Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 160, 1 (2019)	21-Oct-2019

Q(β^-)=−3116 *17*; S(n)=6833 *12*; S(p)=6.29×10^3 *5*; Q(α)=2608 *10* 2017Wa10
Q(ε)=2094.5 *19*; S(2n)=16155 *12*; S(2p)=10851 *5* 2017Wa10
Additional information 1.

^{155}Dy Levels

Configuration assignments for the levels populated in the heavy-ion reactions are those proposed by 1994Vl02 and are based on comparison of experimental routhians and alignments with theoretically calculated ones. For the labeling of the quasiparticle orbitals used by 1994Vl02 and employed here in the discussion of the band assignments, see the (HI,xnγ) Data Set.

Cross Reference (XREF) Flags

A	^{155}Dy IT decay (6 μs)	D	^{156}Dy(d,t), ^{156}Dy(^{3}He,α)
B	^{155}Ho ε decay	E	(HI,xnγ)
C	^{124}Sn(^{36}S,5nγ)		

E(level)†	J$^\pi$‡	T$_{1/2}$#	XREF	Comments
0.0&	3/2$^-$	9.9 h *2*	ABCDE	%ε+%β^+=100 μ=−0.339 *2*; Q=+0.96 *2* J$^\pi$: atomic beam (1970Ro21). π=− from L=1 in (d,t) (1976St06). T$_{1/2}$: weighted average of: 9.59 h *10* (1970Ch09); 10.3 h *3* (1967Ha12); 10.0 h *5* (1964Ma10); 10.2 h *1* (1964Pe13). Others: 11 h *2* (1958Dz02); 9 h *2* (1958Do61). μ: From 2014StZZ. 2014StZZ also list μ=−0.385 *4*. Q: From 2016St14. In an evaluation of nuclear rms charge radii, 2013An02 report <r^2>$^{1/2}$=5.1457 fm *2751*.
39.384[a] *9*	5/2$^-$	3.34 ns *3*	ABCDE	J$^\pi$: M1+E2 to g.s. Enhanced B(E2) to the g.s. indicates that this is a member of the g.s. band. The small (d,t) cross section to this level is expected for the 5/2$^-$ member of the 3/2[521] band. T$_{1/2}$: from ^{155}Ho ε decay.
86.767& *12*	7/2$^-$	1.1 ns *2*	ABCDE	J$^\pi$: L=3 in (d,t) requires J^π=5/2$^-$ or 7/2$^-$. The enhanced B(E2) of the transition to the g.s. and the (d,t) cross section indicate that this is the 7/2$^-$ member of the 3/2[521] band. T$_{1/2}$: from ^{155}Ho ε decay.
132.195[d] *22*	9/2$^+$	51 ns *3*	ABCdE	XREF: d(134). J$^\pi$: E1 to 7/2$^-$. Angular distribution in (d,t) is consistent with L=4, and transition from 13/2$^+$ requires J^π=9/2$^+$. T$_{1/2}$: from 1982Ka36, γ(t).
136.320[m] *9*	5/2$^-$	<0.4 ns	B d	XREF: d(134). J$^\pi$: M1+E2 to 3/2$^-$ and 7/2$^-$ states. T$_{1/2}$: from ^{155}Ho ε decay.
154.48[d] *5*	13/2$^+$		ABCDE	J$^\pi$: L=6 in (d,t) requires 11/2$^+$ or 13/2$^+$. Large (^{3}He,α) cross section indicates 13/2$^+$ because of i13/2 character of the neutron orbitals involved.
202.413[l] *12*	3/2$^-$	<0.4 ns	B D	J$^\pi$: L=1 in (d,t), M1 component in the transition to the 5/2$^-$ state. T$_{1/2}$: from ^{155}Ho ε decay.
224.532[m] *13*	7/2$^-$	≤5 ns	B d	XREF: d(225). T$_{1/2}$: from ^{155}Ho ε decay. J$^\pi$: M1 transitions to 5/2$^-$ and 7/2$^-$ require J^π=5/2$^-$ or 7/2$^-$. If J^π were 5/2$^-$, the

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Adopted Levels, Gammas (continued)

^{155}Dy Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[#]	XREF	Comments
				92.2γ would be M2 and would have B(M2)(W.u.)≥220, which violates RUL. Hence, $J^\pi=7/2^-$. Note, however, that with this J^π value the 22.15γ must be pure E2, which is in disagreement with the reported mult.
225.285[a] *16*	$9/2^-$	75[@] ps *17*	ABCdE	XREF: d(225). Jπ: E2 to $5/2^-$, L=5,6 in (d,t).
234.33[b] *3*	$11/2^-$	6 μs *1*	ABCDE	%IT=100 $T_{1/2}$: from γ(t) (1970Bo02). Jπ: E1 components in transitions to $9/2^+$ and $13/2^+$.
240.196[j] *12*	$3/2^+$	≤0.7 ns	B D	$T_{1/2}$: from ^{155}Ho ε decay. Jπ: L=2 in (d,t) indicates $J^\pi=3/2^+$ or $5/2^+$. The large (d,t) cross section indicates that this is the 3/2[402] Nilsson state.
247.791 *13*	$5/2^+$	≤1 ns	B D	$T_{1/2}$: from ^{155}Ho ε decay. Jπ: E1 transition to $3/2^-$ and E2 to $9/2^+$. Coriolis-mixing calculations of 1976St06 indicate that this is the $5/2^+$ member of the "1/2[660]" band.
321[k] *2*	$1/2^+$		d	XREF: d(321). Jπ: L=0 in (d,t). The large (d,t) cross section to this level establishes it as the 1/2[400] Nilsson state.
325.406[l] *13*	$5/2^-$,$(3/2)^-$		B d	XREF: d(321). Jπ: M1 transitions to $3/2^-$ and $5/2^-$ states. The existence of an M1 component in the 238.5γ to $7/2^-$ would rule out $3/2^-$. Assigned as the $5/2^-$ member of the 3/2[532] band by 1976St06.
345 *2*	$1/2^-$,$3/2^-$		D	Jπ: L=1 in (d,t).
349.002[j] *12*	$5/2^+$		B	Jπ: M1 to $3/2^+$ and E1 to $7/2^-$.
351.106 *19*	$5/2^+$,$7/2^+$		B	Jπ: E1 to $5/2^-$ and E2 to $9/2^+$.
375.401 *24*	$5/2^-$,$7/2^-$		B	Jπ: M1 transition to $7/2^-$ and M1+E2 to $5/2^-$.
381.75[d] *11*	$17/2^+$	77.6[@] ps *28*	CdE	XREF: d(382). Jπ: E2 to $13/2^+$. The population pattern in the in-beam studies establishes this as the $17/2^+$ member of the indicated band.
382.89 *8*	$3/2^-$,$(1/2)^-$		B d	XREF: d(382). Jπ: L=1 in (d,t). Strong population in (d,t) suggests that this is the $3/2^-$ member of the 1/2[530] band.
408.533 *14*	$3/2^+$,$5/2^+$		B	Jπ: E1 transitions to $3/2^-$ and $5/2^-$ states.
423.33 *4*	$5/2^-$,$7/2^-$		B D	Jπ: L=3 in (d,t). The multipolarities of the two γ's tentatively placed from this level are not consistent with the proposed J^π value. See the comment regarding these γ's in the ^{155}Ho ε Decay data set. E(level): Level population is uncertain in ^{155}Ho ε decay.
436.57[c] *11*	$13/2^-$	9.3[@] ps *15*	C E	
440.341 *14*	$5/2^+$,$7/2^+$		B D	Jπ: E1 transitions to $5/2^-$ and $7/2^-$ states.
448.98 *3*	$1/2^-$,$3/2^-$		B D	Jπ: L=1 in (d,t). From Coriolis-mixing calculations, 1976St06 assign this as the $1/2^-$ member of 1/2[530].
456.218 *24*	$5/2^-$		B D	Jπ: M1 transitions to $3/2^-$ and $5/2^-$, L=3,4 in (d,t).
483.73[k] *3*	$5/2^+$		B D	Jπ: L=2 in (d,t), E1 to $7/2^-$. Assigned as the $5/2^+$ member of the 1/2[400] band by 1976St06.
515 *2*	$(1/2^+)$		D	Jπ: L=(0) in (d,t).
547 *2*			D	
557.550 *19*	$5/2^-$,$7/2^-$		B D	Jπ: E1 transitions to $5/2^+$ and $5/2^+$,$7/2^+$ states suggest $J^\pi=3/2^-$,$5/2^-$,$7/2^-$. L=2,3 in (d,t) rules out $3/2^-$. 1976St06 propose $5/2^-$.
569.11 *6*	$3/2^-$,$5/2^-$,$7/2^-$		B	Jπ: E1 transition to $5/2^+$.
577.77[a] *10*	$13/2^-$		C E	
594 *2*			D	
645.2[e] *3*	$15/2^+$		E	
656 *2*	$(3/2^+,5/2^+)$		D	Jπ: L=(2) in (d,t).
657.78[b] *13*	$15/2^-$	4.85[@] ps *55*	C E	

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Adopted Levels, Gammas (continued)

^{155}Dy Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[#]	XREF	Comments
702.73 *20*			B D	Jπ: from Coriolis-mixing calculations, 1976St06 in (d,t) assign this as the 5/2⁻ member of 1/2[530].
744.73[d] *14*	21/2+	7.90[@] ps *21*	C E	
752.70 *8*	3/2+,5/2+		B	Jπ: M1 transition to 3/2+,5/2+ and E1 to 5/2⁻ allows Jπ+3/2+,5/2+,7/2+. γ to 3/2⁻ rules out 7/2+.
774 *2*	(9/2⁻,11/2⁻)		D	Jπ: L=(5) in (d,t).
803 *2*			D	
874 *2*	(1/2+)		D	Jπ: L=(0) in (d,t).
892.19[h] *24*	17/2+	8.8[@] ps *23*	C E	
895 *2*	(1/2⁻,3/2⁻)		D	Jπ: L=(1) in (d,t).
896.49[c] *13*	17/2⁻	2.70[@] ps *42*	C E	
902.06 *5*	3/2+,5/2+		B	Jπ: E2 to 3/2+,5/2+ states, gammas to 3/2⁻ and 5/2⁻ states.
925 *2*			D	
1004.77[e] *25*	19/2+		E	
1031.86[a] *14*	17/2⁻	2.70[@] ps *28*	C E	
1033.47 *4*	3/2+,5/2+		B	Jπ: E1 transitions to 3/2⁻ and 5/2⁻ states.
1037 *2*	5/2⁻,7/2⁻		D	Jπ: L=3 in (d,t).
1061 *2*			D	
1084 *2*	5/2⁻,7/2⁻		D	Jπ: L=3 in (d,t).
1119 *2*			D	
1145 *2*	3/2+,5/2,7/2⁻		D	Jπ: L=2,3 in (d,t).
1150.89[b] *14*	19/2⁻	1.18[@] ps *28*	C E	
1207 *2*			D	
1209.05[d] *17*	25/2+	2.36[@] ps *21*	C E	
1217.75 *3*	3/2+,5/2+		B D	Jπ: E1 transitions to 3/2⁻ and 5/2⁻ states.
1225.08[h] *23*	21/2+	5.48[@] ps *49*	C E	
1295 *2*			D	
1325 *2*			D	
1419.12[c] *16*	21/2⁻		E	
1424 *2*	(9/2⁻,11/2⁻)		D	Jπ: L=(5) in (d,t).
1441 *2*	5/2⁻,7/2⁻		D	Jπ: L=3 in (d,t).
1461.86[e] *24*	23/2+		E	
1533.65[a] *17*	21/2⁻	1.59[@] ps *28*	C E	
1547 *2*	(9/2⁻,11/2⁻)		D	Jπ: L=(5) in (d,t).
1573 *2*			D	
1625 *5*			D	
1649.96[h] *24*	25/2+	2.91[@] ps *21*	C E	
1688 *2*	(11/2⁻)		D	Jπ: L=(5) in (d,t). The strong population of this level in (^{3}He,α), together with the observation of transitions with similar characteristics in several odd-A Gd isotopes, suggests that this is the 11/2⁻ member of 9/2⁻[514].
1688.0 *8*	23/2		E	
1699.90[b] *17*	23/2⁻		E	
1719.0 *8*	23/2+		E	
1731 *5*			D	
1752.74[d] *19*	29/2+	1.07[@] ps *31*	C E	
1991.24[c] *18*	25/2⁻		E	
1998.85[e] *25*	27/2+		E	
2012.3[f] *3*	25/2⁻		E	
2082.75[a] *20*	25/2⁻		E	
2169.4[h] *5*	29/2+	1.46[@] ps *21*	C E	
2292.03[b] *19*	27/2⁻		E	
2357.74[d] *21*	33/2+		C E	

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Adopted Levels, Gammas (continued)

^{155}Dy Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[#]	XREF	Comments
2475.63[f] *21*	29/2−		C E	
2599.56[c] *20*	29/2−		E	
2601.7[e] *3*	31/2+		E	
2688.4[a] *6*	29/2−		E	
2784.5[h] *5*	33/2+		E	
2911.06[b] *21*	31/2−		E	
2990.23[f] *23*	33/2−	1.09[@] ps *19*	C E	
3012.04[d] *23*	37/2+	396[@] fs *53*	C E	
3212.0[c] *4*	33/2−		E	
3241.4[a] *8*	33/2−		E	
3256.2[e] *6*	35/2+		E	
3304.4[g] *5*	35/2−		E	
3473.4[b] *5*	35/2−		E	
3481.5[h] *5*	37/2+		E	
3556.33[f] *25*	37/2−	0.64[@] ps *12*	C E	
3710.84[d] *25*	41/2+	265[@] fs *20*	C E	$T_{1/2}$: other value: 0.27 ps *+76−24* (1989Em01).
3736.1[c] *5*	37/2−		E	
3832.1[a] *9*	37/2−		E	
3912.1[g] *5*	39/2−		E	
3951.2[e] *8*	39/2+		E	
4014.6[b] *5*	39/2−		E	
4180.2[f] *3*	41/2−	448[@] fs *45*	C E	$T_{1/2}$: other value: 0.56 ps *21* (2013Pe11).
4228.2[h] *7*	41/2+		E	
4315.5[c] *6*	41/2−		E	
4453.6[d] *3*	45/2+	166 fs *25*	C E	$T_{1/2}$: weighted average of 130 fs *40* (1989Em01) and 177 fs *30* (2013Pe19).
4471.6[a] *11*	41/2−		E	
4573.9[g] *5*	43/2−		E	
4634.8[b] *6*	43/2−		E	
4685.9[e] *9*	43/2+		E	
4865.8[f] *3*	45/2−	223[@] fs *32*	C E	$T_{1/2}$: other value: 210 fs *110* (1989Em01).
4974.7[c] *6*	45/2−		E	
5011.1[h] *9*	45/2+		E	
5157.6[a] *15*	45/2−		E	
5238.1[d] *3*	49/2+	159[@] fs *31*	C E	$T_{1/2}$: other value: 50 fs *+30−20* (1989Em01).
5289.7[g] *5*	47/2−		E	
5331.9[b] *7*	47/2−		E	
5459.4[e] *11*	47/2+		E	
5610.2[f] *3*	49/2−	157[@] fs *24*	C E	$T_{1/2}$: other value: 170 fs *+30−60* (1989Em01).
5707.4[c] *7*	49/2−		E	
5896.8[a] *16*	49/2−		E	
6061.8[g] *5*	51/2−		E	
6067.4[d] *3*	53/2+	0.13 ps *5*	E	
6098.6[b] *7*	51/2−		E	
6272.4[e] *12*	51/2+		E	
6405.2[f] *4*	53/2−	128[@] fs *19*	C E	$T_{1/2}$: other value: 180 fs *40* (1989Em01).
6506.4[c] *8*	53/2−		E	
6684.5[a] *16*	53/2−		E	
6892.2[g] *5*	55/2−		E	

