^{139}La(^{30}Si,3nγ) 2000Le25

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 109, 1103 (2008)	1-Mar-2008

E=120 MeV; Tsukuba Ball consisting of 10 BGO Compton-suppressed HPGE detectors and one LEPS detector; measured Eγ, $\gamma\gamma$ coin, DCO ratios (unenumerated).

^{166}Lu Levels

E(level)[†]	Jπ[‡]	E(level)[†]	Jπ[‡]	E(level)[†]	Jπ[‡]	E(level)[†]	Jπ[‡]
0.0	6$^-$[#]	587.6[d]	(10$^-$)	1433.9[c]	(15$^-$)	2739.7[&]	(17$^+$)
83.5	(5,6,7)$^+$[#]	591.3[&]	(9$^+$)	1512.4[&]	(13$^+$)	2799.6[a]	(20$^-$)
144.8	(6,7,8)$^-$[#]	592.1[c]	(11$^-$)	1574.4[a]	(16$^-$)	3069.7[@]	(18$^+$)
189.8[@]	(6$^+$)	694.3[a]	(12$^-$)	1799.6[@]	(14$^+$)	3098.9[d]	(20$^-$)
196.0[c]	(7$^-$)	786.8[@]	(10$^+$)	1835.0[d]	(16$^-$)	3172.8[b] *7*	(21$^-$)
287.0[a]	(8$^-$)	867.5[b]	(13$^-$)	1856.3[b]	(17$^-$)	3431.1[&] *7*	(19$^+$)
290.3[&]	(7$^+$)	907.2[d]	(12$^-$)	1991.6[c]	(17$^-$)	3499.1[a] *7*	(22$^-$)
336.1[c]	(9$^-$)	962.1[c]	(13$^-$)	2097.0[&]	(15$^+$)	3773.9[@] *8*	(20$^+$)
340.8[b]	(9$^-$)	1004.9[&]	(11$^+$)	2151.5[a]	(18$^-$)	3820.6[d] *9*	(22$^-$)
358.4[d]	(8$^-$)	1083.0[a]	(14$^-$)	2417.0[@]	(16$^+$)	3892.3[b] *7*	(23$^-$)
425.6[@]	(8$^+$)	1250.8[@]	(12$^+$)	2430.8[d]	(18$^-$)	4167.3[&] *8*	(21$^+$)
426.2[a]	(10$^-$)	1312.5[b]	(15$^-$)	2482.6[b]	(19$^-$)	4248.2[a] *7*	(24$^-$)
538.8[b]	(11$^-$)	1324.1[d]	(14$^-$)	2616.0[c]	(19$^-$)	4673.1[b] *8*	(25$^-$)

[†] From least-squares fit to Eγ, assigning equal weight to all data.
[‡] Authors′ values.
[#] From Adopted Levels.
[@] Band(A): K$^\pi$=6$^+$, α=0 (π 7/2[404])+(ν 5/2[642]) band.
[&] Band(a): K$^\pi$=6$^+$, α=1 (π 7/2[404])+(ν 5/2[642]) band.
[a] Band(B): K$^\pi$=7$^-$, α=0 (π 9/2[514])+(ν 5/2[642]) band. J values are based on energy systematics, the alignment additivity rule, and systematics of signature inversion for low-lying states for yrast bands In odd-odd Lu isotopes; they are one unit higher than suggested In an earlier (^{12}C,5nγ) study (1992Ho02).
[b] Band(b): K$^\pi$=7$^-$, α=1 (π 9/2[514])+(ν 5/2[642]) band. See comment on signature partner band.
[c] Band(C): π=−, α=1 (π 1/2[541])(ν 5/2[642]) band. Note that this band assignment differs from that In Adopted Levels.
[d] Band(D): π=−, α=0 (π 1/2[541])(ν 5/2[642]) band.

