Coulomb excitation 1999Ja13,1981Yo07

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 113, 2187 (2012)	15-Sep-2012

Others: 2008We07, 1969Ga25, 1963Al31.

2008We07: C(^{92}Zr,^{92}Zr′), E(^{92}Zr)=275 MeV; ^{92}Zr + Gd targets backed by Cu layer to stop the Zr ions; PIPS Si detectors or solar cells to detect recoils; 4 HPGe Clover detectors for γ detection; measured Eγ, g-factors for the 2^+ states At 934 and 1847 keV using transient field technique.

1999Ja13: Si(^{92}Zr,^{92}Zr′), E(^{92}Zr)=300 MeV; (natural Si)-Gd-Ta multilayer target backed by Al, cooled to 50° K, placed in 0.05 T external field; Si target recoils stopped in planar Si detector, gammas detected by 4 clover detectors, each consisting of 4 Ge crystals; measured Eγ, $\gamma(\theta$,H,t), deduced g-factor for 935 and 1495 levels.

1981Yo07: (^{16}O,^{16}O′), E=46 MeV; Ge(Li).

1969Ga25: (^{14}N,^{14}N′), (^{12}C,^{12}C′), E=31-46 MeV; (α,α′), E(α)=12 MeV; Ge(Li).

1963Al31: (^{14}N,^{14}N′), E=44 MeV; NaI.

^{92}Zr Levels

E(level)†	J^π‡	$T_{1/2}$	Comments
0.0	0^+		
934	2^+	5.0 ps *4*	B(E2)↑=0.080 *6* g=−0.180 *10* (1999Ja13) g: from transient field. other g: −0.18 *2* (2008We07, transient field). B(E2) from 1981Yo07. Other data: B(E2)(^{92}Zr)/B(E2)(^{94}Zr,920-level)=1.40 *14* (1969Ga25); B(E2)=0.094 *19* (1963Al31), 0.079 *20* (1969Ga25). $T_{1/2}$: from B(E2)=0.080 *6*.
1382	0^+		
1495	4^+		g=−0.50 *11* (1999Ja13)
1847	2^+		g=+0.8 *5* (2008We07)
2066	2^+		
2339	3^-		
2398	4^+		
2486	5^-		

† From least-squares fit to Eγ, assigning equal weight to all data.

‡ From Adopted Levels.

γ(^{92}Zr)

Eγ†	E$_i$(level)	J^π_i	E$_f$	J^π_f	Comments
448	1382	0^+	934	2^+	
561	1495	4^+	934	2^+	
903	2398	4^+	1495	4^+	
913	1847	2^+	934	2^+	
934	934	2^+	0.0	0^+	
991	2486	5^-	1495	4^+	
1132	2066	2^+	934	2^+	
1405	2339	3^-	934	2^+	
1847	1847	2^+	0.0	0^+	Eγ: rounded value from Adopted Gammas; γ evident In particle-γ coin spectrum In fig. 1 of 2008We07.

† From 1999Ja13; uncertainty unstated by authors.

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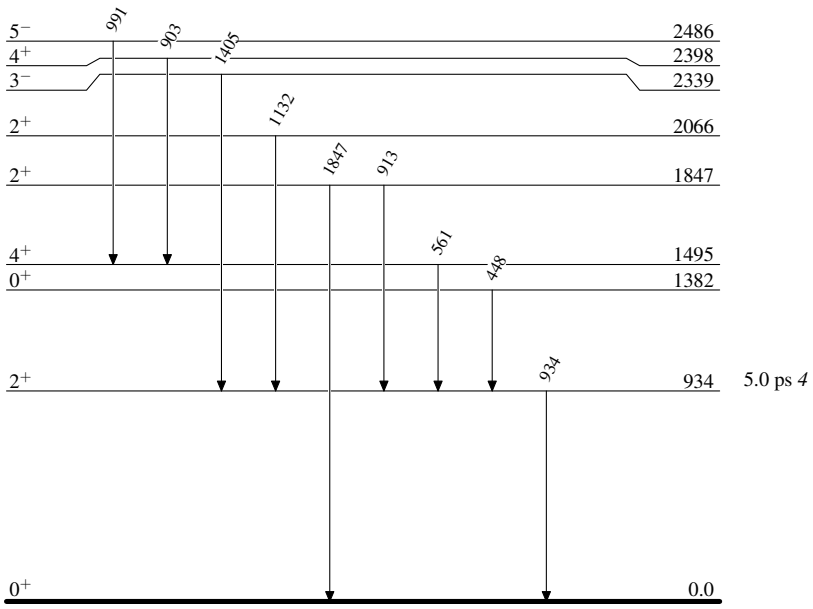
Level Scheme



$^{92}_{40}Zr_{52}$