(HI,xnγ)

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	C. W. Reich	NDS 112,2497 (2011)	1-Jun-2011

Additional information 1.

Data are primarily from ^{150}Nd(^{16}O,5nγ) with E(^{16}O)=86 MeV (1982Ga28,2011Ch12) for levels below 6.25 MeV, and from ^{130}Te(^{36}S,5nγ) with E(^{36}S)=170 MeV (1990Ri03, 1990Ri09, 1999LiZW, 2000Si26) for higher-energy levels.

In-beam publications include:

1982Ga28: ^{150}Nd(^{16}O,5nγ), E(^{16}O)=86 MeV. Measured γ singles, $\gamma(\theta)$, $\gamma\gamma$ coincidences and conversion coefficients. Only reported data are E_γ for 74 γ's placed in bands up to J$^\pi$'s of 53/2$^+$, 49/2$^-$, and 29/2$^-$.

1990Ri03: ^{130}Te(^{36}S,5nγ), E(^{36}S)=170 MeV. Measured γ's with TESSA3 array of 16 Ge and 50 BGO detectors. Only reported data are E_γ for γ's in several bands starting above 6650 keV with two going to 101/2$^+$ and 101/2$^-$.

1990Ri09: Has same results as 1990Ri03.

1998LiZX: see 1999LiZW.

1999LiZW: ^{130}Te(^{36}S,5nγ), E(^{36}S)=170 MeV. γ's measured with EUROBALL array. Bands observed to 109/2$^+$, 123/2$^-$, and 105/2$^-$. E_γ and J$^\pi$ given, but no level energies given. A conference report, this work seems to be based on the same information as that in 2000Si26, which work involves many of the same authors. The evaluator assumes that the information in this work has been superseded by that of 2000Si26 and has used the information in this latter publication here.

2000Si26: ^{130}Te(^{36}S,5nγ), E(^{36}S)=170 MeV. γ's measured in the EUROBALL array, consisting of 14 seven-element Cluster detectors, 26 four-element Clover detectors, and 30 single-crystal Ge detectors. Present data (level energies, Eγ values and J$^\pi$ values) on only three bands and only for levels above J=87. Extends this information for levels up to J$^\pi$=113/2$^+$, 119/2$^-$ and 109/2$^-$. For earlier related studies by many of these same authors, see 1990Ri03, 1990Ri09, 1998LiZX, 1999LiZW.

A. Pipidis (Master's Thesis, University of Surrey, 2000 (unpublished)) presents the results of a study of the high-spin states of ^{161}Er. Those data are part of the same data set and analysis as reported in 2000Si26, but also provide information on lower-spin members of the three bands reported by 2000Si26. These data clarify a number of previously confusing features of the ^{161}Er level scheme, including a gap in the level sequence in the (π=−,α=−1/2) branch of the 3/2[521] band and extend the levels in this branch up to the J$^\pi$=119/2$^-$ level. They also show more levels and fragments of bands than do 2000Si26. However, the evaluator has chosen not to include this latter information here.

2011Ch12: ^{150}Nd(^{16}O,5nγ), E(^{16}O)=86 MeV. 1.5 mg/cm^2 foil target (94.2% enrichment) on a 10.8-mg/cm^2 Pb backing. γ's detected in an array of 9 HPGe detectors with BGO anti-Compton shields, two low-energy planar HPGe detectors and one Clover detector. Measured Eγ, Iγ, $\gamma\gamma$, (x-ray)γ coin, γ-ray angular distributions from oriented nuclei (R_{ADO}).

2011Ch26: (many of the same authors as 2011Ch12). Further analysis of the data of 2011Ch12. Infer B(E1) values for the transitions connecting the 3/2[521] and 5/2[642] bands and propose the presence of octupole correlations to explain the deduced enhanced B(E1)'s.

^{161}Er Levels

E(level)[†]	J$^\pi$[#]	$T_{1/2}$[@&]	E(level)[†]	J$^\pi$[#]	E(level)[†]	J$^\pi$[#]
0.0[a]	3/2$^-$		726.2[a] *4*	15/2$^-$	1727.1[c] *4*	29/2$^+$
59.51[b] *3*	5/2$^-$		782.6[e] *7*	15/2$^-$	1772.4[b] *4*	25/2$^-$
143.91[a] *5*	7/2$^-$		783.6[c] *4*	21/2$^+$	1783.7[e] *8*	23/2$^-$
189.45[c] *6*	9/2$^+$		848.9[d] *3*	19/2$^+$	1849.9[d] *4*	27/2$^+$
250.0[b] *3*	9/2$^-$		891.6[b] *4*	17/2$^-$	2063.2[a] *5*	27/2$^-$
267.5[c] *3*	13/2$^+$		1006.9[f] *7*	17/2$^-$	2071.3[f] *8*	25/2$^-$
296.6[d] *3*	11/2$^+$		1135.7[a] *5*	19/2$^-$	2256.7[b] *5*	29/2$^-$
388.7[a] *4*	11/2$^-$		1208.6[c] *4*	25/2$^+$	2326.0[c] *4*	33/2$^+$
396.6[e] *6*	11/2$^-$	7.5[‡] μs *7*	1249.6[e] *7*	19/2$^-$	2369.1[e] *9*	27/2$^-$
466.2[c] *4*	17/2$^+$		1301.9[d] *4*	23/2$^+$	2477.0[d] *5*	31/2$^+$
508.8[d] *3*	15/2$^+$		1312.8[b] *4*	21/2$^-$	2548.6[a] *4*	31/2$^-$
531.3[b] *4*	13/2$^-$		1509.3[f] *8*	21/2$^-$	2674.3[f] *9*	29/2$^-$
578.7[f] *6*	13/2$^-$		1589.0[a] *5*	23/2$^-$	2775.4[b] *6*	33/2$^-$

