

<sup>92</sup>Mo(<sup>54</sup>Fe,pn $\gamma$ ) 2001Sc09

Type	History		
	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	ENSDF	21-Feb-2008

2001Sc09 (also 2001Sc14,2001Cu02): E=226 and 236 MeV. Measured E $\gamma$ , I $\gamma$  and  $\gamma\gamma$  using JUROSPHERE spectrometer array consisting of 15 EUROGAM type I detectors, seven TESSA type detectors, and five NORDBALL type detectors.

<sup>144</sup>Ho Levels

E(level) <sup>†</sup>	J $\pi$ <sup>‡</sup>	T <sub>1/2</sub>	E(level) <sup>†</sup>	J $\pi$ <sup>‡</sup>	E(level) <sup>†</sup>	J $\pi$ <sup>‡</sup>
0.0			911.9 <sup>#</sup> 5	(9 <sup>+</sup> )	2604.6 <sup>@</sup> 7	(14 <sup>+</sup> )
60.6 2			1274.9 <sup>@</sup> 5	(10 <sup>+</sup> )	2992.8 <sup>#</sup> 7	(15 <sup>+</sup> )
208.9 2	(6 <sup>-</sup> )		1413.3 <sup>#</sup> 5	(11 <sup>+</sup> )	3473.1 <sup>@</sup> 7	(16 <sup>+</sup> )
265.3 3	(7 <sup>+</sup> )	500 ns 20	1842.6 <sup>@</sup> 5	(12 <sup>+</sup> )	3878.0 <sup>#</sup> 8	(17 <sup>+</sup> )
612.8 <sup>@</sup> 4	(8 <sup>+</sup> )		2136.8 <sup>#</sup> 6	(13 <sup>+</sup> )	4691.1 <sup>#</sup> 10	(19 <sup>+</sup> )

<sup>†</sup> From least-squares fit to E $\gamma$ 's.

<sup>‡</sup> Spins are one unit less in 'Adopted Levels'.

<sup>#</sup> Band(A): Band based on (9<sup>+</sup>). Possible configuration= $\pi h_{11/2} \otimes \nu(h_{11/2}, f_{7/2})$  or  $\pi h_{11/2} \otimes \nu(s_{1/2}, d_{3/2})$ .

<sup>@</sup> Band(a): Band based on (8<sup>+</sup>). Possible configuration= $\pi h_{11/2} \otimes \nu(h_{11/2}, f_{7/2})$  or  $\pi h_{11/2} \otimes \nu(s_{1/2}, d_{3/2})$ .

$\gamma(^{144}\text{Ho})$

E $\gamma$	I $\gamma$ <sup>†</sup>	E <sub>i</sub> (level)	J $\pi$ <sub>i</sub>	E <sub>f</sub>	J $\pi$ <sub>f</sub>	Comments
56.4 2		265.3	(7 <sup>+</sup> )	208.9	(6 <sup>-</sup> )	I $\gamma$ : Delayed I $\gamma$ =100 9.
60.4 3		60.6		0.0		I $\gamma$ : Delayed I $\gamma$ =11 1.
148.2 2		208.9	(6 <sup>-</sup> )	60.6		I $\gamma$ : Delayed I $\gamma$ =91 7.
209.0 2		208.9	(6 <sup>-</sup> )	0.0		I $\gamma$ : Delayed I $\gamma$ =54 6.
299.1 <sup>‡</sup> 3	4 1	911.9	(9 <sup>+</sup> )	612.8	(8 <sup>+</sup> )	
347.5 <sup>‡</sup> 2	7 2	612.8	(8 <sup>+</sup> )	265.3	(7 <sup>+</sup> )	
362.9 <sup>‡</sup> 1	16 3	1274.9	(10 <sup>+</sup> )	911.9	(9 <sup>+</sup> )	
429.6 <sup>‡</sup> 3	25 2	1842.6	(12 <sup>+</sup> )	1413.3	(11 <sup>+</sup> )	
467.8 <sup>‡</sup> 2	19 2	2604.6	(14 <sup>+</sup> )	2136.8	(13 <sup>+</sup> )	
501.6 2	100 7	1413.3	(11 <sup>+</sup> )	911.9	(9 <sup>+</sup> )	
567.3 <sup>‡</sup> 3	10 5	1842.6	(12 <sup>+</sup> )	1274.9	(10 <sup>+</sup> )	
723.6 4	64 5	2136.8	(13 <sup>+</sup> )	1413.3	(11 <sup>+</sup> )	
761.7 <sup>‡</sup> 8	16 3	2604.6	(14 <sup>+</sup> )	1842.6	(12 <sup>+</sup> )	
813.1 6	36 4	4691.1	(19 <sup>+</sup> )	3878.0	(17 <sup>+</sup> )	
856.0 2	47 6	2992.8	(15 <sup>+</sup> )	2136.8	(13 <sup>+</sup> )	
868.5 <sup>‡</sup> 3	27 5	3473.1	(16 <sup>+</sup> )	2604.6	(14 <sup>+</sup> )	
885.2 5	42 4	3878.0	(17 <sup>+</sup> )	2992.8	(15 <sup>+</sup> )	
<sup>x</sup> 913.0 8	10 2					This $\gamma$ ray may be in coin with 502-724-856-885-813 cascade.

