

$^{86}\text{Kr}(\text{p,p}') \text{ IAR}$ 1972Ho15,1972Ho16

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

1969RiZW: E=4.76-10.1 MeV, $p'(\theta)$ measured.

1972Ho15: E=4.76-10.1 MeV, FWHM \approx 35 keV, $\theta=95^\circ-165^\circ$. Measured excitation functions for 14 resonances, which are identified as analogs of levels in ^{87}Kr . Deduced L-values, total and partial widths, and spectroscopic factors. The results are in agreement with $^{86}\text{Kr}(\text{d,p})$ studies.

1972Ho16: measured $\sigma(\theta)$ at 9 of the 14 IAR for proton decay to inelastic channels.

1972Sp02: related model calculations.

 ^{87}Rb Levels

E(level) [†]	$T_{1/2}$ [‡]	L [‡]	S [‡] #	Comments
S(p)+5348	36.0 keV	2	0.62	E(level): isobaric analog of ^{87}Kr ground state, confirmed by agreement with spectroscopic factor in $^{86}\text{Kr}(\text{d,p})$.
S(p)+5870	77.0 keV	0	0.62	E(level): isobaric analog of 532 level in ^{87}Kr , confirmed by agreement with spectroscopic factor in $^{86}\text{Kr}(\text{d,p})$.
S(p)+6826	49.6 keV	2	0.22,0.18	S: S=0.22 for $J^\pi=3/2^+$ or S=0.18 for $J^\pi=5/2^+$. E(level): isobaric analog of 1476 level in ^{87}Kr , confirmed by agreement with spectroscopic factor in $^{86}\text{Kr}(\text{d,p})$.
S(p)+7234	30.0 keV	2	0.02	E(level): isobaric analog of 1881 level in ^{87}Kr , consistent with tentative spectroscopic factor in $^{86}\text{Kr}(\text{d,p})$.
S(p)+7348	36.0 keV	2	0.10	E(level): isobaric analog of 2004 level in ^{87}Kr , confirmed by agreement with spectroscopic factor in $^{86}\text{Kr}(\text{d,p})$.
S(p)+7420	60.0 keV	0	0.20	E(level): isobaric analog of 2087 level in ^{87}Kr , consistent with tentative spectroscopic factor in $^{86}\text{Kr}(\text{d,p})$.
S(p)+7463	62.0 keV	2	0.50	E(level): isobaric analog of 2123 level in ^{87}Kr , confirmed by agreement with spectroscopic factor in $^{86}\text{Kr}(\text{d,p})$.
S(p)+7620	45.0 keV	5		E(level): isobaric analog of 2259 level in ^{87}Kr , consistent with tentative spectroscopic factor in $^{86}\text{Kr}(\text{d,p})$.
S(p)+7892	30.0 keV	4	0.60	E(level): isobaric analog of 2520 level in ^{87}Kr , confirmed by agreement with spectroscopic factor in $^{86}\text{Kr}(\text{d,p})$.
S(p)+8142	65.0 keV	2	0.18	E(level): unresolved doublet. E(level): isobaric analog of 2787 level in ^{87}Kr , confirmed by agreement with spectroscopic factor in $^{86}\text{Kr}(\text{d,p})$.
S(p)+8263	65.0 keV	2	0.01	
S(p)+8374	35.0 keV	3	0.03	E(level): weak resonance. E(level): isobaric analog of 3020 level in ^{87}Kr , confirmed by agreement with spectroscopic factor in $^{86}\text{Kr}(\text{d,p})$.
S(p)+8573	70.0 keV	0	0.11	E(level): isobaric analog of 3218 level in ^{87}Kr , consistent with one of the tentative spectroscopic factors in $^{86}\text{Kr}(\text{d,p})$.
S(p)+8893	38.0 keV	2	0.03	
S(p)+9250 [@]		(0)		
S(p)+9639 [@]				

[†] c.m. energies, S(p)=8621.10 keV I .

[‡] From 1972Ho15, except for S(p)+9250 resonance; data analysis by an energy-averaged scattering matrix method (1969Za03).

Defined as the square of the coupling coefficient for coupling to the target gs. Except for the 5348 and 6826 resonances, for the calculation of S, $J^\pi=3/2^+$, $7/2^-$, $7/2^+$, and $11/2^-$ is assumed for the resonances with L=2, 3, 4, and 5, respectively.

[@] From 1969RiZW and 1972Ho16.