^{216}At α decay:J=9 1994Li10,1971Br13

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	K. Auranen and E. A. Mccutchan	NDS 168, 117 (2020)	1-Aug-2020

Parent: ^{216}At: E=400 *30*; $J^{\pi}=(9^-)$; Q(α)=7950 *3*; %α decay=100.0

^{216}At-E: from assumption that the 7960α populates the 239-keV, 25 min isomer in ^{212}Bi.

^{216}At-$T_{1/2}$: on the basis of systematics, taking HF≈2 would give a $T_{1/2}$ of approximately 0.1 ms.

1994Li10: ^{224}Ac activity produced by bombarding targets of ^{232}Th with 200-MeV protons followed by mass separation. Sources of ^{216}At were produced in secular equilibrium with ^{220}Fr and ^{224}Ac. Measured Eα, Iα, Eγ, Iγ, $\alpha\gamma$ coin, ce, α-ce coin, ce-γ coin using Ge detectors for γ rays and Si(Li) for conversion electrons.

1971Br13: ^{224}Ac activity from parent ^{228}Pa produced in ^{232}Th(p,5n) reaction. Sources of ^{216}At were produced in secular equilibrium with ^{220}Fr and ^{224}Ac. Measured Eα, Iα.

1994Li10 and 1971Br13 both indicate that this is a very tentative decay scheme proposed to account for the observed 7960α.

^{212}Bi Levels

E(level)†	J^{π}†	$T_{1/2}$†
239 *30*	$(8^-,9^-)$	25.0 min *2*

† From the Adopted Levels.

α radiations

Eα	E(level)	Iα†	Comments
7960	239	100	Eα: from 1971Br13.

† Absolute intensity per 100 decays.