Coulomb excitation 1963Mc18,1997Br18

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia	NDS 110,999 (2009)	1-Nov-2008

1963Mc18: (α,α') and (p,p') E(x)=4-8 MeV.

1997Br18: Target: 46.99% enriched ^{187}Os; (α,α'), E=8 MeV; HPGe detectors at 125° and 235°; Measured: B(E2)↓ for γ-rays from 187-keV level.

^{187}Os Levels

E(level)†	J$^\pi$†	$T_{1/2}$‡	Comments
0.0	1/2$^-$		
9.756 *19*	3/2$^-$		
74.356 *21*	3/2$^-$	37 ps *28*	B(E2)↑=0.68 (1963Mc18). $T_{1/2}$: Using 74.30γ.
75.016 *22*	5/2$^-$	1.7 ns *5*	B(E2)↑=0.90 (1963Mc18).
100.45 *4*	7/2$^-$		
187.42 *3*	5/2$^-$	107 ps *9*	B(E2)↑=1.69 (1963Mc18). $T_{1/2}$: Using the 187γ and it's corresponding B(E2)↓ (1997Br18). Contamination of 187γ from ^{189}Os and ^{190}Os, stated by 1997Br18, seems insignificant. Since 112.3γ, 113.2γ, and 177.7γ and their corresponding B(E2)↓ values yield statistically consistent $T_{1/2}$ of 108 ps *17*, 111 ps *19*, and 110 ps *27*, respectively.

† From Adopted Levels.

‡ From measured B(E2) and adopted γ-ray properties, except otherwise noted. 20% uncertainty is assumed by the evaluator for the B(E2)↑. The authors (1963Mc18) assigned 10% of the observed 75γ intensity to direct excitation of the 75 level.

γ(^{187}Os)

E_γ†	I_γ†	E_i(level)	J_i^π	E_f	J_f^π	Mult.†	δ†	α‡	Comments
87.62 *10*	1.8 *12*	187.42	5/2$^-$	100.45	7/2$^-$	(M1+E2)		7.9	B(E2)↓=1.45 *16* (1997Br18), assuming 87γ is pure E2.
112.35 *10*	1.53 *15*	187.42	5/2$^-$	75.016	5/2$^-$	E2		2.78	B(E2)↓=0.129 *17* (1997Br18).
113.20 *10*	8.1 *5*	187.42	5/2$^-$	74.356	3/2$^-$	M1+E2	1.5 *2*	3.12	B(E2)↓=0.44 *6* (1997Br18).
177.68 *7*	100 *4*	187.42	5/2$^-$	9.756	3/2$^-$	M1+E2	0.53 *6*	0.995	B(E2)↓=0.18 *3* (1997Br18).
187.37 *7*	67.4 *23*	187.42	5/2$^-$	0.0	1/2$^-$	E2		0.420	B(E2)↓=0.45 *3* (1997Br18).

† 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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