Coulomb excitation 1971Ba59,1976Pa13

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	D. Abriola(a), A. A. Sonzogni	NDS 109,2501 (2008)	1-Apr-2008

1971Ba59: (^{16}O,^{16}O′γ) E=35 MeV to 44.8 MeV. (α,$\alpha'\gamma$) E=7.2 MeV to 8.0 MeV; measured γ.
1976Pa13: (^{16}O,^{16}O′) E=36 MeV and 36.5 MeV; FWHM=100-140 keV (α,α') E=8 MeV; FWHM=30 keV.
β(EL) values are from 1971Ba59 except as noted. 1976Pa13 stated that first-excited state B(E2) values measured by 1971Ba59 are too large by ≈5%. Evaluator assumes that this may also apply to other β(EL) values.
2001Ma17: measured G factors following Coulomb excitation.
Other: 2005Zi02: Preliminary and basic level scheme in Pb(^{96}Mo,^{96}Mo′).

^{96}Mo Levels

E(level)	J$^\pi$ †	Comments
0	0$^+$	
778.2 *7*	2$^+$	B(E2)↑=0.270 *4*; g=+0.39 *3* (2001Ma17) B(E2)↑: From 1976Pa13; interference with higher 2$^+$ states may change B(E2) to 0.269 or 0.271. B(E2)=0.284 *14* from 1971Ba59. Other measurements: B(E2)=0.284 *14* (1971Ba59), 0.302 *33* (1958St32).
1148.0 *13*	0$^+$	B(E2)(γ I(γ+ce) 778.2)=0.0270 *35*.
1497.7 *8*	2$^+$	B(E2)(γ to g.s.)=0.0156 *19*; B(E2)(γ to 778.2)=0.045 *7*, B(M1)=0.09 *1*. β(EL): if δ(719.5)=0.18.
1625.8 *8*	2$^+$	B(E2)(to g.s.)=0.0015 *4*; B(E2)(γ to 778.2)=0.045 *15*, B(M1)=0.020 *6*. β(EL): if δ(847.6)=1.08.
1628.1 *13*	4$^+$	B(E2)(γ to 778.2)=0.190 *36*.
1869.5 *13*	4$^+$	B(E2)(γ to 778.2)=0.0090 *27*.
2234.5 *9*	3$^-$	B(E3)↑=0.092 *12*

† Adopted values.

γ(^{96}Mo)

E$_\gamma$ †	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	E$_\gamma$ †	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
369.8	1148.0	0$^+$	778.2	2$^+$	849.86	1628.1	4$^+$	778.2	2$^+$
608.7	2234.5	3$^-$	1625.8	2$^+$	1091.30	1869.5	4$^+$	778.2	2$^+$
719.55	1497.7	2$^+$	778.2	2$^+$	1456.3	2234.5	3$^-$	778.2	2$^+$
736.8	2234.5	3$^-$	1497.7	2$^+$	1497.68	1497.7	2$^+$	0	0$^+$
778.22	778.2	2$^+$	0	0$^+$	1625.8	1625.8	2$^+$	0	0$^+$
847.6	1625.8	2$^+$	778.2	2$^+$					

† From 1971Ba59. ΔE not reported.

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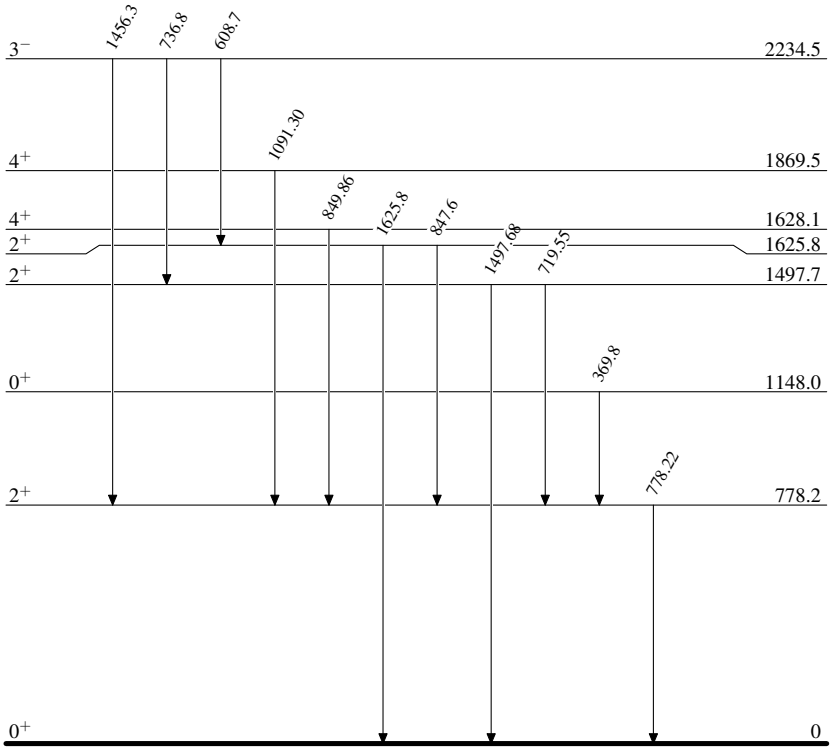
Level Scheme



$^{96}_{42}Mo_{54}$