Atomic Data and Nuclear Data Tables **73,** 43–150 (1999)
Article ID adnd.1999.0817, available online at http://www.idealibrary.com on IDEAL®

NUCLEAR SUPERDEFORMATION DATA TABLES*

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This paper updates the earlier compilation of Nuclear superdeformation data tables (data cutoff at July 1995) published in ATOMIC DATA AND NUCLEAR DATA TABLES **63,** 117 (1996). The present tables list the measured γ-transition energies E_γ of 248 nuclear superdeformed bands for 90 nuclei found in the mass-60, -80, -130, -140, -150, -160, and -190 regions. Data were collected up to July 1998. The corresponding rotational frequencies ω, dynamic moments of inertia $\mathscr{J}^{(2)}$, measured or suggested spin assignments I and associated static moments of inertia $\mathscr{J}^{(1)}$, available transition quadrupole moments Q_t or average moments Q_0, M1 or E1 interband transition energies and parities, and g-factors are also tabulated. For the user's convenience, a plot of $\mathscr{J}^{(1)}$ and $\mathscr{J}^{(2)}$ versus rotational frequency ω is given with the data table for each superdeformed band.

* This research was supported by National Science Council of ROC under Contract NSC 87-2112-M-033-002.

0092-640X/99 $30.00

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INTRODUCTION

The data collected in this compilation are from works published before July 1998. Although it has been just 3 years since the cut off date of our previous compilation [1], the experimental data on superdeformed (SD) nuclei have accumulated so rapidly that we feel an update is again necessary. During the intervening years, the total number of experimentally found SD nuclei has increased by 76%, from 51 to 90, and superdeformed bands have increased by 89%, from 131 to 248. Meanwhile, data for about 77% of the earlier 131 SD bands have now been measured with much higher precision by GAMMASPHERE, GASP, and EUROGAM. In total, there are 218 bands in this compilation that are new or revised. The distribution of SD bands on the N–Z plane is summarized in Fig. 1.

In our previous compilation [1], the mass $A \sim 140$ superdeformed region had not been quite established. With more data accumulated, this mass region is now confirmed. As one can see from Fig. 1, the center of this mass region is around $Z = 64$ and $N = 80$. Two new mass regions with SD bands, at $A \sim 60$ and $A \sim 160$, have been identified, the latter of which has been characterized by the original authors as "triaxially superdeformed." Superdeformation in these regions remains to be further confirmed.

Some bands in the mass $A \sim 130$ region usually referred to as highly deformed or enhanced-deformed bands are also included in the present compilation. Although the deformations for these bands are somewhat smaller, such bands could be interpreted as transitional SD bands since they are located at the boundary of the SD mass region (as seen in Fig. 1).

In addition to the SD band E_γ measurements, more transition quadrupole moments Q_t (or average transition quadrupole moments Q_0) are now known through lifetime measurements, more interband M1 (E1) transitions and g-factors have been measured, and the decay-out quasicontinuum spectrum measured in the SD yrast band of ^{192}Hg has been interpreted in terms of the fragmentation and statistical nature of the deexcitation of the SD band in that isotope [2].

There has also been progress in the measurement of linking transitions to the normal deformed states. In addition to the three superdeformed bands in ^{133}Nd, ^{135}Nd, and ^{137}Nd [3], the linking transitions for eight other SD bands have been observed. These are the SD bands of ^{60}Zn, ^{132}Nd(1), ^{133}Pm(a, b), ^{137}Sm, ^{139}Gd, ^{194}Hg(1), and ^{194}Pb(1) [4], whose spins, parities, and excitation energies have now been assigned experimentally. Linking transitions for seven other bands, ^{58}Cu, ^{134}Nd(1, 2), ^{163}Lu, ^{165}Lu, ^{192}Pb, and ^{193}Pb(1a), have also been measured (details can be found in Tables I–III and the references therein). However, for most of the SD bands these level properties are still unknown. To completely determine them remains a difficult task. We hope that, with the aid of the new generation of γ-detectors, more complete data will appear in the near future.

Theoretical studies of SD bands are presently mostly done in terms of the semiphenomenological cranked Nilsson–Strutinsky and cranked Woods–Saxon–Strutinsky methods [5]. Many experimental papers contain this type of analysis. In addition, efforts have been devoted to systematic investigations of a complete mass region by such microscopic models as those employing the cranked Hartree–Fock and Hartree–Fock–Bogoliubov [6] methods. There are also two new approaches, the cranked relativistic mean field (CRMF) [7] theory and the projected shell model (PSM) [8], which may deserve special attention. The most attractive feature of the CRMF is that it is able to describe many essential ground state properties of nuclei over extended regions of the periodic table in an astonishingly accurate way with only seven parameters and with no readjustment for different mass regions. The PSM is an approach beyond mean field: it is essentially a shell model in a truncated model space obtained by angular momentum projection from the deformed mean field. Both approaches give reasonable results for the SD bands without readjustment of the parameters except pairing has to be properly treated (see Refs. [7] and [8]).

Although the above-mentioned approaches have been successful in representing many essential features of SD nuclei, they are still far from being a precise quantitative description. Meanwhile, the occurrence of identical bands remains a challenging problem to theoretical models [9]. It has been recognized that the pairing interaction plays an important role in determining the details of SD bands. The uncertainty in the treatment of the pairing force is a common problem in all approaches. Another important issue is the interplay between rotation and octupole vibrations, which is generally ignored in various approaches. It has been found in SD Hg nuclei that such octupole vibrations may be prevalent [10]. To search for the best treatment for pairing and to take the octupole correlation into account may well be important issues in the further theoretical study of SD nuclei; additionally, whether the occurrence of identical bands can be explained in a consistent manner will provide a rigorous test to the theory.

In this compilation, we list the measured γ-transition energies E_γ of 248 nuclear superdeformed and highly deformed bands for 90 nuclei found in the mass-60, -80, -130, -140, -150, -160, and -190 regions. The corresponding rotational frequencies ω, dynamic moments of inertia $\mathcal{J}^{(2)}$, measured or suggested spin assignments I and associated static moments of inertia $\mathcal{J}^{(1)}$, available transition quadrupole moments Q_t or average moments Q_0, M1 or E1 interband transition energies and parities, and g-factors are also tabulated. A plot of $\mathcal{J}^{(1)}$ and $\mathcal{J}^{(2)}$ versus rotational frequency ω is given with the data table for each superdeformed band. The $\mathcal{J}^{(2)}$ versus ω plots are also aggregated for the various A regions and displayed in Figs. 2–6 to show the overall behavior of superdeformed bands in each mass region.

Spin Assignments

As in the previous compilation, the spins suggested by the original authors are always adopted, if they are available, regardless of the approach used to make the assignments. However, readers should always keep in mind that a $\pm 2\hbar$ uncertainty in the spin assignments is expected on general grounds, except for those SD bands whose linking transitions to the normal deformed states have been

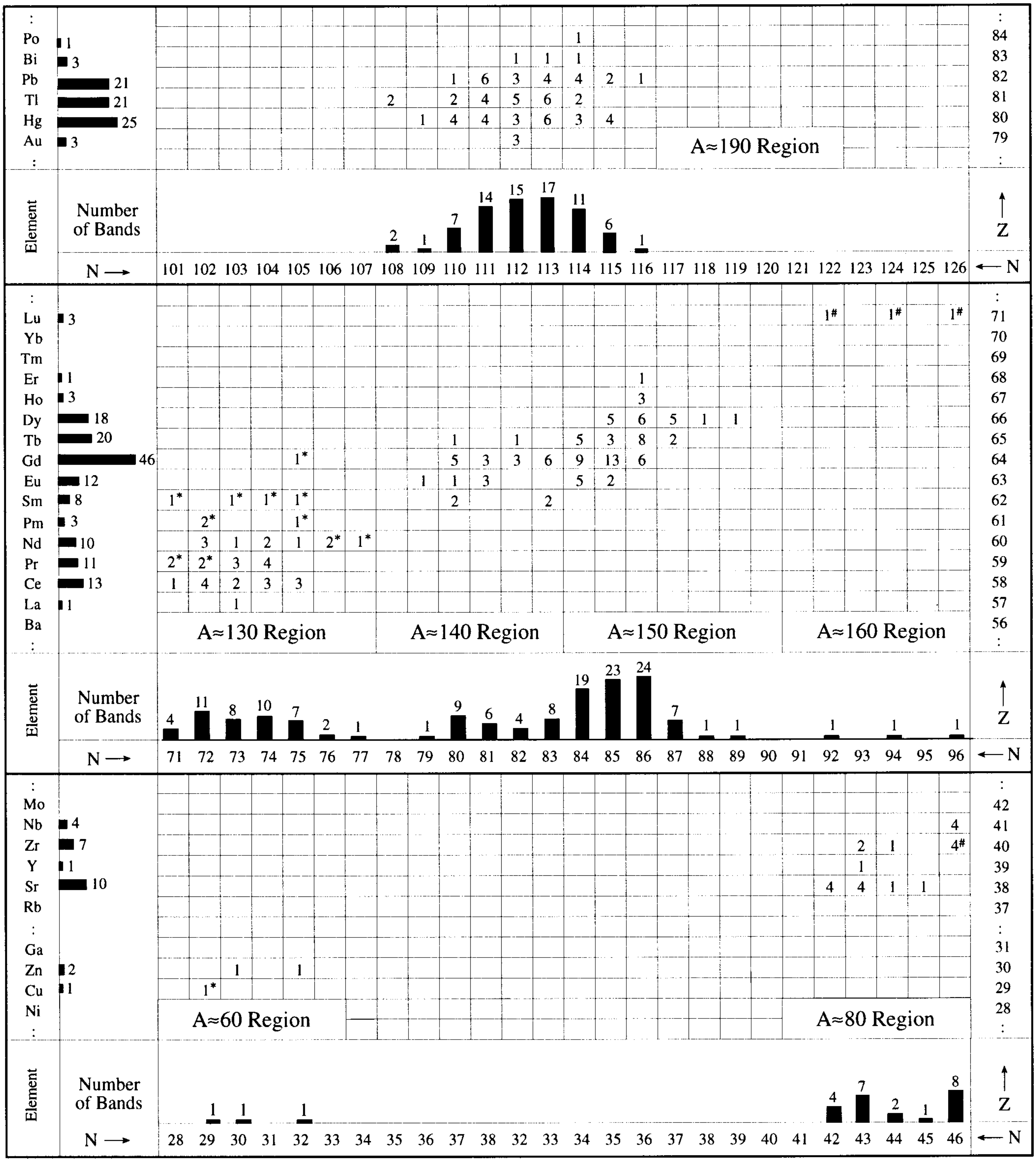

FIG. 1. The distribution of superdeformed bands on the N–Z plane. The numbers shown in the grid are the numbers of superdeformed bands for each isotope. The number adjacent to the vertical (horizontal) bars is the total number of superdeformed bands that have been found for a given proton number Z (neutron number N). The numbers with the symbol * indicate SD bands which have smaller deformations ($\beta \sim 0.3$–0.35) and usually are referred to as highly (or enhanced) deformed bands. The numbers with the symbol # indicate bands which have been referred to as triaxial SD bands.

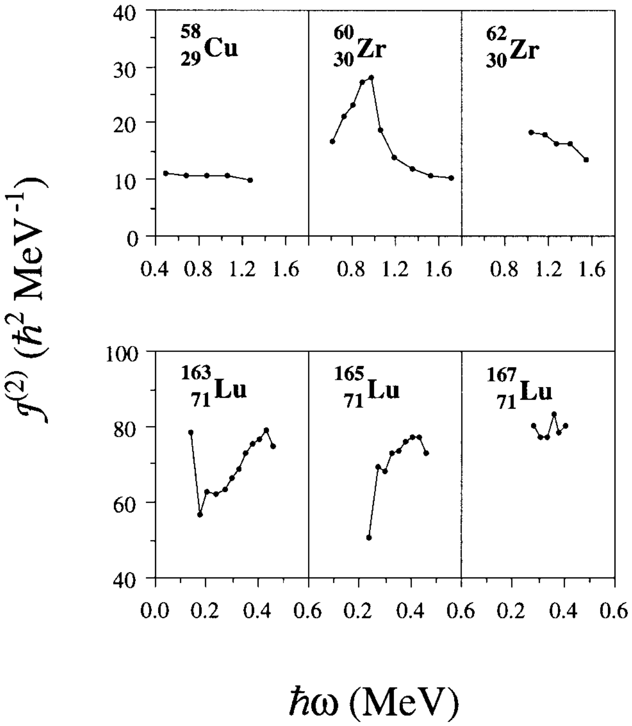

FIG. 2. Dynamic moment of inertia $\mathcal{J}^{(2)}$ versus rotational frequency ω for superdeformed bands in the $A \sim 60$ and $A \sim 160$ regions.

measured. Such spin values will be marked as $I^{\exp}$ in the SD data tables. If the spin assignments suggested by the original authors are not unique, the smallest value is adopted as the tentative assignment. The other spin assignments will be listed in the footnotes with their references.

For those SD bands where no spin assignments have been suggested by the original authors, tentative assignments are given by comparison with carefully chosen reference bands whose spins have been assigned. The tentative spin assignments, I^*, are obtained based on the assumption that the relative spin alignments i with respect to the reference band take minimum values. The relative alignment i was first introduced by Stephens et al. [11] and it has the following relations to the spins of the reference band I^r and the spins of a given superdeformed band I^*,

$$i(\omega^*) = (I^* - I^r) + \Delta i, \tag{1}$$

$$\Delta i = \mathcal{J}^{(2)}(\omega^r)[\omega^r - \omega^*], \tag{2}$$

where Δi is the so-called incremental alignment [12], ω^* is the frequency corresponding to I^*, ω^r is the frequency of the reference band that is most close to ω^*, and I^r and $\mathcal{J}^{(2)}$ are the corresponding spin and dynamic moment of inertia, respectively.

Note that the spin of the level from which the nth γ-transition originates I_n^*, is related to the exit spin I_0^* in the form

$$I_n^* = I_0^* + 2n, \quad n = 1, 2, 3, \ldots . \tag{3}$$

An average relative alignment for a superdeformed band can be defined as

$$\langle i \rangle = \sum_n (I_0^* - I_n^r + 2n + \Delta i_n)/N, \tag{4}$$

where I_n^r and Δi_n are the spin of the reference band and the incremental alignment corresponding to the nth γ-transition and N is the total number of γ-transitions within the band. The incremental alignment Δi_n can be calculated from the experimental transition energies with Eq. (2). Thus, by minimizing the average relative alignment $\langle i \rangle$, the exit spin I_0^* of the band in question can be obtained.

The minimum relative alignment $\langle i \rangle_{\min}$ of a band reflects the difference of its dynamic moment of inertia compared to the reference band. The smaller the $\langle i \rangle_{\min}$, the closer the $\mathcal{J}^{(2)}$ behavior of the two bands is. Therefore, $\langle i \rangle_{\min}$ may be taken as a measure of the dynamical similarity of a SD band compared to the reference band. It is also the measure of the accuracy of this method.

The reference bands (identified by Ref. Band in Tables A–D) were chosen according to the following criteria: (1) the spin assignments given for these bands are believed to be reliable; (2) the range of transition energies is sufficient to cover the frequency range for a given mass region; (3) the $\mathcal{J}^{(2)}$ behavior is smooth; (4) the resultant minimum relative alignments are mostly less than 1. With these criteria, the ground SD bands of ^{82}Sr, ^{133}Nd, ^{143}Eu, ^{150}Tb(1a) and ^{152}Dy(1), and ^{192}Hg(1) were chosen to be reference bands for the $A \sim 80$, 130, 140, 150, and 190 mass regions, respectively. There are two reference bands for the $A \sim 150$ region, because it was found in the last compilation [1] that the SD bands in this mass region can in fact be divided into two subgroups: ^{150}Tb(1a) for bands with mean dynamic moments of inertia $\bar{\mathcal{J}}^{(2)}$ around 77 $\hbar^2$MeV^{-1} (obtained by minimizing $\sum_n(\bar{\mathcal{J}}^{(2)}\Delta\omega_n - 2\hbar)^2$), and ^{152}Dy(1) for those with $\bar{\mathcal{J}}^{(2)}$ around 85 $\hbar^2$MeV^{-1}. These reference bands are the same as those employed in our last compilation [1], except for the $A \sim 80$ region, which is new. Since the previous compilation, more SD bands in the $A \sim 130$ and 190 mass regions now have their spins determined experimentally and we have noted that these spins are consistent with the assignments we predicted. Although in the case of the ^{143}Eu SD band the spin assignment from the previous linking transition measurement was not confirmed by a recent experiment [12], no other SD band in this region has been found to satisfy the criteria better. We therefore decided to keep the reference bands unchanged.

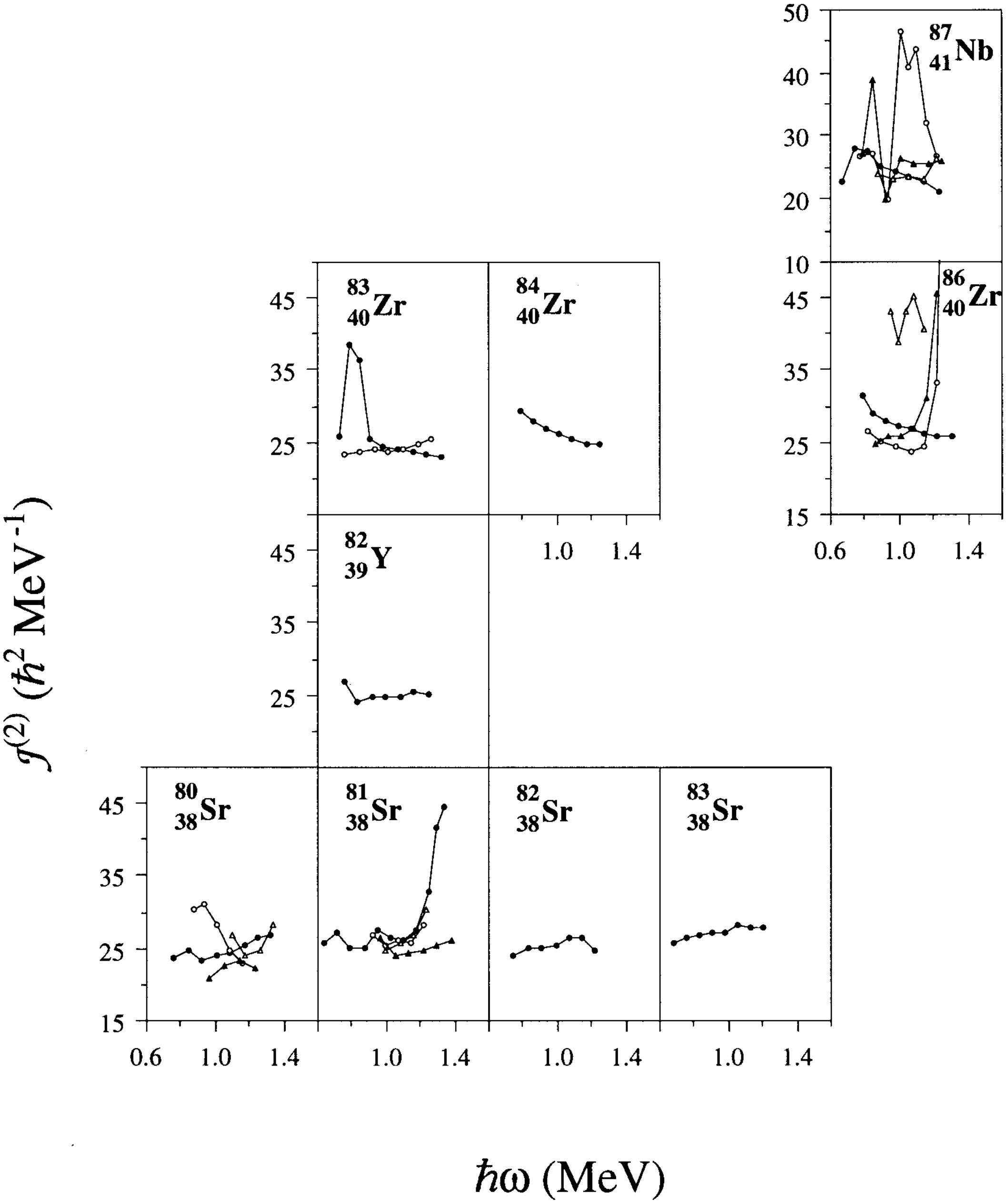

FIG. 3. Dynamic moment of inertia $\mathcal{J}^{(2)}$ versus rotational frequency ω for superdeformed bands in the $A \sim 80$ region.

The results of our spin assignments via the above-described comparison to reference bands are summarized in Tables A–D (the two new mass regions at $A \sim 60$ and $A \sim 160$ are not included since each of them has only three SD bands and their spins have all been suggested by the original authors). In these Tables, the average relative alignment and the deduced exit spin I_0^* are listed as $\langle i \rangle_{\min}$ and $I_0(\langle i \rangle_{\min})$, respectively. The spins suggested by the original authors are listed as I_0(est) where available.

It should be emphasized that the above method is not being proposed for the determination of absolute spin values but rather to link spins between different superdeformed bands. The spin assignments determined by this procedure are made in order to construct the static moment of inertia $\mathcal{J}^{(1)}$ versus ω plots. Although many spin values for the SD ground bands predicted in the last compilation [1] by this method have recently been confirmed by experiments [4] (for example, the spins for ^{132}Nd(1), ^{194}Hg(1), ^{192}Pb, ^{193}Pb(1a), and ^{194}Pb(1), etc.), this is no guarantee that the spins for other SD bands will be correct. There is an uncertainty associated with the assumption of minimum relative alignment, which may or may not be valid, and this kind of uncertainty cannot be estimated. The total relative alignment should include the initial alignment i_0, which is in fact unknown. Only under the assumption of minimum alignment, which implies $i_0 = 0$, will $I_0(\langle i \rangle_{\min})$ give the correct exit spin; otherwise, the exit spin cannot be determined. Another uncertainty originates from the uncertainty of the reference band itself. In particular, for the $A \sim 140$ and 150 mass regions, there is not a single SD band whose spin is measured; thus the spin assignment of the reference band itself may already have a $2\hbar$ uncertainty as we have

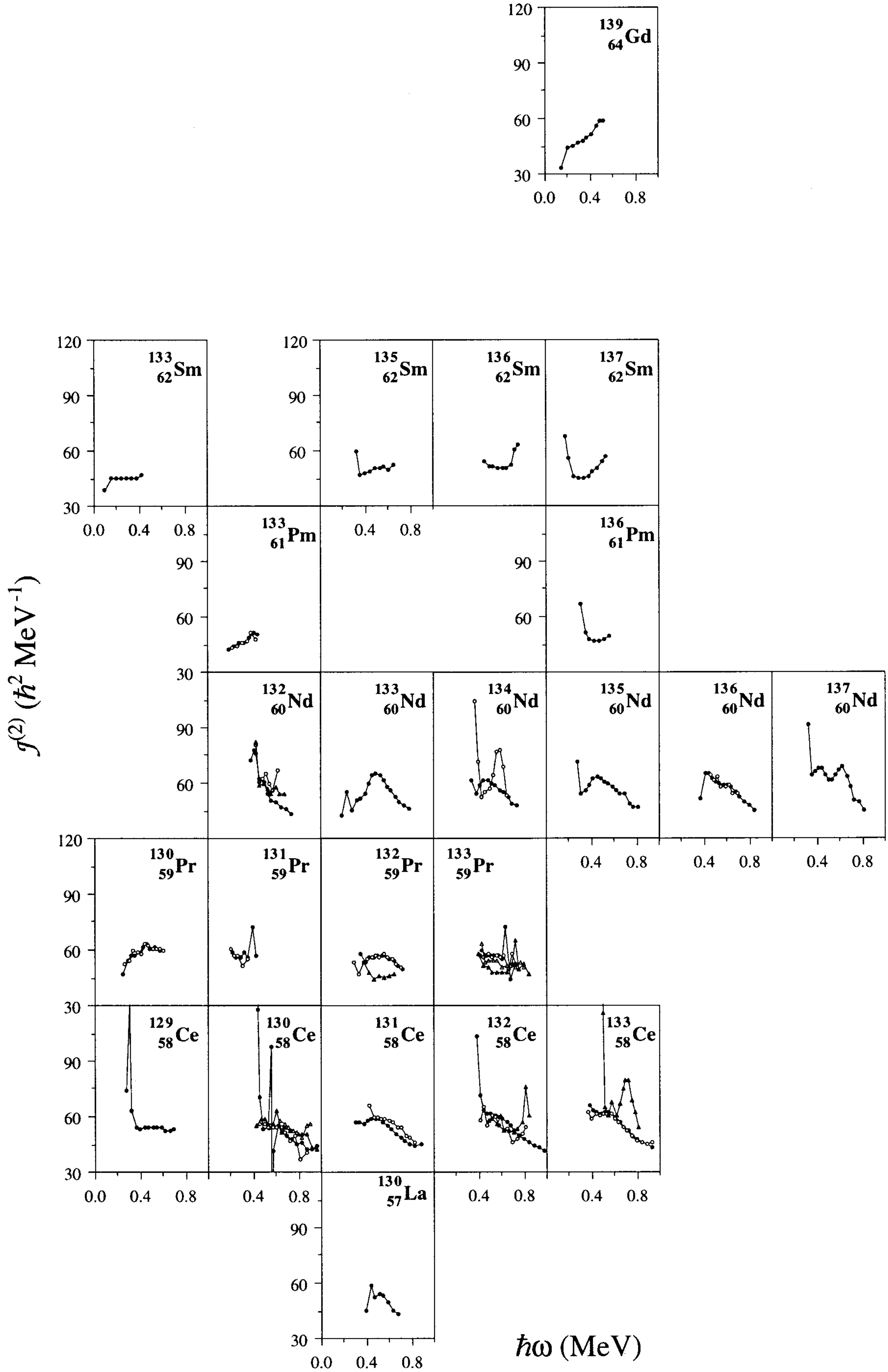

FIG. 4. Dynamic moment of inertia $\mathcal{J}^{(2)}$ versus rotational frequency ω for superdeformed bands in the $A \sim 130$ region.

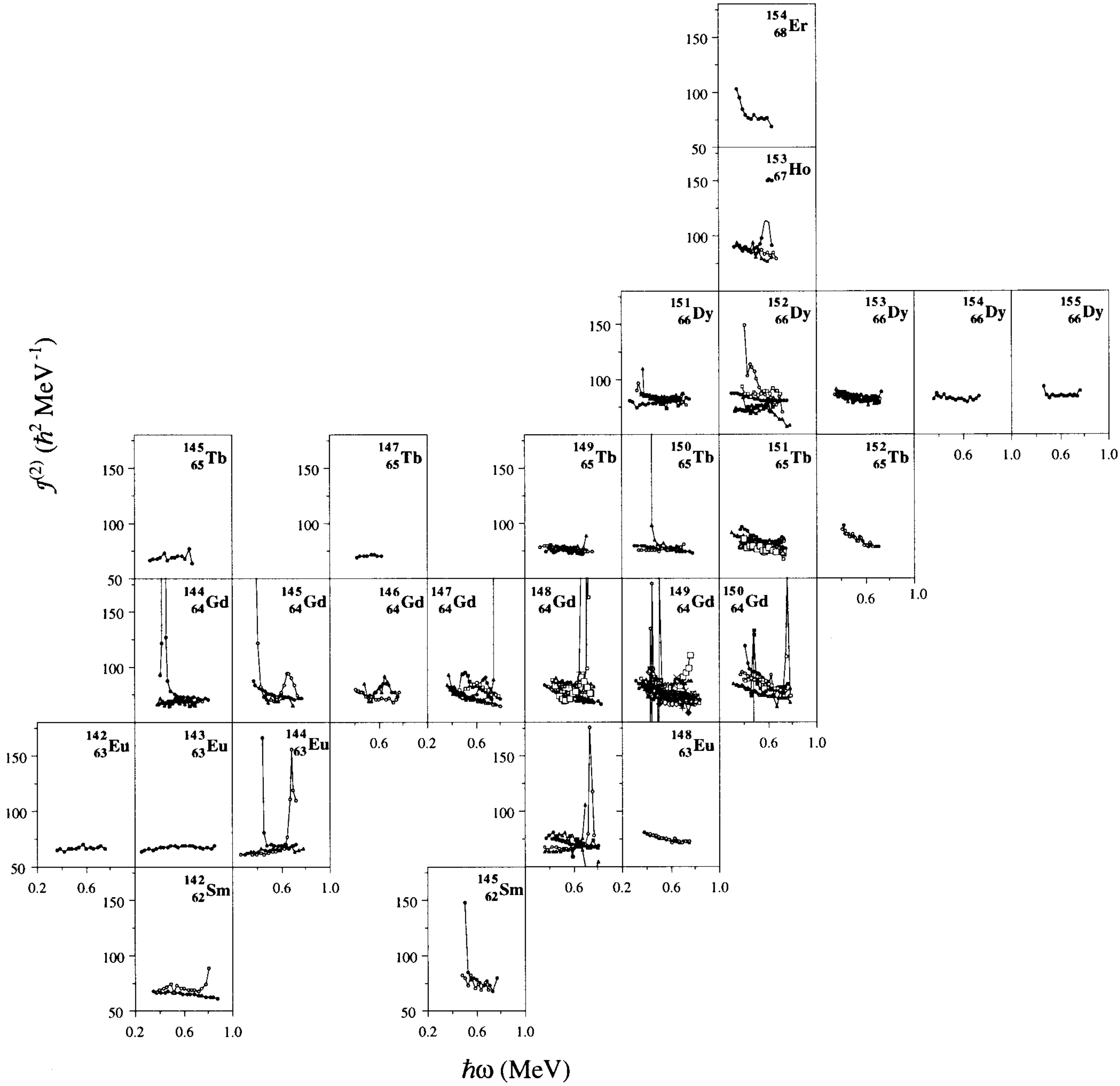

FIG. 5. Dynamic moment of inertia $\mathcal{J}^{(2)}$ versus rotational frequency ω for superdeformed bands in the $A \sim 140$ and $A \sim 150$ regions.

mentioned. It would be most desirable to have the spin measurements for SD bands in this region.

For a more detailed look at the extent to which the above-described procedure succeeds in deriving valid spin assignments, one can first observe that in those cases where the exit spin has been determined experimentally (that is, where the spin values are marked with an asterisk in Tables B and D), generally $I_0(\langle i\rangle_{\min})$ and I_0(est) agree with each other; any deviation is mostly within $\pm 1\hbar$, and $\langle i\rangle_{\min}$ is less than $1\hbar$. There are two cases, however, where the deviations between $I_0(\langle i\rangle_{\min})$ and the experimental I_0(est) are exceptionally large: the so-called highly deformed bands ^{133}Pm(a) and (b) in Table B. The 5 unit difference between $I_0(\langle i\rangle_{\min})$ and I_0(est) suggests a $-5\hbar$ initial alignment relative to the reference band ^{133}Nd. Looking next at the more global picture in Tables A–D, one again sees that $I_0(\langle i\rangle_{\min})$

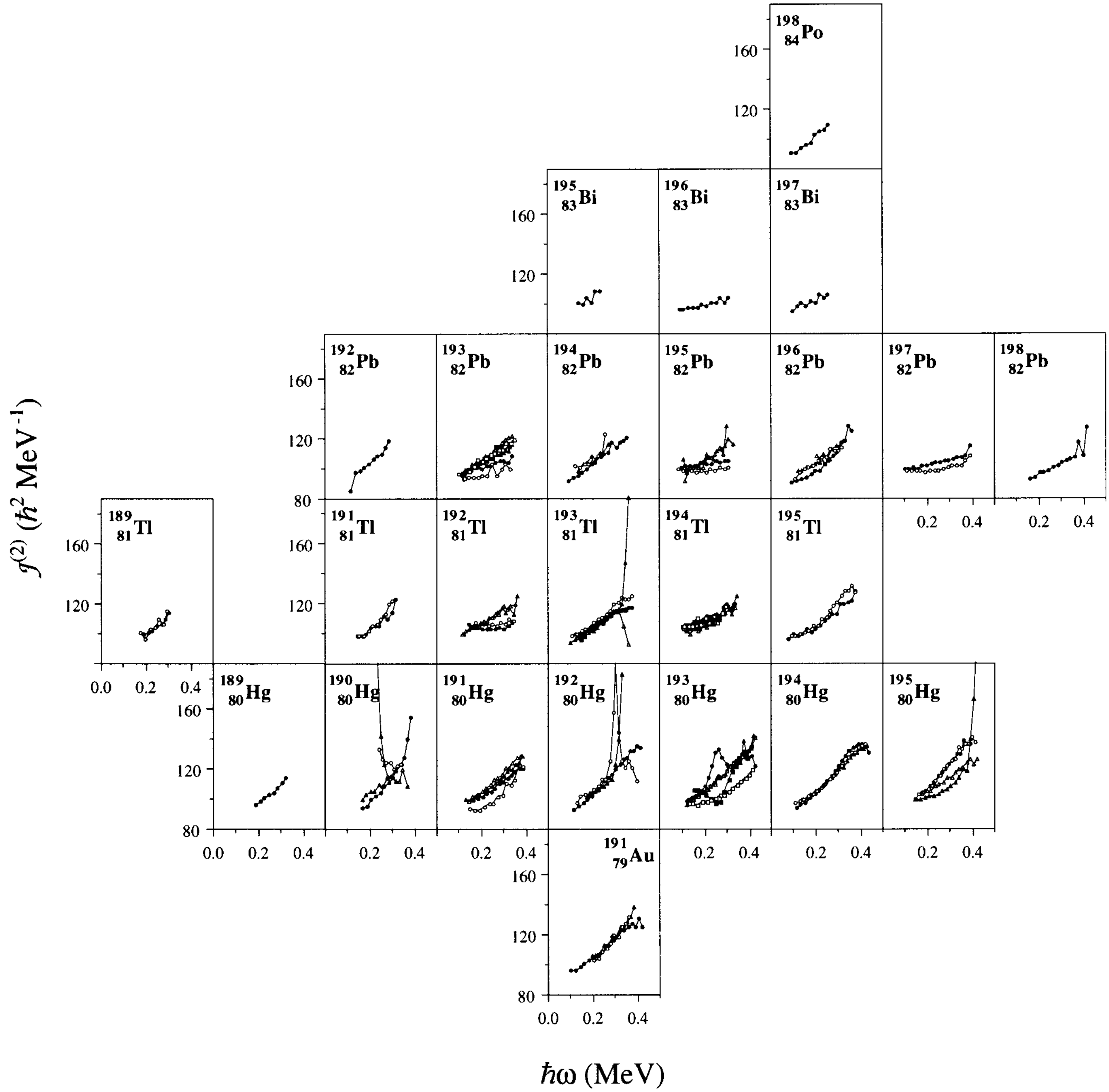

FIG. 6. Dynamic moment of inertia $\mathcal{J}^{(2)}$ versus rotational frequency ω for superdeformed bands in the $A \sim 190$ region.

and I_0(est) are generally quite close, and that $\langle i \rangle_{\min}$ is typically less than $1\hbar$. This seems to suggest that the choice of reference bands and the assumption of minimum relative alignment may be reasonable. There are some cases that show large differences, such as the SD bands in ^{131,133}Ce, ^{133}Pr, $^{146-149}$Gd, ^{151}Dy, and ^{152}Dy(3), where the deviations could be as large as $7\hbar$. Whether these differences are due to the initial alignments or to incorrect estimations of the spins by the original authors is not known, since spins for these bands have not yet been measured. Some theoretical analyses have suggested that $I_0(\text{est}) = 25.5$ for ^{151}Dy(1) seems too high, and $I_0(\text{est}) = 8.5$ for ^{131}Ce(1) seems too low. Nevertheless, the spin assignments proposed by the original references are adopted in the Tables according to our polices.

Data for the individual SD bands are given in Tables

TABLE A

Spin Assignments for the $A \sim 80$ Region (See Text for Explanation of Tabulated Quantities)

SD Band		$E_\gamma(I_0+2\rightarrow I_0)$	I_0(est)	$I_0(\langle i\rangle_{min})$	$\langle i\rangle_{min}$	Ref. Band
80	Sr(1)	1443	18	18	0.5	^{82}Sr
80	Sr(2)	1688	18	20	0.6	^{82}Sr
80	Sr(3)	1712	20	22	0.5	^{82}Sr
80	Sr(4)	2140	20	27	0.2	^{82}Sr
81	Sr(1)	1214	15.5	14.5	0.4	^{82}Sr
81	Sr(2)	1773	17.5	22.5	0.4	^{82}Sr
81	Sr(3)	1881	---	23.5	0.2	^{82}Sr
81	Sr(4)	1938	---	24.5	0.2	^{82}Sr
82	Sr	1429.8	18	18	0.0#	^{82}Sr
83	Sr	1303.7	20.5	15.5	0.4	^{82}Sr
82	Y	1455	20	18	0.3	^{82}Sr
83	Zr(1)	1378	15.5	16.5	0.5	^{82}Sr
83	Zr(2)	1448	16.5	18.5	0.3	^{82}Sr
84	Zr	1526	21	19	0.4	^{82}Sr
86	Zr(1)	1518	23	18	0.4	^{82}Sr
86	Zr(2a)	1577	22	20	0.2	^{82}Sr
86	Zr(2b)	1648	23	20	0.5	^{82}Sr
86	Zr(3)	1866	25	22	0.9	^{82}Sr
87	Nb(1)	1250	17.5	15.5	0.2	^{82}Sr
87	Nb(2)	1492	20.5	18.5	0.4	^{82}Sr
87	Nb(3)	1508	22.5	18.5	0.1	^{82}Sr
87	Nb(4)	1697	19.5	21.5	0.3	^{82}Sr

Relative alignment for the reference band is set to zero.

TABLE B

Spin Assignments for the $A \sim 130$ and $A \sim 140$ Regions (See Text for Explanation of Tabulated Quantities)

SD Band		$E_\gamma(I_0+2\rightarrow I_0)$	I_0(est)	$I_0(\langle i\rangle_{min})$	$\langle i\rangle_{min}$	Ref. Band
130	La	762.4	16	20	0.8	^{133}Nd
129	Ce	634	12.5	15.5	0.7	^{133}Nd
130	Ce(1a)	899	22	21	1.2	^{133}Nd
130	Ce(1b)	904	21	23	0.6	^{133}Nd
130	Ce(2a)	841	---	21	0.4	^{133}Nd
130	Ce(2b)	1261	---	33	0.3	^{133}Nd
131	Ce(1)	590.73	8.5	14.5	0.5	^{133}Nd
131	Ce(2)	846.80	23.5	20.5	0.5	^{133}Nd
132	Ce(1)	769.61	16	17	0.6	^{133}Nd
132	Ce(2)	794	---	20	0.4	^{133}Nd
132	Ce(3)	947	---	24	0.4	^{133}Nd
133	Ce(1)	748.30	21.5	17.5	0.2	^{133}Nd
133	Ce(2)	720.32	18.5	17.5	0.4	^{133}Nd
133	Ce(3)	956.9	22.5	22.5	0.6	^{133}Nd
130	Pr(a)	462	10	11	0.4	^{133}Nd
130	Pr(b)	509	11	12	0.4	^{133}Nd
131	Pr(1)	411	5.5	8.5	0.7	^{133}Nd
131	Pr(2)	378	4.5	7.5	0.8	^{133}Nd
132	Pr(1)	695.5	15	17	0.6	^{133}Nd
132	Pr(2)	565.3	12	14	0.5	^{133}Nd
132	Pr(3)	738.3	14	20	1.4	^{133}Nd
133	Pr(1a)	840	26.5	21.5	0.4	^{133}Nd
133	Pr(1b)	800	25.5	20.5	0.5	^{133}Nd
133	Pr(2)	784	26.5	20.5	1.0	^{133}Nd
133	Pr(3)	821	27.5	21.5	0.8	^{133}Nd
132	Nd(1)	741	17*	17	0.6	^{133}Nd
132	Nd(2)	827	---	20	0.2	^{133}Nd
132	Nd(3)	854	---	21	0.3	^{133}Nd
133	Nd	345	8.5*	8.5	0.0#	^{133}Nd
134	Nd(1)	667.9	17*	16	0.2	^{133}Nd
134	Nd(2)	726.4	18*	17	0.7	^{133}Nd
135	Nd	545.4	12.5*	12.5	0.5	^{133}Nd
136	Nd(1)	656.5	14	15	0.3	^{133}Nd
136	Nd(2)	888	---	22	0.2	^{133}Nd
137	Nd	634.7	14.5*	13.5	1.2	^{133}Nd
133	Pm(a)	338.4	4.5*	9.5	0.5	^{133}Nd
133	Pm(b)	386.8	5.5*	10.5	0.5	^{133}Nd
136	Pm	603.0	---	15	0.9	^{133}Nd
133	Sm	171	6.5	5.5	0.4	^{133}Nd
135	Sm	619	14.5	15.5	0.9	^{133}Nd
136	Sm	888	22	23	0.7	^{133}Nd
137	Sm	379.1	8.5*	9.5	0.8	^{133}Nd
139	Gd	245	6.5*	7.5	0.5	^{133}Nd
142	Sm(1)	679.7	30	24	0.5	^{143}Eu
142	Sm(2)	726.2	---	25	0.3	^{143}Eu
145	Sm(1)	1011.3	---	32.5	0.7	^{143}Eu
145	Sm(2)	945.1	---	31.5	0.4	^{143}Eu
142	Eu	699.7	27	25	0.3	^{143}Eu
143	Eu	483.5	17.5	17.5	0.0#	^{143}Eu
144	Eu(1)	878.6	36	29	0.3	^{143}Eu
144	Eu(2a)	506.9	20	19	0.6	^{143}Eu
144	Eu(2b)	603.2	---	22	0.3	^{143}Eu
147	Eu(1)	737.3	---	24.5	0.5	^{143}Eu
147	Eu(2)	703.2	---	24.5	0.3	^{143}Eu
147	Eu(3)	708.1	---	25.5	0.4	^{143}Eu
147	Eu(4)	944.0	---	31.5	0.4	^{143}Eu
147	Eu(5)	940.5	---	31.5	0.4	^{143}Eu
144	Gd(1)	934.2	32	31	0.5	^{143}Eu
144	Gd(2a)	774.5	25	27	0.2	^{143}Eu
144	Gd(2b)	743.6	24	26	0.2	^{143}Eu
144	Gd(3a)	852.9	29	29	0.3	^{143}Eu
144	Gd(3b)	936.8	32	32	0.3	^{143}Eu
145	Gd(2a)	843.3	---	28.5	0.4	^{143}Eu
145	Gd(2b)	919.7	---	31.5	0.3	^{143}Eu
146	Gd(1)	826.3	33	28	0.6	^{143}Eu
146	Gd(2)	806.2	32	27	0.4	^{143}Eu
146	Gd(3)	958.5	---	32	0.6	^{143}Eu
145	Tb	627.1	---	21.5	0.3	^{143}Eu
147	Tb	826	---	28.5	0.3	^{143}Eu

* The spin is experimentally determined.

Relative alignment for the reference band is set to zero.

TABLE C

Spin Assignments for the $A \sim 150$ Region (See Text for Explanation of Tabulated Quantities)

SD Band	$E_\gamma(I_0+2 \to I_0)$	I_0(est)	$I_0(<i>_{min})$	$<i>_{min}$	Ref. Band
148 Eu(1)	747.86	---	27	0.2	^{150}Tb(1a)
148 Eu(2)	844.2	---	31	0.2	^{150}Tb(1a)
145 Gd(1)	723.2	---	25.5	0.3	^{150}Tb(1a)
147 Gd(1)	697.04	27.5	24.5	0.6	^{150}Tb(1a)
147 Gd(2)	730.21	30.5	26.5	0.5	^{150}Tb(1a)
147 Gd(3)	704.8	25.5	25.5	0.6	^{150}Tb(1a)
147 Gd(4)	741.9	30.5	26.5	0.5	^{150}Tb(1a)
147 Gd(5)	899.5	35.5	31.5	0.7	^{150}Tb(1a)
147 Gd(6)	890.8	---	31.5	0.7	^{150}Tb(1a)
148 Gd(1)	700.2	29	25	0.5	^{150}Tb(1a)
148 Gd(4)	849.44	---	31	0.4	^{150}Tb(1a)
148 Gd(5)	891.1	---	32	0.4	^{150}Tb(1a)
148 Gd(6)	830.3	---	30	0.3	^{150}Tb(1a)
148 Gd(7a)	911.8	---	33	0.5	^{150}Tb(1a)
148 Gd(7b)	887.0	---	32	0.3	^{150}Tb(1a)
149 Gd(1)	617.8	25.5	21.5	0.3	^{150}Tb(1a)
149 Gd(2)	901.0	37.5	31.5	0.5	^{150}Tb(1a)
149 Gd(3)	649.8	28.5	22.5	0.4	^{150}Tb(1a)
149 Gd(5)	755.7	31.5	27.5	0.5	^{150}Tb(1a)
149 Gd(6)	688.1	28.5	24.5	0.5	^{150}Tb(1a)
149 Gd(7)	802.9	---	28.5	0.3	^{150}Tb(1a)
149 Gd(10)	747.6	---	27.5	0.5	^{150}Tb(1a)
149 Gd(11)	827.6	---	30.5	0.6	^{150}Tb(1a)
149 Gd(12)	855.1	---	31.5	0.5	^{150}Tb(1a)
149 Gd(13)	850.3	---	30.5	0.3	^{150}Tb(1a)
150 Gd(3a)	617.1	24	22	0.5	^{150}Tb(1a)
150 Gd(3b)	688.3	27	25	0.6	^{150}Tb(1a)
150 Gd(4)	998.6	42	36	0.3	^{150}Tb(1a)
149 Tb(1)	740.1	---	27.5	0.5	^{150}Tb(1a)
149 Tb(2)	646.2	---	23.5	0.5	^{150}Tb(1a)
149 Tb(3)	786.0	---	28.5	0.2	^{150}Tb(1a)
149 Tb(4)	824.0	---	30.5	0.5	^{150}Tb(1a)
149 Tb(5)	803.7	---	29.5	0.4	^{150}Tb(1a)
150 Tb(1a)	596.8	21	21	0.0#	^{150}Tb(1a)
150 Tb(1b)	662.5	---	24	0.2	^{150}Tb(1a)
150 Tb(2)	888.3	---	32	0.5	^{150}Tb(1a)
151 Tb(3a)	709.3	---	25.5	0.1	^{150}Tb(1a)
151 Tb(3b)	739	---	26.5	0.1	^{150}Tb(1a)
151 Tb(4a)	758	---	27.5	0.4	^{150}Tb(1a)
151 Tb(4b)	785	---	28.5	0.3	^{150}Tb(1a)
151 Dy(1)	527.3	25.5	18.5	0.5	^{150}Tb(1a)
151 Dy(5)	959.3	---	34.5	0.4	^{150}Tb(1a)
152 Dy(3)	793.0	36	29	0.4	^{150}Tb(1a)
152 Dy(4)	669.6	27	24	0.4	^{150}Tb(1a)
152 Dy(5)	642.1	26	23	0.3	^{150}Tb(1a)
154 Er	695.06	26	24	0.3	^{150}Tb(1a)
148 Gd(2)	790.2	32	33	0.3	^{152}Dy(1)
148 Gd(3)	853.8	---	35	0.2	^{152}Dy(1)
148 Gd(8)	868.4	---	36	0.5	^{152}Dy(1)
149 Gd(4)	725.6	31.5	29.5	0.1	^{152}Dy(1)
149 Gd(8)	877.8	---	37.5	0.6	^{152}Dy(1)
149 Gd(9)	874.1	---	34.5	1.2	^{152}Dy(1)
150 Gd(1)	815.0	32	32	0.6	^{152}Dy(1)
150 Gd(2)	727.9	29	29	0.3	^{152}Dy(1)
150 Gd(5)	771.6	28	31	0.3	^{152}Dy(1)
151 Tb(1a)	726.5	28.5	28.5	0.6	^{152}Dy(1)
151 Tb(1b)	681.5	27.5	27.5	0.5	^{152}Dy(1)
151 Tb(2a)	602.1	24.5	24.5	0.6	^{152}Dy(1)
151 Tb(2b)	768.6	31.5	31.5	0.1	^{152}Dy(1)
152 Tb(1)	823	---	33	0.4	^{152}Dy(1)
152 Tb(2)	801	---	32	0.4	^{152}Dy(1)
151 Dy(2)	633.0	---	25.5	0.2	^{152}Dy(1)
151 Dy(3)	728.5	---	29.5	0.3	^{152}Dy(1)
151 Dy(4)	712.0	---	28.5	0.5	^{152}Dy(1)
152 Dy(1)	602.4	24	24	0.0#	^{152}Dy(1)
152 Dy(2)	825.9	34	32	0.9	^{152}Dy(1)
152 Dy(6)	761.5	32	30	0.6	^{152}Dy(1)
153 Dy(1)	721.4	---	28.5	0.4	^{152}Dy(1)
153 Dy(2a)	678.6	---	27.5	0.1	^{152}Dy(1)
153 Dy(2b)	702.0	---	28.5	0.0	^{152}Dy(1)
153 Dy(3a)	723.4	---	29.5	0.3	^{152}Dy(1)
153 Dy(3b)	743.2	---	30.5	0.3	^{152}Dy(1)
154 Dy	701.7	---	28	0.4	^{152}Dy(1)
155 Dy	909.6	---	36.5	0.5	^{152}Dy(1)
153 Ho(1a)	651.3	25.5	25.5	0.5	^{152}Dy(1)
153 Ho(1b)	713	28.5	28.5	0.5	^{152}Dy(1)
153 Ho(2)	657	24.5	25.5	0.2	^{152}Dy(1)

Relative alignment for the reference band is set to zero.

I–III. The hyperdeformed bands ^{147}Gd(H1, H2), which had been included in the last compilation, were not confirmed in subsequent experiments [13] and thus are deleted in this edition. No experimental confirmation is available for the spin assignments listed in this compilation except for the 18 SD bands, ^{58}Cu, ^{60}Zn, ^{132}Nd(1), ^{133}Nd, ^{134}Nd(1, 2), ^{135}Nd, ^{137}Nd, ^{133}Pm(a, b), ^{137}Sm, ^{139}Gd, ^{163}Lu, ^{165}Lu, ^{192}Pb, ^{193}Pb(1a), ^{194}Hg(1), and ^{194}Pb(1), for which linking transitions to the normally deformed bands have been observed. For the spins estimated by various procedures, an uncertainty of at least $1\hbar$–$2\hbar$ should be assumed. Error bars have been omitted on the $\mathscr{J}^{(1)}$ plots since the uncertainty on spin I cannot be specified. We note, however, that the effect of changing the exit spin of a band is an upward or downward displacement of the $\mathscr{J}^{(1)}$ plots, without a shape change.

Finally it should be mentioned that there is a database

TABLE D

Spin Assignments for the $A \sim 190$ Region (See Text for Explanation of Tabulated Quantities)

SD Band	$E_\gamma(I_0+2\rightarrow I_0)$	I_0(est)	$I_0(<i>_{min})$	$<i>_{min}$	Ref. Band
191 Au(1)	186.8	7.5	6.5	0.2	^{192}Hg(1)
191 Au(2a)	397.8	17.5	16.5	0.4	^{192}Hg(1)
191 Au(2b)	382.7	16.5	15.5	0.4	^{192}Hg(1)
189 Hg	366.2	14.5	15.5	0.5	^{192}Hg(1)
190 Hg(1)	316.9	12	13	0.5	^{192}Hg(1)
190 Hg(2)	481.1	23	21	0.5	^{192}Hg(1)
190 Hg(3)	279	14	11	0.2	^{192}Hg(1)
190 Hg(4)	446.3	---	17	0.7	^{192}Hg(1)
191 Hg(1a)	310.9	15.5	12.5	0.5	^{192}Hg(1)
191 Hg(1b)	280.9	12.5	12.5	0.9	^{192}Hg(1)
191 Hg(2a)	252.4	10.5	9.5	0.3	^{192}Hg(1)
191 Hg(2b)	272.0	11.5	10.5	0.1	^{192}Hg(1)
192 Hg(1)	214.75	8	8	0.0#	^{192}Hg(1)
192 Hg(2)	282.4	12	11	0.5	^{192}Hg(1)
192 Hg(3)	333.1	---	14	0.5	^{192}Hg(1)
193 Hg(1a)	233.2	9.5	7.5	0.6	^{192}Hg(1)
193 Hg(1b, 2b)	254.0	10.5	9.5	0.1	^{192}Hg(1)
193 Hg(2a)	233.5	9.5	8.5	0.1	^{192}Hg(1)
193 Hg(3a)	291.0	13.5	11.5	0.2	^{192}Hg(1)
193 Hg(3b)	240.5	10.5	9.5	0.5	^{192}Hg(1)
194 Hg(1)	211.1	8*	8	0.4	^{192}Hg(1)
194 Hg(2a)	200.79	8	7	0.1	^{192}Hg(1)
194 Hg(2b)	262.27	11	10	0.1	^{192}Hg(1)
195 Hg(1a)	294	12.5	11.5	0.5	^{192}Hg(1)
195 Hg(1b)	273.9	11.5	10.5	0.5	^{192}Hg(1)
195 Hg(2)	244	10.5	9.5	0.7	^{192}Hg(1)
195 Hg(3)	341.9	15.5	14.5	0.4	^{192}Hg(1)
189 Tl(a)	326.3	13.5	13.5	0.3	^{192}Hg(1)
189 Tl(b)	304.5	12.5	12.5	0.2	^{192}Hg(1)
191 Tl(a)	277	---	11.5	0.5	^{192}Hg(1)
191 Tl(b)	296	---	12.5	0.7	^{192}Hg(1)
192 Tl(1a)	283.0	15	11	0.5	^{192}Hg(1)
192 Tl(1b)	337.5	18	14	0.4	^{192}Hg(1)
192 Tl(2a)	233.4	10	9	0.6	^{192}Hg(1)
192 Tl(2b)	213.4	9	8	0.6	^{192}Hg(1)
193 Tl(1a)	227.3	9.5	8.5	0.3	^{192}Hg(1)
193 Tl(1b)	206.6	8.5	7.5	0.3	^{192}Hg(1)
193 Tl(2)	187.9	7.5	6.5	0.3	^{192}Hg(1)
193 Tl(3)	250.8	11.5	9.5	0.4	^{192}Hg(1)
193 Tl(4)	271.5	10.5	10.5	0.2	^{192}Hg(1)
194 Tl(1a)	268.0	12	10	0.2	^{192}Hg(1)
194 Tl(1b)	209.3	9	7	0.2	^{192}Hg(1)
194 Tl(2a)	240.5	10	9	0.2	^{192}Hg(1)
194 Tl(2b)	220.3	9	8	0.2	^{192}Hg(1)
194 Tl(3a)	187.9	8	6	0.4	^{192}Hg(1)
194 Tl(3b)	207.0	9	7	0.3	^{192}Hg(1)
195 Tl(a)	146.2	5.5	4.5	0.2	^{192}Hg(1)
195 Tl(b)	167.5	6.5	5.5	0.4	^{192}Hg(1)
192 Pb	214.8	8*	8	0.1	^{192}Hg(1)
193 Pb(1a)	276.90	11.5*	11.5	0.6	^{192}Hg(1)
193 Pb(1b)	190.53	8.5	7.5	0.8	^{192}Hg(1)
193 Pb(2a)	250.60	10.5	9.5	0.4	^{192}Hg(1)
193 Pb(2b)	273.0	11.5	10.5	0.1	^{192}Hg(1)
193 Pb(3a)	213.20	8.5	7.5	0.2	^{192}Hg(1)
193 Pb(3b)	232.95	9.5	8.5	0.3	^{192}Hg(1)
194 Pb(1)	124.9	4*	4	0.2	^{192}Hg(1)
194 Pb(2a)	241.2	10	9	0.2	^{192}Hg(1)
194 Pb(2b)	260.9	11	10	0.2	^{192}Hg(1)
195 Pb(1)	182.13	7.5	6.5	0.4	^{192}Hg(1)
195 Pb(2)	162.58	6.5	5.5	0.5	^{192}Hg(1)
195 Pb(3)	198.19	7.5	6.5	0.3	^{192}Hg(1)
195 Pb(4)	213.58	8.5	7.5	0.3	^{192}Hg(1)
196 Pb(1)	171.40	6	7	0.5	^{192}Hg(1)
196 Pb(2a)	204.6	8	7	0.5	^{192}Hg(1)
196 Pb(2b)	226.8	9	8	0.4	^{192}Hg(1)
196 Pb(3)	405	17	17	0.2	^{192}Hg(1)
197 Pb(a)	184.4	7.5	6.5	0.8	^{192}Hg(1)
197 Pb(b)	205.5	8.5	8.5	1.1	^{192}Hg(1)
198 Pb	305.1	12	14	1.2	^{192}Hg(1)
195 Bi	261.5	---	10.5	0.5	^{192}Hg(1)
196 Bi	166.2	---	6	0.4	^{192}Hg(1)
197 Bi	186.7	7.5	6.5	0.1	^{192}Hg(1)
198 Po	175.91	6	6	0.4	^{192}Hg(1)

* The spin is experimentally determined.

Relative alignment for the reference band is set to zero.

on superdeformed bands at the Berkeley Lab web site [14]. This database could supply details one isotope at a time, whereas the present SD data tables may facilitate a systematic overview across regions.

Acknowledgments

We thank the nuclear physics group at the University of Tennessee, the Joint Institute for Heavy-Ion Research, and the Oak Ridge National Laboratory for their warm hospitality and financial support. Discussions with Mike Guidry, S. Raman, C. Baktash, J. D. Garrett, Yang Sun, and Jing Ye Zhang are very much appreciated.

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SD Band Energies

The source (or sources) of the listed transition energies is indicated below each tabulation. For the bands with more than one set of γ-transition data, the weighted average values $E_\gamma = \sum_i E_\gamma(i)W(i)$ are listed in the Table. The weight $W(i)$ is determined by the experimental uncertainty $\Delta E_\gamma(i)$, $W(i) = [1/\Delta E_\gamma(i)]^2/\sum_i[1/\Delta E_\gamma(i)]^2$. The standard deviations are given by $\Delta E_\gamma = [\sum_i \Delta E_\gamma(i)^2 W(i)]]^{1/2}$. However, only data sets which have comparable precision and whose differences are within the uncertainty are selected for the weighted average. If the precision is not at the same level, the ones with poor precision will be ignored. The SD band in ^{142}Eu is an example. Generally only the data measured by the new generation of γ-detectors such as GASP, GAMMASPHERE, and EUROGAM are taken into account in the weighted average since they have much higher precision, unless they are not available. When there are only two sets of data with comparable precision, but their differences are significant compared to their uncertainty, only one consistent set of data will be selected, without averaging. Judgment for selection is based on the experimental setup, counting rate, peak analysis, and background subtraction, and so forth, or the data set with relatively smaller uncertainty is taken if no other justification is apparent. The SD band in ^{198}Pb and ^{133}Pr(1a) are examples. If the different sets of data originate from the same group of authors, only the newest one is selected without forming the weighted average. The SD bands in ^{192}Tl are one of the examples: with new data, four bands now replace the original six bands. If the experimental uncertainty $\Delta E_\gamma(i)$ has not been given by the original authors, a 0.1 or 0.2% uncertainty in transition energies (depending on whether the last significant digit of E_γ data is given at the 0.1 or 1 keV level) is assumed.

The standard deviations ΔE_γ will be listed in parentheses for the last significant digit of E_γ only if at least one set of experimental uncertainties $\Delta E_\gamma(i)$ is given by the original authors; otherwise, they will not be shown, but are used for the estimation of uncertainties of $\mathscr{J}^{(1)}$ and $\mathscr{J}^{(2)}$. A footnote about the source of the γ-transition energies which are adopted or used in the weighted average will be given beneath the tabulation of each band.

For those bands which have been referred to as highly (enhanced or largely) deformed bands and for the triaxial superdeformed bands, the corresponding references will be marked as (HD) and (TSD).

Spin, Parity, and Excitation Energies

The spin assignments are always given according to the original references if they are available, regardless of the approach used to make the assignments. If there is more than one reference for the same assignment only the earliest one is referred to. If the spin assignments suggested by the original authors are not unique, the smallest value is adopted as the tentative assignment. The other assignments will be listed in the footnotes with their references only if they differ from the adopted assignment by more than $2\hbar$ or are proposed by a different group. If the same group has proposed different assignments at different times, only the latest assignment is adopted. Spin assignments which are from theoretical analysis, but were not suggested in the original experimental references, will not be referred to. For those superdeformed bands that have no spin assignments suggested in the original references, tentative assignments denoted as I^* were assigned by the method explained in the previous section. The spin assignments that are determined by measurements of linking transitions are denoted as I^{exp}, and only for these bands are parities and excitation energies given if available. Results that are not certain are put in parentheses.

In order to keep this compilation primarily to be experimental in nature, theoretical predictions for the properties of SD bands will not be referenced. It should be borne in mind, however, that none of the spin assignments in this compilation is experimentally determined except those marked with I^{exp}. For others, an uncertainty of $1\hbar$–$2\hbar$ or more should generally be expected.

Quadrupole Moment The average transition quadrupole moment Q_0 for a band and the individual transition quadrupole moments Q_t obtained from lifetime measurements are both tabulated, if available. For those SD bands where the original authors provide only lifetime data, the transition quadrupole moments are deduced from the lifetime and denoted as Q_t^*. The formula employed is $Q_t = [1.22\langle I0\ 20|I{-}20\rangle^2 \tau(1 + \alpha)E_\gamma^5]^{-1/2}$ (eb), where τ is the lifetime (in ps), E_γ is the transition energy (in MeV), and α is the total electron conversion coefficient. The Q_0 values are also obtained by averaging the Q_t^*. In the cases where Q_0 values measured by centroid shift and line shape fit are both available, or when there is more than one set of measurements, only the weighted average values are listed in the Tables. The policies for selecting the data are the same as those for the E_γ case. In addition, if some of the Q_0 values are very different from the majority of other measurements, these will not be used in the weighted average even if their precision is comparable.

EXPLANATION OF TABLES

TABLE I. Superdeformed Rotational Bands in the Mass-60 and Mass-80 Regions

TABLE II. Superdeformed Rotational Bands in the Mass-130, Mass-140, Mass-150, and Mass-160 Regions

TABLE III. Superdeformed Rotational Bands in the Mass-190 Region

I, I*, I^{exp} — The spin assignments for the initial state of a γ-transition (in $\hbar$). Different symbols are used to indicate whether they are estimated by the original authors (I) or by the method presented under Spin Assignments section (I^*), or are determined experimentally ($I^{\rm exp}$). Parities, if available, are given as a superscript with each spin; available excitation energies are given in the footnotes under each tabulation. Assignments which are not certain are in parentheses. All the spin assignments, except the ones marked by $I^{\rm exp}$, are estimated values. An uncertainty of $1\hbar$–$2\hbar$ or more should generally be expected.

E_γ — The experimental γ-transition energies in the superdeformed bands (in keV). Uncertain transitions are given in parentheses. References for each band are given directly below the data table of that band, where it may be further indicated that the particular band has been characterized as highly deformed (HD) or triaxially superdeformed (TSD). For the nuclei that have more than one superdeformed band, the notation 1a, 1b, 2a, 2b, . . . is used to specify the different bands, with the indexes a and b indicating pairs of signature partners. For the bands which have no signature partner specified, only numbers, 1, 2, 3, . . . , are used to specify the bands. Errors on the last digit given in parentheses behind the E_γ values are derived as described under Policies.

$\mathscr{J}^{(1)}$ — The static moments of inertia, defined as $\mathscr{J}^{(1)}(I) = [(2I - 1)/E_\gamma(I)] \times 1000$ ($\hbar^2$MeV^{-1}), where E_γ is in keV. The uncertainties for the last significant digit are calculated from $[\Delta E_\gamma/E_\gamma(I)] \times \mathscr{J}^{(1)}(I)$ and given in parentheses; uncertainties in the spin are *not* reflected in this calculation. The effect of a change in the spin is an upward or downward displacement of the plot without major shape change.

$\mathscr{J}^{(2)}$ — The dynamic moments of inertia, defined as $\mathscr{J}^{(2)}(I) = 4000/[E_\gamma(I + 2) - E_\gamma(I)]$ ($\hbar^2$MeV^{-1}), where E_γ is in keV. The uncertainties for the last significant digit, calculated from $[\sqrt{\Delta E_\gamma(I + 2)^2 + \Delta E_\gamma(I)^2}/(E_\gamma(I + 2) - E_\gamma(I))] \times \mathscr{J}^{(2)}(I)$, are given in parentheses, where $\Delta E_\gamma(I)$ is the uncertainty of the γ-transition energies.

$\hbar\omega$ — The rotational frequency ω times $\hbar$, given in MeV. The frequencies are defined by $\hbar\omega = [E_\gamma(I) + E_\gamma(I + 2)]/4000$, where E_γ is in keV.

Q_0, Q_t, Q_t^* — The average transition quadrupole moment Q_0 for a band and the individual transition quadrupole moment Q_t obtained from the lifetime measurements. Q_t^* are those Q_t's which are not directly provided by the original references but are deduced by us from the provided lifetime measurements. Weighted average values are listed when there is more than one set of measurements (see Policies).

M1 (E1) — The interband dipole transitions. The γ-transition energies are directly marked on the linking transition plot for each transition. The tentative assignments for the spins and parities suggested by the original authors are also given, but with parentheses to indicate that they are not experimentally measured.

$\bar{g}$, g_K — The g-factors. $\bar{g}$ is the mean g-factor measured by the precession effect induced by a magnetic field. g_K is the mean g-factor deduced from the branching ratio of the interband M1 transition and the intraband E2 transition. The directly measured quantity is actually $(g_K - g_R)K/Q_0$. From knowing the K value and the average transition quadrupole moment Q_0 of the band assuming $g_R = Z/A$, g_K is obtained.

