

$^{191}\text{Ir}(\alpha,6n\gamma)$ 1979Go15

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	T. D. Johnson, Balraj Singh		NDS 142, 1 (2017)	15-Apr-2017

1979Go15: E(^4He)=77 MeV. Measured E γ , I γ , $\gamma(\theta)$, $\gamma\gamma$ -coin, ce.

 ^{189}Au Levels

E(level) [†]	J $^{\pi}$ [‡]	T _{1/2}	Comments
247.25 [@] 16	11/2 ⁻	4.59 min 11	Additional information 1. E(level),T _{1/2} : from Adopted Levels.
325.13 ^{&} 10	9/2 ⁻		
646.4 ^{&} 4	13/2 ⁻		
681.8 [@] 3	15/2 ⁻		
712.6 4	11/2 ⁻		
812.7 3	13/2 ⁻		
1105.7 ^{&} 5	17/2 ⁻		
1412.1 [@] 5	19/2 ⁻		
1662.7 ^{&} 6	21/2 ⁻		
2062.5 5	21/2 ⁽⁺⁾		
2205.2 [@] 5	23/2 ⁻		
2250.6 6	23/2 ⁽⁺⁾		J $^{\pi}$: (25/2 ⁺) in Adopted Levels.
2299.8 6	25/2 ⁻		
2400.8 6	25/2 ⁽⁺⁾		
2450.9 6	(23/2 ⁻) [#]		
2515.7 7	(25/2)		
2515.7+x 7		242 ns 10	Additional information 2. T _{1/2} : from Adopted Levels. E(level): x=38.8 keV (2001MaZN, 39 in 1997Pe26). In Adopted Levels, this level is at 2555, (31/2 ⁺). A 199.6-keV transition from this isomer proposed by 1975De20 was not confirmed by 1979Go15 from lack of coincidences between 200 γ and 265.1 γ or 188.0 γ as required by level scheme in 1975De20.
2554.1 [@] 6	27/2 ⁻	11 ns 4	T _{1/2} : $\gamma(t)$ (1979Go15). In Adopted Levels, this half-life is assigned to a 2554+x, (31/2 ⁻) level with no known transition from it.
2862.7 7	29/2		J $^{\pi}$: (33/2 ⁻) in Adopted Levels.
2988.3 7	31/2		J $^{\pi}$: (35/2 ⁻) in Adopted Levels.
3023.1+x 3			E(level),J $^{\pi}$: this level is 3062, (35/2 ⁺) in Adopted Levels.
3233.0 7	31/2		E(level),J $^{\pi}$: this level is 3359+x, (37/2 ⁻) in Adopted Levels.
3433.2 8			E(level),J $^{\pi}$: this level is 3560, (39/2 ⁻) in Adopted Levels.
3806.6+x 5			E(level),J $^{\pi}$: this level is 3845.1, (39/2 ⁺) in Adopted Levels.

[†] From least-squares fit to E γ data, except as noted.

[‡] As proposed by 1979Go15 from $\gamma(\theta)$ data and band structures, unless otherwise stated.

[#] From Adopted Levels.

[@] Band(A): $\pi h_{11/2}$ band.

[&] Band(B): $\pi h_{9/2}$ band.

$^{191}\text{Ir}(\alpha,6n\gamma)$ **1979Go15** (continued)

