^{248}Cm,^{252}Cf SF decay

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	D. De Frenne	NDS 110, 1745 (2009)	31-Dec-2008

Parent: ^{248}Cm: E=0; $J^\pi=0^+$; $T_{1/2}=3.48\times10^5$ y *6*; %SF decay=?
Parent: ^{252}Cf: E=0; $J^\pi=0^+$; $T_{1/2}=2.645$ y *8*; %SF decay=?
1991Ho16,1996Sm04: ^{248}Cm source: measured: Eγ, Iγ, $T_{1/2}$ using Doppler-profile method. Deduced: ^{102}Mo levels, J^π.
1970Ch11,1971Ch44: ^{252}Cf source. Measured: fragment kinetic energies, Eγ, Iγ; (fission)γ-, (fission)x-ray-, $\gamma\gamma$- and (K x ray)γ-coin.
Others: 1972Ho08, 1977YoZM.

^{102}Mo Levels

E(level)	J^π[†]	$T_{1/2}$[‡]	Comments
0[#]	0^+		
296.1[#] *5*	2^+	<0.1 ns	$T_{1/2}$: recoil-distance Doppler-shift (1970Ch11).
743.1[#] *5*	4^+		
1327.5[#] *5*	6^+		
2018.7[#] *5*	8^+	1.8 ps *3*	
2790.2[#] *5*	10^+	1.03 ps *18*	
3632.2[#] *5*	12^+	0.66 ps *12*	

[†] From $\gamma\gamma$ and observed band structure.
[‡] From Doppler-profile method (1996Sm04).
[#] Band(A): Probable member of $\Delta J=2$ g.s. band.

$\gamma(^{102}Mo)$

$T_{1/2}$ from Doppler-profile method (1996Sm04).
ΔE: Not given by 1991Ho16, 1996Sm04. Estimated by the evaluator.

E_γ[‡]	I_γ	E_i(level)	J_i^π	E_f	J_f^π
296.1 *5*	100[†] *10*	296.1	2^+	0	0^+
447.0 *5*	62[†] *6*	743.1	4^+	296.1	2^+
584.4 *5*	35[†] *4*	1327.5	6^+	743.1	4^+
691.2 *5*	12[†] *3*	2018.7	8^+	1327.5	6^+
771.5 *5*		2790.2	10^+	2018.7	8^+
842.0 *5*		3632.2	12^+	2790.2	10^+

[†] Relative with respect to Iγ(296.1)=100 (1991Ho16).
[‡] Taken from 1991Ho16 or 1996Sm04.
[#] Not given by 1991Ho16, 1996Sm04. Estimated by the evaluator.

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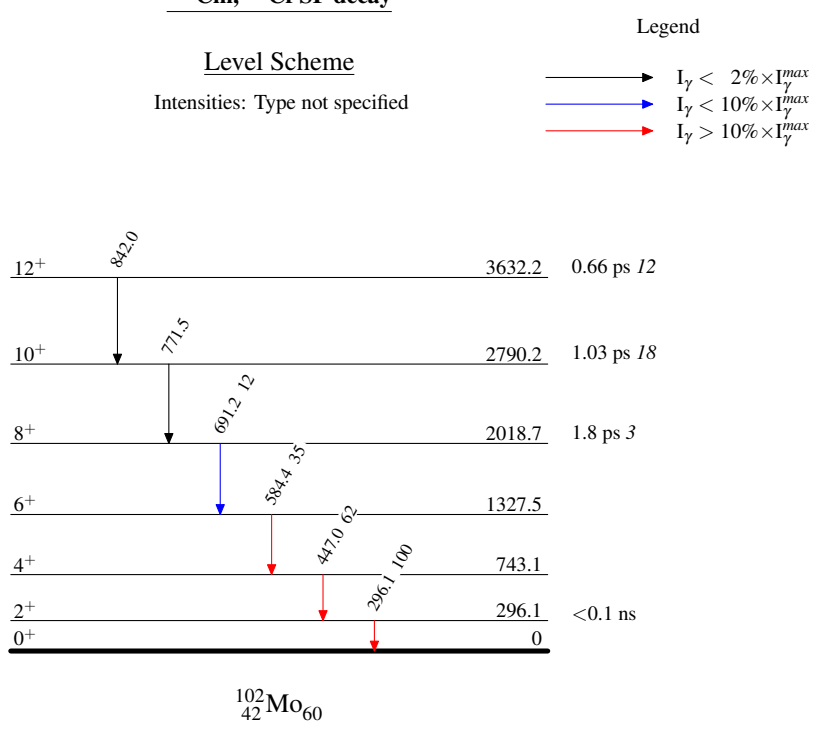
Level Scheme

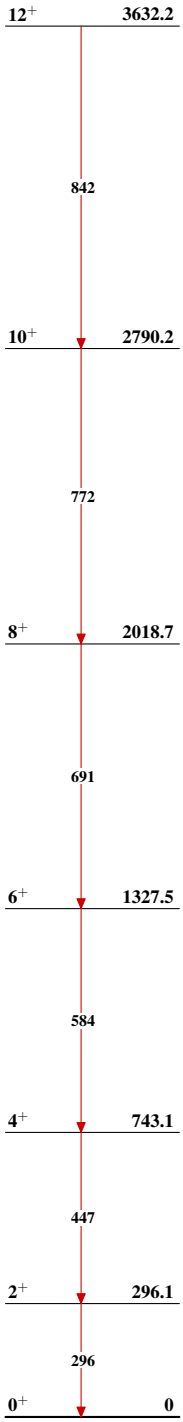
Intensities: Type not specified



$^{102}_{42}Mo_{60}$

^{248}Cm,^{252}Cf SF decay

Band(A): Probable member of ΔJ=2 g.s. band



$^{102}_{42}Mo_{60}$