^{24}Mg(^{16}O,n2$\alpha\gamma$) 2005DeZZ

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen and Balraj Singh	NDS 184,29 (2022)	24-Jun-2022

2005DeZZ: Measured Eγ, $\gamma\gamma$, using the GASP spectrometer of 40 Compton-suppressed HPGe detectors and a multiplicity filter of BGO scintillators.

^{31}S Levels

E(level)[†]	J$^{\pi}$[‡]
0.0[#]	1/2$^+$
1249.1[#] *8*	3/2$^+$
2235.1[#] *8*	5/2$^+$
3287.1 *7*	5/2$^+$
3351.1[#] *12*	7/2$^+$
4452.2 *11*	7/2$^-$
4583.2 *16*	(7/2$^+$)
5301.2[#] *13*	(9/2$^+$)
6391.3[#] *16*	(11/2$^+$)
6835.3 *13*	(11/2$^-$)

[†] From a least-squares fit to Eγ, assuming ΔEγ=1 keV for each γ ray.
[‡] As proposed by 2005DeZZ based on earlier assignments for low-lying levels and yrast nature of levels populated in high-spin reactions. It is assumed that the spins ascend as the excitation energy rises due to yrast type of population of levels in heavy-ion fusion studies.
[#] Band(A): Yrast cascade based on 1/2$^+$.

γ(^{31}S)

E$_\gamma$[†]	E$_i$(level)	J$_i^{\pi}$	E$_f$	J$_f^{\pi}$	Comments
1052	3287.1	5/2$^+$	2235.1	5/2$^+$	
1165	4452.2	7/2$^-$	3287.1	5/2$^+$	
1232	4583.2	(7/2$^+$)	3351.1	7/2$^+$	
1249	1249.1	3/2$^+$	0.0	1/2$^+$	
1534	6835.3	(11/2$^-$)	5301.2	(9/2$^+$)	
1950	5301.2	(9/2$^+$)	3351.1	7/2$^+$	
2038	3287.1	5/2$^+$	1249.1	3/2$^+$	E$_\gamma$: 1038 in Figure 1 of 2005DeZZ is a misprint.
2102	3351.1	7/2$^+$	1249.1	3/2$^+$	
2235	2235.1	5/2$^+$	0.0	1/2$^+$	
2383	6835.3	(11/2$^-$)	4452.2	7/2$^-$	
3040	6391.3	(11/2$^+$)	3351.1	7/2$^+$	
3287	3287.1	5/2$^+$	0.0	1/2$^+$	

[†] From 2005DeZZ, with no uncertainty given.

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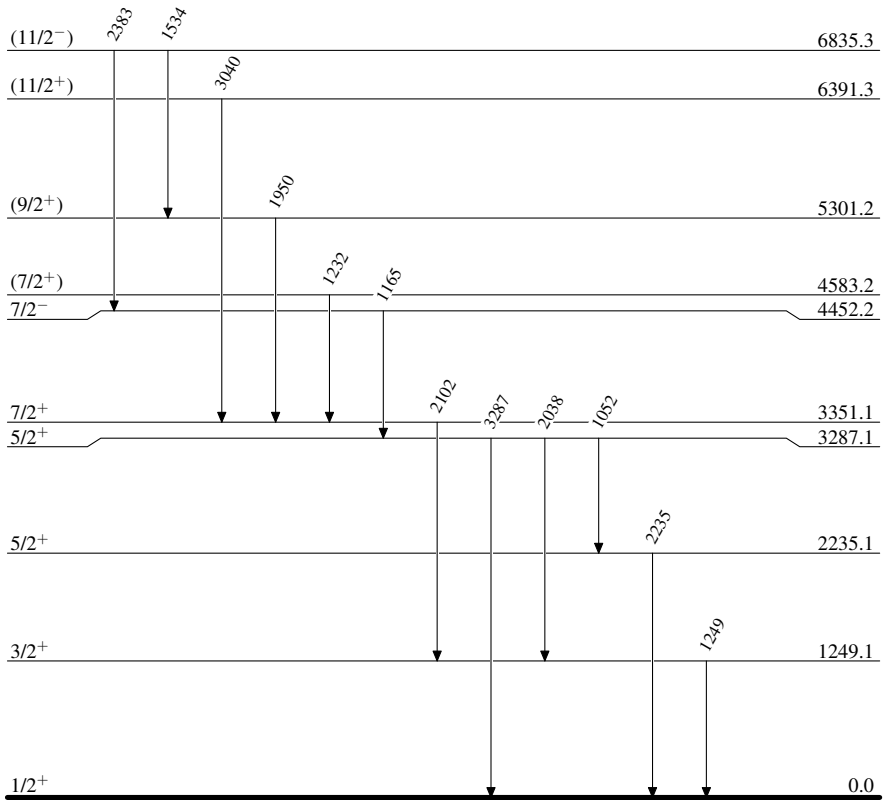
Level Scheme



$^{31}_{16}S_{15}$

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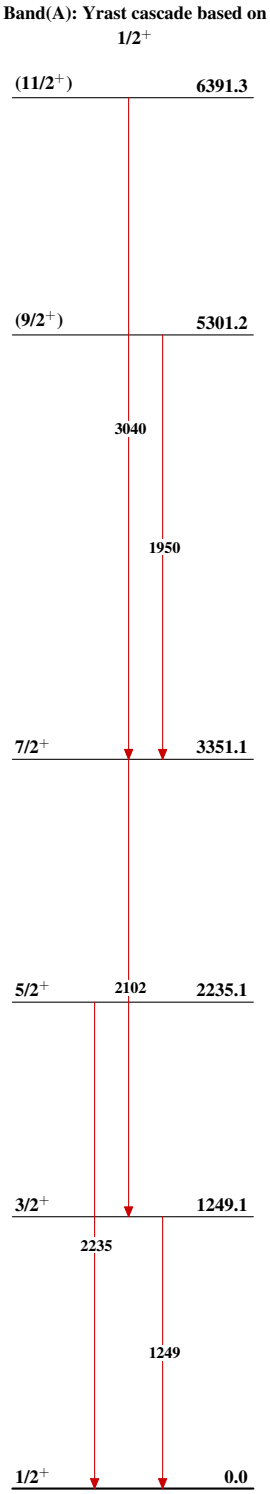

$^{31}_{16}S_{15}$