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(HI,xnγ) (continued)

^{161}Er Levels (continued)

E(level)[†]	J^{π}[#]	E(level)[†]	J^{π}[#]	E(level)[†]	J^{π}[#]	E(level)[†]	J^{π}[#]
2980.2[e] *9*	$31/2^-$	5808.5[a] *9*	$51/2^-$	10921[b]	$(73/2^-)$	17991[b]	$(97/2^-)$
2991.4[c] *4*	$37/2^+$	6076.5[c] *7*	$53/2^+$	11434[a]	$(75/2^-)$	17995[c]	$(97/2^+)$
3067.0[a] *5*	$35/2^-$	6243.4[b] *12*	$53/2^-$	11825[c]	$(77/2^+)$	18522[a]	$(99/2^-)$
3169.2[d] *6*	$35/2^+$	6656[a]	$(55/2^-)$	11953[b]	$(77/2^-)$	19384[b]	$(101/2^-)$
3345.6[b] *7*	$37/2^-$	6957[c]	$(57/2^+)$	12478[a]	$(79/2^-)$	19397	$(101/2^-)$
3565.8[e] *11*	$35/2^-$	7118[b]	$(57/2^-)$	12935[c]	$(81/2^+)$	19416[c]	$(101/2^+)$
3646.0[a] *5*	$39/2^-$	7557[a]	$(59/2^-)$	13039[b]	$(81/2^-)$	19916[a]	$(103/2^-)$
3708.3[c] *4*	$41/2^+$	7873[c]	$(61/2^+)$	13572[a]	$(83/2^-)$	20844[b]	$(105/2^-)$
3913.4[d] *8*	$39/2^+$	8039[b]	$(61/2^-)$	14105[c]	$(85/2^+)$	20895[c]	$(105/2^+)$
3976.4[b] *8*	$41/2^-$	8499[a]	$(63/2^-)$	14183[b]	$(85/2^-)$	21376[a]	$(107/2^-)$
4297.8[a] *6*	$43/2^-$	8808[c]	$(65/2^+)$	14720[a]	$(87/2^-)$	22364?[b]	$(109/2^-)$
4461.5[c] *4*	$45/2^+$	8984[b]	$(65/2^-)$	15339[c]	$(89/2^+)$	22407[c]	$(109/2^+)$
4670.5[b] *10*	$45/2^-$	9458[a]	$(67/2^-)$	15388[b]	$(89/2^-)$	22901[a]	$(111/2^-)$
4691.4[d] *9*	$43/2^+$	9768[c]	$(69/2^+)$	15925[a]	$(91/2^-)$	23917?[c]	$(113/2^+)$
5020.5[a] *8*	$47/2^-$	9938[b]	$(69/2^-)$	16636[c]	$(93/2^+)$	24487[a]	$(115/2^-)$
5246.5[c] *5*	$49/2^+$	10431[a]	$(71/2^-)$	16658[b]	$(93/2^-)$	26143?[a]	$(119/2^-)$
5427.8[b] *11*	$49/2^-$	10770[c]	$(73/2^+)$	17192[a]	$(95/2^-)$		

† Level energies computed from a least-squares fit to the listed γ energies.
‡ From the Adopted Levels.
\# From ^{161}Er Adopted Levels. For the high-spin states, they are based on the deduced mults and the customary considerations of rotational-band structure in such studies.
@ Value is from in-beam studies only; see ^{161}Er Adopted Levels for results from other studies.
& Most observed levels have lifetimes of <10 ns (1970Hj02); these limits are not given with the individual levels.
a Band(A): $K^{\pi}=3/2^-$, 3/2[521], band; $\alpha=-1/2$. 2011Ch12 propose level energies for the $19/2^-$, $23/2^-$, and $27/2^-$ band different from those proposed earlier by 1982Ga28. (The γ's from those levels were assigned to another nuclide (^{152}Sm, see 2011Ch12). In addition, 2011Ch12 associate the $27/2^-$ through $51/2^-$ levels, previously placed in a "($\pi=-$,$\alpha=-1/2^-$) band" by Pipidis, with this branch. The evaluator has identified this band as the higher-spin members of the $\alpha=-1/2$ branch of 3/2[521].
b Band(a): $K^{\pi}=3/2^-$, 3/2[521], band; $\alpha=+1/2$.
c Band(B): Coriolis-mixed $+\pi$ band, $\alpha=+1/2$.
d Band(b): Coriolis-mixed $+\pi$ band, $\alpha=-1/2$.
e Band(C): $K^{\pi}=11/2^-$, 11/2[505], band, $\alpha=-1/2$.
f Band(c): $K^{\pi}=11/2^-$, 11/2[505], band, $\alpha=+1/2$.

γ(^{161}Er)

R_{ADO}: anisotropy deduced by 2011Ch12 from $\gamma\gamma$-coin matrices at ±42° and 90°. Expected values are 1.4 for $\Delta J=2$, quadrupole, and 0.7 for $\Delta J=1$, dipole transitions.

