

**Coulomb excitation    [1973Ha07](#),[1977Ro08](#),[1977Ro26](#)**

| Type            | Author        | History<br>Citation | Literature Cutoff Date |
|-----------------|---------------|---------------------|------------------------|
| Full Evaluation | M. S. Basunia | NDS 107, 791 (2006) | 15-Sep-2005            |

[1973Ha07](#) ( $\alpha, \alpha'$ ),  $E(\alpha)=15$  MeV.[1977Ro08](#) ( $\alpha, \alpha'$ ),  $E(\alpha)=16.9$  MeV, target:>99% enriched  $^{176}\text{Hf}$ .[1977Ro26](#) ( $\alpha, \alpha'$ ),  $E(\alpha)=13.5, 14.0$  MeV, target:>99% enriched  $^{176}\text{Hf}$ .Measured scattered  $\alpha$ 's, deduced B(E2).Others: [1976Ha26](#), [1961Ha21](#), [1955He64](#). **$^{176}\text{Hf}$  Levels**

| E(level) <sup>†</sup> | J <sup>‡</sup>                   | T <sub>1/2</sub> | Comments   |
|-----------------------|----------------------------------|------------------|--|
| 0.0<br>88             | 0 <sup>+</sup><br>2 <sup>+</sup> | 1.47 ns 4        | B(E2) $\uparrow=5.21\ 5$<br>T <sub>1/2</sub> : from B(E2) and adopted $\alpha$ for 88 $\gamma$ . B(E2): weighted average of 5.19 6 ( <a href="#">1977Ro08</a> ), 5.27 25 ( <a href="#">1961Ha21</a> ), and 5.78 23 ( <a href="#">1973Ha07</a> ). Other: B(E2)=5.29 10 from muonic atom ( <a href="#">1984Ta10</a> ). g-factor=0.266 21 $\gamma(\theta, H)$ ( <a href="#">1968Be04</a> ). |
| 290                   | 4 <sup>+</sup>                   |                  | Measured E4 matrix element of 0.26 12 or -0.76 15. B(E4)=0.068 63, using 0.26 12, B(E4)=0.58 23, using -0.76 15.   |
| 1227                  | 2 <sup>+</sup>                   | 0.8 ps 1         | T <sub>1/2</sub> : from B(E2)=0.029 3 (weighted average of 0.031 3 ( <a href="#">1977Ro08</a> ) and 0.025 5 ( <a href="#">1973Ha07</a> )) and adopted $\alpha$ and branching for 1227 $\gamma$ .   |
| 1313                  | 3 <sup>-</sup>                   |                  | B(E3)=0.093 29 ( <a href="#">1977Ro08</a> ).   |
| 1341                  | 2 <sup>+</sup>                   | 0.29 ps 3        | T <sub>1/2</sub> : from B(E2)=0.119 8 ( <a href="#">1977Ro08</a> ) and adopted $\alpha$ and branching for 1341 $\gamma$ . Other value: B(E2)=0.075 6 ( <a href="#">1973Ha07</a> ).   |

<sup>†</sup> From [1973Ha07](#).<sup>‡</sup> From Adopted Levels.