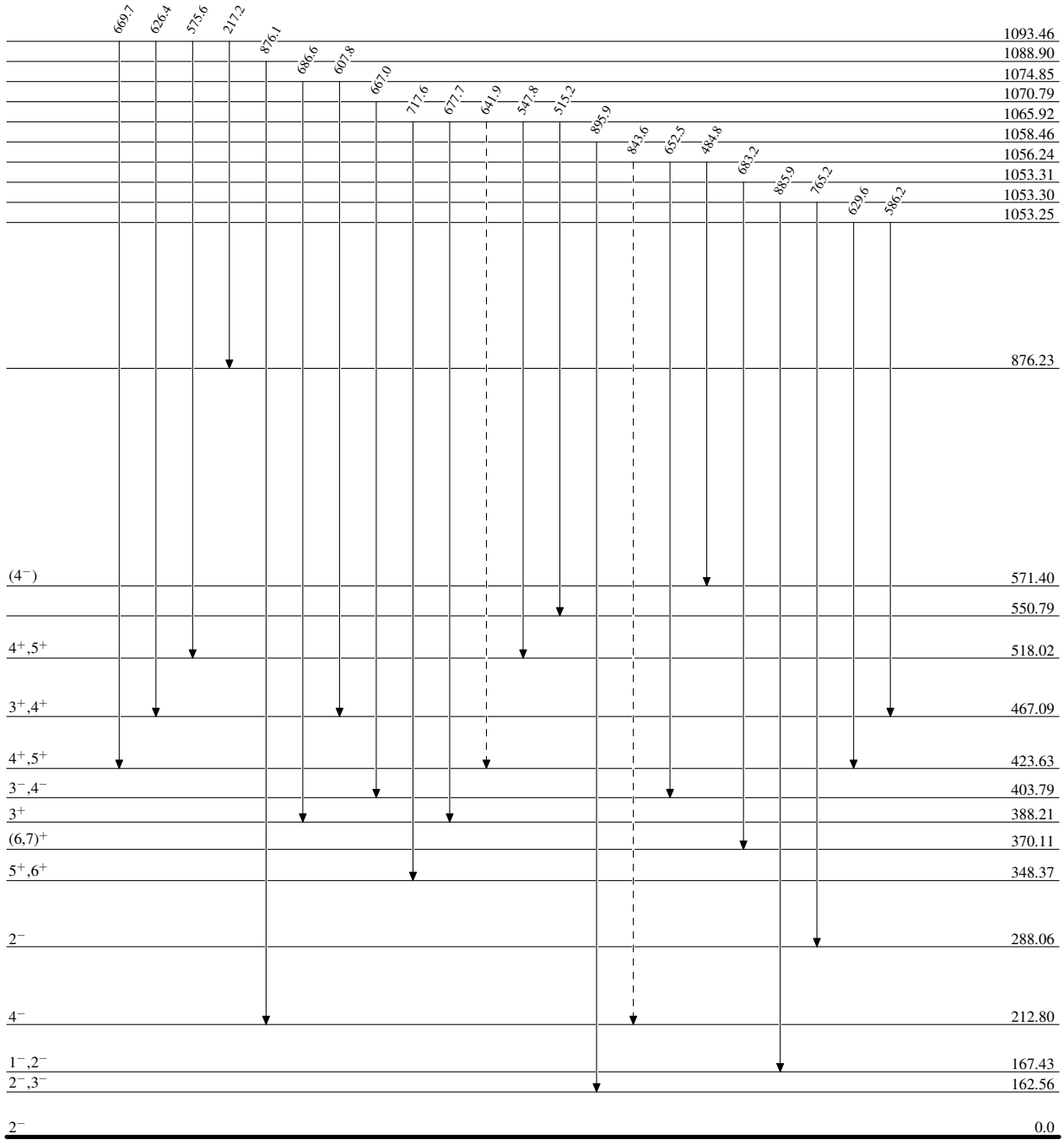
$^{196}_{79}Au_{117}$

^{196}Pt(d,2nγ),(p,nγ) 2000Gr32 Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

- - - - - - ► γ Decay (Uncertain)



