^{48}Ca(^{238}U,Xγ) 2009Bh02

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	ENSDF	10-Feb-2014

E=1.31 GeV beam provided by CSS1 cyclotron of GANIL. The target-like residues produced in deep-inelastic reactions were detected and and analyzed using VAMOS spectrometer. The focal plane detection detection system consisted of two position-sensitive drift chambers, electron (timing) detector (SeD) and a segmented ionization chamber followed by a 21-element Si wall. The mass/charge identification was made on the basis of magnetic rigidity and time-of-flight. Measured Eγ, Iγ, γ rays in singles and coincidence mode using EXOGAM array of clover Ge detectors. The γ-ray spectra were Doppler corrected. The γ rays were detected in coin with ^{53}Sc fragments.

^{53}Sc Levels

E(level)	J$^\pi$	Comments
0	(7/2$^-$)	Configuration=$\pi f_{7/2}\otimes\nu p^4_{3/2}$.
2283 *18*	(9/2$^-$)	Configuration=$\pi f_{7/2}\otimes\nu(p^3_{3/2}p_{1/2})$.
2617 *20*	(11/2$^-$)	Configuration=$\pi f_{7/2}\otimes\nu(p^3_{3/2}p_{1/2})$.

γ(^{53}Sc)

E$_\gamma$	E$_i$(level)	J$^\pi_i$	E$_f$	J$^\pi_f$
345[†] *7*	2617	(11/2$^-$)	2283	(9/2$^-$)
2283 *18*	2283	(9/2$^-$)	0	(7/2$^-$)
2617 *20*	2617	(11/2$^-$)	0	(7/2$^-$)

[†] Placement of transition in the level scheme is uncertain.

Legend

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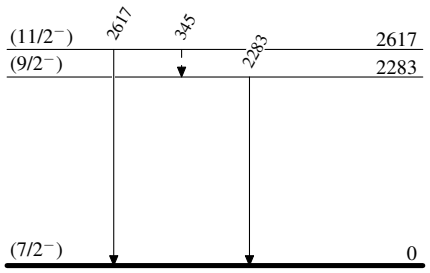
Level Scheme

γ Decay (Uncertain)



$^{53}_{21}Sc_{32}$