

^{177}Au α decay [2009An14](#)

| Type | Author | History Citation | Literature Cutoff Date |
|-----------------|---------|------------------|------------------------|
| Full Evaluation | J. Tuli | ENSDF | 15-Aug-2015 |

Parent: ^{177}Au : $E=0$; $J^\pi=(1/2^+)$; $T_{1/2}=1.53$ s 7; $Q(\alpha)=6298$ 4; $\% \alpha$ decay=40 6

^{177}Au - $T_{1/2}$: From [2009An14](#).

^{177}Au - J^π : From Adopted dataset for ^{177}Au in ENSDF database.

^{177}Au - $Q(\alpha)$: From [2012WA38](#).

^{177}Au - J^π : From [2014An10](#).

^{177}Au - $\% \alpha$ decay: $\% \alpha=40$ 6 ([2009An14](#)).

1009An14 (referred also in [2014An10](#)): ^{177}Au source from α decay of ^{181}Tl , which was produced in $^{144}\text{Sm}(^{40}\text{Ca},p2n)$ reaction at $E=177$ -229 MeV. Measured E_α , I_α , $\alpha\gamma$ coin, E_γ , K x ray and $\gamma\gamma$ coin using a large-volume fourfold segmented clover germanium detector, three time-of-flight detectors, and 16-strip position-sensitive silicon strip detector (PSSD) at GSI facility.

[1975Ca06](#): Sources from $^{141}\text{Pr}(^{40}\text{Ca},4n)$ ($E(^{40}\text{Ca})=180$ -290 MeV), helium-jet transport; measured E_α, I_α . Perhaps includes isomer decay.

[1996Pa01](#): Measured α , $T_{1/2}$. $T_{1/2}(^{177}\text{Au})=1300$ ms 200.

Others: [1968Si01](#), [1973Ga08](#), [1991Se01](#).

 ^{173}Ir Levels

| E(level) | J^π | Comments |
|----------|--------------------|---|
| 0 | ($3/2^+, 5/2^+$) | J^π : From Adopted dataset for ^{173}Ir in ENSDF database. |

 α radiations

| E_α | E(level) | Comments |
|------------|----------|---|
| 6161 7 | 0 | E_α : from 2009An14 . Other: 6150 10 (1975CA06), 6154 10 (1996PA01). |