

$^{164}\text{Er}(^{28}\text{Si},4n\gamma)$ 1999Dr10,2010Io01

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev, S. Juutinen, D. J. Hartley		NDS 150, 1 (2018)	1-Feb-2018

1999Dr10: E not stated. Pulsed beam (with 1 ns pulses at 1.7 μs intervals) and recoil-shadow technique, CAESAR detector array with six Compton-suppressed detectors and two planar detectors. Measured $E\gamma$, $I\gamma$, $\gamma\gamma$ and $\gamma(t)$.

2010Io01: E=143 MeV, planar and large volume Ge detectors. Measured $\gamma(t)$ and $\gamma(\theta, H, t)$.

Others:

2001Ra09: $^{150}\text{Sm}(^{42}\text{Ca},4n\gamma)$. Deduced delayed γ rays from a 0.8 μs isomer, probably the same isomer reported by **2000By02**.

 ^{188}Pb Levels

E(level) [†]	$J^{\pi\ddagger}$	$T_{1/2}$	Comments
0.0 [#]	0 ⁺		
722.9 [#] 5	2 ⁺		
1063.1 [#] 7	4 ⁺		
1194.4 7	(4)		
1432.9 [#] 9	6 ⁺		
1786.7 10	(5,6)		
1866.4 [#] 9	8 ⁺		
1955.1 10	(5 ⁻)		
2215.6 9	(7,8)		
2297.7? 14			
2365.1 [#] 11	10 ⁺		
2473.2 10	(7 ⁻)		
2575.7 9	(8 ⁻) [@]	0.800 μs 20	$T_{1/2}$: From Adopted Levels. Others: 0.83 μs 21 from 370 $\gamma(t)$ in 1999Dr10 and 0.82 μs 6 from $\gamma(t)$ in 2010Io01 . g=-0.037 3 from 2010Io01 . configuration: $\nu(7/2^- [514], 9/2^+ [624])$ (prolate).
2700.5 12	11 ⁻ [@]	26 ns 3	J^{π} : From Adopted Levels. 1999Dr10 assign $J^{\pi}=12^+$. $T_{1/2}$: Weighted average of 26 ns 4 from 335.4 $\gamma(t)$ in 1999Dr10 and 27 ns 5 from $\gamma(t)$ in 2010Io01 . g=+1.03 3 from 2010Io01 . configuration: $K^{\pi}=11^-$, $\pi(9/2^- [505] \otimes 13/2^+ [606])$ (oblate).
2708.6 12	12 ⁺ [@]	97 ns 8	J^{π} : from Adopted Levels. 1999Dr10 assign $J^{\pi}=11^-$. $T_{1/2}$: Weighted average of 94 ns 14 from 343.5 $\gamma(t)$ in 1999Dr10 and 99 ns 10 from $\gamma(t)$ in 2010Io01 . g=-0.179 6 from 2010Io01 . configuration: $\nu(1_{13/2})^{-2}$ (spherical).
2700.5+x		$\approx 0.7 \mu\text{s}$	Additional information 1 . E(level), $T_{1/2}$: From 1999Dr10 .

[†] From least-squares fit to $E\gamma$.

[‡] From **1999Dr10**, unless otherwise stated.

[#] Band(A): $K^{\pi}=0^+$, yrast band.

[@] The g-factors were measured using the TDPAD technique. The values were corrected by the authors for Knight shift and diamagnetic shielding.

$^{164}\text{Er}(^{28}\text{Si},4\text{n}\gamma)$ **1999Dr10,2010Io01** (continued) $\gamma(^{188}\text{Pb})$

E_γ^\dagger	$E_i(\text{level})$	J_i^π	E_f	J_f^π	E_γ^\dagger	$E_i(\text{level})$	J_i^π	E_f	J_f^π
102.5 5	2575.7	(8 ⁻)	2473.2	(7 ⁻)	498.7 5	2365.1	10 ⁺	1866.4	8 ⁺
^x 218 [‡] 1					518.1 5	2473.2	(7 ⁻)	1955.1	(5 ⁻)
278 1	2575.7	(8 ⁻)	2297.7?		^x 527 [‡] 1				
335.4 5	2700.5	11 ⁻	2365.1	10 ⁺	607 1	2473.2	(7 ⁻)	1866.4	8 ⁺
340.2 5	1063.1	4 ⁺	722.9	2 ⁺	709.3 5	2575.7	(8 ⁻)	1866.4	8 ⁺
343.5 5	2708.6	12 ⁺	2365.1	10 ⁺	722.9 5	722.9	2 ⁺	0.0	0 ⁺
360.0 5	2575.7	(8 ⁻)	2215.6	(7,8)	724 1	1786.7	(5,6)	1063.1	4 ⁺
369.7 5	1432.9	6 ⁺	1063.1	4 ⁺	782.6 5	2215.6	(7,8)	1432.9	6 ⁺
429.0 5	2215.6	(7,8)	1786.7	(5,6)	892 1	1955.1	(5 ⁻)	1063.1	4 ⁺
433.6 5	1866.4	8 ⁺	1432.9	6 ⁺	^x 914 [‡] 1				
^x 469 [‡] 1					^x 947 [‡] 1				
471.5 5	1194.4	(4)	722.9	2 ⁺	^x 977 [‡] 1				
^x 479 [‡] # 1					1104# 1	2297.7?		1194.4	(4)

† From 1999Dr10. Uncertainties were estimated by the evaluators.

