## (HI,xnγ) 1994Re06

| Type | Author | History Citation | Literature Cutoff Date |
|---|---|---|---|
| Full Evaluation | Jean Blachot | NDS 110, 1239 (2009) | 1-Feb-2008 |

$^{96}$Zr($^{18}$O,xnγ) E=60,70 MeV (1994Re06).
Measured γ, DCO, γ(θ), 20 Compton-suppressed Ge detectors are placed in 5 rings of 5 detectors. 70 BGO in an inner ball.
$^{96}$Zr($^{18}$O,xnγ) E=73 MeV (1994Ju05).
Measured γ, nordball; excit, γ(θ), 20 Compton-suppressed Ge 52 BaF2 as multiplicity filter. They show only the yrast band until the level at 6649 keV (39/2$^-$).

### $^{111}$Cd Levels

| E(level) | J$^\pi$[†] | Comments |
|---|---|---|
| 0.0 | 1/2$^+$ | |
| 245.4 *10* | 5/2$^+$ | E(level): from Adopted Levels. |
| 396.2[‡] | 11/2$^-$ | E(level): from Adopted Levels. |
| 967.9[‡] *11* | 15/2$^-$ | |
| 1852.2[‡] *11* | 19/2$^-$ | |
| 2147.7 *12* | (17/2$^-$) | |
| 2740.1 *11* | (19/2$^+$) | |
| 2847.2[‡] *11* | 23/2$^-$ | |
| 3100.6 *12* | (23/2$^+$) | |
| 3230.3 *14* | (23/2$^+$) | |
| 3717.4 *12* | (27/2$^+$) | |
| 3763.2[‡] *12* | 27/2$^-$ | |
| 4556.1[‡] *13* | 31/2$^-$ | |
| 5501.9[‡] *14* | 35/2$^-$ | |
| 6649.0[‡] *14* | 39/2$^-$ | |
| 7951.3[‡] *15* | 43/2$^-$ | |
| 9407.3[‡] *17* | 47/2$^-$ | |

[†] From Adopted Levels and DCO measurements of gammas.
[‡] Band(A): decoupled ΔJ=2 sequence built on $h_{11/2}$ state. Level spacing corresponds to $^{110}$Cd g.s. band up to 8$^+$.

### γ($^{111}$Cd)

| E$_\gamma$[†] | I$_\gamma$[†] | E$_i$(level) | J$_i^\pi$ | E$_f$ | J$_f^\pi$ | Mult.[‡] | δ | Comments |
|---|---|---|---|---|---|---|---|---|
| 150.8 | | 396.2 | 11/2$^-$ | 245.4 | 5/2$^+$ | | | |
| 245.4 | | 245.4 | 5/2$^+$ | 0.0 | 1/2$^+$ | | | |
| [x]358.6 *4* | 4 *3* | | | | | | | |
| 360.5 *4* | 11 *4* | 3100.6 | (23/2$^+$) | 2740.1 | (19/2$^+$) | | | Mult.: DCO= 1.02 *19*. |
| 490.2 *9* | 9 *1* | 3230.3 | (23/2$^+$) | 2740.1 | (19/2$^+$) | Q | | Mult.: DCO= 1.04 *20*. |
| 571.8 *1* | 100 *25* | 967.9 | 15/2$^-$ | 396.2 | 11/2$^-$ | E2 | | Mult.: DCO= 0.98 *7*. |
| 592.7 *5* | 6 *2* | 2740.1 | (19/2$^+$) | 2147.7 | (17/2$^-$) | D(+Q) | −0.11 *11* | Mult.: DCO=0.50 *9*. |
| 616.8 *3* | 11 *3* | 3717.4 | (27/2$^+$) | 3100.6 | (23/2$^+$) | | | Mult.: DCO=1.04 *15*. |
| 792.9 *6* | 15 *4* | 4556.1 | 31/2$^-$ | 3763.2 | 27/2$^-$ | E2 | | Mult.: DCO= 1.04 *12*. |
| [x]819.5 *2* | 6 *2* | | | | | | | |
| 884.2 *2* | 46 *12* | 1852.2 | 19/2$^-$ | 967.9 | 15/2$^-$ | E2 | | Mult.: DCO= 0.94 *6*. |
| 887.9 *3* | 7 *2* | 2740.1 | (19/2$^+$) | 1852.2 | 19/2$^-$ | | | |
| [x]895.9 *4* | 9 *2* | | | | | D(+Q) | 0.01 *9* | Mult.: DCO=0.60 *9* d(+Q). |
| 916.0 *3* | 21 *5* | 3763.2 | 27/2$^-$ | 2847.2 | 23/2$^-$ | E2 | | Mult.: DCO= 0.92 *11*. |
| 945.8 *3* | 10 *3* | 5501.9 | 35/2$^-$ | 4556.1 | 31/2$^-$ | E2 | | Mult.: DCO= 1.06 *17*. |

