^{8}He β^- decay 1986Ba66

History

Type	Author	Citation	Literature Cutoff Date
Update	J. H. Kelley, J. L. Godwin, C. G. Sheu	ENSDF	31-Mar-2004

Parent: ^{8}He: E=0.; $J^{\pi}=0^{+}$; $T_{1/2}$=119.1 ms *12*; Q(β^-)=10651 *7*; %β^- decay=100.0

Additional information 1.

1981Bj03: ^{8}He, measured β-delayed E_N, I_N, $\beta\gamma$-coin, $T_{1/2}$. Deduced delayed neutron branching, log *ft*.

1986Bo41: ^{8}He(β^-), measured β-delayed triton branching ratios, spectra. Deduced log *ft*.

1988Ba67: ^{8}Be(β^-); calculated t, branching ratio, delayed N, $T_{1/2}$ spectra, deduced GAMOW-Teller matrix elements. R-matrix, shell model methods.

1991Bo31: ^{8}He(β^-), measured continuum particle spectra following β-decay. Deduced log *ft*, Gamow-Teller transition strength, Γ-level, di-neutron halo roles.

1993Bo24: ^{8}He(β^-), measured β-delayed triton, α-spectra. Deduced branching ratio. ^{8}Li deduced level. R-matrix analysis.

1996Ba66: ^{8}He(β^-); analyzed β^-decay delayed triton spectra. ^{8}Li levels deduced parameters, B(GT), branching ratios, log *ft*, R-matrix approach.

^{8}Li Levels

E(level)	J^{π} †	$T_{1/2}$ †
0.	2^+	839.9 ms *6*
980. *1*	1^+	8.2 fs *23*
3080	1^+	≈1 MeV
5150	1^+	≈650 keV
9670	1^+	≈1 MeV

† From Adopted Levels.

β^- radiations

E(decay)	E(level)	Iβ^- †	Log *ft*	Comments
(981 *7*)	9670	0.9 *1*	2.91	av Eβ=384 *3*
(5501 *7*)	5150	<16	4.53	av Eβ=2543 *4* Iβ(3210+5400 level)=16 *1*.
(7571 *7*)	3080	<16	4.52	av Eβ=3567 *4* Iβ(3210+5400 level)=16 *1*.
(9671 *7*)	980.	84 *1*	4.20	av Eβ=4607 *4*

† Absolute intensity per 100 decays.

$\gamma(^{8}Li)$

E_γ	I_γ †	E_i(level)	J_i^π	E_f	J_f^π
980.	84 *1*	980.	1^+	0.	2^+

† Absolute intensity per 100 decays.

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Decay Scheme

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