^{126}Te(^{19}F,4nγ) 2011Gu12,1989Gu10

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 187,1 (2023)	12-Oct-2022

2011Gu12: ^{19}F beam, E=90 MeV from the HI-3 tandem accelerator at the China Institute of Atomic Energy (CIAE). Target=2.85 mg/cm^2 enriched ^{126}Te on a 21.75 mg/cm^2 gold backing. γ-rays detected by 12 Compton-suppressed HPGe detectors and a clover detector consisting of 4 Ge crystals at angles of 90°, 140°, 150°, 125°, 42°, and 65° with respect to the beam direction. Measured Eγ, Iγ, DCO ratios. Deduced Levels, J, π, multipolarities. Comparison with particle-rotor model calculations.

1989Gu10: E=74-84 MeV, measured γ, $\gamma\gamma$, $\gamma(\theta)$, excit.

Unless noted otherwise, all the data are from 2011Gu12.

The level schemes of 2011Gu12 and 1989Gu10 are similar up to 2703 (the major difference is that the order of transitions in some cascades is inverted relative to each other). Above 2703 2011Gu12 found many more gammas than 1989Gu10, the common ones being fully relocated by 2011Gu12, so the level structure is completely different. In most cases 2011Gu12 confirm the level scheme of 2004Bh01 (^{12}C,4nγ) dataset), reason for which the level scheme of 2011Gu12 is fully adopted by evaluator above 2703.

^{141}Pm Levels

E(level)†@	Jπ‡	$T_{1/2}$	E(level)†@	Jπ‡	E(level)†@	Jπ‡
0.0	5/2$^+$		3332.8 *10*	33/2$^-$	5094.3[e] *8*	33/2$^-$
196.94 *20*	7/2$^+$		3465.7 *7*	25/2$^-$	5151.8 *12*	(37/2$^-$)
628.49 *19*	11/2$^-$	0.63# μs *2*	3581.2[&] *8*	27/2$^-$	5337.8 *10*	37/2$^-$
973.97 *21*	11/2$^+$		3702.2[a] *7*	25/2$^-$	5400.0[a] *12*	33/2$^-$
1312.77 *23*	13/2$^-$		3727.3 *6*	23/2$^-$	5407.6[e] *10*	35/2$^-$
1510.39 *20*	15/2$^-$		3885.1 *8*	27/2$^-$	5459.4[b] *14*	43/2$^-$
1969.78 *22*	15/2$^+$		3982.1[a] *9*	27/2$^-$	5482.3 *12*	41/2$^-$
2014.1 *3*			4063.5 *7*	27/2$^-$	5512.9 *11*	(39/2$^-$)
2137.7 *3*	13/2$^+$		4076.2 *8*	(27/2$^-$)	5762.4[e] *11*	37/2$^-$
2238.69 *21*	19/2$^-$		4115.7 *8*	27/2$^-$	5773.8[&] *12*	39/2$^-$
2349.5 *4*	19/2$^-$		4270.3[&] *9*	31/2$^-$	5902.1[b] *15*	45/2$^-$
2381.0 *3*	15/2$^-$		4334.9[b] *10*	35/2$^-$	5998.5[c] *12*	43/2$^-$
2509.48 *24*	19/2$^-$		4349.5[a] *10*	29/2$^-$	6025.1[d] *13*	(39/2$^-$)
2530.3 *4*			4376.9 *9*	25/2$^-$	6084.4[a] *13*	35/2$^-$
2622.4 *4*			4515.1[b] *11*	37/2$^-$	6243.5[d] *14*	(41/2$^-$)
2623.22 *22*	17/2$^+$		4625.1 *7*	29/2$^-$	6353.5[c] *12*	45/2$^-$
2641.0 *4*	17/2$^-$		4683.3 *11*	35/2$^-$	6402.4[&] *13*	43/2$^-$
2662.2 *5*	21/2$^-$		4722.1 *7*	29/2$^-$	6479.6[d] *15*	(43/2$^-$)
2702.90 *24*	21/2$^-$		4773.2[b] *13*	39/2$^-$	6698.2 *13*	43/2$^-$
2810.4 *5*	21/2$^-$		4821.6[a] *11*	31/2$^-$	6792.5[d] *16*	(45/2$^-$)
2899.4[&] *6*	23/2$^-$		4861.7[e] *8*	31/2$^-$	6814.5[c] *13*	47/2$^-$
3079.0 *8*	27/2$^-$		4916.4[&] *11*	35/2$^-$	7121.4[&] *14*	47/2$^-$
3123.2 *6*	25/2$^-$		4916.7 *8*	31/2$^-$	7122.7[d] *16*	(47/2$^-$)
3158.3 *7*	23/2$^-$		4938.0 *11*	37/2$^-$	7353.4[c] *14*	49/2$^-$
3246.8 *7*	25/2$^-$		5047.0 *11*	39/2$^-$		
3256.9 *9*	31/2$^-$		5087.7[b] *14*	41/2$^-$		

† From least-squares fit to Eγ data, with ΔEγ=0.5 keV assumed for each γ ray energy.

‡ J^π values are from 2011Gu12 based on measured multipolarities as well as those measured by 1989Gu10, on the reaction type, and the implicit assumption that spin is generally increasing with increasing excitation energy. These J^π values can differ from those in Adopted Levels, Gammas dataset.

Adopted value.

@ If ΔEγ not given, ±0.50 keV assumed for least-squares fitting.

