

$^{176}\text{Yb}(\text{pol p,p}')$ 1985La15,1987Ic04,1984Ic01

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia	NDS 107, 791 (2006)	15-Sep-2005

1985La15: target: 96% enriched ^{176}Yb . Projectiles: polarized protons, E=134 MeV. Measured angular distributions of scattered protons from $\theta=22^\circ$ to $\theta=77^\circ$ in 2.0° and 2.5° steps. Detector: magnetic spectrometer, FWHM=70 keV. Deduced multipole moments and deformation parameters ($\beta_2=0.244$ 5, $\beta_4=-0.040$ 4) for the g.s. rotational band using coupled-channel calculations.

1987Ic04, 1986Ic02: target: 96.68% enriched ^{176}Yb . Projectiles: polarized protons, E=65 MeV. Measured angular distributions of scattered protons from $\theta=10^\circ$ to 70° in 1° and 2° steps. Detector: magnetic spectrometer, FWHM=20-26 keV. Deduced deformation parameters ($\beta_2=0.270$ 5, $\beta_4=-0.054$ 3), and quadrupole and hexadecapole strengths, using coupled-channel calculations.

1984Ic01: target: 96.68% enriched ^{176}Yb . Projectiles: polarized protons, E=65 MeV. Measured angular distributions of scattered protons from $\theta=11^\circ$ to 70° in 1° and 2° steps. Detector: magnetic spectrometer, FWHM=20-26 keV. Deduced deformation parameters ($\beta_2=0.271$, $\beta_4=-0.048$), multipole moments, and analyzing powers for the g.s. rotational band, using coupled-channel calculations. Others: [1992Ka07](#), [1992Pe02](#).

 ^{176}Yb Levels

<u>E(level)[‡]</u>	<u>J^π[†]</u>
0.0&	0 ⁺ @
82&	2 ⁺ @
272&	4 ⁺ @
565&	6 ⁺ @
955&	8 ⁺
1051 ^b	8 ⁻
1261 ^{#a}	2 ⁺
1429 ^{#a}	(4) ⁺

[†] From Adopted Levels, unless otherwise specified.

[‡] From [1985La15](#), unless otherwise specified.

From [1987Ic04](#).

@ From excellent fit of both cross sections and analyzing powers for (pol p,p') in [1984Ic01](#).

& Band(A): K=0⁺ g.s. rotational band.

^a Band(B): K=2⁺ γ -vibrational band.

^b Band(C): K^π=8₁⁻, configuration: $\nu 7/2[514]+\nu 9/2[624]$.

 $^{176}\text{Yb}(\text{pol p,p}') \quad 1985\text{La15},1987\text{Ic04},1984\text{Ic01}$

Band(B): K=2⁺
 γ -vibrational band

(4)⁺ 1429

2⁺ 1261

Band(C): K π =8₁⁻,
configuration:
 $\nu_7/2[514]+\nu_9/2[624]$

8⁻ 1051

Band(A): K=0⁺ g.s.
rotational band

8⁺ 955

6⁺ 565

4⁺ 272

2⁺ 82

0⁺ 0.0