

Adopted Levels, Gammas

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Shaofei Zhu and E. A. Mccutchan		NDS 175, 1 (2021)	1-May-2021

$Q(\beta^-) = -4262$ 17; $S(n) = 7779$ 18; $S(p) = 1201$ 17; $Q(\alpha) = 7351.9$ 25 [2021Wa16](#)
 $S(2n) = 1.701\text{E}+4$ 3; $S(2p) = 4629$ 16; $Q(ep) = 2699$ 14 ([2021Wa16](#)).

 ^{214}Ac LevelsCross Reference (XREF) Flags

A ^{218}Pa α decay (107 μs)
B ^{218}Pa α decay (0.13 ms)

E(level)	J^π	$T_{1/2}$	XREF	Comments
0.0	$5^{(+)}$	8.2 s 2	AB	$\% \alpha \geq 89$ 3; $\% \varepsilon \leq 11$ 3 $Q = +0.14$ 8; $\mu = +4.84$ 10 μ : deduced from $g = 0.967$ 20 and $J = 5$ measured in 2017Gr18 with uncertainty deduced by quadratic addition of statistical uncertainty of 0.014 and systematic uncertainty of 0.014 (1σ); other: $\mu = 4.234$ 8 referenced to a calculated value of $\mu = 1.07$ of ^{227}Ac (2017Gr18). Both values were from in-beam Laser measurements. Q : from 2016Fe11 and 2017Gr18 with uncertainty deduced by quadratic addition of statistical uncertainty of 0.06 and systematic uncertainty of 0.06. $\Delta \langle r^2 \rangle = -0.0770$ fm ² 10 relative to ^{215}Ac (2016Fe11) from isotope shift measurement with uncertainty deduced by quadratic addition of statistical uncertainty of 0.0004 (2σ) and systematic uncertainty of 0.0010 (1σ). $T_{1/2}$: from 1968Va04 . Others: 12 s (1961Gr42), 8.6 s +50–15 (1979Sc09), and 8.6 s +70–27 (2020Zh01). J^π : J from fit of the observed hyperfine spectrum (2017Gr18), π based on systematics (2017Gr18 , 2020Zh01). Proposed configuration = $\pi h_{9/2} \otimes \nu p_{1/2}^{-1}$ (2017Gr18 , 2020Zh01). $\% \varepsilon$: deduced from the ratio of $I\alpha(^{214}\text{Ac})$ and $I\alpha(^{214}\text{Ra})$ at equilibrium (1968Va04). E(level): from E_γ (2000He17 , 2020Zh01). J^π : based on systematics (2020Zh01).
91.8 4	(4^+)		AB	

 $\gamma(^{214}\text{Ac})$

$E_i(\text{level})$	J_i^π	E_γ	E_f	J_f^π	Comments
91.8	(4^+)	91.8 4	0.0	$5^{(+)}$	E_γ : weighted average of 91.8 4 (2000He17) and 91.8 8 (2020Zh01).

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Level Scheme

