^{58}Ni(^{14}C,^{13}C) 1985Vi01

History

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

$J^{\pi}(^{13}C)=1/2^{-}$ for g.s., $1/2^{+}$ for first excited state.
E(^{14}C)=64 MeV, FWHM≈140 keV, DWBA analysis of $\sigma(\theta)$ (1985Vi01).

^{59}Ni Levels

E(level)	L	S†	Comments
0.0	2+1	0.69	
339	3+2	1.06	
465	1+0	0.84	
878	2+1	0.07	
1189	3+2		
≈1320	1+0	0.27	Unresolved 1301+1338 levels; 1301 level dominant.
≈1750	3+2	0.11	Possibly 5 unresolved levels, 1680≤E≤1767; 1680 level dominant.
1948	4+3	(0.018)	S: $\sigma(\theta)$ not bell-shaped.
≈2450	2+1	0.09	Possibly 4 unresolved levels, 2415≤E≤2535; 2415 level dominant.
≈3100	5+4	0.69	Possibly 8 unresolved levels, 2894≤E≤3196; 3054 level dominant.

† Spectroscopic factors (^{58}Ni+n to ^{59}Cu) assuming S(^{14}C to ^{13}C+n)=1.73 and normalization factor=1. Qualitative agreement between S(d,p) and S(^{14}C,^{13}C) is good.