$\gamma(^{189}\text{Au})$								
E_γ	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. [†]	$\alpha^\#$	Comments
x		2515.7+x		2515.7	(25/2)			E_γ : x=38.8 keV (2001MaZN , 39 in 1997Pe26).
77.9 1		325.13	9/2 ⁻	247.25	11/2 ⁻			E_γ : from Adopted Gammas.
125.6 3	4 1	2988.3	31/2	2862.7	29/2	D		$A_2=-0.11$ 4; $A_4=-0.02$ 6
150.1 3	2 1	2400.8	25/2 ⁽⁺⁾	2250.6	23/2 ⁽⁺⁾	(M1) [‡]	2.28	$\alpha(\text{K})=1.87$ 3; $\alpha(\text{L})=0.313$ 5; $\alpha(\text{M})=0.0725$ 11 $\alpha(\text{N})=0.0181$ 3; $\alpha(\text{O})=0.00332$ 5; $\alpha(\text{P})=0.000224$ 4 $A_2=-0.21$ 11; $A_4=+0.06$ 17
153.2 3	10 5	2554.1	27/2 ⁻	2400.8	25/2 ⁽⁺⁾	(E1) [‡]	0.1409 21	$\alpha(\text{K})=0.1146$ 17; $\alpha(\text{L})=0.0202$ 3; $\alpha(\text{M})=0.00468$ 7 $\alpha(\text{N})=0.001151$ 18; $\alpha(\text{O})=0.000201$ 3; $\alpha(\text{P})=1.002\times 10^{-5}$ 15 $A_2=-0.22$ 5; $A_4=-0.01$ 8
188.0 3	21 3	2250.6	23/2 ⁽⁺⁾	2062.5	21/2 ⁽⁺⁾	D		$A_2=-0.16$ 2; $A_4=-0.01$ 3
200.2 3	10 2	3433.2		3233.0	31/2			$A_2=+0.08$ 2; $A_4=-0.03$ 3
265.1 3	42 9	2515.7	(25/2)	2250.6	23/2 ⁽⁺⁾			$A_2=-0.02$ 2; $A_4=+0.01$ 3
308.6 3	22 2	2862.7	29/2	2554.1	27/2 ⁻	D		$A_2=0.00$ 2; $A_4=-0.01$ 3
321.3 3	12 3	646.4	13/2 ⁻	325.13	9/2 ⁻	(E2)	0.0837	$A_2=+0.21$ 5; $A_4=-0.03$ 8
349.0 3	13 2	2554.1	27/2 ⁻	2205.2	23/2 ⁻	(E2)	0.066	$A_2=+0.26$ 4; $A_4=-0.08$ 6
370.3 3	10 2	3233.0	31/2	2862.7	29/2	D		$A_2=-0.09$ 3; $A_4=-0.03$ 5
387.5 3	4 2	712.6	11/2 ⁻	325.13	9/2 ⁻	D		$A_2=-0.31$ 16; $A_4=-0.01$ 24
434.6 3	100 7	681.8	15/2 ⁻	247.25	11/2 ⁻	(E2)	0.0367	$A_2=+0.22$ 2; $A_4=-0.05$ 3
459.3 3	11 1	1105.7	17/2 ⁻	646.4	13/2 ⁻	(E2)		$A_2=+0.28$ 3; $A_4=-0.09$ 5
507.5 3	23 5	3023.1+x		2515.7+x		(Q)		$A_2=+0.31$ 7; $A_4=-0.05$ 10
557.0 3	8 2	1662.7	21/2 ⁻	1105.7	17/2 ⁻	(E2)		$A_2=+0.22$ 6; $A_4=-0.08$ 9
565.5 3	10 2	812.7	13/2 ⁻	247.25	11/2 ⁻	D		$A_2=+0.03$ 3; $A_4=+0.03$ 5
637.1 3	4 1	2299.8	25/2 ⁻	1662.7	21/2 ⁻	(Q)		$A_2=+0.43$ 8; $A_4=-0.10$ 12
650.3 3	59 4	2062.5	21/2 ⁽⁺⁾	1412.1	19/2 ⁻	D		$A_2=-0.16$ 2; $A_4=0.00$ 3
730.3 3	93 7	1412.1	19/2 ⁻	681.8	15/2 ⁻	Q		$A_2=+0.20$ 2; $A_4=-0.05$ 3
783.4 3	12 1	3806.6+x		3023.1+x		Q		$A_2=+0.32$ 3; $A_4=-0.11$ 5
793.2 3	20 1	2205.2	23/2 ⁻	1412.1	19/2 ⁻	(Q)		$A_2=+0.21$ 2; $A_4=-0.03$ 3
1038.8 3	9 1	2450.9	(23/2 ⁻)	1412.1	19/2 ⁻	(Q)		$A_2=+0.33$ 5; $A_4=+0.01$ 8

[†] From $\gamma(\theta)$ except as noted. For stretched quadrupole transitions, (E2) is assigned here for $E_\gamma < 600$ keV based on assumed level half-life <20 ns (typical coincidence resolving time) and RUL for E2 and M2.

[‡] From experimental conversion coefficients, however, values are not given in **1979Go15**.

[#] From BrIcc v2.3b (16-Dec-2014) **2008Ki07**, "Frozen Orbitals" appr.