E_{γ}[†‡]	I_{γ}[†&a]	E_i(level)	J^{π}_i	E_f	J^{π}_f
45.54[#] *3*		189.45	$9/2^+$	143.91	$7/2^-$
59.51[#] *3*		59.51	$5/2^-$	0.0	$3/2^-$
78.0 *5*	≥4.2	267.5	$13/2^+$	189.45	$9/2^+$
84.40[#] *3*		143.91	$7/2^-$	59.51	$5/2^-$

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(HI,xnγ) (continued)

γ(^{161}Er) (continued)

E_γ [†‡]	I_γ [†&a]	E_i(level)	J^π_i	E_f	J^π_f	Mult. [b]	Comments
99.7 [@]		396.6	11/2⁻	296.6	11/2⁺		
106.2 *5*	≥0.3	250.0	9/2⁻	143.91	7/2⁻		
107.2 *5*	≥0.7	296.6	11/2⁺	189.45	9/2⁺		
129 [@]		396.6	11/2⁻	267.5	13/2⁺		
138.7 *5*	≥0.5	388.7	11/2⁻	250.0	9/2⁻		
142.5 *5*	1.6 *5*	531.3	13/2⁻	388.7	11/2⁻		
143.9 *5*	≥1.9	143.91	7/2⁻	0.0	3/2⁻		
146.8 [@]		396.6	11/2⁻	250.0	9/2⁻		
165.5 *5*	0.7 *2*	891.6	17/2⁻	726.2	15/2⁻		
177.0 *5*	0.5 *2*	1312.8	21/2⁻	1135.7	19/2⁻		
182.1 *3*	≈7.8	578.7	13/2⁻	396.6	11/2⁻	D	R_{ADO}=0.55 *11*.
190.6 *5*	≥2.7	250.0	9/2⁻	59.51	5/2⁻		R_{ADO}=1.8 *8*.
198.7 *1*	100 *5*	466.2	17/2⁺	267.5	13/2⁺	Q	R_{ADO}=1.65 *22*.
204.0 *3*	5.0 *8*	782.6	15/2⁻	578.7	13/2⁻	D	R_{ADO}=0.74 *13*.
212.2 *1*	21.4 *11*	508.8	15/2⁺	296.6	11/2⁺	Q	R_{ADO}=1.51 *24*.
224.1 *5*	3.1 *9*	1006.9	17/2⁻	782.6	15/2⁻	D	R_{ADO}=0.75 *15*.
241.3 *3*	11.0 *17*	508.8	15/2⁺	267.5	13/2⁺	D	R_{ADO}=0.64 *11*.
242.7 *5*	2.1 *6*	1249.6	19/2⁻	1006.9	17/2⁻	D	R_{ADO}=0.4 *4*.
244.7 *5*	≥3.4	388.7	11/2⁻	143.91	7/2⁻	Q	R_{ADO}=1.5 *3*.
252.7 [@]		396.6	11/2⁻	143.91	7/2⁻		
259.7 *5*	0.9 *3*	1509.3	21/2⁻	1249.6	19/2⁻		R_{ADO}=0.9 *3*.
274.5 *5*	0.8 *2*	1783.7	23/2⁻	1509.3	21/2⁻		R_{ADO}=0.73 *25*.
281.3 *3*	9.6 *14*	531.3	13/2⁻	250.0	9/2⁻	Q	R_{ADO}=1.79 *20*.
287.4 *5*	1.0 *3*	2071.3	25/2⁻	1783.7	23/2⁻	D	R_{ADO}=0.65 *19*.
297.5 *5*	0.4 *1*	2369.1	27/2⁻	2071.3	25/2⁻	D	R_{ADO}=0.44 *14*.
305.0 [d] *5*	≈0.5	2674.3	29/2⁻	2369.1	27/2⁻	D	R_{ADO}=0.8 *3*.
306.0 *5*	≈0.5	2980.2	31/2⁻	2674.3	29/2⁻	D	R_{ADO}=0.8 *3*.
317.4 *1*	97 *5*	783.6	21/2⁺	466.2	17/2⁺	Q	R_{ADO}=1.69 *15*.
337.5 *5*	3.3 *10*	726.2	15/2⁻	388.7	11/2⁻	Q	R_{ADO}=1.7 *5*.
340.1 *1*	21.5 *11*	848.9	19/2⁺	508.8	15/2⁺	Q	R_{ADO}=1.49 *14*.
360.3 *3*	9.8 *15*	891.6	17/2⁻	531.3	13/2⁻	[E2]	R_{ADO}=1.57 *22*, consistent with mult=Q. Iγ(360.3γ)/Iγ(382.8γ)=8.92 *13*.
382.5 *3*	5.5 *8*	848.9	19/2⁺	466.2	17/2⁺	D	R_{ADO}=0.57 *11*.
382.8 *5*	1.3 *4*	891.6	17/2⁻	508.8	15/2⁺	[E1]	R_{ADO}=0.8 *3*, consistent with mult=d.
386.0 *5*	2.0 *6*	782.6	15/2⁻	396.6	11/2⁻	(Q)	R_{ADO}=1.7 *7*.
406.7 *5*	2.0 *6*	2256.7	29/2⁻	1849.9	27/2⁺	[E1]	R_{ADO}=0.79 *17*, consistent with mult=d.
409.5 *5*	2.5 *8*	1135.7	19/2⁻	726.2	15/2⁻		R_{ADO}=1.03 *22*.
421.2 *3*	10.5 *16*	1312.8	21/2⁻	891.6	17/2⁻	[E2]	R_{ADO}=1.45 *17*, consistent with mult=Q. Iγ(421.2γ)/Iγ(464.0γ)=5.85 *22*.
425.0 *1*	89 *4*	1208.6	25/2⁺	783.6	21/2⁺	Q	R_{ADO}=1.47 *14*.
428.2 *5*	2.5 *8*	1006.9	17/2⁻	578.7	13/2⁻		R_{ADO}=1.0 *4*.
452.9 *1*	25.3 *13*	1301.9	23/2⁺	848.9	19/2⁺	Q	R_{ADO}=1.51 *22*.
454.1 *5*	1.5 *5*	1589.0	23/2⁻	1135.7	19/2⁻	[E2]	R_{ADO}=1.0 *5*. Iγ(454.1γ)/Iγ(806.3)=1.4 *4*.
459.6 *3*	8.5 *13*	1772.4	25/2⁻	1312.8	21/2⁻	[E2]	R_{ADO}=1.57 *18*, consistent with mult=Q. Iγ(459.6γ)/Iγ(470.5γ)=5.22 *11*.
464.0 *5*	3.1 *9*	1312.8	21/2⁻	848.9	19/2⁺	[E1]	R_{ADO}=0.61 *17*, consistent with mult=d.
467.1 *5*	2.9 *9*	1249.6	19/2⁻	782.6	15/2⁻		R_{ADO}=1.2 *3*.
470.5 *5*	1.9 *6*	1772.4	25/2⁻	1301.9	23/2⁺	[E1]	R_{ADO}=0.94 *17*, consistent with mult=d.
473.5 *5*	2.1 *6*	2063.2	27/2⁻	1589.0	23/2⁻	[E2]	R_{ADO}=1.7 *7*. Iγ(473.5γ)/Iγ(854.5γ)=0.63 *27*.
484.4 *3*	8.4 *13*	2256.7	29/2⁻	1772.4	25/2⁻	[E2]	R_{ADO}=1.51 *21*, consistent with mult=Q. Iγ(484.4γ)/Iγ(406.7γ)=5.17 *16*.
485.3 *5*	3.2 *10*	2548.6	31/2⁻	2063.2	27/2⁻	[E2]	R_{ADO}=1.27 *25*, consistent with mult=Q. Iγ(485.3γ)/Iγ(821.5γ)=0.45 *22*.

