

$^{209}\text{Bi}(\pi^-, 6n\gamma)$ 1978Be24

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 177, 509, 2021	4-Jul-2021

1978Be24: Pions energy: 125 MeV; Target: ^{209}Bi powder target 1.22 g/cm² thick; Detectors: Four scintillation counters and a Cerenkov counter (for identification of stopped pions), several Ge(Li) and NaI; Measured: E_γ , I_γ .

 ^{203}Pb Levels

$E(\text{level})^\dagger$	$J^\pi^\ddagger$	$E(\text{level})^\dagger$	$J^\pi^\ddagger$	$E(\text{level})^\dagger$	$J^\pi^\ddagger$
0	$5/2^-$	896.9 5	$9/2^-$	1663.9 7	$17/2^+$
126.5 4	$1/2^-$	933.4 5	$(5/2)^-$	1922.5 9	$21/2^+$
825.2 5	$13/2^+$	1198.6 5	$9/2^-$	2161.9 9	$(21/2)^+$
866.5 4	$5/2^-$	1203.1 5	$(7/2)^-$	2796.4 9	$23/2^+$
				2949.6 10	$29/2^-$

[†] From a least-squares fit to E_γ with $\Delta E_\gamma = 0.5$ keV estimated by the evaluator.

[‡] From Adopted Levels.

 $\gamma(^{203}\text{Pb})$

$E_\gamma^\dagger$	$I_\gamma^\ddagger$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Comments
126.5	0.013 12	126.5	$1/2^-$	0	$5/2^-$	
153.4 [#]	≤ 0.03	2949.6	$29/2^-$	2796.4	$23/2^+$	
239.4 2		2161.9	$(21/2)^+$	1922.5	$21/2^+$	E_γ : From adopted gammas.
258.6	0.028 9	1922.5	$21/2^+$	1663.9	$17/2^+$	
634.5	0.014 7	2796.4	$23/2^+$	2161.9	$(21/2)^+$	
740.1	0.029 9	866.5	$5/2^-$	126.5	$1/2^-$	
825.2	0.048 4	825.2	$13/2^+$	0	$5/2^-$	
838.7	0.028 2	1663.9	$17/2^+$	825.2	$13/2^+$	
866.5	0.037 9	866.5	$5/2^-$	0	$5/2^-$	
874.0	0.011 3	2796.4	$23/2^+$	1922.5	$21/2^+$	
896.9	0.095 12	896.9	$9/2^-$	0	$5/2^-$	I_γ : Includes ^{207}Pb impurities.
933.4	0.0017 8	933.4	$(5/2)^-$	0	$5/2^-$	
1027.0		2949.6	$29/2^-$	1922.5	$21/2^+$	I_γ : Includes ^{200}Pb impurities.
1198.6	0.0009 8	1198.6	$9/2^-$	0	$5/2^-$	
1203.1	0.0009 8	1203.1	$(7/2)^-$	0	$5/2^-$	

[†] From 1978Be24.

[‡] From 1978Be24. I_γ per stopped π^- normalized to pionic x ray intensity.

[#] Placement of transition in the level scheme is uncertain.

