

^{215}Fr α decay: prompt: 1573 keV [1984Sc25](#), [1984De16](#)

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	B. Singh, S. Singh, H. X. Nguyen and M. Patial		NDS 114, 661 (2013)	28-Feb-2013

Parent: ^{215}Fr : E=1573.1 2; $J^\pi=(23/2)^-$; $T_{1/2}=3.5$ ns 14; $Q(\alpha)=9540$ 7; % α decay=4.1 4

^{215}Fr -E, J^π : From Adopted Levels of ^{215}Fr in ENSDF database.

^{215}Fr - $T_{1/2}$: $\gamma\gamma(t)$ ([1984Sc25](#)).

^{215}Fr - $Q(\alpha)$: From [2012Wa38](#).

^{215}Fr -% α decay: % α =4.1 4 (deduced by evaluators from $I\alpha(10890)/I\alpha(\text{total})=3.6\%$ 3 ([1984Sc25](#)), and renormalizing g.s. α branch from 87.7% to 100%. It is assumed by the evaluators that [1984Sc25](#) have corrected for 78% detection of the ground state α branch in $\alpha\gamma$ -coin spectrum. Other: $I(10919\alpha)/I(9369\alpha)=3\%$ ([1984De16](#)).

[1984Sc25](#): observed alpha from $^{208}\text{Pb}(^{11}\text{B},4n)$ E=66 MeV.

Target: >99% enriched ^{208}Pb . Measured E_γ , I_γ , E_α , $\gamma\gamma$ - and $\gamma\alpha$ coin, $\gamma\gamma(t)$, pulsed-beam, $\gamma(\theta)$. Deduced α -particle branches.

[1984De16](#): observed alpha from $^{208}\text{Pb}(^{11}\text{B},4n)$ E=58,62 MeV. E_γ , I_γ , E_α , ce, $\gamma\gamma$ - and $\gamma\alpha$ coin, $\gamma\gamma(t)$, g factors. Deduced α -particle branches.

 ^{211}At Levels

E(level)	J^π
0.0	$9/2^-$

 α radiations

$E\alpha^\dagger$	E(level)	$I\alpha^\ddagger@$	HF [#]	Comments
10913 15	0.0	100	1.05×10^3 43	$E\alpha$: weighted average of 10890 30 (1984Sc25) and 10919 15 (1984De16). α from 1573.1, $(23/2)^-$ level of ^{215}Fr .

[†] Long-range α particle group from 1573-keV level in ^{215}Fr .

[‡] From $\alpha\gamma$ -coin and relative to the total number of α particles in the spectrum.

[#] $r_0(^{211}\text{At})=1.5365$ 55; interpolated value deduced from $r_0(^{210}\text{Po})=1.532$ 6, $r_0(^{212}\text{Rn})=1.541$ 5 ([1998Ak04](#)).

[@] For absolute intensity per 100 decays, multiply by 0.041 4.