^{155}Gd(^{36}Ar,4nγ)   1998Ba88

			History	
Type	Author		Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia		NDS 110, 999 (2009)	1-Nov-2008

Other: 2000By02.

1998Ba88: E(^{36}Ar)=174 MeV, 90.5% enriched ^{155}Gd target, fragment mass analyzer, array of 10 Compton-suppressed Ge detectors. E(^{36}Ar)=176 MeV, 92.3% enriched ^{155}Gd target, RITU gas-filled recoil separator, JUROSPHERE detector array (15 Ge (70% efficient) and 4 smaller Ge detectors). measured Eγ, Iγ (unstated), recoil-γ coin, recoil-$\gamma\gamma$ coin, γ-X(Pb) coin, Eα(recoil).

2000By02: ^{155}Gd(^{36}Ar,4nγ), E(^{32}S)=176 MeV; 92% ^{155}Gd enriched target; evaporation residue energy, position, arrival time and Eα obtained from Si strip detector In focal plane of RITU gas-filled magnetic recoil separator; four Ge γ detectors; measured Eγ, recoil-γ(t) (Δt<50 μs), recoil-$\gamma\gamma$(t) (Δt<4 μs). searched for, but did not find, ^{187}Pb isomers; concluded that 14 ns$\leq$T$_{1/2}\leq$416 ns for any yrast or near-yrast isomer produced In this reaction, based on absence of lines In Eγ-t data (In this experiment or In 1998Ba88) which could Be identified with any known γ In ^{187}Pb.

^{187}Pb Levels

E(level)[†]	J$^{\pi}$	Comments
0.0+x[‡]	(13/2$^+$)	J$^{\pi}$: Author's tentative assignments, on the basis of systematic trends of heavier odd-A Pb isotopes, assuming the 0.0+x level is the low-energy isomer (J$^{\pi}$=13/2$^+$) observed in this region.
831+x[‡]	(17/2$^+$)[#]	
1247+x[‡]	(21/2$^+$)[#]	
1723+x[‡]	(25/2$^+$)[#]	

[†] Based on Eγ. Here, values are given relative to the excitation energy "x" of the 13/2$^+$ state. Comparing with the Adopted Levels, x=0.0 keV is assumed by the evaluator considering the absence of the 494γ in this dataset, which is observed depopulating the other 13/2$^+$ state in the ^{191}Po α decay (93 ms) dataset.
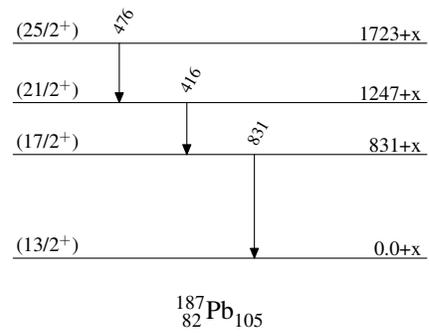
[‡] Band(A): π=+ yrast states. Likely configuration is (ν i$_{13/2}$) weakly coupled to near-spherical ^{186}Pb core states.
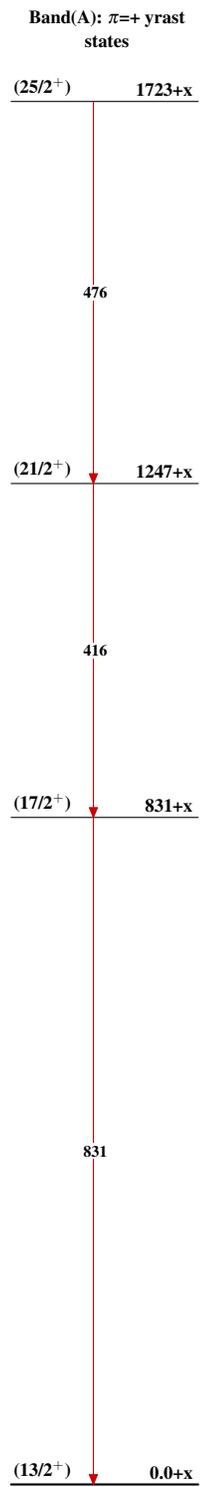
[#] From the assumption of cascade 476γ, 416γ, and 831γ are stretched Q transitions by 1998Ba88 and the systematic trend of heavier odd-A Pb in this region.

γ(^{187}Pb)

E$_\gamma$[†]	E$_i$(level)	J$^{\pi}_i$	E$_f$	J$^{\pi}_f$
416	1247+x	(21/2$^+$)	831+x	(17/2$^+$)
476	1723+x	(25/2$^+$)	1247+x	(21/2$^+$)
831	831+x	(17/2$^+$)	0.0+x	(13/2$^+$)

[†] From 1998Ba88; uncertainty unstated by authors.

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Level Scheme

$^{187}_{82}Pb_{105}$

^{155}Gd(^{36}Ar,4nγ)   1998Ba88

Band(A): π=+ yrast states

(25/2$^+$)   1723+x

476

(21/2$^+$)   1247+x

416

(17/2$^+$)   831+x

831

(13/2$^+$)   0.0+x

$^{187}_{82}$Pb$_{105}$