

$^{40}\text{Ca}(^{36}\text{Ar}, 2n\gamma)$ 2014He29

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	ENSDF	10-Feb-2015

2014He29: $E(^{36}\text{Ar})=105$ MeV from K130 cyclotron of University of Jyvaskyla. Target= 0.66 mg/cm^2 ^{40}Ca backed by $42 \mu\text{g/cm}^2$ thick carbon foil. Recoils were separated by RITU separator and implanted in a double-sided silicon strip (DSSD) detector. Recoils were selected based on E, ΔE and time-of-flight parameters. Gamma rays were detected using JUROGAM II array of 24 Eurogam II type Clover detectors and 15 Eurogam phase I and GASP type detectors. Measured E_γ correlated with implanted recoils, or with charged particles. Recoil- β tagging technique used to identify transitions and excited states in ^{74}Sr . Comparison with shell-model calculations.

 ^{74}Sr Levels

$E(\text{level})^\dagger$	J^π^\ddagger	$T_{1/2}$	Comments
0	0^+	27 ms 8	$T_{1/2}$: measured by 2014He29 from events in the whole DSSD and a β -energy threshold of 3 MeV. Low statistics prevented use of decay curve method, instead method proposed by 1984Sc13 was used. Authors mention (ref. 18 in paper) that this value is in agreement with a recent (unpublished) measurement at RIKEN.
471 1	(2^+)		
1043 2	(4^+)		

† From E_γ data.

‡ From systematics of even-even nuclei and comparison with shell-model calculations.

 $\gamma(^{74}\text{Sr})$

E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π
471 1	471	(2^+)	0	0^+
572 1	1043	(4^+)	471	(2^+)

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Level Scheme

