

Adopted Levels, Gammas

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	G. Gürdal and F. G. Kondev		NDS 113,1315 (2012)	1-Aug-2011

$Q(\beta^-)=6.48\times 10^3$ 3; $S(n)=5.95\times 10^3$ 3; $S(p)=1.52\times 10^4$ 6; $Q(\alpha)=-8.07\times 10^3$ syst 2012Wa38

Note: Current evaluation has used the following Q record 6480 30 5950 30 15058 syst -7939 syst 2011AuZZ.

$\Delta S(p)=\Delta Q(\alpha)=300$ (2011AuZZ).

 ^{110}Mo LevelsCross Reference (XREF) Flags

A ^{110}Nb β^- decay
B ^{248}Cm SF decay

E(level) [†]	J ^π [‡]	T _{1/2}	XREF	Comments
0.0 [#]	0 ⁺	0.296 s 17	AB	$\% \beta^- = 100$; $\% \beta^- n = 2.0$ 7 (2009Pe06) T _{1/2} : Weighted average of 0.330 s 28 (using $\beta(t)$ and maximum likelihood method in 2009Pe06), 0.340 s 11 (using $\beta(t)$ and least-squares fit method in 2009Pe06), 0.26 s 1 (using $121\gamma\text{-}\beta(t)$ in 2004Wa03), 0.28 s 2 (using $142\gamma\text{-}\beta(t)$ in 2004Wa03), 0.30 s 4 (using $142\gamma\text{-}\beta(t)$ and $K\alpha$ x ray(t) in 1994Lh02), and 0.25 s 10 (using $K\alpha$ x ray(t) in 1992Ay02). Other: 0.30 s 4 (2002Pf04 compilation).
213.77 [#] 10	(2 ⁺)		AB	
494.21 [@] 14	(2 ⁺)		A	
599.69 [#] 14	(4 ⁺)		AB	
700.75 [@] 17	(3 ⁺)		A	
915.51 [@] 25	(4 ⁺)		A	
1131.70 [#] 24	(6 ⁺)		AB	
1163.47 [@] 21	(5 ⁺)		A	
1783.7 [#] 6	(8 ⁺)		B	
2531.9 [#] 8	(10 ⁺)		B	E(level): The doppler broadening observed for the depopulating 748.2 γ in ^{248}Cm SF decay (2004Ur03) implies a very short lifetime for this state.

[†] From a least-square fit to E_γ .

[‡] From the assigned band structures and systematics. The assignments are tentative.

Band(A): $k\pi=0^+$, g.s. band.

@ Band(B): γ vibrational band.

 $\gamma(^{110}\text{Mo})$

E _i (level)	J _i ^π	E _γ [†]	I _γ [†]	E _f	J _f ^π	Mult. [†]	Comments
213.77	(2 ⁺)	213.8 1	100	0.0	0 ⁺	[E2]	
494.21	(2 ⁺)	280.6 2	55 13	213.77	(2 ⁺)	[M1]	
		494.1 2	100 18	0.0	0 ⁺	[E2]	
599.69	(4 ⁺)	385.9 1	100	213.77	(2 ⁺)	(E2)	Mult.: $A_2/A_0=+0.08$ 3, $A_4/A_0=-0.04$ 3 (2004Ur03).
700.75	(3 ⁺)	206.6 2	60 13	494.21	(2 ⁺)	[M1]	
		487.0 2	100 20	213.77	(2 ⁺)	[M1]	
915.51	(4 ⁺)	421.3 2	100	494.21	(2 ⁺)	[E2]	
1131.70	(6 ⁺)	532.0 2	100	599.69	(4 ⁺)	[E2]	

Continued on next page (footnotes at end of table)

