(HI,xnγ)

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	D. De Frenne	NDS 110, 2081 (2009)	1-Mar-2009

1997Ko51: reactions: ^{50}Cr(^{58}Ni,3p2n); ^{50}Cr(^{58}Ni,pα); ^{54}Fe(^{58}Ni,p2α). Measured: Eγ, Iγ, $\gamma\gamma$, 3p2n$\gamma\gamma$ coin, $\gamma(\theta)$. Deduced: ^{103}In levels, J^π.
1991IsZY: ^{48}Ti(^{58}Ni,p2n). E(^{58}Ni)=224 MeV. Measured: γ, $\gamma\gamma$, $\gamma(\theta)$, γ- particle, 4 Ge detectors, Si detector, pγ spectrum.
Other: 1995De51.

^{103}In Levels

E(level)†	Jπ‡	$T_{1/2}$	E(level)†	Jπ‡	E(level)†	Jπ‡
0.0	(9/2$^+$)		3686.8 *5*	(25/2$^+$)	5703.8 *7*	(29/2$^-$)
1077.7 *3*	(11/2$^+$)		4192.4 *5*	(23/2$^-$)	5852.6 *6*	(29/2$^-$)
1272.81 *9*	(13/2$^+$)		4589.9 *5*	(25/2$^-$)	6192.0 *8*	(31/2$^-$)
1795.3 *3*	(17/2$^+$)	0.13# ns *2*	4810.8 *6*	(27/2$^+$)	6229.0 *7*	(31/2$^-$)
2110.3 *4*	(19/2$^+$)		5098.3 *6*	(25/2$^-$)	6303.4 *8*	
2925.5 *4*	(21/2$^+$)		5342.6 *7*	(27/2$^-$)	7657?	
3247.9 *4*	(23/2$^+$)		5570.6 *6*	(27/2$^-$)		

† Taken from ^{50}Cr(^{58}Ni,3p2n) at 261 MeV (1997Ko51). To avoid confusion for the user, only the results of 1997Ko51 are given because there are substantial differences between the results of 1997Ko51 and 1995De51, and the results of1997Ko51 are considered more complete and reliable by the evaluator.
‡ J^π(g.s.)=(9/2$^+$) assumed from systematics and theory. All other J^π's are from $\gamma(\theta)$, cascades and intercascade transitions.
# From recoil distance method (1996IsZZ).

γ(^{103}In)

Eγ†	Iγ†	Ei(level)	J_i^π	E_f	J_f^π	Mult.‡	Comments
195.1 *3*	3.5 *6*	1272.81	(13/2$^+$)	1077.7	(11/2$^+$)	D	R=1.02 *8*.
282.0 *3*	9.2 *6*	5852.6	(29/2$^-$)	5570.6	(27/2$^-$)	D	R=0.6 *1*.
315.0 *2*	41 *1*	2110.3	(19/2$^+$)	1795.3	(17/2$^+$)	D	R=0.80 *3*.
322.5 *2*	41 *1*	3247.9	(23/2$^+$)	2925.5	(21/2$^+$)	D	R=0.72 *4*.
361.2 *3*	7.5 *7*	5703.8	(29/2$^-$)	5342.6	(27/2$^-$)	D	R=0.6 *1*.
376.4 *3*	4.6 *4*	6229.0	(31/2$^-$)	5852.6	(29/2$^-$)	D	R=0.6 *2*.
397.5 *3*	16.3 *8*	4589.9	(25/2$^-$)	4192.4	(23/2$^-$)	D	R=0.75 *7*.
438.9 *2*	28 *1*	3686.8	(25/2$^+$)	3247.9	(23/2$^+$)	D	R=0.74 *5*.
450.8 *5*	2.4 *4*	6303.4		5852.6	(29/2$^-$)		
472.2 *5*	1.4 *4*	5570.6	(27/2$^-$)	5098.3	(25/2$^-$)	D	R=0.8 *5*.
488.2 *4*	4.1 *5*	6192.0	(31/2$^-$)	5703.8	(29/2$^-$)	Q	R=0.4 *2*.
522.4 *2*	100 *2*	1795.3	(17/2$^+$)	1272.81	(13/2$^+$)	Q	R=1.34 *6*.
752.7 *4*	6.5 *8*	5342.6	(27/2$^-$)	4589.9	(25/2$^-$)	D	R=0.54 *10*.
815.3 *2*	60 *2*	2925.5	(21/2$^+$)	2110.3	(19/2$^+$)	D	R=0.87 *4*.
981.2 *5*	2.1 *4*	5570.6	(27/2$^-$)	4589.9	(25/2$^-$)	D	R=0.60 *8*.
1041.9 *4*	3.7 *5*	5852.6	(29/2$^-$)	4810.8	(27/2$^+$)	(E1)	R=0.8 *2*.
1077.4 *5*	6 *2*	1077.7	(11/2$^+$)	0.0	(9/2$^+$)	D+Q	R=1.5 *5*.
1124.1 *4*	4.3 *7*	4810.8	(27/2$^+$)	3686.8	(25/2$^+$)	D	R=1.4 *3*.
1130.2 *7*	3 *1*	2925.5	(21/2$^+$)	1795.3	(17/2$^+$)	Q	
1137.5 *3*	12 *1*	3247.9	(23/2$^+$)	2110.3	(19/2$^+$)	Q	R=1.2 *1*.
1266.9 *3*	18 *1*	4192.4	(23/2$^-$)	2925.5	(21/2$^+$)	(E1)	R=0.82 *8*.
1272.9 *2*	97 *2*	1272.81	(13/2$^+$)	0.0	(9/2$^+$)	Q	R=1.38 *6*.
1342.0 *4*	8 *1*	4589.9	(25/2$^-$)	3247.9	(23/2$^+$)	(E1)	R=0.75 *10*.
1850.3 *4*	1.5 *4*	5098.3	(25/2$^-$)	3247.9	(23/2$^+$)	(E1)	

