^{33}P β^- decay (25.38 d)

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen and Balraj Singh	NDS 199,1 (2025)	30-Sep-2024

Parent: ^{33}P: E=0.0; $J^\pi=1/2^+$; $T_{1/2}$=25.38 d *6*; Q(β^-)=248.5 *11*; %β^- decay=100

^{33}P-J^π,$T_{1/2}$: From ^{33}P Adopted Levels. Adopted $T_{1/2}$ is from weighted average of 25.2 d *5* (1960Fi05), 25.30 d *5* (1968Re04), 25.56 d *7* (1972La14), 24.8 d *5* (1952Je12), 25 d *2* (1952We29), and 25 d *2* (1951Sh92), with a reduced χ^2=2.1. Other: 24.4 d *2* (1954Ni06) seems discrepant.

^{33}P-Q(β^-): From 2021Wa16.

1984Po09: measured decay Q(β^-) value at the Los Alamos Meson Physics Facility.

1951Sh92: measured Eβ and $T_{1/2}$ at the University of Chicago.

1952Je12, 1954Ni06: measured Eβ and $T_{1/2}$ at the Institute for Atomic Research and Department of Physics, Iowa State College.

1952We29: measured Eβ and $T_{1/2}$ at the Royal Institute of Technology, Stockholm. No γ activity detected.

1960Fi05: measured $T_{1/2}$ and activity at the Royal Institute of Technology, Stockholm.

1968Re04: measured $T_{1/2}$ at the Oak Ridge National Laboratory.

1972La14: measured $T_{1/2}$ at ce(N)/Saclay.

2004Si04: measured ^{33}P activity using 4π(LS)β-γ counting.

1954El25: measured Eβ.

Additional information 1.

^{33}S Levels

E(level)	J^π	$T_{1/2}$
0.0	$3/2^+$	stable

β^- radiations

E(decay)	E(level)	Iβ^-[†]	Log *ft*	Comments
(248.5 *18*)	0.0	100	5.033 *8*	av Eβ=75.91 *38*

[†] Absolute intensity per 100 decays.