& Band(A): ΔJ=2 band based on 23/2$^-$. Possible configuration: $\pi h_{11/2}\otimes\nu(h_{11/2},f_{7/2}1/2[541])$ (2011Gu12).

a Band(B): ΔJ=1 band based on 25/2$^-$. Assigned as an oblate band by authors and used particle rotor model (PRM) calculations

Continued on next page (footnotes at end of table)

^{126}Te(^{19}F,4nγ) 2011Gu12,1989Gu10 (continued)

^{141}Pm Levels (continued)

to determine a quasiparticle configuration of $\pi h_{11/2}\otimes\nu h^2_{11/2}$ (2011Gu12).

[b] Band(C): ΔJ=1 band based on 35/2$^-$. States with spins up to 45/2. Assigned as an oblate band (2011Gu12).

[c] Band(D): ΔJ=1 band based on 43/2$^-$. State with spins up to 49/2. Assigned as oblate-triaxial deformation (2011Gu12).

[d] Band(E): ΔJ=1 band based on (39/2$^-$). States with spins up to 47/2. Assigned as oblate-triaxial deformation (2011Gu12).

[e] Band(F): ΔJ=1 band based on 31/2$^-$. States with spins up to 35/2. Assigned as oblate-triaxial deformation (2011Gu12).

γ(^{141}Pm)

Given in the table are the A_2, A_4 coefficients of the $\gamma(\theta)$ measured by 1989Gu10 at E(^{19}F)=80 MeV.

Unplaced gammas are from 1989Gu10.

DCO: Due to the statistics being poorer than the total coincidence matrix, the DCO ratios of some weak transitions could not be determined. Generally a quadrupole (ΔJ=2, E2) transition is adopted if a DCO ratio is approximately 0.51 and a dipole (ΔJ=1) transition is assumed if a DCO is about 1.01 (2011Gu12). The gating transition seems to be the 728.2γ, stretched E2 (from 19/2$^-$ to 15/2$^-$).

E$_\gamma$ [†]	I$_\gamma$ [‡#]	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult. [@]	Comments
61.7	18.1 *15*	2702.90	21/2$^-$	2641.0	17/2$^-$		
75.9	18 *3*	3332.8	33/2$^-$	3256.9	31/2$^-$	M1+E2	DCO=1.09 *8*
79.8	41.3 *22*	2702.90	21/2$^-$	2623.22	17/2$^+$		
109.0	2.1 *7*	5047.0	39/2$^-$	4938.0	37/2$^-$	M1+E2	DCO=0.91 *15*
110.8[c]	52.0 *18*	2349.5	19/2$^-$	2238.69	19/2$^-$	M1+E2[&]	E$_\gamma$: 109.98 *10* (1989Gu10). Mult.: 1989Gu10 adopted E2. Mult.: A_2=+0.23 *4*, A_4=−0.16 *4*.
139.6	6.4 *8*	4861.7	31/2$^-$	4722.1	29/2$^-$	M1+E2	DCO=0.95 *6*
[x]140.00 *13*	462 *97*						Mult.: A_2=+1.1 *8*, A_4=+0.27 *7*.
148.1[e]	9.3 *7*	2810.4	21/2$^-$	2662.2	21/2$^-$	M1[&]	E$_\gamma$: according to 2011Gu12 the 170.3γ connects the 2810.7 and 2661.8 levels, in which case it should be 148.1γ.
[x]169.6 *2*	207 *43*						Mult.: A_2=−0.31 *11*, A_4=−0.05 *12*.
175.1	6.2 *8*	5512.9	(39/2$^-$)	5337.8	37/2$^-$	(M1+E2)	
[x]177.3 *3*	214 *46*						Mult.: A_2=−0.23 *13*, A_4=−0.01 *15*.
177.9	≈43	3256.9	31/2$^-$	3079.0	27/2$^-$	E2	DCO=0.48 *8*
[x]179.3 *2*	268 *53*						Mult.: A_2=−0.35 *10*, A_4=+0.01 *11*.
179.6	≈46	3079.0	27/2$^-$	2899.4	23/2$^-$	E2	DCO=0.51 *8*
180.2	9.3 *6*	4515.1	37/2$^-$	4334.9	35/2$^-$	M1+E2	DCO=0.97 *11*
196.5		2899.4	23/2$^-$	2702.90	21/2$^-$		
196.9		196.94	7/2$^+$	0.0	5/2$^+$		
197.5		1510.39	15/2$^-$	1312.77	13/2$^-$		
218.4	4.7 *5*	6243.5	(41/2$^-$)	6025.1	(39/2$^-$)	M1+E2	DCO=0.96 *15*
218.9	9.3 *9*	3465.7	25/2$^-$	3246.8	25/2$^-$	M1+E2	DCO=1.13 *15*
232.6	4.2 *5*	5094.3	33/2$^-$	4861.7	31/2$^-$	M1+E2	DCO=0.96 *4*
236.1	2.3 *7*	6479.6	(43/2$^-$)	6243.5	(41/2$^-$)	M1+E2	DCO=0.96 *7*
236.5	18.1 *11*	3702.2	25/2$^-$	3465.7	25/2$^-$		
236.6	5.7 *8*	4861.7	31/2$^-$	4625.1	29/2$^-$	M1+E2	DCO=0.93 *3*
243.5	7.3 *7*	5337.8	37/2$^-$	5094.3	33/2$^-$	E2	DCO=0.54 *9*
[x]254.5 *3*	100 *16*						Mult.: A_2=−0.38 *11*, A_4=+0.21 *14*.
254.7	9.0 *9*	4938.0	37/2$^-$	4683.3	35/2$^-$	M1+E2	DCO=1.00 *6*
258.1	8.8 *7*	4773.2	39/2$^-$	4515.1	37/2$^-$	M1+E2	DCO=0.94 *5* E$_\gamma$,I$_\gamma$: possibly same γ ray as 258.1 *2* (DIγ=86 *15*) placed at 2641 in 1989Gu10.
260.0[b] *3*	19.2 *10*	2641.0	17/2$^-$	2381.0	15/2$^-$	M1+E2[&]	Mult.: A_2=+0.03 *15*, A_4=−0.28 *14*.
279.9	10.1 *7*	3982.1	27/2$^-$	3702.2	25/2$^-$	M1+E2	DCO=0.93 *6*
[x]291.6 *3*							

