

Adopted Levels, Gammas

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Shaofei Zhu and E. A. Mccutchan		NDS 175, 1 (2021)	1-May-2021

$Q(\beta^-) = -8.76 \times 10^3$ 8; S(n)=9496 14; S(p)=2735 16; $Q(\alpha) = 7827$ 5 [2021Wa16](#)
 $S(2n) = 17559$ 15; $S(2p) = 3684$ 15; $Q(\epsilon p) = 3060$ 14 ([2021Wa16](#)).
[1968Va18](#): $^{206}\text{Pb}(^{16}\text{O}, 8n)$, excitation function.
[1980Ve01](#): $^{177}\text{Hf}(^{40}\text{Ar}, 3n)$, excitation function.
[1984Sc13](#): $^{96}\text{Zr}(^{124}\text{Sn}, 6n)$ E=570 MeV parent of ^{210}Ra , evaporation residual separation.
[2005Li17](#): $^9\text{Be}(^{238}\text{U}, X)$ E=1 GeV/nucleon, fragment separator.
 Mass measurement: [2006MaZY](#).

^{214}Th Levels

Cross Reference (XREF) Flags

- A** ^{218}U α decay (0.51 ms)
- B** ^{218}U α decay (0.56 ms)
- C** $^{164}\text{Dy}(^{54}\text{Cr}, 4n\gamma)$

E(level)	J^π	$T_{1/2}$	XREF	Comments
0.0 [†]	0 ⁺	87 ms 10	ABC	$\% \alpha = 100$ Only α decay has been observed. Calculated $\% \beta \approx 0.3$ (2019Mo01). $T_{1/2}$: weighted average of 125 ms 25 (1968Va18), 80 ms 10 (1980Ve01), and 96 ms 30 (1984Sc13).
623.0 [†] 10	(2 ⁺)		BC	XREF: B(606).
1453.0 [†] 15	(4 ⁺)		C	
2092.0 [†] 18	(6 ⁺)		C	
2181.0 [†] 27	(8 ⁺)	1.21 μs 12	C	$\% \text{IT} = 100$ $T_{1/2}$: weighted average of 1.18 μs 13 from implant- $\alpha\gamma(t)$ (2021ZH24) and 1.24 μs 12 from ER- $\gamma(t)$ (2007Kh22). Possible configuration= $\pi[1h_{9/2} \otimes 2f_{7/2}]$.

[†] Seq.(A): Yrast cascade.

$\gamma(^{214}\text{Th})$

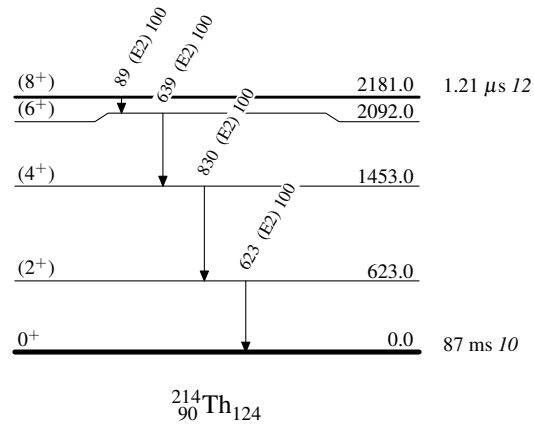
$E_i(\text{level})$	J_i^π	E_γ [†]	I_γ [†]	E_f	J_f^π	Mult. [†]	α^\ddagger	Comments
623.0	(2 ⁺)	623 1	100	0.0	0 ⁺	(E2)		
1453.0	(4 ⁺)	830 1	100	623.0	(2 ⁺)	(E2)		
2092.0	(6 ⁺)	639 1	100	1453.0	(4 ⁺)	(E2)		
2181.0	(8 ⁺)	89 2	100	2092.0	(6 ⁺)	(E2)	19.5 23	B(E2)(W.u.)=0.053 10

[†] From $^{164}\text{Dy}(^{54}\text{Cr}, 4n\gamma)$ ([2007Kh22](#)).

[‡] Total theoretical internal conversion coefficients, calculated using the BrIcc code ([2008Ki07](#)) with Frozen orbital approximation based on γ -ray energies, assigned multiplicities, and mixing ratios, unless otherwise specified.

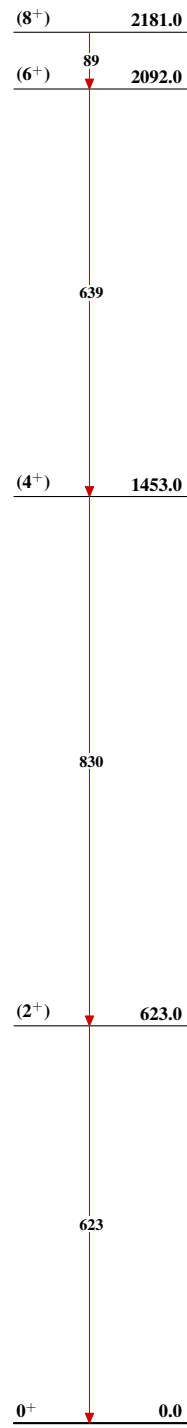
Adopted Levels, Gammas**Level Scheme**

Intensities: Relative photon branching from each level



Adopted Levels, Gammas

Seq.(A): Yrast cascade

 ${}^{214}_{90}\text{Th}_{124}$