

²⁰⁸Pb(¹³⁶Xe,Xγ) 2000Re12,1999ReZT

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev, S. Lalkovski		NDS 112, 707 (2011)	1-Aug-2010

Facility: GSI; Beam: E(¹³⁶Xe)=5.7 A*MeV. Target: enriched to 98.7% in ²⁰⁸Pb; Detectors: 5 EUROBALL Cluster detectors (Eff=2.2%), 132 NaI Crystal Ball detectors (Eff= 53%); Measured: γγ and γγ, γγγ, γγ(t), Eγ, Iγ; Deduced: level scheme and J^π.

Others: 2004Br19.

²⁰⁷Tl Levels

E(level) [†]	J ^π [‡]	Comments
0.0	1/2 ⁺	J ^π : From the Adopted Levels.
351.1 4	3/2 ⁺	J ^π : From the Adopted Levels.
1348.1 4	11/2 ⁻	configuration: 96% π(1h _{11/2}) ⁻¹ and 4% (π(d _{5/2}) ⁻¹)x3 ⁻ (2000Re12).
1683	5/2 ⁺	E(level): From 2000Re12.
3813.1 5		configuration: 84% π(2d _{5/2}) ⁻¹ and 16% (π(h _{11/2}) ⁻¹)x3 ⁻ (2000Re12). J ^π : (17/2 ⁺) assumed in 2000Re12 and based on Particle-Vibration Coupling Model prediction.
4293.0 5		configuration: 92% (π(1h _{11/2}) ⁻¹)x3 ⁻ and 8% π(d _{5/2}) ⁻¹ x(3 ⁻) ² (2000Re12).
4418.0 5		

[†] Based on least-squares fit adjustment to Eγ, unless otherwise noted.

[‡] From the Adopted Levels.

γ(²⁰⁷Tl)

E _γ [†]	I _γ [†]	E _i (level)	J _i ^π	E _f	J _f ^π	Comments
^x 264.9 1	58 7					Possible coincidence with 479.9γ and 604.9γ (1999ReZT).
^x 302.5 5	40 6					
^x 342.3 3	26 5					
351.1 [‡] 5		351.1	3/2 ⁺	0.0	1/2 ⁺	
479.9 2	100 10	4293.0		3813.1		
^x 511.5 3	30 5					
604.9 2	53 7	4418.0		3813.1		
997.1 [‡] 5		1348.1	11/2 ⁻	351.1	3/2 ⁺	
^x 1108.4 3	19 5					
1348.1 [‡] 5		1348.1	11/2 ⁻	0.0	1/2 ⁺	
2464.9 1		3813.1		1348.1	11/2 ⁻	

[†] From 1999ReZT, unless otherwise noted.

[‡] ΔEγ estimated by the evaluators. Based on the general HPGe detectors performance.

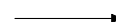


^x γ ray not placed in level scheme.

$^{208}\text{Pb}(^{136}\text{Xe}, X\gamma)$ 2000Re12,1999ReZT

Level Scheme

Intensities: Type not specified

Legend

-  $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
-  $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
-  $I_\gamma > 10\% \times I_\gamma^{\text{max}}$

