^{86}Kr(p,p′)   1974Ar29,1979Sa14,1972Ho16

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Alexandru Negret, Balraj Singh	NDS 124, 1 (2015)	30-Nov-2014

1974Ar29: E=12.0 MeV, FWHM=35 keV. Measured $\sigma(\theta)$ from θ=30°−160°. DWBA and coupled-channels analysis.

1979Sa14 (also 1978Ma11): E=51.9 MeV. Broad-range magnetic spectrometer, FWHM=100 keV. Measured $\sigma(\theta)$ from θ=10°−80°. DWBA and coupled-channels analysis.

1972Ho16 (also 1971HoYM): E=4.76-10.10 MeV. Measured $\sigma(\theta)$. A total of 24 excited states are reported (from 1550-5070), but the quoted energies are systematically lower by≈10-20 keV than those of 1974Ar29.

^{86}Kr Levels

E(level)[†]	J$^{\pi}$[#]	L[@]	β_L[@]	Comments
0		0		
1566 10		2	0.106	β_L: from coupled-channel analysis: 0.108, 0.105 (1974Ar29), 0.113 (1979Sa14).
2241 10		4	0.079	β_L: others: 0.069 (1974Ar29), 0.087 (1979Sa14).
2340 10		2	0.047	L: from 1979Sa14.
				β_L: others: 0.045 (1974Ar29), 0.053 (1979Sa14).
2715 10				
2848 10				
2923 10				
3012 10				
3096 10		3	0.142	B(E3)↑=0.38 4 (1978Ma11)
				β_L: from coupled-channel analysis: 0.145 or 0.142 (1974Ar29).
3330 10		(4)	0.031	
3535 10				
3575 10				
3783 10				
3809 10				
3938 10	5$^+$	(5)	0.10	J$^{\pi}$: Adopted J$^{\pi}$=(5$^-$).
4048 20				
4090 20				
4175 20		(4)	0.042	
4275 20	7$^+$			
4308 20				
4399 20	4$^+$			
4559 20	4$^+$			
4660[‡]				
4700 20				
4795 20				E(level): 4760 in 1972Ho16 is probably the same level.
4928 20		(4)	0.098	
5070[‡]				
5127 20				
5203 20				
5315 20				
5397 20				
5576 20				
5795 20				
5850 20				
5928 20				

[†] From 1974Ar29, unless indicated otherwise. Uncertainty is based on a general statement by 1974Ar29 that it varies from 10 keV for lower levels to 20 keV for higher levels.

[‡] From 1972Ho16.

[#] Proposed by 1972Ho16 on the basis of $\sigma(\theta)$ data of scattered protons from ^{86}Kr at the 9.63 MeV IAR in ^{87}Rb, assuming

^{86}Kr(p,p$'$)   1974Ar29,1979Sa14,1972Ho16 (continued)

^{86}Kr Levels (continued)

$\nu(d_{5/2}g_{9/2}^{-1})$ excitations.

@ From DWBA analysis in 1974Ar29, unless otherwise stated. See 1974Ar29 and 1979Sa14 for deformation parameters in coupled-channels analysis.