See page 58 for Explanation of Tables

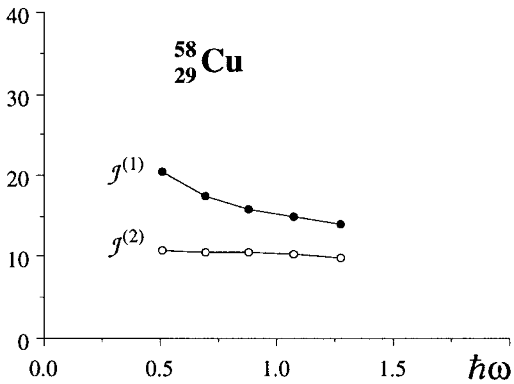
A=58 Z=29 Cu

I^{exp}	$E\gamma^{\#}$	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
(9)	830	20.48(4)	10.90(9)	0.507
(11)	1197	17.54(4)	10.6(1)	0.693
(13)	1576	15.86(3)	10.6(1)	0.883
(15)	1955	14.83(3)	10.3(2)	1.074
(17)	2342	14.09(3)	9.9(2)	1.273
(19)	2748	13.46(3)		
(21)	(3181)			

$Q_0 = 2.0 \pm 0.2$ eb

\# The energy of (7) level is 8915 keV.

D. Rudolph et al., Phys. Rev. Lett. **80**, 3018(1998), (HD).



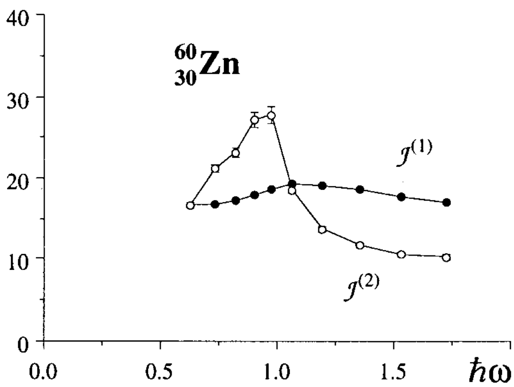
A=60 Z=30 Zn

I^{exp}	$E\gamma^{\#}$	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
10^+	1136	16.73(3)	16.7(2)	0.628
12^+	1376	16.72(3)	21.1(5)	0.736
14^+	1566	17.24(3)	23.1(6)	0.826
16^+	1739	17.83(4)	27.2(9)	0.906
18^+	1886	18.56(4)	28(1)	0.979
20^+	2030	19.21(4)	18.7(5)	1.069
22^+	2244	19.16(4)	13.7(3)	1.195
24^+	2535	18.54(4)	11.8(3)	1.353
26^+	2875	17.74(4)	10.7(2)	1.531
28^+	3250	16.92(3)	10.2(3)	1.723
30^+	3641	16.20(3)		

$Q_0 = 2.75 \pm 0.45$ eb

\# The energy of 8^+ level is 9620 keV.

C. E. Svensson et al., Phys. Rev. Lett. **82**, 3400(1999).



A=62 Z=30 Zn

I	$E\gamma$	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
20	1993(2)	19.57(2)	18.0(2)	1.052
22	2215(2)	19.41(2)	17.8(2)	1.164
24	2440(2)	19.26(2)	16.0(2)	1.283
26	2690(2)	18.96(1)	16.1(2)	1.407
28	2939(2)	18.71(1)	13.5(1)	1.544
30	3236(2)	18.23(1)		

$Q_0 = 2.7^{+0.7}_{-0.5}$ eb

C. E. Svensson et al., Phys. Rev. Lett. **79** ,1233(1997).

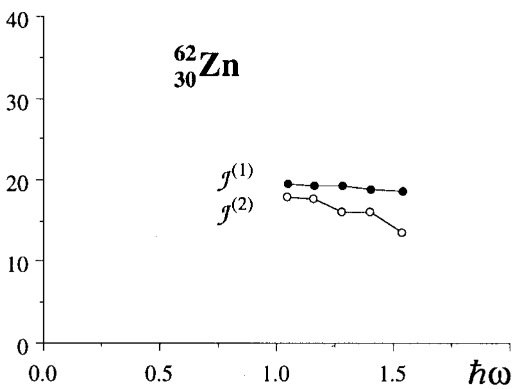


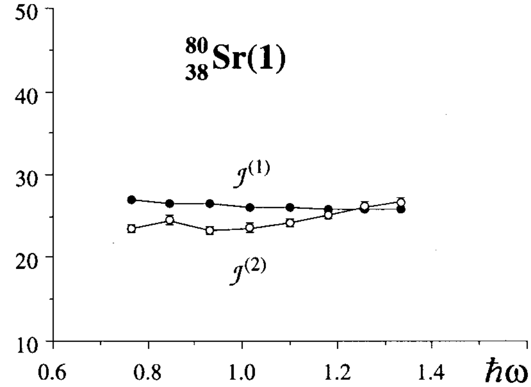
TABLE I. Superdeformed Rotational Bands in the Mass-60 and Mass-80 Regions
See page 58 for Explanation of Tables

A=80 Z=38 Sr(1)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
20	1443(2.5)	27.03(5)	23.5(5)	0.764
22	1613(2.5)	26.66(4)	24.5(5)	0.847
24	1776(2.5)	26.46(4)	23.3(5)	0.931
26	1948(2.5)	26.18(3)	23.7(5)	1.016
28	2117(2.5)	25.98(3)	24.2(5)	1.100
30	2282(2.5)	25.86(3)	25.2(6)	1.181
32	2441(2.5)	25.81(3)	26.1(6)	1.259
34	2594(2.5)	25.83(2)	26.7(6)	1.335
36	2744(2.5)	25.88(2)		
38	(2860)			

$Q_0 = 2.7^{+0.7}_{-0.6}$ eb

M. Devlin et al., Phys. Lett. **B415**, 328(1997).

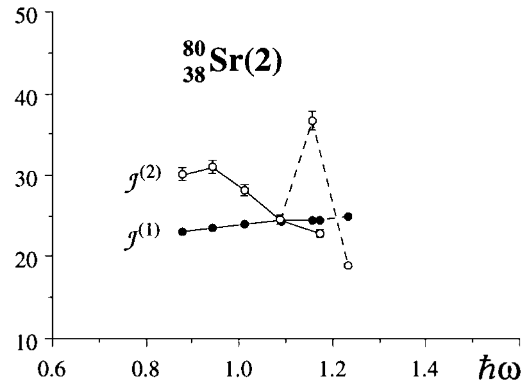


A=80 Z=38 Sr(2)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
20	1688(2.5)	23.10(3)	30.1(8)	0.877
22	1821(2.5)	23.61(3)	31.0(8)	0.943
24	1950(2.5)	24.10(3)	28.2(7)	1.011
26	2092(2.5)	24.38(3)	24.5(5)	1.087
28	2255(2.5)	24.39(3)	22.9(5)	1.171
30	2430(2.5)*	24.28(3)		
32	- - - - - - -*			

$Q_0 = 2.2^{+0.6}_{-0.5}$ eb

M. Devlin et al., Phys. Lett. **B415**, 328(1997).
* There is a forking cascade: 2364, 2575 keV (I=30, 32).

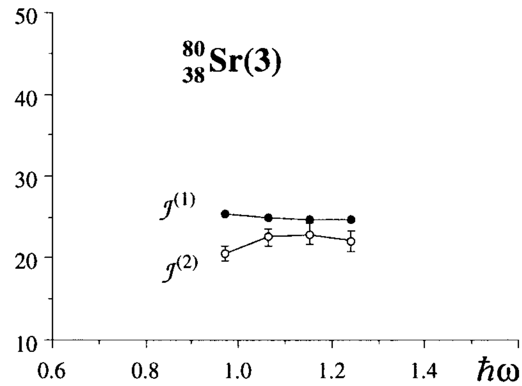


A=80 Z=38 Sr(3)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
22	(1712)			
24	1845(2.5)	25.47(3)	20.6(4)	0.971
26	2039(2.5)	25.01(3)	22.6(5)	1.064
28	2216(2.5)	24.82(3)	23.0(5)	1.152
30	2390(2.5)	24.69(3)	22.1(4)	1.240
32	2571(2.5)	24.50(2)		
34	(2747)			

$Q_0 = 3.6^{+2.0}_{-1.1}$ eb

M. Devlin et al., Phys. Lett. **B415**, 328(1997).

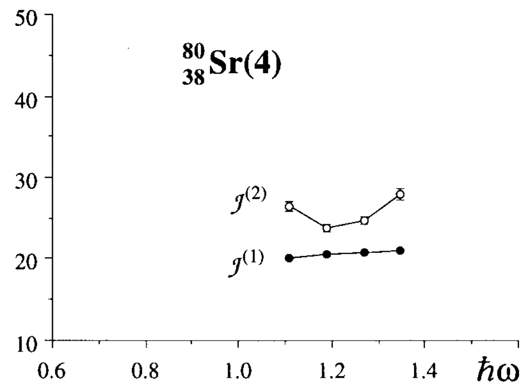


A=80 Z=38 Sr(4)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
22	2140(2.5)	20.09(2)	26.5(6)	1.108
24	2291(2.5)	20.52(2)	23.8(5)	1.188
26	2459(2.5)	20.74(2)	24.7(5)	1.270
28	2621(2.5)	20.98(2)	28.0(7)	1.346
30	2764(2.5)	21.35(2)		

$Q_0 = 2.8^{+1.1}_{-0.8}$ eb

M. Devlin et al., Phys. Lett. **B415**, 328(1997).



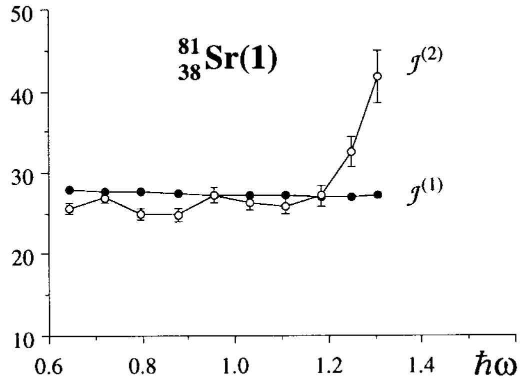
See page 58 for Explanation of Tables

A=81 Z=38 Sr(1)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
17.5	1214	28.01(6)	25.6(6)	0.646
19.5	1370	27.74(6)	27.0(7)	0.722
21.5	1518	27.67(6)	25.0(7)	0.799
23.5	1678	27.41(5)	24.8(8)	0.879
25.5	1839	27.19(5)	27(1)	0.956
27.5	1986	27.19(5)	26(1)	1.031
29.5	2138	27.13(5)	26(1)	1.108
31.5	2292	27.05(5)	27(1)	1.183
33.5	2439	27.06(5)	33(2)	1.250
35.5	2562	27.32(5)	42(3)	1.305
37.5	2658	27.84(6)		
39.5	(2748)			

$Q_0 = 3.5^{+0.8}_{-0.7}$ eb (from ref. 2)

I-Values from ref. 1 (for the lowest level, I = 15.5 ± 2.0);
E_γ from ref. 1.
1. F. Cristancho et al., Phys. Lett. **B357**, 281(1995).
2. M. Devlin et al., Phys. Lett. **B415**, 328(1997).

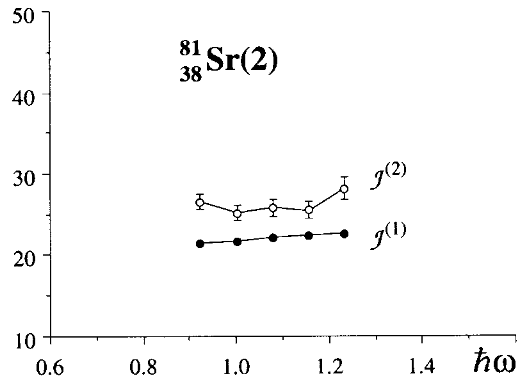


A=81 Z=38 Sr(2)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
19.5	1773	21.43(4)	26.5(9)	0.924
21.5	1924	21.83(4)	25.2(9)	1.002
23.5	2083	22.08(4)	26(1)	1.080
25.5	2238	22.34(4)	25(1)	1.158
27.5	2395	22.55(5)	28(1)	1.233
29.5	2537	22.86(5)		

$Q_0 = 3.8^{+0.7}_{-0.5}$ eb (from ref. 2)

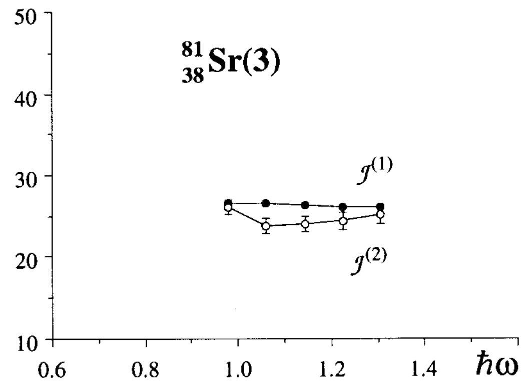
I-Values from ref. 1 (for the lowest level, I = 17.5 ± 2.0);
E_γ from ref. 1.
1. F. Cristancho et al., Phys. Lett. **B357**, 281(1995).
2. M. Devlin et al., Phys. Lett. **B415**, 328(1997).



A=81 Z=38 Sr(3)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
25.5	1881	26.58(5)	26.1(9)	0.979
27.5	2034	26.55(5)	23.8(8)	1.059
29.5	2202	26.34(5)	24.1(9)	1.143
31.5	2368	26.18(5)	24(1)	1.225
33.5	2532	26.07(5)	25(1)	1.306
35.5	2691	26.01(5)		
37.5	(2845)			

F. Cristancho et al., Phys. Lett. **B357**, 281(1995).
* I-Values obtained by comparison with ^{82}Sr.



A=81 Z=38 Sr(4)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
26.5	1938	26.83(5)	24.7(9)	1.010
28.5	2100	26.67(5)	25(1)	1.089
30.5	2257	26.58(5)	26(1)	1.166
32.5	2408	26.58(5)	30(2)	1.237
34.5	2541	26.76(5)		

F. Cristancho et al., Phys. Lett. **B357**, 281(1995).
* I-Values obtained by comparison with ^{82}Sr.

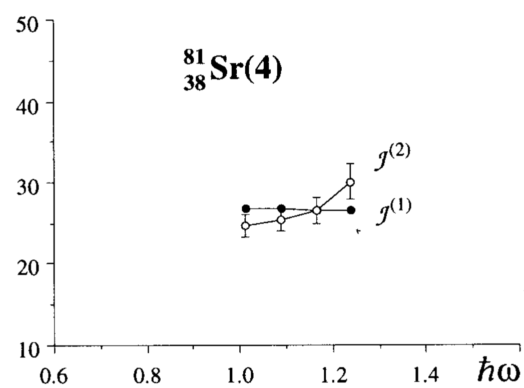


TABLE I. Superdeformed Rotational Bands in the Mass-60 and Mass-80 Regions

See page 58 for Explanation of Tables

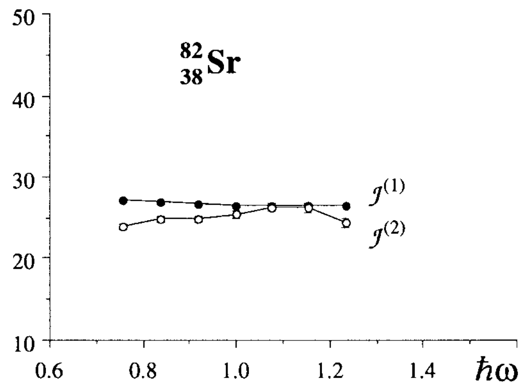
A=82 Z=38 Sr

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
20	1429.8	27.28(3)	24.0(3)	0.757
22	1596.6	26.93(3)	24.8(4)	0.839
24	1757.7	26.74(3)	24.9(4)	0.919
26	1918.6	26.58(3)	25.3(5)	0.999
28	2076.6	26.49(3)	26.3(5)	1.076
30	2228.6	26.47(3)	26.3(6)	1.152
32	2380.7	26.46(3)	24.4(5)	1.231
34	2544.6	26.33(3)		
36	(2736)			

$Q_0 = 4.5 \pm 0.9$ eb (from ref. 2)

I-Values from ref. 1; E_γ from ref. 2.

1. A. G. Smith et al., Phys. Lett. **B355**, 32(1995).
2. C.-H. Yu et al., Phys. Rev. **C57**, 113(1998).



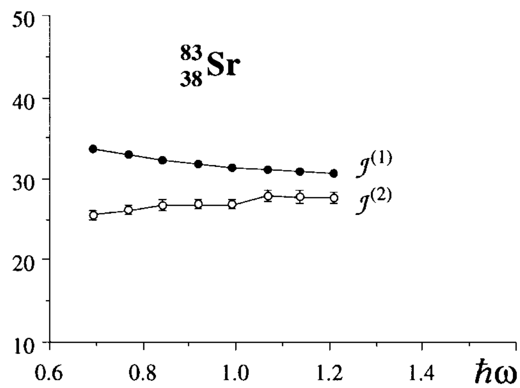
A=83 Z=38 Sr

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
22.5	1304(3)	33.75(7)	25.6(6)	0.691
24.5	1460(3)	32.88(6)	26.2(6)	0.768
26.5	1613(3)	32.24(5)	26.8(7)	0.844
28.5	1762(3)	31.78(5)	26.9(7)	0.918
30.5	1911(3)	31.39(4)	26.9(7)	0.993
32.5	2060(3)	31.07(4)	28.0(7)	1.066
34.5	2203(3)	30.87(4)	27.8(7)	1.137
36.5	2347(3)	30.68(3)	27.6(7)	1.210
38.5	2492(3)	30.50(3)		
40.5	(2642)			

$Q_0 = 3.5^{+0.8}_{-0.6}$ eb (from ref. 3)

I-Values from ref. 2; E_γ from refs. 1, 2.

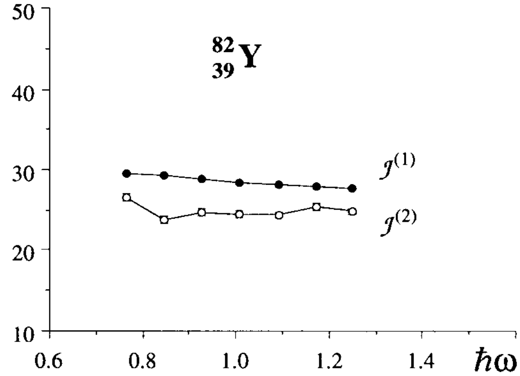
1. C. Baktash et al., Phys. Rev. Lett. **74**, 1946(1995).
2. D. R. LaFosse et al., Phys. Lett. **B354**, 34(1995).
3. M. Devlin et al., Phys. Lett. **B415**, 328(1997).



A=82 Z=39 Y

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
22	1455(2)	29.6(4)	26.5(5)	0.765
24	1606(2)	29.3(4)	23.8(4)	0.845
26	1774(2)	28.7(3)	24.7(4)	0.928
28	1936(2)	28.4(3)	24.5(4)	1.009
30	2099(2)	28.1(3)	24.4(4)	1.091
32	2263(2)	27.8(2)	25.3(5)	1.171
34	2421(2)	27.7(2)	24.8(4)	1.251
36	2582(2)	27.5(2)		
38	(2755)			

P. J. Dagnall et al., Z. Phys. **A353**, 251(1995).

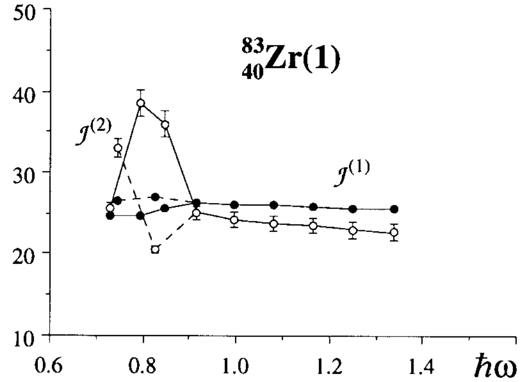


A=83 Z=40 Zr(1)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
17.5	1378	24.67(5)	25.6(7)	0.728
19.5	1534*	24.77(5)	38(2)	0.793
21.5	1638*	25.64(5)	36(2)	0.847
23.5	1749	26.30(5)	25.2(8)	0.914
25.5	1908	26.21(5)	24.2(8)	0.995
27.5	2073	26.05(5)	23.8(9)	1.079
29.5	2241	25.88(5)	23.5(9)	1.163
31.5	2411	25.72(5)	23.0(9)	1.249
33.5	2585	25.53(5)	23(1)	1.337
35.5	2761	25.35(5)		
37.5	(2938)			

$Q_0 = 5 \pm 2$ eb

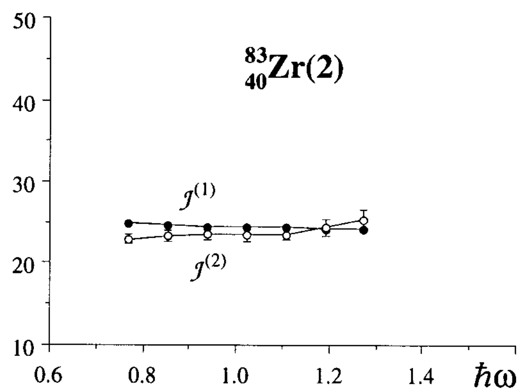
D. Rudolph et al., Phys. Lett. **B389**, 463(1996).
* There is a forking cascade: 1433, 1554 keV (I=19.5, 21.5).



A=83 Z=40 Zr(2)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
18.5	1448	24.86(5)	23.0(6)	0.768
20.5	1622	24.66(5)	23.4(7)	0.854
22.5	1793	24.54(5)	23.7(7)	0.939
24.5	1962	24.47(5)	23.5(8)	1.024
26.5	2132	24.39(5)	23.7(9)	1.108
28.5	2301	24.34(5)	24(1)	1.192
30.5	2465	24.34(5)	25(1)	1.272
32.5	2623	24.40(5)		

D. Rudolph et al., Phys. Lett. **B389**, 463(1996).



A=84 Z=40 Zr

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
23	1526(1)	29.49(2)	29.2(3)	0.797
25	1663(1)	29.47(2)	27.6(3)	0.868
27	1808(1)	29.31(2)	26.5(2)	0.942
29	1959(1)	29.10(1)	25.8(2)	1.018
31	2114(1)	28.86(1)	25.3(2)	1.097
33	2272(1)	28.61(1)	24.5(2)	1.177
35	2435(1)	28.34(1)	24.4(2)	1.259
37	2599(1)	28.09(1)		
39	(2761)			

$Q_0 = 5.2 \pm 0.8$ eb (from refs. 1, 2)

I-Values and E_γ from ref. 1.
1. H.-Q. Jin et al., Phys. Rev. Lett. **75**, 1471(1995).
2. C.-H. Yu et al., Phys. Rev. **C57**, 113(1998).

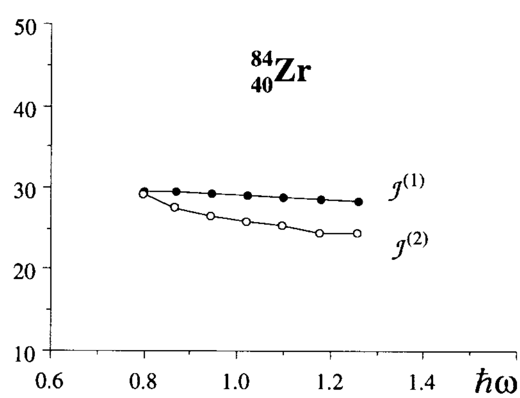


TABLE I. Superdeformed Rotational Bands in the Mass-60 and Mass-80 Regions

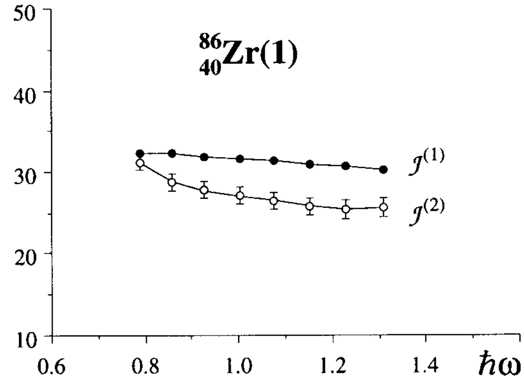
See page 58 for Explanation of Tables

A=86 Z=40 Zr(1)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
25	1518	32.28(6)	31(1)	0.791
27	1646	32.20(6)	29(1)	0.858
29	1785	31.93(6)	28(1)	0.929
31	1929	31.62(6)	27(1)	1.002
33	2077	31.30(6)	26(1)	1.076
35	2228	30.97(6)	26(1)	1.153
37	2383	30.63(6)	25(1)	1.231
39	2540	30.32(6)	26(1)	1.309
41	2696	30.05(6)		

$Q_0 = 4.6^{+0.7}_{-0.6}$ eb

D. G. Sarantites., Phys. Rev. **C57**, R1(1998), (TSD).

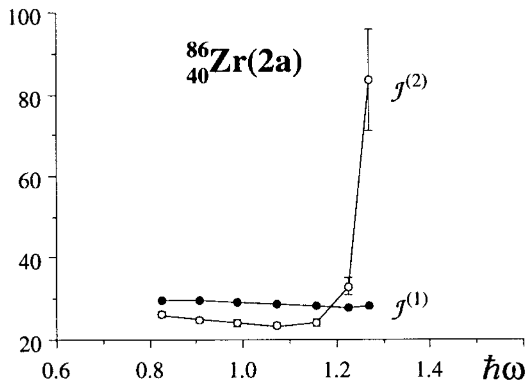


A=86 Z=40 Zr(2a)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
24	1577	29.80(6)	26.1(8)	0.827
26	1730	29.48(6)	24.8(8)	0.905
28	1891	29.09(6)	24.2(8)	0.987
30	2056	28.70(6)	23.4(8)	1.071
32	2227	28.29(6)	24.1(9)	1.155
34	2393	28.00(6)	33(2)	1.227
36	2514	28.24(6)	83(12)	1.269
38	2562	29.27(6)		
40	(2708)			

$Q_0 = 4.0 \pm 0.3$ eb

D. G. Srantites et al., Phys. Rev. **C57**, R1(1998), (TSD).

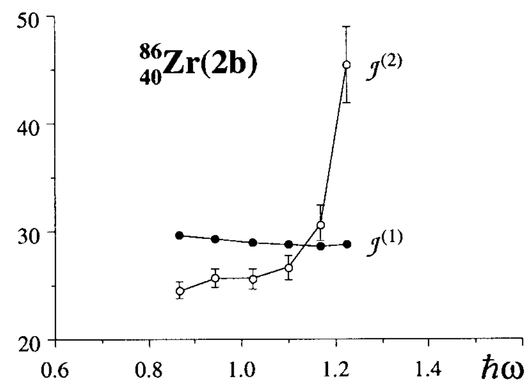


A=86 Z=40 Zr(2b)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
25	1648	29.73(6)	24.5(7)	0.865
27	1811	29.27(6)	25.6(9)	0.945
29	1967	28.98(6)	26(1)	1.023
31	2123	28.73(6)	27(1)	1.099
33	2273	28.60(6)	31(2)	1.169
35	2403	28.71(6)	45(4)	1.224
37	2491	29.31(6)		

$Q_0 = 3.8^{+0.6}_{-0.5}$ eb

D. G. Sarantites et al., Phys. Rev. **C57**, R1(1998), (TSD).



A=86 Z=40 Zr(3)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
27	1866	28.40(6)	43(3)	0.956
29	1959	29.10(6)	39(2)	1.005
31	2062	29.58(6)	43(3)	1.054
33	2155	30.16(6)	45(3)	1.100
35	2244	30.75(6)	40(3)	1.147
37	2343	31.16(6)		
39	(2429)			

$Q_0 = 5.4^{+2.2}_{-1.1}$ eb

D. G. Sarantites et al., Phys. Rev. **C57**, R1(1998), (TSD).

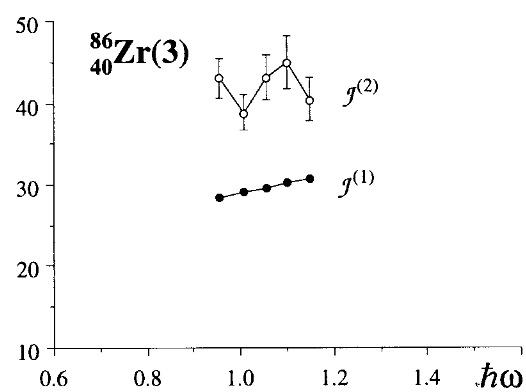


TABLE I. Superdeformed Rotational Bands in the Mass-60 and Mass-80 Regions

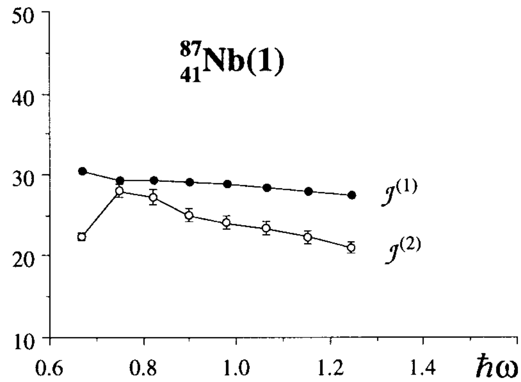
See page 58 for Explanation of Tables

A=87 Z=41 Nb(1)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
19.5	1250	30.40(6)	22.3(5)	0.670
21.5	1429	29.39(6)	28.0(8)	0.750
23.5	1572	29.26(6)	27.2(9)	0.823
25.5	1719	29.09(6)	25.0(8)	0.900
27.5	1879	28.74(6)	24.1(8)	0.981
29.5	2045	28.36(6)	23.4(8)	1.065
31.5	2216	27.98(6)	22.3(8)	1.153
33.5	2395	27.56(6)	21.1(8)	1.245
35.5	2585	27.08(5)		

$Q_0 = 5.2^{+1.1}_{-0.8}$ eb

D. R. LaFosse et al., Phys. Rev. Lett. **78**, 614(1997).

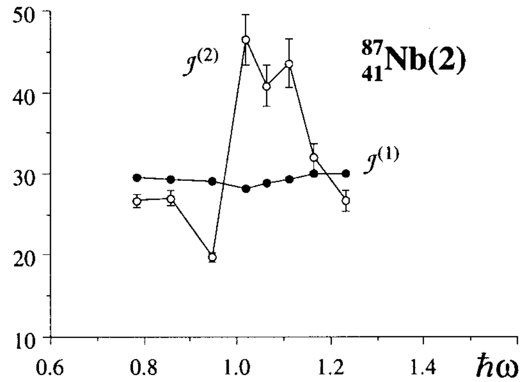


A=87 Z=41 Nb(2)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
22.5	1492	29.49(6)	26.7(8)	0.784
24.5	1642	29.23(6)	27.0(9)	0.858
26.5	1790	29.05(6)	19.8(5)	0.946
28.5	1992	28.11(6)	47(3)	1.018
30.5	2078	28.87(6)	41(3)	1.064
32.5	2176	29.41(6)	43(3)	1.111
34.5	2268	29.98(6)	32(2)	1.165
36.5	2393	30.09(6)	27(1)	1.234
38.5	2543	29.89(6)		

$Q_0 = 5.0^{+0.7}_{-1.0}$ eb

D. R. LaFosse et al., Phys. Rev. Lett. **78**, 614(1997).

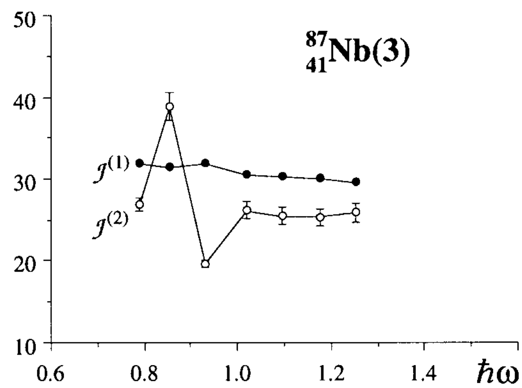


A=87 Z=41 Nb(3)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
24.5	1508	31.83(6)	26.8(8)	0.791
26.5	1657	31.38(6)	39(2)	0.854
28.5	1760	31.82(6)	19.6(5)	0.931
30.5	1964	30.55(6)	26(1)	1.020
32.5	2117	30.23(6)	25(1)	1.098
34.5	2274	29.90(6)	25(1)	1.177
36.5	2432	29.61(6)	26(1)	1.255
38.5	2587	29.38(6)		

$Q_0 = 5.3^{+1.2}_{-1.0}$ eb

D. R. LaFosse et al., Phys. Rev. Lett. **78**, 614(1997).



A=87 Z=41 Nb(4)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
21.5	1697	24.75(5)	23.7(7)	0.891
23.5	1866	24.65(5)	22.9(7)	0.977
25.5	2041	24.50(5)	23.5(8)	1.063
27.5	2211	24.42(5)	23.1(9)	1.149
29.5	2384	24.33(5)	26(1)	1.230
31.5	2537	24.44(5)		

D. R. LaFosse et al., Phys. Rev. Lett. **78**, 614(1997).

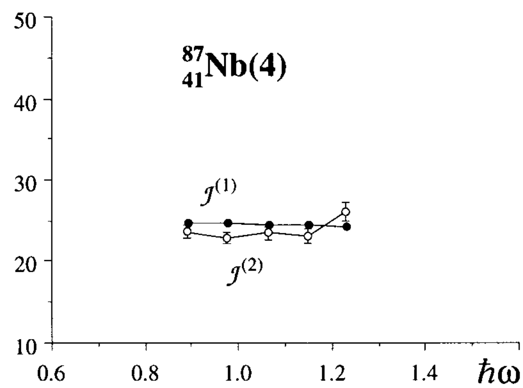


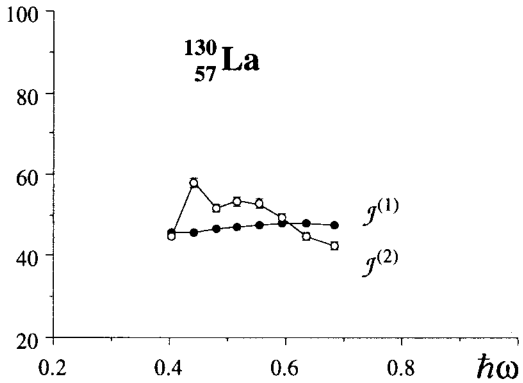
TABLE II. Superdeformed Rotational Bands in the Mass-130, Mass-140, Mass-150, and Mass-160 Regions

See page 58 for Explanation of Tables

A=130 Z=57 La

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
18	762.4	45.91(5)	44.9(6)	0.404
20	851.5	45.80(5)	58(1)	0.443
22	920.5	46.71(5)	51.8(9)	0.480
24	997.7	47.11(5)	53(1)	0.518
26	1072.6	47.55(5)	53(1)	0.555
28	1148.3	47.90(5)	49(1)	0.594
30	1229.4	47.99(5)	44.8(9)	0.637
32	1318.6	47.78(5)	42.6(9)	0.683
34	1412.4	47.44(5)		

M J Godfrey et al., J. Phys. **G15**, L163(1989).

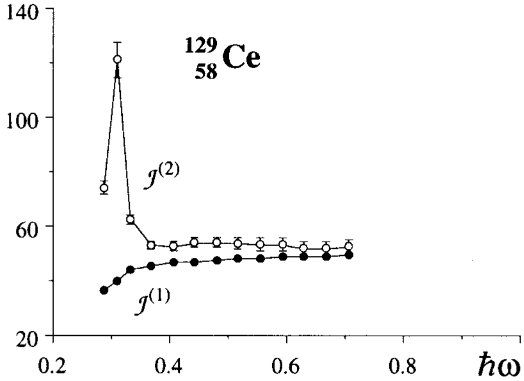


A=129 Z=58 Ce

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
10.5	547	36.56(7)	74(2)	0.287
12.5	601	39.93(8)	121(6)	0.309
14.5	634	44.16(9)	63(2)	0.333
16.5	698	45.85(9)	53(1)	0.368
18.5	773	46.57(9)	53(2)	0.406
20.5	849	47.11(9)	54(2)	0.443
22.5	923	47.7(1)	54(2)	0.480
24.5	997	48.1(1)	54(2)	0.517
26.5	1071	48.6(1)	53(2)	0.554
28.5	1146	48.9(1)	53(2)	0.592
30.5	1221	49.1(1)	52(2)	0.630
32.5	1298	49.3(1)	52(3)	0.668
34.5	1375	49.5(1)	53(3)	0.707
36.5	1451	49.6(1)		

$Q_0 = 6.3 \pm 0.4$ eb

A. Galindo-Uribarri et al., Phys. Rev. **C54**, R454(1996).



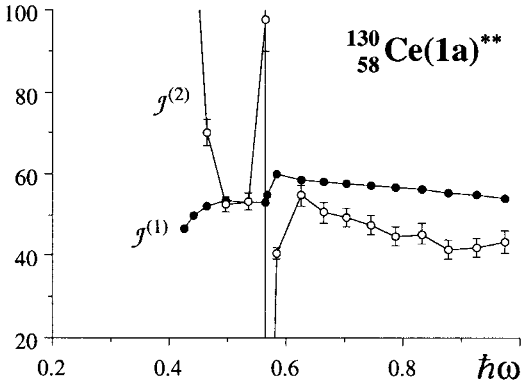
A=130 Z=58 Ce(1a)**

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
20	834	46.8(1)	129(10)	0.425
22	865	49.7(1)	118(9)	0.441
24	899	52.3(1)	70(3)	0.464
26	956	53.3(1)	53(2)	0.497
28	1032	53.3(1)	53(2)	0.535
30	1107	53.3(1)	98(8)	0.564
32	1148	54.9(1)	-129(13)	0.566
34	1117	60.0(1)	41(1)	0.583
36	1215	58.4(1)	55(3)	0.626
38	1288	58.2(1)	51(2)	0.664
40	1367	57.8(1)	49(2)	0.704
42	1448	57.3(1)	48(2)	0.745
44	1532	56.8(1)	45(2)	0.788
46	1621	56.1(1)	45(2)	0.833
48	1709	55.6(1)	42(2)	0.879
50	1805	54.8(1)	42(2)	0.926
52	1900	54.2(1)	43(3)	0.973
54	1992	53.7(1)		
56	(2064)			

I-Values and E_γ from ref. 3.

1. E. S. Paul et al., Acta Phys. Hung. N. S; Heavy Ion Physics **6**, 281(1997).
2. J. N. Wilson et al., Phys. Rev. **C57**, R2090(1998).
3. A T Semple et al., J. Phys. **G24**, 1125(1998).

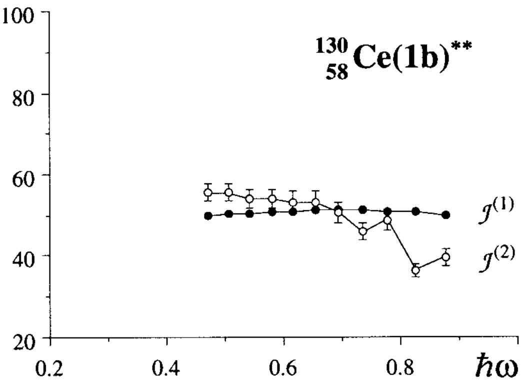
** tentatively assigned as signature partners.



See page 58 for Explanation of Tables

A=130 Z=58 Ce(1b)

I	E_γ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
23	904	49.8(1)	56(2)	0.470
25	976	50.2(1)	56(2)	0.506
27	1048	50.6(1)	54(2)	0.543
29	1122	50.8(1)	54(2)	0.580
31	1196	51.0(1)	53(2)	0.617
33	1271	51.1(1)	53(3)	0.654
35	1346	51.3(1)	51(3)	0.693
37	1425	51.2(1)	46(2)	0.734
39	1512	50.9(1)	49(3)	0.777
41	1594	50.8(1)	36(2)	0.825
43	1704	49.9(1)	40(2)	0.877
45	1805	49.3(1)		
47	(1904)			
49	(1999)			



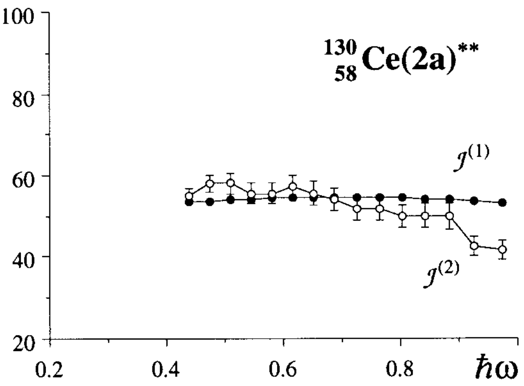
I-Values and E_γ from ref. 3.

1. E. S. Paul et al., Acta Phys. Hung. N. S; Heavy Ion Physics **6**, 281(1997).
2. J. N. Wilson et al., Phys. Rev. **C57**, R2090(1998).
3. A T Semple et al., J. Phys. **G24**, 1125(1998).

** tentatively assigned as signature partners.

A=130 Z=58 Ce(2a)

I*	E_γ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
23	841	53.5(1)	55(2)	0.439
25	914	53.6(1)	58(2)	0.474
27	983	53.9(1)	58(2)	0.509
29	1052	54.2(1)	56(2)	0.544
31	1124	54.3(1)	56(3)	0.580
33	1196	54.3(1)	57(3)	0.616
35	1266	54.5(1)	56(3)	0.651
37	1338	54.6(1)	54(3)	0.688
39	1412	54.5(1)	52(3)	0.725
41	1489	54.4(1)	52(3)	0.764
43	1566	54.3(1)	50(3)	0.803
45	1646	54.1(1)	50(3)	0.843
47	1726	53.9(1)	50(3)	0.883
49	1806	53.7(1)	43(2)	0.927
51	1900	53.2(1)	42(2)	0.974
53	1996	52.6(1)		

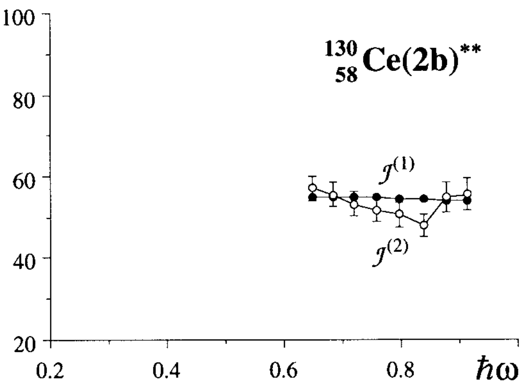


1. E. S. Paul et al., Acta Hung. N. S; Heavy Ion Physics, **6**, 281(1997).
2. J. N. Wilson et al., Phys. Rev. **C55**, 519(1997).
3. J. N. Wilson et al., Phys. Rev. **C57**, R2090(1998).
4. A T Semple et al., J. Phys. **G24**, 1125(1998).

* I-Values obtained by comparison with ^{133}Nd; E_γ from ref. 4.
** tentatively assigned as signature partners.

A=130 Z=58 Ce(2b)

I*	E_γ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
35	1261	54.7(1)	57(3)	0.648
37	1331	54.8(1)	56(3)	0.684
39	1403	54.9(1)	53(3)	0.720
41	1478	54.8(1)	52(3)	0.758
43	1555	54.7(1)	51(3)	0.797
45	1634	54.5(1)	48(3)	0.838
47	1717	54.2(1)	55(4)	0.877
49	1790	54.2(1)	56(4)	0.913
51	1862	54.2(1)		



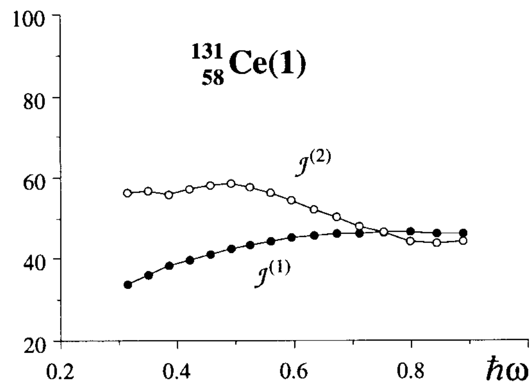
1. E. S. Paul et al., Acta Hung. N. S; Heavy Ion Physics, **6**, 281(1997).
2. J. N. Wilson et al., Phys. Rev. **C57**, R2090(1998).
3. A T Semple et al., J. Phys. **G24**, 1125(1998).

* I-Values obtained by comparison with ^{133}Nd; E_γ from ref. 3.
** tentatively assigned as signature partners.

See page 58 for Explanation of Tables

A=131 Z=58 Ce(1)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
10.5	590.73(5)	33.856(3)	56.13(6)	0.313
12.5	661.99(5)	36.254(3)	56.71(6)	0.349
14.5	732.52(5)	38.224(3)	55.75(5)	0.384
16.5	804.27(5)	39.788(3)	57.41(6)	0.420
18.5	873.95(5)	41.192(2)	57.99(6)	0.454
20.5	942.93(5)	42.421(2)	58.48(6)	0.489
22.5	1011.33(5)	43.507(2)	57.85(7)	0.523
24.5	1080.48(6)	44.425(3)	56.50(7)	0.558
26.5	1151.28(6)	45.167(2)	54.26(6)	0.594
28.5	1225.00(6)	45.714(2)	52.37(6)	0.632
30.5	1301.38(6)	46.105(2)	50.17(6)	0.671
32.5	1381.11(8)	46.340(3)	48.22(7)	0.711
34.5	1464.06(8)	46.446(3)	46.60(7)	0.754
36.5	1549.89(10)	46.455(3)	44.26(8)	0.798
38.5	1640.26(12)	46.334(3)	43.84(9)	0.843
40.5	1731.50(15)	46.203(4)	44.2(2)	0.888
42.5	1822.00(29)	46.103(7)		



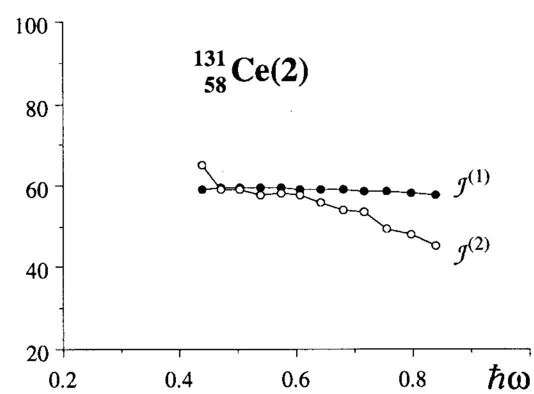
$Q_0 = 7.4 \pm 0.3$ eb (from refs. 5, 6)

I-Values from refs. 1, 2; E_γ from ref. 4.

1. Y.-X. Luo et al., Z. Phys. **A329**, 125(1988).
2. Y He et al., J. Phys. **G16**, 657(1990).
3. S. M. Mullins et al., Phys. Lett. **B312**, 272(1993), (HD), (Q0=5.5(5)).
4. A. T. Semple et al., Phys. Rev. Lett. **76**, 3671(1996).
5. R. M. Clark et al., Phys. Rev. Lett, **76**, 3510(1996).
6. C. M. Petrache et al., Phys. Rev. **C57**, R10(1998), (HD).
7. J. N. Wilson et al., Phys. Rev. **C57**, R2090(1998).

A=131 Z=58 Ce(2)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
25.5	846.80(10)	59.046(7)	65.3(2)	0.439
27.5	908.07(10)	59.467(7)	59.3(1)	0.471
29.5	975.52(10)	59.456(6)	59.2(1)	0.505
31.5	1043.13(10)	59.437(6)	57.9(1)	0.539
33.5	1112.24(11)	59.340(6)	57.9(1)	0.573
35.5	1181.28(12)	59.258(6)	57.6(1)	0.608
37.5	1250.71(12)	59.166(6)	56.1(1)	0.643
39.5	1322.04(12)	59.000(5)	53.9(1)	0.680
41.5	1396.22(15)	58.730(6)	53.7(2)	0.717
43.5	1470.66(15)	58.477(6)	49.3(1)	0.756
45.5	1551.81(19)	57.997(7)	48.2(2)	0.797
47.5	1634.80(20)	57.499(7)	45.3(2)	0.840
49.5	1723.02(25)	56.877(8)		



$Q_0 = 8.5 \pm 0.4$ eb (from ref. 2)

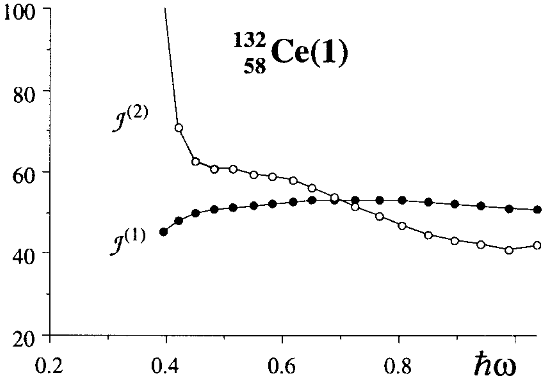
I-Values and E_γ from ref. 1.

1. A. T. Semple et al., Phys. Rev. **C54**, 425(1996).
2. R. M. Clark et al., Phys. Rev. Lett. **76**, 3510(1996).

See page 58 for Explanation of Tables

A=132 Z=58 Ce(1)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω	Q_t^*
18	769.61(10)	45.478(6)	102.7(3)	0.395	
20	808.55(5)	48.235(3)	71.05(9)	0.418	9(2)
22	864.85(5)	49.720(3)	62.55(7)	0.448	7.2(8)
24	928.80(5)	50.603(3)	60.76(7)	0.481	9(2)
26	994.63(5)	51.275(3)	60.89(7)	0.514	>10
28	1060.32(5)	51.871(2)	59.75(7)	0.547	>8
30	1127.27(6)	52.339(3)	59.30(7)	0.581	8(2)
32	1194.72(6)	52.732(3)	58.05(7)	0.615	8(3)
34	1263.63(6)	53.022(3)	56.39(7)	0.650	>6
36	1334.56(7)	53.201(3)	54.22(8)	0.686	>7
38	1408.34(9)	53.254(3)	51.73(9)	0.724	>5
40	1485.67(10)	53.175(4)	49.36(9)	0.763	>5
42	1566.70(10)	52.978(3)	47.18(9)	0.805	>3
44	1651.49(12)	52.680(4)	45.05(9)	0.848	>4
46	1740.29(14)	52.290(4)	43.3(1)	0.893	
48	1832.64(17)	51.838(5)	42.6(1)	0.940	
50	1926.50(17)	51.389(5)	41.2(1)	0.988	
52	2023.50(20)	50.902(5)	41.9(1)	1.036	
54	2119.00(25)	50.496(6)			



$Q_0 = 7.4 \pm 0.4$ eb (from refs. 5, 6)

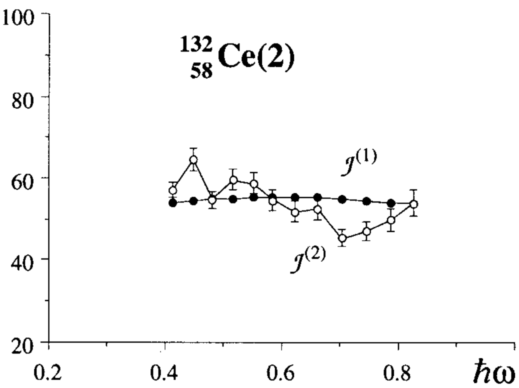
* Calculated from τ (ref. 2). See the EXPLANATION OF TABLES.

I-Values from refs. 1, 2; E_γ from ref. 4.

1. P J Nolan et al., J. Phys. **G11**, L17(1985).
2. A. J. Kirwan et al., Phys. Rev. Lett. **58**, 467(1987).
3. D. Santos et al., Phys. Rev. Lett. **74**, 1708(1995).
4. A. T. Semple et al., Phys. Rev. Lett. **76**, 3671(1996).
5. K. Hauschild et al., Phys. Rev. **C52**, R2281(1995).
6. R. M. Clark et al., Phys. Rev. Lett. **76**, 3510(1996).

A=132 Z=58 Ce(2)

I^*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
22	794	54.2(1)	57(2)	0.415
24	864	54.4(1)	65(3)	0.448
26	926	55.1(1)	55(2)	0.481
28	999	55.1(1)	60(3)	0.516
30	1066	55.3(1)	59(3)	0.550
32	1134	55.6(1)	55(2)	0.585
34	1207	55.5(1)	52(2)	0.623
36	1284	55.3(1)	53(3)	0.661
38	1360	55.1(1)	45(2)	0.702
40	1448	54.6(1)	47(2)	0.745
42	1533	54.1(1)	50(3)	0.787
44	1613	53.9(1)	54(3)	0.825
46	1687	53.9(1)		



$Q_0 = 7.3 \pm 0.4$ eb (from ref. 2)

1. D. Santos et al., Phys. Rev. Lett. **74**, 1708(1995).
2. R. M. Clark et al., Phys. Rev. Lett. **76**, 3510(1996).

* I-Values obtained by comparison with ^{133}Nd; E_γ from ref. 1.

TABLE II. Superdeformed Rotational Bands in the Mass-130, Mass-140, Mass-150, and Mass-160 Regions

See page 58 for Explanation of Tables

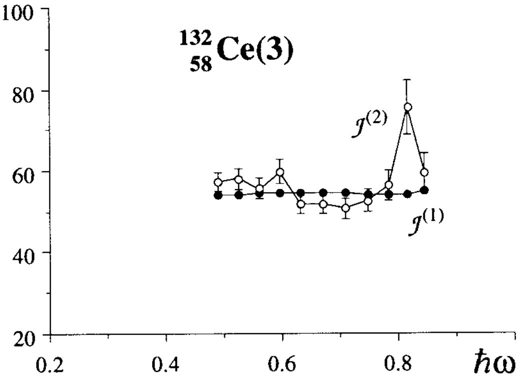
A=132 Z=58 Ce(3)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
26	947	53.9(1)	57(2)	0.491
28	1017	54.1(1)	58(3)	0.526
30	1086	54.3(1)	56(2)	0.561
32	1158	54.4(1)	60(3)	0.596
34	1225	54.7(1)	52(2)	0.632
36	1302	54.5(1)	52(3)	0.670
38	1379	54.4(1)	51(3)	0.709
40	1458	54.2(1)	53(3)	0.748
42	1534	54.1(1)	56(4)	0.785
44	1605	54.2(1)	75(7)	0.816
46	1658	54.9(1)	60(4)	0.846
48	1725	55.1(1)		

$Q_0 = 7.6 \pm 0.4$ eb (from ref. 2)

1. D. Santos et al., Phys. Rev. Lett. **74**, 1708(1995).
2. R. M. Clark et al., Phys. Rev. Lett. **76**, 3510(1996).

* I-Values obtained by comparison with ^{133}Nd; E_γ from ref. 1.



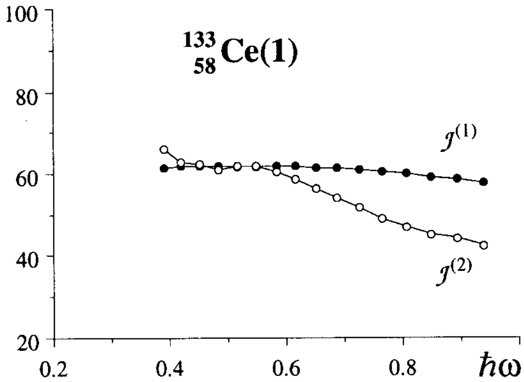
A=133 Z=58 Ce(1)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
23.5	748.30(11)	61.473(9)	65.8(1)	0.389
25.5	809.13(3)	61.795(2)	62.76(6)	0.421
27.5	872.86(5)	61.866(4)	62.1(1)	0.453
29.5	937.27(9)	61.882(6)	60.8(1)	0.485
31.5	1003.03(7)	61.813(4)	61.99(9)	0.518
33.5	1067.56(6)	61.823(3)	61.82(8)	0.550
35.5	1132.26(6)	61.823(3)	60.5(1)	0.583
37.5	1198.39(10)	61.750(5)	58.6(1)	0.616
39.5	1266.60(6)	61.582(3)	56.50(8)	0.651
41.5	1337.40(8)	61.313(4)	54.06(8)	0.687
43.5	1411.39(8)	60.933(3)	51.79(8)	0.725
45.5	1488.63(9)	60.458(4)	49.10(7)	0.765
47.5	1570.09(8)	59.869(3)	47.28(8)	0.806
49.5	1654.70(12)	59.225(4)	45.28(9)	0.849
51.5	1743.04(14)	58.519(5)	44.3(3)	0.894
53.5	1833.42(56)	57.82(2)	42.5(6)	0.940
55.5	1927.50(120)	57.07(4)		

$Q_0 = 7.4 \pm 0.7$ eb (from ref. 3)

I-Values from ref. 1; E_γ from ref. 2.

1. K. Hauschild et al., Phys. Lett. **B353**, 438(1995).
2. A. T. Semple et al., Phys. Rev. Lett. **76**, 3671(1996).
3. K. Hauschild et al., Phys. Rev. **C52**, R2281(1995).



See page 58 for Explanation of Tables

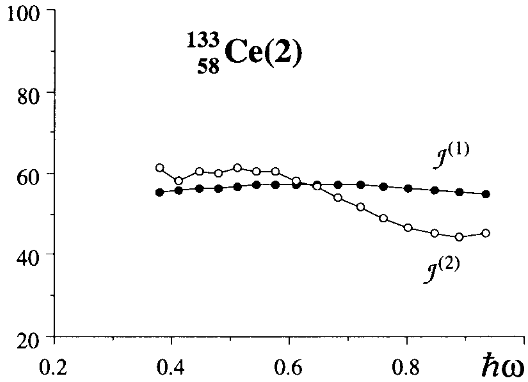
A=133 Z=58 Ce(2)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
20.5	720.32(9)	55.531(7)	61.4(1)	0.376
22.5	785.43(10)	56.020(7)	58.1(1)	0.410
24.5	854.22(7)	56.192(5)	60.54(9)	0.444
26.5	920.29(7)	56.504(4)	60.0(1)	0.477
28.5	986.92(8)	56.742(5)	61.3(1)	0.510
30.5	1052.19(7)	57.024(4)	60.6(1)	0.543
32.5	1118.23(8)	57.233(4)	60.5(1)	0.576
34.5	1184.33(9)	57.416(4)	58.1(1)	0.609
36.5	1253.19(8)	57.453(4)	56.6(1)	0.644
38.5	1323.86(10)	57.408(4)	54.0(1)	0.680
40.5	1397.89(11)	57.229(5)	51.53(9)	0.718
42.5	1475.51(9)	56.930(3)	48.91(9)	0.758
44.5	1557.29(11)	56.508(4)	46.7(1)	0.800
46.5	1642.98(21)	55.996(7)	45.3(2)	0.844
48.5	1731.35(21)	55.448(7)	44.3(1)	0.888
50.5	1821.62(22)	54.896(7)	45.3(2)	0.933
52.5	1910.00(20)	54.450(6)		

$Q_0 = 7.5 \pm 0.8$ eb (from ref. 3)

I-Values from ref. 1; E_γ from ref. 2.

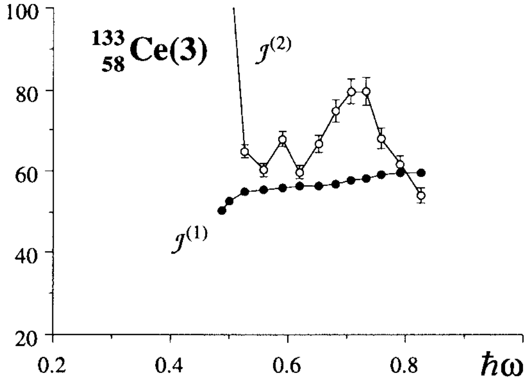
1. K. Hauschild et al., Phys. Lett. **B353**, 438(1995).
2. A. T. Semple et al., Phys. Rev. Lett. **76**, 3671(1996).
3. K. Hauschild et al., Phys. Rev. **C52**, R2281(1995).



A=133 Z=58 Ce(3)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
24.5	956.9	50.16(5)	138(7)	0.486
26.5	985.9	52.74(5)	116(5)	0.502
28.5	1020.5	54.88(5)	65(2)	0.526
30.5	1082.1	55.45(6)	60(1)	0.558
32.5	1148.5	55.72(6)	68(2)	0.589
34.5	1207.6	56.31(6)	60(2)	0.621
36.5	1274.7	56.48(6)	67(2)	0.652
38.5	1334.7	56.94(6)	75(3)	0.681
40.5	1388.3	57.62(6)	80(3)	0.707
42.5	1438.6	58.39(6)	80(3)	0.732
44.5	1488.9	59.10(6)	68(2)	0.759
46.5	1547.8	59.44(6)	62(2)	0.790
47.5	1612.6	59.53(6)	54(2)	0.825
50.5	1686.7	59.29(6)		
52.5	(1764)			

K. Hauschild et al., Phys. Lett. **B353**, 438(1995).



A=130 Z=59 Pr(a)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
12	462	49.8(1)	46.5(8)	0.253
14	548	49.3(1)	53(1)	0.293
16	623	49.8(1)	56(1)	0.329
18	694	50.4(1)	56(2)	0.365
20	765	51.0(1)	58(2)	0.400
22	834	51.6(1)	61(2)	0.434
24	900	52.2(1)	63(3)	0.466
26	964	52.9(1)	60(3)	0.499
28	1031	53.3(1)	61(3)	0.532
30	1097	53.8(1)	60(3)	0.565
32	1164	54.1(1)		

T. B. Brown et al., Phys. Rev. **C56**, R1210(1997).

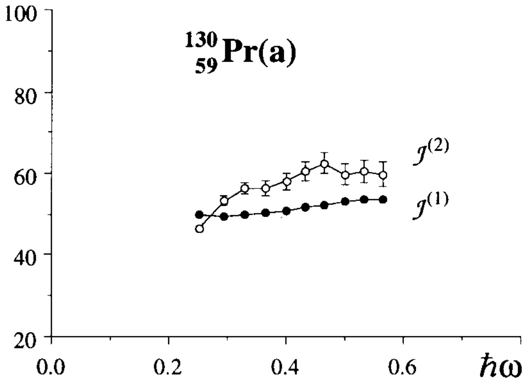


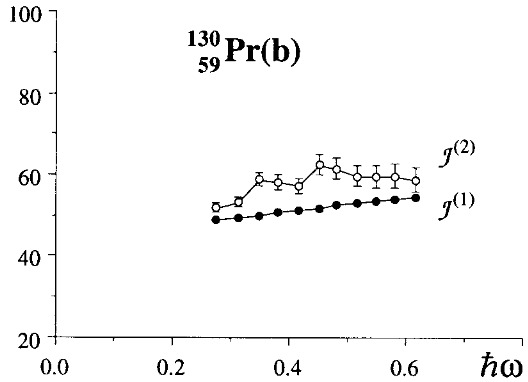
TABLE II. Superdeformed Rotational Bands in the Mass-130, Mass-140, Mass-150, and Mass-160 Regions

See page 58 for Explanation of Tables

A=130 Z=59 Pr(b)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
13	509	49.1(1)	52(1)	0.274
15	586	49.5(1)	53(1)	0.312
17	661	49.9(1)	59(2)	0.348
19	729	50.8(1)	58(2)	0.382
21	798	51.4(1)	57(2)	0.417
23	868	51.8(1)	63(2)	0.450
25	932	52.6(1)	62(3)	0.482
27	997	53.2(1)	60(3)	0.515
29	1064	53.6(1)	60(3)	0.549
31	1131	53.9(1)	60(3)	0.582
33	1198	54.3(1)	59(3)	0.616
35	1266	54.5(1)		

T. B. Brown et al., Phys. Rev. **C56**, R1210(1997).

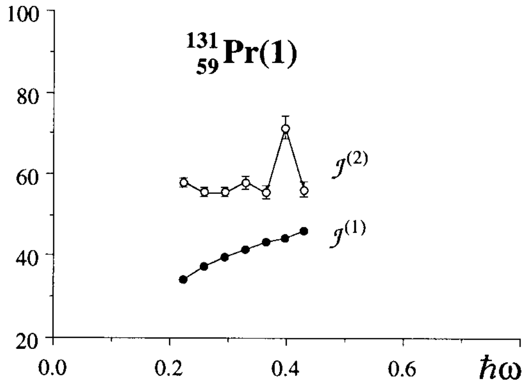


A=131 Z=59 Pr(2)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
6.5	378	31.75(6)	60(1)	0.206
8.5	445	35.96(7)	56(1)	0.240
10.5	516	38.76(8)	56(1)	0.276
12.5	587	40.89(8)	51(1)	0.313
14.5	665	42.11(8)	55(1)	0.351
16.5	738	43.36(9)		

$Q_0 = 5.5 \pm 0.8$ eb

A. Galindo-Uribarri et al., Phys. Rev. **C50**, R2655(1994), (HD).

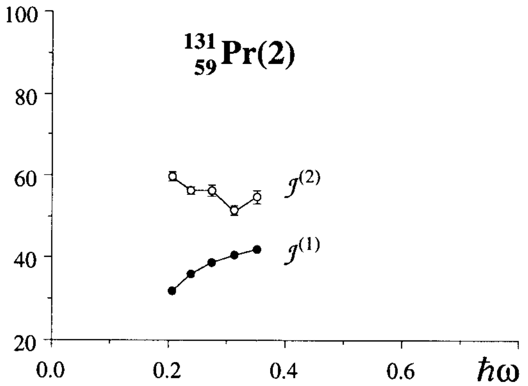


A=131 Z=59 Pr(1)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
7.5	411	34.06(7)	58(1)	0.223
9.5	480	37.50(8)	56(1)	0.258
11.5	552	39.86(8)	56(1)	0.294
13.5	624	41.67(8)	58(2)	0.329
15.5	693	43.29(9)	56(2)	0.365
17.5	765	44.44(9)	71(3)	0.397
19.5	821	46.29(9)	56(2)	0.428
21.5	892	47.09(9)		

$Q_0 = 5.5 \pm 0.8$ eb

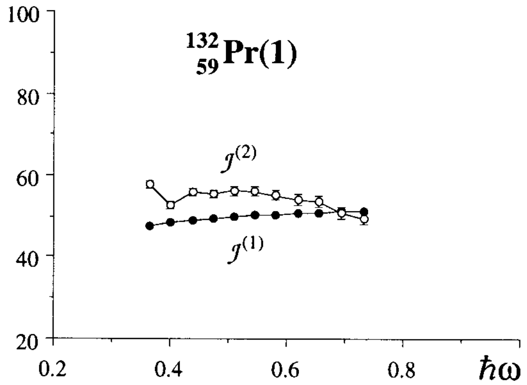
A. Galindo-Uribarri et al., Phys. Rev. **C50**, R2655(1994), (HD).



