^{74}Ge(^{12}C,3nγ) 1981Bu02,1978Iv02

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. A. Mccutchan	NDS 125, 201 (2015)	31-Dec-2014

1980Bu02: E(^{12}C)=43 and 45 MeV. Measured Eγ, Iγ, $\gamma(\theta)$ using a Ge(Li) detector; deduced $T_{1/2}$ from Recoil Distance Doppler Shift (RDDS) measurement. Level scheme presented in 1980Bu02 is based on that from ^{82}Kr(α,3nγ) (1980Ar02).

1978Iv02: E(^{12}C)=35 to 45 MeV. Measured Eγ, Iγ, excitation function. Identified transitions belonging to ^{83}Sr based on excitation function, however, did not place transitions into a level scheme.

^{83}Sr Levels

E(level)†	J$^\pi$‡	$T_{1/2}$#	Comments
0	$7/2^+$		
35	$9/2^+$		
800	$11/2^+$		
894	$11/2^+$		
910	$13/2^+$	3.5 ps *2*	
1574	$(9/2)^+$		
1856	$15/2^+$		
1987	$17/2^+$	0.7 ps *2*	
2107	$(13/2^-)$		J$^\pi$: $(13/2^+)$ proposed in 1980Bu02.
3116	$21/2^+$	<0.7 ps	
3644	$23/2^+$	8.7 ps *8*	

† From a least squares fit to Eγ, by evaluator.
‡ From the Adopted Levels.
# From Recoil-distance Doppler shift measurements (RDDM) in 1981Bu02.

γ(^{83}Sr)

E$_\gamma$†	I$_\gamma$†	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.‡	δ‡	Comments
(35)		35	$9/2^+$	0	$7/2^+$			
528	157 *4*	3644	$23/2^+$	3116	$21/2^+$	D+Q	−0.14 *4*	Mult.: A_2=−0.39 *5*, A_4=−0.08 *6* (1981Bu02).
680	97 *3*	1574	$(9/2)^+$	894	$11/2^+$	D+Q	+1.1 *+5−10*	Mult.: A_2=−0.73 *5*, A_4=+0.07 *5* (1981Bu02).
765		800	$11/2^+$	35	$9/2^+$			
800	107 *2*	800	$11/2^+$	0	$7/2^+$	(Q)		Mult.: A_2=+0.14 *3*, A_4=−0.08 *4* (1981Bu02).
859	256 *3*	894	$11/2^+$	35	$9/2^+$	D+Q	−0.78 *30*	Mult.: A_2=−0.85 *3*, A_4=+0.20 *3* (1981Bu02).
875	1000 *19*	910	$13/2^+$	35	$9/2^+$	Q		Mult.: A_2=+0.28 *3*, A_4=−0.08 *5* (1981Bu02).
946	128 *1*	1856	$15/2^+$	910	$13/2^+$	D+Q	+0.87 *+73−42*	Mult.: A_2=−0.82 *2*, A_4=+0.06 *1* (1981Bu02).
1077	576 *10*	1987	$17/2^+$	910	$13/2^+$	Q		Mult.: A_2=+0.22 *3*, A_4=−0.06 *4* (1981Bu02).
1129	≈360	3116	$21/2^+$	1987	$17/2^+$	Q		Mult.: A_2=+0.21 *4*, A_4=−0.19 *6* (1981Bu02).
1213	92 *4*	2107	$(13/2^-)$	894	$11/2^+$	D		Mult.: A_2=−0.18 *8*, A_4=+0.11 *10* (1981Bu02).

† From 1981Bu02. Iγ's are measured at E(^{12}C)=43 MeV and given relative to Iγ(875γ)=1000.
‡ From γ-ray angular distributions, using adopted J^π where angular distribution results are not unique.

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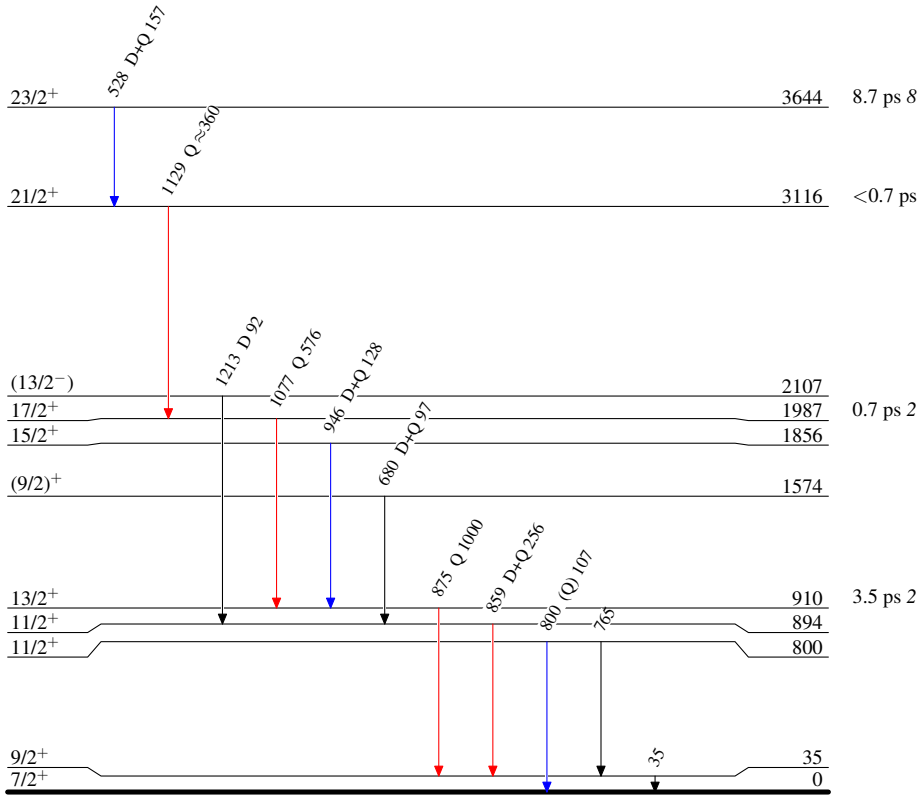
Level Scheme

Intensities: Relative I_γ

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
γ Decay (Uncertain)



$^{83}_{38}Sr_{45}$