Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	J. Tuli	ENSDF	15-Aug-2015

Q(β^-)=−10107 *SY*; S(n)=11519 *79*; S(p)=−992 *22*; Q(α)=6836 *5* 2012Wa38
ΔQ(β^-)=210 syst, ΔS(n)=162 syst (2012Wa38).
Identification: time and position correlation of α-emitting products from fusion evaporation reactions of ^{92}Mo with targets of neutron-deficient isotopes from Rb to Mo, correlation to known ^{169}Ir daughter.
See 1984Al36 for analysis of mass and proton-stability data for ^{173}Au.

^{173}Au Levels

Cross Reference (XREF) Flags

- A ^{177}Tl α decay (18 ms)
- B ^{177}Tl α decay (0.23 ms)
- C (HI,xnγ)

E(level)†	J$^\pi$‡	$T_{1/2}$	XREF	Comments
0.0	(1/2$^+$)	26.3 ms *12*	A C	%α=94 *19* (1999Po09); %ε+%β^+=?; %p=? %ε+%β^+: ≈6 based on gross β decay theory (1997Mo25); only α decay observed, consistent with observed %α. $T_{1/2}$: From α(t) (2012Th13) Other: 25 ms *1* from 6890α-γ(t) (2001Ko14). $T_{1/2}$: from α-γ(t) In ^{92}Mo(^{84}Sr,p2nγ). other: 20 ms *+9−6* (1999Po09). J$^\pi$: unhindered α decay from (1/2$^+$) ^{177}Tl. Probable configuration=(π 1/2[400]).
214 *23*	(11/2$^-$)	12.2 ms *1*	BC	%α=92 *13* (1999Po09); %ε+%β^+=?; %p=? XREF: C(0.0+X). $T_{1/2}$: From α decay of ^{173}Au isomer (2012Th13). Others: 14 ms *1* from 6740α-γ(t) In ^{92}Mo(^{84}Sr,p2nγ) (2001Ko44), 12 ms *+3−2* (1999Po09), 15 ms *2* (1996Pa01), 59 ms *+45−18* (1983Sc24). E(level): from ^{177}Tl α decay (0.23 ms). J$^\pi$: unhindered α decay from (11/2$^-$) ^{177}Tl. probable configuration=(π 11/2[505]).
806.2	(15/2)		C	
888.0	(13/2)		C	
1766.1	(17/2)		C	
2198.5	(21/2)		C	

† From Eγ, except As noted. for E>214, energies are given relative to E=214 for the (11/2$^-$) isomer and do not include the 23 keV uncertainty In that energy.
‡ Values given without comment are from ^{92}Mo(^{84}Sr,p2nγ). The proposed J$^\pi$ are consistent with systematics In heavier odd-A Au and Tl isotopes (2001Ko44).

γ(^{173}Au)

E_i(level)	J_i^π	E_γ†	I_γ	E_f	J_f^π
806.2	(15/2)	592.2	100	214	(11/2$^-$)
888.0	(13/2)	674.0	100	214	(11/2$^-$)
1766.1	(17/2)	959.9	100	806.2	(15/2)
2198.5	(21/2)	432.4	100	1766.1	(17/2)

† From ^{92}Mo(^{84}Sr,p2nγ). uncertainties unstated by authors.

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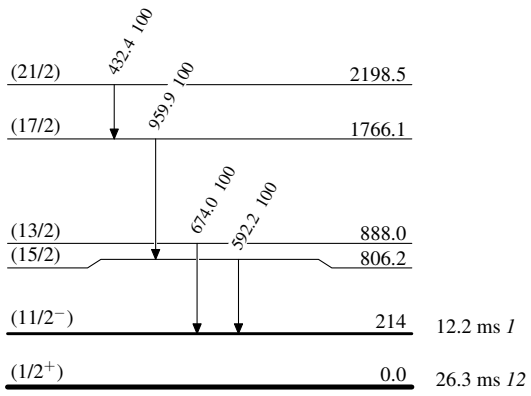
Level Scheme

Intensities: Relative photon branching from each level



$^{173}_{79}Au_{94}$