$^{196}_{79}Au_{117}$

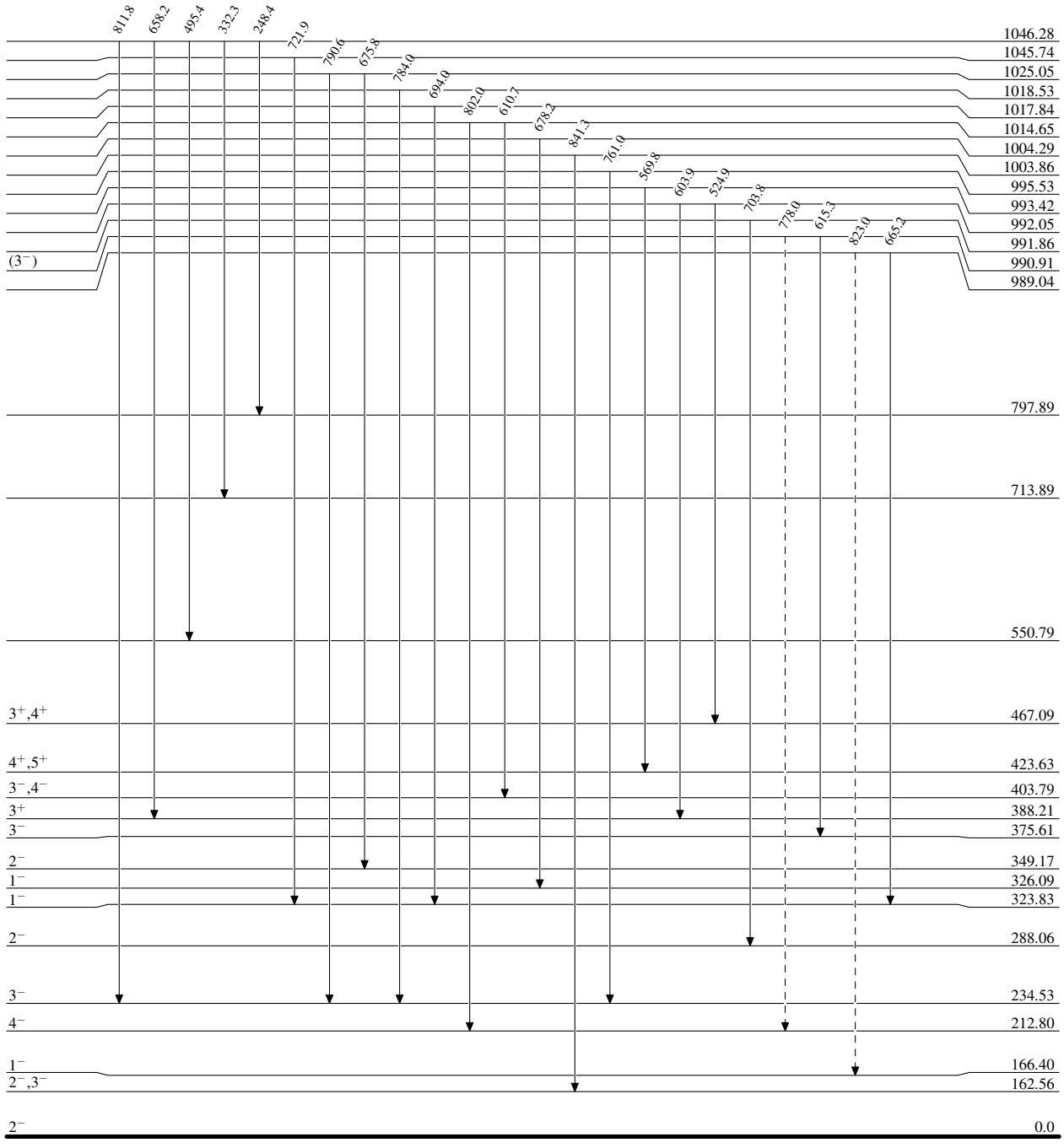
^{196}Pt(d,2nγ),(p,nγ) 2000Gr32

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



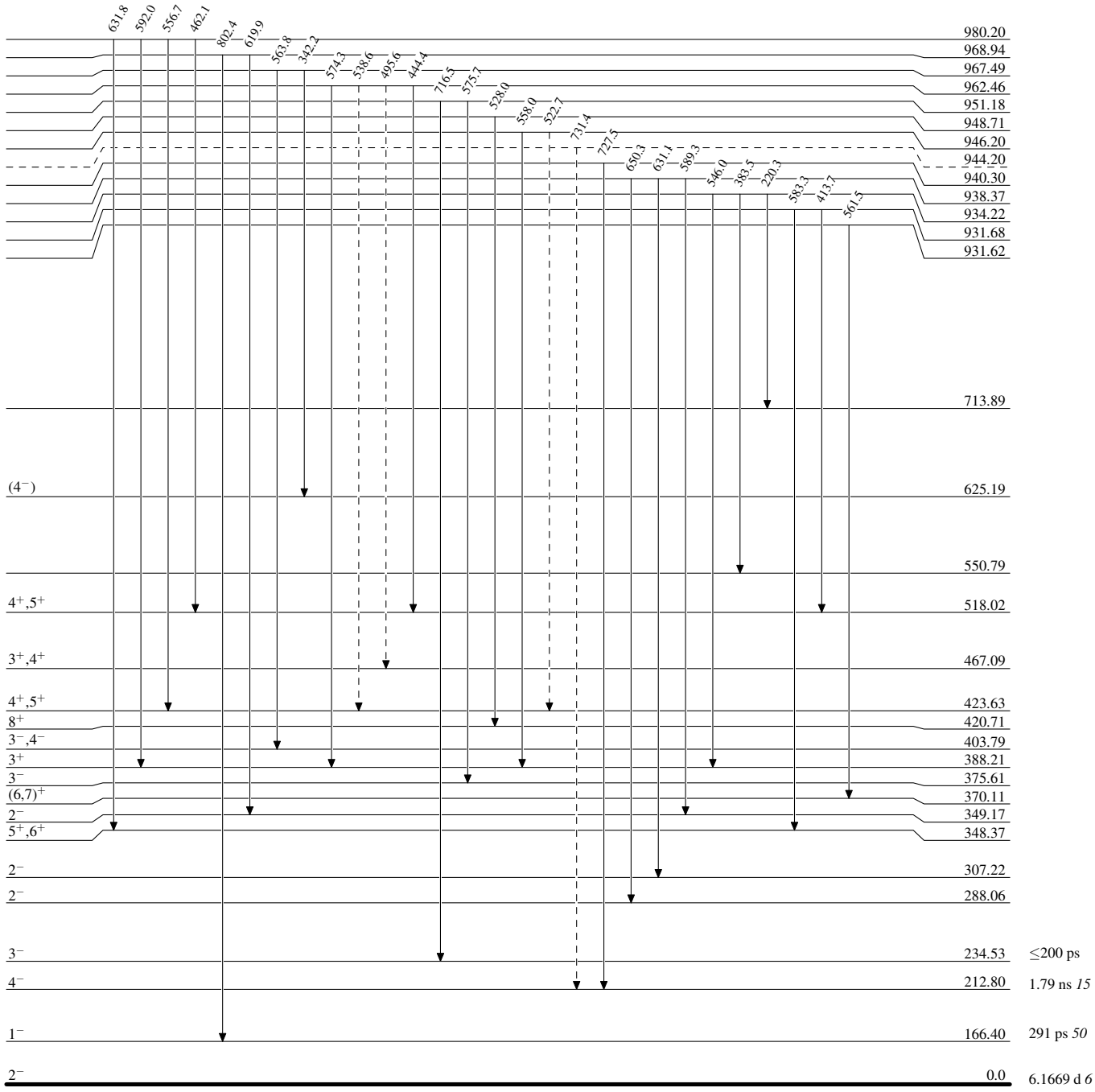
$^{196}_{79}Au_{117}$

^{196}Pt(d,2nγ),(p,nγ) 2000Gr32 Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

- - - - - - ► γ Decay (Uncertain)



$^{196}_{79}Au_{117}$

^{196}Pt(d,2nγ),(p,nγ) 2000Gr32 Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

