Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 195,1 (2024)	19-Sep-2023

Q(β^-)=−11550 *syst*; S(n)=11560 *syst*; S(p)=2510 *30*; Q(α)=5678.3 *24* 2021Wa16
ΔQ(β^-)=200, ΔS(n)=200 (syst,2021Wa16).
S(2n)=20810 *150*, S(2p)=2638 *20*, Q(εp)=5028 *29* (2021Wa16).

^{162}W Levels

Cross Reference (XREF) Flags

- A ^{166}Os α decay (213 ms)
- B ^{92}Mo(^{78}Kr,2$\alpha\gamma$)
- C ^{106}Cd(^{60}Ni,2p2nγ)
- D ^{107}Ag(^{58}Ni,p2nγ)

E(level)†	J$^\pi$‡	$T_{1/2}$	XREF	Comments
0.0#	0$^+$	1.19 s *12*	ABCD	%α=45.2 *16*; %ε+%β^+=54.8 *16* $T_{1/2}$: from α-decay curves. Unweighted average of 1.39 s *4* (1979Ho10), 1.2 s *1* (1996Pa01) and 0.990 s *30* (2015Li24, recoil-α-α-α correlated decay curve). Discrepant set of measured half-lives. Weighted average is 1.14 s *13* but reduced χ^2=32. Other: <0.25 s (1973Ea01). %α: weighted average of 46 *4* (1981Ho10), 49 *4* (1989Wo02) and 44 *2* (1996Pa01). 1979Ho10 report %α>70, but this was superseded by the results of a subsequent study (1981Ho10) by this group.
449.5# *3*	(2$^+$)	19 ps *8*	BCD	$T_{1/2}$: RDDS method (2017Do06, ^{92}Mo dataset). J$^\pi$: stretched quadrupole (E2) to 0$^+$.
1012.5# *5*	(4$^+$)		BCD	J$^\pi$: stretched quadrupole (E2) to (2$^+$).
1638.4# *6*	(6$^+$)		BCD	
1972.9 *21*			C	
2267.2# *7*	(8$^+$)		BCD	
2393.3 *11*			CD	
2425.8 *12*			CD	
2507.9 *12*			C	
2823.4# *9*	(10$^+$)		BCD	
2891.6 *8*			CD	
3047.7 *13*			CD	
3119.3@ *10*	(11$^-$)		CD	
3442.1# *13*	(12$^+$)		BCD	
3654.3@ *14*	(13$^-$)		CD	
4122.5# *17*	(14$^+$)		CD	
4252.7@ *18*	(15$^-$)		CD	
4832.3@ *20*	(17$^-$)		CD	
4851.1# *26*	(16$^+$)		CD	
5562.7 *28*			CD	

† From least-squares fit to Eγ values.
‡ As proposed by 2016Jo01, based on $\gamma\gamma(\theta)$(DCO) data for the 450 and 563 transitions, and band structures for the remaining levels.

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{162}W Levels (continued)

[#] Band(A): Band based on g.s. Configuration=$\nu i^2_{13/2}$ before the band crossing at $\hbar\omega\approx0.3$ MeV, $\nu i^2_{13/2}\otimes\nu h^2_{9/2}$ after the crossing.
[@] Band(B): Band based on (11^-). Configuration=$\nu i_{13/2}\otimes\nu(h_{9/2},f_{7/2})$.