Continued on next page (footnotes at end of table)

^{126}Te(^{19}F,4nγ) 2011Gu12,1989Gu10 (continued)

$\gamma(^{141}Pm)$ (continued)

E_γ [†]	I_γ [‡#]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [@]	Comments
291.6	4.5 *5*	4916.7	31/2$^-$	4625.1	29/2$^-$	M1+E2	DCO=1.06 *5*
301.0	5.7 *6*	2810.4	21/2$^-$	2509.48	19/2$^-$	M1+E2	DCO=0.99 *9*
312.6[c] *3*	30.1 *13*	2662.2	21/2$^-$	2349.5	19/2$^-$	M1+E2	DCO=0.97 *3* I_γ: 106 *20* (1989Gu10). Mult.: A_2=−0.50 *18*, A_4=−0.23 *18*.
312.9[d]	5.5[d] *8*	3123.2	25/2$^-$	2810.4	21/2$^-$	E2	DCO=0.57 *5*
312.9[d]	2.0[d] *7*	6792.5	(45/2$^-$)	6479.6	(43/2$^-$)	M1+E2	DCO=1.02 *12*
313.3	3.4 *5*	5407.6	35/2$^-$	5094.3	33/2$^-$	M1+E2	DCO=1.05 *7*
[x]314.0 *5*	81 *17*						Mult.: A_2=−0.47 *22*, A_4=+0.27 *22*.
314.5	8.2 *7*	5087.7	41/2$^-$	4773.2	39/2$^-$	M1+E2	DCO=0.98 *6*
330.2	1.0 *5*	7122.7	(47/2$^-$)	6792.5	(45/2$^-$)	M1+E2	DCO=0.92 *23*
347.4	25.8 *8*	3246.8	25/2$^-$	2899.4	23/2$^-$	M1+E2	DCO=0.93 *4*
353.4	≈20	2702.90	21/2$^-$	2349.5	19/2$^-$	M1+E2	
354.8	2.8 *6*	5762.4	37/2$^-$	5407.6	35/2$^-$	M1+E2	DCO=0.94 *6*
[x]354.9 *5*	144 *17*						Mult.: A_2=−0.85 *15*, A_4=+0.01 *16*.
355.0	3.3 *6*	6353.5	45/2$^-$	5998.5	43/2$^-$	M1+E2	DCO=0.93 *11*
361.3	17.1 *11*	4063.5	27/2$^-$	3702.2	25/2$^-$	M1+E2	DCO=0.93 *3*
363.7	6.2 *4*	5047.0	39/2$^-$	4683.3	35/2$^-$	E2	DCO=0.55 *16*
367.4	8.9 *9*	4349.5	29/2$^-$	3982.1	27/2$^-$	M1+E2	DCO=0.99 *8*
371.7	6.7 *19*	5459.4	43/2$^-$	5087.7	41/2$^-$	M1+E2	DCO=0.95 *8*
388.4	2.2 *7*	4115.7	27/2$^-$	3727.3	23/2$^-$	E2	DCO=0.37 *18*
401.65[e] *10*		2641.0	17/2$^-$	2238.69	19/2$^-$	D	E_γ: measured by 1989Gu10 but inexistent in 2011Gu12; 2004Bh01 (^{12}C,4nγ)) placed this transition at a close lying but different level, 2639.7, populated by 170γ from 2810. I_γ: 60 *20* (1989Gu10). Mult.: A_2=−0.31 *3*, A_4=+0.03 *3*.
431.56 *7*	208[a] *18*	628.49	11/2$^-$	196.94	7/2$^+$	M2[&]	Mult.: A_2=−0.02 *1*, A_4=−0.08 *2*.
435.3	2.9 *6*	5482.3	41/2$^-$	5047.0	39/2$^-$	M1+E2	DCO=0.99 *6*
442.7	5.9 *4*	5902.1	45/2$^-$	5459.4	43/2$^-$	M1+E2	DCO=1.02 *6*
461.0[d]	6.9[d] *4*	3123.2	25/2$^-$	2662.2	21/2$^-$	E2	DCO=0.47 *4*
461.0[d]	3.1[d] *6*	6814.5	47/2$^-$	6353.5	45/2$^-$	M1+E2	DCO=0.93 *14*
[x]461.4 *2*	78 *11*						Mult.: A_2=−0.08 *13*, A_4=−0.06 *15*.
464.21 *12*	22.8 *11*	2702.90	21/2$^-$	2238.69	19/2$^-$	M1+E2	DCO=0.96 *2* I_γ: 113 *12* (1989Gu10). Mult.: A_2=−0.25 *7*, A_4=−0.08 *8*.
468.5	6.3 *5*	5151.8	(37/2$^-$)	4683.3	35/2$^-$	(M1+E2)	DCO=1.12 *7*
469.2	7.3 *5*	5094.3	33/2$^-$	4625.1	29/2$^-$	E2	DCO=0.60 *10*
472.1	6.2 *4*	4821.6	31/2$^-$	4349.5	29/2$^-$	M1+E2	DCO=1.14 *11*
486.0	12.4 *12*	2623.22	17/2$^+$	2137.7	13/2$^+$	E2	DCO=0.56 *5*
496.1	12.5 *11*	3158.3	23/2$^-$	2662.2	21/2$^-$	M1+E2	DCO=0.98 *3*
516.2	1.3 *5*	5998.5	43/2$^-$	5482.3	41/2$^-$	M1+E2	DCO=1.09 *12*
538.9	1.0 *5*	7353.4	49/2$^-$	6814.5	47/2$^-$	M1+E2	DCO=1.07 *11*
544.3	6.3 *4*	5482.3	41/2$^-$	4938.0	37/2$^-$	E2	DCO=0.50 *4*
561.6	11.7 *14*	4625.1	29/2$^-$	4063.5	27/2$^-$	M1+E2	DCO=1.08 *4*
566.3	19.5 *13*	3465.7	25/2$^-$	2899.4	23/2$^-$	M1+E2	DCO=1.03 *4*
578.4	5.4 *4*	5400.0	33/2$^-$	4821.6	31/2$^-$	M1+E2	DCO=1.14 *11*
597.8	7.6 *4*	4063.5	27/2$^-$	3465.7	25/2$^-$	M1+E2	DCO=1.00 *5*
608.3 *2*		2622.4		2014.1			E_γ: observed by 1989Gu10 but not by 2011Gu12. I_γ: 105 *13* (1989Gu10). Mult.: A_2=+0.53 *10*, A_4=+0.07 *9*.
628.5 *2*	25[a] *3*	628.49	11/2$^-$	0.0	5/2$^+$	E3[&]	Mult.: A_2=+0.13 *8*, A_4=−0.15 *9*.
628.6	9.0 *7*	6402.4	43/2$^-$	5773.8	39/2$^-$	E2	DCO=0.59 *6*
638.3	15.4 *12*	3885.1	27/2$^-$	3246.8	25/2$^-$	M1+E2	DCO=1.08 *11*

