^{129}Pm ε decay (2.4 s) 2004Xu05

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Janos Timar and Zoltan Elekes, Balraj Singh	NDS 121, 143 (2014)	31-May-2014

Parent: ^{129}Pm: E=0.0; J^π=(5/2$^-$); $T_{1/2}$=2.4 s *9*; Q(ε)=9430 *SY*; %ε+%β^+ decay=100.0

^{129}Pm-J^π,$T_{1/2}$: From ^{129}Pm Adopted Levels.

^{129}Pm-Q(ε): 9430 *360* (syst,2012Wa38).

2004Xu05: The ^{129}Pm isotope was obtained by bombarding a ^{92}Mo target with a $^{40}Ca^{12+}$ beam at E=232 MeV. The beam energy at target center could be varied from 164-190 MeV. Measured Eγ, $\gamma\gamma$(t), (charged particle)γ (coin), (x ray)γ (coin) with two coaxial HPGe(GMX) detectors for γ-rays and a HPGe planar detector for x-ray spectroscopy. In order to improve the energy resolution for low-energy γ-rays, in some runs a second HPGe planar detector was used instead of one of the two coaxial HPGe(GM-X) detectors.

2000So11: First identification of ^{129}Pm isotope in ^{90}Zr(^{197}Au,X) reaction at 30 MeV/nucleon; MSU A1200 fragment separator used.

^{129}Nd Levels

E(level)	J^π[†]
0+y	(1/2$^-$)
99+y	(5/2$^-$)

[†] As quoted by 2004Xu05 based on results in 2002Ze01.

γ(^{129}Nd)

E_γ	E_i(level)	J_i^π	E_f	J_f^π	Mult.	α[†]	Comments
99	99+y	(5/2$^-$)	0+y	(1/2$^-$)	(E2)	2.27	α(K)=1.241 *19*; α(L)=0.801 *14*; α(M)=0.182 *3* α(N)=0.0394 *7*; α(O)=0.00508 *9*; α(P)=5.42×10^{-5} *9* α(exp)=2.0 (2004Xu05) E_γ: from 2004Xu05.

[†] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

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Decay Scheme