Coulomb excitation 1974Ba80,1998Sp03

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh, Ameenah R. Farhan	NDS 107, 1923 (2006)	30-Apr-2006

1974Ba80: (160,160′) E=39.2 MeV. γ-ray data.
1998Sp03: (^{74}Se,^{74}Se′) E=230-262 MeV, measured γ(θ,H). Deduced g-factors. Transient-field technique.
Others:
1978Le22: (α,α′) E=7.3 MeV and (^{16}O,^{16}O′) E=33 MeV Q(reorientation method); 1970AgZV (α,α′); 1962Ga13, 1962Ga10 (α,α′) and (^{14}N,^{14}N′); 1961An07 (^{14}N,^{14}N′); 1956Te26 (α,α′).

^{74}Se Levels

E(level)‡	Jπ†	$T_{1/2}$#	Comments
0.0	0^+		
634.8 *2*	2^+	7.08 ps *9*	g=0.428 *27* (1998Sp03) Q=−0.36 *7* (1978Le22) Q: for constructive interference which is supported by models. For destructive interference Q=−0.14 *7* (1978Le22). B(E2)↑=0.388 *5* (1978Le22), 0.370 *15* (1974Ba80). Others: 0.48 *15* (1970AgZV), 0.44 (1961An07), 0.21 (1956Te26). $T_{1/2}$: from B(E2)=0.388 *5*.
854.1 *3*	0^+	0.75 ns *5*	B(E2)(2^+ to 0^+)=0.030 *2*.
1269.26 *15*	2^+	3.3 ps *15*	g=0.55 *9* (1998Sp03) B(E2)=0.0080 *5* (1974Ba80). B(E2)↑: other: 1962Ga13, 1962Ga10. $T_{1/2}$: from B(E2)=0.0080 *5* and adopted branching ratio=0.34 *3*.
1363.2 *3*	4^+	1.86 ps *8*	g=0.50 *10* (1998Sp03) B(E2)(2^+ to 4^+)=0.266 *11*.
2350.2 *7*	3^-		B(E3)=0.021 *5*.

† From 'Adopted Levels'.
‡ From least-squares fit to Eγ′s.
# From B(E2)′s and branching ratios.

γ(^{74}Se)

E_i(level)	J_i^π	E_γ	I_γ†	E_f	J_f^π	Comments
634.8	2^+	634.8 *2*	100	0.0	0^+	β_{20}=0.295.
854.1	0^+	219.3 *2*	100	634.8	2^+	B(E2)↓=0.15 *1* β_{02}=0.298.
1269.26	2^+	634.5		634.8	2^+	B(E2)↓=0.09 *4* β_{22}=0.23. I_γ: line obscured by 634.8γ from 634.8 level. No Iγ available from Coul. ex.
		1269.25 *15*		0.0	0^+	B(E2)↓=0.0016 *1* β_{20}=0.043.
1363.2	4^+	728.4 *2*	100	634.8	2^+	B(E2)↓=0.148 *6* β_{42}=0.295.
2350.2	3^-	986.9 *7*	90 *40*	1363.2	4^+	
		1715.5 *10*	100	634.8	2^+	B(E3)↓=0.0030 *7* β_{30}=0.140.

† Relative photon branching ratios.

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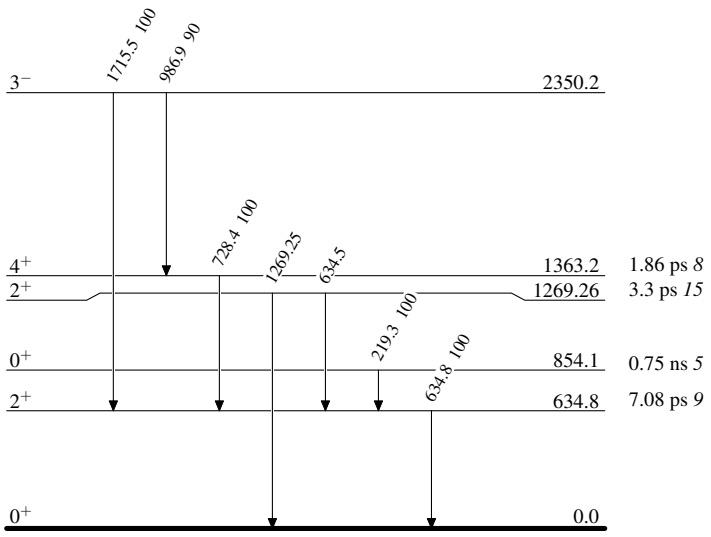
Level Scheme

Intensities: Relative photon branching from each level



$^{74}_{34}Se_{40}$