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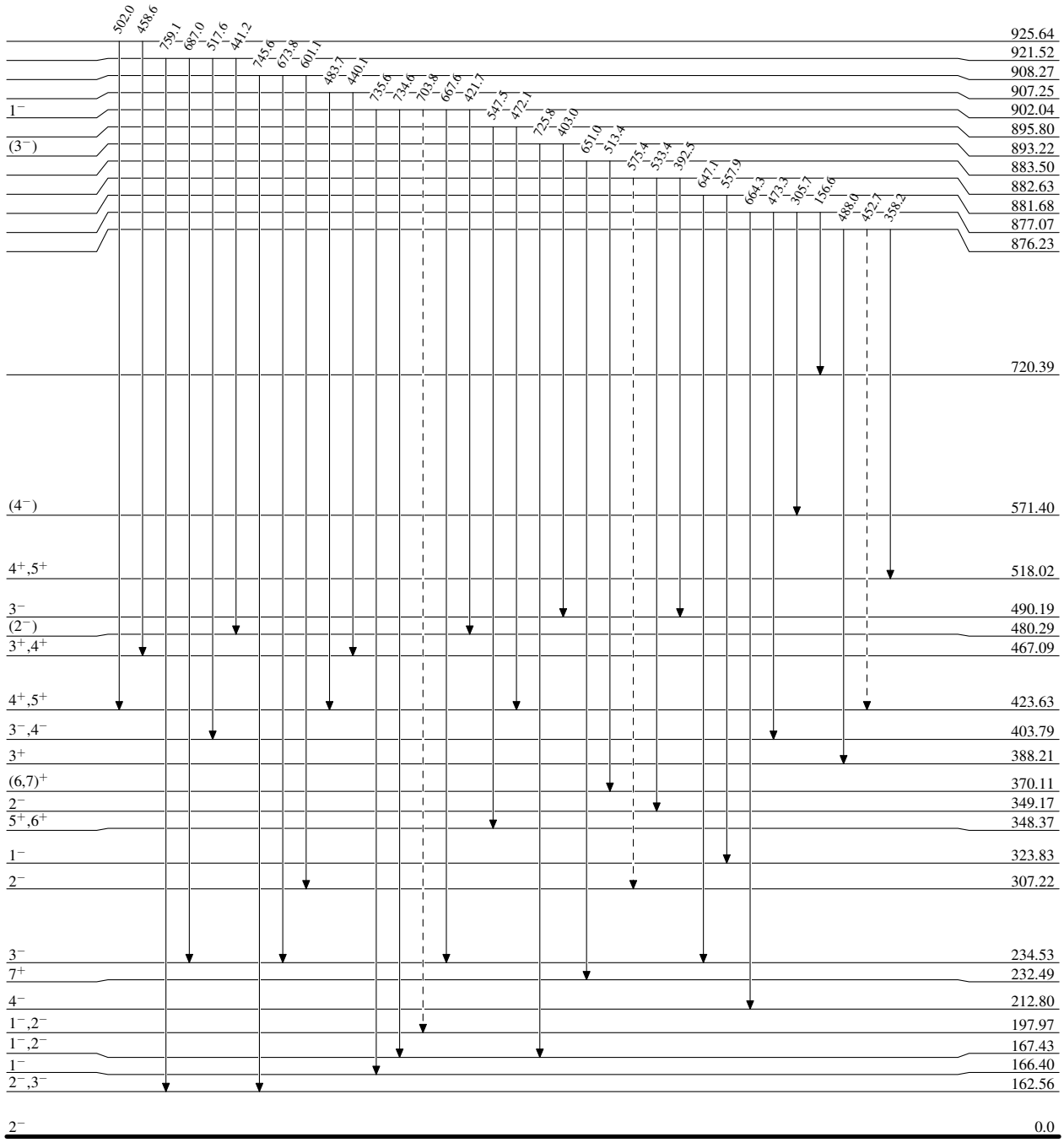

$^{196}_{79}Au_{117}$

^{196}Pt(d,2nγ),(p,nγ) 2000Gr32 Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

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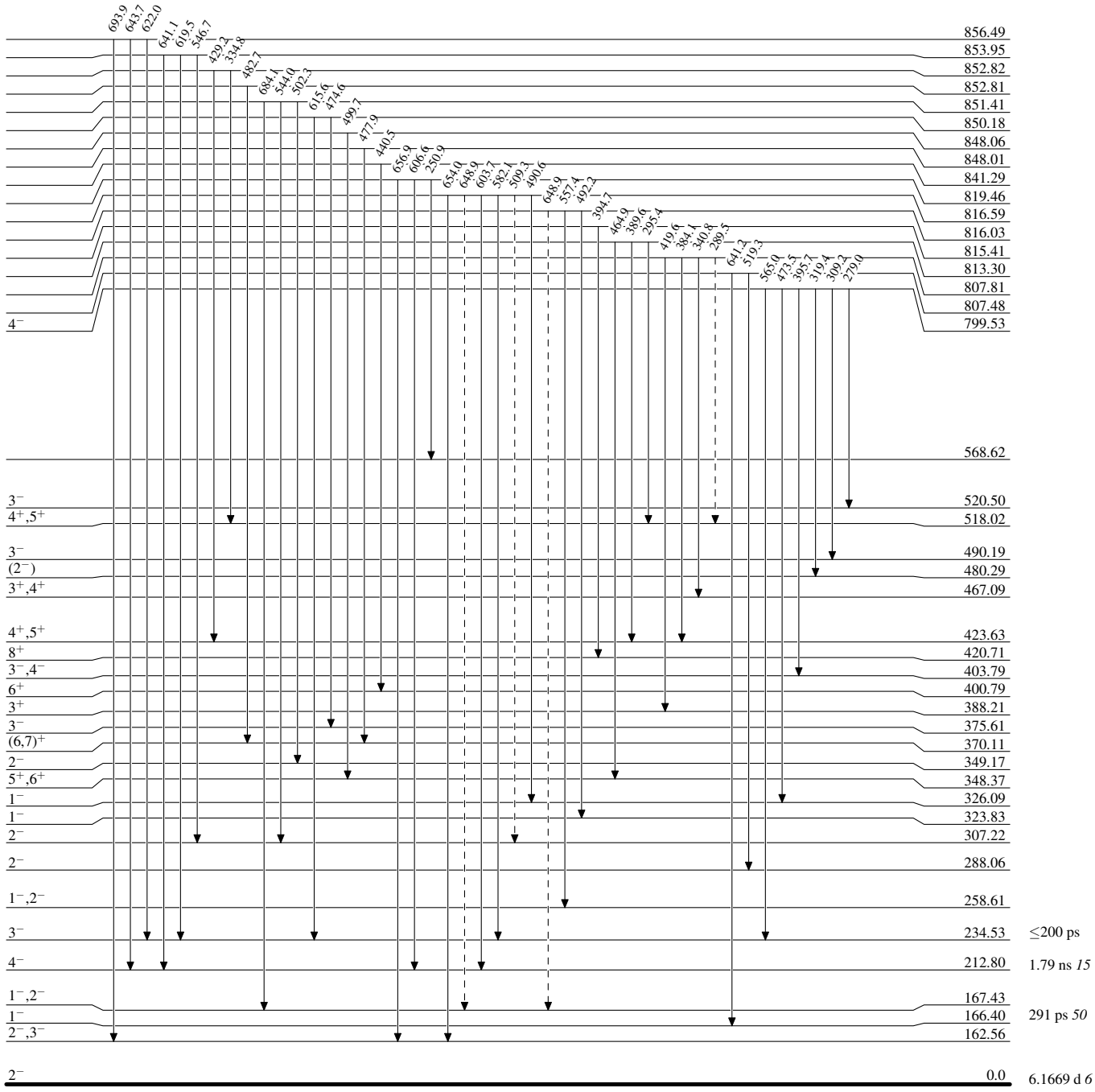

