^{9}Be(^{28}Mg,^{27}Mgγ),^{9}Be(^{50}Ti,Xγ) 2005ScZV,2001Ge05

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia	NDS 112, 1875 (2011)	30-Nov-2010

2005ScZV: ^{9}Be(^{28}Mg,^{27}Mgγ): One neutron transfer of ^{28}Mg, E=57 MeV, on ^{9}Be target at ISOLDE facility with MINIBALL γ-ray spectrometer; ^{27}Mg identified in coincidence with two α particle decay of ^{8}Be; Measured γ-rays and deduced one neutron transfer cross section and presented ^{27}Mg level scheme.

2001Ge05: ^{9}Be(^{50}Ti,Xγ): ^{50}Ti beam, E= 300 MeV/u, was fragmented and separated using a magnetic fragment separator at GSI. Fragments were identified by energy loss and time of flight before arriving at the secondary target of Pb; Measured γ-rays and deduced ^{27}Mg level scheme.

^{27}Mg Levels

E(level)	J$^{\pi}$[†]
0	1/2^{+}
985	3/2^{+}
1698	5/2^{+}
1940	5/2^{+}
3475	1/2^{+}
3560	3/2^{-}
4827	1/2^{-},3/2^{-}

[†] From Adopted Levels.

γ(^{27}Mg)

E$_i$(level)	J$_i^{\pi}$	E$_\gamma$[†]	I$_\gamma$[#]	E$_f$	J$_f^{\pi}$	E$_i$(level)	J$_i^{\pi}$	E$_\gamma$[†]	I$_\gamma$[#]	E$_f$	J$_f^{\pi}$
985	3/2^{+}	985		0	1/2^{+}	3475	1/2^{+}	3475[‡]	100	0	1/2^{+}
1698	5/2^{+}	713[‡@]	<1	985	3/2^{+}	3560	3/2^{-}	1862[‡@]	2.0	1698	5/2^{+}
		1698	100	0	1/2^{+}			2575[‡]	6.5	985	3/2^{+}
1940	5/2^{+}	955	100	985	3/2^{+}			3560[‡]	100	0	1/2^{+}
		1940	50	0	1/2^{+}	4827	1/2^{-},3/2^{-}	1267[‡@]	9.8	3560	3/2^{-}
3475	1/2^{+}	1777[‡@]	<1	1698	5/2^{+}			1352[‡]	13.7	3475	1/2^{+}
		2490[‡@]	2	985	3/2^{+}			3842[‡]	100	985	3/2^{+}

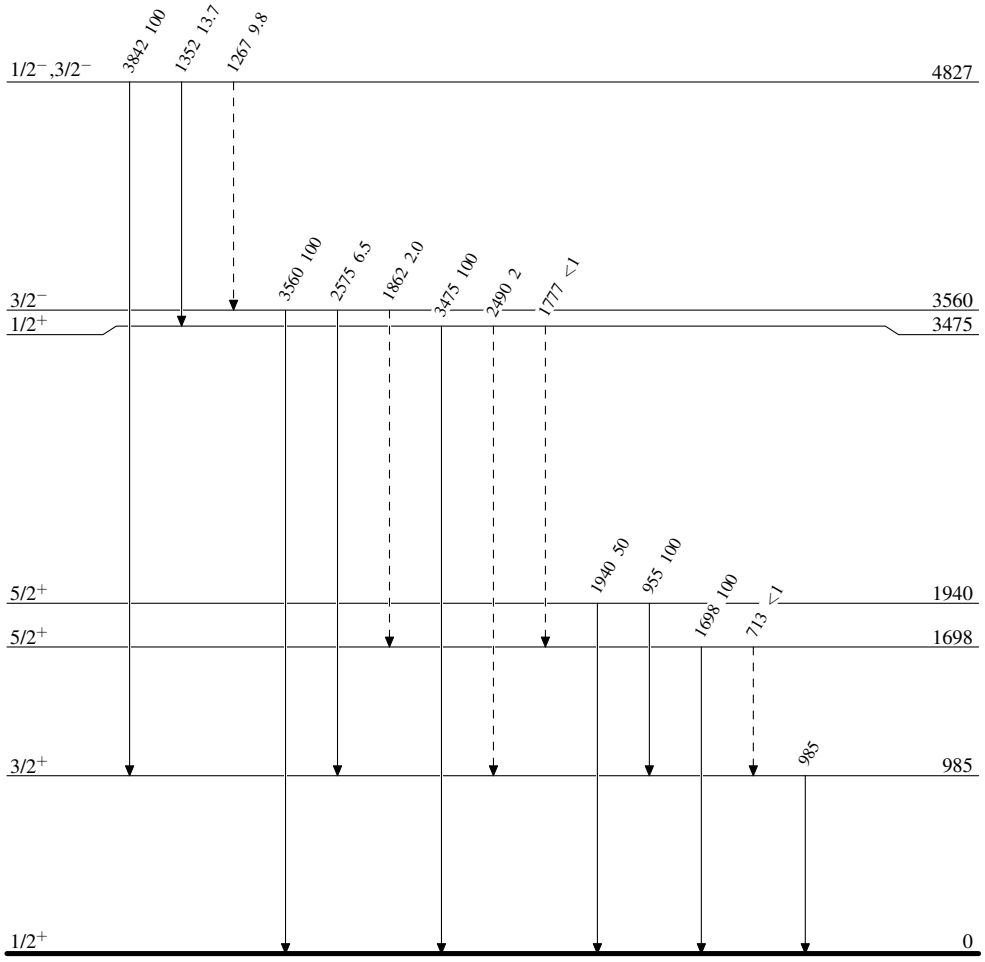
[†] Reported both in 2005ScZV and 2001Ge05, except otherwise noted. γ-ray energy deduced by the evaluator from level energy difference.
[‡] From 2005ScZV, deduced from level energy difference by the evaluator.
[#] Branching from 2005ScZV.
[@] Placement of transition in the level scheme is uncertain.

^{9}Be(^{28}Mg,^{27}Mgγ),^{9}Be(^{50}Ti,Xγ) 2005ScZV,2001Ge05 Legend

Level Scheme

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{27}_{12}Mg_{15}$