^{71}Ni β^- decay (2.3 s) 2009St07

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen	NDS 188,1 (2023)	17-Jan-2023

Parent: ^{71}Ni: E=498.5 *6*; J^π=(1/2$^-$); $T_{1/2}$=2.3 s *3*; Q(β^-)=7304.9 *27*; %β^- decay=100

^{71}Ni-E,J^π,$T_{1/2}$: From ^{71}Ni Adopted Levels. $T_{1/2}$ measured by 2009St07 from 454γ decay curve.

^{71}Ni-Q(β^-): From 2021Wa16.

2009St07: ^{71}Ni beam produced in ^{238}U(p,X) reaction at E(p)=30 MeV at the LISOL facility. The γ rays were detected using three HPGe detectors. The β particles were detected with four plastic ΔE-E detectors. Measurements were made with and without laser radiation to disentangle γ rays emitted by the nuclei of interest from the non-resonant γ rays. Measured Eγ, Eβ, $\beta\gamma$-coin, isomer half-life.

Additional information 1.

The decay scheme is considered as incomplete by the evaluators since there remains a large gap of 7 MeV between the Q(β^-) value and the highest populated level.

^{71}Cu Levels

E(level)	J^π†	$T_{1/2}$†
0	3/2$^{(-)}$	19.4 s *16*
454	(1/2$^-$)	

† From the Adopted Levels.

γ(^{71}Cu)

E_γ	I_γ†	E_i(level)	J_i^π	E_f	J_f^π
454	40 *15*	454	(1/2$^-$)	0	3/2$^{(-)}$

† Absolute intensity per 100 decays.

^{71}Ni β^- decay (2.3 s) 2009St07

Decay Scheme

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