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Adopted Levels, Gammas (continued)

^{155}Dy Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[#]	XREF	Comments
6928.5[b] *9*	55/2⁻		E	
6942.9[d] *4*	57/2⁺	0.15 ps *4*	E	
7241.4[f] *4*	57/2⁻	116[@] fs *17*	C E	$T_{1/2}$: other value:≤70 fs (1989Em01).
7365.3[c] *9*	57/2⁻		E	
7504.5[a] *19*	57/2⁻		E	
7778.0[g] *7*	59/2⁻		E	
7816.0[b] *10*	59/2⁻		E	
7869.9[d] *11*	61/2⁺	0.12 ps *+76−7*	E	
8109.7[f] *4*	61/2⁻	110[@] fs *41*	C E	$T_{1/2}$: other value: 160 fs *80* (1989Em01).
8279.5[c] *11*	61/2⁻		E	
8696.4[g] *9*	63/2⁻		E	
8756.9[b] *12*	63/2⁻		E	
8849.1[d] *12*	65/2⁺	0.06 ps *+28−3*	E	
9008.0[f] *4*	65/2⁻	0.12 ps *+7−10*	E	
9249.9[c] *12*	65/2⁻		E	
9624.4[g] *14*	67/2⁻		E	
9751.8[b] *13*	67/2⁻		E	
9882.1[d] *16*	69/2⁺	≤0.8 ps	E	$T_{1/2}$: value is not corrected for the feeding time.
9965.3[f] *4*	69/2⁻	≤0.15 ps	E	
10272.9[c] *16*	69/2⁻		E	
10520.6[g] *14*	71/2⁻	≥1.0 ps	E	
10802.8[b] *16*	71/2⁻		E	
10969.1[d] *19*	73/2⁺		E	
10972.3[f] *11*	73/2⁻	0.4 ps *+14−1*	E	
11113?[d]	77/2⁺		E	
11349.9[c] *19*	73/2⁻		E	
11450.6[g] *18*	75/2⁻	≥1.0 ps	E	
11905.8[b] *19*	75/2⁻		E	
11972.0[f] *12*	77/2⁻	≤0.14 ps	E	
12401[g]	79/2⁻		E	
12477?[c]	77/2⁻		E	
12983.0[f] *16*	81/2⁻	0.44 ps *+24−17*	E	$T_{1/2}$: value is not corrected for the feeding time.
13067?[b]	79/2⁻		E	
13344?[g]	83/2⁻		E	
14040.0[f] *19*	85/2⁻		E	
14469[g]	87/2⁻		E	
15159.0[f] *21*	89/2⁻		E	
15637?[g]	91/2⁻		E	
16347?[f]	93/2⁻		E	
x[i]	J		E	Additional information 2. Jπ: from Cranked Relativistic Mean-Field Theory calculations, 1998Af02 suggest J=75/2⁻.
909.6+x[i] *9*	J+2		E	
1862.1+x[i] *10*	J+4		E	
2860.2+x[i] *10*	J+6		E	
3905.2+x[i] *11*	J+8		E	
4996.1+x[i] *11*	J+10		E	
6133.4+x[i] *11*	J+12		E	

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Adopted Levels, Gammas (continued)

^{155}Dy Levels (continued)

E(level)†	Jπ‡	XREF	E(level)†	Jπ‡	XREF	E(level)†	Jπ‡	XREF
7317.0+x[i] *11*	J+14	E	11145.8+x[i] *12*	J+20	E	15390.6+x[i] *12*	J+26	E
8546.7+x[i] *11*	J+16	E	12514.5+x[i] *12*	J+22	E	16897.9+x[i] *13*	J+28	E
9823.0+x[i] *12*	J+18	E	13929.5+x[i] *12*	J+24	E	18449.7+x[i] *14*	J+30	E

† Values computed from a least-squares fit to the listed γ-ray energies. χ^2 norm = 2.3 greater than χ^2 critical = 1.3.

‡ For those levels seen only in the heavy-ion reactions, the values are those proposed by 1994Vl02 and are based on DCO ratios, $\gamma(\theta)$, and the systematics of similar bands in this mass region. Specific arguments for the J^π assignments to such levels are not given here.

Unless otherwise noted, the $T_{1/2}$ values are those reported by 1989Em01 from Doppler-shift attenuation measurements.

@ From 2013Pe19 measured by recoil distance Doppler-shift method or by Doppler-shift attenuation method.

& Band(a): Ground-state band, signature=−1/2 portion. Conf=3/2(521).

a Band(A): Ground-state band. Signature=+1/2 portion. Conf=3/2(521). Band is crossed by AB, becomes EAB and at higher energies is crossed by A_pB_p.

b Band(B): Band built on the 11/2[505] orbital, signature=−1/2.

c Band(C): Band built on the 11/2[505] orbital, signature=+1/2 band is crossed by AB and, at higher energies, by A_pB_p.

d Band(D): Strongly mixed $i_{13/2}$-related band, signature=+1/2. Dominant component at low energies is 1/2[660]. Band crossings with BC and A_pB_p are proposed to occur in the same energy region. 1984Ha39 report an average g-factor of 0.23 *6* for the $17/2^+$ through the $29/2^+$ states in this band, assuming an intrinsic quadrupole moment of 4.5 eb for the band.

e Band(E): Strongly mixed $i_{13/2}$-related band, signature=−1/2. Dominant component at low energies is 1/2[660]. Band crossings with AD and A_pB_p are proposed to occur in the same energy region.

f Band(F): Three-neutron-quasiparticle negative-parity band, signature=+1/2. Proposed configuration is EAB. Band is crossed by A_pB_p at higher energies and is seen to approach termination at the highest spins.

g Band(G): Three-neutron-quasiparticle negative-parity band, signature=−1/2. Proposed configuration is FAB. Band is crossed by A_pB_p at higher energies and is seen to approach termination at the highest spins.

h Band(H): Positive-parity band, signature=+1/2. Proposed "β vibration" based on ν $i_{13/2}$ (1994Vl02).

i Band(I): SD band. Proposed configuration is $\pi 6^4 \nu 7^3$, with four $i_{13/2}$ proton and three $j_{15/2}$ intruder neutron orbitals involved (1996Fi08). For other properties of this band, see the (HI,xnγ) data set.

j Band(J): 3/2[402] band.

k Band(K): 1/2[400] band.

l Band(L): 3/2[532] band.

m Band(M): 5/2[523] band.

Adopted Levels, Gammas (continued)

γ(^{155}Dy)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ[†&]	α[@]	Comments
39.384	5/2$^-$	39.39 *2*	100	0.0	3/2$^-$	M1+E2	0.222 *4*	11.9 *3*	α(L)=9.26 *21*; α(M)=2.13 *5* α(N)=0.484 *12*; α(O)=0.0629 *14*; α(P)=0.00183 *3* B(M1)(W.u.)=0.00797 *20*; B(E2)(W.u.)=132 *6*
86.767	7/2$^-$	47.37 *2*	100 *11*	39.384	5/2$^-$	M1+E2	0.115 *10*	4.03 *14*	α(L)=3.14 *11*; α(M)=0.702 *25* α(N)=0.161 *6*; α(O)=0.0227 *7*; α(P)=0.001093 *16* B(M1)(W.u.)=0.027 *+6−4*; B(E2)(W.u.)=82 *+25−18*
		86.75 *2*	34 *2*	0.0	3/2$^-$	E2		4.63	α(K)=1.567 *22*; α(L)=2.36 *4*; α(M)=0.566 *8* α(N)=0.1269 *18*; α(O)=0.01515 *22*; α(P)=6.50×10^{-5} *10* B(E2)(W.u.)=104 *+26−18*
132.195	9/2$^+$	45.38 *5*	100	86.767	7/2$^-$	E1		0.467	α(L)=0.366 *6*; α(M)=0.0806 *12* α(N)=0.0180 *3*; α(O)=0.00230 *4*; α(P)=8.14×10^{-5} *12* B(E1)(W.u.)=3.35×10^{-5} *+21−19*
136.320	5/2$^-$	49.52 *5*	1.5 *3*	86.767	7/2$^-$	M1+E2	0.11 *3*	3.4 *3*	α(L)=2.68 *24*; α(M)=0.60 *6* α(N)=0.138 *13*; α(O)=0.0195 *15*; α(P)=0.000961 *15* B(M1)(W.u.)=0.005 *+6−3*; B(E2)(W.u.)=12 *+18−8*
		96.91 *2*	21 *1*	39.384	5/2$^-$	M1+E2	0.22 *4*	2.64	α(K)=2.16 *4*; α(L)=0.375 *20*; α(M)=0.084 *5* α(N)=0.0192 *11*; α(O)=0.00272 *12*; α(P)=0.0001335 *24* B(M1)(W.u.)=0.009 *+9−5*; B(E2)(W.u.)=23 *+31−14*
		136.30 *2*	100 *5*	0.0	3/2$^-$	M1+E2	0.195 *24*	0.987	α(K)=0.822 *12*; α(L)=0.1290 *25*; α(M)=0.0285 *6* α(N)=0.00658 *13*; α(O)=0.000949 *17*; α(P)=5.08×10^{-5} *8* B(M1)(W.u.)=0.015 *+18−8*; B(E2)(W.u.)=16 *+19−9*
154.48	13/2$^+$	22.15[a] *5*	100	132.195	9/2$^+$	[E2]		2.39×10^3 *5*	α(L)=1.84×10^3 *4*; α(M)=437 *8* α(N)=97.2 *18*; α(O)=11.32 *21*; α(P)=0.00350 *7*
202.413	3/2$^-$	66.12 *3*	4.8 *2*	136.320	5/2$^-$	M1+E2	0.42 *5*	8.74 *22*	α(K)=6.01 *16*; α(L)=2.11 *24*; α(M)=0.49 *6* α(N)=0.111 *13*; α(O)=0.0143 *15*; α(P)=0.000371 *11* B(M1)(W.u.)=0.007 *+8−4*; B(E2)(W.u.)=1.5×10^2 *+19−8*
		163.02 *2*	29 *2*	39.384	5/2$^-$	M1(+E2)	<1.7	0.55 *5*	α(K)=0.43 *8*; α(L)=0.098 *25*; α(M)=0.0225 *64* α(N)=0.0051 *14*; α(O)=0.00069 *15*; α(P)=2.46×10^{-5} *68* B(M1)(W.u.)=8×10^{-4} *+16−4*; B(E2)(W.u.)=48 *+48−30*
		202.41 *2*	100 *3*	0.0	3/2$^-$	M1		0.328	B(M1)(W.u.)=0.006 *+7−3* α(K)=0.277 *4*; α(L)=0.0403 *6*; α(M)=0.00884 *13* α(N)=0.00205 *3*; α(O)=0.000300 *5*; α(P)=1.718×10^{-5} *24*
224.532	7/2$^-$	22.15[a] *5*		202.413	3/2$^-$	[E2]		2.39×10^3 *5*	α(L)=1.84×10^3 *4*; α(M)=437 *8* α(N)=97.2 *18*; α(O)=11.32 *21*; α(P)=0.00350 *7* Mult.,δ: from ce data in ^{155}Ho ε decay, mult=M1+E2 with δ=0.07 *+3−2* is deduced. This is inconsistent with the adopted J^π values for the two levels involved. See the comments for this γ in the ^{155}Ho ε Decay data set.
		88.26 *5*	0.94 *22*	136.320	5/2$^-$	M1		3.43	α(K)=2.88 *4*; α(L)=0.425 *6*; α(M)=0.0935 *14* α(N)=0.0216 *3*; α(O)=0.00316 *5*; α(P)=0.000180 *3*
		92.22 *6*	1.7 *6*	132.195	9/2$^+$	[E1]		0.383	α(K)=0.319 *5*; α(L)=0.0501 *7*; α(M)=0.01100 *16* α(N)=0.00249 *4*; α(O)=0.000338 *5*; α(P)=1.455×10^{-5} *21*

$^{155}_{66}Dy_{89}$-7

Adopted Levels, Gammas (continued)

γ(^{155}Dy) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ[†&]	α[@]	Comments
224.532	7/2$^-$	137.76 *4*	14 *3*	86.767	7/2$^-$	M1		0.961	α(K)=0.810 *12*; α(L)=0.1186 *17*; α(M)=0.0261 *4* α(N)=0.00603 *9*; α(O)=0.000882 *13*; α(P)=5.04×10^{-5} *7*
		185.13 *2*	100 *5*	39.384	5/2$^-$	M1		0.420	α(K)=0.354 *5*; α(L)=0.0516 *8*; α(M)=0.01134 *16* α(N)=0.00262 *4*; α(O)=0.000384 *6*; α(P)=2.20×10^{-5} *3*
		224.55 *2*	6.7 *22*	0.0	3/2$^-$	E2		0.1613	α(K)=0.1126 *16*; α(L)=0.0377 *6*; α(M)=0.00880 *13* α(N)=0.00199 *3*; α(O)=0.000254 *4*; α(P)=5.52×10^{-6} *8*
225.285	9/2$^-$	138.46 *4*	100 *10*	86.767	7/2$^-$	E2(+M1)	>2.4	0.843 *15*	α(K)=0.49 *3*; α(L)=0.272 *13*; α(M)=0.064 *4* α(N)=0.0145 *8*; α(O)=0.00179 *8*; α(P)=2.26×10^{-5} *22* B(E2)(W.u.)=1090 *+440−140* value exceeds RUL(E2)=300 by a factor of 3.4; RUL(E2) suggests δ(E2/M1) should be about <0.6.
		185.89 *2*	39 *3*	39.384	5/2$^-$	E2		0.302	α(K)=0.197 *3*; α(L)=0.0810 *12*; α(M)=0.0190 *3* α(N)=0.00430 *6*; α(O)=0.000540 *8*; α(P)=9.25×10^{-6} *13* B(E2)(W.u.)=114 *+36−23*
234.33	11/2$^-$	9.1 *1*	0.52 *6*	225.285	9/2$^-$	M1+E2	0.0189 *21*	≈530	B(M1)(W.u.)=2.4×10^{-6} *5*; B(E2)(W.u.)=0.0042 *+22−16*
		79.72 *5*	47 *4*	154.48	13/2$^+$	E1+M2	0.23 *3*	3.3 *7*	α(K)=2.4 *5*; α(L)=0.66 *16*; α(M)=0.16 *4* α(N)=0.036 *9*; α(O)=0.0051 *12*; α(P)=0.00024 *6* B(E1)(W.u.)=3.1×10^{-9} *+8−6*; B(M2)(W.u.)=0.120 *+46−33*
		102.16 *3*	100 *12*	132.195	9/2$^+$	E1+M2	0.45 *6*	3.8 *8*	α(K)=2.8 *6*; α(L)=0.74 *16*; α(M)=0.17 *4* α(N)=0.040 *9*; α(O)=0.0057 *13*; α(P)=0.00028 *6* B(E1)(W.u.)=2.8×10^{-9} *+7−5*; B(M2)(W.u.)=0.25 *+9−7*
		147.63 *6*	82 *12*	86.767	7/2$^-$	[E2]		0.666	B(E2)(W.u.)=0.0020 *+6−4* α(K)=0.388 *6*; α(L)=0.215 *3*; α(M)=0.0509 *8* α(N)=0.01146 *17*; α(O)=0.001412 *20*; α(P)=1.721×10^{-5} *25*
240.196	3/2$^+$	37.80 *4*	10.7 *20*	202.413	3/2$^-$	(E1)		0.778	B(E1)(W.u.)=8×10^{-4} *+10−5* α(L)=0.609 *9*; α(M)=0.1347 *20* α(N)=0.0300 *5*; α(O)=0.00375 *6*; α(P)=0.0001244 *18*
		103.89 *2*	17.4 *9*	136.320	5/2$^-$	E1		0.279	B(E1)(W.u.)=7×10^{-5} *+8−4* α(K)=0.233 *4*; α(L)=0.0360 *5*; α(M)=0.00788 *11* α(N)=0.00179 *3*; α(O)=0.000244 *4*; α(P)=1.080×10^{-5} *16*
		200.86 *7*	12.2 *5*	39.384	5/2$^-$	E1		0.0481	B(E1)(W.u.)=6×10^{-6} *+8−4* α(K)=0.0406 *6*; α(L)=0.00588 *9*; α(M)=0.001286 *18* α(N)=0.000294 *5*; α(O)=4.14×10^{-5} *6*; α(P)=2.05×10^{-6} *3*
		240.19 *2*	100 *5*	0.0	3/2$^-$	E1		0.0302	B(E1)(W.u.)=3.1×10^{-5} *+37−16* α(K)=0.0255 *4*; α(L)=0.00366 *6*; α(M)=0.000799 *12* α(N)=0.000183 *3*; α(O)=2.59×10^{-5} *4*; α(P)=1.318×10^{-6} *19*
247.791	5/2$^+$	111.47 *3*	7.1 *5*	136.320	5/2$^-$	E1		0.231	B(E1)(W.u.)=7×10^{-6} *+8−4* α(K)=0.193 *3*; α(L)=0.0295 *5*; α(M)=0.00647 *9* α(N)=0.001472 *21*; α(O)=0.000202 *3*; α(P)=9.05×10^{-6} *13*
		115.5 *1*	51 *2*	132.195	9/2$^+$	E2		1.597	α(K)=0.772 *11*; α(L)=0.635 *10*; α(M)=0.1516 *22* α(N)=0.0340 *5*; α(O)=0.00412 *6*; α(P)=3.26×10^{-5} *5* B(E2)(W.u.)=1.6×10^2 *+19−8*

