Coulomb excitation **2012Ku14,1988Ku01,1964Sy01**

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Alexandru Negret, Balraj Singh	NDS 124, 1 (2015)	30-Nov-2014

2012Ku14: ^{86}Sr beam at E=243-285 MeV on ^{12}C targets. Target I: 0.606 mg/cm^2 ^{12}C, 6.426 mg/cm^2 Gd, 1.0 mg/cm^2 Ta, 5.6 mg/cm^2 Cu. Target II: 0.4 mg/cm^2 ^{12}C, 4.40 mg/cm^2 Gd, 7.8 mg/cm^2 Cu. Target III: 0.45 mg/cm^2 ^{12}C, 4.45 mg/cm^2 Fe, 4.9 mg/cm^2 Cu. Carbon was evaporated onto layers of Gd, Ta, Cu and Fe. Detected γ radiation using four segmented Clover detectors. Scattered ^{12}C and α particles detected using circular Si detectors. Measured lifetimes, g factors, spin alignment, precession angle and angular correlations. Comparison with large-scale shell-model calculations.

1988Ku01: (^{28}Si,^{28}Si′γ) E=90 MeV; (^{30}Si,^{30}Si′γ) E=90 MeV; (^{32}S,^{32}S′γ) E=100, 110 MeV. Measured γ(particle)-coin, $\gamma(\theta)$, $\gamma(\theta$,H) by thin-foil transient field-method, lifetime by DSAM. Deduced g factor.

1964Sy01: (^{16}O,^{16}Oγ) E=35-42 MeV.

1963Al31: (^{14}N,^{14}N′γ) E=44 MeV.

^{86}Sr Levels

E(level)	J$^\pi$[†]	T$_{1/2}$[‡]	Comments
0.0	0$^+$		
1076.7	2$^+$	1.39 ps *7*	g=+0.285 *14* (2012Ku14); g=+0.323 *51* (2012Ku14) B(E2)↑=0.028 *1* (2012Ku14) B(E2)↑: Others: 0.118 *16* (1964Sy01), 0.087 *26* (1963Al31). g factor=+0.323 from Target III: with iron as ferromagnetic material (243 MeV) (2012Ku14). g: Others: +0.273 *50* (1988Ku01). T$_{1/2}$: 1.46 ps *15* (1988Ku01).
1854.2	2$^+$		g=+0.40 *16* (2012Ku14)
2229.7	4$^+$	1.73 ps *21*	g=−0.68 *49* (2012Ku14)
2481.9	3$^-$	0.90 ps *7*	
2672.8	5$^-$		

[†] From Adopted Levels.
[‡] From DSAM (2012Ku14).

γ(^{86}Sr)

E$_\gamma$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.[†]	δ[†]	Comments
443	2672.8	5$^-$	2229.7	4$^+$			
628	2481.9	3$^-$	1854.2	2$^+$	E1+M2	−0.07 *3*	
777	1854.2	2$^+$	1076.7	2$^+$			
1076.7	1076.7	2$^+$	0.0	0$^+$	E2		
1153	2229.7	4$^+$	1076.7	2$^+$	E2		B(E2)↓=0.016 *2* (2012Ku14)
1854	1854.2	2$^+$	0.0	0$^+$			

[†] From Adopted Gammas.

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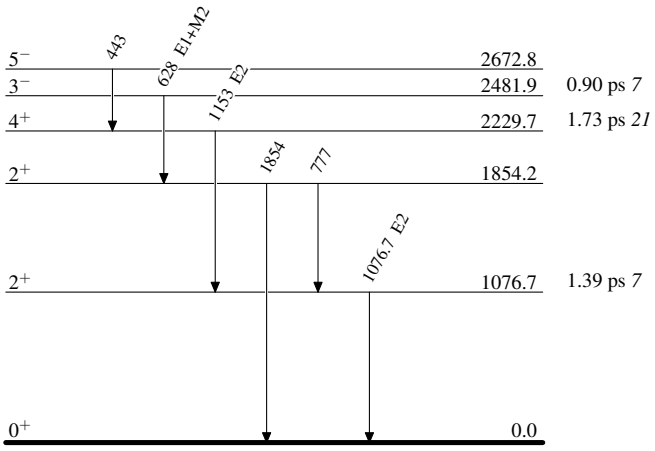
Level Scheme



$^{86}_{38}Sr_{48}$