Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Yu. Khazov and A. Rodionov, F. G. Kondev	NDS 112,855 (2011)	31-Oct-2010

Q(β^-)=8048 *4*; S(n)=2402 *4*; S(p)=1.575×10^4 *6*; Q(α)=−9.79×10^3 *syst* 2012Wa38
Note: Current evaluation has used the following Q record 8095 34 2370 24 15722 64 −10070 SY 2009AUZZ.
ΔQ(α)=299 (syst,2009AuZZ).
Q(β^-n)=750 *25* (2009AuZZ).
Q(β^-)=7990 *25* (1999Fo01).
Produced and identified in ^{235}U(n,f) reaction (1963Gr13).

^{133}Sn Levels

Cross Reference (XREF) Flags

- A ^{133}In β^- decay
- B ^{134}In β^-n decay
- C ^{248}Cm SF decay
- D ^{132}Sn(d,p)

E(level)†	J$^\pi$‡	T$_{1/2}$	XREF	Comments
0.0	7/2$^-$	1.46 s *3*	ABCD	%β^-=100; %β^-n=0.0294 *24* (1993Ru01) T$_{1/2}$: weighted average of 1.47 s *4* (1973Bo42), 1.47 s *7* (1976Lu02), 1.37 s *7* (1978Si05), and 1.57 s *14* (2006KeZZ). J$^\pi$: L(d,p)=3 in 2010Jo03; systematics of single-particle states in neighboring odd-a nuclei. configuration: possible $\nu(f^{+1}_{7/2})$.
853.7 *3*	3/2$^-$		AB D	J$^\pi$: L(d,p)=1 in 2010Jo03. configuration: possible $\nu(p^{+1}_{3/2})$.
1363 *31*	(1/2$^-$)		D	E(level): from 2010Jo03 in ^{132}Sn(d,p). configuration: possible $\nu(p^{+1}_{1/2})$ (2010Jo03).
1560.9 *5*	(9/2$^-$)		ABC	configuration: possible $\nu(h^{+1}_{9/2})$ (2010Jo03).
2004.6 *10*	(5/2$^-$)		AB D	configuration: possible $\nu(f^{+1}_{5/2})$ (2010Jo03).
(2.69×10^3 *20*)	(13/2$^+$)		C	E(level): Estimated in 1999Ur01 from the observed (10$^+$) state at 2434 keV in ^{134}Sb, assigned the $(\pi g_{7/2}\nu i_{13/2})_{10+}$ configuration, and the estimated proton-neutron residual interactions energies of −722 keV ($(\pi g_{7/2}\nu i_{13/2})_{10+}$) and −462 keV ($(\pi g_{7/2}\nu f_{7/2})_{7-}$). J$^\pi$: from systematics (1999Ur01). configuration: possible $\nu(i^{+1}_{13/2})$.
≈3700	(11/2$^-$)		B	E(level): from ^{134}In β^-n decay. No deexciting γ's observed. configuration: possible $\nu(h^{-1}_{11/2})$.

† From a least-squares fit to Eγ, unless otherwise stated.
‡ Supported by the proton angular distributions in ^{132}Sn(d,p), except as noted.

Adopted Levels, Gammas (continued)

γ(^{133}Sn)

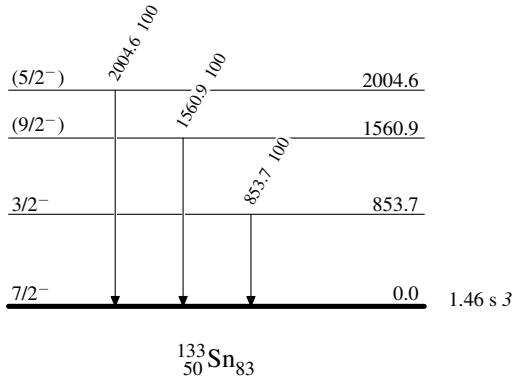
E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π
853.7	$3/2^-$	853.7 *3*	100	0.0	$7/2^-$
1560.9	$(9/2^-)$	1560.9 *5*	100	0.0	$7/2^-$
2004.6	$(5/2^-)$	2004.6 *10*	100	0.0	$7/2^-$

† From 1996Ho16, 2000Ho32.

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level



$^{133}_{50}Sn_{83}$