‡ γ ray observed in the out-of-beam time region feeding the 2700.5-keV level.

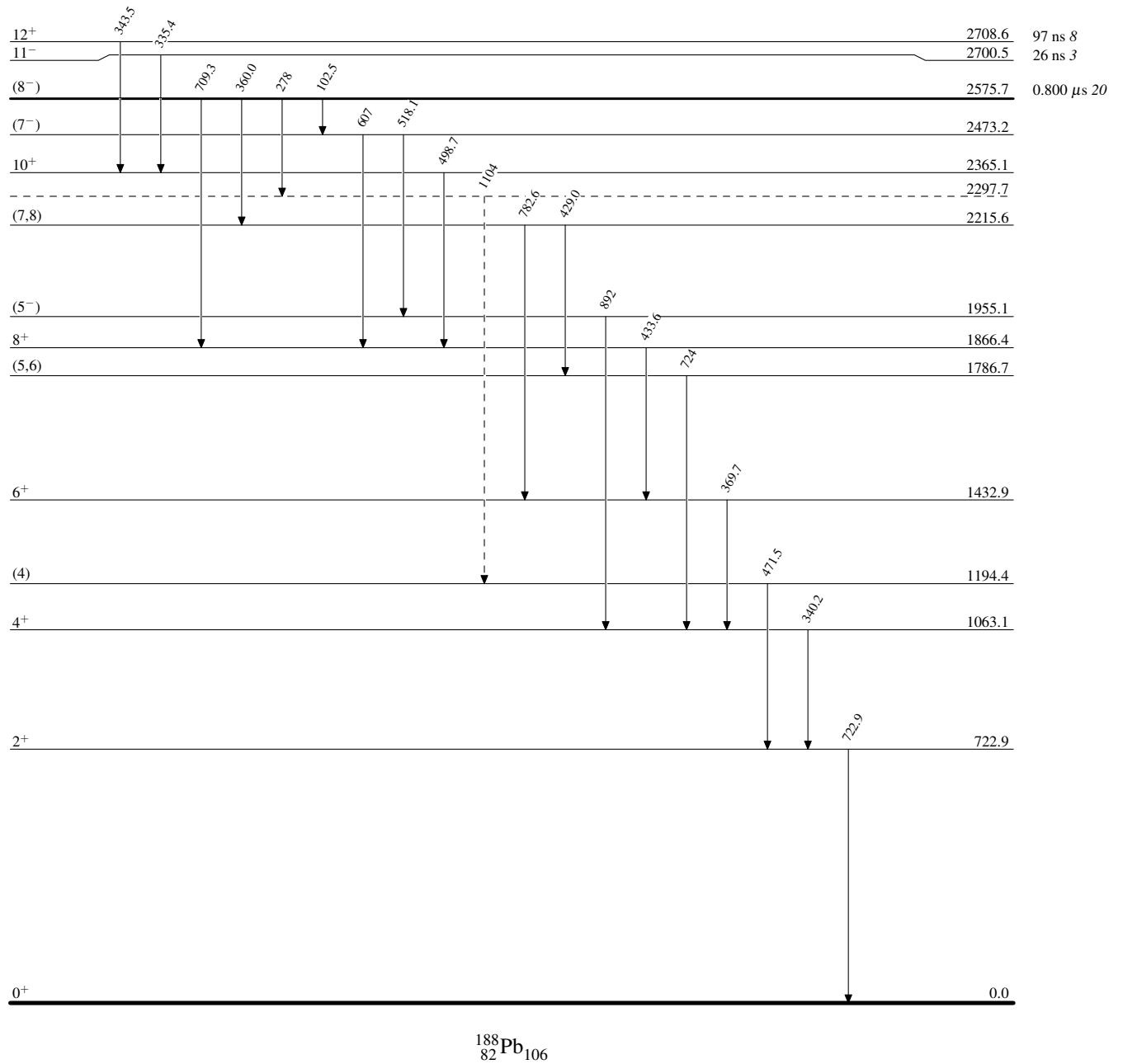
Placement of transition in the level scheme is uncertain.

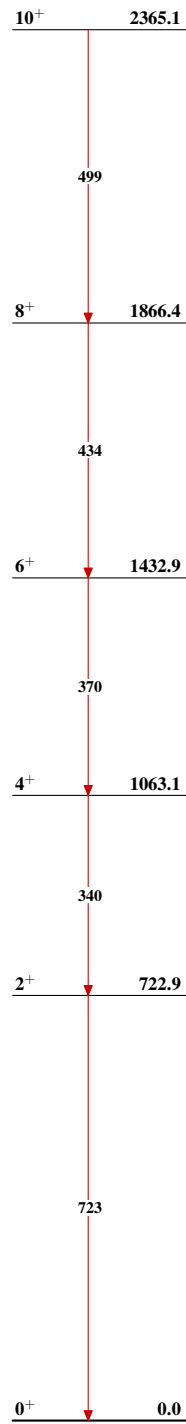
^x γ ray not placed in level scheme.

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Legend

Level Scheme

-----> γ Decay (Uncertain)

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band $^{188}_{82}\text{Pb}_{106}$