^{191}Ir(γ,γ): Mossbauer   1969Ow02,1993Wa05

		History		
Type	Author		Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia		NDS 195,368 (2024)	1-Dec-2023

Others: 1959Mo05, 1964Wi13, See 1967Wa12 (isomer shifts), 1968Da19, 1967Wa20, 1967Jh02, 1973Ve11.

^{191}Ir Levels

E(level)[†]	J$^{\pi}$[†]	T$_{1/2}$	Comments
0.0	3/2$^+$	stable	Q=+0.774 *24*
			Q: from Q(^{191}Ir)/Q(^{193}Ir)=1.03 *3* from isomer shifts (1967Wa12) using Q(^{193}Ir)=+0.751 *9* from hyperfine structure of muonic x rays (2016St14,1984Ta04).
82.4241 *23*	1/2$^+$	3.7 ns *6*	T$_{1/2}$: From τ=5.3 ns *8* (1969Ow02). Other: T$_{1/2}$=2.3 ns (discrepant datum probably due to broadening of Mossbauer line − noted in 1967Jh02).
			g−factor=+1.200 *6*, recalculated for consistency with standard (1983Wa31,1989Ra17); sign=− (1987Be36) Mossbauer detection of oriented nuc disagrees with adopted sign. Other: +1.083 *9* (1967Wa20), +1.03 *5* (1969Ow02) Mossbauer.
129.426 *3*	5/2$^+$	90.5 ps *11*	T$_{1/2}$: Weighted average of: 97 ps *+14−7* (1959Mo05 − from τ=140 ns *+20−10*), 89.4 ps *14* (1969St04 − from τ=129 ps *2*), 100 ps *7* (1969Ow02 − from τ=144 ps *10*), 91.2 ps *16* (1993Wa05 − from 5.00 eV *9*) × 10^{-6} obtained from Γ_v=1.16 cm/s *2* given in Table II.
			g−factor=+1.7 *3* (recalculated by evaluator for adopted T$_{1/2}$=89.7 ps *12* in Adopted Levels) (1968Da19). This value disagrees with the adopted value, +0.322 *22*, from transient field IMPAC measurements in Coulomb excitation (2000Be07).

[†] From Adopted Levels.

γ(^{191}Ir)

E$_{\gamma}$[†]	E$_i$(level)	J$_i^{\pi}$	E$_f$	J$_f^{\pi}$	Mult.	δ	α[‡]	Comments
82.427 *10*	82.4241	1/2$^+$	0.0	3/2$^+$	M1+E2	0.80 *7*	10.56	α(K)=5.7 *4*; α(L)=3.7 *3*; α(M)=0.93 *7*; α(N+..)=0.262 *19* α(N)=0.226 *16*; α(O)=0.0355 *24*; α(P)=0.00073 *5* δ: from 1967Wa20.
129.427 *5*	129.426	5/2$^+$	0.0	3/2$^+$	M1+E2	−0.398 *20*	2.76 *5*	α(K)=2.15 *4*; α(L)=0.463 *9*; α(M)=0.1099 *23*; α(N+..)=0.0317 *7* α(N)=0.0269 *6*; α(O)=0.00458 *9*; α(P)=0.000265 *5* δ: from 1968Da19. Other value: −0.36 *+4−1* (1964Wi13).

[†] From Adopted Gammas.

[‡] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

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Level Scheme