

$^{238}\text{U}(^{76}\text{Ge},\text{X}\gamma)$ **2009St12**

Type	History		Literature Cutoff Date
	Author	Citation	
Full Evaluation	Balraj Singh	ENSDF	30-Sep-2020

Deep-inelastic reaction.

2009St12: ^{76}Ge beam produced at E=530 MeV by the ATLAS accelerator at Argonne National Laboratory. The γ rays were measured by the Gammasphere array consisting of 100 Compton-suppressed HPGe detectors. Measured E_γ , I_γ , $\gamma\gamma$. Deduced levels, spins, parities and shell-model configurations.

 ^{77}Ga Levels

$E(\text{level})^\dagger$	J^π^\ddagger	$E(\text{level})^\dagger$	J^π^\ddagger	$E(\text{level})^\dagger$	J^π^\ddagger	$E(\text{level})^\dagger$	J^π^\ddagger
0.0 [#]	$3/2^{-}$	626.11 [#] 14	$(7/2^{-})$	1969.7 3	$(11/2^{-})$	2620.7 4	$(13/2^{+})$
189.29 [@] 16	$(5/2^{-})$	1115.96 [@] 21	$(9/2^{-})$	2028.56 24	$(9/2^{+})$	3217.4 [@] 4	$(17/2^{-})$
473.41 16	$(5/2^{-})$	1477.05 [#] 21	$(11/2^{-})$	2206.8 [@] 3	$(13/2^{-})$		

[†] From least-squares fit to E_γ data.

[‡] From **2009St12**.

[#] Seq.(A): γ cascade based on $3/2^{-}$.

[@] Seq.(B): γ cascade based on $(5/2^{-})$.

 $\gamma(^{77}\text{Ga})$

E_γ	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	E_γ	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π
152.7 2	35 3	626.11	$(7/2^{-})$	473.41	$(5/2^{-})$	626.1 2	120 9	626.11	$(7/2^{-})$	0.0	$3/2^{-}$
189.3 2	264 19	189.29	$(5/2^{-})$	0.0	$3/2^{-}$	850.9 2	274 21	1477.05	$(11/2^{-})$	626.11	$(7/2^{-})$
361.0 2	101 11	1477.05	$(11/2^{-})$	1115.96	$(9/2^{-})$	853.7 2	41 9	1969.7	$(11/2^{-})$	1115.96	$(9/2^{-})$
436.8 2	74 7	626.11	$(7/2^{-})$	189.29	$(5/2^{-})$	912.7 2	34 5	2028.56	$(9/2^{+})$	1115.96	$(9/2^{-})$
473.4 2	9 1	473.41	$(5/2^{-})$	0.0	$3/2^{-}$	926.7 2	188 12	1115.96	$(9/2^{-})$	189.29	$(5/2^{-})$
551.4 2	100	2028.56	$(9/2^{+})$	1477.05	$(11/2^{-})$	1010.6 2	24 6	3217.4	$(17/2^{-})$	2206.8	$(13/2^{-})$
592.1 2	11 4	2620.7	$(13/2^{+})$	2028.56	$(9/2^{+})$	1090.8 2	94 6	2206.8	$(13/2^{-})$	1115.96	$(9/2^{-})$

