^{9}Be(^{48}K,Xγ) 2012St12

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	ENSDF	31-Aug-2012

2102St12: E=85 MeV/nucleon ^{48}K beam was produced from fragmentation of 140 MeV/nucleon ^{48}Ca beam with ^{9}Be target at the Coupled cyclotron facility of NSCL, MSU. Target=376 mg/cm^2 ^{9}Be. The beam was purified in A1900 fragment separator. The S800 spectrograph together with plastic scintillators was used for event-by-event identification of projectile-like reaction products and time-of-flight and energy loss information. Measured Eγ, Iγ, $\gamma\gamma$, (fragment)γ coin using SeGA array of 32-fold segmented HPGe detectors. Shell-model calculations.

^{46}Cl Levels

E(level)[†]	J$^\pi$	Comments
0	(2$^-$)	J$^\pi$: from shell-model calculations (2012St12).
118 *3*		
151 *3*		
402[‡] *4*		
1024[‡] *5*		

[†] From Eγ data.
[‡] From g.s. transition. Possible unresolved multiplet, since the energy fits of cascading γ rays are marginal.

γ(^{46}Cl)

E$_\gamma$	I$_\gamma$	E$_i$(level)	E$_f$	J$^\pi_f$	Comments
118 *3*	29 *3*	118	0	(2$^-$)	
151 *3*	100 *4*	151	0	(2$^-$)	
256 *4*	11 *2*	402	151		E$_\gamma$: 251 *5* from level-energy difference.
293 *4*	8 *2*	402	118		E$_\gamma$: 284 *5* from level-energy difference.
402 *4*	51 *4*	402	0	(2$^-$)	
636 *5*	29 *4*	1024	402		E$_\gamma$: poor fit, Eγ=622 *6* from level-energy difference.
[x]880 *5*	13 *3*				
1024 *5*	11 *4*	1024	0	(2$^-$)	

[x] γ ray not placed in level scheme.

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Level Scheme

Intensities: Relative I_γ

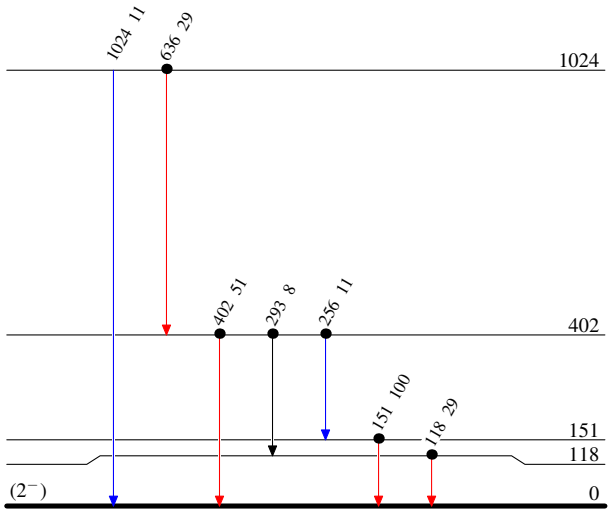
Legend

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

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

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

Coincidence



$^{46}_{17}Cl_{29}$