A=132 Z=59 Pr(1)

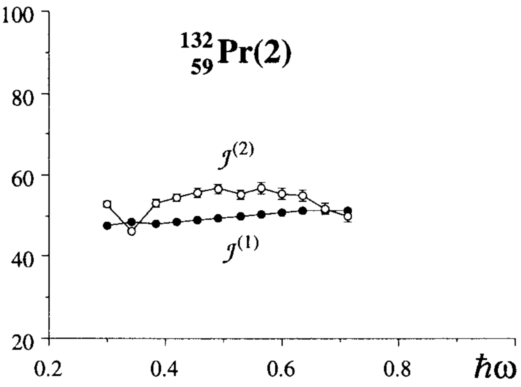
I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
17	695.5	47.45(5)	57.7(9)	0.365
19	764.8	48.38(5)	52.7(8)	0.401
21	840.7	48.77(5)	56(1)	0.438
23	912.3	49.33(5)	55(1)	0.474
25	984.6	49.77(5)	56(1)	0.510
27	1055.9	50.19(5)	56(1)	0.546
29	1127.4	50.56(5)	55(1)	0.582
31	1199.9	50.84(5)	54(1)	0.618
33	1273.8	51.03(5)	54(1)	0.656
35	1348.5	51.17(5)	51(1)	0.694
37	1427.3	51.15(5)	50(1)	0.734
39	1508.1	51.06(5)		

D. J. Hartley et al., Phys. Rev. **C55**, R985(1997).



A=132 Z=59 Pr(2)

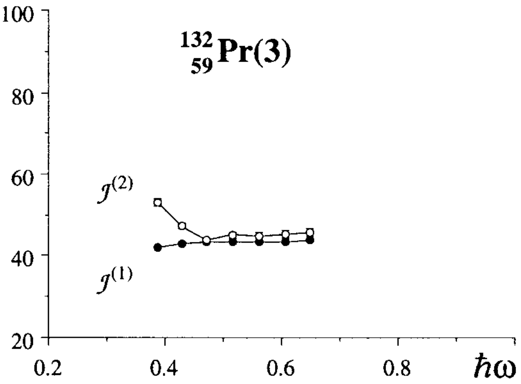
I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
14	565.3	47.76(5)	52.8(6)	0.302
16	641.0	48.36(5)	46.2(5)	0.342
18	727.6	48.10(5)	53.1(8)	0.383
20	802.9	48.57(5)	54.3(9)	0.420
22	876.5	49.06(5)	56(1)	0.456
24	948.3	49.56(5)	57(1)	0.492
26	1019.0	50.05(5)	55(1)	0.528
28	1091.4	50.39(5)	57(1)	0.563
30	1161.8	50.78(5)	55(1)	0.599
32	1234.0	51.05(5)	55(1)	0.635
34	1307.0	51.26(5)	52(1)	0.673
36	1384.4	51.29(5)	50(1)	0.712
38	1464.8	51.20(5)		



D. J. Hartley et al., Phys. Rev. **C55**, R985(1997).

A=132 Z=59 Pr(3)

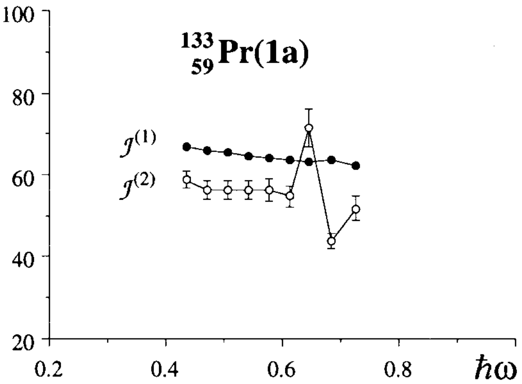
I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
16	738.3	41.99(4)	53.1(8)	0.388
18	813.7	43.01(4)	47.2(7)	0.428
20	898.4	43.41(4)	43.7(6)	0.472
22	989.9	43.44(4)	45.1(7)	0.517
24	1078.6	43.58(4)	44.8(8)	0.562
26	1167.8	43.67(4)	45.2(9)	0.606
28	1256.2	43.78(4)	46(1)	0.650
30	1343.3	43.92(4)		



D. J. Hartley et al., Phys. Rev. **C55**, R985(1997).

A=133 Z=59 Pr(1a)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
28.5	840	66.7(1)	59(2)	0.437
30.5	908	66.1(1)	56(2)	0.472
32.5	979	65.4(1)	56(2)	0.507
34.5	1050	64.8(1)	56(2)	0.543
36.5	1121	64.2(1)	56(3)	0.578
38.5	1192	63.8(1)	55(3)	0.614
40.5	1265	63.2(1)	71(5)	0.647
42.5	1321	63.6(1)	44(2)	0.683
44.5	1412	62.3(1)	52(3)	0.725
46.5	1489	61.8(1)		



I–Values and Eγ from ref. 1.

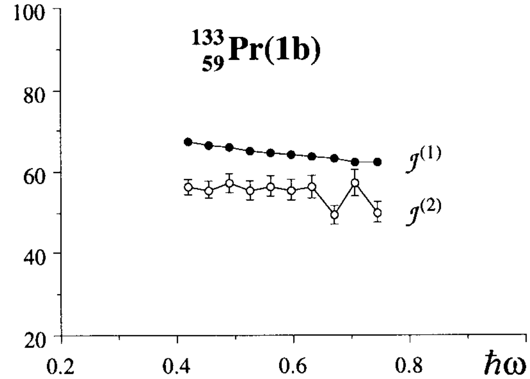
1. J. N. Wilson et al., Phys. Rev. Lett. **74**, 1950(1995).
2. D. J. Hartley et al., Phys. Rev. **C55**, R985(1997).

See page 58 for Explanation of Tables

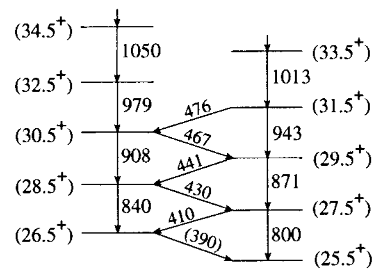
A=133 Z=59 Pr(1b)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
27.5	800	67.5(1)	56(2)	0.418
29.5	871	66.6(1)	56(2)	0.454
31.5	943	65.7(1)	57(2)	0.489
33.5	1013	65.2(1)	56(2)	0.525
35.5	1085	64.5(1)	56(3)	0.560
37.5	1156	64.0(1)	56(3)	0.596
39.5	1228	63.5(1)	56(3)	0.632
41.5	1299	63.1(1)	49(2)	0.670
43.5	1380	62.3(1)	57(3)	0.708
45.5	1450	62.1(1)	50(3)	0.745
47.5	1530	61.4(1)		

J. N. Wilson et al., Phys. Rev. Lett. **74**, 1950(1995).



^{133}Pr(1a)↔^{133}Pr(1b) M1 Transition

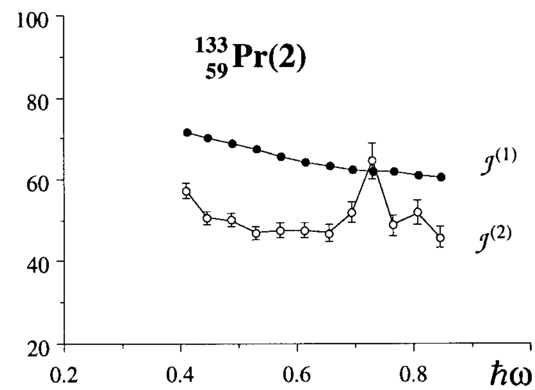


$g_K = 1.30 \pm 0.05$, assuming K=9/2 ($\pi[404]9^+/2$)
and $Q_0 = 8.0 \pm 0.8$ eb
J. N. Wilson et al., Phys. Rev. Lett. **74**, 1950(1995).

A=133 Z=59 Pr(2)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
28.5	784	71.4(1)	57(2)	0.410
30.5	854	70.3(1)	51(2)	0.447
32.5	933	68.6(1)	50(2)	0.487
34.5	1013	67.1(1)	47(2)	0.528
36.5	1098	65.6(1)	48(2)	0.570
38.5	1182	64.3(1)	48(2)	0.612
40.5	1266	63.2(1)	47(2)	0.654
42.5	1351	62.2(1)	52(3)	0.695
44.5	1428	61.6(1)	65(4)	0.730
46.5	1490	61.7(1)	49(3)	0.766
48.5	1572	61.1(1)	52(3)	0.805
50.5	1649	60.6(1)	46(3)	0.846
52.5	1736	59.9(1)		

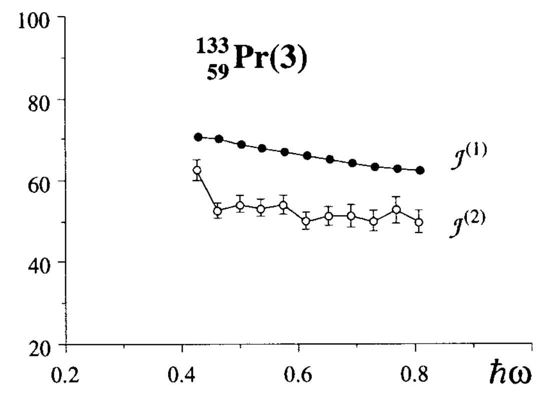
J. N. Wilson et al., Phys. Rev. Lett. **74**, 1950(1995).



A=133 Z=59 Pr(3)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
29.5	821	70.6(1)	63(2)	0.427
31.5	885	70.1(1)	53(2)	0.462
33.5	961	68.7(1)	54(2)	0.499
35.5	1035	67.6(1)	53(2)	0.536
37.5	1110	66.7(1)	54(2)	0.574
39.5	1184	65.9(1)	50(2)	0.612
41.5	1264	64.9(1)	51(2)	0.652
43.5	1342	64.1(1)	51(3)	0.691
45.5	1420	63.4(1)	50(3)	0.730
47.5	1500	62.7(1)	53(3)	0.769
49.5	1576	62.2(1)	50(3)	0.808
51.5	1656	61.6(1)		

J. N. Wilson et al., Phys. Rev. Lett. **74**, 1950(1995).



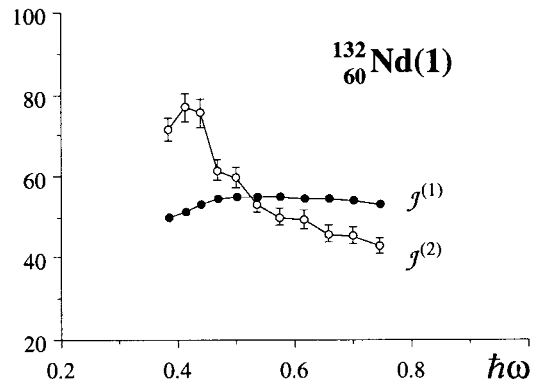
See page 58 for Explanation of Tables

A=132 Z=60 Nd(1)

I^{exp}	$E\gamma^{\#}$	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
19^-	741	49.9(1)	71(3)	0.385
21^-	797	51.4(1)	77(3)	0.412
23^-	849	53.0(1)	75(4)	0.438
25^-	902	54.3(1)	62(3)	0.467
27^-	967	54.8(1)	60(3)	0.500
29^-	1034	55.1(1)	53(2)	0.536
31^-	1109	55.0(1)	50(2)	0.575
33^-	1189	54.7(1)	49(2)	0.615
35^-	1270	54.3(1)	46(2)	0.657
37^-	1357	53.8(1)	45(2)	0.701
39^-	1445	53.3(1)	43(2)	0.746
41^-	1538	52.7(1)		
43^-	(1634)			

The energy of 17^- level is 5693 keV.

D. T. Joss et al., Phys. Rev. **C54**, R969(1996).

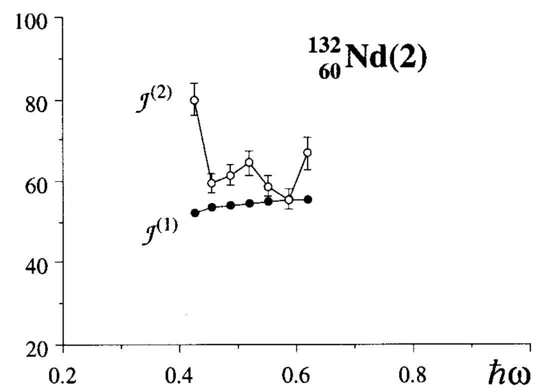


A=132 Z=60 Nd(2)

I^*	$E\gamma$	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
22	827	52.0(1)	80(4)	0.426
24	877	53.6(1)	60(2)	0.455
26	944	54.0(1)	62(3)	0.488
28	1009	54.5(1)	65(3)	0.520
30	1071	55.1(1)	59(3)	0.553
32	1139	55.3(1)	56(3)	0.588
34	1211	55.3(1)	67(4)	0.621
36	1271	55.9(1)		

D. T. Joss et al., Phys. Rev. **C54**, R969(1996).

* I-Values obtained by comparison with ^{133}Nd.



A=132 Z=60 Nd(3)

I^*	$E\gamma$	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
23	854	52.7(1)	82(4)	0.439
25	903	54.3(1)	58(2)	0.469
27	972	54.5(1)	59(2)	0.503
29	1040	54.8(1)	56(2)	0.538
31	1111	54.9(1)	54(2)	0.574
33	1185	54.9(1)	57(3)	0.610
35	1255	55.0(1)	54(3)	0.646
37	1329	54.9(1)	53(3)	0.683
39	1404	54.8(1)		
41	(1475)			

D. T. Joss et al., Phys. Rev. **C54**, R969(1996).

* I-Values obtained by comparison with ^{133}Nd.

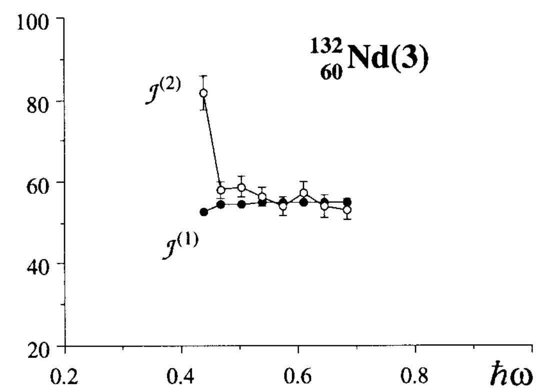
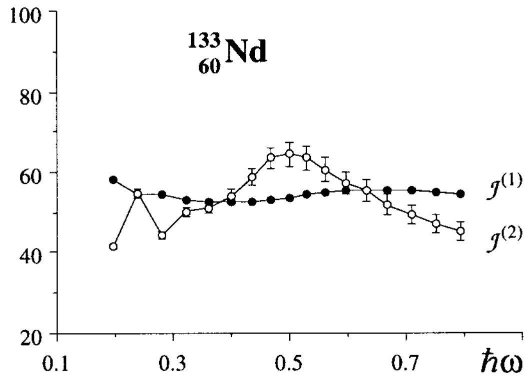


TABLE II. Superdeformed Rotational Bands in the Mass-130, Mass-140, Mass-150, and Mass-160 Regions

See page 58 for Explanation of Tables

A=133 Z=60 Nd

I^{exp}	$E\gamma^{\#}$	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$	Q_t
10.5^+	345	58.0(1)	41.7(5)	0.197	6.3(9)
12.5^+	441	54.4(1)	55(1)	0.239	6.7(11)
14.5^+	514	54.5(1)	44.4(8)	0.280	>5.0
16.5^+	604	53.0(1)	50(1)	0.322	
18.5^+	684	52.7(1)	51(1)	0.361	
20.5^+	762	52.5(1)	54(2)	0.400	
22.5^+	836	52.6(1)	59(2)	0.435	
24.5^+	904	53.1(1)	63(3)	0.468	
26.5^+	967	53.8(1)	65(3)	0.499	
28.5^+	1029	54.4(1)	63(3)	0.530	
30.5^+	1092	54.9(1)	61(3)	0.563	
32.5^+	1158	55.3(1)	57(3)	0.597	
34.5^+	1228	55.4(1)	56(3)	0.632	
36.5^+	1300	55.4(1)	52(3)	0.669	
38.5^+	1377	55.2(1)	49(2)	0.709	
40.5^+	1458	54.9(1)	47(2)	0.750	
42.5^+	1543	54.4(1)	45(2)	0.794	
44.5^+	1631	54.0(1)			



$Q_0 = 6.9 \pm 0.6$ eb (from refs. 5, 6, 7)

$\bar{g} = 0.31(8)$ for $I = 20.5^+$ (ref. 5)

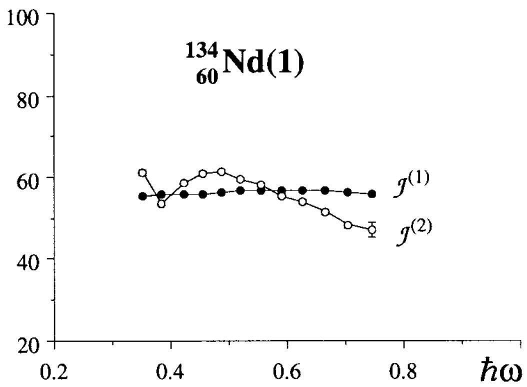
The energy of 8.5^+ level is 2027 keV (ref.3, 4).

I^{exp}-Values and parity from ref. 4, 5, 7; E_γ from ref. 2, 3, 4; Q_t from ref. 7.

1. R Wadsworth et al., J. Phys. **G13**, L207(1987).
2. D. Bazzacco et al., Phys. Lett. **B309**, 235(1993), (HD).
3. D. Bazzacco et al., Phys. Rev. **C49**, R2281(1994).
4. D. Bazzacco et al., Nucl. Phys. **A583**, 191(1995).
5. N. H. Medina et al., Nucl. Phys. **A589**, 106(1995).
6. S. M. Mullins et al., Phys. Rev. **C45**, 2683(1992), (HD), (LS).
7. S. A. Forbes et al., Z. Phys. **A352**, 15(1995).

A=134 Z=60 Nd(1)

I^{exp}	$E\gamma^{\#}$	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
$19^{(-)}$	667.9	55.40(4)	61.2(5)	0.350
$21^{(-)}$	733.3	55.91(2)	53.5(3)	0.385
$23^{(-)}$	808.1	55.69(1)	58.4(2)	0.421
$25^{(-)}$	876.6	55.90(1)	61.0(3)	0.455
$27^{(-)}$	942.2(2)	56.25(1)	61.4(3)	0.487
$29^{(-)}$	1007.4(2)	56.58(1)	59.3(3)	0.521
$31^{(-)}$	1074.8(3)	56.76(2)	58.0(4)	0.555
$33^{(-)}$	1143.8(3)	56.83(1)	55.4(4)	0.590
$35^{(-)}$	1216.0(4)	56.74(2)	54.1(5)	0.627
$37^{(-)}$	1289.9(6)	56.59(3)	51.7(7)	0.664
$39^{(-)}$	1367.3(8)	56.32(3)	48.4(7)	0.704
$41^{(-)}$	1450(1)	55.86(4)	47(2)	0.746
$43^{(-)}$	1535	55.4(1)		



$Q_0 = 6.8 \pm 0.3$ eb (from ref. 6)

The energy of $17^{(-)}$ level is 6303 keV (from refs. 4, 5).

I^{exp}-Values and parity from refs. 4, 5; E_γ from refs. 3, 4, 5.

1. E. M. Beck et al., Phys. Lett. **B195**, 531(1987).
2. R Wadsworth et al., J. Phys. **G13**, L207(1987).
3. C. M. Petrache et al., Phys. Lett. **B335**, 307(1994), (HD).
4. C. M. Petrache et al., Phys. Lett. **B387**, 31(1996), (HD).
5. C. M. Petrache et al., Phys. Rev. Lett. **77**, 239(1996), (HD).
6. C. M. Petrache et al., Phys. Rev. **C57**, R10(1998), (HD).

See page 58 for Explanation of Tables

A=134 Z=60 Nd(2)

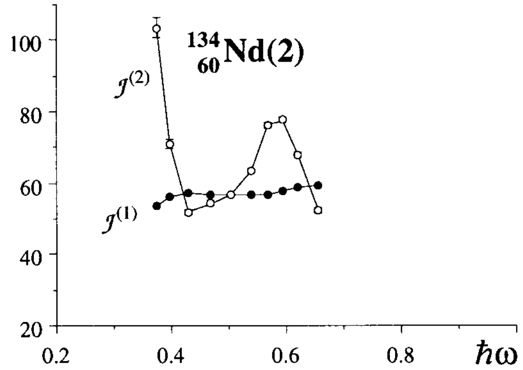
I^{exp}	$E\gamma^{\#}$	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
(20^+)	726.4	53.69(5)	103(3)	0.373
(22^+)	765.1	56.20(6)	71(1)	0.397
(24^+)	821.4	57.22(6)	51.8(8)	0.430
(26^+)	898.6	56.76(6)	54.3(7)	0.468
(28^+)	972.3(2)	56.57(1)	56.5(2)	0.504
(30^+)	1043.1(2)	56.56(1)	63.5(4)	0.537
(32^+)	1106.1(3)	56.96(2)	76.2(6)	0.566
(34^+)	1158.6(3)	57.83(2)	77.7(9)	0.592
(36^+)	1210.1(5)	58.67(2)	68.0(8)	0.620
(38^+)	1268.9(5)	59.11(2)	52.5(7)	0.654
(40^+)	1345.1(9)	58.73(4)		

$Q_0 = 6.4 \pm 0.4$ eb (from ref. 4)

The energy of (18^+) level is 6835 keV (from refs. 2, 3).

I-Values from ref. 2, 3; E_γ from refs. 1, 3.

1. C. M. Petrache et al., Phys. Lett. **B335**, 307(1994), (HD).
2. C. M. Petrache et al., Phys. Lett. **B387**, 31(1996), (HD).
3. C. M. Petrache et al., Phys. Rev. Lett. **77**, 239(1996), (HD).
4. C. M. Petrache et al., Phys. Rev. **C57**, R10(1998), (HD).



A=135 Z=60 Nd

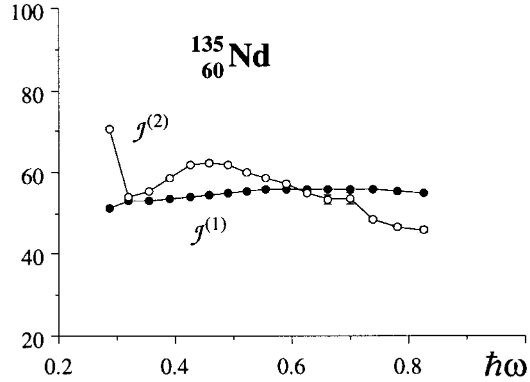
I^{exp}	$E\gamma^{\#}$	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$	Q_t
14.5^+	545.4(3)	51.34(2)	70.8(4)	0.287	5.2(-1.0, +2.0)
16.5^+	601.9(3)	53.17(2)	54.1(3)	0.320	6.8(-1.4, +0.8)
18.5^+	675.9(3)	53.26(2)	55.2(3)	0.356	7.2(-1.5, +1.2)
20.5^+	748.3(3)	53.45(2)	58.5(3)	0.391	>6.7
22.5^+	816.7(3)	53.88(2)	61.8(3)	0.425	
24.5^+	881.4(3)	54.46(2)	62.4(3)	0.457	
26.5^+	945.5(3)	55.00(1)	61.8(3)	0.489	
28.5^+	1010.2(3)	55.44(1)	60.1(3)	0.522	
30.5^+	1076.8(3)	55.72(1)	58.7(3)	0.556	
32.5^+	1145.0(3)	55.90(1)	57.4(3)	0.590	
34.5^+	1214.7(3)	55.98(1)	55.0(3)	0.626	
36.5^+	1287.4(3)	55.93(1)	53.3(1)	0.662	
38.5^+	1362(2)	55.78(7)	53.5(1)	0.700	
40.5^+	1437.2(4)	55.66(2)	48.6(4)	0.739	
42.5^+	1519.5(5)	55.28(2)	46.8(5)	0.781	
44.5^+	1605.0(7)	54.83(2)	46.0(6)	0.824	
46.5^+	1692.0(10)	54.37(3)			

$Q_0 = 7.4 \pm 1.0$ eb (from refs. 4, 9)

The energy of 12.5^+ level is 3324.0 keV (from refs. 3, 5, 8).

I^{exp}-Values and parity from refs. 3, 5, 8; E_γ from refs. 1, 2, 3; Q_t from ref. 5.

1. E. M. Beck et al., Phys. Rev. Lett. **58**, 2182(1987).
2. R Wadsworth et al., J. Phys. **G13**, L207(1987).
3. M. A. Deleplanque et al., Phys. Rev. **C52**, R2302(1995).
4. R. M. Diamond et al., Phys. Rev. **C41**, R1327(1990).
5. P. Willsau et al., Phys. Rev. **C48**, R494(1993).
6. W. Korten et al., Z. Phys. **A358**, 217(1997).
7. J. M. Nieminen et al., Phys. Rev. Lett. **78**, 3832(1997).
8. B. Aengenvoort et al., Eur. Phys. J. **A1**, 359(1998).
9. C. M. Petrache et al., Phys. Rev. **C57**, R10(1998), (HD).



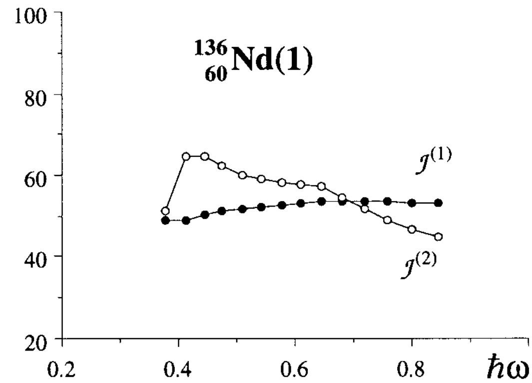
See page 58 for Explanation of Tables

A=136 Z=60 Nd(1)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
16	(656.5(2))			
18	716.8(2)	48.83(1)	51.1(2)	0.378
20	795.1(2)	49.05(1)	64.8(4)	0.413
22	856.8(3)	50.19(2)	64.7(4)	0.444
24	918.6(3)	51.17(2)	62.3(4)	0.475
26	982.8(3)	51.89(2)	59.9(4)	0.508
28	1049.6(2)	52.40(1)	58.9(3)	0.542
30	1117.5(2)	52.80(1)	58.4(4)	0.576
32	1186.0(3)	53.12(2)	57.7(4)	0.610
34	1255.3(4)	53.37(2)	57.2(4)	0.645
36	1325.2(4)	53.58(1)	54.4(4)	0.681
38	1398.8(4)	53.62(2)	51.6(4)	0.719
40	1476.3(4)	53.51(2)	48.8(4)	0.759
42	1558.2(4)	53.27(1)	46.9(4)	0.800
44	1643.5(5)	52.94(2)	44.9(4)	0.844
46	1732.6(7)	52.52(2)		
48	(1815)			

I-Values from ref. 1; E_γ from refs. 2, 3.

1. E. M. Beck et al., Phys. Lett. **B195**, 531(1987).
2. R. M. Clark et al., Phys. Lett. **B343**, 59(1995).
3. C. M. Petrache et al., Phys. Lett. **B373**, 275(1996), (HD).

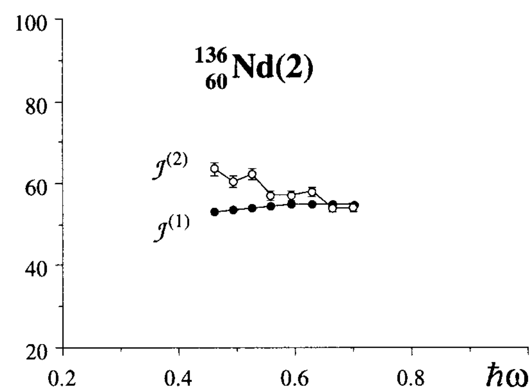


A=136 Z=60 Nd(2)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
24	888(1)	52.93(6)	63(1)	0.460
26	951(1)	53.63(6)	61(1)	0.492
28	1017(1)	54.08(5)	63(1)	0.525
30	1081(1)	54.58(5)	57(1)	0.558
32	1151(1)	54.74(5)	57(1)	0.593
34	1221(1)	54.87(4)	58(1)	0.628
36	1290(1)	55.04(4)	54(1)	0.664
38	1364(1)	54.99(4)	54(1)	0.701
40	1438(1)	54.94(4)		

R. M. Clark et al., Phys. Lett. **B343**, 59(1995).

* I-Values obtained by comparison with ^{133}Nd.



See page 58 for Explanation of Tables

A=137 Z=60 Nd

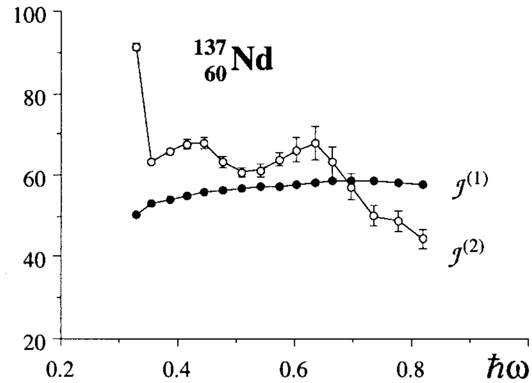
I^{exp}	$E\gamma^{\#}$	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$	Q_t
16.5^+	634.7(3)	50.42(2)	91.3(9)	0.328	
18.5^+	678.5(3)	53.06(2)	63.4(4)	0.355	
20.5^+	741.6(3)	53.94(2)	65.8(5)	0.386	
22.5^+	802.4(4)	54.84(3)	68(1)	0.416	5.2(5)
24.5^+	861.5	55.72(6)	68(1)	0.446	5.3(6)
26.5^+	920.6	56.48(6)	63(1)	0.476	4.8(6)
28.5^+	983.9	56.92(6)	61(1)	0.508	4.1(9)
30.5^+	1049.8	57.15(6)	61(1)	0.541	3.8(5)
32.5^+	1115.2	57.39(6)	64(2)	0.573	3.7(6)
34.5^+	1177.9	57.73(6)	66(3)	0.604	3.2(14)
36.5^+	1238	58.1(1)	68(4)	0.634	
38.5^+	1297	58.6(1)	63(4)	0.665	
40.5^+	1361	58.8(1)	57(3)	0.698	
42.5^+	1431	58.7(1)	50(3)	0.734	
44.5^+	1511	58.2(1)	49(3)	0.776	
46.5^+	1593	57.8(1)	44(2)	0.819	
48.5^+	1683	57.0(1)			

$Q_0 = 4.2 \pm 0.6$ eb (from ref. 2, 4)

The energy of 14.5^+ level is 4885 keV (from ref. 3).

I^{exp}-Values and parity from ref. 3; E_γ from refs. 1, 2, 3, 4; Q_t from ref. 4.

1. R Wadsworth et al., J. Phys. **G13**, L207(1987).
2. S. M. Mullins et al., Phys. Rev. **C45**, 2683(1992), (HD).
3. S Lunardi et al., Phys. Rev. **C52**, R6(1995), (HD).
4. C. M. Petrache et al., Phys. Lett. **B383**, 145(1996), (HD).



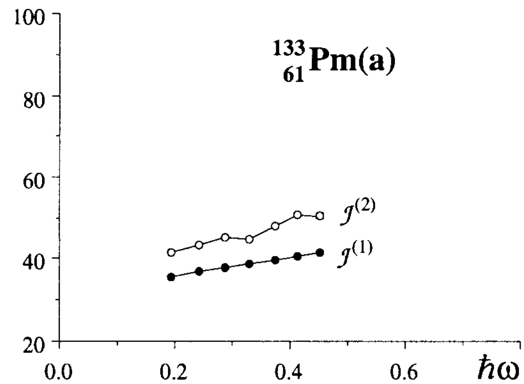
A=133 Z=61 Pm(a)

I^{exp}	$E\gamma^{\#}$	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
6.5^+	338.4(3)	35.46(3)	41.6(2)	0.193
8.5^+	434.5(2)	36.82(2)	43.3(1)	0.240
10.5^+	526.8(2)	37.97(1)	45.1(1)	0.286
12.5^+	615.5(2)	38.99(1)	45.0(2)	0.330
14.5^+	704.3(4)	39.76(2)	48.0(3)	0.373
16.5^+	787.7(2)	40.62(1)	50.6(2)	0.414
18.5^+	866.7(3)	41.54(1)	50.4(7)	0.453
20.5^+	946(1)	42.28(4)		

$Q_0 = 7.4 \pm 1.0$ eb

The energy of 4.5^+ level is 654 keV.

A. Galindo-Uribarri et al., Phys. Rev. **C54**, 1057(1996), (HD).



A=133 Z=61 Pm(b)

I^{exp}	$E\gamma^{\#}$	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
7.5^+	386.8(2)	36.19(2)	42.5(1)	0.217
9.5^+	481.0(2)	37.42(2)	44.0(1)	0.263
11.5^+	572.0(2)	38.46(1)	45.5(1)	0.308
13.5^+	660.0(2)	39.39(1)	46.5(2)	0.352
15.5^+	746.1(2)	40.21(1)	50.9(2)	0.393
17.5^+	824.7(3)	41.23(2)	46.9(6)	0.434
19.5^+	910(1)	41.76(5)		

$Q_0 = 7.4 \pm 1.0$ eb

The energy of 5.5^+ level is 810 keV.

A. Galindo-Uribarri et al., Phys. Rev. **C54**, 1057(1996), (HD).

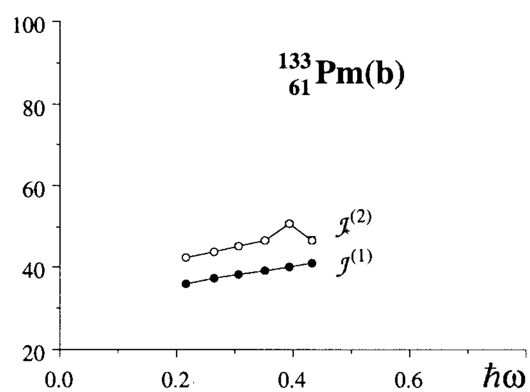


TABLE II. Superdeformed Rotational Bands in the Mass-130, Mass-140, Mass-150, and Mass-160 Regions

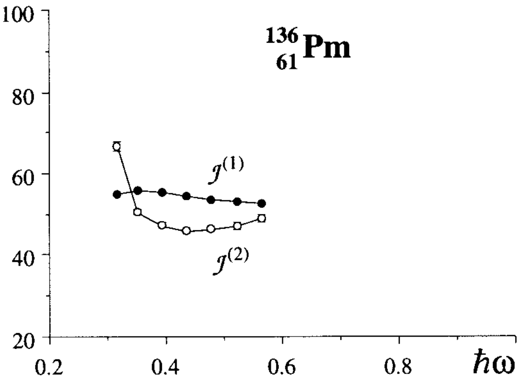
See page 58 for Explanation of Tables

A=136 Z=61 Pm

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
17	603.0	54.73(5)	67(1)	0.317
19	663.0	55.81(6)	50.5(6)	0.351
21	742.2	55.24(6)	47.2(6)	0.392
23	826.9	54.42(5)	46.0(7)	0.435
25	913.9	53.62(5)	46.4(7)	0.479
27	1000.1	52.99(5)	47.1(8)	0.521
29	1085.0	52.53(5)	49(1)	0.563
31	1166.9	52.28(5)		

M. A. Riley et al., Phys. Rev. **C47**, R441(1993), (HD).

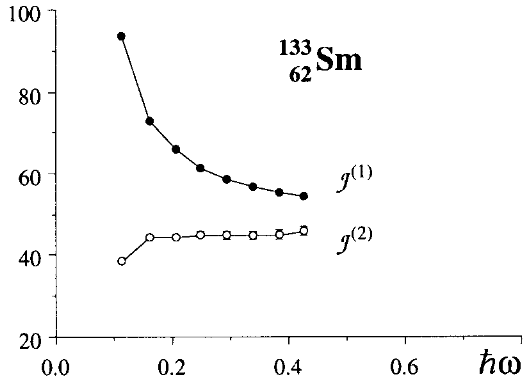
* I-Values obtained by comparison with ^{133}Nd.



A=133 Z=62 Sm

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
8.5	171	93.6(2)	38.5(2)	0.112
10.5	275	72.7(1)	44.4(5)	0.160
12.5	365	65.8(1)	44.4(6)	0.205
14.5	455	61.5(1)	44.9(7)	0.250
16.5	544	58.8(1)	44.9(8)	0.294
18.5	633	56.9(1)	45(1)	0.339
20.5	722	55.4(1)	45(1)	0.383
22.5	811	54.3(1)	46(1)	0.427
24.5	898	53.5(1)		

R. Wadsworth et al., Z. Phys. **A333**, 409(1989), (HD).



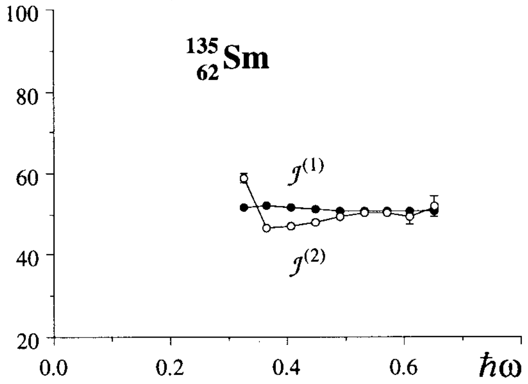
A=135 Z=62 Sm

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
16.5	619	51.7(1)	59(1)	0.327
18.5	686.9(2)	52.41(2)	46.6(2)	0.365
20.5	772.7(2)	51.77(1)	47.1(2)	0.408
22.5	857.7(2)	51.30(1)	47.8(2)	0.450
24.5	941.3(2)	50.99(1)	49.6(2)	0.491
26.5	1022.0(3)	50.88(1)	50.1(3)	0.531
28.5	1101.8(3)	50.83(1)	50.6(3)	0.571
30.5	1180.9(4)	50.81(2)	49(2)	0.611
32.5	1262	50.7(1)	52(2)	0.650
34.5	1339	50.8(1)		

$Q_0 = 7.0 \pm 0.7$ eb (from refs. 2, 3)

I-Values from ref. 1; E_γ from refs. 1, 2, 4.

1. S M Mullins et al., J. Phys. **G13**, L201(1987), (HD).
2. P H Regan et al., J. Phys. **G18**, 847(1992).
3. P. H. Regan et al., Phys. Rev. **C42**, R1805(1990), (HD).
4. N. J. O'Brien et al., Phys. Rev. C58, 3212(1998), (HD).

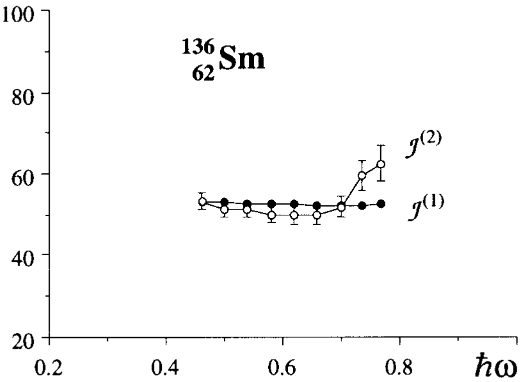


See page 58 for Explanation of Tables

A=136 Z=62 Sm

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
24	888	52.9(1)	53(2)	0.463
26	963	53.0(1)	51(2)	0.501
28	1041	52.8(1)	51(2)	0.540
30	1119	52.7(1)	50(2)	0.580
32	1199	52.5(1)	50(2)	0.620
34	1279	52.4(1)	50(2)	0.660
36	1359	52.2(1)	52(3)	0.699
38	1436	52.2(1)	60(4)	0.735
40	1503	52.6(1)	63(4)	0.768
42	1567	53.0(1)		
44	(1629)			

N. J. O'Brien et al., Phys. Rev. **C58**, 3212(1998), (HD).



A=137 Z=62 Sm

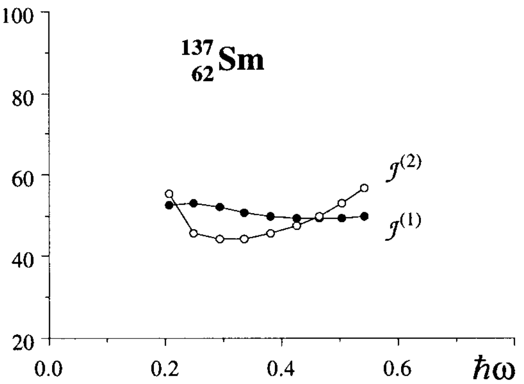
I^{exp}	Eγ#	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
10.5+	379.1(1)	52.76(1)	55.4(1)	0.208
12.5+	451.3(1)	53.18(1)	45.8(1)	0.248
14.5+	538.7(1)	51.98(1)	44.2(1)	0.292
16.5+	629.1(1)	50.87(1)	44.6(1)	0.337
18.5+	718.8(1)	50.08(1)	45.6(1)	0.381
20.5+	806.6(2)	49.59(1)	47.8(2)	0.424
22.5+	890.3(3)	49.42(2)	49.9(3)	0.465
24.5+	970.5(3)	49.46(2)	53.3(4)	0.504
26.5+	1045.6(5)	49.73(2)	56.7(6)	0.540
28.5+	1116.1(5)	50.18(2)		

$Q_0 = 5.0 \pm 0.7$ eb (from ref. 3)

The energy of 8.5^+ level is1997 keV (from ref. 4).

I^{exp}-Values from refs. 1, 2, 4; E_γ from ref. 3.

1. E. S. Paul et al., Phys. Rev. Lett. **61**, 42(1988).
2. R. Ma et al., Phys. Rev. **C40**, 156(1989), (HD).
3. P H Regan et al., J. Phys. **G18**, 847(1992), (HD).
4. C. Rossi et al., Nucl. Phys. **A624**, 225(1997), (HD).



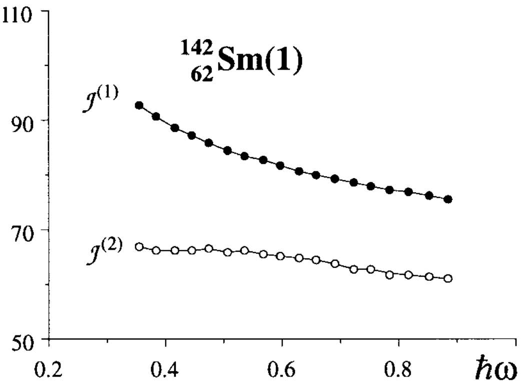
A=142 Z=62 Sm(1)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
32	679.7(2)	92.69(3)	67.0(3)	0.355
34	739.4(1)	90.61(1)	66.3(2)	0.385
35	799.7(1)	88.78(1)	66.3(2)	0.415
36	860.0(1)	87.21(1)	66.2(2)	0.445
40	920.4(1)	85.832(9)	66.4(2)	0.475
42	980.6(1)	84.642(9)	65.9(2)	0.506
44	1041.3(1)	83.549(8)	66.1(2)	0.536
46	1101.8(1)	82.592(8)	65.5(2)	0.566
48	1162.9(1)	81.692(7)	65.0(1)	0.597
50	1224.4(1)	80.856(7)	64.7(1)	0.628
52	1286.2(1)	80.081(6)	64.5(1)	0.659
54	1348.2(1)	79.365(6)	63.8(1)	0.690
56	1410.9(1)	78.673(6)	62.9(1)	0.721
58	1474.5(1)	77.993(5)	62.7(1)	0.753
60	1538.3(1)	77.358(5)	62.0(1)	0.785
62	1602.8(1)	76.741(5)	61.7(1)	0.818
64	1667.6(1)	76.157(5)	61.3(2)	0.850
66	1732.8(2)	75.600(9)	61.1(4)	0.883
68	1798.3(4)	75.07(2)		

$Q_0 = 11.7 \pm 0.1$ eb (from ref. 4)

I-Values from ref. 3; E_γ from ref. 4.

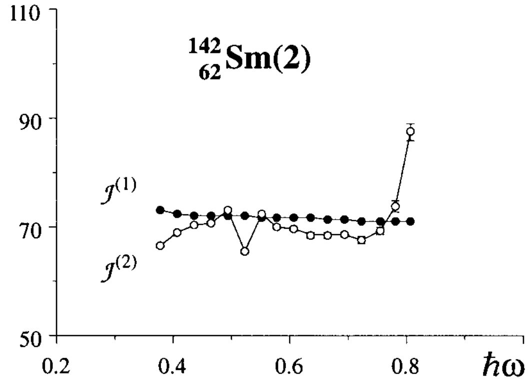
1. G. Hackman et al., Phys. Rev. **C47**, R433(1993).
2. D. C. Radford et al., Nucl. Phys. **A557**, 311c(1993).
3. G. Hackman et al., Phys. Rev. **C52**, R2293(1995).
4. G. Hackman et al., Phys. Lett. **B416**, 268(1998).



See page 58 for Explanation of Tables

A=142 Z=62 Sm(2)

I^*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
27	726.2(3)	72.98(3)	66.4(4)	0.378
29	786.4(2)	72.48(2)	69.0(3)	0.408
31	844.4(2)	72.24(2)	70.3(3)	0.436
33	901.3(2)	72.12(2)	70.7(4)	0.465
35	957.9(2)	72.03(2)	73.1(4)	0.493
37	1012.6(2)	72.09(1)	65.5(3)	0.522
39	1073.7(2)	71.71(1)	72.3(4)	0.551
41	1129.0(2)	71.74(1)	70.1(3)	0.579
43	1186.1(2)	71.66(1)	69.7(3)	0.607
45	1243.5(2)	71.57(1)	68.5(4)	0.636
47	1301.9(3)	71.43(2)	68.5(5)	0.666
49	1360.3(3)	71.31(2)	68.6(5)	0.695
51	1418.6(3)	71.20(2)	67.6(6)	0.724
53	1477.8(4)	71.05(2)	69.4(7)	0.753
55	1535.4(4)	70.99(2)	74(1)	0.781
57	1589.6(6)	71.09(3)	88(1)	0.806
59	1635.3(5)	71.55(2)		



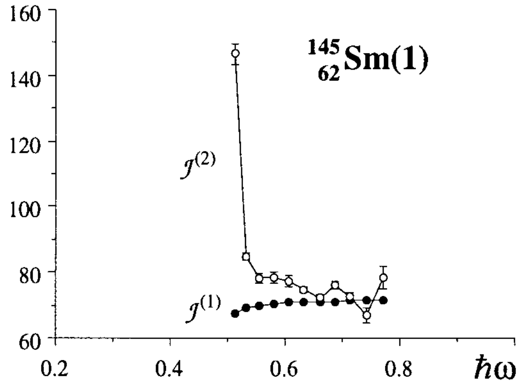
$Q_0 = 13.2^{+0.8}_{-0.7}$ eb (from ref. 2)

1. G. Hackman et al., Phys. Rev. **C52**, R2293(1995).
2. G. Hackman et al., Phys. Lett. **B416**, 268 (1998).

* I-Values obtained by comparison with ^{143}Eu; E_γ from ref. 2.

A=145 Z=62 Sm(1)

I^*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
34.5	1011.3(4)	67.24(3)	147(3)	0.513
36.5	1038.6(4)	69.32(3)	85(1)	0.531
38.5	1085.8(5)	69.99(3)	78(1)	0.556
40.5	1137.0(6)	70.36(4)	78(2)	0.581
42.5	1188(1)	70.71(6)	77(2)	0.607
44.5	1239.8(4)	70.98(2)	74.8(9)	0.633
46.5	1293.3(5)	71.14(3)	72.2(9)	0.661
48.5	1348.7(5)	71.18(3)	76(1)	0.688
50.5	1401.2(6)	71.37(3)	73(1)	0.714
52.5	1456.2(7)	71.42(3)	67(2)	0.743
54.5	1516(2)	71.24(9)	78(3)	0.771
56.5	1567(1)	71.47(5)		

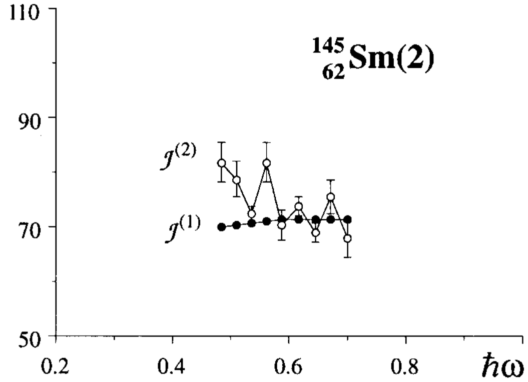


D. S. Haslip et al., Phys. Rev. **C57**, 442(1998).

* I-Values obtained by comparison with ^{143}Eu

A=145 Z=62 Sm(2)

I^*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
33.5	945.1(8)	69.83(6)	82(4)	0.485
35.5	994(2)	70.4(1)	79(3)	0.510
37.5	1044.8(8)	70.83(5)	72(1)	0.536
39.5	1100.1(8)	70.90(5)	82(4)	0.562
41.5	1149(2)	71.4(1)	70(3)	0.589
43.5	1205.9(8)	71.32(5)	74(2)	0.617
45.5	1260(1)	71.43(6)	69(2)	0.645
47.5	1318(1)	71.32(5)	75(3)	0.672
49.5	1371(2)	71.5(1)	68(3)	0.700
51.5	1430(2)	71.3(1)		



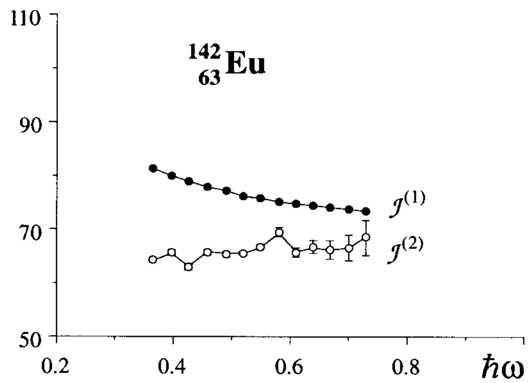
D. S. Haslip et al., Phys. Rev. **C57**, 442(1998).

* I-Values obtained by comparison with ^{143}Eu

See page 58 for Explanation of Tables

A=142 Z=63 Eu

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
29	699.7(3)	81.46(3)	64.3(4)	0.365
31	761.9(3)	80.06(3)	65.7(5)	0.396
33	822.8(3)	79.00(3)	63.0(4)	0.427
35	886.3(3)	77.85(3)	65.8(5)	0.458
37	947.1(3)	77.08(2)	65.4(5)	0.489
39	1008.3(3)	76.37(2)	65.5(5)	0.519
41	1069.4(3)	75.74(2)	66.7(6)	0.550
43	1129.4(4)	75.26(3)	69.3(9)	0.579
45	1187.1(6)	74.97(4)	65.8(9)	0.609
47	1247.9(6)	74.53(4)	67(1)	0.639
49	1307.9(10)	74.17(6)	66(2)	0.669
51	1368.2(12)	73.82(6)	66(2)	0.699
53	1428.4(18)	73.51(9)	68(3)	0.729
55	1486.8(20)	73.3(1)		
57	(1548)			

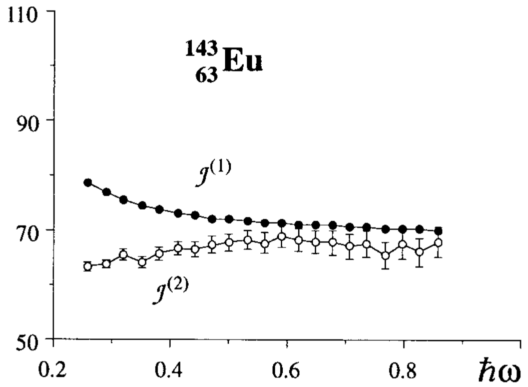


I-Values and Eγ from ref. 1

1. S. M. Mullins et al., Phys. Rev. **C52**, 99(1995).
2. A. Ataç et al., Z. Phys. **A348**, 251(1994).

A=143 Z=63 Eu

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
19.5	483.5	78.59(8)	63.3(7)	0.258
21.5	546.7	76.83(8)	63.8(8)	0.289
23.5	609.4	75.48(8)	66(1)	0.320
25.5	670.4	74.58(7)	64(1)	0.351
27.5	732.9	73.68(7)	66(1)	0.382
29.5	793.7	73.08(7)	67(1)	0.412
31.5	853.7	72.63(7)	67(1)	0.442
33.5	913.7	72.23(7)	67(2)	0.472
35.5	973.1	71.94(7)	68(2)	0.501
37.5	1032.1	71.70(7)	68(2)	0.531
39.5	1090.8	71.51(7)	68(2)	0.560
41.5	1149.9	71.31(7)	69(2)	0.590
43.5	1207.9	71.20(7)	68(2)	0.619
45.5	1266.5	71.06(7)	68(2)	0.648
47.5	1325.5	70.92(7)	68(2)	0.678
49.5	1384.5	70.78(7)	67(2)	0.707
51.5	1444.1	70.63(7)	68(2)	0.737
53.5	1503.2	70.52(7)	66(2)	0.767
55.5	1564.2	70.32(7)	67(3)	0.797
57.5	1624	70.22(7)	66(3)	0.827
59.5	1684	70.07(7)	68(3)	0.857
61.5	1743	69.99(7)		



$Q_0 = 13.0 \pm 1.5$ eb (from refs. 2, 5)

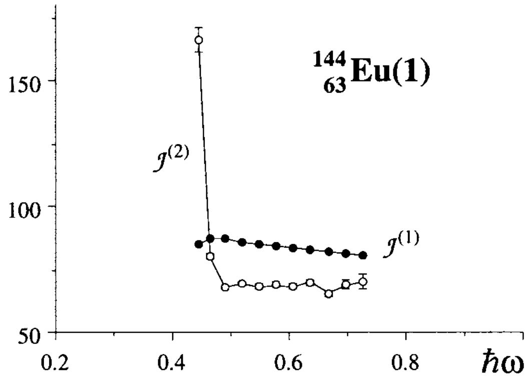
I-Values from refs. 2, 3; Eγ from refs. 1, 2, 4.

1. S. M. Mullins et al., Phys. Rev. Lets. **66**, 1677(1991).
2. A. Ataç et al., Nucl. Phys. **A557**, 109c(1993).
3. A. Ataç et al., Phys. Rev. Lett. **70**, 1069(1993).
4. F. Lerma et al., Phys. Rev. **C56**, R1671(1997).
5. S. A. Forbes et al., Nucl. Phys. **A584**, 149(1995).
6. S. Lunardi et al., Acta Phys. Hung. N. S. **6**, 241(1997).

See page 58 for Explanation of Tables

A=144 Z=63 Eu(1)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
38	878.6(6)	85.36(6)	166(5)	0.445
40	902.7(4)	87.52(4)	80(1)	0.464
42	952.7(6)	87.12(5)	67.8(9)	0.491
44	1011.7(5)	85.99(4)	69.4(9)	0.520
46	1069.3(6)	85.10(5)	68(1)	0.549
48	1128.0(6)	84.22(4)	69(1)	0.579
50	1186.1(7)	83.47(5)	68(1)	0.608
52	1244.9(6)	82.74(4)	70(1)	0.637
54	1302.2(8)	82.17(5)	65(1)	0.666
56	1363.3(9)	81.42(5)	69(2)	0.696
58	1421.4(12)	80.91(7)	70(3)	0.725
60	1478.6(21)	80.5(1)		

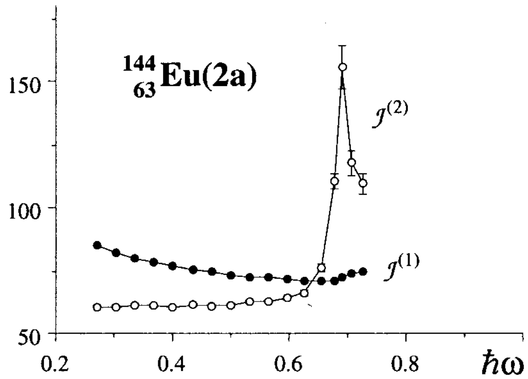


I-Values and E_γ from ref. 2

1. S. M. Mullins et al., Z. Phys. **A346**, 327(1993).
2. G. Hackman et al., Phys. Rev. **C55**, 1101(1997).

A=144 Z=63 Eu(2a)

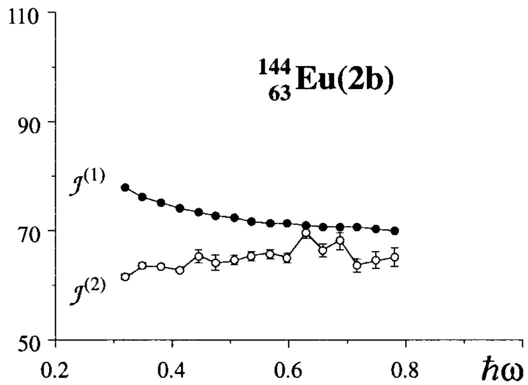
I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
22	506.9(3)	84.83(5)	60.6(3)	0.270
24	572.9(2)	82.04(3)	60.7(3)	0.303
26	638.8(2)	79.84(3)	61.4(3)	0.336
28	703.9(3)	78.14(3)	61.0(3)	0.368
30	769.5(2)	76.67(2)	60.5(3)	0.401
32	835.6(3)	75.40(3)	61.4(4)	0.434
34	900.7(3)	74.39(2)	60.9(4)	0.467
36	966.4(3)	73.47(2)	61.3(5)	0.500
38	1031.7(4)	72.70(3)	62.6(6)	0.532
40	1095.6(5)	72.11(3)	62.5(7)	0.564
42	1159.6(5)	71.58(3)	64.5(7)	0.595
44	1221.6(5)	71.22(3)	66(1)	0.626
46	1282.0(8)	70.98(4)	76(1)	0.654
48	1334.6(6)	71.18(3)	110(3)	0.676
50	1370.8(9)	72.22(5)	156(9)	0.692
52	1396.5(11)	73.76(6)	118(5)	0.707
54	1430.5(9)	74.80(5)	110(4)	0.724
56	1467(1)	75.67(5)		



G. Hackman et al., Phys. Rev. **C55**, 1101(1997).

A=144 Z=63 Eu(2b)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
24	603.2(4)	77.92(5)	61.5(5)	0.318
26	668.2(4)	76.32(5)	63.6(5)	0.350
28	731.1(3)	75.23(3)	63.4(4)	0.381
30	794.2(3)	74.29(3)	62.8(4)	0.413
32	857.9(3)	73.44(3)	65(1)	0.444
34	919.1(12)	72.9(1)	64(1)	0.475
36	981.5(4)	72.34(3)	64.6(8)	0.506
38	1043.4(6)	71.88(4)	65.5(9)	0.537
40	1104.5(6)	71.53(4)	65.8(9)	0.568
42	1165.3(6)	71.23(4)	65(1)	0.598
44	1226.8(7)	70.92(4)	70(1)	0.628
46	1284.3(6)	70.86(3)	66(1)	0.657
48	1344.5(10)	70.66(5)	68(2)	0.687
50	1403.2(10)	70.55(5)	64(1)	0.717
52	1466.0(7)	70.26(3)	65(2)	0.749
54	1528.0(13)	70.03(6)	65(2)	0.779
56	1589.3(10)	69.84(4)		



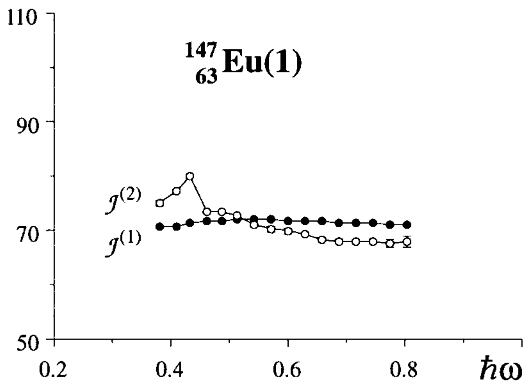
G. Hackman et al., Phys. Rev. **C55**, 1101(1997).

* I-Values obtained by comparison with ^{143}Eu.

See page 58 for Explanation of Tables

A=147 Z=63 Eu(1)

I^*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
26.5	737.3(3)	70.53(3)	75.0(4)	0.382
28.5	790.6(1)	70.832(9)	77.4(2)	0.408
30.5	842.3(1)	71.234(8)	80.0(2)	0.434
32.5	892.3(1)	71.725(8)	73.4(2)	0.460
34.5	946.8(1)	71.821(8)	73.4(2)	0.487
36.5	1001.3(1)	71.907(7)	72.7(2)	0.514
38.5	1056.3(1)	71.949(7)	71.2(2)	0.542
40.5	1112.5(1)	71.910(6)	70.3(5)	0.571
42.5	1169.4(4)	71.83(2)	69.9(5)	0.599
44.5	1226.6(1)	71.743(6)	69.4(2)	0.628
46.5	1284.2(1)	71.640(6)	68.4(2)	0.657
48.5	1342.7(1)	71.498(5)	67.9(3)	0.686
50.5	1401.6(2)	71.35(1)	67.9(3)	0.716
52.5	1460.5(2)	71.21(1)	68.0(4)	0.745
54.5	1519.3(3)	71.09(1)	67.6(6)	0.775
56.5	1578.5(4)	70.95(2)	68(1)	0.804
58.5	1637.5(8)	70.84(3)		

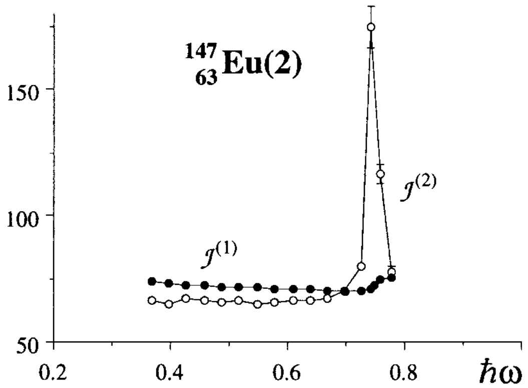


1. D. S. Haslip et al., Phys. Rev. Lets. **78**, 3447(1997).
2. D. S. Haslip et al., Phys. Rev. **C57**, 2196(1998).

* I-Values obtained by comparison with ^{143}Eu; E_γ from ref. 2.

A=147 Z=63 Eu(2)

I^*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
26.5	703.2(7)	73.95(7)	66.7(8)	0.367
28.5	763.2(2)	73.38(2)	64.9(2)	0.397
30.5	824.8(1)	72.745(9)	67.5(2)	0.427
32.5	884.1(1)	72.390(8)	66.8(2)	0.457
34.5	944.0(1)	72.034(8)	65.8(2)	0.487
36.5	1004.8(1)	71.656(7)	66.3(2)	0.518
38.5	1065.1(1)	71.355(7)	65.3(2)	0.548
40.5	1126.4(1)	71.023(6)	66.0(2)	0.578
42.5	1187.0(2)	70.77(1)	66.3(2)	0.609
44.5	1247.3(1)	70.552(6)	66.7(2)	0.639
46.5	1307.3(1)	70.374(5)	67.5(3)	0.669
48.5	1366.6(2)	70.25(1)	69.9(3)	0.698
50.5	1423.8(2)	70.24(1)	79.5(4)	0.725
52.5	1474.1(2)	70.55(1)	175(8)	0.743
54.5	1497(1)	72.14(5)	∞	0.749
56.5	1497(1)	74.82(5)	117(4)	0.757
58.5	1531.3(4)	75.75(2)	78(2)	0.779
60.5	1582.7(14)	75.82(7)		

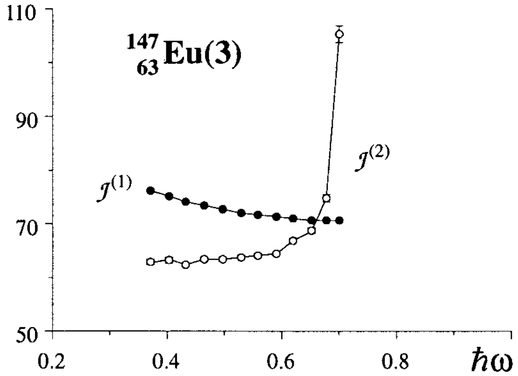


D. S. Haslip et al., Phys. Rev. **C57**, 2196(1998).

* I-Values obtained by comparison with ^{143}Eu.