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(HI,xnγ) (continued)

γ(^{161}Er) (continued)

E_γ [†‡]	I_γ [†&a]	E_i(level)	J^π_i	E_f	J^π_f	Mult. [b]	Comments
502.3 *5*	2.5 *8*	1509.3	21/2⁻	1006.9	17/2⁻		R_{ADO}=1.1 *4*.
518.5 *3*	5.5 *8*	1301.9	23/2⁺	783.6	21/2⁺		R_{ADO}=0.83 *16*.
518.5 *1*	≥82	1727.1	29/2⁺	1208.6	25/2⁺	Q	R_{ADO}=1.32 *13*.
518.5 *3*	7.0 *11*	3067.0	35/2⁻	2548.6	31/2⁻	[E2]	R_{ADO}=1.6 *3*, consistent with mult=Q. Iγ(518.5γ)/Iγ(740.9γ)=1.05 *12*.
518.7 *3*	6.5 *10*	2775.4	33/2⁻	2256.7	29/2⁻	Q	R_{ADO}=1.4 *3*.
534.2 *5*	1.5 *5*	1783.7	23/2⁻	1249.6	19/2⁻		R_{ADO}=1.3 *8*.
548.1 *3*	11.7 *18*	1849.9	27/2⁺	1301.9	23/2⁺	Q	R_{ADO}=1.55 *25*.
562.0 *5*	2.6 *8*	2071.3	25/2⁻	1509.3	21/2⁻		R_{ADO}=1.0 *3*.
570.2 *3*	5.3 *8*	3345.6	37/2⁻	2775.4	33/2⁻	Q	R_{ADO}=1.43 *22*.
579.0 *3*	9.2 *14*	3646.0	39/2⁻	3067.0	35/2⁻	[E2]	R_{ADO}=1.7 *4*, consistent with mult=Q. Iγ(579.0γ)/Iγ(654.6γ)=2.68 *22*.
585.6[c] *5*	≈1.9[c]	2369.1	27/2⁻	1783.7	23/2⁻		R_{ADO}=2.0 *5* (value is for a doublet).
585.6[c] *5*	≤1.9[c]	3565.8	35/2⁻	2980.2	31/2⁻		R_{ADO}=2.0 *5* (value is for a doublet).
598.9 *1*	64 *3*	2326.0	33/2⁺	1727.1	29/2⁺	Q	R_{ADO}=1.27 *18*.
603.0 *5*	2.1 *6*	2674.3	29/2⁻	2071.3	25/2⁻	Q	R_{ADO}=2.1 *6*.
611.0 *5*	≈0.6	2980.2	31/2⁻	2369.1	27/2⁻		R_{ADO}=1.1 *4*.
627.1 *3*	7.4 *11*	2477.0	31/2⁺	1849.9	27/2⁺	Q	R_{ADO}=1.49 *22*.
630.8 *5*	3.3 *10*	3976.4	41/2⁻	3345.6	37/2⁻	Q	R_{ADO}=1.5 *4*.
641.2 *5*	1.0 *3*	1849.9	27/2⁺	1208.6	25/2⁺	D	R_{ADO}=0.6 *3*.
651.8 *3*	8.6 *13*	4297.8	43/2⁻	3646.0	39/2⁻	(Q)	R_{ADO}=1.11 *25*.
654.6 *5*	2.5 *8*	3646.0	39/2⁻	2991.4	37/2⁺	[E1]	R_{ADO}=0.7 *3*, consistent with mult=d.
665.4 *1*	34.9 *17*	2991.4	37/2⁺	2326.0	33/2⁺	Q	R_{ADO}=1.35 *16*.
692.2 *3*	5.4 *8*	3169.2	35/2⁺	2477.0	31/2⁺		R_{ADO}=1.3 *3*.
694.1 *5*	1.7 *5*	4670.5	45/2⁻	3976.4	41/2⁻		R_{ADO}=1.2 *4*.
716.9 *1*	22.0 *11*	3708.3	41/2⁺	2991.4	37/2⁺		R_{ADO}=1.3 *3*.
722.7 *5*	4.6 *14*	5020.5	47/2⁻	4297.8	43/2⁻	Q	R_{ADO}=1.13 *23*.
740.9 *3*	6.7 *10*	3067.0	35/2⁻	2326.0	33/2⁺	[E1]	R_{ADO}=0.81 *14*, consistent with mult=d.
744.1 *5*	3.3 *10*	3913.4	39/2⁺	3169.2	35/2⁺		R_{ADO}=1.2 *3*.
753.2 *1*	15.6 *8*	4461.5	45/2⁺	3708.3	41/2⁺	Q	R_{ADO}=1.41 *24*.
757.3 *5*	0.6 *2*	5427.8	49/2⁻	4670.5	45/2⁻	Q	R_{ADO}=1.8 *7*.
778.0 *5*	2.9 *9*	4691.4	43/2⁺	3913.4	39/2⁺	Q	R_{ADO}=1.9 *7*.
785.0 *3*	10.6 *16*	5246.5	49/2⁺	4461.5	45/2⁺	Q	R_{ADO}=1.41 *24*.
788.0 *5*	2.5 *8*	5808.5	51/2⁻	5020.5	47/2⁻		
806.3 *5*	0.9 *3*	1589.0	23/2⁻	783.6	21/2⁺	[E1]	R_{ADO}=0.6 *4*, consistent with mult=d.
815.6 *5*	0.3 *1*	6243.4	53/2⁻	5427.8	49/2⁻		
821.5 *3*	6.3 *9*	2548.6	31/2⁻	1727.1	29/2⁺	[E1]	R_{ADO}=0.73 *19*, consistent with mult=d.
830.0 *5*	3.1 *9*	6076.5	53/2⁺	5246.5	49/2⁺		R_{ADO}=0.97 *55*.
848		6656	(55/2⁻)	5808.5	51/2⁻		
854.5 *5*	2.7 *8*	2063.2	27/2⁻	1208.6	25/2⁺	[E1]	R_{ADO}=0.9 *3*.
875		7118	(57/2⁻)	6243.4	53/2⁻		
880		6957	(57/2⁺)	6076.5	53/2⁺		
901		7557	(59/2⁻)	6656	(55/2⁻)		
916		7873	(61/2⁺)	6957	(57/2⁺)		
921		8039	(61/2⁻)	7118	(57/2⁻)		
935		8808	(65/2⁺)	7873	(61/2⁺)		
942		8499	(63/2⁻)	7557	(59/2⁻)		
945		8984	(65/2⁻)	8039	(61/2⁻)		
954		9938	(69/2⁻)	8984	(65/2⁻)		
959		9458	(67/2⁻)	8499	(63/2⁻)		
960		9768	(69/2⁺)	8808	(65/2⁺)		
973		10431	(71/2⁻)	9458	(67/2⁻)		
983		10921	(73/2⁻)	9938	(69/2⁻)		
1002		10770	(73/2⁺)	9768	(69/2⁺)		
1002		11434	(75/2⁻)	10431	(71/2⁻)		

