Adopted Levels, Gammas

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 134, 149 (2016)	15-Apr-2015

Q(β^-)=2010 *30*; S(n)=5310 *30*; S(p)=8700 *SY*; Q(α)=830 *SY* 2012Wa38
Uncertainty In S(p) and Q(α) is 200 (2012Wa38).

^{183}Hf Levels

Cross Reference (XREF) Flags

A ^{183}Lu β^- decay
B ^{183}Hf^{71+} IT decay

E(level)†	J$^\pi$‡	$T_{1/2}$	XREF	Comments
0.0#	(3/2$^-$)	1.018 h *2*	A	%β^-=100 $T_{1/2}$: from γ(t) (2006Vo12) In ^{183}Hf β^- decay. others: 1.05 h *5* (1967Mo13), 1.067 h *17* (1966Ba06), 1.10 h *7* (1960Po01), 1.07 h *5* (1956Ga46) from β^- decay. the weighted average of all data is 1.019 h *3* and the unweighted average is 1.061 h *13*.
68.57# *18*	(5/2$^-$)		A	J$^\pi$: intraband (M1) 69γ to (3/2$^-$) g.s..
168.1# *3*	(7/2$^-$)		A	J$^\pi$: intraband 99γ to (5/2$^-$) 69; intraband 168γ to (3/2$^-$) g.s..
205.7 *5*	(5/2$^-$)		A	likely configuration: 5/2 *1*/2[510] (1983Ry01). 137γ to (5/2$^-$) 69; 206γ to (3/2$^-$) g.s..
316.9 *4*	(7/2$^-$)		A	likely configuration: 7/2 *7*/2[503] (1983Ry01). 316γ to (3/2$^-$) g.s.; 149γ to (7/2$^-$) 168.
1125.3@ *4*	(5/2$^+$)		A	allowed β^- decay (log *ft*=5.6) from possible 7/2[404] ^{183}Lu. 1125γ to (3/2$^-$) g.s.; 957γ to (7/2$^-$) 168.
1255.8@ *6*	(7/2$^+$)		A	1088γ to (7/2$^-$) 168; 1187γ to (5/2$^-$) 69.
1464 *64*			B	%IT(^{183}Hf^{71+})=100; $T_{1/2}$(^{183}Hf^{71+})=10 s *+48−5* (2010Re07, 2012Re19) from ^{183}Hf^{71+} IT decay. J$^\pi$: possibly the K$^\pi$=27/2$^-$ state with configuration ((π 7/2[404])+(π 9/2[514])+(ν 11/2[615])) and predicted E=1712 (2010Re07, 2012Re19). E(level): from direct mass measurement In ^{183}Hf^{71+} IT decay (2010Re07, 2012Re19).
1604.8 *8*	(≤9/2)		A	J$^\pi$: 1537γ to (5/2$^-$) 69, 1437γ to (7/2$^-$) 168 suggest J$^\pi$=(3/2$^-$,5/2,7/2,9/2$^-$).

† From least-squares fit to adopted Eγ.
‡ Suggested by 1983Ry01 based on systematics.
# Band(A): 3/2[512] band. Analogous to ^{185}W isotone (1983Ry01). Band parameters: E_0=−20, α=13.4, B=42.0 (J=3/2,5/2,7/2 levels).
@ Band(B): π=(+) 3-quasiparticle band. Possible configuration: ((π 11/2[615])(π 9/2[514])(ν 7/2[514])) (1983Ry01).

