

<sup>207</sup>Po IT decay (2.79 s) 1978Sc12

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev, S. Lalkovski		NDS 112, 707 (2011)	1-Aug-2010

Parent: <sup>207</sup>Po: E=1382.95 14; J<sup>π</sup>=19/2<sup>-</sup>; T<sub>1/2</sub>=2.79 s 8; %IT decay=100.0

<sup>207</sup>Po Levels

E(level) <sup>†</sup>	J <sup>π</sup> <sup>‡</sup>	T <sub>1/2</sub>	Comments
0	5/2 <sup>-</sup>	5.80 h 2	J <sup>π</sup> , T <sub>1/2</sub> : From Adopted Levels.
814.41 3	9/2 <sup>-</sup>		
1115.06 4	13/2 <sup>+</sup>	49 μs 4	T <sub>1/2</sub> : Weighted average of 47 μs 7 (1962Ha26) and 50 μs 5 (1973Co30).
1274.10 5	13/2 <sup>-</sup>		
1383.14 7	19/2 <sup>-</sup>	2.79 s 8	T <sub>1/2</sub> : From 1978Sc12. Other: 2.8 s 2 (1961WhZZ).

<sup>†</sup> From a least-squares fit to E<sub>γ</sub>.

<sup>‡</sup> From deduced transition multipolarities using α(K)<sub>exp</sub> and sub-shell ratios.

γ(<sup>207</sup>Po)

I<sub>γ</sub> normalization: From the requirement that Ti(814.4γ)=100.

E <sub>γ</sub>	I <sub>γ</sub> <sup>‡@</sup>	E <sub>i</sub> (level)	J <sub>i</sub> <sup>π</sup>	E <sub>f</sub>	J <sub>f</sub> <sup>π</sup>	Mult.#	α <sup>†</sup>	Comments
109.1	<0.32	1383.14	19/2 <sup>-</sup>	1274.10	13/2 <sup>-</sup>	M3	453 7	E <sub>γ</sub> , I <sub>γ</sub> , Mult.: From adopted gammas.
268.08 6	45 3	1383.14	19/2 <sup>-</sup>	1115.06	13/2 <sup>+</sup>	E3	1.169	α(K)=0.229 4; α(L)=0.692 10; α(M)=0.189 3; α(N+..)=0.0593 9 α(N)=0.0490 7; α(O)=0.00945 14; α(P)=0.000897 13 E <sub>γ</sub> : From adopted gammas. 268.08 keV 7 in 1978Sc12. Mult.: α(K) <sub>exp</sub> =0.224 18. K:L12:L3:M:N+=100.0 17:239 4:77.4 19:86.1 21:34.3 15. δ: δ(M4/E3)<0.03.
300.648 13	33.8 23	1115.06	13/2 <sup>+</sup>	814.41	9/2 <sup>-</sup>	M2	1.84	α(K)=1.374 20; α(L)=0.351 5; α(M)=0.0872 13; α(N+..)=0.0280 4 α(N)=0.0227 4; α(O)=0.00471 7; α(P)=0.000590 9 E <sub>γ</sub> : From adopted gammas. 300.47 keV 7 in 1978Sc12. Mult.: α(K) <sub>exp</sub> =1.53 10. K:L12:L3:M:N+=100:24.0 5:1.47 22:6.14 24:2.14 24. δ: δ(E3/M2)<0.09.
459.69 3		1274.10	13/2 <sup>-</sup>	814.41	9/2 <sup>-</sup>	E2		E <sub>γ</sub> , Mult.: From adopted gammas.
814.41 3	100	814.41	9/2 <sup>-</sup>	0	5/2 <sup>-</sup>	E2	0.01104	α(K)=0.00850 12; α(L)=0.00192 3; α(M)=0.000467 7; α(N+..)=0.0001474 21 α(N)=0.0001200 17; α(O)=2.45×10 <sup>-5</sup> 4; α(P)=2.91×10 <sup>-6</sup> 4 E <sub>γ</sub> : From adopted gammas. 814.4 keV 1 in 1978Sc12. Mult.: α(K) <sub>exp</sub> =0.0090 14.

Continued on next page (footnotes at end of table)

$^{207}\text{Po}$  IT decay (2.79 s) 1978Sc12 (continued) $\gamma(^{207}\text{Po})$  (continued)† [Additional information 1.](#)

‡ From 1978Sc12, unless otherwise stated. Others: 1962Ha26, 1973Co30.

# From ce data of 1978Sc12. The  $\alpha(\text{K})_{\text{exp}}$  are based on absolute  $I_{\gamma}$  and  $I_{\text{ce}}(\text{K})$  data.

@ For absolute intensity per 100 decays, multiply by 0.98908 15.

 $^{207}\text{Po}$  IT decay (2.79 s) 1978Sc12Decay SchemeIntensities:  $I_{(\gamma+ce)}$  per 100 parent decays  
%IT=100.0

## Legend

- $I_{\gamma} < 2\% \times I_{\gamma}^{\text{max}}$
- $I_{\gamma} < 10\% \times I_{\gamma}^{\text{max}}$
- $I_{\gamma} > 10\% \times I_{\gamma}^{\text{max}}$

