	100 Mo(11 B, α 2n γ)	2004A103	
Tuno	History	Citation	Literatura Cutoff Data
Full Evaluation	S Lalkovski I Timar and Z Elekes	NDS 161 1 (2019)	1-Apr-2019

Facility: Sao Paolo University's Pelletron Tandem; Beam: E(¹¹B)=43 MeV; Target:≈18 mg/cm² enriched in ¹⁰⁰Mo; Detectors: ΔE-E SACI telescope consisting of 11 plastic phoswich scintillators, and PERERE spectrometer comprising 4 HPGe detectors with BGO shields; Measured: γ, γ-γ coinc, Eγ, Iγ, γγ(θ); Deduced: ¹⁰⁵Rh level scheme, J^π, band structure; Also from the same collaboration: 1997Es04, 2001Cy01.

¹⁰⁵Rh Levels

E(level) [†]	$J^{\pi \ddagger}$	E(level) [†]	$J^{\pi \ddagger}$	E(level) [†]	$J^{\pi \ddagger}$	E(level) [†]	$J^{\pi \ddagger}$
0.0	7/2+	1147.6 3		2170.24 ^c 10	15/2-	2993.12 ^c 20	23/2-
129.73 ^a 18	$1/2^{-}$	1206.95 ^e 10	$13/2^{+}$	2244.17 [@] 13	$19/2^{+}$	3077.93 ^f 16	$23/2^{-}$
149.15 [#] 7	9/2+	1297.1 5		2310.71 ^c 11	$17/2^{-}$	3197.62 ^{&} 19	$25/2^+$
392.74 <mark>b</mark> 19	3/2-	1365.92 [@] 10	$15/2^{+}$	2330.01 17	(15/2)	3267.15 ⁸ 17	$23/2^{-}$
456.14 ^a 16	5/2-	1399.82 ^d 14	$11/2^{+}$	2396.16 ^a 14	$17/2^{-}$	3308.52 ^c 22	$25/2^{-}$
469.8 <i>4</i>	3/2+	1406.2 <i>3</i>		2417.36 ^f 17	$15/2^{-}$	3344.7 ^d 4	$(23/2^+)$
499.46 12	5/2+	1475.22 25		2477.12 ⁸ 11	$17/2^{-}$	3469.93 ^f 19	$(25/2^{-})$
602.77 [@] 7	$11/2^{+}$	1519.1 7		2496.02 ^c 13	19/2-	3478.1 ^{&} 3	$27/2^+$
638.75 12	7/2+	1529.9 <i>3</i>		2512.67 ^f 13	$17/2^{-}$	3536.9 [#] 3	$25/2^+$
734.25 ^e 8	$11/2^{+}$	1565.47 <mark>b</mark> 22	$(11/2^{-})$	2521.19 [#] 15	$21/2^{+}$	3667.7 <mark>8</mark> <i>3</i>	$(25/2^{-})$
786.4 6	$1/2^{+}$	1605.52 [#] 12	$17/2^{+}$	2594.1 ^d 3	19/2+	3769.32 ^c 24	$27/2^{-}$
794.99 [#] 9	$13/2^{+}$	1647.15 ^a 11	13/2-	2615.34 ^e 21	(19/2+)	3839.4 ^{&} <i>3</i>	29/2+
806.2 4	3/2+	1676.97 <mark>e</mark> 10	$15/2^{+}$	2645.70 ^f 12	19/2-	4002.5 4	$23/2^+$
833.65 21	(11/2)	1745.28 22		2669.09 ⁸ 11	19/2-	4092.5 <mark>8</mark> 4	$(27/2^{-})$
869.52 25	(5/2)	1781.0 4		2718.72 [°] 17	$21/2^{-}$	4169.9 ^d 7	$(27/2^+)$
894.68 <mark>b</mark> 16	7/2-	1905.7 4		2825.13 ^f 13	$21/2^{-}$	4183.6 ^C 4	$(29/2^{-})$
978.49 15	$(9/2^+)$	1936.72 ^d 17	$15/2^{+}$	2890.84 24	(19/2)	4215.4 ^{&} 3	$31/2^{+}$
979.02 ^a 14	9/2-	2019.24 ^c 11	13/2-	2914.35 <mark>8</mark> 13	21/2-	4417.5 [#] 12	$(29/2^+)$
1019.04 ^d 10	7/2+	2164.02 ^e 16	$(17/2^+)$	2981.62 ^{&} 18	$23/2^+$	4702.2 ^{&} 4	$(33/2^+)$

[†] From a least-squares fit to $E\gamma$.

[‡] From 2004Al03, based on γ -ray Mult.

Band(A): $\pi g_{9/2}$, $\alpha = +1/2$.

