

$^{180}\text{Hf}(^{136}\text{Xe}, ^{134}\text{Xe}\gamma)$ 2007Ng03

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 130, 21 (2015)	15-Jul-2015

2007Ng03: E(^{136}Xe)=750 MeV. Enriched (>94%) target. Measured E γ , I γ , $\gamma\gamma$ using Gammasphere array with 100

Compton-suppressed HPGe detectors and position-sensitive parallel-plate avalanche counter (CHICO). Coincidence requirement was at least two γ rays in γ -ray detectors and two correlated particles in CHICO detector.

Two-neutron transfer reaction.

 ^{182}Hf Levels

E(level) [†]	J π [‡]	T _{1/2}	E(level) [†]	J π [‡]	E(level) [†]	J π [‡]
0.0@	0 ⁺		1419.8& 11	9 ⁻	2649.5& 12	13 ⁻
98.3@ 5	2 ⁺		1679.8@ 11	10 ⁺	3010.3& 12	14 ⁻
322.4@ 7	4 ⁺		1692.2& 11	10 ⁻	3064.8@ 13	14 ⁺
666.1@ 9	6 ⁺		1988.6& 11	11 ⁻	3868.7@ 14	16 ⁺
1121.6@ 10	8 ⁺		2307.6& 11	12 ⁻	4733.4@ 15	18 ⁺
1173.1& 10	8 ⁻	61.5# min 15	2331.2@ 12	12 ⁺		

[†] From least-squares fit to E γ data.

[‡] As proposed by 2007Ng03 based on band assignments. The assignments in Adopted Levels are the same except that all assignments above 100-keV level are in parentheses there due to lack of strong arguments.

From Adopted Levels.

@ Band(A): g.s. band.

& Band(B): K π =8⁻ band. Configuration= $\pi 7/2[404] \otimes \pi 9/2[514]$.

 $\gamma(^{182}\text{Hf})$

E γ	I γ	E _i (level)	J π _i	E _f	J π _f	E γ	I γ	E _i (level)	J π _i	E _f	J π _f
51.5 5		1173.1	8 ⁻	1121.6 8 ⁺		507.1 5	12.3 11	1173.1	8 ⁻	666.1 6 ⁺	
98.3 5		98.3	2 ⁺	0.0 0 ⁺		518.9 5	11.3 11	1692.2	10 ⁻	1173.1 8 ⁻	
224.1 5	100 3	322.4	4 ⁺	98.3 2 ⁺		558.2 5	24.9 16	1679.8	10 ⁺	1121.6 8 ⁺	
246.8 5	20.1 14	1419.8	9 ⁻	1173.1 8 ⁻		569.1 5	17.8 13	1988.6	11 ⁻	1419.8 9 ⁻	
272.3 5	14.3 12	1692.2	10 ⁻	1419.8 9 ⁻		615.0 5	20.5 14	2307.6	12 ⁻	1692.2 10 ⁻	
296.6 5	18.2 13	1988.6	11 ⁻	1692.2 10 ⁻		651.4 5	18.2 13	2331.2	12 ⁺	1679.8 10 ⁺	
319.2 5	18.4 14	2307.6	12 ⁻	1988.6 11 ⁻		661.0 5	14.3 12	2649.5	13 ⁻	1988.6 11 ⁻	
341.6 5	15.5 12	2649.5	13 ⁻	2307.6 12 ⁻		703.0 5	15.0 12	3010.3	14 ⁻	2307.6 12 ⁻	
343.7 5	70 3	666.1	6 ⁺	322.4 4 ⁺		733.6 5	14.0 12	3064.8	14 ⁺	2331.2 12 ⁺	
360.5 5	19.3 14	3010.3	14 ⁻	2649.5 13 ⁻		803.9 5	11.8 11	3868.7	16 ⁺	3064.8 14 ⁺	
455.4 5	35.5 19	1121.6	8 ⁺	666.1 6 ⁺		864.7 5	8.7 9	4733.4	18 ⁺	3868.7 16 ⁺	