Continued on next page (footnotes at end of table)

^{126}Te(^{19}F,4nγ) 2011Gu12,1989Gu10 (continued)

$\gamma(^{141}Pm)$ (continued)

E_γ [†]	I_γ [‡#]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [@]	Comments
646.1	17.8 *11*	4916.4	35/2$^-$	4270.3	31/2$^-$	E2	DCO=0.48 *3*
[x]651.1 *2*	84 *13*						Mult.: A_2=+0.61 *10*, A_4=−0.49 *10*.
653.3 *2*	65.7 *16*	2623.22	17/2$^+$	1969.78	15/2$^+$	M1+E2	DCO=1.06 *2* Mult.: A_2=−0.72 *7*, A_4=+0.16 *9*.
658.6	6.1 *4*	4722.1	29/2$^-$	4063.5	27/2$^-$	M1+E2	DCO=1.03 *7*
681.8	25.4 *9*	3581.2	27/2$^-$	2899.4	23/2$^-$	E2	DCO=0.45 *3*
[x]682.1 *2*	101 *13*						Mult.: A_2=+0.28 *7*, A_4=−0.11 *8*.
684.25 *13*	48.8 *7*	1312.77	13/2$^-$	628.49	11/2$^-$	M1+E2[&]	Mult.: 2011Gu12 quote E2 from 2004Bh01 ((^{12}C,4nγ) dataset), which finally assigned M1+E2; 1989Gu10 adopt M1+E2 too. Mult.: A_2=−0.86 *5*, A_4=+0.08 *6*.
684.4	4.9 *5*	6084.4	35/2$^-$	5400.0	33/2$^-$	M1+E2	DCO=1.03 *4*
689.1	21.4 *10*	4270.3	31/2$^-$	3581.2	27/2$^-$	E2	DCO=0.45 *4*
701.3 *2*		2014.1		1312.77	13/2$^-$		E_γ: observed by 1989Gu10 but not by 2011Gu12. I_γ: 62 *10* (1989Gu10). Mult.: A_2=−0.52 *13*, A_4=+0.21 *15*.
719.0	12.1 *14*	7121.4	47/2$^-$	6402.4	43/2$^-$	E2	DCO=0.55 *5*
728.30 *7*	100 *4*	2238.69	19/2$^-$	1510.39	15/2$^-$	E2	DCO=0.46 *1* Mult.: A_2=+0.29 *2*, A_4=−0.0.08 *2*.
777.02 *6*	113 *5*	973.97	11/2$^+$	196.94	7/2$^+$	E2[&]	Mult.: A_2=+0.38 *3*, A_4=−0.11 *4*.
798.2	3.7 *5*	4861.7	31/2$^-$	4063.5	27/2$^-$	E2	DCO=0.48 *10*
802.8	28.6 *9*	3702.2	25/2$^-$	2899.4	23/2$^-$	M1+E2	DCO=1.06 *4*
816.7	1.7 *8*	4063.5	27/2$^-$	3246.8	25/2$^-$	M1+E2	DCO=1.04 *9*
837.0	1.7 *6*	4722.1	29/2$^-$	3885.1	27/2$^-$	M1+E2	DCO=1.07 *10*
853.2	3.8 *5*	4916.7	31/2$^-$	4063.5	27/2$^-$	E2	DCO=0.47 *7*
857.4	16.8 *12*	5773.8	39/2$^-$	4916.4	35/2$^-$	E2	DCO=0.43 *5*
871.2	3.8 *5*	6353.5	45/2$^-$	5482.3	41/2$^-$	E2	DCO=0.52 *6* E_γ,I_γ: possibly same γ ray as 871.22 *14* ($\Delta I\gamma$=129 *16*) placed at 2382 in 1989Gu10. Mult.: A_2=+0.06 *6*, A_4=−0.06 *7*.
873.3	5.7 *4*	6025.1	(39/2$^-$)	5151.8	(37/2$^-$)	(M1+E2)	DCO=1.07 *8*
881.90 *6*	207 *4*	1510.39	15/2$^-$	628.49	11/2$^-$	E2	DCO=0.45 *1* Mult.: A_2=+0.29 *1*, A_4=−0.06 *1*.
922.9	11.0 *8*	4625.1	29/2$^-$	3702.2	25/2$^-$	E2	DCO=0.43 *4*
924.4	6.8 *4*	6698.2	43/2$^-$	5773.8	39/2$^-$	E2	DCO=0.45 *4*
951.5	4.2 *5*	5998.5	43/2$^-$	5047.0	39/2$^-$	E2	DCO=0.42 *4*
[x]951.8 *3*	62 *11*						Mult.: A_2=+0.63 *18*, A_4=−0.25 *17*.
953.0	4.2 *8*	4076.2	(27/2$^-$)	3123.2	25/2$^-$	(M1+E2)	DCO=0.91 *5*
995.77 *11*	81.5 *15*	1969.78	15/2$^+$	973.97	11/2$^+$	E2	DCO=0.55 *2* Mult.: A_2=+0.31 *4*, A_4=−0.10 *4*.
999.09 *13*	22.2 *10*	2509.48	19/2$^-$	1510.39	15/2$^-$	E2	DCO=0.55 *3* Mult.: A_2=+0.34 *5*, A_4=−0.11 *5*.
1002.1	10.6 *14*	4334.9	35/2$^-$	3332.8	33/2$^-$	M1+E2	DCO=1.12 *5*
1019.9 *3*		2530.3		1510.39	15/2$^-$		E_γ: observed by 1989Gu10 but not by 2011Gu12. I_γ: 60 *30* (1989Gu10).
1019.9	6.2 *4*	4722.1	29/2$^-$	3702.2	25/2$^-$	E2	DCO=0.60 *9*
1068.2[b] *2*	24.1 *17*	2381.0	15/2$^-$	1312.77	13/2$^-$	M1[&]	Mult.: A_2=+0.15 *14*, A_4=+0.06 *14*.
1078.0	6.3 *4*	4334.9	35/2$^-$	3256.9	31/2$^-$	E2	DCO=0.57 *9*
1112.85 *10*	41.8 *17*	2623.22	17/2$^+$	1510.39	15/2$^-$	E1[&]	Mult.: A_2=−0.35 *3*, A_4=+0.02 *3*.
1163.8 *2*	19.2 *14*	2137.7	13/2$^+$	973.97	11/2$^+$	M1+E2	DCO=0.91 *5* Mult.: A_2=−0.05 *11*, A_4=−0.03 *12*.
1218.6	11.3 *11*	4376.9	25/2$^-$	3158.3	23/2$^-$	(M1+E2)	DCO=1.08 *4*
1256.4	2.0 *5*	4722.1	29/2$^-$	3465.7	25/2$^-$	E2	DCO=0.49 *15*

