^{9}Be(^{238}U,Fγ) 2019Du18

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia	NDS 199,271 (2025)	1-Sep-2024

Adapted/Edited XUNDL dataset compiled by E.A. McCutchan (NNDC,BNL), February 18, 2021.

E(^{238}U)=6.2 MeV/nucleon at GANIL facility incident on ^{9}Be target (thickness 10-micron). Identification of Z and A was done using the magnetic spectrometer VAMOS++. Measured Eγ, Iγ, $\gamma\gamma$, fragment-γ using the AGATA array consisting of eight triple clusters.

^{81}Ga Levels

E(level)[†]	J$^{\pi}$[‡]
0	5/2$^-$
350.6 *3*	(3/2$^-$)
1340.7 *4*	(9/2$^-$)
1398.5 *7*	(7/2$^-$)
1952.2 *6*	(11/2$^-$)
2765.8 *10*	(13/2$^-$)
3092.8 *10*	(15/2$^-$)

[†] From Eγ.

[‡] As proposed by authors in 2019Du18 based on the assumption of preferred population of yrast states in fission reactions and comparison to shell model calculations.

γ(^{81}Ga)

E$_\gamma$	I$_\gamma$[†]	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
327.0 *2*	18 *4*	3092.8	(15/2$^-$)	2765.8	(13/2$^-$)
350.6 *3*	19 *5*	350.6	(3/2$^-$)	0	5/2$^-$
611.5 *5*	52 *10*	1952.2	(11/2$^-$)	1340.7	(9/2$^-$)
813.6 *8*	24 *6*	2765.8	(13/2$^-$)	1952.2	(11/2$^-$)
1340.7 *4*	100 *20*	1340.7	(9/2$^-$)	0	5/2$^-$
1398.5 *7*	17 *5*	1398.5	(7/2$^-$)	0	5/2$^-$

[†] Relative intensity with respect to Iγ(1340.7γ)=100.

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Level Scheme

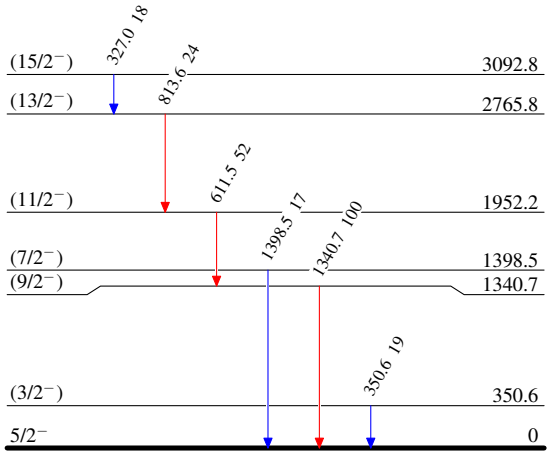
Intensities: Relative I_γ

Legend

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

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

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



$^{81}_{31}Ga_{50}$