

Table 3 Measured resonance strengths $\omega\gamma$ of excitation energies (E_x) in ^{44}Ti and the centre-of-mass resonance energy (E_{cm}) of $^{40}\text{Ca} + \alpha$, assigned spin-parities and reference.

E_x [keV]	E_{cm} [keV]	J^π	$\omega\gamma$ [eV]	reference
7634	2507		0.013 ± 0.003	[CSW77]
8067	2940		0.022 ± 0.004	[CSW77]
8318	3191		0.12 ± 0.02	[CSW77]
8385	3258	2+	0.52 ± 0.1	[CSW77]
8416	3289	(0+,1-)	0.33 ± 0.07	[CSW77]
8449	3322	(2+,3-)	0.28 ± 0.06	[CSW77]
8511	3384	2+	0.22 ± 0.04	[CSW77]
8534	3407	(2+,3-)	0.33 ± 0.07	[CSW77]
8565	3438	2+	0.11 ± 0.02	[CSW77]
8627	3500	2+	0.08 ± 0.02	[CSW77]
8639	3512	2+	0.23 ± 0.05	[CSW77]
8756	3629	(2+)	0.33 ± 0.07	[CSW77]
8947	3820		0.11 ± 0.02	[DSS77]
8954	3827	1-	0.22 ± 0.04	[DSS77]
8960	3833	(2+,3-)	0.4 ± 0.08	[DSS77]
8987	3860	2+	0.3 ± 0.06	[DSS77]
8992	3865	4+	0.6 ± 0.1	[DSS77]
9215	4088	2+	0.5 ± 0.1	[DSS80]
9227	4100	2+	5.8 ± 0.12	[DSS80]
9239	4112	2+	2 ± 0.4	[DSS80]

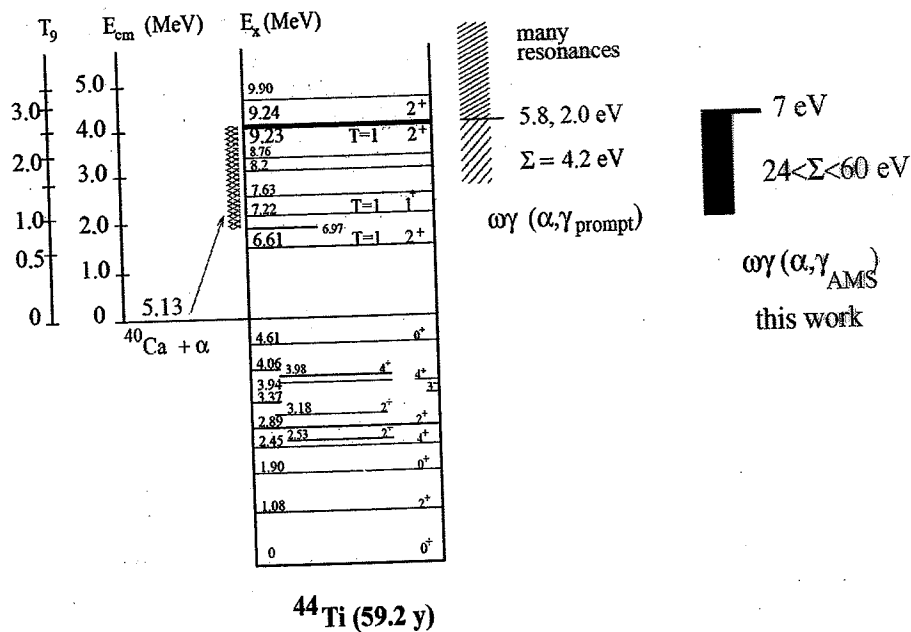


Fig. 2 Level scheme of $^{40}\text{Ca}(\alpha, \gamma)^{44}\text{Ti}$. The result of the AMS measurements are shown on the far right and compared with the measurements by prompt γ next to the level scheme. Figure taken from [NPG+04].

Table 5 Excitation energies in ^{44}Ti (E_x) above the threshold of $^{40}\text{Ca} + \alpha$ (Q-value = 5.1271 MeV), centre-of-mass resonance energies of $^{40}\text{Ca} + \alpha$ (E_{cm}), assigned spin-parities and isospin and measured resonance strengths $\omega\gamma$. Data from [CS99].

E_x [keV]	E_{cm} [keV]	E_{lab}/m [keV/u]	J^π	T	$\omega\gamma$ [eV]	reference
5152	25	7.0	(6-)			
5210	83	22.8	5-			
5305	178	48.9	5-			
5421	294	80.8	3-			
5670	543	149.4	(7-)			
6030	903	248.3	2+			
6220	1093	300.5	1-			
6509	1381	379.9	(8+)			
6572	1445	397.5	(8+)			
6606	1479	406.8	2+	$T = 1$		
6805	1678	461.4	(0,2)+			
6849	1722	473.5	(6+)	$T = 1$		
6924	1797	494.1	(8-)			
6959	1832	503.8	4+	$T = 1$		
7216	2089	574.4	1+	$T = 1$		
7340	2213	608.5	3-			
7409	2281	627.4	(9-)			
7560	2433	669.0				
7634	2507	689.4			0.013 ± 0.003	[CSW77]
7670	2543	699.3	6+			
7671	2544	699.6	(10+)			
8040	2913	801.0	3-, (12+)			
8067	2940	808.5			0.022 ± 0.004	[CSW77]
8170	3043	836.8	1-			
8180	3053	839.5				
8318	3191	877.5			0.12 ± 0.02	[CSW77]
8385	3258	895.9	2+		0.52 ± 0.1	[CSW77]
8416	3289	904.4	(0+, 1-)		0.33 ± 0.07	[CSW77]
8449	3322	913.5	(2+, 3-)		0.28 ± 0.06	[CSW77]
8511	3384	930.6	2+		0.22 ± 0.04	[CSW77]
8534	3407	936.9	(2+, 3-)		0.33 ± 0.07	[CSW77]
8565	3438	945.4	2+		0.11 ± 0.02	[CSW77]
8627	3500	962.5	2+		0.08 ± 0.02	[CSW77]
8639	3512	965.8	2+		0.23 ± 0.05	[CSW77]
8756	3629	997.9	(2+)		0.33 ± 0.07	[CSW77]

Table 6 Excitation energies in ^{44}Ti , continued.

E_x [keV]	E_{cm} [keV]	E_{lab}/m [keV/u]	J^π	T	$\omega\gamma$ [eV]	reference
8862	3735	1027.0	(10-)			
8947	3820	1050.5			0.11 ± 0.02	[DSS77]
8954	3827	1052.4	1-		0.22 ± 0.04	[DSS77]
8960	3833	1054.0	(2+, 3-)		0.4 ± 0.08	[DSS77]
8987	3860	1061.5	2+		0.3 ± 0.06	[DSS77]
8992	3865	1062.8	4+		0.6 ± 0.1	[DSS77]
9073	3946	1085.1				
9100	3973	1092.5				
9120	3993	1098.0				
9140	4013	1103.5				
9180	4053	1114.5				
9215	4088	1124.2	2+		0.5 ± 0.1	[DSS80]
9227	4100	1127.5	2+	$T = 1$	5.8 ± 0.12	[DSS80]
9239	4112	1130.8	2+		2 ± 0.4	[DSS80]