- [@] Band(a): $\pi g_{9/2}$, $\alpha = -1/2$.
- [&] Band(B): $23/2^+$, $\Delta J=1$ band.
- ^{*a*} Band(C): $\pi 1/2[301]$, $\alpha = +1/2$.
- ^b Band(c): $\pi 1/2[301]$, $\alpha = -1/2$.
- ^{*c*} Band(D): $13/2^{-}$, $\Delta J=1$ band.
- ^d Band(E): $\pi 1/2[431]$, $\alpha = -1/2$.
- ^{*e*} Band(F): $\pi 7/2[413] + \gamma$ phonon.
- ^{*f*} Band(G): 15/2⁻, $\Delta J=1$ band, $\pi g_{9/2} \nu(h_{11/2}g_{7/2})$.
- ^{*g*} Band(H): 17/2⁻, $\Delta J=1$ band, $\pi g_{9/2} \nu(h_{11/2} g_{7/2})$.

100 Mo(11 B, α 2n γ) 2004Al03 (continued)

$\gamma(^{105}\text{Rh})$

	E_{γ}^{\dagger}	I_{γ}^{\dagger}	E_i (level)	\mathbf{J}_i^{π}	E _f J	$\frac{\pi}{f}$ Mult. [‡]	Comments
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	63.4 2	8.5 9	456.14	5/2-	392.74 3/2	2- M1+E2	Mult.: $R_{DCO}=0.8 \ 3 \ in \ {}^{100}Mo({}^{11}B,\alpha 2n\gamma) \ (2004A103).$
95.3 1.43 / k 2512.67 17.2" 2417.36 15/2" 100.2 0.76 / 12 2465.70 19/2" 2512.67 17/2" MI Mult:: $R_{DCO} = 0.71$ / 4 in $^{100}Mo(^{11}B.a2ny)$ 140.4 17.1 9 2310.71 17/2" M1 + E2 Mult:: $R_{DCO} = 0.71$ / 4 in $^{100}Mo(^{11}B.a2ny)$ 149.2 >282 149.15 9/2" 0.0 7/2" M1 + E2 Mult:: $R_{DCO} = 0.76$ 2 2 in $^{100}Mo(^{11}B.a2ny)$ 149.5 4 1.2 4 1297.1 1147.6 Mult:: $R_{DCO} = 0.76$ 2 2 in $^{100}Mo(^{11}B.a2ny)$ 149.5 4 1.2 4 1297.2 2610.90 19/2" M1 + E2 Mult:: $R_{DCO} = 0.76$ 2 2 in $^{100}Mo(^{11}B.a2ny)$ 156.4 0.88 J2 2660.09 19/2" 2512.67 17/2" M1 + E2 Mult:: $R_{DCO} = 0.63$ 2 in $^{100}Mo(^{11}B.a2ny)$ (2004A103). 156.4 0.88 J2 2660.09 19/2" 2477.12 17/2" M1 + E2 Mult:: $R_{DCO} = 0.63$ 3 in $^{100}Mo(^{11}B.a2ny)$ (2004A103). 19.9 4 5.8 2825.13 21/2" 2465.70 19/2" M1 + E2 Mult:: $R_$	84.4 <i>1</i>	0.61 21	979.02	9/2-	894.68 7/2	2-	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	95.3 2	1.43 18	2512.67	$17/2^{-}$	2417.36 15,	/2-	
	100.2 2	0.76 12	2496.02	19/2-	2396.16 17	/2-	100 11
	133.0 2	1.89 <i>21</i>	2645.70	19/2-	2512.67 17,	/2 ⁻ M1	Mult.: $R_{DCO}=0.34\ 20$ in ¹⁰⁰ Mo(¹¹ B, $\alpha 2n\gamma$) (2004Al03).
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	140.4 1	17.1 9	2310.71	17/2-	2170.24 15	/2 ⁻ M1+E2	Mult.: $R_{DCO}=0.71 \ 14 \ in \ ^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004Al03).
	149.2 <i>1</i>	>282	149.15	9/2+	0.0 7/2	2+ M1+E2	I_{γ} : > 282 8: total intensity of feeding γ rays divided by $\alpha(149\gamma)$.
$ \begin{array}{llllllllllllllllllllllllllllllllllll$							Mult.: $R_{DCO}=0.74 \ 16 \ in \ ^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004Al03).
	149.5 4	1.2 4	1297.1		1147.6		
	151.1 <i>I</i>	8.8 6	2170.24	15/2-	2019.24 13,	/2 ⁻ M1+E2	Mult.: $R_{DCO}=0.76\ 22\ in\ ^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004Al03).
	156.0 <i>1</i>	1.98 18	2825.13	21/2-	2669.09 19	/2 ⁻ M1	Mult.: $R_{DCO}=0.34\ 20\ in\ ^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004Al03).
	156.4 <i>1</i>	0.88 24	2669.09	19/2-	2512.67 17	/2-	
	168.6 <i>1</i>	3.32 24	2645.70	19/2-	2477.12 17,	/2 ⁻ M1(+E2)	Mult.: $R_{DCO}=0.63\ 25\ in\ ^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004Al03).
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	179.4 <i>1</i>	5.8 4	2825.13	$21/2^{-}$	2645.70 19	/2 ⁻ M1(+E2)	Mult.: $R_{DCO}=0.6 \ 3 \ in \ {}^{100}Mo({}^{11}B,\alpha 2n\gamma) \ (2004Al03).$
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	185.3 <i>1</i>	29.3 15	2496.02	$19/2^{-}$	2310.71 17	/2 ⁻ M1+E2	Mult.: $R_{DCO}=0.68 \ 9 \ in \ {}^{100}Mo({}^{11}B,\alpha 2n\gamma) \ (2004A103).$
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	191.9 <i>1</i>	4.0 3	2669.09	19/2-	2477.12 17,	/2 ⁻ M1	Mult.: $R_{DCO}=0.49 \ 16 \ in \ ^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004Al03).
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	192.2 <i>1</i>	41.8 21	794.99	13/2+	602.77 11,	/2 ⁺ M1+E2	Mult.: $R_{DCO}=0.78 \ 11 \text{ in } {}^{100}\text{Mo}({}^{11}\text{B},\alpha 2n\gamma)$ (2004Al03).
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	216.0 <i>1</i>	16.5 9	3197.62	$25/2^{+}$	2981.62 23	$/2^{+}$ M1(+E2)	Mult.: $R_{DCO} = 0.52 \ 8 \ in \ {}^{100}Mo({}^{11}B,\alpha 2n\gamma) \ (2004Al03).$
