^{179}Hf(γ,γ′), (e,e′) 1970Jo16,1970Bo10

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 110, 265 (2009)	15-Nov-2008

1970Bo10: measured cross section for formation of ^{179}Hf(18.7 s) as a function of the bombarding photon energy; deduced level energies.

1970Jo16: measured effective yield of ^{179}Hf(18.7 s) as a function of the bombarding electron and photon energies; deduced level energies.

For other measurements of the isomer excitation cross section (without specific structure information) see, e.g., 2002Ga14 and references therein.

^{179}Hf Levels

E(level)‡	Jπ	Comments
0	9/2+	Jπ: from Adopted Levels.
650 *20*		
880 *20*		
1030 *20*		
1160 *20*		
1400# *10*		
1605# *10*		
2310 *15*		
2390 *15*		
2480 *15*	7/2+,9/2+,11/2+†&	
2565 *15*	7/2+,9/2+,11/2+†&	
2640 *15*		
2705 *15*	7/2+,9/2+,11/2+†&	
2850 *15*	9/2+@	
2930 *15*		
3030 *15*		
3095 *15*	9/2+@	
3155 *15*	7/2+,9/2+,11/2+†&	
3240 *15*	7/2+,9/2+,11/2+†&	
3360 *15*	7/2+,9/2+,11/2+†&	
3490 *15*		

† From multipolarities of excitations deduced from ratios of bombarding electron-to-photon cross sections (1970Jo16), assuming Jπ(g.s.)=9/2+.

‡ Energies of levels below 2310 keV are from 1970Bo10; for E≥2310, they are from 1970Jo16.

Authors report ΔE=+10-5.

@ Level observed in (e,e′) but not in (γ,γ′), so authors presume a mult=E0 excitation.

& M1+E2 excitation from 9/2+ g.s.; deduced from ratios of bombarding electron-to-photon cross sections (1970Jo16).