

$^{13}\text{C}(^9\text{Be},\alpha\text{n}),(^9\text{Be},^5\text{He})$ [1984Da17,1986Cu02](#)

Type	History	Citation	Literature Cutoff Date
Full Evaluation	Author C. G. Sheu, J. H. Kelley, J. Purcell	ENSDF	5-Aug-2021

[1984Da17](#): $^{13}\text{C}(^9\text{Be},\alpha\text{n}),(^9\text{Be},^5\text{He})^{17}\text{O}$, E=1.2-5.2 MeV; measured $\sigma(E)$, γ yields; deduced no evidence for the $^{13}\text{C}(^9\text{Be},^5\text{He})^{17}\text{O}$ transfer process in the $^{17}\text{O}+\text{n}\alpha$ channels.

[1986Cu02](#): $^{13}\text{C}(^9\text{Be},\alpha\text{n})^{17}\text{O}$, E(cm) $\approx$ 2-5 MeV; measured E_γ , I_γ , γ , residual production $\sigma(E)$. ^{17}O deduced transitions. Statistical model, α -transfer, DWBA analyses. Enriched targets, Ge detectors.

See also ([2019Xu05](#): theory).

 ^{17}O Levels

E(level) [†]	J^π [†]	l_α [‡]	Comments
0	$5/2^+$		Q=3.89 MeV (1984Da17,1986Cu02).
870	$1/2^+$	1	Q=3.02 MeV (1984Da17).
3060	$1/2^-$	0	Q=0.83 MeV (1984Da17).
3840	$5/2^-$	2	Q=0.05 MeV (1984Da17).

[†] From ([1984Da17,1986Cu02](#)).

[‡] The angular momentum of the transferred α -particle ([1986Cu02](#)).

 $\gamma(^{17}\text{O})$

E_γ	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π
870	100	870	$1/2^+$	0	$5/2^+$
2190	100	3060	$1/2^-$	870	$1/2^+$
3840	100	3840	$5/2^-$	0	$5/2^+$

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Level Scheme

Intensities: Relative I_γ

Legend

- $I_\gamma < 2\% \times I_\gamma^{max}$
→ $I_\gamma < 10\% \times I_\gamma^{max}$
→ $I_\gamma > 10\% \times I_\gamma^{max}$