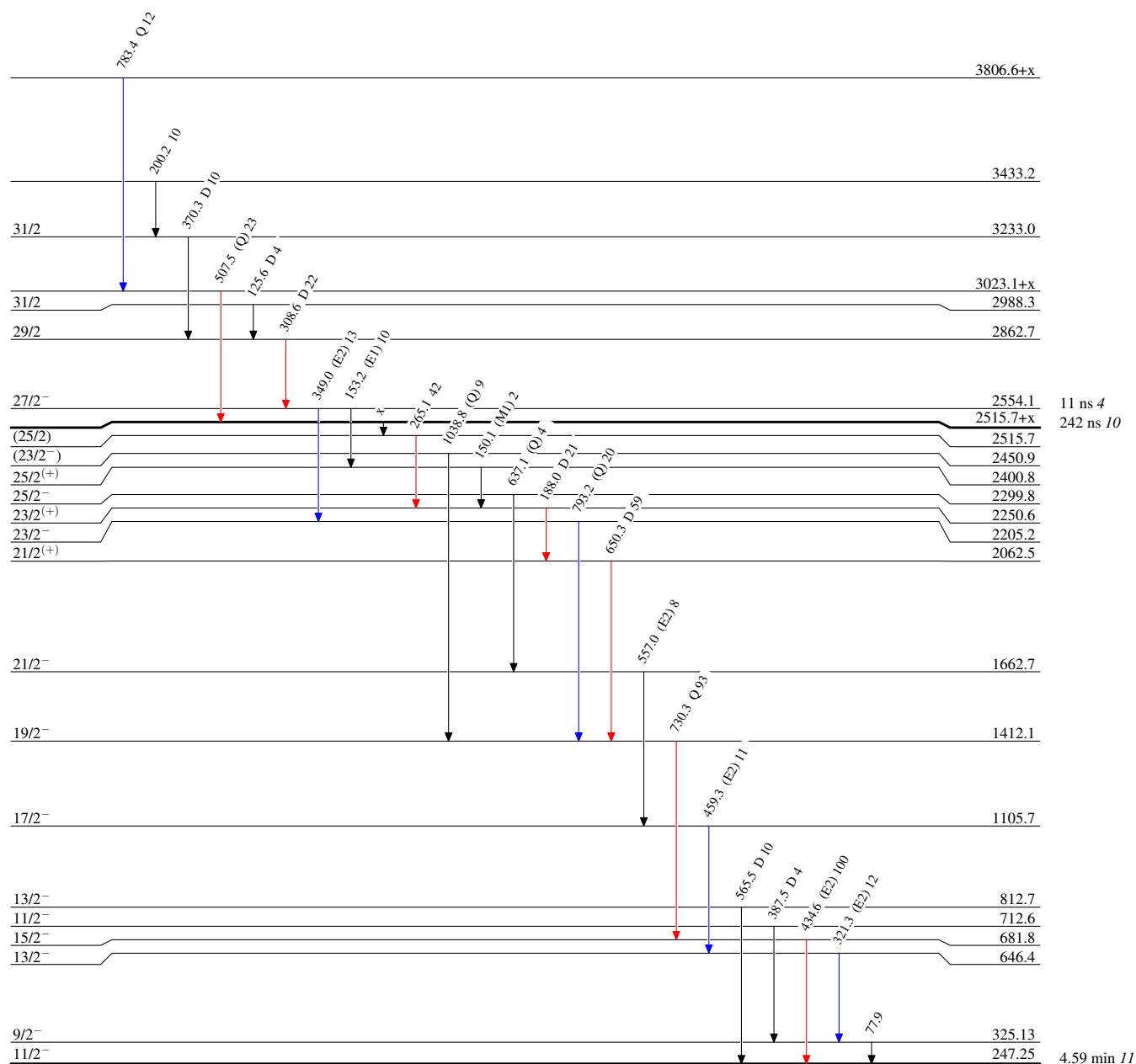
$^{191}\text{Ir}(\alpha,6n\gamma)$ 1979Go15

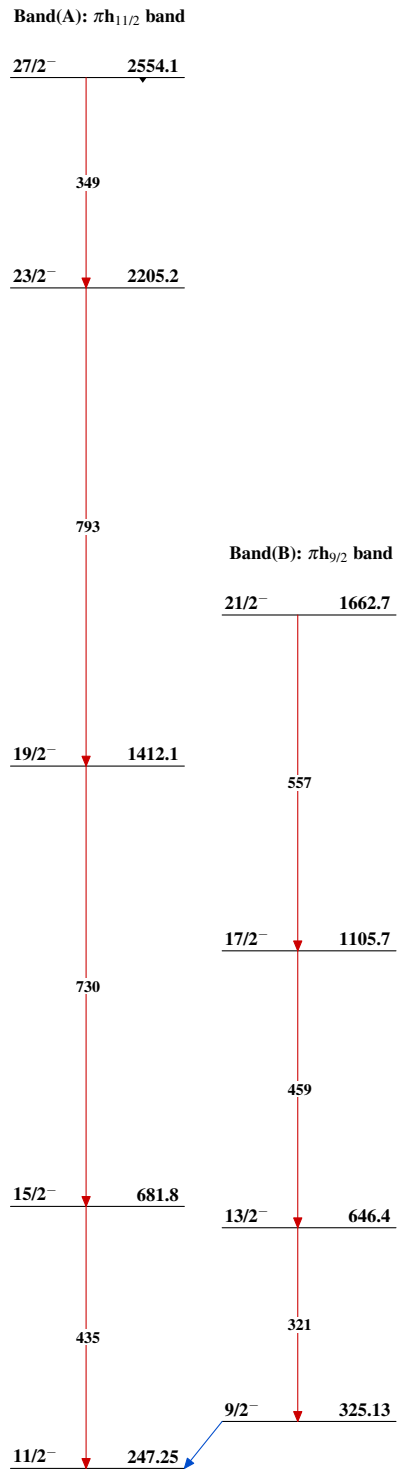
Level Scheme

Intensities: Relative I_γ

Legend

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

 $^{189}_{79}\text{Au}_{110}$

$^{191}\text{Ir}(\alpha,6n\gamma)$ 1979Go15 $^{189}_{79}\text{Au}_{110}$