Coulomb excitation 1978Ro11,1981HuZV

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 113, 1871 (2012)	15-Jun-2012

Others: 1966Gr20, 1970Br26, 1971Mi08, 1977Jo05, 1977Le15, 1977Ro16, 1984Mu19, 1987Gy01, 1992Br03, 1995An15.
1966Gr20: E(^{16}O)=36 MeV.
1970Br26: E(α)=10 MeV, E(α)=15 MeV, E(^{16}O)=41 MeV.
1971Mi08: E(p)=4.5 MeV, E(^{16}O)=43.75 MeV.
1977Jo05: E(^{40}Ar)=149 MeV.
1977Le15: E(^{136}Xe)=620 MeV.
1977Ro16: E(α)=14.9 MeV.
1978Ro11: E(^{84}Kr)=370 MeV; Pt metallic foil targets enriched to 93.5% in ^{192}Pt; measured prompt and delayed particle-γ and particle-$\gamma\gamma$ coin (Si, Ge(Li), NaI(Tl) detectors).
1981HuZV: E(^{208}Pb)=? (energy not given).
1984Mu19: E(p)=5.0-6.0 MeV.
1987Gy01: E(α)=14.4-15.2 MeV, E(^{12}C)=41-48 MeV, E(^{16}O)=55-60 MeV.
1992Br03: E(^{58}Ni)=180-210 MeV; measured $\gamma(\theta$,H,T) in polarized Gd and Fe.
1995An15: E(^{58}Ni)=160 MeV; measured $\gamma(\theta$,H,T) in polarized Gd.
The level scheme is from 1978Ro11 and 1981HuZV. Data are from 1978Ro11, except where noted.

^{192}Pt Levels

E(level)[†]	J$^\pi$[‡]	$T_{1/2}$	Comments
0.0[@]	0^+	stable	
316.5[@]	2^+	43.7 ps *9*	B(E2)↑=1.88 *4* B(E2)↑: Weighted average of 2.00 *4* (1970Br26), 2.10 *12* (1971Mi08), 1.89 *3* (1977Ro16), and 1.833 *20* (1987Gy01). Others: 1966Gr20 (2.3 *3*, relative to 1.94 *20* for ^{194}Pt(0^+ to 2^+)); 1984Mu19 (1.77 *5*, relative to 1.620 *15* for ^{194}Pt(0^+ to 2^+)). $T_{1/2}$: deduced from B(E2) and adopted γ-ray properties. Other value: 48.5 ps *25* (Doppler-shift recoil-distance measurements, 1977Jo05). g-factor(^{192}Pt)/g-factor(^{194}Pt, 328)=1.00 *4* (1995An15), 1.08 *5* (1992Br03).
612.4[&]	2^+	31 ps *6*	B(E2)↑=0.015 *3* B(E2)↑: Weighted average of 0.020 *3* (1970Br26, relative to 1.65 *2* for ^{194}Pt(0^+ to 2^+)) and 0.013 *2* (1977Ro16). $T_{1/2}$: from B(E2) and adopted γ-ray properties. g-factor(^{192}Pt)/g-factor(^{194}Pt, 328)=0.95 *10* (1992Br03).
784.6[@]	4^+	4.2 ps *2*	$T_{1/2}$: Doppler-shift recoil-distance measurements (1977Jo05). g-factor(^{192}Pt)/g-factor(^{194}Pt, 328)=0.94 *15* (1992Br03).
922[#&]	3^+		
1201.0[&]	4^+		
1365.3[@]	6^+	1.8 ps *7*	$T_{1/2}$: Doppler-shift recoil-distance measurements (1977Jo05).
1378.2	3^-	41 ps *9*	B(E3)↑=0.17 *3* B(E3): from 1977Ro16; collective strength suggests octupole vibration character. E(level): from 1977Ro16. $T_{1/2}$: deduced from B(E3) and adopted γ-ray properties.
1481.9[&]	5^+		
1869[&] *1*	6^+		
2018.1[@]	8^+		
2113.1[&]	7^+		
2518.7[a]	$(10)^+$		
2583[#b]	(10^+)		
2591[#&]	8^+		

Continued on next page (footnotes at end of table)

Coulomb excitation 1978Ro11,1981HuZV (continued)

^{192}Pt Levels (continued)

E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡
2623.4[a]	(12)+	2936[#b]	(12+)	3542[#a]	(16)+
2729[#@]	10+	2998.0[a]	(14)+	4203[#a]	(18)+
				4950[#a]	(20+)

† From 1978Ro11, except as noted.
‡ Adopted values.
# From 1981HuZV.
@ Band(A): K=0 g.s. band.
& Band(B): K=2 quasi-γ vibration band.
a Band(C): neutron superband; yrast.
b Band(D): aligned proton band (proton superband).