$^{196}_{79}Au_{117}$

^{196}Pt(d,2nγ),(p,nγ) 2000Gr32 Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

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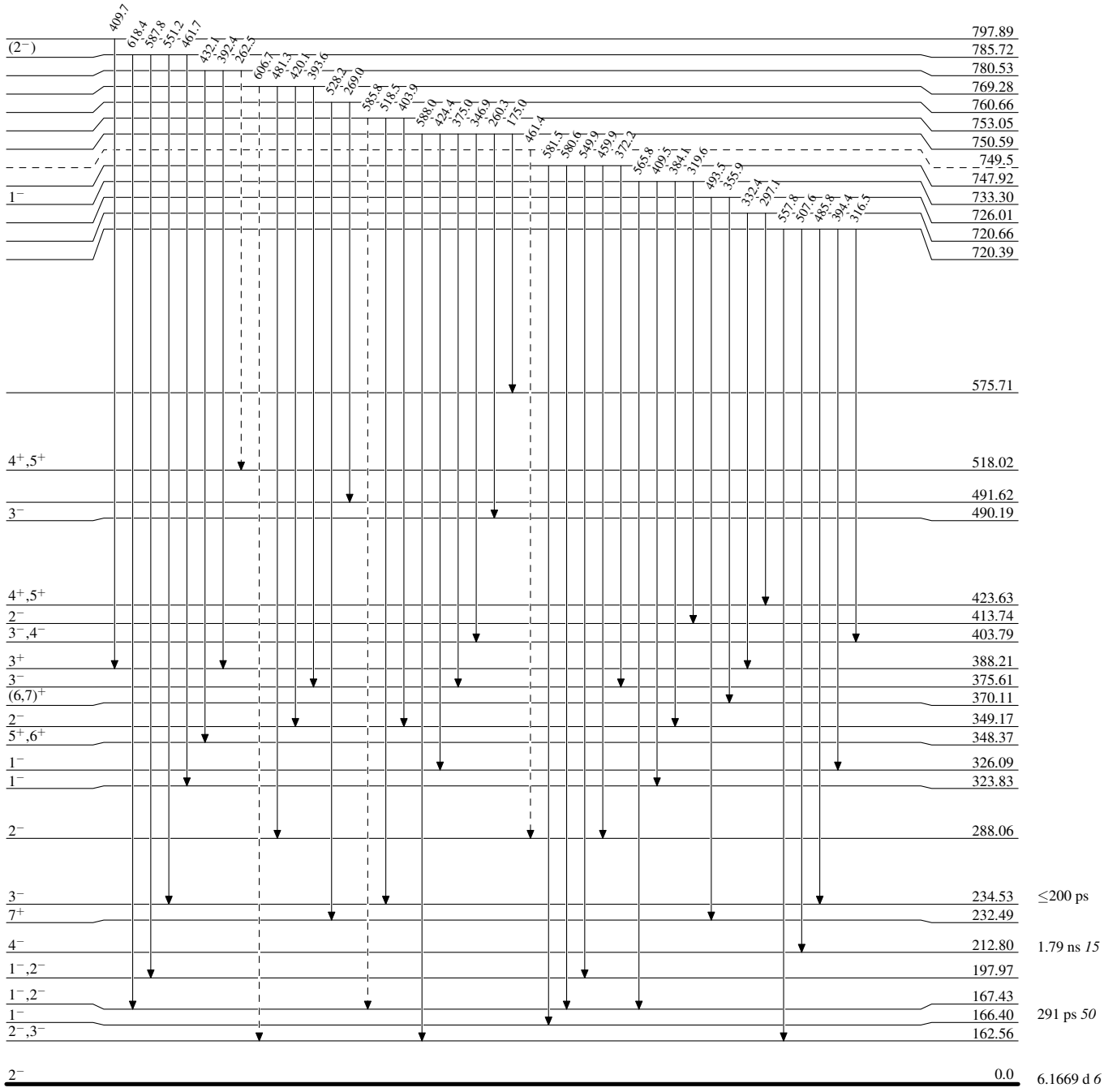


