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).
^{35}Na production:
2019Ah07,2022Ah02: ^{9}Be(^{48}Ca,X) at RIKEN.
2002LuZT: Ta(^{48}Ca,X) at GANIL.
^{35}Na decay measurements:
2022Cr03: ^{9}Be(^{48}Ca,X) at FRIB. Measured $T_{1/2}$.
2013StZY: ^{9}Be(^{48}Ca,X) at RIKEN. Measured $T_{1/2}$ and β^--delayed γ rays.
1983La12,1984La03: Ir(p,X) at CERN. Measured $T_{1/2}$ and β^--delayed neutrons.
^{35}Na mass measurements: None.
Theoretical calculations (binding energies, deformation, quadrupole moments, radii, levels, J, π, mass, $T_{1/2}$, etc.): 2024Lu06, 2023Zh15, 2023Ba27, 2022Ot01, 2020Ch21, 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=? ^{35}Na β^--delayed neutrons have been observed by 1983La12. Experimental %β^-n values are unknown. Theoretical %β^-0n=1.4, %β^-1n=73.5, %β^-2n=20.1, %β^-3n=4.8 (2021Mi17). Theoretical %β^-0n=14.0, %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 βn-coin).
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).

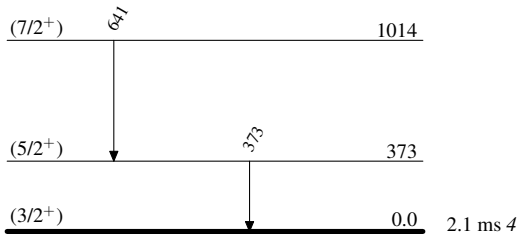
γ(^{35}Na)

E_i(level)	J_i^π	E_γ[†]	E_f	J_f^π
373	(5/2$^+$)	373 *5*	0.0	(3/2$^+$)
1014	(7/2$^+$)	641 *16*	373	(5/2$^+$)

[†] From C(^{36}Mg,^{35}Naγ).

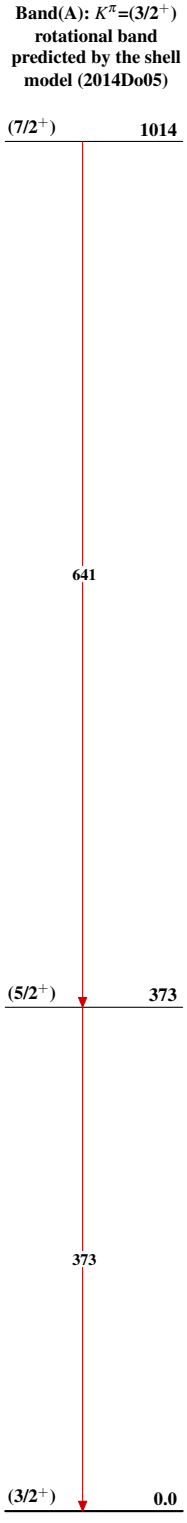
Adopted Levels, Gammas

Level Scheme



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

Adopted Levels, Gammas



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