γ(^{192}Pt)

Eγ†	Iγ‡	Ei(level)	Jiπ	Ef	Jfπ	Eγ†	Iγ‡	Ei(level)	Jiπ	Ef	Jfπ
104.7		2623.4	(12)+	2518.7	(10)+	580.7	24.0 *23*	1365.3	6+	784.6	4+
295.9	30.0 *25*	612.4	2+	316.5	2+	588.6	20.0 *14*	1201.0	4+	612.4	2+
309[#]		922	3+	612.4	2+	605[#]		922	3+	316.5	2+
316.5	100	316.5	2+	0.0	0+	612.4		612.4	2+	0.0	0+
353[#]		2936	(12+)	2583	(10+)	631.2		2113.1	7+	1481.9	5+
374.6		2998.0	(14)+	2623.4	(12)+	652.8	5.3 *6*	2018.1	8+	1365.3	6+
416.4	1.6 *3*	1201.0	4+	784.6	4+	661[#]		4203	(18)+	3542	(16)+
468.1	57 *4*	784.6	4+	316.5	2+	668	5.1 *6*	1869	6+	1201.0	4+
500.6	0.78 *25*	2518.7	(10)+	2018.1	8+	711[#]		2729	10+	2018.1	8+
544[#]		3542	(16)+	2998.0	(14)+	722[#]		2591	8+	1869	6+
561[#]		1481.9	5+	922	3+	747[#]		4950	(20+)	4203	(18)+
565[#]		2583	(10+)	2018.1	8+	884.5		1201.0	4+	316.5	2+

† From level energy differences, except as noted.
‡ Relative to Iγ(316.5γ)=100 for excitation by ^{84}Kr, 370 MeV (1978Ro11). ΔIγ includes efficiency-calibration (5%) and statistical uncertainties.
# From 1981HuZV (evaluator deduced Eγ values from authors′ level-energy differences).

Coulomb excitation 1978Ro11,1981HuZV

Level Scheme

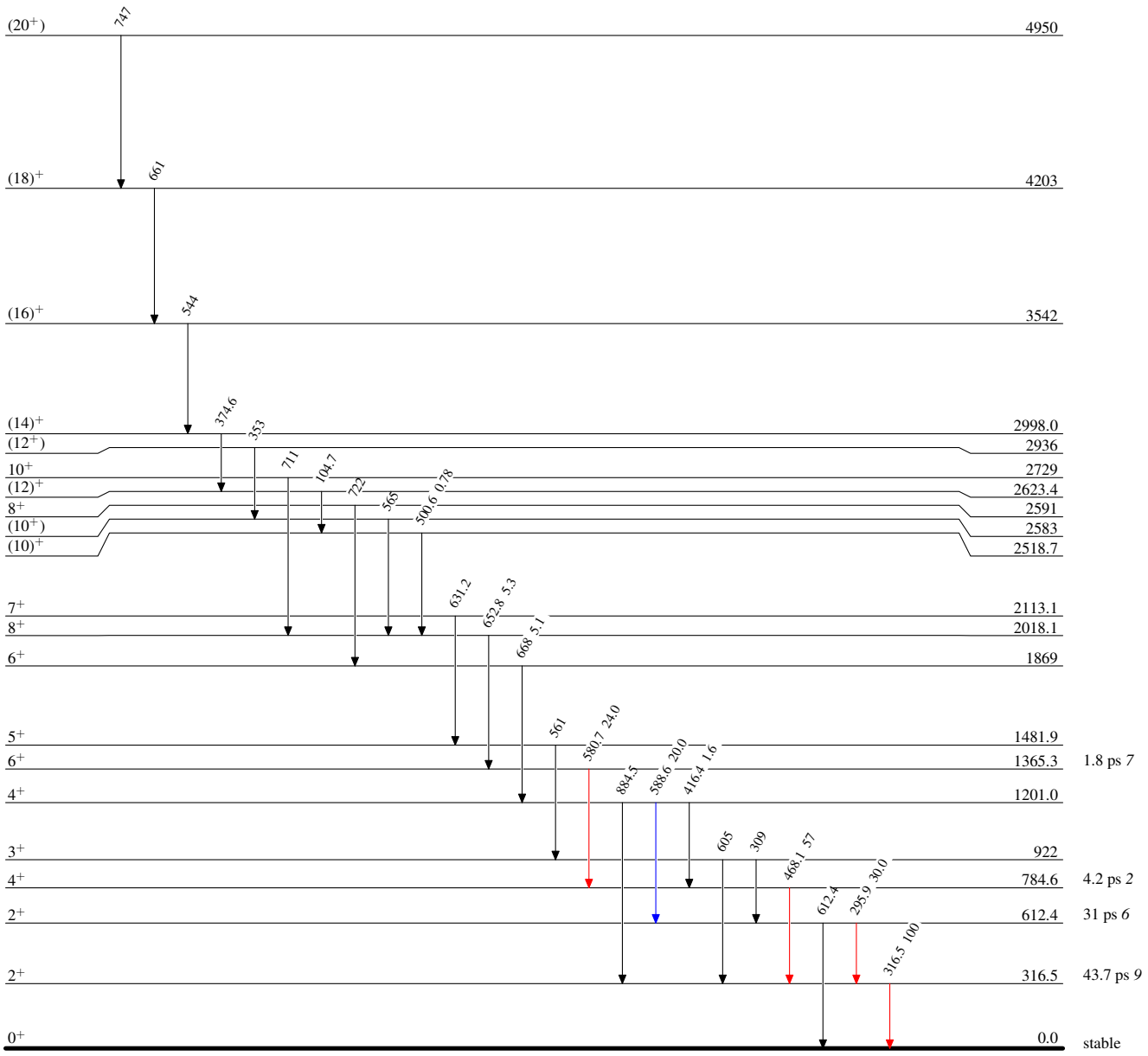
Intensities: Relative Iγ for excitation by ^{84}Kr, 370 MeV