A=147 Z=63 Eu(3)

I^*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
27.5	708.1(3)	76.26(3)	62.9(4)	0.370
29.5	771.7(3)	75.16(3)	63.3(4)	0.402
31.5	834.9(2)	74.26(2)	62.5(3)	0.434
33.5	898.9(2)	73.42(2)	63.5(3)	0.465
35.5	961.9(2)	72.77(2)	63.4(3)	0.497
37.5	1025.0(2)	72.20(1)	63.9(3)	0.528
39.5	1087.6(2)	71.72(1)	64.2(3)	0.559
41.5	1149.9(2)	71.31(1)	64.6(4)	0.590
43.5	1211.8(3)	70.97(2)	66.9(4)	0.621
45.5	1271.6(2)	70.78(1)	68.7(4)	0.650
47.5	1329.8(3)	70.69(2)	74.8(6)	0.678
49.5	1383.3(3)	70.85(2)	105(2)	0.701
51.5	1421.3(5)	71.77(3)		



D. S. Haslip et al., Phys. Rev. **C57**, 2196(1998).

* I-Values obtained by comparison with ^{143}Eu

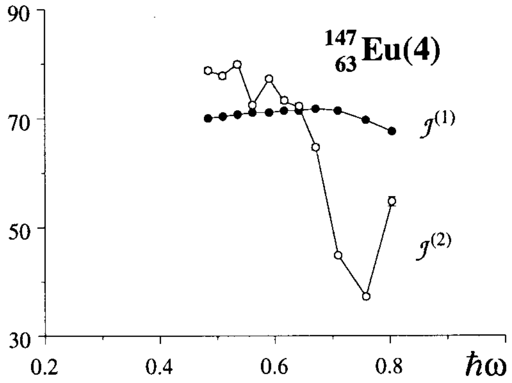
See page 58 for Explanation of Tables

A=147 Z=63 Eu(4)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
33.5	944.0(3)	69.92(2)	78.7(6)	0.485
35.5	994.8(2)	70.37(1)	77.8(4)	0.510
37.5	1046.2(2)	70.73(1)	79.8(5)	0.536
39.5	1096.3(2)	71.15(1)	72.3(4)	0.562
41.5	1151.6(2)	71.21(1)	77.2(4)	0.589
43.5	1203.4(2)	71.46(1)	73.3(5)	0.615
45.5	1258.0(3)	71.54(2)	72.2(6)	0.643
47.5	1313.4(3)	71.57(2)	64.7(4)	0.672
49.5	1375.2(3)	71.26(2)	44.7(2)	0.710
51.5	1464.7(4)	69.64(2)	37.2(3)	0.759
53.5	1572.1(7)	67.43(3)	54.6(8)	0.804
55.5	1645.4(8)	66.85(3)		

D. S. Haslip et al., Phys. Rev. **C57**, 2196(1998).

* I-Values obtained by comparison with ^{143}Eu

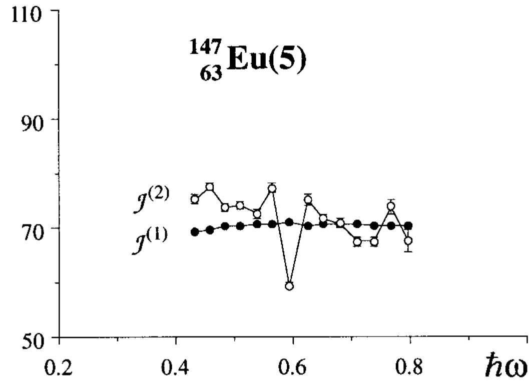


A=147 Z=63 Eu(5)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
29.5	835.9(4)	69.39(3)	75.3(7)	0.431
31.5	889.0(3)	69.74(2)	77.7(8)	0.457
33.5	940.5(4)	70.18(3)	73.8(8)	0.484
35.5	994.7(4)	70.37(3)	74.2(8)	0.511
37.5	1048.6(4)	70.57(3)	72.6(8)	0.538
39.5	1103.7(5)	70.67(3)	77(1)	0.565
41.5	1155.4(4)	70.97(2)	59.3(5)	0.595
43.5	1222.8(4)	70.33(2)	75.2(9)	0.625
45.5	1276.0(5)	70.53(3)	71.7(8)	0.652
47.5	1331.8(4)	70.58(2)	70.8(9)	0.680
49.5	1388.3(6)	70.59(3)	67.5(8)	0.709
51.5	1447.6(4)	70.46(2)	67.5(8)	0.739
53.5	1506.9(6)	70.34(3)	74(1)	0.767
55.5	1561.1(9)	70.46(4)	68(2)	0.795
57.5	1620.2(15)	70.36(7)		

D. S. Haslip et al., Phys. Rev. **C57**, 2196(1998).

* I-Values obtained by comparison with ^{143}Eu.

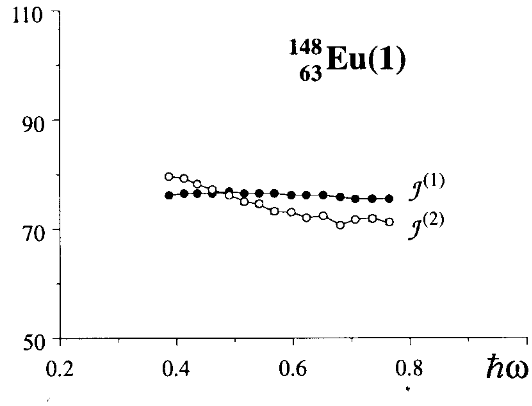


A=148 Z=63 Eu(1)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
29	747.7(1)	76.23(1)	79.7(4)	0.386
31	797.9(2)	76.45(2)	79.4(4)	0.412
33	848.3(1)	76.62(1)	78.1(3)	0.437
35	899.5(2)	76.71(2)	77.1(4)	0.463
37	951.4(2)	76.73(2)	76.3(4)	0.489
39	1003.8(2)	76.71(1)	75.0(4)	0.515
41	1057.1(2)	76.62(1)	74.6(4)	0.542
43	1110.7(2)	76.53(1)	73.3(4)	0.569
45	1165.3(2)	76.38(1)	73.0(4)	0.596
47	1220.1(2)	76.22(1)	71.9(4)	0.624
49	1275.7(2)	76.04(1)	72.5(4)	0.652
51	1330.9(2)	75.89(1)	70.7(4)	0.680
53	1387.5(2)	75.68(1)	71.7(4)	0.708
55	1443.3(2)	75.52(1)	71.9(5)	0.736
57	1498.9(3)	75.39(2)	71.2(6)	0.764
59	1555.1(4)	75.24(2)		

1. D. S. Haslip et al., Phys. Rev. Lett. 78, 3447(1997).
2. D. S. Haslip et al., Phys. Rev. **C57**, 2196(1998).

* I-Values obtained by comparison with ^{150}Tb(1a); E_γ from ref. 2.



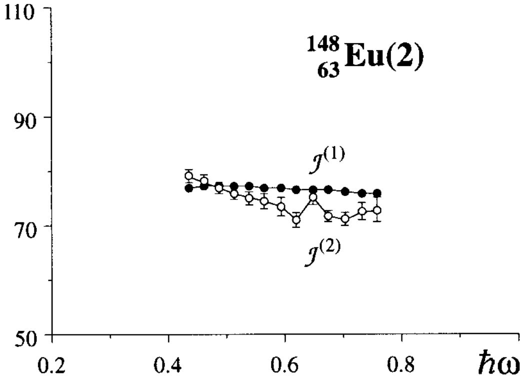
See page 58 for Explanation of Tables

A=148 Z=63 Eu(2)

I^*	E_γ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
33	844.2(6)	77.00(5)	79(1)	0.435
35	894.8(5)	77.11(4)	78(1)	0.460
37	946.1(6)	77.16(5)	77(1)	0.486
39	998.1(5)	77.15(4)	76(1)	0.512
41	1050.9(5)	77.08(4)	75(1)	0.539
43	1104.2(6)	76.98(4)	74(2)	0.566
45	1157.9(9)	76.86(6)	73(2)	0.593
47	1212.4(8)	76.71(5)	71(1)	0.620
49	1268.7(7)	76.46(4)	75(1)	0.648
51	1322.0(5)	76.40(3)	72(1)	0.675
53	1377.8(7)	76.21(4)	71(1)	0.703
55	1434.0(6)	76.01(3)	72(2)	0.731
57	1489.2(10)	75.88(5)	73(2)	0.758
59	1544.1(14)	75.77(7)		

D. S. Haslip et al., Phys. Rev. **C57**, 2196(1998).

* I-Values obtained by comparison with ^{150}Tb(1a).



A=139 Z=64 Gd

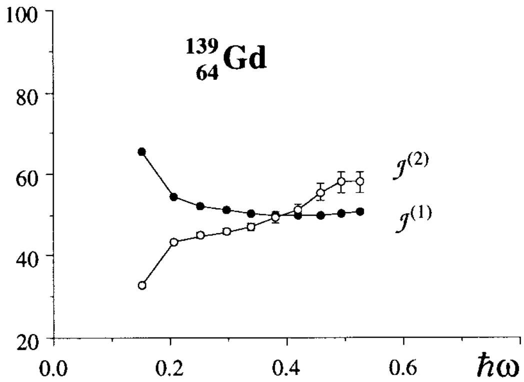
I^{exp}	$E_\gamma^{\#}$	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
8.5^+	245	65.3(1)	32.8(2)	0.153
10.5^+	367	54.5(1)	43.5(6)	0.207
12.5^+	459	52.3(1)	44.9(7)	0.252
14.5^+	548	51.1(1)	46.0(9)	0.296
16.5^+	635	50.4(1)	47(1)	0.339
18.5^+	720	50.0(1)	49(1)	0.380
20.5^+	801	49.9(1)	51(2)	0.420
22.5^+	879	50.1(1)	56(2)	0.458
24.5^+	951	50.5(1)	58(2)	0.493
26.5^+	1020	51.0(1)	58(3)	0.527
28.5^+	1089	51.4(1)		
30.5^+	(1158)			

$Q_0 = 7.0 \pm 1.5$ eb (from ref. 2)

\# The energy of 6.5^+ level is1626 keV (from ref. 3).

I-Values from refs. 1, 3; E_γ from refs. 1, 3.

1. R. Ma et al., J. Phys. **G16**, 1233(1990), (HD).
2. P H Regan et al., J. Phys. **G18**, 847(1992), (HD).
3. C. Rossi et al., Nucl. Phys. **A624**, 225(1997), (HD).

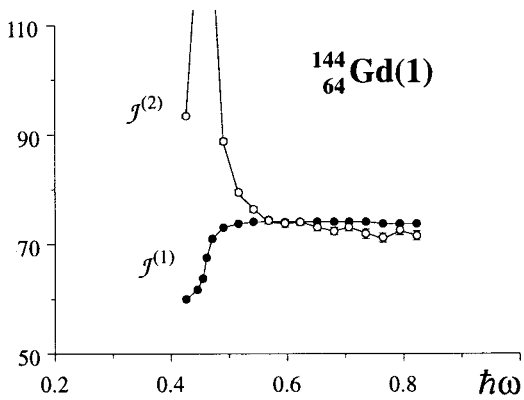


A=144 Z=64 Gd(1)

I	E_γ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
24	802.8(3)	58.55(2)	92.2(8)	0.412
26	846.2(2)	60.27(1)	121(1)	0.431
28	879.2(2)	62.56(1)	299(12)	0.443
30	892.6(5)	66.10(4)	404(22)	0.449
32	902.5(2)	69.81(2)	126(1)	0.459
34	934.2(2)	71.72(2)	87.3(5)	0.479
36	980.0(2)	72.45(1)	78.0(8)	0.503
38	1031.3(5)	72.72(4)	75(1)	0.529
40	1084.6(5)	72.84(3)	72.9(7)	0.556
42	1139.5(2)	72.84(1)	72.5(4)	0.584
44	1194.7(2)	72.82(1)	72.6(4)	0.611
46	1249.8(2)	72.81(1)	71.7(7)	0.639
48	1305.6(5)	72.76(3)	70.9(9)	0.667
50	1362.0(5)	72.69(3)	71.7(9)	0.695
52	1417.8(5)	72.65(3)	71(1)	0.723
54	1474.5(6)	72.57(3)	70(1)	0.752
56	1531.8(10)	72.46(5)	71(2)	0.780
58	1588(1.5)	72.42(7)	70(3)	0.808
60	1645(2)	72.34(9)		

I-Values and E_γ from ref. 2.

1. S. Lunardi et al., Phys. Rev. Lett. **72**, 1427(1994).
2. S. Lunardi et al., Nucl. Phys. **A618**, 238(1997).
3. L. H. Zhu et al., Nucl. Phys. **A635**, 325(1998).

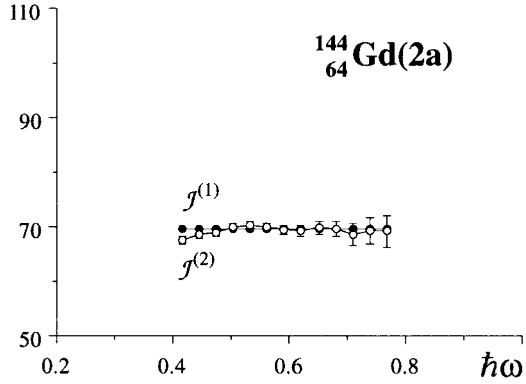


See page 58 for Explanation of Tables

A=144 Z=64 Gd(2a)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
27	774.5(5)	68.43(4)	66.3(7)	0.402
29	834.8(4)	68.28(3)	67.3(6)	0.432
31	894.2(4)	68.22(3)	67.6(6)	0.462
33	953.4(3)	68.18(2)	68.7(6)	0.491
35	1011.6(4)	68.21(3)	69.0(7)	0.520
37	1069.6(4)	68.25(3)	68.6(8)	0.549
39	1127.9(5)	68.27(3)	68.1(8)	0.579
41	1186.6(5)	68.26(3)	67.9(9)	0.608
43	1245.5(6)	68.25(3)	68(1)	0.637
45	1303.9(7)	68.26(4)	68(1)	0.667
47	1362.6(10)	68.25(5)	67(2)	0.696
49	1422(1.5)	68.21(7)	68(2)	0.726
51	1481(1.5)	68.20(7)	68(3)	0.755
53	1540(2)	68.18(9)		

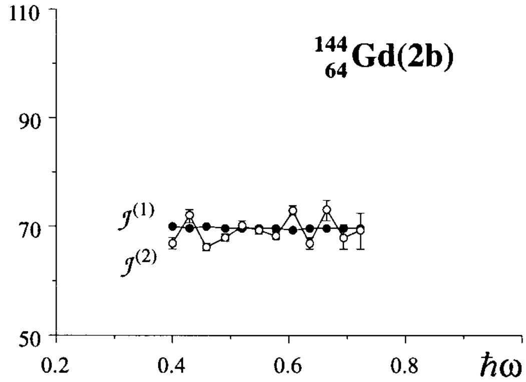
S. Lunardi et al., Nucl. Phys. **A618**, 238(1997).



A=144 Z=64 Gd(2b)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
26	743.6(8)	68.58(7)	65(1)	0.387
28	804.7(7)	68.35(6)	71(1)	0.417
30	861.4(5)	68.49(4)	64.8(7)	0.446
32	923.1(5)	68.25(4)	66.6(7)	0.477
34	983.2(4)	68.14(3)	68.7(8)	0.506
36	1041.4(5)	68.18(3)	68.0(7)	0.535
38	1100.2(3)	68.17(2)	66.9(7)	0.565
40	1160.0(5)	68.10(3)	71.4(8)	0.594
42	1216.0(4)	68.26(2)	65(1)	0.623
44	1277.1(9)	68.12(5)	72(2)	0.653
46	1333(1.3)	68.27(7)	67(2)	0.682
48	1393(1.5)	68.20(7)	68(3)	0.711
50	1452(2.5)	68.2(1)		

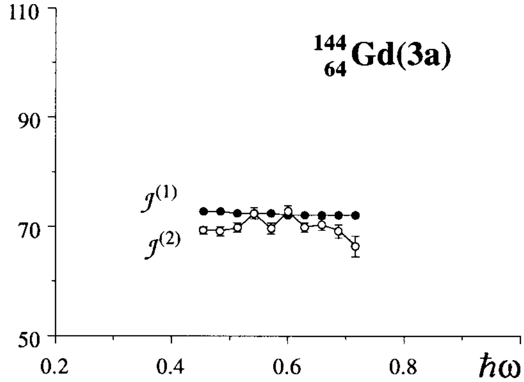
S. Lunardi et al., Nucl. Phys. **A618**, 238(1997).



A=144 Z=64 Gd(3a)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
31	852.9(4)	71.52(3)	68.0(7)	0.441
33	911.7(4)	71.30(3)	67.8(7)	0.471
35	970.7(5)	71.08(4)	68.4(9)	0.500
37	1029.2(6)	70.93(4)	71(1)	0.529
39	1085.5(6)	70.94(4)	68(1)	0.557
41	1144.0(7)	70.80(4)	71(1)	0.586
43	1200.1(5)	70.83(3)	68.5(9)	0.615
45	1258.5(6)	70.72(3)	69.0(9)	0.644
47	1316.5(5)	70.64(3)	68(1)	0.673
49	1375.5(8)	70.52(4)	65(2)	0.703
51	1437(1.5)	70.29(7)		

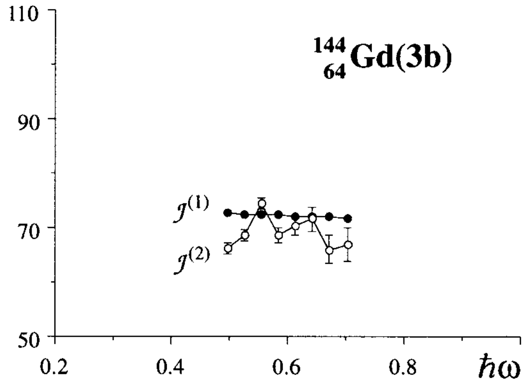
S. Lunardi et al., Nucl. Phys. **A618**, 238(1997).



A=144 Z=64 Gd(3b)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
34	936.8(5)	71.52(4)	65(1)	0.484
36	998.4(8)	71.11(6)	67(1)	0.514
38	1057.9(5)	70.90(3)	73(1)	0.543
40	1112.6(6)	71.00(4)	67(1)	0.571
42	1172(1)	70.82(6)	69(2)	0.601
44	1230(1)	70.73(6)	70(2)	0.629
46	1287(1.5)	70.71(8)	65(3)	0.659
48	1349(2)	70.4(1)	66(3)	0.690
50	1410(2)	70.2(1)		

S. Lunardi et al., Nucl. Phys. **A618**, 238(1997).



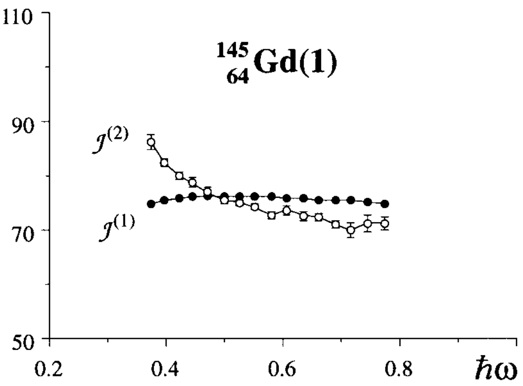
See page 58 for Explanation of Tables

A=145 Z=64 Gd(1)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
27.5	723.2(7)	74.67(7)	86(1)	0.373
29.5	769.6(3)	75.36(3)	82.5(7)	0.397
31.5	818.1(3)	75.79(3)	80.2(7)	0.422
33.5	868.0(3)	76.04(3)	78.7(9)	0.447
35.5	918.8(5)	76.19(4)	76.9(9)	0.472
37.5	970.8(3)	76.23(2)	75.5(6)	0.499
39.5	1023.8(3)	76.19(2)	75.1(6)	0.525
41.5	1077.1(3)	76.13(2)	74.2(6)	0.552
43.5	1131.0(3)	76.04(2)	72.9(7)	0.579
45.5	1185.9(4)	75.89(3)	74(1)	0.607
47.5	1240.2(6)	75.79(4)	73(1)	0.634
49.5	1295.3(4)	75.66(2)	72.3(7)	0.662
51.5	1350.6(4)	75.52(2)	71.2(7)	0.689
53.5	1406.8(4)	75.35(2)	70(1)	0.718
55.5	1464.0(10)	75.14(5)	71(2)	0.746
57.5	1520.1(7)	75.00(3)	71(1)	0.774
59.5	1576.2(7)	74.86(3)		

T. Rząca-Urban et al., Phys. Lett. **B356**, 456(1995).

* I-Values obtained by comparison with ^{150}Tb(1a).

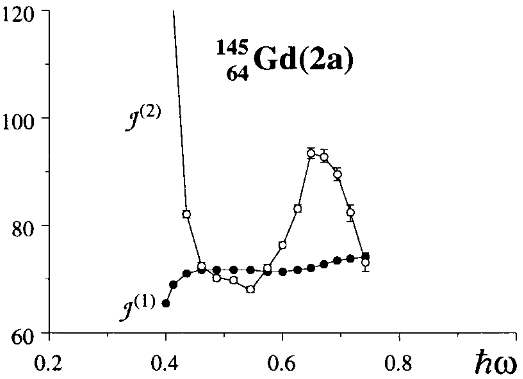


A=145 Z=64 Gd(2a)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
26.5	(792.7)			
28.5	810.2(3)	69.12(3)	121(2)	0.413
30.5	843.3(3)	71.15(3)	82.0(7)	0.434
32.5	892.1(3)	71.74(2)	72.5(6)	0.460
34.5	947.3(3)	71.78(2)	70.2(5)	0.488
36.5	1004.3(3)	71.69(2)	69.8(5)	0.517
38.5	1061.6(3)	71.59(2)	68.0(5)	0.546
40.5	1120.4(3)	71.40(2)	72.1(6)	0.574
42.5	1175.9(3)	71.43(2)	76.3(6)	0.601
44.5	1228.3(3)	71.64(2)	83.2(7)	0.626
46.5	1276.4(3)	72.08(2)	93(1)	0.649
48.5	1319.2(4)	72.77(2)	93(1)	0.670
50.5	1362.3(4)	73.41(2)	89(1)	0.692
52.5	1407.0(5)	73.92(3)	82(1)	0.716
54.5	1455.6(7)	74.20(4)	73(2)	0.742
56.5	1510.3(10)	74.16(5)		

T. Rząca-Urban et al., Phys. Lett. **B356**, 456(1995).

* I-Values obtained by comparison with ^{143}Eu.

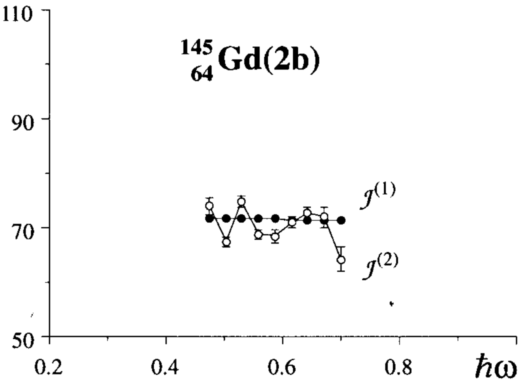


A=145 Z=64 Gd(2b)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
33.5	919.7(10)	71.76(8)	74(2)	0.473
35.5	973.7(5)	71.89(4)	67.5(8)	0.502
37.5	1033.0(5)	71.64(3)	75(1)	0.530
39.5	1086.4(5)	71.80(3)	68.8(8)	0.558
41.5	1144.5(5)	71.65(3)	68(1)	0.587
43.5	1202.9(8)	71.49(5)	71(1)	0.616
45.5	1259.2(5)	71.47(3)	73(1)	0.643
47.5	1314.3(7)	71.52(4)	72(2)	0.671
49.5	1369.9(12)	71.54(6)	64(2)	0.701
51.5	1432.1(18)	71.22(9)		

T. Rząca-Urban et al., Phys. Lett. **B356**, 456(1995).

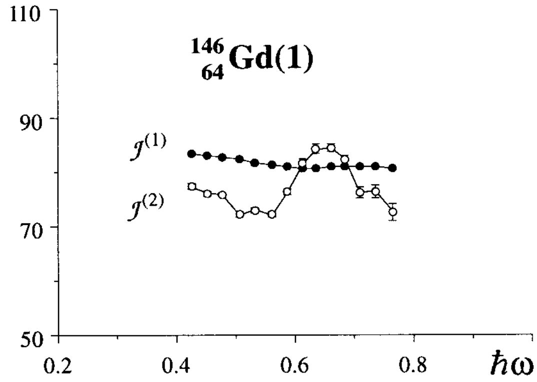
* I-Values obtained by comparison with ^{143}Eu.



See page 58 for Explanation of Tables

A=146 Z=64 Gd(1)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
35	826.3(3)	83.51(3)	77.4(6)	0.426
37	878.0(3)	83.14(3)	76.2(5)	0.452
39	930.5(2)	82.75(2)	75.9(4)	0.478
41	983.2(2)	82.38(2)	72.2(5)	0.506
43	1038.6(3)	81.84(2)	73.0(5)	0.533
45	1093.4(3)	81.40(2)	72.2(5)	0.561
47	1148.8(2)	80.95(1)	76.3(5)	0.588
49	1201.2(3)	80.75(2)	81.5(8)	0.613
51	1250.3(4)	80.78(3)	84.2(9)	0.637
53	1297.8(3)	80.91(2)	84.6(8)	0.661
55	1345.1(3)	81.04(2)	82.3(8)	0.685
57	1393.7(4)	81.08(2)	76.2(9)	0.710
59	1446.2(5)	80.90(3)	76(1)	0.736
61	1498.5(7)	80.75(4)	73(2)	0.763
63	1553.6(9)	80.46(5)		



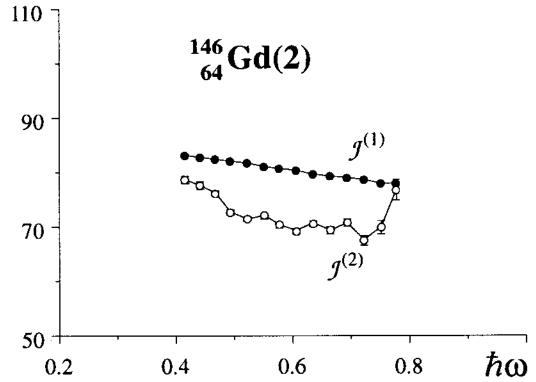
$Q_0 = 12 \pm 2$ eb (from ref. 3)

I-Values from ref. 1; E_γ from ref. 2.

1. B. Haas et al., Nucl. Phys. **A561**, 251(1993).
2. C. Schumacher et al., Phys. Rev. **C52**, 1302(1995).
3. G. Hebbinghaus et al., Phys. Lett. **B240**, 311(1990).

A=146 Z=64 Gd(2)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
34	806.2(3)	83.11(3)	78.7(7)	0.416
36	857.0(3)	82.85(3)	77.7(6)	0.441
38	908.5(3)	82.55(3)	76.1(5)	0.467
40	961.1(2)	82.20(2)	72.6(4)	0.494
42	1016.2(2)	81.68(2)	71.4(4)	0.522
44	1072.2(2)	81.14(2)	71.9(5)	0.550
46	1127.8(3)	80.69(2)	70.2(5)	0.578
48	1184.8(3)	80.18(2)	69.2(5)	0.607
50	1242.6(3)	79.67(2)	70.6(6)	0.636
52	1299.3(4)	79.27(2)	69.4(7)	0.664
54	1356.9(4)	78.86(2)	70.8(7)	0.693
56	1413.4(4)	78.53(2)	67.5(8)	0.722
58	1472.7(6)	78.09(3)	70(1)	0.751
60	1529.9(8)	77.78(4)	77(2)	0.778
62	1582.0(11)	77.75(5)		

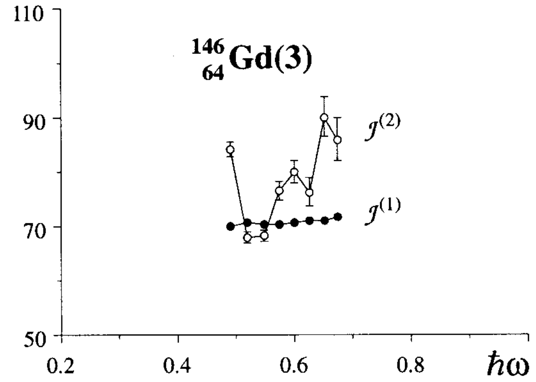


I-Values from ref. 2; E_γ from ref. 3.

1. T. Rząca-Urban et al., Z phys. **A339**, 421(1991).
2. B. Haas et al., Nucl. Phys. **A561**, 251(1993).
3. C. Schumacher et al., Phys. Rev. **C52**, 1302(1995).

A=146 Z=64 Gd(3)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
34	958.5(5)	69.90(4)	84(1)	0.491
36	1006.1(6)	70.57(4)	68(1)	0.518
38	1064.9(6)	70.43(4)	68(1)	0.547
40	1123.5(8)	70.32(5)	77(2)	0.575
42	1175.7(8)	70.60(5)	80(2)	0.600
44	1225.6(10)	70.99(6)	76(3)	0.626
46	1278.0(14)	71.21(8)	90(4)	0.650
48	1322.4(11)	71.84(6)	86(4)	0.673
50	1368.9(19)	72.3(1)		



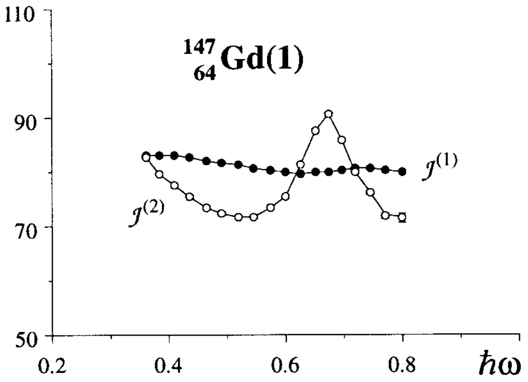
C. Schumacher et al., Phys. Rev. **C52**, 1302(1995).

* I-Values obtained by comparison with ^{143}Eu.

See page 58 for Explanation of Tables

A=147 Z=64 Gd(1)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
29.5	697.04(5)	83.209(6)	82.9(1)	0.361
31.5	745.31(6)	83.187(7)	79.6(1)	0.385
33.5	795.53(6)	82.964(6)	77.7(1)	0.411
35.5	847.03(6)	82.642(6)	75.6(1)	0.437
37.5	899.95(7)	82.227(6)	73.5(1)	0.464
39.5	954.36(7)	81.730(6)	72.5(1)	0.491
41.5	1009.55(7)	81.224(6)	71.8(1)	0.519
43.5	1065.24(6)	80.733(5)	71.7(1)	0.547
45.5	1121.03(7)	80.283(5)	73.5(1)	0.574
47.5	1175.45(8)	79.969(5)	75.5(2)	0.601
49.5	1228.44(7)	79.776(5)	81.5(2)	0.627
51.5	1277.52(9)	79.842(6)	87.7(2)	0.650
53.5	1323.14(9)	80.113(5)	90.8(3)	0.673
55.5	1367.21(11)	80.456(7)	86.0(3)	0.695
57.5	1413.74(11)	80.637(6)	80.0(3)	0.719
59.5	1463.77(16)	80.614(9)	76.1(4)	0.745
61.5	1516.33(23)	80.46(1)	72.0(5)	0.772
63.5	1571.88(29)	80.16(1)	71.6(9)	0.800
65.5	1627.76(66)	79.86(3)		

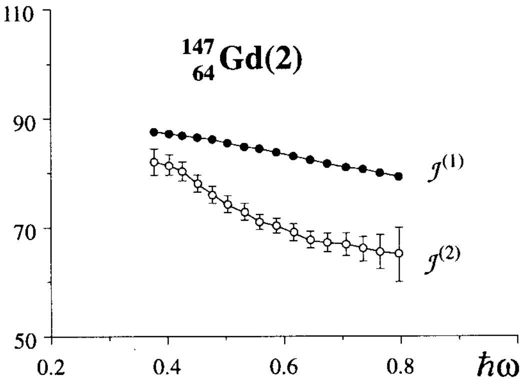


I-Values from refs. 4, 5; E_γ from ref. 5.

1. K. Zuber et al., Nucl. Phys. **A520**, 195c(1990).
2. K. Zuber et al., Phys. Lett. **B254**, 308(1991).
3. S. Flibotte et al., Phys. Rev. **C45**, R889(1992).
4. B. Haas et al., Nucl. Phys. **A561**, 251(1993).
5. Ch. Theisen et al., Phys. Rev. **C54**, 2910(1996).
6. L. H. Zhu et al., Phys. Rev. **C55**, 1169(1997).

A=147 Z=64 Gd(2)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
32.5	730.21(12)	87.6(1)	82(2)	0.377
34.5	778.94(8)	87.30(9)	81(2)	0.402
36.5	828.02(8)	86.95(8)	80(2)	0.426
38.5	877.74(7)	86.59(7)	78(2)	0.452
40.5	929.02(7)	86.11(6)	76(2)	0.478
42.5	981.60(8)	85.58(7)	74(2)	0.504
44.5	1035.49(8)	84.98(7)	73(1)	0.532
46.5	1090.42(8)	84.37(6)	71(1)	0.559
48.5	1146.67(8)	83.72(6)	70(1)	0.588
50.5	1203.52(9)	83.09(6)	69(2)	0.616
52.5	1261.38(9)	82.45(6)	68(2)	0.646
54.5	1320.44(10)	81.79(6)	67(2)	0.675
56.5	1380.04(12)	81.16(7)	67(2)	0.705
58.5	1439.81(13)	80.57(7)	66(2)	0.735
60.5	1500.33(16)	79.98(9)	66(3)	0.765
62.5	1561.34(24)	79.4(1)	65(5)	0.796
64.5	1622.84(40)	78.9(2)		



I-Values from refs. 3, 4; E_γ from ref. 4.

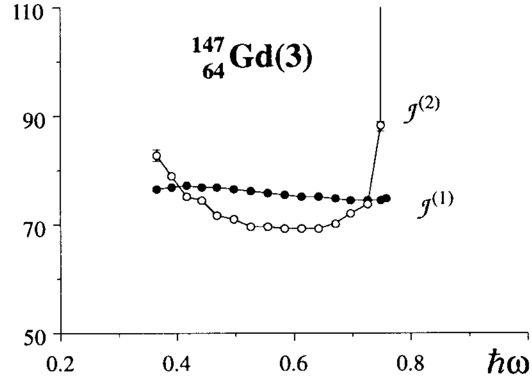
1. K. Zuber et al., Nucl. Phys. **A520**, 195c(1990).
2. K. Zuber et al., Phys. Lett. **B254**, 308(1991).
3. B. Haas et al., Nucl. Phys. **A561**, 251(1993).
4. Ch. Theisen et al., Phys. Rev. **C54**, 2910(1996).
5. L. H. Zhu et al., Phys. Rev. **C55**, 1169(1997).

See page 58 for Explanation of Tables

A=147 Z=64 Gd(3)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
27.5	704.8(5)	76.62(5)	82.8(9)	0.365
29.5	753.1(2)	77.02(2)	78.9(4)	0.389
31.5	803.8(2)	77.13(2)	75.2(3)	0.415
33.5	857.0(1)	77.01(1)	74.5(2)	0.442
35.5	910.7(1)	76.86(1)	71.8(2)	0.469
37.5	966.4(1)	76.57(1)	71.0(2)	0.497
39.5	1022.7(1)	76.27(1)	69.6(2)	0.526
41.5	1080.2(1)	75.91(1)	69.7(2)	0.555
43.5	1137.6(1)	75.60(1)	69.3(2)	0.583
45.5	1195.3(1)	75.29(1)	69.3(3)	0.612
47.5	1253.0(2)	75.02(1)	69.3(3)	0.641
49.5	1310.7(2)	74.77(1)	70.2(3)	0.670
51.5	1367.7(2)	74.58(1)	72.1(4)	0.698
53.5	1423.2(2)	74.48(1)	73.9(5)	0.725
55.5	1477.3(3)	74.46(2)	88.1(8)	0.750
57.5	1522.7(3)	74.87(1)	-381(28)	0.759
59.5	1512.2(7)	78.03(3)		

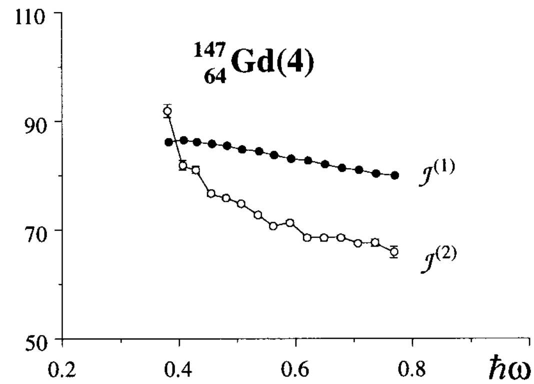
Ch. Theisen et al., Phys. Rev. **C54**, 2910(1996).



A=147 Z=64 Gd(4)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
32.5	741.9(4)	86.27(5)	92(1)	0.382
34.5	785.5(4)	86.57(4)	81.8(8)	0.405
36.5	834.4(3)	86.29(3)	81.1(7)	0.430
38.5	883.7(3)	86.00(3)	76.6(5)	0.455
40.5	935.9(2)	85.48(2)	75.9(4)	0.481
42.5	988.6(2)	84.97(2)	74.9(4)	0.508
44.5	1042.0(2)	84.45(2)	72.9(4)	0.535
46.5	1096.9(2)	83.87(2)	70.7(4)	0.563
48.5	1153.5(2)	83.23(1)	71.4(4)	0.591
50.5	1209.5(2)	82.68(1)	68.7(3)	0.619
52.5	1267.7(2)	82.04(1)	68.5(4)	0.649
54.5	1326.1(3)	81.44(2)	68.6(5)	0.678
56.5	1384.4(3)	80.90(2)	67.6(5)	0.707
58.5	1443.6(3)	80.35(2)	67.7(7)	0.737
60.5	1502.7(5)	79.86(3)	65.9(9)	0.767
62.5	1563.4(7)	79.31(4)		

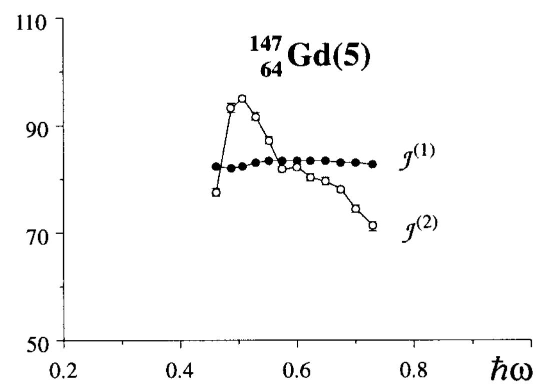
Ch. Theisen et al., Phys. Rev. **C54**, 2910(1996).



A=147 Z=64 Gd(5)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
37.5	899.5(4)	82.27(4)	77.5(8)	0.463
39.5	951.1(3)	82.01(3)	93.2(8)	0.486
41.5	994.0(2)	82.50(2)	95.0(6)	0.508
43.5	1036.1(2)	83.00(2)	91.7(8)	0.529
45.5	1079.7(3)	83.36(2)	87.1(7)	0.551
47.5	1125.6(2)	83.51(1)	81.8(5)	0.575
49.5	1174.5(2)	83.44(1)	82.3(6)	0.599
51.5	1223.1(3)	83.39(2)	80.5(7)	0.624
53.5	1272.8(3)	83.28(2)	79.5(7)	0.649
55.5	1323.1(3)	83.14(2)	78.1(6)	0.674
57.5	1374.3(3)	82.95(2)	74.5(7)	0.701
59.5	1428.0(4)	82.63(2)	71.3(9)	0.728
61.5	1484.1(6)	82.20(3)		

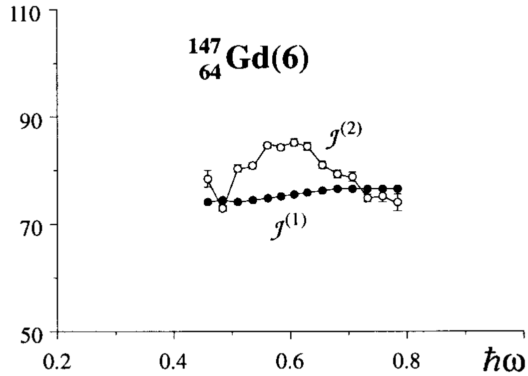
Ch. Theisen et al., Phys. Rev. **C54**, 2910(1996).



See page 58 for Explanation of Tables

A=147 Z=64 Gd(6)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
33.5	890.8(9)	74.09(7)	78(1)	0.458
35.5	941.8(3)	74.33(2)	72.9(5)	0.485
37.5	996.7(2)	74.25(1)	80.3(6)	0.511
39.5	1046.5(3)	74.53(2)	80.8(6)	0.536
41.5	1096.0(2)	74.82(1)	84.7(5)	0.560
43.5	1143.2(2)	75.23(1)	84.4(5)	0.584
45.5	1190.6(2)	75.59(1)	85.3(7)	0.607
47.5	1237.5(3)	75.96(2)	84.4(8)	0.631
49.5	1284.9(3)	76.27(2)	81.0(7)	0.655
51.5	1334.3(3)	76.44(2)	79.2(7)	0.680
53.5	1384.8(3)	76.55(2)	78.7(8)	0.705
55.5	1435.6(4)	76.62(2)	74.8(8)	0.731
57.5	1489.1(4)	76.56(2)	75(1)	0.758
59.5	1542.3(6)	76.51(3)	74(2)	0.785
61.5	1596.4(10)	76.42(5)		

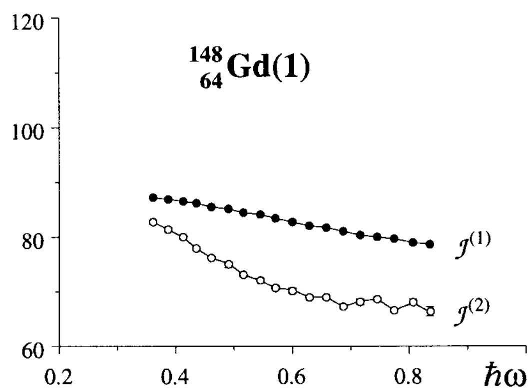


Ch. Theisen et al., Phys. Rev. **C54**, 2910(1996).

* I-Values obtained by comparison with ^{150}Tb(1a).

A=148 Z=64 Gd(1)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
31	700.2(1)	87.12(2)	82.6(3)	0.362
33	748.6(1)	86.83(2)	81.5(3)	0.387
35	797.7(1)	86.50(2)	79.8(3)	0.411
37	847.8(1)	86.11(1)	78.0(3)	0.437
39	899.1(1)	85.64(1)	76.3(3)	0.463
41	951.5(1)	85.13(1)	75.1(4)	0.489
43	1004.8(3)	84.59(2)	73.1(4)	0.516
45	1059.5(1)	84.00(1)	72.2(3)	0.544
47	1114.9(1)	83.42(1)	70.8(4)	0.572
49	1171.4(3)	82.81(2)	70.2(4)	0.600
51	1228.4(1)	82.22(1)	69.0(2)	0.629
53	1286.4(1)	81.62(1)	69.0(2)	0.658
55	1344.4(1)	81.08(1)	67.1(4)	0.687
57	1404.0(3)	80.48(2)	68.1(4)	0.717
59	1462.7(2)	79.99(1)	68.6(3)	0.746
61	1521.0(2)	79.55(1)	66.4(4)	0.776
63	1581.2(3)	79.05(1)	68.0(6)	0.805
65	1640.0(4)	78.66(2)	66.3(8)	0.835
67	1700.3(6)	78.22(3)		



$Q_0 = 14.6 \pm 0.2$ eb (from ref. 6)

I-Values from ref. 3; Eγ from refs. 4, 5.

1. M. A. Deleplanque et al., Phys. Rev. Lett. **60**, 1626(1988).
2. S. Flibotte et al., Phys. Rev. **C45**, R889(1992).
3. B. Hass et al., Nucl. Phys. **A561**, 251(1993).
4. G. de Angelis et al., Phys. Rev. **C53**, R679(1996).
5. L. H. Zhu et al., Phys. Rev. **C55**, 1169(1997).
6. H. Savajols et al., Phys. Rev. Lett. **76**, 4480(1996).

See page 58 for Explanation of Tables

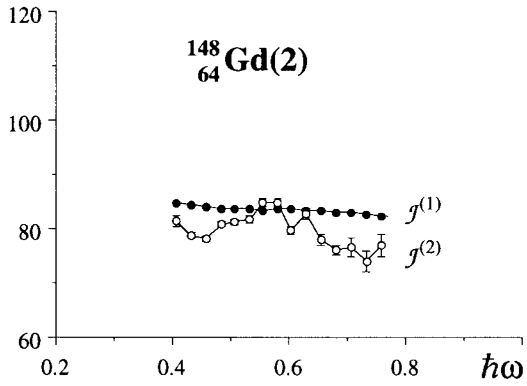
A=148 Z=64 Gd(2)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
34	790.2(5)	84.79(5)	82(1)	0.407
36	839.3(3)	84.59(3)	78.7(6)	0.432
38	890.1(2)	84.26(2)	78.1(4)	0.458
40	941.3(2)	83.93(2)	80.8(5)	0.483
42	990.8(2)	83.77(2)	81.3(5)	0.508
44	1040.0(2)	83.65(2)	81.8(6)	0.532
46	1088.9(3)	83.57(2)	84.9(7)	0.556
48	1136.0(2)	83.63(1)	84.9(7)	0.580
50	1183.1(3)	83.68(2)	79.7(7)	0.604
52	1233.3(3)	83.52(2)	83(1)	0.629
54	1281.7(5)	83.48(3)	78(1)	0.654
56	1333.1(5)	83.27(3)	76(1)	0.680
58	1385.7(5)	82.99(3)	76(2)	0.706
60	1438(1)	82.75(6)	74(2)	0.733
62	1492(1)	82.44(6)	77(2)	0.759
64	1544(1)	82.25(5)		

$Q_0 = 14.8 \pm 0.3$ eb (from ref. 3)

I-Values from ref. 1; Eγ from ref. 2.

1. B. Haas et al., Nucl. Phys. **A561**, 251(1993).
2. G. de Angelis et al., Phys. Rev. **C53**, 679(1996).
3. H. Savajols et al., Phys. Rev. Lett. **76**, 4480(1996).



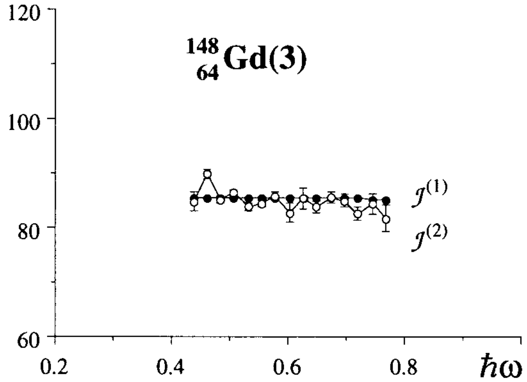
A=148 Z=64 Gd(3)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
37	853.8(9)	85.50(9)	85(2)	0.439
39	900.9(3)	85.47(3)	89.9(9)	0.462
41	945.4(3)	85.68(3)	85.1(8)	0.484
43	992.4(3)	85.65(3)	86.4(7)	0.508
45	1038.7(2)	85.68(2)	83.7(6)	0.531
47	1086.5(3)	85.60(2)	84.6(8)	0.555
49	1133.8(3)	85.55(2)	85.8(8)	0.579
51	1180.4(3)	85.56(2)	83(2)	0.602
53	1228.7(9)	85.46(6)	85(2)	0.626
55	1275.5(5)	85.46(3)	84(1)	0.650
57	1323.2(4)	85.40(3)	85(1)	0.673
59	1370.0(4)	85.40(2)	85(1)	0.697
61	1417.1(5)	85.39(3)	82(1)	0.721
63	1465.6(5)	85.29(3)	84(2)	0.745
65	1513(1)	85.26(6)	82(2)	0.769
67	1562(1)	85.15(5)		

$Q_0 = 17.8 \pm 1.3$ eb (from ref. 2)

1. G. de Angelis et al., Phys. Rev. **C53**, 679(1996).
2. H. Savajols et al., Phys. Rev. Lett. **76**, 4480(1996).

* I-Values obtained by comparison with ^{152}Dy(1); Eγ from ref. 1.



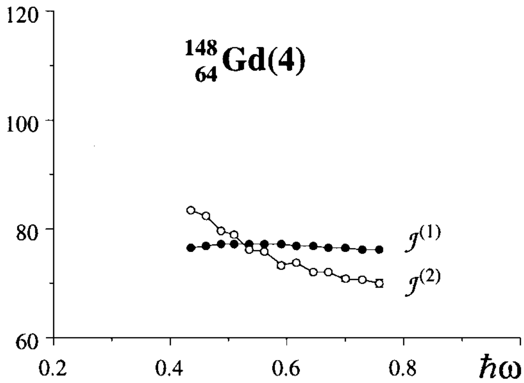
See page 58 for Explanation of Tables

A=148 Z=64 Gd(4)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
33	849.44(22)	76.52(2)	83.4(4)	0.437
35	897.40(16)	76.89(1)	82.5(4)	0.461
37	945.86(15)	77.18(1)	79.7(4)	0.485
39	996.08(19)	77.30(1)	78.8(3)	0.511
41	1046.83(14)	77.38(1)	76.1(3)	0.537
43	1099.39(16)	77.32(1)	75.7(3)	0.563
45	1152.20(15)	77.24(1)	73.3(4)	0.590
47	1206.76(24)	77.07(2)	73.7(3)	0.617
49	1261.00(16)	76.92(1)	72.0(3)	0.644
51	1316.57(14)	76.71(1)	72.0(4)	0.672
53	1372.10(22)	76.53(1)	70.9(4)	0.700
55	1428.55(24)	76.30(1)	70.7(5)	0.728
57	1485.15(26)	76.09(1)	69.9(7)	0.757
59	1542.40(42)	75.86(2)		

1. G. de Angelis et al., Phys. Rev. **C53**, 679(1996).
2. D. S. Haslip et al., Phys. Rev. Lett. **78**, 3447(1997).

* I-Values obtained by comparison with ^{150}Tb(1a); E_γ from ref. 2.

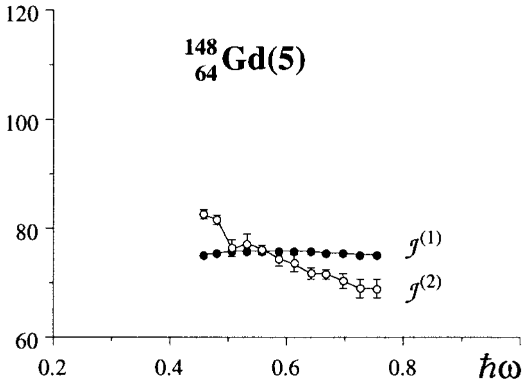


A=148 Z=64 Gd(5)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
34	891.1(3)	75.19(3)	82.5(9)	0.458
36	939.6(4)	75.56(3)	81.6(9)	0.482
38	988.6(4)	75.87(3)	76(2)	0.507
40	1041(1)	75.89(7)	77(2)	0.533
42	1092.7(4)	75.96(3)	76.0(7)	0.560
44	1145.3(3)	75.96(2)	74(1)	0.586
46	1199(1)	75.90(6)	74(2)	0.613
48	1253.4(5)	75.79(3)	71.7(9)	0.641
50	1309.2(5)	75.62(3)	71.6(9)	0.669
52	1365.1(5)	75.45(3)	70(1)	0.697
54	1422(1)	75.25(5)	69(2)	0.726
56	1480(1)	75.00(5)	69(2)	0.755
58	1538(1)	74.77(5)		

G. de Angelis et al., Phys. Rev. **C53**, 679(1996).

* I-Values obtained by comparison with ^{150}Tb(1a)

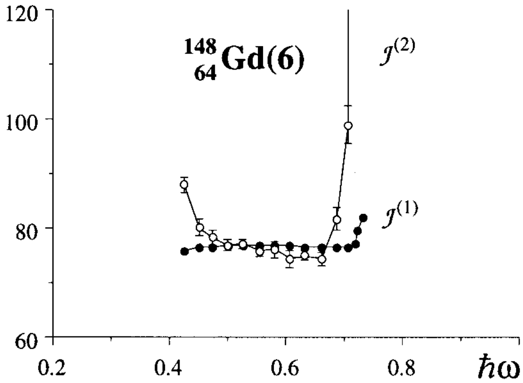


A=148 Z=64 Gd(6)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
32	830.3(6)	75.88(5)	88(2)	0.427
34	875.8(5)	76.50(4)	80(2)	0.450
36	925.7(8)	76.70(7)	78(2)	0.476
38	976.8(6)	76.78(5)	77(1)	0.501
40	1028.8(4)	76.79(3)	77.2(8)	0.527
42	1080.6(4)	76.81(3)	75.8(8)	0.554
44	1133.4(4)	76.76(3)	76(2)	0.580
46	1186(1)	76.73(6)	74(1)	0.606
48	1239.8(4)	76.63(2)	74.9(8)	0.633
50	1293.2(4)	76.55(2)	74(1)	0.660
52	1347.0(8)	76.47(5)	82(2)	0.686
54	1395.9(10)	76.65(5)	99(3)	0.708
56	1436.3(10)	77.28(5)	417(78)	0.721
58	1445.9(15)	79.54(8)	1111(655)	0.724
60	1449.5(15)	82.10(9)	163(17)	0.731
62	1474(2)	83.4(1)		

G. de Angelis et al., Phys. Rev. **C53**, 679(1996).

* I-Values obtained by comparison with ^{150}Tb(1a)



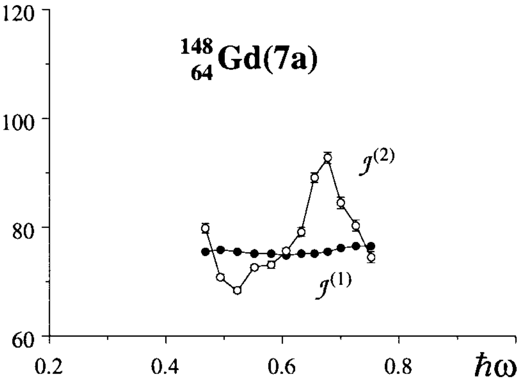
See page 58 for Explanation of Tables

A=148 Z=64 Gd(7a)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
35	911.8(4)	75.67(3)	79.8(8)	0.468
37	961.9(3)	75.89(2)	70.8(5)	0.495
39	1018.4(3)	75.61(2)	68.4(5)	0.524
41	1076.9(3)	75.22(2)	72.6(7)	0.552
43	1132.0(4)	75.09(3)	73.1(7)	0.580
45	1186.7(3)	75.00(2)	75.5(7)	0.607
47	1239.7(4)	75.02(2)	79.2(8)	0.632
49	1290.2(3)	75.18(2)	89.3(8)	0.656
51	1335.0(3)	75.66(2)	93(1)	0.678
53	1378.1(4)	76.19(2)	85(1)	0.701
55	1425.4(4)	76.47(2)	80.3(9)	0.725
57	1475.2(4)	76.60(2)	74.5(9)	0.751
59	1528.9(5)	76.53(3)		

Th. Byrski et al., Phys. Rev. **C57**, 1151(1998).

* I-Values obtained by comparison with ^{150}Tb(1a)

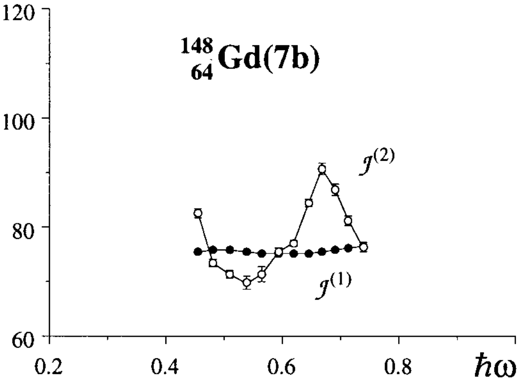


A=148 Z=64 Gd(7b)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
34	887.0(3)	75.54(3)	82.6(9)	0.456
36	935.4(4)	75.90(3)	73.4(8)	0.481
38	989.9(4)	75.77(3)	71.4(6)	0.509
40	1045.9(3)	75.53(2)	70(1)	0.537
42	1103.2(10)	75.24(7)	71(1)	0.566
44	1159.2(3)	75.05(2)	75.6(6)	0.593
46	1212.1(3)	75.08(2)	77.1(6)	0.619
48	1264.0(3)	75.16(2)	84.6(8)	0.644
50	1311.3(3)	75.50(2)	91(1)	0.667
52	1355.4(4)	75.99(2)	87(1)	0.689
54	1401.4(4)	76.35(2)	81.3(9)	0.713
56	1450.6(4)	76.52(2)	76.3(9)	0.738
58	1503.0(5)	76.50(3)		

Th. Byrski et al., Phys. Rev. **C57**, 1151(1998).

* I-Values obtained by comparison with ^{150}Tb(1a)

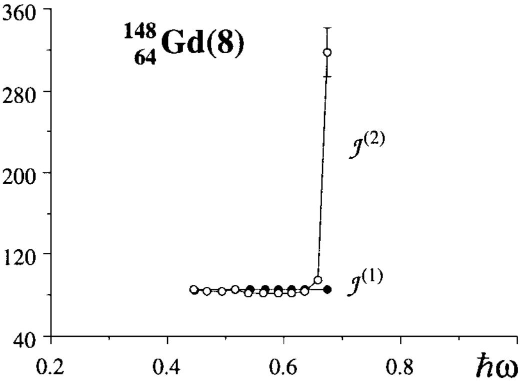


A=148 Z=64 Gd(8)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
38	868.4(3)	86.37(3)	85.8(8)	0.446
40	915.0(3)	86.34(3)	84.7(8)	0.469
42	962.2(3)	86.26(3)	84.2(6)	0.493
44	1009.7(2)	86.16(2)	85.8(5)	0.517
46	1056.3(2)	86.15(2)	82.3(5)	0.540
48	1104.9(2)	85.98(2)	82.5(5)	0.565
50	1153.4(2)	85.83(1)	83.0(6)	0.589
52	1201.6(3)	85.72(2)	83.0(6)	0.613
54	1249.8(2)	85.61(1)	84.4(6)	0.637
56	1297.2(3)	85.57(2)	95(2)	0.659
58	1339.3(6)	85.87(4)	317(23)	0.673
60	1351.9(7)	88.02(5)		

Th. Byrski et al., Phys. Rev. **C57**, 1151(1998).

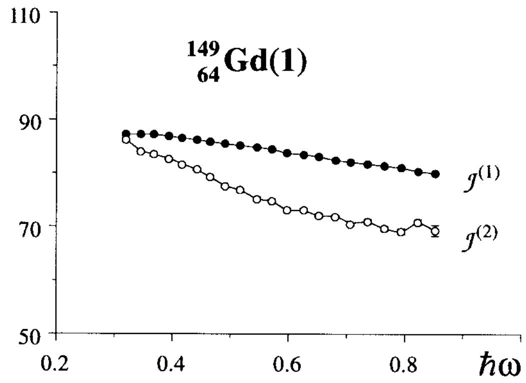
* I-Values obtained by comparison with ^{152}Dy(1).



See page 58 for Explanation of Tables

A=149 Z=64 Gd(1)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
27.5	617.8(1)	87.41(1)	86.2(3)	0.321
29.5	664.2(1)	87.32(1)	84.0(2)	0.344
31.5	711.8(1)	87.10(1)	83.5(2)	0.368
33.5	759.7(1)	86.88(1)	82.6(2)	0.392
35.5	808.1(1)	86.62(1)	81.6(2)	0.416
37.5	857.1(1)	86.34(1)	80.6(2)	0.441
39.5	906.7(1)	86.03(1)	79.4(2)	0.466
41.5	957.1(1)	85.68(1)	77.5(2)	0.492
43.5	1008.7(1)	85.26(1)	76.9(2)	0.517
45.5	1060.7(1)	84.85(1)	75.3(2)	0.544
47.5	1113.8(1)	84.40(1)	74.9(3)	0.570
49.5	1167.2(2)	83.96(1)	73.3(3)	0.597
51.5	1221.8(1)	83.48(1)	73.1(2)	0.625
53.5	1276.5(1)	83.04(1)	72.1(2)	0.652
55.5	1332.0(1)	82.58(1)	71.9(2)	0.680
57.5	1387.6(1)	82.16(1)	70.7(2)	0.708
59.5	1444.2(1)	81.71(1)	71.0(3)	0.736
61.5	1500.5(2)	81.31(1)	69.8(3)	0.765
63.5	1557.8(2)	80.88(1)	69.1(4)	0.793
65.5	1615.7(3)	80.46(1)	70.9(6)	0.822
67.5	1672.1(4)	80.14(2)	69(1)	0.851
69.5	1729.9(8)	79.77(4)		



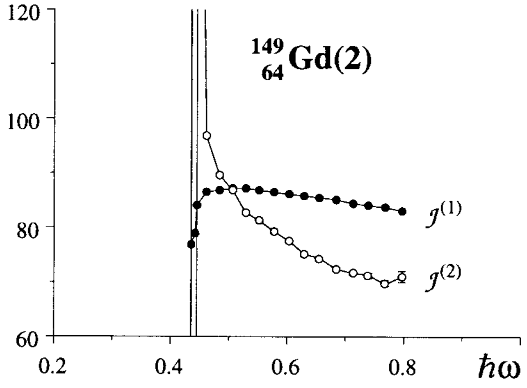
$Q_0 = 15.0 \pm 0.2$ eb (from refs. 4, 5)

I-Values from refs. 1, 3; E_γ from refs. 2, 3.

1. B. Haas et al., Phys. Rev. Lett. **60**, 503(1988); Phys. Rev. **C42**, R1817(1990); Nucl. Phys. **A561**, 251(1993).
2. S. Flibotte et al., Phys. Rev. Lett. **71**, 688(1993) and **71**, 4299(1993).
3. S. Flibotte et al., Nucl. Phys. **A584**, 373(1995).
4. H. Savajols et al., Phys. Rev. Lett. **76**, 4480(1996).
5. B. Kharraja et al., Phys. Rev. **C58**, 1422(1998).

A=149 Z=64 Gd(2)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
33.5	858.5(3)	76.88(3)	135(2)	0.437
35.5	888.2(2)	78.81(2)	-396(11)	0.442
37.5	878.1(2)	84.27(2)	175(2)	0.445
39.5	901.0(1)	86.57(1)	96.9(3)	0.461
41.5	942.3(1)	87.02(1)	89.7(3)	0.482
43.5	986.9(1)	87.14(1)	86.8(3)	0.505
45.5	1033.0(1)	87.12(1)	82.8(2)	0.529
47.5	1081.3(1)	86.93(1)	81.5(2)	0.553
49.5	1130.4(1)	86.70(1)	79.2(2)	0.578
51.5	1180.9(1)	86.37(1)	77.5(2)	0.603
53.5	1232.5(1)	86.00(1)	75.0(2)	0.630
55.5	1285.8(1)	85.55(1)	74.3(2)	0.656
57.5	1339.6(1)	85.10(1)	72.5(3)	0.684
59.5	1394.8(2)	84.60(1)	71.7(4)	0.711
61.5	1450.6(2)	84.10(1)	71.3(5)	0.739
63.5	1506.7(3)	83.63(2)	69.8(5)	0.768
65.5	1564.0(3)	83.12(2)	71(1)	0.796
67.5	1620.3(7)	82.70(4)		



$Q_0 = 15.6 \pm 0.3$ eb (from ref. 4)

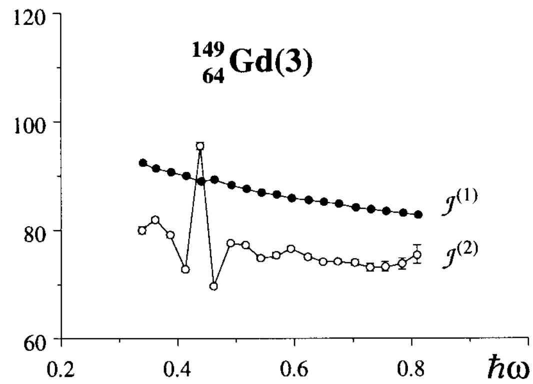
I-Values and E_γ from ref. 3.

1. B. Haas et al., Phys. Rev. **C42**, R1817(1990).
2. B. Haas et al., Nucl. Phys. **A561**, 251(1993).
3. S. Flibotte et al., Nucl. Phys. **A584**, 373(1995).
4. H. Savajols et al., Phys. Rev. Lett. **76**, 4480(1996).

See page 58 for Explanation of Tables

A=149 Z=64 Gd(3)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
30.5	649.8(4)	92.34(6)	80.0(7)	0.337
32.5	699.8(2)	91.45(3)	82.0(5)	0.362
34.5	748.6(2)	90.84(2)	79.1(4)	0.387
36.5	799.2(2)	90.09(2)	72.9(4)	0.413
38.5	854.1(2)	88.98(2)	95.5(6)	0.438
40.5	896.0(2)	89.29(2)	69.8(3)	0.462
42.5	953.3(2)	88.12(2)	77.5(4)	0.490
44.5	1004.9(2)	87.57(2)	77.2(4)	0.515
46.5	1056.7(2)	87.06(2)	74.9(4)	0.542
48.5	1110.1(2)	86.48(2)	75.3(4)	0.568
50.5	1163.2(2)	85.97(1)	76.5(4)	0.595
52.5	1215.5(2)	85.56(1)	75.0(4)	0.621
54.5	1268.8(2)	85.12(1)	74.1(4)	0.648
56.5	1322.8(2)	84.67(1)	74.1(4)	0.675
58.5	1376.8(2)	84.25(1)	73.9(5)	0.702
60.5	1430.9(3)	83.86(2)	73.1(7)	0.729
62.5	1485.6(4)	83.47(2)	73.3(9)	0.756
64.5	1540.2(5)	83.11(3)	74(1)	0.784
66.5	1594.4(7)	82.79(4)	75(2)	0.810
68.5	1647.4(9)	82.55(5)		



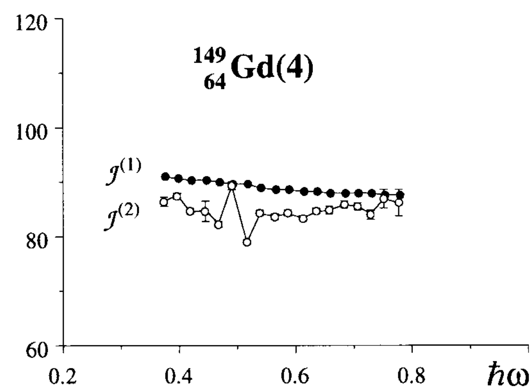
$Q_0 = 15.2 \pm 0.5$ eb (from ref. 3)

I-Values and Eγ from ref. 2.

1. B. Haas et al., Phys. Rev. **C42**, R1817(1990).
2. S. Flibotte et al., Nucl. Phys. **A584**, 373(1995).
3. H. Savajols et al., Phys. Rev. Lett. **76**, 4480(1996).

