^{69}Mn β^- decay 2015Be32

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	C. D. Nesaraja	NDS 207,1 (2026)	1-Apr-2023

Parent: ^{69}Mn: E=0.0; J^π=(5/2$^-$); $T_{1/2}$=25.8 ms *28*; Q(β^-)=11190 *syst*; %β^- decay=100

^{69}Mn-J^π,$T_{1/2}$: From Adopted Levels in ^{69}Mn. Note that 2015Be32 determined $T_{1/2}$=25.8 ms *28* from β(t) gated on 135γ, 325γ, 355γ, 521γ, and 1207γ and $T_{1/2}$=24.1 ms *26* from β(t) measurement.

^{69}Mn-Q(β^-): 11190 *220* (2021Wa16).

2015Be32: ^{69}Mn was produced as fission fragment from the ^{9}Be(^{238}U,F) reaction. E(^{238}U)=345 MeV/nucleon from the Radioactive-Isotope Beam Factory (RIBF) facility at RIKEN bombarded a Be target. The fragments were separated with the Big-RIPS separator combined with the ZeroDegree Spectrometer and 4300 ^{69}Mn ions were implanted into Si detectors. Measured Eγ, Iγ, $\beta\gamma$, β(t), $\beta\gamma$(t) using the 5 silicon detectors of the WAS3ABI array which was surrounded by the EURICA spectrometer consisting of 12 HPGe EUROBALL cluster detectors and 18 small volume $LaBr_3$(Ce) scintillators.

^{69}Fe Levels

E(level)	J^π	$T_{1/2}$	Comments
0.0	(1/2$^-$)	162 ms *7*	J^π,$T_{1/2}$: From Adopted Levels.

γ(^{69}Fe)

Due to limited statistics and expectation that decay will be fragmented over a number of states, $\gamma\gamma$ coincidences were not possible and no placements were provided by 2015Be32.

E_γ †	I_γ †	E_i(level)
^{x}135.0	58 *15*	
^{x}162.4	16 *12*	
^{x}325.1	100 *24*	
^{x}355.3	28 *18*	
^{x}631.5	7 *4*	
^{x}1207.8	54 *11*	
^{x}2037	44 *13*	

† From 2015Be32. Iγ normalized to Iγ(325γ)=100.

^{x} γ ray not placed in level scheme.