$^{12}C(^{36}S,2\alpha\gamma)$ 2008Sp04

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jun Chen	NDS 140, 1 (2017)	30-Sep-2015

2008Sp04, 2008Sp01: E=70 MeV ^{36}S beam was produced from the Cologne tandem accelerator. Target was natural C of 0.19 mg/cm^2 thickness on 3.03 mg/cm^2 Gd deposited on 1.0 mg/cm^2 Ta backed by 2.0 mg/cm^2 Cu. γ-rays were detected with four NaI(Tl) detectors and a Ge detector and α-particles were detected with a Si counter. Measured Eγ, Iγ, Eα, $\gamma\gamma$-coin, $\alpha\gamma$-coin, Doppler-shift attenuation. Deduced levels, J, π, B(E2), $T_{1/2}$, g-factor by transient field technique in inverse kinematics reaction.

All data are from 2008Sp04 unless otherwise noted.

^{40}Ar Levels

E(level)†	J$^\pi$†	$T_{1/2}$‡	Comments
0	0^+		
1461	2^+	1.25 ps *14*	g=−0.02 *3* (2008Sp04)
2121	0^+		
2524	2^+	0.47 ps *7*	$T_{1/2}$: from weighted average of τ=0.7 ps *1* and 0.6 ps *2* in 2008Sp01.
2893	4^+	1.80 ps *28*	
3208	2^+		
3681	3^-		
4226	$4^{(-)}$		
4494	5^-		

† From Adopted Levels. Energies are rounded values.
‡ From 2008Sp04 and 2008Sp01 by DSAM.

$\gamma(^{40}Ar)$

E$_\gamma$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
660	2121	0^+	1461	2^+
1063	2524	2^+	1461	2^+
1333	4226	$4^{(-)}$	2893	4^+
1432	2893	4^+	1461	2^+
1461	1461	2^+	0	0^+
1601	4494	5^-	2893	4^+
1747	3208	2^+	1461	2^+
2220	3681	3^-	1461	2^+
2524	2524	2^+	0	0^+

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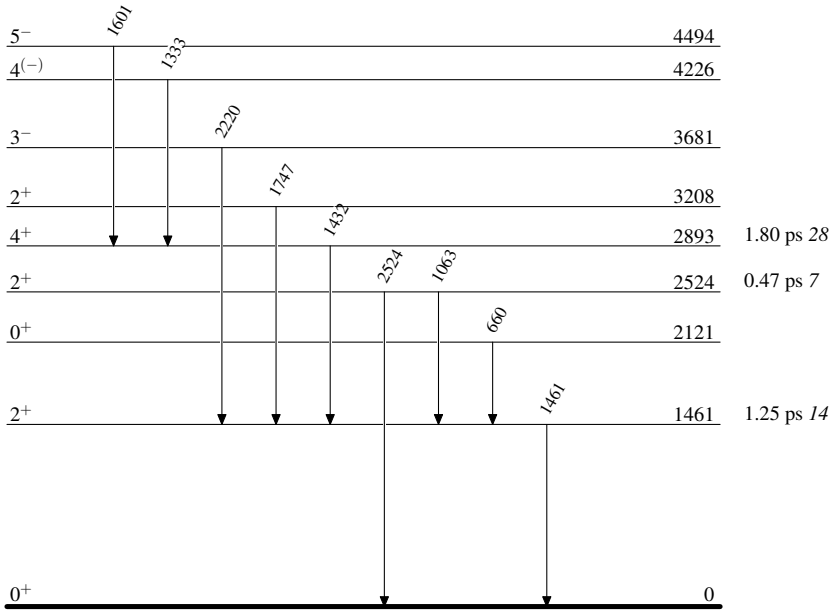
Level Scheme



$^{40}_{18}Ar_{22}$