^{180}Hf(t,p) 1983Bu03

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 130, 21 (2015)	15-Jul-2015

1983Bu03: E=15 MeV. Magnetic spectrograph, FWHM≈15 keV. Measured cross sections, $\sigma(\theta)$, comparisons with DWBA calculations.
Theory: 1995Sh38.

^{182}Hf Levels

E(level)‡	Jπ	L#	dσ/dΩ (μb/sr)†	Comments
0&	0+@	[0]	287	
96& 3	2+@		31	
323& 3	(4+)@		23	
≈667&	(6+)@		5	
818 3			19	
1022 3			11	
≈1034	(0+)	(0)	15	L=0 strength=5, relative to 100 for g.s.
1265 3	(0+)	(0)	8	L=0 strength=3, relative to 100 for g.s.
1465 3			13	
1497 3			51	
≈1590			6	
1724 5			7	
1829 5			14	
1885 5			10	
1915 5			38	
2214 5			22	
2280 5			32	

† At θ=30°; overall uncertainties are from 15-20%.
‡ Uncertainties are stated by 1983Bu03 as ≈3 keV for strongly populated states below 1.5 MeV and ≈5 keV for those above 1.5 MeV.
# Identified in comparison with L=0 distribution to assumed L=0 shape for the ground state. The DWBA comparisons give poor agreement with $\sigma(\theta)$ distributions, possibly due to multi-step processes. $\sigma(\theta)$ distributions for all groups are shown by 1983Bu03 in figure 10, but tentative L values are given for only the 1034 and 1265 groups.
@ From Adopted Levels.
& Band(A): g.s. band.

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Band(A): g.s. band

(6^+) ≈667

(4^+) 323

2^+ 96

0^+ 0

$^{182}_{72}Hf_{110}$