| History | | | | |
|-----------------|---------------------------|------------------|------------------------|--|
| Туре | Author | Citation | Literature Cutoff Date | |
| Full Evaluation | Balraj Singh and Jun Chen | NDS 191,1 (2023) | 22-Aug-2023 | |

Parent: ¹⁶⁷Re: E=0+x; $J^{\pi}=(9/2^{-})$; $T_{1/2}=5.9$ s 5; $Q(\varepsilon)=7260$ syst; $\%\varepsilon+\%\beta^{+}$ decay ≈99.0

 167 Re-J^{π},T_{1/2}: From 167 Re Adopted Levels.

¹⁶⁷Re-Q(ε): 7260 40 (syst, 2021Wa16).

¹⁶⁷Re- $\%\varepsilon + \%\beta^+$ decay: $\%\alpha \approx 1$ from 1992Me10 for the decay of ¹⁶⁷Re, assuming the 137 γ and 221 γ observed following ε decay of ¹⁶⁷Re represent the total ε decay intensity.

1992Me10: ¹⁶⁷Re produced in ¹⁴¹Pr(³²S,X),E=235 MeV at the VICKSI accelerator facility of HMI-Berlin. Measured E α , I γ , γ (x ray)-coin, half-life of ¹⁶⁷Re decay from α -decay curve. Only two weak γ rays of 136.6 and 221.3 keV were observed by 1992Me10, who suggested that the 136.6 γ was the same transition as observed in the in-beam reactions, the adopted placement for which shows that it feeds a (7/2⁻) level. Evaluators assume that this is the same (7/2⁻) level as fed in ¹⁷¹Os α decay. 1992Me10 further suggested that the 137 γ and the 221 γ are probably non-cascading γ rays. If so, the unplaced 221 γ presumably feeds either the 0+x or the 79+x level, implying a possible level at either 221.3+x or 300.3+x.

¹⁶⁷W Levels

| E(level) [†] | $J^{\pi \ddagger}$ | Comments | |
|---------------------------------|---|------------------------------------|--|
| 0.0 79.2 <i>3</i> 215.8 2 | $(5/2^{-})$ $(7/2^{-})$ $(9/2^{-})$ | E(level): from the Adopted Levels. | |
| | | | |

[†] From $E\gamma$ data.

[‡] From the Adopted Levels.

$\gamma(^{167}W)$

| E_{γ}^{\dagger} | ients |
|------------------------|--|
| (79.2 3) | 2; α(M)=0.281 5; |
| | 0784 10 |
| | dataset. |
| 136.6 2 | x(M) = 0.10 4; |
| |)34 <i>12</i> ; α (P)=0.00010 7 |
| | 992Me10). |
| 221.3 2 | 992Me10). |
| ^{136.6} 2 | $\nu(M)=0.10$ 4;)34 12; $\alpha(P)=0.$ 992Me10). 992Me10). |

[†] From 1992Me10.

[‡] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ -ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

 $x \gamma$ ray not placed in level scheme.

Legend

¹⁶⁷Re ε decay (5.9 s) 1992Me10

Decay Scheme

Intensities: Relative I_{γ}