A=149 Z=64 Gd(4)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
33.5	725.6(4)	90.96(5)	86.4(8)	0.374
35.5	771.9(2)	90.69(2)	87.5(5)	0.397
37.5	817.6(2)	90.51(2)	84.6(5)	0.421
39.5	864.9(2)	90.18(2)	85(2)	0.444
41.5	912.1(2)	89.90(2)	82.3(5)	0.468
43.5	960.7(2)	89.52(2)	89.3(6)	0.492
45.5	1005.5(2)	89.51(2)	78.9(4)	0.515
47.5	1056.2(2)	89.00(2)	84.2(5)	0.540
49.5	1103.7(2)	88.79(2)	83.7(5)	0.564
51.5	1151.5(2)	88.58(2)	84.2(5)	0.588
53.5	1199.0(2)	88.41(1)	83.3(5)	0.612
55.5	1247.0(2)	88.21(1)	84.6(5)	0.635
57.5	1294.3(2)	88.08(1)	84.7(6)	0.659
59.5	1341.5(3)	87.96(2)	85.8(8)	0.682
61.5	1388.1(3)	87.89(2)	85.5(8)	0.706
63.5	1434.9(3)	87.81(2)	84.0(9)	0.729
65.5	1482.5(4)	87.69(2)	87(2)	0.753
67.5	1528.6(8)	87.66(5)	86(2)	0.776
69.5	1575.0(10)	87.62(6)		



$Q_0 = 17.5 \pm 0.6$ eb (from ref. 2)

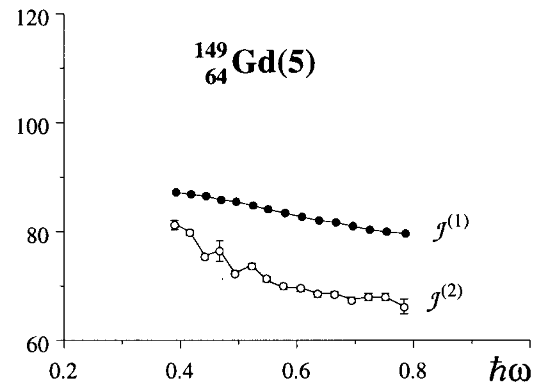
I-Values and Eγ from ref. 1.

1. S. Flibotte et al., Nucl. Phys. **A584**, 373(1995).
2. H. Savajols et al., Phys. Rev. Lett. **76**, 4480(1996).

See page 58 for Explanation of Tables

A=149 Z=64 Gd(5)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
33.5	755.7(4)	87.34(5)	81.3(8)	0.390
35.5	804.9(3)	86.97(3)	79.8(7)	0.415
37.5	855.0(3)	86.55(3)	75.5(5)	0.441
39.5	908.0(2)	85.90(2)	76(2)	0.467
41.5	960.3(2)	85.39(2)	72.3(5)	0.494
43.5	1015.6(3)	84.68(3)	73.7(6)	0.521
45.5	1069.9(3)	84.12(2)	71.2(5)	0.549
47.5	1126.1(3)	83.47(2)	69.8(5)	0.577
49.5	1183.4(3)	82.81(2)	69.6(5)	0.606
51.5	1240.9(3)	82.20(2)	68.5(5)	0.635
53.5	1299.3(3)	81.58(2)	68.5(5)	0.664
55.5	1357.7(3)	81.02(2)	67.5(6)	0.694
57.5	1417.0(4)	80.45(2)	68.0(7)	0.723
59.5	1475.8(4)	79.96(2)	68.0(7)	0.753
61.5	1534.6(5)	79.50(3)	66(1)	0.782
63.5	1595.0(10)	79.00(5)		

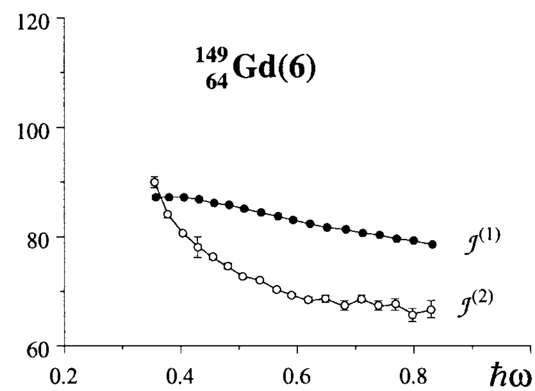


I-Values and E_γ from ref. 2.

1. G. de France et al., Phys. Lett. **B331**, 290(1994).
2. S. Flibotte etal., Nucl. Phys. **A584**, 373(1995).

A=149 Z=64 Gd(6)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
30.5	688.1(5)	87.20(6)	90(1)	0.355
32.5	732.6(2)	87.36(2)	84.0(5)	0.378
34.5	780.2(2)	87.16(2)	80.6(5)	0.403
36.5	829.8(2)	86.77(2)	78(2)	0.428
38.5	881.0(2)	86.27(2)	76.2(4)	0.454
40.5	933.5(2)	85.70(2)	74.6(4)	0.480
42.5	987.1(2)	85.10(2)	72.9(4)	0.507
44.5	1042.0(2)	84.45(2)	72.1(4)	0.535
46.5	1097.5(2)	83.83(2)	70.4(4)	0.563
48.5	1154.3(2)	83.17(1)	69.3(4)	0.592
50.5	1212.0(3)	82.51(2)	68.4(5)	0.621
52.5	1270.5(3)	81.86(2)	68.5(7)	0.650
54.5	1328.9(5)	81.27(3)	67.3(8)	0.679
56.5	1388.3(5)	80.67(3)	68.6(8)	0.709
58.5	1446.6(4)	80.19(2)	67.3(8)	0.738
60.5	1506.0(6)	79.68(3)	68(1)	0.768
62.5	1565.2(6)	79.22(3)	66(1)	0.798
64.5	1626.0(10)	78.72(5)	67(2)	0.828
66.5	1686.0(10)	78.29(5)		



I-Values and E_γ from ref. 2.

1. G. de France et al., Phys. Lett. **B331**, 290(1994).
2. S. Flibotte etal., Nucl. Phys. **A584**, 373(1995).

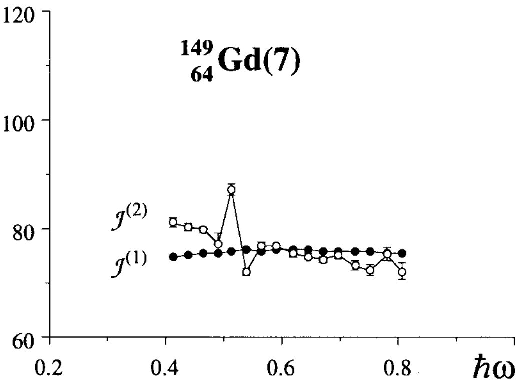
See page 58 for Explanation of Tables

A=149 Z=64 Gd(7)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
30.5	802.9(3)	74.73(3)	81.1(8)	0.414
32.5	852.2(4)	75.10(4)	80.3(8)	0.439
34.5	902.0(3)	75.39(3)	79.8(6)	0.464
36.5	952.1(2)	75.62(2)	77(2)	0.489
38.5	1003.8(4)	75.71(3)	87(1)	0.513
40.5	1049.7(4)	76.21(3)	72.1(7)	0.539
42.5	1105.2(4)	76.00(3)	76.9(7)	0.566
44.5	1157.2(3)	76.05(2)	76.8(6)	0.592
46.5	1209.3(3)	76.08(2)	75.5(6)	0.618
48.5	1262.3(3)	76.05(2)	74.9(6)	0.645
50.5	1315.7(3)	76.01(2)	74.3(6)	0.671
52.5	1369.5(3)	75.94(2)	75.0(7)	0.698
54.5	1422.8(4)	75.91(2)	73.1(9)	0.725
56.5	1477.5(5)	75.80(3)	72.5(9)	0.753
58.5	1532.7(5)	75.68(2)	75(1)	0.780
60.5	1585.8(6)	75.67(3)	72(2)	0.807
62.5	1641.2(11)	75.55(5)		

Th. Byrski et al., Phys. Rev. **C57**, 1151(1998).

* I-Values obtained by comparison with ^{150}Tb(1a)

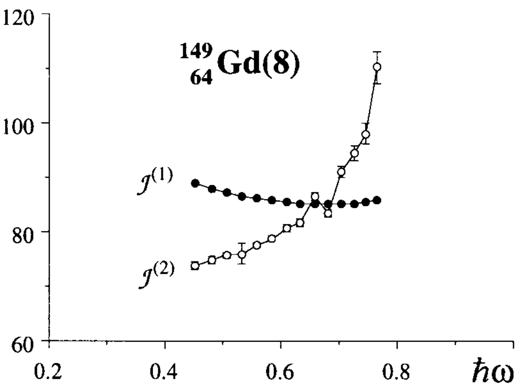


A=149 Z=64 Gd(8)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
39.5	877.8(4)	88.86(4)	73.8(7)	0.452
41.5	932.0(3)	87.98(3)	74.8(6)	0.479
43.5	985.5(3)	87.27(3)	75.8(6)	0.506
45.5	1038.3(3)	86.68(3)	76(2)	0.532
47.5	1091.0(2)	86.16(2)	77.7(4)	0.558
49.5	1142.5(2)	85.78(2)	78.7(6)	0.584
51.5	1193.3(3)	85.48(2)	80.6(7)	0.609
53.5	1242.9(3)	85.28(2)	81.6(7)	0.634
55.5	1291.9(3)	85.15(2)	86.6(8)	0.658
57.5	1338.1(3)	85.20(2)	83.3(7)	0.681
59.5	1386.1(3)	85.13(2)	91(1)	0.704
61.5	1430.0(4)	85.31(2)	95(1)	0.726
63.5	1472.3(5)	85.58(3)	98(2)	0.746
65.5	1513.1(6)	85.92(3)	110(3)	0.766
67.5	1549.4(8)	86.49(4)		

Th. Byrski et al., Phys. Rev. **C57**, 1151(1998).

* I-Values obtained by comparison with ^{152}Dy(1)

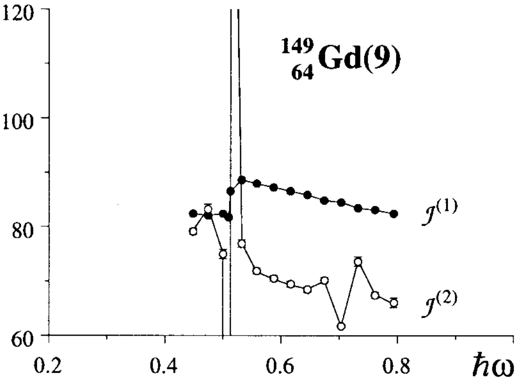


A=149 Z=64 Gd(9)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
36.5	874.1(3)	82.37(3)	79.2(6)	0.450
38.5	924.6(2)	82.20(2)	83.3(8)	0.474
40.5	972.6(4)	82.25(3)	75.0(9)	0.500
42.5	1025.9(5)	81.88(4)	-421(2)	0.511
44.5	1016.4(3)	86.58(3)	186(4)	0.514
46.5	1037.9(3)	88.64(3)	76.9(6)	0.532
48.5	1089.9(3)	88.08(2)	71.8(5)	0.559
50.5	1145.6(3)	87.29(2)	70.4(5)	0.587
52.5	1202.4(3)	86.49(2)	69.4(5)	0.616
54.5	1260.0(3)	85.71(2)	68.5(5)	0.645
56.5	1318.4(3)	84.95(2)	70.1(5)	0.673
58.5	1375.5(3)	84.33(2)	61.7(5)	0.704
60.5	1440.3(4)	83.32(2)	73.7(8)	0.734
62.5	1494.6(4)	82.97(2)	67.5(6)	0.762
64.5	1553.9(4)	82.37(2)	66.0(9)	0.792
66.5	1614.5(7)	81.76(4)		

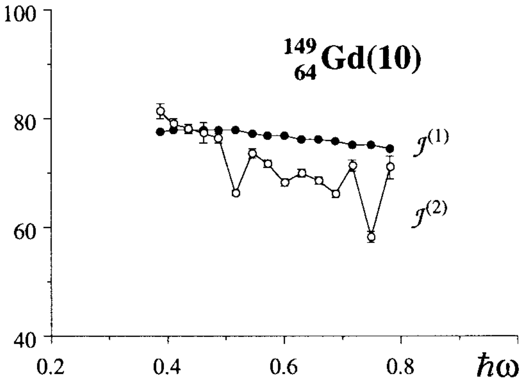
Th. Byrski et al., Phys. Rev. **C57**, 1151(1998).

* I-Values obtained by comparison with ^{152}Dy(1)



A=149 Z=64 Gd(10)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
29.5	747.6(6)	77.58(6)	81.5(1)	0.386
31.5	796.7(5)	77.82(5)	79.1(1)	0.411
33.5	847.3(4)	77.89(4)	78.1(9)	0.436
35.5	898.5(4)	77.91(3)	77(2)	0.462
37.5	950.2(4)	77.88(3)	76.5(8)	0.488
39.5	1002.5(4)	77.81(3)	66.3(6)	0.516
41.5	1062.8(4)	77.15(3)	73.7(8)	0.545
43.5	1117.1(4)	76.99(3)	71.8(7)	0.572
45.5	1172.8(4)	76.74(3)	68.4(7)	0.601
47.5	1231.3(5)	76.34(3)	70.1(8)	0.630
49.5	1288.4(4)	76.06(2)	68.5(7)	0.659
51.5	1346.8(4)	75.74(2)	66.2(7)	0.689
53.5	1407.2(5)	75.33(3)	71.3(1)	0.718
55.5	1463.3(6)	75.17(3)	58.4(1)	0.749
57.5	1531.8(10)	74.42(5)	70.9(2)	0.780
59.5	1588.2(13)	74.30(6)		

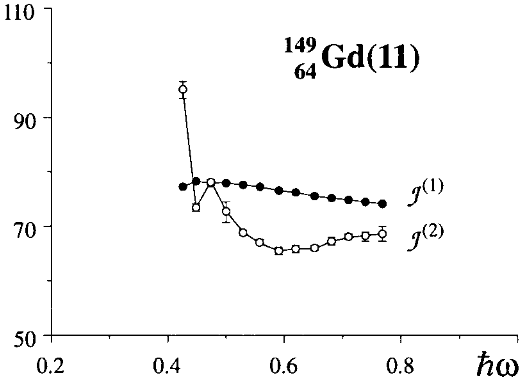


Th. Byrski et al., Phys. Rev. **C57**, 1151(1998).

* I-Values obtained by comparison with ^{150}Tb(1a)

A=149 Z=64 Gd(11)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
32.5	827.6(5)	77.33(5)	95(1)	0.424
34.5	869.7(4)	78.19(4)	73.4(7)	0.448
36.5	924.2(3)	77.91(3)	78.1(6)	0.475
38.5	975.4(3)	77.92(2)	73(2)	0.501
40.5	1030.4(3)	77.64(2)	68.8(5)	0.530
42.5	1088.5(3)	77.17(2)	67.0(6)	0.559
44.5	1148.2(4)	76.64(3)	65.5(6)	0.589
46.5	1209.3(4)	76.08(3)	65.9(6)	0.620
48.5	1270.0(4)	75.59(2)	66.0(6)	0.650
50.5	1330.6(4)	75.15(2)	67.2(6)	0.680
52.5	1390.1(3)	74.81(2)	68.0(6)	0.710
54.5	1448.9(4)	74.54(2)	68.1(7)	0.739
56.5	1507.6(5)	74.29(2)	68(1)	0.768
58.5	1566.0(11)	74.07(5)		

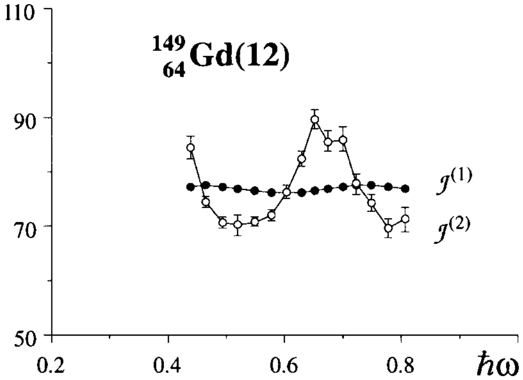


Th. Byrski et al., Phys. Rev. **C57**, 1151(1998).

* I-Values obtained by comparison with ^{150}Tb(1a)

A=149 Z=64 Gd(12)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
33.5	855.1(10)	77.18(9)	85(2)	0.439
35.5	902.4(6)	77.57(5)	74(1)	0.465
37.5	956.1(6)	77.40(5)	71(1)	0.492
39.5	1012.6(5)	77.03(4)	70(2)	0.521
41.5	1069.6(5)	76.66(4)	71(1)	0.549
43.5	1126.1(5)	76.37(3)	72(1)	0.577
45.5	1181.6(5)	76.17(3)	76(1)	0.604
47.5	1234.0(6)	76.18(4)	82(1)	0.629
49.5	1282.5(6)	76.41(4)	90(2)	0.652
51.5	1327.1(7)	76.86(4)	86(2)	0.675
53.5	1373.8(8)	77.16(4)	86(2)	0.699
55.5	1420.3(10)	77.45(5)	78(2)	0.723
57.5	1471.7(8)	77.46(4)	74(2)	0.749
59.5	1525.6(8)	77.35(4)	70(2)	0.777
61.5	1583.1(12)	77.06(6)	71(2)	0.806
63.5	1639.2(13)	76.87(6)		



Th. Byrski et al., Phys. Rev. **C57**, 1151(1998).

* I-Values obtained by comparison with ^{150}Tb(1a)

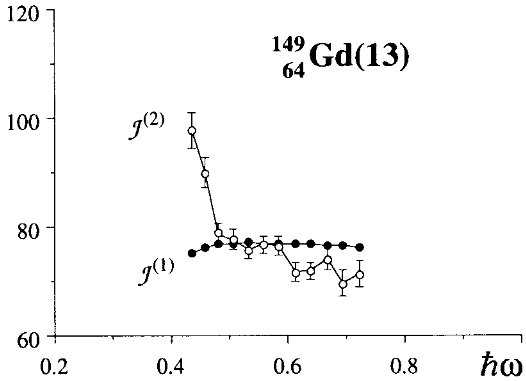
See page 58 for Explanation of Tables

A=149 Z=64 Gd(13)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
32.5	850.3(10)	75.27(9)	98(3)	0.435
34.5	891.2(10)	76.30(9)	90(3)	0.457
36.5	935.7(9)	76.95(7)	79(2)	0.481
38.5	986.5(9)	77.04(7)	78(2)	0.506
40.5	1038.0(8)	77.07(6)	76(2)	0.532
42.5	1090.8(8)	77.01(6)	77(2)	0.558
44.5	1142.9(8)	77.00(5)	76(2)	0.585
46.5	1195.2(9)	76.97(6)	72(2)	0.612
48.5	1251.1(10)	76.73(6)	72(2)	0.639
50.5	1306.7(7)	76.53(4)	74(2)	0.667
52.5	1360.6(15)	76.44(8)	70(2)	0.695
54.5	1418.0(13)	76.16(7)	71(3)	0.723
56.5	1474.0(15)	75.98(8)		

Th. Byrski et al., Phys. Rev. **C57**, 1151(1998).

* I-Values obtained by comparison with ^{150}Tb(1a)



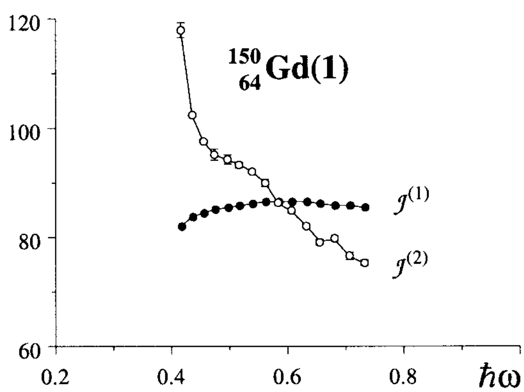
A=150 Z=64 Gd(1)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
34	815.0(4)	82.21(4)	118(1)	0.416
36	848.9(1)	83.64(1)	102.4(4)	0.434
38	888.0(1)	84.46(1)	97.7(4)	0.454
40	928.9(1)	85.05(1)	95.2(9)	0.475
42	970.9(4)	85.49(3)	94(1)	0.496
44	1013.4(2)	85.85(2)	93.3(5)	0.517
46	1056.2(1)	86.16(1)	92.0(4)	0.539
48	1099.7(1)	86.39(1)	90.0(7)	0.561
50	1144.1(3)	86.53(2)	86.4(6)	0.584
52	1190.4(1)	86.52(1)	84.9(3)	0.607
54	1237.6(1)	86.46(1)	82.1(5)	0.631
56	1286.3(2)	86.30(2)	79.2(5)	0.656
58	1336.8(2)	86.03(2)	79.7(5)	0.681
60	1387.0(2)	85.80(1)	76.5(6)	0.707
62	1439.3(3)	85.46(2)	75.3(6)	0.733
64	1492.4(3)	85.10(2)		

$Q_0 = 17.0^{+0.5}_{-0.4}$ eb (from ref. 3)

I-Values from ref. 2; E_γ from refs. 1, 2.

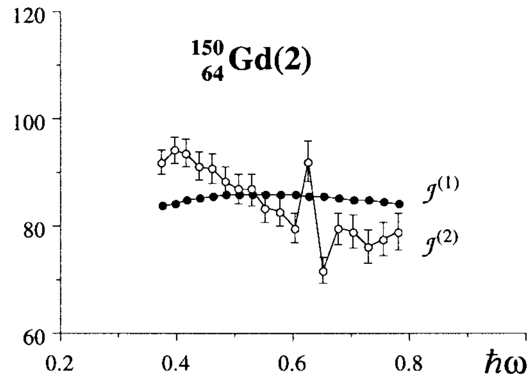
1. P. Fallon et al., Phys. Lett. **B218**, 137(1989).
2. P. Fallon et al., Phys. Lett. **B257**, 269(1991).
3. C. W. Beausang et al., Phys. Lett. **B417**, 13(1998).



See page 58 for Explanation of Tables

A=150 Z=64 Gd(2)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
31	727.9	83.80(8)	92(2)	0.375
33	771.5	84.25(8)	94(2)	0.396
35	814.0	84.77(8)	93(3)	0.418
37	856.8	85.20(9)	91(3)	0.439
39	900.7	85.49(9)	91(3)	0.461
41	944.8	85.73(9)	88(3)	0.484
43	990.1	85.85(9)	87(3)	0.507
45	1036.1	85.90(9)	87(3)	0.530
47	1082.2	85.94(9)	83(3)	0.553
49	1130.2	85.83(9)	83(3)	0.577
51	1178.5	85.70(9)	80(3)	0.602
53	1228.7	85.46(9)	92(4)	0.625
55	1272.2	85.68(9)	72(2)	0.650
57	1327.9	85.10(9)	80(3)	0.677
59	1378.2	84.89(8)	79(3)	0.702
61	1428.8	84.69(8)	76(3)	0.728
63	1481.3	84.39(8)	78(3)	0.754
65	1532.9	84.15(8)	79(3)	0.779
67	1583.6	83.99(8)		



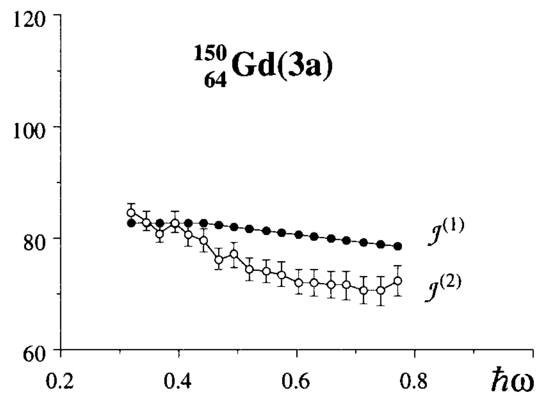
$Q_0 = 17.4^{+0.5}_{-0.4}$ eb (from ref. 3)

I-Values and E_γ from ref. 2.

1. T. Byrski et al., Phys. Rev. Lett. **64**, 1650(1990).
2. C. W. Beausang et al., Phys. Rev. Lett. **71**, 1800(1993).
3. C. W. Beausang et al., Phys. Lett. **B417**, 13(1998).

A=150 Z=64 Gd(3a)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
26	617.1	82.64(8)	85(2)	0.320
28	664.3	82.79(8)	83(2)	0.344
30	712.5	82.81(8)	81(2)	0.369
32	761.8	82.70(8)	83(2)	0.393
34	810.1	82.71(8)	81(2)	0.417
36	859.7	82.59(8)	80(2)	0.442
38	909.9	82.43(8)	76(2)	0.468
40	962.3	82.10(8)	77(2)	0.494
42	1014.2	81.84(8)	75(2)	0.521
44	1067.8	81.48(8)	74(2)	0.547
46	1121.7	81.13(8)	74(2)	0.574
48	1176.1	80.78(8)	72(2)	0.602
50	1231.5	80.39(8)	72(2)	0.630
52	1287.0	80.03(8)	72(2)	0.657
54	1342.8	79.68(8)	72(2)	0.685
56	1398.7	79.36(8)	71(3)	0.714
58	1455.3	79.02(8)	71(3)	0.742
60	1512.0	78.70(8)	72(3)	0.770
62	1567.3	78.48(8)		



$Q_0 = 16.2 \pm 0.4$ eb (from ref. 2)

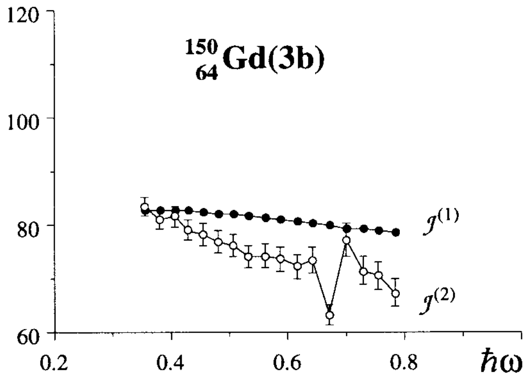
I-Values and E_γ from ref. 1.

1. C. W. Beausang et al., Phys. Rev. Lett. **71**, 1800(1993).
2. C. W. Beausang et al., Phys. Lett. **B417**, 13(1998).

See page 58 for Explanation of Tables

A=150 Z=64 Gd(3b)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
29	688.3	82.81(8)	83(2)	0.356
31	736.3	82.85(8)	81(2)	0.380
33	785.6	82.74(8)	82(2)	0.405
35	834.6	82.67(8)	79(2)	0.430
37	885.2	82.47(8)	78(2)	0.455
39	936.3	82.24(8)	77(2)	0.481
41	988.3	81.96(8)	76(2)	0.507
43	1040.7	81.68(8)	74(2)	0.534
45	1094.6	81.31(8)	74(2)	0.561
47	1148.5	80.98(8)	74(2)	0.588
49	1202.8	80.65(8)	72(2)	0.615
51	1258.1	80.28(8)	73(2)	0.643
53	1312.6	79.99(8)	63(2)	0.672
55	1375.7	79.23(8)	77(3)	0.701
57	1427.5	79.16(8)	71(3)	0.728
59	1483.5	78.87(8)	71(3)	0.756
61	1540.2	78.56(8)	67(3)	0.785
63	1599.6	78.14(8)		



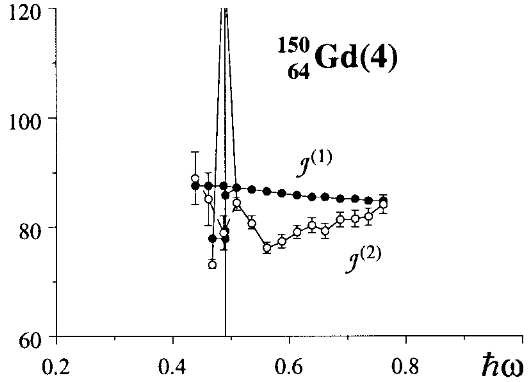
$Q_0 = 15.0^{+0.6}_{-0.4}$ eb (from ref. 2)

I-Values and E_γ from ref. 1.

1. C. W. Beausang et al., Phys. Rev. Lett. **71**, 1800(1993).
2. C. W. Beausang et al., Phys. Lett. **B417**, 13(1998).

A=150 Z=64 Gd(4)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
36	909.9(4)*	78.03(3)	73.3(8)	0.469
38	964.5(4)*	77.76(3)	133(3)	0.490
40	994.5(4)*	79.44(4)	-149(3)	0.491
42	967.6(4)*	85.78(4)	129(3)	0.492
44	998.6(4)	87.12(4)	84(1)	0.511
46	1046.0(5)	87.00(4)	81(1)	0.535
48	1095.5(5)	86.72(4)	76(1)	0.561
50	1147.9(5)	86.24(4)	77(1)	0.587
52	1199.6(5)	85.86(4)	79(1)	0.612
54	1250.2(6)	85.59(4)	80(1)	0.638
56	1300.0(6)	85.38(4)	79(1)	0.663
58	1350.5(6)	85.15(4)	81(1)	0.688
60	1399.6(6)	85.02(4)	81(2)	0.712
62	1448.7(7)	84.90(4)	82(2)	0.737
64	1497.5(7)	84.81(4)	84(2)	0.761
66	1545.0(7)	84.79(4)		



$Q_0 = 16.8 \pm 1.2$ eb (from ref. 2)

I-Values and E_γ from ref. 1.

1. P. Fallon et al., Phys. Rev. Lett. **73**, 782(1994).
2. C. W. Beausang et al., Phys. Lett. **B417**, 13(1998).

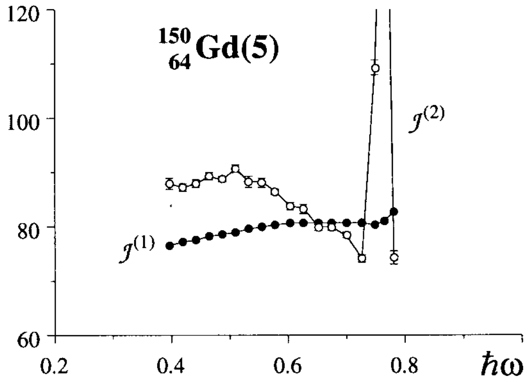
* There is a forking cascade: 856, 901, 948 keV (I=38, 40, 42) (see ref. 2).

See page 58 for Explanation of Tables

A=150 Z=64 Gd(5)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
30	771.6(4)	76.46(4)	88(1)	0.397
32	817.1(3)	77.10(3)	87.3(7)	0.420
34	862.9(2)	77.65(2)	87.9(5)	0.443
36	908.4(2)	78.16(2)	89.3(6)	0.465
38	953.2(2)	78.68(2)	88.7(6)	0.488
40	998.3(2)	79.13(2)	90.7(7)	0.510
42	1042.4(3)	79.62(2)	88(1)	0.533
44	1087.7(4)	79.99(3)	88.1(9)	0.555
46	1133.1(2)	80.31(1)	86.4(5)	0.578
48	1179.4(2)	80.55(1)	83.9(8)	0.602
50	1227.1(4)	80.68(3)	83.3(8)	0.626
52	1275.1(2)	80.78(1)	79.8(6)	0.650
54	1325.2(3)	80.74(2)	80.2(7)	0.675
56	1375.1(3)	80.72(2)	78.4(7)	0.700
58	1426.1(3)	80.64(2)	74.1(6)	0.727
60	1480.1(3)	80.40(2)	109(1)	0.749
62	1516.7(4)	81.10(2)	207(6)	0.763
64	1536.0(4)	82.68(2)	74(1)	0.781
66	1589.9(8)	82.40(4)		

S. Erturk, thesis Phys. U. Liverpool, (1998).

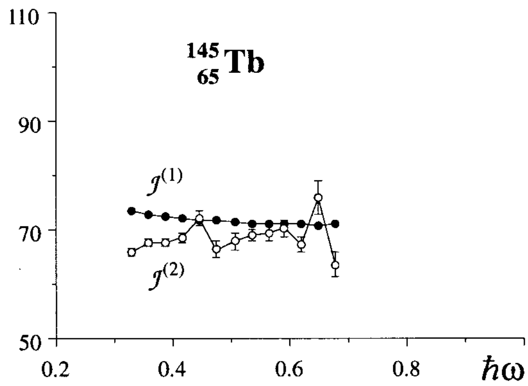


A=145 Z=65 Tb

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
23.5	627.1(4)	73.35(5)	65.9(6)	0.329
25.5	687.8(4)	72.70(4)	67.6(6)	0.359
27.5	747.0(3)	72.29(3)	67.7(7)	0.388
29.5	806.1(5)	71.95(4)	68.5(9)	0.418
31.5	864.5(6)	71.72(5)	72(2)	0.446
33.5	920(1)	71.74(8)	66(2)	0.475
35.5	980.3(11)	71.41(8)	68(1)	0.505
37.5	1039.3(6)	71.20(4)	69.0(9)	0.534
39.5	1097.3(5)	71.08(3)	69(1)	0.563
41.5	1155.0(9)	71.00(6)	70(2)	0.592
43.5	1211.9(9)	70.96(5)	67(1)	0.621
45.5	1271.3(9)	70.79(5)	76(3)	0.649
47.5	1324(2)	71.0(1)	63(2)	0.678
49.5	1387(1)	70.66(5)		

S. M. Mullins et al., Phys. Rev. **C50**, R2261(1994).

* I-Values obtained by comparison with ^{143}Eu.

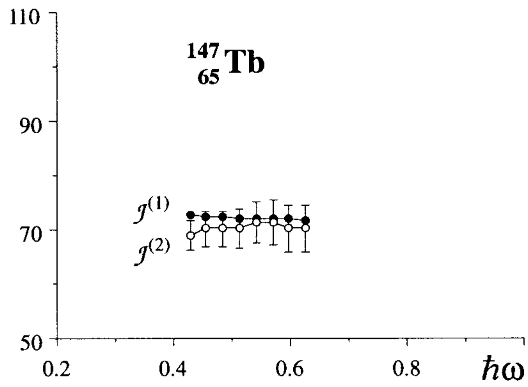


A=147 Z=65 Tb

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
30.5	826	72.6(1)	69(3)	0.428
32.5	884	72.4(1)	70(3)	0.456
34.5	941	72.3(1)	70(3)	0.485
36.5	998	72.1(1)	70(4)	0.513
38.5	1055	72.0(1)	71(4)	0.542
40.5	1111	72.0(1)	71(4)	0.570
42.5	1167	72.0(1)	70(4)	0.598
44.5	1224	71.9(1)	70(4)	0.626
46.5	1281	71.8(1)		

J. M. Nieminen et al., Phys. Rev. **C54**, 2764(1996).

* I-Values obtained by comparison with ^{143}Eu.



See page 58 for Explanation of Tables

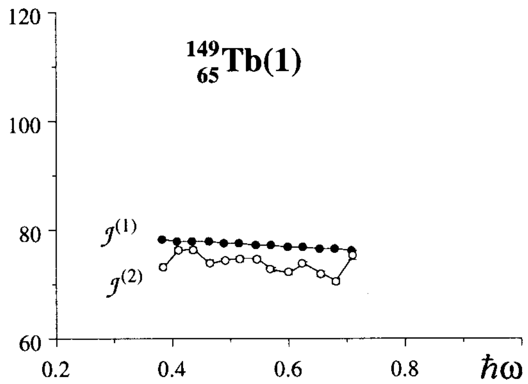
A=149 Z=65 Tb(1)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
29.5	740.1(2)	78.37(2)	73.3(4)	0.384
31.5	794.7(2)	78.02(2)	76.3(5)	0.410
33.5	847.1(3)	77.91(3)	76.5(5)	0.437
35.5	899.4(2)	77.83(2)	73.9(4)	0.463
37.5	953.5(2)	77.61(2)	74.5(4)	0.490
39.5	1007.2(2)	77.44(2)	74.8(5)	0.517
41.5	1060.7(3)	77.31(2)	74.8(5)	0.544
43.5	1114.2(2)	77.19(1)	72.7(5)	0.571
45.5	1169.2(3)	76.98(2)	72.2(5)	0.598
47.5	1224.6(2)	76.76(1)	73.8(5)	0.626
49.5	1278.8(3)	76.63(2)	71.9(5)	0.653
51.5	1334.4(3)	76.44(2)	70.5(5)	0.681
53.5	1391.1(3)	76.20(2)	75.3(7)	0.709
55.5	1444.2(4)	76.17(2)		

$Q_0 = 15.3 \pm 0.2$ eb

B. Kharraja et al., Phys. Rev. **C58**, 1422(1998).

* I-Values obtained by comparison with ^{150}Tb(1a).



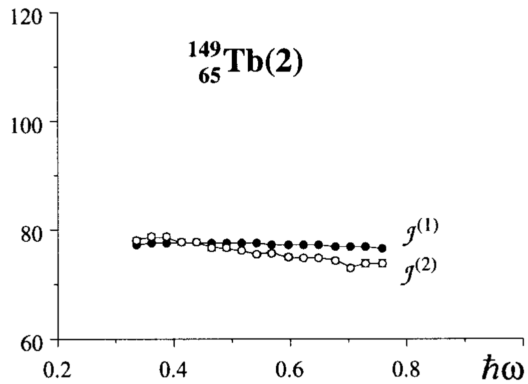
A=149 Z=65 Tb(2)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
25.5	646.2(3)	77.38(4)	78.1(6)	0.336
27.5	697.4(2)	77.43(2)	78.7(4)	0.361
29.5	748.2(2)	77.52(2)	78.7(4)	0.387
31.5	799.0(2)	77.60(2)	77.7(5)	0.412
33.5	850.5(3)	77.60(3)	77.7(5)	0.438
35.5	902.0(2)	77.61(2)	76.8(5)	0.464
37.5	954.1(3)	77.56(2)	76.6(5)	0.490
39.5	1006.3(2)	77.51(2)	76.2(4)	0.516
41.5	1058.8(2)	77.45(1)	75.6(4)	0.543
43.5	1111.7(2)	77.36(1)	75.8(5)	0.569
45.5	1164.5(3)	77.29(2)	74.9(5)	0.596
47.5	1217.9(2)	77.18(1)	74.8(4)	0.622
49.5	1271.4(2)	77.08(1)	74.8(4)	0.649
51.5	1324.9(2)	76.99(1)	74.3(4)	0.676
53.5	1378.7(2)	76.88(1)	73.0(5)	0.703
55.5	1433.5(3)	76.74(2)	73.8(6)	0.730
57.5	1487.7(3)	76.63(2)	73.8(7)	0.757
59.5	1541.9(4)	76.53(2)		

$Q_0 = 15.8^{+0.4}_{-0.3}$ eb

B. Kharraja et al., Phys. Rev. **C58**, 1422(1998).

* I-Values obtained by comparison with ^{150}Tb(1a).



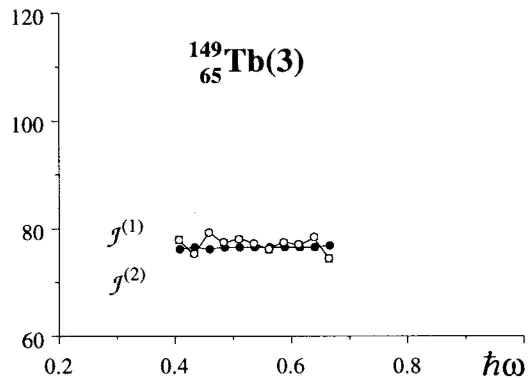
A=149 Z=65 Tb(3)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
30.5	786.0(3)	76.34(3)	77.8(6)	0.406
32.5	837.4(3)	76.43(3)	75.2(5)	0.432
34.5	890.6(2)	76.35(2)	79.4(4)	0.458
36.5	941.0(2)	76.51(2)	77.4(5)	0.483
38.5	992.7(3)	76.56(2)	78.1(6)	0.509
40.5	1043.9(2)	76.64(1)	77.1(4)	0.535
42.5	1095.8(2)	76.66(1)	76.0(4)	0.561
44.5	1148.4(2)	76.63(1)	77.5(5)	0.587
46.5	1200.0(3)	76.67(2)	76.9(5)	0.613
48.5	1252.0(2)	76.68(1)	78.4(6)	0.639
50.5	1303.0(3)	76.75(2)	74.5(7)	0.665
52.5	1356.7(4)	76.66(2)		

$Q_0 = 16.4^{+0.3}_{-0.4}$ eb

B. Kharraja et al., Phys. Rev. **C58**, 1422(1998).

* I-Values obtained by comparison with ^{150}Tb(1a).



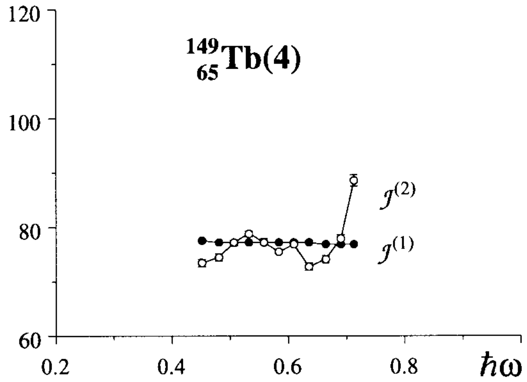
A=149 Z=65 Tb(4)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
32.5	(824.0)			
34.5	877.4(4)	77.50(4)	73.4(8)	0.452
36.5	931.9(4)	77.26(3)	74.3(7)	0.479
38.5	985.7(3)	77.10(2)	77.1(5)	0.506
40.5	1037.6(2)	77.10(1)	78.9(6)	0.531
42.5	1088.3(3)	77.18(2)	77.4(5)	0.557
44.5	1140.0(2)	77.19(1)	75.5(4)	0.583
46.5	1193.0(2)	77.12(1)	76.9(5)	0.610
48.5	1245.0(3)	77.11(2)	72.7(6)	0.636
50.5	1300.0(3)	76.92(2)	74.1(6)	0.664
52.5	1354.0(3)	76.81(2)	77.8(8)	0.690
54.5	1405.4(4)	76.85(2)	89(1)	0.714
56.5	1450.5(4)	77.21(2)		

$Q_0 = 16.0^{+0.6}_{-0.5}$ eb

B. Kharraja et al., Phys. Rev. **C58**, 1422(1998).

* I-Values obtained by comparison with ^{150}Tb(1a).

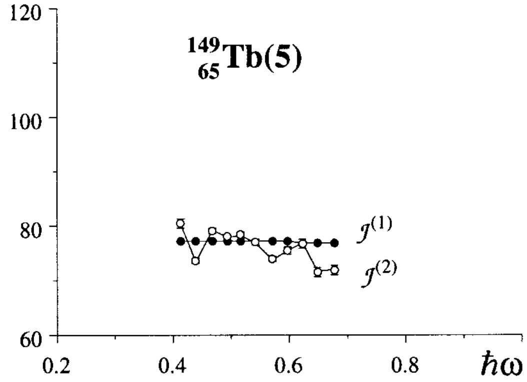


A=149 Z=65 Tb(5)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
31.5	803.7(4)	77.14(4)	80.5(8)	0.414
33.5	853.4(3)	77.34(3)	73.5(6)	0.440
35.5	907.8(3)	77.11(3)	79.2(6)	0.467
37.5	958.3(2)	77.22(2)	77.8(4)	0.492
39.5	1009.7(2)	77.25(2)	78.4(4)	0.518
41.5	1060.7(2)	77.31(1)	76.9(5)	0.543
43.5	1112.7(3)	77.29(2)	73.9(6)	0.570
45.5	1166.8(3)	77.13(2)	75.6(7)	0.597
47.5	1219.7(4)	77.07(3)	76.8(8)	0.623
49.5	1271.8(4)	77.06(2)	71.7(8)	0.650
51.5	1327.6(5)	76.83(3)	71.9(9)	0.678
53.5	1383.2(5)	76.63(3)		

B. Kharraja et al., Phys. Rev. **C58**, 1422(1998).

* I-Values obtained by comparison with ^{150}Tb(1a).



A=150 Z=65 Tb(1a)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
23	596.8(2)	75.40(3)	79.1(3)	0.311
25	647.4(1)	75.69(1)	79.5(2)	0.336
27	697.7(1)	75.96(1)	79.2(2)	0.361
29	748.2(1)	76.18(1)	78.4(2)	0.387
31	799.2(1)	76.33(1)	78.0(2)	0.412
33	850.5(1)	76.43(1)	77.5(2)	0.438
35	902.1(1)	76.49(1)	76.9(2)	0.464
37	954.1(1)	76.51(1)	75.8(2)	0.490
39	1006.9(1)	76.47(1)	75.9(2)	0.517
41	1059.6(1)	76.44(1)	75.8(2)	0.543
43	1112.4(1)	76.41(1)	75.3(2)	0.569
45	1165.5(1)	76.36(1)	75.0(2)	0.596
47	1218.8(1)	76.30(1)	74.8(2)	0.623
49	1272.3(1)	76.24(1)	73.9(3)	0.650
51	1326.4(2)	76.15(1)	74.2(4)	0.677
53	1380.3(2)	76.07(1)	73.3(4)	0.704
55	1434.9(2)	75.96(1)	73.4(5)	0.731
57	1489.4(3)	75.87(2)	73(1)	0.758
59	1544.1(7)	75.77(3)	72(2)	0.786
61	1599.6(10)	75.64(5)		

I-Values from ref. 1; E_γ from ref. 3.

1. M. A. Deleplanque et al., Phys. Rev. **C39**, 1651(1989).
2. B. Haas et al., Phys. Rev. **C42**, R1817(1990).
3. P. Fallon et al., Phys. Rev. **C52**, 93(1995).

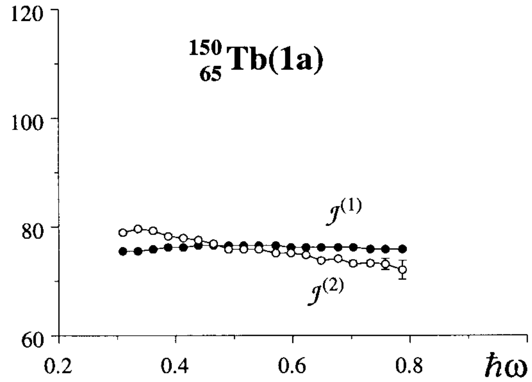


TABLE II. Superdeformed Rotational Bands in the Mass-130, Mass-140, Mass-150, and Mass-160 Regions

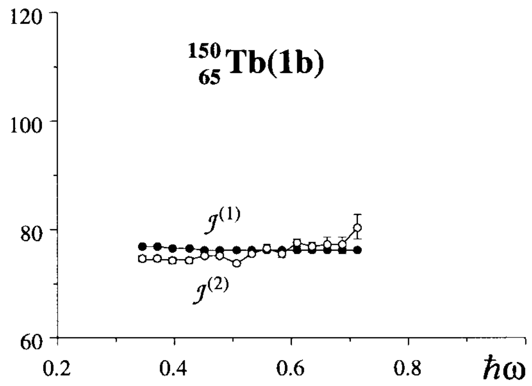
See page 58 for Explanation of Tables

A=150 Z=65 Tb(1b)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
26	662.5(2)	76.98(2)	74.6(4)	0.345
28	716.1(2)	76.80(2)	74.6(5)	0.371
30	769.7(3)	76.65(3)	74.3(6)	0.398
32	823.5(3)	76.50(3)	74.3(6)	0.425
34	877.3(3)	76.37(3)	75.2(5)	0.452
36	930.5(2)	76.30(2)	75.2(4)	0.479
38	983.7(2)	76.24(2)	73.8(4)	0.505
40	1037.9(2)	76.12(1)	75.6(5)	0.532
42	1090.8(3)	76.09(2)	76.5(6)	0.558
44	1143.1(3)	76.11(2)	75.5(6)	0.585
46	1196.1(3)	76.08(2)	77.7(8)	0.611
48	1247.6(4)	76.15(2)	76.8(8)	0.637
50	1299.7(4)	76.17(2)	77(1)	0.663
52	1351.4(6)	76.22(3)	77(1)	0.689
54	1403.3(8)	76.25(4)	80(2)	0.714
56	1453.0(11)	76.39(6)		

P. Fallon et al., Phys. Rev. **C52**, 93(1995).

* I-Values obtained by comparison with ^{150}Tb(1a).

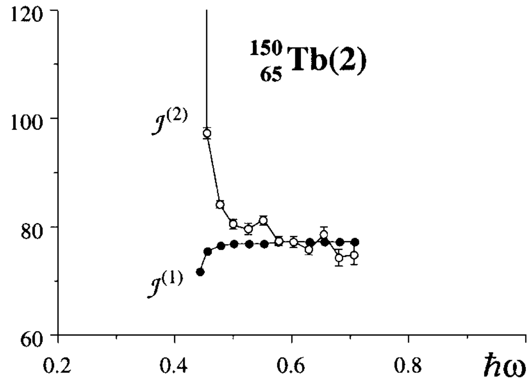


A=150 Z=65 Tb(2)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
32	877.0(4)	71.84(3)	354(16)	0.441
34	888.3(3)	75.43(3)	97(1)	0.454
36	929.4(3)	76.39(2)	84.0(7)	0.477
38	977.0(3)	76.77(2)	80.5(9)	0.501
40	1026.7(5)	76.95(4)	80(1)	0.526
42	1077.0(4)	77.07(3)	81.3(8)	0.551
44	1126.2(3)	77.25(2)	77.4(9)	0.576
46	1177.9(5)	77.26(3)	77(1)	0.602
48	1229.7(6)	77.25(4)	76(1)	0.628
50	1282.4(6)	77.20(4)	79(1)	0.654
52	1333.3(7)	77.25(4)	74(2)	0.680
54	1387.1(9)	77.14(5)	75(2)	0.707
56	1440.5(10)	77.06(5)		
58	(1494.0)			

P. Fallon et al., Phys. Rev. **C52**, 93(1995).

* I-Values obtained by comparison with ^{150}Tb(1a).



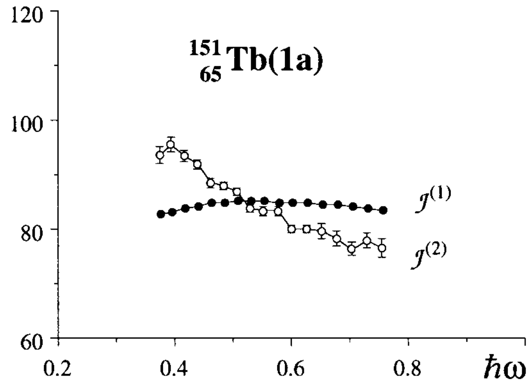
A=151 Z=65 Tb(1a)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
30.5	726.5(5)	82.59(6)	93(2)	0.374
32.5	769.3(5)	83.19(5)	95(1)	0.395
34.5	811.2(3)	83.83(3)	93.5(9)	0.416
36.5	854.0(3)	84.31(3)	92.0(9)	0.438
38.5	897.5(3)	84.68(3)	88.5(8)	0.460
40.5	942.7(3)	84.86(3)	87.9(8)	0.483
42.5	988.2(3)	85.00(3)	87.0(8)	0.506
44.5	1034.2(3)	85.09(2)	83.7(7)	0.529
46.5	1082.0(3)	85.03(2)	83.3(9)	0.553
48.5	1130.0(4)	84.96(3)	83.3(9)	0.577
50.5	1178.0(3)	84.89(2)	80.2(7)	0.602
52.5	1227.9(3)	84.70(2)	80.0(7)	0.627
54.5	1277.9(3)	84.51(2)	80(1)	0.652
56.5	1328.2(8)	84.32(5)	78(1)	0.677
58.5	1379.3(5)	84.10(3)	76(1)	0.703
60.5	1431.7(7)	83.82(4)	78(2)	0.729
62.5	1483.0(7)	83.61(4)	77(2)	0.755
64.5	1535.2(10)	83.38(5)		

$Q_0 = 17.1 \pm 0.5$ eb (from refs. 6, 7)

I-Values from refs. 3, 5; E_γ from ref. 5.

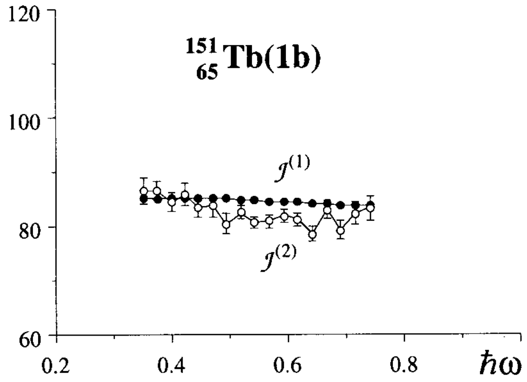
1. P. Fallon et al., Phys. Lett. **B218**, 137(1989).
2. L. Muller et al., Z. Phys. **A341**, 131(1992).
3. D. Curien et al., Phys. Rev. Lett. **71**, 2559(1993).
4. F. A. Beck et al., Nucl. Phys. **A557**, 67c(1993).
5. B. Kharraja et al., Phys. Lett. **B341**, 268(1995).
6. D. Nisius et al., Phys. Lett. **B392**, 18(1997).
7. Ch. Finck et al., Eur. Phys. J **A2**, 123(1998).



A=151 Z=65 Tb(1b)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
29.5	681.5(10)	85.1(1)	87(2)	0.352
31.5	727.7(8)	85.20(9)	87(2)	0.375
33.5	773.9(5)	85.28(6)	85(2)	0.399
35.5	821.2(8)	85.24(8)	86(2)	0.422
37.5	867.8(8)	85.27(8)	83(2)	0.446
39.5	915.8(5)	85.17(5)	84(2)	0.470
41.5	963.6(10)	85.10(9)	80(2)	0.494
43.5	1013.3(5)	84.87(4)	82(1)	0.519
45.5	1061.8(5)	84.76(4)	81(1)	0.543
47.5	1111.4(5)	84.58(4)	81(1)	0.568
49.5	1160.8(5)	84.42(4)	82(1)	0.593
51.5	1209.6(5)	84.33(3)	81(1)	0.617
53.5	1258.8(5)	84.21(3)	79(1)	0.642
55.5	1309.6(7)	84.00(4)	83(2)	0.667
57.5	1357.7(7)	83.97(4)	79(2)	0.691
59.5	1408.2(8)	83.79(5)	82(2)	0.716
61.5	1456.8(9)	83.75(5)	83(2)	0.740
63.5	1504.8(10)	83.73(6)		

$Q_0 = 18.4 \pm 0.6$ eb (from ref. 2)

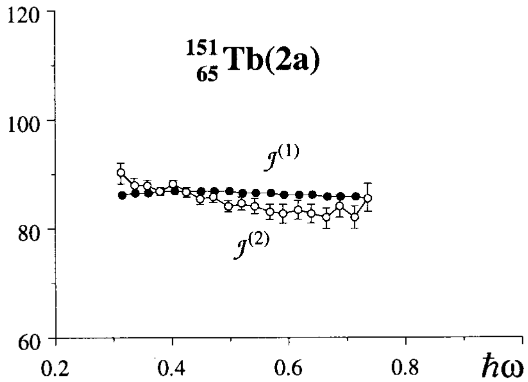


I Values and E_γ from ref. 1.

1. B. Kharraja et al., Phys. Lett. **B341**, 268(1995).
2. Ch. Finck et al., Eur. Phys. J **A2**, 123(1998).

A=151 Z=65 Tb(2a)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
26.5	602.1(8)	86.4(1)	90(2)	0.312
28.5	646.4(5)	86.63(7)	88(1)	0.335
30.5	691.9(5)	86.72(6)	88(1)	0.357
32.5	737.4(3)	86.79(4)	87.0(8)	0.380
34.5	783.4(3)	86.80(3)	88.3(8)	0.403
36.5	828.7(3)	86.88(3)	86.8(8)	0.426
38.5	874.8(3)	86.88(3)	85.5(9)	0.449
40.5	921.6(4)	86.81(4)	86(1)	0.472
42.5	968.1(4)	86.77(4)	84(1)	0.496
44.5	1015.7(4)	86.64(3)	85(1)	0.520
46.5	1063.0(5)	86.55(4)	84(1)	0.543
48.5	1110.5(6)	86.45(5)	83(1)	0.567
50.5	1158.6(6)	86.31(4)	83(2)	0.591
52.5	1206.9(8)	86.17(6)	84(2)	0.615
54.5	1254.8(6)	86.07(4)	83(2)	0.640
56.5	1303.2(8)	85.94(5)	82(2)	0.664
58.5	1352.0(8)	85.80(5)	84(2)	0.688
60.5	1399.5(9)	85.74(6)	82(2)	0.712
62.5	1448.3(9)	85.62(5)	86(3)	0.736
64.5	1495.0(11)	85.62(6)		



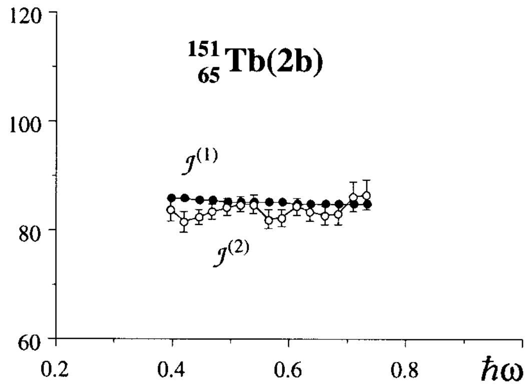
I-Values from refs. 3, 5; E_γ from ref. 5.

1. T. Byrski et al., Phys. Rev. Lett. **64**, 1650(1990).
2. L. Muller et al., Z. Phys. **A341**, 131(1992).
3. D. Curien et al., Phys. Rev. Lett. **71**, 2559(1993).
4. F. A. Beck et al., Nucl. Phys. **A557**, 67c(1993).
5. B. Kharraja et al., Phys. Lett. **B341**, 268(1995).

See page 58 for Explanation of Tables

A=151 Z=65 Tb(2b)

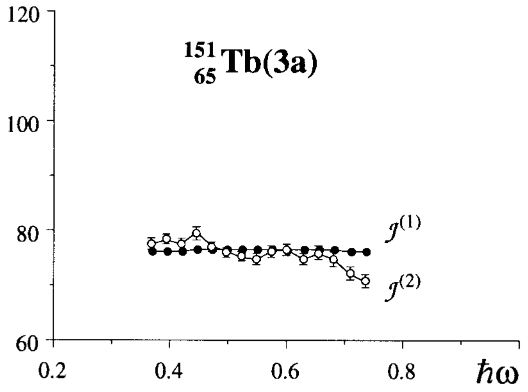
I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
33.5	768.6(5)	85.87(6)	84(2)	0.396
35.5	816.3(10)	85.8(1)	82(2)	0.420
37.5	865.3(6)	85.52(6)	82(1)	0.445
39.5	913.9(5)	85.35(5)	83(1)	0.469
41.5	961.9(6)	85.25(5)	84(2)	0.493
43.5	1009.4(6)	85.20(5)	85(1)	0.517
45.5	1056.6(5)	85.18(4)	85(2)	0.540
47.5	1103.8(8)	85.16(6)	82(2)	0.564
49.5	1152.5(6)	85.03(4)	82(2)	0.588
51.5	1201.1(7)	84.92(5)	84(2)	0.612
53.5	1248.5(6)	84.90(4)	83(2)	0.636
55.5	1296.5(7)	84.84(5)	83(2)	0.660
57.5	1344.8(7)	84.77(4)	83(2)	0.684
59.5	1392.9(10)	84.72(6)	86(3)	0.708
61.5	1439.3(10)	84.76(6)	87(3)	0.731
63.5	1485.5(10)	84.82(6)		



B. Kharraja et al., Phys. Lett. **B341**, 268(1995).

A=151 Z=65 Tb(3a)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
27.5	709.3(5)	76.13(5)	78(1)	0.368
29.5	760.9(5)	76.23(5)	78.4(9)	0.393
31.5	811.9(3)	76.36(3)	78(1)	0.419
33.5	863.5(7)	76.43(6)	80(1)	0.444
35.5	913.8(4)	76.60(3)	77.2(8)	0.470
37.5	965.6(4)	76.64(3)	76.0(9)	0.496
39.5	1018.2(5)	76.61(4)	75(1)	0.522
41.5	1071.3(5)	76.54(4)	75(1)	0.549
43.5	1124.7(5)	76.46(3)	76(1)	0.576
45.5	1177.1(5)	76.46(3)	77(1)	0.602
47.5	1229.3(5)	76.47(3)	75(1)	0.628
49.5	1282.7(5)	76.40(3)	76(1)	0.655
51.5	1335.4(7)	76.38(4)	75(1)	0.681
53.5	1388.8(7)	76.32(4)	72(1)	0.708
55.5	1444.2(6)	76.17(3)	71(1)	0.736
57.5	1500.7(8)	75.96(4)		

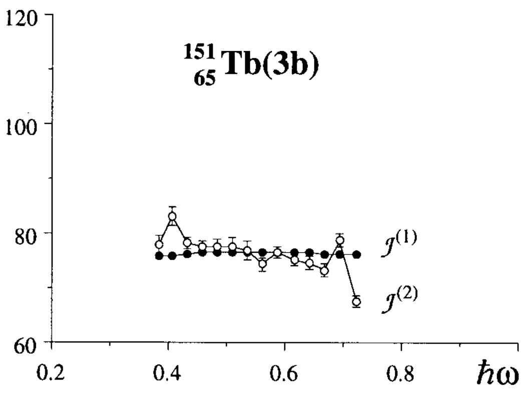


G. de France et al., Phys. Lett. **B331**, 290(1994).

* I-Values obtained by comparison with ^{150}Tb(1a).

A=151 Z=65 Tb(3b)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
28.5	739(1)	75.8(1)	78(2)	0.382
30.5	790.4(8)	75.91(8)	83(2)	0.407
32.5	838.6(6)	76.32(5)	78(1)	0.432
34.5	889.7(5)	76.43(4)	78(1)	0.458
36.5	941.3(5)	76.49(4)	78(1)	0.484
38.5	992.9(7)	76.54(5)	78(2)	0.509
40.5	1044.4(8)	76.60(6)	77(2)	0.535
42.5	1096.4(8)	76.61(6)	74(1)	0.562
44.5	1150.2(5)	76.51(3)	76(1)	0.588
46.5	1202.5(5)	76.51(3)	75(1)	0.615
48.5	1255.7(5)	76.45(3)	75(1)	0.641
50.5	1309.3(7)	76.38(4)	73(1)	0.668
52.5	1363.8(5)	76.26(3)	79(1)	0.695
54.5	1414.6(5)	76.35(3)	68(1)	0.722
56.5	1473.8(8)	75.99(4)		



G. de France et al., Phys. Lett. **B331**, 290(1994).

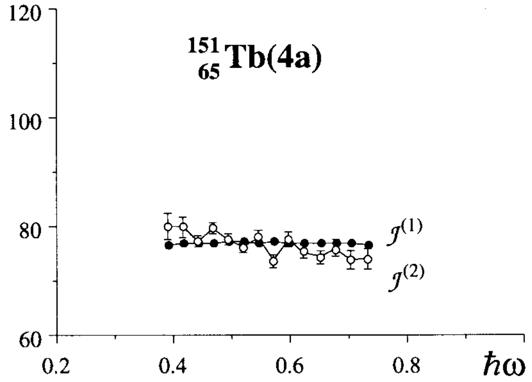
* I-Values obtained by comparison with ^{150}Tb(1a).

A=151 Z=65 Tb(4a)

I^*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
29.5	758(1)	76.5(1)	80(2)	0.392
31.5	808(1)	76.73(9)	80(2)	0.417
33.5	858.1(5)	76.91(4)	77(1)	0.442
35.5	909.8(5)	76.94(4)	80(1)	0.468
37.5	960.0(5)	77.08(4)	78(1)	0.493
39.5	1011.6(5)	77.11(4)	76(1)	0.519
41.5	1064.2(5)	77.05(4)	78(1)	0.545
43.5	1115.5(6)	77.10(4)	74(1)	0.571
45.5	1169.8(6)	76.94(4)	78(1)	0.598
47.5	1221.3(7)	76.97(4)	75(1)	0.624
49.5	1274.4(5)	76.90(3)	74(1)	0.651
51.5	1328.2(7)	76.80(4)	76(2)	0.677
53.5	1380.9(8)	76.76(4)	74(2)	0.704
55.5	1435(1)	76.66(5)	74(2)	0.731
57.5	1489(1)	76.56(5)		

G. de France et al., Phys. Lett. **B331**, 290(1994).

* I-Values obtained by comparison with ^{150}Tb(1a).

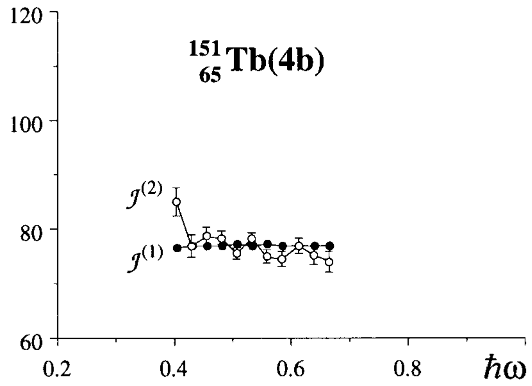


A=151 Z=65 Tb(4b)

I^*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
30.5	785(1)	76.4(1)	85(3)	0.404
32.5	832(1)	76.92(9)	77(2)	0.429
34.5	884(1)	76.92(9)	79(2)	0.455
36.5	934.9(5)	77.01(4)	78(1)	0.480
38.5	985.9(5)	77.09(4)	76(1)	0.506
40.5	1038.8(5)	77.01(4)	78(1)	0.532
42.5	1089.9(5)	77.07(4)	75(1)	0.558
44.5	1143.3(7)	76.97(5)	75(1)	0.585
46.5	1196.9(7)	76.87(4)	77(1)	0.612
48.5	1248.9(7)	76.87(4)	75(2)	0.638
50.5	1302(1)	76.80(6)	74(2)	0.665
52.5	1356(1)	76.70(6)		

G. de France et al., Phys. Lett. **B331**, 290(1994).

* I-Values obtained by comparison with ^{150}Tb(1a).

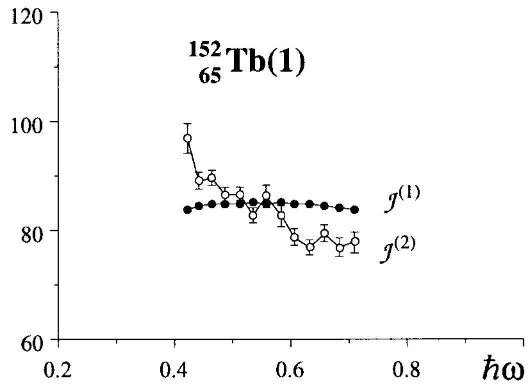


A=152 Z=65 Tb(1)

I^*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
35	823(1)	83.8(1)	97(3)	0.422
37	864.3(6)	84.46(6)	89(2)	0.443
39	909.2(5)	84.69(5)	90(1)	0.466
41	953.8(5)	84.92(4)	87(1)	0.489
43	1000.0(5)	85.00(4)	87(1)	0.512
45	1046.2(4)	85.07(3)	83(1)	0.535
47	1094.6(7)	84.96(5)	86(2)	0.559
49	1141.0(8)	85.01(6)	83(2)	0.583
51	1189.4(7)	84.92(5)	79(2)	0.607
53	1240.2(7)	84.66(5)	77(1)	0.633
55	1292.2(6)	84.35(4)	79(2)	0.659
57	1342.6(8)	84.17(5)	77(2)	0.684
59	1394.6(8)	83.90(5)	78(2)	0.710
61	1446(1)	83.68(6)		

G. de France et al., Phys. Lett. **B331**, 290(1994).

* I-Values obtained by comparison with ^{152}Dy(1).



