^{24}Mg(^{32}S,αpγ)   **2000Be52,2004Du25**

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Wang Jimin and Huang Xiaolong	NDS 144, 1 (2017)	1-Mar-2016

2000Be52: E=95 MeV. Measured Eγ and $\gamma\gamma$ using Gammasphere array consisting of 101 Compton-suppressed HPGe gamma-ray spectrometers.

2004Du25: E=95MeV, GASP array of 40 HPGe+74 BGO detectors, Cologne plunger,Recoil-distance technique. Measured Doppler-shifted Eγ,Iγ and $\gamma\gamma$-coin.

All information below is taken from 2000Be52, unless otherwise noted.
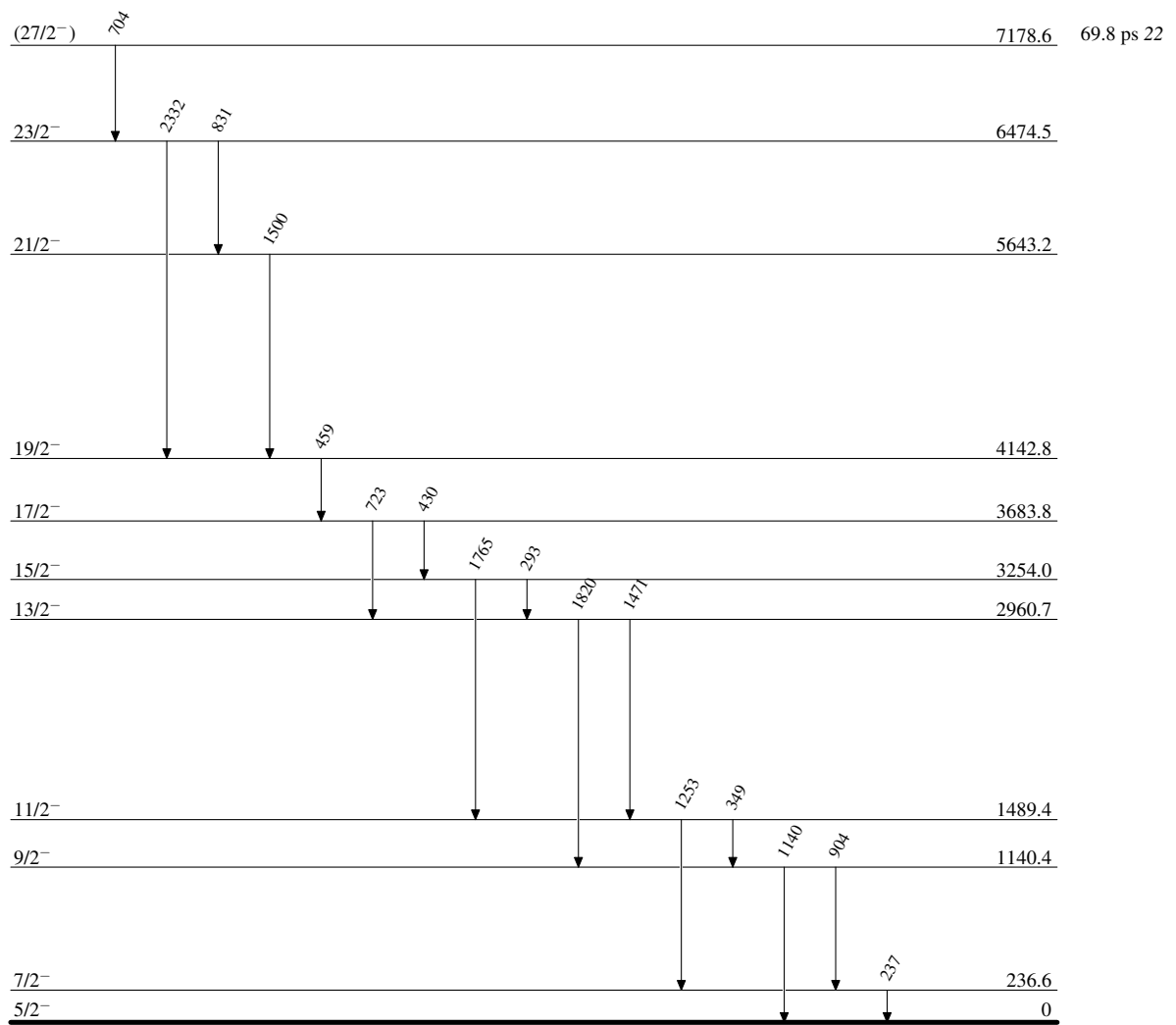
^{51}Mn Levels

E(level)[†]	J$^\pi$[‡]	T$_{1/2}$	Comments
0	5/2$^-$		
236.6 *8*	7/2$^-$		
1140.4 *8*	9/2$^-$		
1489.4 *10*	11/2$^-$		
2960.7 *11*	13/2$^-$		
3254.0 *12*	15/2$^-$		
3683.8 *13*	17/2$^-$		
4142.8 *16*	19/2$^-$		
5643.2 *18*	21/2$^-$		
6474.5 *18*	23/2$^-$		
7178.6 *21*	(27/2$^-$)	69.8 ps *22*	T$_{1/2}$: from 2004Du25. The uncertainty was deduced by adding the systematic (2.1 ps) and statistical (0.8 ps) uncertainties in quadrature. The half-life was obtained by applying the recoil distance Doppler shift (RDDS) method to the 831.8γ (from 6471 level) transition in spectra taken in coincidence with low-lying γ-rays. The analysis of 704γ was hampered due to the presence of closely spaced doppler-shifted components of 723γ and 717γ from lower levels and a 701 keV background peak.

[†] From least-squares fit to Eγ's, assuming Δ(Eγ)=1 keV for each γ ray.
[‡] From Adopted Levels.

γ(^{51}Mn)

E$_\gamma$	E$_i$(level)	J$^\pi_i$	E$_f$	J$^\pi_f$	E$_\gamma$	E$_i$(level)	J$^\pi_i$	E$_f$	J$^\pi_f$
237	236.6	7/2$^-$	0	5/2$^-$	904	1140.4	9/2$^-$	236.6	7/2$^-$
293	3254.0	15/2$^-$	2960.7	13/2$^-$	1140	1140.4	9/2$^-$	0	5/2$^-$
349	1489.4	11/2$^-$	1140.4	9/2$^-$	1253	1489.4	11/2$^-$	236.6	7/2$^-$
430	3683.8	17/2$^-$	3254.0	15/2$^-$	1471	2960.7	13/2$^-$	1489.4	11/2$^-$
459	4142.8	19/2$^-$	3683.8	17/2$^-$	1500	5643.2	21/2$^-$	4142.8	19/2$^-$
704	7178.6	(27/2$^-$)	6474.5	23/2$^-$	1765	3254.0	15/2$^-$	1489.4	11/2$^-$
723	3683.8	17/2$^-$	2960.7	13/2$^-$	1820	2960.7	13/2$^-$	1140.4	9/2$^-$
831	6474.5	23/2$^-$	5643.2	21/2$^-$	2332	6474.5	23/2$^-$	4142.8	19/2$^-$

^{24}Mg(^{32}S,αpγ)   **2000Be52,2004Du25**

Level Scheme

${}^{51}_{25}$Mn${}_{26}$