

Adopted Levels

| Type | Author | History Citation | Literature Cutoff Date |
|-----------------|-----------------|---------------------|------------------------|
| Full Evaluation | Coral M. Baglin | NDS 111,275 (2010) | 1-Oct-2009 |

$Q(\beta^-)=5.1\times 10^3$ *syst*; $S(n)=4.8\times 10^3$ *syst* [2012Wa38](#)

Note: Current evaluation has used the following Q record 5090 *syst* 4960 *syst* [2003Au03,2009AuZZ](#).

Uncertainties are 400 and 500 in $Q(\beta^-)$ and $S(n)$, respectively ([2003Au03](#), [2009AuZZ](#)).

Production: ^{136}Xe (9, 11.7 MeV/nucleon), ^{186}W (11.7, 15 MeV/nucleon) and ^{238}U (11.4 MeV/nucleon) beams on $^{\text{nat}}\text{W}+^{181}\text{Ta}$ stacked targets ([1989Ry04](#)); ^{136}Xe (11.4 MeV/nucleon) bombardment of $^{\text{nat}}\text{W}$ ([1995Kr04](#)).

 ^{184}Lu Levels

| <u>E(level)</u> | <u>J^π</u> | <u>$T_{1/2}$</u> | <u>Comments</u> |
|-----------------|---------------------------|-----------------------------|---|
| 0.0 | (3 ⁺) | 19 s 2 | $\% \beta^- = 100$ J^π : β decay to (2 ⁺) and (4 ⁺) levels in ^{184}Hf with $\log ft=6.0$ and 6.7 , respectively. Possible configuration: (π 9/2[514])-(ν 3/2[512]) (1995Kr04). $T_{1/2}$: 1989Ry04 report 19 s 3 for Hf K x ray, 17 s 5 for 107γ and 20 s 4 for short-lived β rays (weighted average 19 s 2) but authors assigned $T_{1/2}\approx 18$ s because they suspected the presence of two β -decaying ^{184}Lu isomers. Later β - γ coin data (1995Kr04) yielded no evidence for β -368 γ coincidences, so those authors concluded that there was no evidence for the existence of a high-spin ^{184}Lu isomer. 1995Kr04 estimate $T_{1/2}=15$ s to 25 s from decomposition of a 107γ singles decay curve arising from both ^{184}Lu β^- decay and ^{184}Hf IT decay (48 s 10). |