

**Adopted Levels, Gammas**

| Type            | Author       | History<br>Citation | Literature Cutoff Date |
|-----------------|--------------|---------------------|------------------------|
| Full Evaluation | Jean Blachot | NDS 109,1383 (2008) | 1-Mar-2008             |

$Q(\beta^-) = -1.10 \times 10^4$  syst;  $S(n) = 1.039 \times 10^4$  13;  $S(p) = 1.35 \times 10^3$  8;  $Q(\alpha) = 4008$  5    [2012Wa38](#)

Note: Current evaluation has used the following Q record 10400 syst 1500 syst 4008 5    [2003Au03](#).

 **$^{107}\text{Te}$  Levels****Cross Reference (XREF) Flags**

**A**     $^{111}\text{Xe}$   $\alpha$  decay  
**B**     $^{58}\text{Ni}$ ( $^{52}\text{Cr},3\text{ny}$ )

| E(level) | $J^\pi$     | $T_{1/2}$ | XREF               | Comments  |
|----------|-------------|-----------|--------------------|---|
| 0.0      |             | 3.1 ms 1  | <a href="#">AB</a> | % $\alpha$ =70 30; % $\varepsilon$ +% $\beta^+$ =30 30<br>% $\alpha$ : from <a href="#">1979Sc22</a> . Based on gross $\beta^-$ decay theory of <a href="#">1973Ta30</a> , one expects<br>% $\varepsilon$ +% $\beta^+$ $\approx$ 0.5. An energy of 3862 10 for the decay of $^{107}\text{Te}$ ( <a href="#">1991He21</a> ).<br>Populated by 0.9-s $^{111}\text{Xe}$ $\alpha$ decay.<br>$T_{1/2}$ : from <a href="#">1994Pa11</a> . Other: 3.6 ms +6–4 from time-correlated dependence of<br>I( $^{111}\text{Xe}$ )/I( $^{107}\text{Te}$ ) ( <a href="#">1979Sc22</a> ). |
| 90.3 4   | (7/2 $^+$ ) |           | <a href="#">B</a>  | Probable g <sub>7/2</sub> state.  |
| 721.0? 4 | (9/2 $^+$ ) |           | <a href="#">B</a>  |   |

 **$\gamma(^{107}\text{Te})$** 

| E <sub>i</sub> (level) | $J_i^\pi$   | E <sub><math>\gamma</math></sub> | I <sub><math>\gamma</math></sub> | E <sub>f</sub>   | $J_f^\pi$ |
|------------------------|-------------|----------------------------------|----------------------------------|------------------|-----------|
| 90.3                   | (7/2 $^+$ ) | 90.3 4                           | 100                              | 0.0              |           |
| 721.0?                 | (9/2 $^+$ ) | 631.3 <sup>†</sup> 5             | 78 26                            | 90.3 (7/2 $^+$ ) |           |

<sup>†</sup> Placement of transition in the level scheme is uncertain.

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## Legend

Level Scheme

Intensities: Type not specified

- $I_\gamma < 2\% \times I_\gamma^{\max}$
- $I_\gamma < 10\% \times I_\gamma^{\max}$
- $I_\gamma > 10\% \times I_\gamma^{\max}$
- - - - - →  $\gamma$  Decay (Uncertain)