$^{155}_{66}Dy_{89}$-8

Adopted Levels, Gammas (continued)

γ(^{155}Dy) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ[†&]	α[@]	Comments
247.791	5/2$^+$	161.08 *8*	16 *3*	86.767	7/2$^-$	[E1]		0.0862	B(E1)(W.u.)=5×10^{-6} *+6−3* α(K)=0.0726 *11*; α(L)=0.01069 *15*; α(M)=0.00234 *4* α(N)=0.000534 *8*; α(O)=7.46×10^{-5} *11*; α(P)=3.58×10^{-6} *5*
		208.41 *2*	100 *5*	39.384	5/2$^-$	E1		0.0437	α(K)=0.0369 *6*; α(L)=0.00533 *8*; α(M)=0.001165 *17* α(N)=0.000266 *4*; α(O)=3.76×10^{-5} *6*; α(P)=1.87×10^{-6} *3* B(E1)(W.u.)=1.4×10^{-5} *+18−8*
		247.77 *2*	96 *5*	0.0	3/2$^-$	E1		0.0279	B(E1)(W.u.)=8×10^{-6} *+10−4* α(K)=0.0236 *4*; α(L)=0.00337 *5*; α(M)=0.000737 *11* α(N)=0.0001688 *24*; α(O)=2.39×10^{-5} *4*; α(P)=1.221×10^{-6} *18*
325.406	5/2$^-$,(3/2)$^-$	100.84 *6*	1.7 *6*	224.532	7/2$^-$	[M1,E2]		2.48 *15*	α(K)=1.53 *44*; α(L)=0.73 *45*; α(M)=0.17 *11* α(N)=0.039 *25*; α(O)=0.0049 *28*; α(P)=8.4×10^{-5} *39*
		123.10 *6*	0.9	202.413	3/2$^-$	(M1)		1.323	α(K)=1.114 *16*; α(L)=0.1634 *23*; α(M)=0.0359 *5* α(N)=0.00830 *12*; α(O)=0.001215 *17*; α(P)=6.94×10^{-5} *10*
		189.09 *2*	9.1 *9*	136.320	5/2$^-$	M1		0.396	α(K)=0.334 *5*; α(L)=0.0487 *7*; α(M)=0.01069 *15* α(N)=0.00247 *4*; α(O)=0.000362 *5*; α(P)=2.07×10^{-5} *3*
		238.54 *9*	2.3 *9*	86.767	7/2$^-$	E2(+M1)		0.17 *4*	α(K)=0.135 *42*; α(L)=0.0277 *21*; α(M)=0.0063 *7* α(N)=0.00143 *14*; α(O)=0.000196 *7*; α(P)=7.8×10^{-6} *32*
		286.02 *2*	23 *1*	39.384	5/2$^-$	M1		0.1283	α(K)=0.1083 *16*; α(L)=0.01562 *22*; α(M)=0.00343 *5* α(N)=0.000793 *11*; α(O)=0.0001162 *17*; α(P)=6.69×10^{-6} *10*
		325.40 *2*	100 *5*	0.0	3/2$^-$	M1		0.0909	α(K)=0.0768 *11*; α(L)=0.01104 *16*; α(M)=0.00242 *4* α(N)=0.000560 *8*; α(O)=8.21×10^{-5} *12*; α(P)=4.73×10^{-6} *7*
349.002	5/2$^+$	101.34 *7*	5.8 *20*	247.791	5/2$^+$	[M1,E2]		2.44 *15*	α(K)=1.51 *43*; α(L)=0.72 *44*; α(M)=0.17 *11* α(N)=0.038 *24*; α(O)=0.0048 *27*; α(P)=8.3×10^{-5} *38*
		108.79 *2*	41 *2*	240.196	3/2$^+$	M1		1.88	α(K)=1.584 *23*; α(L)=0.233 *4*; α(M)=0.0511 *8* α(N)=0.01183 *17*; α(O)=0.001730 *25*; α(P)=9.87×10^{-5} *14*
		124.54 *5*	28 *1*	224.532	7/2$^-$	E1		0.1715	α(K)=0.1438 *21*; α(L)=0.0217 *3*; α(M)=0.00476 *7* α(N)=0.001082 *16*; α(O)=0.0001493 *21*; α(P)=6.84×10^{-6} *10*
		146.57 *2*	61 *7*	202.413	3/2$^-$	E1		0.1109	α(K)=0.0932 *13*; α(L)=0.01385 *20*; α(M)=0.00303 *5* α(N)=0.000691 *10*; α(O)=9.61×10^{-5} *14*; α(P)=4.54×10^{-6} *7*
		212.70 *2*	38 *2*	136.320	5/2$^-$	E1+M2	0.12 *+3−5*	0.062 *14*	α(K)=0.051 *11*; α(L)=0.0084 *22*; α(M)=0.00187 *51* α(N)=4.3×10^{-4} *12*; α(O)=6.1×10^{-5} *17*; α(P)=3.12×10^{-6} *88*
		262.23 *3*	100 *11*	86.767	7/2$^-$	E1		0.0241	α(K)=0.0204 *3*; α(L)=0.00291 *4*; α(M)=0.000635 *9* α(N)=0.0001457 *21*; α(O)=2.07×10^{-5} *3*; α(P)=1.063×10^{-6} *15*
		309.65[b] *4*	86[b] *8*	39.384	5/2$^-$	E1		0.01590	α(K)=0.01347 *19*; α(L)=0.00190 *3*; α(M)=0.000415 *6* α(N)=9.52×10^{-5} *14*; α(O)=1.360×10^{-5} *19*; α(P)=7.12×10^{-7} *10*
		348.99 *3*	62 *3*	0.0	3/2$^-$	E1		0.01186	α(K)=0.01006 *14*; α(L)=0.001410 *20*; α(M)=0.000308 *5* α(N)=7.07×10^{-5} *10*; α(O)=1.012×10^{-5} *15*; α(P)=5.37×10^{-7} *8*
351.106	5/2$^+$,7/2$^+$	218.93 *2*	100 *5*	132.195	9/2$^+$	E2		0.1753	α(K)=0.1213 *17*; α(L)=0.0417 *6*; α(M)=0.00974 *14* α(N)=0.00220 *3*; α(O)=0.000281 *4*; α(P)=5.91×10^{-6} *9*
		264.35 *14*	11.4 *18*	86.767	7/2$^-$	[E1]		0.0236	α(K)=0.0200 *3*; α(L)=0.00285 *4*; α(M)=0.000622 *9* α(N)=0.0001427 *20*; α(O)=2.03×10^{-5} *3*; α(P)=1.043×10^{-6} *15*
		311.85 *3*	38 *4*	39.384	5/2$^-$	E1		0.01562	α(K)=0.01324 *19*; α(L)=0.00187 *3*; α(M)=0.000408 *6*

$^{155}_{66}Dy_{89}$-9

Adopted Levels, Gammas (continued)

γ(^{155}Dy) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult.†	δ†&	α@	Comments
									α(N)=9.35×10^{-5} *13*; α(O)=1.336×10^{-5} *19*; α(P)=7.00×10^{-7} *10*
375.401	5/2$^-$,7/2$^-$	150.09 *6*	8 *2*	225.285	9/2$^-$				
		288.64 *4*	100 *9*	86.767	7/2$^-$	M1		0.1252	α(K)=0.1057 *15*; α(L)=0.01524 *22*; α(M)=0.00334 *5* α(N)=0.000773 *11*; α(O)=0.0001134 *16*; α(P)=6.53×10^{-6} *10*
		336.02 *3*	79 *9*	39.384	5/2$^-$	M1+E2	1.0 *+13−6*	0.065 *14*	α(K)=0.053 *13*; α(L)=0.0092 *7*; α(M)=0.00207 *12* α(N)=0.00047 *3*; α(O)=6.7×10^{-5} *7*; α(P)=3.11×10^{-6} *90*
381.75	17/2$^+$	227.3 *1*	100	154.48	13/2$^+$	E2		0.1550	α(K)=0.1086 *16*; α(L)=0.0359 *5*; α(M)=0.00838 *12* α(N)=0.00190 *3*; α(O)=0.000243 *4*; α(P)=5.34×10^{-6} *8* B(E2)(W.u.)=210 *8*
382.89	3/2$^-$,(1/2)$^-$	382.88 *14*	100	0.0	3/2$^-$	M1		0.0592	α(K)=0.0501 *7*; α(L)=0.00716 *10*; α(M)=0.001568 *22* α(N)=0.000363 *5*; α(O)=5.32×10^{-5} *8*; α(P)=3.08×10^{-6} *5*
408.533	3/2$^+$,5/2$^+$	160.76 *4*	76 *15*	247.791	5/2$^+$	M1(+E2)		0.56 *7*	α(K)=0.41 *12*; α(L)=0.113 *37*; α(M)=0.0260 *92* α(N)=0.0059 *21*; α(O)=7.8×10^{-4} *21*; α(P)=2.32×10^{-5} *95*
		206.08 *8*	15	202.413	3/2$^-$	E1		0.0450	α(K)=0.0380 *6*; α(L)=0.00549 *8*; α(M)=0.001200 *17* α(N)=0.000275 *4*; α(O)=3.87×10^{-5} *6*; α(P)=1.93×10^{-6} *3*
		272.22 *2*	58 *10*	136.320	5/2$^-$	E1		0.0220	α(K)=0.0186 *3*; α(L)=0.00264 *4*; α(M)=0.000577 *8* α(N)=0.0001322 *19*; α(O)=1.88×10^{-5} *3*; α(P)=9.71×10^{-7} *14*
		369.10 *10*	45 *9*	39.384	5/2$^-$	[E1]		0.01037	α(K)=0.00880 *13*; α(L)=0.001229 *18*; α(M)=0.000268 *4* α(N)=6.16×10^{-5} *9*; α(O)=8.83×10^{-6} *13*; α(P)=4.71×10^{-7} *7*
		408.58 *2*	100 *5*	0.0	3/2$^-$	E1		0.00815	α(K)=0.00692 *10*; α(L)=0.000962 *14*; α(M)=0.000210 *3* α(N)=4.82×10^{-5} *7*; α(O)=6.93×10^{-6} *10*; α(P)=3.73×10^{-7} *6*
423.33	5/2$^-$,7/2$^-$	74.33[c] *3*	4.2 *4*	349.002	5/2$^+$				
		383.95[c] *14*	100 *10*	39.384	5/2$^-$				
436.57	13/2$^-$	202.2 *1*	100	234.33	11/2$^-$	[M1]		0.329	α(K)=0.278 *4*; α(L)=0.0404 *6*; α(M)=0.00887 *13* α(N)=0.00205 *3*; α(O)=0.000301 *5*; α(P)=1.723×10^{-5} *25* B(M1)(W.u.)=0.216 *+43−30* E_γ,I_γ: from (HI,xnγ) dataset.
440.341	5/2$^+$,7/2$^+$	91.35 *3*	18 *3*	349.002	5/2$^+$	M1		3.11	α(K)=2.61 *4*; α(L)=0.385 *6*; α(M)=0.0846 *12* α(N)=0.0196 *3*; α(O)=0.00286 *4*; α(P)=0.0001631 *23*
		200.17 *2*	100 *9*	240.196	3/2$^+$	E2		0.236	α(K)=0.1583 *23*; α(L)=0.0598 *9*; α(M)=0.01401 *20* α(N)=0.00317 *5*; α(O)=0.000400 *6*; α(P)=7.56×10^{-6} *11*
		215.03 *2*	62 *3*	225.285	9/2$^-$	E1		0.0402	α(K)=0.0340 *5*; α(L)=0.00490 *7*; α(M)=0.001071 *15* α(N)=0.000245 *4*; α(O)=3.46×10^{-5} *5*; α(P)=1.733×10^{-6} *25*
		304.02 *2*	91 *6*	136.320	5/2$^-$	E1		0.01664	α(K)=0.01410 *20*; α(L)=0.00199 *3*; α(M)=0.000435 *6* α(N)=9.97×10^{-5} *14*; α(O)=1.424×10^{-5} *20*; α(P)=7.44×10^{-7} *11*
		353.49 *9*	44 *26*	86.767	7/2$^-$	E1		0.01150	α(K)=0.00976 *14*; α(L)=0.001366 *20*; α(M)=0.000298 *5* α(N)=6.85×10^{-5} *10*; α(O)=9.81×10^{-6} *14*; α(P)=5.21×10^{-7} *8*
448.98	1/2$^-$,3/2$^-$	448.98 *3*	100	0.0	3/2$^-$	M1		0.0392	α(K)=0.0331 *5*; α(L)=0.00471 *7*; α(M)=0.001032 *15* α(N)=0.000239 *4*; α(O)=3.50×10^{-5} *5*; α(P)=2.03×10^{-6} *3*

$^{155}_{66}Dy_{89}$-10

Adopted Levels, Gammas (continued)