Continued on next page (footnotes at end of table)

(HI,xnγ) (continued)

γ(^{161}Er) (continued)

Eγ[†‡]	E_i(level)	J^π_i	E_f	J^π_f	Eγ[†‡]	E_i(level)	J^π_i	E_f	J^π_f
1032	11953	(77/2−)	10921	(73/2−)	1333	17991	(97/2−)	16658	(93/2−)
1044	12478	(79/2−)	11434	(75/2−)	1359	17995	(97/2+)	16636	(93/2+)
1055	11825	(77/2+)	10770	(73/2+)	1393	19384	(101/2−)	17991	(97/2−)
1086	13039	(81/2−)	11953	(77/2−)	1394	19916	(103/2−)	18522	(99/2−)
1094	13572	(83/2−)	12478	(79/2−)	1405	19397	(101/2−)	17991	(97/2−)
1110	12935	(81/2+)	11825	(77/2+)	1421	19416	(101/2+)	17995	(97/2+)
1144	14183	(85/2−)	13039	(81/2−)	1447	20844	(105/2−)	19397	(101/2−)
1148	14720	(87/2−)	13572	(83/2−)	1460	20844	(105/2−)	19384	(101/2−)
1170	14105	(85/2+)	12935	(81/2+)	1460	21376	(107/2−)	19916	(103/2−)
1205	15388	(89/2−)	14183	(85/2−)	1479	20895	(105/2+)	19416	(101/2+)
1205	15925	(91/2−)	14720	(87/2−)	1510[d]	23917?	(113/2+)	22407	(109/2+)
1234	15339	(89/2+)	14105	(85/2+)	1512	22407	(109/2+)	20895	(105/2+)
1267	17192	(95/2−)	15925	(91/2−)	1521[d]	22364?	(109/2−)	20844	(105/2−)
1270	16658	(93/2−)	15388	(89/2−)	1525	22901	(111/2−)	21376	(107/2−)
1297	16636	(93/2+)	15339	(89/2+)	1586	24487	(115/2−)	22901	(111/2−)
1330	18522	(99/2−)	17192	(95/2−)	1657[d]	26143?	(119/2−)	24487	(115/2−)

[†] For levels below 6.25 MeV, the data are those reported by 2011Ch12, unless noted otherwise. Above this, these data are from 2000Si26 and the thesis of A. Pipidis.

[‡] 2011Ch12 state that the uncertainties in Eγ range from 0.1 to 0.5 keV. The listed values were assigned as follows: for Iγ>20, 0.1 keV; for Iγ between 5 and 20, 0.3 keV; and for Iγ<5, 0.5 keV.

