

${}^{93}\text{Nb}(\text{p},\alpha)$  1974Ve08

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	S. K. Basu, E. A. Mccutchan		NDS 165,1 (2020)	1-Mar-2020

$J^\pi({}^{93}\text{Nb})=9/2^+$ .

1974Ve08: E=15.2 MeV. Measured  $\sigma(E,\theta)$ ,  $\theta=10^\circ-160^\circ$ , semi;  $\theta=10^\circ, 30^\circ$ , magnetic spectrograph, FWHM=11 keV.

Other: 1995OI01.

For shell and odd-even effects on alpha-particle energy spectra from the (p, $\alpha$ ) reaction on nuclei around neutron number 50, see 1987Ku01.

 ${}^{90}\text{Zr}$  Levels

E(level)	L <sup>‡</sup>	S <sup>†</sup>	Comments
0	4	1.0	
1760	(4)	0.022	
2180	4	0.177	
2320	1	1.0	
2740	1	1.4	L,S: Doublet.
3070	4	0.35	
3290	4	0.14	
3450	4	0.43	
3590	4	0.56	
3840		@	
3955 10	1	0.68	
4015? 10		@	
4120? 10		@	
4225 10	1		
4280 10	1		
4330 10			
4370 10	3		
4420? 10		@	
4450? 10		@	
4470 10	#		
4490 10	#		
4540 10	1		
5100	3		

<sup>†</sup> Normalized to 1 for the ground state (1974Ve08).

<sup>‡</sup> From comparison with DWBA calculations (1974Ve08).

# L=(3) for the levels at 4470 and 4490 keV.

@ Weak.