^{106}Cd(^{58}Ni,3p2nγ) 2001Ke09

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	C. W. Reich	NDS 113, 157 (2012)	31-Dec-2010

Additional information 1.

^{106}Cd(^{58}Ni,3p2nγ) at E(^{58}Ni)=286, 291, 298 MeV; measured Eγ, Iγ, $\gamma\gamma$ and $\gamma(\theta)$ using the JUROSPHERE spectrometer comprised of 14 Eurogam escape-suppressed HPGE detectors and 10 TESSA Ge detectors. Reaction products were separated in a gas-filled recoil separator and implanted into a position-sensitive Si-strip detector. α-decay recoil tagging was used to assign γ's to specific nuclides.

^{159}Ta Levels

E(level)[†]	J$^\pi$[‡]	$T_{1/2}$	Comments
(0)	1/2$^+$		
64[#] *5*	11/2$^-$	0.56 s *6*	E(level): from Adopted Levels. $T_{1/2}$: from Adopted Levels.
637.7[#] *1*	(15/2$^-$)		
1278.2[#] *2*	(19/2$^-$)		
1911.6[#] *2*	(23/2$^-$)		

[†] The three γ's are placed on the assumption that the strongest γ's are lowest in the scheme. The other γ's are in coincidence with all these three.

[‡] From J^π=11/2$^-$ for the bandhead and the observation that the $\gamma(\theta)$ data for the intraband transitions are consistent with stretched quadrupole character (assumed to be E2 rather than M2).

[#] Band(A): Level sequence based on $\pi h_{11/2}$.

γ(^{159}Ta)

E$_\gamma$	I$_\gamma$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.[†]
[x]188.3 *1*	12 *2*					Q
[x]232.4 *1*	40 *2*					D
[x]284.2 *1*	7 *2*					Q
[x]368.3 *1*	24 *3*					Q
[x]433.5 *2*	15 *3*					Q
573.7 *1*	100 *2*	637.7	(15/2$^-$)	64	11/2$^-$	Q
633.4 *1*	72 *6*	1911.6	(23/2$^-$)	1278.2	(19/2$^-$)	Q
640.5 *1*	86 *5*	1278.2	(19/2$^-$)	637.7	(15/2$^-$)	Q

[†] From $\gamma(\theta)$ measurements.

[x] γ ray not placed in level scheme.

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Level Scheme

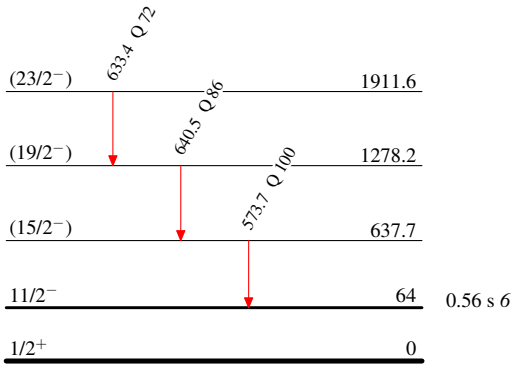
Intensities: Relative I_γ

Legend

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

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

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



$^{159}_{73}Ta_{86}$

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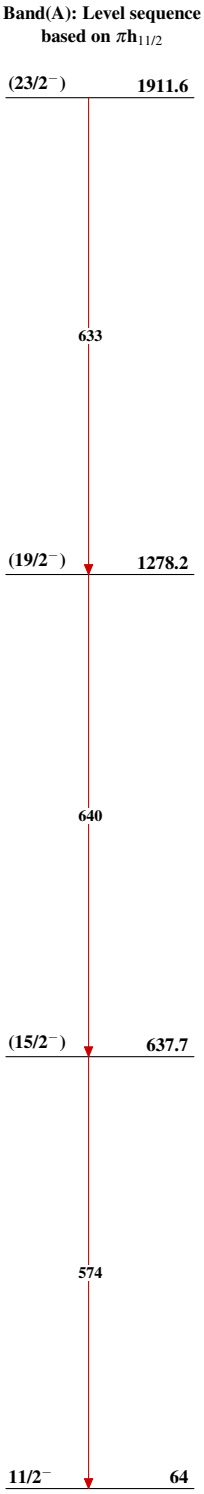

$^{159}_{73}Ta_{86}$