Continued on next page (footnotes at end of table)

**(HI,xn$\gamma$) 1994Re06 (continued)**

$\gamma(^{111}Cd)$ (continued)

| $E_\gamma$[†] | $I_\gamma$[†] | $E_i$(level) | $J_i^\pi$ | $E_f$ | $J_f^\pi$ | Mult.[‡] | $\delta$ | Comments |
|---|---|---|---|---|---|---|---|---|
| 995.0 *3* | 27 *7* | 2847.2 | 23/2$^-$ | 1852.2 | 19/2$^-$ | E2 | | Mult.: DCO= 0.93 *8*. |
| 1147.1 *5* | 8 *3* | 6649.0 | 39/2$^-$ | 5501.9 | 35/2$^-$ | E2 | | Mult.: DCO= 1.01 *17*. |
| [x]1171.8 *5* | 3 *1* | | | | | | | |
| 1180.1 *6* | 7 *2* | 2147.7 | (17/2$^-$) | 967.9 | 15/2$^-$ | D(+Q) | 0.03 *15* | Mult.: DCO= 0.62 *13*. |
| 1302.3 *5* | 3 *1* | 7951.3 | 43/2$^-$ | 6649.0 | 39/2$^-$ | E2 | | Mult.: DCO= 1.03 *21*. |
| 1456.0 *8* | 2 *1* | 9407.3 | 47/2$^-$ | 7951.3 | 43/2$^-$ | (E2) | | |

[†] From 1994Re06, except for 150.7 and 245.4 for which E$\gamma$ are rounded-off values from adopted $\gamma$'s.
[‡] From DCO, stretched Q assumed to have mult=E2.
[x] $\gamma$ ray not placed in level scheme.

