^{148}Sm(^{40}Ca,4nγ) 2001Ju09,1998Co27

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 111,275 (2010)	1-Oct-2009

2001Ju09: E=195, 200 MeV;RITU gas-filled recoil separator, JUROSPHERE Ge detector array; measured recoil α decay tagged γ spectra.

1998Co27: E=195 MeV; 99.94% ^{148}Sm target; JUROSPHERE array (11 TESSA-type and 14 EUROGAM Phase I Compton-suppressed Ge detectors); RITU gas-filled separator with Si strip detector In focal plane; measured Eγ, Iγ, $\gamma\gamma$ coin, Eα (recoil decay), $T_{1/2}$(184PB); recoil-decay tagging technique.

^{184}Pb Levels

E(level)[†]	J$^{\pi}$[‡]
0.0	0^+
701.5[#]	(2^+)
938.9[#]	(4^+)
1261.6[#]	(6^+)
1663.4[#]	(8^+)

[†] From Eγ.

[‡] E(702 level) fits 2^+ level energy systematics for Pb isotopes; the 402γ-323γ-237γ cascade appears to form a rotational band similar to bands built on 2^+ states In ^{186}Pb and ^{188}Pb (1998Co27).

[#] Band(A): possible $K^{\pi}=0^+$ prolate band.

$\gamma(^{184}Pb)$

E$_\gamma$[†]	I$_\gamma$[†]	E$_i$(level)	J$_i^{\pi}$	E$_f$	J$_f^{\pi}$
237.4	98 *12*	938.9	(4^+)	701.5	(2^+)
322.7	94 *13*	1261.6	(6^+)	938.9	(4^+)
401.8	38 *13*	1663.4	(8^+)	1261.6	(6^+)
701.5	100 *11*	701.5	(2^+)	0.0	0^+

[†] From 1998Co27; uncertainties unstated by authors. Eγ data from 2001Ju09 agree with those from 1998Co27 within 0.2 keV.

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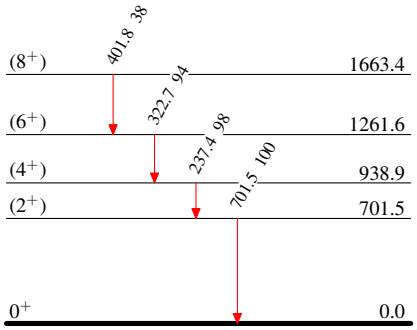
Level Scheme

Intensities: Relative I_γ

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$



$^{184}_{82}Pb_{102}$

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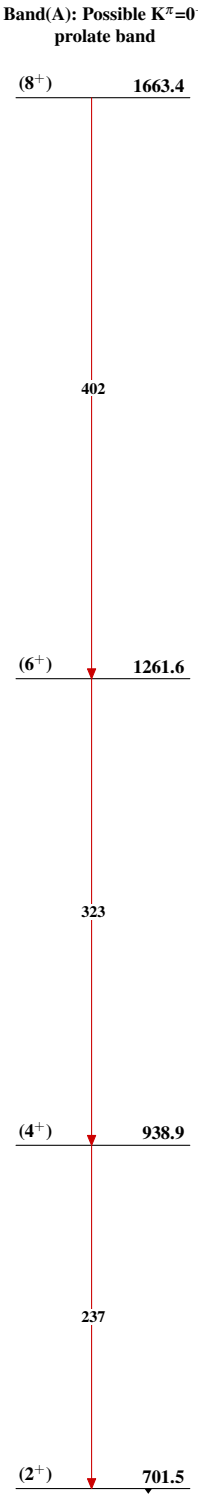

$^{184}_{82}Pb_{102}$