^{58}Ni(d,α), (pol d,α) 1984Sh16,1984Ha22,1971Sc18

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Huo Junde, Huo Su, Yang Dong	NDS 112, 1513 (2011)	29-Oct-2009

1990Lu10: (pol d,α), E=22 MeV; measured σ(θ), DWBA analyses.
1984Ha22: (d,α), E=16 MeV; measured σ(θ), and vector- and tensor-analyzing power; DWBA analysis.
1984Sh16: (pol d,α), E=6.75, 7.0, 7.5, 9.0, 9.5 MeV; measured tensor analyzing power. (d,α), E=7 MeV; measured σ(Eα,θ).
1982Na05: (pol d,α), E=80 MeV, FWHM=60 keV; measured vector-analyzing power angular distributions.
1993Cr01, 1993Cr04: (pol d,α), E=22 MeV, FWHM=25 keV; measured σ(θ) and analyzing power, DWBA analyses.
1981Na13: (d,α), E=80 MeV; measured σ(θ); DWBA analyses.
1974Fr10: (d,α), E=80.2 MeV, FWHM=160-200 keV; measured σ(θ), DWBA analyses.
1971Sc18: (d,α), E=17MeV, FWHM=9-12 keV; measured σ(θ), DWBA analyses.
1968Be10: (d,α), E=7 MeV, FWHM=12 keV; measured σ(Eα,θ).
See also 1968La20.

^{56}Co Levels

E(level)[†]	Jπ[&]	L[d]	Comments
0.0	4+[a]	4	
157 2	3+[a]	2	
576 2	5+[a]	4	
830 3	4+[a]	(4)	
967 3	2+[a]	2	
1008 3	5+	4	
1112 4	3+[a]	(2+4)	
1448[@] 10	0+		Jπ: $J^{\pi}=0^+$ on the basis of σ(E) at forward angles (1984Sh16).
1718 5	1+	0	
1929 5	3+	2	
2059 6	2+	2	Jπ: from 1993Cr01.
2224[@] 10	2+	2	
2283 7	7+	6[e]	E(level): from 1990Lu10. Jπ: from 1993Cr01.
2301 7	(2+)[a]		
2357 7	1+	0	
2371 7		6[e]	
2469 7	(4+)[a]	(4,3)	
2608 8	3+	2	
2636[‡] 5	1+[a]	(0)	
2647 8		(0)	
2663[‡] 5	(1+,3+)[a]	(2)	Jπ: other: 3+ (1984Sh16).
2728 6	1+	0	
2770[‡] 5			
2789[‡] 5			
2926[‡] 5	(2+)[a]		E(level): 2926 and 2969 levels are partially resolved doublet (1984Sh16).
2969[‡] 5	2+[a]		E(level): 2926 and 2969 levels are partially resolved doublet (1984Sh16).
3048[‡] 5			
3060[‡] 5	5+	4	
3077[‡] 5	1+[a]	2	Jπ: other: 1+,3+ (1984Sh16).
3140[‡] 5	3+	2	
3180[‡] 5	1+,3+[a]	(2)	
3234[‡] 5	(0+)[b]	(0)	
3255[‡] 5			

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^{58}Ni(d,α), (pol d,α) 1984Sh16,1984Ha22,1971Sc18 (continued)

^{56}Co Levels (continued)

E(level)†	Jπ&	L[d]	Comments
3297‡ 5	4+	4	
3366‡ 5			L: L=(3) (1971Sc18).
3382‡ 5	2+[a]		
3436‡ 5		0	
3493‡ 5			
3510 11			
3521‡ 5		(2)	
3544‡	7+[c]	6[e]	
3588 11			
3600 11			
3610‡ 5			
3642 11			L: (3) (1971Sc18).
3717‡ 5		(3)	
3798 11		(6)	
3815 11		(2)	
3865 12		(3,4)	
3876 12		(2)	
3900 12			
3935 12			
3960 12			
4011 12		4	
4019 12			
4034 12		(3)	
4062 12		(3)	
4094 12			
4139 12		4	
4185 13			L: L=(2) (1971Sc18).
4209 13			
4222 13			
4281 13			
4293 13			
4308 13			
4349 13			
4388 13		2	
4441 13	7+[c]	6[e]	
4453 13			
4501 14			
4531 14			
4560 14			
4684 14			
4743 14			
4768 14			
4846 15			
4928 15			
4991 15			
5008 15			
≈5080#			
5146 15	5+[c]	4[e]	
5238 16			
≈5620#			
≈6080#			
≈6850#			

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^{58}Ni(d,α), (pol d,α) 1984Sh16,1984Ha22,1971Sc18 (continued)

^{56}Co Levels (continued)

E(level)[†]
≈7480[#]
≈7870[#]

† From 1971Sc18, except as noted.
‡ From 1984Sh16.
# From 1974Fr10.
@ From 1968Be10.
& From analyzing power (1984Sh16) and L value, except as noted.
a From Adopted Levels.
b From L-transfer and $\sigma(\theta)$ DWBA calculation (1971Sc18).
c From vector-analyzing power A(θ) (1982Na05).
d From 1971Sc18 based on $\sigma(\theta)$ DWBA fits, except as noted.
e From 1982Na05 and 1981Na13 based on $\sigma(\theta)$, DWBA analysis and vector-analyzing power.