$^{196}_{79}Au_{117}$

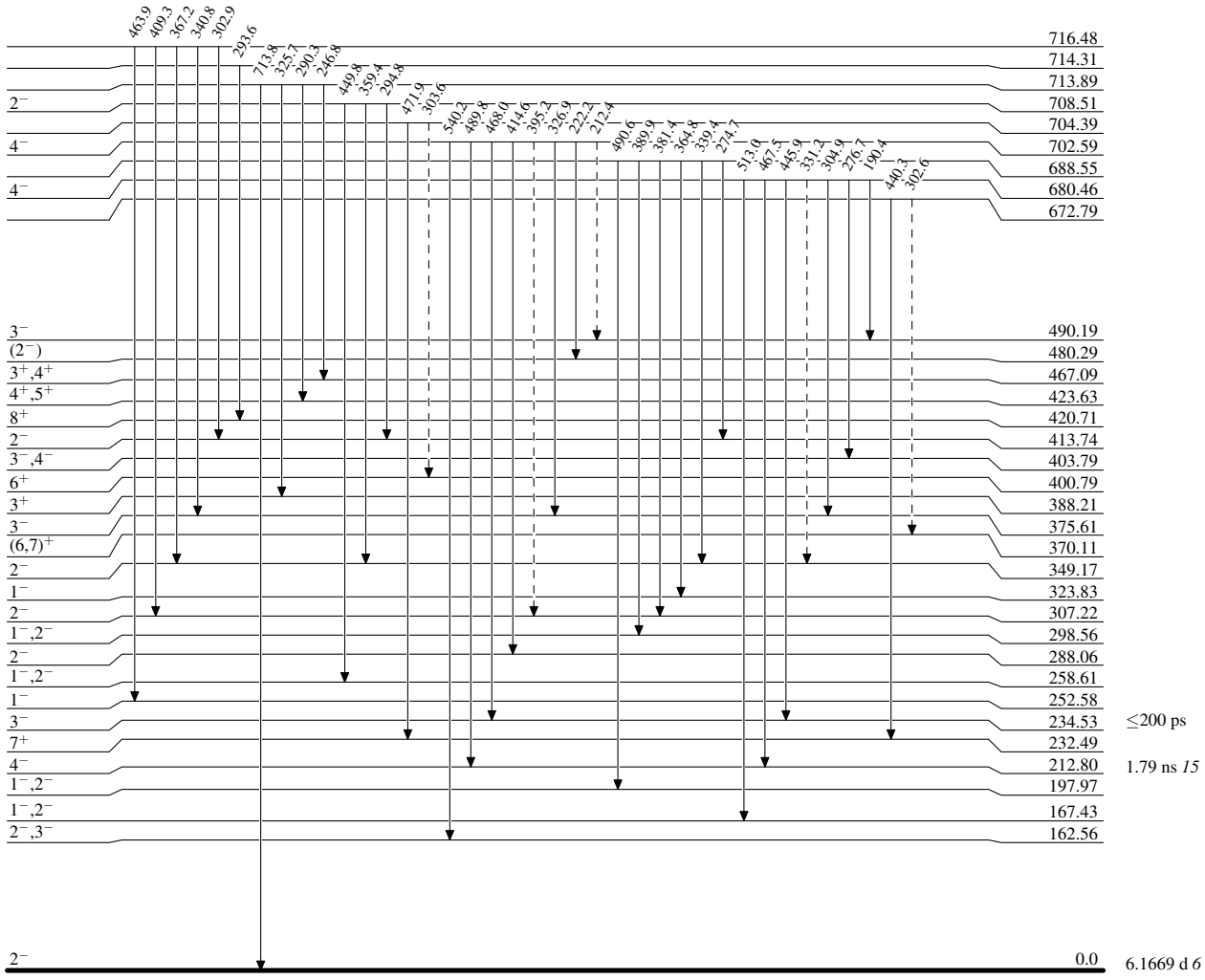
^{196}Pt(d,2nγ),(p,nγ) 2000Gr32

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



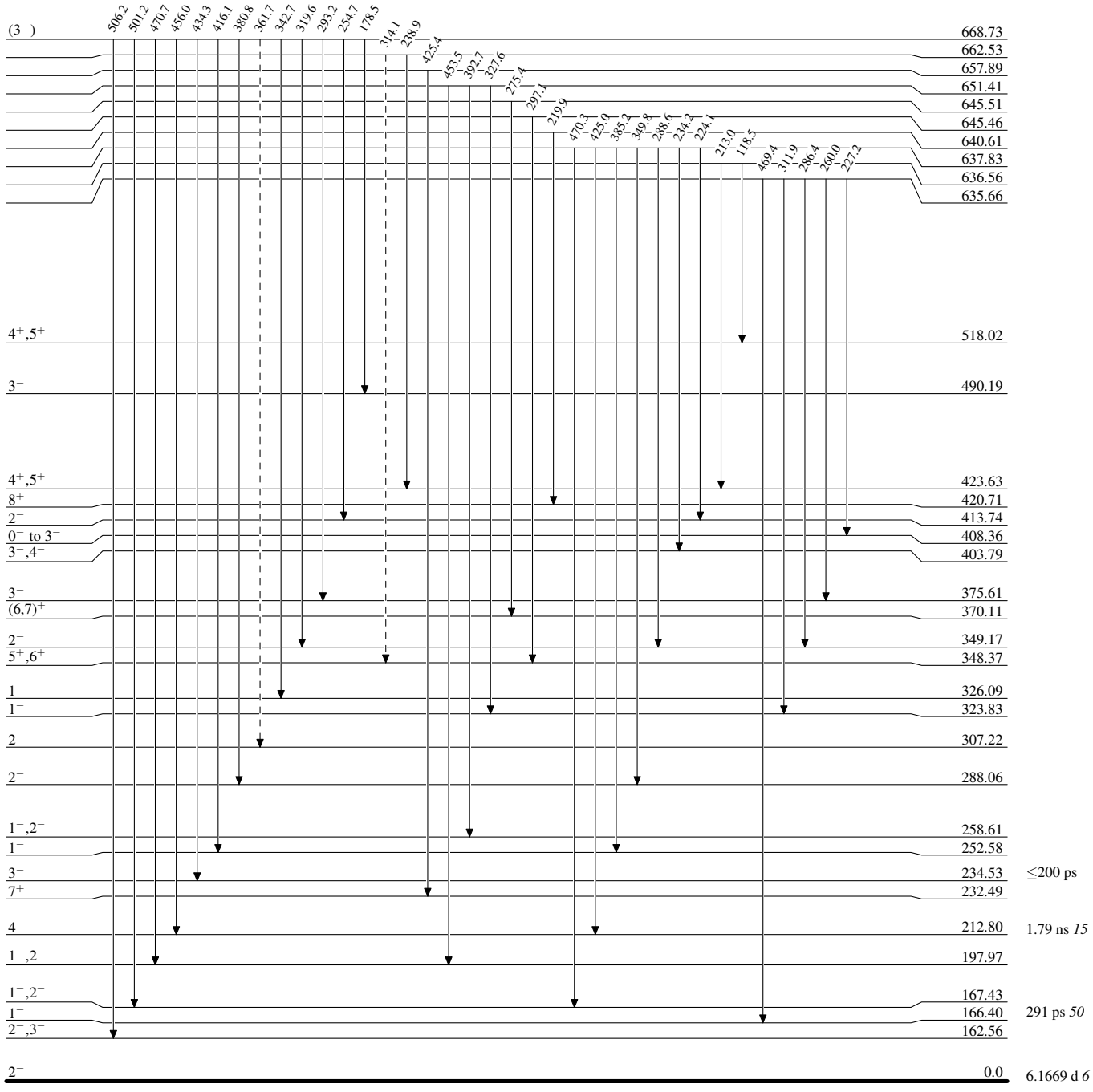
$^{196}_{79}Au_{117}$

^{196}Pt(d,2nγ),(p,nγ) 2000Gr32 Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

– – – – – – ► γ Decay (Uncertain)



