

⁹⁰Zr(⁷Li,⁶He), (⁷Li,⁶Hep) **1993Yo01,1979Pu01**

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 114, 1293 (2013)	1-Sep-2013

Others: [1994Ga10](#), [2000Yo09](#).

[2000Yo09](#): E=210 MeV; 98.7% ⁹⁰Zr target; magnetic spectrograph (FWHM=500 keV); $\theta(\text{lab}) \leq 2^\circ$; 2 position-sensitive Si detectors followed by plastic scin In focal plane; array of 8 Si detectors to measure angular correlation of charged particles coincident with ⁶He.

[1994Ga10](#): E=350 MeV; magnetic spectrograph; detected ⁶He at $\approx 0^\circ$, protons (coin with ⁶He) at backward angles using Si PIN diodes; deduced Γ_p/Γ for excitation energies from 5 to 18 MeV.

[1993Yo01](#): E=210 MeV; magnetic spectrograph; 97.62% ⁹⁰Zr target; FWHM \approx 500 keV.

[1979Pu01](#): E=34.0 MeV. 98.6% ⁹⁰Zr target. Semi, ΔE -E telescope, $\theta(\text{c.m.}) \approx 20^\circ$ to 40° .

⁹¹Nb Levels

E(level) [†]	J ^π [‡]	C ² S [#]	Comments
0	9/2	0.92	
1.0×10 ²	1/2	0.41	
1.31×10 ³			
1.61×10 ³			
3.16×10 ³			
3.41×10 ³	5/2	0.33	
4.23×10 ³			
4.44×10 ³			
4.82×10 ³	7/2	0.44	
4.92×10 ³			$\Gamma=1.2$ MeV (1993Yo01).
5.25×10 ³			
5.50×10 ³			
6.0×10 ³ @ 15			$\Gamma=0.8$ MeV (1993Yo01). Other E: 6.1 MeV (1994Ga10).
9.10×10 ³ @ 15			$\Gamma=3.0$ MeV (1993Yo01). Other E: 9.2 MeV (1994Ga10).
11.90×10 ³ @ 15			$\Gamma=0.6$ MeV (1993Yo01).
$\approx 12 \times 10^3$			High-spin IAS reported by 1994Ga10 only.

[†] From [1979Pu01](#), except as noted.

[‡] J^π as used in the DWBA calculations of [1979Pu01](#); consistent with Adopted values. However, the six-point angular distributions are rather structureless.

[#] C²S from finite-range DWBA calculation assuming C²S=0.59 for p_{3/2} binding to ⁶He ([1979Pu01](#)); the uncertainty in the absolute cross sections is 4%.

@ From [1993Yo01](#).