^{58}Ni(α,^{3}He)   **1970Ro22**

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia	NDS 151, 1 (2018)	1-Apr-2018

Others: 1983Sh09, 2013Sc06, 2013ScZZ. Also (d,p), ^{60}Ni(p,d),(^{3}He,α) were studied by 2013Sc06, 2013ScZZ. 1970Ro22: Eα=44.2 MeV. Measured $\sigma(\theta)$ with 3-counter ΔE-E telescope, FWHM=100-150 keV, θ(C.M.)=13°−63°. For ^{3}He energy spectrum including continuum region, see 1983Sh09 (Eα=172.5 MeV).

^{59}Ni Levels

E(level)[‡]	L[†]	(2J$_f$+1)C^{2}S[†]	E(level)[‡]	L[†]	(2J$_f$+1)C^{2}S[†]	E(level)[‡]	L[†]	(2J$_f$+1)C^{2}S[†]
0.0	1	1.30	1660	3	0.52	3070	4	3.90
340	3	3.70	1760	3	0.60	3170		
480	1	(0.40)	1950	(3,1)	0.50	3450	1+0	0.27+0.11
880	1	0.16	2330	3	0.26	3570	1	0.50
1160	(1)[#]	0.10	2480	(2)	0.08	3800	1	0.32
1330	1	0.42	2640	(1)	0.84	4470	2	0.81

[†] From 1970Ro22. L values and spectroscopic factors are based on comparisons between $\sigma(\theta)$ and DWBA calculations.

[‡] From 1970Ro22; ΔE=10-80 keV (1970Ro22), but observed deviation from adopted E is typically <30 keV. Six doubtful levels (E=780, 1000, 1430, 2190, 3330, 3690) have been omitted here.

[#] Inconsistent with J$^\pi$ adopted for the known 1189 level.