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	222.7 1	20.1 11	2718.72	21/2-	2496.02 19/	/2 ⁻ M1+E2	Mult.: $R_{DCO}=0.65 \ 11 \text{ in } {}^{100}\text{Mo}({}^{11}\text{B},\alpha 2n\gamma)$ (2004A103).
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	239.7 1	12.2 7	1605.52	17/2+	1365.92 15/	/2 ⁺ M1+E2	Mult.: $R_{DCO}=0.62$ 15 in $^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004A103).
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	245.2 1	2.90 24	2914.35	21/2-	2669.09 19	/2 ⁻ M1(+E2)	Mult.: $R_{DCO}=0.69\ 23\ in\ ^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004Al03).
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	252.8 1	4.4 3	3077.93	$23/2^{-}$	2825.13 21	/2 ⁻ M1(+E2)	Mult.: $R_{DCO}=0.6 \ 3 \ in \ {}^{100}Mo({}^{11}B,\alpha 2n\gamma) \ (2004Al03).$
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	263.0 1	>12.9	392.74	3/2-	129.73 1/2	2 ⁻ M1(+E2)	I_{γ} : > 12.9 <i>11</i> : total intensity of feeding γ rays divided by $\alpha(263\gamma)$.
$\begin{array}{cccccccccccccccccccccccccccccccccccc$							Mult.: $R_{DCO}=0.55 \ 10 \ in \ ^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004Al03).
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	268.7 1	2.44 21	2914.35	$21/2^{-}$	2645.70 19	/2-	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	273.0 2	1.43 21	2669.09	19/2-	2396.16 17	/2-	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	274.4 1	12.7 7	2993.12	23/2-	2718.72 21,	/2 ⁻ M1+E2	Mult.: $R_{DCO}=0.68 \ 13 \ in \ ^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004Al03).
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	277.0 1	5.7 4	2521.19	21/2+	2244.17 19	/2 ⁺ M1(+E2)	Mult.: $R_{DCO}=0.49 \ 20 \ in \ {}^{100}Mo({}^{11}B,\alpha 2n\gamma)$ (2004Al03).
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	280.4 2	14.8 8	3478.1	27/2+	3197.62 25/	/2 ⁺ M1(+E2)	Mult.: $R_{DCO}=0.60 \ 12 \ in \ ^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004Al03).
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	306.8 1	3.8 <i>3</i>	2477.12	$17/2^{-}$	2170.24 15	/2 ⁻ M1(+E2)	Mult.: $R_{DCO}=0.6 \ 3 \ in \ {}^{100}Mo({}^{11}B,\alpha 2n\gamma)$ (2004Al03).
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	315.4 <i>1</i>	6.8 4	3308.52	25/2-	2993.12 23	/2 ⁻ M1(+E2)	Mult.: $R_{DCO}=0.61 \ 14 \ in \ {}^{100}Mo({}^{11}B,\alpha 2n\gamma)$ (2004Al03).
326.4 I146 I7456.14 $5/2^{-}$ 129.73 $1/2^{-}$ E2Mult.: $R_{DCO}=1.05$ 7 in $^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004Al03).329.4 21.37 I82825.13 $21/2^{-}$ 2496.02 $19/2^{-}$ M1(+E2)Mult.: $R_{DCO}=0.7$ 4 in $^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004Al03).335.0 I4.8 42645.70 $19/2^{-}$ 2310.71 $17/2^{-}$ M1Mult.: $R_{DCO}=0.46$ I3 in $^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004Al03).340.2 41.4 7469.8 $3/2^{+}$ 129.73 $1/2^{-}$ ValueValue	316.6 4	0.8 4	786.4	$1/2^{+}$	469.8 3/2	2+	
329.4 2 1.37 18 2825.13 $21/2^{-}$ 2496.02 $19/2^{-}$ M1(+E2) Mult.: $R_{DCO}=0.74$ in $^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004Al03). 335.0 1 4.8 4 2645.70 $19/2^{-}$ 2310.71 $17/2^{-}$ M1 Mult.: $R_{DCO}=0.46$ 13 in $^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004Al03). 340.2 4 1.4 7 469.8 $3/2^{+}$ 129.73 $1/2^{-}$ $1/2^{-}$	326.4 1	146 17	456.14	$5/2^{-}$	129.73 1/2	2- E2	Mult.: $R_{DCO}=1.05$ 7 in ${}^{100}Mo({}^{11}B,\alpha 2n\gamma)$ (2004Al03).
335.0 I 4.8 4 2645.70 $19/2^ 2310.71$ $17/2^-$ M1 Mult.: $R_{DCO}=0.46$ $I3$ in $^{100}Mo(^{11}B,\alpha 2n\gamma)$ 340.2 4 1.4 7 469.8 $3/2^+$ 129.73 $1/2^-$ M1 Mult.: $R_{DCO}=0.46$ $I3$ in $^{100}Mo(^{11}B,\alpha 2n\gamma)$	329.4 2	1.37 18	2825.13	$21/2^{-}$	2496.02 19	/2 ⁻ M1(+E2)	Mult.: $R_{DCO}=0.7 \ 4 \ in \ {}^{100}Mo({}^{11}B,\alpha 2n\gamma) \ (2004Al03).$
340.2 4 1.4 7 469.8 3/2+ 129.73 1/2-	335.0 1	4.8 4	2645.70	19/2-	2310.71 17	/2 ⁻ M1	Mult.: $R_{DCO}=0.46 \ 13 \ in \ ^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004Al03).
	340.2 4	1.4 7	469.8	3/2+	129.73 1/2	2-	

