^{209}Bi(π^-,4nγ) 1978Be24

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 166, 1 (2020)	20-Apr-2020

1978Be24: Pions energy: 125 MeV; Target: ^{209}Bi powder target 1.22 g/cm^2 thick; Detectors: Four scintillation counters and a Cerenkov counter(for identification of stopped pions), several Ge(Li) and NaI; Measured: Eγ, Iγ.

^{205}Pb Levels

E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡
0	5/2$^-$	987.5 *7*	9/2$^-$	1697.3 *7*	17/2$^+$	3195.6 *10*	25/2$^-$
2.2 *10*	1/2$^-$	1013.8 *5*	13/2$^+$	2020.5 *9*	19/2$^+$	3625.8 *12*	29/2$^-$
703.4 *5*	7/2$^-$	1043.7 *5*	7/2$^-$	2555.4 *10*	(21/2$^+$)	3909.9 *13*	(27/2$^-$)
761.4 *12*	5/2$^-$	1264.7 *5*	5/2$^-$	3167.9 *10*	21/2$^-$		

† From a least-squares fit to Eγ.
‡ From Adopted Levels.

γ(^{205}Pb)

E$_\gamma$†	I$_\gamma$‡	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Comments
(2.23)		2.2	1/2$^-$	0	5/2$^-$	
284.1# *5*	0.0040# *13*	987.5	9/2$^-$	703.4	7/2$^-$	
284.1# *5*	0.0040# *13*	3909.9	(27/2$^-$)	3625.8	29/2$^-$	
323.2 *5*	0.020 *6*	2020.5	19/2$^+$	1697.3	17/2$^+$	I$_\gamma$: contaminated with Eγ in ^{204}Pb.
430.2 *5*	0.005 *2*	3625.8	29/2$^-$	3195.6	25/2$^-$	
534.9 *5*	<0.024	2555.4	(21/2$^+$)	2020.5	19/2$^+$	
683.5 *5*	0.020 *1*	1697.3	17/2$^+$	1013.8	13/2$^+$	
703.4 *5*	0.0026 *8*	703.4	7/2$^-$	0	5/2$^-$	
759.2 *5*	0.0051 *9*	761.4	5/2$^-$	2.2	1/2$^-$	
1013.8 *5*	≤0.018	1013.8	13/2$^+$	0	5/2$^-$	I$_\gamma$: contaminated with Eγ in ^{27}Al.
1043.7 *5*	≤0.009	1043.7	7/2$^-$	0	5/2$^-$	I$_\gamma$: contaminated with Eγ in ^{127}I.
1147.4 *5*	0.011 *5*	3167.9	21/2$^-$	2020.5	19/2$^+$	
1175.1 *5*	0.022 *8*	3195.6	25/2$^-$	2020.5	19/2$^+$	
1264.7 *5*	0.0033 *9*	1264.7	5/2$^-$	0	5/2$^-$	

† From 1978Be24. ΔEγ estimated by the evaluator.
‡ From 1978Be24.
# Multiply placed with undivided intensity.

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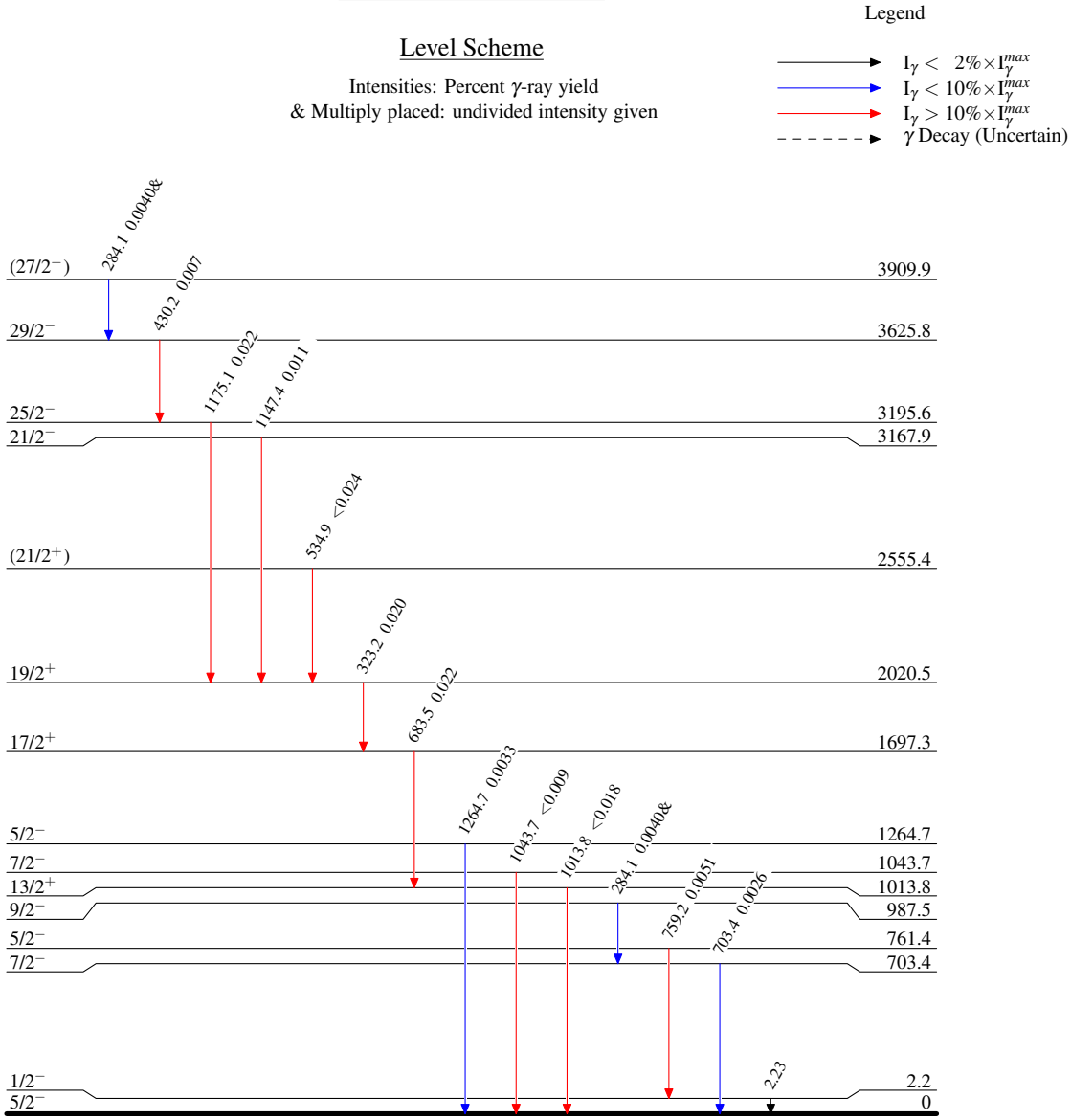
Level Scheme

Intensities: Percent γ-ray yield
& Multiply placed: undivided intensity given



$^{205}_{82}Pb_{123}$