^{26}Mg(α,$\alpha'\gamma$),^{22}Ne(α,n) 1975Na06,1975Wa10,1991Ha06

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia and A. M. Hurst	NDS 134,1 (2016)	1-Feb-2016

Other references:
1994Da09,1983Ch17,1982Yu01,1981Va09,1980Va10,1975Na06,1974Na22,1969Ca18 – ^{22}Ne(α,α),(α,α').
1979Ku13 – ^{22}Ne(α,γ).
1989Wo09 – ^{22}Ne(α,γ),(α,nγ) – considered to be superseded by 1991Ha06.
1993Gi04,1993Dr08,1991Dr01,2001Ja15 – ^{22}Ne(α,n).
1975Na06: ^{26}Mg(α,$\alpha'\gamma$), E=17.1 MeV; Measured Eγ, γ-ray branching, $\alpha\gamma$ coin, $\gamma\gamma(\theta)$.
1975Wa10: ^{26}Mg(α,$\alpha'\gamma$), E=16 MeV; measured Eg, Ig, mean lifetime by Doppler-shift attenuation method. Ge(Li) detectors.
1991Ha06: ^{26}Mg(α,n), E=0.7-2.1 MeV; Measured spectroscopic factors.

^{26}Mg Levels

E(level)[†]	J$^\pi$	Γ[c]	$\omega\gamma$[d]	Comments
0.0				
1808.74[‡] *4*	*a*			
2938.33[‡] *4*	*a*			
3588.56[‡] *9*	*a*			
4318.89[‡] *4*	*a*			
4332.52[‡] *5*	*a*			
4350.08[‡] *4*		111 fs *38*		
4901.44[‡] *7*	4$^+$			J$^\pi$: From 1969Ca18 – $\alpha\gamma$ angular correlation.
4972.30[‡] *5*		444 fs *69*		
5291.74[‡] *6*	*a*	69 fs *42*		
5476.05[‡] *7*	*a*	<49 fs		
5691.08[‡] *19*	*b*			
5715.91[‡] *8*	*a*	159 fs *69*		
6125 *2*				
6256 *2*		62 fs *31*		
6621 *2*	*a*	<69 fs		
6743 *2*	*a*	<35 fs		
6871 *6*		104 fs *52*		
6979 *3*				
7062 *4*				
7099 *4*				
7349 *4*				
7364 *4*				
7394 *4*				
7815 *7*				
8181 *3*				
8201 *2*	*a*			
8470 *5*	*a*			
8624 *3*				
8700 *3*	*a*			
9055 *8*				
9109 *3*	*a*			
11142?[#] *6*				E$_R$ (Lab)=(623 keV *6*) (1991Dr01). The existence of this resonance is considered doubtful by 1991Ha06. Other: E$_R$ (Lab)=635 keV *10* (2001Ja15) and level energy 11152 keV *10*. $\omega\gamma$ <60 neV (2001Ja15).
11317[#] *3*		0.25 keV *17*	8.2×10^{-5}	E$_R$ (Lab)=830 keV *3* (1991Ha06) – Separate yields are given for n$_0$, n$_1$, and

Continued on next page (footnotes at end of table)

^{26}Mg(α,$\alpha'\gamma$),^{22}Ne(α,n) 1975Na06,1975Wa10,1991Ha06 (continued)

^{26}Mg Levels (continued)

