^{96}Zr(d,p),(α,^{3}He) 1973Bi04

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 111, 525 (2010)	19-Nov-2009

^{97}Zr Levels

Others: 1969Bo27, 1962Co06.
1973Bi04: ^{96}Zr(d,p): E(d)=33.3 MeV, measured σ(E,θ). θ(lab)=12.5° to 42.5°, FWHM=25 keV; ^{96}Zr(α,^{3}He): E(α)=65.7 MeV, measured σ(θ), θ=15°, 20°. Protons and ^{3}He were detected in nuclear emulsion. Analysis with DWBA(JULIE) with N=3.30 for (d,p) reaction and N=92.1 for (α,^{3}He) reaction.
1963Co10: ^{96}Zr(d,p): E(d)=15 MeV, measured σ(E,θ).
1980HeZS: ^{96}Zr(pol d,p): E(d)=12 MeV, measured σ(θ), vector-analyzing power.
All data from 1973Bi04, unless otherwise noted.

E(level)	J$^{\pi}$[†]	L	S[‡]	Comments
0.0	1/2^{+}	0	1.06	
1108 *5*	3/2^{+}	2	1.22	J$^{\pi}$: J=3/2 from vector-analyzing power (1980HeZS).
1265 *5*	7/2^{+}	4	1.05	S: if 1g7/2.
1399 *5*	(3/2^{+},5/2^{+})	2	0.091	J$^{\pi}$: J=5/2 from vector-analyzing power (1980HeZS); disagrees with log $f^{1u}t$=8.11 from (1/2^{-}) ^{97}Y.
1848 *5*		2+4	0.08	L: L=2+4 needed to get agreement between (d,p) and (α,^{3}He) data (1973Bi04). S: if peak is 2d3/2 + 1g7/2 doublet (1973Bi04).
2070[#]	(5/2^{+})	(2)[#]		
2265 *10*	11/2^{-}	5	0.56	
2629 *10*				S: 0.082 if 2d3/2, 0.027 if 2f7/2, 0.067 if 1g7/2.
2830[#]	(1/2^{-},3/2^{-})	(1)[#]		
3014 *10*				S: 0.072 if 2d3/2, 0.026 if 2f7/2, 0.070 if 1g7/2.
3160[#]	1/2^{-},3/2^{-}	1[#]		
3652 *10*		2+3		L: from 1963Co10.
3731 *10*	9/2^{-},11/2^{-}	5	0.13	S: if 1h11/2 (1973Bi04).
4586 *10*				

[†] From Adopted Levels.
[‡] From 1980HeZS.
[#] From 1963Co10.