^{9}Be(^{61}V,^{58}Tiγ) 2014Ga07

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	ENSDF	27-May-2014

One-proton and two neutron removal reaction.

2014Ga07: E(^{61}V)=90.0 MeV/nucleon beam from Coupled Cyclotron Facility at NSCL-MSU. Secondary ^{61}V beam produced in ^{9}Be(^{82}Se,X),E=140 MeV/nucleon primary reaction followed by fragment separation by A1900 fragment separator. Secondary ^{9}Be target=376 mg/cm^2 thick located at target position of S800 magnetic spectrograph. Measured Eγ, Iγ, $\gamma\gamma$-coin, and (^{58}Ti)γ-coin using GRETINA array of 36-folded segmented HPGe detectors arranged in 58° and 90° geometry. Gamma-ray energies were deduced from Doppler- corrected spectra. Deduced levels, J, π. Comparison of level structure in ^{58}Ti with shell-model calculations.

^{58}Ti Levels

E(level)	J$^\pi$
0	0$^+$
1047 *4*	2$^+$†
2038 *6*	(4$^+$)†
2657 *7*	(6$^+$)†

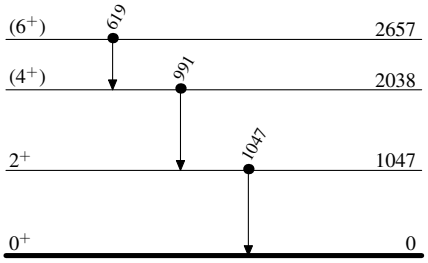
† From systematics of even-even nuclei, and comparison with shell-model calculations.

γ(^{58}Ti)

E$_\gamma$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
619 *5*	2657	(6$^+$)	2038	(4$^+$)
991 *4*	2038	(4$^+$)	1047	2$^+$
1047 *4*	1047	2$^+$	0	0$^+$

^{9}Be(^{61}V,^{58}Tiγ) 2014Ga07

Level Scheme



$^{58}_{22}Ti_{36}$