Continued on next page (footnotes at end of table)

^{126}Te(^{19}F,4nγ) 2011Gu12,1989Gu10 (continued)

$\gamma(^{141}Pm)$ (continued)

E_γ [†]	I_γ [‡#]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [@]	Comments
1426.4	23.8 *10*	4683.3	$35/2^-$	3256.9	$31/2^-$	E2	DCO=0.42 *8*
1488.6	6.0 *4*	3727.3	$23/2^-$	2238.69	$19/2^-$	E2	DCO=0.52 *7*

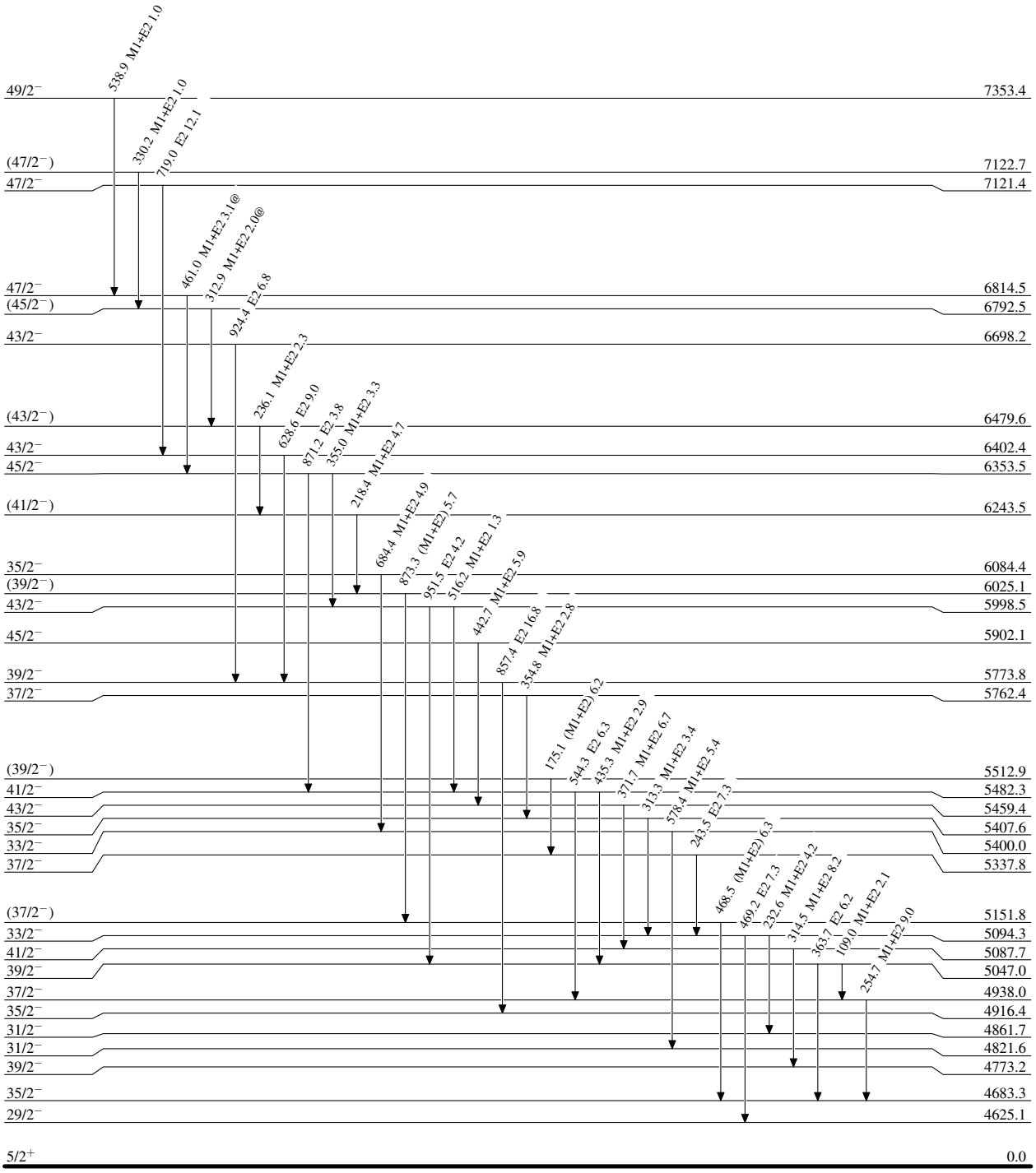
† Values with uncertainty are from 1989Gu10 and those without uncertainty are from 2011Gu12.
‡ Relative intensities from 2011Gu12, unless noted otherwise.
# Relative intensities quoted from 2011Gu12 and 1989Gu10 are not directly comparable (they used different normalizations).
@ From 2011Gu12 (based on DCO ratio measurements), unless noted otherwise; generally in agreement with those from 1989Gu10 (based on $\gamma(\theta)$ measurements). Both papers adopt E2 for Q transitions and M1 for D transitions (and M1+E2 for D+Q) based on the heavy ion type of reaction; there is only one E1 1113γ from 2623 adopted by both papers. These values can differ from those in Adopted Levels, Gammas dataset.
& Taken from 2004Bh01 (in (^{12}C,4nγ) dataset) as the DCO value for the transition could not be obtained in 2011Gu12.
a Calculated by evaluator from the Iγ's from 1989Gu10 and the ratio of Iγ feedings of the 628.5 level in 2011Gu12 and 1989Gu10 (2011Gu12 do not give intensities for 432γ and 629γ).
b The order of transitions in cascade from 2641 to 1313 is 1068γ-260γ in 1989Gu10, (^{3}He,3nγ) and (α,4nγ) datasets, but 260γ-1068γ in the more recent 2011Gu12 and in (^{12}C,4nγ), which is adopted here as well.
c The order of transitions in cascade from 2662 to 2238 adopted here is 312.6γ-110.8γ (from 2011Gu12; this is reversed in 1989Gu10).
d Multiply placed with intensity suitably divided.
e Placement of transition in the level scheme is uncertain.
x γ ray not placed in level scheme.

