^{70}Zn(^{13}C,4nγ) 2011Ko16

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 135, 193 (2016)	31-May-2016

2011Ko16: E=65 MeV from the cyclotron at Tohoku university. Measured Eγ, Iγ, $\gamma\gamma$-coin , $\gamma\gamma(\theta)$(DCO), $\gamma\gamma$(linear polarization) using Ge detector array Hypeball2 consisting of 13 co-axial Ge detectors of n-type and six clovers. Deduced high-spin levels, J, π, bands, configuration. Evidence for chiral structure.

1980SaZH: ^{70}Zn(^{12}C,3nγ) E=38.4 MeV. No details are available.

2011Ko16 provide a level scheme only in Figure 2, without any details of gamma-ray data.

^{79}Kr Levels

E(level)[†]	J$^{\pi}$[‡]	$T_{1/2}$	Comments
0.0	1/2$^-$		
129.76[@] *10*	7/2$^+$	50 s *3*	%IT=100 $T_{1/2}$: from Adopted Levels.
148.84[#] *15*	9/2$^+$		
894.4[@] *7*	11/2$^+$		
974.6[#] *9*	13/2$^+$		
1881.7[@] *9*	15/2$^+$		
1999.3[#] *11*	17/2$^+$		
2975.9[@] *12*	19/2$^+$		
3142.2[#] *13*	21/2$^+$		
3613.7 *12*	21/2$^+$		
3842.1[@] *13*	23/2$^+$		
4295.6[#] *14*	25/2$^+$		
4652.5[&] *14*	(25/2$^+$)		
4895.0[@] *14*	27/2$^+$		
5518.6[#] *15*	29/2$^+$		
5542.9[&] *15*	(27/2$^+$)		
5969.3[&] *14*	(29/2$^+$)		
6244.5[@] *16*	31/2$^+$		
6885.2[#] *16*	33/2$^+$		
7052.1[&] *16*	(31/2$^+$)		
7898.4[@] *17*	35/2$^+$		
8394.1[#] *18*	37/2$^+$		
9644.8[@] *18*	(39/2$^+$)		
10033.1[#] *20*	41/2$^+$		
11818.2[@] *23*	(45/2$^+$)		

[†] From least-squares fit to Eγ values, assuming 1 keV uncertainty for each γ ray except when stated otherwise.
[‡] As proposed by 2011Ko16 based on previous assignment and band structures in the current experiment.
[#] Band(A): Yrast Band,α=+1/2.
[@] Band(a): Yrast Band,α=−1/2.
[&] Band(B): Band based on (25/2$^+$).

^{70}Zn(^{13}C,4nγ) 2011Ko16 (continued)

$\gamma(^{79}Kr)$

E_γ	E_i(level)	J_i^π	E_f	J_f^π	Mult.	Comments
19.1 *1*	148.84	$9/2^+$	129.76	$7/2^+$		E_γ: from Adopted Gammas.
129.76 *10*	129.76	$7/2^+$	0.0	$1/2^-$	E3	E_γ,Mult.: from Adopted Gammas.
229	3842.1	$23/2^+$	3613.7	$21/2^+$		
356	4652.5	$(25/2^+)$	4295.6	$25/2^+$		
453	4295.6	$25/2^+$	3842.1	$23/2^+$		
472	3613.7	$21/2^+$	3142.2	$21/2^+$		
496	8394.1	$37/2^+$	7898.4	$35/2^+$		
599	4895.0	$27/2^+$	4295.6	$25/2^+$		
623	5518.6	$29/2^+$	4895.0	$27/2^+$		
637	3613.7	$21/2^+$	2975.9	$19/2^+$		
641	6885.2	$33/2^+$	6244.5	$31/2^+$		
699	3842.1	$23/2^+$	3142.2	$21/2^+$		
726	6244.5	$31/2^+$	5518.6	$29/2^+$		
747	894.4	$11/2^+$	148.84	$9/2^+$		
763	894.4	$11/2^+$	129.76	$7/2^+$		
811	4652.5	$(25/2^+)$	3842.1	$23/2^+$		
826	974.6	$13/2^+$	148.84	$9/2^+$		
866	3842.1	$23/2^+$	2975.9	$19/2^+$		
890	5542.9	$(27/2^+)$	4652.5	$(25/2^+)$		
907	1881.7	$15/2^+$	974.6	$13/2^+$		
976	2975.9	$19/2^+$	1999.3	$17/2^+$		
987	1881.7	$15/2^+$	894.4	$11/2^+$		
1013	7898.4	$35/2^+$	6885.2	$33/2^+$		
1025	1999.3	$17/2^+$	974.6	$13/2^+$		
1052	4895.0	$27/2^+$	3842.1	$23/2^+$		
1073	5969.3	$(29/2^+)$	4895.0	$27/2^+$		
1083†	7052.1	$(31/2^+)$	5969.3	$(29/2^+)$		
1094	2975.9	$19/2^+$	1881.7	$15/2^+$		
1143	3142.2	$21/2^+$	1999.3	$17/2^+$		
1154	4295.6	$25/2^+$	3142.2	$21/2^+$		
1223	5518.6	$29/2^+$	4295.6	$25/2^+$		
1251	9644.8	$(39/2^+)$	8394.1	$37/2^+$		
1317	5969.3	$(29/2^+)$	4652.5	$(25/2^+)$		
1350	6244.5	$31/2^+$	4895.0	$27/2^+$		
1366	6885.2	$33/2^+$	5518.6	$29/2^+$		
1509†	7052.1	$(31/2^+)$	5542.9	$(27/2^+)$		
1509	8394.1	$37/2^+$	6885.2	$33/2^+$		
1615	3613.7	$21/2^+$	1999.3	$17/2^+$		
1639	10033.1	$41/2^+$	8394.1	$37/2^+$		
1654	7898.4	$35/2^+$	6244.5	$31/2^+$		
1675	5969.3	$(29/2^+)$	4295.6	$25/2^+$		
1701	5542.9	$(27/2^+)$	3842.1	$23/2^+$		
1746	9644.8	$(39/2^+)$	7898.4	$35/2^+$		
1785	11818.2	$(45/2^+)$	10033.1	$41/2^+$		