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100 Mo(11 B, $\alpha 2n\gamma$) **2004**Al03 (continued)

$\gamma(^{105}\text{Rh})$ (continued)

${\rm E_{\gamma}}^{\dagger}$	I_{γ}^{\dagger}	E _i (level)	\mathbf{J}_i^{π}	E_f	\mathbf{J}_f^{π}	Mult. [‡]	Comments
350.4.3	205	499 46	5/2+	149 15	9/2+		
352.8 1	3.3 3	3267.15	23/2-	2914.35	21/2-	M1(+E2)	Mult.: $R_{DCO}=0.56 \ 15 \text{ in } {}^{100}Mo({}^{11}B,\alpha 2n\gamma)$ (2004A103).
358.4 1	4.9 4	2669.09	19/2-	2310.71	17/2-	M1(+E2)	Mult.: $R_{DCO}=0.46\ 25\ in\ ^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004A103).
361.3 <i>1</i>	8.4 5	3839.4	29/2+	3478.1	27/2+	M1	Mult.: $R_{DCO}=0.47 \ 12 \ in \ ^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004A103).
369.6 2	1.6 3	2890.84	(19/2)	2521.19	21/2+	D(+Q)	Mult.: $R_{DCO}=0.7 \ 3 \ in \ {}^{100}Mo({}^{11}B,\alpha 2n\gamma)$ (2004A103).
371.2 6	0.6 3	2019.24	$13/2^{-}$	1647.15	$13/2^{-}$		
376.1 <i>1</i>	3.8 <i>3</i>	4215.4	31/2+	3839.4	29/2+	M1	Mult.: $R_{DCO}=0.48 \ I5 \text{ in } {}^{100}\text{Mo}({}^{11}\text{B},\alpha 2n\gamma)$ (2004A103).
380.3 6	0.67 12	1019.04	$7/2^{+}$	638.75	$7/2^{+}$		
380.8 1	8.6 7	1399.82	11/2+	1019.04	7/2+	E2	Mult.: $R_{DCO}=1.1 \ 3 \ \text{in}^{100} \text{Mo}(^{11}\text{B}, \alpha 2n\gamma)$ (2004Al03).
392.0 <i>1</i>	2.04 21	3469.93	(25/2 ⁻)	3077.93	23/2-	(M1+E2)	Mult.: $R_{DCO}=0.8 5$ in ${}^{100}Mo({}^{11}B,\alpha 2n\gamma)$ (2004Al03).
400.6 2	1.22 15	3667.7	$(25/2^{-})$	3267.15	$23/2^{-}$		
413.5 <i>3</i>	0.8 <i>3</i>	806.2	$3/2^{+}$	392.74	3/2-		
413.7 4	2.6 6	869.52	(5/2)	456.14	$5/2^{-}$		
414.3 2	1.28 12	4183.6	$(29/2^{-})$	3769.32	$27/2^{-}$		
421.1 <i>3</i>	1.07 18	1399.82	$11/2^{+}$	978.49	$(9/2^+)$		
424.8 2	0.76 12	4092.5	$(27/2^{-})$	3667.7	$(25/2^{-})$		
438.6 1	9.1 8	894.68	7/2-	456.14	5/2-	M1(+E2)	Mult.: $R_{DCO}=0.53 \ 12 \text{ in } {}^{100}Mo({}^{11}B,\alpha 2n\gamma)$ (2004A103).
451.2 <i>4</i>	1.3 <i>3</i>	2615.34	$(19/2^+)$	2164.02	$(17/2^+)$		
453.7 1	100 5	602.77	11/2+	149.15	9/2+	M1+E2	Mult.: $R_{DCO}=0.69 \ I3 \text{ in } {}^{100}\text{Mo}({}^{11}\text{B},\alpha 2n\gamma)$ (2004A103).
