^{180}Hf(pol p,p′) 1992Pe02,1986Og02

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. A. Mccutchan	NDS 126, 151 (2015)	1-Feb-2015

1992Pe02: E(pol p)=98.4 MeV on a 93.9% ^{180}Hf isotopically enriched target. Measured $\sigma(\theta)$ and asymmetries using QDDM magnetic spectrometer (FWHM=50 keV); deduced deformation parameters from coupled-channels calculation.

1986Og02: E(pol p)=65 MeV on a 93.65% ^{180}Hf isotopically enriched target. Measured $\sigma(\theta)$ and asymmetries from θ=11° to $\theta\approx$75° in 1° steps at the forward angles and in 2° steps at the backward angles using RAIDEN high resolution spectrograph and a counter array consisting of a position sensitive proportional chamber, a pair of single-wire proportional chambers, and a plastic scintillator (FWHM≈25 keV); deduced deformation parameters β_2, β_4, and β_6 from coupled-channel calculations.

^{180}Hf Levels

E(level)[†]	Jπ[@]	Comments
0.0[‡]	0+	
93[‡]	2+	β_2=0.260 (1992Pe02); β_2=0.2507 (1986Og02). E(level): from 1986Og02. Other: 91 (1992Pe02).
309[‡]	4+	β_4=−0.050 (1992Pe02); β_4=−0.0562 (1986Og02). E(level): from 1986Og02. Other: 312 (1992Pe02).
641[‡]	6+	β_6=0.004 (1992Pe02); β_6=−0.0110 (1986Og02). E(level): from 1986Og02. Other: 652 (1992Pe02).
1086[‡#] *6*	8+	
1190[#] *6*	2+	β_2=0.047 (1992Pe02).
1289[#] *6*	2+	β_2=0.019 (1992Pe02).
1372[#] *6*	3−	β_3=0.026 (1992Pe02).
1444 *6*	5−	β_5=0.017 (1992Pe02).
1566[#] *6*	4+	β_4=0.022 (1992Pe02).
1651 *6*	3−	β_3=0.038 (1992Pe02).
1715 *6*	5−	β_5=0.014 (1992Pe02).
1740 *6*	3−	β_3=0.019 (1992Pe02).
1804[#] *6*	3−	β_3=0.026 (1992Pe02).
1839 *6*	3−	β_3=0.040 (1992Pe02).
1920 *6*	3−	β_3=0.019 (1992Pe02).
2067 *6*	4+	β_4=0.020 (1992Pe02).
2125 *6*		
2169[#] *6*	3−	β_3=0.018 (1992Pe02).
2205 *6*		
2257 *6*	4+	β_4=0.018 (1992Pe02).
2295 *6*		
2391 *6*	4+	β_4=0.015 (1992Pe02).
2447[#] *6*	5−	β_5=0.027 (1992Pe02).
2482 *6*	3−	β_3=0.029 (1992Pe02).
2533 *20*	3−	β_3=0.018 (1992Pe02).
2591 *20*	4+	β_4=0.022 (1992Pe02).

[†] From 1992Pe02, except where noted.
[‡] K^π=0+ g.s. rotational band.
[#] Peak used for internal energy calibration (1992Pe02).
[@] Based on comparison of experimental cross sections and asymmetries with results from coupled-channel calculations (1992Pe02).