γ(^{166}Lu)

Eγ	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Eγ	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
45	189.8	(6$^+$)	144.8	(6,7,8)$^-$	142.2	287.0	(8$^-$)	144.8	(6,7,8)$^-$
54.0	340.8	(9$^-$)	287.0	(8$^-$)	155.5	694.3	(12$^-$)	538.8	(11$^-$)
61.3	144.8	(6,7,8)$^-$	83.5	(5,6,7)$^+$	162.6	358.4	(8$^-$)	196.0	(7$^-$)
83.5	83.5	(5,6,7)$^+$	0.0	6$^-$	165.7	591.3	(9$^+$)	425.6	(8$^+$)
85.6	426.2	(10$^-$)	340.8	(9$^-$)	173.2	867.5	(13$^-$)	694.3	(12$^-$)
100.5	290.3	(7$^+$)	189.8	(6$^+$)	195.5	786.8	(10$^+$)	591.3	(9$^+$)
112.5	196.0	(7$^-$)	83.5	(5,6,7)$^+$	196.1	340.8	(9$^-$)	144.8	(6,7,8)$^-$
112.5	538.8	(11$^-$)	426.2	(10$^-$)	198.0	538.8	(11$^-$)	340.8	(9$^-$)
135.3	425.6	(8$^+$)	290.3	(7$^+$)	203.5	287.0	(8$^-$)	83.5	(5,6,7)$^+$
139.0	426.2	(10$^-$)	287.0	(8$^-$)	215.5	1083.0	(14$^-$)	867.5	(13$^-$)
139.9	336.1	(9$^-$)	196.0	(7$^-$)	218.1	1004.9	(11$^+$)	786.8	(10$^+$)

Continued on next page (footnotes at end of table)

^{139}La(^{30}Si,3nγ) 2000Le25 (continued)

γ(^{166}Lu) (continued)

E_γ	E_i(level)	J_i^π	E_f	J_f^π	E_γ	E_i(level)	J_i^π	E_f	J_f^π
229.3	587.6	(10^-)	358.4	(8^-)	416.9	1324.1	(14^-)	907.2	(12^-)
229.5	1312.5	(15^-)	1083.0	(14^-)	445.0	1312.5	(15^-)	867.5	(13^-)
235.8	425.6	(8^+)	189.8	(6^+)	464.0	1250.8	(12^+)	786.8	(10^+)
245.9	1250.8	(12^+)	1004.9	(11^+)	471.8	1433.9	(15^-)	962.1	(13^-)
251.3	587.6	(10^-)	336.1	(9^-)	491.4	1574.4	(16^-)	1083.0	(14^-)
256.0	592.1	(11^-)	336.1	(9^-)	507.5	1512.4	(13^+)	1004.9	(11^+)
261.6	1512.4	(13^+)	1250.8	(12^+)	510.9	1835.0	(16^-)	1324.1	(14^-)
261.9	1574.4	(16^-)	1312.5	(15^-)	543.8	1856.3	(17^-)	1312.5	(15^-)
268.0	694.3	(12^-)	426.2	(10^-)	548.8	1799.6	(14^+)	1250.8	(12^+)
281.9	1856.3	(17^-)	1574.4	(16^-)	557.9	1991.6	(17^-)	1433.9	(15^-)
287.2	1799.6	(14^+)	1512.4	(13^+)	577.1	2151.5	(18^-)	1574.4	(16^-)
295.2	2151.5	(18^-)	1856.3	(17^-)	584.6	2097.0	(15^+)	1512.4	(13^+)
297.4	2097.0	(15^+)	1799.6	(14^+)	595.6	2430.8	(18^-)	1835.0	(16^-)
301.0	591.3	(9^+)	290.3	(7^+)	617.4	2417.0	(16^+)	1799.6	(14^+)
315.5[†‡]	907.2	(12^-)	592.1	(11^-)	624.4	2616.0	(19^-)	1991.6	(17^-)
317.0	2799.6	(20^-)	2482.6	(19^-)	626.3	2482.6	(19^-)	1856.3	(17^-)
319.6	907.2	(12^-)	587.6	(10^-)	642.7	2739.7	(17^+)	2097.0	(15^+)
320.0	2417.0	(16^+)	2097.0	(15^+)	648.1	2799.6	(20^-)	2151.5	(18^-)
322.7	2739.7	(17^+)	2417.0	(16^+)	652.7	3069.7	(18^+)	2417.0	(16^+)
326.3	3499.1	(22^-)	3172.8	(21^-)	668.1	3098.9	(20^-)	2430.8	(18^-)
328.7	867.5	(13^-)	538.8	(11^-)	690.2	3172.8	(21^-)	2482.6	(19^-)
330.0	3069.7	(18^+)	2739.7	(17^+)	691.4	3431.1	(19^+)	2739.7	(17^+)
331.1	2482.6	(19^-)	2151.5	(18^-)	699.5	3499.1	(22^-)	2799.6	(20^-)
361.2	786.8	(10^+)	425.6	(8^+)	704.2	3773.9	(20^+)	3069.7	(18^+)
361.4	3431.1	(19^+)	3069.7	(18^+)	719.5	3892.3	(23^-)	3172.8	(21^-)
370.0	962.1	(13^-)	592.1	(11^-)	721.7	3820.6	(22^-)	3098.9	(20^-)
373.2	3172.8	(21^-)	2799.6	(20^-)	736.2	4167.3	(21^+)	3431.1	(19^+)
388.7	1083.0	(14^-)	694.3	(12^-)	749.1	4248.2	(24^-)	3499.1	(22^-)
413.6	1004.9	(11^+)	591.3	(9^+)	780.8	4673.1	(25^-)	3892.3	(23^-)