$^{196}_{79}Au_{117}$

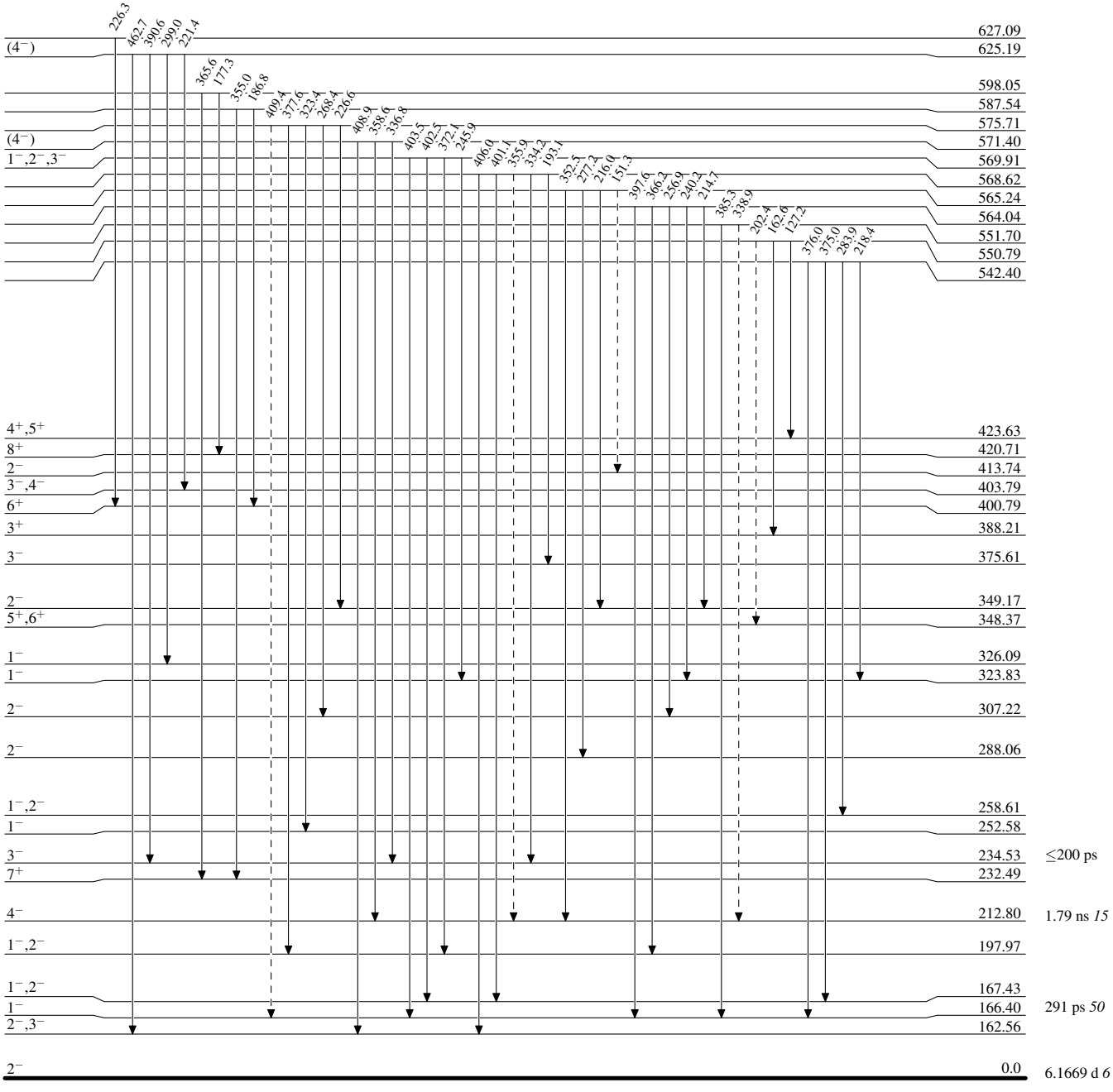
^{196}Pt(d,2nγ),(p,nγ) 2000Gr32

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

– – – – – – ► γ Decay (Uncertain)



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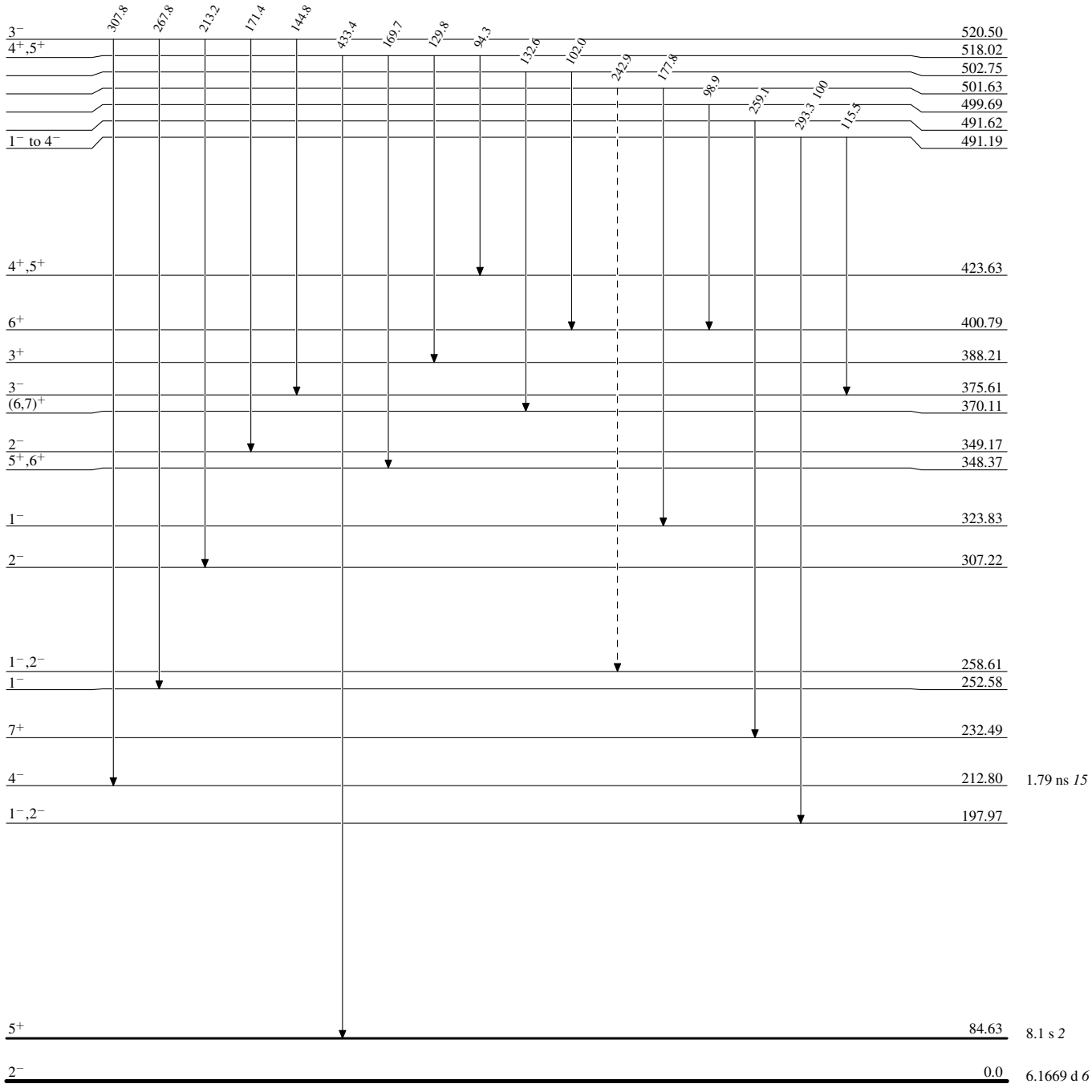
Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

