Adopted Levels

History

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

Q(β^-)=−10740 *SY*; S(n)=13170 *SY*; S(p)=−140 *SY*; Q(α)=2730 *SY* 2012Wa38

Estimated (2012Wa38) uncertainties: 590 for Q(β^-), 420 for S(n) and Q(α), 360 for S(p).

Q(εp)=6160 *300*, S(2n)=24240 *500*, S(2p)=2920 *360* (syst,2012Wa38).

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

2004Xu05: ^{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 vary from 164-190 MeV. Measured Eγ, $\gamma\gamma$(t), (charged particle)γ coin, xγ coin with two coaxial HpGe detectors for γ rays and a HPGe planar detector for x rays.

Additional information 1.

2008StZX: ^{58}Ni(^{76}Kr,X), E=4.34 MeV/nucleon; measured Eγ, Iγ, $\gamma\gamma$-coin using EXOGAM array and SPIRAL facility at GANIL. Four γ rays were assigned to ^{129}Pm in the energy range of 250-680 keV, but no other details are available.

^{129}Pm Levels

E(level)	J^π	$T_{1/2}$	Comments
0	(5/2$^-$)	2.4 s *9*	%ε+%$\beta^+\approx$100; %εp=?; %p=? No delayed-proton activity has been reported. $T_{1/2}$: from timing of 99γ assigned to the decay of ^{129}Pm to ^{129}Nd (2004Xu05). J^π: possible π5/2[532] orbital (2004Xu05). 5/2$^-$ proposed in theoretical calculations (1997Mo25).