^{126}Te(^{19}F,4nγ) 2011Gu12,1989Gu10

Level Scheme

Intensities: Relative I_γ
@ Multiply placed: intensity suitably divided

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



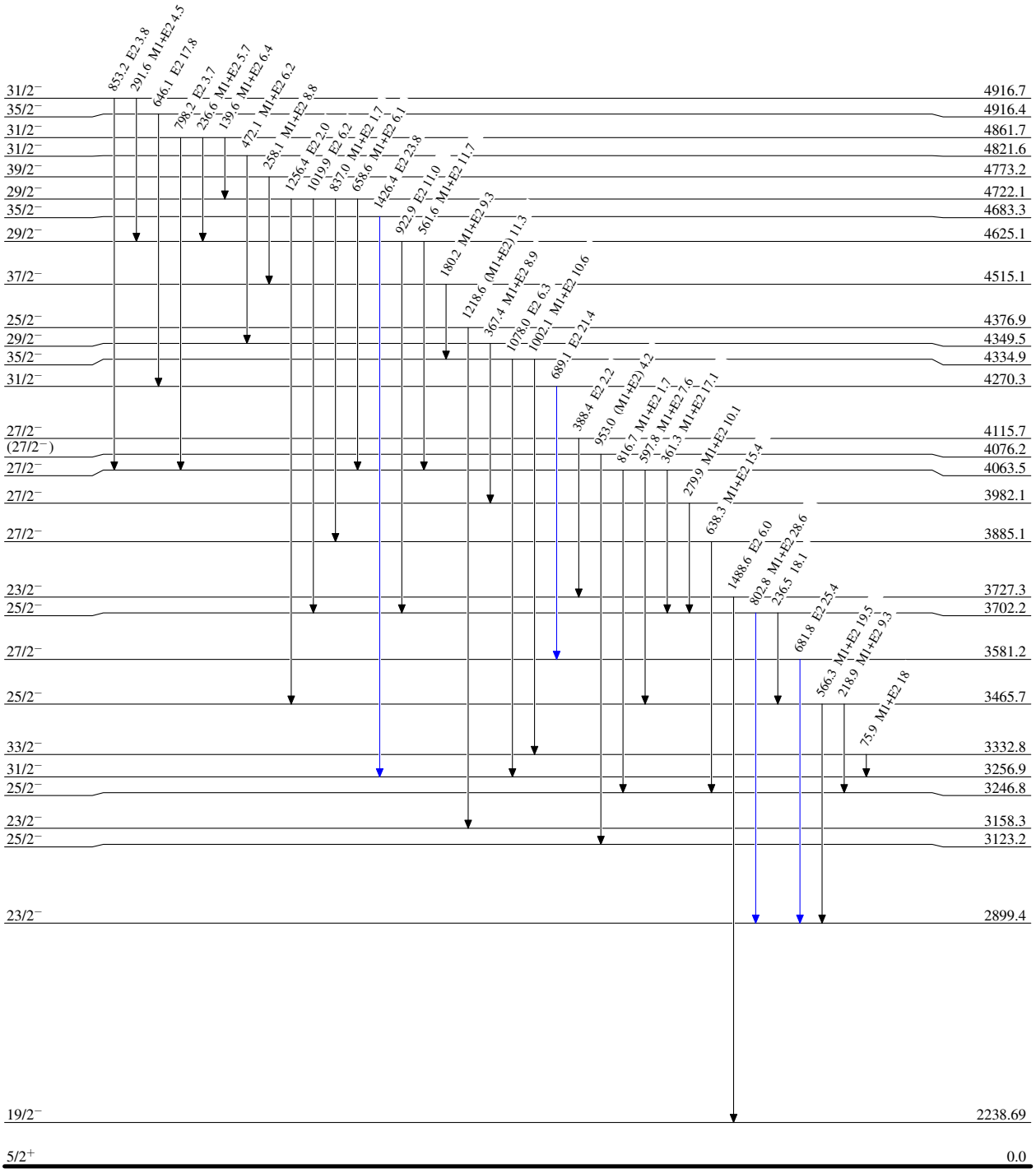
$^{141}_{61}Pm_{80}$

^{126}Te(^{19}F,4nγ) 2011Gu12,1989Gu10

Level Scheme (continued)