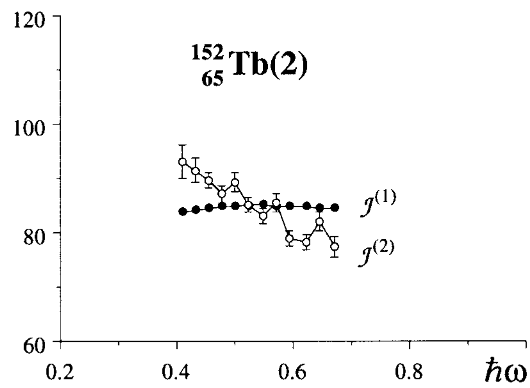
See page 58 for Explanation of Tables

A=152 Z=65 Tb(2)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
34	801(1)	83.6(1)	93(3)	0.411
36	844(1)	84.1(1)	92(2)	0.433
38	887.7(5)	84.49(5)	90(1)	0.455
40	932.3(5)	84.74(5)	87(1)	0.478
42	978.2(6)	84.85(5)	89(2)	0.500
44	1023.0(6)	85.04(5)	85(1)	0.523
46	1069.9(5)	85.06(4)	83(1)	0.547
48	1118.1(6)	84.97(5)	85(2)	0.571
50	1164.9(7)	84.99(5)	79(1)	0.595
52	1215.6(6)	84.73(4)	78(1)	0.621
54	1266.7(7)	84.47(5)	82(2)	0.646
56	1315.4(7)	84.39(4)	78(2)	0.671
58	1367(1)	84.13(6)		

G. de France et al., Phys. Lett. **B331**, 290(1994).

* I-Values obtained by comparison with ^{152}Dy(1).



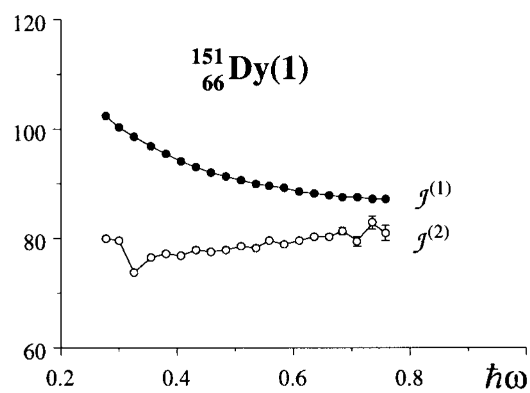
A=151 Z=66 Dy(1)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
27.5	527.3(1)	102.41(2)	79.8(2)	0.276
29.5	577.4(1)	100.45(2)	79.5(2)	0.301
31.5	627.7(1)	98.77(2)	73.9(2)	0.327
33.5	681.8(1)	96.80(1)	76.6(2)	0.354
35.5	734.0(1)	95.37(1)	77.4(2)	0.380
37.5	785.7(1)	94.18(1)	76.8(2)	0.406
39.5	837.8(1)	93.10(1)	78.0(2)	0.432
41.5	889.1(1)	92.23(1)	77.7(2)	0.457
43.5	940.6(1)	91.43(1)	78.0(2)	0.483
45.5	991.9(1)	90.74(1)	78.6(2)	0.509
47.5	1042.8(1)	90.14(1)	78.4(2)	0.534
49.5	1093.8(1)	89.60(1)	79.5(2)	0.560
51.5	1144.1(1)	89.15(1)	79.1(2)	0.585
53.5	1194.7(1)	88.73(1)	79.5(2)	0.610
55.5	1245.0(1)	88.35(1)	80.3(4)	0.635
57.5	1294.8(2)	88.04(1)	80.3(5)	0.660
59.5	1344.6(2)	87.76(1)	81.3(6)	0.685
61.5	1393.8(3)	87.53(2)	79.5(8)	0.710
63.5	1444.1(4)	87.25(2)	83(1)	0.734
65.5	1492.4(6)	87.11(4)	81(1)	0.759
67.5	1541.8(6)	86.91(3)		

$Q_0 = 16.9^{+0.2}_{-0.3}$ eb (from ref. 4)

I-Values from ref. 1; E_γ from ref. 3.

1. G.-E. Rathke et al., Phys. Lett. **B209**, 177(1988).
2. L. Muller et al., Z. Phys. **A341**, 131(1992).
3. D. Nisius et al., Phys. Lett. **B346**, 15(1995).
4. D. Nisius et al., Phys. Lett. **B392**, 18(1997).

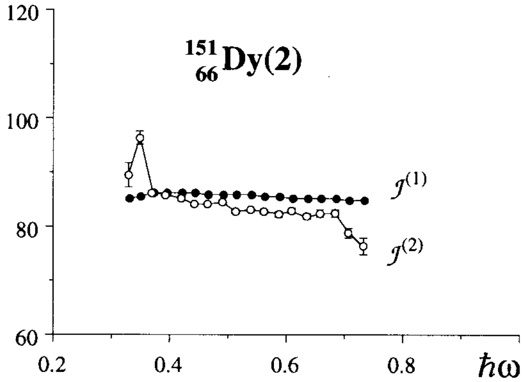


See page 58 for Explanation of Tables

A=151 Z=66 Dy(2)

I^*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
27.5	633.0(10)	85.3(1)	89(2)	0.328
29.5	677.7(5)	85.58(6)	96(1)	0.349
31.5	719.2(1)	86.21(1)	86.2(3)	0.371
33.5	765.6(1)	86.21(1)	85.8(3)	0.395
35.5	812.2(1)	86.19(1)	85.1(3)	0.418
37.5	859.2(1)	86.13(1)	84.2(3)	0.442
39.5	906.7(1)	86.03(1)	84.0(2)	0.465
41.5	954.3(1)	85.93(1)	84.4(4)	0.489
43.5	1001.7(2)	85.85(2)	82.8(4)	0.513
45.5	1050.0(1)	85.71(1)	83.0(2)	0.537
47.5	1098.2(1)	85.60(1)	82.6(4)	0.561
49.5	1146.6(2)	85.47(1)	82.3(5)	0.586
51.5	1195.2(2)	85.34(1)	82.8(5)	0.610
53.5	1243.5(2)	85.24(1)	81.8(5)	0.634
55.5	1292.4(2)	85.11(1)	82.5(6)	0.658
57.5	1340.9(3)	85.02(2)	82.5(7)	0.683
59.5	1389.4(3)	84.93(2)	78.9(9)	0.707
61.5	1440.1(5)	84.72(3)	76(2)	0.733
63.5	1492.5(10)	84.42(6)		

$Q_0 = 18.2 \pm 0.4$ eb (from ref. 2)



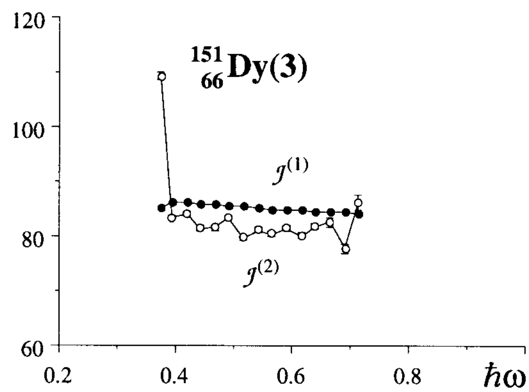
1. D. Nisius et al., Phys. Lett. **B346**, 15(1995).
2. D. Nisius et al., Phys. Lett. **B392**, 18(1997).

* I-Values obtained by comparison with ^{152}Dy(1); E_γ from ref. 1.

A=151 Z=66 Dy(3)

I^*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
31.5	728.5(1)	85.11(1)	109.3(7)	0.373
33.5	765.1(2)	86.26(2)	83.5(4)	0.395
35.5	813.0(1)	86.10(1)	84.2(4)	0.418
37.5	860.5(2)	86.00(2)	81.5(5)	0.443
39.5	909.6(2)	85.75(2)	81.6(5)	0.467
41.5	958.6(2)	85.54(2)	83.5(4)	0.491
43.5	1006.5(1)	85.45(1)	79.7(4)	0.516
45.5	1056.7(2)	85.17(2)	81.1(5)	0.541
47.5	1106.0(2)	84.99(2)	80.5(5)	0.565
49.5	1155.7(2)	84.80(1)	81.5(5)	0.590
51.5	1204.8(2)	84.66(1)	80.2(5)	0.615
53.5	1254.7(2)	84.48(1)	81.8(5)	0.640
55.5	1303.6(2)	84.38(1)	82.6(8)	0.664
57.5	1352.0(4)	84.32(2)	78(1)	0.689
59.5	1403.4(5)	84.08(3)	86(1)	0.713
61.5	1449.8(6)	84.15(3)		

$Q_0 = 17.9 \pm 0.6$ eb (from ref. 2)



1. D. Nisius et al., Phys. Lett. **B346**, 15(1995).
2. D. Nisius et al., Phys. Lett. **B392**, 18(1997).

* I-Values obtained by comparison with ^{152}Dy(1); E_γ from ref. 1.

See page 58 for Explanation of Tables

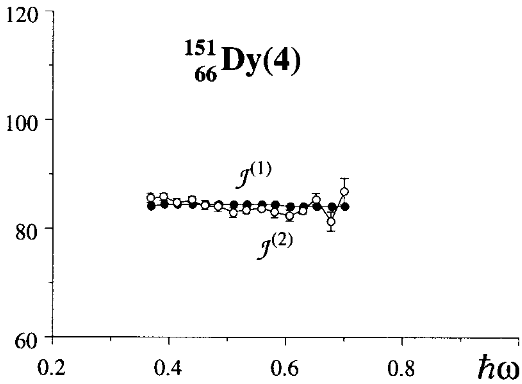
A=151 Z=66 Dy(4)

I^*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
30.5	712.0(4)	84.27(5)	85.7(9)	0.368
32.5	758.7(3)	84.36(3)	85.8(7)	0.391
34.5	805.3(2)	84.44(2)	84.9(5)	0.414
36.5	852.4(2)	84.47(2)	85.3(5)	0.438
38.5	899.3(2)	84.51(2)	84.2(8)	0.462
40.5	946.8(4)	84.50(4)	84.0(8)	0.485
42.5	994.4(2)	84.47(2)	83.0(8)	0.509
44.5	1042.6(4)	84.40(3)	83.5(8)	0.533
46.5	1090.5(2)	84.37(2)	83.9(5)	0.557
48.5	1138.2(2)	84.34(1)	83(1)	0.581
50.5	1186.4(6)	84.29(4)	82(1)	0.605
52.5	1234.9(3)	84.22(2)	83.3(6)	0.630
54.5	1282.9(2)	84.18(1)	85(1)	0.653
56.5	1329.7(6)	84.23(4)	81(2)	0.677
58.5	1378.8(8)	84.13(5)	87(2)	0.701
60.5	1424.9(10)	84.22(6)		

$Q_0 = 17.5^{+1.1}_{-0.7}$ eb (from ref. 2)

1. D. Nisius et al., Phys. Lett. **B346**, 15(1995).
2. D. Nisius et al., Phys. Lett. **B392**, 18(1997).

* I-Values obtained by comparison with ^{152}Dy(1); E_γ from ref. 1.

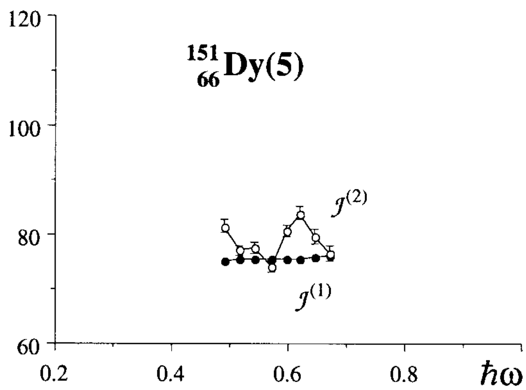


A=151 Z=66 Dy(5)

I^*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
36.5	959.3(5)	75.05(4)	81(1)	0.492
38.5	1008.4(5)	75.37(4)	77(1)	0.517
40.5	1060.3(4)	75.45(3)	78(1)	0.543
42.5	1111.9(5)	75.55(3)	74(1)	0.570
44.5	1165.9(5)	75.48(3)	81(1)	0.595
46.5	1215.5(5)	75.69(3)	84(1)	0.620
48.5	1263.2(5)	76.00(3)	80(1)	0.644
50.5	1313.4(8)	76.14(5)	76(1)	0.670
52.5	1365.7(5)	76.15(3)		

D. Nisius et al., Phys. Lett. **B346**, 15(1995).

* I-Values obtained by comparison with ^{150}Tb(1a).



See page 58 for Explanation of Tables

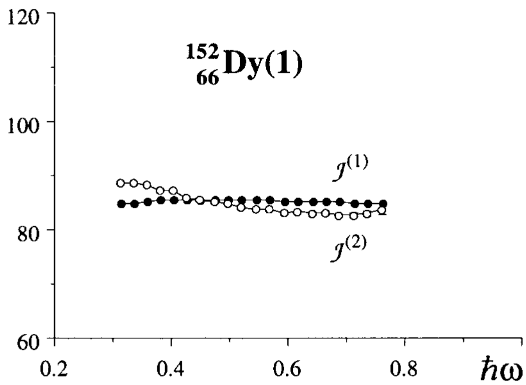
A=152 Z=66 Dy(1)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
26^+	602.4(1)	84.66(1)	88.7(3)	0.313
28^+	647.5(1)	84.94(1)	88.5(3)	0.335
30^+	692.7(1)	85.17(1)	88.1(3)	0.358
32^+	738.1(1)	85.35(1)	87.1(3)	0.381
34^+	784.0(1)	85.46(1)	87.1(3)	0.404
36^+	829.9(1)	85.55(1)	86.0(3)	0.427
38^+	876.4(1)	85.58(1)	85.5(3)	0.450
40^+	923.2(1)	85.57(1)	85.1(3)	0.473
42^+	970.2(1)	85.55(1)	84.7(3)	0.497
44^+	1017.4(1)	85.51(1)	84.2(3)	0.521
46^+	1064.9(1)	85.45(1)	83.7(2)	0.544
48^+	1112.7(1)	85.38(1)	83.7(2)	0.568
50^+	1160.5(1)	85.31(1)	83.2(2)	0.592
52^+	1208.6(1)	85.22(1)	83.3(2)	0.616
54^+	1256.6(1)	85.15(1)	83.0(2)	0.640
56^+	1304.8(1)	85.07(1)	83.2(2)	0.664
58^+	1352.9(1)	85.00(1)	82.6(2)	0.689
60^+	1401.3(1)	84.92(1)	82.8(4)	0.713
62^+	1449.6(2)	84.85(1)	83.0(6)	0.737
64^+	1497.8(3)	84.79(2)	84(1)	0.761
66^+	1545.6(5)	84.76(3)		

$Q_0 = 17.5 \pm 0.2$ eb (from refs. 7, 8)

I-Values and E_γ from ref. 5; Parity from ref. 1, 3, 5.

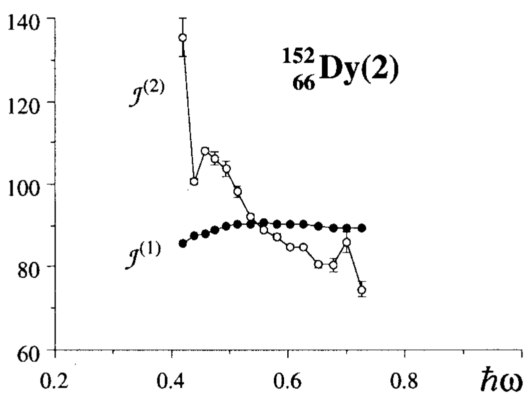
1. P. J. Twin et al., Phys. Rev. Lett. **57**, 811(1986).
2. M. A. Bentley et al., Phys. Rev. Lett. **59**, 2141(1987).
3. M. A. Bentley et al., J. Phys. **G17**, 481(1991).
4. G. Smith et al., Phys. Rev. Lett. **68**, 158(1992).
5. P. J. Dagnall et al., Phys. Lett. **B335**, 313(1994).
6. B. Cederwall et al., Nucl. Instrum. Methods. Phys. Res. **A354**, 591(1995).
7. H. Savajols et al., Phys. Rev. Lett. **76**, 4480(1996).
8. D. Nisius et al., Phys. Lett. **B392**, 18(1997).



A=152 Z=66 Dy(2)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
36	825.9(10)	86.0(1)	136(5)	0.420
38	855.4(2)	87.68(2)	100.5(7)	0.438
40	895.2(2)	88.25(2)	108.1(8)	0.457
42	932.2(2)	89.04(2)	106(2)	0.476
44	969.9(5)	89.70(5)	104(2)	0.495
46	1008.5(5)	90.23(4)	98(1)	0.514
48	1049.2(2)	90.55(2)	92.2(6)	0.536
50	1092.6(2)	90.61(2)	88.9(6)	0.558
52	1137.6(2)	90.54(2)	87.3(5)	0.580
54	1183.4(2)	90.42(2)	84.7(5)	0.604
56	1230.6(2)	90.20(1)	84.9(5)	0.627
58	1277.7(2)	90.01(1)	80.5(9)	0.651
60	1327.4(5)	89.65(3)	80(2)	0.676
62	1377.1(10)	89.32(6)	86(3)	0.700
64	1423.6(10)	89.21(6)	75(2)	0.725
66	1477.1(10)	88.69(6)		

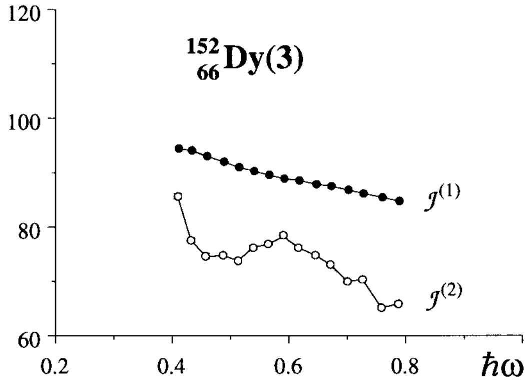
P. J. Dagnall et al., Phys. Lett. **B335**, 313(1994).



See page 58 for Explanation of Tables

A=152 Z=66 Dy(3)

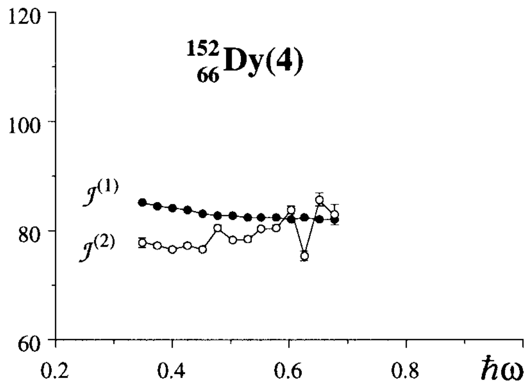
I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
38	793.0(2)	94.58(2)	85.7(5)	0.408
40	839.7(2)	94.08(2)	77.7(4)	0.433
42	891.2(2)	93.13(2)	74.6(4)	0.459
44	944.8(2)	92.08(2)	74.9(4)	0.486
46	998.2(2)	91.16(2)	73.8(4)	0.513
48	1052.4(2)	90.27(2)	76.2(4)	0.539
50	1104.9(2)	89.60(2)	76.9(4)	0.566
52	1156.9(2)	89.03(2)	78.4(4)	0.591
54	1207.9(2)	88.58(1)	76.2(4)	0.617
56	1260.4(2)	88.07(1)	74.9(4)	0.644
58	1313.8(2)	87.53(1)	73.0(4)	0.671
60	1368.6(2)	86.95(1)	69.9(3)	0.699
62	1425.8(2)	86.27(1)	70.3(3)	0.727
64	1482.7(2)	85.65(1)	65.1(3)	0.757
66	1544.1(2)	84.84(1)	66.0(3)	0.787
68	1604.7(2)	84.13(1)		



P. J. Dagnall et al., Phys. Lett. **B335**, 313(1994).

A=152 Z=66 Dy(4)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
29	669.6(5)	85.13(6)	77.8(8)	0.348
31	721.0(2)	84.60(2)	77.2(4)	0.374
33	772.8(2)	84.11(2)	76.6(4)	0.400
35	825.0(2)	83.64(2)	77.2(4)	0.426
37	876.8(2)	83.26(2)	76.6(4)	0.452
39	929.0(2)	82.88(2)	80.5(5)	0.477
41	978.7(2)	82.76(2)	78.3(4)	0.502
43	1029.8(2)	82.54(2)	78.4(4)	0.528
45	1080.8(2)	82.35(2)	80.3(5)	0.553
47	1130.6(2)	82.26(1)	80.5(5)	0.578
49	1180.3(2)	82.18(1)	83.9(6)	0.602
51	1228.0(3)	82.25(2)	75.5(8)	0.627
53	1281.0(5)	81.97(3)	86(1)	0.652
55	1327.7(5)	82.10(3)	83(2)	0.676
57	1376(1)	82.13(6)		

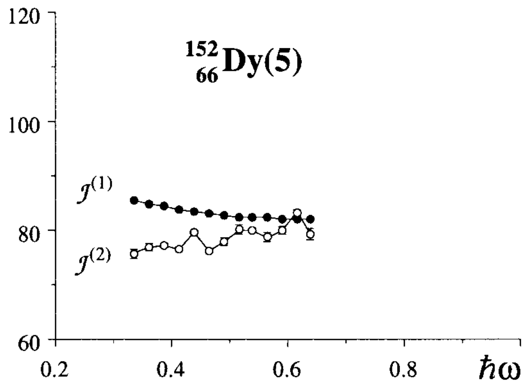


I-Values from ref. 2; E_γ from refs. 1, 2.

1. G. de France et al., Phys. Lett. **B331**, 290(1994).
2. P. J. Dagnall et al., Phys. Lett. **B335**, 313(1994).

A=152 Z=66 Dy(5)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
28	642.1(5)	85.66(7)	75.8(9)	0.334
30	694.9(4)	84.90(5)	76.8(7)	0.361
32	747.0(2)	84.34(2)	77.2(4)	0.387
34	798.8(2)	83.88(2)	76.5(4)	0.413
36	851.1(2)	83.42(2)	79.7(4)	0.438
38	901.3(2)	83.21(2)	76.2(4)	0.464
40	953.8(2)	82.83(2)	78.0(8)	0.490
42	1005.1(5)	82.58(4)	80.2(9)	0.515
44	1055.0(2)	82.46(2)	80.0(5)	0.540
46	1105.0(2)	82.35(1)	78.7(8)	0.565
48	1155.8(5)	82.19(4)	80.0(9)	0.590
50	1205.8(2)	82.10(1)	83.3(6)	0.615
52	1253.8(3)	82.15(2)	79.4(9)	0.640
54	1304.2(5)	82.04(3)		



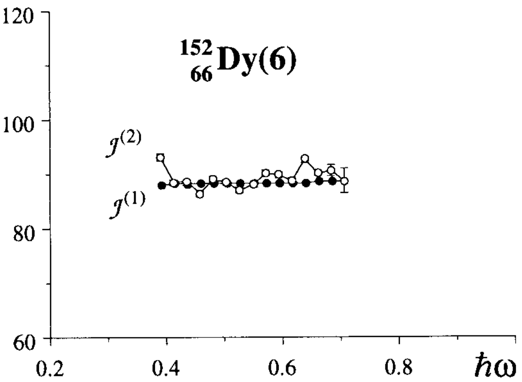
I-Values from ref. 2; E_γ from refs. 1, 2.

1. G. de France et al., Phys. Lett. **B331**, 290(1994).
2. P. J. Dagnall et al., Phys. Lett. **B335**, 313(1994).

See page 58 for Explanation of Tables

A=152 Z=66 Dy(6)

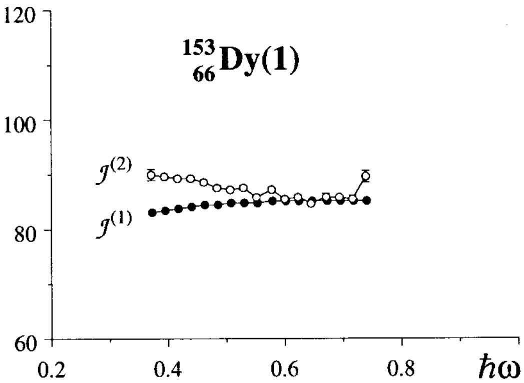
I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
34	761.5(2)	87.98(2)	93.0(6)	0.392
36	804.5(2)	88.25(2)	88.5(6)	0.414
38	849.7(2)	88.27(2)	88.5(6)	0.436
40	894.9(2)	88.28(2)	86.4(5)	0.459
42	941.2(2)	88.19(2)	89.1(6)	0.482
44	986.1(2)	88.23(2)	88.5(6)	0.504
46	1031.3(2)	88.24(2)	87.0(5)	0.527
48	1077.3(2)	88.18(2)	88.1(5)	0.550
50	1122.7(2)	88.18(2)	90.1(6)	0.573
52	1167.1(2)	88.25(2)	89.9(6)	0.595
54	1211.6(2)	88.31(1)	88.7(6)	0.617
56	1256.7(2)	88.33(1)	92.6(6)	0.639
58	1299.9(2)	88.47(1)	90.1(6)	0.661
60	1344.3(2)	88.52(1)	91(1)	0.683
62	1388.4(5)	88.59(3)	89(2)	0.706
64	1433.5(10)	88.59(6)		



P. J. Dagnall et al., Phys. Lett. **B335**, 313(1994).

A=153 Z=66 Dy(1)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
30.5	721.4(5)	83.17(6)	90(1)	0.372
32.5	765.9(1)	83.56(1)	89.5(3)	0.394
34.5	810.6(1)	83.89(1)	89.3(3)	0.417
36.5	855.4(1)	84.17(1)	89.3(3)	0.439
38.5	900.2(1)	84.43(1)	88.5(3)	0.461
40.5	945.4(1)	84.62(1)	87.5(3)	0.484
42.5	991.1(1)	84.75(1)	87.3(3)	0.507
44.5	1036.9(1)	84.87(1)	87.5(3)	0.530
46.5	1082.6(1)	84.98(1)	86.0(3)	0.553
48.5	1129.1(1)	85.02(1)	87.1(3)	0.576
50.5	1175.0(1)	85.11(1)	85.5(3)	0.599
52.5	1221.8(1)	85.12(1)	86.0(3)	0.623
54.5	1268.3(1)	85.15(1)	84.7(3)	0.646
56.5	1315.5(1)	85.14(1)	86.0(4)	0.669
58.5	1362.0(2)	85.17(1)	85.8(5)	0.693
60.5	1408.6(2)	85.19(1)	85.7(5)	0.716
62.5	1455.3(2)	85.21(1)	90(1)	0.739
64.5	1499.9(5)	85.34(3)		



$Q_0 = 16 \pm 5$ eb (from ref. 3)

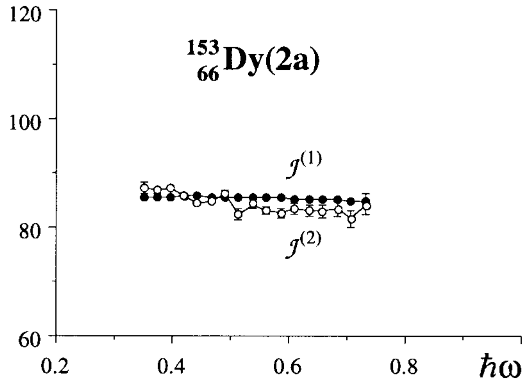
1. J. K. Johansson et al., Phys. Rev. Lett. **63**, 2200(1989).
2. B. Cederwall et al., Phys. Lett. **B346**, 244(1995).
3. B. Cederwall et al., Nucl. Instrum. Methods. Phys. Res. **A354**, 591 (1995).

* I-Values obtained by comparison with ^{152}Dy(1); Eγ from ref. 2.

See page 58 for Explanation of Tables

A=153 Z=66 Dy(2a)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
29.5	678.6(5)	85.47(6)	87(1)	0.351
31.5	724.5(3)	85.58(4)	86.8(6)	0.374
33.5	770.6(1)	85.65(1)	87.1(3)	0.397
35.5	816.5(1)	85.73(1)	85.8(3)	0.420
37.5	863.1(1)	85.74(1)	84.6(3)	0.443
39.5	910.4(1)	85.68(1)	84.7(4)	0.467
41.5	957.6(2)	85.63(2)	86.2(8)	0.490
43.5	1004.0(4)	85.66(3)	82(1)	0.514
45.5	1052.5(4)	85.51(3)	84.2(9)	0.538
47.5	1100.0(3)	85.45(2)	83.0(7)	0.562
49.5	1148.2(3)	85.35(2)	82.6(9)	0.586
51.5	1196.6(4)	85.24(3)	84(1)	0.610
53.5	1244.5(4)	85.17(3)	83(1)	0.634
55.5	1292.6(4)	85.10(3)	83(1)	0.658
57.5	1340.8(5)	85.02(3)	83(1)	0.682
59.5	1388.8(6)	84.97(4)	82(2)	0.707
61.5	1437.8(7)	84.85(4)	84(2)	0.731
63.5	1485.3(8)	84.83(5)		

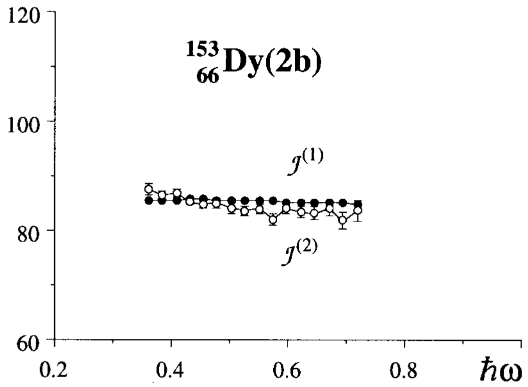


1. J. K. Johansson et al., Phys. Rev. Lett. **63**, 2200(1989).
2. B. Cederwall et al., Phys. Lett. **B346**, 244(1995).

* I-Values obtained by comparison with ^{152}Dy(1); E_γ from ref. 2.

A=153 Z=66 Dy(2b)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
30.5	702.0(5)	85.47(6)	88(1)	0.362
32.5	747.7(3)	85.60(3)	86.6(8)	0.385
34.5	793.9(3)	85.65(3)	87.0(7)	0.408
36.5	839.9(2)	85.72(2)	85.3(5)	0.432
38.5	886.8(2)	85.70(2)	84.7(6)	0.455
40.5	934.0(3)	85.65(3)	85.1(9)	0.479
42.5	981.0(4)	85.63(3)	84(1)	0.502
44.5	1028.5(4)	85.56(3)	83.7(9)	0.526
46.5	1076.3(3)	85.48(2)	84.0(9)	0.550
48.5	1123.9(4)	85.42(3)	82(1)	0.574
50.5	1172.6(4)	85.28(3)	84(1)	0.598
52.5	1220.2(4)	85.23(3)	84(1)	0.622
54.5	1268.1(5)	85.17(3)	83(1)	0.646
56.5	1316.2(5)	85.09(3)	84(1)	0.670
58.5	1363.7(6)	85.06(4)	82(2)	0.694
60.5	1412.6(7)	84.95(4)	84(2)	0.718
62.5	1460.4(9)	84.91(5)		



1. J. K. Johansson et al., Phys. Rev. Lett. **63**, 2200(1989).
2. B. Cederwall et al., Phys. Lett. **B346**, 244(1995).

* I-Values obtained by comparison with ^{152}Dy(1); E_γ from ref. 2.

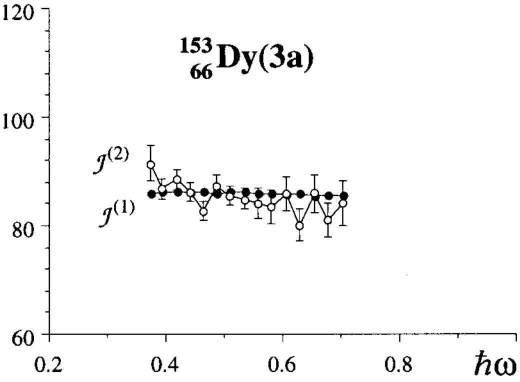
See page 58 for Explanation of Tables

A=153 Z=66 Dy(3a)

I^*	E_γ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
31.5	723.4(15)	85.7(2)	92(3)	0.373
33.5	767.1(5)	86.04(6)	87(2)	0.395
35.5	813.2(8)	86.08(8)	88(2)	0.418
37.5	858.4(6)	86.21(6)	86(2)	0.441
39.5	904.8(7)	86.21(7)	83(2)	0.465
41.5	953.2(7)	86.03(6)	87(2)	0.488
43.5	999.0(7)	86.09(6)	86(2)	0.511
45.5	1045.7(6)	86.07(5)	85(2)	0.535
47.5	1092.8(8)	86.02(6)	84(3)	0.558
49.5	1140.3(13)	85.9(1)	83(3)	0.582
51.5	1188.3(12)	85.84(9)	86(3)	0.606
53.5	1234.9(12)	85.84(8)	80(3)	0.630
55.5	1284.8(13)	85.62(9)	86(4)	0.654
57.5	1331.4(14)	85.62(9)	81(3)	0.678
59.5	1380.8(13)	85.46(8)	84(4)	0.702
61.5	1428.3(19)	85.4(1)		

B. Cederwall et al., Phys. Lett. **B346**, 244(1995).

* I-Values obtained by comparison with ^{152}Dy(1).

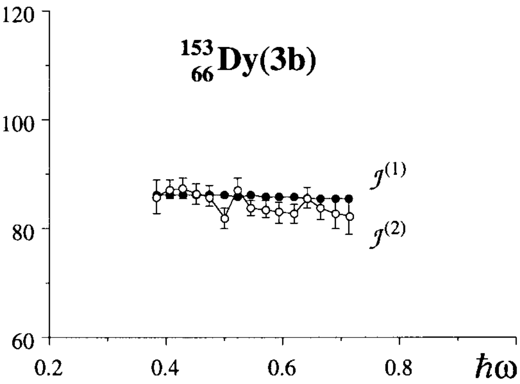


A=153 Z=66 Dy(3b)

I^*	E_γ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
32.5	743.2(15)	86.1(2)	86(3)	0.383
34.5	789.8(6)	86.10(7)	87(2)	0.406
36.5	835.6(7)	86.17(7)	87(2)	0.429
38.5	881.4(7)	86.23(7)	86(2)	0.452
40.5	927.7(8)	86.23(7)	86(2)	0.476
42.5	974.2(6)	86.22(5)	82(2)	0.499
44.5	1023.0(9)	86.02(8)	87(2)	0.523
46.5	1068.8(5)	86.08(4)	84(1)	0.546
48.5	1116.5(6)	85.98(5)	84(2)	0.570
50.5	1164.4(7)	85.88(5)	83(2)	0.594
52.5	1212.6(8)	85.77(6)	83(2)	0.618
54.5	1260.9(7)	85.65(5)	86(2)	0.642
56.5	1307.6(7)	85.65(5)	84(2)	0.666
58.5	1355.3(10)	85.59(6)	83(3)	0.690
60.5	1403.6(13)	85.49(8)	82(3)	0.714
62.5	1452.2(14)	85.39(8)		

B. Cederwall et al., Phys. Lett. **B346**, 244(1995).

* I-Values obtained by comparison with ^{152}Dy(1).



A=154 Z=66 Dy

I^*	E_γ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
30	701.7(10)	84.1 (1)	85(2)	0.363
32	749.0(3)	84.11(3)	88.1(7)	0.386
34	794.4(2)	84.34(2)	86.6(5)	0.409
36	840.6(2)	84.46(2)	85.5(5)	0.432
38	887.4(2)	84.52(2)	86.8(5)	0.455
40	933.5(2)	84.63(2)	84.0(4)	0.479
42	981.1(1)	84.60(1)	84.9(4)	0.502
44	1028.2(2)	84.61(2)	84.0(5)	0.526
46	1075.8(2)	84.59(2)	83.3(5)	0.550
48	1123.8(2)	84.54(2)	84.6(5)	0.574
50	1171.1(2)	84.54(1)	84.0(5)	0.598
52	1218.7(2)	84.52(1)	83.3(5)	0.621
54	1266.7(2)	84.47(1)	82.6(5)	0.646
56	1315.1(2)	84.40(1)	85.5(7)	0.669
58	1361.9(3)	84.44(2)	83(1)	0.693
60	1410.2(5)	84.39(3)	85(1)	0.717
62	1457.5(6)	84.39(3)	87(2)	0.740
64	1503.7(7)	84.46(4)		

$Q_0 = 15.9^{+3.1}_{-2.1}$ eb (from ref. 2)

1. D. Nisius et al., Phys. Rev. **C51**, R1061(1995).
2. S. M. Ficher et al., Phys. Rev. **C54**, R2806(1996).

* I-Values obtained by comparison with ^{152}Dy(1); E_γ from ref. 1.

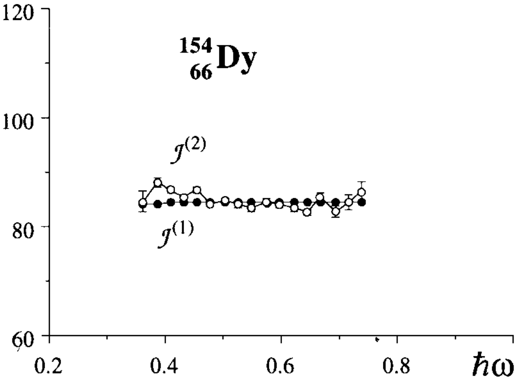


TABLE II. Superdeformed Rotational Bands in the Mass-130, Mass-140, Mass-150, and Mass-160 Regions

See page 58 for Explanation of Tables

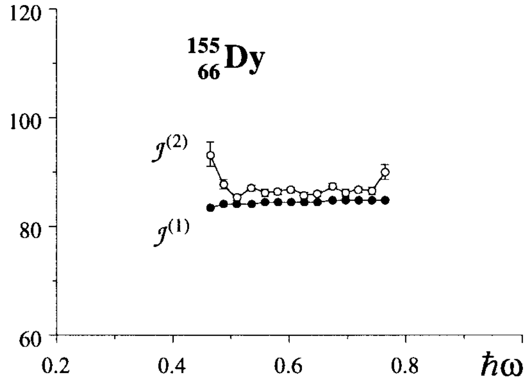
A=155 Z=66 Dy

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
38.5	909.6(9)	83.55(9)	93(2)	0.466
40.5	952.5(2)	83.99(4)	87.7(9)	0.488
42.5	998.1(2)	84.16(2)	85.3(5)	0.511
44.5	1045.0(2)	84.21(2)	87.1(5)	0.534
46.5	1090.9(2)	84.33(2)	86.2(5)	0.557
48.5	1137.3(2)	84.41(1)	86.4(5)	0.580
50.5	1183.6(2)	84.49(1)	86.8(5)	0.603
52.5	1229.7(2)	84.57(1)	85.8(5)	0.627
54.5	1276.3(2)	84.62(1)	86.0(5)	0.650
56.5	1322.8(2)	84.67(1)	87.3(5)	0.673
58.5	1368.6(2)	84.76(1)	86.2(5)	0.696
60.5	1415.0(2)	84.81(1)	86.8(5)	0.719
62.5	1461.1(2)	84.87(1)	86.6(7)	0.742
64.5	1507.3(3)	84.92(2)	90(1)	0.765
66.5	1551.8(6)	85.06(3)		

$Q_0 = 17.9^{+3.9}_{-2.6}$ eb

S. M. Fischer et al., Phys. Rev. **C54**, R2806(1996).

* I-Values obtained by comparison with ^{152}Dy(1).

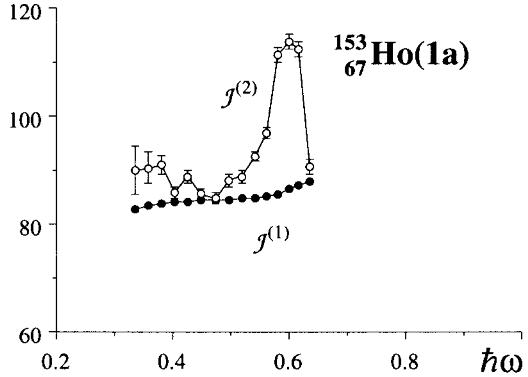


A=153 Z=67 Ho(1a)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
27.5	651.3(19)	82.9(2)	90(4)	0.337
29.5	695.8(11)	83.4(1)	90(3)	0.359
31.5	740.0(8)	83.78(9)	91(2)	0.381
33.5	784.0(2)	84.18(2)	86(1)	0.404
35.5	830.6(5)	84.28(5)	89(1)	0.427
37.5	875.6(3)	84.51(3)	86(1)	0.450
39.5	922.3(3)	84.57(3)	85(1)	0.473
41.5	969.5(5)	84.58(4)	88(1)	0.496
43.5	1014.9(5)	84.74(4)	89(1)	0.519
45.5	1059.9(3)	84.91(2)	93(1)	0.541
47.5	1103.1(3)	85.21(2)	97(1)	0.562
49.5	1144.4(3)	85.63(2)	111(1)	0.581
51.5	1180.3(3)	86.42(2)	114(1)	0.599
53.5	1215.5(3)	87.21(2)	112(1)	0.617
55.5	1251.1(3)	87.92(2)	91(1)	0.637
57.5	1295.2(6)	88.02(4)		
59.5	(1343(1))			
61.5	(1390(1))			

I-Values and E_γ from ref. 2.

1. D. E. Appelbe et al., Acta Hung. N. S. (Heavy Ion Physics) **6**, 285(1997).
2. D. E. Appelbe et al., Phys. Rev. **C56**, 2490(1997).

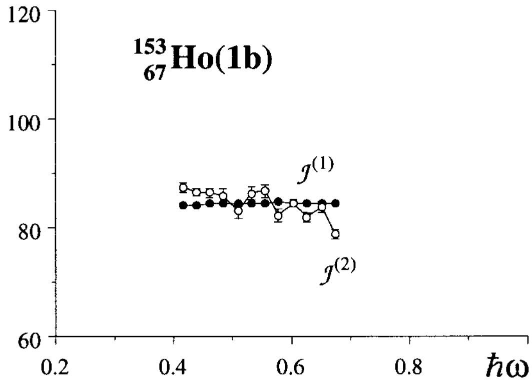


A=153 Z=67 Ho(1b)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
30.5	(713(2))			
32.5	(761(2))			
34.5	808.4(3)	84.12(3)	87.5(8)	0.416
36.5	854.1(3)	84.30(3)	86.6(8)	0.439
38.5	900.3(3)	84.42(3)	86.4(8)	0.462
40.5	946.6(3)	84.51(3)	86(1)	0.485
42.5	993.1(5)	84.58(4)	83(1)	0.509
44.5	1041.3(5)	84.51(4)	86(1)	0.532
46.5	1087.6(3)	84.59(2)	87(1)	0.555
48.5	1133.7(6)	84.68(4)	82(1)	0.579
50.5	1182.3(3)	84.58(2)	84.6(8)	0.603
52.5	1229.6(3)	84.58(2)	82.0(8)	0.627
54.5	1278.4(4)	84.48(3)	84(1)	0.651
56.5	1326.2(4)	84.45(3)	78.7(9)	0.676
58.5	1377.0(4)	84.24(2)		
60.5	(1425(2))			

I-Values and E_γ from ref. 2.

1. D. E. Appelbe et al., Acta Hung. N. S. (Heavy Ion Physics) **6**, 285(1997).
2. D. E. Appelbe et al., Phys. Rev. **C56**, 2490(1997).

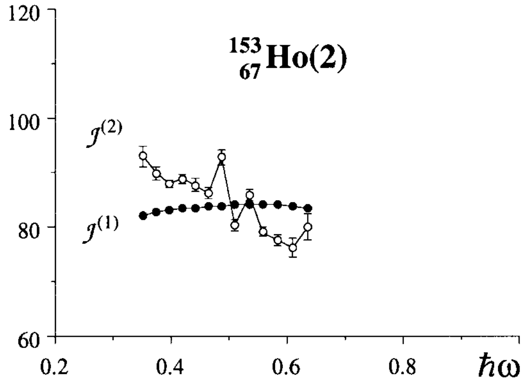


A=153 Z=67 Ho(2)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
26.5	(657(2))			
28.5	683.3(7)	81.96(8)	93(2)	0.352
30.5	726.3(5)	82.61(6)	90(1)	0.374
32.5	770.8(3)	83.03(3)	87.9(8)	0.397
34.5	816.3(3)	83.30(3)	88.9(8)	0.419
36.5	861.3(3)	83.60(3)	88(1)	0.442
38.5	906.9(5)	83.80(5)	86(1)	0.465
40.5	953.3(3)	83.92(3)	93(1)	0.487
42.5	996.4(5)	84.30(4)	80(1)	0.511
44.5	1046.1(4)	84.12(3)	85.8(9)	0.535
46.5	1092.7(3)	84.20(2)	79.1(9)	0.559
48.5	1143.3(5)	83.97(4)	78(1)	0.585
50.5	1194.9(5)	83.69(4)	76(2)	0.611
52.5	1247.4(10)	83.37(7)	80(2)	0.636
54.5	1297.4(10)	83.24(6)		
56.5	(1351(2))			

I-Values and E_γ from ref. 2.

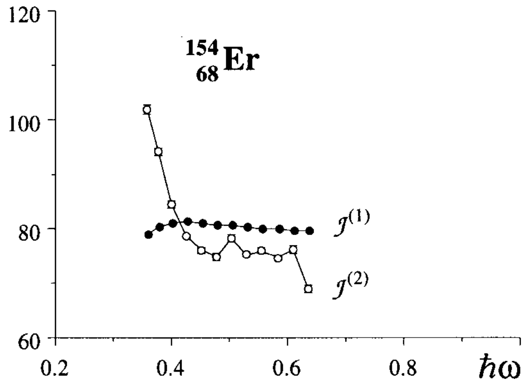
1. D. E. Appelbe et al., Acta Hung. N. S. (Heavy Ion Physics) **6**, 285(1997).
2. D. E. Appelbe et al., Phys. Rev. **C56**, 2490(1997).



A=154 Z=68 Er

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
28	695.06(25)	79.13(3)	102.0(9)	0.357
30	734.26(23)	80.35(3)	94.2(7)	0.378
32	776.73(22)	81.11(2)	84.5(5)	0.400
34	824.09(21)	81.30(2)	78.6(5)	0.425
36	874.95(23)	81.15(2)	76.1(5)	0.451
38	927.51(26)	80.86(2)	74.7(7)	0.477
40	981.04(44)	80.53(4)	78.3(7)	0.503
42	1032.14(20)	80.42(2)	75.3(4)	0.529
44	1085.24(22)	80.17(2)	76.0(5)	0.556
46	1137.88(30)	79.97(2)	74.8(6)	0.582
48	1191.39(28)	79.74(2)	76.3(6)	0.609
50	1243.84(34)	79.59(2)	68.9(7)	0.636
52	1301.93(51)	79.11(3)		

L. A. Bernstein et al., Phys. Rev. **C52**, R1171(1995).



See page 58 for Explanation of Tables

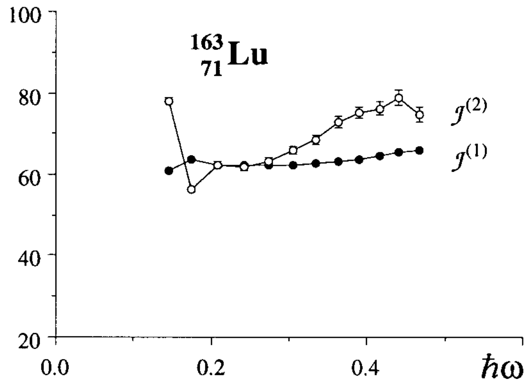
A=163 Z=71 Lu

I^{exp}	$E\gamma^{\#}$	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$	Q_t
(8.5^+)	263.5	60.72(6)	78.1(6)	0.145	
(10.5^+)	314.7	63.55(6)	56.1(4)	0.175	11.5(-1.1, +1.1)
(12.5^+)	386.0	62.18(6)	62.5(6)	0.209	9.2(-1.0, +1.0)
(14.5^+)	450.0	62.22(6)	61.6(6)	0.241	9.9(-1.9, +2.0)
(16.5^+)	514.9	62.15(6)	63.3(8)	0.273	12.0(-2.0, +2.9)
(18.5^+)	578.1	62.27(6)	66.0(9)	0.304	13.0(-1.9, +2.8)
(20.5^+)	638.7	62.63(6)	68.6(1)	0.334	12.0(-1.9, +2.0)
(22.5^+)	697.0	63.13(6)	72.7(1)	0.362	11.0(-2.1, +2.6)
(24.5^+)	752.0	63.83(6)	75.2(2)	0.389	11.0(-1.2, +4.8)
(26.5^+)	805.2	64.58(6)	76.2(2)	0.416	11.0(-2.4, +7.3)
(28.5^+)	857.7	65.29(7)	78.9(2)	0.442	
(30.5^+)	908.4	66.05(7)	74.8(2)	0.468	
(32.5^+)	961.9	66.54(7)			

$Q_0 = 10.7 \pm 0.7$ eb (from ref. 2)

The energy of (6.5^+) level is 1220 keV (from ref. 1).
I^{exp}-Values and E_γ from ref. 1; Q_t from ref. 2.

1. W. Schmitz et al., Nucl. Phys. **A539**, 112(1992), (HD).
2. W. Schmitz et al., Phys. Lett. **B303**, 230(1993), (HD).
3. H. Schnack-Petersen et al., Nucl. Phys. **A594**, 175(1995), (TSD).

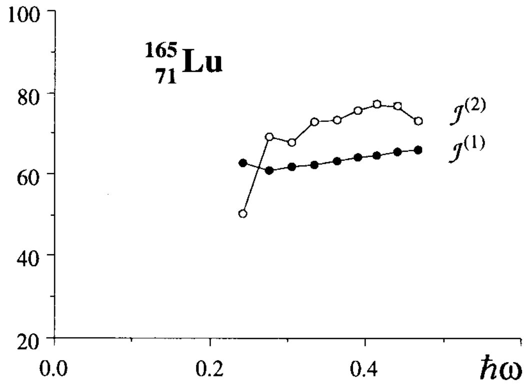


A=165 Z=71 Lu

I^{exp}	$E\gamma^{\#}$	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
(14.5^+)	445.28(24)	62.88(3)	50.5(2)	0.242
(16.5^+)	524.44(20)	61.02(2)	69.1(3)	0.277
(18.5^+)	582.36(18)	61.82(2)	67.9(3)	0.306
(20.5^+)	641.3(2)	62.37(2)	73.0(4)	0.334
(22.5^+)	696.10(20)	63.21(2)	73.2(4)	0.362
(24.5^+)	750.73(20)	63.94(2)	75.8(5)	0.389
(26.5^+)	803.52(26)	64.72(2)	77.2(5)	0.415
(28.5^+)	855.31(25)	65.47(2)	76.7(6)	0.441
(30.5^+)	907.47(34)	66.12(2)	73.0(7)	0.467
(32.5^+)	962.30(37)	66.51(3)		

The energy of (12.5^+) level is 2263.7(11) keV.

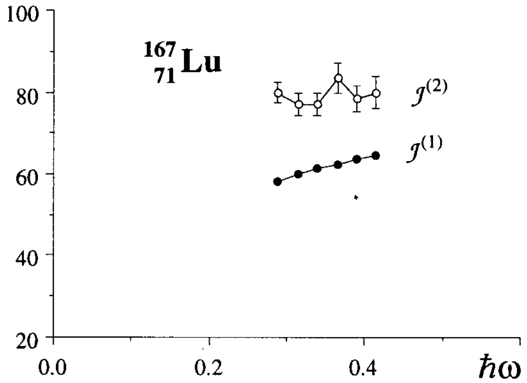
H. Schnack-Petersen et al., Nucl. Phys. **A594**,175(1995), (TSD).



A=167 Z=71 Lu

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
16.5	551	58.1(1)	80(3)	0.288
18.5	601	59.9(1)	77(3)	0.314
20.5	653	61.3(1)	77(3)	0.340
22.5	705	62.4(1)	83(4)	0.365
24.5	753	63.7(1)	78(3)	0.389
26.5	804	64.7(1)	80(4)	0.415
28.5	854	65.6(1)		
30.5	(904)			

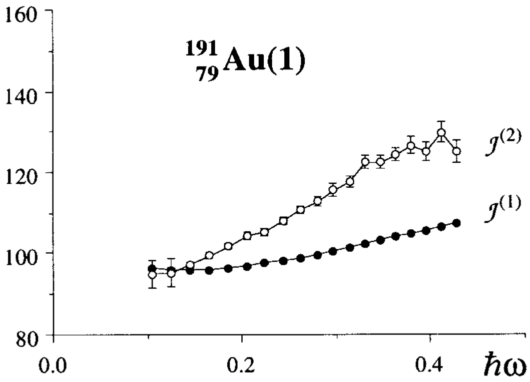
C. X. Yang et al., Eur. Phys. J. **A1**, 237(1998), (TSD).



See page 58 for Explanation of Tables

A=191 Z=79 Au(1)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
9.5	186.8(3)	96.4(2)	95(3)	0.104
11.5	228.9(15)	96.1 (6)	95(3)	0.125
13.5	270.9(2)	95.98(7)	97.3(7)	0.146
15.5	312.0(2)	96.15(6)	99.5(7)	0.166
17.5	352.2(2)	96.54(5)	101.8(7)	0.186
19.5	391.5(2)	97.06(5)	104.4(8)	0.205
21.5	429.8(2)	97.72(5)	105.3(8)	0.224
23.5	467.8(2)	98.33(4)	108.1(8)	0.243
25.5	504.8(2)	99.05(4)	110.8(9)	0.261
27.5	540.9(2)	99.83(4)	113(1)	0.279
29.5	576.4(3)	100.63(5)	116(1)	0.297
31.5	611.0(3)	101.47(5)	118(1)	0.314
33.5	645.0(3)	102.33(5)	122(2)	0.331
35.5	677.7(3)	103.29(5)	122(2)	0.347
37.5	710.4(3)	104.17(4)	124(2)	0.363
39.5	742.6(3)	105.04(4)	127(2)	0.379
41.5	774.2(4)	105.92(5)	125(2)	0.395
43.5	806.2(4)	106.67(5)	130(3)	0.411
45.5	837.0(5)	107.53(6)	125(3)	0.427
47.5	869.0(5)	108.17(6)		

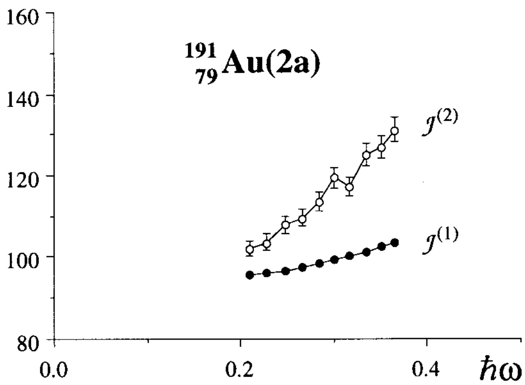


I-Values from ref. 1; E_γ from ref. 3.

1. D. T. Vo et al., Phys. Rev. Lett. **71**, 340(1993).
2. M. A. Deleplanque et al., Nucl. Phys. **A557**, 39c(1993).
3. C. Schück et al., Phys. Rev. **C56**, R1667(1997).

A=191 Z=79 Au(2a)

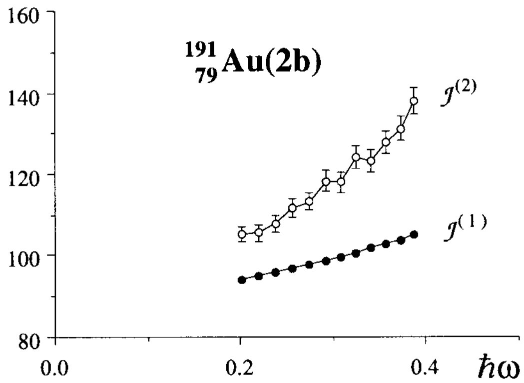
I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
19.5	397.8(5)	95.5(1)	102(2)	0.209
21.5	437.0(5)	96.1(1)	104(2)	0.228
23.5	475.6(5)	96.7(1)	108(2)	0.247
25.5	512.7(5)	97.5(1)	110(2)	0.266
27.5	549.2(5)	98.32(9)	114(2)	0.283
29.5	584.4(5)	99.25(8)	119(3)	0.301
31.5	617.9(5)	100.34(8)	117(2)	0.318
33.5	652.0(5)	101.23(8)	125(3)	0.334
35.5	684.0(5)	102.34(7)	127(3)	0.350
37.5	715.5(5)	103.42(7)	131(3)	0.365
39.5	746.0(5)	104.56(7)		



C. Schück et al., Phys. Rev. **C56**, R1667(1997).

A=191 Z=79 Au(2b)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
18.5	382.7(5)	94.1(1)	105(2)	0.201
20.5	420.7(5)	95.1(1)	106(2)	0.220
22.5	458.6(5)	95.9(1)	108(2)	0.239
24.5	495.7(5)	96.8(1)	112(2)	0.257
26.5	531.5(5)	97.84(9)	113(2)	0.275
28.5	566.8(5)	98.80(9)	118(2)	0.292
30.5	600.6(5)	99.90(8)	118(2)	0.309
32.5	634.5(5)	100.87(8)	124(3)	0.325
34.5	666.7(5)	102.00(8)	123(3)	0.342
36.5	699.2(5)	102.98(7)	128(3)	0.357
38.5	730.5(5)	104.04(7)	131(3)	0.373
40.5	761.0(5)	105.13(7)	138(3)	0.388
42.5	790.0(5)	106.33(7)		



C. Schück et al., Phys. Rev. **C56**, R1667(1997).

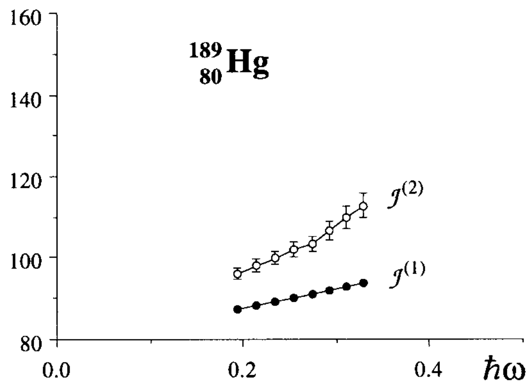
See page 58 for Explanation of Tables

A=189 Z=80 Hg

I	E_γ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
16.5	366.2(4)	87.38(9)	96(1)	0.194
18.5	407.9(4)	88.26(9)	98(2)	0.214
20.5	448.7(5)	89.2(1)	100(2)	0.234
22.5	488.7(4)	90.03(8)	102(2)	0.254
24.5	527.9(6)	90.9(1)	103(2)	0.274
26.5	566.6(5)	91.78(7)	107(2)	0.293
28.5	604.0(7)	92.7(1)	110(3)	0.311
30.5	640.5(6)	93.68(9)	113(3)	0.329
32.5	675.9(7)	94.69(9)		
34.5	(707.6)			

I-Values from ref. 2; E_γ from refs. 1, 2.

1. M. W. Drigert et al., Nucl. Phys. **A530**, 452(1991).
2. I. G. Bearden et al., Z. Phys. **A341**, 491(1992).



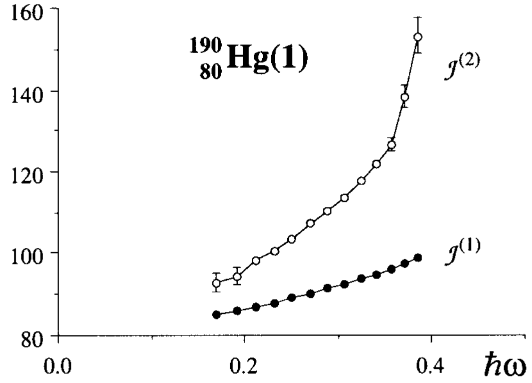
A=190 Z=80 Hg(1)

I	E_γ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
14	316.9(4)	85.2(1)	93(2)	0.169
16	360(1)	86.1(2)	94(2)	0.191
18	402.34(4)	86.99(1)	98.4(2)	0.211
20	442.98(6)	88.04(1)	100.7(2)	0.231
22	482.71(6)	89.08(1)	103.7(2)	0.251
24	521.30(6)	90.16(1)	107.2(3)	0.270
26	558.6(1)	91.30(2)	110.2(4)	0.288
28	594.9(1)	92.45(2)	113.6(5)	0.306
30	630.1(1)	93.64(1)	117.6(5)	0.324
32	664.1(1)	94.87(1)	122.0(5)	0.340
34	696.9(1)	96.14(1)	127(2)	0.356
36	728.5(4)	97.46(5)	138(3)	0.372
38	757.4(4)	99.02(5)	153(4)	0.385
40	783.5(6)	100.83(8)		
42	(801.8)			

$Q_0 = 17.7^{+1.0}_{-1.2}$ eb (from ref. 6)

I-Values and E_γ from refs. 4, 5.

1. M. W. Drigert et al., Nucl. Phys. **A530**, 452(1991).
2. M. P. Carpenter et al., Nucl. Phys. **A557**, 57c(1993).
3. B. Crowell et al., Phys. Lett. **B333**, 320(1994).
4. B. Crowell et al., Phys. Rev. **C51**, R1599(1995).
5. A. N. Wilson et al., Phys. Rev. **C54**, 559(1996).
6. H. Amro et al., Phys. Lett. **B413**, 15(1997).



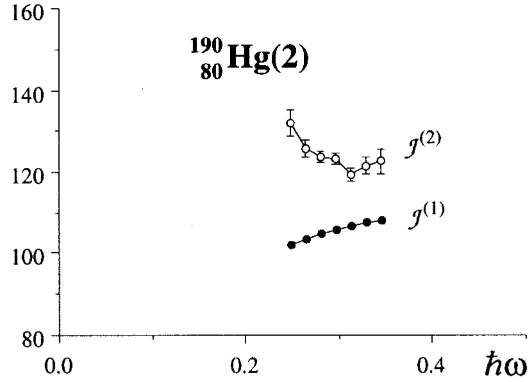
A=190 Z=80 Hg(2)

I	E_γ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
25	481.1(6)	101.8(1)	132(3)	0.248
27	511.4(4)	103.64(8)	126(2)	0.264
29	543.2(3)	104.93(6)	123(1)	0.280
31	575.6(2)	105.98(4)	123(1)	0.296
33	608.1(3)	106.89(5)	119(2)	0.312
35	641.6(3)	107.54(5)	122(2)	0.329
37	674.5(5)	108.23(8)	123(3)	0.345
39	707.1(6)	108.90(9)		

$Q_0 = 17.6 \pm 1.5$ eb (from ref. 3)

I-Values from refs. 1, 2; E_γ from ref. 2.

1. B. Crowell et al., Phys. Rev. **C51**, R1599(1995).
2. A. N. Wilson et al., Phys. Rev. **C54**, 559(1996).
3. H. Amro et al., Phys. Lett. **B413**, 15(1997).

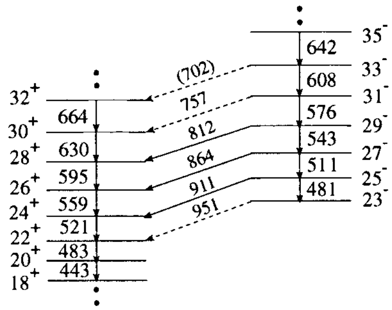


Linking Transitions between ^{190}Hg(1) and ^{190}Hg(2)

I+1→I	Eγ(E1) keV	B(E1) (mW.u.)
$23^- \to 22^+$	950.8(3)	≥0.9
$25^- \to 24^+$	910.9(3)	2.9(13)
$27^- \to 26^+$	864(1)	2.3(7)
$29^- \to 28^+$	812(1)	1.5(6)
$31^- \to 30^+$	757(1)	1.9(7)
$33^- \to 32^+$	702(1)	1.5(10)

1. B. Crowell et al., Phys. Rev. **C51**, R1599(1995).
2. A. N. Wilson et al., Phys. Rev. **C54**, 559(1996).

^{190}Hg(1)←^{190}Hg(2) E1 Tansition

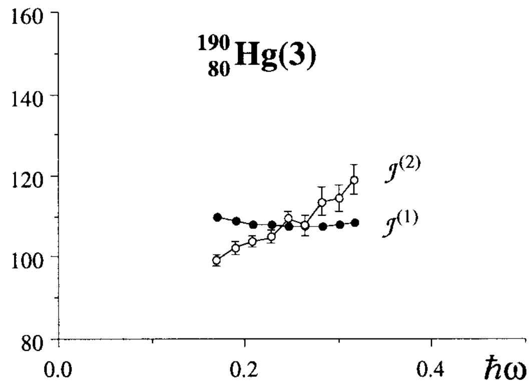


1. B. Crowell et al., Phys. Rev. **C51**, R1599(1995).
2. A. N. Wilson et al., Phys. Rev. **C54**, 559(1996).

A=190 Z=80 Hg(3)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
16	(279)			
18	318.0(3)	110.1(1)	99(1)	0.169
20	358.3(4)	108.8(1)	102(1)	0.189
22	397.4(4)	108.2(1)	104(2)	0.208
24	435.9(4)	107.8(1)	105(2)	0.227
26	474.0(5)	107.6(1)	109(2)	0.246
28	510.6(4)	107.7(1)	108(3)	0.265
30	547.7(8)	107.7(2)	114(3)	0.283
32	582.9(7)	108.1(1)	114(3)	0.300
34	617.9(7)	108.4(1)	119(4)	0.317
36	651.5(7)	109.0(1)		

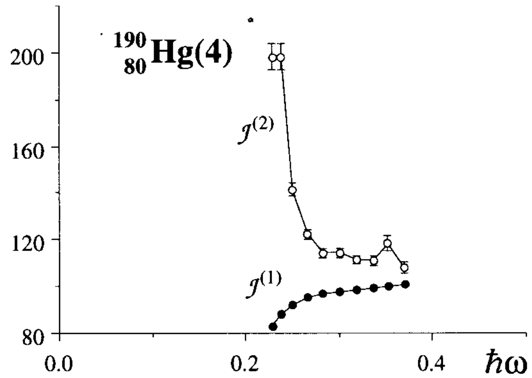
A. N. Wilson et al., Phys. Rev. **C54**, 559(1996).



