^{160}Gd(^{37}Cl,Xγ) 2002Li55

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	C. D. Nesaraja, E. A. Mccutchan	NDS 133, 1 (2016)	30-Sep-2015

2002Li55: Deep inelastic reaction with E(^{37}Cl)=234 MeV beam on ^{160}Gd. Measured Eγ, Iγ, $\gamma\gamma$ using EUROBALL IV array of Ge detectors. γ-ray transitions were gated within the yrast sequence of the complimentary fragments of ^{152}Gd and ^{154}Gd.

^{41}Cl Levels

E(level)	J$^{\pi}$[†]
0[‡]	(1/2$^+$)
130[‡]	(3/2$^+$)
891[‡]	(5/2$^+$)

† Proposed by authors (2002Li55) based on the selective population of yrast states seen in ^{37}Cl and ^{39}Cl and the γ-ray intensities.
‡ Band(A): Yrast states.

γ(^{41}Cl)

E$_\gamma$[†]	I$_\gamma$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
130	445 *6*	130	(3/2$^+$)	0	(1/2$^+$)
761	281 *6*	891	(5/2$^+$)	130	(3/2$^+$)

† Energy peak of 554 keV was observed in 2002Li55 but has been assigned to ^{152}Gd by the authors. However, subsequent works of 2003Ol03 and 2004Ol05 in ^{176}Yb(^{36}S,Xγ) associate the 554 keV peak with ^{41}Cl.

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Level Scheme

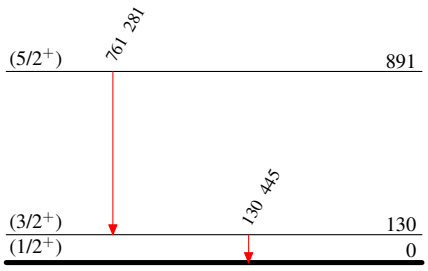
Intensities: Relative I_γ

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



$^{41}_{17}Cl_{24}$

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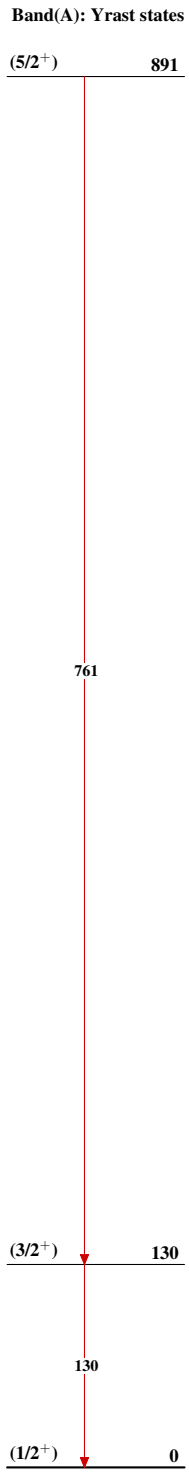

$^{41}_{17}Cl_{24}$