

$^9\text{Be}(^{136}\text{Xe},\text{X}\gamma)$:isomer **2007Ho22,2007To23**

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	J. Katakura	NDS 112, 495 (2011)	1-Jan-2010

2007Ho22: E=120 MeV/nucleon beam provided by National Superconducting Cyclotron lab (NSCL) at MSU. Fragmentation of ^{136}Xe beam followed by separation of fragments by A1900 fragment separator. Time-of-flight measured with a plastic scintillator. Measured E_γ , I_γ , delayed γ , (fragment) γ correlated events using segmented germanium (SeGA) array. The Ge detectors were gated for 15 μs by a particle implantation trigger from Si detectors.

2007To23,2006ToZW: Fragmentation of a 120 MeV/A ^{136}Xe beam; MSU Beta Counting System; measured E_γ , $\gamma\gamma$ -coin. XUNDL data set compiled by S. Geraedts and B. Singh (McMaster), Nov 1, 2007, is consulted.

 ^{125}Cd Levels

E(level) [†]	J^π	Comments
x	(11/2 ⁻)	Additional information 1. E(level): See Adopted Levels.
x+719.70 20	(15/2 ⁻)	E(level): Reversed ordering of 743-720 cascade gives X+743.3.
x+1463.0 3	(19/2 ⁻)	
x+2249.2 5	(23/2 ⁻)	
x+3116.9 5	(27/2 ⁻)	
x+3171.7 5		
x+3580.4 7		
x+3606.5 7		
3606.5+y	(33/2 ⁻)	Additional information 2. E(level): Possible configuration= $[\nu h_{11/2} \otimes (\nu h_{11/2} \otimes \nu d_{3/2})_{7-} \otimes (\pi g_{9/2} \pi p_{1/2})_{5-}]_{33/2-}$.

[†] From a least-squares fit to the adopted E_γ 's relative to E(11/2⁻).

 $\gamma(^{125}\text{Cd})$

E_γ [†]	I_γ [†]	E_i (level)	J_i^π	E_f	J_f^π	Comments
408.7 5	42 17	x+3580.4		x+3171.7		
489.6 5	64 21	x+3606.5		x+3116.9	(27/2 ⁻)	
719.7 [‡] 2	100 19	x+719.70	(15/2 ⁻)	x	(11/2 ⁻)	Could also be a 720-743 cascade, instead of 743-720.
743.3 [‡] 2	96 22	x+1463.0	(19/2 ⁻)	x+719.70	(15/2 ⁻)	
786.2 3	92 24	x+2249.2	(23/2 ⁻)	x+1463.0	(19/2 ⁻)	
867.7 2	63 21	x+3116.9	(27/2 ⁻)	x+2249.2	(23/2 ⁻)	
922.5 1	20 20	x+3171.7		x+2249.2	(23/2 ⁻)	

[†] From [2007Ho22](#).

[‡] Ordering of the 720-743 cascade is not established.

$^9\text{Be}(^{136}\text{Xe}, X\gamma)$:isomer 2007Ho22,2007To23**Level Scheme**Intensities: Relative I_γ

Legend

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

