Adopted Levels, Gammas

Q(β^-)=22190 *syst*; S(n)=1920 *syst*; S(p)=22300 *syst*; Q(α)=−21440 *syst* 2021Wa16
ΔQ(β^-)=720, ΔS(n)=300, ΔS(p)=840, ΔQ(α)=860 (syst,2021Wa16).
S(2n)=2090 *810*, Q(β^-n)=21440 *670* (syst,2021Wa16).
Isotope discovery (2012Th10): Ir(p,X)^{35}Na at CERN (1983La12).
Theoretical calculations (binding energies, deformation, quadrupole moments, radii, levels, J, π, mass, $T_{1/2}$): 2022Ot01, 2020Ts03, 2013Li39, 2013Sh05, 2009Ly01, 2004Ge02, 2004Lu10, 2002Sa08, 1997Mo25, 1991Pa19, 1991Pa21, 1989Ly01, 1987SaZQ, 1985Ly02, 1975Ca27.

^{35}Na Levels

Cross Reference (XREF) Flags

A ^{9}Be(^{48}Ca,^{35}Na)
B C(^{36}Mg,^{35}Naγ)

E(level)	J$^\pi$[†]	$T_{1/2}$	XREF	Comments
0.0[‡]	(3/2$^+$)	2.1 ms *4*	AB	%β^-=100; %β^-n>0; %β^-2n=?; %β^-3n=?; %β^-4n=? The β^-n decay mode was observed by 1983La12, but %β^-n was not deduced. According to the theoretical calculations (2003Mo09 and 2016Ma12), almost 100% decay is through delayed-neutron branches. In β-delayed γ-ray spectrum, 2013StZY observed one γ ray at 661 keV from the decay of ^{35}Na, which was proposed either a transition from the first 2$^+$ in ^{34}Mg or from an excited state in ^{35}Mg. Based on theoretical predictions of strong delayed-neutron branches, this γ ray most likely is from the first 2$^+$ state in ^{34}Mg. Theoretical %β^-1n=73.5, %β^-2n=20.1, %β^-3n=4.8 (2021Mi17). Theoretical %β^-1n=73.0, %β^-2n=10.0, %β^-3n=3.0 (2019Mo01). $T_{1/2}$: weighted average of 2.4 ms *3* (stat) *2* (syst) (2022Cr03, implant-β correlation), 2.4 ms *3* (stat) *6* (syst) (2013StZY, implant-β correlation), and 1.5 ms *5* (1983La12,1984La03, decay curve of β-coincident neutrons).
373[‡] *5*	(5/2$^+$)		B	
1014[‡] *17*	(7/2$^+$)		B	

[†] From Monte-Carlo shell-Model calculations using the SPDF-M effective interaction (2014Do05).
[‡] Band(A): K^π=(3/2$^+$) rotational band predicted by the shell model (2014Do05).

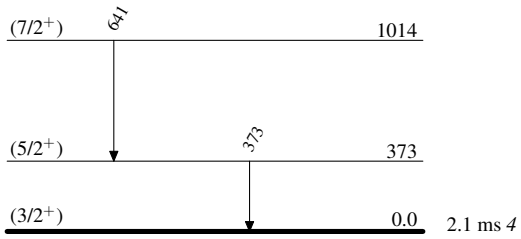
γ(^{35}Na)

E$_i$(level)	J$_i^\pi$	E$_\gamma$[†]	E$_f$	J$_f^\pi$
373	(5/2$^+$)	373 *5*	0.0	(3/2$^+$)
1014	(7/2$^+$)	641 *16*	373	(5/2$^+$)

[†] From C(^{36}Mg,^{35}Naγ).

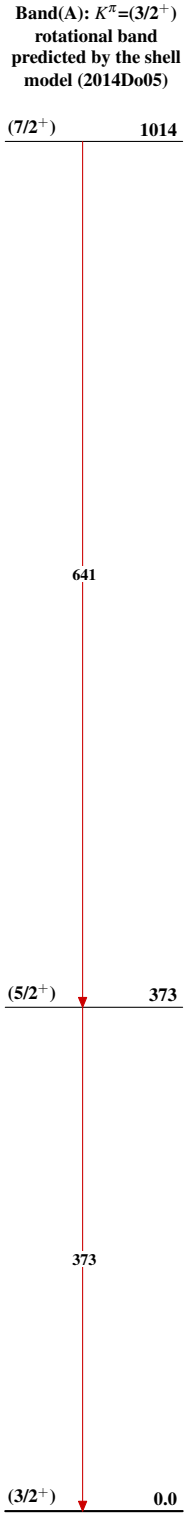
Adopted Levels, Gammas

Level Scheme



$^{35}_{11}Na_{24}$

Adopted Levels, Gammas



$^{35}_{11}Na_{24}$