^{86}Kr(d,p),(pol d,p) 1970Ha16,1978De20

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	T. D. Johnson and W. D. Kulp(a)	NDS 129, 1 (2015)	27-Jul-2015

1965Sa06: E=15 MeV, θ=12°−45°. Level energies above 1 Mev are higher by 50-100 keV than those adopted.
1970Ha16: E=11 MeV, ΔE=30 keV, θ=20°−160° in 5° steps. Finite-range DWBA analysis of $\sigma(\theta)$.
1971Co21: E=4.5-10.5 MeV, θ=100°−160° in 20° steps. Determined cross sections as a function of E(d) for levels at 0, 530, and 1470 keV.
1978De20: E=12 MeV, ΔE ≈ 16 keV, θ=25°−100° with polarized deuterons. Determined vector analyzing power for ground state transition and DWBA analysis of $\sigma(\theta)$ for ground state and 529 and 2112 levels.
Unless noted otherwise, data are from 1970Ha16.

^{87}Kr Levels

E(level)[†]	J^π	L[‡#]	S[‡]	Comments
0.0	$5/2^+$	2	0.56	J^π: from analyzing power (1978De20).
529		0	0.46	
1468		2	0.23	
1570				E(level): This level likely corresponds to the adopted 1570 level with 1577 level with $J^\pi=9/2^+$.
1873		(2)	0.02	
1996		2	0.09	
2080		(0)	0.18	
2112		2	0.30	
2250		(5)	0.18	
2277		(0)	0.03	E(level): incompletely resolved from the 2250 level. J^π: $(1/2^+)$ assigned to level at 2300 keV.
2515		4	0.49	
2775		2	0.10	
2823		2	0.11	J^π: there are Adopted Levels at 2832, and 2836 to which this L might apply.
3015		2	0.08	J^π: there are Adopted Levels at 3020, and 3026 to which this L might apply.
3223		@	@	
3237		@	@	
3552				
3819				
3871				
4402				
4536				
4800				
4856				

[†] A comparison of energies of the first five excited levels with the adopted values shows these values are low by about 8 keV. A change of +5 keV in calibration energy accounts for part of this discrepency. The evaluators have increased the authors′ energies by 8 keV when making level associations in the Adopted Levels. The 3819 level is seen only in this reaction and in the Adopted Levels is given as E=3827.
[‡] For the DWBA calculation for L=2, the values are for $J^\pi=3/2^+$, except for the ground state; for L=4 J^π is taken to be $7/2^+$; and for L=5 J^π is taken to be $11/2^-$.
[#] Assignments of 1965Sa06 agree with those of 1970Ha16, except where noted.
[@] The 3223 and 3237 levels were not resolved. From the assumption that L=2 is valid for both members of the doublet, 1970Ha16 deduce S=0.12 for $J^\pi=3/2^+$ and S=0.08 for $J^\pi=5/2^+$. In 1965Sa06 a peak at 3310 keV was reported with L=(0+2) that probably corresponds to this doublet.