† Placement of transition in the level scheme is uncertain.

Legend

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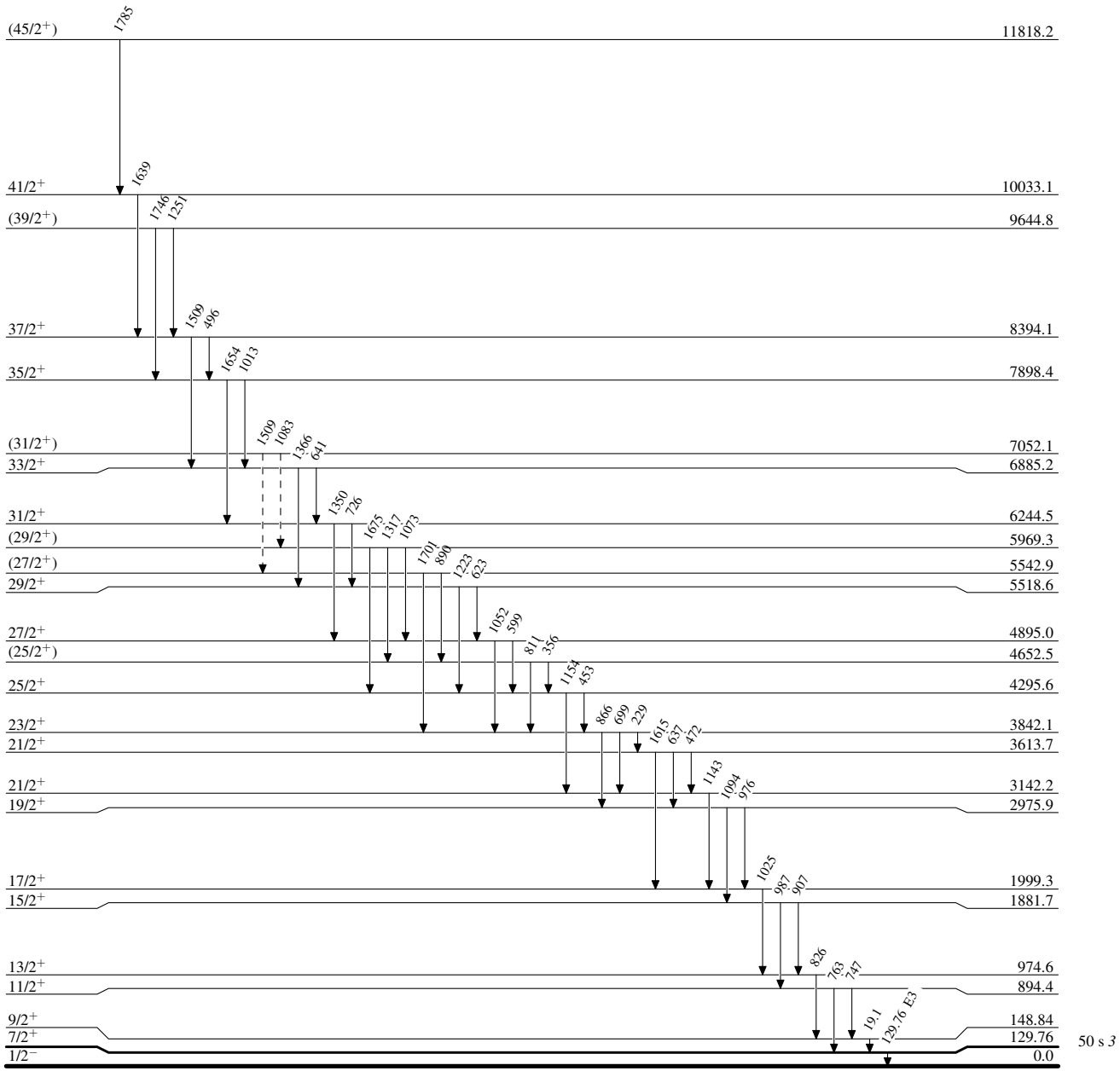
Level Scheme