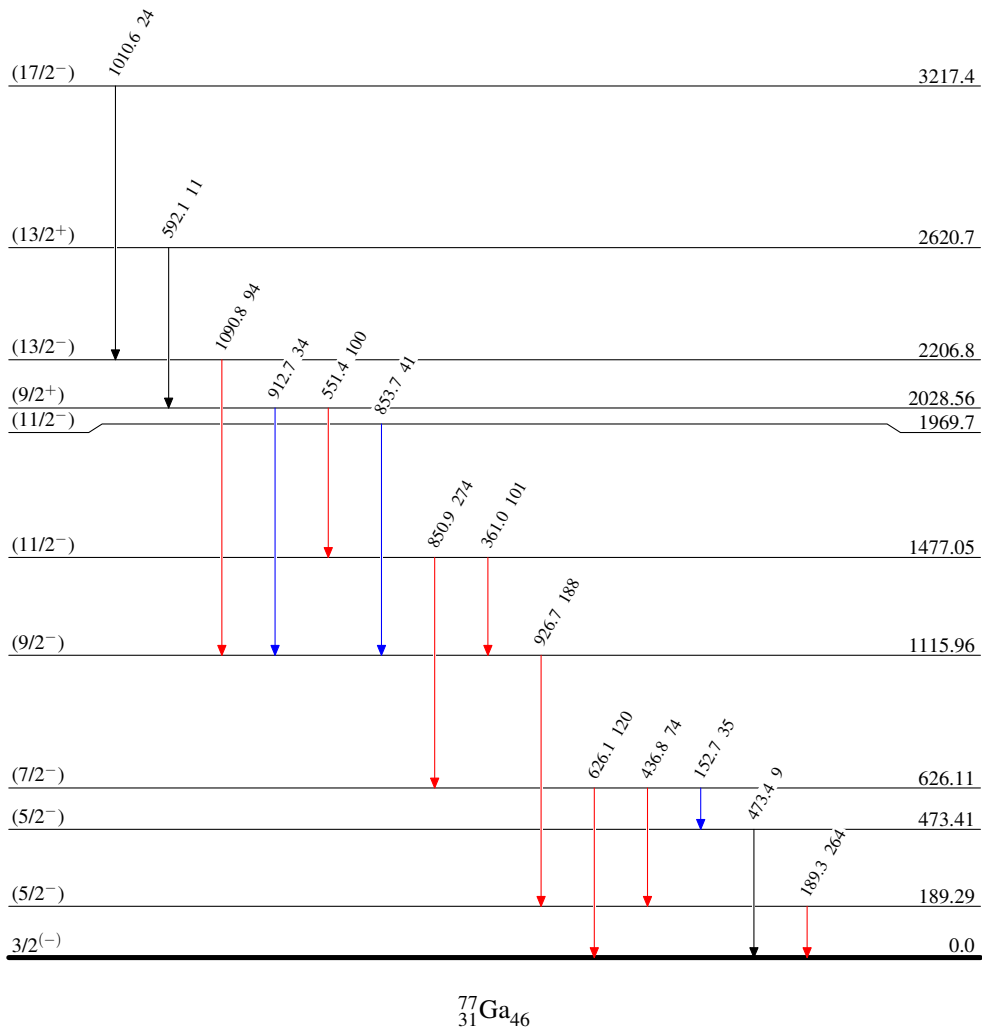
$^{238}\text{U}(^{76}\text{Ge}, X\gamma)$ 2009St12

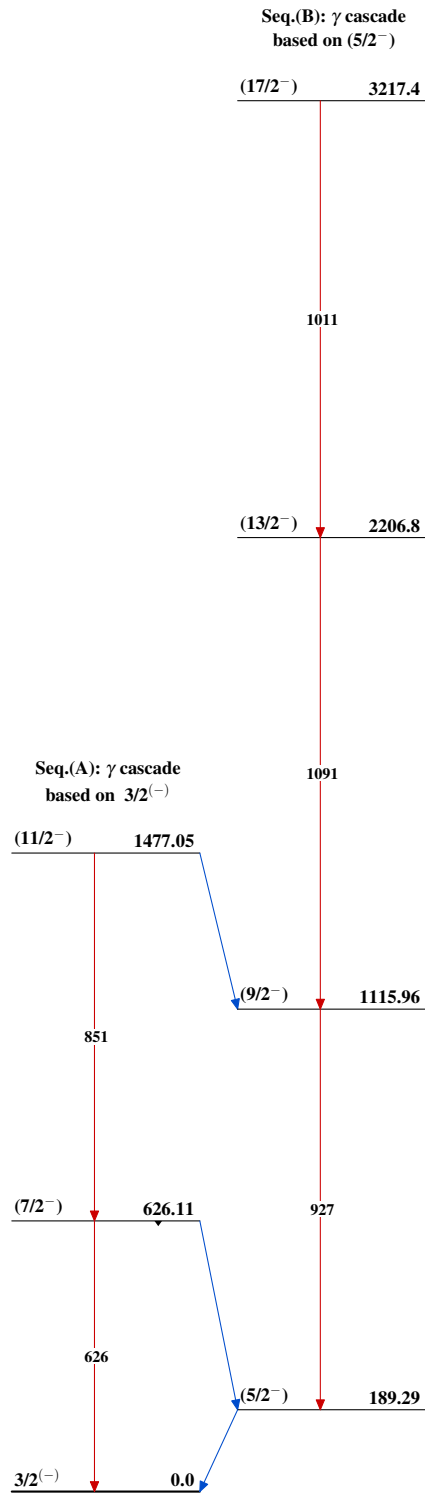
Level Scheme

Intensities: Relative I_γ

Legend

- $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
- $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
- $I_\gamma > 10\% \times I_\gamma^{\text{max}}$



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