$^{12}C(^{14}N,^{13}C)$

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

1969Vo01, 1970Vo02: $^{12}C(^{14}N,^{13}C)$ E=78 MeV; measured $\sigma(\theta)$ for θ=5° to 40°. Compared population of $^{13}N/^{13}C$ IAS states. Higher-lying ^{13}N states are unresolved.
1974An36: E=114 MeV; measured σ; compared different transfer reactions.
1974De03: $^{12}C(^{14}N,^{13}C)$ E=100 MeV; measured $\sigma(\theta)$ for θ=10° to 30°.
1975Go14: E=78 MeV; analyzed σ.
1975Na15, 1975Vo05: E=155 MeV; measured $\sigma(\theta)$ for θ=15° to 50°. Analyzed S.
1997Zi05: $^{12}C(^{14}N,^{13}C)$ E=116 MeV; measured $\sigma(\theta)$ for θ=10°−60°. Coupled channels analysis of various transfer reactions.
Theory:
1973De02, 1973De35: $^{12}C(^{14}N,^{13}C)$ calculated impact of recoil effects on angular distributions.
1975Re04: $^{12}C(^{14}N,^{13}C)$ calculated impact of recoil effects on angular distributions.
1976Ku06: DWBA analysis of the reaction to $^{13}N^{*}$(2.37 MeV).
1976Na09: comparison of $^{12}C(^{14}N,^{13}N)$ and $^{12}C(^{14}N,^{13}C)$ reactions at E=155 MeV.

^{13}N Levels

E(level)[†]	J^{π}	L	S[‡]	Comments
0	$1/2^{-}$	0,1	0.62	L,S: From DWBA analysis in (1975Na15).
2.37×10^{3}				
3.56×10^{3}				
6.90×10^{3}				

[†] From (1974An36).
[‡] $C_2^2S_2$.