From ENSDF - Evaluated April 2020

$^{204}\text{Pb}(n,\gamma)$ E=1.95 keV   1971Gr40

	Type	Author	History Citation	Literature Cutoff Date
	Full Evaluation	F. G. Kondev	NDS 166, 1 (2020)	20-Apr-2020

1971Gr40: E=1.95 keV with scandium filter and FWHM=0.7 keV for the neutron beam; Target: 1.34% ^{204}Pb in the natural Pb;
Detectors: 5 cm^3 coaxial Ge(Li); Measured: Eγ, Iγ, $\sigma(n,\gamma)$; $\sigma(n,\gamma)$=1.8 barn 5.
Others: 1984Ho11, 1973Al18.

^{205}Pb Levels

E(level)[†]	J$^{\pi}$[‡]	Comments
0	5/2$^-$	
2.3 7	1/2$^-$	
261.9 10	3/2$^-$	
576.3 8	3/2$^-$	
804.3 12	(1/2,3/2)$^-$	
1617.7 8	(1/2$^-$,3/2$^-$)	
1748.2 8	(1/2$^-$,3/2$^-$)	
1918.4 9	(1/2$^-$,3/2$^-$)	
2117.8 11	(1/2$^-$,3/2$^-$)	
6733.61 11	1/2$^+$	Additional information 1.
		E(level): From Q(n) (2017Wa10) and E(n)=1.95 keV.

[†] From a least-squares fit to Eγ.
[‡] From Adopted Levels, unless otherwise stated.

$\gamma(^{205}\text{Pb})$

E$_\gamma$	I$_\gamma$[†]	E$_i$(level)	J$^{\pi}_i$	E$_f$	J$^{\pi}_f$
4615.8 11	15 3	6733.61	1/2$^+$	2117.8	(1/2$^-$,3/2$^-$)
4815.1 9	22 3	6733.61	1/2$^+$	1918.4	(1/2$^-$,3/2$^-$)
4985.3 8	45 5	6733.61	1/2$^+$	1748.2	(1/2$^-$,3/2$^-$)
5115.8 8	34 4	6733.61	1/2$^+$	1617.7	(1/2$^-$,3/2$^-$)
5929.2 12	28 4	6733.61	1/2$^+$	804.3	(1/2,3/2)$^-$
6157.2 8	58 5	6733.61	1/2$^+$	576.3	3/2$^-$
6471.6 10	9 2	6733.61	1/2$^+$	261.9	3/2$^-$
6731.2 7	100 3	6733.61	1/2$^+$	2.3	1/2$^-$

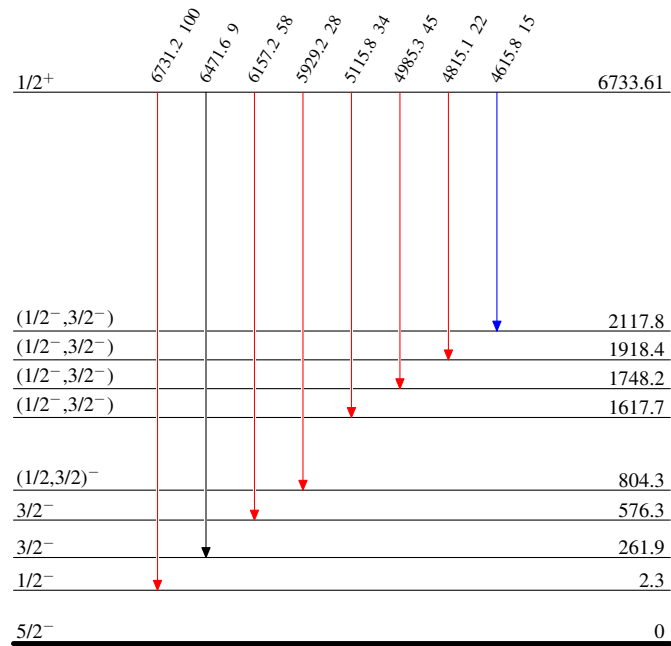[†] From 1971Gr40. To convert to partial radiative-capture cross section in barns, multiply by 0.0045 9.

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Level Scheme

Intensities: Relative I$_\gamma$

Legend

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

1/2$^+$	6733.61
(1/2$^-$,3/2$^-$)	2117.8
(1/2$^-$,3/2$^-$)	1918.4
(1/2$^-$,3/2$^-$)	1748.2
(1/2$^-$,3/2$^-$)	1617.7
(1/2,3/2)$^-$	804.3
3/2$^-$	576.3
3/2$^-$	261.9
1/2$^-$	2.3
5/2$^-$	0

Gamma labels: 6731.2 100, 6471.6 9, 6157.2 58, 5929.2 28, 5115.8 34, 4985.3 45, 4815.1 22, 4615.8 15

$^{205}_{82}$Pb$_{123}$