Intensities: Relative I_γ
@ Multiply placed: intensity suitably divided

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

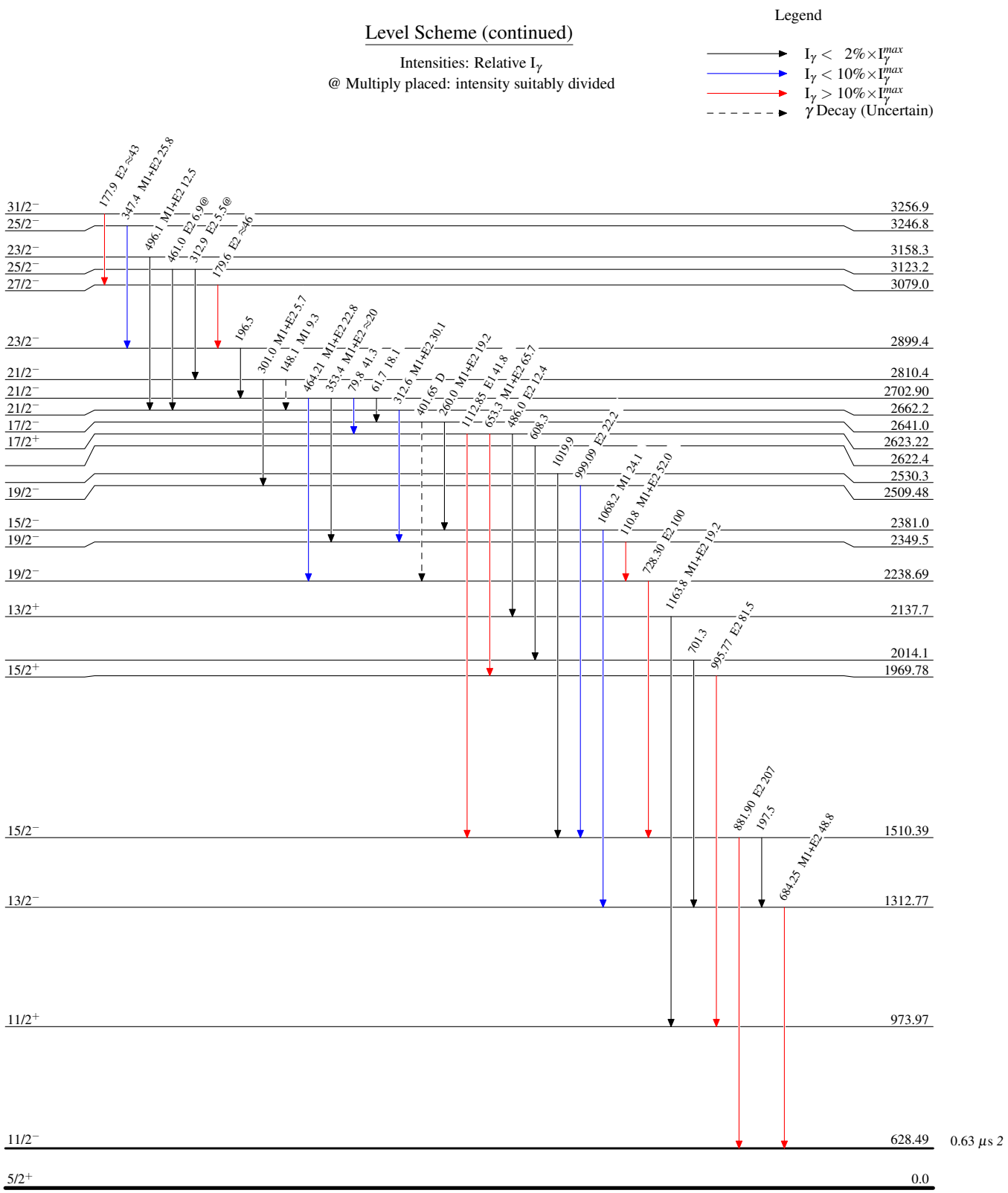


$^{141}_{61}Pm_{80}$

^{126}Te(^{19}F,4nγ) 2011Gu12,1989Gu10

Level Scheme (continued)

Intensities: Relative I_γ
@ Multiply placed: intensity suitably divided



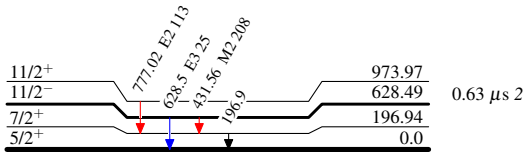
