^{64}V β^- decay (15 ms) 2014Su11

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen	NDS 178, 41 (2021).	12-Nov-2021

Parent: ^{64}V: E=0; J^π=(0,1,2); $T_{1/2}$=15 ms *2*; Q(β^-)=17320 *SY*; %β^- decay=100.0

^{64}V-J^π,$T_{1/2}$: From ^{64}V Adopted Levels.

^{64}V-Q(β^-): 17320 *500* (syst,2021Wa16).

2014Su11: ^{64}V isotope produced at the NSCL-MSU facility by the fragmentation of a ^{76}Ge beam, E=130 MeV/nucleon, impinging on ^{9}Be target. Products were selected by the A1900 fragment separator and identified by time of flight and energy loss information, then delivered to β counting system (BCS) surrounded by SeGA Ge array for γ-ray detection. The ^{64}V ions were finally stopped in 1 mm thick DSSD which detected β particles. Measured Eγ, (^{64}V)γ coincidence, $\beta\gamma$ correlated spectra. Deduced levels, half-life, an isomer in ^{64}V.

γ ray from first 4^+ to first 2^+ was not seen in this work; and no γ rays were observed which could be assigned to the beta-delayed neutron decay of ^{64}V.

^{64}Cr Levels

E(level)	J^π[†]	$T_{1/2}$[†]
0	0^+	42.9 ms *10*
430 *2*	2^+	125 ps *+49−29*

[†] From the Adopted Levels.

γ(^{64}Cr)

Iγ normalization: 2014Su11 give absolute intensity of 430γ.

Eγ	Iγ[†]	E$_i$(level)	J_i^π	E$_f$	J_f^π	Comments
430 *2*	≈20	430	2^+	0	0^+	Iγ: absolute intensity is given in 2014Su11, normalized to the number of ^{64}V β decays.

[†] Absolute intensity per 100 decays.

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Decay Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays