^{9}Be(^{55}V,Xγ),(^{57}Cr,Xγ) 2006Ga14

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Yang Dong, Huo Junde	NDS 128, 185 (2015)	10-Jul-2015

Beams of ^{55}V and ^{57}Cr at E=77 MeV/nucleon were produced from fragmentation of ^{76}Ge primary beam at 130 MeV/nucleon on a ^{9}Be target. ^{52}Sc residues produced from the fragmentation of ^{55}V and/or ^{57}Cr beams were identified from energy loss in the S800 ionization chamber, time-of-flight measurement, and the position and angle information. γ rays were measured using SeGA array of 32-fold segmented HPGe detectors. Shell-model calculations.

^{52}Sc Levels

E(level)	J$^{\pi}$[†]
0.0	(3$^+$)
0+x	(4$^+$)
212+x	(5$^+$)
675	(2$^+$)

[†] low-lying state based on comparison with model calculations.

γ(^{52}Sc)

E$_\gamma$	E$_i$(level)	J$_i^{\pi}$	E$_f$	J$_f^{\pi}$	Comments
212 *3*	212+x	(5$^+$)	0+x	(4$^+$)	E$_\gamma$: this γ reported for the first time by 2006Ga14, from comparison with shell-model calculations this γ is between 5$^+$ and 4$^+$ levels or between 4$^+$ and 3$^+$ levels. Mult.: from estimated lifetime based on Doppler-shift, E2 mult can be ruled out from RUL. It is possibly M1 transition which would be consistent with mean lifetime >1.1 ps.
674 *5*	675	(2$^+$)	0.0	(3$^+$)	

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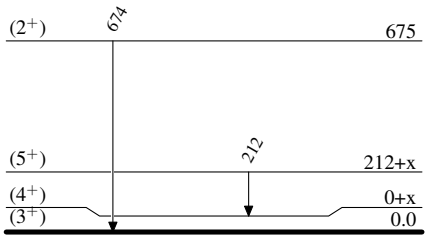
Level Scheme



$^{52}_{21}Sc_{31}$