

(HL,xn $\gamma$ ) 2003Fo09

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	G. Gürdal and F. G. Kondev		NDS 113, 1315 (2012)	1-Aug-2011

**2003Fo09:**  $^{173}\text{Yb}(^{24}\text{Mg},X\gamma)$ ;  $E = 134.5$  MeV and  $1$  mg/cm $^2$   $^{173}\text{Yb}$  target consisting of isotopically enriched (95%) material, evaporated on a  $7$  mg/cm $^2$  Au backing.  $^{176}\text{Yb}(^{23}\text{Na},X\gamma)$ ;  $E=129$  MeV and  $1$  mg/cm $^2$   $^{176}\text{Yb}$  target consisting of isotopically enriched (98%) material, evaporated on a  $10$  mg/cm $^2$  Au backing.  $^{208}\text{Pb}(^{18}\text{O},X\gamma)$ ;  $E=91$  MeV and a  $45$  mg/cm $^2$  Pb target. The Gammasphere array (LBNL) comprised of 92 Compton-suppressed large volume HPGe detectors (for the  $^{197}\text{Pb}$  compound nucleus (CN) experiment) and 100 HPGe detectors for the  $^{199}\text{Tl}$  and  $^{226}\text{Th}$  CN experiments) were used. The four-fold coincidence events ( $\approx 2.3 \times 10^9$  for  $^{197}\text{Pb}$  CN experiment,  $\approx 10^{10}$  for  $^{199}\text{Tl}$  CN experiment, and  $\approx 2.5 \times 10^9$  for  $^{226}\text{Th}$  CN experiment) were recorded. Measured  $E_\gamma$ ,  $I_\gamma$ ,  $\gamma\gamma$ , and  $\gamma\gamma\gamma$ .

The level scheme differs from the adopted one. Specifically, the 159.1+X level here is equivalent to 284.0+X in the adopted, and the authors in **2003Fo09** missed the low-energy transitions at the bottom of the band.

 $^{110}\text{Rh}$  Levels

E(level) $^\dagger$	J $^\ddagger$	Comments
0+x		<a href="#">Additional information 1.</a>
159.1+x $^\#$ 5	(8 $^-$ )	E(level): $x < 296$ ( <b>2003Fo09</b> ) from systematics of 8 $^-$ states in $^{100}\text{Rh}$ , $^{102}\text{Rh}$ and $^{104}\text{Rh}$ .
345.6+x $^\@$ 7	(9 $^-$ )	
645.2+x $^\#$ 7	(10 $^-$ )	
903.0+x $^\@$ 7	(11 $^-$ )	
1265.3+x $^\#$ 8	(12 $^-$ )	
1640.2+x $^\@$ 8	(13 $^-$ )	

$^\dagger$  From least-squares fit to  $E_\gamma$ 's.  $\Delta E_\gamma = 0.5$  keV was assumed by the evaluators.

$^\ddagger$  From **2003Fo09**, based on systematics in lighter odd-odd Rh isotopes.

$^\#$  Band(A):  $\pi g_{9/2} \otimes \nu h_{11/2}$ ,  $\alpha=0$ .

$^\@$  Band(a):  $\pi g_{9/2} \otimes \nu h_{11/2}$ ,  $\alpha=1$ .

 $\gamma(^{110}\text{Rh})$ 

$E_\gamma$ $^\dagger$	$I_\gamma$ $^\ddagger$	$E_i$ (level)	$J_i$ $^\pi$	$E_f$	$J_f$ $^\pi$
159.1		159.1+x	(8 $^-$ )	0+x	
186.6	10	345.6+x	(9 $^-$ )	159.1+x	(8 $^-$ )
257.8	35.3 60	903.0+x	(11 $^-$ )	645.2+x	(10 $^-$ )
299.5	61.7 70	645.2+x	(10 $^-$ )	345.6+x	(9 $^-$ )
362.2	16.9 10	1265.3+x	(12 $^-$ )	903.0+x	(11 $^-$ )
374.8	5.8 7	1640.2+x	(13 $^-$ )	1265.3+x	(12 $^-$ )
486.0	5.7 6	645.2+x	(10 $^-$ )	159.1+x	(8 $^-$ )
557.5	9.2 9	903.0+x	(11 $^-$ )	345.6+x	(9 $^-$ )
620.1	3.6 4	1265.3+x	(12 $^-$ )	645.2+x	(10 $^-$ )
737.3	4.1 5	1640.2+x	(13 $^-$ )	903.0+x	(11 $^-$ )