460.4 2	19.9 <i>12</i>	2981.62	23/2+	2521.19	21/2+	M1(+E2)	Mult.: $R_{DCO}=0.58 \ 12 \text{ in } {}^{100}\text{Mo}({}^{11}\text{B},\alpha 2n\gamma)$ (2004A103).
460.8 1	3.11 24	3769.32	27/2-	3308.52	25/2-	M1(+E2)	Mult.: $R_{DCO}=0.52 \ 16 \ \text{in}^{100} \text{Mo}(^{11}\text{B},\alpha 2n\gamma)$ (2004Al03).
465.6 3	1.04 23	4002.5	23/2+	3536.9	25/2+	M1(+E2)	Mult.: $R_{DCO}=0.49 \ 22 \ in \ ^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004Al03).
469.4 6	14.6 4	469.8	$3/2^{+}$	0.0	$7/2^{+}$		
469.9 1	10.6 8	1676.97	15/2+	1206.95	13/2+	M1(+E2)	Mult.: $R_{DCO}=0.52 \ 17 \ \text{in}^{100} \text{Mo}(^{11}\text{B},\alpha 2n\gamma)$ (2004Al03).
472.5 2	22.3 14	1206.95	13/2+	734.25	11/2+	M1(+E2)	Mult.: $R_{DCO}=0.59\ 22\ in\ ^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004Al03).
475.5 17	1.4 3	2645.70	19/2-	2170.24	$15/2^{-}$		
476.7 2	2.2 4	869.52	(5/2)	392.74	3/2-	D+Q	Mult.: $R_{DCO}=0.65 \ 17 \text{ in } {}^{100}Mo({}^{11}B,\alpha 2n\gamma)$ (2004Al03).
479.0 1	5.2 7	978.49	(9/2+)	499.46	5/2+	(E2)	Mult.: $R_{DCO}=1.3 5$ in ${}^{100}Mo({}^{11}B,\alpha 2n\gamma)$ (2004Al03).
486.8 2	1.62 18	4702.2	$(33/2^+)$	4215.4	$31/2^{+}$		
487.0 2	2.7 4	2164.02	$(17/2^+)$	1676.97	15/2+	(M1+E2)	Mult.: $R_{DCO}=0.6 \ 3 \ in \ {}^{100}Mo({}^{11}B,\alpha 2n\gamma)$ (2004Al03).
489.6 1	10.7 9	638.75	7/2+	149.15	9/2+	M1(+E2)	Mult.: $R_{DCO}=0.6 \ 3 \ in \ {}^{100}Mo({}^{11}B,\alpha 2n\gamma)$ (2004Al03).
496.2 2	2.9 5	1475.22		979.02	9/2-		
496.5 8	0.91 21	3478.1	$27/2^{+}$	2981.62	$23/2^{+}$		
496.8 13	0.6 3	2993.12	$23/2^{-}$	2496.02	$19/2^{-}$		
498.3 4	1.2 3	2669.09	$19/2^{-}$	2170.24	$15/2^{-}$		
499.4 2	11.6 3	499.46	5/2+	0.0	7/2+	M1+E2	Mult.: $R_{DCO}=1.0 \ 3 \ in \ {}^{100}Mo({}^{11}B,\alpha 2n\gamma)$ (2004A103).
502.0 2	1.7 3	894.68	7/2-	392.74	3/2-	E2	Mult.: $R_{DCO} = 0.9 \ 3 \ in \ {}^{100}Mo({}^{11}B,\alpha 2n\gamma)$

				¹⁰⁰ Mo (¹¹ B , α 2n γ)	2004A10	3 (continued)	
					$\gamma(^{105}\text{R}$	h) (continue	d)	
E_{γ}^{\dagger}	I_{γ}^{\dagger}	E _i (level)	\mathbf{J}_i^π	E_f	${ m J}_f^\pi$	Mult. [‡]		Comments
							(2004Al03).	