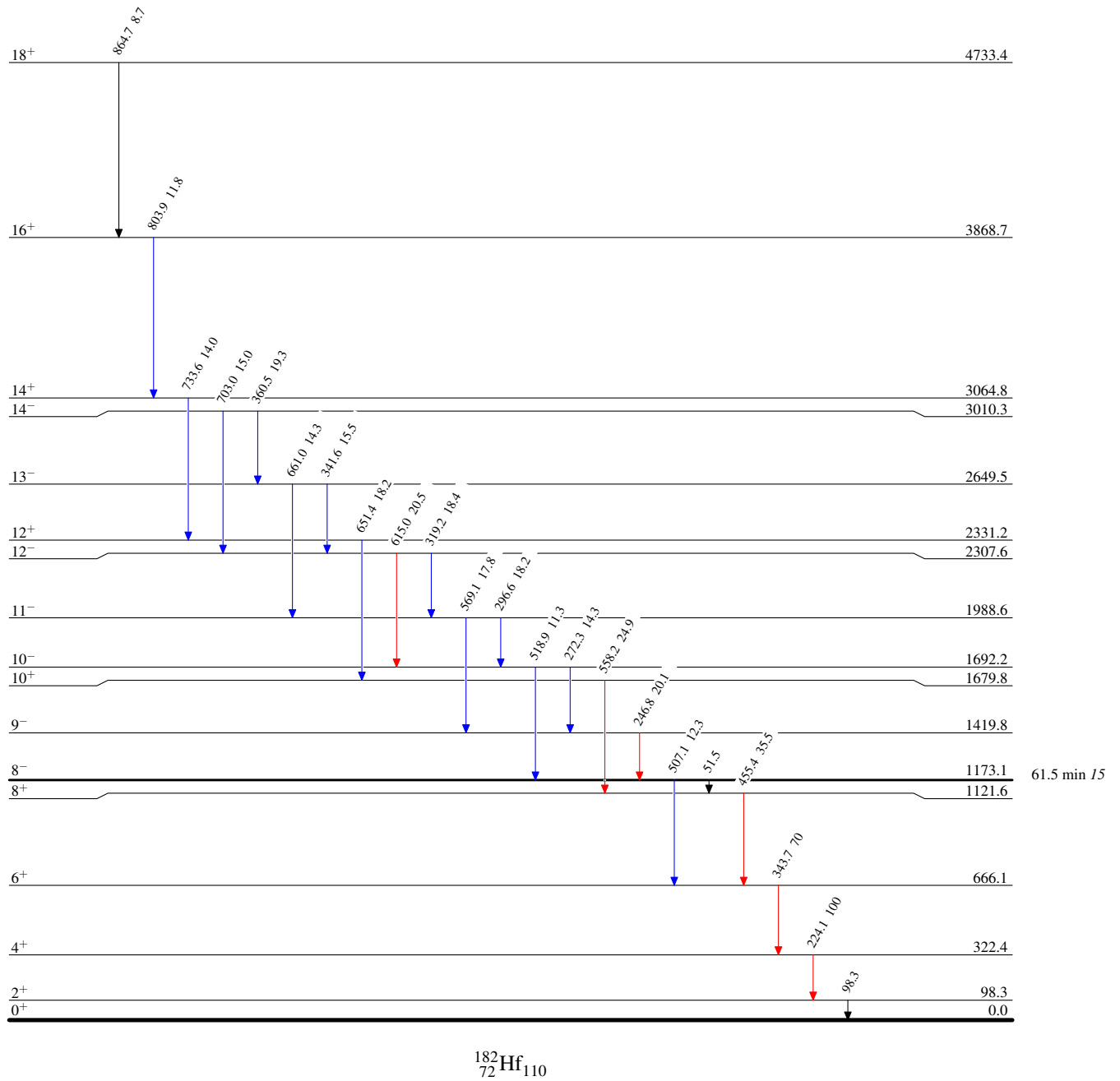
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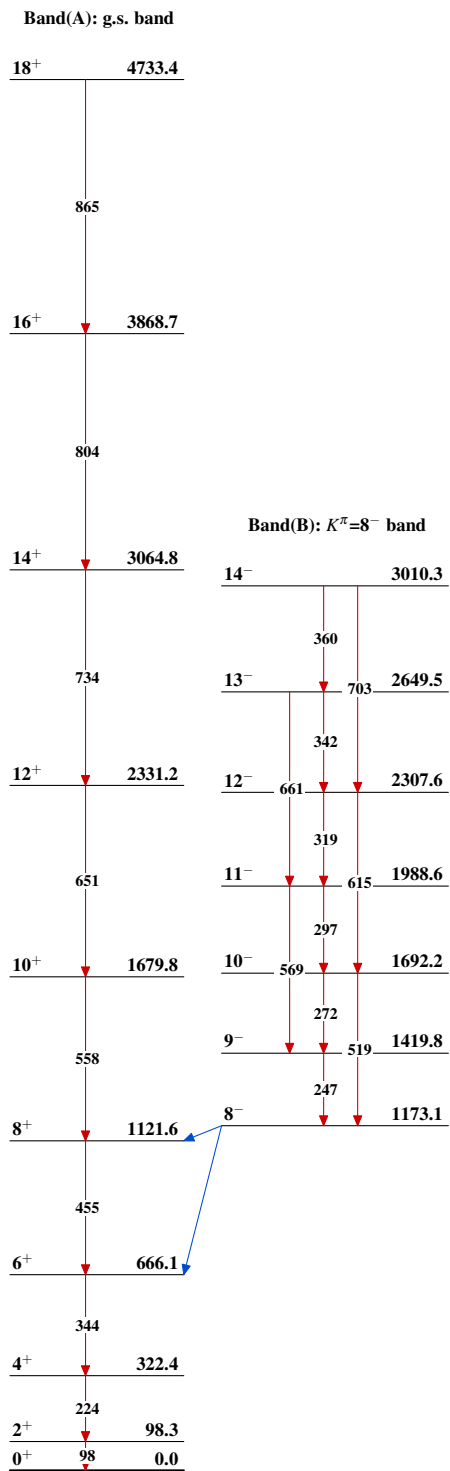
Level Scheme

Intensities: Relative I_γ

Legend

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



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