$^{238}U(^{76}Ge,X\gamma)$ **2015Sa09**

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen	NDS 158, 1 (2019)	16-May-2019

2015Sa09: neutron-rich Cu isotopes were populated via multinucleon transfer reactions using a E=577 MeV ^{76}Ge beam from the Tandem-XTU and the ALPI superconducting LINAC accelerators at LNL-Legnaro, bombarding a thin, metallic ^{238}U target of 1.5 mg/cm^2 thickness evaporated onto a ^{181}Ta backing of 1.4 mg/cm^2 thickness. Reaction products were separated according to the measured ΔE-E matrix by the PRISMA magnetic spectrometer. γ rays were detected by the AGATA Demonstrator array of four triple clusters, each consisting of three 36-fold segmented HPGe detector. Measured Eγ, Iγ, particle-γ(t), and lifetime of the 1298 level using the differential recoil-distance Doppler-shift (RDDS) method. Deduced B(E2), and compared with shell-model calculation.

^{73}Cu Levels

E(level)	J^{π}[†]	$T_{1/2}$[‡]
0	$3/2^-$	
166	$(5/2)^-$	
1298	$(7/2^-)$	15 ps 8

[†] From Adopted Levels.
[‡] From 2015Sa09 using the differential recoil-distance Doppler-shift method (RDDS).

$\gamma(^{73}$Cu)

E_γ	E_i(level)	J^{π}_i	E_f	J^{π}_f	Mult.
1132	1298	$(7/2^-)$	166	$(5/2)^-$	[E2]

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<u>Level Scheme</u>

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                                    1132 [E2]

(7/2⁻)                                1298    15 ps 8




(5/2)⁻                                166
3/2⁻                                    0
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$^{73}_{29}Cu_{44}$

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