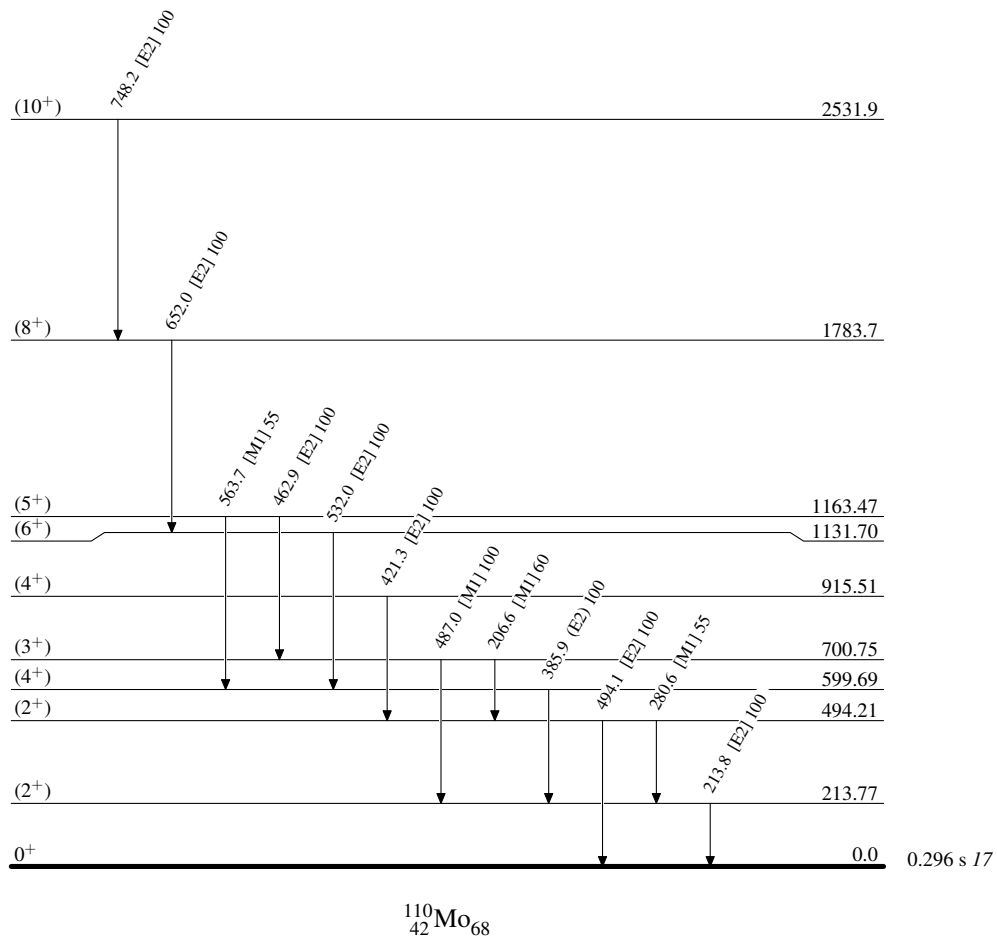
Adopted Levels, Gammas (continued)

<u>γ(¹¹⁰Mo) (continued)</u>						
<u>E_i(level)</u>	<u>J^π_i</u>	<u>E_γ[†]</u>	<u>I_γ[†]</u>	<u>E_f</u>	<u>J^π_f</u>	<u>Mult.[†]</u>
1163.47	(5 ⁺)	462.9 3	100 27	700.75	(3 ⁺)	[E2]
		563.7 2	55 23	599.69	(4 ⁺)	[M1]
1783.7	(8 ⁺)	652.0 [‡] 5	100 [‡]	1131.70	(6 ⁺)	[E2] [‡]
2531.9	(10 ⁺)	748.2 [‡] 5	100 [‡]	1783.7	(8 ⁺)	[E2] [‡]

[†] From [2011Wa26](#), unless otherwise specified.
[‡] From [2004Ur03](#). ΔEγ were estimated by the evaluators.

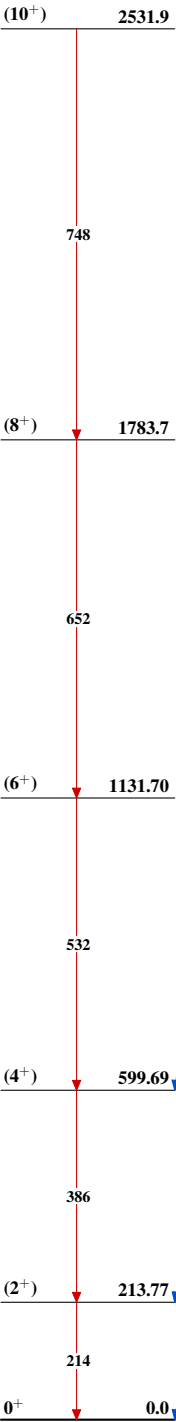
Adopted Levels, GammasLevel Scheme

Intensities: Relative photon branching from each level

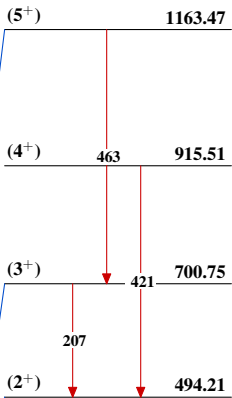


Adopted Levels, Gammas

Band(A): $K^\pi=0^+$, g.s.
band



Band(B): γ vibrational band



$^{110}_{42}\text{Mo}_{68}$