^{16}O(α,^{3}He),(α,n^{3}He) 1992Ya08

History

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

1973PrZL: ^{16}O(α,^{3}He); measured σ(E(3He),θ). ^{17}O deduced levels.
1984YaZS: ^{16}O(α,^{3}He), E=64.9 MeV; measured $\sigma(\theta)$. ^{17}O levels deduced C^2S, $f_{7/2}$ strength fragmentation.
1992Ya08: ^{16}O(α,^{3}He), E=65 MeV; measured $\sigma(\theta)$. ^{17}O deduced levels, J, π, spectroscopic factors.
1993La31: ^{16}O(α,n^{3}He), E=120 MeV; measured neutron spectra. ^{16}O(α,n^{3}He), E=120 MeV; measured n(^{3}He)(θ). ^{17}O level deduced Γ_n/Γ. Neutron tof multi-detector.
See also (1997Mo06: theory).
1979Gr11: ^{16}O(α,^{3}He), E=75 MeV; calculated $\sigma(\theta)$. Channel coupling array theory.

^{17}O Levels

E(level)[†]	J$^{\pi}$[‡]	S[#]	Comments
0 *4*	5/2$^+$	1.3[@]	
0.87×10^3 *4*	1/2$^+$	0.90[@]	
3.05×10^3 *4*	1/2$^-$		
3.84×10^3 *4*	5/2$^-$		
5.08×10^3 *4*	3/2$^+$	0.67[&]	
5.22×10^3 *4*			
5.70×10^3 *4*	7/2$^-$	0.17[&]	$(\Gamma_n/\Gamma)_{exp}$=0.97 *5* (1993La31: ^{16}O(α,^{3}He)^{17}O*(5.697-MeV[7/2$^-$])→n+^{16}O$_{g.s.}$[0$^+$]).
5.87×10^3	3/2$^+$	0.06[&]	
6.97×10^3 *4*	3/2$^+$[†]	(0.08)[&]	
7.38×10^3 *4*			E(level): Unresolved from a contaminant peak due to the ^{13}C*(7.55 MeV:5/2$^-$) state.
7.58×10^3 *4*	7/2$^-$	0.01[&]	
7.69×10^3 *4*	7/2$^-$	0.10[&]	
7.75×10^3 *4*	11/2$^-$		
8.40×10^3 *4*	5/2$^+$	0.15[&]	
8.89×10^3 *4*			
9.49×10^3 *4*			
9.78×10^3 *4*	3/2$^+$	0.24[&]	

[†] From (1992Ya08).
[‡] (1992Ya08) cited from Adopted Levels in (1986Aj04) except where noted.
[#] See also (1973Da17,1974Co04: ^{16}O(d,p)).
[@] Obtained from EFR DWBA calculations (1992Ya08).
[&] Obtained from Zr DWBA calculations (1992Ya08).