## $^{230}$Pa α decay

| Type | Author | History Citation | Literature Cutoff Date |
|---|---|---|---|
| Full Evaluation | Y. A. Akovali | NDS 77,433 (1996) | 1-Feb-1996 |

Parent: $^{230}$Pa: E=0.0; $J^\pi=2^-$; $T_{1/2}$=17.4 d *5*; Q(α)=5439.4 *7*; %α decay=$3.2\times10^{-3}$ *1*

### $^{226}$Ac Levels

| E(level)† | Jπ | $T_{1/2}$ | E(level)† | E(level)† | Jπ |
|---|---|---|---|---|---|
| 0.0 | (1) | 29.37 h *12* | 70.3 *10* | 265 *3* | |
| 5.1 *13* | | | 77.7 *10* | 290 *4* | |
| 18.8 *10* | | | 130.4 *17* | 378 *3* | |
| 33.3 *10* | | | 165 *4* | 418 *4* | |
| 45.0 *10* | | | 195 *3* | 556? *6* | |
| 58.3 *17* | | | 230 *4* | 589 *3* | (2⁻) |

† Level energies are deduced from Eα(to g.s.)=5344.7 *7* and Eα′s to excited states; recoil-energy corrections are included.

### α radiations

%α=0.0032 *1*.

| Eα† | E(level) | Iα‡@ | HF# | Comments |
|---|---|---|---|---|
| 4766 *2* | 589 | 0.2 *1* | 7 *4* | |
| 4798& *5* | 556? | ≈0.03 | ≈80 | Iα: 0.02-0.05 was given by 1966Ba14. |
| 4934 *3* | 418 | 0.4 *2* | 48 *25* | |
| 4973 *2* | 378 | 0.7 *2* | 50 *15* | |
| 5060 *3* | 290 | 0.4 *2* | $3.1\times10^2$ *16* | |
| 5084 *2* | 265 | 0.7 *2* | $2.5\times10^2$ *8* | |
| 5119 *3* | 230 | 0.6 *2* | $4.9\times10^2$ *17* | Could be a doublet. |
| 5153 *2* | 195 | 0.4 *1* | $1.2\times10^3$ *3* | |
| 5183 *3* | 165 | 0.5 *2* | $1.4\times10^3$ *6* | Could be a doublet. |
| 5216.6 *15* | 130.4 | 0.5 *1* | $2.3\times10^3$ *5* | |
| 5268.4 *7* | 77.7 | 3.5 *5* | $6.7\times10^2$ *10* | |
| 5275.6 *7* | 70.3 | 3.0 *5* | $8.6\times10^2$ *15* | |
| 5287.4 *15* | 58.3 | 3.0 *8* | $1.0\times10^3$ *3* | |
| 5300.5 *7* | 45.0 | 17 *3* | $2.1\times10^2$ *4* | |
| 5312.0 *7* | 33.3 | 13 *3* | $3.3\times10^2$ *8* | |
| 5326.2 *7* | 18.8 | 18 *3* | $2.9\times10^2$ *5* | |
| 5339.7 *10* | 5.1 | 15 *5* | $4.1\times10^2$ *14* | |
| 5344.7 *7* | 0.0 | 23 *5* | $2.9\times10^2$ *7* | |

† Measurements of 1966Ba14 (s). Original energies have been increased by 1.6 keV, as recommended by 1991Ry01, because of change in calibration energies. Other measurements: 1964Mc21 (semi), 1965Br32 (semi).
‡ α intensity per 100 α decays, as measured by 1966Ba14.
# $r_0(^{226}Ac)$=1.5318 *25* is used in the calculations.
@ For absolute intensity per 100 decays, multiply by $3.2\times10^{-5}$ *1*.
& Existence of this branch is questionable.