

$^{21}\text{Ne}(^6\text{Li,d})$ [1976An01,1977An06](#)

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia, Anagha Chakraborty		NDS 205,1 (2025)	31-May-2025

$J^\pi(^{21}\text{Ne})=3/2^+$.

[1976An01,1977An06](#): Gas-cell target of ^{21}Ne (92% enriched), ^6Li beam, $E=32$ MeV; deuterons were analyzed by an Enge split-pole magnetic spectrograph and detected by nuclear emulsion plates; measured $\sigma(E_d,\theta)$, deduced excited levels, spectroscopic strengths, L, spin, parity. FWHM 70 to 80 keV.

 ^{25}Mg Levels

E(level) [†]	J^π	L [#]	S [@]	Comments
0.0	5/2 ⁺	2	1.00	
580	1/2 ⁺	2	0.24	
980	3/2 ⁺	2	1.94	
1610	7/2 ⁺	2	1.90	
1970	5/2 ⁺	2	1.45	
2560	1/2 ⁺	2	0.37	
2740	7/2 ⁺	4	1.17	S: 0.98 for L=2.
2800	3/2 ⁺	0	2.12	S: 0.88 for L=2.
3410 [‡]				E(level): doublet.
3900	5/2 ⁺	2	0.42	S: 0.26 for L=4.
4350 [‡]				
4715 [‡]				E(level): doublet – listed as 4.71 and 4.72 MeV.
5000 [‡]				
5250 [‡]				

[†] From [1977An06](#) (Table 3), except where otherwise noted.

[‡] From [1977An06](#) (Fig. 2), not listed in Table 3.

[#] Based on $\sigma(\theta)$ and DWBA analysis (plots in [1976An01](#)).

[@] Relative spectroscopic strengths.