[#] Value from the Adopted Gammas.

[@] Value from 1982Ga28.

[&] Relative Iγ, divided by 10, from 2011Ch12 .

[a] 2011Ch12 state that the uncertainties in the Iγ values range from 5% to 30%. The values listed here were chosen as follows: 5%, for Iγ>20; 15%, for Iγ between 5 and 20; and 30%, for Iγ<5. The E1/E2 branching ratios were determined in a separate sorting of coincidence matrices and are indicated in separate comments. These are generally used in the computing the adopted γ branching from the respective levels.

[b] Values are for selected γ′s and are based on the R_{ADO} data from 2011Ch12. In some cases, values derived from ΔJ^π assignments are listed.

[c] Multiply placed with intensity suitably divided.

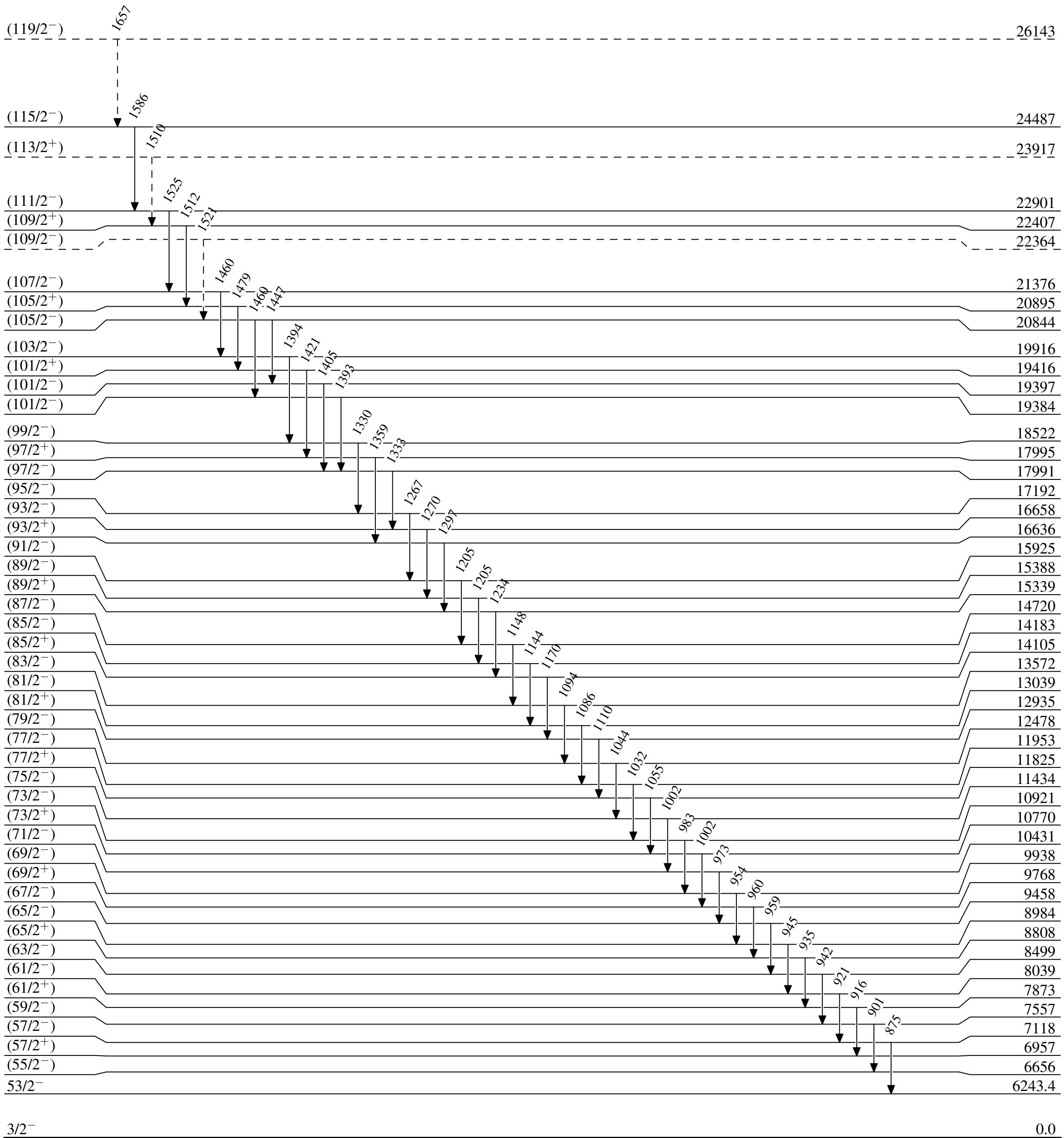
[d] Placement of transition in the level scheme is uncertain.

(HI,xnγ)

