

$^{176}\text{Yb}(\text{p,p}')$  1980Ba30,1979Ki14,1973Oo01

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

**1980Ba30:** target: 96.43% enriched  $^{176}\text{Yb}$ . Projectiles: protons, E=800 MeV. Measured angular distributions of scattered protons from  $\theta=4.5^\circ$  to  $21^\circ$  in  $0.1^\circ$  steps. Detector: magnetic spectrometer, FWHM $\approx$ 50 keV. Deduced deformation parameters for the g.s. rotational band using coupled-channel calculations ( $\beta_2=0.330$ ,  $\beta_4=-0.045$ ). Calculated DWBA cross sections agree poorly with experimental values.

**1979Ki14:** target: 97% enriched  $^{176}\text{Yb}$ . Projectiles: protons, E=35 MeV. Measured angular distributions of scattered protons from  $\theta=20^\circ$  to  $120^\circ$  in  $5^\circ$  steps. Detector: magnetic spectrometer, FWHM=7 keV. Deduced deformation parameters for the g.s. rotational band ( $\beta_2=0.275$ ,  $\beta_4=-0.055$ ).

**1973Oo01:** projectiles: protons, E=19 MeV. Measured angular distributions of scattered protons from  $\theta\approx 30^\circ$  to  $\approx 120^\circ$ . Detector: magnetic spectrometer, FWHM $\approx$ 11 keV.

Others: **1971Kr10** – projectiles: protons, E=16 MeV. Measured angular distributions of scattered protons from  $\theta=50^\circ$  to  $165^\circ$  in  $5^\circ$  steps. Detector: semi, FWHM=40 keV. Deduced deformation parameters for the g.s. rotational band ( $\beta_2=0.316$ , using DWBA calculations;  $\beta_2=0.275$ , using coupled-channel calculations). Others: **1987Zh14**, **1989Zh11**.

 $^{176}\text{Yb}$  Levels

Levels above 955 keV are from a proton spectrum measured at  $\theta=80^\circ$  presented in a figure by **1979Ki14**.

E(level) <sup>†</sup>	J $\pi$ <sup>‡</sup>
0.0 <sup>#</sup>	0 <sup>+</sup>
82 <sup>#</sup>	2 <sup>+</sup>
272 <sup>#</sup>	4 <sup>+</sup>
565 <sup>#</sup>	6 <sup>+</sup>
955 <sup>#</sup>	8 <sup>+</sup>

<sup>†</sup> From **1979Ki14**.

<sup>‡</sup> From Adopted Levels.

<sup>#</sup> Band(A): K=0<sup>+</sup> g.s. rotational band.

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**Band(A): K=0<sup>+</sup> g.s.  
rotational band**

8<sup>+</sup>                    955

6<sup>+</sup>                    565

4<sup>+</sup>                    272

2<sup>+</sup>                    82

0<sup>+</sup>                    0.0

$^{176}_{70}\text{Yb}_{106}$