A=190 Z=80 Hg(4)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
19	446.3(4)	82.90(7)	198(6)	0.228
21	466.5(4)	87.89(8)	198(6)	0.238
23	486.7(4)	92.46(8)	141(3)	0.250
25	515.0(4)	95.15(7)	122(2)	0.266
27	547.7(4)	96.77(7)	114(2)	0.283
29	582.7(4)	97.82(7)	114(2)	0.300
31	617.7(4)	98.75(6)	111(2)	0.318
33	653.6(4)	99.45(6)	111(2)	0.336
35	689.6(6)	100.06(9)	119(3)	0.353
37	723.3(6)	100.93(8)	108(2)	0.371
39	760.4(6)	101.26(8)		
41	(791)			

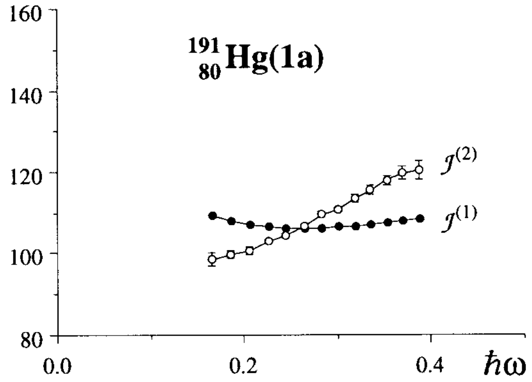
A. N. Wilson et al., Phys. Rev. **C54**, 559(1996).
* I-Values obtained by comparison with ^{192}Hg(1).



See page 58 for Explanation of Tables

A=191 Z=80 Hg(1a)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
17.5	310.9(7)	109.4(2)	99(2)	0.166
19.5	351.5(1)	108.11(3)	100(1)	0.186
21.5	391.6(4)	107.3(1)	101(1)	0.206
23.5	431.3(1)	106.65(2)	103.1(4)	0.225
25.5	470.1(1)	106.36(2)	104.4(4)	0.245
27.5	508.4(1)	106.22(2)	106.7(6)	0.264
29.5	545.9(2)	106.25(4)	109.6(7)	0.282
31.5	582.4(1)	106.46(2)	110.8(7)	0.300
33.5	618.5(2)	106.71(3)	113.6(9)	0.318
35.5	653.7(2)	107.08(3)	115.6(9)	0.336
37.5	688.3(2)	107.51(3)	118(1)	0.353
39.5	722.2(3)	108.00(4)	120(2)	0.369
41.5	755.6(3)	108.52(4)	120(2)	0.386
43.5	788.8(6)	109.03(8)		



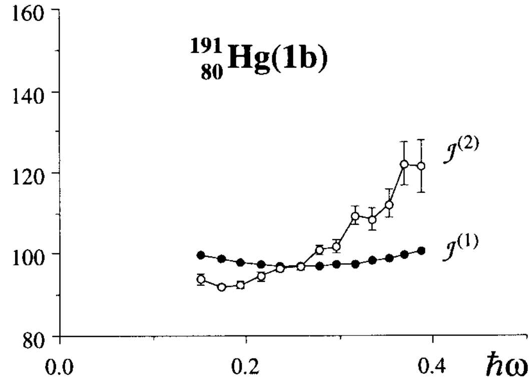
$Q_0 = 18 \pm 3$ eb (from ref. 1)

I-Values and E_γ from ref. 2.

1. E. F. Moore et al., Phys. Rev. Lett. **63**, 360(1989).
2. M. P. Carpenter et al., Phys. Rev. **C51**, 2400(1995).

A=191 Z=80 Hg(1b)

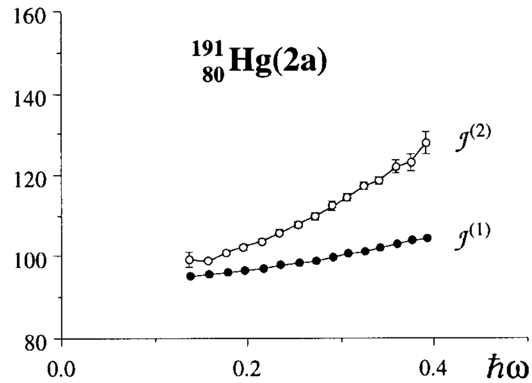
I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
14.5	280.9(6)	99.7(2)	94(1)	0.151
16.5	323.6(2)	98.89(6)	92.0(6)	0.173
18.5	367.1(2)	98.07(5)	93(1)	0.194
20.5	410.3(4)	97.5(1)	95(1)	0.216
22.5	452.6(3)	97.22(6)	96.4(8)	0.237
24.5	494.1(2)	97.15(4)	96.9(8)	0.257
26.5	535.4(3)	97.12(5)	101(1)	0.278
28.5	575.0(4)	97.39(7)	102(2)	0.297
30.5	614.3(5)	97.67(8)	110(2)	0.316
32.5	650.8(6)	98.34(9)	109(3)	0.335
34.5	687.6(7)	98.9(1)	112(3)	0.353
36.5	723.2(8)	99.6(1)	122(5)	0.370
38.5	756.0(12)	100.5(2)	121(6)	0.386
40.5	789.0(13)	101.4(2)		



M. P. Carpenter et al., Phys. Rev. **C51**, 2400(1995).

A=191 Z=80 Hg(2a)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
12.5	252.4(7)	95.1(3)	99(2)	0.136
14.5	292.7(1)	95.66(3)	99.0(3)	0.156
16.5	333.1(1)	96.07(3)	101.0(4)	0.176
18.5	372.7(1)	96.59(3)	102.3(6)	0.196
20.5	411.8(2)	97.13(5)	103.9(6)	0.216
22.5	450.3(1)	97.71(2)	105.8(6)	0.235
24.5	488.1(2)	98.34(4)	107.8(8)	0.253
26.5	525.2(2)	99.01(4)	110(1)	0.272
28.5	561.6(3)	99.72(5)	112(1)	0.290
30.5	597.2(2)	100.47(3)	114.6(9)	0.307
32.5	632.1(2)	101.25(3)	117(1)	0.325
34.5	666.2(2)	102.07(3)	119(1)	0.342
36.5	699.9(2)	102.87(3)	122(2)	0.358
38.5	732.7(4)	103.73(6)	123(2)	0.374
40.5	765.2(4)	104.55(5)	128(3)	0.390
42.5	796.5(6)	105.46(8)		



$Q_0 = 18$ eb (from ref. 1)

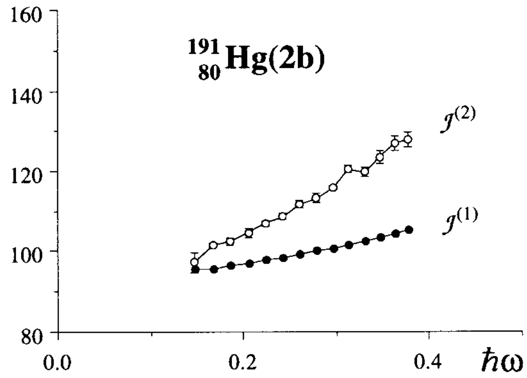
I-Values and E_γ from ref. 2.

1. M. P. Carpenter et al., Phys. Lett. **B240**, 44(1990).
2. M. P. Carpenter et al., Phys. Rev. **C51**, 2400(1995).

See page 58 for Explanation of Tables

A=191 Z=80 Hg(2b)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
13.5	272.0(10)	95.6(4)	97(2)	0.146
15.5	313.1(2)	95.82(6)	101.5(6)	0.166
17.5	352.5(1)	96.45(3)	103(1)	0.186
19.5	391.5(4)	97.1(1)	105(1)	0.205
21.5	429.7(1)	97.74(2)	107.0(6)	0.224
23.5	467.1(2)	98.48(4)	108.7(7)	0.243
25.5	503.9(1)	99.23(2)	112(1)	0.261
27.5	539.7(3)	100.06(6)	113(1)	0.279
29.5	575.0(1)	100.87(2)	115.9(5)	0.296
31.5	609.5(1)	101.72(2)	120.5(8)	0.313
33.5	642.7(2)	102.69(3)	120(1)	0.330
35.5	676.1(3)	103.54(5)	123(2)	0.346
37.5	708.5(3)	104.45(4)	127(2)	0.362
39.5	740.0(3)	105.41(4)	128(2)	0.378
41.5	771.3(3)	106.31(4)		
43.5	(800.5)			

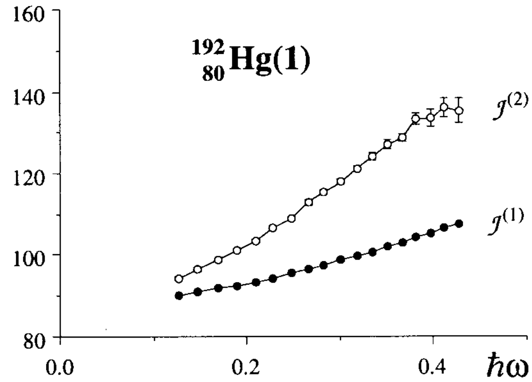


I-Values and E_γ from ref. 2.

1. M. P. Carpenter et al., Phys. Lett. **B240**, 44(1990).
2. M. P. Carpenter et al., Phys. Rev. **C51**, 2400(1995).

A=192 Z=80 Hg(1)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$	Q_t
10	214.8(2)	88.5(1)	92.5(5)	0.118	>6
12	258.0(1)	89.15(3)	94.7(3)	0.140	18.3(-1.6, +1.6)
14	300.3(1)	89.93(3)	96.9(3)	0.161	18.5(-1.0, +1.0)
16	341.6(1)	90.76(3)	99.4(3)	0.181	19.2(-2.1, +2.4)
18	381.8(1)	91.67(2)	101.6(4)	0.201	19.7(-6.6, +3.6)
20	421.2(1)	92.60(3)	104.8(5)	0.220	
22	459.4(1)	93.61(3)	107.3(5)	0.239	21.2(-2.7, +3.7)
24	496.6(1)	94.64(2)	111.0(6)	0.257	19.7(-1.5, +2.3)
26	532.7(1)	95.75(2)	113.6(6)	0.275	19.8(-1.6, +2.5)
28	567.9(1)	96.85(2)	116.1(6)	0.293	20.0(-1.6, +2.4)
30	602.3(1)	97.95(2)	119.3(6)	0.310	18.0(-1.5, +1.6)
32	635.9(1)	99.08(2)	122.4(9)	0.326	17.8(-1.9, +3.1)
34	668.6(2)	100.22(3)	125(1)	0.342	19.0(-2.2, +3.0)
36	700.5(2)	101.36(3)	127(1)	0.358	17.0(-2.3, +2.1)
38	732.1(1)	102.45(2)	131(2)	0.374	18.9(-3.8, +∞)
40	762.5(3)	103.61(5)	132(2)	0.389	18.0(-5.6, +∞)
42	792.9(3)	104.68(4)	134(2)	0.404	
44	822.7(4)	105.75(5)	133(3)	0.419	
46	852.7(5)	106.72(7)			
48	(888.7(7))				



$Q_0 = 20.2 \pm 1.2$ eb (from ref. 13)

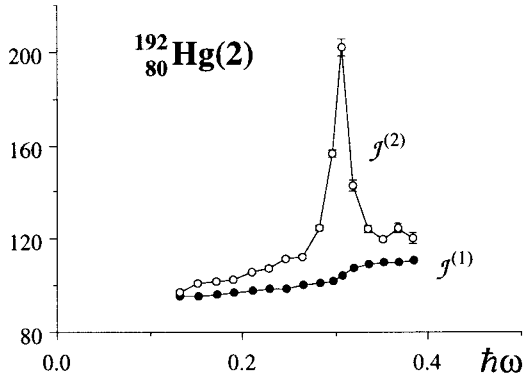
I-Values from refs. 1, 2, 10; E_γ from refs. 5, 6; Q_t from refs. 7, 10, 13.

1. D. Ye et al., Phys. Rev. **C41**, R13(1990).
2. J. A. Becker et al., Phys. Rev. **C41**, R9(1990).
3. T. Lauritsen et al., Phys. Lett. **B279**, 239(1992).
4. F Hannachi et al., Nucl. Phys. **A557**, 75c(1993).
5. B. J. P. Gall et al., Z. Phys. **A347**, 223(1994).
6. P. Fallon et al., Phys. Rev. **C51**, R1609(1995).
7. E. F. Moore et al., Phys. Rev. Lett. **64**, 3127(1990).
8. A Dewald et al., J. Phys. **G19**, L177(1993).
9. I. Y. Lee et al., Phys. Rev. **C50**, 2602(1994).
10. P. Willsau et al., Nucl. Phys. **A574**, 560(1994).
11. E. F. Moore et al., Phys. Rev. **C55**, R2150(1997).
12. E. F. Moore et al., Z. Phys. **A358**, 219(1997).
13. B. C. Busse et al., Phys. Rev. **C57**, R1017(1998).

See page 58 for Explanation of Tables

A=192 Z=80 Hg(2)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω	Q_t
12	241.2	95.4(1)	97.1(7)	0.131	
14	282.4(2)	95.61(7)	100.8(7)	0.151	
16	322.1(2)	96.24(6)	102.0(7)	0.171	
18	361.3(2)	96.87(5)	102.8(7)	0.190	
20	400.2(2)	97.45(5)	105.8(8)	0.210	
22	438.0(2)	98.17(5)	107.5(8)	0.228	
24	475.2(2)	98.91(4)	111.7(9)	0.247	22.1(-3.0, +2.9)
26	511.0(2)	99.80(4)	112.0(9)	0.264	17.8(-2.0, +2.8)
28	546.7(2)	100.60(4)	125(1)	0.281	18.2(-1.3, +1.3)
30	578.8(2)	101.94(4)	156(2)	0.296	19.4(-1.3, +1.2)
32	604.4(2)	104.24(3)	202(4)	0.307	19.4(-1.3, +1.2)
34	624.2(3)	107.34(5)	143(2)	0.319	19.5(-1.3, +1.2)
36	652.2(3)	108.86(5)	125(2)	0.334	
38	684.3(3)	109.60(5)	120(2)	0.351	
40	717.7(3)	110.07(5)	125(2)	0.367	
42	749.8(4)	110.70(6)	120(2)	0.383	
44	783.1(5)	111.10(7)			
46	(819(1))				



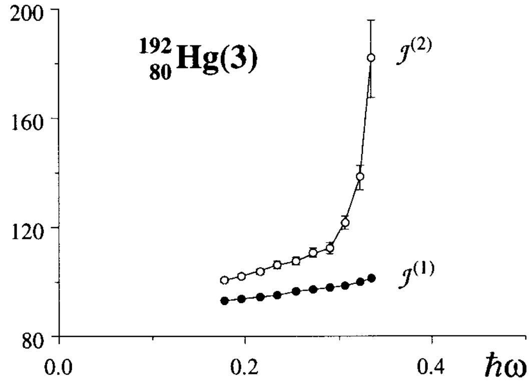
Q_0 = 19.5 ± 1.5 eb (from ref. 2)

I & Q_t Values from ref. 2; Eγ from ref. 1.

1. P. Fallon et al., Phys. Rev. **C51**, R1609(1995).
2. A. Korichi et al., Phys. Lett. **B345**, 403(1995).

A=192 Z=80 Hg(3)

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
16	333.1(3)	93.07(8)	100.8(9)	0.177
18	372.8(2)	93.88(5)	101.8(7)	0.196
20	412.1(2)	94.64(5)	104(1)	0.216
22	450.6(3)	95.43(6)	106(1)	0.235
24	488.3(3)	96.25(6)	108(1)	0.254
26	525.5(4)	97.05(7)	110(2)	0.272
28	561.7(4)	97.92(7)	112(2)	0.290
30	597.3(4)	98.78(7)	122(2)	0.307
32	630.1(5)	99.98(8)	138(5)	0.322
34	659.0(8)	101.7(1)	182(14)	0.335
36	681.0(15)	104.3(2)		



P. Fallon et al., Phys. Rev. **C51**, R1609(1995).

* I-Values obtained by comparison with ^{192}Hg(1).

See page 58 for Explanation of Tables

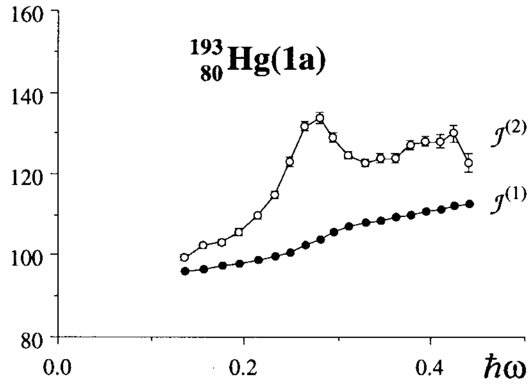
A=193 Z=80 Hg(1a)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$	Q_t
11.5	233.2(2)	94.34(8)	97.6(7)	0.127	
13.5	274.2(2)	94.82(7)	100.5(7)	0.147	
15.5	314.0(2)	95.54(6)	101.5(7)	0.167	
17.5	353.4(2)	96.21(5)	103.9(8)	0.186	
19.5	391.9(2)	96.96(5)	107.8(8)	0.205	
21.5	429.0(2)	97.90(5)	113.0(9)	0.223	
23.5	464.4(2)	99.05(4)	121(1)	0.240	
25.5	497.4(2)	100.52(4)	130(1)	0.256	
27.5	528.2(2)	102.23(4)	132(1)	0.272	17.0(-1.8, +1.9)
29.5	558.5(2)	103.85(4)	127(1)	0.287	16.7(-1.2, +0.9)
31.5	590.0(2)	105.08(4)	123(1)	0.303	16.1(-1.1, +2.0)
33.5	622.6(2)	106.01(3)	121(1)	0.320	16.3(-1.3, +2.1)
35.5	655.7(2)	106.76(3)	122(1)	0.336	
37.5	688.5(2)	107.48(3)	122(1)	0.352	
39.5	721.3(2)	108.14(3)	125(1)	0.369	
41.5	753.2(2)	108.87(3)	126(1)	0.385	
43.5	784.9(2)	109.57(3)	126(1)	0.400	
45.5	816.6(3)	110.21(4)	128(2)	0.416	
47.5	847.8(4)	110.88(5)	121(2)	0.432	
49.5	880.9(5)	111.25(6)			

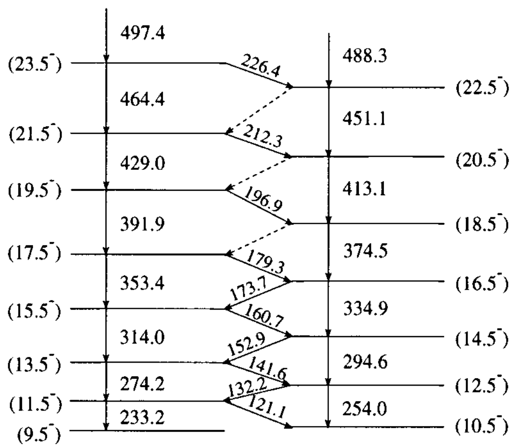
$Q_0 = 18.4^{+0.8}_{-0.9}$ eb (from ref. 5)

I-Values from refs. 1, 2, 3, 4; E_γ from ref. 4; Qt from ref. 5.

1. D. M. Cullen et al., Phys. Rev. Lett. **65**, 1547(1990).
2. P. Fallon et al., Phys. Rev. Lett. **70**, 2690(1993).
3. M. J. Joyce et al., Phys. Rev. Lett. **71**, 2176(1993).
4. M. J. Joyce et al., Phys. Lett. **B340**, 150(1994).
5. B. C. Busse et al., Phys. Rev. **C57**, R1017(1998).



^{193}Hg(1a)↔ ^{193}Hg(1b) M1 Transition



$g_K = -0.65 \pm 0.14$, assuming K=5/2 (ν[512]5⁻/2)
and $Q_0 = 19 \pm 2$ eb
M. J. Joyce et al., Phys. Rev. Lett. **71**, 2176(1993).

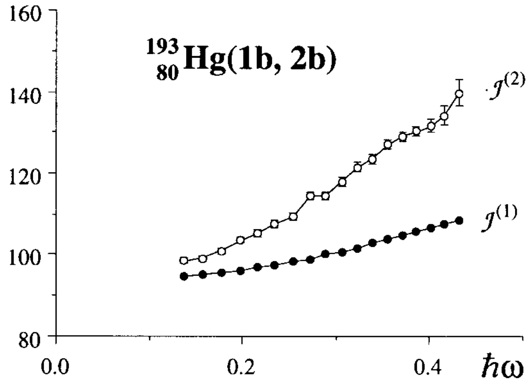
A=193 Z=80 Hg(1b, 2b)*

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
12.5	254.0(2)	94.49(7)	98.5(7)	0.137
14.5	294.6(2)	95.04(6)	99.3(7)	0.157
16.5	334.9(2)	95.55(6)	101.0(7)	0.177
18.5	374.5(2)	96.13(5)	103.6(8)	0.197
20.5	413.1(2)	96.83(5)	105.3(8)	0.216
22.5	451.1(2)	97.54(4)	107.5(8)	0.235
24.5	488.3(2)	98.30(4)	109.3(8)	0.253
26.5	524.9(2)	99.07(4)	114.3(9)	0.271
28.5	559.9(2)	100.02(4)	114.3(9)	0.289
30.5	594.9(2)	100.86(3)	118(1)	0.306
32.5	628.8(2)	101.78(3)	122(1)	0.323
34.5	661.7(2)	102.77(3)	123(1)	0.339
36.5	694.1(2)	103.73(3)	127(1)	0.355
38.5	725.6(2)	104.74(3)	129(1)	0.371
40.5	756.6(2)	105.74(3)	130(1)	0.386
42.5	787.3(2)	106.69(3)	132(2)	0.401
44.5	817.7(3)	107.62(4)	134(2)	0.416
46.5	847.5(4)	108.56(5)	140(3)	0.431
48.5	876.1(5)	109.58(6)		

$Q_0 = 17.3^{+1.1}_{-0.9}$ eb (from ref. 6)

* 1b and 2b are two "isospectral" bands (see ref. 4)
I -Valus from ref. 1, 3, 4, 5; E_γ from ref. 5.

1. D. M. Cullen et al., Phys. Rev. Lett. **65**, 1547(1990).
2. E. A. Henry et al., Z. Phys. **A335**, 361(1990).
3. P. Fallon et al., Phys. Rev. Lett. **70**, 2690(1993).
4. M. J. Joyce et al., Phys. Rev. Lett. **71**, 2176(1993).
5. M. J. Joyce et al., Phys. Lett. **B340**, 150(1994).
6. B. C. Busse et al., Phys. Rev. **C57**, R1017(1998).



See page 58 for Explanation of Tables

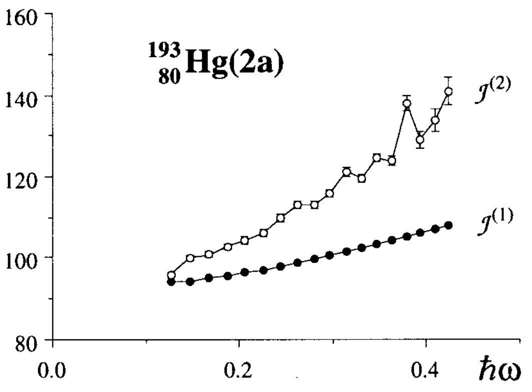
A=193 Z=80 Hg(2a)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
11.5	233.5(2)	94.22(8)	95.9(7)	0.127
13.5	275.2(2)	94.48(7)	100.0(7)	0.148
15.5	315.2(2)	95.18(6)	100.8(7)	0.168
17.5	354.9(2)	95.80(5)	102.8(7)	0.187
19.5	393.8(2)	96.50(5)	104.4(8)	0.207
21.5	432.1(2)	97.20(5)	106.1(8)	0.226
23.5	469.8(2)	97.91(4)	109.9(9)	0.244
25.5	506.2(2)	98.78(4)	113.3(9)	0.262
27.5	541.5(2)	99.72(4)	113.3(9)	0.280
29.5	576.8(2)	100.55(3)	116(1)	0.297
31.5	611.3(2)	101.42(3)	121(1)	0.314
33.5	644.3(2)	102.44(3)	119(1)	0.331
35.5	677.8(2)	103.28(3)	125(1)	0.347
37.5	709.9(2)	104.24(3)	124(1)	0.363
39.5	742.2(2)	105.09(3)	138(2)	0.378
41.5	771.2(3)	106.33(4)	129(2)	0.393
43.5	802.2(4)	107.21(5)	134(3)	0.409
45.5	832.1(5)	108.16(7)	141(4)	0.423
47.5	860.5(5)	109.24(6)		

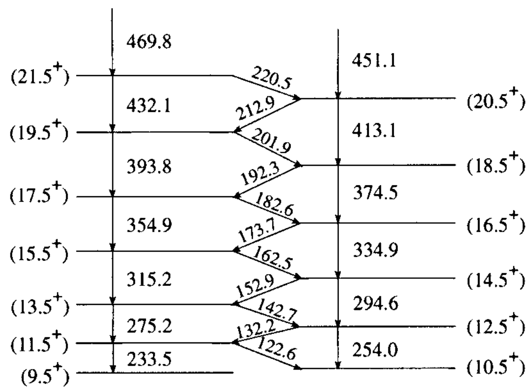
$Q_0 = 16.1\,^{+1.5}_{-1.4}$ eb (from ref. 5)

I -Values from ref. 1, 2, 3, 4; E_γ from ref. 4.

1. D. M. Cullen et al., Phys. Rev. Lett. **65**, 1547(1990).
2. P. Fallon et al., Phys. Rev. Lett. **70**, 2690(1993).
3. M. J. Joyce et al., Phys. Rev. Lett. **71**, 2176(1993).
4. M. J. Joyce et al., Phys. Lett. **B340**, 150(1994).
5. B. C. Busse et al., Phys. Rev. **C57**, R1017(1998).



^{193}Hg(2a)↔ ^{193}Hg(2b) M1 Transition



Assuming K=9/2 (ν[624]9$^+$/2)

M. J. Joyce et al., Phys. Rev. Lett. **71**, 2176(1993).

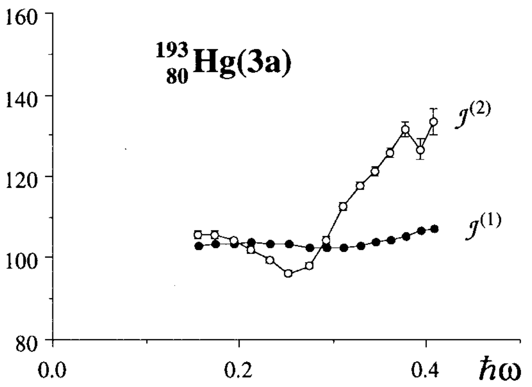
A=193 Z=80 Hg(3a)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω	Q_t
15.5	291.0(2)	103.09(7)	105.8(8)	0.155	
17.5	328.8(2)	103.41(6)	105.8(8)	0.174	
19.5	366.6(2)	103.66(6)	104.2(8)	0.193	
21.5	405.0(2)	103.70(5)	102.0(7)	0.212	
23.5	444.2(2)	103.56(5)	100.0(7)	0.232	
25.5	484.3(2)	103.24(4)	96.2(7)	0.253	
27.5	525.9(2)	102.68(4)	98.0(7)	0.273	16.7(-1.8, +2.3)
29.5	566.7(2)	102.35(4)	104.4(8)	0.293	19.3(-1.8, +2.9)
31.5	605.0(2)	102.48(3)	102.7(9)	0.311	16.1(-1.0, +1.1)
33.5	640.5(2)	103.04(3)	118(1)	0.329	
35.5	674.5(2)	103.78(3)	121(1)	0.346	
37.5	707.5(2)	104.59(3)	126(1)	0.362	
39.5	739.3(2)	105.51(3)	132(2)	0.377	
41.5	769.7(4)	106.54(6)	127(3)	0.393	
43.5	801.3(5)	107.33(7)	133(3)	0.408	
45.5	831.3(5)	108.26(7)			

$Q_0 = 16.7 \pm 1.0$ eb (from ref. 3)

I-Values from refs. 1, 2; E_γ from ref. 2; Qt from ref. 3.

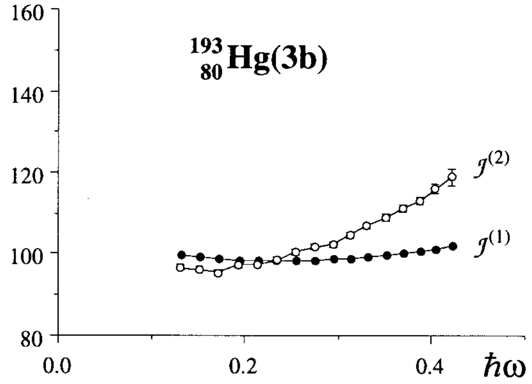
1. D. M. Cullen et al., Phys. Rev. Lett. **65**, 1547(1990).
2. M. J. Joyce et al., Phys. Lett. **B340**, 150(1994).
3. B. C. Busse et al., Phys. Rev. **C57**, R1017(1998).



See page 58 for Explanation of Tables

A=193 Z=80 Hg(3b)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
12.5	240.5(2)	99.79(8)	96.6(7)	0.131
14.5	281.9(2)	99.33(7)	96.2(7)	0.151
16.5	323.5(2)	98.92(6)	95.5(6)	0.172
18.5	365.4(2)	98.52(5)	97.3(7)	0.193
20.5	406.5(2)	98.40(5)	97.6(7)	0.214
22.5	447.5(2)	98.32(4)	98.5(7)	0.234
24.5	488.1(2)	98.34(4)	100.5(7)	0.254
26.5	527.9(2)	98.50(4)	101.8(7)	0.274
28.5	567.2(2)	98.73(3)	102.3(7)	0.293
30.5	606.3(2)	98.96(3)	104.7(8)	0.313
32.5	644.5(2)	99.30(3)	107.0(8)	0.332
34.5	681.9(2)	99.72(3)	109.0(8)	0.350
36.5	718.6(2)	100.20(3)	111.4(9)	0.368
38.5	754.5(2)	100.73(3)	113.3(9)	0.386
40.5	789.8(2)	101.29(3)	116(1)	0.404
42.5	824.3(3)	101.91(4)	119(2)	0.421
44.5	857.9(5)	102.58(6)		



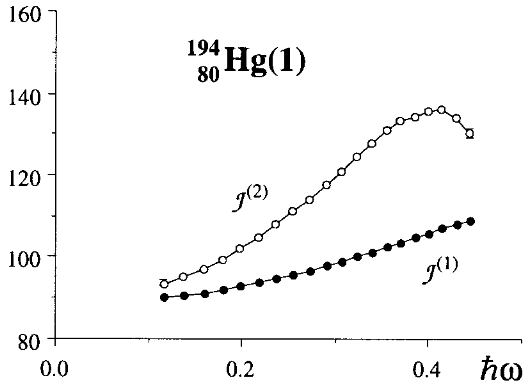
$Q_0 = 16.7^{+1.4}_{-1.3}$ eb (from ref. 2)

I-Values and E_γ from ref. 1.

1. M. J. Joyce et al., Phys. Lett. **B340**, 150(1994).
2. B. C. Busse et al., Phys. Rev. **C57**, R1017(1998).

A=194 Z=80 Hg(1)

I^{exp}	$E\gamma^{\#}$	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$	Q_t
10^+	211.1(3)	90.0(1)	93.4(8)	0.116	20.3(-3.1, +5.3)
12^+	253.93(4)	90.58(1)	95.1(1)	0.137	16.8(-1.3, +1.7)
14^+	295.99(3)	91.219(9)	97.1(1)	0.158	18.3(-2.2, +3.4)
16^+	337.18(3)	91.939(8)	99.5(1)	0.179	
18^+	377.39(3)	92.742(7)	102.0(1)	0.199	
20^+	416.60(3)	93.615(7)	104.8(1)	0.218	17.3(-1.7, +2.5)
22^+	454.76(3)	94.555(6)	107.8(2)	0.237	18.1(-1.1, +1.3)
24^+	491.86(5)	95.56(1)	111.0(2)	0.255	17.8(-1.6, +2.2)
26^+	527.88(3)	96.613(6)	114.2(1)	0.273	15.6(-2.1, +3.6)
28^+	562.92(3)	97.705(5)	117.8(2)	0.290	16.3(-1.6, +2.2)
30^+	596.87(5)	98.849(8)	121.0(2)	0.307	16.1(-2.3, +4.0)
32^+	629.93(3)	100.011(5)	124.5(2)	0.323	17.2(-2.2, +3.6)
34^+	662.07(4)	101.198(6)	127.7(2)	0.339	19.5(-3.2, +6.4)
36^+	693.40(4)	102.394(6)	131.1(3)	0.354	
38^+	723.91(6)	103.604(9)	133.3(4)	0.369	
40^+	753.92(6)	104.786(8)	134.5(5)	0.384	
42^+	783.67(8)	105.91(1)	135.8(4)	0.399	
44^+	813.12(3)	106.995(4)	135.9(3)	0.414	
46^+	842.55(6)	108.006(8)	134.0(6)	0.429	
48^+	872.41(13)	108.89(2)	130.3(9)	0.444	
50^+	903.10(18)	109.62(2)			



$Q_0 = 17.7 \pm 0.4$ eb (from refs. 7, 8)

The energy of 8^+ level is 6417.2 keV (refs. 6, 10).

$\bar{g} = 0.36(10)$ (from refs. 11, 12)

I^{exp}-Values and parity from refs. 1, 6, 10; E_γ from refs. 4, 6, 10; Q_t from refs. 5, 9.

1. M. A. Riley et al., Nucl. Phys. **A512**, 178(1990).
2. C. W. Beausang et al., Z. Phys. **A335**, 325(1990).
3. B. Cederwall et al., Phys. Rev. Lett. **72**, 3150(1994).
4. R. Krücken et al., Phys. Rev. **C54**, R2109(1996).
5. J. R. Hughes et al., Phys. Rev. Lett. **72**, 824(1994).
6. T. L. Khoo et al., Phys. Rev. Lett. **76**, 1583(1996).
7. E. F. Moore et al., Phys. Rev. **C55**, R2150(1997).
8. E. F. Moore et al., Z. Phys. **A358**, 219(1997).
9. R. Kühn et al., Phys. Rev. **C55**, R1002(1997).
10. G. Hackman et al., Phys. Rev. Lett. **79**, 4100(1997).
11. R. H. Mayer et al., Phys. Rev. **C58**, R2640(1998).
12. L. Weissman et al., Phys. Lett. **B446**, 22(1999).

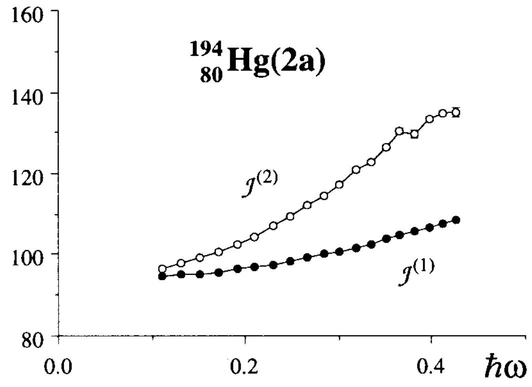
A=194 Z=80 Hg(2a)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω	Q_t
10	200.79(6)	94.63(3)	96.5(2)	0.111	
12	242.25(6)	94.94(2)	97.8(2)	0.131	
14	283.14(6)	95.36(2)	99.2(2)	0.152	
16	323.45(6)	95.84(2)	100.8(2)	0.172	
18	363.12(6)	96.39(2)	102.7(2)	0.191	
20	402.05(6)	97.00(1)	104.5(2)	0.211	
22	440.31(6)	97.66(1)	107.0(2)	0.230	19.0(-2.6, +4.3)
24	477.68(6)	98.39(1)	109.4(3)	0.248	17.9(-1.8, +2.6)
26	514.23(6)	99.18(1)	112.0(3)	0.266	18.5(-2.9, +5.5)
28	549.93(6)	100.01(1)	114.6(3)	0.284	17.7(-2.3, +3.9)
30	584.82(6)	100.89(1)	117.2(3)	0.301	16.1(-1.5, +2.1)
32	618.96(6)	101.78(1)	121.0(3)	0.318	16.3(-2.7, +5.4)
34	652.03(6)	102.76(1)	122.9(3)	0.334	
36	684.57(7)	103.72(1)	126.5(4)	0.350	
38	716.20(6)	104.72(1)	130.3(8)	0.366	
40	746.89(19)	105.77(3)	129.7(8)	0.381	
42	777.73(6)	106.72(1)	133.2(4)	0.396	
44	807.76(8)	107.71(1)	134.6(5)	0.411	
46	837.48(7)	108.66(1)	135(1)	0.426	
48	867.08(24)	109.56(3)			

$Q_0 = 17.6 \pm 0.6$ eb (from refs. 7, 8)
$\bar{g} = 0.41(20)$ (from refs. 9, 10)

I-Values from ref. 1; E_γ from ref. 4; Q_t from ref. 5.

1. M. A. Riley et al., Nucl. Phys. **A512**, 178(1990).
2. C. W. Beausang et al., Z. Phys. **A335**, 325(1990).
3. B. Cederwall et al., Phys. Rev. Lett. **72**, 3150(1994).
4. R. Krücken et al., Phys. Rev. **C54**, R2109(1996).
5. J. R. Hughes et al., Phys. Rev. Lett. **72**, 824(1994).
6. R. Kühn et al., Phys. Rev. **C55**, R1002(1997).
7. E. F. Moore et al., Phys. Rev. **C55**, R2150(1997).
8. E. F. Moore et al., Z. Phys. **A358**, 219(1997).
9. R. H. Mayer et al., Phys. Rev. **C58**, R2640(1998).
10. L. Weissman et al., Phys. Lett. **B446**, 22(1999).



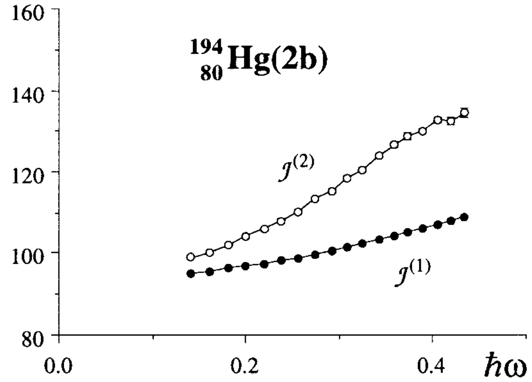
A=194 Z=80 Hg(2b)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
13	262.27(6)	95.32(2)	99.0(2)	0.141
15	302.68(6)	95.81(2)	100.5(2)	0.161
17	342.50(6)	96.35(2)	102.1(2)	0.181
19	381.68(6)	96.94(2)	104.2(2)	0.200
21	420.08(6)	97.60(1)	106.1(2)	0.220
23	457.79(6)	98.30(1)	108.2(2)	0.238
25	494.77(6)	99.04(1)	110.4(3)	0.256
27	531.01(7)	99.81(1)	113.5(3)	0.274
29	566.26(6)	100.66(1)	115.4(3)	0.292
31	600.92(6)	101.51(1)	118.8(4)	0.309
33	634.60(11)	102.43(2)	120.3(5)	0.326
35	667.84(7)	103.32(1)	124.0(4)	0.342
37	700.11(6)	104.27(1)	126.6(7)	0.358
39	731.70(17)	105.23(2)	128.7(7)	0.374
41	762.77(6)	106.19(1)	130.1(4)	0.389
43	793.51(6)	107.12(1)	132.7(6)	0.404
45	823.65(13)	108.06(2)	132.5(8)	0.419
47	853.85(12)	108.92(2)	134(1)	0.434
49	883.60(22)	109.78(3)		

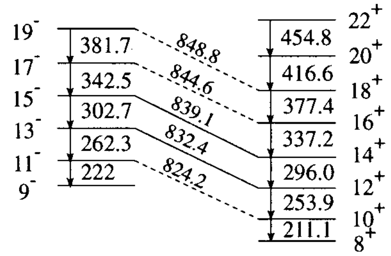
$Q_0 = 17.6 \pm 0.8$ eb (from refs. 6, 7)
$\bar{g} = 0.72(26)$ (from refs. 8, 9)

I-Values from ref. 1; E_γ from ref. 4.

1. M. A. Riley et al., Nucl. Phys. **A512**, 178(1990).
2. E. A. Henry et al., Z. Phys. **A335**, 361(1990).
3. B. Cederwall et al., Phys. Rev. Lett. **72**, 3150(1994).
4. R. Krücken et al., Phys. Rev. **C54**, R2109(1996).
5. R. Kühn et al., Phys. Rev. **C55**, R1002(1997).
6. E. F. Moore et al., Phys. Rev. **C55**, R2150(1997).
7. E. F. Moore et al., Z. Phys. **A358**, 219(1997).
8. R. H. Mayer et al., Phys. Rev. **C58**, R2640(1998).
9. L. Weissman et al., Phys. Lett. **B446**, 22(1999).



^{194}Hg(2b)→^{194}Hg(1) E1 Transition



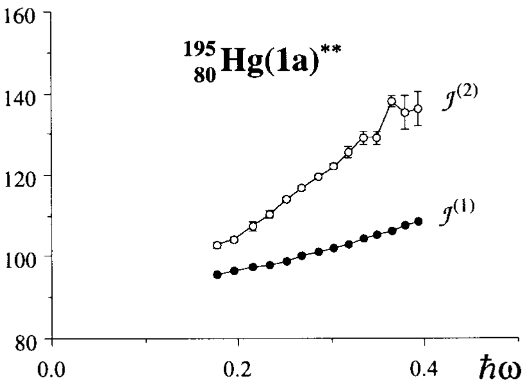
1. T. L. Khoo et al., Phys. Rev. Lett. **76**, 1583(1996).
2. G. Hackman et al., Phys. Rev. Lett. **79**, 4100(1997).
3. R. R. Chasman et al., Phys. Rev. Lett. **80**, 4610(1998).
4. G. Hackman et al., Phys. Rev. Lett. **80**, 4611(1998).

* Band 2b is a $K^\pi = 2^-$ octupole vibrational band need further measurements. (see refs. 2,3,4)

See page 58 for Explanation of Tables

A=195 Z=80 Hg(1a)**

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
14.5	(294)			
16.5	333.9(1)	95.84(3)	102.8(8)	0.177
18.5	372.8(3)	96.57(8)	104(1)	0.196
20.5	411.2(3)	97.28(7)	107.5(9)	0.215
22.5	448.4(1)	98.13(2)	110.2(4)	0.233
24.5	484.7(1)	99.03(2)	114.0(5)	0.251
26.5	519.8(1)	100.04(2)	117.0(5)	0.269
28.5	554.0(1)	101.08(2)	119.4(8)	0.285
30.5	587.5(2)	102.13(3)	122(1)	0.302
32.5	620.3(3)	103.18(5)	125(2)	0.318
34.5	652.2(3)	104.26(5)	129(2)	0.334
36.5	683.2(2)	105.39(3)	129(2)	0.349
38.5	714.2(3)	106.41(4)	138(4)	0.364
40.5	743.2(8)	107.6(1)	135(4)	0.379
42.5	772.8(4)	108.70(6)	136(5)	0.394
44.5	802.2(9)	109.7(1)		
46.5	(832)			
48.5	(861)			
50.5	(887)			

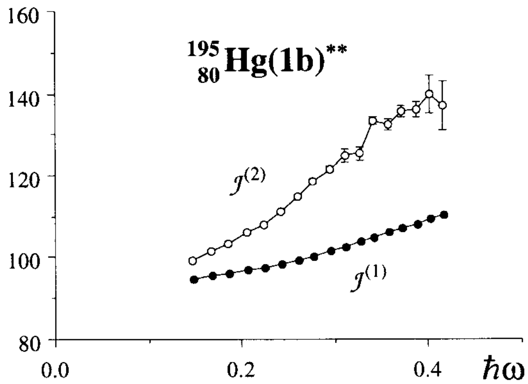


G. Hackman et al., Phys. Rev. **C55**, 148(1997).

* tentatively assigned as signature partners.

A=195 Z=80 Hg(1b)**

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
13.5	273.9(2)	94.93(7)	99.3(6)	0.147
15.5	314.2(1)	95.48(3)	101.8(4)	0.167
17.5	353.5(1)	96.18(3)	103.4(4)	0.186
19.5	392.2(1)	96.89(2)	106.1(4)	0.206
21.5	429.9(1)	97.70(2)	108.1(4)	0.224
23.5	466.9(1)	98.52(2)	111.4(4)	0.242
25.5	502.8(1)	99.44(2)	114.9(5)	0.260
27.5	537.6(1)	100.45(2)	118.7(5)	0.277
29.5	571.3(1)	101.52(2)	121.6(5)	0.294
31.5	604.2(1)	102.62(2)	125(2)	0.310
33.5	636.2(4)	103.74(7)	125(2)	0.326
35.5	668.1(1)	104.77(2)	133(1)	0.342
37.5	698.1(2)	106.00(3)	132(1)	0.357
39.5	728.3(2)	107.10(3)	136(1)	0.372
41.5	757.8(2)	108.21(3)	136(2)	0.386
43.5	787.2(3)	109.25(4)	140(5)	0.401
45.5	815.8(9)	110.3(1)	137(6)	0.415
47.5	845.0(9)	111.2(1)		
49.5	(874)			



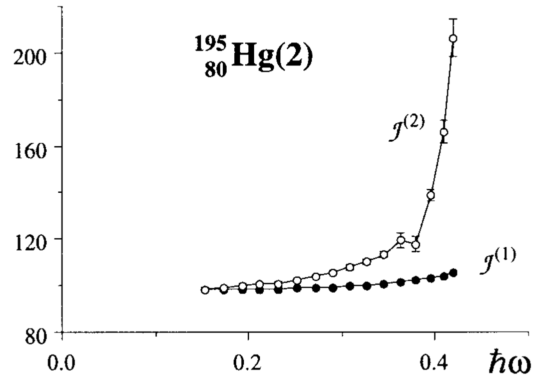
G. Hackman et al., Phys. Rev. **C55**, 148(1997).

* tentatively assigned as signature partners.

A=195 Z=80 Hg(2)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
12.5	(244)			
14.5	284.5(1)	98.42(3)	98.8(3)	0.152
16.5	325.0(1)	98.46(3)	99.0(3)	0.173
18.5	365.4(1)	98.52(3)	100.3(4)	0.193
20.5	405.3(1)	98.69(2)	100.8(4)	0.213
22.5	445.0(1)	98.88(2)	101.3(4)	0.232
24.5	484.5(1)	99.07(2)	102.3(4)	0.252
26.5	523.6(1)	99.31(2)	103.9(4)	0.271
28.5	562.1(1)	99.63(2)	105.5(4)	0.291
30.5	600.0(1)	100.00(2)	108(1)	0.309
32.5	637.1(4)	100.46(6)	110(1)	0.328
34.5	673.4(2)	100.98(3)	113(1)	0.346
36.5	708.7(4)	101.59(6)	119(4)	0.363
38.5	742.2(9)	102.4(1)	118(3)	0.380
40.5	776.1(3)	103.08(4)	138(2)	0.395
42.5	805.0(4)	104.35(5)	166(5)	0.409
44.5	829.1(6)	106.14(8)	206(8)	0.419
46.5	848.5(5)	108.43(6)		
48.5	(868)			

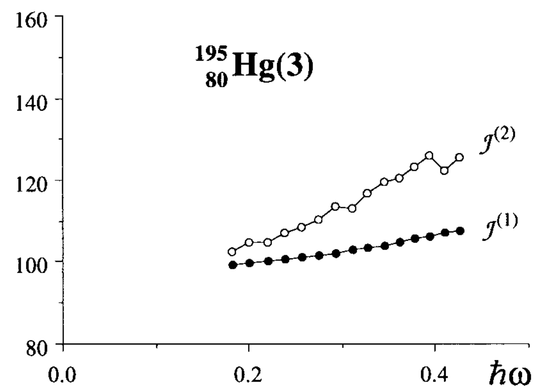
G. Hackman et al., Phys. Rev. **C55**, 148(1997).



A=195 Z=80 Hg(3)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
17.5	341.9(1)	99.44(3)	102.6(4)	0.181
19.5	380.9(1)	99.76(3)	104.7(4)	0.200
21.5	419.1(1)	100.21(2)	105.0(4)	0.219
23.5	457.2(1)	100.61(2)	107.2(4)	0.238
25.5	494.5(1)	101.11(2)	108.4(4)	0.257
27.5	531.4(1)	101.62(2)	110.5(4)	0.275
29.5	567.6(1)	102.18(2)	113.6(5)	0.293
31.5	602.8(1)	102.85(2)	113.3(5)	0.310
33.5	638.1(1)	103.43(2)	116.6(8)	0.328
35.5	672.4(2)	104.10(3)	119(1)	0.345
37.5	705.9(2)	104.83(3)	120(3)	0.361
39.5	739.1(8)	105.5(1)	123(3)	0.378
41.5	771.6(2)	106.27(3)	126(2)	0.394
43.5	803.4(5)	107.05(7)	122(3)	0.410
45.5	836.1(5)	107.64(6)	125(3)	0.426
47.5	868.0(6)	108.29(7)		
49.5	(899)			

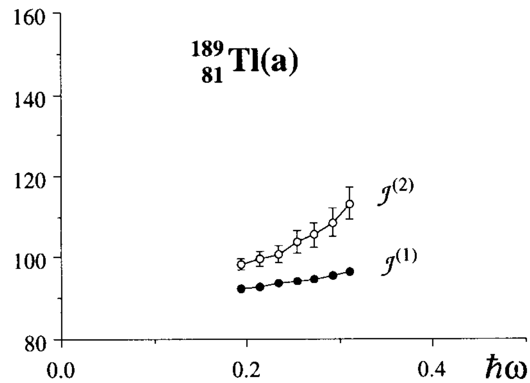
G. Hackman et al., Phys. Rev. **C55**, 148(1997).



A=189 Z=81 Tl(a)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
15.5	(326.3(3))			
17.5	367.9(4)	92.4(1)	99(1)	0.194
19.5	408.5(5)	93.0(1)	100(2)	0.214
21.5	448.6(6)	93.6(1)	101(2)	0.234
23.5	488.3(6)	94.2(1)	104(3)	0.254
25.5	526.8(7)	94.9(1)	106(3)	0.273
27.5	564.7(8)	95.6(1)	109(3)	0.292
29.5	601.5(9)	96.4(1)	113(4)	0.310
31.5	636.8(9)	97.4(1)		
33.5	(670.9(10))			

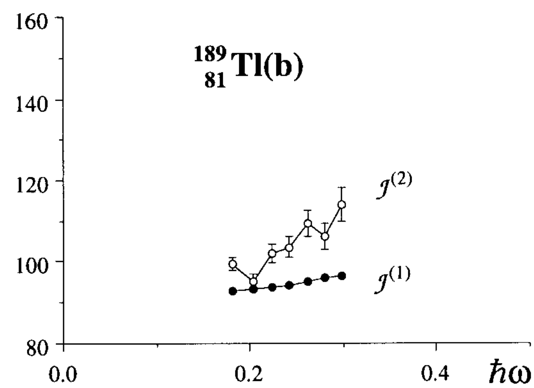
W. Reviol et al., Phys. Rev. **C58**, R2644(1998).



A=189 Z=81 Tl(b)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
14.5	(304.5(3))			
16.5	344.8(4)	92.8(1)	100(1)	0.182
18.5	385(1)	93.5(1)	95(2)	0.203
20.5	427(1)	93.7(1)	102(2)	0.223
22.5	466.2(6)	94.4(1)	104(3)	0.243
24.5	504.8(7)	95.1(1)	109(3)	0.262
26.5	541.4(8)	96.0(1)	106(3)	0.280
28.5	579.1(9)	96.7(1)	114(4)	0.298
30.5	614.2(9)	97.7(1)		
32.5	(648.4(10))			

W. Reviol et al., Phys. Rev. **C58**, R2644(1998).



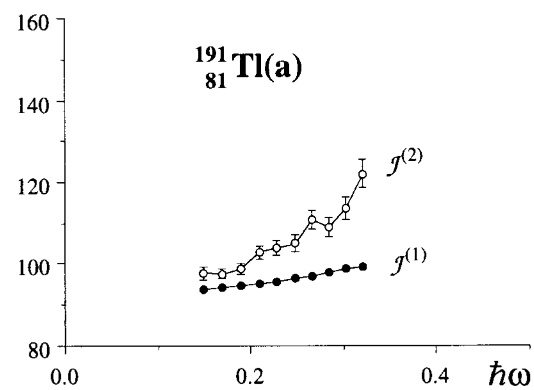
A=191 Z=81 Tl(a)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
13.5	277	93.9(2)	98(2)	0.149
15.5	317.9	94.37(9)	98(1)	0.169
17.5	358.9	94.73(9)	99(1)	0.190
19.5	399.4	95.1(1)	103(2)	0.209
21.5	438.3	95.8(1)	104(2)	0.229
23.5	476.8	96.5(1)	105(2)	0.248
25.5	514.9	97.1(1)	111(2)	0.267
27.5	551.0	98.0(1)	109(2)	0.285
29.5	587.7	98.7(1)	114(3)	0.303
31.5	622.9	99.5(1)	122(3)	0.320
33.5	655.7	100.7(1)		

$Q_0 = 18 \pm 1$ eb (from ref. 2)

I-Values from ref. 2; E_γ from ref. 1.

1. S. Pilotte et al., Phys. Rev. **C49**, 718(1994).
2. W. Reviol et al., Nucl. Phys. **A630**, 434c(1998).



See page 58 for Explanation of Tables

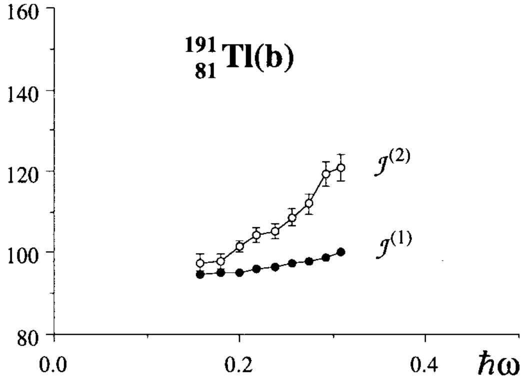
A=191 Z=81 Tl(b)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
14.5	296	94.6(2)	98(2)	0.158
16.5	337	95.0(2)	98(2)	0.179
18.5	377.8	95.3(1)	102(1)	0.199
20.5	417.2	95.9(1)	104(2)	0.218
22.5	455.5	96.6(1)	105(2)	0.237
24.5	493.5	97.3(1)	109(2)	0.256
26.5	530.3	98.1(1)	112(2)	0.274
28.5	566.0	98.9(1)	119(3)	0.291
30.5	599.5	100.1(1)	121(3)	0.308
32.5	632.6	101.2(1)		

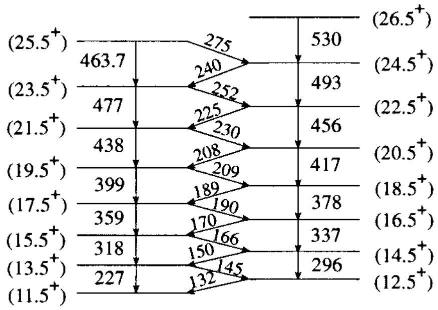
$Q_0 = 18 \pm 1$ eb (from ref. 2)

I-Values from ref. 2; E_γ from refs. 1, 2.

1. S. Pilotte et al., Phys. Rev. **C49**, 718(1994).
2. W. Reviol et al., Nucl. Phys. **A630**, 434c(1998).



^{191}Tl(a)↔ ^{191}Tl(b) M1 Transition

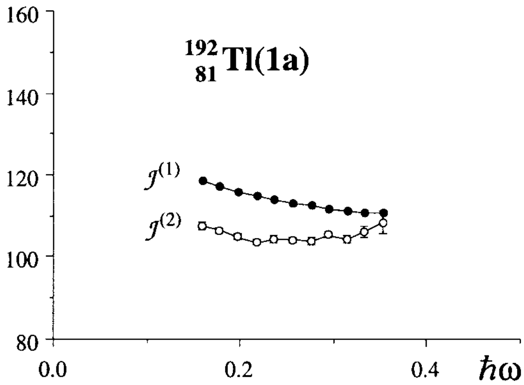


$g_K = 1.38 \pm 0.12$, assuming K=5/2 (π[642]5$^+$/2)
and $Q_0 = 18 \pm 1$ eb
W. Reviol et al., Nucl. Phys. **A630**, 434c(1998).

A=192 Z=81 Tl(1a)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
17	283.0(2)	116.61(8)	105.8(8)	0.151
19	320.8(2)	115.34(7)	104.7(8)	0.170
21	359.0(2)	114.21(6)	103.1(8)	0.189
23	397.8(2)	113.12(6)	101.8(7)	0.209
25	437.1(2)	112.10(5)	102.6(7)	0.228
27	476.1(2)	111.32(5)	102.3(7)	0.248
29	515.2(2)	110.64(4)	102.0(7)	0.267
31	554.4(2)	110.03(4)	103.6(8)	0.287
33	593.0(2)	109.61(4)	102.6(9)	0.306
35	632.0(3)	109.18(5)	104(1)	0.326
37	670.4(4)	108.89(7)	107(3)	0.345
39	707.9(8)	108.8(1)		

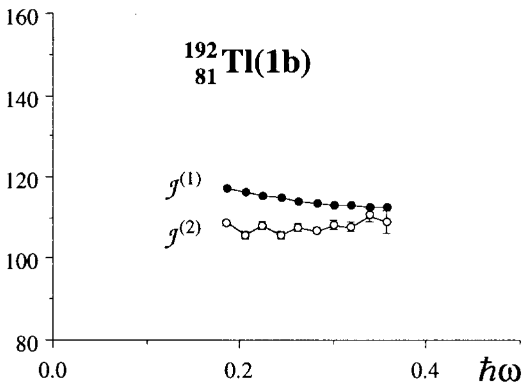
S. M. Fischer et al., Phys. Rev. **C53**, 2126(1996).



A=192 Z=81 Tl(1b)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
20	337.5(2)	115.56(7)	107.0(8)	0.178
22	374.9(2)	114.70(6)	103.9(8)	0.197
24	413.4(2)	113.69(6)	106.1(8)	0.216
26	451.1(2)	113.06(5)	103.9(8)	0.235
28	489.6(2)	112.34(5)	105.8(8)	0.254
30	527.4(2)	111.87(4)	105.0(8)	0.273
32	565.5(2)	111.41(4)	106(1)	0.292
34	603.1(3)	111.09(6)	106(1)	0.311
36	640.9(3)	110.78(5)	109(2)	0.330
38	677.7(5)	110.67(8)	107(3)	0.348
40	715.0(8)	110.5(1)		

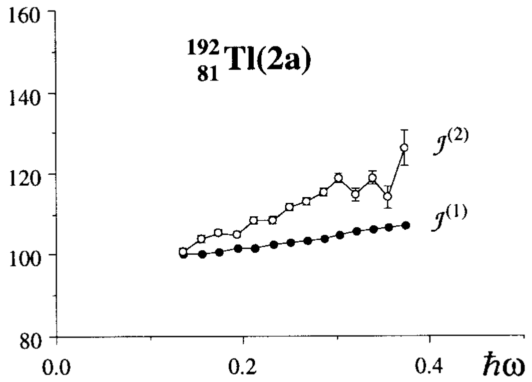
S. M. Fischer et al., Phys. Rev. **C53**, 2126(1996).



See page 58 for Explanation of Tables

A=192 Z=81 Tl(2a)

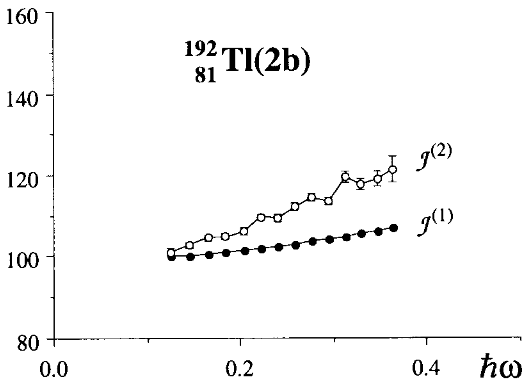
I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
12	233.4(2)	98.54(8)	99.0(7)	0.127
14	273.8(2)	98.61(7)	102.0(7)	0.147
16	313.0(2)	99.04(6)	103.6(8)	0.166
18	351.6(2)	99.54(6)	103.1(8)	0.186
20	390.4(2)	99.90(5)	106.7(8)	0.205
22	427.9(2)	100.49(5)	106.7(8)	0.223
24	465.4(2)	100.99(4)	109.9(9)	0.242
26	501.8(2)	101.63(4)	111.1(9)	0.260
28	537.8(2)	102.27(4)	113.6(9)	0.278
30	573.0(2)	102.97(4)	117(1)	0.295
32	607.2(3)	103.75(5)	113(2)	0.313
34	642.6(4)	104.26(6)	117(2)	0.330
36	676.8(3)	104.91(5)	112(3)	0.347
38	712.5(8)	105.3(1)	124(4)	0.364
40	744.7(8)	106.1(1)		



S. M. Fischer et al., Phys. Rev. **C53**, 2126(1996).

A=192 Z=81 Tl(2b)

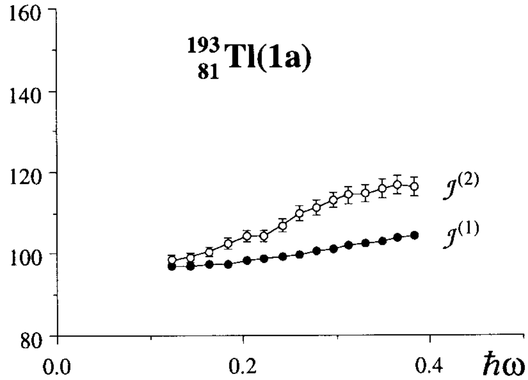
I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
11	213.4(3)	98.4(1)	99.3(9)	0.117
13	253.7(2)	98.54(8)	101.0(7)	0.137
15	293.3(2)	98.87(7)	102.8(7)	0.156
17	332.2(2)	99.34(6)	103.1(8)	0.176
19	371.0(2)	99.73(5)	104.4(8)	0.195
21	409.3(2)	100.17(5)	107.8(8)	0.214
23	446.4(2)	100.81(5)	107.5(8)	0.233
25	483.6(2)	101.32(4)	110.2(9)	0.251
27	519.9(2)	101.94(4)	112.7(9)	0.269
29	555.4(2)	102.63(4)	112(1)	0.287
31	591.2(3)	103.18(5)	118(1)	0.304
33	625.2(3)	103.97(5)	116(1)	0.321
35	659.7(3)	104.59(5)	117(2)	0.338
37	693.8(4)	105.22(6)	119(3)	0.355
39	727.3(8)	105.9(1)		



S. M. Fischer et al., Phys. Rev. **C53**, 2126(1996).

A=193 Z=81 Tl(1a)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
11.5	227.3(3)	96.8(1)	99(1)	0.124
13.5	267.9(3)	97.1(1)	99(1)	0.144
15.5	308.2(3)	97.3(1)	101(1)	0.164
17.5	348.0(3)	97.7(1)	103(1)	0.184
19.5	387.0(4)	98.19(9)	104(1)	0.203
21.5	425.4(4)	98.73(9)	104(1)	0.222
23.5	463.7(4)	99.20(8)	107(2)	0.241
25.5	501.1(4)	99.78(8)	110(2)	0.260
27.5	537.5(4)	100.47(8)	111(2)	0.278
29.5	573.4(4)	101.15(7)	113(2)	0.296
31.5	608.8(4)	101.84(7)	114(2)	0.313
33.5	643.8(5)	102.52(7)	115(2)	0.331
35.5	678.7(5)	103.14(7)	116(2)	0.348
37.5	713.2(5)	103.76(7)	117(2)	0.365
39.5	747.5(5)	104.35(7)	116(2)	0.382
41.5	781.9(5)	104.87(7)		



I-Values and E_γ from ref. 2.

1. P. B. Fernandez et al., Nucl. Phys. **A517**, 386(1990).
2. S. Bouneau et al., Phys. Rev. **C53**, R9(1996).

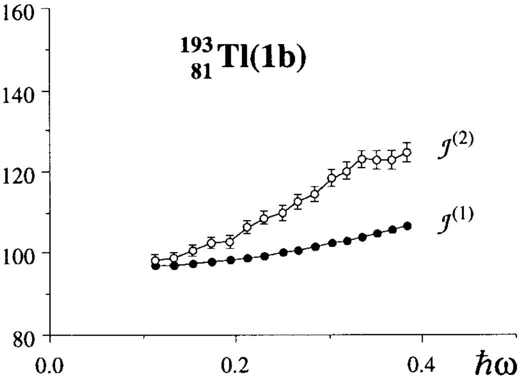
See page 58 for Explanation of Tables

A=193 Z=81 Tl(1b)

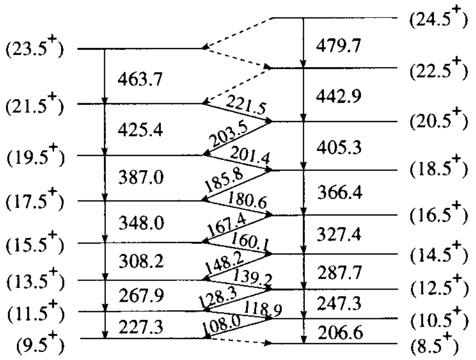
I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
10.5	206.6(4)	96.8(2)	98(1)	0.114
12.5	247.3(4)	97.0(2)	99(1)	0.134
14.5	287.7(4)	97.3(1)	101(1)	0.154
16.5	327.4(4)	97.7(1)	103(1)	0.174
18.5	366.4(4)	98.3(1)	103(1)	0.193
20.5	405.3(4)	98.7(1)	106(2)	0.212
22.5	442.9(4)	99.35(9)	109(2)	0.231
24.5	479.7(4)	100.06(8)	110(2)	0.249
26.5	516.1(4)	100.76(8)	113(2)	0.267
28.5	551.6(4)	101.52(7)	115(2)	0.285
30.5	586.5(4)	102.30(7)	118(2)	0.302
32.5	620.3(4)	103.18(7)	120(2)	0.319
34.5	653.6(4)	104.04(6)	123(2)	0.335
36.5	686.1(4)	104.94(6)	123(2)	0.351
38.5	718.7(4)	105.75(6)	123(2)	0.368
40.5	751.3(4)	106.48(6)	125(2)	0.384
42.5	783.4(4)	107.22(5)		

I-Values and E_γ from ref. 2.