- - - - - - ► γ Decay (Uncertain)



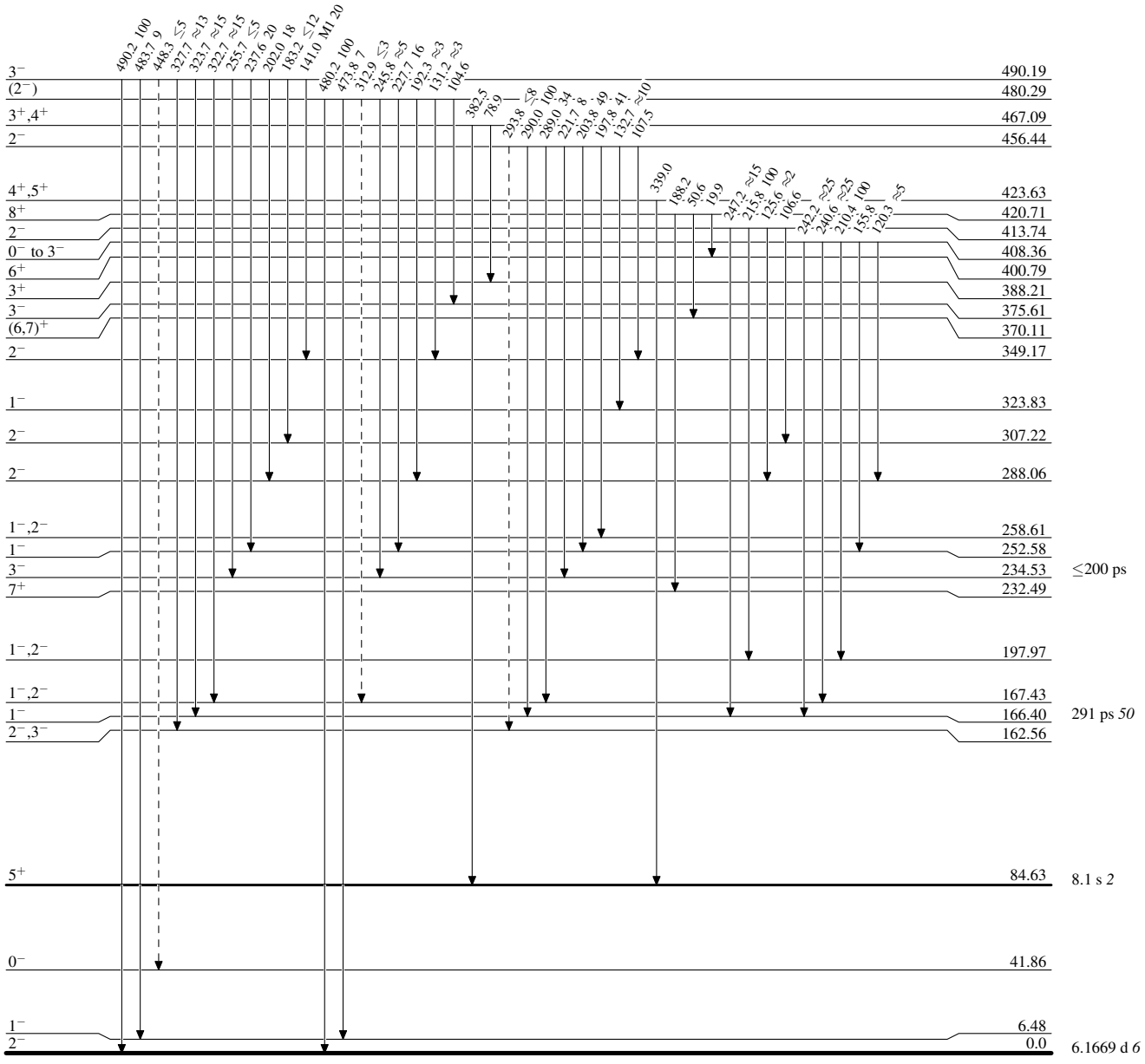
$^{196}_{79}Au_{117}$

^{196}Pt(d,2nγ),(p,nγ) 2000Gr32 Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{196}_{79}Au_{117}$