Legend

Level Scheme

Intensities: Relative I_γ



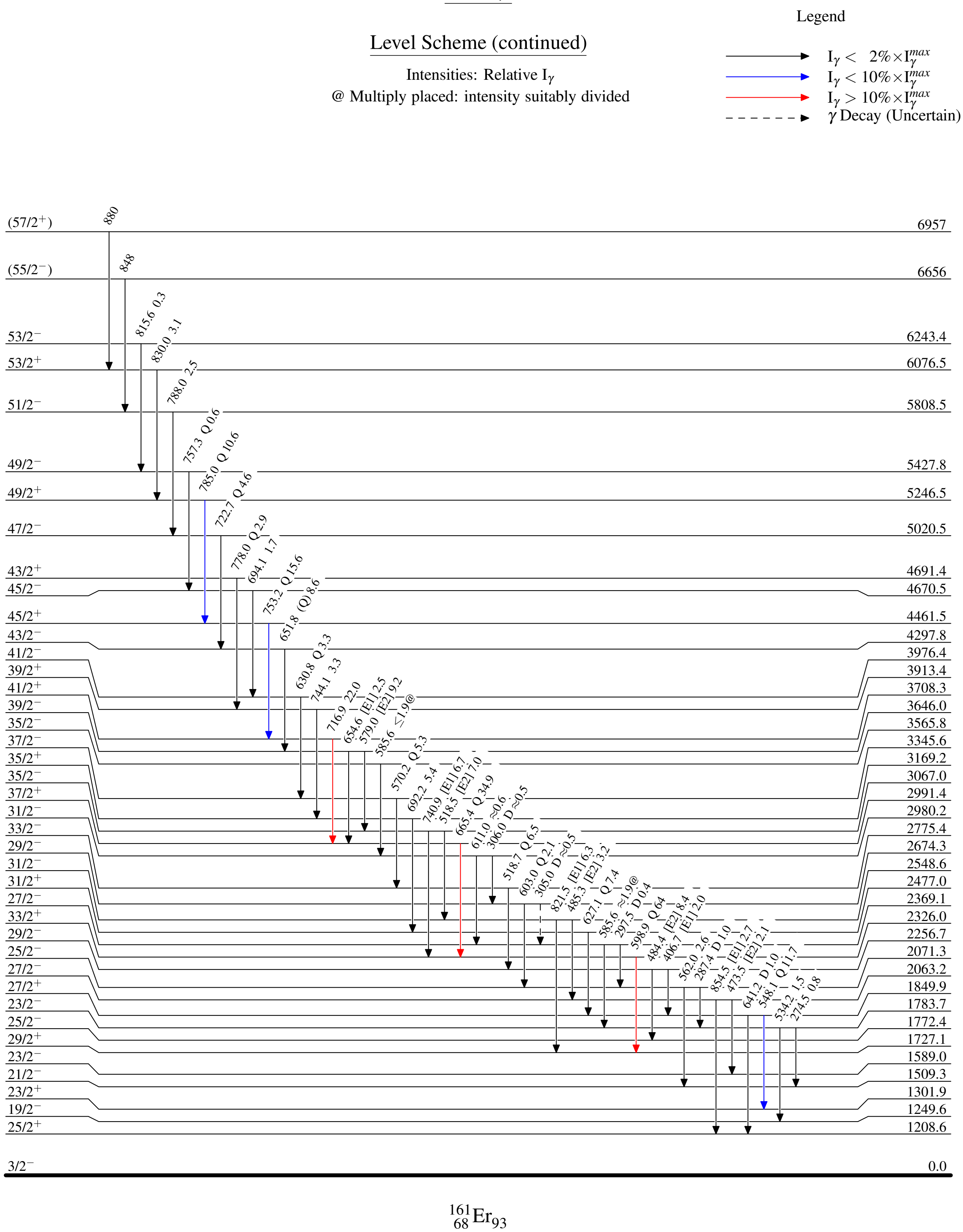
$^{161}_{68}Er_{93}$

(HI,xnγ)

Level Scheme (continued)

Intensities: Relative I_γ

@ Multiply placed: intensity suitably divided



(HI,xnγ)

Level Scheme (continued)

Intensities: Relative I_γ

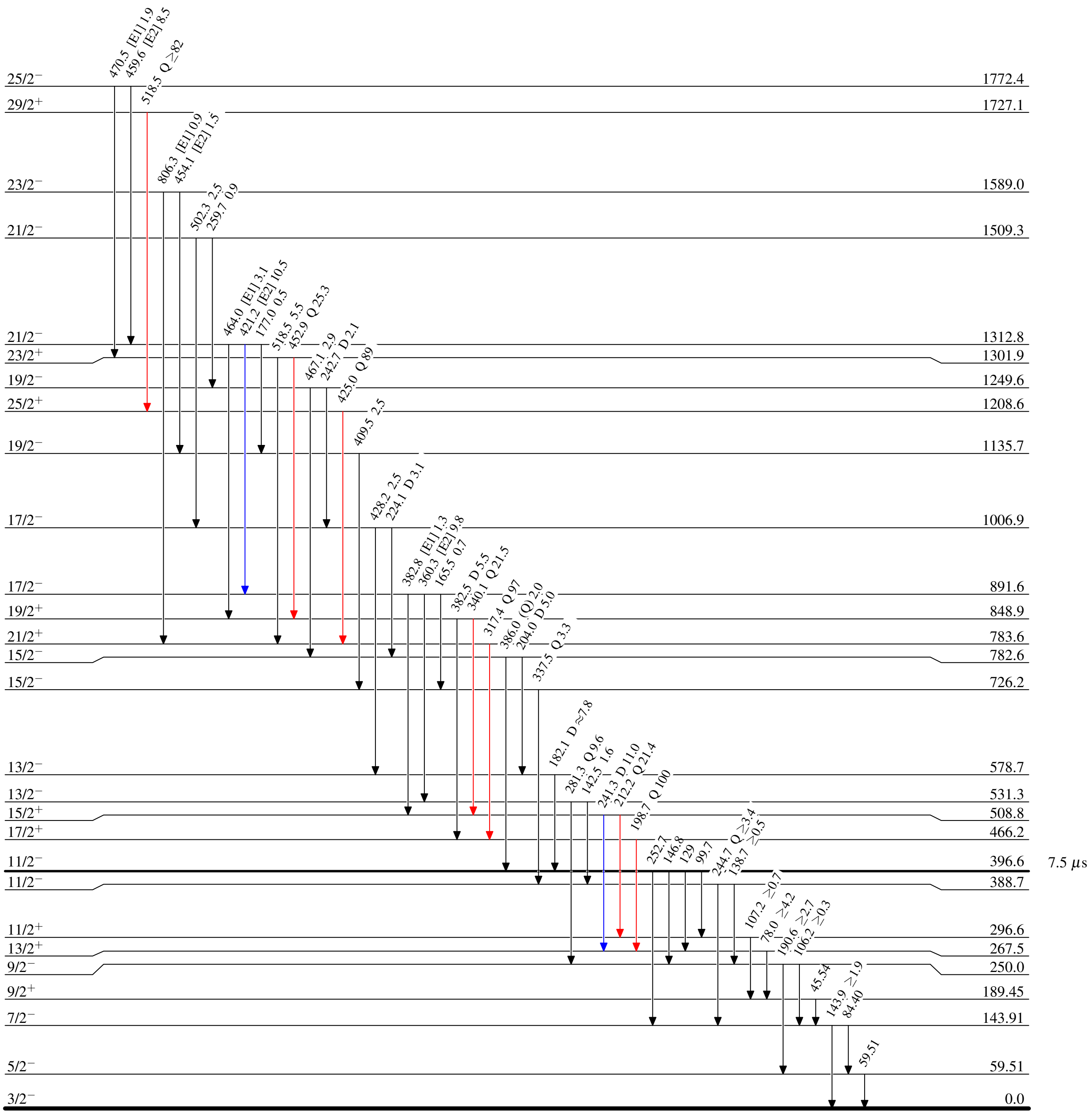
@ Multiply placed: intensity suitably divided

