^{92}Zr(p,p′γ) 1981Ju03

History

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

See also 1982Ka22.
Others: 1970Co10, 1974Cu04.
1982Ka22, 1981Ju03: E(p)=7.08 MeV; beam-γ delay (walk free centroid method) and beam-ce delay (centroid time shift method); ^{92}Zr+^{60}Ni composite target, Si(Li) + magnetic lens spectrometer). Enhanced excitation of 0^+, 1382 level via IAR.
1974Cu04: E(p)=5 MeV; measured p′(θ)−934γ(θ) in vicinity of lowest $5/2^+$ IAR in ^{93}Nb.
1970Co10: E(p)=7.82, 7.90 MeV; p′-γ delayed coin; enhanced excitation of 0^+ 1382 level via IAR.

^{92}Zr Levels

E(level)	J^π †	$T_{1/2}$
0.	0^+	
934.1		
1382.0	0^+	85‡ ps *15*
1495#		

† From Adopted Levels.
‡ From 1981Ju03. However, 1970Co10 report $T_{1/2}$=166 ps *28*. 1981Ju03 attribute $T_{1/2}$ discrepancy to insufficient slope method (logarithmic slope of time spectra) used by 1970Co10.
# Reported by 1974Cu04 only.

γ(^{92}Zr)

E_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult.	$I_{(\gamma+ce)}$ ‡
447.9	1382.0	0^+	934.1			100
(561)	1495		934.1			
934.1	934.1		0.	0^+		
1382.0	1382.0	0^+	0.	0^+	E0#	0.196 *19*

† From data of 1981Ju03 for 1382 and 448 transitions; ΔE not stated by authors. from level energy difference otherwise.
‡ Relative transition intensity, based on I(1383ce(K))/I(448ce(K))=0.31 *3* (1981Ju03), assuming I(ce(K))/I(ce+pair)=0.808 (E0 theory) for 1383 transition, and α(K)(448)=0.00512, α(448)=0.00586 (E2 theory).
# Based on observation of 1383ce(K) here and absence of 1383γ in (n,γ) and in ^{92}Y β^- decay (in which a strong 448γ is observed). Considering all mult(1382γ) through E4 and M4, the measured I(1383ce(K))/I(448ce(K)) implies I(1383γ)/I(448γ)≥0.76, unless mult(1383γ)=E0.

Legend

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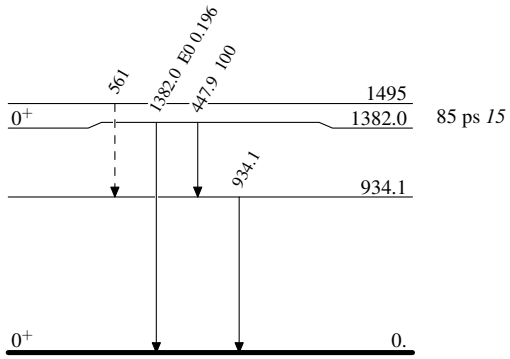
Level Scheme

- - - - - - ► γ Decay (Uncertain)



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