γ(^{155}Dy) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult.†	α@	Comments
456.218	5/2⁻	369.30 *10*	36 *18*	86.767	7/2⁻	(M1)	0.0651	α(K)=0.0551 *8*; α(L)=0.00788 *11*; α(M)=0.001726 *25* α(N)=0.000399 *6*; α(O)=5.86×10^{-5} *9*; α(P)=3.38×10^{-6} *5*
		416.84 *3*	48 *4*	39.384	5/2⁻	M1	0.0475	α(K)=0.0402 *6*; α(L)=0.00572 *8*; α(M)=0.001253 *18* α(N)=0.000290 *4*; α(O)=4.26×10^{-5} *6*; α(P)=2.46×10^{-6} *4*
		456.23 *4*	100 *5*	0.0	3/2⁻	M1	0.0376	α(K)=0.0318 *5*; α(L)=0.00452 *7*; α(M)=0.000989 *14* α(N)=0.000229 *4*; α(O)=3.36×10^{-5} *5*; α(P)=1.95×10^{-6} *3*
483.73	5/2⁺	243.55 *3*	100 *13*	240.196	3/2⁺	M1	0.198	α(K)=0.1670 *24*; α(L)=0.0242 *4*; α(M)=0.00531 *8* α(N)=0.001228 *18*; α(O)=0.000180 *3*; α(P)=1.034×10^{-5} *15*
		259.09 *7*	83 *4*	224.532	7/2⁻	E1	0.0249	α(K)=0.0211 *3*; α(L)=0.00300 *5*; α(M)=0.000656 *10* α(N)=0.0001503 *21*; α(O)=2.13×10^{-5} *3*; α(P)=1.095×10^{-6} *16*
		397.14 *15*	61 *9*	86.767	7/2⁻	E1	0.00871	α(K)=0.00740 *11*; α(L)=0.001029 *15*; α(M)=0.000224 *4* α(N)=5.16×10^{-5} *8*; α(O)=7.41×10^{-6} *11*; α(P)=3.98×10^{-7} *6*
557.550	5/2⁻,7/2⁻	149.24 *4*	13 *1*	408.533	3/2⁺,5/2⁺			
		206.52 *2*	52 *13*	351.106	5/2⁺,7/2⁺	E1	0.0447	α(K)=0.0377 *6*; α(L)=0.00546 *8*; α(M)=0.001193 *17* α(N)=0.000273 *4*; α(O)=3.85×10^{-5} *6*; α(P)=1.92×10^{-6} *3*
		309.65[b] *4*	100[b] *9*	247.791	5/2⁺	E1	0.01590	α(K)=0.01347 *19*; α(L)=0.00190 *3*; α(M)=0.000415 *6* α(N)=9.52×10^{-5} *14*; α(O)=1.360×10^{-5} *19*; α(P)=7.12×10^{-7} *10*
		420.97 *3*	73 *4*	136.320	5/2⁻	M1	0.0463	α(K)=0.0391 *6*; α(L)=0.00558 *8*; α(M)=0.001221 *17* α(N)=0.000283 *4*; α(O)=4.15×10^{-5} *6*; α(P)=2.40×10^{-6} *4*
		518.43 *15*	16 *6*	39.384	5/2⁻			
		557.6 *2*	≤36	0.0	3/2⁻			
569.11	3/2⁻,5/2⁻,7/2⁻	160.55	37 *7*	408.533	3/2⁺,5/2⁺	[E1]	0.0870	α(K)=0.0732 *11*; α(L)=0.01079 *16*; α(M)=0.00236 *4* α(N)=0.000539 *8*; α(O)=7.52×10^{-5} *11*; α(P)=3.61×10^{-6} *5*
		321.31 *6*	100 *6*	247.791	5/2⁺	E1	0.01451	α(K)=0.01230 *18*; α(L)=0.001732 *25*; α(M)=0.000378 *6* α(N)=8.68×10^{-5} *13*; α(O)=1.240×10^{-5} *18*; α(P)=6.52×10^{-7} *10*
		569.2 *2*	43 *15*	0.0	3/2⁻	E2	0.01090	α(K)=0.00887 *13*; α(L)=0.001576 *23*; α(M)=0.000353 *5* α(N)=8.09×10^{-5} *12*; α(O)=1.128×10^{-5} *16*; α(P)=5.02×10^{-7} *7*
577.77	13/2⁻	352.5 *1*	100	225.285	9/2⁻			
645.2	15/2⁺	263.4 *5*	100 *22*	381.75	17/2⁺			
		490.6 *5*		154.48	13/2⁺			
657.78	15/2⁻	221.2 *1*	100 *10*	436.57	13/2⁻	[M1]	0.257	α(K)=0.217 *3*; α(L)=0.0315 *5*; α(M)=0.00692 *10* α(N)=0.001600 *23*; α(O)=0.000234 *4*; α(P)=1.346×10^{-5} *19* B(M1)(W.u.)=0.244 *+32−28*
		423.5 *5*	45 *5*	234.33	11/2⁻	[E2]	0.0236	α(K)=0.0187 *3*; α(L)=0.00385 *6*; α(M)=0.000873 *13* α(N)=0.000199 *3*; α(O)=2.71×10^{-5} *4*; α(P)=1.028×10^{-6} *15* B(E2)(W.u.)=46 *7*
702.73		478.2 *2*	100	224.532	7/2⁻			
744.73	21/2⁺	363.0 *1*	100	381.75	17/2⁺	E2	0.0366	α(K)=0.0283 *4*; α(L)=0.00641 *9*; α(M)=0.001463 *21* α(N)=0.000333 *5*; α(O)=4.47×10^{-5} *7*; α(P)=1.524×10^{-6} *22* B(E2)(W.u.)=222 *6* E_γ,I_γ,Mult.: from (HI,xnγ) dataset.

$^{155}_{66}Dy_{89}$-11

Adopted Levels, Gammas (continued)

γ(^{155}Dy) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ[†&]	α[@]	Comments
752.70	3/2$^+$,5/2$^+$	344.18 *8*	100 *15*	408.533	3/2$^+$,5/2$^+$	M1		0.0784	α(K)=0.0662 *10*; α(L)=0.00950 *14*; α(M)=0.00208 *3* α(N)=0.000482 *7*; α(O)=7.07×10^{-5} *10*; α(P)=4.08×10^{-6} *6*
		616.2 *4*	14 *5*	136.320	5/2$^-$	E1		0.00326	α(K)=0.00278 *4*; α(L)=0.000378 *6*; α(M)=8.21×10^{-5} *12* α(N)=1.89×10^{-5} *3*; α(O)=2.74×10^{-6} *4*; α(P)=1.531×10^{-7} *22*
		752.5 *4*		0.0	3/2$^-$				
892.19	17/2$^+$	510.6 *5*	96 *14*	381.75	17/2$^+$	[M1+E2]	1.0[#]	0.0213	α(K)=0.0177 *3*; α(L)=0.00277 *4*; α(M)=0.000612 *9* α(N)=0.0001410 *21*; α(O)=2.02×10^{-5} *3*; α(P)=1.053×10^{-6} *15* B(M1)(W.u.)=0.0045 *+21−13*; B(E2)(W.u.)=9.1 *+38−28* E_γ,I_γ: from (HI,xnγ) dataset.
		737.8 *5*	100 *18*	154.48	13/2$^+$	[E2]		0.00588	α(K)=0.00488 *7*; α(L)=0.000786 *11*; α(M)=0.0001744 *25* α(N)=4.01×10^{-5} *6*; α(O)=5.69×10^{-6} *8*; α(P)=2.80×10^{-7} *4* B(E2)(W.u.)=3.0 *+11−7* E_γ,I_γ: from (HI,xnγ) dataset.
896.49	17/2$^-$	238.7 *1*	100 *8*	657.78	15/2$^-$	[M1]		0.209	α(K)=0.1764 *25*; α(L)=0.0256 *4*; α(M)=0.00561 *8* α(N)=0.001298 *19*; α(O)=0.000190 *3*; α(P)=1.092×10^{-5} *16* B(M1)(W.u.)=0.30 *+6−4* E_γ,I_γ: from (HI,xnγ) dataset.
		459.9 *1*	77 *5*	436.57	13/2$^-$	[E2]		0.0189	α(K)=0.01509 *22*; α(L)=0.00297 *5*; α(M)=0.000670 *10* α(N)=0.0001532 *22*; α(O)=2.10×10^{-5} *3*; α(P)=8.37×10^{-7} *12* B(E2)(W.u.)=80 *+15−12* E_γ,I_γ: from (HI,xnγ) dataset.
902.06	3/2$^+$,5/2$^+$	493.3 *3*	42 *4*	408.533	3/2$^+$,5/2$^+$	E2		0.01570	α(K)=0.01262 *18*; α(L)=0.00240 *4*; α(M)=0.000539 *8* α(N)=0.0001234 *18*; α(O)=1.700×10^{-5} *24*; α(P)=7.05×10^{-7} *10*
		654.16 *9*	69 *8*	247.791	5/2$^+$				
		699.50 *15*	46 *4*	202.413	3/2$^-$				
		765.85 *7*	70 *4*	136.320	5/2$^-$				
		902.03 *11*	100 *8*	0.0	3/2$^-$				
1004.77	19/2$^+$	260.4 *5*	100 *17*	744.73	21/2$^+$				E_γ,I_γ: from (HI,xnγ) dataset.
		359.3 *5*		645.2	15/2$^+$				E_γ,I_γ: from (HI,xnγ) dataset.
		623 *1*		381.75	17/2$^+$				E_γ,I_γ: from (HI,xnγ) dataset.
1031.86	17/2$^-$	454.1 *1*	100	577.77	13/2$^-$	[E2]		0.0196	α(K)=0.01559 *22*; α(L)=0.00309 *5*; α(M)=0.000698 *10* α(N)=0.0001595 *23*; α(O)=2.18×10^{-5} *3*; α(P)=8.64×10^{-7} *13* B(E2)(W.u.)=215 *+25−20* E_γ,I_γ: from (HI,xnγ) dataset.

$^{155}_{66}Dy_{89}$-12

Adopted Levels, Gammas (continued)

γ(^{155}Dy) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ[†&]	α[@]	Comments
1033.47	3/2$^+$,5/2$^+$	897.14 *7*	94 *5*	136.320	5/2$^-$	E1		1.53×10^{-3}	α(K)=0.001309 *19*; α(L)=0.0001746 *25*; α(M)=3.79×10^{-5} *6* α(N)=8.74×10^{-6} *13*; α(O)=1.275×10^{-6} *18*; α(P)=7.29×10^{-8} *11*
		994.10 *7*	71 *6*	39.384	5/2$^-$	E1		1.26×10^{-3}	α(K)=0.001079 *16*; α(L)=0.0001432 *20*; α(M)=3.11×10^{-5} *5* α(N)=7.17×10^{-6} *10*; α(O)=1.047×10^{-6} *15*; α(P)=6.02×10^{-8} *9*
		1033.47 *4*	100 *5*	0.0	3/2$^-$	E1		1.17×10^{-3}	α(K)=0.001004 *14*; α(L)=0.0001331 *19*; α(M)=2.89×10^{-5} *4* α(N)=6.66×10^{-6} *10*; α(O)=9.73×10^{-7} *14*; α(P)=5.61×10^{-8} *8*
1150.89	19/2$^-$	254.4 *1*	100 *6*	896.49	17/2$^-$	[M1]		0.1759	α(K)=0.1484 *21*; α(L)=0.0215 *3*; α(M)=0.00471 *7* α(N)=0.001090 *16*; α(O)=0.0001598 *23*; α(P)=9.18×10^{-6} *13* B(M1)(W.u.)=0.53 *+16−11* E_γ,I_γ: from (HI,xnγ) dataset.
		493.1 *1*	93 *6*	657.78	15/2$^-$	[E2]		0.01571	α(K)=0.01263 *18*; α(L)=0.00240 *4*; α(M)=0.000540 *8* α(N)=0.0001236 *18*; α(O)=1.702×10^{-5} *24*; α(P)=7.06×10^{-7} *10* B(E2)(W.u.)=146 *+46−29* E_γ,I_γ: from (HI,xnγ) dataset.
1209.05	25/2$^+$	464.3 *1*	100	744.73	21/2$^+$	E2		0.0184	α(K)=0.01472 *21*; α(L)=0.00288 *4*; α(M)=0.000651 *10* α(N)=0.0001487 *21*; α(O)=2.04×10^{-5} *3*; α(P)=8.18×10^{-7} *12* B(E2)(W.u.)=221 *+22−19* E_γ,I_γ,Mult.: from (HI,xnγ) dataset.
1217.75	3/2$^+$,5/2$^+$	659.6 *2*	24 *4*	557.550	5/2$^-$,7/2$^-$				
		834.85 *9*	31 *7*	382.89	3/2$^-$,(1/2)$^-$	E1		1.76×10^{-3}	α(K)=0.001504 *21*; α(L)=0.000201 *3*; α(M)=4.37×10^{-5} *7* α(N)=1.007×10^{-5} *15*; α(O)=1.468×10^{-6} *21*; α(P)=8.36×10^{-8} *12*
		892.2 *2*	78 *9*	325.406	5/2$^-$,(3/2)$^-$	E1		1.55×10^{-3}	α(K)=0.001323 *19*; α(L)=0.0001765 *25*; α(M)=3.83×10^{-5} *6* α(N)=8.83×10^{-6} *13*; α(O)=1.289×10^{-6} *18*; α(P)=7.37×10^{-8} *11*
		1015.35 *6*	87 *7*	202.413	3/2$^-$	E1		1.21×10^{-3}	α(K)=0.001038 *15*; α(L)=0.0001376 *20*; α(M)=2.98×10^{-5} *5* α(N)=6.88×10^{-6} *10*; α(O)=1.006×10^{-6} *14*; α(P)=5.79×10^{-8} *9*
		1081.40 *6*	100 *9*	136.320	5/2$^-$	E1		1.08×10^{-3}	α(K)=0.000924 *13*; α(L)=0.0001222 *18*; α(M)=2.65×10^{-5} *4* α(N)=6.12×10^{-6} *9*; α(O)=8.94×10^{-7} *13*; α(P)=5.16×10^{-8} *8*
		1178.39 *4*	82 *4*	39.384	5/2$^-$	E1		9.40×10^{-4}	α(K)=0.000791 *11*; α(L)=0.0001043 *15*; α(M)=2.26×10^{-5} *4* α(N)=5.22×10^{-6} *8*; α(O)=7.64×10^{-7} *11*; α(P)=4.43×10^{-8} *7*; α(IPF)=1.572×10^{-5} *22*
		1218.0 *3*	21 *3*	0.0	3/2$^-$				

$^{155}_{66}Dy_{89}$-13

Adopted Levels, Gammas (continued)

