## $^{186}$Po $\alpha$ decay (28 $\mu$s) 2013An13

| History | | | |
|---|---|---|---|
| Type | Author | Citation | Literature Cutoff Date |
| Full Evaluation | Balraj Singh | NDS 130, 21 (2015) | 15-Jul-2015 |

Parent: $^{186}$Po: E=0; $J^{\pi}=0^{+}$; $T_{1/2}$=28 $\mu$s *+16−6*; Q($\alpha$)=8503 *15*; %$\alpha$ decay≈100.0

$^{186}$Po-Q($\alpha$): From E$\alpha$=8320 *15*. Other: 8490 *30* (2012Wa38).

$^{186}$Po-$T_{1/2}$: From 2013An13. Other: 40 $\mu$s *10* (preliminary value from 2005AnZY).

$^{186}$Po-%$\alpha$ decay: %$\alpha$ is expected to be 100 from calculated (1997Mo25) $T_{1/2}(\beta)$=0.67 s and $T_{1/2}(\alpha)$=11 $\mu$s.

2013An13: $^{186}$Po isotope produced and identified in $^{144}$Sm($^{46}$Ti,4n) reaction at GSI facility. The evaporation residues were separated in-flight by SHIP separator. Measured $\alpha$, $\alpha$-$\gamma$ correlations, $\alpha$-$\alpha$ correlations. Eight events were observed with four-$\alpha$ correlated events associated with $^{186}$Po $\alpha$ decay chain ($^{186}$Po -> $^{182}$Pb -> $^{178}$Hg -> $^{174}$Pt -> $^{170}$Os). Earlier report from the authors: 2005AnZY.

### $^{182}$Pb Levels

| E(level) | $J^{\pi}$ |
|---|---|
| 0 | $0^{+}$ |

### $\alpha$ radiations

| E$\alpha$ | E(level) | Comments |
|---|---|---|
| 8320 *15* | 0 | E$\alpha$: from 2013An13. |