<sup>†</sup> Prompt intensities. Delayed intensities are given under comments.

<sup>‡</sup> Placement of transition in the level scheme is uncertain.

<sup>x</sup>  $\gamma$  ray not placed in level scheme.

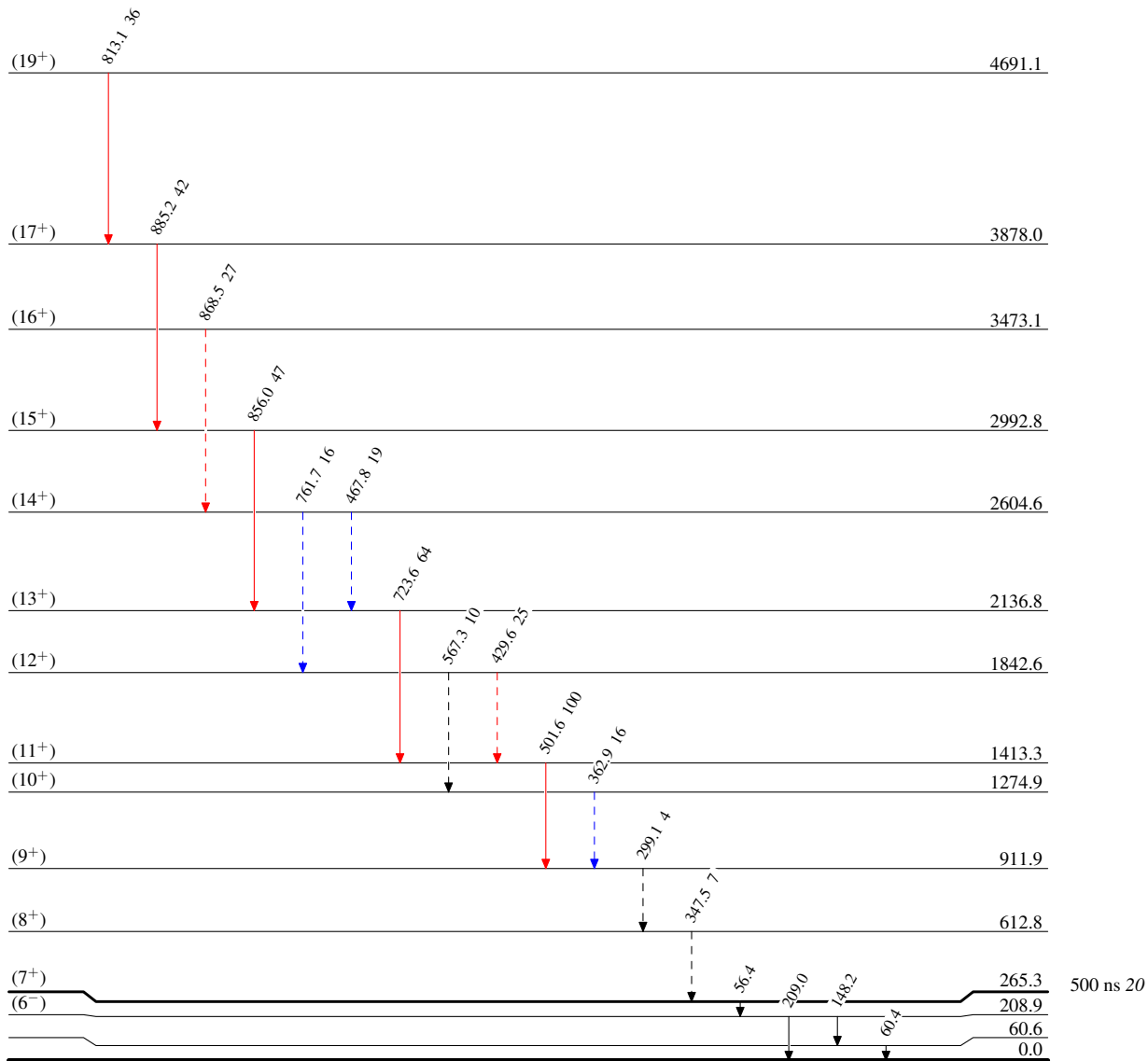
$^{92}\text{Mo}(^{54}\text{Fe}, \text{pn}\gamma)$  2001Sc09