100 Mo(11 B, $\alpha 2n\gamma$) **2004A103** (continued)

$\gamma(^{105}\text{Rh})$ (continued)

E_{γ}^{\dagger}	I_{γ}^{\dagger}	E_i (level)	\mathbf{J}_i^π	\mathbf{E}_{f}	\mathbf{J}_f^{π}	Mult. [‡]	Comments
511.5 2	2.2 4	1406.2		894.68	7/2-		
519.6 <i>1</i>	7.0 8	1019.04	7/2+	499.46	5/2+	M1+E2	Mult.: $R_{DCO}=0.71 \ 16 \ in \ ^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004Al03).
522.8 1	108 6	979.02	9/2-	456.14	5/2-	E2	Mult.: $R_{DCO}=0.97$ 7 in ¹⁰⁰ Mo(¹¹ B, α 2n γ) (2004A103).
522.9 1	8.4 <i>6</i>	2170.24	$15/2^{-}$	1647.15	$13/2^{-}$		
536.9 1	8.7 7	1936.72	15/2+	1399.82	11/2+	E2	Mult.: $R_{DCO}=1.18\ 20\ in\ {}^{100}Mo({}^{11}B,\alpha 2n\gamma)$ (2004Al03).
570.9 <i>1</i>	48 <i>3</i>	1365.92	15/2+	794.99	13/2+	M1+E2	Mult.: $R_{DCO}=0.80 \ 16 \ in \ ^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004A103).
585.1 <i>1</i>	43.3 24	734.25	$11/2^{+}$	149.15	9/2+	M1	Mult.: $R_{DCO}=0.48\ 20\ in\ ^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004A103).
586.4 2	4.2 6	1565.47	$(11/2^{-})$	979.02	9/2-	(M1+E2)	Mult.: $R_{DCO} = 0.9 \ 3 \ in \ {}^{100}Mo({}^{11}B,\alpha 2n\gamma) \ (2004A103).$
602.7 1	13.7 13	602.77	$11/2^{+}$	0.0	7/2+	E2	Mult.: $R_{DCO} = 0.90 \ 19 \ in \ ^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004Al03).
604.1 <i>1</i>	17.3 11	1206.95	$13/2^{+}$	602.77	$11/2^+$	M1+E2	Mult.: $R_{DCO}=0.87 \ 21 \text{ in } {}^{100}\text{Mo}({}^{11}\text{B},\alpha 2n\gamma)$ (2004A103).
635.2 2	2.6 4	1529.9		894.68	$7/2^{-}$		
638.7 1	17.1 11	2244.17	19/2+	1605.52	17/2+	M1+E2	Mult.: $R_{DCO}=0.83 \ 17 \ in \ {}^{100}Mo({}^{11}B,\alpha 2n\gamma)$ (2004A103).
642.0 5	1.07 21	3839.4	$29/2^{+}$	3197.62	$25/2^+$		
645.8 <i>1</i>	146 7	794.99	13/2+	149.15	9/2+	E2	Mult.: $R_{DCO}=0.98 \ 10 \text{ in } {}^{100}\text{Mo}({}^{11}\text{B},\alpha 2n\gamma)$ (2004Al03).
657.4 2	3.6 4	2594.1	$19/2^{+}$	1936.72	$15/2^{+}$	E2	Mult.: $R_{DCO}=0.9 \ 3 \ in \ {}^{100}Mo({}^{11}B,\alpha 2n\gamma) \ (2004Al03).$
663.6 <i>1</i>	26.9 15	2310.71	17/2-	1647.15	13/2-	E2	Mult.: $R_{DCO}=0.99 \ I2 \text{ in } {}^{100}\text{Mo}({}^{11}\text{B},\alpha 2n\gamma)$ (2004Al03).
668.1 <i>1</i>	73 4	1647.15	13/2-	979.02	9/2-	E2	Mult.: $R_{DCO}=1.01 \ 9 \ \text{in}^{100} \text{Mo}(^{11}\text{B},\alpha 2n\gamma)$ (2004A103).
670.9 <i>3</i>	1.9 4	1565.47	$(11/2^{-})$	894.68	$7/2^{-}$		
676.4 2	3.8 4	3197.62	$25/2^+$	2521.19	$21/2^+$	E2	Mult.: $R_{DCO}=1.0 \ 4 \ \text{in}^{100} \text{Mo}(^{11}\text{B},\alpha 2n\gamma) \ (2004\text{Al}03).$
684.5 2	7.5 9	833.65	(11/2)	149.15	9/2+	D+Q	Mult.: $R_{DCO}=0.81 \ 24 \ in \ ^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004A103).
685.4 6	0.8 <i>3</i>	1519.1		833.65	(11/2)		
691.5 2	4.5 7	1147.6		456.14	5/2-	D+Q	Mult.: $R_{DCO}=0.9 \ 3 \ in \ {}^{100}Mo({}^{11}B,\alpha 2n\gamma) \ (2004A103).$
698.8 <i>3</i>	2.7 4	1905.7		1206.95	$13/2^+$		
724.7 2	5.1 6	2330.01	(15/2)	1605.52	17/2+		100
734.3 1	20.1 18	734.25	$11/2^+$	0.0	$7/2^+$	E2	Mult.: $R_{DCO}=0.7 \ 3 \text{ in } {}^{100}\text{Mo}({}^{11}\text{B},\alpha 2n\gamma) \ (2004\text{Al}03).$
/30.90	1.3 4	4215.4	31/21	34/8.1	$\frac{21}{2}$	E2	$M_{\rm eff}$, $D_{\rm eff}$ = 0.0.2 in 100 $M_{\rm eff}$ (11 $D_{\rm eff}$ 2mc) (2004.02)
740.1.1	4.4 4	2981.02	23/21	2244.17	19/2	E2	Mult.: $R_{DCO} = 0.9.5 \text{ in }^{100} \text{Mo}(^{11}\text{B}, \alpha 2 \pi \gamma) (2004\text{Al}05).$
/49.1 1	13.5 9	2396.16	1//2	1647.15	13/2	E2	Mult.: $R_{DCO}=1.01$ <i>19</i> in ¹⁰⁰ Mo(10 B, $\alpha 2n\gamma$) (2004Al03).
750.6 2	1.8 <i>3</i>	3344.7	$(23/2^+)$	2594.1	$19/2^{+}$	(E2)	Mult.: $R_{DCO}=0.8 \ 3 \ in \ {}^{100}Mo({}^{11}B,\alpha 2n\gamma) \ (2004Al03).$
763.2 1	17.2 11	1365.92	15/2+	602.77	11/2+	E2	Mult.: $R_{DCO}=0.88\ 22\ in\ ^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004Al03).
802.0 3	2.0 5	1781.0		979.02	9/2-	D,Q	Mult.: $R_{DCO} = 1.0 \ 4 \ in \ \frac{100}{100} Mo(\frac{11}{11}B, \alpha 2n\gamma) \ (2004A103).$
803.8 4	1.4 3	2170.24	$15/2^{-}$	1365.92	$15/2^{+}$	E1(+M2)	Mult.: $R_{DCO}=0.85$ in ${}^{100}Mo({}^{11}B,\alpha 2n\gamma)$ (2004Al03).
810.6 5	75 4	1605.52	17/2+	794.99	13/2+	E2	Mult.: $R_{DCO}=1.00 \ 11 \ in \ {}^{100}Mo({}^{11}B,\alpha 2n\gamma)$ (2004A103).