$\gamma(^{162}W)$

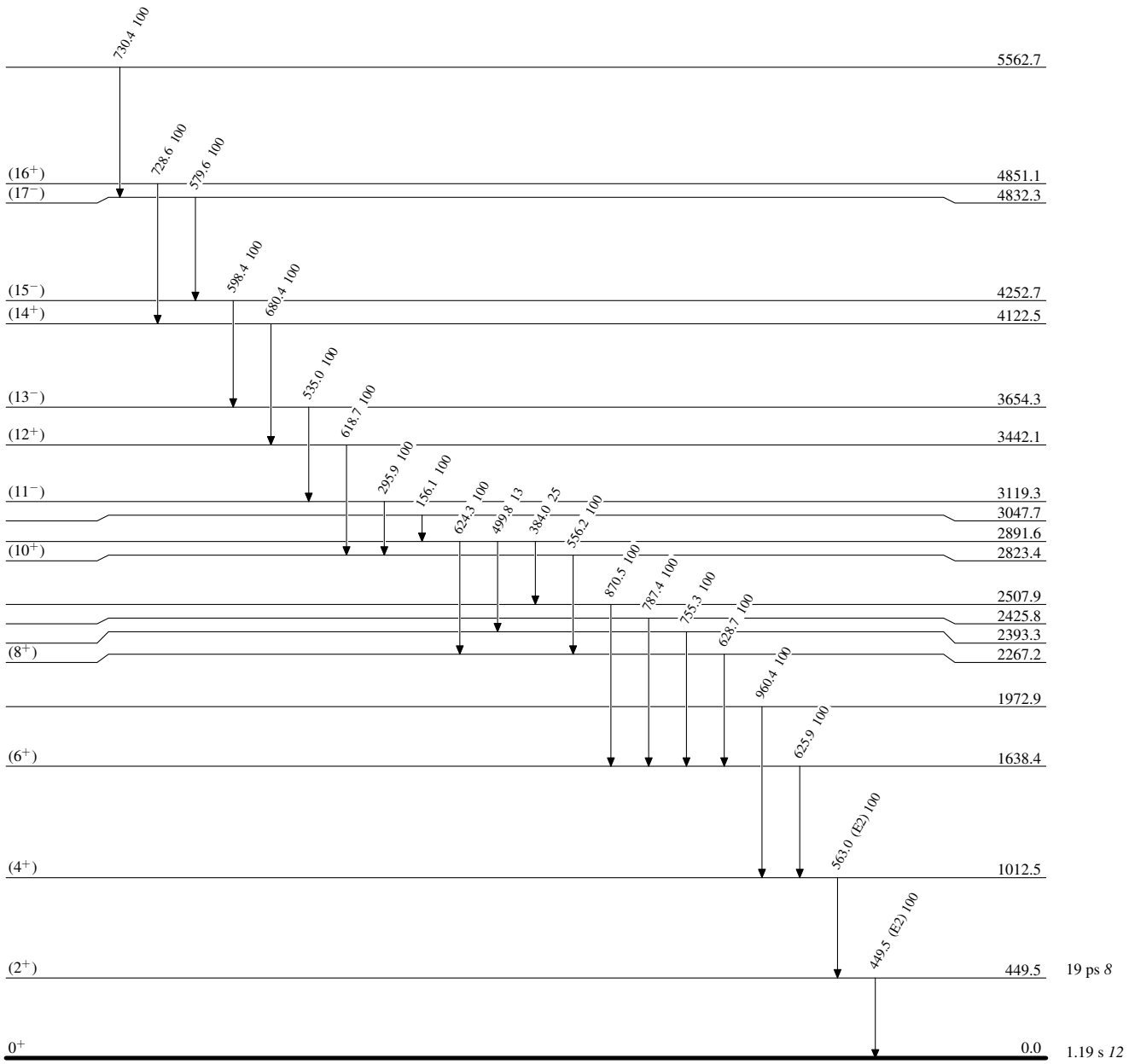
E_i(level)	J^π_i	E_γ[†]	I_γ	E_f	J^π_f	Mult.	α[‡]	Comments
449.5	(2^+)	449.5 *3*	100	0.0	0^+	(E2)	0.0275	α(K)=0.0206 *3*; α(L)=0.00529 *8*; α(M)=0.001262 *18* α(N)=0.000301 *5*; α(O)=4.53×10^{-5} *7*; α(P)=1.87×10^{-6} *3* B(E2)(W.u.)=30 *+21−9*
1012.5	(4^+)	563.0 *3*	100	449.5	(2^+)	(E2)	0.01572	α(K)=0.01224 *18*; α(L)=0.00268 *4*; α(M)=0.000631 *9* α(N)=0.0001506 *22*; α(O)=2.31×10^{-5} *4*; α(P)=1.126×10^{-6} *16*
1638.4	(6^+)	625.9 *4*	100	1012.5	(4^+)			
1972.9		960.4 *20*	100	1012.5	(4^+)			
2267.2	(8^+)	628.7 *3*	100	1638.4	(6^+)			
2393.3		755.3 *10*	100	1638.4	(6^+)			
2425.8		787.4 *10*	100	1638.4	(6^+)			
2507.9		870.5 *20*	100	1638.4	(6^+)			
2823.4	(10^+)	556.2 *5*	100	2267.2	(8^+)			
2891.6		384.0 *10*	25 *6*	2507.9				
		499.8 *20*	13 *5*	2393.3				
		624.3 *5*	100 *11*	2267.2	(8^+)			
3047.7		156.1 *10*	100	2891.6				
3119.3	(11^-)	295.9 *5*	100	2823.4	(10^+)			
3442.1	(12^+)	618.7 *10*	100	2823.4	(10^+)			
3654.3	(13^-)	535.0 *10*	100	3119.3	(11^-)			
4122.5	(14^+)	680.4 *10*	100	3442.1	(12^+)			
4252.7	(15^-)	598.4 *10*	100	3654.3	(13^-)			
4832.3	(17^-)	579.6 *10*	100	4252.7	(15^-)			
4851.1	(16^+)	728.6 *20*	100	4122.5	(14^+)			
5562.7		730.4 *20*	100	4832.3	(17^-)			

