^{144}Sm(^{36}Ar,4nγ) 2001Ju09,1998Mu25

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

2001Ju09,1998Mu25: Target: 92.4% enriched ^{144}Sm. Projectile: 190 MeV ^{36}Ar beam. Measured Eγ, Iγ, $\gamma\gamma$ coin, α-γ coin, Eα. Detectors: JUROSPHERE array consist of 12 TESSA-type and 13 Eurogam Phase I Compton suppressed Ge detectors. The TESSA detectors were placed at angles of 78° and 101° and the Eurogam detectors at angles 134° and 158° with respect to the beam direction.

^{176}Hg Levels

E(level)†	J$^\pi$‡	$T_{1/2}$	Comments
0.0	0^+	21 ms *3*	$T_{1/2}$: Determined from the time difference spectrum of recoiled ^{176}Hg and α (2001Ju09,1998Mu25).
613.3 *10*	2^+		
1369.7 *15*	4^+		
1920.7 *18*	6^+		
2373.9 *20*	(8^+)		
2450.6 *20*			
2851.5 *23*			
2874.4 *23*	(10^+)		

† Deduced by evaluator from a least squares fit to the γ-ray energies assuming ΔE=1 keV.
‡ Assigned from stretched E2 transition as determined from measured intensity ratio of γ rays observed by the Ge detectors at 134° and 158° to those observed at 79° and 101° Ge detectors.

γ(^{176}Hg)

E$_\gamma$†	I$_\gamma$†	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
400.9‡	19 *2*	2851.5		2450.6	
453.2	28 *2*	2373.9	(8^+)	1920.7	6^+
500.5	20 *2*	2874.4	(10^+)	2373.9	(8^+)
529.9‡	25 *2*	2450.6		1920.7	6^+
551.0	59 *3*	1920.7	6^+	1369.7	4^+
613.3	100 *5*	613.3	2^+	0.0	0^+
756.4	70 *4*	1369.7	4^+	613.3	2^+

† From both 2001Ju09 and 1998Mu25, same data.
‡ Placement and cascade character of 529.9γ and 400.9γ are tentative.

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Level Scheme

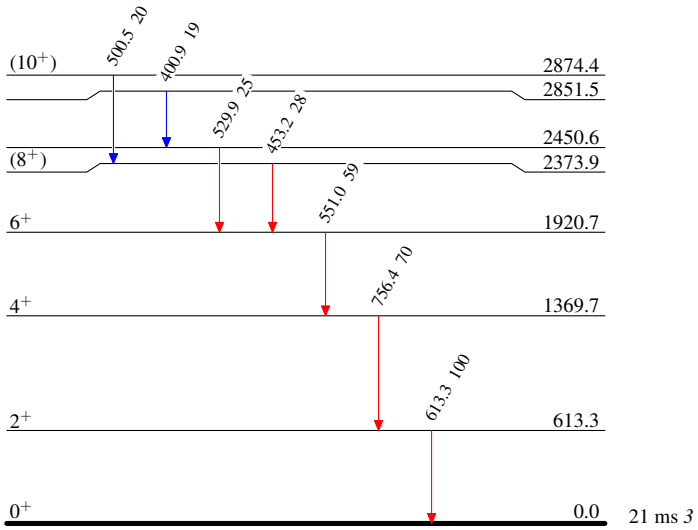
Intensities: Relative I_γ

Legend

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

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

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



$^{176}_{80}Hg_{96}$