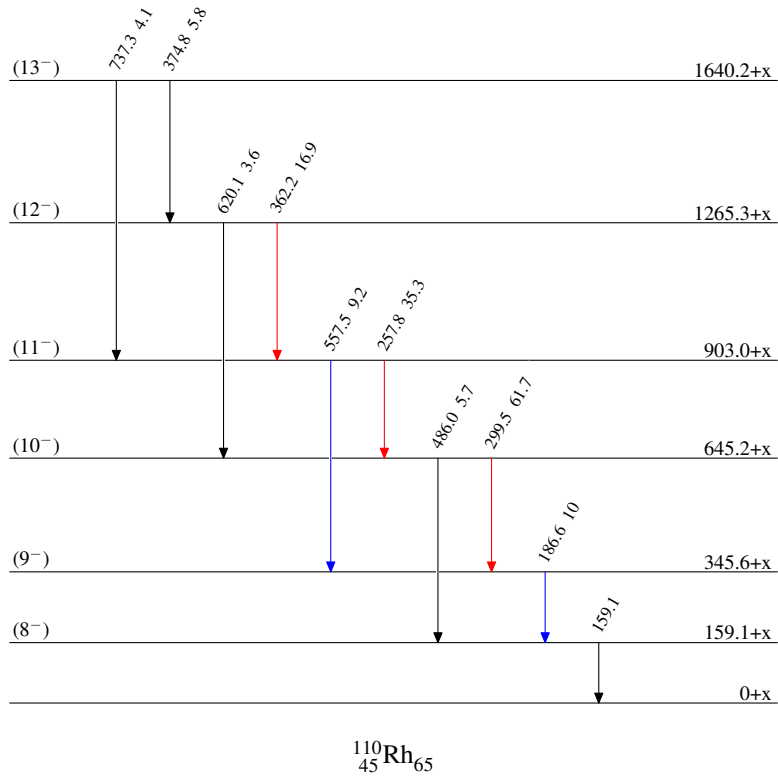
$^\dagger$  From **2003Fo09**.

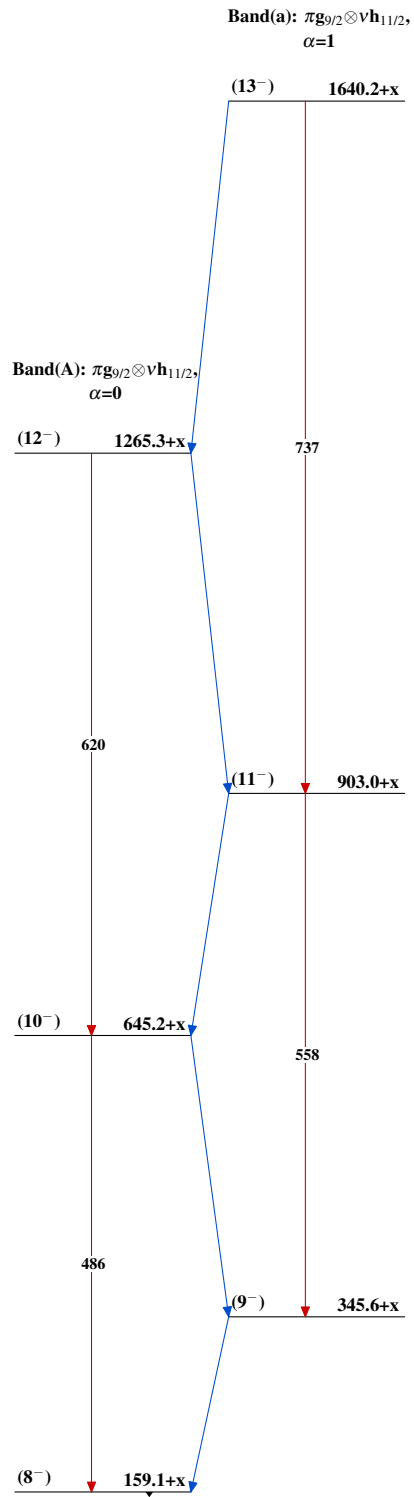
$^\ddagger$  From  $^{208}\text{Pb}(^{18}\text{O},X\gamma)$  in **2003Fo09**.

**(HI,xn $\gamma$ ) 2003Fo09****Level Scheme**Intensities: Relative  $I_{\gamma}$ 

## 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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