$^{141}_{61}Pm_{80}$

^{126}Te(^{19}F,4nγ) 2011Gu12,1989Gu10

Level Scheme (continued)

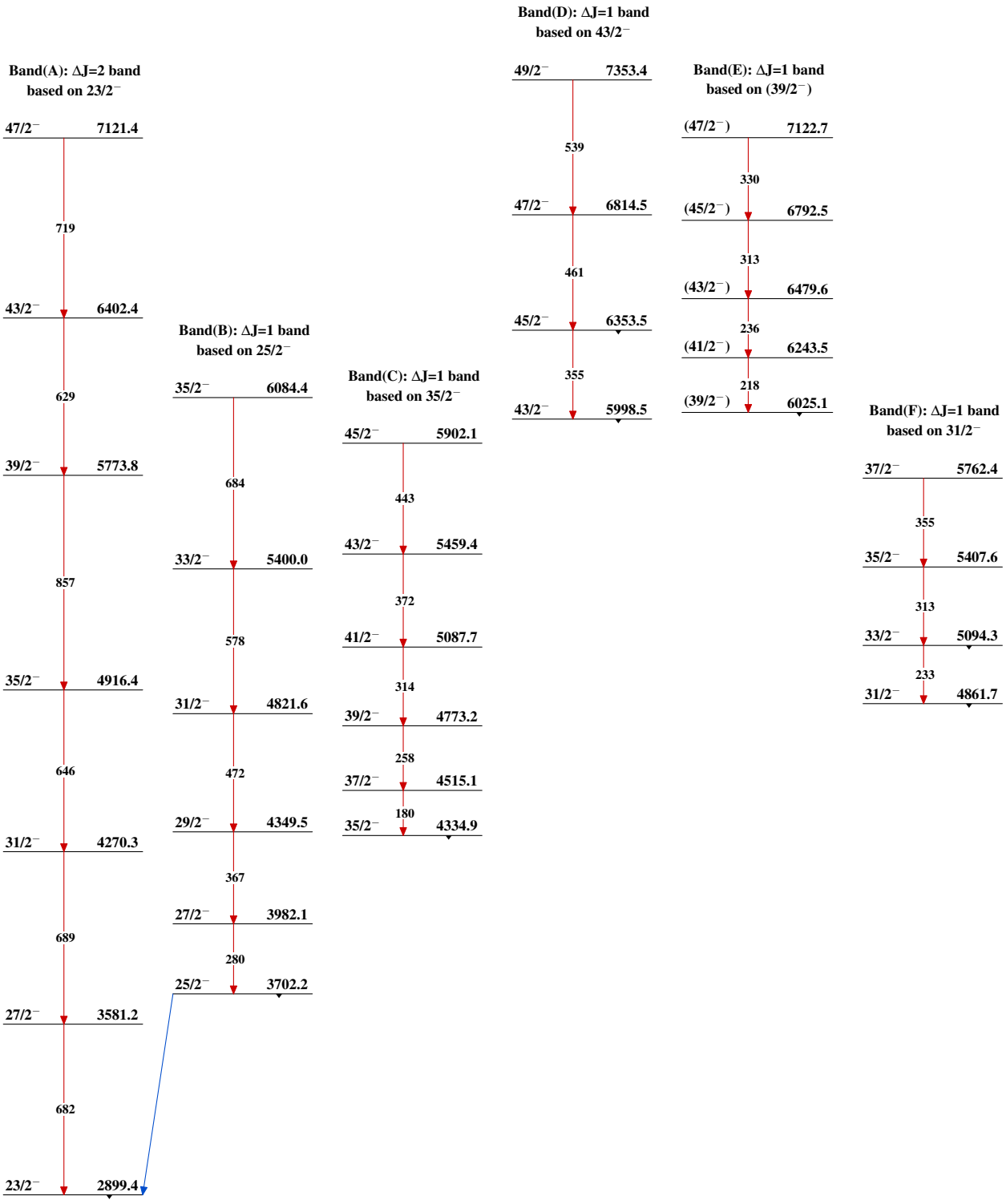
Intensities: Relative I_γ
@ Multiply placed: intensity suitably divided

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



$^{141}_{61}Pm_{80}$

^{126}Te(^{19}F,4nγ) 2011Gu12,1989Gu10



$^{141}_{61}Pm_{80}$