

$^{92}\text{Mo}(^{86}\text{Sr},\text{p}2\text{n}\gamma)$ 2011Wa37

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jin Wu	NDS 206,1 (2025)	29-Oct-2024

2011Wa37: The excited states of ^{175}Au were produced via the fusion-evaporation reaction $^{92}\text{Mo}(^{86}\text{Sr},\text{p}2\text{n}\gamma)$ at $E=401$ MeV from K130 cyclotron at JYFL facility, using a target of 1 mg/cm^2 thick. Recoil-decay tagging technique with RITU gas-filled recoil separator. The residues implanted in DSSDs of the GREAT spectrometer. Measured level lifetimes by recoil-distance Doppler-shift (RDDS) method using Cologne Plunger device and JUROGAM II array of 15 EUROGAM phase I type and 12 Clover and escape suppressed HPGe detectors.

Level scheme is taken from **2001Ko44**.

 ^{175}Au Levels

E(level) [‡]	J ^π	T _{1/2} [#]	Comments
0+x	11/2 ⁻	139 ms 2	T _{1/2} : measured in 2011Wa37 from time difference between recoil implantations and α decays from ^{175}Au .
977+x	(13/2 ⁺)	3.9 ns 37	$\tau=300\text{--}11000$ ps (2011Wa37).
1271+x [†]	(17/2 ⁺)	30.5 ps 28	Q(transition)=4.8 2 (2011Wa37).
1594+x [†]	(21/2 ⁺)	7.6 ps 14	Q(transition)=7.6 7 (2011Wa37).
1974+x [†]	(25/2 ⁺)	4.9 ps 14	Q(transition)=6.4 9 (2011Wa37).
2422+x [†]	(29/2 ⁺)		

[†] Band(A): Band based on (17/2⁺).

[‡] **2011Wa37** took from **2001Ko44**.

[#] from RDDS in **2011Wa37**.

 $\gamma(^{175}\text{Au})$

Transitio: **Additional information 1**.

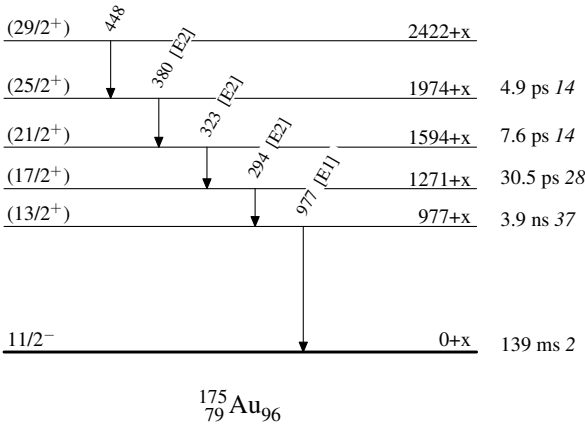
E _{γ} [†]	E _f (level)	J _i ^π	E _f	J _f ^π	Mult.	α [‡]	Comments
294	1271+x	(17/2 ⁺)	977+x	(13/2 ⁺)	[E2]	0.1087 15	$\alpha(\text{K})=0.0652\ 9$; $\alpha(\text{L})=0.0328\ 5$; $\alpha(\text{M})=0.00828\ 12$; $\alpha(\text{N})=0.002044\ 29$; $\alpha(\text{O})=0.000341\ 5$ $\alpha(\text{P})=6.94\times 10^{-6}\ 10$
323	1594+x	(21/2 ⁺)	1271+x	(17/2 ⁺)	[E2]	0.0824 12	$\alpha(\text{K})=0.0518\ 7$; $\alpha(\text{L})=0.02309\ 32$; $\alpha(\text{M})=0.00580\ 8$; $\alpha(\text{N})=0.001432\ 20$; $\alpha(\text{O})=0.0002403\ 34$ $\alpha(\text{P})=5.57\times 10^{-6}\ 8$
380	1974+x	(25/2 ⁺)	1594+x	(21/2 ⁺)	[E2]	0.0523 7	$\alpha(\text{K})=0.0352\ 5$; $\alpha(\text{L})=0.01293\ 18$; $\alpha(\text{M})=0.00322\ 5$; $\alpha(\text{N})=0.000795\ 11$; $\alpha(\text{O})=0.0001349\ 19$ $\alpha(\text{P})=3.84\times 10^{-6}\ 5$
448	2422+x	(29/2 ⁺)	1974+x	(25/2 ⁺)			
977	977+x	(13/2 ⁺)	0+x	11/2 ⁻	[E1]	$2.30\times 10^{-3}\ 3$	$\alpha(\text{K})=0.001933\ 27$; $\alpha(\text{L})=0.000287\ 4$; $\alpha(\text{M})=6.56\times 10^{-5}\ 9$; $\alpha(\text{N})=1.626\times 10^{-5}\ 23$; $\alpha(\text{O})=2.97\times 10^{-6}\ 4$ $\alpha(\text{P})=1.975\times 10^{-7}\ 28$ E _{γ} : 997 in table I of 2011Wa37 seems a misprint.

[†] **2011Wa37** took from **2001Ko44**.

[‡] **Additional information 2**.

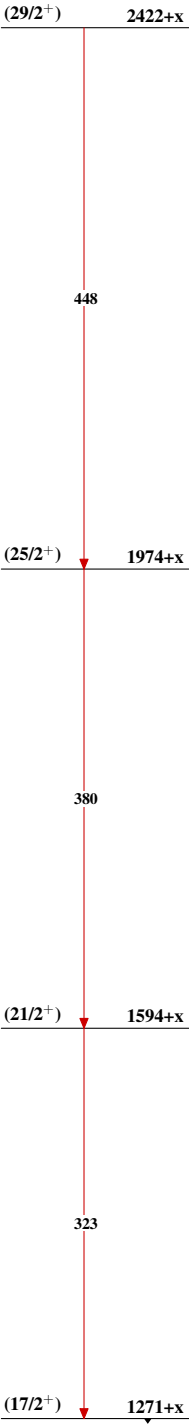
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Level Scheme



$^{92}\text{Mo}(^{86}\text{Sr},\text{p}2\text{n}\gamma)$ 2011Wa37

Band(A): Band based on
(17/2⁺)



$^{175}_{79}\text{Au}_{96}$