^{94}Mo(^{84}Sr,pnγ) 2004GoZZ

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia	NDS 107, 791 (2006)	15-Sep-2005

Target: ≈98% enriched ^{94}Mo; Projectiles: ^{84}Sr, E=380 and 385 MeV; Detectors: GAMMASPHERE, consists of 110 escape-suppressed Ge detectors , a position-sensitive parallel-grid avalanche counter, double-sided silicon strip detector, an array of 4 Ge detector and 1 low energy photon detector; Measured: Eγ, Iγ, $\gamma\gamma$ coin, Eα, $\alpha\gamma$ coin.

^{176}Au Levels

E(level)[†]	J$^\pi$	T$_{1/2}$	Comments
0.0+x	(3$^-$)	1.05 s *1*	Additional information 1. J$^\pi$: ^{176}Au's 6282α decays from this isomeric state to the 4.4 s state, which is assigned a spin of 3 based on beta decay feeding to the 2$^+$ and 4$^+$ states of the yrast band in ^{172}Os (1992Sc16). Following 5520α from the ^{172}Ir to the excited state of ^{168}Re and coincident 123γ E1 transition, a spin of (3$^-$) is assigned for the 1.05 s isomeric state in 2004GoZZ. Possible configuration π1/2[411]+ν7/2[503]. T$_{1/2}$: From 6282α(t).
0.0+y	(9$^+$)	1.36 s *2*	Additional information 2. J$^\pi$: Assigned in 2004GoZZ based on the strong beta decay feeding assumption from this state to the 8$^+$ state in ^{176}Pt (1999Da18). Possible configuration π11/2[505]+ν7/2[503]. T$_{1/2}$: From weighted average of 6080α(t), 6117α(t), and sum line of 6220 keV (t) [6080+212-K, 6117+175-K] in 2004GoZZ.
92.4+y *3*			
205.0+x *10*			
210.0+x *10*			
272.92+y *20*			
283.0+x *10*			
295.60+y *20*			
360.0+x *10*			
447.2+y *11*			
453.9+y *5*			
475.0+y *3*			
618.8+y *3*			
630.6+y *11*			
648.2+y *3*			
655.8+y *3*			
677.5+y *3*			
705.0+y *11*			
780.4+y *4*			
843.1+y *4*			
911.7+y *4*			
936.4+y *3*			
1087.4+y *6*			
1094.2+y *11*			
1288.4+y *4*			
1316.2+y *4*			
1522+y?			
1799.2+y *5*			

[†] From a least squares fit to the gamma ray energy, assuming ΔE=1 keV for γ-rays without uncertainty.

^{94}Mo(^{84}Sr,pnγ) 2004GoZZ (continued)

$\gamma(^{176}Au)$

E_γ	I_γ[†]	E_i(level)	E_f	J^π_f	Comments
(93)		92.4+y	0.0+y	(9^+)	
132.2 *2*	90 *6*	780.4+y	648.2+y		
180.5 *2*	88 *11*	272.92+y	92.4+y		
201	105 *15*	648.2+y	447.2+y		I_γ: from doublet.
202.1 *2*	105 *15*	475.0+y	272.92+y		I_γ: from doublet.
205		205.0+x	0.0+x	(3^-)	
210		210.0+x	0.0+x	(3^-)	
230		705.0+y	475.0+y		
(263.6 *2*)	72 *11*	911.7+y	648.2+y		
272.9 *2*	63 *10*	272.92+y	0.0+y	(9^+)	
283		283.0+x	0.0+x	(3^-)	
295.6 *2*	450 *23*	295.60+y	0.0+y	(9^+)	
323.2 *2*	50 *12*	618.8+y	295.60+y		
335.3	66 *11*	630.6+y	295.60+y		
352.6 *2*	78 *11*	648.2+y	295.60+y		
360		360.0+x	0.0+x	(3^-)	
360.2 *2*	85 *11*	655.8+y	295.60+y		
368.1 *2*	80 *11*	843.1+y	475.0+y		
381.9 *2*	62 *11*	677.5+y	295.60+y		
431.6 *5*	15 *6*	1087.4+y	655.8+y		
434[‡]		1522+y?	1087.4+y		
445.3 *2*	63 *11*	1288.4+y	843.1+y		I_γ: from doublet.
446		1094.2+y	648.2+y		
453.9 *5*	30 *10*	453.9+y	0.0+y	(9^+)	
473.1 *2*	55 *12*	1316.2+y	843.1+y		E_γ: In Table 6.1, 473.1γ and 191γ are shown depopulating the 1761.5 keV level. From the tentative ^{176}Au level scheme shown in fig. 6.9, evaluator calculates the level energy as 1316+y keV. 191γ is not placed in the level scheme.
(484.7 *5*)	20 *10*	780.4+y	295.60+y		
510.8 *2*	57 *11*	1799.2+y	1288.4+y		
616.0 *5*	49 *10*	911.7+y	295.60+y		
640.8 *2*	57 *10*	936.4+y	295.60+y		

[†] Among the reported Iγ in 2004GoZZ, uncertainty noted to be as 0.2 keV for most transitions and 0.5 keV for relatively weak transitions. Evaluator assigned γ-ray uncertainty of 0.2 keV for I$\gamma\geq$50, otherwise 0.5 keV.

[‡] Placement of transition in the level scheme is uncertain.

