

Adopted Levels

<u>Type</u>	<u>Author</u>	<u>History Citation</u>	<u>Literature Cutoff Date</u>
Full Evaluation	N. Nica	NDS 111,525 (2010)	19-Nov-2009

Q( $\beta^-$ )=-1.33×10<sup>4</sup> syst; S(n)=1.30×10<sup>4</sup> syst; S(p)=3.2×10<sup>3</sup> syst; Q( $\alpha$ )=-3.7×10<sup>3</sup> syst [2012Wa38](#)  
 Note: Current evaluation has used the following Q record -1360E+1 syst 1257e+1syst 3320 syst -3300 syst [2003Au03](#).  
 Uncertainties based on systematics are:  $\Delta Q(\beta^-)=720$ ,  $\Delta S(n)=640$ ,  $\Delta S(p)=570$ ,  $\Delta Q(\alpha)=570$ .

Q( $\epsilon p$ )=8340 430 (based on syst).

[1997Sc30](#): <sup>60</sup>Ni(<sup>40</sup>Ca,3n $\gamma$ ), E=4.1 MeV/u. Measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ , X $\gamma$ ,  $\beta p$ , T<sub>1/2</sub>. Predicts a 25/2<sup>+</sup>, T<sub>1/2</sub>=0.6 s high-spin isomer.

[1982Ku15](#): <sup>60</sup>Ni(<sup>40</sup>Ca,3n $\gamma$ ), E=4.0 MeV/u, mass separation. Detected p,  $\alpha\gamma$  and Pd K x ray, and (p)(K x ray). Measured T<sub>1/2</sub>.

Possibly the 25/2<sup>+</sup> high-spin isomer predicted by [1983Og01](#) (probably not same level as seen by [1978EI09](#)).

[1978EI09](#): S(n)(p,3pxn $\gamma$ ), E=600 MeV, chem. Detected p, 1 MeV<E(p)<5 MeV. Production rate too low for T<sub>1/2</sub> determination.

Calculations:

high spin isomer: [2005Gr34](#), [1985Bu25](#), [1983Og01](#), [1971Pe16](#)

mass differences: [2002Is08](#)

single- and double-  $\Lambda$  hypernucleus: [2001Kh06](#)

T<sub>1/2</sub> g.s.: [1997He24](#)

<sup>97</sup>Cd Levels

<u>E(level)</u>	<u>J<math>\pi</math></u>	<u>T<sub>1/2</sub></u>	<u>Comments</u>
0.0	(9/2 <sup>+</sup> )	2.8 s 6	% $\epsilon$ =100; % $\epsilon p$ =? E(level),J $\pi$ ,T <sub>1/2</sub> : T <sub>1/2</sub> measured by $\beta p$ coin ( <a href="#">1997Sc30</a> ); $p\gamma$ coin data showed coin with 6 <sup>+</sup> - 4 <sup>+</sup> - 2 <sup>+</sup> cascade in <sup>97</sup> Cd, whence the conclusion that the observed T <sub>1/2</sub> is that of the <sup>97</sup> Cd g.s. (while admixture of other activities is not excluded, especially from the hypothetical 25/2 <sup>+</sup> isomer of <sup>97</sup> Cd); this also suggests the tentative J $\pi$ assignment for <sup>97</sup> Cd g.s.. Other value: 3 s +4-2 ( <a href="#">1982Ku15</a> ).