γ(^{183}Hf)

E_i(level)	J_i^π	E_γ‡	I_γ‡	E_f	J_f^π	Mult.	α†	Comments
68.57	(5/2$^-$)	68.6 *2*	100.0	0.0	(3/2$^-$)	(M1)	11.79 *19*	Mult.: from intensity balance In β^- decay.
168.1	(7/2$^-$)	99.4 *5*	33 *7*	68.57	(5/2$^-$)	[M1+E2]	3.84 *25*	
		168.2 *4*	100 *10*	0.0	(3/2$^-$)	[E2]	0.519 *9*	
205.7	(5/2$^-$)	137.3 *6*	40 *10*	68.57	(5/2$^-$)	[E2]	1.067 *23*	

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

$\gamma(^{183}Hf)$ (continued)

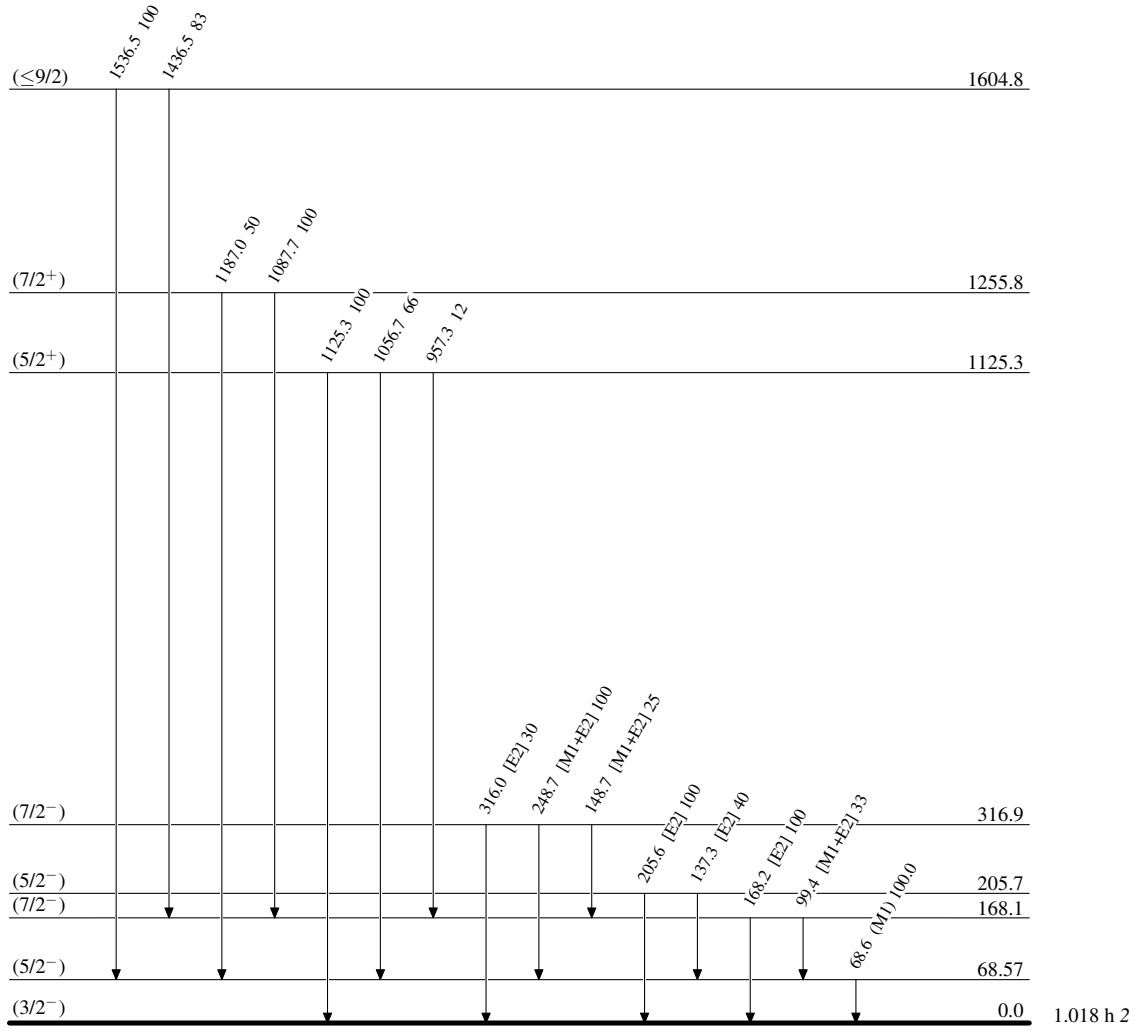
E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.	α[†]
205.7	$(5/2^-)$	205.6 *6*	100 *30*	0.0	$(3/2^-)$	[E2]	0.262 *5*
316.9	$(7/2^-)$	148.7 *6*	25 *5*	168.1	$(7/2^-)$	[M1+E2]	1.05 *25*
		248.7 *5*	100 *10*	68.57	$(5/2^-)$	[M1+E2]	0.23 *9*
		316.0 *10*	30 *10*	0.0	$(3/2^-)$	[E2]	0.0679 *12*
1125.3	$(5/2^+)$	957.3 *6*	12 *3*	168.1	$(7/2^-)$		
		1056.7 *5*	66 *7*	68.57	$(5/2^-)$		
		1125.3 *5*	100 *10*	0.0	$(3/2^-)$		
1255.8	$(7/2^+)$	1087.7 *6*	100 *25*	168.1	$(7/2^-)$		
		1187.0 *10*	50 *25*	68.57	$(5/2^-)$		
1604.8	$(\leq 9/2)$	1436.5 *10*	83 *42*	168.1	$(7/2^-)$		
		1536.5 *10*	100 *50*	68.57	$(5/2^-)$		