γ Decay (Uncertain)



$^{79}_{36}Kr_{43}$

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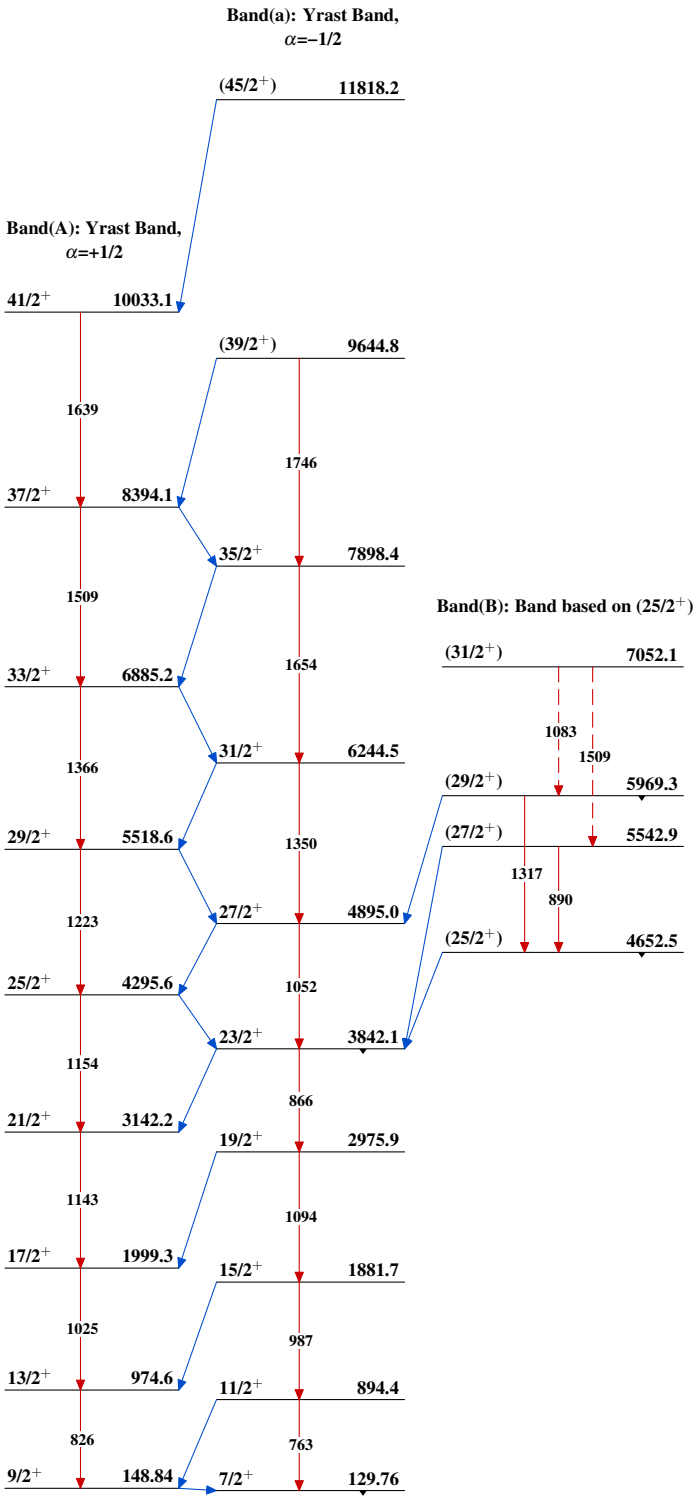

$^{79}_{36}Kr_{43}$