Legend

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

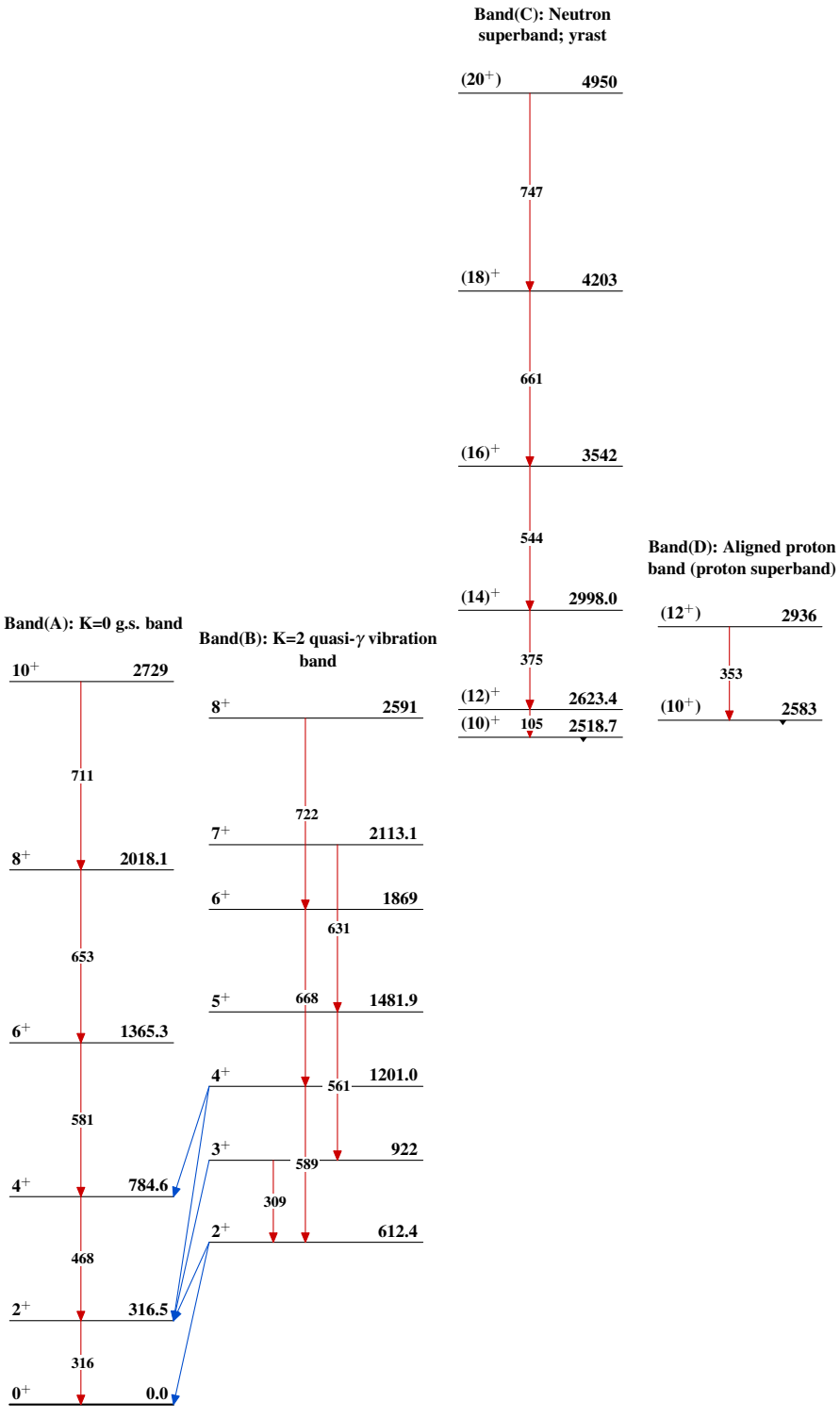
$I_\gamma < 10\% \times I_\gamma^{max}$

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



$^{192}_{78}Pt_{114}$

Coulomb excitation 1978Ro11,1981HuZV



$^{192}_{78}Pt_{114}$