¹⁰⁰Mo(¹¹B, α 2n γ) 2004Al03 (continued)

$\gamma(^{105}\text{Rh})$ (continued)

E_{γ}^{\dagger}	I_{γ}^{\dagger}	E_i (level)	\mathbf{J}_i^π	E_f	${ m J}_f^\pi$	Mult. [‡]	Comments
825.2 6	0.76 18	4169.9	$(27/2^+)$	3344.7	$(23/2^+)$		
830.0 1	4.8 5	2477.12	17/2-	1647.15	13/2-	E2	Mult.: $R_{DCO}=0.85\ 25\ in\ ^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004Al03).
835.6 2	2.8 5	2512.67	$17/2^{-}$	1676.97	$15/2^{+}$		
869.9 <i>1</i>	4.4 6	1019.04	7/2+	149.15	9/2+	M1	Mult.: $R_{DCO}=0.31 \ 20 \ in \ ^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004Al03).
878.2 1	9.7 7	2244.17	19/2+	1365.92	15/2+	E2	Mult.: $R_{DCO}=0.88\ 25\ in\ ^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004Al03).
880.6 11	1.1 4	4417.5	(29/2 ⁺)	3536.9	25/2+	(E2)	Mult.: $R_{DCO}=0.9 \ 4 \ \text{in}^{100} \text{Mo}(^{11}\text{B},\alpha 2n\gamma)$ (2004Al03).
915.4 6	34.2 21	2521.19	21/2+	1605.52	17/2+	E2	Mult.: $R_{DCO}=0.97 \ 12 \ in \ ^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004Al03).
938.4 2	3.0 5	2615.34	$(19/2^+)$	1676.97	$15/2^{+}$		
942.8 1	10.6 10	1676.97	15/2+	734.25	11/2+	E2	Mult.: $R_{DCO}=0.9 \ 4 \ \text{in}^{100} \text{Mo}(^{11}\text{B},\alpha 2n\gamma)$ (2004Al03).
944.8 <i>1</i>	6.3 5	2310.71	17/2-	1365.92	15/2+	E1	Mult.: $R_{DCO}=0.52\ 21\ in\ ^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004Al03).
957.1 2	4.4 5	2164.02	$(17/2^+)$	1206.95	$13/2^{+}$		
1015.7 2	3.9 5	3536.9	$25/2^+$	2521.19	$21/2^+$	E2	Mult.: $R_{DCO}=1.1 \ 4 \ in \ {}^{100}Mo({}^{11}B,\alpha 2n\gamma) \ (2004A103).$
1019.0 4	2.4 6	1019.04	7/2+	0.0	7/2+	M1+E2	Mult.: $R_{DCO}=1.7 \ 9 \ \text{in}^{100} \text{Mo}(^{11}\text{B},\alpha 2n\gamma)$ (2004Al03).
1040.4 3	1.74 24	2019.24	$13/2^{-}$	979.02	9/2-		
1142.5 2	3.9 6	1745.28		602.77	11/2+	D,Q	Mult.: $R_{DCO}=0.8 \ 4 \ in \ ^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004Al03).
1210.4 2	2.9 5	2417.36	$15/2^{-}$	1206.95	$13/2^{+}$		
1224.3 <i>I</i>	6.4 6	2019.24	$13/2^{-}$	794.99	$13/2^{+}$	E1+M2	Mult.: $R_{DCO}=1.1 5 \text{ in } {}^{100}Mo({}^{11}B,\alpha 2n\gamma) (2004Al03).$
1285.6 5	1.2 4	2890.84	(19/2)	1605.52	17/2+	(D+Q)	Mult.: $R_{DCO}=1.1 \ 4 \ \text{in} \ {}^{100}\text{Mo}({}^{11}\text{B},\alpha 2n\gamma)$ (2004Al03).
1375.2 <i>1</i>	11.0 8	2170.24	15/2-	794.99	13/2+	E1	Mult.: $R_{DCO}=0.37 \ 15 \text{ in } {}^{100}\text{Mo}({}^{11}\text{B},\alpha 2n\gamma)$ (2004Al03).
1416.6 2	3.1 4	2019.24	13/2-	602.77	11/2+	E1	Mult.: $R_{DCO}=0.35 \ 15 \ in \ ^{100}Mo(^{11}B,\alpha 2n\gamma)$ (2004Al03).
1534.8 2	5.1 6	2330.01	(15/2)	794.99	13/2+	D	Mult.: $R_{DCO}=0.39 \ 21 \text{ in } {}^{100}Mo({}^{11}B,\alpha 2n\gamma)$ (2004Al03).