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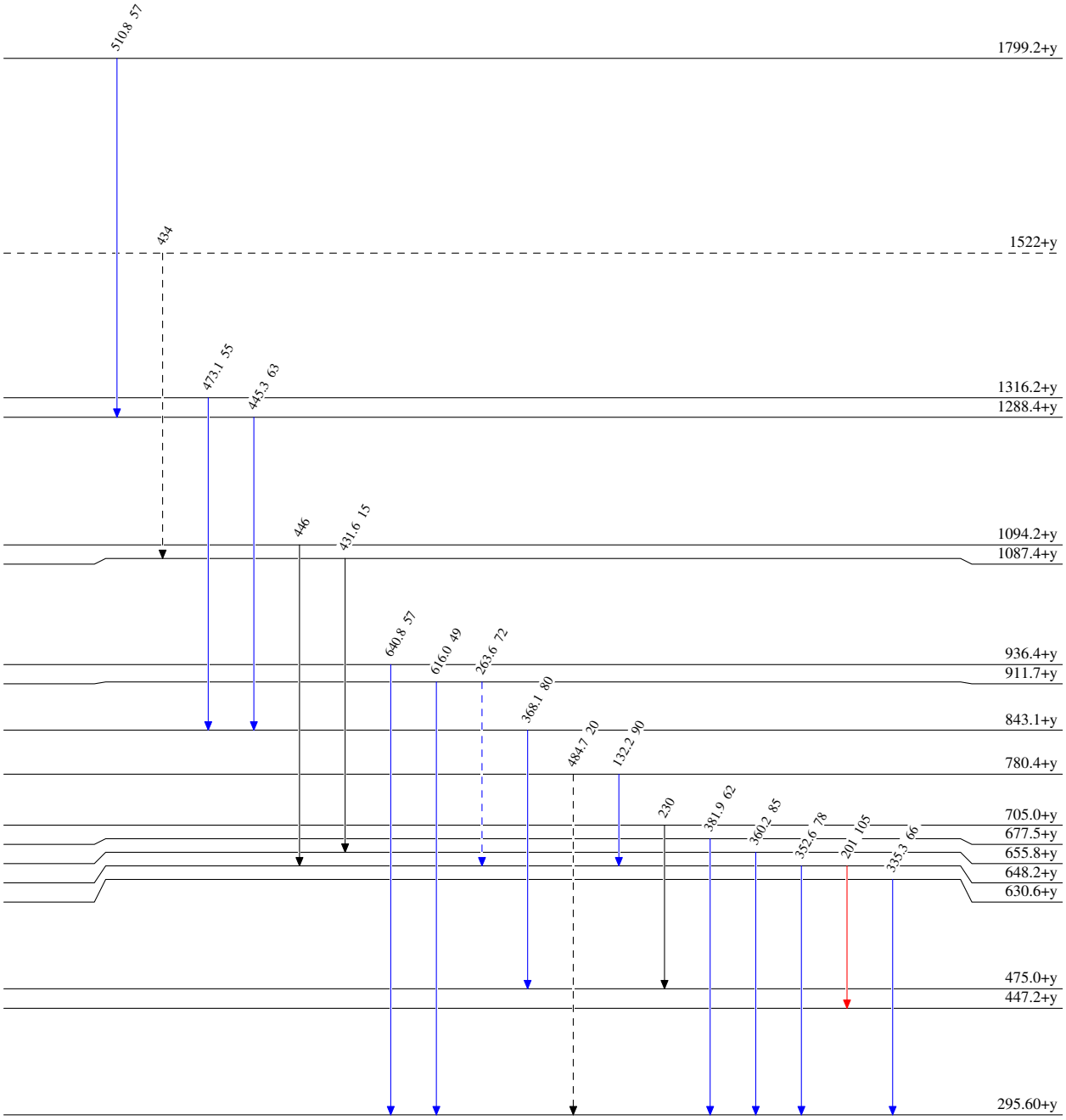
Level Scheme

Intensities: Relative I_γ

Legend

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



$^{176}_{79}Au_{97}$

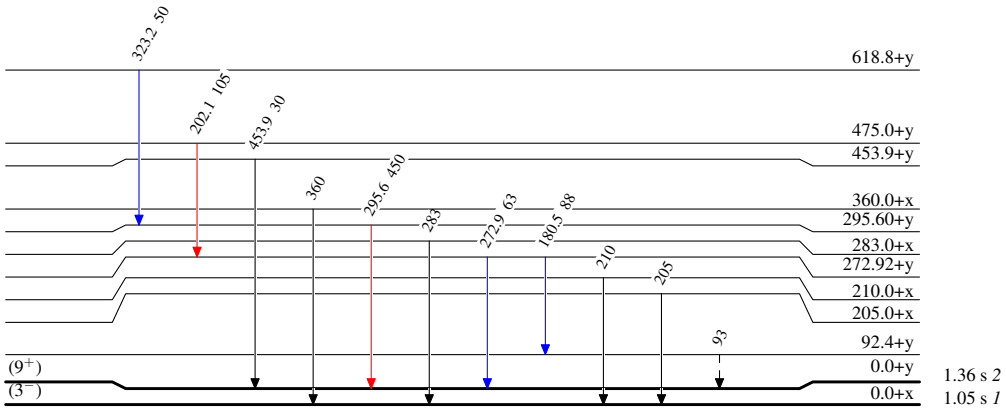
^{94}Mo(^{84}Sr,pnγ) 2004GoZZ

Level Scheme (continued)

Intensities: Relative I_γ

Legend

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



$^{176}_{79}Au_{97}$