^{30}Si(μ^-,$\nu\gamma$) 2007Me18

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia, A. Chakraborty	NDS 197,1 (2024)	31-May-2024

Adapted/Edited XUNDL dataset compiled by S. Geraedts and B. Singh (McMaster): Oct 10, 2007.
The μ^- beam obtained from decay of π^- beam at 90 MeV/c. Measured γ-ray yields using two HPGe detectors at TRIUMF facility.

Muonic Lyman (or K) series for Silicon

μ x-ray	Energy	Intensity (in % per capture)
2p-1s	400.177 a)	80.3 *8*
3p-1s	476.80 *5*	7.40 *20*
4p-1s	503.58 *10*	4.27 *20*
5p-1s	515.97 *10*	3.83 *20*
6p-1s	522.74 *10*	2.29 *10*
(7p to ∞)-1s		1.87 *20*

a): 400.177-keV x ray used for calibration

^{30}Al Levels

E(level)†	J$^\pi$†
0.0	3$^+$
243.90	2$^+$
687.66	1$^+$

† From the Adopted Levels.

γ(^{30}Al)

E$_\gamma$†	I$_\gamma$‡	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Comments
243.86	0.4 *2*	243.90	2$^+$	0.0	3$^+$	
443.70	0.4 *4*	687.66	1$^+$	243.90	2$^+$	E$_\gamma$,I$_\gamma$: probably an impurity.
687.7	<0.04	687.66	1$^+$	0.0	3$^+$	

† From Adopted Gammas.
‡ Percent yield per muon capture.

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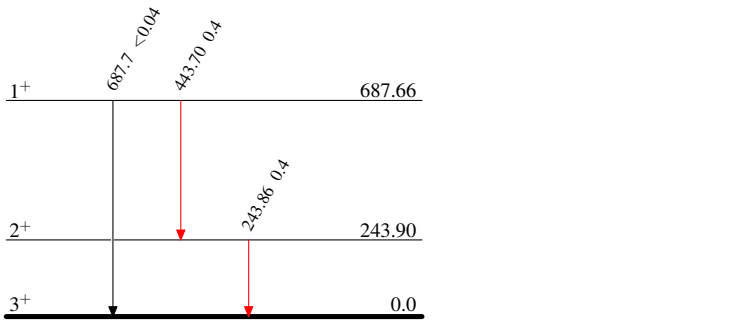
Level Scheme

Intensities: Percent γ-ray yield/muon capture



$^{30}_{13}Al_{17}$