

Adopted Levels

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	J. C. Batchelder and A. M. Hurst, M. S. Basunia		NDS 183, 1 (2022)	1-Mar-2022

$Q(\beta^-)=2180$  80;  $S(n)=6180$  80;  $S(p)=9750$  SY [2021Wa16](#)

$\Delta S(p)=300$  (syst) [2021Wa16](#).

Production: 60 MeV/nucleon  $^{18}\text{O}$  bombardment of natural W followed by radiochemical separation. Identification: from growth and decay of  $737.5\gamma$  and  $739.2\gamma$  (in  $^{186}\text{W}$ ) produced in  $\beta^-$  decay of  $^{186}\text{Ta}$  daughter ([1998Yu02](#)).

Mass measurement and identification of high-spin isomer using Schottky mass spectrometry technique ([2012Re19](#), [2010Re07](#)).

 $^{186}\text{Hf}$  Levels

E(level)	$J^\pi$	$T_{1/2}$	Comments
0.0	$0^+$	2.6 min <i>I2</i>	$\% \beta^- = 100$ $T_{1/2}$ : from growth and decay of $737.5\gamma(^{186}\text{W})$ from $^{186}\text{Ta}$ daughter's $\beta^-$ decay ( <a href="#">1998Yu02,1999Ya10</a> ).
2968 43		>20 s	$\% \beta^- = ?$ ; $\% \text{IT} = ?$ E(level): From measured mass difference between the isomer and g.s. ( <a href="#">2012Re19</a> ). $J^\pi$ : A $K^\pi = 17^+$ , 4 quasi-particle state with configuration $\pi^2(7/2^+[404], 9/2^-[514]) \otimes \nu^2(7/2^-[503], 11/2^+[615])$ calculated at 2.269 MeV is tentatively associated with this isomer by ( <a href="#">2012Re19</a> ). $T_{1/2}$ : Measured value in <a href="#">2012Re19</a> for bare $^{186}\text{Hf}$ ion. Number of ions detected=2 ( <a href="#">2010Re07</a> ) and 8 ( <a href="#">2012Re19</a> ).