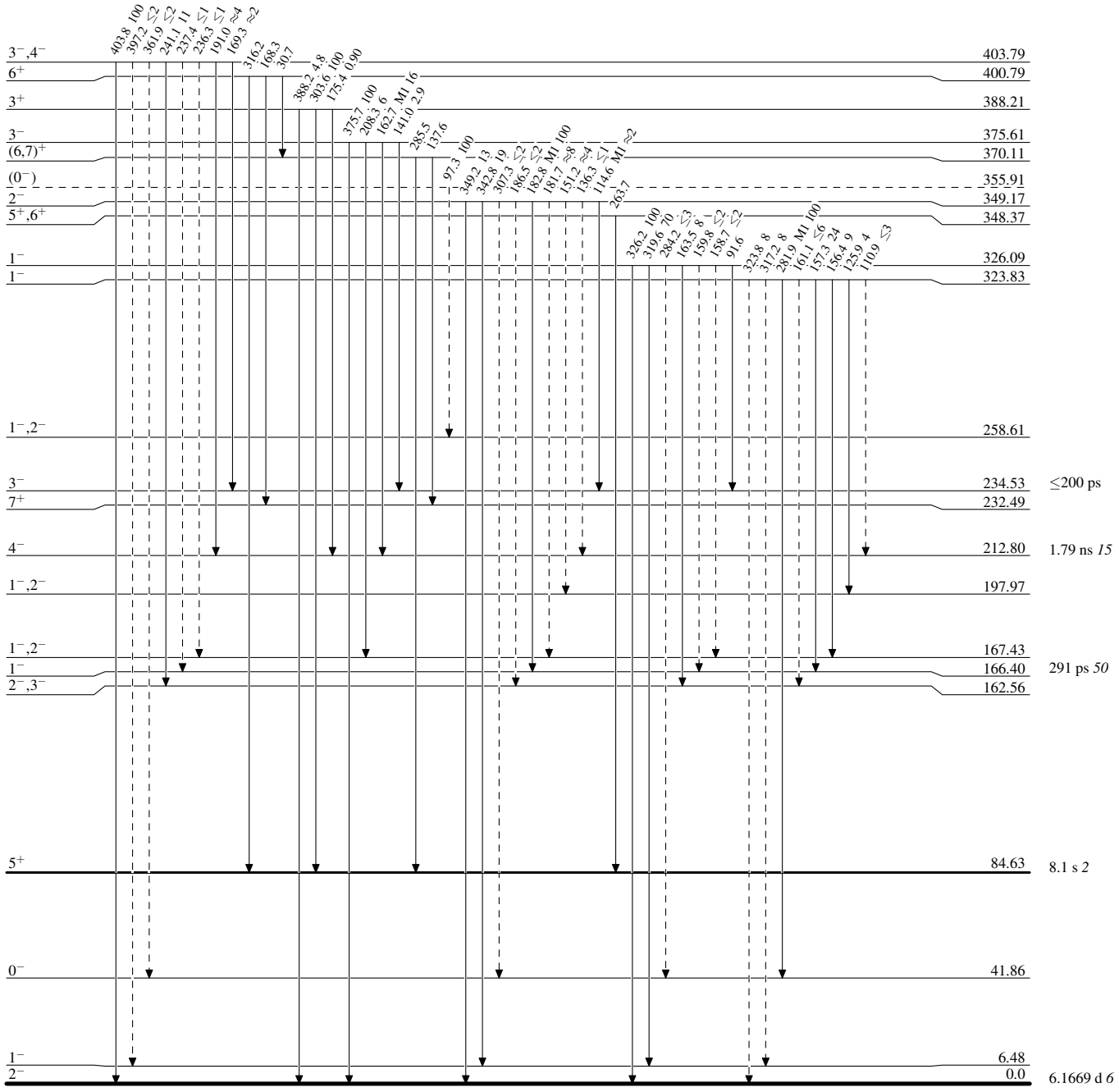
^{196}Pt(d,2nγ),(p,nγ) 2000Gr32

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{196}_{79}Au_{117}$

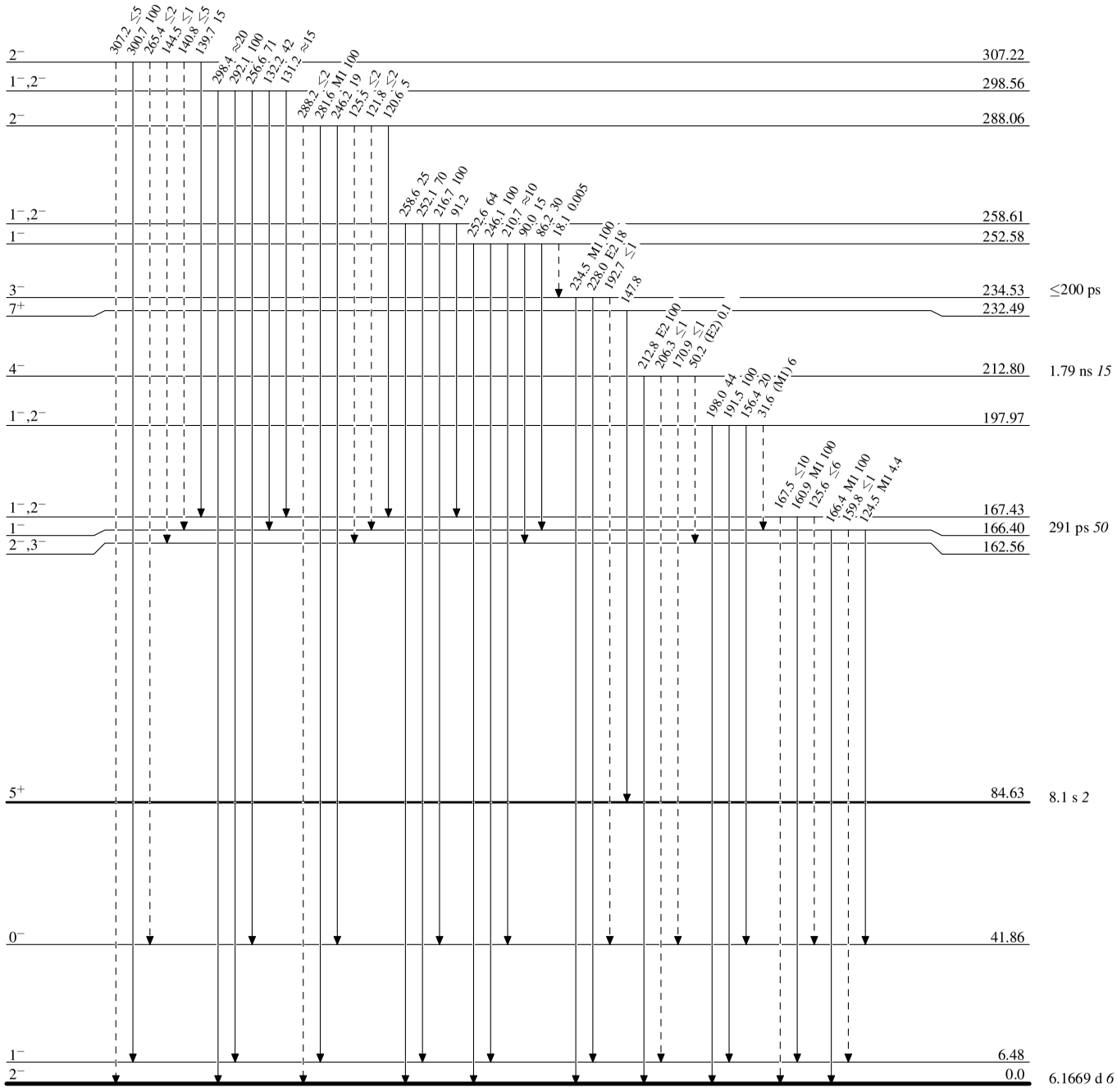
^{196}Pt(d,2nγ),(p,nγ) 2000Gr32

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

– – – – – – ► γ Decay (Uncertain)



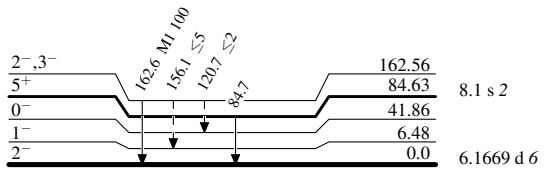
$^{196}_{79}Au_{117}$

^{196}Pt(d,2nγ),(p,nγ) 2000Gr32

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{196}_{79}Au_{117}$