† From level-energy difference; Eγ=281.1 in figure 2 of 2000Le25 appears to be erroneous. Consequently, transition is shown As tentative.

‡ Placement of transition in the level scheme is uncertain.

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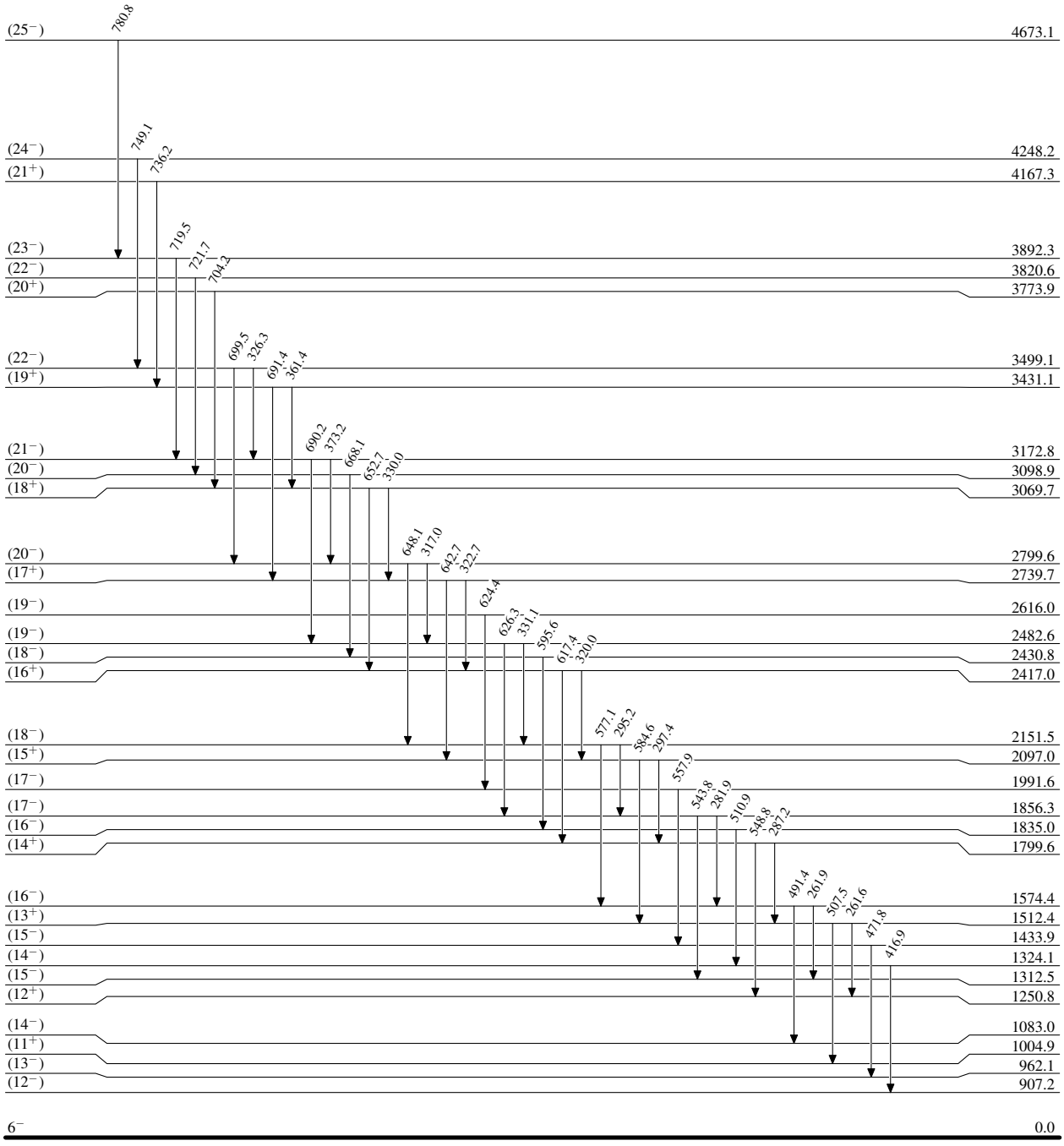
Level Scheme



