

$^{36}\text{S}(^{14}\text{C},\alpha 2n\gamma)$  1986Wa19

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen, Balraj Singh and John A. Cameron		NDS 112, 2357 (2011)	31-Jul-2011

**1986Wa19:** E=32 MeV  $^{14}\text{C}$  beam produced from the Brookhaven National Laboratory (BNL) tandem Van de Graaff facility. Enriched target of  $300 \mu\text{g}/\text{cm}^2$   $\text{Ag}_2\text{S}$  (81.1%  $^{36}\text{S}$ ). Four Ge detectors for detecting  $\gamma$ -rays. Measured  $E_\gamma$ ,  $I_\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma(\theta)$ . Deduced levels,  $J^\pi$ ,  $\gamma$ -branching, mixing ratios;  $T_{1/2}$  by Doppler Shift Attenuation Method (DSAM).

 $^{44}\text{Ca}$  Levels

E(level)	$J^\pi$ †	$T_{1/2}$
0	$0^+$	
1157.047 15	$2^+$	
2283.16 4	$4^+$	
3044.35 20	$4^+$	
3285.02 5	$6^+$ ‡	
3913.55 10	$5^-$	>2 ps
5087.65 10	$(8^+)$ ‡	0.53 ps 14

† From Adopted Levels, unless otherwise noted.

‡ Proposed in 1986Wa19.

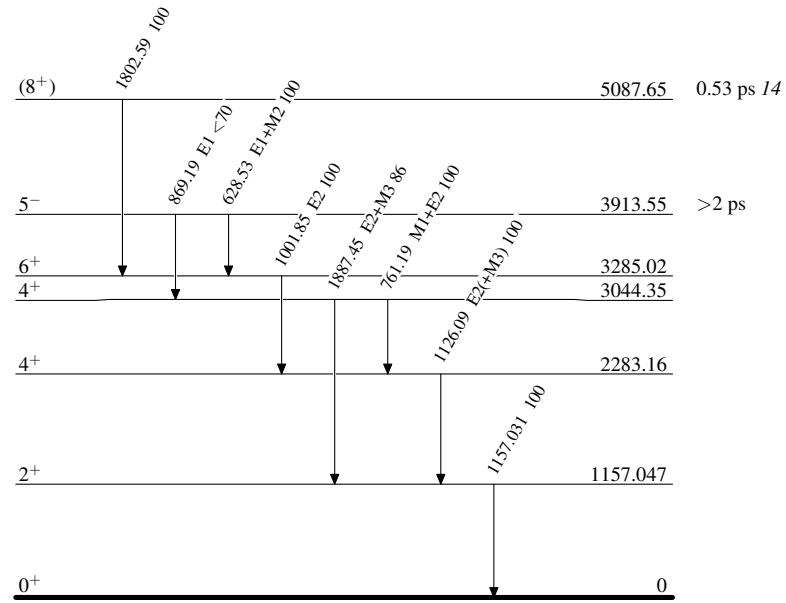
 $\gamma(^{44}\text{Ca})$ 

$E_i(\text{level})$	$J_i^\pi$	$E_\gamma$	$I_\gamma$	$E_f$	$J_f^\pi$	Mult.	$\delta$	Comments
1157.047	$2^+$	1157.031	100	0	$0^+$			
2283.16	$4^+$	1126.09	100	1157.047	$2^+$	E2(+M3)	0.00 4	$A_2=+0.31$ 1, $A_4=-0.07$ 1.
3044.35	$4^+$	761.19 20	100 5	2283.16	$4^+$	M1+E2	-0.18 8	$A_2=+0.25$ 3, $A_4=+0.10$ 5.
		1887.45 20	86 5	1157.047	$2^+$	E2+M3	-0.04 22	$A_2=+0.32$ 7, $A_4=-0.23$ 7.
3285.02	$6^+$	1001.85	100	2283.16	$4^+$	E2		$A_2=+0.35$ 1, $A_4=-0.06$ 1.
3913.55	$5^-$	628.53 9	100	3285.02	$6^+$	E1+M2	-0.30 14	$A_2=+0.22$ 3, $A_4=-0.04$ 5.
		869.19	<70	3044.35	$4^+$	E1		
5087.65	$(8^+)$	1802.59 8	100	3285.02	$6^+$			$A_2=+0.34$ 4, $A_4=-0.05$ 5 (1986Wa19).

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## Level Scheme

Intensities: Relative photon branching from each level

 $^{44}_{20}\text{Ca}_{24}$