Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	NDS 113,515 (2012)	1-Jan-2012

Q(β^-)=−8.72×10^3 *13*; S(n)=1.099×10^4 *8*; S(p)=−2.3×10^2 *8*; Q(α)=3.36×10^3 *5* 2012Wa38
Note: Current evaluation has used the following Q record −8.72E+3 SY1.099E+4syst−230 SY3.36E+3 *5* 2011AuZZ.
ΔQ(β^-)=130, ΔS(n)=70, ΔS(p)=70 (2011AuZZ).
The following activities from ^{114}Cs have been observed by 1978Da07, 1978Ro19, 1979Sc22, 1980Ro04, 1985Ti02.
Q(ε) − S(p)=8.73 MeV *15*, mass-excess: −55.10 MeV *16* (1985Ti02). To be compared with −54.531 MeV *300* (2011AuZZ).

β^+ decay
Ground-state α decay: branching ratio=1.8×10^{-4} *6*
β^+-delayed p-emission branching ratio=7×10^{-2} *2*, now 8.7× 10^{-2} (1996He25)
(β^+)-delayed α emission branching ratio=1.6×10^{-3} *6* (1985Ti02)
(β^+,p)/(β^+,α)= 45.5 *2* (1985Ti02)

^{114}Cs Levels

Cross Reference (XREF) Flags

A ^{114}Ba ε decay (0.43 s)
B ^{58}Ni(^{58}Ni,pnγ)

E(level)†	J$^\pi$	T$_{1/2}$	XREF	Comments
0	(1$^+$)	0.57 s *2*	A	%ε+%β^+=99.982 *6*; %α=0.018 *6*; %εp=8.7 *13* (1996He25); %$\varepsilon\alpha$=0.19 *3* T$_{1/2}$: from 1978Ro19, 1979Sc22. Other: 0.7 s *2* (1978Da07). J$^\pi$: from comparison of delayed-p to delayed-α branching ratios with theory (1980Ro04), and statistical model (1985Ti02).
0+x	(10$^+$)		B	
229.0+x‡ *1*	(11$^+$)		B	
671.5+x‡ *2*	(13$^+$)		B	
1108.2+x *2*			B	
1334.6+x‡ *2*	(15$^+$)		B	
1692.2+x *2*			B	
2160.0+x‡ *2*	(17$^+$)		B	
2437.0+x? *5*			B	
3077.9+x‡ *2*	(19$^+$)		B	
4047.4+x‡ *3*	(21$^+$)		B	
5064.4+x?‡ *5*	(23$^+$)		B	
6154.4+x?‡ *7*	(25$^+$)		B	

† From Eγ's.
‡ Band(A): νh$_{11/2}\otimes\pi$h$_{11/2}$, α=1. The second signature is not seen.

Adopted Levels, Gammas (continued)

$\gamma(^{114}Cs)$

The γ rays are known only from $^{58}Ni(^{58}Ni,pn\gamma)$ reaction study.

E_i(level)	J_i^π	E_γ[†]	E_f	J_f^π	E_i(level)	J_i^π	E_γ[†]	E_f	J_f^π
229.0+x	(11^+)	229.0[‡] *1*	0+x	(10^+)	2160.0+x	(17^+)	825.4 *1*	1334.6+x	(15^+)
671.5+x	(13^+)	442.5[#] *1*	229.0+x	(11^+)	2437.0+x?		277.0[@] *4*	2160.0+x	(17^+)
1108.2+x		436.7[‡] *1*	671.5+x	(13^+)	3077.9+x	(19^+)	917.9 *1*	2160.0+x	(17^+)
1334.6+x	(15^+)	663.1[#] *1*	671.5+x	(13^+)	4047.4+x	(21^+)	969.5 *1*	3077.9+x	(19^+)
1692.2+x		357.6[‡] *1*	1334.6+x	(15^+)	5064.4+x?	(23^+)	1017.0[@] *4*	4047.4+x	(21^+)
		584.0[@] *4*	1108.2+x		6154.4+x?	(25^+)	1090.0[@] *4*	5064.4+x?	(23^+)