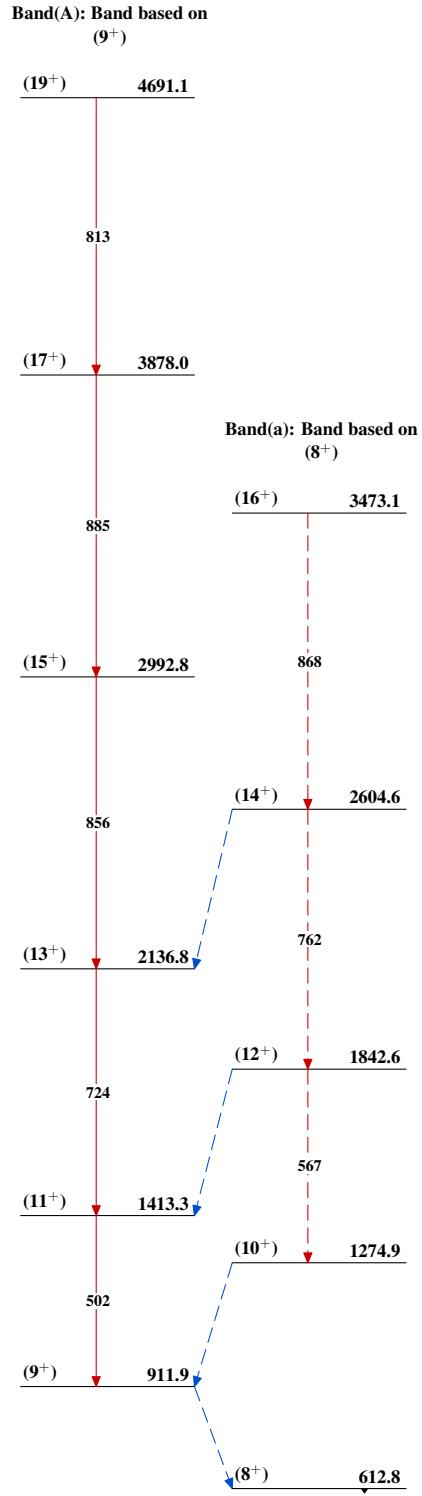
## Level Scheme

Intensities: Relative  $I_\gamma$ 

## Legend

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

 $^{144}\text{Ho}_{77}$

$^{92}\text{Mo}(\text{}^{54}\text{Fe,pn}\gamma)$  2001Sc09 $^{144}_{67}\text{Ho}_{77}$