[†] Weighted averages taken when values are available from ^{92}Mo(^{78}Kr,2$\alpha\gamma$) and ^{106}Cd(^{60}Ni,2p2nγ), otherwise from from the (^{78}Kr,2$\alpha\gamma$) reaction.
[‡] Additional information 1.

Adopted Levels, Gammas

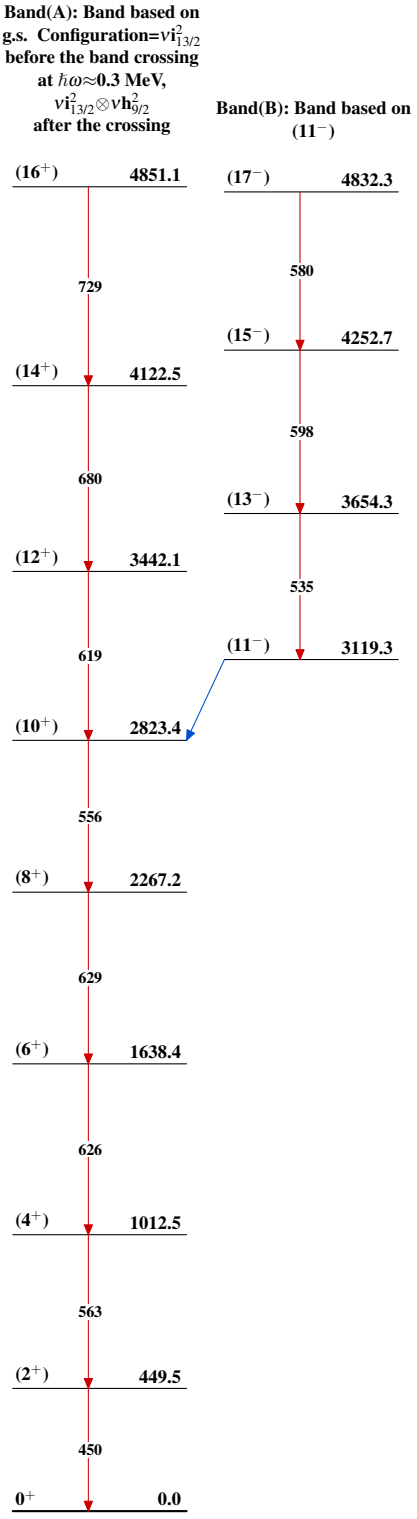
Level Scheme

Intensities: Relative photon branching from each level



$^{162}_{74}W_{88}$

Adopted Levels, Gammas



$^{162}_{74}W_{88}$