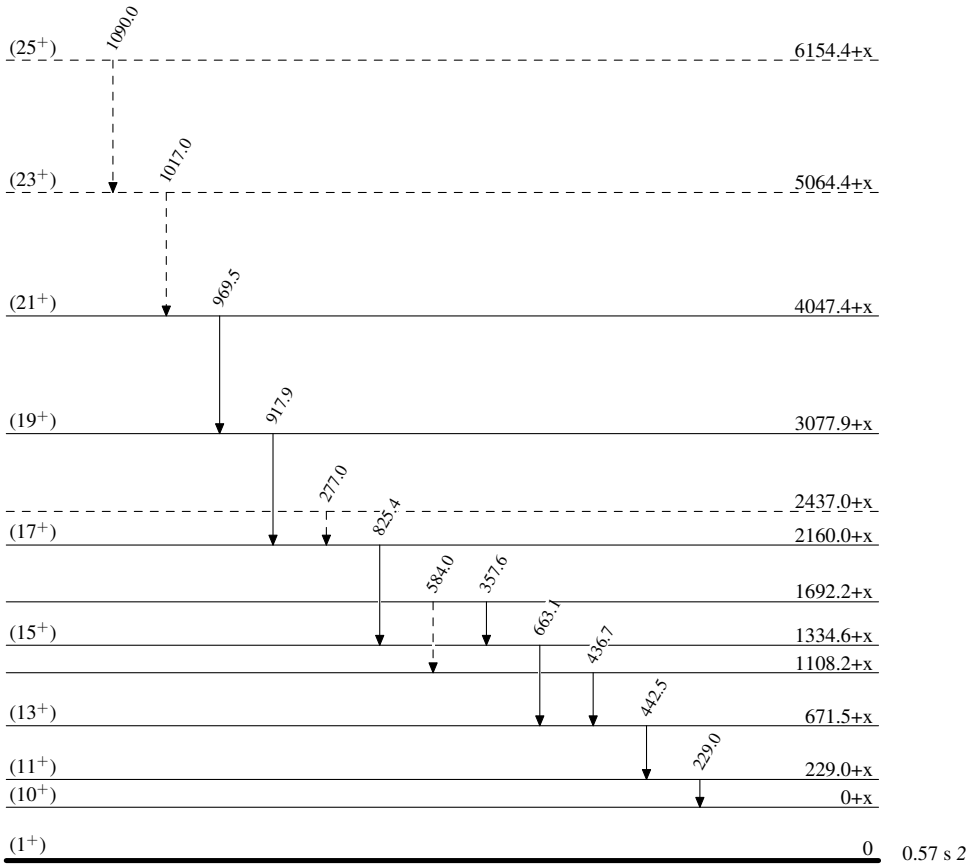
[†] Uncertainties are stated as 0.1 to 0.4 keV by 2006Sm02, the evaluator assigns 0.1 to strong γ rays and 0.4 keV to weak γ rays.
[‡] $\Delta J=1$, dipole (D) from $\gamma(\theta)$ data, no coefficients are listed by 2006Sm02.
[#] $\Delta J=2$, quadrupole (Q) from $\gamma(\theta)$ data, no coefficients are listed by 2006Sm02.
[@] Placement of transition in the level scheme is uncertain.

Legend

Adopted Levels, Gammas

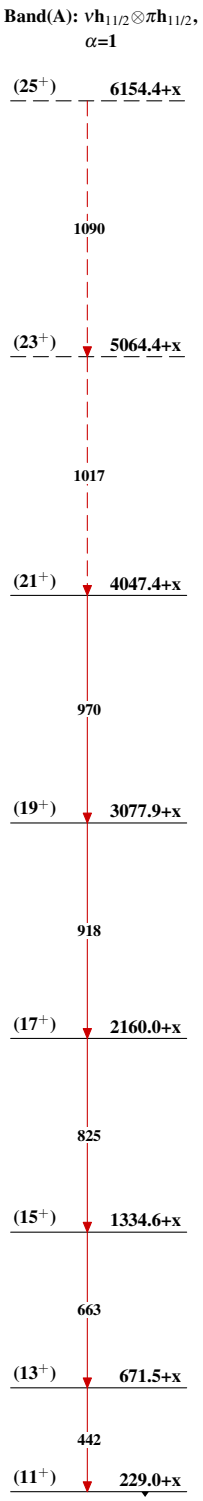
Level Scheme

γ Decay (Uncertain)



$^{114}_{55}Cs_{59}$

Adopted Levels, Gammas



$^{114}_{55}Cs_{59}$