Ta(⁸⁶K**r**,**X**γ) **2002MaZN**

History								
Туре	Author	Citation	Literature Cutoff Date					
Full Evaluation	M. Shamsuzzoha Basunia	NDS 151, 1 (2018)	1-Apr-2018					

⁵⁹Ti produced in the fragmentation of 57.8 MeV/nucleon ⁸⁶Kr beam impinged on 50 mg/cm² thick tantalum target using LISE-2000 spectrometer at GANIL facility. Detector system included a three-element Si-detector telescope containing a double-sided silicon-strip detector (DSSSD) backed by a Si(Li) detector and surrounded by four clover type EXOGAM Ge detectors. Product identified by mass, atomic number, charge, energy loss and time of flight. Measured half-life.

⁵⁹Ti Levels

E(level)	J^{π}	T _{1/2}	Comments
0.0	(5/2 ⁻)	27.5 ms 25	$T_{1/2}$: based on time correlation between implantation and β -ray events in the DSSSD. Fitting procedure included five parameters: β -detection efficiency, background rate, mother, daughter and grand-daughter half-lives (2002MaZN, 2011Da08).
114 2	$(1/2^{-})$	600 ns 50	$T_{1/2}$: from $\gamma(t)$ (2002MaZN).
699 1	9/2+	≈70 ns	E(level),J ^{π} : Proposed [M2] isomer feeding the 5/2 ⁻ state. If 1st exited state were considered to be 5/2 ⁻ , then level energy would be 813 keV (2002MaZN). Not mentioned/discussed in primary publication (2011Da08) of 2002MaZN work. Not adopted by evaluator. T _{1/2} : from γ (t) (2002MaZN).

[†] From Adopted Levels, except otherwise noted.

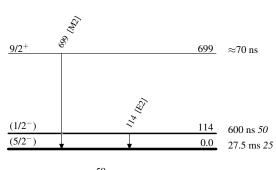
$\gamma(^{59}{\rm Ti})$

Eγ	E _i (level)	\mathbf{J}_i^{π}	E_f	\mathbf{J}_{f}^{π}	Mult.	Comments
114 2		$(1/2^{-})$		(5/2 ⁻)	L 1	
699 <i>1</i>	699	9/2+	0.0	(5/2 ⁻)	[M2]	E_{γ} : Could not perform γ - γ coincidence for placement. Not adopted by evaluator. Not mentioned/discussed in primary publication (2011Da08) of

2002MaZN work.

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Level Scheme



⁵⁹₂₂Ti₃₇