1. P. B. Fernandez et al., Nucl. Phys. **A517**, 386(1990).
2. S. Bouneau et al., Phys. Rev. **C53**, R9(1996).



^{193}Tl(1a)↔ ^{193}Tl(1b) M1 Transition

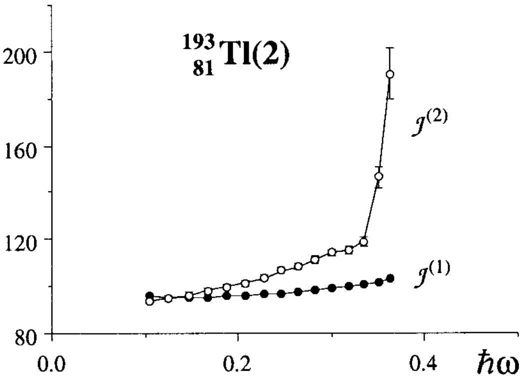


$g_K = 1.46 \pm 0.17$, assuming K=5/2 ($\pi[642]5^+/2$)
and $Q_0 = 19 \pm 2$ eb
S. Bouneau et al., Phys. Rev. **C53**, R9(1996).

A=193 Z=81 Tl(2)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
9.5	187.9(3)	95.8(2)	93.5(9)	0.105
11.5	230.7(3)	95.4(1)	95(1)	0.126
13.5	272.8(3)	95.3(1)	96(1)	0.147
15.5	314.3(3)	95.45(9)	98(1)	0.167
17.5	355.0(3)	95.77(8)	100(1)	0.188
19.5	395.1(3)	96.18(7)	102(1)	0.207
21.5	434.5(3)	96.66(7)	104(1)	0.227
23.5	473.1(3)	97.23(6)	107(1)	0.246
25.5	510.6(3)	97.92(6)	108(1)	0.265
27.5	547.5(3)	98.63(5)	111(1)	0.283
29.5	583.4(3)	99.42(5)	114(1)	0.301
31.5	618.4(3)	100.26(5)	115(1)	0.318
33.5	653.1(3)	101.06(5)	119(2)	0.335
35.5	686.7(4)	101.94(6)	147(4)	0.350
37.5	714.0(7)	103.6(1)	190(11)	0.362
39.5	735.0(10)	106.1(1)		

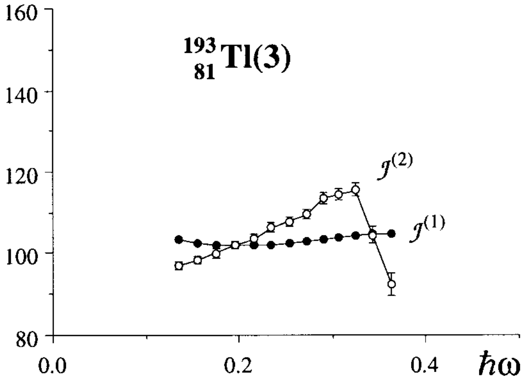
S. Bouneau et al., Phys. Rev. **C58**, 3260(1998).



A=193 Z=81 Tl(3)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
13.5	250.8(3)	103.7(1)	97(1)	0.136
15.5	292.0(3)	102.7(1)	98(1)	0.156
17.5	332.7(3)	102.19(9)	100(1)	0.176
19.5	372.7(3)	101.96(8)	102(1)	0.196
21.5	411.9(3)	101.97(7)	104(1)	0.216
23.5	450.5(3)	102.11(7)	106(1)	0.235
25.5	488.1(3)	102.44(6)	108(1)	0.253
27.5	525.2(3)	102.82(6)	110(1)	0.272
29.5	561.7(3)	103.26(6)	114(1)	0.290
31.5	596.9(3)	103.87(5)	115(1)	0.307
33.5	631.8(3)	104.46(5)	116(1)	0.325
35.5	666.4(3)	105.04(5)	104(2)	0.343
37.5	704.7(7)	105.0(1)	92(3)	0.363
39.5	748.0(10)	104.3(1)		

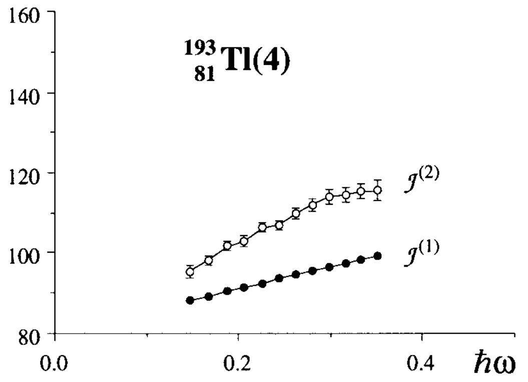
S. Bouneau et al., Phys. Rev. **C58**, 3260(1998).



A=193 Z=81 Tl(4)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
12.5	271.5(5)	88.4(2)	95(1)	0.146
14.5	313.4(4)	89.3(1)	98(1)	0.167
16.5	354.1(3)	90.37(8)	102(1)	0.187
18.5	393.4(4)	91.51(9)	103(1)	0.206
20.5	432.3(3)	92.53(6)	106(1)	0.226
22.5	469.9(3)	93.64(6)	107(1)	0.244
24.5	507.3(3)	94.62(6)	110(1)	0.263
26.5	543.7(3)	95.64(5)	112(2)	0.281
28.5	579.4(4)	96.65(7)	114(2)	0.299
30.5	614.5(4)	97.64(6)	114(2)	0.316
32.5	649.5(4)	98.74(6)	115(2)	0.333
34.5	684.2(4)	99.39(6)	116(3)	0.351
36.5	718.8(7)	100.2(1)		

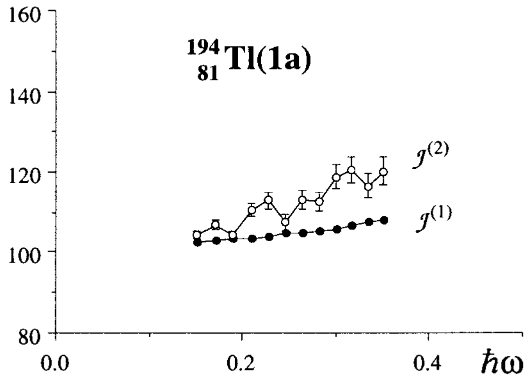
S. Bouneau et al., Phys. Rev. **C58**, 3260(1998).



A=194 Z=81 Tl(1a)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
14	268.0	100.7(1)	103(1)	0.144
16	307.0	101.0(1)	105(1)	0.163
18	345.1	101.4(1)	102(1)	0.182
20	384.2	101.5(1)	109(2)	0.201
22	421.0	102.1(1)	111(2)	0.220
24	457.0	102.8(1)	106(2)	0.238
26	494.9	103.1(1)	111(2)	0.256
28	530.9	103.6(1)	111(2)	0.274
30	567.0	104.1(1)	117(3)	0.292
32	601.2	104.8(1)	119(3)	0.309
34	634.9	105.5(1)	115(3)	0.326
36	669.8	106.0(1)	118(3)	0.343
38	703.6	106.6(1)		

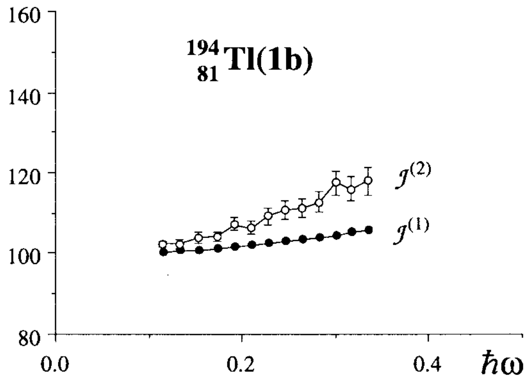
I-Values and E_γ from ref. 2.
1. F. Azaiez et al., Z. Phys. **A336**, 243(1990).
2. F. Azaiez et al., Phys. Rev. Lett. **66**, 1030(1991).



A=194 Z=81 Tl(1b)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
11	209.3	100.3(1)	102(1)	0.114
13	248.4	100.6(1)	102(1)	0.134
15	287.5	100.9(1)	104(1)	0.153
17	326.0	101.2(1)	104(1)	0.173
19	364.4	101.5(1)	107(2)	0.192
21	401.7	102.1(1)	106(2)	0.210
23	439.3	102.4(1)	109(2)	0.229
25	475.9	103.0(1)	111(2)	0.247
27	512.0	103.5(1)	111(2)	0.265
29	548.0	104.0(1)	113(3)	0.283
31	583.5	104.5(1)	118(3)	0.300
33	617.5	105.3(1)	116(3)	0.317
35	652.0	105.8(1)	118(3)	0.334
37	685.9	106.4(1)		

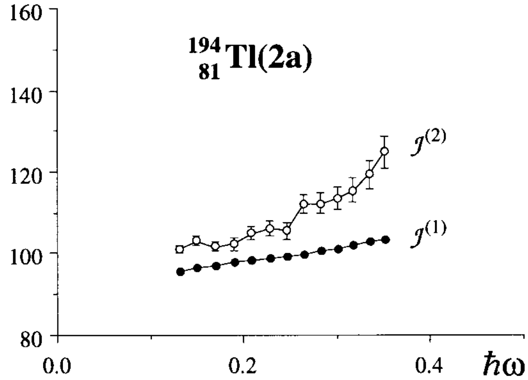
F. Azaiez et al., Phys. Rev. Lett. **66**, 1030(1991).



See page 58 for Explanation of Tables

A=194 Z=81 Tl(2a)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
12	240.5	95.6(1)	101(1)	0.130
14	280.0	96.4(1)	103(1)	0.150
16	318.8	97.2(1)	102(1)	0.169
18	358.1	97.7(1)	102(1)	0.189
20	397.2	98.2(1)	105(2)	0.208
22	435.3	98.8(1)	106(2)	0.227
24	473.0	99.4(1)	106(2)	0.246
26	510.9	99.8(1)	112(2)	0.264
28	546.6	100.6(1)	112(3)	0.282
30	582.2	101.3(1)	114(3)	0.300
32	617.4	102.0(1)	116(3)	0.317
34	652.0	102.8(1)	119(3)	0.334
36	685.5	103.6(1)	125(4)	0.351
38	717.5	104.5(1)		

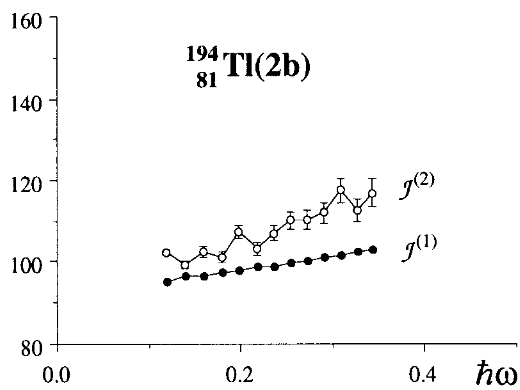


I-Values from ref. 2; E_γ from refs. 1, 2.

1. F. Azaiez et al., Z. Phys. **A336**, 243(1990).
2. F. Azaiez et al., Phys. Rev. Lett. **66**, 1030(1991).

A=194 Z=81 Tl(2b)

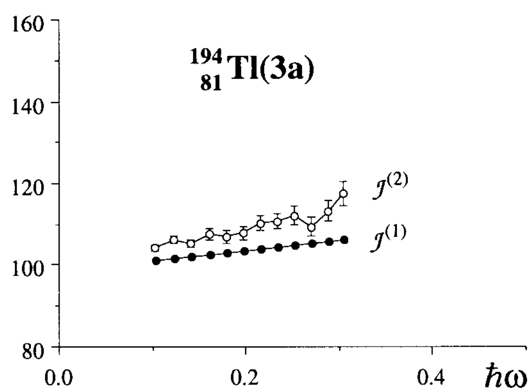
I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
11	220.3	95.3(1)	102(1)	0.120
13	259.4	96.4(1)	99(1)	0.140
15	299.7	96.8(1)	103(1)	0.160
17	338.7	97.4(1)	101(1)	0.179
19	378.3	97.8(1)	108(2)	0.198
21	415.5	98.7(1)	103(2)	0.217
23	454.2	99.1(1)	107(2)	0.236
25	491.5	99.7(1)	110(2)	0.255
27	527.8	100.4(1)	110(2)	0.273
29	564.0	101.1(1)	112(3)	0.291
31	599.7	101.7(1)	118(3)	0.308
33	633.7	102.6(1)	113(3)	0.326
35	669.2	103.1(1)	117(3)	0.343
37	703.4	103.8(1)		



F. Azaiez et al., Phys. Rev. Lett. **66**, 1030(1991).

A=194 Z=81 Tl(3a)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
10	187.9	101.1(1)	104(1)	0.104
12	226.3	101.6(1)	106(1)	0.123
14	264.0	102.3(1)	105(1)	0.142
16	302.0	102.6(1)	108(1)	0.160
18	339.2	103.2(1)	107(1)	0.179
20	376.6	103.6(1)	108(2)	0.198
22	413.7	103.9(1)	110(2)	0.216
24	450.0	104.4(1)	111(2)	0.234
26	486.1	104.9(1)	112(2)	0.252
28	521.8	105.4(1)	109(2)	0.270
30	558.4	105.7(1)	113(3)	0.288
32	593.7	106.1(1)	118(3)	0.305
34	627.7	106.7(1)		

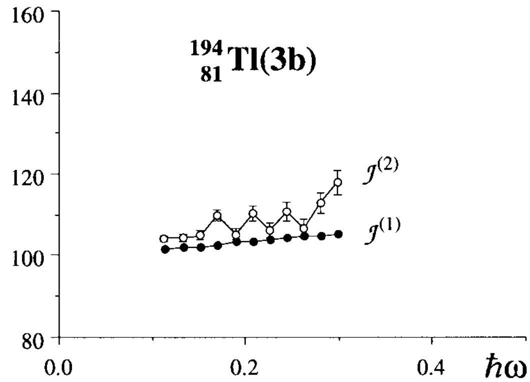


F. Azaiez et al., Phys. Rev. Lett. **66**, 1030(1991).

A=194 Z=81 Tl(3b)

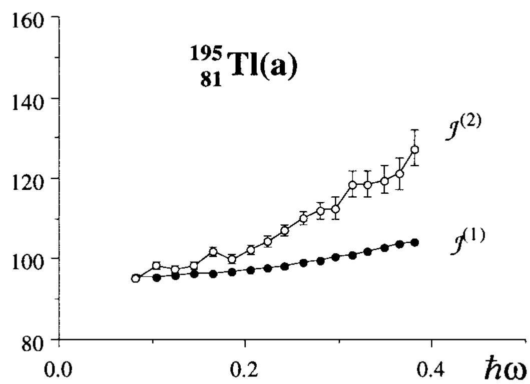
I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
11	207.0	101.4(1)	104(1)	0.113
13	245.4	101.9(1)	104(1)	0.132
15	283.7	102.2(1)	105(1)	0.151
17	321.8	102.5(1)	110(1)	0.170
19	358.2	103.3(1)	105(1)	0.189
21	396.2	103.5(1)	110(2)	0.207
23	432.5	104.0(1)	106(2)	0.226
25	470.1	104.2(1)	111(2)	0.244
27	506.2	104.7(1)	107(2)	0.262
29	543.7	104.8(1)	113(3)	0.281
31	579.1	105.3(1)	118(3)	0.298
33	613.0	106.0(1)		

F. Azaiez et al., Phys. Rev. Lett. **66**, 1030(1991).



A=195 Z=81 Tl(a)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
7.5	146.2	95.8(1)	95.3(6)	0.084
9.5	188.2	95.7(1)	98.4(9)	0.104
11.5	228.8	96.2(1)	97.5(9)	0.125
13.5	269.8	96.4(1)	98(1)	0.145
15.5	310.5	96.6(1)	102(1)	0.165
17.5	349.8	97.2(1)	100(1)	0.185
19.5	389.8	97.5(1)	102(1)	0.205
21.5	428.9	97.9(1)	104(1)	0.224
23.5	467.2	98.5(1)	107(1)	0.243
25.5	504.5	99.1(1)	110(2)	0.261
27.5	540.8	100.0(1)	112(2)	0.279
29.5	576.5	100.6(1)	113(3)	0.297
31.5	612.0	101.3(1)	119(3)	0.314
33.5	645.7	102.2(1)	119(3)	0.331
35.5	679.4	103.0(1)	120(4)	0.348
37.5	712.8	103.8(1)	121(4)	0.365
39.5	745.8	104.6(1)	127(4)	0.381
41.5	777.2	105.5(1)		



I Values from ref.2; E_γ from refs. 2, 3.

1. F. Azaiez et al., Z. Phys. **A338**, 471(1991).
2. J. Duprat et al., Phys. Lett. **B341**, 6(1994).
3. R. M. Clark et al., Phys. Rev. **C51**, R1052(1995).
4. F. Azaiez et al., Phys. Scr. **T56**, 35(1995).

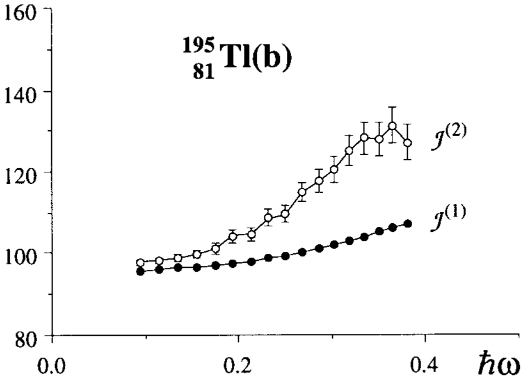
See page 58 for Explanation of Tables

A=195 Z=81 Tl(b)

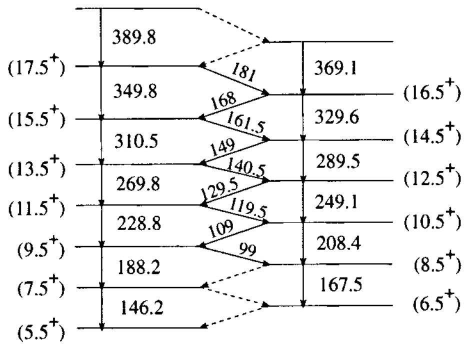
I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
8.5	167.5	95.5(1)	97.8(6)	0.094
10.5	208.4	96.0(1)	98.3(8)	0.114
12.5	249.1	96.3(1)	99.0(9)	0.135
14.5	289.5	96.7(1)	100(1)	0.155
16.5	329.6	97.1(1)	101(1)	0.175
18.5	369.1	97.5(1)	104(1)	0.194
20.5	407.5	98.2(1)	105(2)	0.213
22.5	445.7	98.7(1)	109(2)	0.232
24.5	482.5	99.5(1)	110(2)	0.250
26.5	519.0	100.2(1)	115(3)	0.268
28.5	553.8	101.1(1)	118(3)	0.285
30.5	587.8	102.1(1)	120(3)	0.302
32.5	621.0	103.1(1)	125(4)	0.319
34.5	653.0	104.1(1)	128(4)	0.334
36.5	684.2	105.2(1)	128(4)	0.350
38.5	715.5	106.2(1)	131(4)	0.365
40.5	746.0	107.2(1)	127(4)	0.381
42.5	777.5	108.0(1)		

I-Values and E_γ from ref. 2.

1. F. Azaiez et al., Z. Phys. **A338**, 471(1991).
2. J. Duprat et al., Phys. Lett. **B341**, 6(1994).
3. F. Azaiez et al., Phys. Scr. **T56**, 35(1995).



^{195}Tl(a)↔^{195}Tl(b) M1 Transition



$g_K = 1.4 \pm 0.4$, assuming K=5/2 ($\pi[642]5^+/2$) and $Q_0 = 19 \pm 2$ eb

J. Duprat et al., Phys. Lett. **B341**, 6(1994).
3. F. Azaiez et al., Phys. Scr. **T56**, 35(1995).

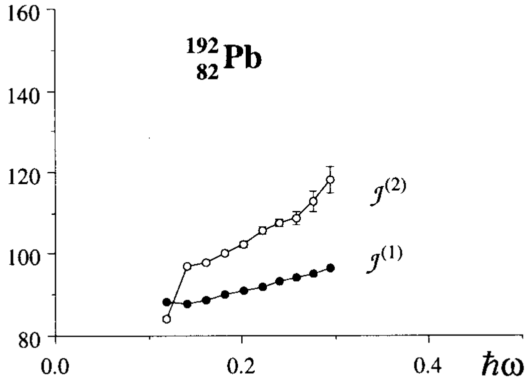
A=192 Z=82 Pb

I^{exp}	$E\gamma^{\#}$	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
(10^+)	214.8(2)	88.45(8)	84.0(4)	0.119
(12^+)	262.4(1)	87.65(3)	96.9(3)	0.142
(14^+)	303.7(1)	88.90(3)	97.8(3)	0.162
(16^+)	344.6(1)	89.96(3)	100.0(4)	0.182
(18^+)	384.6(1)	91.00(2)	102.3(6)	0.202
(20^+)	423.7(2)	92.05(4)	105.8(8)	0.221
(22^+)	461.5(2)	93.17(4)	107.5(8)	0.240
(24^+)	498.7(2)	94.25(4)	109(2)	0.259
(26^+)	535.4(5)	95.25(9)	113(2)	0.277
(28^+)	570.9(6)	96.3(1)	118(3)	0.294
(30^+)	604.7(7)	97.6(1)		
(32^+)	(640)			

The energy (8^+) level is 4357(1) keV (from ref. 7).

I-Values and parity from refs. 1, 7; E_γ from refs. 5, 6, 7.

1. E. A. Henry et al., Z. Phys. **A338**, 469(1991).
2. A. J. M. Plompen et al., Phys. Rev. **C47**, 2378(1993).
3. E. A. Henry et al., Phys. Rev. **C49**, 2849(1994).
4. A. J. M. Plompen et al., Phys. Rev. **C49**, 2851(1994).
5. L. Ducroux et al., Z. Phys. **A352**, 13(1995).
6. S. J. Asztalos et al., Z. Phys. **A352**, 239(1995).
7. D. P. McNabb et al., Phys. Rev. **C56**, 2474(1997).



See page 58 for Explanation of Tables

A=193 Z=82 Pb(1a)

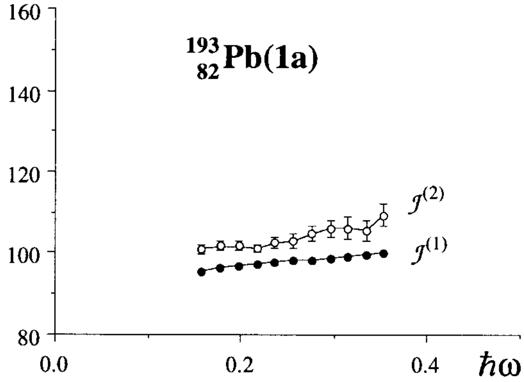
I^{exp}	$E\gamma^{\#}$	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
(13.5^-)	276.9(3)	93.9(1)	99(1)	0.149
(15.5^-)	317.3(3)	94.56(9)	100(1)	0.169
(17.5^-)	357.3(3)	95.16(8)	100(1)	0.189
(19.5^-)	397.3(3)	95.64(7)	99(1)	0.209
(21.5^-)	437.6(3)	95.98(7)	101(1)	0.229
(23.5^-)	477.4(5)	96.36(9)	101(2)	0.249
(25.5^-)	517.0(5)	96.7(1)	103(2)	0.268
(27.5^-)	555.8(5)	97.16(8)	104(2)	0.288
(29.5^-)	594.2(6)	97.6(1)	104(3)	0.307
(31.5^-)	632.5(7)	98.0(1)	104(3)	0.326
(33.5^-)	671.0(6)	98.36(9)	108(3)	0.345
(35.5^-)	708.2(8)	98.8(1)		

$Q_0 = 17.3^{+0.7}_{-0.6}$ eb (from ref. 4)

The energy of (11.5^-) level is 4217 keV (from ref. 3).

I-Values and parity from ref. 3; Eγ from refs. 1, 2.

1. J. R. Hughes et al., Phys. Rev. **C51**, R447(1995).
2. L. Ducroux et al., Phys. Rev. **C53**, 2701(1996).
3. S. Perries et al., Z. Phys. **A356**, 1(1996)
4. U. J. van Severen et al., Phys. Lett. **B434**, 14(1998).

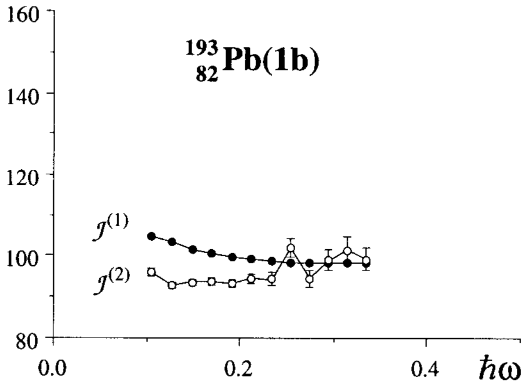


A=193 Z=82 Pb(1b)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
10.5	190.5(3)	105.0(1)	96.0(8)	0.106
12.5	232.2(2)	103.4(1)	92.7(8)	0.127
14.5	275.4(3)	101.7(1)	93.6(8)	0.148
16.5	318.1(3)	100.60(9)	93.7(8)	0.170
18.5	360.8(3)	99.79(7)	93(1)	0.191
20.5	403.6(4)	99.10(9)	95(1)	0.212
22.5	445.9(3)	98.68(8)	94(2)	0.234
24.5	488.3(6)	98.3(1)	102(2)	0.254
26.5	527.5(7)	98.6(1)	95(2)	0.274
28.5	569.8(7)	98.3(1)	99(3)	0.295
30.5	610.2(8)	98.3(1)	102(3)	0.315
32.5	649.5(8)	98.5(1)	99(3)	0.335
34.5	689.8(8)	98.6(1)		

I-Values from refs. 1; Eγ from refs. 1, 2.

1. J. R. Hughes et al., Phys. Rev. **C51**, R447(1995).
2. L. Ducroux et al., Phys. Rev. **C53**, 2701(1996).

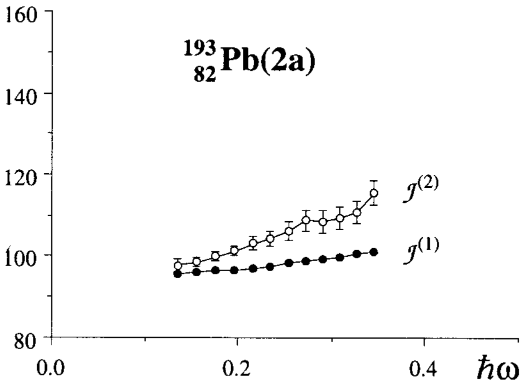


A=193 Z=82 Pb(2a)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
12.5	250.6(5)	95.8(2)	98(1)	0.136
14.5	291.5(3)	96.0(1)	99(1)	0.156
16.5	332.1(3)	96.34(9)	100(1)	0.176
18.5	372.2(3)	96.73(7)	101(1)	0.196
20.5	411.7(4)	97.16(9)	103(2)	0.216
22.5	450.5(4)	97.7(1)	104(2)	0.235
24.5	488.8(5)	98.2(1)	106(2)	0.254
26.5	526.4(6)	98.8(1)	109(3)	0.272
28.5	563.2(7)	99.4(1)	108(3)	0.291
30.5	600.1(7)	100.0(1)	110(3)	0.309
32.5	636.6(6)	100.53(9)	111(3)	0.327
34.5	672.7(6)	101.09(9)	116(3)	0.345
36.5	707.3(6)	101.80(9)		

I-Values from ref. 2; Eγ from refs. 1, 2.

1. J. R. Hughes et al., Phys. Rev. **C51**, R447(1995).
2. L. Ducroux et al., Phys. Rev. **C53**, 2701(1996).



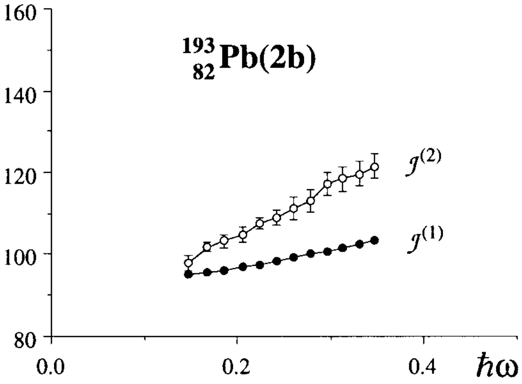
See page 58 for Explanation of Tables

A=193 Z=82 Pb(2b)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
13.5	273.0(7)	95.2(2)	98(2)	0.147
15.5	313.8(4)	95.6(1)	102(1)	0.167
17.5	353.1(3)	96.29(9)	103(2)	0.186
19.5	391.8(5)	97.0(1)	105(2)	0.205
21.5	430.0(4)	97.68(8)	108(1)	0.224
23.5	467.1(3)	98.48(7)	109(2)	0.243
25.5	503.8(6)	99.2(1)	111(3)	0.261
27.5	539.8(7)	100.0(1)	113(3)	0.279
29.5	575.1(6)	100.9(1)	117(3)	0.296
31.5	609.2(6)	101.8(1)	119(3)	0.313
33.5	643.0(6)	102.6(1)	120(3)	0.330
35.5	676.4(6)	103.49(9)	122(3)	0.346
37.5	709.3(6)	104.33(9)		

I-Values from ref. 2; E_γ from refs. 1, 2.

1. J. R. Hughes et al., Phys. Rev. **C51**, R447(1995).
2. L. Ducroux et al., Phys. Rev. **C53**, 2701(1996).

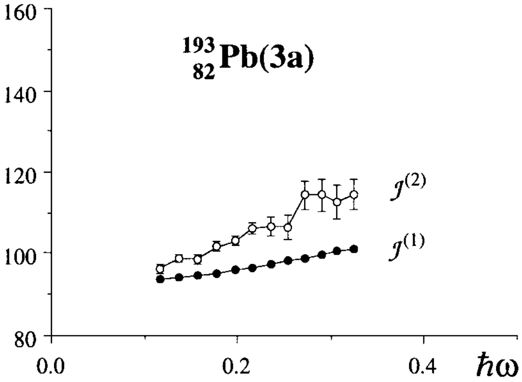


A=193 Z=82 Pb(3a)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
10.5	213.2(4)	93.8(2)	96(1)	0.117
12.5	254.7(3)	94.2(1)	99(1)	0.138
14.5	295.2(3)	94.86(9)	99(1)	0.158
16.5	335.7(3)	95.32(9)	102(1)	0.178
18.5	375.0(3)	95.99(8)	103(1)	0.197
20.5	413.8(2)	96.67(5)	106(2)	0.216
22.5	451.4(5)	97.5(1)	107(2)	0.235
24.5	488.9(6)	98.2(1)	106(3)	0.254
26.5	526.5(9)	98.8(2)	114(3)	0.272
28.5	561.5(6)	99.7(1)	114(4)	0.290
30.5	597(1)	100.6(2)	113(4)	0.307
32.5	632.0(8)	101.3(1)	114(4)	0.325
34.5	667.0(8)	101.9(1)		

I-Values from ref. 2; E_γ from refs. 1, 2.

1. J. R. Hughes et al., Phys. Rev. **C51**, R447(1995).
2. L. Ducroux et al., Phys. Rev. **C53**, 2701(1996).

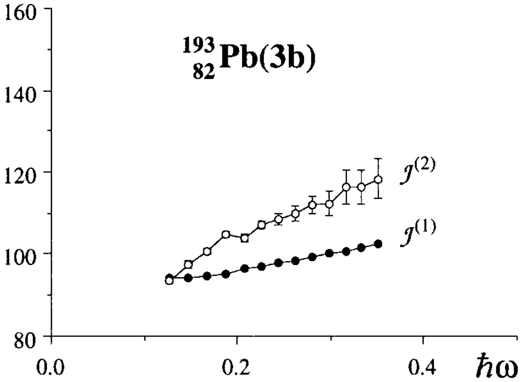


A=193 Z=82 Pb(3b)

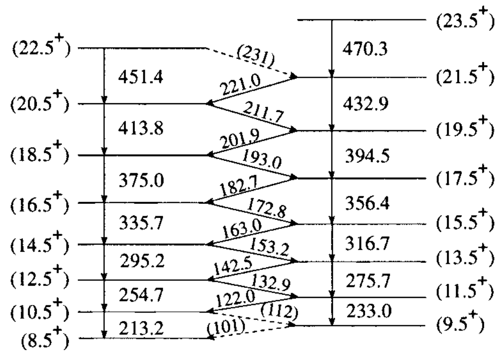
I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
11.5	233.0(3)	94.4(1)	93.5(8)	0.127
13.5	275.7(3)	94.3(1)	97.5(9)	0.148
15.5	316.7(2)	94.72(7)	100.8(8)	0.168
17.5	356.4(2)	95.40(5)	105.0(9)	0.188
19.5	394.5(3)	96.33(6)	104(1)	0.207
21.5	432.9(3)	97.01(6)	107(1)	0.226
23.5	470.3(3)	97.81(6)	108(1)	0.244
25.5	507.2(3)	98.58(6)	110(2)	0.263
27.5	543.6(5)	99.34(9)	112(2)	0.281
29.5	579.3(5)	100.12(8)	112(3)	0.299
31.5	614.9(8)	100.8(1)	116(4)	0.316
33.5	649.3(9)	101.6(1)	116(4)	0.333
35.5	683.7(9)	102.4(1)	118(5)	0.350
37.5	717.5(10)	103.1(1)		

I-Values from ref. 2; E_γ from refs. 1, 2.

1. J. R. Hughes et al., Phys. Rev. **C51**, R447(1995).
2. L. Ducroux et al., Phys. Rev. **C53**, 2701(1996).



^{193}Pb(3a)↔^{193}Pb(3b) M1 Transition



g_K = -0.39 ± 0.12, assuming K=9/2 ($\pi[642]9^+/2$)
and Q_0 = 18.4 eb

L. Ducroux et al., Phys. Rev. **C53**, 2701(1996)

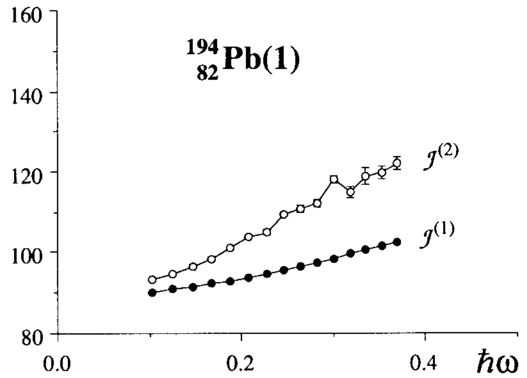
A=194 Z=82 Pb(1)

I^{exp}	$E\gamma^{\#}$	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$	Q_t
6^+	(124.9(5))				
8^+	169.52(6)	88.48(3)	91.4(2)	0.096	17.3(−2.4, +4.0)
10^+	213.27(5)	89.09(2)	92.9(1)	0.117	20.7(−1.8, +2.5)
12^+	256.33(5)	89.73(2)	94.9(2)	0.139	18.2(−1.5, +1.9)
14^+	298.50(5)	90.45(1)	96.7(2)	0.160	18.5(−2.0, +3.2)
16^+	339.87(7)	91.21(2)	99.2(2)	0.180	
18^+	380.18(7)	92.06(2)	102.1(6)	0.200	
20^+	419.4(2)	93.00(5)	103.0(7)	0.219	23.1(-9.4, +13.4)
22^+	458.2(1)	93.85(2)	107.7(5)	0.238	21.6(-4.6, +6.6)
24^+	495.4(1)	94.88(2)	109.0(8)	0.257	20.4(-3.1, +5.1)
26^+	532.1(2)	95.86(4)	110(1)	0.275	20.7(-3.5, +10.0)
28^+	568.3(2)	96.78(4)	116.4(9)	0.293	19.5(-2.2, +4.0)
30^+	602.7(1)	97.90(2)	113(1)	0.310	
32^+	638.1(4)	98.73(6)	117(2)	0.328	
34^+	672.3(4)	99.66(6)	118(2)	0.345	
36^+	706.2(2)	100.54(3)	120(2)	0.361	
38^+	739.5(4)	101.42(5)			

$Q_0 = 20.1^{+0.3}_{-0.5}$ eb (from ref. 15)

The energy of 6^+ level is 4878.3 ± 0.4 kev (from refs. 8, 12, 14).
I^{exp}-Values and parity from refs. 8, 11- 14; E_γ from refs. 6, 7, 8; Q_t from refs. 9, 13.

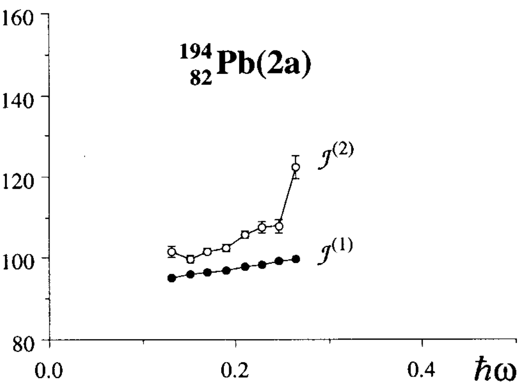
1. K. Theine et al., Z. Phys. **A336**, 113(1990).
2. M. J. Brinkman et al., Z. Phys. **A336**, 115(1990).
3. H. Hübel et al., Nucl. Phys. **A520**, 125c(1990).
4. W. Korten et al., Z. Phys. **A344**, 475(1993).
5. F. Hannachi et al., Nucl. Phys. **A557**, 75c(1993).
6. J. R. Hughes et al., Phys. Rev. **C50**, R1265(1994).
7. B. J. P. Gall et al., Phys. Lett. **B345**, 124(1995).
8. K. Hauschild et al., Phys. Rev. **C55**, 2819(1997).
9. P. Willsau et al., Z. Phys. **A344**, 351(1993).
10. R. Krücken et al., Phys. Rev. Lett. **73**, 3359(1994).
11. M. J. Brinkman et al., Phys. Rev. **C53**, R1461(1996).
12. A. Lopez-Martens et al., Phys. Lett. **B380**, 18(1996).
13. R. Krücken et al., Phys. Rev. **C55**, R1625(1997)
14. F. Hannachi et al., Z. Phys. **A358**, 183(1997).
15. U. J. van Severen et al., Phys. Lett. **B434**, 14(1998).



A=194 Z=82 Pb(2a)

I	$E\gamma$	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
12	241.2(3)	95.4(1)	102(1)	0.130
14	280.6(4)	96.2(1)	100(1)	0.150
16	320.7(2)	96.66(6)	101.8(7)	0.170
18	360.0(2)	97.22(5)	102.6(7)	0.190
20	399.0(2)	97.74(5)	106(1)	0.209
22	436.8(3)	98.44(7)	108(1)	0.228
24	474.0(3)	99.16(6)	108(2)	0.246
26	511.1(5)	99.8(1)	122(3)	0.264
28	543.8(5)	101.14(9)		

J. R. Hughes et al., Phys. Rev. **C50**, R1265(1994).

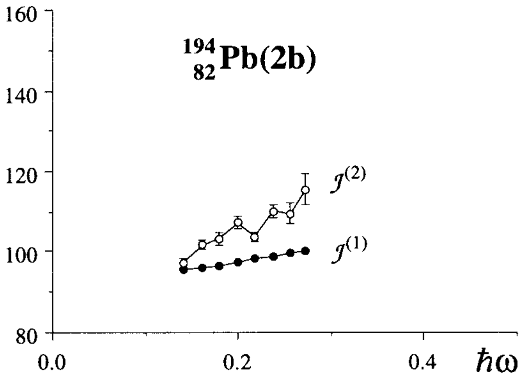


See page 58 for Explanation of Tables

A=194 Z=82 Pb(2b)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
13	260.9(4)	95.8(1)	97(1)	0.141
15	302.0(3)	96.0(1)	102(1)	0.161
17	341.3(3)	96.69(9)	103(2)	0.180
19	380.0(5)	97.4(1)	107(2)	0.199
21	417.3(3)	98.25(7)	104(1)	0.218
23	455.8(3)	98.73(7)	110(2)	0.237
25	492.1(4)	99.57(8)	110(3)	0.255
27	528.6(8)	100.3(2)	116(4)	0.273
29	563.2(8)	101.2(1)		

J. R. Hughes et al., Phys. Rev. **C50**, R1265(1994).



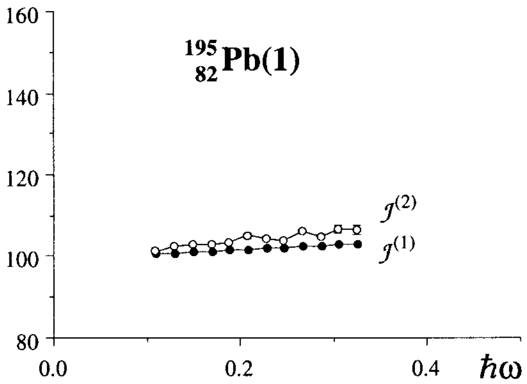
A=195 Z=82 Pb(1)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
9.5	182.13(21)	98.8(1)	99.5(6)	0.101
11.5	222.33(14)	98.95(6)	100.9(4)	0.121
13.5	261.97(10)	99.25(4)	101.1(3)	0.141
15.5	301.52(9)	99.50(3)	101.1(3)	0.161
17.5	341.09(9)	99.68(3)	101.4(3)	0.180
19.5	380.54(10)	99.86(3)	103.2(5)	0.200
21.5	419.29(16)	100.17(4)	102.6(5)	0.219
23.5	458.26(9)	100.38(2)	102.2(3)	0.239
25.5	497.38(9)	100.53(2)	104.4(5)	0.258
27.5	535.69(15)	100.81(3)	103.0(6)	0.278
29.5	574.52(18)	100.95(3)	104.8(9)	0.297
31.5	612.68(29)	101.20(5)	105(1)	0.316
33.5	650.88(35)	101.40(5)		

$Q_0 = 19.5^{+1.0}_{-0.9}$ eb (from ref. 2)

I-Values and E_γ from ref. 1.

1. L. P. Farris et al., Phys. Rev. **C51**, R2288(1995).
2. U. J. van Severen et al., Phys. Lett. **B434**, 14(1998).



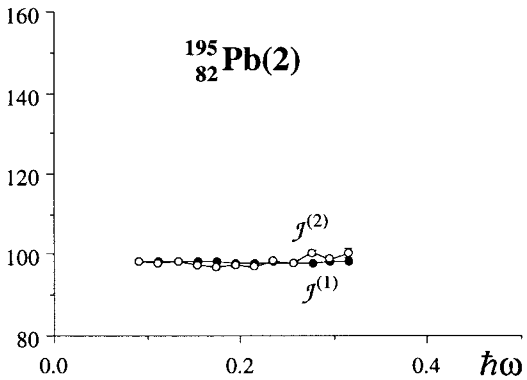
A=195 Z=82 Pb(2)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
8.5	162.58(18)	98.4(1)	98.4(6)	0.091
10.5	203.22(16)	98.42(8)	98.1(5)	0.112
12.5	243.99(11)	98.36(4)	98.4(3)	0.132
14.5	284.63(9)	98.37(3)	97.5(3)	0.153
16.5	325.64(9)	98.27(3)	96.9(3)	0.173
18.5	366.91(10)	98.12(3)	97.4(4)	0.194
20.5	407.99(11)	98.04(3)	97.2(3)	0.214
22.5	449.14(9)	97.97(2)	98.6(3)	0.235
24.5	489.70(8)	98.02(2)	98.0(4)	0.255
26.5	530.51(13)	98.02(2)	100.5(5)	0.275
28.5	570.32(16)	98.19(3)	98.9(7)	0.295
30.5	610.75(23)	98.24(4)	100(1)	0.315
32.5	650.58(31)	98.37(5)		

$Q_0 = 19.5^{+0.9}_{-1.0}$ eb (from ref. 2)

I-Values and E_γ from ref. 1.

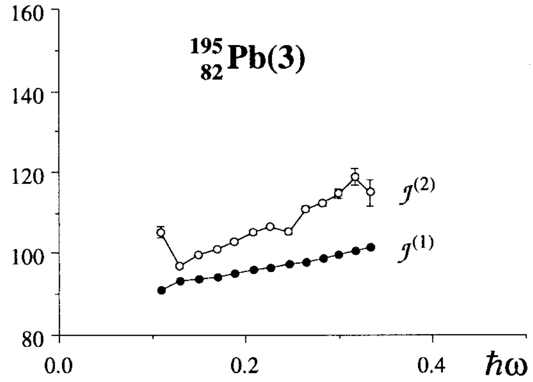
1. L. P. Farris et al., Phys. Rev. **C51**, R2288(1995).
2. U. J. van Severen et al., Phys. Lett. **B434**, 14(1998).



A=195 Z=82 Pb(3)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
9.5	198.19(40)	90.8(2)	105(1)	0.109
11.5	236.19(14)	93.15(6)	96.9(4)	0.128
13.5	277.47(13)	93.70(4)	99.7(4)	0.149
15.5	317.60(12)	94.46(4)	101.0(4)	0.169
17.5	357.22(11)	95.18(3)	102.9(5)	0.188
19.5	396.08(13)	95.94(3)	105.4(5)	0.208
21.5	434.02(13)	96.77(3)	106.7(6)	0.226
23.5	471.52(15)	97.56(3)	105.4(6)	0.245
25.5	509.46(14)	98.14(3)	111.0(7)	0.264
27.5	545.51(16)	98.99(3)	112.6(7)	0.282
29.5	581.04(17)	99.82(3)	115(1)	0.299
31.5	615.97(31)	100.65(5)	119(2)	0.316
33.5	649.65(53)	101.59(8)	115(3)	0.334
35.5	684.41(81)	102.3(1)		

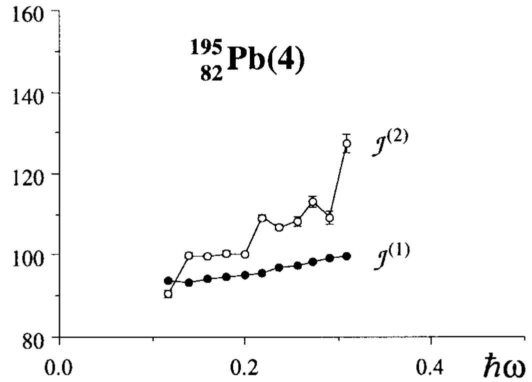
L. P. Farris et al., Phys. Rev. **C51**, R2288(1995).



A=195 Z=82 Pb(4)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
10.5	213.58(39)	93.6(2)	90.7(9)	0.118
12.5	257.66(23)	93.15(8)	99.9(7)	0.139
14.5	297.70(17)	94.05(5)	99.7(6)	0.159
16.5	337.83(16)	94.72(4)	100.4(6)	0.179
18.5	377.68(17)	95.32(4)	100.2(6)	0.199
20.5	417.59(19)	95.79(4)	109.2(7)	0.218
22.5	454.21(14)	96.87(3)	106.8(7)	0.236
24.5	491.68(20)	97.62(4)	108(1)	0.255
26.5	528.60(29)	98.37(5)	113(1)	0.273
28.5	563.93(34)	99.30(6)	109(2)	0.291
30.5	600.55(42)	99.91(7)	128(2)	0.308
32.5	631.92(39)	101.28(6)		

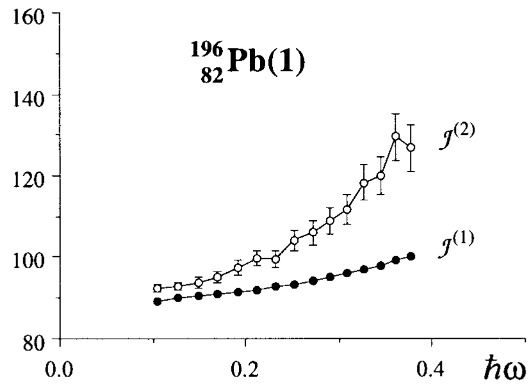
L. P. Farris et al., Phys. Rev. **C51**, R2288(1995).



A=196 Z=82 Pb(1)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω	Q_t
8	171.4(2)	87.5(1)	90.5(8)	0.097	18.3(3)
10	215.6(3)	88.1(1)	91(1)	0.119	18.3(3)
12	259.5(4)	88.6(1)	92(1)	0.141	18.3(3)
14	303.0(4)	89.1(1)	93(1)	0.162	18.3(3)
16	345.8(5)	89.6(1)	96(2)	0.183	18.3(3)
18	387.6(5)	90.3(1)	98(2)	0.204	18.3(3)
20	428.5(6)	91.0(1)	98(2)	0.225	18.3(3)
22	469.4(6)	91.6(1)	102(3)	0.245	17.3(-3.0, +6.1)
24	508.5(7)	92.4(1)	104(3)	0.264	19.1(-1.8, +6.5)
26	546.9(8)	93.3(1)	107(3)	0.283	19.6(-4.0, +3.0)
28	584.2(8)	94.1(1)	110(4)	0.301	18.3(3)
30	620.6(9)	95.1(1)	117(4)	0.319	18.3(3)
32	654.9(9)	96.2(1)	118(5)	0.336	18.3(3)
34	689(1)	97.3(1)	128(6)	0.352	18.3(3)
36	720(1)	98.6(1)	125(6)	0.368	
38	752(1)	99.7(1)			

$Q_0 = 19.5^{+0.4}_{-0.3}$ eb (from ref. 9)



I-Values from refs. 2, 8; E_γ from refs. 5, 6; Q_t from ref. 3.

1. M. J. Brinkman et al., Z. Phys. **A336**, 115(1990).
2. T. F. Wang et al., Phys. Rev. **C43**, R2465(1991).
3. E. F. Moore et al., Phys. Rev. **C48**, 2261(1993).
4. P J Dagnall et al., J. Phys. **G19**, 465(1993).
5. R. M. Clark et al., Phys. Rev. **C50**, 1222(1994).
6. U. J. van Severen et al., Z. Phys. **A353**, 15(1995).
7. S. Bouneau et al., Z. Phys. **A358**, 179(1997).
8. F. Azaiez et al., Acta Hung. N. S. (Heavy Ion Physics), **6**, 289(1997).
9. U. J. van Severen et al., Phys. Lett. **B434**, 14(1998).

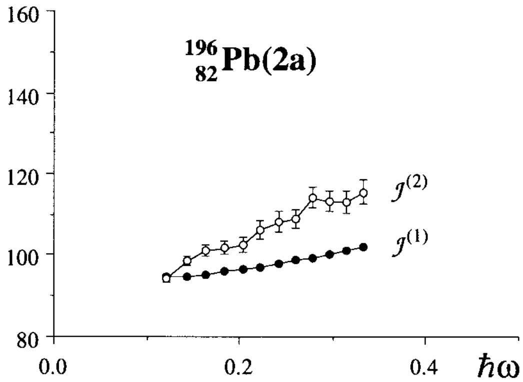
See page 58 for Explanation of Tables

A=196 Z=82 Pb(2a)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
10	204.6	92.9(1)	92.3(9)	0.113
12	247.9	92.8(1)	97(1)	0.134
14	289.3	93.3(1)	99(1)	0.155
16	329.6	94.1(1)	100(2)	0.175
18	369.6	94.7(1)	101(2)	0.195
20	409.3	95.3(1)	104(2)	0.214
22	447.6	96.1(1)	106(2)	0.233
24	485.2	96.9(1)	107(2)	0.252
26	522.6	97.6(1)	112(2)	0.270
28	558.2	98.5(1)	111(3)	0.288
30	594.1	99.3(1)	111(3)	0.306
32	630.0	100.0(1)	114(3)	0.324
34	665.2	100.7(1)		

I-Values from ref. 3; E_γ from refs. 1, 3.

1. U. J. van Severen et al., Z. Phys. **A353**, 15(1995).
2. S. Bouneau et al., Z. Phys. **A358**, 179(1997).
3. Azaiez et al., Acta Phys. Hung. N. S. (Heavy Ion Physics) **6**, 289(1997).

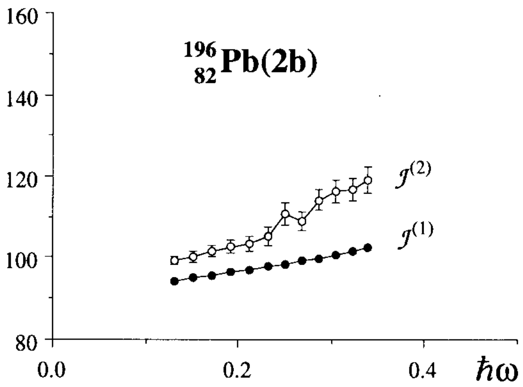


A=196 Z=82 Pb(2b)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
11	226.8	92.6(1)	98(1)	0.124
13	267.8	93.4(1)	98(1)	0.144
15	308.4	94.0(1)	100(1)	0.164
17	348.5	94.7(1)	101(2)	0.184
19	388.2	95.3(1)	102(2)	0.204
21	427.5	95.9(1)	103(2)	0.223
23	466.2	96.5(1)	109(3)	0.242
25	502.9	97.4(1)	107(2)	0.261
27	540.2	98.1(1)	112(2)	0.279
29	575.8	99.0(1)	114(3)	0.297
31	610.8	99.9(1)	115(3)	0.314
33	645.6	100.7(1)	117(3)	0.331
35	679.7	101.5(1)		

I-Values from ref. 3; E_γ from refs. 1, 3.

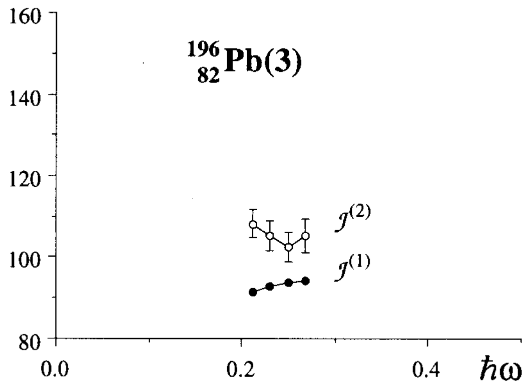
1. U. J. van Severen et al., Z. Phys. **A353**, 15(1995).
2. S. Bouneau et al., Z. Phys. **A358**, 179(1997).
3. Azaiez et al., Acta Phys. Hung. N. S. (Heavy Ion Physics) **6**, 289(1997).



A=196 Z=82 Pb(3)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
19	405	91.4(2)	108(4)	0.212
21	442	92.8(2)	105(4)	0.231
23	480	93.8(2)	103(4)	0.250
25	519	94.4(2)	105(4)	0.269
27	557	95.2(2)		

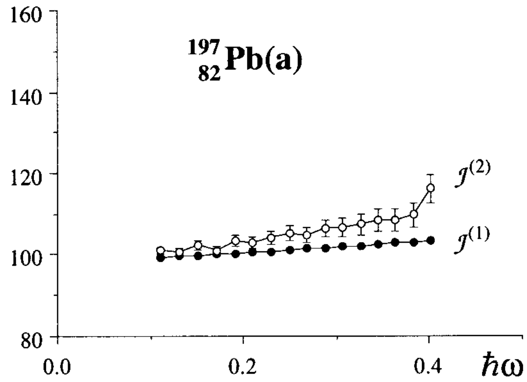
Azaiez et al., Acta Phys. Hung. N. S. (Heavy Ion Physics) **6**, 289(1997).



A=197 Z=82 Pb(a)

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
9.5	184.4	97.6(1)	99.3(7)	0.102
11.5	224.7	97.9(1)	99.0(9)	0.123
13.5	265.1	98.1(1)	101(1)	0.143
15.5	304.9	98.4(1)	99(1)	0.163
17.5	345.2	98.5(1)	102(1)	0.183
19.5	384.6	98.8(1)	101(1)	0.202
21.5	424.2	99.0(1)	102(2)	0.222
23.5	463.3	99.3(1)	103(2)	0.241
25.5	502.0	99.6(1)	103(2)	0.261
27.5	540.8	99.9(1)	105(2)	0.280
29.5	579.0	100.2(1)	105(2)	0.299
31.5	617.2	100.5(1)	106(3)	0.318
33.5	655.1	100.7(1)	107(3)	0.337
35.5	692.6	101.1(1)	107(3)	0.356
37.5	730.1	101.4(1)	108(3)	0.374
39.5	767.2	101.7(1)	114(4)	0.392
41.5	802.2	102.2(1)		

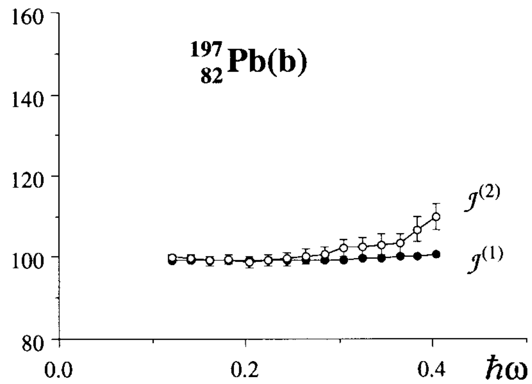
I. M. Hibbert et al., Phys. Rev. **C54**, 2253(1996).



A=197 Z=82 Pb(b)

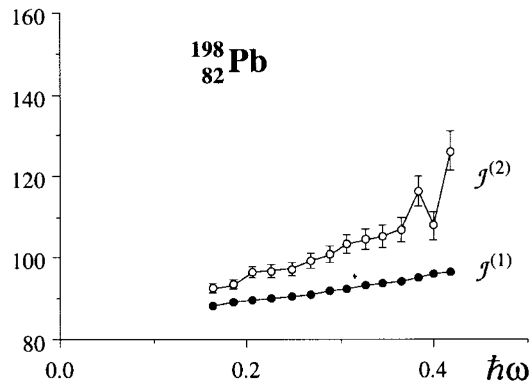
I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
10.5	205.5	97.3(1)	98.3(8)	0.113
12.5	246.2	97.5(1)	98.0(9)	0.133
14.5	287.0	97.6(1)	97(1)	0.154
16.5	328.1	97.5(1)	98(1)	0.174
18.5	369.1	97.5(1)	97(1)	0.195
20.5	410.3	97.5(1)	97(1)	0.215
22.5	451.4	97.5(1)	98(2)	0.236
24.5	492.3	97.5(1)	98(2)	0.256
26.5	533.0	97.6(1)	99(2)	0.277
28.5	573.5	97.6(1)	101(2)	0.297
30.5	613.3	97.8(1)	101(2)	0.317
32.5	653.0	98.0(1)	101(2)	0.336
34.5	692.5	98.2(1)	102(3)	0.356
36.5	731.9	98.4(1)	105(3)	0.376
38.5	770.0	98.7(1)	108(3)	0.394
40.5	807.0	99.1(1)		

I. M. Hibbert et al., Phys. Rev. **C54**, 2253(1996).



A=198 Z=82 Pb

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	$\hbar\omega$
14	305.1	88.50(9)	93(1)	0.163
16	348.3	89.00(9)	93(1)	0.185
18	391.1	89.49(9)	96(1)	0.206
20	432.6	90.15(9)	97(2)	0.227
22	473.9	90.74(9)	97(2)	0.247
24	515.0	91.26(9)	100(2)	0.268
26	555.2	91.86(9)	101(2)	0.288
28	594.9	92.45(9)	103(2)	0.307
30	633.6	93.12(9)	104(3)	0.326
32	671.9	93.76(9)	105(3)	0.346
34	709.9	94.38(9)	107(3)	0.364
36	747.3	95.0(1)	116(4)	0.382
38	781.7	95.9(1)	108(3)	0.400
40	818.8	96.5(1)	126(5)	0.417
42	850.5	97.6(1)		



I Values from ref. 1; E_γ from ref. 3.

1. T. F. Wang et al., Phys. Rev. **C43**, R2465(1991).
2. R. M. Clark et al., Phys. Rev. **C50**, 1222(1994).
3. I. M. Hibbert et al., Phys. Rev. **C54**, 2253(1996).

See page 58 for Explanation of Tables

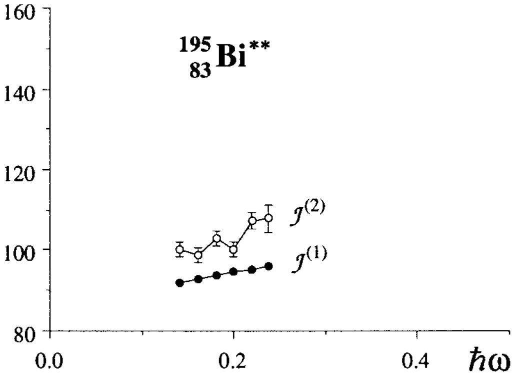
A=195 Z=83 Bi**

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
12.5	261.5(5)	91.8(2)	100(2)	0.141
14.5	301.4(5)	92.9(2)	99(2)	0.161
16.5	341.9(5)	93.6(1)	103(2)	0.181
18.5	380.7(5)	94.6(1)	100(2)	0.200
20.5	420.6(5)	95.1(1)	107(2)	0.220
22.5	457.9(5)	96.1(1)	108(3)	0.238
24.5	495(1)	97.0(2)		

R. M. Clark et al., Phys. Rev. **C53**, 117(1996).

* I-Values obtained by comparison with ^{192}Hg(1)

** The band assignment remains tentative (see the reference above)



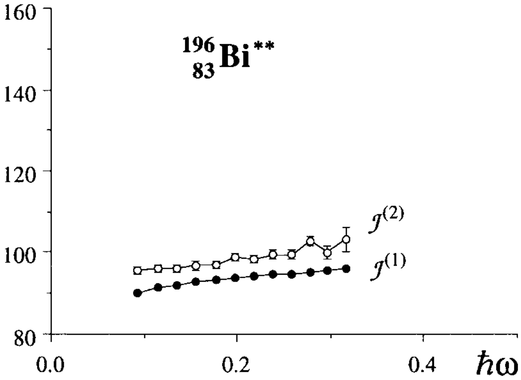
A=196 Z=83 Bi**

I*	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
8	166.2(3)	90.3(2)	96(1)	0.094
10	208.0(3)	91.3(1)	96(1)	0.114
12	249.7(3)	92.1(1)	96(1)	0.135
14	291.3(3)	92.7(1)	97(1)	0.156
16	332.6(3)	93.21(8)	97(1)	0.177
18	373.8(3)	93.63(8)	99(1)	0.197
20	414.3(3)	94.13(7)	98(1)	0.217
22	455.0(3)	94.51(6)	100(1)	0.238
24	495.2(3)	94.91(6)	100(1)	0.258
26	535.4(3)	95.26(5)	103(1)	0.277
28	574.3(3)	95.77(5)	100(1)	0.297
30	614.3(5)	96.04(8)	103(3)	0.317
32	653(1)	96.5(1)		

R. M. Clark et al., Phys. Rev. **C53**, 117(1996).

* I-Values obtained by comparison with ^{192}Hg(1)

** The band assignment remains tentative (see the reference above)

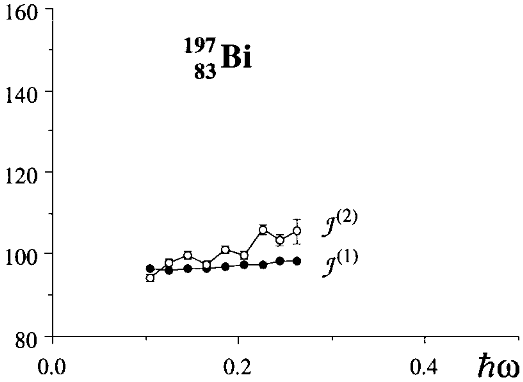


A=197 Z=83 Bi

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
9.5	186.7(3)	96.4(1)	94.3(8)	0.104
11.5	229.1(3)	96.0(1)	98.1(9)	0.125
13.5	269.6(3)	96.35(9)	99.6(9)	0.145
15.5	310.0(3)	96.77(8)	97.3(9)	0.165
17.5	351.1(3)	96.84(7)	101.0(9)	0.186
19.5	390.7(3)	97.26(7)	99.8(9)	0.205
21.5	430.8(3)	97.49(6)	106(1)	0.225
23.5	468.5(3)	98.19(6)	104(1)	0.244
25.5	507.1(4)	98.60(9)	106(3)	0.263
27.5	545(1)	99.1(2)		

I-Values from ref. 1; E_γ from ref. 1, 2.

1. R. M. Clark et al., Phys. Rev. **C51**, R1052(1995).
2. R. M. Clark et al., Phys. Rev. **C53**, 117(1996).



A=198 Z=84 Po

I	Eγ	$\mathcal{J}^{(1)}$	$\mathcal{J}^{(2)}$	ħω
8	175.91(27)	85.3(1)	90.0(7)	0.099
10	220.37(20)	86.22(8)	90.5(5)	0.121
12	264.59(15)	86.93(5)	93.7(5)	0.143
14	307.29(15)	87.86(4)	95.2(5)	0.164
16	349.29(16)	88.75(4)	97.2(6)	0.185
18	390.46(20)	89.64(5)	102.4(7)	0.205
20	429.54(19)	90.79(4)	104(1)	0.224
22	467.90(38)	91.90(7)	105(2)	0.243
24	505.85(42)	92.91(8)	109(2)	0.262
26	542.57(42)	94.00(7)		

D. P. McNabb et al., Phys. Rev. **C53**, R541(1996).