

$^{20}\text{Ne}({}^6\text{Li,d}),({}^7\text{Li,t})$ 1977An06,1973Le23

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

1977An06: $^{20}\text{Ne}({}^6\text{Li,d})$, natural target of ^{20}Ne ; ${}^6\text{Li}$ beam, $E=32.0$ MeV from the University of Rochester tandem accelerator; Enge split-pole magnetic spectrograph, Kodak NTB-50 nuclear emulsion plates; measured $\sigma(E_d, \theta)$ in the range 5° to 15° and 12.5° to 50° ; Deduced levels, spectroscopic strength. Authors note absolute cross sections were accurate to $\pm 20\%$. FWHM=70 and 80 keV.

1973Le23: $({}^6\text{Li,d}),({}^7\text{Li,t})$, $E=30$ MeV from F.N. tandem of Saclay; $\Delta E+E$ counter telescope; 99.98% enriched ^{20}Ne target; measured (E_d, E_t) , spectra of tritons for $E({}^7\text{Li})=29.6$ MeV at $\theta=10.7^\circ, 12.4^\circ, 13.9^\circ, 14.2^\circ, 16.4^\circ, 18.9^\circ$, spectra of deuterons for $E({}^6\text{Li})=29.6$ MeV at $\theta=10.7^\circ$ and 14.2° and for 25.6 MeV at $\theta=10.7^\circ$; deduced levels. FWHM=70 and 80 keV for forward angles in ${}^7\text{Li}$ experiment.

 ^{24}Mg Levels

E(level) [†]	J π [@]	S&	E(level) [†]	J π [@]	S&	E(level) [†]
0.0	0 ⁺	1.00	8.65×10^3	2 ⁺	0.22	16.09×10^3 [‡] 2
1.37×10^3	2 ⁺	0.42	13.78×10^3 [‡] # 2			16.23×10^3 [‡] 2
4.12×10^3	4 ⁺	0.03	14.10×10^3 [‡] # 2			16.33×10^3 [‡] # 2
4.24×10^3	2 ⁺	0.13	14.45×10^3 [‡] 2			16.48×10^3 [‡] 2
6.01×10^3	4 ⁺	0.28	14.68×10^3 [‡] 2			16.55×10^3 [‡] 2
6.43×10^3	0 ⁺	3.87	15.22×10^3 [‡] 2			16.88×10^3 [‡] 2
7.35×10^3	2 ⁺	0.37	15.54×10^3 [‡] 2			16.98×10^3 [‡] 2
8.12×10^3	6 ⁺	0.09 4	15.81×10^3 [‡] # 2			17.06×10^3 [‡] 2

[†] From 1977An06, except where otherwise noted.

[‡] From Fig 2(c) in 1973Le23. Authors note the differences for each angle were generally <15 keV and in all cases <25 keV. Evaluators list an uncertainty as 0.02×10^3 keV.

Overlaps three or more levels – not referenced in adopted level.

@ From Adopted Levels.

& From 1977An06 in relative scale.