^{235}U(n,Fγ) 2012Mu08

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	P. K. Joshi, B. Singh, S. Singh, A. K. Jain	NDS 138, 1 (2016)	15-Oct-2016

2012Mu08: E=thermal neutrons from the CIRUS-BARC reactor facility. Target density≈5.1 g/cm^3 UAl_3 (17% enriched ^{235}U). Gamma rays were detected by two clover HPGe detectors equipped with anti-Compton shields, in coincidence mode. Measured Eγ, Iγ, $\gamma\gamma$-coin. Deduced levels, J, π, isotopic yield, angular momentum distribution.

^{139}Xe Levels

E(level)	J$^\pi$[†]
0	3/2$^-$
23[‡]	(7/2$^-$)
594[‡]	(11/2$^-$)
1179[‡]	(15/2$^-$)
1810[‡]	(19/2$^-$)

[†] 2012Mu08 gave assignments from 2002Ur04. Here these are from Adopted Levels.
[‡] Band(A): Band based on 7/2$^-$.

γ(^{139}Xe)

E$_\gamma$	I$_\gamma$[†]	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
571	>100	594	(11/2$^-$)	23	(7/2$^-$)
585	100 *5*	1179	(15/2$^-$)	594	(11/2$^-$)
630	47 *7*	1810	(19/2$^-$)	1179	(15/2$^-$)

[†] 2012Mu08 mention uncertainties of 5% to 25% depending on the γ-ray intensity. Evaluators assign 5% for γ rays with Iγ≥50; 15% for Iγ=20-50 and 25% for Iγ≤20.

^{235}U(n,Fγ) 2012Mu08

Level Scheme

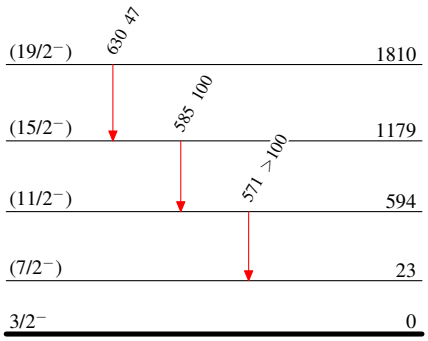
Intensities: Relative I_γ

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

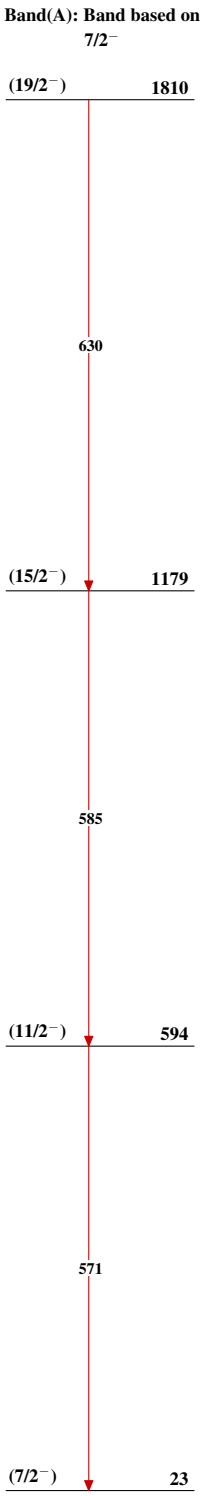
$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



$^{139}_{54}Xe_{85}$

^{235}U(n,Fγ) 2012Mu08



$^{139}_{54}Xe_{85}$