^{68}Ge ε decay 1999BeZQ,1999BeZS

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. A. Mccutchan	NDS 113, 1735 (2012)	1-Mar-2012

Parent: ^{68}Ge: E=0.0; $J^\pi=0^+$; $T_{1/2}$=270.95 d *16*; Q(ε)=106.9 *24*; %ε decay=100.0

1956Cr29:^{68}Ge activity from ^{66}Zn(α,2n), E(α)=37 MeV. Measured $T_{1/2}$, β^+ spectrum, Eγ, Iγ in ^{68}Ge, ^{68}Ga decays.

1959Ra04,1960Ra22: ^{68}Ge activity from Zn(α,xnγ), E(α)=30 MeV. Measured Eγ, Iγ, Xγ-coin using NaI(Tl).

1959Ho85: ^{68}Ge activity from ^{66}Zn(α,2n), E(α)=43 MeV. Measured Eγ, Iγ, $\gamma\gamma$ coin using NaI(Tl).

Data are taken from 1956Cr29, 1959Ho85, 1959Ra04 and 1960Ra22.

Other: 1950Ho26.

Additional information 1.

^{68}Ga Levels

E(level)	J^π	$T_{1/2}$	Comments
0.0	1^+	67.71 min *8*	%ε=100 J^π,$T_{1/2}$: from the Adopted Levels.

ε radiations

E(decay)	E(level)	Iε[†]	Log *ft*	Comments
(106.9 *24*)	0.0	100	5.006 *22*	εK=0.8645 *6*; εL=0.1143 *5*; εM+=0.02118 *9* (εK/ε)(exp)=0.80 *6* from the data of 1960Ra22. The value has been recalculated by 1999BeZQ and 1999BeZS with β^+(fraction)=0.88 in ^{68}Ga ε decay and I(K x ray)/ε=0.510 *8* (1972Bb16). Iε: ≥99.1% (1959Ho85) and ≥99.6% (1959Ra04). 100% from Q value. I($\varepsilon+\beta^+$): no γ's from ^{68}Ga deexcitation have been observed following ^{68}Ge ε decay. Limits on Iγ of <1% for Eγ=100-500 and <0.1% for Eγ=600-1100 (1959Ho85); <1% for E$\gamma\leq$1200 (1959Ra04).

[†] Absolute intensity per 100 decays.