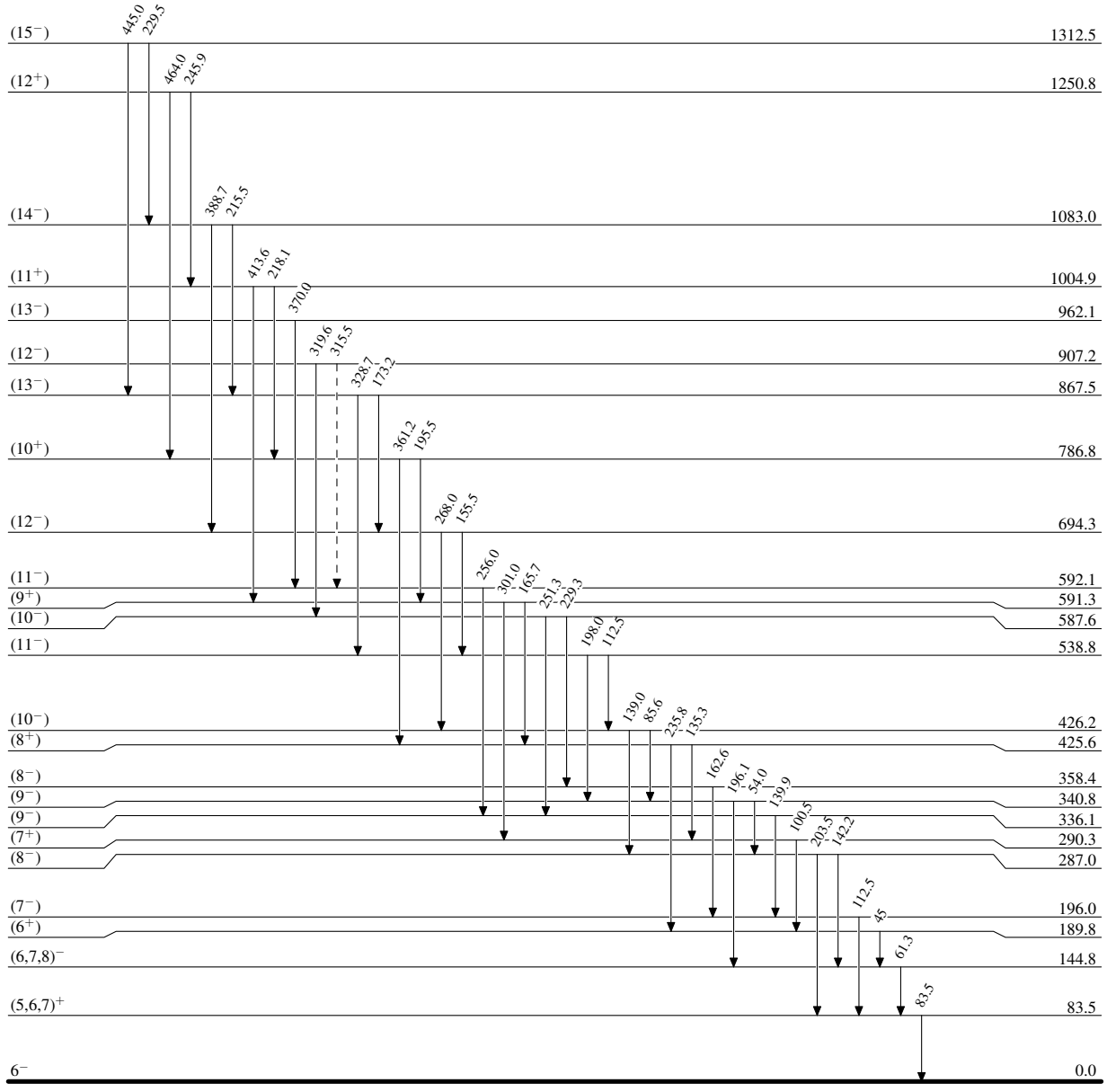
$^{166}_{71}Lu_{95}$

^{139}**La(^{30}Si,3nγ)** **2000Le25**

Legend

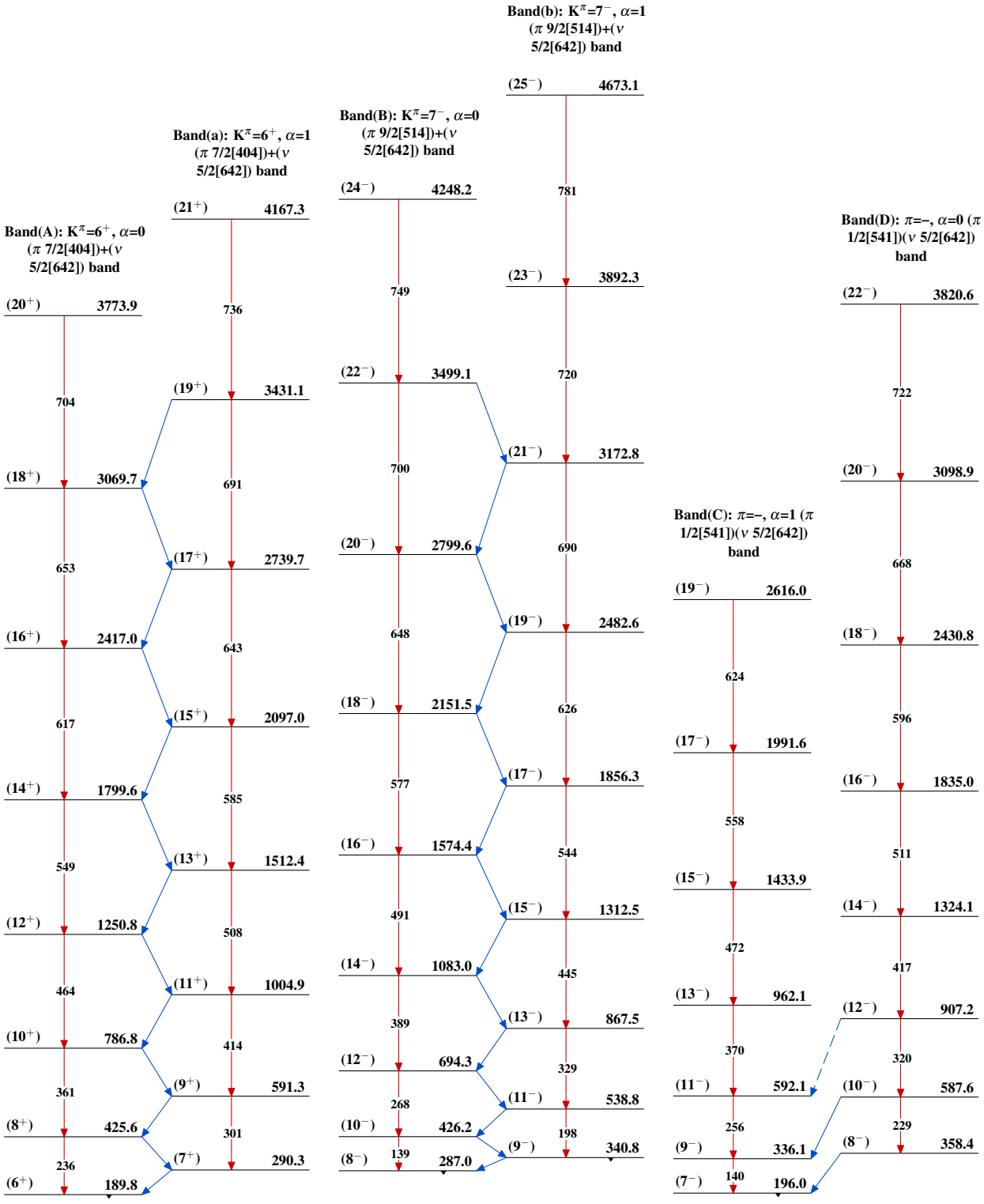
Level Scheme (continued)

γ Decay (Uncertain)



$^{166}_{71}Lu_{95}$

^{139}La(^{30}Si,3nγ) 2000Le25



$^{166}_{71}Lu_{95}$