

$^{178}\text{Hf}(\text{p},\text{n}\gamma)$ 1979Du02

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	E. Achterberg, O. A. Capurro, G. V. Marti		NDS 110, 1473 (2009)	31-May-2008

1979Du02: $^{178}\text{Hf}(\text{p},\text{n}\gamma)$, E(d)=6.7 MeV. Target 98% enriched. Measured E_γ , I_γ , $\gamma\gamma(t)$, $T_{1/2}$. Detectors: Ge(Li), scin.

Other: 1978Sc10.

 ^{178}Ta Levels

E(level)	J^π &	$T_{1/2}$
0.0+x [†]	7 ⁻	
220.1+x [‡]	8 ⁺	8.5 ns 10
289.5+x [#]	6 ⁻	2.0 ns 5
392.8+x [@]	(9 ⁻)	≈1 ns

[†] $K^\pi=7^-$ rotational band possible configuration= $\pi 7/2[404] + \nu 7/2[514]$.

[‡] $K^\pi=(8)^+$ rotational band.

[#] $K^\pi=6^-$ rotational band possible configuration= $\pi 5/2[402] + \nu 7/2[514]$.

[@] $K^\pi=9^-$ rotational band.

& From adopted values.

 $\gamma(^{178}\text{Ta})$

E_γ [†]	I_γ [‡]	$E_i(\text{level})$	E_γ [†]	I_γ [‡]	$E_i(\text{level})$	J_i^π	E_f	J_f^π
^x 46.0	20		^x 122.2	7				
^x 71.9	7		^x 129.4	100				
^x 72.9	16		^x 136.3	1.8				
^x 83.5	36		^x 143.7	1.7				
^x 97.0	3.2		^x 178.9	5.2				
^x 98.4	3.9		289.5	5	289.5+x	6 ⁻	0.0+x	7 ⁻
^x 115.7	14		^x 289.5	5				
^x 116.5	1		^x 329.5	14				
^x 118.5	3.5							

[†] Uncertainties are 0.1 to 0.3 keV depending on I_γ and on the complexity of the spectrum.

[‡] Measured at $\theta=125^\circ$. Uncertainties are 10 to 30% depending on I_γ .

^x γ ray not placed in level scheme.

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