Legend

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

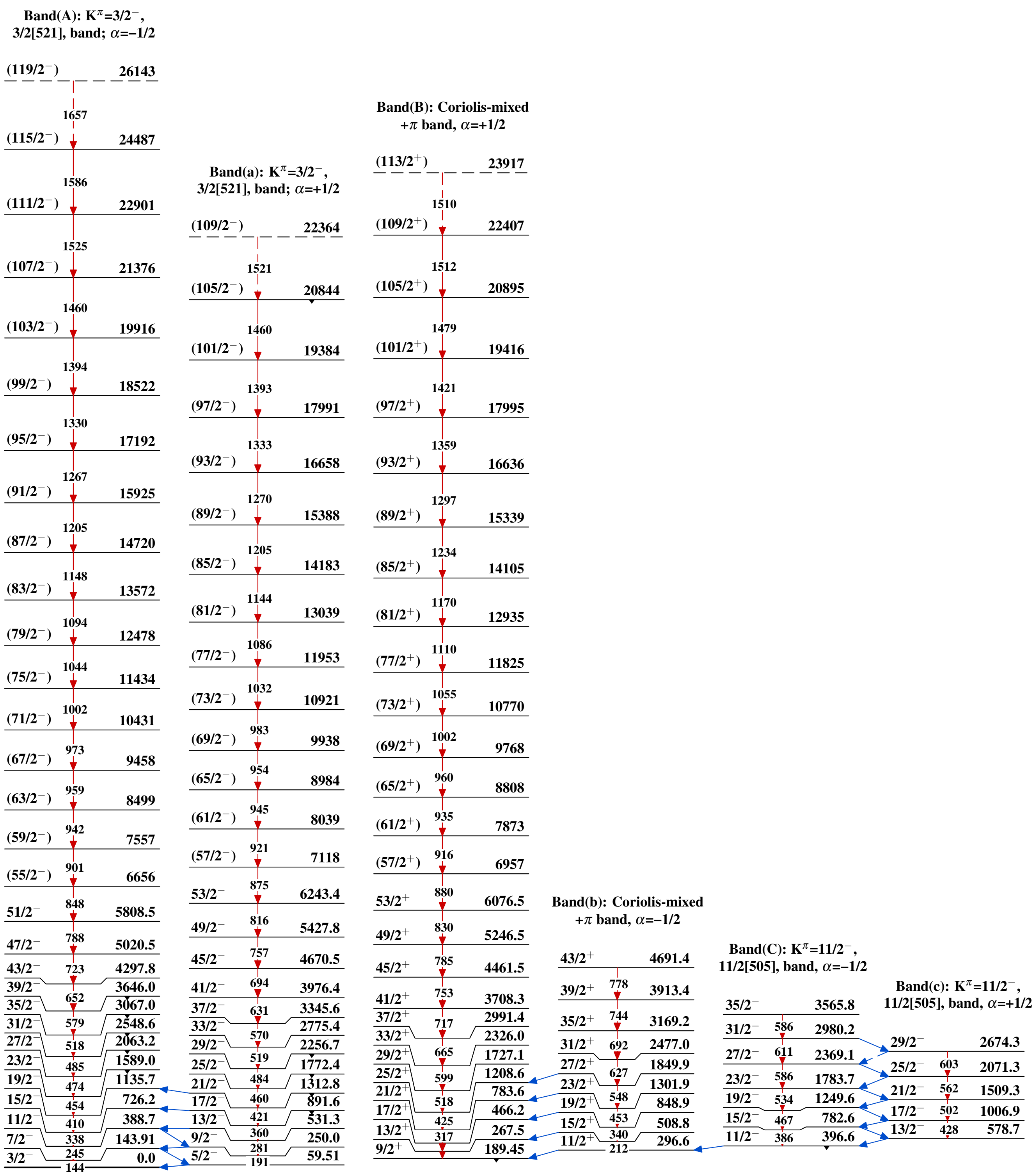
$I_\gamma < 10\% \times I_\gamma^{max}$

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



$^{161}_{68}Er_{93}$

(HI,xnγ)



$^{161}_{68}Er_{93}$