Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. H. Kelley, J. E. Purcell and C. G. Sheu	NP A968,71 (2017)	1-Jan-2017

Q(β^-)=−14577 *24*; S(n)=15040 *50*; S(p)=600.3 *10*; Q(α)=−8008.4 *14* 2017Wa10

^{12}N Levels

Cross Reference (XREF) Flags

A	^{1}H(^{11}C,P):res	E	^{10}B(^{3}He,n)	I	^{12}C(^{12}C,^{12}N),^{12}C(^{12}C,^{12}B)
B	^{2}H(^{11}C,^{12}N)	F	^{12}C(p,n)	J	^{12}C(^{13}C,^{13}B)
C	^{9}Be(^{12}N,X)	G	^{12}C(^{3}He,t)	K	^{14}N(p,t)
D	^{9}Be(^{13}O,^{12}N)	H	^{12}C(^{6}Li,^{6}He)	L	^{208}Pb(^{12}N,P11C)

E(level)	J$^\pi$	T$_{1/2}$	XREF	Comments
0	1$^+$	11.000 ms *16*	ABCDEFGHIJK	%ε+%β^+=100; %$\beta^+\alpha$=1.93 *4* T=1; μ=+0.4571 *1* (2010Zh03) Q=+0.0098 *9* (1998Mi10) T$_{1/2}$: The half-life of ^{12}N is 11.000 ms *16* (1978Al01). Other values are reported at T$_{1/2}$=10.95 ms *5* (1963Fi05), 11.43 *5* (1958Ve20), 11.0 *1* (1963Pe10), 11.1 ms *2* (1962Po02) and 11.2 *4* (1959Fa03). ^{12}N decays to ^{12}C*(0,4.44,7.65,10.3,12.71,15.11). μ: See also μ=4573 *5* (1968Su05). Q: See also Q=0.0103 *7* (1994OhZY) and [+0.049 *6* or −0.010 *6*] (1980Ra05).
961 *5*	2$^+$	<20 keV	A DEFG IJK	%p≈100 E(level): From (1974Fu11,2012Ja11,2013So11,2015Ch50). Γ: From (1976Ma15).
1190 *7*	2$^-$	100 keV *20*	A DEFG KL	%p≈100 Γ_γ=6.0×10^{-3} eV *+70−35* E(level): From (1974Fu11, 1976Ma15, 1983St10, 2013So11, 2015Ch50). Γ: From (1976Ma15,1983St10,2013So11,2015Ch50) and ^{10}B(^{3}He,n) references in (1980Aj01).
1800 *30*	1$^-$	0.75 MeV *25*	A EFG	%p≤100 E(level),Γ: From (1983St10).
2439 *8*	0$^+$	69 keV *22*	A E G K	%p≤100 E(level),Γ: From (1976Ma15,1983St10,2015Ch50).
3132 *8*	3$^-$	219 keV *20*	A EFGH K	%p≤100 E(level),Γ: From (1974Fu11,1976Ma15,1983St10,2015Ch50).
3558 *7*	2$^+$	221 keV *30*	EFGH K	%p≤100 E(level),Γ: From (1974Fu11,1976Ma15,1983St10,2015Ch50).
4142[†] *10*	2$^-$&4$^-$	825 keV *25*	EFGH JK	%p≤100 E(level),Γ: From (1976Ma15,1983St10,1996An08).
4410? *50*	4$^-$	744 keV *27*	F	%p≤100 E(level),Γ: From (1996An08).
4561? *24*	(1,2)$^+$	517 keV *72*	K	%p≤100 E(level),Γ: From (2015Ch50).
5348 *15*	3$^-$	0.27 MeV *11*	EFGH K	%p≤100 E(level): From (1974Fu11, 1976Ma15, 1983St10, 1996An08, 2015Ch50). Γ: From (1974Fu11, 1976Ma15, 1983St10, 1996An08, 2015Ch50) using the Method of Best Representation averaging technique.
5600? *10*		120 keV *50*	G	%p≤100 E(level),Γ: From (1983St10).

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Adopted Levels, Gammas (continued)

^{12}N Levels (continued)

E(level)	J^π	$T_{1/2}$	XREF	Comments
6275 *21*	$(1^-,3^+)$	256 keV *88*	K	%p=100 E(level),Γ: From (2015Ch50). Likely multiplet.
6400† *30*	(1^-)	1.20 keV *30*	FGH	%p≤100 E(level),Γ: From (1983St10). Also see (1976Ma15).
7400† *50*	(1^-)	1.20 keV *50*	FGH JK	%p≤100 E(level),Γ: From (1983St10). Also see (2015Ch50).
7682† *30*		200 keV *30*	E G	%p≤100 E(level): From (1974Fu11,1976Ma15,1983St10). Γ: From (1974Fu11,1983St10).
8446† *17*	(0^-)	90 keV *30*	EF	E(level),Γ: From (1974Fu11).
8.86×10^3? *10*		≈100 keV	G	E(level): From (1976Ma15).
9035 *12*	(1^-)	16 keV *+20−16*	EF	E(level): From (1974Fu11).
9800‡ *50*	(0^-)	0.45 MeV *10*	GH	E(level),Γ: From (1983St10). Also see (1976Ma15).
10300‡ *50*	(1^-)	0.45 MeV *10*	FG	E(level),Γ: From (1983St10). Also see (1976Ma15).
11000‡ *20*		0.35 MeV *10*	G	E(level),Γ: From (1983St10).
12196 *29*	0^+	<110 keV	D H	T=2 E(level),Γ: From (2012Ja11).
14.20×10^3			D	E(level): From (2012Ja11).

† Probably corresponds to unresolved states. See states from these reactions: ^{10}B(^{3}He,n), ^{12}C(^{3}He,t) and ^{12}C(^{13}C,^{13}B).
‡ Decay mode not specified.

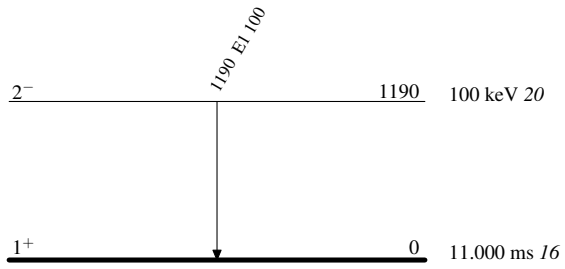
γ(^{12}N)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.
1190	2^-	1190	100	0	1^+	E1

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level



$^{12}_{7}N_5$