

$^{41}\text{K}(\text{p},\alpha)$ 1965A106

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jun Chen	NDS 152, 1 (2018)	30-Sep-2017

Includes (p, $\alpha\gamma$) from 1969En04.

$J^\pi(^{41}\text{K g.s.})=3/2^+$.

1965A106: E=9.0 MeV proton beam was produced from the Argonne tandem accelerator. Target was 40 $\mu\text{g}/\text{cm}^2$ KI (99.72% in ^{41}K) evaporated on a thin carbon (30 $\mu\text{g}/\text{cm}^2$) backing. Reaction products were momentum-analyzed with a broad-range magnetic spectrograph (FWHM=15-25 keV). Measured $\sigma(E(\alpha))$. Deduced levels. Comparisons with available data.

1969En04: E=4.47 MeV, measured $\alpha\gamma(\theta)$, lifetime of 2170 level by DSAM.

Others: 1966Gr27, 1960CI02.

 ^{38}Ar Levels

E(level) [†]	T _{1/2}	E(level) [†]	E(level) [†]	E(level) [†]
0		5093 10	5985 10	6610 [‡] 20
2170 5	0.37 [@] ps 5	5164 10	6058 [#] 10	6630 [‡] 20
3383 10		5357 10	6222 10	6680 20
3816 10		5522 10	6259 10	6780 20
3944 10		5561 10	6286 10	6830 [‡] 20
4486 10		5603 10	6347 [‡] 10	6850 [‡] 20
4573 [‡] 10		5669 10	6360 [‡] 10	6880 [‡] 20
4594 [‡] 10		5743 10	6420 20	
4719 10		5835 [‡] 10	6500 20	
4885 10		5869 [‡] 10	6590 [‡] 20	

[†] From 1965A106, values seem systematically high by 5-10 keV as compared to those from other reactions.

[‡] Following closely spaced groups are unresolved in 1965A106: 4573 and 4594; 5835 and 5869; 6347 and 6360; 6590, 6610 and 6630; 6830, 6850 and 6880.

[#] Possible multiplet (1965A106).

[@] From DSAM for 2167 γ (1969En04).