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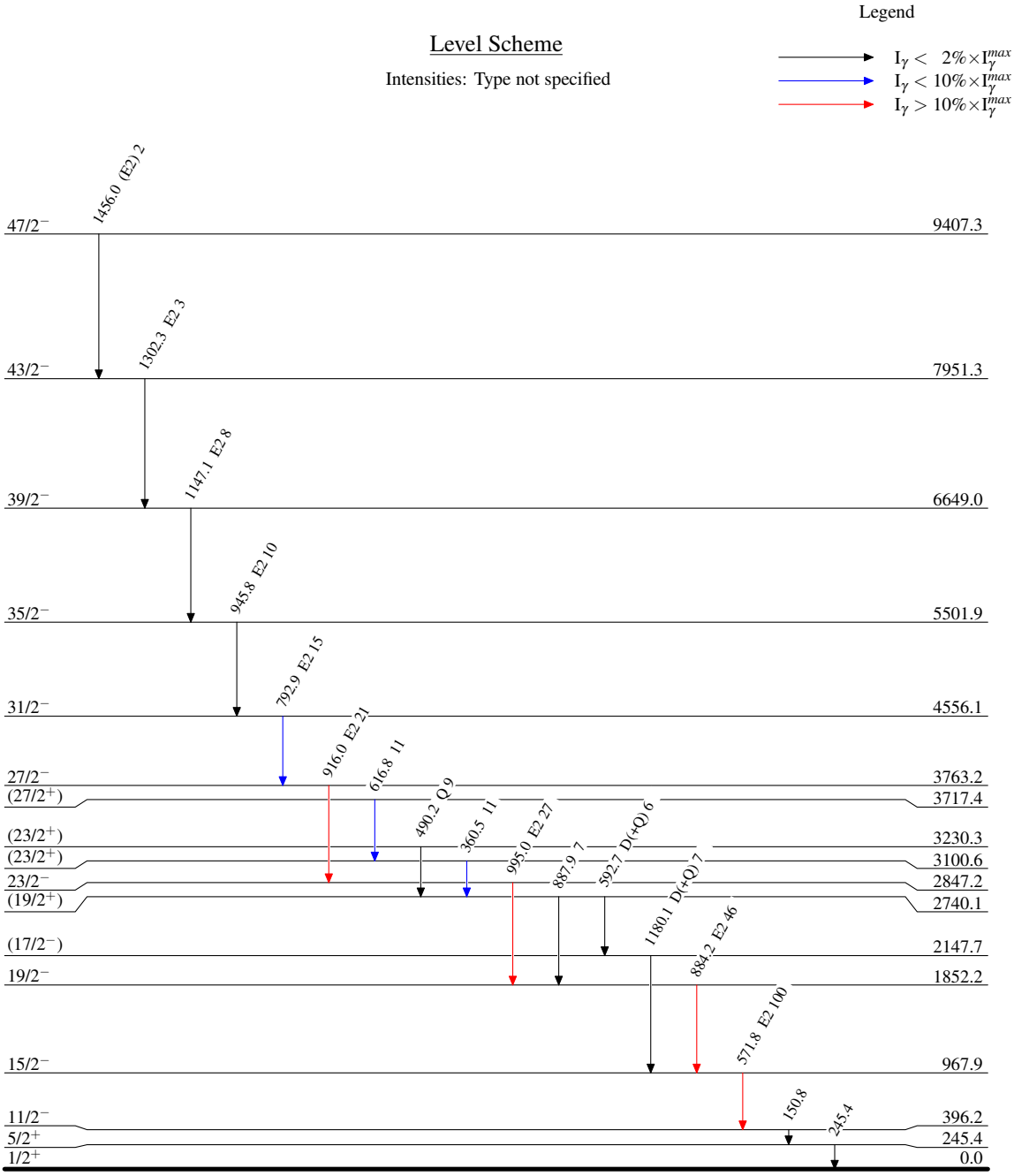
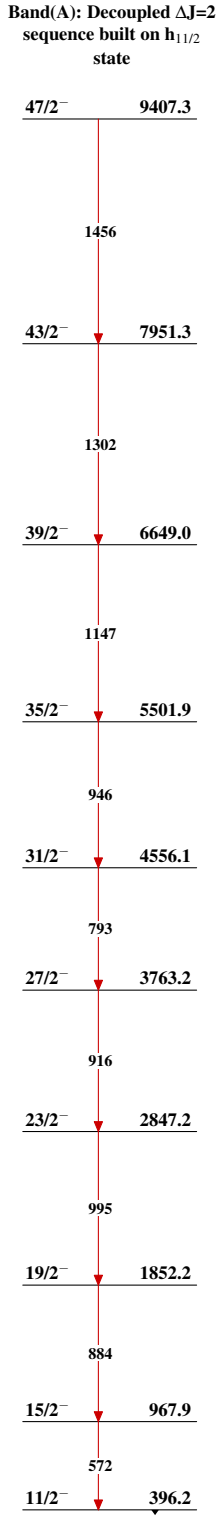
Level Scheme

Intensities: Type not specified




$^{111}_{48}Cd_{63}$

**(HI,xnγ) 1994Re06**




$^{111}_{48}Cd_{63}$