^{28}Si(d,^{6}Li) 1981Ve05,1976Co15

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia, Anagha Chakraborty	NDS 186, 2 (2022)	31-Mar-2022

1981Ve05: ^{3}He beam, E=55.0 MeV; enriched target, Q3D-type magnetic spectrograph, measured $\sigma(E_{Li}, \theta)$; Deduced levels, α-spectroscopic strengths. DWBA analysis. FWHM ≈40 keV.

1976Co15: ^{3}He beam, E=35 MeV; magnetic spectrograph, ΔE proportional counter; measured $\sigma(\theta)$; Deduced levels, α-spectroscopic strengths.

^{24}Mg Levels

$(d\sigma/d\Omega)_{max}$ data in the comments are from 1981Ve05.

E(level)[†]	J^{π}[#]	L[#]	S[@]	Comments
0	0^+		0.41	$(d\sigma/d\Omega)_{max}$=18 μb/sr.
1368 *7*	2^+		0.50	$(d\sigma/d\Omega)_{max}$=9 μb/sr.
4115 *7*	4^+		0.44	$(d\sigma/d\Omega)_{max}$=4.1 μb/sr.
4231 *7*	2^+		0.87	$(d\sigma/d\Omega)_{max}$=10 μb/sr.
5224 *7*	3^+			$(d\sigma/d\Omega)_{max}$=1.5 μb/sr.
6002 *7*	4^+		0.70	$(d\sigma/d\Omega)_{max}$=4.0 μb/sr.
6427 *10*	0^+			$(d\sigma/d\Omega)_{max}$=1.0 μb/sr.
7349 *7*	2^+			$(d\sigma/d\Omega)_{max}$=0.9 μb/sr.
7616	3^-			E(level): Used for energy calibration in 1981Ve05. $(d\sigma/d\Omega)_{max}$=16 μb/sr.
8105 *10*	6^+			$(d\sigma/d\Omega)_{max}$=0.8 μb/sr.
8357 *7*	3^-			$(d\sigma/d\Omega)_{max}$=1.3 μb/sr.
8439 *7*	1^-			E(level): Doublet. $(d\sigma/d\Omega)_{max}$=3.8 μb/sr.
8651 *7*	2^+			$(d\sigma/d\Omega)_{max}$=0.8 μb/sr.
8865 *7*	2^-			$(d\sigma/d\Omega)_{max}$=0.8 μb/sr.
9000 *10*	2^+			$(d\sigma/d\Omega)_{max}$=0.5 μb/sr.
9144 *7*	1^-			$(d\sigma/d\Omega)_{max}$=1.4 μb/sr.
9301[‡] *7*				$(d\sigma/d\Omega)_{max}$=2.4 μb/sr.
9437 *15*				$(d\sigma/d\Omega)_{max}$=0.5 μb/sr.
9526 *7*		2+6		E(level): Doublet. $(d\sigma/d\Omega)_{max}$=1.9 μb/sr.
10024 *10*		5		$(d\sigma/d\Omega)_{max}$=0.8 μb/sr.
10.11×10^3[‡] *20*				$(d\sigma/d\Omega)_{max}$=0.7 μb/sr.
10352 *7*		2+4		E(level): Doublet. $(d\sigma/d\Omega)_{max}$=2.6 μb/sr.
10580 *7*				$(d\sigma/d\Omega)_{max}$=1.0 μb/sr.
10.68×10^3[‡] *20*				$(d\sigma/d\Omega)_{max}$=0.6 μb/sr.
10925 *10*		2		$(d\sigma/d\Omega)_{max}$=0.6 μb/sr.
11016 *7*		2		$(d\sigma/d\Omega)_{max}$=1.4 μb/sr.
11.13×10^3[‡] *20*				$(d\sigma/d\Omega)_{max}$=1.3 μb/sr.
11.20×10^3[‡] *20*				$(d\sigma/d\Omega)_{max}$=0.9 μb/sr.
11.31×10^3[‡] *20*				$(d\sigma/d\Omega)_{max}$=0.5 μb/sr.
11.39×10^3[‡] *20*		1		$(d\sigma/d\Omega)_{max}$=2.5 μb/sr.
11.46×10^3[‡] *20*		0+2		E(level): Doublet. $(d\sigma/d\Omega)_{max}$=1.7 μb/sr.
11.51×10^3[‡] *20*		2		$(d\sigma/d\Omega)_{max}$=1.1 μb/sr.
11596 *7*		5		$(d\sigma/d\Omega)_{max}$=2.1 μb/sr.
11693 *7*		4		$(d\sigma/d\Omega)_{max}$=0.7 μb/sr.
11851 *10*				E(level): Doublet.

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^{28}Si(d,^{6}Li) 1981Ve05,1976Co15 (continued)

^{24}Mg Levels (continued)

E(level)[†]	L[#]	Comments
		$(d\sigma/d\Omega)_{max}$=1.2 μb/sr.
11986 *10*	2	$(d\sigma/d\Omega)_{max}$=2.2 μb/sr.
12.14×10^{3}[‡] *20*		E(level): Doublet. $(d\sigma/d\Omega)_{max}$=1.5 μb/sr.
12.24×10^{3}[‡] *20*		E(level): Triplet. $(d\sigma/d\Omega)_{max}$=0.9 μb/sr.
13.31×10^{3}[‡] *30*		E(level): Authors note: No evidence for identification of the same state at 13213 keV *3* from literature as listed in 1981Ve05. $(d\sigma/d\Omega)_{max}$=0.9 μb/sr.
13.79×10^{3}[‡] *30*		E(level): Authors note: No evidence for identification of the same state at 13750 keV from literature as listed in 1981Ve05. $(d\sigma/d\Omega)_{max}$=0.7 μb/sr.
14.10×10^{3}[‡] *30*		E(level): Authors note: No evidence for identification of the same state at 14152 keV *3* from literature as listed in 1981Ve05. $(d\sigma/d\Omega)_{max}$=1.5 μb/sr.

[†] From 1981Ve05.
[‡] Overlaps three or more levels − not referenced in adopted level.
[#] Based on measured differential cross sections and DWBA analysis in Fig. 6 (1981Ve05).
[@] From 1976Co15. In relative scale, with respect to S_α=1 for the ^{20}Ne g.s.