

$^{14}\text{N}(\gamma,\text{p})$

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

- 1962Ko23:** $^{14}\text{N}(\gamma,\text{p})$ E=17-90 MeV; measured products, ^{13}C deduced $\sigma(\text{E})$, $\sigma(\theta)$.
1970Sh06: $^{14}\text{N}(\gamma,\text{pn})$ E<15-30 MeV; measured $\sigma(\text{E};\text{En})$. ^{13}C levels deduced neutron de-excitation.
1970Th01: $\text{N}(\gamma,\text{X})$ E<29 MeV; measured $\sigma(\text{E};\text{E}\gamma)$; deduced integrated σ .
1971BeWW: $^{14}\text{N}(\gamma,\text{p})$ E<26 MeV; measured $\sigma(\text{E};\text{Ep},\theta)$.
1972Ca34: $^{14}\text{N}(\gamma,\text{p}_0)$ E≤17-25 MeV MeV; measured $\sigma(\text{E};\text{En})$; deduced integrated σ .
1972Ge11: $^{14}\text{N}(\gamma,\text{p})$ E<15.5-29.5 MeV; measured $\sigma(\text{E};\text{En})$; deduced integrated σ .
1974Ba37: $^{14}\text{N}(\gamma,\text{p})$ E=18-26 MeV; measured $\sigma(\text{E}\gamma,\text{Ep},\theta)$.
1984PyZZ, 1985Ku01: See for discussion on $^{14}\text{C}(\gamma,\text{n})$ E<36 MeV.
1993Ir01: $^{14}\text{N}(\gamma,\text{p})$ E≤ 60 MeV; measured $\sigma(\text{E}\gamma,\text{Ep},\theta)$ for $\theta=60^\circ$ to 120° . Compared results with direct-knockout calculations.
 Assumed p-shell proton knockout.

Theory:

- 1973Ki05:** $^{14}\text{N}(\gamma,\text{X})$; calculated $\sigma(\text{E})$.
1972Go23: $^{14}\text{N}(\gamma,\text{p})$ E<30 MeV; calculated $\sigma(\text{E};\text{Ep})$.
1975Ch44: $^{14}\text{N}(\gamma,\text{p})$; analyzed σ .
1978Di12: $^{14}\text{N}(\gamma,\text{p}),(\gamma,\text{np})$; calculated σ .

 ^{13}C Levels

E(level) [†]	J ^π [†]	Comments
0	1/2 ⁻	E(level),J ^π : See (1974Ba37,1972Ca34,1993Ir01).
3090	1/2 ⁺	E(level),J ^π : See (1970Th01).
3680	3/2 ⁻	E(level),J ^π : See (1970Th01,1974Ba37,1993Ir01).
3850	5/2 ⁺	E(level),J ^π : See (1970Th01).
7550	5/2 ⁻	E(level),J ^π : See (1970Sh06,1972Ge11,1993Ir01). A large fraction of the $^{14}\text{N}(\gamma,\text{p})^{13}\text{C}^* \rightarrow ^{12}\text{C}+\text{n}$ neutron yield appears to be associated with sequential decay via $^{13}\text{C}^*(7.75,8.86,11.80)$ (1970Sh06,1972Ge11).
8860	1/2 ⁻	E(level),J ^π : See (1972Ge11,1993Ir01).
11800	3/2 ⁻	E(level),J ^π : See (1970Sh06,1972Ge11,1993Ir01).

[†] From shell model analysis of proton knock-out reactions in (1970Th01,1993Ir01).