γ(^{155}Dy) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ[†&]	α[@]	Comments
1225.08	21/2$^+$	332.9 *1*	100 *19*	892.19	17/2$^+$	[E2]		0.0471	α(K)=0.0360 *5*; α(L)=0.00865 *13*; α(M)=0.00198 *3* α(N)=0.000451 *7*; α(O)=5.99×10^{-5} *9*; α(P)=1.91×10^{-6} *3* B(E2)(W.u.)=226 *33*
		480.5 *5*	45 *6*	744.73	21/2$^+$	[M1+E2]	1.0[#]	0.0249	α(K)=0.0207 *3*; α(L)=0.00327 *5*; α(M)=0.000725 *11* α(N)=0.0001669 *24*; α(O)=2.39×10^{-5} *4*; α(P)=1.228×10^{-6} *18* B(M1)(W.u.)=0.0036 *+11−8*; B(E2)(W.u.)=8.2 *22*
		843.4 *5*	74 *11*	381.75	17/2$^+$	[E2]		0.00437	α(K)=0.00365 *6*; α(L)=0.000565 *8*; α(M)=0.0001249 *18* α(N)=2.87×10^{-5} *4*; α(O)=4.11×10^{-6} *6*; α(P)=2.10×10^{-7} *3* B(E2)(W.u.)=1.61 *+29−25*
1419.12	21/2$^-$	268.3 *5*	62 *6*	1150.89	19/2$^-$				
		522.6 *1*	100 *10*	896.49	17/2$^-$				
1461.86	23/2$^+$	252.9 *5*	24 *5*	1209.05	25/2$^+$				
		457.1 *1*	100 *11*	1004.77	19/2$^+$				
		717.5 *5*	45 *12*	744.73	21/2$^+$				
1533.65	21/2$^-$	501.8 *1*	100	1031.86	17/2$^-$	[E2]		0.01501	α(K)=0.01209 *17*; α(L)=0.00228 *4*; α(M)=0.000512 *8* α(N)=0.0001172 *17*; α(O)=1.617×10^{-5} *23*; α(P)=6.77×10^{-7} *10* B(E2)(W.u.)=223 *+49−33*
1649.96	25/2$^+$	424.9 *1*	100 *17*	1225.08	21/2$^+$	[E2]		0.0234	α(K)=0.0185 *3*; α(L)=0.00381 *6*; α(M)=0.000864 *13* α(N)=0.000197 *3*; α(O)=2.68×10^{-5} *4*; α(P)=1.019×10^{-6} *15* B(E2)(W.u.)=200 *18*
		440.4 *5*	23 *3*	1209.05	25/2$^+$	[M1+E2]	1.0[#]	0.0312	α(K)=0.0259 *4*; α(L)=0.00418 *6*; α(M)=0.000927 *14* α(N)=0.000213 *3*; α(O)=3.04×10^{-5} *5*; α(P)=1.533×10^{-6} *22* B(M1)(W.u.)=0.0072 *+22−17*; B(E2)(W.u.)=19 *5*
		905.3 *5*	16 *3*	744.73	21/2$^+$	[E2]		0.00375	α(K)=0.00314 *5*; α(L)=0.000478 *7*; α(M)=0.0001054 *15* α(N)=2.43×10^{-5} *4*; α(O)=3.48×10^{-6} *5*; α(P)=1.81×10^{-7} *3* B(E2)(W.u.)=0.73 *+18−15*
1688.0	23/2	943 *1*	100	744.73	21/2$^+$				
1699.90	23/2$^-$	280.6 *5*	60 *5*	1419.12	21/2$^-$				
		549.0 *1*	100 *9*	1150.89	19/2$^-$				
1719.0	23/2$^+$	974 *1*	100	744.73	21/2$^+$				
1752.74	29/2$^+$	543.7 *1*	100	1209.05	25/2$^+$	E2		0.01222	α(K)=0.00992 *14*; α(L)=0.00180 *3*; α(M)=0.000403 *6* α(N)=9.24×10^{-5} *13*; α(O)=1.283×10^{-5} *18*; α(P)=5.59×10^{-7} *8* B(E2)(W.u.)=2.2×10^2 *+9−5*
1991.24	25/2$^-$	291.5 *5*	48 *4*	1699.90	23/2$^-$				
		572.1 *1*	100 *7*	1419.12	21/2$^-$				
1998.85	27/2$^+$	537.0 *1*	100	1461.86	23/2$^+$				
2012.3	25/2$^-$	293 *1*		1719.0	23/2$^+$				
		324 *1*		1688.0	23/2				
		479.0 *5*	69 *7*	1533.65	21/2$^-$				
		550.7 *5*	78 *13*	1461.86	23/2$^+$				
		803.2 *5*	100 *18*	1209.05	25/2$^+$				
2082.75	25/2$^-$	549.1 *1*	100	1533.65	21/2$^-$				

$^{155}_{66}Dy_{89}$-14

Adopted Levels, Gammas (continued)

γ(^{155}Dy) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	α[@]	Comments
2169.4	29/2$^+$	519.5 *5*	100	1649.96	25/2$^+$	[E2]	0.01373	α(K)=0.01109 *16*; α(L)=0.00205 *3*; α(M)=0.000461 *7* α(N)=0.0001056 *15*; α(O)=1.461×10^{-5} *21*; α(P)=6.23×10^{-7} *9* B(E2)(W.u.)=204 *+34−25*
2292.03	27/2$^-$	301 *1*		1991.24	25/2$^-$			
		592.1 *1*	100	1699.90	23/2$^-$			
2357.74	33/2$^+$	605.0 *1*	100	1752.74	29/2$^+$	E2	0.00938	α(K)=0.00767 *11*; α(L)=0.001329 *19*; α(M)=0.000297 *5* α(N)=6.81×10^{-5} *10*; α(O)=9.53×10^{-6} *14*; α(P)=4.36×10^{-7} *7*
2475.63	29/2$^-$	463.7 *5*		2012.3	25/2$^-$			
		476.2 *5*	40 *8*	1998.85	27/2$^+$			
		722.9 *1*	100 *31*	1752.74	29/2$^+$			DCO=0.7 *2*.
2599.56	29/2$^-$	307.7 *5*	45 *4*	2292.03	27/2$^-$			
		608.3 *1*	100 *8*	1991.24	25/2$^-$			
2601.7	31/2$^+$	602.9 *1*	100	1998.85	27/2$^+$			
2688.4	29/2$^-$	605.7 *5*	100	2082.75	25/2$^-$			
2784.5	33/2$^+$	615.1 *1*	100	2169.4	29/2$^+$			
2911.06	31/2$^-$	311.3 *5*	29 *3*	2599.56	29/2$^-$			
		619.0 *1*	100 *11*	2292.03	27/2$^-$			
2990.23	33/2$^-$	514.6 *1*	100 *5*	2475.63	29/2$^-$	[E2]	0.01406	α(K)=0.01135 *16*; α(L)=0.00211 *3*; α(M)=0.000475 *7* α(N)=0.0001086 *16*; α(O)=1.502×10^{-5} *21*; α(P)=6.37×10^{-7} *9* B(E2)(W.u.)=2.5×10^2 *+5−4*
		632.5 *5*	16 *3*	2357.74	33/2$^+$	[E1]	0.00309	α(K)=0.00263 *4*; α(L)=0.000357 *5*; α(M)=7.77×10^{-5} *11* α(N)=1.79×10^{-5} *3*; α(O)=2.60×10^{-6} *4*; α(P)=1.451×10^{-7} *21* B(E1)(W.u.)=1.16×10^{-4} *+33−25*
3012.04	37/2$^+$	654.3 *1*	100	2357.74	33/2$^+$	E2	0.00777	α(K)=0.00639 *9*; α(L)=0.001075 *15*; α(M)=0.000239 *4* α(N)=5.50×10^{-5} *8*; α(O)=7.74×10^{-6} *11*; α(P)=3.65×10^{-7} *6* B(E2)(W.u.)=239 *+38−28*
3212.0	33/2$^-$	300 *1*		2911.06	31/2$^-$			
		611.2 *5*	100 *8*	2601.7	31/2$^+$			
3241.4	33/2$^-$	552.9 *5*	100	2688.4	29/2$^-$			
3256.2	35/2$^+$	654.5 *5*	100	2601.7	31/2$^+$			
3304.4	35/2$^-$	520 *1*	100 *9*	2784.5	33/2$^+$			
		946.4 *5*	53 *5*	2357.74	33/2$^+$			
3473.4	35/2$^-$	261.8 *5*		3212.0	33/2$^-$			
		561.7 *5*	100	2911.06	31/2$^-$			
3481.5	37/2$^+$	697.0 *1*	100	2784.5	33/2$^+$			
3556.33	37/2$^-$	544 *1*	≤20	3012.04	37/2$^+$	[E1]	0.00426	α(K)=0.00363 *6*; α(L)=0.000496 *8*; α(M)=0.0001080 *16* α(N)=2.49×10^{-5} *4*; α(O)=3.60×10^{-6} *6*; α(P)=1.99×10^{-7} *3* B(E1)(W.u.)=2.0×10^{-4} *+20−11* I_γ: the limit ≤20 results from B(E1) limit in 2013Pe19 (^{124}Sn(^{36}S,5nγ).
		566.1 *1*	100	2990.23	33/2$^-$	[E2]	0.01105	α(K)=0.00899 *13*; α(L)=0.001601 *23*; α(M)=0.000359 *5* α(N)=8.22×10^{-5} *12*; α(O)=1.145×10^{-5} *16*; α(P)=5.08×10^{-7} *8* B(E2)(W.u.)=2.8×10^2 *+6−5*

$^{155}_{66}Dy_{89}$-15

Adopted Levels, Gammas (continued)

γ(^{155}Dy) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	α[@]	Comments
3710.84	41/2$^+$	698.8 *1*	100	3012.04	37/2$^+$	[E2]	0.00666	α(K)=0.00551 *8*; α(L)=0.000904 *13*; α(M)=0.000201 *3* α(N)=4.61×10^{-5} *7*; α(O)=6.52×10^{-6} *10*; α(P)=3.15×10^{-7} *5* B(E2)(W.u.)=257 *+21−18*
3736.1	37/2$^-$	262.5 *5*		3473.4	35/2$^-$			
		524.3 *5*		3212.0	33/2$^-$			
3832.1	37/2$^-$	590.7 *5*	100	3241.4	33/2$^-$			
3912.1	39/2$^-$	430.6 *5*	100 *11*	3481.5	37/2$^+$			
		607 *1*		3304.4	35/2$^-$			
		900.3 *5*	83 *11*	3012.04	37/2$^+$			
3951.2	39/2$^+$	695.0 *5*	100	3256.2	35/2$^+$			
4014.6	39/2$^-$	278.7 *5*	22 *4*	3736.1	37/2$^-$			
		541.2 *1*	100 *8*	3473.4	35/2$^-$			
4180.2	41/2$^-$	623.9 *1*	100	3556.33	37/2$^-$	[E2]	0.00871	α(K)=0.00714 *10*; α(L)=0.001222 *18*; α(M)=0.000273 *4* α(N)=6.25×10^{-5} *9*; α(O)=8.78×10^{-6} *13*; α(P)=4.06×10^{-7} *6* B(E2)(W.u.)=268 *+29−25*
4228.2	41/2$^+$	746.7 *5*	100	3481.5	37/2$^+$			
4315.5	41/2$^-$	301 *1*		4014.6	39/2$^-$			
		579.4 *5*		3736.1	37/2$^-$			
4453.6	45/2$^+$	742.8 *1*	100	3710.84	41/2$^+$	E2	0.00579	α(K)=0.00480 *7*; α(L)=0.000773 *11*; α(M)=0.0001714 *24* α(N)=3.94×10^{-5} *6*; α(O)=5.59×10^{-6} *8*; α(P)=2.75×10^{-7} *4* B(E2)(W.u.)=3.0×10^2 *+6−4*
4471.6	41/2$^-$	639.5 *5*	100	3832.1	37/2$^-$			
4573.9	43/2$^-$	661.8 *1*	100	3912.1	39/2$^-$			
4634.8	43/2$^-$	319.5 *5*		4315.5	41/2$^-$			
		620.2 *5*		4014.6	39/2$^-$			
4685.9	43/2$^+$	734.7 *5*	100	3951.2	39/2$^+$			
4865.8	45/2$^-$	685.6 *1*	100	4180.2	41/2$^-$	E2	0.00696	α(K)=0.00575 *8*; α(L)=0.000950 *14*; α(M)=0.000211 *3* α(N)=4.85×10^{-5} *7*; α(O)=6.85×10^{-6} *10*; α(P)=3.29×10^{-7} *5* B(E2)(W.u.)=3.4×10^2 *+6−4*
4974.7	45/2$^-$	340.0 *5*	17 *4*	4634.8	43/2$^-$			
		659.2 *1*	100 *8*	4315.5	41/2$^-$			
5011.1	45/2$^+$	782.9 *5*	100	4228.2	41/2$^+$			
5157.6	45/2$^-$	686 *1*	100	4471.6	41/2$^-$			
5238.1	49/2$^+$	784.5 *1*	100	4453.6	45/2$^+$	E2	0.00512	α(K)=0.00426 *6*; α(L)=0.000674 *10*; α(M)=0.0001493 *21* α(N)=3.43×10^{-5} *5*; α(O)=4.89×10^{-6} *7*; α(P)=2.45×10^{-7} *4* B(E2)(W.u.)=2.4×10^2 *+6−4*
5289.7	47/2$^-$	715.8 *1*	100	4573.9	43/2$^-$			
5331.9	47/2$^-$	357.3 *5*	24 *5*	4974.7	45/2$^-$			
		697.0 *5*	100 *7*	4634.8	43/2$^-$			
5459.4	47/2$^+$	773.5 *5*	100	4685.9	43/2$^+$			
5610.2	49/2$^-$	744.4 *1*	100	4865.8	45/2$^-$	E2	0.00577	α(K)=0.00478 *7*; α(L)=0.000769 *11*; α(M)=0.0001705 *24* α(N)=3.92×10^{-5} *6*; α(O)=5.56×10^{-6} *8*; α(P)=2.74×10^{-7} *4* B(E2)(W.u.)=3.2×10^2 *+6−4*

$^{155}_{66}Dy_{89}$-16

Adopted Levels, Gammas (continued)

γ(^{155}Dy) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	α[@]	Comments
5707.4	49/2$^-$	375.5 *5*	18 *3*	5331.9	47/2$^-$			
		732.7 *5*	100 *5*	4974.7	45/2$^-$			
5896.8	49/2$^-$	739.2 *5*	100	5157.6	45/2$^-$			
6061.8	51/2$^-$	772.1 *1*	100	5289.7	47/2$^-$			
6067.4	53/2$^+$	829.3 *1*	100	5238.1	49/2$^+$	[E2]	0.00453	B(E2)(W.u.)=2.2×10^2 *+14−6* α(K)=0.00378 *6*; α(L)=0.000589 *9*; α(M)=0.0001301 *19* α(N)=2.99×10^{-5} *5*; α(O)=4.27×10^{-6} *6*; α(P)=2.17×10^{-7} *3*
6098.6	51/2$^-$	391.1 *5*	24 *3*	5707.4	49/2$^-$			
		766.8 *5*	100 *8*	5331.9	47/2$^-$			
6272.4	51/2$^+$	813.0 *5*	100	5459.4	47/2$^+$			
6405.2	53/2$^-$	795.0 *1*	100	5610.2	49/2$^-$	E2	0.00498	α(K)=0.00414 *6*; α(L)=0.000653 *10*; α(M)=0.0001444 *21* α(N)=3.32×10^{-5} *5*; α(O)=4.73×10^{-6} *7*; α(P)=2.38×10^{-7} *4* B(E2)(W.u.)=280 *+49−37*
6506.4	53/2$^-$	407.8 *5*	13 *3*	6098.6	51/2$^-$			
		799.0 *5*	100 *13*	5707.4	49/2$^-$			
6684.5	53/2$^-$	787.7 *5*	100	5896.8	49/2$^-$			
6892.2	55/2$^-$	830.3 *1*	100	6061.8	51/2$^-$			
6928.5	55/2$^-$	829.9 *5*	100	6098.6	51/2$^-$			
6942.9	57/2$^+$	875.4 *1*	100	6067.4	53/2$^+$	E2	0.00403	B(E2)(W.u.)=1.5×10^2 *+6−3* α(K)=0.00337 *5*; α(L)=0.000517 *8*; α(M)=0.0001142 *16* α(N)=2.63×10^{-5} *4*; α(O)=3.76×10^{-6} *6*; α(P)=1.94×10^{-7} *3*
7241.4	57/2$^-$	836.2 *1*	100	6405.2	53/2$^-$	E2	0.00445	α(K)=0.00371 *6*; α(L)=0.000577 *8*; α(M)=0.0001275 *18* α(N)=2.93×10^{-5} *5*; α(O)=4.19×10^{-6} *6*; α(P)=2.14×10^{-7} *3* B(E2)(W.u.)=240 *+40−30*
7365.3	57/2$^-$	858.9 *5*	100	6506.4	53/2$^-$			
7504.5	57/2$^-$	820 *1*	100	6684.5	53/2$^-$			
7778.0	59/2$^-$	885.8 *5*	100	6892.2	55/2$^-$			
7816.0	59/2$^-$	887.5 *5*	100	6928.5	55/2$^-$			
7869.9	61/2$^+$	927 *1*	100	6942.9	57/2$^+$	[E2]	0.00357	α(K)=0.00299 *5*; α(L)=0.000452 *7*; α(M)=9.97×10^{-5} *15* α(N)=2.30×10^{-5} *4*; α(O)=3.29×10^{-6} *5*; α(P)=1.723×10^{-7} *25* B(E2)(W.u.)=1.4×10^2 *+19−12*
8109.7	61/2$^-$	868.3 *1*	100	7241.4	57/2$^-$	E2	0.00410	α(K)=0.00343 *5*; α(L)=0.000527 *8*; α(M)=0.0001164 *17* α(N)=2.68×10^{-5} *4*; α(O)=3.83×10^{-6} *6*; α(P)=1.97×10^{-7} *3* B(E2)(W.u.)=2.1×10^2 *+13−6*
8279.5	61/2$^-$	914.2 *5*	100	7365.3	57/2$^-$			
8696.4	63/2$^-$	918.4 *5*	100	7778.0	59/2$^-$			
8756.9	63/2$^-$	940.9 *5*	100	7816.0	59/2$^-$			
8849.1	65/2$^+$	979.2 *5*	100	7869.9	61/2$^+$	E2	0.00318	α(K)=0.00267 *4*; α(L)=0.000399 *6*; α(M)=8.78×10^{-5} *13* α(N)=2.02×10^{-5} *3*; α(O)=2.91×10^{-6} *4*; α(P)=1.540×10^{-7} *22* B(E2)(W.u.)=2.1×10^2 *+21−18*
9008.0	65/2$^-$	898.3 *1*	100	8109.7	61/2$^-$	[E2]	0.00381	α(K)=0.00319 *5*; α(L)=0.000487 *7*; α(M)=0.0001073 *15* α(N)=2.47×10^{-5} *4*; α(O)=3.54×10^{-6} *5*; α(P)=1.84×10^{-7} *3* B(E2)(W.u.)=1.6×10^2 *+15−6*