[†] Additional information 1.
[‡] From ^{183}Lu β^- decay.

Adopted Levels, Gammas

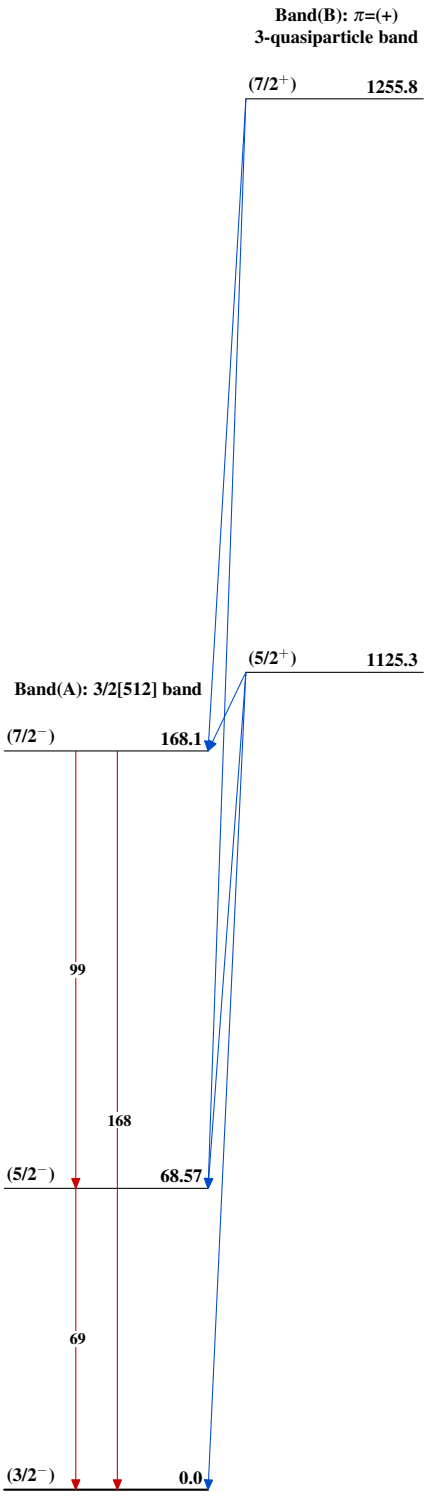
Level Scheme

Intensities: Relative photon branching from each level



$^{183}_{72}Hf_{111}$

Adopted Levels, Gammas



$^{183}_{72}Hf_{111}$