^{14}N(d,t)

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. H. Kelley, C. G. Sheu and J. E. Purcell	NDS 198,1 (2024)	1-Aug-2024

1957Wa01: ^{14}N(d,t) E=14.8 MeV; measured yields to ^{13}N*(0, 2.37, 3.5 MeV (doublet)).

1968Ga13: ^{14}N(d,t) E=28 MeV; measured $\sigma(\theta)$ for θ=10° to 70°, DWBA analysis of (d,t) and (d,^{3}He) cross sections. Deduced C^{2}S=0.9 to ^{13}N$_{g.s.}$ vs 0.88 to ^{13}C$_{g.s.}$.

1968Hi01: ^{14}N(d,t) E=52 MeV; measured σ(E$_t$,θ) for θ=12° to 60°. Deduced level energies, J$^\pi$. Discussed S.

1971Bo50: Theoretical analysis of spectroscopic factors.

1973Da26,1975DaYO: ^{14}N(pol. d,t) E=15 MeV; measured analyzing power A(θ) for θ=30° to 90°.

1974Lu06: ^{14}N(pol. d, t$_0$) E=15 MeV; measured σ(E$_t$,θ), A(θ). for θ=20° to 100°. DWBA analysis.

1985Sa35: ^{14}N(d,t), ^{15}N(p,d); measured thick target yields.

1995Gu22: ^{14}N(d,t) E=8-50 MeV; analyzed $\sigma(\theta)$.

1998Sz01: ^{14}N(d,t) E=3.8-12.3 MeV; measured σ(E) for ^{13}N production as background radiation produced along with ^{14}N(d,n)^{15}O.

^{13}N Levels

E(level)[†]	J$^\pi$[†]	S[†]	Comments
0	1/2$^-$	0.6	S: See also S=0.9 from (1968Ga13).
2.37×10^3			E(level): From (1975DaYO).
3.51×10^3	3/2$^-$	0.25	
7.38×10^3	5/2$^-$	1.3	
8.93×10^3[‡]	1/2$^-$		
9.5×10^3[‡]	3/2$^-$		
11.9×10^3	3/2$^-$	1.25	

[†] From DWBA analysis of spectroscopic factors in (1968Hi01).
[‡] Unresolved, S(8.9+9.5 MeV)=0.7.