Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	S. K. Basu, E. A. Mccutchan	NDS 165, 1 (2020)	1-Mar-2020

Q(β^-)=14470 *SY*; S(n)=2600 *SY*; S(p)=14890 *SY*; Q(α)=−9680 *SY* 2017Wa10
ΔQ(β^-)=520; ΔS(n)=500; ΔS(p)=570; ΔQ(α)=570 (2017Wa10).
S(2n)=6750 syst *450*; Q(β^-n)=9590 syst *400* (2017Wa10).
1997Be70: ^{90}As produced in ^{9}Be(^{238}U,F), E=750 MeV/nucleon, fragments separator (FRS) at GSI facility. Identification by time-of-flight. Measured production cross section.

^{90}As Levels

Cross Reference (XREF) Flags

A ^{9}Be(^{238}U,Fγ)

E(level)	$T_{1/2}$	XREF	Comments
0.0			%β^-=100; %β^-n=? E(level): the observed fragments assigned to ^{90}As are assumed to correspond to the ground state. $T_{1/2}$: >300 ns from time-of-flight in 1997Be70. Actual half-life is expected to be much longer as suggested by the calculated value of 20.5 ms (2019Mo01). J^π: $1/2^-$ proton and $3/2^+$ neutron orbital predicted by 2019Mo01. production cross section=21 nb (1997Be70) corresponding to 228 counts assigned to ^{90}As. Calculated %β^-n=40, %β^-2n=1 (2019Mo01).
0.0+x		A	E(level): it is not established to which level the 0.20 μs isomer decays. It is possible this is the ground state of ^{90}As.
124.5+x *5*	0.20 μs *+12−9*	A	$T_{1/2}$: from 124.5γ(t) in ^{9}Be(^{238}U,Fγ) (2012Ka36).

$\gamma(^{90}As)$

E_i(level)	E_γ	E_f
124.5+x	124.5 *5*	0.0+x

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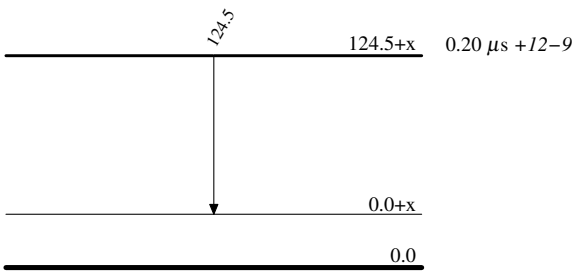
Level Scheme



$^{90}_{33}As_{57}$