

$^{231}\text{Pa}(\text{p},\text{p}')$ 1996Le01

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh, Jagdish K. Tuli, and Edgardo Browne		NDS 185, 560 (2022)	31-Aug-2022

1996Le01: E(p)=22 MeV. Measured scattered protons at $\theta=60^\circ$ and 90° using a Q3D magnetic spectrometer at the Munich tandem accelerator facility.

 ^{231}Pa Levels

<u>E(level)[†]</u>	<u>J^π[‡]</u>	<u>Relative I(p)</u>	<u>E(level)[†]</u>	<u>J^π[‡]</u>	<u>Relative I(p)</u>	<u>E(level)[†]</u>	<u>J^π[‡]</u>	<u>Relative I(p)</u>
0.0 [#]	3/2 ⁻	100	193.4 [#] 4	9/2 ⁻	0.08	395.7 [@] 15	9/2 ⁺	0.01
9.8 [#] 6	1/2 ⁻	6.4	275.7 [@] 6	1/2 ⁺	0.03	411.4 [@] 8	(7/2 ⁺)	0.02
59.4 [#] 2	7/2 ⁻	2.9	295.0 15		0.03	422.7 6		0.04
77.2 [#] 2	5/2 ⁻	0.67	317.8 [@] 4	3/2 ⁺	0.12	441.9 10		0.01
112.4 8		0.08	329.6 [#] 7	15/2 ⁻	0.06			
168.7 [#] 3	11/2 ⁻	0.32	351.2 [#] 8	13/2 ⁻	0.02			

[†] Uncertainties are statistical only, not including from energy calibration.

[‡] As given by 1996Le01 in Table 1.

[#] Band(A): $\pi 1/2[530]$.

[@] Band(B): $\pi 1/2[400]+\pi 1/2[660]$. Admixture of two configurations.

$^{231}\text{Pa}(\text{p,p}') \quad 1996\text{Le01}$ Band(B): $\pi 1/2[400] + \pi 1/2[660]$ $7/2^+$ 411.4 $9/2^+$ 395.7Band(A): $\pi 1/2[530]$ $13/2^-$ 351.2 $15/2^-$ 329.6 $3/2^+$ 317.8 $1/2^+$ 275.7 $9/2^-$ 193.4 $11/2^-$ 168.7 $5/2^-$ 77.2 $7/2^-$ 59.4 $1/2^-$ 9.8 $3/2^-$ 0.0