$^{155}_{66}Dy_{89}$-17

Adopted Levels, Gammas (continued)

γ(^{155}Dy) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	α[@]	Comments
9249.9	65/2$^-$	970.4 *5*	100	8279.5	61/2$^-$			
9624.4	67/2$^-$	928 *1*	100	8696.4	63/2$^-$			
9751.8	67/2$^-$	994.9 *5*	100	8756.9	63/2$^-$			
9882.1	69/2$^+$	1033 *1*	100	8849.1	65/2$^+$	[E2]	0.00285	B(E2)(W.u.)=24 *+30−13* α(K)=0.00239 *4*; α(L)=0.000354 *5*; α(M)=7.77×10^{-5} *11* α(N)=1.79×10^{-5} *3*; α(O)=2.58×10^{-6} *4*; α(P)=1.382×10^{-7} *20*
9965.3	69/2$^-$	957.3 *1*	100	9008.0	65/2$^-$	[E2]	0.00333	α(K)=0.00280 *4*; α(L)=0.000420 *6*; α(M)=9.25×10^{-5} *13* α(N)=2.13×10^{-5} *3*; α(O)=3.06×10^{-6} *5*; α(P)=1.613×10^{-7} *23* B(E2)(W.u.)=1.9×10^2 *+22−10*
10272.9	69/2$^-$	1023 *1*	100	9249.9	65/2$^-$			
10520.6	71/2$^-$	896.2 *5*	100	9624.4	67/2$^-$	[E2]	0.00383	α(K)=0.00321 *5*; α(L)=0.000489 *7*; α(M)=0.0001079 *16* α(N)=2.48×10^{-5} *4*; α(O)=3.56×10^{-6} *5*; α(P)=1.85×10^{-7} *3*
10802.8	71/2$^-$	1051 *1*	100	9751.8	67/2$^-$			
10969.1	73/2$^+$	1087 *1*	100	9882.1	69/2$^+$			
10972.3	73/2$^-$	1007 *1*	100	9965.3	69/2$^-$	[E2]	0.00300	α(K)=0.00252 *4*; α(L)=0.000374 *6*; α(M)=8.23×10^{-5} *12* α(N)=1.90×10^{-5} *3*; α(O)=2.73×10^{-6} *4*; α(P)=1.455×10^{-7} *21* B(E2)(W.u.)=28 *+9−22*
11113?	77/2$^+$	1144[c] *1*	100	9965.3	69/2$^-$			
11349.9	73/2$^-$	1077 *1*	100	10272.9	69/2$^-$			
11450.6	75/2$^-$	930 *1*	100	10520.6	71/2$^-$	[E2]	0.00354	α(K)=0.00297 *5*; α(L)=0.000449 *7*; α(M)=9.89×10^{-5} *14* α(N)=2.28×10^{-5} *4*; α(O)=3.27×10^{-6} *5*; α(P)=1.712×10^{-7} *25*
11905.8	75/2$^-$	1103 *1*	100	10802.8	71/2$^-$			
11972.0	77/2$^-$	999.6 *5*	100	10972.3	73/2$^-$	[E2]	0.00305	α(K)=0.00256 *4*; α(L)=0.000381 *6*; α(M)=8.37×10^{-5} *12* α(N)=1.93×10^{-5} *3*; α(O)=2.78×10^{-6} *4*; α(P)=1.477×10^{-7} *21* B(E2)(W.u.)=1.6×10^2 *+19−9*
12401	79/2$^-$	950[c] *1*	100	11450.6	75/2$^-$			
12477?	77/2$^-$	1128[c] *1*	100	11349.9	73/2$^-$			
12983.0	81/2$^-$	1011 *1*	100	11972.0	77/2$^-$	[E2]	0.00297	α(K)=0.00250 *4*; α(L)=0.000371 *6*; α(M)=8.16×10^{-5} *12* α(N)=1.88×10^{-5} *3*; α(O)=2.71×10^{-6} *4*; α(P)=1.443×10^{-7} *21* B(E2)(W.u.)=25 *+16−9*
13067?	79/2$^-$	1162[c] *1*	100	11905.8	75/2$^-$			
13344?	83/2$^-$	942.9[c] *5*	100	12401	79/2$^-$			
14040.0	85/2$^-$	1057 *1*	100	12983.0	81/2$^-$			
14469	87/2$^-$	1125[c] *1*	100	13344?	83/2$^-$			
15159.0	89/2$^-$	1119 *1*	100	14040.0	85/2$^-$			
15637?	91/2$^-$	1168[c] *1*	100	14469	87/2$^-$			
16347?	93/2$^-$	1186[c] *1*	100	15159.0	89/2$^-$			
909.6+x	J+2	909.6 *9*	0.28[‡] *14*	x	J			
1862.1+x	J+4	952.5 *4*	0.52[‡] *12*	909.6+x	J+2			
2860.2+x	J+6	998.1 *2*	0.98[‡] *12*	1862.1+x	J+4			
3905.2+x	J+8	1045.0 *2*	0.92[‡] *10*	2860.2+x	J+6			

$^{155}_{66}Dy_{89}$-18

Adopted Levels, Gammas (continued)

γ(^{155}Dy) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π
4996.1+x	J+10	1090.9 *2*	1.04‡ *15*	3905.2+x	J+8	12514.5+x	J+22	1368.6 *2*	1.00‡ *11*	11145.8+x	J+20
6133.4+x	J+12	1137.3 *2*	0.96‡ *11*	4996.1+x	J+10	13929.5+x	J+24	1415.0 *2*	0.81‡ *10*	12514.5+x	J+22
7317.0+x	J+14	1183.6 *2*	1.07‡ *11*	6133.4+x	J+12	15390.6+x	J+26	1461.1 *2*	0.50‡ *10*	13929.5+x	J+24
8546.7+x	J+16	1229.7 *2*	0.98‡ *11*	7317.0+x	J+14	16897.9+x	J+28	1507.3 *3*	0.45‡ *9*	15390.6+x	J+26
9823.0+x	J+18	1276.3 *2*	0.97‡ *10*	8546.7+x	J+16	18449.7+x	J+30	1551.8 *6*	0.16‡ *10*	16897.9+x	J+28
11145.8+x	J+20	1322.8 *2*	0.92‡ *8*	9823.0+x	J+18						

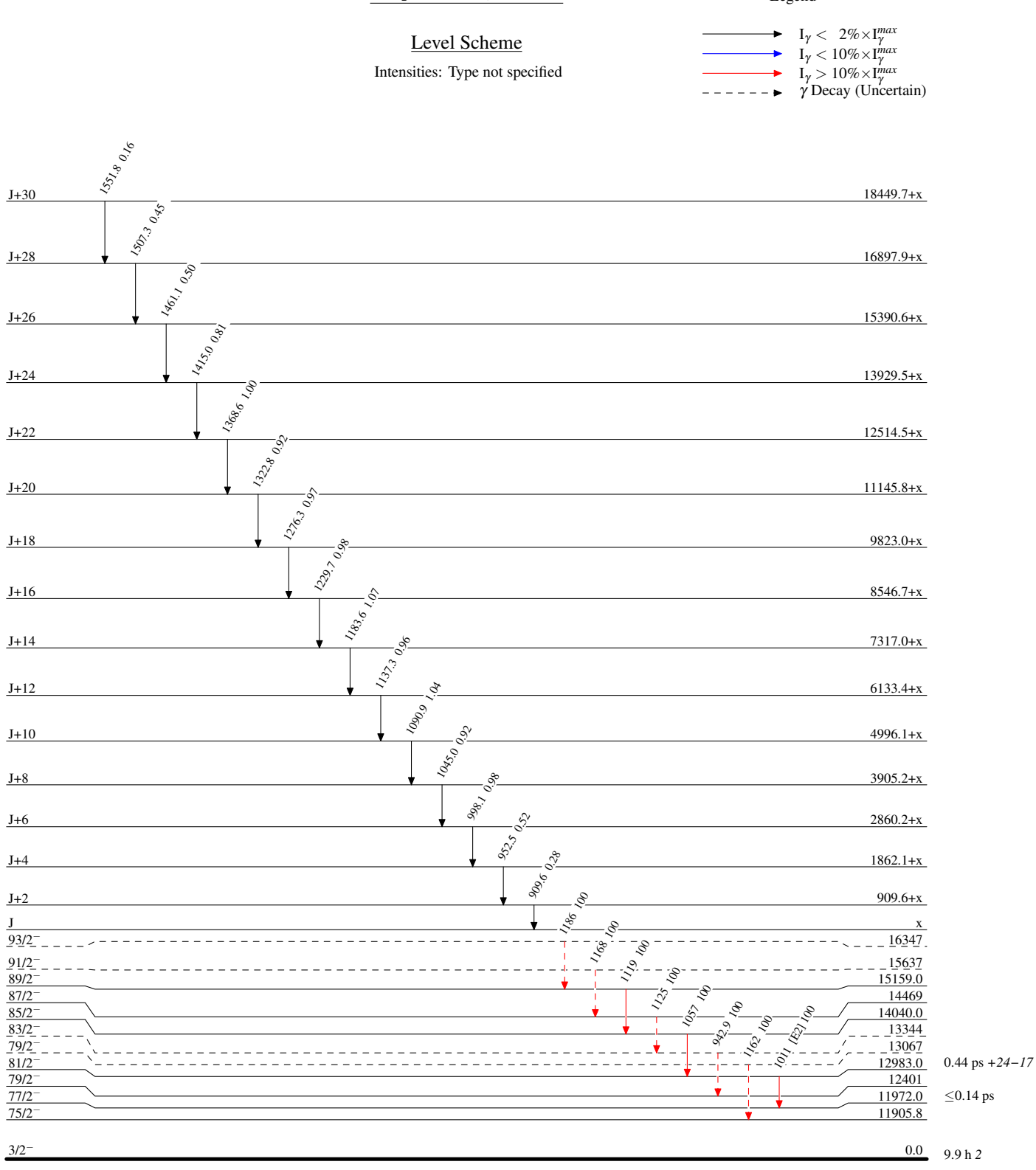
† Unless mentioned otherwise from ^{155}Ho ε decay dataset for levels ≤1276 and from (HI,xnγ) for the levels above 1276.
‡ Value expressed relative to the other γ′s within this SD band. This information is useful in assessing the feeding and decay pattern within this band, whereas simply listing Iγ=100 for each of γ′s does not yield useful data. See the comment regarding these values in the (HI,xnγ) data set.
# Assumed by 2013Pe19 (^{124}Sn(^{36}S,5nγ)).
@ Additional information 3.
& Additional information 4.
a Multiply placed.
b Multiply placed with undivided intensity.
c Placement of transition in the level scheme is uncertain.

$^{155}_{66}Dy_{89}$-19

Adopted Levels, Gammas

Level Scheme

Intensities: Type not specified



$^{155}_{66}Dy_{89}$

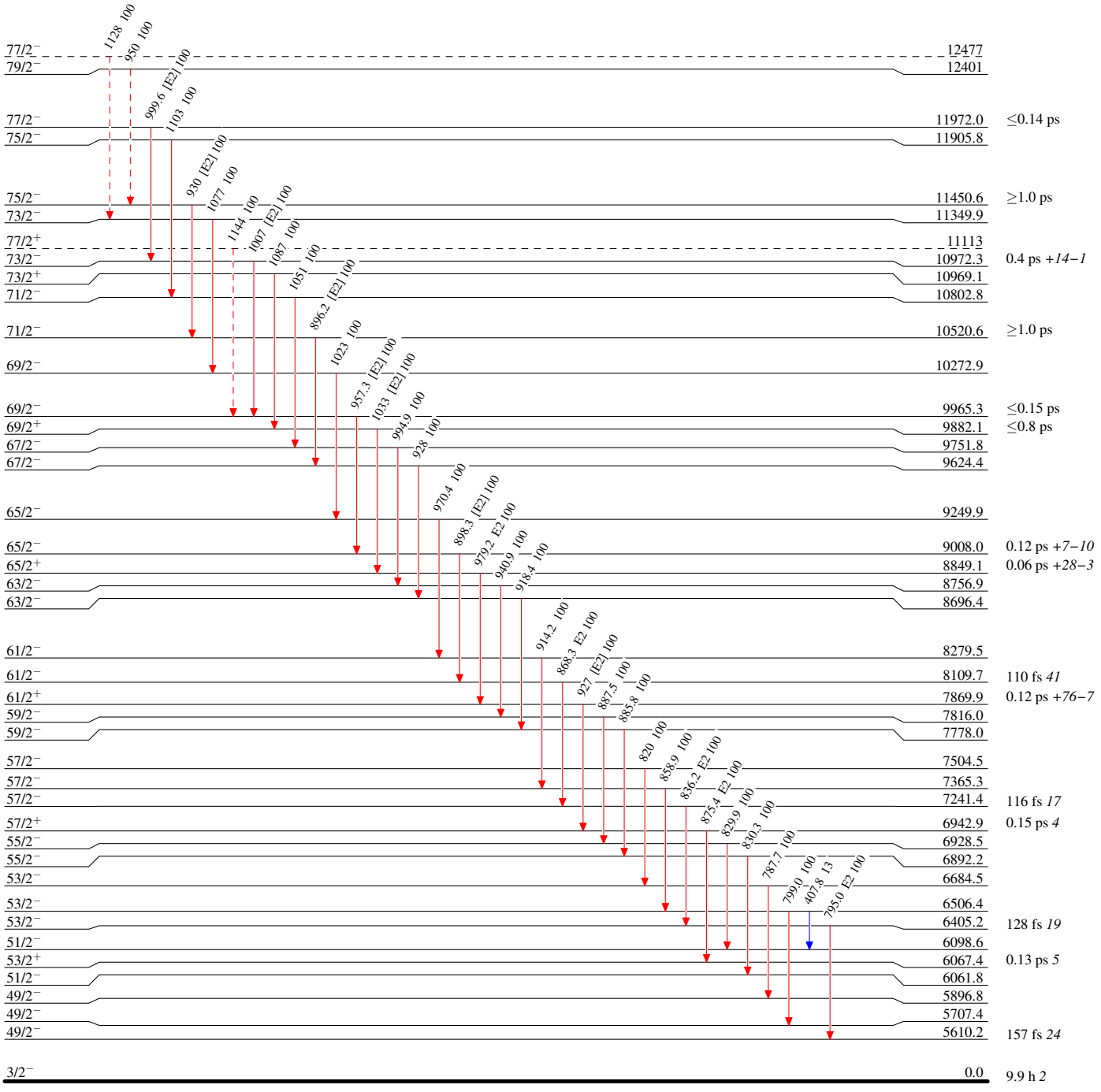
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
γ Decay (Uncertain)

