

$^{24}\text{Mg}(^{24}\text{Mg},2\alpha2p\text{n}\gamma)$  2008Sa04

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	John Cameron, Jun Chen and Balraj Singh, Ninel Nica		NDS 113, 365 (2012)	15-Jan-2012

E=91.72 MeV (for ON resonance), 92.62 MeV (for OFF resonance) beam provided by Legnaro XTU Tandem accelerator.

Measured  $E_\gamma$ ,  $I_\gamma$ ,  $\gamma\gamma$  coin using CLARA array. Detected charged particles with PRISMA spectrometer.

Decay of a narrow  $36^+$  resonance in  $^{24}\text{Mg}(^{24}\text{Mg},X)$  system at 45.7 MeV (c.m.) with  $\Gamma=170$  keV.

Level scheme is from ENSDF database for  $^{37}\text{Ar}$ . 2008Sa04 reported six  $\gamma$  rays at 323, 598, 680, 937, 1264 and 1506 keV from the decay of a  $J^\pi=36^+$  resonance in  $^{24}\text{Mg}+^{24}\text{Mg}$  system.

 $^{37}\text{Ar}$  Levels

E(level)	$J^\pi^\dagger$
0	$3/2^+$
1611.3	$7/2^-$
3185	$9/2^-$
3706	$11/2^-$
4887	
5213	$11/2^+$
5793	$13/2^-$
6151	$13/2^+$
6473	$15/2^+$
7071	$13/2^+, 17/2^+$

$^\dagger$  From Adopted Levels.

 $\gamma(^{37}\text{Ar})$ 

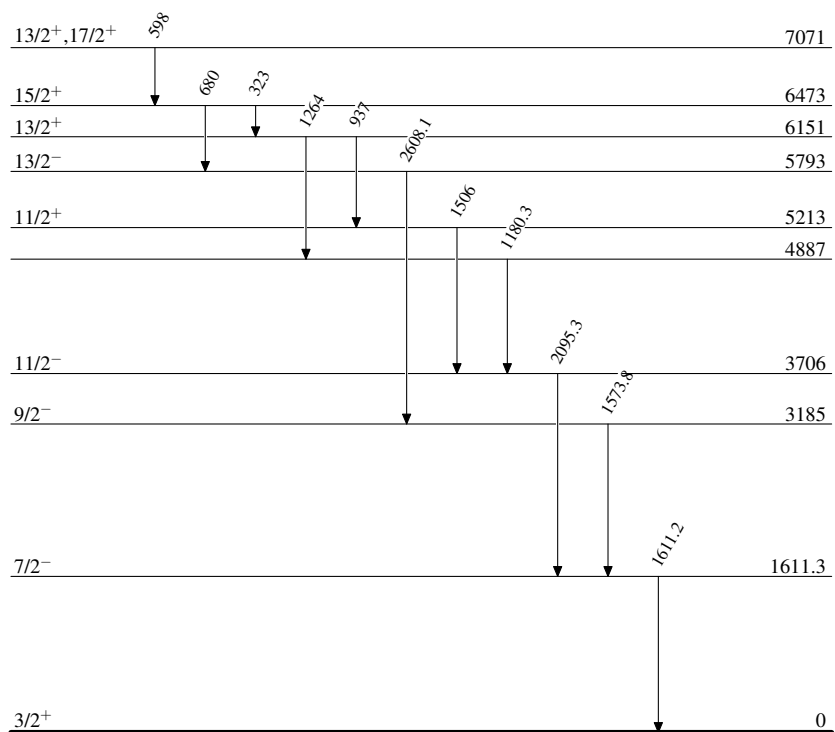
$E_\gamma$	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$	$E_\gamma$	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$
323 $^\dagger$	6473	$15/2^+$	6151	$13/2^+$	1506 $^\dagger$	5213	$11/2^+$	3706	$11/2^-$
598 $^\dagger$	7071	$13/2^+, 17/2^+$	6473	$15/2^+$	1573.8 $^\ddagger$	3185	$9/2^-$	1611.3	$7/2^-$
680 $^\dagger$	6473	$15/2^+$	5793	$13/2^-$	1611.2 $^\ddagger$	1611.3	$7/2^-$	0	$3/2^+$
937 $^\dagger$	6151	$13/2^+$	5213	$11/2^+$	2095.3 $^\ddagger$	3706	$11/2^-$	1611.3	$7/2^-$
1180.3 $^\ddagger$	4887		3706	$11/2^-$	2608.1 $^\ddagger$	5793	$13/2^-$	3185	$9/2^-$
1264 $^\dagger$	6151	$13/2^+$	4887						

$^\dagger$  From 2008Sa04. Placement is by the evaluators based on Adopted Levels, Gammas dataset for  $^{37}\text{Ar}$ .

$^\ddagger$  From  $^{37}\text{Ar}$  Adopted Gammas.

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## Level Scheme

 $^{37}_{18}\text{Ar}_{19}$