[†] From 2004Al03. [‡] From 2004Al03, based on DCO measurements.

100 Mo(11 B, $\alpha 2n\gamma$) 2004A103 Legend Level Scheme $\begin{array}{l} \bullet \quad I_{\gamma} < \ 2\% \times I_{\gamma}^{max} \\ \bullet \quad I_{\gamma} < 10\% \times I_{\gamma}^{max} \\ \bullet \quad I_{\gamma} > 10\% \times I_{\gamma}^{max} \end{array}$ Intensities: Relative I_{γ} 1 ⁴6.8 1.02 $(33/2^+)$ 4702.2 + 880,6 (23) 1,1 | $[] \frac{2_{\delta_{\mathcal{G}}}}{2_{\delta_{\mathcal{G}}}} \frac{1}{\lambda_{1}^{3}}$ (29/2+) 4417.5 1 82-7 E-15/ . 0.36 $\frac{31/2^+}{(29/2^-)}$ 4215.4 4183.6 Ð $(27/2^+)$ 4169.9 24 4 $\frac{1}{3^{0_{\ell_3}}} \frac{5^{\ell_2}}{3^{\ell_1}} \frac{\delta_{\ell_3}}{\delta_{\ell_3}} + \frac{1}{3^{\ell_3}}$ (27/2-) 405.6 4092.5 8 M(42) 311 23/2+ 4002.5 \$00k 29/2+ 3839.4 + 36/ (3+)/1 + 50% + 20 an + 2 20 27/2-3769.32 9.00× + 1015 + 123 + (25/2-) 16.05.01 + 3667.7 25/2+ 3536.9 $\frac{27/2^+}{(25/2^-)}$ 3478.1 ¥ £ 315.4 MIL 30.6 3469.93 MIC. Ŷ $(23/2^+)$ 3344.7 25/2 2 3308.52 ¥ 23/2 3267.15 6 5 2 C3+/W 5. 15-5-5-90 25/2+ ž MIGH 3197.62 ^{حري}م ا E24.4 Ņ 23/2-3077.93 23/2 2993.12 $\frac{\frac{23/2^+}{21/2^-}}{(19/2)}$ ¥ 2981.62 ¥ A. ż 3 5 2914.35 156.0 40 2890.84 <u>_</u>?) ž 21/2 2825.13 Å. <u>21/2</u>-<u>19/2</u>-2718.72 2669.09 ۷ ¥ 2645.70 19/2 19/2+ 2594.1 $21/2^+$ 2521.19 2496.02 19/2 19/2+ 2244.17 $17/2^+$ 1605.52 7/2+ 0.0

 $^{105}_{45} \mathrm{Rh}_{60}$







 $^{105}_{45} \mathrm{Rh}_{60}$





 $^{105}_{45}\rm{Rh}_{60}$

Band(D): 13/2[−], ∆J=1

band

414

461

315

4183.6

3769.32

3308.52

2993.12

497 2718.72

2496.02

2310.71

2170.24

2019.24

(29/2-)

27/2

25/2-

23/2

¹⁰⁰**Mo**(11 **B**, α 2**n** γ) 2004A103





 $^{105}_{45} \mathrm{Rh}_{60}$





