

⁶⁰Ni(d,α),(pol d,α) **1972Sc13,1981Na13,1988Na01**

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	C. D. Nesaraja and B. Singh	ENSDF	31-Oct-2015

1972Sc13: E(d)=17 MeV, FWHM=9-14 keV. Beam from University of Pittsburgh Van de Graaff Accelerator. Measured $\sigma(E,\theta)$.
1981Na13: E(d)=80 MeV, FWHM≈60 keV. Beam from Indiana University cyclotron. Measured $\sigma(E, \theta)$.
1988Na01: E(pol d)=79 MeV, FWHM≈55-60 keV. Beam from Michigan State accelerator. Measured vector analyzing powers, $\sigma(E,\theta)$.

⁵⁸Co Levels

E(level) [†]	J ^π @	L [‡]	S [#]	E(level) [†]	J ^π @	L [‡]	S [#]	E(level) [†]	J ^π @	L [‡]	S [#]
0		2	25	2444 7		(2)	5.8	3337 10		2	9.8
25 2	5 ⁺	4	262	2456 7			6.4	3394 10		(0,1)	31
54 2		(4)	5.5	2510 & 8				3410 10		(1)	28
111 2			5.5	2524 8		2	20	3422 10		(2,3)	27
366 2				2605 8		(4)	4.9	3455 10		(0)	34
371 2	5 ⁺	4 ^a	343	2631 8		4	8.3	3470 & 10			
455 2		4	15	2692 8	7 ⁺	6	157	3488 10		4	15
882 3		(4)	5.9	2733 8		(2,3)	20	3507 11		(3)	20
1038 3		2	136	2761 8		(6)	3.7	3517 11		(0)	12
1042 3				2781 8		(0+2)	15	3548 & 11			5.8
1073 3		6	8.6	2792 8		(0+2)	8.3	3574 ^f 11			
1182 4		4	53	2819 8		4	6.6	3604 11		(4)	5.8
1233 4		(2)	13	2837 & 9				3639 11		(3)	8.3
1350 4			<5	2849 9		4	14	3659 11			5.3
1376 & 4				2865 & 9				3689 11		(3)	11
1414 4		4	12	2884 9		(2)	10	3736 11		(1)	8.6
1431 4		(0)	5.9	2907 & 9				3759 11		(1,4)	20
1517 ^e 5		2	11	2931 9	7 ⁺	6 ^b	9.7	3779 11		(1)	9.2
1546 5		4	31	2946 9		2	8.4	3801 11	7 ⁺	6 ^c	15
1602 5		(4)	11	2987 9		2	139	3806 11			
1665 5		(2,4)	12	3007 9			7.0	3833 & 11			
1729 5		0	32	3044 & 9				3853 12			
1741 5		(4)	11	3062 9			4.4	3869 12			
1743 5				3072 9		(6)	5.3	3898 12			
1778 5		4	19	3090 9		(1,2)	14	3916 12			
1827 5		(2,4)	34	3100 & 9				3943 12			
1844 6		2	68	3118 9		0,(4)	13	3957 12			
1863 6		0	85	3146 9		(2)	18	4006 12			
1925 6		(2)	12	3169 10			20	4082 12			
1974 6		2	25	3184 10		0	20	4097 12			
2007 6			6.2	3199 10		(1)	15	4110 12			
2071 6		4	37	3214 10		(3)	13	4790 ^d 30	7 ⁺	6	
2166 6		2	18	3221 & 10				5040 ^d 30	5 ⁺	4	
2225 7		(6)	11	3232 10		(1)	22	6140 18			
2242 7		0	11	3279 10		(2)	14				
2420 & 7				3309 & 10							

[†] ΔE=2 keV or 0.3% of E, whichever is larger (1972Sc13). Authors quote a single set of energies for their (d,α) and (³He,d) studies.

[‡] From 1972Sc13, except where noted otherwise.

[#] σ(max) in μb/sr (1972Sc13).

Continued on next page (footnotes at end of table)

$^{60}\text{Ni}(\text{d},\alpha),(\text{pol d},\alpha)$ [1972Sc13](#),[1981Na13](#),[1988Na01](#) (continued)

^{58}Co Levels (continued)

@ From L and vector analyzing power ([1988Na01](#)).

& Seen only at $E(\text{d})=12$ MeV.

^a From [1981Na13](#), [1988Na01](#); $L=4+2$ for 371+366 ([1972Sc13](#)).

^b From [1981Na13](#). $L=(6)$ in [1972Sc13](#).

^c From [1981Na13](#), $L=(3,6)$ in [1972Sc13](#).

^d From [1988Na01](#).

^e Labeled as 1512+1522 in both (d,α) and $(^3\text{He},\text{d})$ based on known levels, but only one peak is resolved. The evaluators assign $E=1517$.

^f 3547 in authors' table is assumed to be an error.