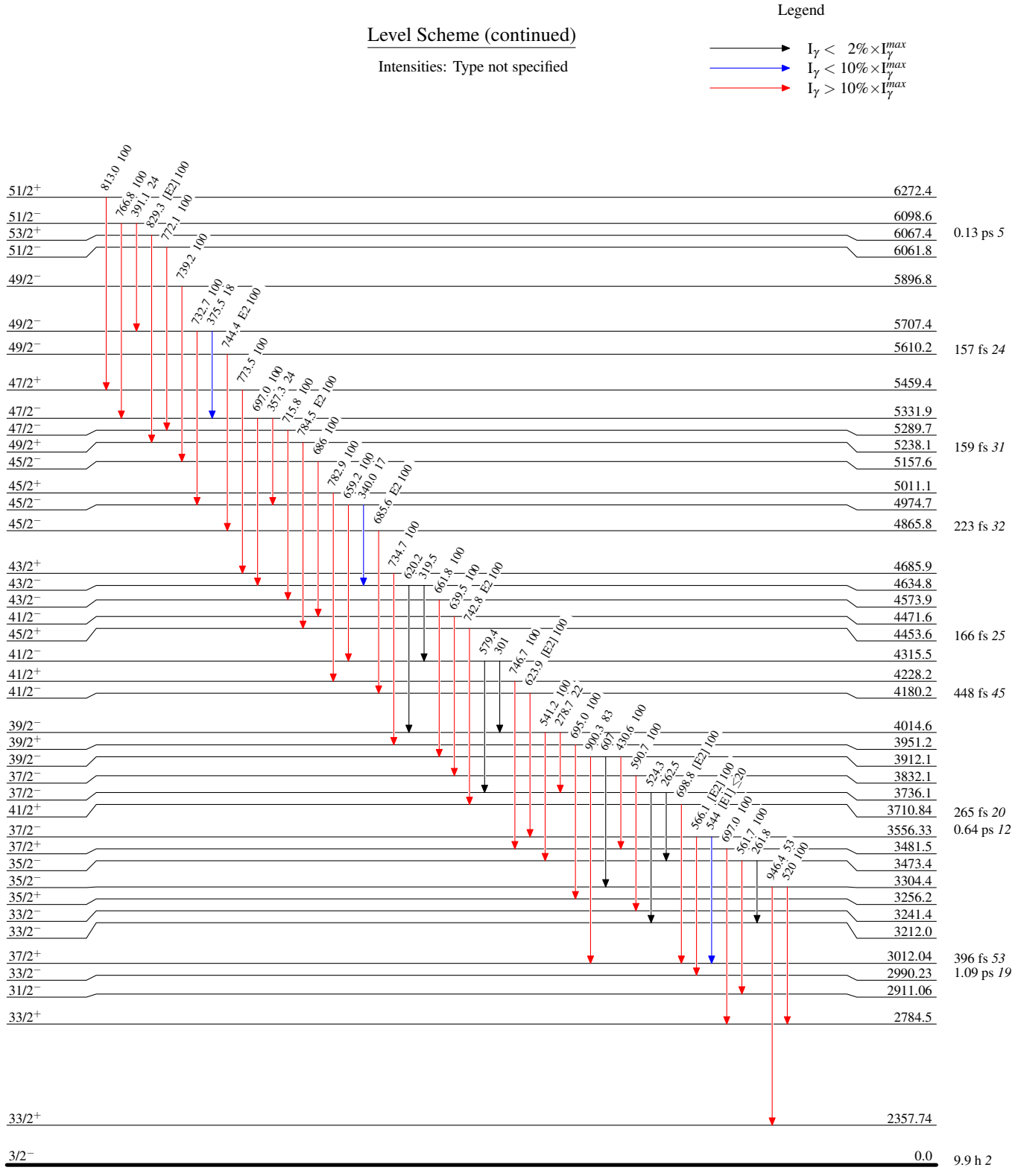


$^{155}_{66}Dy_{89}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

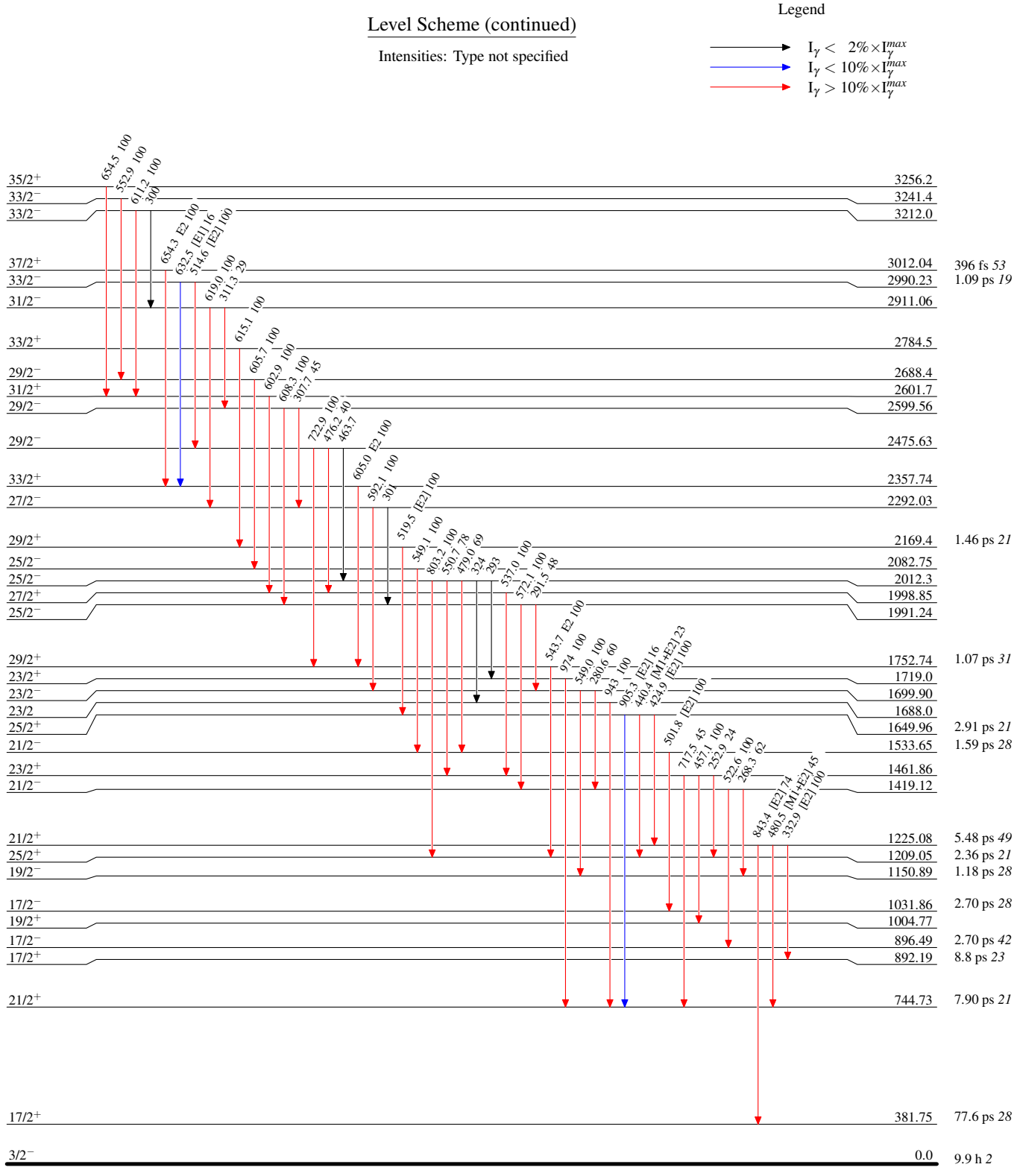


$^{155}_{66}Dy_{89}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified



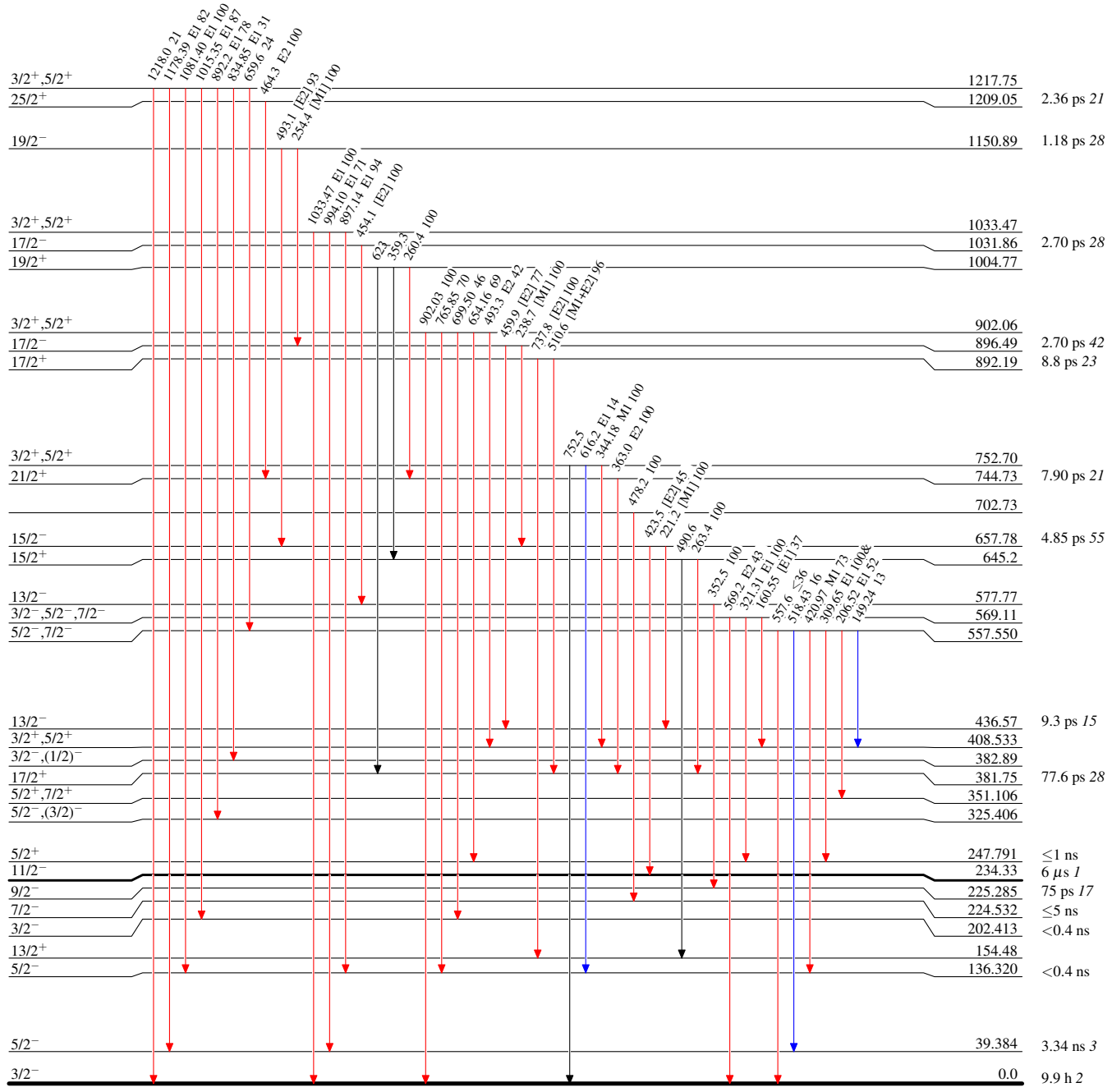
$^{155}_{66}Dy_{89}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified
& Multiply placed: undivided intensity given

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

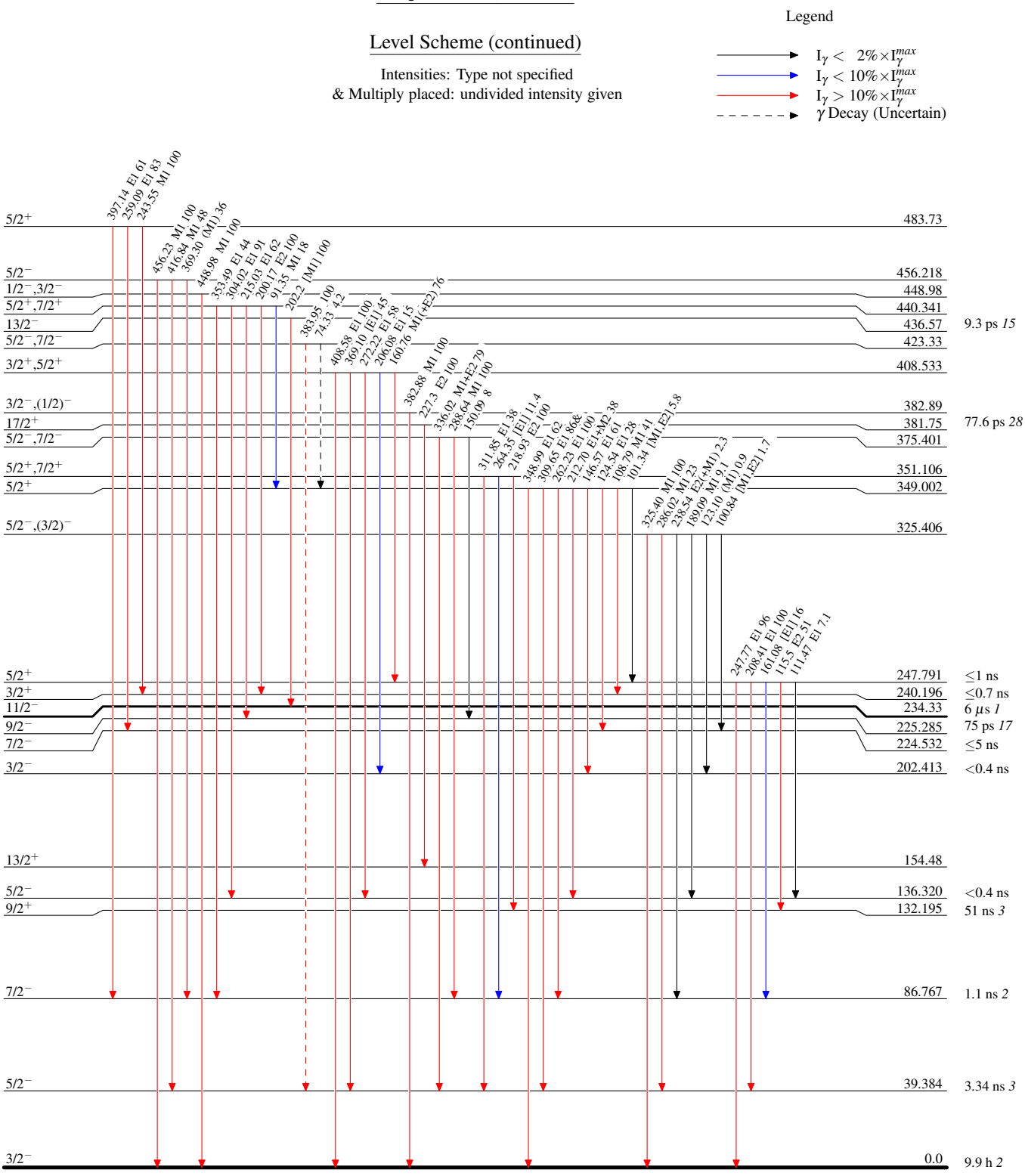


$^{155}_{66}Dy_{89}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified
& Multiply placed: undivided intensity given