E(level)[†]	Γ[c]	$\omega\gamma$[d]	Comments
			n_2 groups. Other: E_R (Lab)=832 keV *2* (2001Ja15) and level energy 11319 keV *2*.
			Also $\omega\gamma$=2.4×10^{-4} eV *8* (1993Gi04), 1.18×10^{-4} eV *11* (C.M.) (2001Ja15). Γ (Lab) from 2001Ja15.
11441[#@] *2*	2.1 keV *9*	3.4×10^{-5} *4*	E_R (Lab)=976 keV *2* (2001Ja15). Γ (Lab), $\omega\gamma$ (C.M.) from 2001Ja15.
11461[#@] *2*	9.3 keV *25*	4.8×10^{-5} *10*	E_R (Lab)=1000 keV *2* (2001Ja15). Γ (Lab), $\omega\gamma$ (C.M.) from 2001Ja15.
11506[#&] *2*	12.7 keV *25*	3.5×10^{-4} *6*	E_R (Lab)=1053 keV *2* (2001Ja15). Γ (Lab), $\omega\gamma$ (C.M.) from 2001Ja15.
11526[#&] *2*	1.8 keV *9*	8.3×10^{-4} *7*	E_R (Lab)=1077 keV *2* (2001Ja15). Γ (Lab), $\omega\gamma$ (C.M.) from 2001Ja15.
11611[#] *5*	<3 keV	0.0049 *12*	E_R (Lab)=1178 keV *5* (1991Ha06).
11630[#] *2*	13.5 keV *17*	0.0085 *10*	E_R (Lab)=1200 keV *2* (2001Ja15). Γ (Lab), $\omega\gamma$ (C.M.) from 2001Ja15.
11646[#] *5*	<3 keV	0.0048 *12*	E_R (Lab)=1219 keV *5* (1991Ha06).
11749[#] *10*	64 keV *8*	0.060 *9*	E_R (Lab)=1340 keV *10* (2001Ja15). Γ (Lab)=63.5 keV *85*, $\omega\gamma$ (C.M.) from 2001Ja15.
11795[#] *10*	25 keV *3*	0.015 *4*	E_R (Lab)=1395 keV *10* (1991Ha06). Other: E_R (Lab)=1385 keV *4* (2001Ja15) and level energy 11787 keV *4*. Γ (Lab)=24.5 keV *34*, $\omega\gamma$ (C.M.)=0.050 eV *7* (2001Ja15).
11827[#] *2*	1.10 keV *25*	0.61 *9*	E_R (Lab)=1433 keV *2* (1991Ha06) – Separate yields are given for n_0, n_1, and n_2 groups. Other: E_R (Lab)=1434 keV *2* (2001Ja15) and level energy 11828 keV *2*. Γ (Lab) from 2001Ja15. Also $\omega\gamma$ (C.M.)=1.067 eV *42* (2001Ja15).
11890[#] *2*	<3 keV	0.30 *6*	E_R (Lab)=1507 keV *2* (1991Ha06) – Separate yields are given for n_0, n_1, and n_2 groups.
11909[#] *2*	6 keV *1*	1.5 *3*	E_R (Lab)=1530 keV *2* (1991Ha06) – Separate yields are given for n_0, n_1, and n_2 groups.
11950[#] *2*	3 keV *1*	1.3 *2*	E_R (Lab)=1578 keV *2* (1991Ha06) – Separate yields are given for n_0, n_1, and n_2 groups.
12049[#] *2*	6 keV *2*	6.3 *10*	E_R (Lab)=1695 keV *2* (1991Ha06) – Separate yields are given for n_0, n_1, and n_2 groups.
12110[#] *2*	25 keV *5*	1.0 *2*	E_R (Lab)=1767 keV *2* (1991Ha06).
12141[#] *2*	15 keV *2*	2.7 *4*	E_R (Lab)=1804 keV *2* (1991Ha06).
12345[#] *2*	40 keV *2*	165 *25*	E_R (Lab)=2045 keV *2* (1991Ha06).

[†] From 1975Na06, except otherwise noted.
[‡] From Adopted Levels.
[#] Deduced using resonance energy E_R, listed in comments, and Q(α)=10614.8 *1* (2012Wa38).
[@] Appears to be a doublet in 1991Ha06 of E_R(Lab)=988 keV *5* (1991Ha06) and corresponding excitation energy of 11451 keV *5*.
[&] Appears to be a doublet in 1991Ha06 of E_R(Lab)=1066 keV *5* (1991Ha06) and corresponding excitation energy of 11517 keV *5*.
[a] Natural parity (1975Na06).
[b] Possible unnatural parity (1975Na06).
[c] From 1975Wa10, except otherwise noted.
[d] From 1991Ha06, except otherwise noted. Resonance strength in units of eV.