Continued on next page (footnotes at end of table)

(HI,xnγ) (continued)

γ(^{103}In) (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	Comments
1883.7 *4*	6.0 *9*	5570.6	(27/2$^-$)	3686.8	(25/2$^+$)	(E1)	R=0.5 *1*.
2846.3[#] *6*	1.3 *3*	7657?		4810.8	(27/2$^+$)		

[†] From ^{50}Cr(^{58}Ni,3p2n) with E(^{50}Cr)=261 MeV (1997Ko51).

[‡] From measured anisotropies R=Iγ(143°)/[Iγ(79°)+ Iγ(101°)] Values of R≈0.8 correspond to stretched ΔJ=1 dipole transitions and R≈1.5 to stretched ΔJ=2 quadrupole or non-stretched ΔJ=1 transitions (1997Ko51). No identification of non-stretched and mixed transitions possible. E1′s considered as tentative by the evaluator as only from γ(θ) M1 cannot be excluded. Some D transitions might be D+Q most probably M1+E2.

[#] Placement of transition in the level scheme is uncertain.

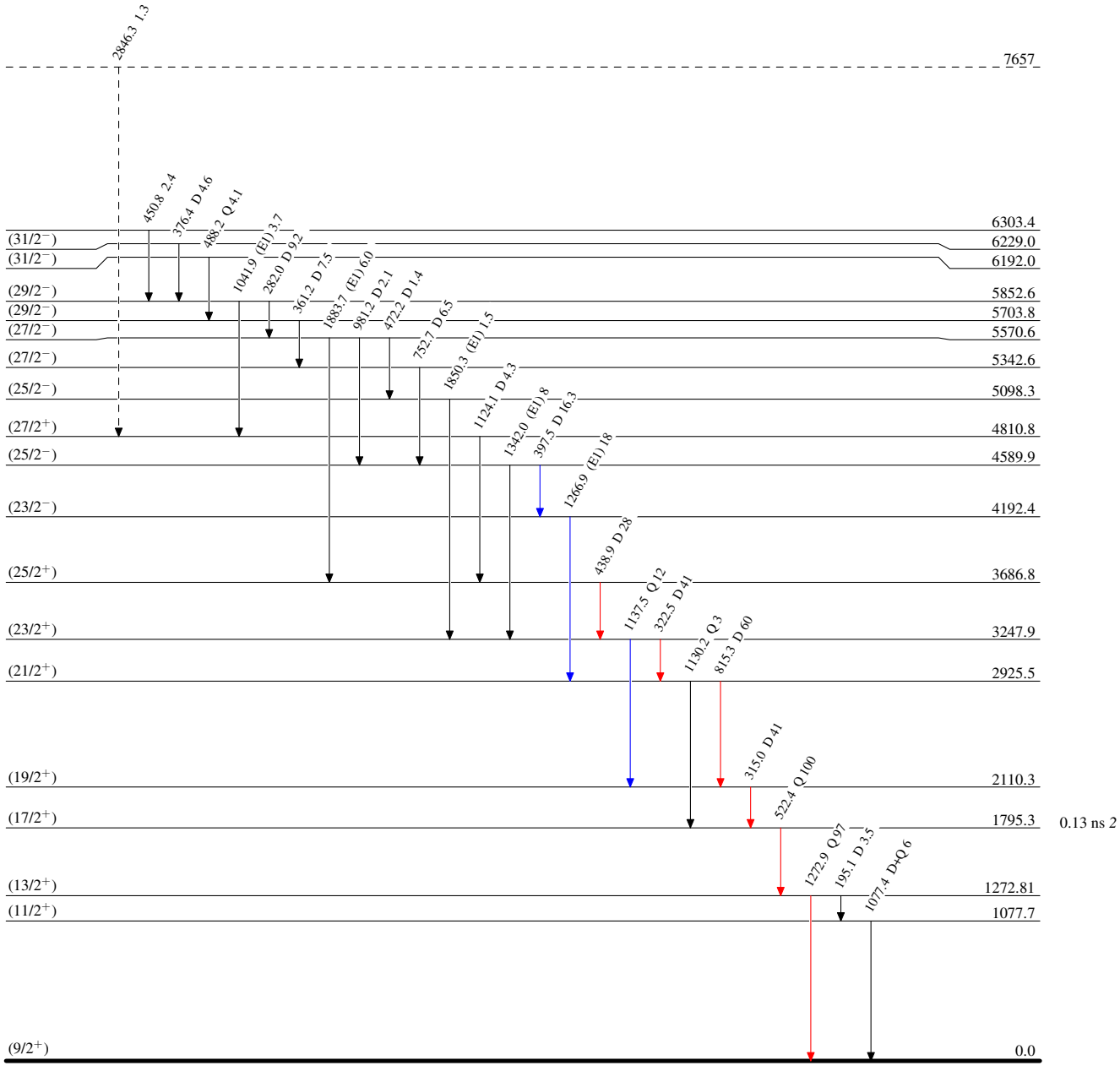
(HI,xnγ)

Level Scheme

Intensities: Type not specified

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
γ Decay (Uncertain)



$^{103}_{49}In_{54}$