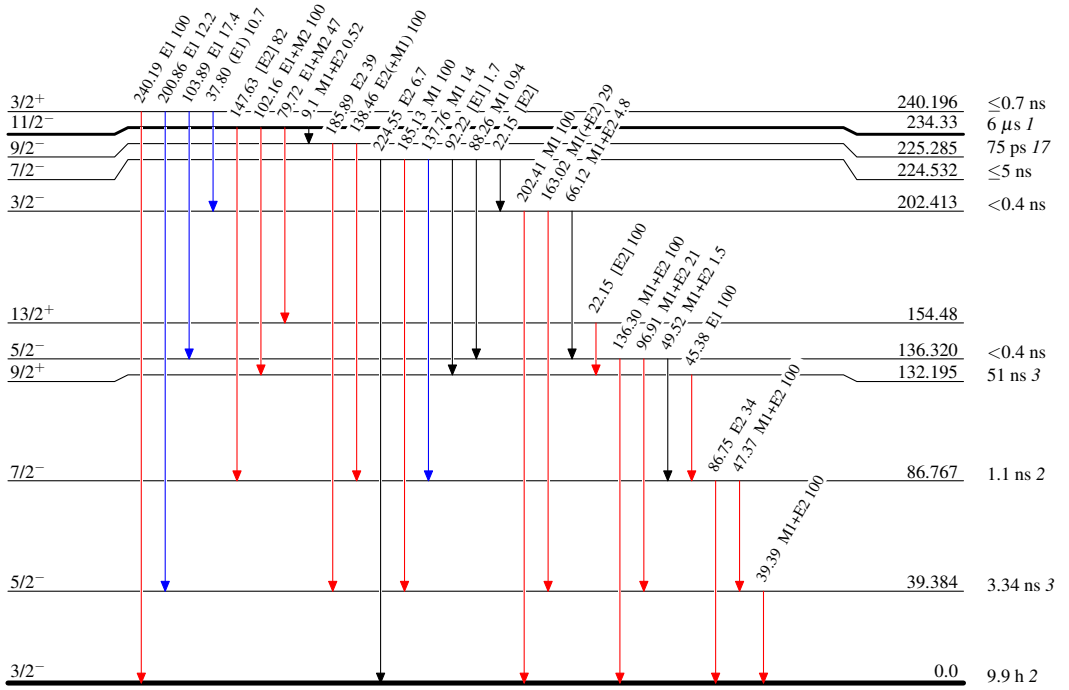
$^{155}_{66}Dy_{89}$

Adopted Levels, Gammas

Level Scheme (continued)

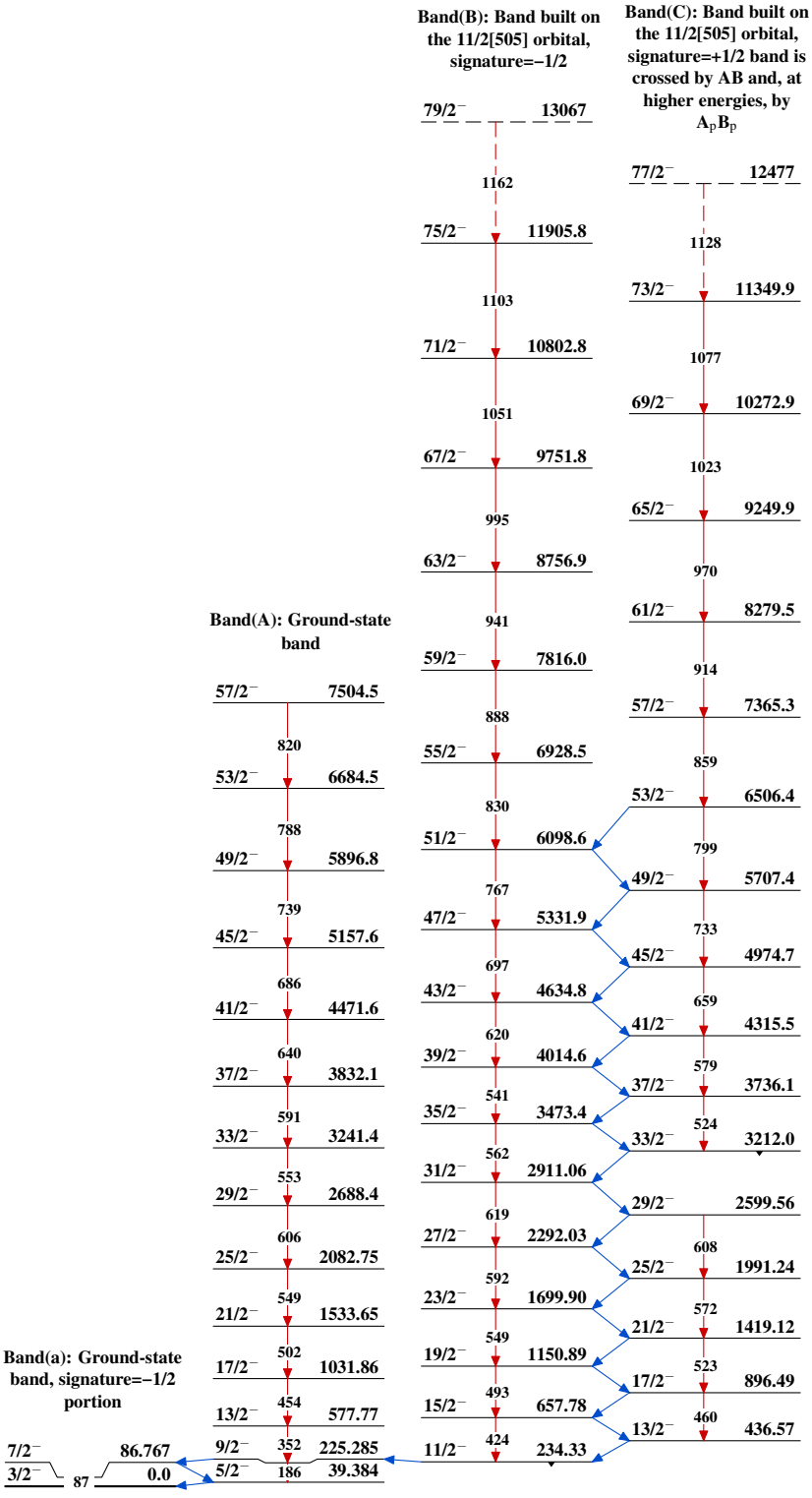
Intensities: Type not specified
& Multiply placed: undivided intensity given

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



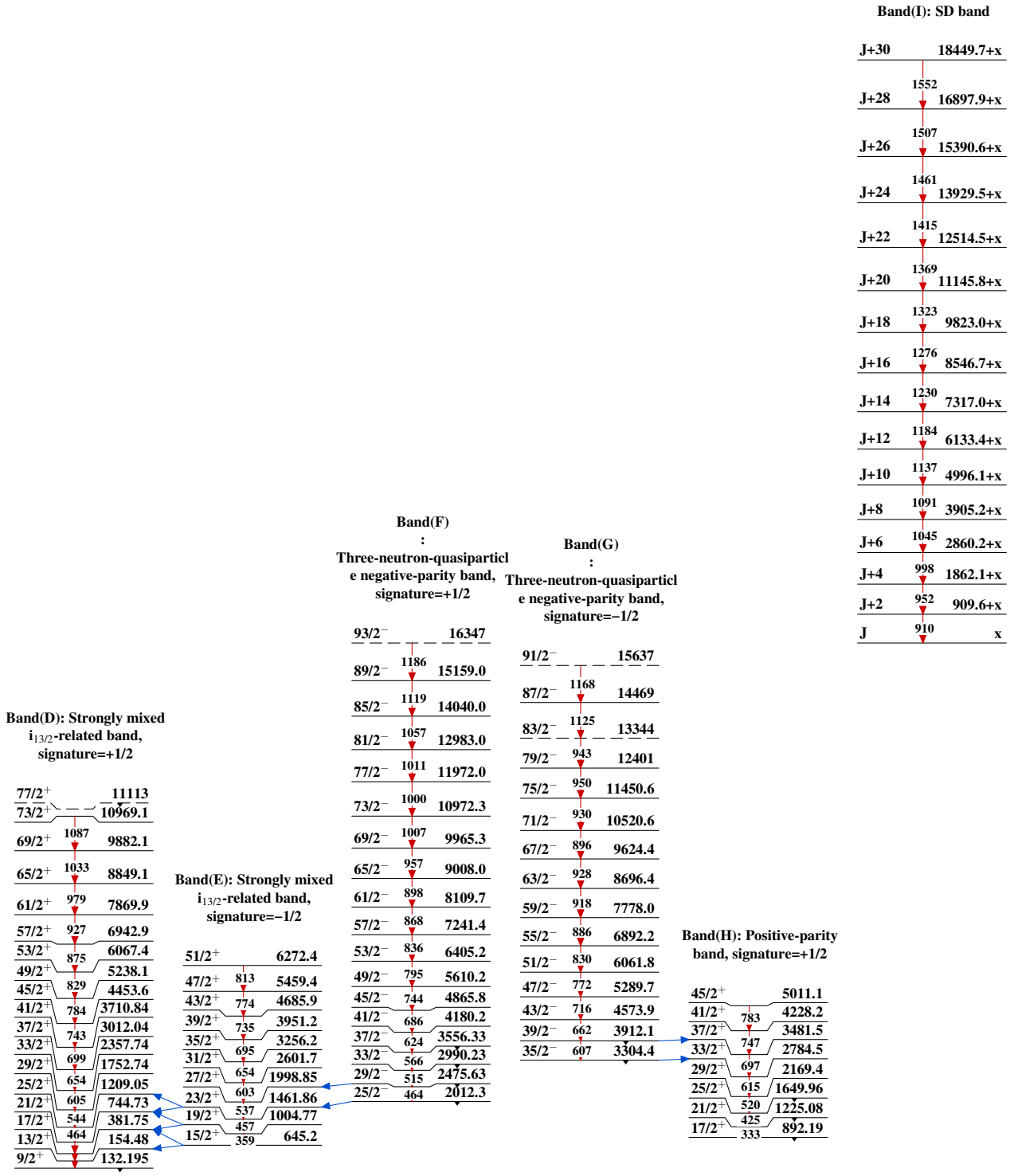
$^{155}_{66}Dy_{89}$

Adopted Levels, Gammas



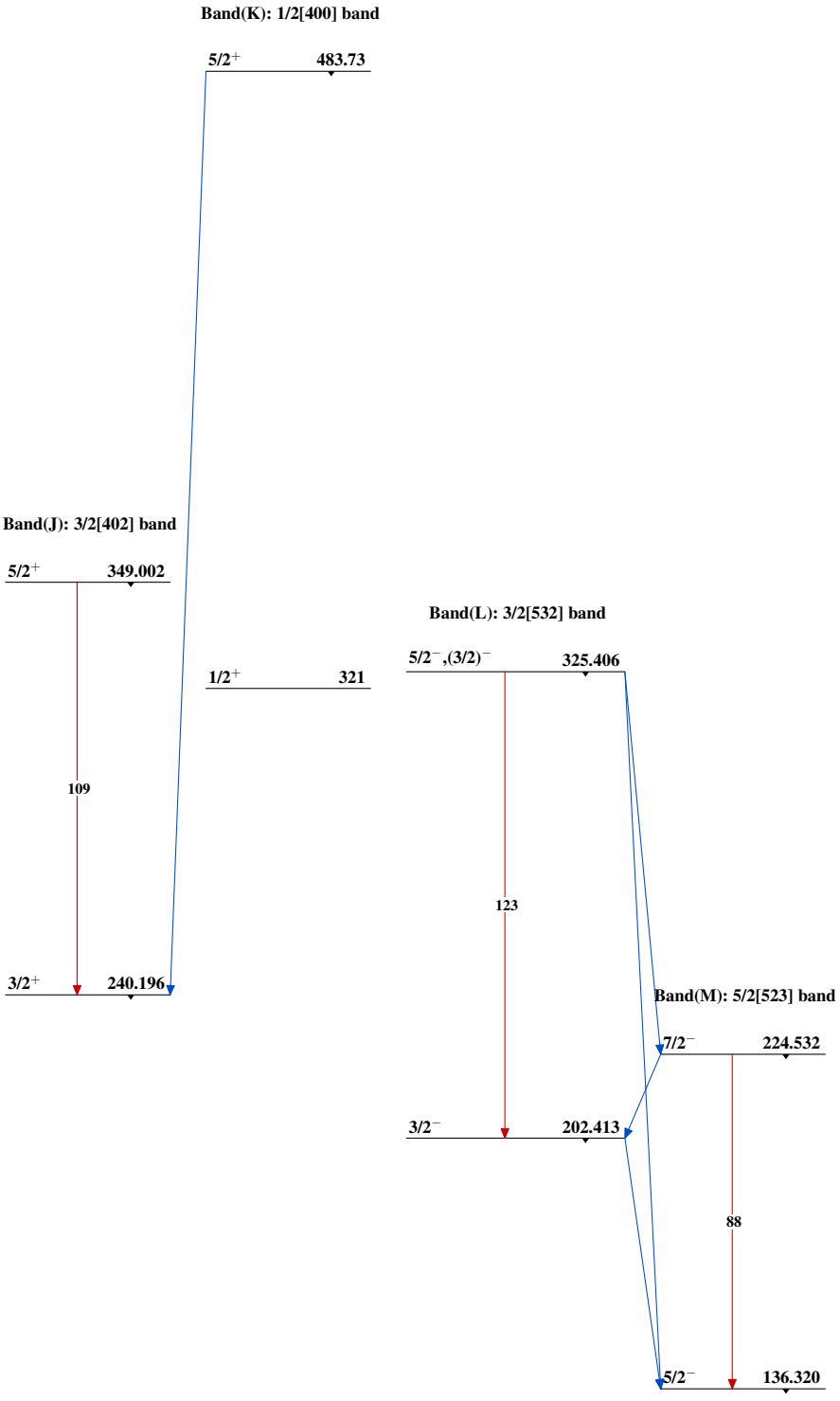
$^{155}_{66}Dy_{89}$

Adopted Levels, Gammas (continued)



$^{155}_{66}Dy_{89}$

Adopted Levels, Gammas (continued)



$^{155}_{66}Dy_{89}$